

FINAL
2014 Long Term Management Report for Sites LF003, ST009, SS015, and SS010 at Cape Romanzof Long Range Radar Station, Alaska

Contract No. FA8903-10-D-8601
Contract Task Order No. 0101

Prepared for
Air Force Civil Engineer Center

Prepared by
EA Engineering, Science, and Technology, Inc., PBC.
711 H Street, Suite 330
Anchorage, Alaska 99501

January 2015

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LIST OF ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AFCEC	Air Force Civil Engineer Center
amsl	above mean sea level
AST	aboveground storage tank
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
btoc	below top of casing
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
COC	contaminant(s) of concern
DRO	diesel range organics
DTH	down the hole hammer
EA	EA Engineering, Science, and Technology, Inc., PBC.
EPA	United States Environmental Protection Agency
ft	foot (feet)
GPS	Global Positioning System
GRO	gasoline range organics
IC	institutional control
LOD	limit of detection
LRRS	Long Range Radar Station
LTM	long term monitoring
µg/L	microgram(s) per liter
mg/kg	milligram(s) per kilogram
mg/L	milligram(s) per liter
MNA	monitored natural attenuation
MSL	mean sea level
NTU	Nephelometric Turbidity Unit
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
RAO	Remedial Action Objective
ROD	Record of Decision
RRO	residual range organics
SIM	selective ion monitoring
SOP	standard operating procedure
TAH	total aromatic hydrocarbon
TAqH	total aqueous hydrocarbon
TOC	top of casing
USAF	United States Air Force
VOC	volatile organic compound

1.0 INTRODUCTION

EA Engineering, Science, and Technology, Inc. (EA), on behalf of the Air Force Civil Engineer Center (AFCEC), has prepared this report for environmental long term monitoring (LTM) at Cape Romanzof Long Range Radar Station (LRRS) Sites LF003, ST009, SS015, and SS010. This project is being performed under Environmental, Construction, and Operations and Services 2009 contract number FA8903-10-D-8601, Task Order 0101.

1.1 PROJECT OBJECTIVES

The objective for this project is to perform LTM and institutional control (IC) inspections in accordance with the Decision Documents for each site. The scope for this effort included field activities at four sites: LF003, ST009, SS015, and SS010. The site locations are shown on Figure 1-1, and specific task requirements for each site are indicated in Table 1-1.

Table 1-1 Site-Specific Project Objectives

Site ID	Applicable Regulatory Program	Selected Remedial Actions from Site RODs
LF003	CERCLA	• Landfill cap and IC inspection.
ST009	Non-CERCLA, State Program	• Visual inspections; • Collect groundwater samples from three existing wells for analysis of GRO, DRO, and BTEX. • Collect surface water sample from one location for analysis of total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH).
SS015	Non-CERCLA, State Program	• Collect groundwater samples from three existing wells for analysis of diesel range organics (DRO), gasoline range organics (GRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), alkalinity, dissolved iron, sulfate, and nitrate/nitrite.
SS010	Non-CERCLA, State Program	• Visual inspections; • Install three new monitoring wells; • Collect three soil samples at various depths from each new well location for analysis of GRO, DRO, and residual-range organics (RRO); • Collect groundwater samples from the three new wells for analysis of GRO, DRO, and RRO.

Notes:
ROD = Record of Decision
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980

The purpose of this report is to document the results of the investigation.

1.2 REPORT ORGANIZATION

This document is organized as follows:

- **Section 1** is the Introduction;
- **Section 2** provides a discussion of the site history, contamination, previous investigations, and the geology and hydrology of the area;
- **Section 3** provides a discussion of the 2014 LTM field activities performed;
- **Section 4** provides a discussion of site specific cleanup levels/Remedial Action Objectives (RAOs);
- **Section 5** provides a summary of the analytical results for environmental media sampled during the investigation;
- **Section 6** presents data quality information;
- **Section 7** presents deviations from the Work Plan;
- **Section 8** presents a summary of the investigation findings including recommendations for future activities regarding the site; and
- **Section 9** presents references cited.

Summary tables are imbedded within the text; Analytical results tables and site figures are presented following their associated sections.

Appendixes to this report include the following:

- Appendix A – Field Notes and Forms
- Appendix B – Photographic Logs
- Appendix C – Well Construction and Boring Logs
- Appendix D – Laboratory Reports
- Appendix E – Data Validation Reports and Alaska Department of Environmental Conservation (ADEC) Checklists
- Appendix F –ADEC Comments and Response to Comments on Draft Report

1.3 PROJECT PERSONNEL

The project was managed by qualified environmental professionals as defined by 18 Alaska Administrative Code (AAC) 75.990. Ms. Evana Burt-Toland and Mr. Mark Blinstrub performed oversight for the project, including inspections and sample collection. A summary of their qualifications is as follows:

- Ms. Burt-Toland, an environmental scientist with a B.S. in Fisheries and Wildlife Biology, has over 8 years of varied environmental and natural resource experience, and is an Alaska certified sampler. Ms. Burt-Toland led the groundwater and surface water investigation for this project and was the Field Manager for the Project.
- Mr. Blinstrub, an environmental scientist with a B.S. in Environmental Policy and Assessment, has over 18 years of varied professional experience, and is an Alaska certified sampler. Mr. Blinstrub led the soil sampling and well installation for this project.

The following firms were subcontracted to perform key specialty services for the project:

- GeoTek Alaska, Inc. of Anchorage, Alaska provided drilling services
- SGS Laboratories of Anchorage, Alaska provided analytical testing of environmental samples

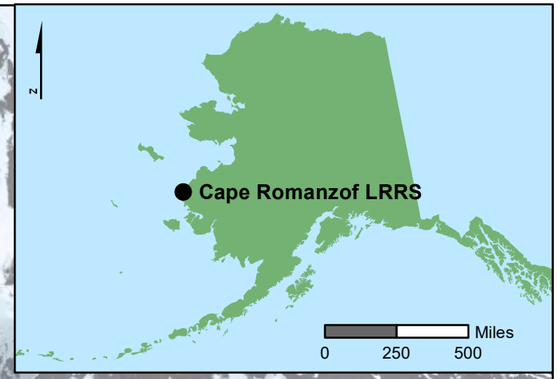
1.4 FUTURE OBJECTIVES FOR SITES LF003, ST009, SS015, AND SS010

AFCEC will continue to perform selected remedies in accordance with the site specific RODs and decision documents.

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Notes
1. Institutional Control inspections were performed at sites LF003, ST009, SS010.
2. Environmental sampling was performed at sites ST009, SS010, SS015.

Data Source
Imagery: Esri, 2012



LF003
Landfill No. 2

Lower Camp

SS015
UST Spill Area

Upper Camp

Airstrip

SS010
Weather Station

ST009
Former Truck Fueling Station

N

0 1,000 2,000 4,000 Feet

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at Cape Romanzof Long Range Radar Station, Alaska

Figure 1-1
Location Map

jklemick Path: C:\EA\projects\FAIRBANKS\611th Remote Sites\RomanzofMXD\Report\RomanzofLocation.mxd

2.0 BACKGROUND

Cape Romanzof LRRS is a minimally attended radar site located approximately 540 miles west of Anchorage on a small peninsula that extends into the Bering Sea. The installation was constructed in 1953 and since 1977 has been operated by independent contractors. Access to the site is controlled and all visits must be coordinated through Alaska Radar Systems program management. Additional details regarding site background are provided in historical investigation reports and site decision documents.

2.1 SITE BACKGROUND

As part of this effort, monitoring activities were conducted at four sites to meet the selected remedial actions as identified in each site decision document. The sites are shown on Figure 1-1 and a summary of each site is as follows:

- Site LF003 is located on the south side of the main access road from the runway to the Lower Camp facilities, and occupies approximately 1.5 acres. This site was the primary installation landfill until the mid-1970s. Garbage, rubbish, wood, metal, plastic, incinerator ash, and construction and demolition debris were disposed in the landfill. Polychlorinated biphenyls and lead in surface soil and sediments are considered site contaminants of concern (COCs) (United States Air Force [USAF] 2013).
- Site ST009 is located adjacent to the mouth of Fowler Creek, at the end of the access road leading from the coast to the southern tip of the airstrip. The site consists of a former truck fueling station that was contaminated as a result of numerous small petroleum spills associated with vehicle fueling activities. Total petroleum hydrocarbons, GRO, DRO, and benzene are considered site COCs (USAF 2009a).
- Site SS015 is located in the lower camp. During 1991 excavation activities, petroleum-contaminated soils were encountered adjacent to an above ground storage tank (AST). The spills may be associated with the AST and/or the two former underground storage tanks (one 5,000-gallon tank and one 15,000-gallon tank). GRO, DRO, and benzene are considered site COCs (USAF 2011a).
- Site SS010 is located at the southwest end of the airstrip. The site encompasses a Weather Station Building area and consists of fuel spills associated with a former diesel fuel AST. The COCs consist of DRO in subsurface soil and potential fuel contamination in groundwater, (i.e., DRO, GRO, and RRO). Approximately 3,518 cubic yards of DRO contaminated subsurface soil remains

in place. Groundwater was reportedly impacted with fuel but quantitative data had not been collected prior to this investigation (USAF 2013).

2.2 GENERAL SITE CHARACTERISTICS

The following section provides a brief summary of the general site characteristics.

2.2.1 Geology

Cape Romanzof LRRS is located on the western flank of the Askinuk Mountains facing the Bering Sea. These mountains are composed of granitic bedrock and occur as an isolated mass elongated east to west that rises to an elevation of up to 2,342 feet (ft) above mean sea level (amsl) from the surrounding deltaic plain. The surrounding area is characterized as a marshy, lake-dotted deltaic plain, consisting of coastal deposits and interlayered alluvial and marine sediments (USAF 2010).

The Lower Camp and adjacent facilities are located at an elevation of 1,500 ft amsl. The area is underlain by deposits of talus and other colluvial materials that have moved down the steep valley side slopes toward Fowler Creek, largely under the influence of gravity. The colluvium includes a wide range of material sizes, from large granite blocks to fine-to-coarse grained sand, silt, and minor amounts of clay.

The colluvium forms an apron at the base of the steep slope extending across part of the low-angle slope on the valley floor. The Lower Camp is located on the uphill margin of this apron. Soils at the Lower Camp are commonly sand and silt with gravel/talus horizons near the bedrock interface.

The Upper Camp facilities are located on the narrow ridge above the valley. Low, rounded hills and mountains with alpine tundra and ephemeral streams define the surrounding area. The two camps are connected by a gravel road and tramway throughout the year. The one-mile gravel aircraft runway is approximately 4 miles southwest of the Lower Camp (USAF 2010).

2.2.2 Hydrogeology

The depth to water varies based on the topography at each site; summaries of measurements recorded during this effort are as follows:

- Site ST009 - Measurements collected during this field event found that groundwater depths ranged from approximately 11 to 22 ft below ground surface (bgs).
- Site SS015 – Measurements collected during this field event found that groundwater depths ranged from approximately 21 ft bgs to 44 ft bgs. To note,

some areas at SS015 experience high seasonal fluctuations in groundwater depth (USAF 2011a).

- Site SS010 – Measurements collected during this field event found that groundwater depths ranged deeper than the expected 65 ft bgs (USAF 2013) and were detected from approximately 94 ft bgs to 111 ft bgs.

For the evaluated groundwater at Site SS010, in addition to gauging information, groundwater elevation data was determined from survey and gauging data from the three newly installed wells. The groundwater flow direction was found to be generally toward the southwest at site SS010. Further discussion of the groundwater flow direction at Site SS010 is presented in Section 3.9 of this Report.

2.2.3 Surface Water Hydrology

Fowler (Nilumat) Creek is a perennial stream draining the main Cape Romanzof LRRS valley. The creek flows 4 miles from a constructed reservoir at the head of the valley to Kokechik Bay. Stream recharge is primarily from the reservoir, sheet run-off, and small tributaries from nearby valleys. Numerous ponds and surface water bodies exist for short periods of time (usually one to five days) after precipitation events. Fowler Creek, the reservoir, and a small pond approximately 300 ft north of the reservoir are the only perennial bodies of water near the installation. The Fowler Creek watershed has an approximate area of 8.5 square miles (USAF 2013).

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3.0 FIELD ACTIVITIES

Field activities were performed from 28 July through 6 August 2014 in accordance with the Work Plan (USAF 2014). This section discusses the activities performed. Copies of field logbooks and field forms are included in Appendix A. Site-specific photographic logs are included in Appendix B as follows:

- Appendix B1 – LF003 Photographic Log
- Appendix B2 – ST009 Photographic Log
- Appendix B3 – SS015 Photographic Log
- Appendix B4 – SS010 Photographic Log

3.1 VISUAL INSTITUTIONAL CONTROLS INSPECTIONS

IC inspections were performed at Sites LF003 and ST009 on 31 July 2014 and at Site SS010 on 2 August 2014. Locations of items of interest and areas of concern are shown on Figures 3-1, 3-2, and 3-3. The field inspections were documented on field forms and/or in the field log book (Appendix A). A summary of observations follows.

3.1.1 Site LF003 Landfill No. 2 Inspection

Site LF003 was inspected on 31 July 2014, and notes were taken in a field logbook. Figure 3-1 shows photographs and locations of items or areas of interest at Site LF003. Additional photographs are shown in Appendix B1. The landfill visual inspection checklist is included in Appendix A.

The overall site is a capped landfill with top and edges vegetated in amounts ranging from 0 percent to 90 percent cover. The top of the cap is sparsely vegetated with grasses, ranging from 0 percent cover to 30 percent cover. The northern edge is without vegetation, and is a gravel pad bordered by the main road. The eastern edge has a percent cover estimated at 80-90 percent, with the vast majority of the vegetation consisting of grass and willow species; this densely vegetated section borders a small creek that is discussed in the 2013 ROD (USAF 2013). The southern edge is densely vegetated with 80-90% cover with small 1-3 foot spots without vegetation. The western edges are sparsely vegetated and have surface erosion as discussed below.

Cap surface erosion was observed along the western sidewall of the landfill is due to runoff from the adjacent road leading to Lower Camp (Appendix B1, Photographs 15 and 16). Erosion channels were observed that lead drainage from the road, over the cap, and into the boulder area adjacent to Site LF003 on the western flank. This was the only area with erosion observed onsite and is shown aerially on Figure 3-1.

Metal, plastic, and garbage debris was identified within the Site LF003 boundary. Debris that was found within the landfill boundary was primarily partially-buried and

appeared to consist of large pieces of plastic, metal, and possibly liner. Unburied and partially-buried metal debris was observed primarily along the southwestern boundary of the site. Of note in the area was the presence of a rusted compressed gas cylinder (Appendix B1, Photographs 13 and 14).

Other things noted during the inspection and shown in the photographic log are as follows:

- Surface water runs from the east to the southwest along the site boundary (Appendix B1, Photograph 1).
- An area with oxidized soil and a sheen was observed (Appendix B1, Photographs 5 and 6). The sheen appeared to be biological and not petroleum related.
- No marking or signs were observed at Site LF003.
- Numerous tire tracks were observed on the surface of the Site LF003 cap area (Appendix B1, Photograph 17). Site LF003 is used as a turn-around and pull-out area for a low-volume of vehicle traffic.
- Numerous avian species (passerine and shorebird species) were present, especially in the eastern heavily vegetated areas.

3.1.2 Site ST009 Inspection

Site ST009 was inspected on 31 July 2014. Notable locations are presented on Figure 3-2. The inspection was documented in a field logbook, and the inspection form is included in Appendix A. Photographs of the site are presented on Figure 3-2 and in Appendix B-2.

The site is used for storage of shipping containers, and is frequented by installation personnel and vehicles for both commercial and recreational activities during the non-winter months. The area has regular vehicle and heavy equipment traffic during the non-winter months. The site is not accessed in the winter by installation personnel in vehicles as the access road is not plowed.

The area is sparsely vegetated and is adjacent to both marine (Bering Sea) and fresh water (Fowler Creek) systems. Debris at the site was limited to items consistent with the historical and current industrial usage: primarily metal drums and wooden pallets, with very little partially-buried plastic materials seen in the center of the site.

Erosion was observed along the southern edge of the site, adjacent to the beach. Numerous 55-gallon crushed emptied drums were observed within the eroding bank and at the shoreline below the high tide mark (Appendix B-2, Photographs 9 through 11). No stained soils were observed in the area of the exposed drums.

Monitoring wells in the area were found to have notably strong petroleum odors.

One warning sign was present on site and directed to recreational and subsistence users (Appendix B-2, Photographs 6 through 8). The sign is located along the eastern bank of Fowler Creek, upstream from the mouth of the river.

Numerous wildlife species were observed using the waters adjacent to and or the shoreline area of the site, primarily marine mammals and sea ducks. Other wildlife noted during the site inspection included fox, beaver, birds (passerine and shorebirds), bivalves, and seals. Pink salmon were observed to be spawning in Fowler Creek (Appendix B-2, Photograph 4).

3.1.3 Site SS010 Inspection

The IC inspection was performed at Site SS010 on 2 August 2014. The field inspections are documented in a field log book and accompanied by photographs. Photographs of the site are presented on Figure 3-3 and in Appendix B-3. The inspection form is included in Appendix A.

Site SS010 is accessed by installation personnel year-round for industrial and station operations, primarily during weather monitoring for flights. No warning signs or other general area restrictions were found since none are required. Vehicular traffic is limited to authorized site users. An aerial photograph (Appendix B-3, Photograph 2) was taken of the site and shows the existing structure (weather station), road, and the vegetated area surrounding the site.

Wildlife including song birds and small rodents were identified during the site inspection near the newly installed well SS010-MW01. Non-road and building areas were 100% vegetated, and all vegetation in those areas appeared to be healthy.

3.2 UNDERGROUND UTILITY CLEARANCE

With the assistance of the BOS Contractor (ARCTEC) workers, EA obtained utility clearance for underground utilities at Site SS010 prior to beginning intrusive drilling activities at each well installation location. Utilities are predominantly above-ground throughout Cape Romanzof, including Site SS010 where drilling was performed.

3.3 DRILLING ACTIVITIES

Drilling activities were performed to advance and sample three soil borings and install three groundwater monitoring wells at Site SS010 during this contract. Successful installation required deviations from the planned well installation specifications.

The placement of soil borings and groundwater monitoring wells was changed due to to much deeper groundwater than anticipated at the Site SS010 area. This deviation is

described in Section 7.1. Total depths and other well construction information are included in Table 3-2.

3.4 SUBSURFACE SOIL INVESTIGATION

Nine subsurface soil samples were collected from three soil borings during the well installation at Site SS010 to evaluate the presence hydrocarbons in subsurface soil. Samples were laboratory analyzed for DRO/RRO and GRO. Results are presented in Section 5.0 of this report.

3.4.1 Soil Borings

Three soil borings were completed for the installation of monitoring wells were drilled between 29 July and 3 August 2014. The soil borings were completed by GeoTek Alaska, Inc. under the supervision of EA personnel. Borings were performed using "down the hole hammer" (DTH) technology on a Geoprobe 8040DT track-mounted drill rig. A 5-ft macrocore soil sampler was advanced for logging and soil sample collection using direct-push technology from the ground surface to 30 ft bgs at each of the three boring locations. To note, at SB02 a boulder was encountered at 27 ft bgs, limiting the recovery for logging due to the boulder crumpling of the macrocore sleeve from an estimated 27 to 30 ft bgs.

Soil logged in each of the cores was described in accordance with ASTM International Standard D2488 and the Unified Soil Classification System. Observations, including the presence of visual or olfactory impacts, were documented. Soil was field screened for the presence of volatile organic compounds (VOCs) with a photo-ionization detector. Boring logs are provided in Appendix C.

3.4.2 Soil Samples

Soil samples were collected using a 2.5-inch outside-diameter, 5-ft long macro-core sampler lined with acetate sleeves. New liners were used for each sample interval. Soil samples were collected for laboratory analysis to characterize the surface soil (0 to 2 ft bgs) and subsurface soil (2 to 15 ft bgs).

A third soil sampling depth, just above the capillary fringe, was also planned for each boring location. This was successfully collected for boring SB01, however was not feasible at the following locations due to the cobbles and boulders encountered during drilling and the uncertainty of the depth to water at the boring locations.

- At soil boring location SB02, a soil sample was collected from the deepest core obtained at this boring (sample from 55-60 ft bgs). Boulders were frequently encountered and the later core attempted at 88 ft bgs was met with refusal. The depth of water at this location was found to be 110.6 ft bgs.

- At soil boring location SB03, during coring from 50 to 55 ft bgs, the macrocore sleeve bent due to the presence of boulders. The final soil core was obtained from 79 to 84 ft bgs, and was observed to be wet (below the groundwater surface). The deep sample was obtained from 80 ft bgs and was saturated.

Soil samples collected from the borings performed during well installations are listed in Table 3-1.

Table 3-1 Primary Soil Samples Collected During Well Installation

Monitoring Well ID	SS010-MW01	SS010-MW02	SS010-MW03
Soil Sample ID	SS010-SB01-2	SS010-SB02-2	SS010-SB03-2
	SS010-SB01-11	SS010-SB02-13	SS010-SB03-14
	SS010-SB01-90	SS010-SB02-56	SS010-SB03-80

3.5 MONITORING WELL INSTALLATION AND DEVELOPMENT

At Site SS010, petroleum contamination is present in subsurface soil. In addition, reports from the 1960s indicate that groundwater was contaminated with fuel. Previous efforts to install groundwater monitoring wells were not successful due to the presence of large, subsurface boulders present throughout the site (USAF 2013, 2014). As part of this effort, three wells were successfully installed for the purpose of characterizing current groundwater conditions at the site.

The monitoring wells were constructed of 2-inch diameter schedule 40 polyvinyl chloride (PVC) with 5-ft sections of 0.010-inch slotted, 20/40 sand pre-packed screens. The screens were installed to straddle the groundwater level observed at the time of installation. MW03 was installed with 10 ft of screen, and MW01 and MW02 were installed with 15 ft of screen. A sand pack extends from the base of each well to at least 2 ft above the top of the screen. The sand pack is overlain by a minimum of 7 ft of bentonite seal (Pel-Plug) and the remaining annular space was filled with 3/8-inch bentonite holeplug. Monitoring wells were completed with 6-inch diameter steel "stickup" above-ground monuments with locking covers, and were protected by two bollards. A photo of each completed monitoring well with bollards is included in the Photographic log (Appendix B4). Monitoring well installation and development were completed in accordance with ADEC's Monitoring Well Guidance (ADEC 2013). Well construction details are briefly shown below (Table 3-2) and are included in Appendix C with the associated soil boring logs.

Table 3-2 Newly Installed Monitoring Well Construction Information

Monitoring Well Identification	Completion Date	Well Diameter (inches)	Screen Interval (ft bgs)	Depth Water Encountered During Drilling (ft bgs)	Total Depth of Boring (ft bgs)	TOC Elevation (ft MSL)
SS010-MW01	1 Aug-2014	2.0	88.5-103.5	94.0	111.0	338.17
SS010-MW02	3 Aug-2014	2.0	103-118	110.5	118.5	287.53
SS010-MW03	30-Jul-2014	2.0	71.5-81.5	75.0	84.0	413.98

Notes:
TOC = top of casing
MSL = mean sea level

Monitoring wells were developed after well installation to remove fine sediments from within the well and create a hydraulic connection to the aquifer. Development techniques included surging a minimum of three times and purging with a stainless steel GeoTech 1.66 Reclaimer. Monitoring well MW02 was also initially purged with a bailer to remove sediment. Wells were developed until approximately 10 well volumes were removed and turbidity of the well water was less than 10 Nephelometric Turbidity Units (NTUs) or within 10 percent during three consecutive water quality readings. Turbidity achieved during well development was: 183 NTU's at well MW01, 90.0 NTU's at well MW02, and 47.1 NTU's at well MW03. Purged groundwater was treated using a portable granular activated carbon vessel and discharged near the well in accordance with the Work Plan (USAF 2014).

3.6 GROUNDWATER MONITORING WELL SAMPLING

A total of nine groundwater samples were collected in accordance with the Work Plan. Three groundwater samples were collected from existing wells at each of Sites ST009 and SS015, and from the three newly installed wells at Site SS010.

Prior to sampling, depth to groundwater in the monitoring wells was measured using an electronic measuring tape to 0.01-ft precision from the mark on the PVC well casing.

Groundwater samples were collected using low-flow purge and sample methods for each of the wells. A pneumatic bladder pump was used to purge and sample all monitoring wells. The pump was lowered into the well slowly and carefully to a depth corresponding with the approximate midpoint of the saturated screen interval, or when targeting petroleum contaminants, the intake was set at 1.5 to 2.5 feet below static water level [bswl] regardless of screened interval length. Groundwater purge rates were set to ensure the water table remained within 0.3 ft of the initial depth. Groundwater quality parameters measured throughout purging were: temperature, pH, specific conductance, oxidation reduction potential, dissolved oxygen, and turbidity.

Following stabilization of water quality parameters, groundwater samples were collected in laboratory supplied containers, labeled, and immediately stored in a cooler. Chain-of-custody forms were completed and accompanied samples to the laboratory. Groundwater sampling forms are included in Appendix A.

The re-usable down-hole equipment (i.e., sampling pumps and water level meters) was decontaminated between wells by washing with non-phosphate soap and water, and rinsing with distilled water. Disposable materials, including Teflon-lined polyethylene tubing and Teflon bladders, were discarded after use at each well.

Purged groundwater and decontamination water was treated using a portable granular activated carbon vessel and discharged near the well in accordance with Work Plan (USAF 2014), as discussed in Section 3.10.

3.6.1 Site ST009 Groundwater Sampling

Groundwater samples were collected from three existing wells (MW-4, MW-7, and MW-9) at Site ST009 on 30 July 2014. The samples were laboratory analyzed for DRO, GRO, and BTEX. Results are presented in Section 5.0 with associated sample locations shown on Figure 5-1.

3.6.2 Site SS015 Groundwater Sampling

Groundwater samples were collected from three existing wells (WW-01, WW-05, and WW-06) at Site SS015 on 29 July 2014. The samples were laboratory analyzed for DRO, GRO, BTEX, and for the following monitored natural attenuation parameters: alkalinity, dissolved iron, sulfate, and nitrate/nitrite. Well WW-01 was found to be heavily damaged, but it was possible to collect a primary groundwater sample from this well. Results are presented in Section 5.0 with associated sample locations shown on Figure 5-2.

3.6.3 Site SS010 Groundwater Sampling

Groundwater samples were collected from the three newly installed wells at Site SS010 (MW01, MW02, and MW03) between 4 and 6 August 2014. The samples were laboratory analyzed for DRO/RRO, and GRO. Results are presented in Section 5.0 with associated sample locations shown on Figure 5-3.

3.7 SURFACE WATER SAMPLING

A surface water sample was collected from Fowler Creek, which flows through Site ST009, on 5 August 2014. Sample bottles were submerged directly into the creek flow, the cap was opened, the bottle was allowed to fill, and then the cap was sealed prior to

removal from the water. For sample bottles with preservatives, a dedicated and new transfer bottle was used to fill the containers.

The sample was laboratory analyzed for TAH and TAqH. Results are presented in Section 5.0 with the sample location shown on Figure 5-1.

3.8 MONITORING WELL SURVEY FOR NEWLY INSTALLED WELLS

Monitoring well coordinates were measured by EA personnel on 3 August 2014. Horizontal coordinates were obtained using a Leica Global Positioning System (GPS) and were post processed to obtain an accuracy of 1.0 ft. A vertical survey was performed for newly-installed monitoring wells at Site SS010 using differential leveling techniques. Vertical elevations for monitoring wells at Site SS010 are relative to each other. The starting elevation for MW03 was collected using a Leica GPS. Vertical elevations for monitoring wells MW01 and MW02 were then obtained using differential leveling techniques to ensure a vertical accuracy of 0.01 ft between monitoring wells. Vertical measurements were collected at marked measuring points at the top of each well casing. Survey data and groundwater level measurements were used to evaluate the groundwater flow direction at site SS010.

A complete round of depth-to-water measurements was performed at each site within a separate 24-hour period for each site, using an electronic water level meter. Table 3-3 summarizes these measurements.

Since no monitoring wells were installed at sites ST009 and SS015, and accordingly a land survey was not performed at these sites, it is not possible to make a precise determination of groundwater flow direction at these sites.

Table 3-3 Monitoring Well Gauging Information

Monitoring Well Identification	Date Gauged	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	TOC Elevation (ft amsl)
SS010-MW01	5 Aug. 2014	1830	93.70	107.03	338.17
SS010-MW02	5 Aug. 2014	1845	111.74	121.42	287.54
SS010-MW03	5 Aug. 2014	1815	81.75	84.73	413.98
MW-4 (ST009)	30 July 2014	1420	11.23	15.65	-
MW-7 (ST009)	30 July 2014	1720	18.95	24.5	-
MW-9 (ST009)	30 July 2014	0940	21.7	27.05	-
WW-01 (SS015)	29 July 2014	1805	44.01[1]	63.51[1]	-
WW-05 (SS015)	29 July 2014	1215	32.4	49.4	-
WW-06 (SS015)	29 July 2014	1545	21.51	29.15	-

[1] Well WW-01 was found to be heavily damaged, and most of the well stickup was sheared off. Accordingly the current top of casing elevation is different than that of previous monitoring efforts.

Notes:
amsl = above mean sea level
btoc = below top of casing
ft = feet

3.9 GROUNDWATER FLOW AT SITE SS010

The distance between the Site SS010 monitoring wells decreases the accuracy in determining the direction of groundwater flow at this site. Therefore the groundwater flow direction has been estimated using the elevation data collected during the survey in combination with the site topography. Groundwater is expected to flow generally to the west or southwest toward Fowler Creek. The measured groundwater elevations and estimated groundwater flow direction are shown on Figure 3-4. As discussed in Section 7.0, monitoring well locations were adjusted in the field due to limitations for drill rig gaining site access, and to better match the Site topographical landscape (and the likelihood of encountering groundwater).

3.10 MANAGEMENT OF INVESTIGATION-DERIVED WASTE

The following investigation-derived waste was generated during the field investigation at the site:

- Solid waste – Non-hazardous waste, including disposable sampling equipment, personal protective equipment, and garbage, was collected in garbage bags and disposed of by the site manager in accordance with refuse procedures at Cape Romanzof.
- Liquid waste – Water generated from monitoring well development and sampling activities, and decontamination fluids were treated on-site using a granulated

activated carbon system. Once treated, the water was discharged next to the well from which the waste was generated in accordance with the Work Plan.

- Soil cuttings – Direct push and down the hole hammer drilling generated very little soil cuttings. Excess soil cuttings were spread across the ground surface at each of the drilling locations in accordance with the methods granted by ADEC (this letter is included in Appendix D of the 2014 Work Plan [USAF 2014]).

Acronym
IC - Institutional controls

Data Source
Imagery: PACAF, 2001









Photo No. 17

Photo No. 16

Photo No. 14

Photo No. 5

Legend
- Photograph Location
- LF003 Boundary

N

0 50 100 200 Feet

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Figure 3-1
Landfill Cap and IC Inspection at Site LF003

jklemick Path: C:\EA\projects\FAIRBANKS\611th Remote Sites\Romanzof\MXD\Report\LF003.mxd

Acronym
IC - Institutional controls

Data Source
Imagery: PACAF, 2001

















Photo No. 12
Liner
Photo No. 17
Photo No. 4
Fowler Creek
MW-4
Warning Sign
Photo No. 8
MW-7
MW-9
Trail
Photo No. 16
Drums
Photo No. 10
Drums
Photo No. 11
Tracks
Photo No. 13

Legend
- Monitoring Well Sampled
- Photograph Location
- Surface Water Sample Location
- Active Loading Dock Area
- Eroding Bluff Area with Protruding Drums
- ST009 Boundary

N

0 50 100 200 Feet

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Figure 3-2
IC Inspection at Site ST009

klemick Path: C:\EA\projects\FAIRBANKS\611th Remote Sites\RomanzofMXD\ReportST009b.mxd

Acronym
IC - Institutional controls

Data Source
Imagery: PACAF, 2001

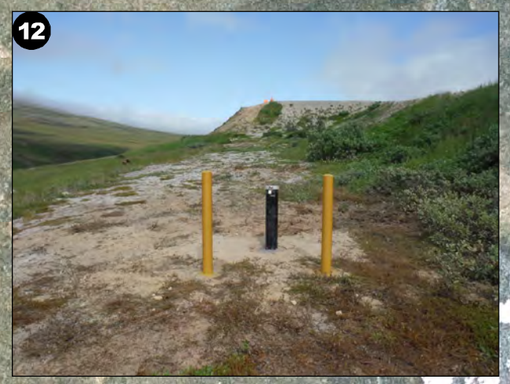
Legend
- New Monitoring Well Location
- Photograph Location
- Estimated Groundwater Flow Direction
- Contamination Zone
- SS010 Boundary

Photo No. 2
Photo No. 1
Existing Weather Station (Building 4001)
Location of Former Tank #4
Petroleum Contamination at 0 to 5 feet
Existing Transformer Box
Approximate Location of Former Weather Station (Building 4000)
Approximate Location of Former Tank #11 and Berm
Petroleum Contamination > 17 feet
Petroleum Contamination at 5 to 10 feet
Petroleum Contamination at 3 to 7 feet
Photo No. 12
SS010-MW01
Photo No. 6
SS010-MW03
Photo No. 14
SS010-MW02

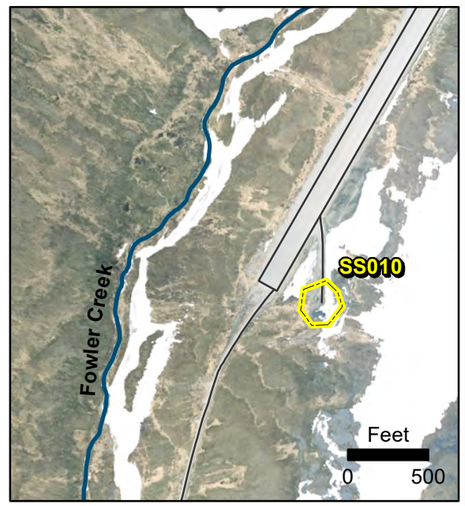












N

0 50 100 200 Feet

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Figure 3-3
IC Inspection at Site SS010

jklemick Path: C:\EA\projects\FAIRBANKS\611th Remote Sites\Romanzof\MXD\Report\SS010b.mxd

Data Source
Imagery: PACAF, 2001

Legend
- Monitoring Well Location
- (244.47) Groundwater Elevation (feet above mean sea level)
- Estimated Groundwater Flow Direction
- Contamination Zone
- SS010 Boundary

Existing Weather Station (Building 4001)

Location of Former Tank #4

Petroleum Contamination at 0 to 5 feet

Existing Transformer Box

Approximate Location of Former Weather Station (Building 4000)

Approximate Location of Former Tank #11 and Berm

Petroleum Contamination > 17 feet

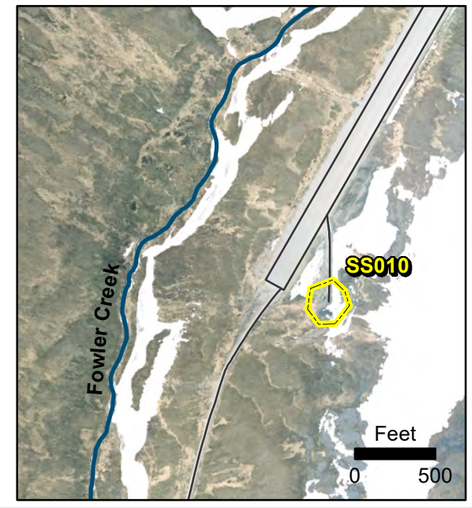
Petroleum Contamination at 5 to 10 feet

Petroleum Contamination at 3 to 7 feet

SS010-MW01 (244.47)

SS010-MW03 (332.23)

SS010-MW02 (175.80)



N

0 50 100 200 Feet

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Figure 3-4
Groundwater Elevation at Site SS010

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4.0 REMEDIAL ACTION OBJECTIVES

This project was completed in support of the RAOs for each site, which are specified in each of the Site ROD documents, and in accordance with the ADEC contaminated site regulations (ADEC 2012a, 2012b). A summary of the RAOs for Sites LF003, ST009, SS015, and SS010 is as follows:

- At Site LF003, the landfill will remain in-place, thus ICs, annual inspections and maintenance for the first five years with a five-year review will be required, at which time the frequency of inspections and reports may be reduced (USAF 2013).

- RAOs at Site ST009 include: ensure groundwater contamination is not migrating downgradient into Kokechik Bay at levels detrimental to surface water quality; restrict the use of groundwater while contaminant concentrations exceed levels protective of drinking water; restrict direct contact with petroleum-contaminated subsurface soil and document that contaminants in surface and subsurface soils exceed concentrations protective of unrestricted land use; and restrict excavation and transportation of contaminated soils to prevent migration of contaminants. Groundwater and surface water samples will be collected to evaluate contaminant concentrations and trends through time (USAF 2010).

- The RAO at Site SS015 is to reduce exposure to contaminants of potential concern through implementation of the selected remedy of monitored natural attenuation (MNA). Groundwater samples will be collected to evaluate contaminant concentrations and trends through time (USAF 2011a).

- Site SS010 is regulated exclusively under Alaska state law. The three monitoring wells were installed in accordance with the selected remedy in the 2013 ROD to assess groundwater conditions as part of the LTM program for the site. Contaminated subsurface soil will remain in place to naturally attenuate (USAF 2013).

Site LF003 (Landfill No. 2) contains solid waste and hazardous materials remaining capped in-place. Polychlorinated biphenyls and lead in surface soil and sediments were established as COCs at this Site (USAF 2013). Remedial action is required under CERCLA as well as Alaska state law to address these COCs in order to protect human health and the environment at this area (USAF 2011b).

Sites ST009, SS010, and SS015 contain petroleum contaminants at concentrations exceeding Alaska state cleanup levels under 18 AAC 75.345. There are no CERCLA

hazardous substances exceeding acceptable exposure levels protective of human health and the environment; therefore the sites are regulated under Alaska state law.

The applicable groundwater cleanup levels for Sites ST009, SS015, and SS010 are established in decision documents and based on 18 AAC 75.345, Table C. Note the cleanup level for GRO in groundwater has increased from 1,300 to 2,200 micrograms per liter (µg/L) since the implementation of the ROD for Site ST009. The current cleanup levels for groundwater are listed in Table 4-1.

Table 4-1 Cleanup Levels for Groundwater

Parameter	Cleanup Level (µg/L)
GRO	2,200
DRO	1,500
Benzene	5.0
Ethylbenzene	700
Toluene	1,000
Xylenes, total	10,000

Notes:
DRO = diesel range organics
GRO = gasoline range organics
µg/L = micrograms per liter

The applicable surface water cleanup criteria for Site ST009 are established in decision documents and based on 18 AAC 70 (Table 4-2).

Table 4-2 Cleanup Levels for Surface Water

Parameter	Cleanup Level (µg/L)
TAH	10
TAqH	15
Absence of petroleum sheen	-

Notes:
TAH = total aromatic hydrocarbons
TAqH = total aqueous hydrocarbons
µg/L = micrograms per liter

The applicable soil cleanup criteria for Site SS010 are established in decision documents and based on 18 AAC 75.341 Table B2, Method 2, Under-40 inch zone (Table 4-3)

Table 4-3 Cleanup Levels for Subsurface Soil

Parameter	ADEC Cleanup Levels (mg/kg)			
	Ingestion	Inhalation	Migration to Groundwater	Maximum Allowable Concentration
GRO	1,400	1,400	300	1,400
DRO	10,250	12,500	250	12,500
RRO	10,000	22,000	11,000	22,000

Notes:
DRO = diesel range organics
GRO = gasoline range organics
mg/kg = milligrams per kilogram
RRO = residual range organics

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5.0 ANALYTICAL DATA

Water and soil samples for analytical testing were submitted to SGS Laboratories in Anchorage, Alaska, an ADEC-approved laboratory accredited through the Department of Defense Environmental Laboratory Accreditation Program.

This section provides a summary of the analytical results from sampling activities. Laboratory and data validation reports for all sites are provided in Appendices D and E, respectively. No environmental sampling was performed at Site LF003 under this effort and thus that site is not included in this section.

5.1 SITE ST009 GROUNDWATER ANALYTICAL RESULTS

Monitoring wells MW-4, MW-7, and MW-9 were sampled and groundwater samples were submitted for laboratory analysis of COCs including GRO, DRO, and BTEX by Methods AK101, AK102, and SW8260B respectively. Results were as follows:

- At monitoring wells MW-4 and MW-9, all analytes were either non-detect or detected at concentrations below ADEC Groundwater Cleanup Levels (AAC Title 18, Chapter 75.345 Table C).
- At monitoring well MW-7, a single exceedance of the ADEC Cleanup Levels was detected. DRO was detected at 2.87 mg/L, exceeding the 1.5 mg/L ADEC Cleanup Level. GRO and BTEX were non-detect or detected at concentrations below ADEC Groundwater Cleanup Levels at this location.

A summary of all analytical results is presented in Table 5-1. Analytical results are also shown aerially on Figure 5-1.

5.2 SITE ST009 SURFACE WATER ANALYTICAL RESULTS

A surface water sample and duplicate sample were collected from Fowler Creek and were submitted for laboratory analysis for COCs including TAH and TAqH by United States Environmental Protection Agency (EPA) Methods 624 and E635 Selective Ion Monitoring (SIM), respectively.

All results for both the primary sample (FC-SW01) and duplicate sample (FC-SW99) were non-detect and are below ADEC 18 AAC 70 Water Quality Standards and ADEC Cleanup Levels for groundwater. The total value for TAH and TAqH when all of the analytes are non-detect is reported as the highest limit of detection (LOD). Therefore, the results are as follows:

- Total TAH is reported at the non-detect limit of 1.0 micrograms per liter (µg/L)
- Total TAqH is reported at the non-detect limit of 0.052 µg/L

No visual sheen was observed on surface water at this location. Individual analytical results for TAH, TAqH, and field parameters are presented in Table 5-2. Analytical results are also shown aerially on Figure 5-1.

5.3 SITE SS015 GROUNDWATER ANALYTICAL RESULTS

Monitoring wells WW-01, WW-05, and WW-06 were sampled and groundwater samples were submitted for laboratory analysis of COCs including GRO, DRO, and BTEX by Methods AK101, AK102, and SW8260B, respectively. For MNA, each of these wells samples were also laboratory analyzed for alkalinity, iron, nitrate and nitrite, and sulfate.

Groundwater samples from monitoring wells WW-01 and WW-06 exceeded the ADEC Cleanup Level for DRO. The DRO concentration detected in WW-01 was 3.16 mg/L and in WW-06 was 1.56 mg/L, exceeding the 1.5 mg/L ADEC Cleanup Level. GRO and BTEX concentrations were non-detect or detected below ADEC Groundwater Cleanup Levels at both WW-01 and WW-06 locations. Primary and duplicate samples were collected from WW-05 with all analytical values for GRO, DRO and BTEX reported as non-detect or detected at concentrations below ADEC Groundwater Cleanup Levels.

There are no specified ADEC Cleanup Levels for MNA parameters in groundwater. Ranges in the reported concentrations of the MNA parameters for Site SS015 are as follows:

- Alkalinity was reported ranging from a low of 27.2 mg/L (WW-06) to a high of 144 mg/L (WW-01);
- Iron was reported ranging from a low (non-detect) of 0.25 mg/L (WW-06/WW-05) to a high of 0.26 mg/L (WW-01);
- Nitrate/nitrite was reported at estimated concentrations ranging from a low of 0.35 mg/L (WW-01) to a high of 0.92 mg/L (WW-05 duplicate); and
- Sulfate was reported ranging from a low of 2.23 mg/L (WW-06) to a high of 5.16 mg/L (WW-01).

A summary of the analytical results, including MNA results and methods, is presented in Table 5-3. Analytical results for GRO, DRO, RRO, and BTEX are also shown aerially on Figure 5-2.

5.4 SITE SS010 SUBSURFACE SOIL ANALYTICAL RESULTS

A total of nine soil samples and one duplicate sample were collected from various intervals at three soil borings and analyzed for GRO, DRO, and RRO using Alaska Methods AK101, AK102, and AK103, respectively. GRO was not detected in any of the

samples. DRO and RRO were either non-detect or detected at concentrations below ADEC Soil Cleanup Levels. Detected concentrations are listed below.

SS010-SB01 (SS010-MW01):

- RRO was detected at a depth of 2 ft bgs at an estimated concentration of 16.9 mg/kg.
- RRO was detected at a depth of 11 ft bgs at an estimated concentration of 90.4 mg/kg.

SS010-SB02 (SS010-MW02):

- DRO was detected at a depth of 2 ft bgs at a concentration of 50.5 mg/kg.
- RRO was detected at a depth of 2 ft bgs at an estimated concentration of 494 mg/kg.
- RRO was detected at a depth of 56 ft bgs with an estimated concentration of 12.7 mg/kg.

SS010-SB03 (SS010-MW03):

- RRO was detected at a depth of 2 ft bgs at an estimated concentration of 214 mg/kg.
- RRO was detected in the duplicate sample at a depth of 14 ft bgs at an estimated concentration of 7.9 mg/kg.

Soil boring logs are provided in Appendix C. A summary of the analytical results is presented in Table 5-4. Soil analytical results are also shown aerially on Figure 5-3.

5.5 SITE SS010 GROUNDWATER ANALYTICAL RESULTS

The following is a brief summary of the analytical results for all Site SS010 newly installed wells, and the first groundwater data collected for this site as directed by the 2013 ROD. Monitoring wells SS010-MW01, SS010-MW02, and SS010-MW03 were sampled and groundwater samples were submitted for laboratory analysis of COCs including GRO, DRO, and RRO by Alaska Methods AK101, AK102, and AK103, respectively. Results for all groundwater samples and analytes were either non-detect or detected below ADEC Groundwater Cleanup Levels as specified below:

- SS010-MW01 results for both GRO (0.0356 mg/L) and RRO (0.0326 mg/L) were below ADEC Cleanup Levels and DRO was not detected. A duplicate sample (SS010-MW99) was also collected at this location with results for all analytes being non-detect.
- SS010-MW02 results for GRO, DRO and RRO were all non-detect.

- SS010-MW03 results for both GRO (0.0326 J mg/L) and RRO (0.705 mg/L) were below ADEC Cleanup Levels and DRO was not detected

A summary of the analytical results and ADEC Groundwater Cleanup Levels is presented in Table 5-5. Analytical results are also shown aerially on Figure 5-3.

TABLE 5-1 SITE ST009 GROUNDWATER ANALYTICAL RESULTS
COMPARISON OF GROUNDWATER SAMPLE CONCENTRATIONS TO ADEC CLEANUP LEVELS

				Sample Identifier	MW-4		MW-7		MW-9	
				Groundwater Sample ID	MW-4-073014		MW-7-073014		MW-9-073014	
				Sample Date	30-Jul-14		30-Jul-14		30-Jul-14	
Analyte	**Analytical Method**	**CASRN**	**Units**	**ADEC Groundwater Cleanup Level [1]**	**Results**	**Q**	**Results**	**Q**	**Results**	**Q**
Field Parameters										
Temperature	Field	-	˚C	NS	8.82		3.81		3.94	
Specific Conductance	Field	-	µS/cm @ 25˚C	NS	58		98		141	
Dissolved Oxygen	Field	-	mg/L	NS	1.11		0.75		4.05	
pH	Field	-	standard units	NS	2.87*		6.33		6.29	
Oxygen Reduction Potential	Field	-	mV	NS	41.3		25.4		74.0	
Turbidity	Field	-	NTU	NS	6.11		1.17		15.99	
Petroleum Hydrocarbons										
Gasoline Range Organics	AK101	GRO	mg/L	2.2	0.0727	UJ	0.495	J	0.293	
Diesel Range Organics	AK102	DRO	mg/L	1.5	1.21		**2.87**		1.04	
BTEX										
Benzene	SW8260B	71-43-2	µg/L	5.0	0.20	U	0.20	U	0.20	U
Ethylbenzene	SW8260B	100-41-4	µg/L	700	0.50	U	2.0		0.64	J
m,p-Xylene	SW8260B	179601-23-1	µg/L	NS	1.0	U	4.38		1.06	J
o-Xylene	SW8260B	95-47-6	µg/L	NS	0.50	U	0.97	J	0.50	U
Toluene	SW8260B	108-88-3	µg/L	1,000	0.50	U	0.50	U	0.50	U
Xylenes, Total	SW8260B	1330-20-7	µg/L	10,000	1.5	U	5.35		1.06	J

Notes:

Results shown in bold and highlighted blue equal or exceed the ADEC Groundwater Cleanup Level.

[1] ADEC Groundwater Cleanup Levels (2012), AAC Title 18, Chapter 75.345 Table C.

* actual pH reading; meter verified with calibration fluid during sampling.

ADEC = Alaska Department of Environmental Conservation

CASRN = Chemical Abstracts Service Registry Number

mg/L = Milligram(s) per liter ˚C = degrees Celsius

µg/L = Microgram (s) per liter mV = millivolts

NS = Not specified NTU = Nephelometric Turbidity Unit

µS/cm = microsiemens per centimeter

Q - Data Qualifiers:

J = The analyte was positively identified; the quantitation limit is estimated.

UJ = The analyte was not detected; however the quantitation limit is estimated based on data validation criteria.

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.

Note
Results shown in bold and highlighted blue equal or exceed the ADEC groundwater cleanup level and/or ROD-specified level.

Acronyms
ADEC - Alaska Department of Environmental Conservation
BTEX - Benzene, toluene, ethylbenzene, and total xylenes
mg/L - Milligram(s) per liter
µg/L - Microgram(s) per liter
NS - Not specified
ROD - Record of decision

Data Qualifiers
J - The analyte was positively identified; the quantitation limit is estimated.
UJ - The analyte was not detected; however, the quantitation limit is estimated due to discrepancies in the associated quality control criteria.
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.

Data Source
Imagery: PACAF, 2001

		Sample Identifier	MW-4	
Analyte	**Units**	**ADEC Groundwater Cleanup Level**	**Results**	**Q**
Petroleum Hydrocarbons				
Gasoline Range Organics	mg/l	2.2	0.0727	UJ
Diesel Range Organics	mg/l	1.5	1.21	
BTEX				
Benzene	µg/l	5.0	0.20	U
Ethylbenzene	µg/l	700	0.50	U
m,p-Xylene	µg/l	NS	1.0	U
o-Xylene	µg/l	NS	0.50	U
Toluene	µg/l	1,000	0.50	U
Xylenes, Total	µg/l	10,000	1.5	U

		Sample Identifier	FC-SW01		FC-SW99	
Analyte	**Units**	**ADEC Surface Water Cleanup Level**	**Results**	**Q**	**Results**	**Q**
Total Aromatic Hydrocarbons (TAH) & Total Aqueous Hydrocarbons (TAqH)						
TAH	µg/l	10	1.0	U	1.0	U
TAqH	µg/l	15	0.050	U	0.052	U

		Sample Identifier	MW-7	
Analyte	**Units**	**ADEC Groundwater Cleanup Level**	**Results**	**Q**
Petroleum Hydrocarbons				
Gasoline Range Organics	mg/l	2.2	0.495	J
Diesel Range Organics	mg/l	1.5	**2.87**	
BTEX				
Benzene	µg/l	5.0	0.20	U
Ethylbenzene	µg/l	700	2.0	
m,p-Xylene	µg/l	NS	4.38	
o-Xylene	µg/l	NS	0.97	J
Toluene	µg/l	1,000	0.50	U
Xylenes, Total	µg/l	10,000	5.35	

		Sample Identifier	MW-9	
Analyte	**Units**	**ADEC Groundwater Cleanup Level**	**Results**	**Q**
Petroleum Hydrocarbons				
Gasoline Range Organics	mg/l	2.2	0.293	
Diesel Range Organics	mg/l	1.5	1.04	
BTEX				
Benzene	µg/l	5.0	0.20	U
Ethylbenzene	µg/l	700	0.64	J
m,p-Xylene	µg/l	NS	1.06	J
o-Xylene	µg/l	NS	0.50	U
Toluene	µg/l	1,000	0.50	U
Xylenes, Total	µg/l	10,000	1.06	J

FC-SW01
MW-4
MW-7
MW-9

Legend
- Monitoring Well Sampled
- Surface Water Sample Location
- ST009 Boundary

N
0 50 100 200 Feet

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Figure 5-1
Groundwater and Surface Water Results at Site ST009

jklemick Path: C:\EA\projects\FAIRBANKS\611th Remote Sites\Romanzof\MXD\Report\ST009a.mxd

TABLE 5-2 SITE ST009 SURFACE WATER ANALYTICAL RESULTS
COMPARISON OF SURFACE WATER SAMPLE CONCENTRATIONS TO ADEC WATER QUALITY STANDARDS

				Sample Identifier	FC-SW01		FC-SW99	
				Surface Water Sample ID	FC-SW01-080514		080514 Duplicate	
				Sample Date	5-Aug-14		5-Aug-14	
Analyte	**Analytical Method**	**CASRN**	**Units**	**ADEC Surface Water Cleanup Level[1]**	**Results**	**Q**	**Results**	**Q**
Field Parameters								
Temperature	Field	-	˚C	NS	7.20		-	
Specific Conductance	Field	-	µS/cm @ 25˚C	NS	26		-	
Dissolved Oxygen	Field	-	mg/L	NS	12.28		-	
pH	Field	-	standard units	NS	5.81		-	
Oxygen Reduction Potential	Field	-	mV	NS	-49.3		-	
Turbidity	Field	-	NTU	NS	4.66		-	
Total Aromatic Hydrocarbons (TAH) & Total Aqueous Hydrocarbons (TAqH)								
TAH	EPA 624	-	µg/L	10	1.0	U	1.0	U
TAqH	E625 SIM	-	µg/L	15	0.050	U	0.052	U

Notes:

[1] Total TAqH and TAH values are compared to the 18 AAC 70 Water Quality Standards.
ADEC = Alaska Department of Environmental Conservation
CASRN = Chemical Abstracts Service Registry Number
Because values for calculating TAH and TAqH are all non-detects, they are reported as the lowest LOD for all non-detects
µg/L - Microgram (s) per liter
mg/L = milligrams per liter
NS - Not specified
°C = degrees Celsius
TAH =Total Aromatic Hydrocarbons
mV = millivolts
TAqH = Total Aqueous Hydrocarbons
NTU = Nephelometric Turbidity Unit
µS/cm = microsiemens per centimeter
SIM = selective ion monitoring

Q - Data Qualifiers:
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.

TABLE 5-3 SITE SS015 GROUNDWATER ANALYTICAL RESULTS
COMPARISON OF GROUNDWATER SAMPLE CONCENTRATIONS TO ADEC CLEANUP LEVELS

				Sample Identifier	WW-01		WW-05		WW-99		WW-06	
				Groundwater ID	WW-01-072914		WW-05-072914		WW-05-072914 Duplicate		WW-06-072914	
				Sample Date	29-Jul-14		29-Jul-14		29-Jul-14		29-Jul-14	
Analyte	**Analytical Method**	**CASRN**	**Units**	**ADEC Groundwater Cleanup Level [1]**	**Results**	**Q**	**Results**	**Q**	**Results**	**Q**	**Results**	**Q**
Field Parameters												
Temperature	Field	-	˚C	NS	5.49		4.54		-		10.72	
Specific Conductance	Field	-	µS/cm @ 25˚C	NS	384		128		-		94.0	
Dissolved Oxygen	Field	-	mg/L	NS	3.19		11.37		-		8.18	
pH	Field	-	standard units	NS	6.54		5.77		-		5.33	
Oxygen Reduction Potential	Field	-	mV	NS	52.0		100		-		194	
Turbidity	Field	-	NTU	NS	8.12		2.1		-		25.9	
Petroleum Hydrocarbons												
Gasoline Range Organics	AK101	GRO	mg/L	2.2	0.191	J	0.050	U	0.0461	J	0.0378	J
Diesel Range Organics	AK102	DRO	mg/L	1.5	**3.16**		0.418	J	0.60	UJ	**1.56**	
BTEX												
Benzene	SW8260B	71-43-2	µg/L	5.0	2.21	J	0.20	U	0.20	U	0.20	U
Ethylbenzene	SW8260B	100-41-4	µg/L	700	3.63	J	0.50	U	0.50	U	0.50	U
m,p-Xylene	SW8260B	179601-23-1	µg/L	NS	4.36	J	1.0	U	1.0	U	1.0	U
o-Xylene	SW8260B	95-47-6	µg/L	NS	2.39	J	0.50	U	0.50	U	0.50	U
Toluene	SW8260B	108-88-3	µg/L	1,000	0.50	UJ	0.50	U	0.50	U	0.50	U
Xylenes, Total	SW8260B	1330-20-7	µg/L	10,000	6.75	J	1.5	U	1.5	U	1.5	U
Monitored Natural Attenuation (MNA) Parameters												
Alkalinity, total (as CaCO3)	SM2320B	ALK	mg/L	NS	144		49.8		49.6		27.2	
Iron	SW6020A	7439-89-6	mg/L	NS	0.26	J	0.25	U	0.25	U	0.25	U
Nitrate + Nitrite	SW9056A	NN	mg/L	NS	0.35	J	0.52	J	0.92	J	0.77	J
Sulfate	SW9056A	14808-79-8	mg/L	NS	5.16		4.03		4.22		2.23	

Notes:

Results shown in bold and highlighted blue equal or exceed the ADEC Groundwater Cleanup Level.

[1] ADEC Groundwater Cleanup Levels (2012), AAC Title 18, Chapter 75.345 Table C.

ADEC = Alaska Department of Environmental Conservation

CASRN = Chemical Abstracts Service Registry Number

mg/L = Milligram(s) per liter ℃ = degrees Celsius

µg/L = Microgram (s) per liter mV = millivolts

NS = Not specified NTU = Nephelometric Turbidity Unit

µS/cm = microsiemens per centimeter

Q - Data Qualifiers:

J = The analyte was positively identified; the quantitation limit is estimated.

UJ = The analyte was not detected; however the quantitation limit is estimated based on data validation criteria.

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.

Note
Results shown in bold and highlighted blue equal or exceed the ADEC groundwater cleanup level and/or ROD-specified level.

Acronyms
ADEC - Alaska Department of Environmental Conservation
BTEX - Benzene, toluene, ethylbenzene, and total xylenes
mg/L - Milligram(s) per liter
µg/L - Microgram(s) per liter
NA - Not applicable
NS - Not specified
ROD - Record of decision

Data Qualifiers
J - The analyte was positively identified; the quantitation limit is estimated.
UJ - The analyte was not detected; however, the quantitation limit is estimated due to discrepancies in the associated quality control criteria.
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.

Data Source
Imagery: PACAF, 2001

		Sample Identifier	WW-05		WW-99	
Analyte	Units	ADEC Groundwater Cleanup Level	Results	Q	Results	Q
Petroleum Hydrocarbons						
Gasoline Range Organics	mg/l	2.2	0.050	U	0.0461	J
Diesel Range Organics	mg/l	1.5	0.418	J	0.60	UJ
BTEX						
Benzene	µg/l	5.0	0.20	U	0.20	U
Ethylbenzene	µg/l	700	0.50	U	0.50	U
m,p-Xylene	µg/l	NS	1.0	U	1.0	U
o-Xylene	µg/l	NS	0.50	U	0.50	U
Toluene	µg/l	1,000	0.50	U	0.50	U
Xylenes, Total	µg/l	10,000	1.5	U	1.5	U

		Sample Identifier	WW-06	
Analyte	Units	ADEC Groundwater Cleanup Level	Results	Q
Petroleum Hydrocarbons				
Gasoline Range Organics	mg/l	2.2	0.0378	J
Diesel Range Organics	mg/l	1.5	**1.56**	
BTEX				
Benzene	µg/l	5.0	0.20	U
Ethylbenzene	µg/l	700	0.50	U
m,p-Xylene	µg/l	NS	1.0	U
o-Xylene	µg/l	NS	0.50	U
Toluene	µg/l	1,000	0.50	U
Xylenes, Total	µg/l	10,000	1.5	U

		Sample Identifier	WW-01	
Analyte	Units	ADEC Groundwater Cleanup Level	Results	Q
Petroleum Hydrocarbons				
Gasoline Range Organics	mg/l	2.2	0.191	J
Diesel Range Organics	mg/l	1.5	**3.16**	
BTEX				
Benzene	µg/l	5.0	2.21	J
Ethylbenzene	µg/l	700	3.63	J
m,p-Xylene	µg/l	NS	4.36	J
o-Xylene	µg/l	NS	2.39	J
Toluene	µg/l	1,000	0.50	UJ
Xylenes, Total	µg/l	10,000	6.75	J

WW-05
WW-06
WW-01
Former Soil Stockpile
Former Excavation
Former Bermed AST Area

Legend
- Monitoring Well Sampled
- Former Locations
- Institutional Control (IC) Boundary
- SS015 Boundary

N
0 50 100 200 Feet

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for Sites LF003, ST009, SS015, and SS010
at Cape Romanzof Long Range Radar Station, Alaska

Figure 5-2
Groundwater Results at Site SS015

klemick Path: C:\EA\projects\FAIRBANKS\611th Remote Sites\RomanzofMXD\ReportSS015.mxd

TABLE 5-4 SITE SS010 SUBSURFACE SOIL ANALYTICAL RESULTS
COMPARISON OF SUBSURFACE SOIL SAMPLE CONCENTRATIONS TO ADEC CLEANUP LEVELS

Analyte				Petroleum Hydrocarbons		Gasoline Range Organics		Diesel Range Organics		Residual Range Organics	
Analytical Method						AK101		AK102		AK103	
CASRN						GRO		DRO		RRO	
ADEC Soil Cleanup Level [1]				Ingestion		1,400		10,250		10,000	
				Inhalation		1,400		12,500		22,000	
				Migration to Groundwater		300		250		11,000	
				Maximum Allowable Concentration		1,400		12,500		22,000	
Units						mg/kg		mg/kg		mg/kg	
Soil Boring ID/ Associated Monitoring Well ID	Soil Sample ID	Sample Depth (ft bgs)	Sample Date			Results	Q	Results	Q	Results	Q
SS010-SB01/ SS010-MW01	SS010-SB01-2	2	30-Jul-14			0.932	UJ	10.6	UJ	16.9	J
	SS010-SB01-11	11	31-Jul-14			0.981	UJ	10.2	UJ	90.4	J
	SS010-SB01-90	90	31-Jul-14			0.879	UJ	11.8	UJ	11.8	UJ
SS010-SB02/ SS010-MW02	SS010-SB02-2	2	2-Aug-14			1.62	UJ	50.5		494	J
	SS010-SB02-13	13	2-Aug-14			0.917	UJ	10.9	UJ	10.9	UJ
	SS010-SB02-56	56	2-Aug-14			0.848	UJ	10.4	UJ	12.7	J
SS010-SB03/ SS010-MW03	SS010-SB03-2	2	29-Jul-14			2.02	UJ	17.3	UJ	214	J
	SS010-SB03-14	14	29-Jul-14			1.21	UJ	10.8	UJ	10.8	UJ
	SS010-SB03-14 Duplicate	14	29-Jul-14			1.36	UJ	10.7	UJ	7.9	J
	SS010-SB03-80	80	29-Jul-14			1.42	UJ	10.9	UJ	10.9	UJ

Notes:

[1] ADEC Soil Cleanup Levels, 18 Alaska Administrative Code (AAC) 75.341 Table B2, Method 2, Under-40 inch zone; updated April 2012.

ADEC = Alaska Department of Environmental Conservation

CASRN = Chemical Abstracts Service Registry Number

mg/kg = milligram(s) per kilogram

Q- Data Qualifiers:

J = The analyte was positively identified; the quantitation limit is estimated.

UJ = The analyte was not detected; however the quantitation limit is estimated based on data validation criteria.

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.

TABLE 5-5 SITE SS010 GROUNDWATER ANALYTICAL RESULTS
COMPARISON OF GROUNDWATER SAMPLE CONCENTRATIONS TO ADEC CLEANUP LEVELS

				Sample Identifier	SS010-MW01		SS010-MW99		SS010-MW02		SS010-MW03	
				Groundwater ID	SS010-MW01-080414		SS010-MW01-080414 Duplicate		SS010-MW02-080514		SS010-MW03-080214	
				Sample Date	4-Aug-14		4-Aug-14		5-Aug-14		2-Aug-14	
Analyte	**Analytical Method**	**CASRN**	**Units**	**ADEC Groundwater Cleanup Level [1]**	**Results**	**Q**	**Results**	**Q**	**Results**	**Q**	**Results**	**Q**
Field Parameters												
Temperature	Field	-	˚C	NS	5.88		-		8.40		4.17	
Specific Conductance	Field	-	µS/cm @ 25˚C	NS	28.0		-		30.0		20.0	
Dissolved Oxygen	Field	-	mg/L	NS	9.59		-		11.58		8.82	
pH	Field	-	standard units	NS	5.12		-		5.94		5.04	
Oxygen Reduction Potential	Field	-	mV	NS	-59.4		-		-79.9		-78.9	
Turbidity	Field	-	NTU	NS	4.00		-		6.04		4.01	
Petroleum Hydrocarbons												
Gasoline Range Organics	AK101	GRO	mg/L	2.2	0.0356	J	0.050	U	0.050	U	0.0326	J
Diesel Range Organics	AK102	DRO	mg/L	1.5	0.315	UJ	0.374	UJ	0.363	UJ	0.301	UJ
Residual Range Organics	AK103	RRO	mg/L	1.1	0.393	J	0.25	U	0.25	U	0.705	

Notes:
[1] ADEC Groundwater Cleanup Levels (2012), AAC Title 18, Chapter 75.345 Table C.
ADEC = Alaska Department of Environmental Conservation
CASRN = Chemical Abstracts Service Registry Number
mg/L = Milligram(s) per liter °C = degrees Celsius
µg/l = Microgram (s) per liter mV = millivolts
NS = Not specified NTU = Nephelometric Turbidity Unit
µS/cm = microsiemens per centimeter

Q - Data Qualifiers:
J = The analyte was positively identified; the quantitation limit is estimated.
UJ = The analyte was not detected; however the quantitation limit is estimated based on data validation criteria.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.

Soil Boring ID/ Associated Monitoring Well ID	Soil Sample ID	Sample Depth (ft bgs)	Gasoline Range Organics Results (mg/kg)	Q	Diesel Range Organics Results (mg/kg)	Q	Residual Range Organics Results (mg/kg)	Q
SS010-SB01/ SS010-MW01	SS010-SB01-2	2	0.932	UJ	10.6	UJ	16.9	J
	SS010-SB01-11	11	0.981	UJ	10.2	UJ	90.4	J
	SS010-SB01-90	90	0.879	UJ	11.8	UJ	11.8	UJ

Analyte	Units	Sample Identifier / ADEC Groundwater Cleanup Level	SS010-MW01 Results	SS010-MW01 Q	SS010-MW99 Results	SS010-MW99 Q
Petroleum Hydrocarbons						
Gasoline Range Organics	mg/l	2.2	0.0356	J	0.050	U
Diesel Range Organics	mg/l	1.5	0.315	UJ	0.374	UJ
Residual Range Organics	mg/l	1.1	0.393	J	0.25	U

Soil Boring ID/ Associated Monitoring Well ID	Soil Sample ID	Sample Depth (ft bgs)	Gasoline Range Organics Results (mg/kg)	Q	Diesel Range Organics Results (mg/kg)	Q	Residual Range Organics Results (mg/kg)	Q
SS010-SB03/ SS010-MW03	SS010-SB03-2	2	2.02	UJ	17.3	UJ	214	J
	SS010-SB03-14	14	1.21	UJ	10.8	UJ	10.8	UJ
	SS010-SB03-14 Duplicate	14	1.36	UJ	10.7	UJ	7.9	J
	SS010-SB03-80	80	1.42	UJ	10.9	UJ	10.9	UJ

Analyte	Units	Sample Identifier / ADEC Groundwater Cleanup Level	SS010-MW03 Results	SS010-MW03 Q
Petroleum Hydrocarbons				
Gasoline Range Organics	mg/l	2.2	0.0326	J
Diesel Range Organics	mg/l	1.5	0.3	UJ
Residual Range Organics	mg/l	1.1	0.705	

Soil Boring ID/ Associated Monitoring Well ID	Soil Sample ID	Sample Depth (ft bgs)	Gasoline Range Organics Results (mg/kg)	Q	Diesel Range Organics Results (mg/kg)	Q	Residual Range Organics Results (mg/kg)	Q
SS010-SB02/ SS010-MW02	SS010-SB02-2	2	1.62	UJ	50.5		494	J
	SS010-SB02-13	13	0.917	UJ	10.9	UJ	10.9	UJ
	SS010-SB02-56	56	0.848	UJ	10.4	UJ	12.7	J

Analyte	Units	Sample Identifier / ADEC Groundwater Cleanup Level	SS010-MW02 Results	SS010-MW02 Q
Petroleum Hydrocarbons				
Gasoline Range Organics	mg/l	2.2	0.050	U
Diesel Range Organics	mg/l	1.5	0.363	UJ
Residual Range Organics	mg/l	1.1	0.25	U

Legend

- Co-located Soil Boring and Monitoring Well Installation Locations
- Estimated Groundwater Flow Direction
- Contamination Zone
- SS010 Boundary

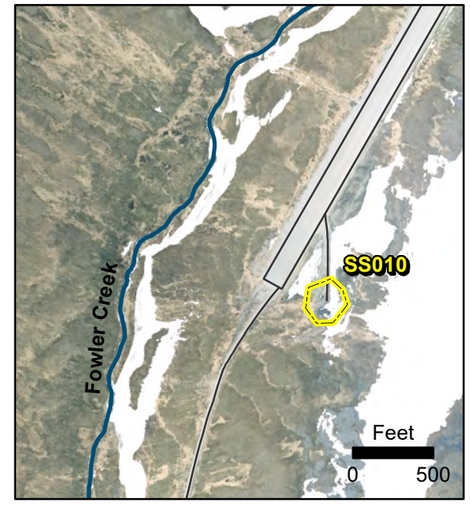
Note
None of the results exceeded the ADEC Groundwater Cleanup Level, ADEC Soil Cleanup Level, or ROD-specified level.

Acronyms
ADEC - Alaska Department of Environmental Conservation
bgs - Below ground surface
ft - Foot (feet)
mg/kg - Milligram(s) per kilogram
mg/L - Milligram(s) per liter
ROD - Record of decision

Data Qualifiers
J - The analyte was positively identified; the quantitation limit is estimated.
UJ - The analyte was not detected; however, the quantitation limit is estimated due to discrepancies in the associated quality control criteria.
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.

Data Source
Imagery: PACAF, 2001

SS010-MW01
SS010-MW03
SS010-MW02



N

0 50 100 200 Feet

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for Sites LF003, ST009, SS015, and SS010
at Cape Romanzof Long Range Radar Station, Alaska

Figure 5-3
Subsurface Soil and Groundwater Results at Site SS010

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6.0 DATA QUALITY

A quality assurance (QA)/quality control (QC) program was implemented during the field and laboratory activities to ensure the generation of data of known and defensible quality. The requirements for the QA/QC program are outlined in Worksheets #20 and #28 of the Work Plan (USAF 2014). The QA/QC program was designed to minimize error, provide early identification and correction of potential problems, control the data acquisition process, and evaluate the performance of the sampling program. The QA/QC procedures were followed in the field as well as at the offsite fixed based laboratory.

6.1 FIELD QUALITY CONTROL SAMPLES

Table 6-1. Environmental Samples Collected.

Matrix[1]	Analyte/ Analytical Group	Analytical, Preparation Method/ SOP Reference[2]	No. of Samples[3]	No. of Field Duplicates[4]	No. of Matrix Spike/Matrix Spike Duplicates[5]	No. of Trip Blanks[7]	No. of Equip. Blanks[8]	Total
Water	GRO	AK101	9	2	1	1	1	14
Water	DRO	AK102	9	2	1	0	1	13
Water	RRO	AK103	3	1	1	0	1	9
Water	BTEX	SW8260B	6	1	1	1	1	10
Water	Alkalinity	SM2320B	3	1	1	0	1	6
Water	Dissolved Iron	SW3010A / SW6020A	3	1	1	0	1	6
Water	Sulfate	SW9056A	3	1	1	0	1	6
Water	Nitrate/Nitrite	SW9056A	3	1	1	0	1	6
Water	TAH	EPA 624/ SW5030B	1	1	1	0	0	3
Water	TAqH	E625 SIMS/ SW3520C	1	1	1	0	0	3
Soil	GRO	AK101	9	1	1	1	1	13
Soil	DRO	AK102	9	1	1	0	1	12
Soil	RRO	AK103	9	1	1	0	1	12

Notes:
SOP = standard operating procedure

6.2 DATA QUALITY INDICATORS

This section presents a qualitative and quantitative assessment of the analytical data quality. The quantitative assessment of the analytical data was measured using the parameters of precision, accuracy, and completeness. The qualitative assessment of the analytical data quality was measured by assessing the representativeness and comparability of the data. In addition, the sensitivity of the analytical methodology was evaluated.

Precision

Precision is defined as the degree of agreement among repeated measurement of the same parameter. Precision is evaluated through the use of field duplicate samples to assess the potential bias of field and laboratory conditions on the results, and also through the use of matrix spike pairs and blank spike samples (also known as laboratory control samples) to assess the laboratory's precision. Precision also characterizes the natural variation of the matrix. The project objectives for precision were achieved.

Accuracy

Accuracy is a measure of the closeness of an observed value to the "true" value. Accuracy is evaluated by the laboratory through the use of blank spike sample (also known as laboratory control samples) recoveries, which are compared to control limits. The project objectives for accuracy were achieved.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent the characteristics of the population that is sampled. The results of the evaluation of field duplicate sample results demonstrate that the data collected are representative.

Completeness

Analytical completeness is a measure of the amount of usable data obtained versus the total possible planned data. Completeness was calculated for each analyte, method, and matrix. The evaluation includes a comparison of the number of valid results divided by the possible number of individual results, expressed in a percentage. The planned samples and analytical data were collected. The completeness goal was met.

Comparability

Comparability is a qualitative indicator that expresses the confidence with which one data set can be compared to another. This goal is achieved by using standard operating procedures to collect and analyze representative samples and reporting data in standardized formats. Sampling and testing were conducted in accordance with the specification of the project Work Plan (USAF 2014) and are, therefore, deemed to be comparable.

Sensitivity

The sensitivity of the methodology used for the analysis of project samples met the requirements of the project Work Plan (USAF 2014).

6.3 DATA VALIDATION

Data validation was performed by the project chemist to ensure that the laboratory procedures and data quality met the project Work Plan requirements (USAF 2014). Each data validation report presented in Appendix E includes a summary of the results of QC measurements and addresses the impact on data usability based on project objectives. There were no significant issues with data quality for the project data. The data quality objectives were met for the samples submitted to the laboratory and project Work Plan standards were achieved, unless otherwise noted.

Qualitative rather than quantitative assessments of data quality were performed because the data validation guidelines produce qualitative results (i.e., U, J, N, and R flags, rather than a numerical error or variability value associated with each data point) and because it is difficult to accurately quantify sources of error.

Data qualified with the “UJ” (non-detectable results) or “J” (detectable) flags are considered estimated minimum concentrations. A summary of data validation findings and complete data validation reports, including additional qualification of data and flagging criteria required, are presented in Appendix E. The laboratory reports are presented in Appendix D.

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7.0 DEVIATIONS FROM WORK PLAN

The following are the deviations that occurred during this field effort.

7.1 MONITORING WELL LOCATIONS

Monitoring well locations were adjusted in the field in order to better match the site's topographical landscape and the likelihood of encountering groundwater, and access limitations for the drill rig on the steep sloped area. Monitoring well SS010-MW03 was installed within 20 feet of its proposed location, near to the SS010 site boundary and within the previously established contamination zone. Well SS010-MW01 was established approximately 80 feet northwest of its proposed location. Well SS010-MW02 was installed approximately 500 ft southwest of the proposed location.

Adjusting the monitoring well installation locations was discussed while in the field by the EA project manager, ADEC Regulators, and the USAF. The three monitoring well depths originally planned were insufficient to reach groundwater, and the installed monitoring wells were screened at depths where groundwater was encountered. Monitoring wells SS010-MW01 and SS010-MW02 were expected to require total depths of 30 ft bgs each, but instead were installed to total depths of 104.0 ft bgs and 118.0 ft bgs, respectively. Well SS010-MW03 was expected to require a total depth of 80 ft bgs, and was installed at a depth of 81.5 ft bgs.

7.2 SOIL SAMPLING

For subsurface soil samples at SS010-MW01 and SS010-MW02, the capillary fringe samples were collected from an estimated depth due to the inability to accurately determine capillary fringe depth while using the only equipment that would successfully install monitoring wells (DTH). For well SS010-MW01, a soil sample was collected at 90 feet bgs, while the depth to water was found to be approximately 97 feet bgs during groundwater sampling. At well SS010-MW02, a soil sample was collected at 56 feet bgs, and the depth to water was approximately 115 ft bgs. For well SS010-MW03, a sample was taken at 80 feet bgs, and the depth to water was approximately 87 feet bgs.

7.3 QUALITY CONTROL SAMPLE COLLECTION

At Site SS015, the planned collection of a duplicate QC sample at WW-01 was changed and the duplicate was collected at WW-05. Well WW-01 was heavily damaged and the QC sample was moved to a well in good condition due to concerns that it might not be possible to collect a sufficient sample volume from this damaged well. The required parameters and analytes were the same for both wells, and QC requirements were met.

At Site ST009, the planned duplicate QC sample at MW-4 was not collected. It was determined that this duplicate was not needed in order to meet the requirements for QC sampling according to ADEC Draft Field Sampling Guidance (ADEC 2010). This page intentionally left blank.

8.0 CONCLUSIONS

This section summarizes the conclusions based on the IC inspections and environmental sampling activities performed at four LTM sites at Cape Romanzof, Alaska.

LF003 LANDFILL AND IC INSPECTION

The landfill cap and IC inspection of Site LF003 (Landfill No. 2) noted areas with surface erosion and partially-exposed debris consisting primarily of metal. In order to meet the substantive requirements of 18 AAC 60.390, additional fill material will be placed at LF003 to adequately cover the debris breaking through the surface.

No warning signs or area restriction postings were found on-site or in the surrounding area. The site is used as a vehicle turn-around and pull-out area primarily by site workers.

ST009 IC INSPECTION

The IC inspection at Site ST009 noted the following: the site is accessed by site workers during non-winter months for recreational and industrial purposes; historically buried drums are exposed along a section of eroding bank and on the shoreline and below the high-tide mark; and there is a single warning sign posted along the eastern side of Fowler Creek, on the western edge of the Site ST009 boundary.

An additional warning sign will be posted that is visible from the shoreline. The new sign will have the same language as the existing warning sign.

ST009 GROUNDWATER MONITORING

Results of the groundwater monitoring conducted at Site ST009 indicated the presence of DRO at a concentration exceeding the ADEC Cleanup Level at monitoring well MW-7. GRO and BTEX were not detected or detected at concentrations below ADEC Groundwater Cleanup Levels at all locations sampled at Site ST009.

ST009 SURFACE WATER SAMPLING

The ST009 surface water sample collected from Fowler Creek indicated that all values analyzed for calculating TAH and TAqH were non-detect. Therefore, the total value for TAH and TAqH when all of the analytes are non-detect was reported as the lowest LOD.

SS015 GROUNDWATER MONITORING

Results of the groundwater monitoring conducted at Site SS015 indicated the presence of DRO at concentrations exceeding the ADEC Cleanup Level at monitoring wells WW-01 and WW-06. GRO and BTEX were not detected or detected at concentrations below ADEC Groundwater Cleanup Levels at all locations sampled at Site SS015.

While well WW-01 was found to be damaged, it was successfully sampled in 2014, and no obstructions were noted. Well WW-01 will be scheduled for repairs. If for some reason repairs are found to not be possible, it will be properly decommissioned and abandoned.

SS010 IC INSPECTION

The IC inspection at Site SS010 noted that there were no warning signs or other area restrictions in place since none are required, and that there was year-round access to site structures by site workers for industrial and maintenance purposes.

SS010 GROUNDWATER MONITORING AND WELL INSTALLATION

Results of the groundwater monitoring conducted at Site SS010 from the three newly-installed monitoring wells indicated that GRO, DRO, and RRO were not detected or detected at concentrations below ADEC Groundwater Cleanup Levels. Groundwater was deeper than anticipated at Site SS010, thus monitoring wells were installed deeper than planned.

SS010 SOIL SAMPLING

Results of the subsurface soil sampling conducted at Site SS010 indicated that GRO, DRO, and RRO were not detected or detected at concentrations below ADEC Groundwater Cleanup Levels. These boring locations were co-located with the monitoring well installation points at Site SS010.

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APPENDICES

Appendix A - Field Notes and Forms

Appendix B - Photographic Logs

Appendix C - Well Construction and Boring Logs

Appendix D - Laboratory Reports

Appendix E - Data Validation Reports and ADEC Checklists

Appendix F - ADEC Comments and Response to Comments on Draft Report

APPENDIX A

FIELD NOTES AND FORMS

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FIELD LOGBOOKS

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Rite in the Rain®

ALL-WEATHER

UNIVERSAL

№ 373-MX

Cape Romanzof LTM

2014

EA Engineering - Cape Romanzof - 62421101 07/28/14 page 01

sunny patchy fog 55°F

0800 - 1045 - Gear to Airport, E. Burt-Toland final logistic coordination

1045 - Depart Anchorage for Bethel (M. Blinstrub / Evana Burt-Toland)

1200 - Arrive Bethel, mob to Era charter.

1315 - Checked in @ Era Charter, waiting for flight w/ (J. Rezin, James GeoTek)

1330 - 1600 delayed flight.

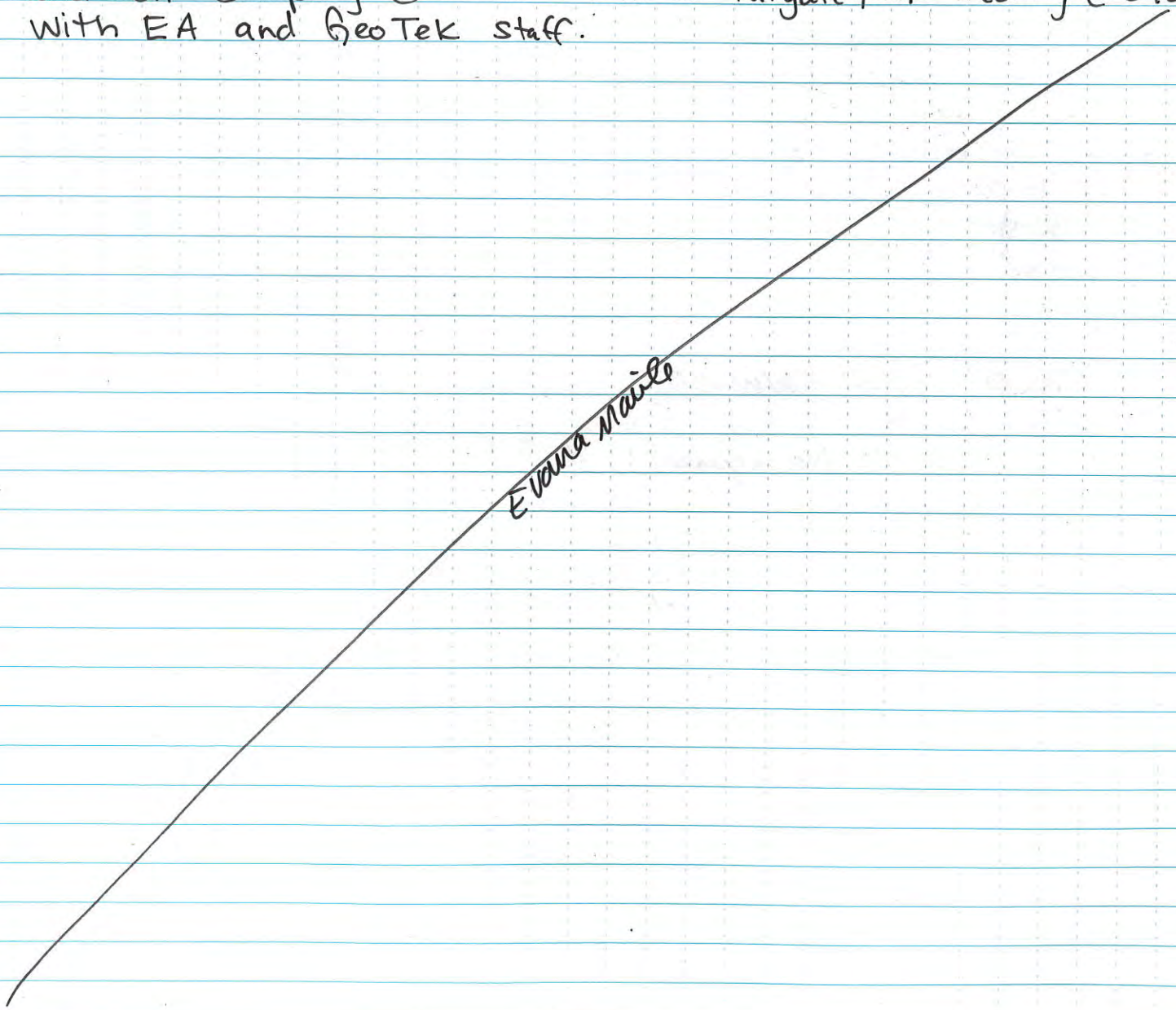
1615 - Depart Bethel

1715 - Arrive Cape Romanzof

1715 - 1845 Orientation, gear check.

1845 - 1945 settle in, prep sample coolers, ice, paperwork

2030 - End of day - Plan for tomorrow - Set-up for sampling wells at SS015, M. Blinstrub w/ GeoTek set-up for MW install and soil sampling @ SS010. Will do tailgate & H/S meeting @ 0700 with EA and GeoTek staff.



Rite in the Rain

Scale: 1 square = _____

 7/29/2014 Cape Romanzof Sunny 50°F

0600 - 0630 - Calibrate instruments
0630 - 0645 - Breakfast., Health & Safety before field work starts today.
0645 - 0825 - Health and Safety Meeting, review of safety by GeoTek and EA: J. Rezin, James Beckner, M. Blinstrub, E. Burt-Toland present. sign HASP.
Reviewed PPE, protocol for Emergency and Drilling/Sampling Safety. Got vehicle access forms signed, Computer access forms. Truck procured.
0825 - 0845 - Mob to SS010 (4 crewmen)
Drop M. Blinstrub / J. Rezin
E.B-T / J. Beckner up to Site Lower Camp to prep for MW sampling, load gear, Beckner drop EBT @ SS015 w/ gear.
0945 Arrive @ SS015 w/ gear
0945 - 1130 Run down to get parts for bladder pump, get decon water & other forgotten items in storage area by SS010 & cold storage (Lower camp).
1130 - Start pump, see form
1145 - M. Blinstrub visited SS015
1215 - Collected sample WW-05-072914 Primary & MS/MSD and duplicate WW-99-072914 (@ 1200 on label's)

1245 - Finish @ SS015 - WW-05.
1245 - 1300 lunch
1300 - 1415 sample management. Refridgerator available; Freezer space limited.
1415 - 1445 - Mob to WW-06 to collect sample.
* Vehicle only available for Drilling crew, 6-wheeler / other shuttle service not available for MW sampler. ARCTEC said I could call on radio for shuttle between sites/MW's, but it was a bit of a wait so walking gear was more efficient.
1445 - Set up @ WW-06 @ SS015
1515 - Begin pumping.
1545 - Collect sample WW-06-072914, clean up, decon.
1700 Mob to WW-01, set up pump for sample.
1805 - Collect sample WW-01-072914, clean up, decon and clean up for the day.
1850 - Back @ camp - break for dinner.

Scale: 1 square = _____

1850 - 1900 - Dinner
1900 - Sample management. paperwork.

Day Summary:
Deviations = WW-99 collected from WW-05 because WW-01 damaged.
Collected the following samples:
(MS/MSD) WW-05-072914 @ 1215 and duplicate WW-99-072914
WW-06-072914 @ 1545
WW-01-072914 @ 1805
Still need QC for RRO, TAH, TA&H.
WW-01 is badly damaged. Well cap not in place, shattered casing, torn outer casing (metal) used to be a stick-up? now is bgs [torn]. Still able to be sampled. Will try to find tool to trim casing - DTW measurments were taken from the North side of well OUTER metal casing. PVC shattered and too deep to read ~~Water level meter~~ EBT Interface Probe #'s accurately.
1935 - Finish paperwork. Plan for tomorrow - Sample wells @ ~~SS~~ EBT ST009, collect equipment blank perform Visual Inspections @ ST009 and LF003 if there's time.

~~1800~~ EBT 2000 Prep for tomorrow, bottles, paper forms. Analytical review. End of Day

page 4 7/30/14 Cape Romanzof haze/sunny 55°F

0615 - Calibrate instruments
0630 - Load truck, Health/Safety meeting: Buddy system, Road hazards.
0700 - Arrive at SS010 grab some gear, drop Evena Burt-Toland at ST009. E B-T needed GeoTek to cut locks at ST009 for the 3 wells to be sampled. locks were badly corroded and otherwise unable to open.
0800 - Set up sampling gear @ ST009 MW-9
0820-0840 interface probe having issues., Changed batteries. OK now.
0855 - Start pumping @ MW-9
0940 - Stabilization reached; collect sample MW-9-073014 for the following.
DRO AK102
BTEX 8260B
GRO AK101
0950 - Finish sample collection at MW-9 mob to MW-7 and set-up for sampling if no odor present: Historically had product? in MW-4 to - MW-7. Has heavy petroleum odor/product will move to MW-4 prior to any possible sampling @ MW-7.
1015 - Mobed to MW-4 called PM Kyle Waldron regarding sampling w/ product if needed.
Note if a deviation: Will measure product. If present, will use bailer to purge 3 well volumes (=) then collect a water quality reading prior to sample collection w/ bailer. (dedicated, disposable) Bailer is Fetlon® lined disposable, VOC tip used just in case sample can be run even though NAPL is present. Product only measure 0.02", will sample w/ pump after MW-4 (odor much less @ MW-4).
1145 - Made preparations for sampling MW-4, Break for lunch @ lower camp.
1200 - 1230 lunch, restock supplies.
1230 - 1315 mob to worksite ST009. Situational delay of sampling/purging*
1315 - 1325 Set tubing and begin purging MW-4
1420 - Sample collected @ MW-4, visible sheen present towards end of purging. pH dropped significantly, and suddenly, but stabilized.
1230 - 1315* Heavy truck traffic @ Pack, decided to wait for ~~MW-7~~ MW-4 set-up due to 3-4 fuel trucks idling (sp?) in ST009 area.
1315 - 1325 - Set up @ ~~MW-7~~ POST (Trucks gone). MW-4 able to have clean air in sample area.

Scale: 1 square = _____

1420 - 1620 - Delays due to trucks idling in area (fuel trucks) (base is getting it's annual re-fueling today - was scheduled last week but had weather delays).
Was able to set-up everything except tubing, pump, WLM, WQ-YSI, just waiting for trucks to leave ST009 staging area.
1620 - 1645 - Set-up remaining gear now that trucks have gone.
1645 - Begin purging MW-7
1720 - Stabilization reached: Collect sample MW-7-073014 for DRO, GRO, BTEX.

Deviation Summary:
No Duplicate collected from MW-7. QC requires 10% duplicates, this duplicate is not needed to meet requirement.

1720 - 1830 clean up, IDW management for ST009 - GAC'd all H_2O created on-site. Discharged on-site per QAPP.
1830 - 1850 - Work w/ M. Blinstub to place wells (30' pair). ArcTek will build a "bridge" with gravel for us to gain access to 30' well located on East side of road. they'll need to remove gravel when we are done.
1850 - 1900 Back to Lower camp for Sample management and dinner.
1900 - 1910 Disscussion w/ Dave (ArcTek) about all fueling needing to be done @ C. Romanzof by ArcTek staff - Including from fuel tank to drilling / generators, etc. M. Blinstub will also make note of this.
1915 - Dinner

1925 - call Kyle, PM. Update on progress.

1930 - 2000 Sample Management.

2000 - 2015 end of day paperwork.
Day Summary: Collected the following samples:
MW-9-073014 @ 0940
MW-4-073014 @ 1420
MW-7-073014 @ 1720 no QC collected for GW@ST009

EBT

Rite in the Rain

Page 6 7/31/14 Cape Romanzof Rain, Overcast 45°F
E. Burt-Toland

0615 - Bottle inventory, pack coolers / organize for remaining samples at SS010 and ST009.
GW remaining to be sampled:
① SS010-MW01 "shallow" 30+ ft well DRO/RRO, GRO
② SS010-MW02 "shallow" 30+ ft well DRO/RRO GRO
③ SS010-MW03 (80'/deep well) DRO/RRO, GRO
also need a duplicate & MS/MSD for this site to cover RRO QC.
also need an ④Equipment Blank for the pump.
Surface water remaining to be sampled:
ST009: ⑤FC-SW01
duplicate ⑥FC-SW99
also need MS/MSD
0730 - H/S topic Safe driving - lights / flash light on truck at all times.
0745 - Calibrate YSI for drillers to use if developing today.
0810 - prep for inspections @ LF003 Landfill No. 2 and ST009.
0830 - Prep for equipment blank.
0830 - 0900 wait for trucks to leave before collecting EB.
0910 - collect equipment blank off of Bladder pump
Water-EB-073114 @0910. GRO, DRO/RRO, alk, Dis. Iron, sulfate, nitrate/nitrite BTEX.
0925 - Mob to LF003 for site inspection. GPS, photo, & video taken photo# 100-0067-0158, GPS'd locations of note & video'd walk through.
1052 - Return to Lower camp. Waited for fog to lift a little since I was on foot and maybe not visible to trucks on road.
1130 - Back @ lower camp. Dry
1130 - 1145 Gear change (soaked).
1145 - 1200 paperwork
1200 - 1245 lunch break, prep for ST009 inspection.
1245 - Mob to staging area for drilling equipment.
1310 - arrive @ ST009, E. Burt-Toland dropped off, J. Rezin, J Beckner, M. Blinstrub up @ drilling location (SS010).
1320 - Begin site inspection @ ST009, walk boundary, zig-zag through site; photos taken of noteable areas. Including crushed metal rusted drums strewn along section of beach side of site (southern boundary) Wildlife use areas, signage (1), and human used areas.
1445 - M. Blinstrub picked me up from ST009, discussed issues with

Scale: 1 square = _____

Rain, dense fog, 45°F

him regaurding drilling "shallow" well (30' initial/planned depth is now @ ≈ 75' without hitting water table yet).
Being a remote site, materials for installation are limited. We will need to prioritize: depths and placement of other well; continue @ this location, or move? to next well??
M. Blinstrub / E. Burt-Toland return to lower camp to call PM & get dust masks for GeoTek staff.

1530-1600 - K. Waldron directs to continue @ current location until 20-30' more

1600 - E.B.T sample management (pack for transport, freeze gel ice packs for transport, COCs.)
M. Blinstrub w/ drillers.

1700-1745 Dinner Drill team back - compressor not working properly. Not completely able to drill. Something is wrong.

1745 to 1945 Whole team goes back to SB/MW install location @ SS010. Guys will work on figuring out what the compressor's issue is; I will take some rough elevation measurments on the difference between the 1st 81.5' well and these down gradient locations. Even with the compressor's issue aside, we still have not hit water at 90+ ft bgs

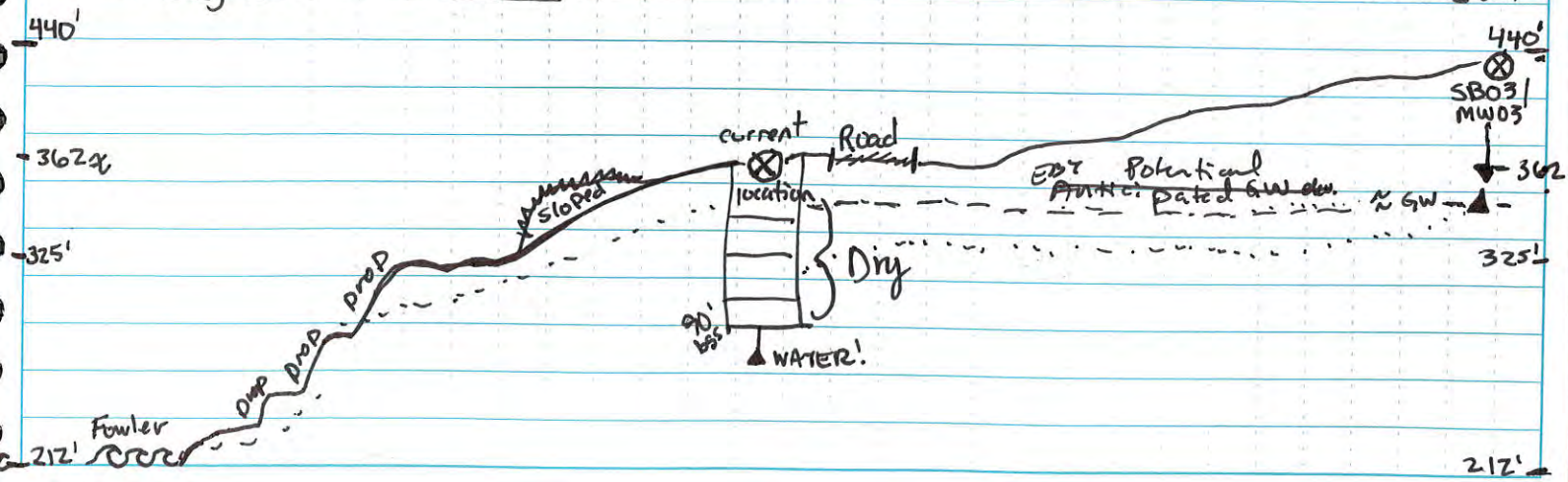
Estimates:

- Top well [SS010-SB03 / SS010-MW03] = 438 elliptical ft'
- current drilling loc on west side of road = c (362 b elliptical ft'
- Bank/Fowler Creek as close to directly west as poss = 212 a elliptical ft.

a = 150' drop in elev.
b = 76' drop in elev.
c = 226' drop in elev.

so, theoretically GW is somewhere between 90' bgs and 150' bgs. (If this reasoning is even remotely possible).

Rough cross section:



Scale: 1 square = _____

Rite in the Rain

Page 8 Cape Romanzof - August 9th 2014 dense fog, rain, 55°F

0730 - Review w/ Jeff and James compressor status: Compressor was "jamming" because of being clogged down-hole. GeoTek pulled all the rod and cleaned out last night, compressor is working for now.

0815 - Mob to warehouse & staging area to get gear for development of MW03.

094K - Arrive @ MW03 (E. Burt-Toland & James Beckner). M. Blinstrub / Jeff Rezin will work @ ~~MW02~~ MW01 EBT location Drilling down to find water.

1015 - Begin surge/purge cycle @ MW03
Initial water level (~~EBT~~ EBT) BTOC = 78.45'
Initial total depth BTOC = 84.45'

1250 - Final WQ readings: (w/in 10%.)

Temp °C	conductivity µS/cm	DO mg/L	pH	ORP mV	Turbidity:
3.59	27	11.21	6.66	133.2	1 - 51.10
					2 - 50.29
					3 - 47.10

Total volume purged / GALS
60 gallons treated & discharged on-site.

1300 - Break for late lunch. Guys found water!!! MW02 can be set.
1330 - Call Kyle: Re-place well # MW02 to ADEC location requested, use 15' screen MW01 EBT
1345 - Scope out logistics for getting rig to new MW02 location while GeoTek pulls rods out to place well.
1415 - Finish @ MW03 cleaning up development set-up. Hike down to ADEC requested area. Work out rig mob options.
1430 - ArcTEK's SAM on-site (adjacent roadway).
1430 - 1530 - GeoTEK finishing pulling rods. Begin well install.
1530 - 1700 - Well installation
1715 - 1740 - Clean up & mob gear out of area.
1740 - 1800 - Mob to Lower camp for dinner.
1800 - 1900 - Dinner, meeting about remaining tasks, scope, etc.
1930 - GeoTek finishing up monument & bollards, EA discussing Schedule for remaining tasks.

Goal Schedule:
8/2 Sat - AM - Start 3rd well (MB) PM - Develop 2nd well, sample 1st well (EBT)
8/3 Sun - AM - PM Finish MW02 install. EA will survey MW02 if possible. Sample if
8/4 Mon - MW02 development, MW01 sample if didn't do yesterday.
8/5 Tues - MW02 sample, SW Fowler Cr. sample. GeoTek leaves; EA prep for mob.
8/6 Wed - EA Mob out on-schedule.

2000 - End of day ——— (EBT)

Scale: 1 square = _____

0700 - H/S meeting. Bears, wildlife, taking our time & being aware of your surroundings.

0800 - GeoTek / M. Blinstrub to start MW02 drilling @ selected location. M. Blinstrub soil sampling. E. Burt-Toland cant develop or sample until afternoon, so will start getting gear organized, packed and make samples ready for transport.

1155 - Drill crew back @ lower camp for Breakfast/lunch.
1200 - 1730 lunch
1230 - Mob to SS010 to drop Geotek off before sampling.
1310 - Unload gear @ MW03, E-BT sampling, guys drilling.
1325 - Set up @ SS010-MW03 well for sample collection
1340 - Start pump
1415 - Stable, collect GW sample SS010-MW03-080214
1415 - 1600 - IDW Management
1600 - 1630 - Mob and set up at MW01
1630 - Surge and purge cycle begins.
1745 - 1800 - getting turbidity down to <10 NTUs is not able to happen with our time schedule @ this remote site. w/in 10% is possible so we purged >10x well volume and got turbidity to be within 10%. Other WQ parameters were collected throughout purge cycle.
1800 - SS010-MW01 has successfully been developed. pack up, get gear loaded from site & GeoTek's stuff loaded.
1900 - Arrive up @ lower camp for dinner.
1900 - 1945 Dinner
2000 - Update PM Kyle Waldon. MW02 is dry and at ≈ 70 feet bgs so far.
2030 - End of day

EBT

Cape Romanzof E. Burt-Toland 8/3/14.

0715 - 0730 - H/s. Dust masks, driving in fog; buddy system.
0730 - 0830 - Prep for survey between MW03 and MW01.
0815 - Begin survey with laser level Leica unit.
1200 - Complete survey with ≈ 20 (TP) turning points. Terrain was moderately difficult due to tundra being very thick (tripod would move, will have to start over). Pretty steep slope, and 1st time team worked together - M. Blinstub on Rod, E. Burt-Toland on laser level / tripod.
1200 - 1300 - lunch.
1300 - Arrive back @ SS010, Drillers finished MW02 install, we will survey this instead of sampling MW01.
1315 - Start Survey @ SS010 - MW02 to MW01.
1705 - Complete survey @ SS010 - MW02 to MW01 (oops: started @ MW01)
1705 - 1715 - clean up gear into rig; go up to dinner.
1715 - 1745 - dinner.
1745 - 1830 - Move all gear to staging area.
1830 - End of work day; Notes -

Plan for tomorrow (Monday)

- EA - Sample MW01 - (collect Duplicate)
- Help GeoTek develop MW02 (collect turbidity / YSI readings) and call about charter out
- Stage Majority of gear to go out w/ GeoTek's flight on Tuesday.

Plan for Tuesday:

- Sample SW @ Fowler Creek (short hold time, saved for last. need F/D/MS/MSD)
- Sample MW02 (No QC needed)
- Stage our gear for flight.

Plan for Wednesday: Final Pack coolers for shipment
[Flight out time will decide when taping / COC seal 'n coolers will be done]

- Flight out to Bethel.
- Shipment via Goldstreak to ANC - SGS Labs.
- Flight BET to ANC ERT / SEA MB.

845 Done for the day

ale: 1 square = _____
ale: 1 square = _____

Monday August 4 2014 Cape Romanzof dense fog. 55°F page 11 ~~page 10~~

0630- Set up field bag for sample day; Breakfast
0715 - Calibrate YSI, turb. H/S - Driving in fog
0800 - Pack up, gas truck, air, oil etc. Maintenance delay.
0800-0915 Misc. tasks, set lock code to 2372 for three new wells; organize gear, clean out truck.
0915 - Mob to SS010 for GW sample @ SS010-MW01. set-up.
1000 - Begin pumping purging MW01
1040 - Reached stablization parameter goals, collect sample SS010-MW01-080414 for DRO/RRO, GRO. (AK102/103, 101)
1100 - clean-up, wait for ride back to Lower camp
1205- Ride @ MW01 arrives. Mob up to lower camp for lunch.
1215 - 1245 lunch
1245- load gear for Development of MW02 (SS010).
1300 - Mob to MW02 (SS010).
1315 - Train GeoTek on development protocol: tubing, surge/purge cycle, turbidity tracking, YSI reading.
1345 - Development. Extremely turbid, good recharge though!
1355 - Issues with pump controller, use bailer
1415 - Issues with pump controller, use bailer
1450 - issued with pump controller, Fixed at ≈ 1630 (see form)
1700 - Development of MW02 completed. Will be able to sample tomorrow.
1705 - Clean up gear, pack up (final). Final Purge development complete. IDW Management;
1730 - Shuttle gear / Dinner
1745 - Prep/Separate GeoTek/EA gear for tomorrows Herc flight. Jeff. Rozin will fly out w/ Cargo plane. E. Burt-Toland, M. Blinstub, J. Beekner to leave west (am).
1850 - Sample management
2000 - End of day

page 12 Tuesday 8/5/14 Cape Romanzof E. Burt-Toland

55°F dense Fog, otherwise sunny.

0700 - Prep for SW sample., calibrate YSI, turb.

0730 - H/S meeting / Breakfast. pinches, tips, don't hurry - foggy conditions.

0800 - Found out the Cargo plane wants to get here early (arrival @ 4PM, now @ 1PM.). Will need to collect sample from MW02 (SS010-MW02) a few hours early in order to have our gear get out on flight.

0900 - Arrive at SS009 for surface water sample @ Fowler Creek. GPS point taken, YSI readings taken, turb taken, Description on form.

0915 - Collect SW sample for TAH and TAqH @ 0915 (MS/MSD) and duplicate @ 0905

0915 FC-SW01-080514 (MS/MSD)

0905 FCSW99-080514 (Duplicate)

0930 - Finish sample collection, pack bottles for transport.

1000 - Arrive @ lower Camp. Prep for GW sample.

1040 - Begin Purging @ SS010-MW02.

1135 - Collect SS010-MW02-080514 for DRO/RRO & GRO.

1135-1215 - Paint bollards, lock wells, re GPS wells (just in case).

1215 - 1245 - lunch @ lower Camp

1230 - 1345 - Sample management. Get coolers ready for flight transport. Refreeze some mene Gel ice for SW cooler.

1345 - Get personal gear & other equipment sorted out. GeoTek not sure flight will come. Most likely canceled.

1345 - 1400 - Work w/ ArcTec to figure out billing addresses & hours.

HOURS (Breakdown) (BOTH)

GeoTek Drill support

7/30 OT Ramp - 4 hrs.

7/30 - equip. time - 6 hrs.

EA

7/28 3 OT.

7/29 - 8/6 vehicle checkout process (7 days)

3 gal gasoline.

also fuel charges (210 gal + ?)

7/30

8/1 - 1 hour OT support.

8/4 - 1 hour each total 2 OT hrs.

8/5 - 2 OT hours

total equipment hrs: 6

total OT hrs: 12

total fuel #:

total vehicle: 9 days

total lodging: 9 days

Scale: 1 square = _____

1400 - Painted bollards, took final photos of wells, collected photos of SS010. Will need to get WL measurements all together from all wells.
1445 - finish w/ all Bollards, drop last of gear.
1500 - Break in weather, Flight maybe?
1545 - No flight possible today.

1545 - 1800 - Site tour. GeoTek and EA

1800 - M. Blinstrub & E. Burt-Toland mob to SS010 for water level measurements for all wells: * ALL CODES (for locks) = 2372
Garbage taken to landfill.

TIME	SS010-MW01		TIME	SS010-MW02		TIME	SS010-MW03	
1830	93.70	FT BTOC	1845	111.74	FT BTOC	~~0615~~ EST 1815	81.75	FT BTOC

Project Sample Summary:

Coolers (#):

Cooler 1 of 5 →
MW-9-073014
MW-7-073014
MW-4-073014
TB-2-ST009 (Trip Blank GRO/BTEX)
SS010-SB-EB1 (Equipment Blank for SS010 soil)
COC Photo ID# 100-0464

Cooler 2 of 5 →
SS010-SB01-96
SS010-SB01-2 (MS/MSD)
SS010-SB01-11
TB-Soil-1 (Trip Blank GRO)
SS010-SB02-13
SS010-SB02-2
SS010-SB02-56
COC photo ID#'s: 100-0465
SS010-SB03-80
100-0466
SS010-SB03-14
SS010-SB03-14D (Duplicate)
SS010-SB03-2

Cooler 4 of 5 →
WW-05-072914 (MS/MSD)
WW-06-072914
WW-01-072914
WW-99-072914 (MW05 duplicate)
COC Photo ID#: 100-0467
TB-1-SS015 (Trip Blank GRO/BTEX)

Cooler 5 of 5 →
SS010-MW03-080214 (MS/MSD)
SS010-MW01-080414
SS010-MW99-080414 (DUP)
SS010-MW02-080514
COC Photo ID# 100-0468
TB-3-SS010 (Trip Blank GRO)
Water-EB-073114 (Equip Blank for Pump).

Cooler 3 of 5 →
FC-SW01-080514 (MS/MSD)
FC-SW99-080514 (Duplicate)
COC Photo ID# 100-0469
TB-5-ST009 (Trip Blank (SW) PAH)
collected last day possible due to hold times.

Rite in the Rain
Scale: 1 square = ____

page 14 Cape Romanzof Continued 8/5/14

1845 - 2145 clean and pack remaining items for 3 different shipments
Lynden
Goldstreak
Alaska Air/Charter hand carry.

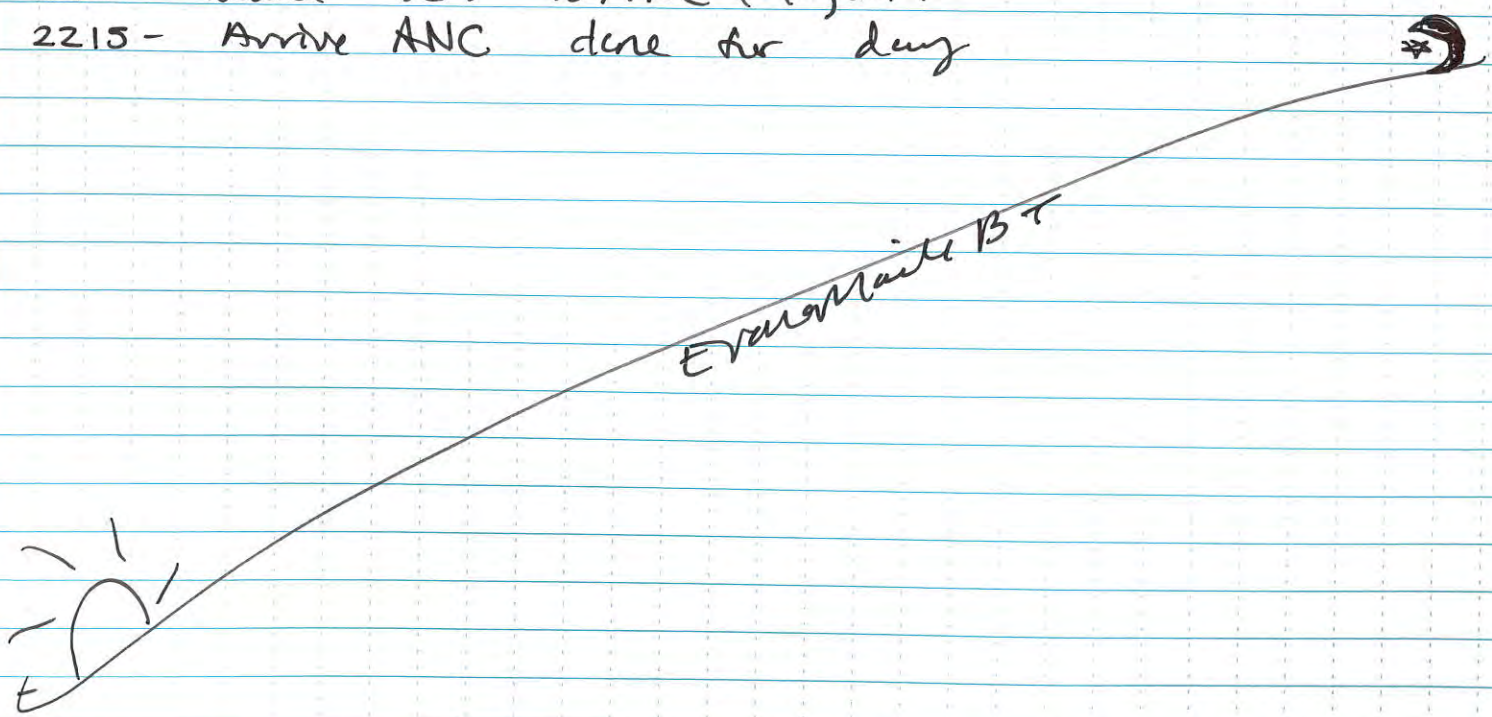
2145 - Done for the day!



Scale: 1 square = _____

Scale: 1 square = _____

0645- GeoTek will not be able to take our gear until the Herk can get in, so we will need to try to get it on our charter.
0730- Breakfast
0745 - Go down to airstrip to update our charter on weather, discuss how arrival will work. Tentatively scheduled for 1000, weather dependant. Gabe @ Era said we just update him, he'll call station chief to try to arrange getting out if there's weather delays throughout the day.
0815 - Tape coolers, coc seals, pack SCW from Fowler's creek.
0900 - Transport all gear to Runway Airstrip. Wait for flight.
1200 - No word from flight about delays go to runway for flight.
1210 - Board charter, load gear.
1315 - Arrive Bethel. Coordinate shuttle w/ Era to NAC and Goldstreak.
1345 - Era shuttle to NAC for all Non-sample CARGO.
1415 - NAC Cargo items (all rental gear) shipped
1430 - Era drops us off at Goldstreak cargo for sample shipment.
1445 - All Cargo and samples shipped to Anchorage for Pickup tomorrow.
1500 - Check in for 9PM flight. No earlier flights available.
1530 - 2030 Wait for flight.
2030 - Board BET to ANC flight.
2215 - Arrive ANC done for day



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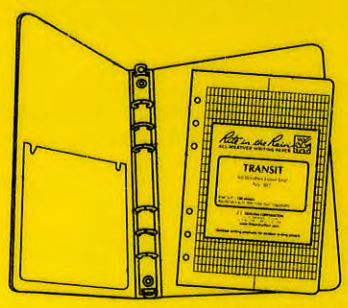
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Project Cape Romanzof LRRS
7/29/14 — 8/6/14

62421101 Phase 3

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CONTENTS

PAGE	REFERENCE	DATE

Cape Romanzof

7/29/14

0800 EA + Geotek AK crew conduct H+S meeting / Tailgate safety meeting.

0845 onsite at SS010 near weather station building. Locate position to drill deep (~80') well. Measure 200' off South to slight SE from current weather station building. Position well location as feasible for drill rig. Gully on both sides. This location appears to be in a downgradient direction from former tanks.

0910 Attempt to locate former well at SE corner of current weather station building using metal detector. Found old metal spiral conduit.

0930 Jeff from Arctec arrives + explains former building + possible former well location. He had done lots of bull dozing and road building in the vicinity.

1000 Jeff Reim + James Becker begin drilling at Boring MW-3 (SB03).

1015 Calibrate TTT PID. 904020.

Scale: 1 square = _____

Rite in the Rain.

7/29/14 SS010-SB03 Drilling

M. Blinstrub, J. Resin, J. Beckner

Weather; 50°F, clear sky's, slight wind

1200 SB03 to depth of 30' bgs.

1200 Collect soil sample from 1-2' bgs.

- Sample ID: SS010-SB03-2 (1200)

- 50 grams soil + 1 bottle MeOH orerit, + 1-4oz jar packed. Sample collated from between 1-2' bgs. PID = 0 ppm from 0-5' bgs.

1230 lunch

1315 Back @ SS010, resume air rotary drilling.

1400 Collect soil sample from 13-14' bgs.

- Sample ID; SS010-SB03-14 (1415)

X - DUP; SS010-SB03-14D (1445)

50 grams soil per MeOH jar, + 2-4oz jars unpreserved.

1500 Boring is ~50' bgs w/ outer 4.5" casing. ~~Collect core from MB~~ Prep to drive macro soil core. Relay problem w/ rod clamp/jaws. Fix relay.

Scale: 1 square = _____

SS010 SB03 7/29/14

1620 Drove soil core from 50-55' bgs. Barrel bent at bottom 2'. PID = 0 ppm from 50-55' bgs. Material is gravel and/or pulverized cobble/boulders with medium and coarse sand, very little fines (≤ 1%) present.

530-600 Dinner break.

1815 Drillers continue boring.

1915 75' bgs @ SB03. Just got through large boulder. Drive to 79' bgs. Cuttings still dry.

1930 Begin pulling inner rods to allow macro core soil sample 79-84' bgs. Look for moisture.

X - Sample ID: SS010-SB03-80 (2000)

2015 Log core from 79-84, whole core is wet.

2030 Leave SS010. Back to barracks. Store samples from day. Unload equipment.

MBB

Scale: 1 square = _____

Rite in the Rain

7/30/14

SS010 SB03 MW03

0700 Mob to site. Drop E. Toland off at ST09. Get generator + grinder to cut locks off wells to be sampled. Done, she is now beginning to sample wells.

Weather: 48°F, overcast, dry.

Conduct Health + safety meeting. Team support + buddy system needed to accomplish project tasks

SS010 - MW03

DTW in open borehole is 74.5' bgs.

Discuss soil core from 79-84' bgs with Kyle.

Submit soil sample collected from 79-80' bgs. yes.

Driller Prepping to install monitoring well at SB03 boring. To be screened 71.5-81.5' bgs.

0930 Hose repair needed on drill rig. Run to mechanics shop.

1030 Mechanics shop only has air fittings, not hydraulic. Driller will deal without use of lower right break loose jaw.

Resume well construction. Bottom of well at

- 81.5' bgs 3" long end cap, 2" diam sch 40 PVC.

10' of .010" slotted screen, prepacked w/ 20/40 sand.

10/20 sand from 81.5-69.0' bgs. (1 3/4 bags)

MBB

Scale: 1 square = _____

SS010 Well Install 7/30/14

MW03

Pel plug time release from 69-62.0' bgs. (1 bucket)

3/8" Halliburton Hole-Plug from 62'-2.5' bgs

1200 Lunch + sample storage in fridge.

1250 E. Toland to ST09.

M. Binstrup to get fuel for drill rig + air compressor.

Drillers install stickup monument, 2 bollards + clean up equipment from MW03 area.

1500 Almost completed surface monument/bollards at MW03. Waiting for Cowley to complete Diesel fuel hauling on road, in order to mob down to SB01 + SB02 locations.

* Collect soil boring equipment rinsate sample.
- Sample ID: SS010-SB-EB1 (1545)

1610 Prepping equipment for next boring. Assess drill rig access to next 2 locations. Driller not comfortable with drop-off from road. Move 1 boring location from East side to west side of road. Setup there.

Scale: 1 square = _____

Rite in the Rain

7/30/14

SS010 Well Install

1700 Discuss newly moved boring locations with Arctec onsite personnel.

* OK'ed!

Arctec to bring 2 dump truck loads of dirt to the edge of road to allow drill rig to access east side of road.

1740 Geotek AK begins boring SB01 on west side of road.

Drives cores to 32' bgs.

Soil Sample from 1-2' bgs.

* • Sample ID: SS010-SB01-2 (1940)

• MS/MSD

2015 Leave site back to barracks. Sort + pack samples for safe storage.

MBB

Scale: 1 square = _____

SS010 Well Install

7/31/14

0645 M. Blindtub, J. Resin, J. Backner mobs to SS010 to resume drilling at SB01.

Weather: 48°F, overcast, drizzle + increasing.

H+S Topic: slips, trips, falls, pinch points.

Gather supplies at driller staging area.

Calibrated MiniRae 2000 PID. 100 ppm.

log soil cores.

0740 Collect soil sample

• Sample ID: SS010-SB01-11 (0740)

Collected cores to 43' bgs. soil still dry. Downhole hammer to 48'. Cuttings are not feeling wet. Drive 2 cores from 48-58' bgs. Still dry. Bent 2nd core barrel due to boulder.

1000 Call + notify Kyle of depth without water. May have to move 3rd boring/well location much further down slope.

- Drive casing to 68' bgs. No moist cuttings observed.
- Air compressor acting up, shuts itself down periodically.

Scale: 1 square = _____

Rite in the Rain

7/31/14 SS010 Well Install

1130 Mob to barracks for lunch. Check in w/ E. Toland.

1300 Drop E. Toland at ST09 for site inspection.

1320 Resume driving outer casing from 68' bgs.

1600 Casing to 89' bgs. still no sign of water. Go get more casing.

Talk w/ Kyle. Explain depth to water issue. Will go to 100 or 110' bgs to find water, or move to last (3rd boring location).

1700 Pull macro soil core from 88-93' bgs. Most of core is moist (88-91, 91.75-93) Wet from 91-91.75. Silty sand

Resume driving outer casing. Drillers air compressor periodically shutting down due to various fault codes.

1750 Break for dinner, give compressor time to cool down.

1900 Back onsite at SS010. Collect soil sample from just above observed water level at 91' bgs. Sample 89-90' bgs

- Sample ID: SS010-SB01-90 (1945)

MBB

Scale: 1 square = _____

SS010 Well Install. 7/31/14

2010 M. Blinstrub leave site w/ E. Toland.

2025 Drillers to return + pull string and trouble shoot hammer at bottom of hole. If that is not the issue, assess compressor.

Note: Elevations of MW03, SB01 + creek level are on last page of logbook

MBB

Scale: 1 square = _____

Rite in the Rain

8/1/14 SS010 Well Install.

0730 Mob to site. Get Evans + James going on MW03 development.

MW03

DTW = 78.45' btoc

TD = 84.46 btoc

Mob to get water for decon.

SB01

Driller had pulled 93' of tool string + cleaned downhole hammer head which was clogged with silt/sand/rock dust. Continue pushing casing downhole. Bored to ~98' bgs. observed moisture exiting with cuttings, a little bit. Periodically stop compressor to fill air line with water to clean out downhole hammer.

1050 At 104' bgs. Only have 119' of drill casing. Not sure water is present in boring.

1245 At 111' bgs. Water observed at 103' bgs

Scale: 1 square = _____

SS010 Well Install. 8/1/14

After lunch + pulling of tooling from outer casing, measured depth to water,

1500 SB01 DTW = 93.20 (measured) 'bgs.

Total boring depth = 111' bgs.

Backfilled boring w/ sand to 104' bgs.

MW01

* - Construct well: 6" coned sump.
- 15' of .010" slotted PVC screen. Prepacked screen w/ 20/40 sand,
- 10/20 sand to 85' bgs (3.5 bags)
- Pel-Plug to 77' bgs
- Bentonite 3/8" Hole plug to 4 'bgs. (6.5 bags)

1800 Well installed/Constructed to surface.

1815 Mob to barracks for dinner. Clean out garbage & get fuel tank out of truck.

1930 Jeff + James return to MW01 location to do concrete work on monument and bollards.

2115 Jeff + James return to barracks.

MBB

Scale: 1 square = _____

Rite in the Rain.

8/2/14 SS010 well Install

0830 Arrive onsite @ SS010. Begin breakdown of equip.

MW01

DTW = 94.57' btoc

TD = 106.71 + .28 = 106.99' btoc

Late Entry 8/4/14 TD later measured to be = 106.75 + .28 = 107.03

0900 Move equip to next (last) boring/well location. SB02 (MW02)

0940 Begin macro cores to 30' bgs.

Calibrate MiniRAE 2000 PID = 100 ppm

Collect soil sample from 1-2' bgs.

- Sample ID: SS010-SB02-2 (1010)

Collect soil sample from 12-13' bgs ~~(1035)~~ MBB 8/2/14

- Sample ID: SS010-SB02-13 (1035)

1125 Begin downhole hammer.

Weather: overcast, dry, 50's.

H+S Topic: Bugs + stings

1150 Brunch

1300 Have Evans reloaded to sample MW03.

1310 Resume downhole hammer at SB02.

Huge boulder 28' bgs - 30' bgs.

Compressor shutting down again. Due to overheating.

MBB

Scale: 1 square = _____

SS010 well Install

8/2/14

Let compressor cool down & then Continue drilling.

- Assist Evans w/ development pump decon & setup for development on MW01. Collect soil sample from 55-56' bgs

- Sample ID: SS010-SB02-56 ( )

1630 SB02

Depth of downhole hammer is 80' bgs

Wet cuttings not observed yet.

1800 Attempt to get macrocore from 88-93' bgs.

* Core not progressing. getting caught up on something. Does not sound or act right. Pull macro core string. Insert downhole hammer.

1830 Break for dinner, store samples, unload unneeded equip.

1930 Backcat SB02. Assist Evan loading up well development equip from MW01 location.

- Resume downhole hammer at 88' bgs.

2040 Achieved 98' bgs.

2120 Downhole hammer at 107' bgs.

stop drilling. Give 5 min for possible water infiltration.

start air compressor to check for moisture ~~on cuttings~~ downhole MBB

2130 NO water observed coming from casing.

2150 Done for the day. MBB

Scale: 1 square = _____

Rite in the Rain

8/3/14 SS010 Well Install

0815 Onsite at SS010. Check borehole SB02 for water. Probe goes to 100' btoc, no water present. Drillers continue to drive downhole hammer & advance casing.

E. Toland & M. Blmstrub begin survey loop of MW03 & MW01.

SB02

DTW observed at 110.25' bgs.

1200 ~~X~~ Install well to 118.5' bgs. 15' of screen. .010

- 10/20 sand to 100' bgs (3 bags)
- pel-plug seal 100 - 92' bgs. (1 Bucket)
- Sump = 6" pointed end cap.
- 3/8" Hole plug bentonite 92' - 4' bgs (4.5 bags)

1200 Lunch

1245 Back @ site.

- above ground stick up monument, filled w/ peagravel (last 6" is sand)
- set above ground monument & 2 protective bollards.

1650 Done for day.

MB13

Scale: 1 square = _____

SS010 Well Development

8/4/14

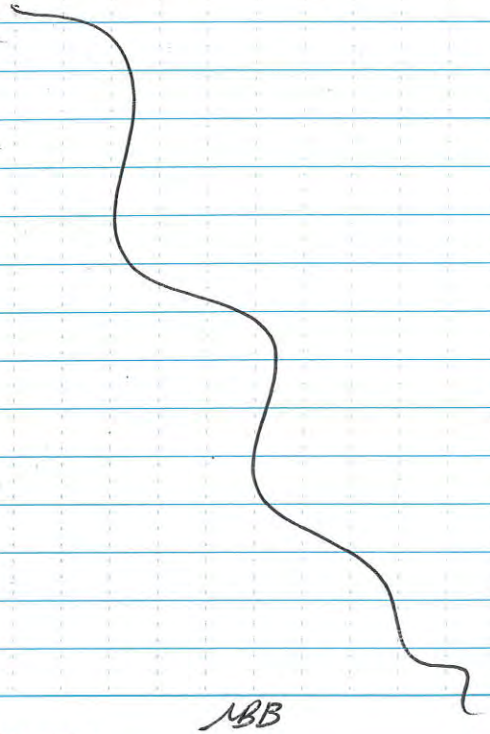
0800 Team loaded & heads to develop MW02.

DTW = ~~110.25~~ 110.25' btoc

TD = 121.21 + .28 = 121.49' btoc

See EBT logbook for development details.

1655 Finished for day.



MBB

Scale: 1 square = _____

Rite in the Rain

8/3/14 Cape Romanzof

	BS(+)	HI	FS(-)	ELEV
MW03 (SS010)	~~2.871~~			~~413.978~~
MW03 TOC	~~7.868~~			~~409.493~~
TP1			7.367	~~409.482~~
	0.209		409.482+0.0018	409.483
TP2			12.987 (7)	~~396.704~~
	1.225		~~Adjusted~~	~~396.707~~
TP3			9.889	388.040
	1.438		~~Adjusted~~	~~388.045~~
TP4			10.231	379.247
	0.998		~~Adjusted~~	
TP5			10.265	369.980
	3.161		~~adjusted~~	
TP6			11.459	361.682
	3.840		~~adjusted~~	
TP7			10.885	354.637
	3.584		~~adjusted~~	
TP8			10,237	347.984
	1.980		~~adjusted~~	
TP9			5.843	344.121
	0.989		~~adjusted~~	
MW01 TOC			6.957	338.153
MW01 TOC	6959	Adjusted	~~adjusted~~	338.171
TP10			3,974	341.138
	8.830		adjusted	

Page Total: 36.084 ✓

Adjusted Page Total = 100.096 ✓

PT.ID.	BS(+)	HI	FS(-)	ELEV.
TP11			0.735	349.233
	11.221		~~0.743~~	
TP12			0.743	359.711
	11.344			
TP13			2.514	368.541
	11.380			
TP14			7.023	372.898
	9.558			
TP15			2.211	380.245
	12.187			
TP16			~~0.0000~~ 0.549	391.883
	10.920			
TP17			1.888	400.916
	11.176			
TP18			1.074	411.018
	~~3.500~~ 3.727			
TP19			3.813	410.932
	8.083			
MW03 TOC			5.073	413.942
	125.681 ✓			
Total (ft)	~~141.505~~		- 125.717 ✓	
error = -0.036			413.978 - 413.942	

0.036' adjust with 20 turning points

8/3/14

338.171

	BS(+)	HI	FS(-)	ELEV.
MW01 ~~TOC~~				~~500~~ 338.171
MW01 TOC	1.046			
TP01			7.716	331.501
	1.336			
TP02			9.259	323.578
	0.874			
TP03			9.882	314.570
	2.377			
TP04			9.046	307.901
	2.328			
TP05			9.026	301.203
	1.254			
TP06			8.129	294.328
[redacted]	3.395			
TP07			9.475	288.248
[redacted] (TP08)	3.306			
MW02 TOC			4.008	287.546
MW02 TOC	3.537		Adjusted	287.537
TP09			2.835	288.248
[redacted]	9.058			
[redacted] TP10			2.389	294.917
[redacted]	6.644			
[redacted]				
page total	35.155		71.765	

	BS(+)	HI	FS(-)	ELEV
TP11			2.393	299.168
	8.772			
TP12			1.662	306.278
	6.684			
TP13			0.868	312.094
	8.941			
TP14			1.110	319.925
	8.883			
TP15			1.699	327.109
	9.324			
TP16			0.576	335.857
	5.956			
MW01 TOC TP17			3.623	338.190
Totals	83.715	–	83.696	
		error	0.019	

Adjust points with 17 turning points. 0.019' ÷ 17

0.001' error per turn

MW02 287.546 - (0.001)·8

= 287.537

INSTITUTIONAL CONTROL INSPECTION FORMS

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EA Engineering, Science, and Technology, Inc.

Landfill Visual Inspection Checklist

Project Information

Client:	Air Force Civil Engineer Center	**Contract No.:**	FA8903-10-D-8601-0101
Project No.:	62421101	**Site:**	Cape Romanzof LRRS, Alaska
Date:	7/31/14 Time: 1320	**Field Personnel:**	E. Burt-Toland
Source Area:	ST009	**Weather:**	Fog, mist, rain 45°F

Attachments: Site map Photographs Other- *GPS points*

Monitoring Item	Y	N	Comments
Evidence of settling on surface of ~~landfill?~~ Site		X	
Ponded water on or next to surface of ~~landfill?~~ Site	X		Surface water body and runoff ponding.
Evidence of surface ~~or sidewall~~ erosion?	X		Site's southern border is eroding and has numerous old rusty anchor chains moving into ocean shoreline HighTide area.
Evidence of vehicle traffic or human trails on the ~~landfill?~~ Site	X		Numerous recreational, industrial, activities obvious on-site.
Discoloring of vegetation in surrounding environment?		X	No discoloration seen, but vegetation is more sparse on-site.
Evidence of escape of impacted materials from ~~landfill?~~ Site.	X		Potential metal debris moving towards ocean, on southern edge of site. Chum salmon spawning out in Fowler creek.
Airborne dust particles?	–	–	~~weather restricted~~ Wouldn't have been able to assess
Evidence of wildlife present? Indicate number and types.	X		Shorebirds, marine mammals, bivalves, fox, beaver, songbirds, waterfowl all use area. As well as
Evidence of windblown litter from landfill?		X	Seems to be metal debris
~~Landfill odors?~~ Site odors?	–	–	Sampled wells have obvious heavy product smell. MW-7 worst.
Evidence of fire or combustion in waste?		X	Camp fires and bon-fires
Is there a warning sign present? If so, what is the condition of the warning sign?	X		Good condition, hard to see/find. One sign for health risk @ Fowler Creek.
Damage to the structural integrity of the erosion control?			No erosion control seems to be in place. Active erosion @ south end of site.
Is re-vegetation occurring?		X	Area is obviously driven on/accessed often. Vegetation unlikely to become established w/ current use.

Estimated Percent Vegetative Cover: **On cap surface:**___ **On sideslopes:**_____

Additional Comments/Describe Evidence Seen:

Describe Photographs Taken:

Corrective Action Taken:

More signage would be good because of current location of 1 sign (not visable from shoreline).

EA Engineering, Science, and Technology, Inc.

Landfill Visual Inspection Checklist

Project Information

Client:	Air Force Civil Engineer Center	**Contract No.:**	FA8903-10-D-8601-0101
Project No.:	62421101	**Site:**	Cape Romanzof LRRS, Alaska
Date:	7/31/14 Time: 0925	**Field Personnel:**	E. Burt-Toland
Source Area:	LF003 - Landfill #2	**Weather:**	Dense fog. rain/mist

Attachments: ✓ Site map ✓ Photographs ✓ Other- *GPS points*

Monitoring Item	Y	N	Comments
Evidence of settling on surface of landfill?		X	None seen; surface flat.
Ponded water on or next to surface of landfill?		X	
Evidence of surface or sidewall erosion?	X		Western side of landfill boundary shows erosion into boulder field adjacent.
Evidence of vehicle traffic or human trails on the landfill?		X	traffic passing area for large trucks, other uses not obvious or observed.
Discoloring of vegetation in surrounding environment?		X	Sparse vegetation on most of LF003 compared to adjacent areas, veg is reduced.
Evidence of escape of impacted materials from landfill?	X	?	Unsure what "impacted material" specifies: evidence of debris breaking through surface, and around edges of boarder
Airborne dust particles?		·	NA. weather prevents assessment.
Evidence of wildlife present? Indicate number and types.	X		Numerous avian species seen passerine and shorebird species.
Evidence of windblown litter from landfill?	X		unburried Plastics and liner shreds outside of border/@surface.
Landfill odors?		X	none observed
Evidence of fire or combustion in waste?		X	No.
Is there a warning sign present? If so, what is the condition of the warning sign?		X	No signage.
Damage to the structural integrity of the erosion control?	-	-	No erosion control observed. Erosion on west sidewall present.
Is re-vegetation occurring?	Y		Sections of landfill on East are showing recovery taken

Estimated Percent Vegetative Cover: On cap surface: 25%. On sideslopes: 15%.

Additional Comments/Describe Evidence Seen:
lots of debris @ surface, mostly metal, garbage, liner, one tank photographed, lots of rusted metal on site.

~~**Describe Photographs Taken:**~~ see photo log.

~~**Corrective Action Taken:**~~ NOTES:
No signage seen, Boundary of Surface soil exceedance area obvious from debris and change in vegetative cover.

EA Engineering, Science, and Technology, Inc.

Landfill Visual Inspection Checklist

Project Information

Client:	Air Force Civil Engineer Center	**Contract No.:**	FA8903-10-D-8601-0101
Project No.:	62421101	**Site:**	Cape Romanzof LRRS, Alaska
Date:	8/2/14 Time: multiple	**Field Personnel:**	M. Blinstrub / E.B.T
Source Area:	SS010	**Weather:**	Overcast ~ 50°F

Attachments: Site map Photographs Other- *GPS points*

Monitoring Item	Y	N	Comments
Evidence of settling on surface of ~~landfill?~~ site		X	
Ponded water on or next to surface of ~~landfill?~~ site	X		puddles do form on driving/ pot holed areas and around buildings.
Evidence of surface or sidewall erosion?	-	-	NA - not a landfill.
Evidence of vehicle traffic or human trails on the ~~landfill~~? site	X		Accessed frequently by site staff.
Discoloring of vegetation in surrounding environment?		X	Vegetation is healthy on non-used areas. commercial/ industrial
Evidence of escape of impacted materials from ~~landfill~~? site		X	
Airborne dust particles?		X	
Evidence of wildlife present? Indicate number and types.	X		Song birds, small rodents.
Evidence of windblown litter from ~~landfill~~? site		X	
Landfill odors?		X	
Evidence of fire or combustion in waste?		X	
Is there a warning sign present? If so, what is the condition of the warning sign?		X	
Damage to the structural integrity of the erosion control?	—	-	N/A
Is re-vegetation occurring?	—	-	Site is vegetated except on access Rd & building area.

Estimated Percent Vegetative Cover: **On ~~cap surface~~:**___ **On ~~sideslopes~~:**_____
100% veg except in parking/dirty site area.

Additional Comments/Describe Evidence Seen:
Site is accessed by ArcTec & subcontractors for LRRS operations.

Describe Photographs Taken:
MW installed; Aerial photo will be taken on departure, site boundary photo taken from ground (NE side of boundary - slope / topo prevents entire boundary from being visible.)

Corrective Action Taken:

SAMPLING FORMS

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EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	MW-9
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	7/30/14	**Samplers:**	E. Burt-Toland
Time Start:	0730 delays to 0855		
Time Finish:	0950	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☒

TD:	27.05 ft		
DTW:	[redacted] 21.84 ft		
Water Column:	5.21 ft	TD-DTW=Water Column	
Liter/Foot:	0.605 L/ft	See ***Well Volume Calculation*** Table	
Liters in Well:	3.15 ~~3.45455~~ EBT L	Water Column x L/ft	
Three Well Volumes:	9.46+10.36 EBT L	Liters in Well x 3	
Sample Depth:	23.8 ft	Depth of Pump Intake	

Well Volume Calculation

Well Diameter	L/ft
2"	0.605
2.5"	0.946
3"	1.4
4"	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	10D100479
Water Level Meter:	Solinst	**Serial No.:**	1220045 25-1
Turbidity Meter:	MicroTPW	**Serial No.:**	20140342
Pump Type:	Bladder	**Serial No.:**	11613

Purge Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.1 Optimum Flow Rate Set at 7.5 Seconds Refill 7.5 Seconds Discharge

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.1 Optimum Flow Rate Set at 7.5 Seconds Refill 7.5 Seconds Discharge

Sample Collection Information

MS/MSD? : Yes ☐ No ☒

Parameter	Method	Container Type	# Containers	Preservative	Note
BTEX	8260B	VOA	3	HCl	
GRO	AK101	VOA	3	HCl	
ORO	AK102	250mL	2	HCl	

Low-Flow Groundwater Sample & Stabilization Form

Well ID: MW-9	Sample ID: MW-9-073014	Sample Time: 0940
Date: 7/30/14	Dup. Sample ID: N/A	Dup. Sample Time: N/A

Notes:

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
0855	START PURGING							21.84		
0900	1.0	2.71	129	4.19	5.92	101.5	95.78	21.90	0.2	Flow rate adjustments needed,
0905	1.5	3.20	132	4.33	5.99	98.5	93.06	21.80	0.1	reduce flow rate
0910	2.0	4.37	137	3.71	6.10	92.8	86.38	21.78	0.1	
0915	2.5	4.37	138	4.11	6.15	87.9	44.32	21.75	0.1	
0920	3.0	4.39	139	3.99	6.17	87.2	27.55	21.70	0.1	
0925	3.5	4.20	139	4.09	6.20	85.0	23.77	21.70	0.1	
0930	4.0	4.06	139	4.00	6.22	80.2	16.70	21.70	0.1	
0935	4.5	4.00	140	4.11	6.25	77.9	17.77	21.70	0.1	waiting for turbidity to stabilize.
0940	5.0	3.94	141	4.05	6.29	74.0	15.99	21.70	0.1	Stabilization, sample collected.

Sampled? : Yes ☑ No ☐

Initial of Sampler: [illegible]

EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	MW-7
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	7/30/14	**Samplers:**	E. Burt-Toland
Time Start:	1600		
Time Finish:	1720	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☒

TD:	24.50 ft		
DTW:	EBT ~~18.77~~ 18.95 ft		
Water Column:	EBT ~~5.73~~ 9.55 ft	TD-DTW=Water Column	
Liter/Foot:	EBT ~~0.605~~ 0.603 L/ft	See ***Well Volume Calculation*** Table	
Liters in Well:	EBT ~~3.47~~ 3.36 L	Water Column x L/ft	
Three Well Volumes:	EBT ~~10.39~~ 10.07 L	Liters in Well x 3	
Sample Depth:	EBT ~~18.77 - 2.0 = 20.77~~ 20.95 ft	Depth of Pump Intake	

Well Volume Calculation

Well Diameter	L/ft
2"	0.605
2.5"	0.946
3"	1.4
4"	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	16D106479
Water Level Meter:	Solinst	**Serial No.:**	1220045 25-1
Turbidity Meter:	Micro TDW	**Serial No.:**	20140342
Pump Type:	Bladder	**Serial No.:**	11613

Purge Method: 18.95 to 18.93 = product

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.1 Optimum Flow Rate Set at 5 Seconds Refill 5 Seconds Discharge

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.1 Optimum Flow Rate Set at 5 Seconds Refill 5 Seconds Discharge

Sample Collection Information

MS/MSD?: Yes ☐ No ☒

Parameter	Method	Container Type	# Containers	Preservative	Note
DRO	AK 102	VOA	2	HCl	
GRO	AK101	VOA	3	HCl	
BTEX	8260B	250mL	3	HCl	

Low-Flow Groundwater Sample & Stabilization Form

Well ID: ~~MW-4~~ EBT MW-7	Sample ID: MW-7-073014	Sample Time: 1720
Date: 7/30/14	Dup. Sample ID:	Dup. Sample Time:

Notes: Heavy sheen, thin NAPL Layer. decided to use bladder pump to sample.

Conductivity

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	~~Spec. Cond.~~ (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1645	START PURGING									Bailer to measure product; removed approximately
1650		5.44	106	2.11	5.81	68.1	2.77			3 bailers. Will use pump for purge/sample
1655		4.66	103	1.51	5.83	54.4	2.45			
1700		3.92	99	0.93	6.15	45.3	1.17			
1705		3.78	98	0.90	6.26	44.1	1.50			
1710		3.85	98	0.83	6.30	34.8	1.17			
1715		3.86	98	0.78	6.33	27.2	1.15			
1720		3.81	98	0.75	6.33	25.4	1.17			Stabilization goal met. Collect sample.

Sampled?: Yes ☒ No ☐

Initial of Sampler: [illegible]

EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	MW-4
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	7-30-14	**Samplers:**	E. Burt-Toland
Time Start:	1325		
Time Finish:	1420	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☒

TD:	15.65 ft		
DTW:	11.05 ft	10.95 w/pump	
Water Column:	4.60 ft	TD-DTW=Water Column	
Liter/Foot:	0.605 L/ft	See ***Well Volume Calculation*** Table	
Liters in Well:	2.783 L	Water Column x L/ft	
Three Well Volumes:	8.35 L	Liters in Well x 3	
Sample Depth:	13.05 ft	Depth of Pump Intake	

Well Volume Calculation

Well Diameter	L/ft
(2")	0.605
2.5"	0.946
3"	1.4
4"	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	10D100479
Water Level Meter:	Solinst	**Serial No.:**	1220045254
Turbidity Meter:	MicroTPW	**Serial No.:**	20140434
Pump Type:	Bladder	**Serial No.:**	11613

Purge Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.1 Optimum Flow Rate Set at 30 Seconds Refill 30 Seconds Discharge

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.1 Optimum Flow Rate Set at ~~40~~ EBT 30 Seconds Refill ~~13~~ EBT 30 Seconds Discharge

Sample Collection Information

MS/MSD? : Yes ☐ No ☒

Parameter	Method	Container Type	# Containers	Preservative	Note
BTEX	8260B	40mL VOA	3	HCl	
GRO	AK101	40mL VOA	3	HCl	
~~AK~~ EBT DRO	AK102	Glass 250	2	HCl	

Low-Flow Groundwater Sample & Stabilization Form

Well ID: MW-4	Sample ID: MW-4-073014	Sample Time: ~~1415~~ 1420
Date: 7-30-14	Dup. Sample ID: N/A - Deviation - No QC Dup needed at this location to meet 10%.	Dup. Sample Time:
Notes:		

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1325	START PURGING							10.95	0.1	Needed to set as low as possible for recharge rate. Recharges very slowly.
1330	0.5	~~8.86~~	64	1.23	5.52	71.8	16.13	11.20	0.1	
1335	1.0	~~8.49~~	57	0.75	5.23	72.3	13.05	11.20	0.1	
1340	1.5	8.55	58	0.79	6.67	73.4	13.05	11.20	0.1	
1345	2.0	8.56	59	0.80	4.68	68.9	13.02	11.20	0.1	
1350	2.5	8.59	59	0.84	4.42	41.1	13.00	11.20	0.1	
1355	3.0	8.65	58	0.99	4.04	48.7	7.76	11.23	0.1	
*1400	3.5	8.80	58	1.09	3.82	52.1	7.50	11.23	0.1	
1405	4.0	8.77	57	1.10	~~3.70~~ 2.93	~~42.7~~ 43.7	6.50	11.23	0.1	pH dropped suddenly to 2.93. Check w/ cal fluid for field verification (that pH meter isn't out of cal.).
1410	4.5	8.86	58	1.03	2.90	44.3	6.40	11.23	0.1	
1415	5.0	8.78	57	1.05	2.90	40.3	6.25	11.23	0.1	
1420	5.5	8.82	58	1.11	2.87	41.3	6.11	11.23	0.1	Stable; Collect sample.
										1405 note - Noticable sheen on purge water. did not see before now, will continue with sample, may be from bucket & NOT water.
										* Sheen not seen in purge water when placed into a clean bottle.

Sampled?: Yes ☑ No ☐

Initial of Sampler: EDT

EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	WW-05
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	7/29/14	**Samplers:**	E. Burt-Toland
Time Start:	0945 arrive @ site well ; pump issues until 1130		
Time Finish:	12 15	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☒

TD:	49.40 ft		
DTW:	31.96 ft		
Water Column:	17.44 ft	TD-DTW=Water Column	
Liter/Foot:	1.462 L/ft	L/ft	See ***Well Volume Calculation*** Table
Liters in Well:	42.9024 L		Water Column x L/ft
Three Well Volumes:	128.7072 L		Liters in Well x 3
Sample Depth:	34.0 ft		Depth of Pump Intake

Well Volume Calculation

Well Diameter	L/ft
2"	0.605
2.5"	0.946
3"	1.4
(4")	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	10 D1004 79
Water Level Meter: Interface Probe	Solinst	**Serial No.:**	1220045 25 -1
Turbidity Meter:	Micro TPW	**Serial No.:**	20140434
Pump Type:	Bladder QED 1.75"S	**Serial No.:**	11613

Purge Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.2 Optimum Flow Rate Set at 6.0 Seconds Refill 6.0 Seconds Discharge

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.2 Optimum Flow Rate Set at 6.0 Seconds Refill 6.0 Seconds Discharge

Sample Collection Information

MS/MSD? : Yes ☒ No ☐

Parameter	Method	Container Type	# Containers	Preservative	Note
DRO	AK 102	250	2x3=6	HCL	
GRO	AK101	VOA	3x3=9	HCl	
BTEX	8260B	VOA	3x3=9	HCl	
Alkalinity	H2SO4 (1) x3 = 3	Poly 250		H2SO4	
Dissolved iron					
Sulfate	Unpres (1) x3 = 3			Unpres	
nitrate Nitrite		60mL	1		

Low-Flow Groundwater Sample & Stabilization Form

Well ID:	WW-05	Sample ID:	WW-05-072914	Sample Time:	1215
Date:	7/29/14	Dup. Sample ID:	~~1200~~ ~~EBT~~ WW-99-0729-14	Dup. Sample Time:	1200
Notes:	QAPP did not specify Dup ID, made up an ID				

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1130	START PURGING									
1135		5.58	132	~~10.5~~ 11.02	5.58	141.8	2.2Ø	31.96	.30	L/min. Water level meter ↑ to 32.5
1140		4.55	126	11.22	5.72	96.0	2.1Ø	32.5	0.2	
1145		4.55	128	11.32	5.69	100.0	2.1Ø	32.5	0.2	
1150		4.56	127	11.40	5.70	92.0	2.0	32.4	0.2	
1155		4.53 ✓	127 ✓	11.36	5.78	101.4	2.0	32.4	0.2	Stable, collected sample @ 1215
1215		4.54	128	11.37	5.77	100.1	2.1	32.4	0.2	Finish sample @ 1245

Sampled? : Yes ☒ No ☐

Initial of Sampler: ~~EBT~~

EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	NW-06
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	7/29/14	**Samplers:**	E. Burt. Toland
Time Start:	1515		
Time Finish:	1545	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☒

TD:	29.15	ft	
DTW:	21.52	ft	
Water Column:	7.63	ft	TD-DTW=Water Column
Liter/Foot:	2.46	L/ft	See ***Well Volume Calculation*** Table
Liters in Well:	18.77	L	Water Column x L/ft
Three Well Volumes:	56.31	L	Liters in Well x 3
Sample Depth:	23.5	ft	Depth of Pump Intake

Well Volume Calculation

Well Diameter	L/ft
2"	0.605
2.5"	0.946
3"	1.4
(4")	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	10D100479
Interface Probe **Water Level Meter:**	Solinst	**Serial No.:**	1220045 25-1
Turbidity Meter:	MicroTPW	**Serial No.:**	201404342
Pump Type:	Bladder QED 75 SS	**Serial No.:**	11613

Purge Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: Optimum Flow Rate Set at 4.0 Seconds Refill 8.0 Seconds Discharge

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.2 L/min Optimum Flow Rate Set at 4.0 Seconds Refill 8.0 Seconds Discharge

Sample Collection Information

MS/MSD? : Yes ☐ No ☒

Parameter	Method	Container Type	# Containers	Preservative	Note
DRO	AK 102	250 mL	2	HCl	
GRO	AK 101	VOA 40mL	3	HCl	
BTEX	8260B	VOA 40mL	3	HCl	
Alkalinity	[See COC]	[250mL]	[1]	[Unpreserved ~~H2SO4~~ EB?]	
Dissolved Iron					
Sulfide					
Nitrate/Nitrite		60mL	1	~~H2SO4~~	

Low-Flow Groundwater Sample & Stabilization Form

Well ID: WW-06	Sample ID: WW-06-072914	Sample Time: 1545
Date: 7/29/14	Dup. Sample ID: N/A	Dup. Sample Time: N/A
Notes:		

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1515	START PURGING									
1520	1.5	9.90	148	10.07	4.99	235.5	50.74	21.52	0.3	very clear, no distict odor.
1525	3.0	10.55	115	8.79	5.19	224.2	46.36	21.52	0.3	
1530	4.5	10.50	99	8.36	5.34	230.4	38.97	21.52	0.3	
1535	6.0	10.60	96	8.19	5.34	194.9	27.69	21.52	0.3	
1540	7.5	10.69	95	8.18	5.33	194.2	28.23	21.51	0.3	
1545	9.0	10.72	94	8.18	5.33	193.8	25.91	21.51	0.3	Stabilized, collect primary sample.

Sampled? : Yes ☑ No ☐

Initial of Sampler: _____

EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	MW-01
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	7/29/14	**Samplers:**	E. Burt-Toland
Time Start:	1725		
Time Finish:	1805	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☐ ☒ BOC (outer casing)

TD:	63.51	ft	
DTW:	44.05	ft	
Water Column:	19.46	ft	TD-DTW=Water Column
Liter/Foot:	2.46	L/ft	See ***Well Volume Calculation*** Table
Liters in Well:	47.8716	L	Water Column x L/ft
Three Well Volumes:	143.6148	L	Liters in Well x 3
Sample Depth:	46.05	ft	Depth of Pump Intake

Well Volume Calculation

Well Diameter	L/ft
2"	0.605
2.5"	0.946
3"	1.4
(4")	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	10D100479
Water Level Meter: (Interface Probe)	Solinst	**Serial No.:**	1220045525-1
Turbidity Meter:	MicroTPW	**Serial No.:**	201404342
Pump Type:	Bladder QED 1.75"SS	**Serial No.:**	11613

Purge Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.2 L/min Optimum Flow Rate Set at 6.4 Seconds Refill 5.6 Seconds Discharge

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☐ Bladder Pump: 0.2 Optimum Flow Rate Set at 6.4 Seconds Refill 5.6 Seconds Discharge CPMS PSI 85-90

Sample Collection Information

MS/MSD? : Yes ☐ No ☒

Parameter	Method	Container Type	# Containers	Preservative	Note
DRO	AK102	250 mL	2	HCl	
GRO	AK101	VOA 40mL	3	HCl	
BTEX	B260B	VOA 40mL	3	HCl	
Alk/Dis Iron/Sulfate	See COC	Poly 250mL	1	—	
Nitrate/Nitrite	see COC	poly 60mL	1	H_2SO_4	

Low-Flow Groundwater Sample & Stabilization Form

Well ID: MW-01	Sample ID: MW-01-072914	Sample Time: 1805
Date: 7/29/14	Dup. Sample ID: —	Dup. Sample Time: —

Notes: Depths taken from top of outer steel casing due to extreme damage to well. BTOC not possible.

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1725	START PURGING									
1730	1.0	6.06	229	13.13	5.55	90.2	41.23	44.05	0.2	Before pump in well. 44.05 BOC (Below outer casing)
1735	2.0	5.08	245	10.20	5.28	62.0	11.60	44.00	0.2	
1740	3.0	6.88	317	5.87	5.69	30.7	11.63	44.00	0.2	
1745	4.0	5.88	359	4.31	5.79	35.1	10.63	44.00	0.2	
1750	5.0	5.62	382	3.80	6.45	42.0	9.36	44.01	0.2	
1755	6.0	5.59	383	3.43	6.47	45.3	9.04	44.01	0.2	
1800	7.0	5.53	384	3.29	6.49	49.0	8.34	44.01	0.2	
1805	8.0	5.49	384	3.19	6.54	52.0	8.12	44.01	0.2	Stable, collect sample.

Sampled? : Yes ☒ No ☐

Initial of Sampler: EDT

EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	SS010-MW01
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	08/04/14	**Samplers:**	E. Burt-Toland
Time Start:	0945		M. Blinstrub
Time Finish:	1040	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☒

TD:	106.75+.28 ft	107.03 TD	
DTW:	94.29 ft		
Water Column:	107.03 - 94.29 = 12.74 ft	TD-DTW=Water Column	
Liter/Foot:	7.71 = 12.74 x 0.605 L/ft	See ***Well Volume Calculation*** Table	
Liters in Well:	7.71 L	Water Column x L/ft	
Three Well Volumes:	23.13 (6.11 ~~10~~) L	Liters in Well x 3	
Sample Depth:	96.5 ft	Depth of Pump Intake	

Well Volume Calculation

Well Diameter	L/ft
(2")	0.605
2.5"	0.946
3"	1.4
4"	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	10D100479
Water Level Meter:	Solinst	**Serial No.:**	1220045 25-1
Turbidity Meter:	Scientific Micro TPW	**Serial No.:**	20140342
Pump Type:	Bladder MP-50	**Serial No.:**	11613

Purge Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.2 Optimum Flow Rate Set at 6.4 Seconds Refill 5-6 Seconds Discharge

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☒ Bladder Pump: 0.2 Optimum Flow Rate Set at 6.4 Seconds Refill 5-6 Seconds Discharge cPM 5

Sample Collection Information

MS/MSD? : Yes ☐ No ☒

Parameter	Method	Container Type	# Containers	Preservative	Note
DRO/RRO	AK102/103	250 mL glass	2+2	HCl	Dup
GRO	AK101	40mL VOA	3+3	HCl	Dup

Low-Flow Groundwater Sample & Stabilization Form

Well ID: SS010 - MW01	Sample ID: SS010-MW01-080414	Sample Time: 1040
Date: 8/4/14	Dup. Sample ID: SS010-MW99-080414	Dup. Sample Time: 0800
Notes:		

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
				START PURGING				94.15	0.3	Pump set @ PSI 135 CPM 5R6.4 & 5.6D ; DTW w/ pump in.
1000								94.13	0.2	Reduce Flow
1005		7.18	49	10.63	4.81	-50.9	339	94.14	0.2	
1010		6.30	33	10.24	4.90	-47.1	33.1	94.15	0.2	
1015		6.33	29	9.75	5.05	-52.6	32.8	94.15	0.2	
1020		6.37	29	9.74	5.07	-54.3	10.5	94.16	0.2	
1025		5.85	28	9.67	5.08	-50.5	6.69	94.16	0.2	
1030		5.82	28	9.69	5.10	-50.0	5.79	94.15	0.2	
1035		5.90	28	9.71	5.18	-52.9	7.32	94.16	0.2	Stabilization reached; NTU < 10 ; collect sample & Dup.
1040		5.88	28	9.59	5.12	-59.4	4.00			

EBT

Sampled?: Yes ☒ No ☐

Initial of Sampler: EBT

EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	25010-MW02
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	8/5/14	**Samplers:**	E. Burt-Toland
Time Start:	1040		
Time Finish:	1135	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☑

TD:	121.14 + 28 = 121.42 ft		
DTW:	111.88 ft		
Water Column:	121.42 − 111.88 = 9.54 ft	TD-DTW=Water Column	
Liter/Foot:	0.605 L/ft	See ***Well Volume Calculation*** Table	
Liters in Well:	9.54 × .605 = 5.77 L	Water Column x L/ft	
Three Well Volumes:	17.32 L	Liters in Well x 3	
Sample Depth:	114.20 ft	Depth of Pump Intake	

Well Volume Calculation

Well Diameter	L/ft
2"	0.605
2.5"	0.946
3"	1.4
4"	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	10D100479
Water Level Meter:	Solinst	**Serial No.:**	1220045253
Turbidity Meter:	Scientific MicroTPW	**Serial No.:**	201404342
Pump Type:	Bladder MP-50	**Serial No.:**	11613

Purge Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☑ Bladder Pump: 0.2 Optimum Flow Rate Set at 175 cpm 2 Seconds Refill 20 | 10 Seconds Discharge

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☑ Bladder Pump: 0.2 cpm 2 175 Optimum Flow Rate Set at 20 Seconds Refill 10 Seconds Discharge

Sample Collection Information

MS/MSD? : Yes ☐ No ☒

Parameter	Method	Container Type	# Containers	Preservative	Note
DRO/RRO	AK102/103	250 mL glass	2	HCl	
GRO	AK101	VOA 40mL	3	HCl	

Low-Flow Groundwater Sample & Stabilization Form

Well ID: SS010-MW02	Sample ID: SS010-MW02-080514	Sample Time: 1135
Date: 8/5/14	Dup. Sample ID: —	Dup. Sample Time: —
Notes:		

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1040	—	START PURGING						111.93	0.1	Tinkered w/ settings until flowcell filled.
1100		09.43	70	13.45	5.25	-66.9	62.78	111.93	0.2	
1105		08.66	52	12.17	5.34	-69.1	34.25	111.93	0.2	
1110		08.69	39	11.79	5.67	-77.5	12.79	111.93	0.2	
1115		08.89	33	11.26	5.78	-81.3	12.43	111.93	0.2	150PSI, CPM3, R6.5 >13.5 D
1120		08.46	33	11.12	5.84	-84.3	10.93	111.91	0.2	
1125		08.26	33	10.99	5.87	-84.8	13.46	111.91	0.3	175PSI, CPM2, R200 >10.0D
1130		08.35	30	11.25	5.93	-84.7	9.61	111.91	0.3	
1135		08.40	30	11.58	5.94	-79.9	6.04	111.91	0.3	Stable reached NTU <10
										Collect sample

Sampled?: Yes ☑ No ☐

Initial of Sampler: EBT

EA Engineering, Science, and Technology, Inc.

Low-Flow Groundwater Sampling & Stabilization Form

Site:	Cape Romanzof LRRS, Alaska	**Well No.:**	SS010-MW03
Contract No.:	FA8903-10-D-8601-0101	**EA Project No.:**	62421101
Date:	8/2/14	**Samplers:**	E. Burt-Toland
Time Start:	1340		
Time Finish:	1415	**Checked By:**	

Well & Purge Information

Select bgs or bTOC: bgs ☐ bTOC ☑

~~**TD:** DTW~~:	79.52 ft		
~~**DTW:** TD~~:	84.45 - 79.52 ft		
Water Column:	= 4.93 ft	TD-DTW=Water Column	
Liter/Foot:	4.93 x 0.605 L/ft	See ***Well Volume Calculation*** Table	
Liters in Well:	= 2.983 L	Water Column x L/ft	
Three Well Volumes:	8.94795 L	Liters in Well x 3	
Sample Depth:	81.5 ft	Depth of Pump Intake	

Well Volume Calculation

Well Diameter	L/ft
2"	0.605
2.5"	0.946
3"	1.4
4"	2.46
6"	5.526

Field Equipment

Multiparameter Water Quality Meter:	YSI	**Serial No.:**	10D100479
Water Level Meter:	Solinst	**Serial No.:**	1220045251
Turbidity Meter:	Scientific INC	**Serial No.:**	~~20110088~~ EBT 20140434 2
Pump Type:	QED MicroPurge	**Serial No.:**	11613

Purge Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☑ Bladder Pump: 0.2 Optimum Flow Rate Set at 7 Seconds Refill 5 Seconds Discharge cpms 100psi

Sampling Method:

☐ Peristaltic Pump ☐ Inertial ☐ Other:

☑ Bladder Pump: 0.2 Optimum Flow Rate Set at 7 Seconds Refill 5 Seconds Discharge cpms 100psi

Sample Collection Information

MS/MSD? : Yes ☑ No ☐

Parameter	Method	Container Type	# Containers	Preservative	Note
GRO	AK101	VOA	9	HCl	MS/MSD
DRO/RRO	AK102/103	250ml Amber	6	HCl	MS/MSD

Low-Flow Groundwater Sample & Stabilization Form

Well ID: SS010-MW03	Sample ID: SS010-MW03-080214	Sample Time: 1415
Date: 8/2/14	Dup. Sample ID: N/A	Dup. Sample Time: N/A

Notes:
WL(Pump in) = 78.50 when pump started.

Purging and *Stabilization Data

Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1340	START PURGING								78.50	Start @ 5R/10D 100PSI CPM4 no water yet
1343	Just	starting	to	fill flow-through cell			of	YSI	0.2	7R/13D 120PSI CPM6, some sputting
1345	1.0	7.60	77	14.36	4.77	28.2	100.2	78.50	0.2	to come up tube in spurts.
1350	2.0	4.95	40	10.77	5.02	-10.5	78.6	78.60	0.2	8R/14D 100PSI CPM5 is good
1400	4.0	4.64	28	9.37	5.15	-79.9	25.10	78.59	0.2	Δ to 7R/15D steady low flow @ 0.2 L/M 100PSI/CPM5
1405	5.0	4.17	21	8.98	5.01	-78.1	16.50	78.60	0.2	
1410	6.0	4.10	20	8.62	5.09	-80.9	4.30	78.59	0.2	
1415	7.0	4.17	20	8.82	5.04	-78.9	4.01	78.58	0.2	Stable; collect sample - SS010-MW03-080214 and MS/MSD.

EBT

Sampled? : Yes ☑ No ☐

Initial of Sampler: EBT

EA Engineering, Science, & Technology, Inc.

Surface Water Sampling Form

Project # 62421101, Phase 3

Project Name: Cape Romanzof LRRS Environmental LTM	**Date:** 8/5/14	**Climatic Conditions:** Dense Fog 52°F
AFCEE Contract Number: FA8903-10-D-8601-0101	**Site:** ST009 - Surface Water	
Sampled By: E. Burt-Toland, M. Blinstrub		

SURFACE WATER (sample site description, notes on water observation, GPS point ID, Photo ID/#s)

Stream leading out to bay used by marine mammals, birds (seabird, shorebird & passerine), beavers, fox, Moose, & waterfowl. Runs adjacent to ST009, moderate flow for stream (not @ high or low water marks). salmon spawning in stream (pinks). very clear. GPS point "GPS0004"

Water Depth @ Collection Point:

Collection Method:

Time (24 hrs)	Temp °C	Spec. Cond. (µS/cm)	Flow Rate (L/min)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	pH	Color/Odor
0915	7.20	26	see video. moderate	12.28	-49.3	4.66	5.81	clear, no odor.

Parameter	Analysis	Container Type	# Containers	Preservative	Notes
TAH	SW8260B	40 mL VOA	3	HCl	
TAqH	SW8270C SIM	1 L amber	2	-	

Sample ID: FC-SW01 - 080514

Sample Time: 0915

QA/QC Sample: FC-SW99 - 080514

Sample Time: 0905

CALIBRATION LOGS

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Water Quality Meter Calibration Log

Cape Romanzof LRRS, Alaska

Model: YSI - 10D100479

Serial Number: Same used for all sampling.

Date & Time & Temp	Calibration Information	Initial Calibration Readings	Final Calibration Readings
Date: 7/29/2014 Time: 0615 Temp: 25°C	pH (4.0)	~~8.05~~ 4.07	4.01
	pH (7.0)	7.05	7.00
	pH (10.0)	10.29	10.05
	Spec Cond (µS/cm)	0.850/1399	1.524/1408
	DO (mg/L) Set	726.69 28.6 in Hg	8.46
	ORP (mV)	236.9	240.1
Date: 7/30/14 7/30/2014 Time: 0615 Temp: 25°C	pH (4.0)	4.01	4.01
	pH (7.0)	6.85	7.00
	pH (10.0)	10.22	10.04
	Spec Cond (µS/cm)	1140	1412
	DO (mg/L) 22.5°c	~~8.6~~ ~~8.50~~ ~~8.65~~ 8.56	8.54
	ORP (mV)	241.2	240.3
Date: 8/1/14 ~~7/31/2014~~ Time: ~~0815~~ 0745 Temp: 25°C ~~72~~ 71	pH (4.0)	4.16	4.01
	pH (7.0)	6.91	7.00
	pH (10.0)	10.16	10.03
	Spec Cond (µS/cm) 1409	1473	1332
	DO (mg/L) 28.65 22.5c	9.03	8.10
	ORP (mV) ~~240.9~~	240.9	240.11
Date: 8/1/2014 Time: Temp:	pH (4.0)		
	pH (7.0)		
	pH (10.0)		
	Spec Cond (µS/cm)		
	DO (mg/L)		
	ORP (mV)		
Date: 8/2/2014 Time: Temp:	pH (4.0)	4.07	4.02
	pH (7.0)	6.97	6.99
	pH (10.0)	9.98	9.99
	~~Spec Cond (µS/cm)~~	2365	239.5
	DO (mg/L)	9.04	8.52
	~~ORP (mV)~~	1156	1297
Date: 8/3/2014 Time: Temp:	pH (4.0)		
	pH (7.0)		
	pH (10.0)		
	Spec Cond (µS/cm)		
	DO (mg/L)		
	ORP (mV)		

ORP
Sp Cond.

No sampling / developing

Water Quality Meter Calibration Log

Cape Romanzof LRRS, Alaska

Model: 100 D1004799 YSI 556

Serial Number: Same used for all sampling

Date & Time & Temp	Calibration Information	Initial Calibration Readings	Final Calibration Readings
Date: 8/4/2014 Time: 0715 cal@ 20°c Temp: 28.24 @ 71°F = 717.3 Barom.	pH (4.0)	4.03	4.00
	pH (7.0)	6.87	7.02
	pH (10.0)	10.20	10.08
	Spec Cond (µS/cm)	1316	1290
	DO (mg/L)	8.95	8.70
	ORP (mV)	235.7	240.1
Date: 8/5/2014 Time: 0730 Temp: 716.79 28.22 mm Hg x 25.4 =	pH (4.0)	4.07	4.01
	pH (7.0)	6.96	7.00
	pH (10.0)	10.19	10.03
	Spec Cond (µS/cm)	1332	1297
	DO (mg/L)	8.63	8.57
	ORP (mV)	236.4	240.1
Date: 8/6/2014 Time: Temp:	pH (4.0)		
	pH (7.0)		
	pH (10.0)		
	Spec Cond (µS/cm)		
	DO (mg/L)		
	ORP (mV)		
Date: Time: Temp:	pH (4.0)		
	pH (7.0)		
	pH (10.0)		
	Spec Cond (µS/cm)		
	DO (mg/L)		
	ORP (mV)		
Date: Time: Temp:	pH (4.0)		
	pH (7.0)		
	pH (10.0)		
	Spec Cond (µS/cm)		
	DO (mg/L)		
	ORP (mV)		

Turbidity Calibration Log
Cape Romanzof LRRS, Alaska

Model: Micro TPW HF Scientific
Serial Number: 20140342

Date & Time	Manufacturer Calibration Standard	Calibration Reading	Acceptable (✓)
Date: 7/29/14	0.02	0.02	✓
	10.0	10.0	✓
Time: 0615	1000	1000	✓
Date: 7/30/14	0.02	0.02	✓
	10.0	10.0	✓
Time: 0615	1000	1000	✓
Date: 8/1/14	0.02	0.02	✓
	10.0	10.0	✓
Time: 0745	1000	1000	✓
Date: 8/2/14	0.02	0.02	✓
	10.0	10.0	✓
Time: 0615	1000	1000	✓
Date: 8/4/14	0.02	0.02	✓
	10.0	10.0	✓
Time: 615	1000	1000	✓
Date: 8/5/14	0.02	0.02	✓
	10.0	10.0	✓
Time: 0730	1000	1000	✓
Date:			
Time:			
Date:			
Time:			
Date:			
Time:			
Date:			
Time:			
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Date:			
Time:			
Date:			
Time:			
Date:			
Time:			

Photoionization Detector Calibration Log

Cape Romanzof LRRS, Alaska

Model: _____

Serial Number: _____

Calibration Gas and Concentration: Isobutylene 100 ppm

Date	Time	Initials of Personnel Calibrating Instrument	Initial Reading (ppm)	Final Calibration Reading (ppm)
7/29/2014	1015	MBB		
7/30/2014	0630	MBB	99.2	100.0
7/31/2014	0730	MBB	99.7	100.0
8/1/2014	0830	MBB	100.2	100.0
8/2/2014	0730	MBB	99.9	100.0
8/3/2014	0900	MBB	98.9	100.0
8/4/2014				
8/5/2014				
8/6/2014				

PPB RAE (904020)
MINI RAE 2000

SOIL BORING LOGS (FIELD)

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BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Gectek AK
Drilling Rig/Bit: Geoprobe 8040DT / 4.5" Casing OD 3.7" ID
Driller: Jeff Resin
Boring/Well Number: SB03/MW03

Project Number: 62421101
Start Time/Date: 1000 / 7/29/14
Completion Date/Time: 7/30/14 1500
Final Depth: 81.5 'bgs for ~~well~~. 84.00' ~~bgs~~ bgs for boring
Logged by: M. Bamstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)
Macro		X	2.5	0	ML	0–5	sandy silt ~~of gravel~~ MB, dark yellowish brown (10YR 3/4), Moderately dense, dry, sand = fine/medium, gravel = mostly fine, some coarse (1.5"). some organics + roots to 5' bgs.
				0		5–8	same as above.
			3.5	0	SM	8–10	Increasing gravel, cobbles, and sand. silty sand w/ gravel; dark brown (10YR 3/2)
		X Dup	3.5	0.1	GP-GM	10–15	Poorly graded gravel with silt + sand, grayish brown (10YR 5/2) MB, moderately dense, dry.
				0.1	SM		same as SM at 9' bgs.
				0	GP-GM	15–20	gravel w/ silt + sand, grayish brown (10YR, 5/2), weathered granitic boulder. dry. 10% silt, 10% fine sand, 15% medium sand, 5% coarse sand, 60% gravel (mostly coarse) w/ cobbles + boulders.
			4.25			20	

Boring/Well Construction Details: stickup Monument completion. 3/8" Bentonite Hydrating. 2" Sch. 40 PVC Riser.

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040DT / 4.5" Casing OD 3.7" Casing ID
Driller: J. Resin
Boring/Well Number: SB03 / MW03

Project Number: 62421101
Start Time/Date: 1000 7/29/14
Completion Date/Time: 7/30/14 1500
Final Depth: 81.5' bgs for well, 84' bgs for ~~well~~ boring
Logged by: M. Blomstrab

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Macro			5'	0	GP	20	gravel w/sand, very pale brown (10YR 7/2), dry, 25% coarse sand, coarse gravel 75% w/ cobble + boulders,	3/8" Bentonite Hydrolog
				0.1				
				0.1				
				0				
				0		25		
				0	GP		same as above, very pale brown (10YR 7/3), dry. Basically pulverized cobble + boulder.	
				0				
				0				
				0				
			3'	0		30		
							Not cored for logging of soil.	
						35		2" Sch 40 PVC Riser
						40		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040 DT
Driller: Jeff Resin
Boring/Well Number: SB03 / MW03

Mud rotary
4.5" OD Casing
3.7" ID Casing

Project Number: 62421101
Start Time/Date: 1000 7/29/14
Completion Date/Time: 7/30/14 1500
Final Depth: 81.5' bgs for well. 84' bgs for boring
Logged by: M. Bimstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Down hole Hammer						40	Not Cored for logging of soil.	3/8" bentonite Hydrolog.
						45		
Mud Rotary				0	GP	50	Gravel with sand, very pale brown (10YR 7/2), dry; angular/subangular slightly moist	2" Sch. 40 PVC Riser
							pulverized boulders, light gray (5GY 1 7/10Y) dry.	
Downhole Hammer						55	Not cored.	
						60		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040 DT — Macro core 4.5" OD casing 3.7" ID casing
Driller: Jeff Ream
Boring/Well Number: SB03 / MW03

Project Number: 62421101
Start Time/Date: 1000 7/29/14
Completion Date/Time: 7/30/14 1500
Final Depth: 81.5 'bgs for well 84 'bgs for boring
Logged by: M. Blinstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
					GP-GM ?	60	Not Cored	3/8" Bentonite; Pellet plug seal; 2" Sch. 40 PVC Riser
						65		
						70	Boulder	
						75	Depth to water observed in casing after sitting overnight.	Prepacked w/ 20/40 sand, 10' of .010" slotted screen.
Down hole Hammer								
Macro		X		0	GP-GM	80	Gravel w/silt + sand, brown (10YR 4/4), wet. Subrounded/subangular.	

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

Macrocore & Downhole Hammer

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040 DT
Driller: Jeff Reim
Boring/Well Number: SB03 / MW03

Macrocore 4.5" OD Casing 3.7" ID Casing

Project Number: 62421101
Start Time/Date: 1000 7/29/14
Completion Date/Time: 7/30/14 1500
Final Depth: 81.5' bgs for well . 84' bgs for boring
Logged by: M. Blimstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Macro			3.5	0	GP-GM	80	Gravel w/silt & sand, brown (10YR 4/4), wet, subrounded/subangular	3" sump; 10/20 Sand
							End of boring.	
						85		
						90		
						95		
						IDD		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

Macrocore + Downhole hammer

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Gestek AK
Drilling Rig/Bit: Geoprobe 8040DT
Driller: Jeff Ressi
Boring/Well Number: SB02 / MW02

Macrocore 4.5" OD Casing 3.7" ID Casing

Project Number: 62421101
Start Time/Date: 0940 8/2/14
Completion Date/Time: 8/3/14 1200
Final Depth: 118' bgs boring
Logged by: M. Blinstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Macro		X	2	0	SW-SM	0	Organics w/ silty sand w/ gravel. Brown (10YR 4/3), Dry. Sand w/ silt + gravel. Dark yellowish brown (10YR 4/4) Dry.	3/8" Bentonite Holeplug
							Wood organics. ~2.25'	
				0	SW-SM	5	Boulder	2" Sch. 40 PVC Riser
			3.75	0		10		
		X			SW-SM			
			3.5	0		15	Boulder! White (white page N/8) Dry. weathered granitic boulder.	
							Boulder!	
			4			20		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Eastek AK
Drilling Rig/Bit: Geoprobe 8040 DT
Driller: Jeff Resin
Boring/Well Number: SB02 / MW02

Macro Sampler Core 4.5" OD Casing 3.7" ID Casing

Project Number: 62421101
Start Time/Date: 0940 8/2/14
Completion Date/Time: 8/3/14 1200
Final Depth: 118' bgs boring
Logged by: M. Blastnik

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Macro / Direct Push Hammer			4	0	SW-SM	20	sand w/ silt + gravel, dark yellowish brown (10YR 4/3) Dry	3/8" Bentonite Hole plug.
							moist	
						25	Dry.	
				0			cobble, white (white dacite N/8) Dry	
			25		SW-SM		moist	
							Dry	
							Refusal w/ macrocore. Dry	
						30	Rock/boulder.	
						35	cobbles/boulder.	2" Sch. 40 PVC Riser
						40		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040 DT
Driller: Jeff Resin
Boring/Well Number: SB02 / MW02

Project Number: 62421101
Start Time/Date: 0940 8/2/14
Completion Date/Time: 8/3/14 1200
Final Depth: 118' bgs boring
Logged by: M. Blinstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Downhole Hammer						40	- cobbles	
						45	Boulder	
						50		
Macro				0	SM		Boulder, white (White page N/8)	
					SW		silty sand w/ gravel, dark yellowish brown (10YR 4/4), Dry	
					SW-SM		Boulder, white, sand w/ gravel >15%, brown (10YR 5/3), dry	
							sand w/ silt + gravel (cobbles), brown (10YR 5/3), dry	
			45		SW	55	sand w/ gravel <15%, brown (10YR 5/3) dry. Gravel = subangular, subrounded.	
Downhole Hammer					?		NO CORE	
						60		

3/8" Bentonite Hydraplug
2" Sch 40 PVC Riser

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040DT
Driller: Jeff Reim
Boring/Well Number: SB02 / MW02

Project Number: 62421101
Start Time/Date: 0940 8/2/14
Completion Date/Time: 8/3/14 1200
Final Depth: 118' bgs boring
Logged by: M. Blastomb

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Dem hole Hammer.					SW-SM ?	60	No Cores. Cuttings observed to be SW-SM w/ boulders periodically.	3/8" Bentonite Holeplug; 2" Sch. 40 PVC Riser
						65		
						70		
						75		
						80		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: 8040 DT
Driller: Jeff Reim
Boring/Well Number: SB02 / MW02

Project Number: 62421101
Start Time/Date: 0940 8/2/14
Completion Date/Time: 8/3/14 1200
Final Depth: 118' bgs boring
Logged by: M. Blumb

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Down hole Hammer					SW-SM ?	80	NO CORES collected. Only cuttings observation.	3/8" Bentonite Hydraplug
						85	Attempted macro core. Refusal. Could not drive core, Rouse "down hole hammer".	
						90		
						95	Boulders	← Pel-Plug seal
						100		2" Sch. 40 PVC riser

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Macrocore + Downhole Hammer

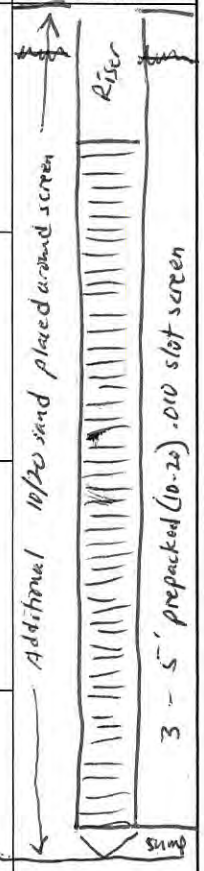
Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: 8040 DT
Driller: Jeff Resin
Boring/Well Number: SB02 / MW02

Macro core 4.5" OD casing 3.9" ID

Project Number: 62421101
Start Time/Date: 0940 8/2/14
Completion Date/Time: 8/3/14 1200
Final Depth: 118' bgs boring.
Logged by: M. Blinstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)
Downhole hammer					SW-SM ?	100	Boulder
							Cobbles
						105	
							Boulder
						110	
						115	
							End of boring
						120	

Boring/Well Construction Details



SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Macrocore + Drivehole Hammer

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040DT / 4.5" Casing OD 3.7" ID
Driller: Jeff Resin
Boring/Well Number: SB01 / MW01

Project Number: 62421101
Start Time/Date: 1740 / 7/30/14
Completion Date/Time: 8/1/14 1800
Final Depth: 104' bgs for well, 111' bgs for boring
Logged by: M. Blimstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Macro		MS/HSA	3.5	0	SW-SM	0	Sand w/ silt fgravel, dark yellowish brown (10YR 4/4), dry, sand = some fine, mostly medium, some coarse. Gravel = some fine, mostly coarse, some cobbles, subrounded subangular	2" well. Aboveground stickup monument.
				0	SM	5	Moist, silty sand w/ gravel.	3/8" Bentonite Hole plug.
				0			same as above. dry.	
			3	0	SW-SM	10	same as above. dry.	
			3.25	0		15	same as above	2" Sch. 40 PVC Riser
			3.5			20	Moist	

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040DT / Macrocore OD 4.5" Casing 3.7" ID
Driller: Jeff Rasin
Boring/Well Number: SB01 / MW01

Project Number: 62421101
Start Time/Date: 1740 / 7/30/14
Completion Date/Time: 8/1/14 1800
Final Depth: 104' bgs for well . 111' bgs for boring
Logged by: M. Blaisdell

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Macro				0	SW-SM	20	Sand w/ silt + gravel, dark yellowish brown (10YR 4/4), dry	3/8" Bentonite Hole plug.
							moist	
							Rock - weathered granitic boulder.	
			4			25	Boulder	
			No Recovery				same SW-SM dry	2" Sch.40 PVC Riser
				0				
			4			30	Boulder	
				0				
					SW-SM	35		
			3.75					
				0				
				0		40		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040DT / Macro core 4.5" OD casing 3.7" ID
Driller: Jeff Rosin
Boring/Well Number: SB01

Project Number: 62421101
Start Time/Date: 1740 / 7/30/14
Completion Date/Time: 8/1/14 1800
Final Depth: 104' bgs for well, 111' bgs for boring
Logged by: M. Blinstrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Macro			4.75	0	SW-SM	40	Boulder, white (white page N/8), dry, subrounded/subangular sand w/silt + gravel, dark yellowish brown (10YR 4/4), dry	3/8" Bentonite Holeplug.
							Boulder, white, dry.	
						45	NO CORE	2" Sch. 40 PVC Riser
Macro				0			Same as above, dry	
						50		
Macro			5	0			~~NO CORE~~ Same as above, dry.	
						55	Boulder	
Macro			5				NO CORE.	
						60		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040DT / 4.5" OD casing, 3.7" ID casing
Driller: Jeff Resin
Boring/Well Number: SB01

Project Number: 62421101
Start Time/Date: 1740 / 7/30/14
Completion Date/Time: 8/1/14 1800
Final Depth: 104' bgs for well, 111' bgs for boring
Logged by: M. Binstead

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Downhole Hammer					SW-SM	60	NO CORE. Cuttings observations: sand and pulverized rock ~~and dust. Penetrating see 1/4" silt chunks exiting casing.~~ MBB MBB	
						65		
						70	Boulder	
						75	Boulder	
						80		3/8" Bentonite Hole plug; 2" Sch. 40 PVC Riser; Bent. Plug

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Cootek AK
Drilling Rig/Bit: Geoprobe 8040DT / 4.5" OD Casing 3.7" ID casing
Driller: Jeff Resin
Boring/Well Number: SB01 / MW01

Project Number: 62421101
Start Time/Date: 1740 / 7/30/14
Completion Date/Time: 8/1/14 / 1860
Final Depth: 104' bgs for well. 111 for boring
Logged by: M. Blystrub

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)
Down hole Hammer						80	NO CORE. Mostly boulders + rock dust observed from cuttings.
						85	
Macro		X		0	? none SW-SM		sand w/ silt + gravel (cobbles + boulders), Moist
						90	
					SP SM		sand, brown (10YR 4/3) moist. Mostly medium, some fine, some coarse. WET. Silty sand (fine).
			4.75		SW		sand w/ gravel, brown (10YR 4/3) moist. w/ black sand.
Downhole Hammer							NO CORE. Down hole hammer + cuttings observation only.
						95	
						100	

Boring/Well Construction Details: Pel-plug; sand; 2" Sch. 40 PVC Riser; 20/40 Prepacked, .010" screen; 16/20 sand pack

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

BORING/WELL CONSTRUCTION LOG

Project: Cape Romanzof LRRS Environmental LTM, 2014
Drilling Company: Geotek AK
Drilling Rig/Bit: Geoprobe 8040 DT / 4.5" OD Casing
Driller: Jeff Resin 3.7" ID Casing
Boring/Well Number: SB01 / MW01

Project Number: 62421101
Start Time/Date: 1740 / 7/30/14
Completion Date/Time: 8/1/14 / 1800
Final Depth: 104' bgs for well. 111' bgs for boring
Logged by: M. Blimstmb

Sample Type	Blow Counts / 6"	Sample Interval	Recovery (in)	PID (ppmv)	USCS Soil Type	Depth (ft bgs)	Soil Description (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring/Well Construction Details
Down Hole Hammer						100	NO CORE. Cuttings observation only.	2" x 6" Prepacked .010" screen; 10/20 sand; 6" coupling
						105		
						110	End of boring	10-20 sand backfill
						115		
						120		

SS = Split Spoon, ST = Shelby Tube, CUT = Drill Cuttings, or Core

MONITORING WELL DEVELOPMENT FORMS

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EA Engineering, Science, and Technology, Inc.

Well Development Record

Well ID: SS010-MW01

Project Information

Client:	U.S. Air Force	Contract No.:	FA8903-10-D-8601-0101
Project:	Cape Romanzof LRRS Environmental LTM	Date Started:	8/2/14
Site:	Cape Romanzof LRRS, Alaska	Date Completed:	8/2/14
Field Personnel:	E. Burt-Toland		

☒ Original Well Development ☐ Redevelopment

Well Details

Well Dia (in.):	(2") 4" Other ____	Borehole Dia (in.):	4.25" 6.25" Other 4.5
Depth to Water (DTW) (ft btoc):	94.43	Total Depth (TD) (ft btoc):	106.71 + .28 = 106.99
15' 6" Sump Screen Interval (ft):	88.5 to 103.5	Saturated Screen Interval (ft):	103.5 - 94.43 = 9.07'
Water Column in Well (ft): $WC_w = TD - DTW$	103.5 - 94.43 = 9.07'		
Volume in Well (gal): $V_w = d_w^2 \times 0.04079 \times WC_w$	9.07 × 0.04079 × 2.0² = 1.4799 gal		
Volume in Filter Pack (gal): $V_{FP} = (d_b^2 - d_w^2) \times 0.01224 \times SSI$	(4.5² - 4) × 0.01224 × 9.07 = 1.804		
Total Well Volume (gal): $V_w + V_{FP} = V_T$	3.283923		

d_w=well diameter (inches) **d_b**= borehole diameter (inches) **WC_w**= water column in well (feet) **SSI**=saturated screen interval (feet) **V_T**=Total Well Volume (gal)

Total well volume 2" (gal): $V_T = [WC_w \times 0.1632] + [SSI \times 0.1721]$

Total well volume 4" (gal): $V_T = [WC_w \times 0.6528] + [SSI \times 0.2822]$

Surge Method Surge Block Purge Method Pump w/ 1.66 Reclaimer

Field Testing Equipment

Water Quality Meter:	Model YSI	Serial No.	10D100479
Turbidity Meter:	Model HF Scientific	Serial No.	20140434?
Water Level Meter:	Solinst		
Pump:	1.66 Reclaimer		
Bailer:	SS if needed.		

Work Plan Criteria

Min purge volume (3 well volumes) 9.85 total gal

Max purge volume (10 well volumes) 30.28 total gal

Development complete:

- Turbidity < 10 NTUs or maximum 10 well volumes purged

Well Development Record

Well ID: SSO10-MW01

Purging Data

Date:

Time (24 hrs)	Water Level (ft BTOC)	Volume Remove (gal)	Temp. (°C)	pH	Specific Conductivity (µS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Comments
1630	94.43 Before pump in	—	—	—	—	—	—	—	Surged 1620-1630
1640	—	—	—	—	—	over	—	—	1637 exhaust 15 charge 10
1645						869.7			exhaust 10 charge 10
1650			7.02	6.11	20	891.7	31.4	28.08	exhaust 12 charge 7
~~1650~~ 1655			—	—	—	—	—	—	Surge
1700	10 gal		4.00	6.44	32	797.6	-95.0	19.56	purge
1705	15 gal		4.15	6.04	27	1002	-99.6	20.47	
1710	20 gal								
1720 -	25 gal	94.45							surge 1720-1725
1730			3.93	6.22	34	1076	-93.0	16.80	start pump up
1735	30 gal		3.74	5.85	24	857.6	-92.8	14.09	
1740	35 gal	94.55	3.37	5.95	26	343.3	-98.6	14.98	
1745	40 gal		3.09	5.89	27	165.2	-100.2	15.75	→ Trying to get turbidity
1750	45		2.58	5.75	26	177.4	-92.1	14.53	<10 NTUs or w/in
1755	50 gal		2.85	5.76	24	186.5	-91.0	15.87	10% if possible.
1800	55 gal		2.91	5.70	25	183.1	~~-87.9~~	15.78.	well over 10x well vol.
									has been purged.
									Turbidity stable w/in 10%
		EST							>10 well vols purged.
									consider developed

Additional Comments:

Unable to track water w/ pump in sometimes (level goes down below 5FT 2" dia. intake at bottom) pump w/ the

EA Engineering, Science, and Technology, Inc.

Well Development Record

Well ID: SS010-MW02

Project Information

Client:	U.S. Air Force	Contract No.:	FA8903-10-D-8601-0101
Project:	Cape Romanzof LRRS Environmental LTM	Date Started:	8/4/14
Site:	Cape Romanzof LRRS, Alaska	Date Completed:	8/4/14
Field Personnel:	J. Beckner, M. Blinstrub		

☒ Original Well Development ☐ Redevelopment

Well Details

Well Dia (in.): (2") 4" Other ____	Borehole Dia (in.): 4.25" 6.25" Other 4.5
Depth to Water (DTW) (ft btoc): 112.25	Total Depth (TD) (ft btoc): 121.21 + .28 WLM = 121.49
Screen Interval (ft): 105.99 - 120.99	Saturated Screen Interval (ft): 112.25 - 120.99
Water Column in Well (ft): $WC_w = TD - DTW$ 8.74'	
Volume in Well (gal): $V_w = d_w^2 \times 0.04079 \times WC_w$ 1.4264	
Volume in Filter Pack (gal): $V_{FP} = (d_b^2 - d_w^2) \times 0.01224 \times SSI$ 1.7384	
Total Well Volume (gal): $V_w + V_{FP} = V_T$ 3.1648	

d_w=well diameter (inches) d_b= borehole diameter (inches) WC_w= water column in well (feet) **SSI**=saturated screen interval (feet) V_T=Total Well Volume (gal)

Total well volume 2" (gal): $V_T = [WC_w \times 0.1632] + [SSI \times 0.1721]$

Total well volume 4" (gal): $V_T = [WC_w \times 0.6528] + [SSI \times 0.2822]$

Surge Method Bailer SS (new) Purge Method Bailer SS (new) / GeoTech Reclaim-

Field Testing Equipment

Water Quality Meter:	Model YSI 556	Serial No.	10D106479
Turbidity Meter:	Model Scientific	Serial No.	20140432
Water Level Meter:	Solinst		
Pump:	Reclaim		
Bailer:	Stainless Steel		

Work Plan Criteria

Min purge volume (3 well volumes) 9.5 total gal

Max purge volume (10 well volumes) 31.65 total gal

Development complete:

- Turbidity < 10 NTUs or maximum 10 well volumes purged

Well Development Record

Well ID: SS010-MW02

Purging Data

Date:

Time (24 hrs)	Water Level (ft BTOC)	Volume Remove (gal)	Temp. (°C)	pH	Specific Conductivity (µS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Comments
1315						-9999-			Surge w/ block 5 min.
1345		3.0				9999 over			purged 10 min, surge 5
1350			3.02	5.56	60	-over-	88.5	24.32	min, begin purge/again.
1355						-over-			Surg w/ block 5 min
1415		8.0				-over-	EOT -65.9		purged cycle.
1420			3.14	6.17	59	-over-	+82.6	20.09	
1450		15.0		5.69	63	831	-62.3	11.25	purge
1500		16.0	4.41	5.71	47	948.0	-84.8	13.99	
1530						728.0	[illegible]	[illegible]	
						-over-			
1632									Begin using pump.
1640	112.31	21	6.41	5.66	56	122.7	-77	12.90	
		26				80.00			
1650	112.25	31	3.57	4.95	72	81.67	-84.0	19.50	
1655		31.05	4.20	5.41	68	82.1	-88.8	17.01	
1700	112.25	34.10	6.20	5.64	31	90.00	-86.4	17.00	Consider developed

Additional Comments:

EA Engineering, Science, and Technology, Inc.

Well Development Record

Well ID: SS010 - MW03

Project Information

Client:	U.S. Air Force	Contract No.:	FA8903-10-D-8601-0101
Project:	Cape Romanzof LRRS Environmental LTM	Date Started:	8/1/14
Site:	Cape Romanzof LRRS, Alaska	Date Completed:	8/1/14
Field Personnel:	E. Burt-Toland, James Beckner, switch to M. Blinstrub		

☒ Original Well Development ☐ Redevelopment

Well Details

Well Dia (in.):	(2") 4" Other ____	Borehole Dia (in.):	4.25" 6.25" Other 4.5
Depth to Water (DTW) (ft btoc):	78.45	Total Depth (TD) (ft btoc):	84.45
Screen Interval (ft):	74.15 - 84.15 (✓)	Saturated Screen Interval (ft):	~~4.30 ft~~ 84.15 − 78.45 = 5.70
Water Column in Well (ft): $WC_w = TD - DTW$	5.70'		
Volume in Well (gal): $V_w = d_w^2 \times 0.04079 \times WC_w$	.912		
Volume in Filter Pack (gal): $V_{FP} = (d_b^2 - d_w^2) \times 0.01224 \times SSI$			
Total Well Volume (gal): $V_w + V_{FP} = V_T$			

d_w=well diameter (inches) d_b= borehole diameter (inches) WC_w= water column in well (feet) **SSI**=saturated screen interval (feet) V_T=Total Well Volume (gal)
Total well volume 2" (gal): $V_T = [WC_w \times 0.1632] + [SSI \times 0.1721]$
Total well volume 4" (gal): $V_T = [WC_w \times 0.6528] + [SSI \times 0.2822]$

Surge Method Surge Block Purge Method Pump w/ 1.66 Reclaimer

Field Testing Equipment

Water Quality Meter:	Model YSI	Serial No.	10D100479
Turbidity Meter:	Model HF Scientific	Serial No.	20140434 2
Water Level Meter:	Solinst		
Pump:	1.66 Reclaimer		
Bailer:	SS if needed		

Work Plan Criteria

Min purge volume (3 well volumes) 2.736 total gal
Max purge volume (10 well volumes) 9.12 total gal

Development complete:
- Turbidity < 10 NTUs or maximum 10 well volumes purged

Controller settings: Exhaust flow almost closed. 1/2 setting, P=1, 5 Chuck, 15 exhaust

Well Development Record

Purging Data

Well ID: SS010-MW03

Date: 8/1/14

Time (24 hrs)	Water Level (ft BTOC)	Volume Remove (gal)	Temp. (°C)	pH	Specific Conductivity (µS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Comments
1015	78.45	—	—	—	—	—	—	—	Begin surge w/ 2" block
1025		—	—	—	—	472	—	—	Hook up Geotech pump begin pumping
1124		—	—	—	—	204	—	—	
1129						441			pump issues
1135		10 gal	4.20	5.90	24	318	114.9	11.85	10 gallons
1145		15 gal	3.78	6.18	28	445	141.4	11.05	
1150		20 gal	3.81	7.00	28	OVR	121.9	11.64	surged
1155		25 gal	3.81	6.64	27	~~251.2~~	124.5	11.56	purged
1205		30	4.21	6.19	28	251.2	137.8	10.34	surge
1215		35	3.72	7.42	27	251.3	123.5	11.26	purge
~~1230~~ 1226		40	3.73	6.42	28	100.1	128.5	10.85	continue
1238		45	3.77	6.40	28	70.1	120.5	11.96	Developed
1243		50	3.94	6.18	27	51.10	132.4	11.08	until 10' to get
1247		55	3.44	7.46	27	50.24	135.8	11.09	<10 NTU ?
1250		60	3.59	6.66	27	47.13	133.2	11.21	go w/in 10'.

Additional Comments:

APPENDIX B

PHOTOGRAPHIC LOGS

APPENDIX B1 – LF003 PHOTOGRAPHIC LOG

APPENDIX B2 – ST009 PHOTOGRAPHIC LOG

APPENDIX B3 – SS015 PHOTOGRAPHIC LOG

APPENDIX B4 – SS010 PHOTOGRAPHIC LOG

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APPENDIX B1 – LF003 PHOTOGRAPHIC LOG

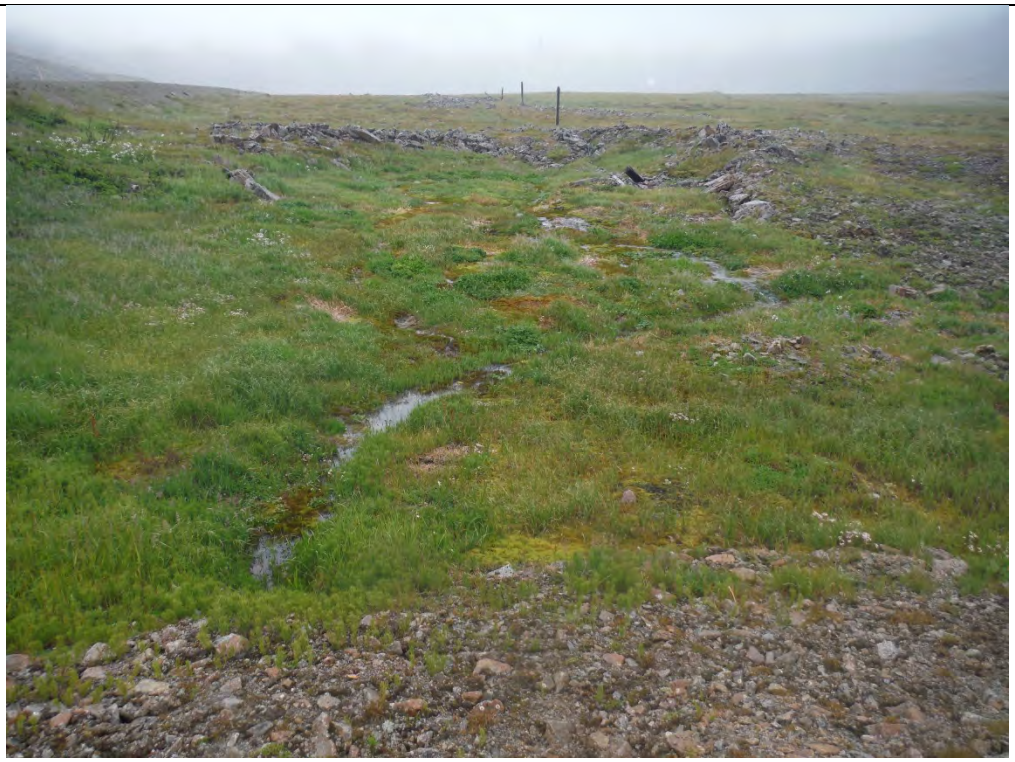
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Photograph No. 1 Site: LF003
Description: Surface water runs from the east to the southwest along the site boundary.
Date: 7/31/2014 Direction: East



Photograph No. 2 Site: LF003
Description: Eastern sidewall of the capped landfill.
Date: 7/31/2014 Direction: Southeast



Photograph No. 3 Site: LF003
Description: Surface water adjacent to the eastern LF003 boundary.
Date: 7/31/2014 Direction: Southeast



Photograph No. 4 Site: LF003
Description: General condition of the surface of the capped landfill.
Date: 7/31/2014 Direction: Southwest



Photograph No. 5 Site: LF003
Description: Likely biological sheen and oxidized soil is present in one location.
Date: 7/31/2014 Direction: Southwest



Photograph No. 6 Site: LF003
Description: Likely biological sheen and oxidized soil is present in one location.
Date: 7/31/2014 Direction: NA



Photograph No. 7 Site: LF003
Description: Piece of liner partially exposed; Vegetation starting on the southern sidewall.
Date: 7/31/2014 Direction: West



Photograph No. 8 Site: LF003
Description: Partially buried plastic. Grasses beginning to revegetate/thicken.
Date: 7/31/2014 Direction: West-Northwest



Photograph No. 9 Site: LF003
Description: Taken from south of the site boundary (across the stream) looking at LF003 from a distance. Southeastern sidewall has thicker revegetation than the cap surface and western areas.
Date: 7/31/2014 Direction: Northwest



Photograph No. 10 Site: LF003
Description: Taken from south of the site boundary (across the stream) looking at LF003 from a distance. Southeastern sidewall has thicker revegetation than the cap surface and western areas.
Date: 7/31/2014 Direction: West



Photograph No. 11 Site: LF003
Description: Taken from south of the site boundary (across the stream) looking at LF003 from a distance. Surface water system originating from the eastern side of the site flows southwest.
Date: 7/31/2014 Direction: West



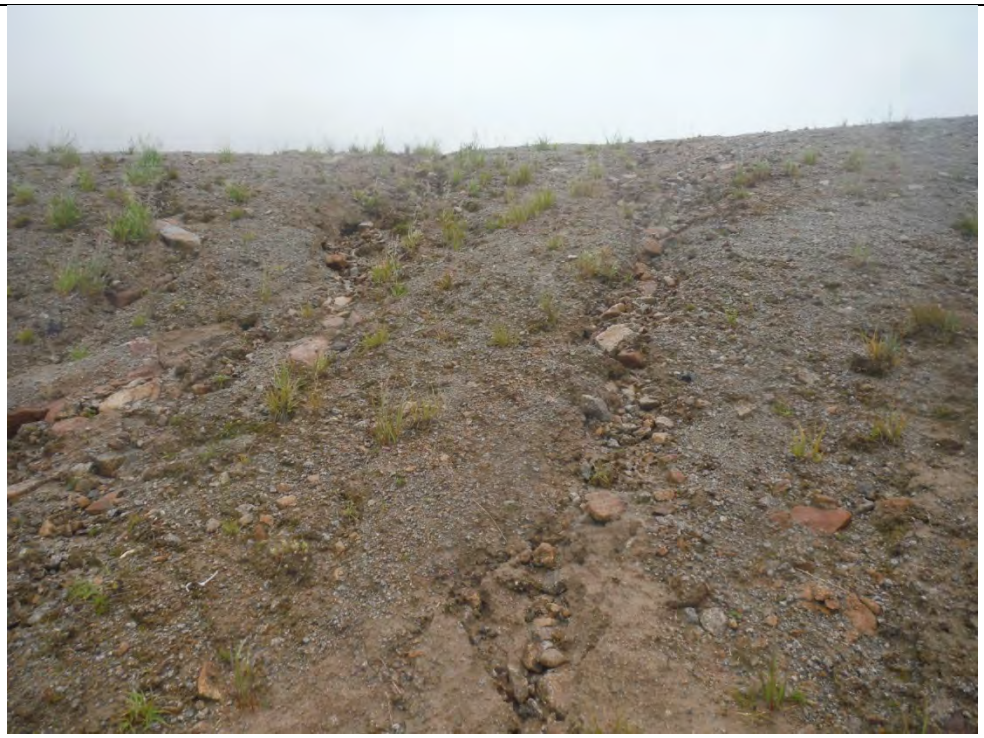
Photograph No. 12 Site: LF003
Description: Scattered metal debris, typical and common to LF003 and all of Romanzof area.
Date: 7/31/2014 Direction: NA



Photograph No. 13 Site: LF003
Description: Compressed gas tank, est. 15-20 gal capacity; at edge of site boundary.
Date: 7/31/2014 Direction: West



Photograph No. 14 Site: LF003
Description: Compressed gas tank and other debris (liner?) at southwest edge of site.
Date: 7/31/2014 Direction: Southwest



Photograph No. 15 Site: LF003
Description: Erosion gullies on the western sidewall of the capped landfill.
Date: 7/31/2014 Direction: East



Photograph No. 16 Site: LF003
Description: Erosion gullies on the western sidewall of the capped landfill.
Date: 7/31/2014 Direction: South



Photograph No. 17 Site: LF003

Description: Panorama of surface of capped landfill (east to west). Equipment and truck tire tracks throughout site surface. Surface runoff observed on 7/31/2014 from the road is what is causing the erosion gullies on the western sidewall. No warning signs are present. Site workers use capped area for a vehicle pull-out and turn-around.

Date: 7/31/2014 Direction: South

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APPENDIX B2 – ST009 PHOTOGRAPHIC LOG

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Photograph No. 1 Site: ST009
Description: ST009 Monitoring well ID MW-9.
Date: 7/30/2014 Direction: Southeast



Photograph No.2 Site: ST009
Description: ST009 Monitoring well ID MW-7.
Date: 7/30/2014 Direction: Northeast



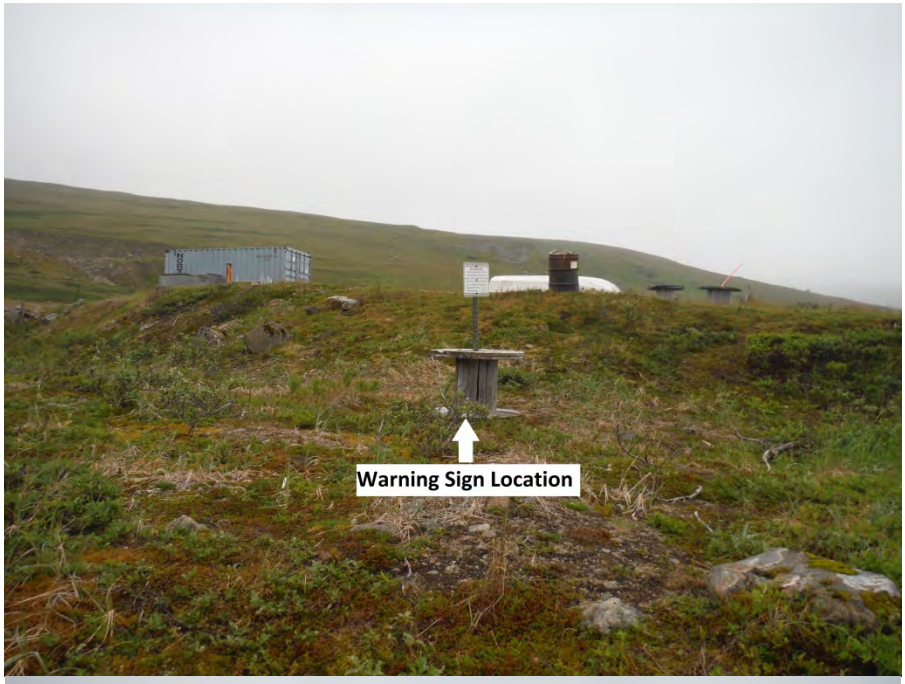
Photograph No.3
Description: ST009 Monitoring well ID MW-4.
Date: 7/30/2014 Direction: Southeast



Photograph No.4 Site: ST009
Description: Fowler Creek during the Pink Salmon Run. Pink Salmon were seen in the creek actively spawning.
Date: 7/31/2014 Direction: Southeast



Photograph No. 5 Site: ST009
Description: Shoreline of ST009, taken from the bluff near MW-9. Fowler Creek is to the west, the active loading dock is to the east. Seals observed feeding in this bay, and hauled-out close to the mouth of Fowler Creek.
Date: 7/31/2014 Direction: South





Photograph No. 6 and 7 Site: ST009
Description: Warning Sign location and verbiage. Fowler Creek is behind photographer to the west (See Photo 8 for sign's proximity to Fowler Creek. Text: "This stream may contain contaminants harmful to human health. Drinking this water is not recommended. Una carvaq carrlugneng imangqersuartuq. Meryaqunaciu. Sponsored by the US Air Force in cooperation with the Native Villages of Chevak, Hooper Bay, Paimiut, and Scammon Bay".
Date: 7/31/2014 Direction: East



Photograph No. 8 Site: ST009
Description: Warning sign's proximity to Fowler Creek.
Date: 7/31/2014 Direction: Northeast



Photograph No. 9 Site: ST009
Description: Eroding bluff (South of MW-9); Crushed 55 gal drums coming out of bluff onto the shoreline.
Date: 7/31/2014 Direction: Northeast



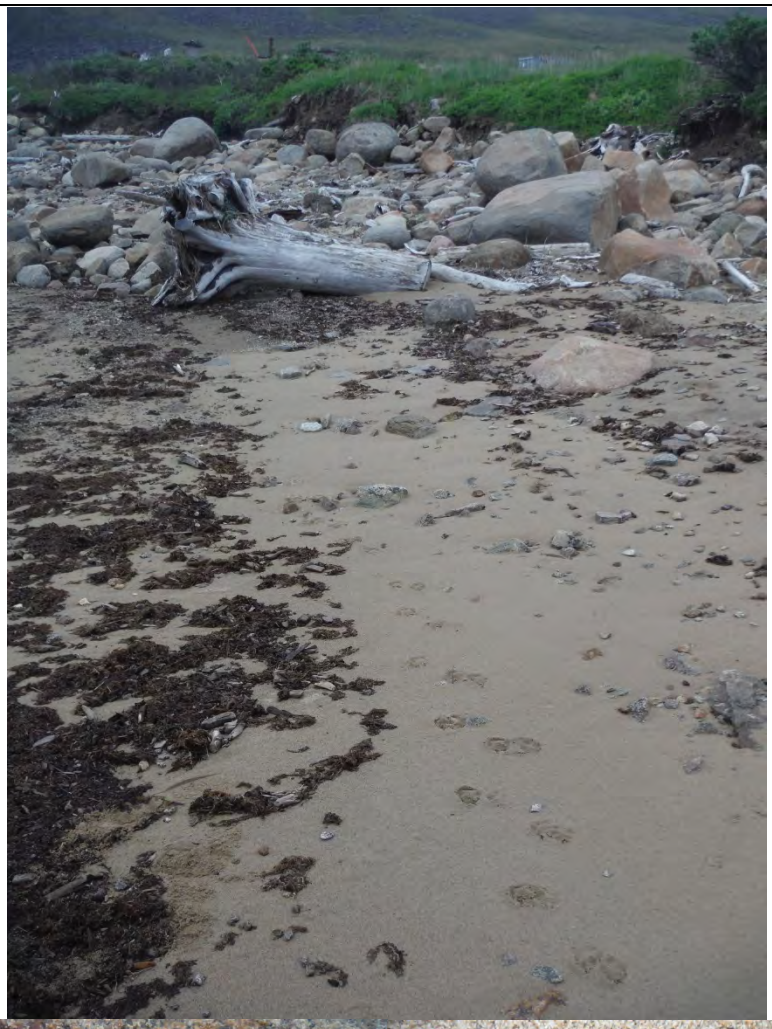
Photograph No. 10 Site: ST009
Description: Eroding bluff (Southeast of MW-9); Crushed 55 gal drums coming out of bluff onto the shoreline.
Date: 7/31/2014 Direction: East



Photograph No. 11 Site: ST009
Description: Crushed 55 gal drums coming out of bluff onto the shoreline.
Date: 7/31/2014 Direction: Southeast



Photograph No. 12 Site: ST009
Description: Road access to Fowler Creek North of MW-4. Pond w/ beaver dam has a spill-over flow across this road.
Date: 7/31/2014 Direction: West







Photograph No. 13, 14, 15 Site: ST009
Description: Fox tracks on the shoreline, several species of bivalves (clams and mussels) live and consumed.
Date: 7/31/2014 Direction: Northwest



Photograph No. 16 Site: ST009
Description: Well-used trail on the southeastern side of ST009.
Date: 7/31/2014 Direction: East



Photograph No. 17, 18 Site: ST009
Description: Pieces of liner or other buried fabric type material coming through the surface on the Northeastern area of ST009.
Date: 7/31/2014 Direction: West

APPENDIX B3 – SS015 PHOTOGRAPHIC LOG

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Photograph No. 1 Site: SS015
Description: View of SS015 taken from in front of the dome lodging facility.
Date: 7/29/2014 Direction: Southeast



Photograph No.2 Site: SS015
Description: SS015 Monitoring well ID WW-05, sample area set-up.
Date: 7/29/2014 Direction: Northwest



Photograph No.3 Site: SS015
Description: SS015 Monitoring well ID WW-06, sample area set-up.
Date: 7/29/2014 Direction: Southeast



Photograph No.4 Site: SS015
Description: SS015 Monitoring well ID WW-06, sample area set-up.
Date: 7/29/2014 Direction: Southeast



Photograph No.5 Site: SS015
Description: SS015 Monitoring well ID WW-01, heavily damaged (in road way, and likely hit by plow). Monument has been sheared off; PVC is cracked and shattered down to ~3 ft bgs. Well cap is unable to be used with current damage.
Date: 7/29/2014 Direction: Southeast

APPENDIX B4 – SS010 PHOTOGRAPHIC LOG

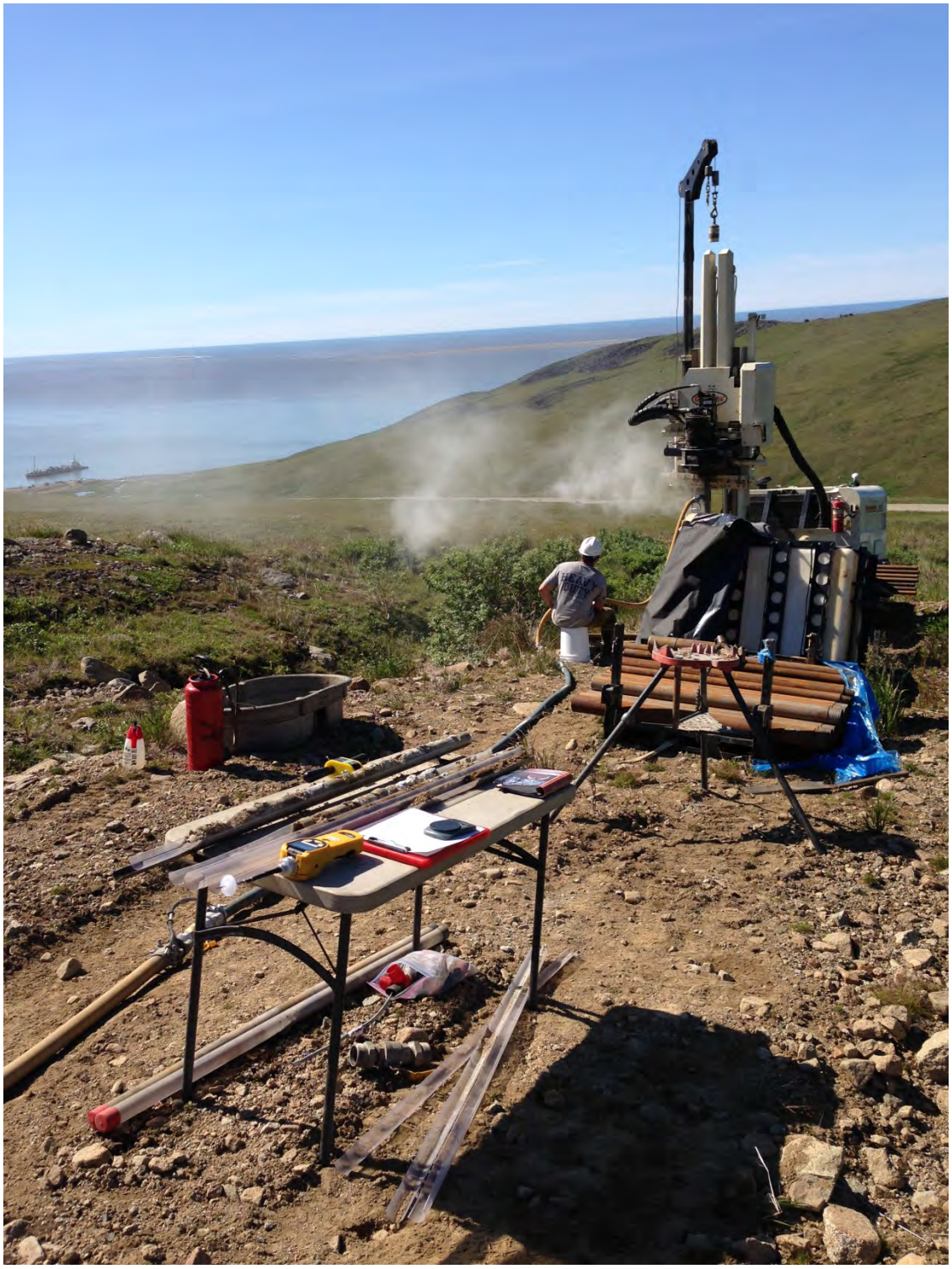
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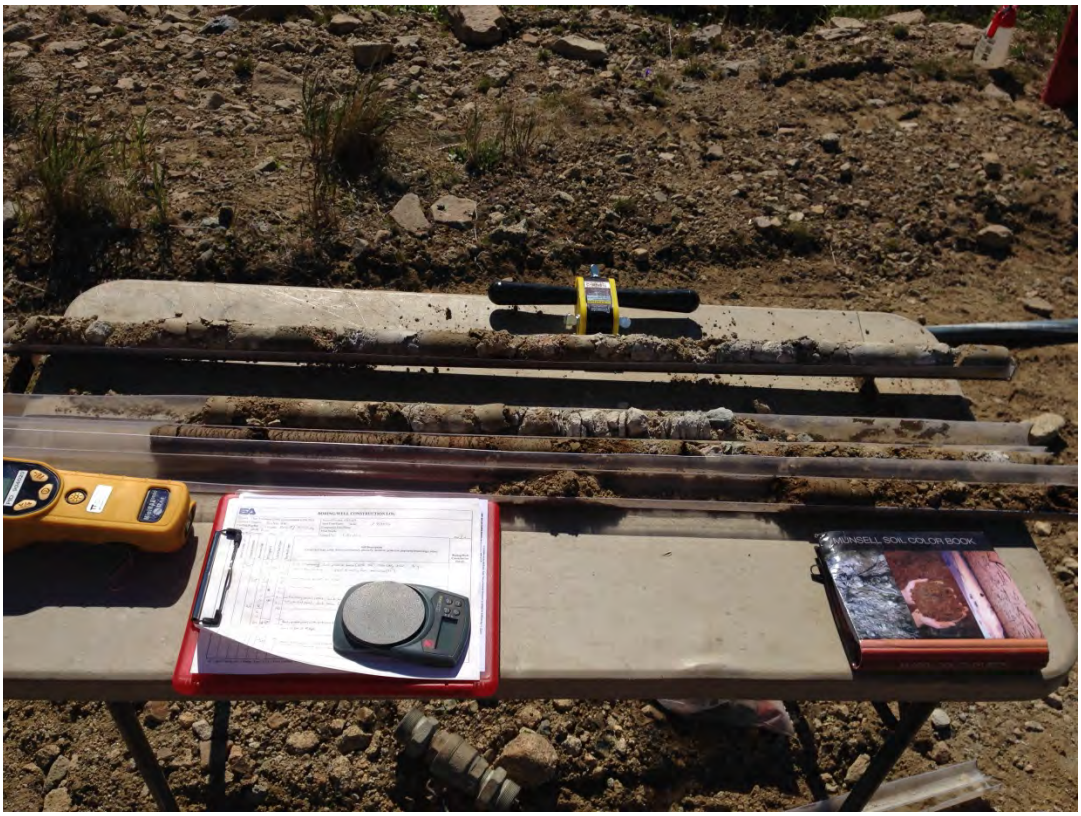
Photograph No. 1 Site: SS010
Description: SS010 drilling staging area with weather station building.
Date: July 29, 2014 Direction: Southwest



Photograph No. 2 Site: SS010
Description: Aerial view of SS010 area with weather station building.
Date: August 6, 2014 Direction: East



Photograph No. 3 Site: SS010
Description: Drilling of SB03 using down the hole hammer. Cuttings can be seen exiting the drill casing.
Date: July 29, 2014 Direction: Southwest



Photograph No. 4 Site: SS010
Description: Logging of soil cores during drilling of SB03/MW03.
Date: July 29, 2014 Direction: Southwest



Photograph No. 5 Site: SS010
Description: Sample set-up at SS010-MW03. Drill rig set up at MW01 in the background.
Date: August 2, 2014 Direction: Southwest



Photograph No. 6 Site: SS010
Description: Monitoring well MW03 above ground completion with bollards.
Date: August 5, 2014 Direction: Southwest



Photograph No. 7 Site: SS010
Description: Down the hole hammer inner drill bit.
Date: August 2, 2014 Direction: NA



Photograph No. 8 Site: SS010
Description: Down the hole hammer outer casing drill bit.
Date: July 29, 2014 Direction: West



Photograph No. 9 Site: SS010
Description: Drill rig setup at SB01/MW01 location.
Date: August 1, 2014 Direction: West-Northwest



Photograph No. 10 Site: SS010
Description: Location of SB01/MW01.
Date: August 1, 2014 Direction: Southwest



Photograph No. 11 Site: SS010
Description: Sample set-up at SS010 Monitoring well MW02.
Date: August 4, 2014 Direction: North



Photograph No. 12 Site: SS010
Description: Monitoring well MW01 above ground completion with bollards.

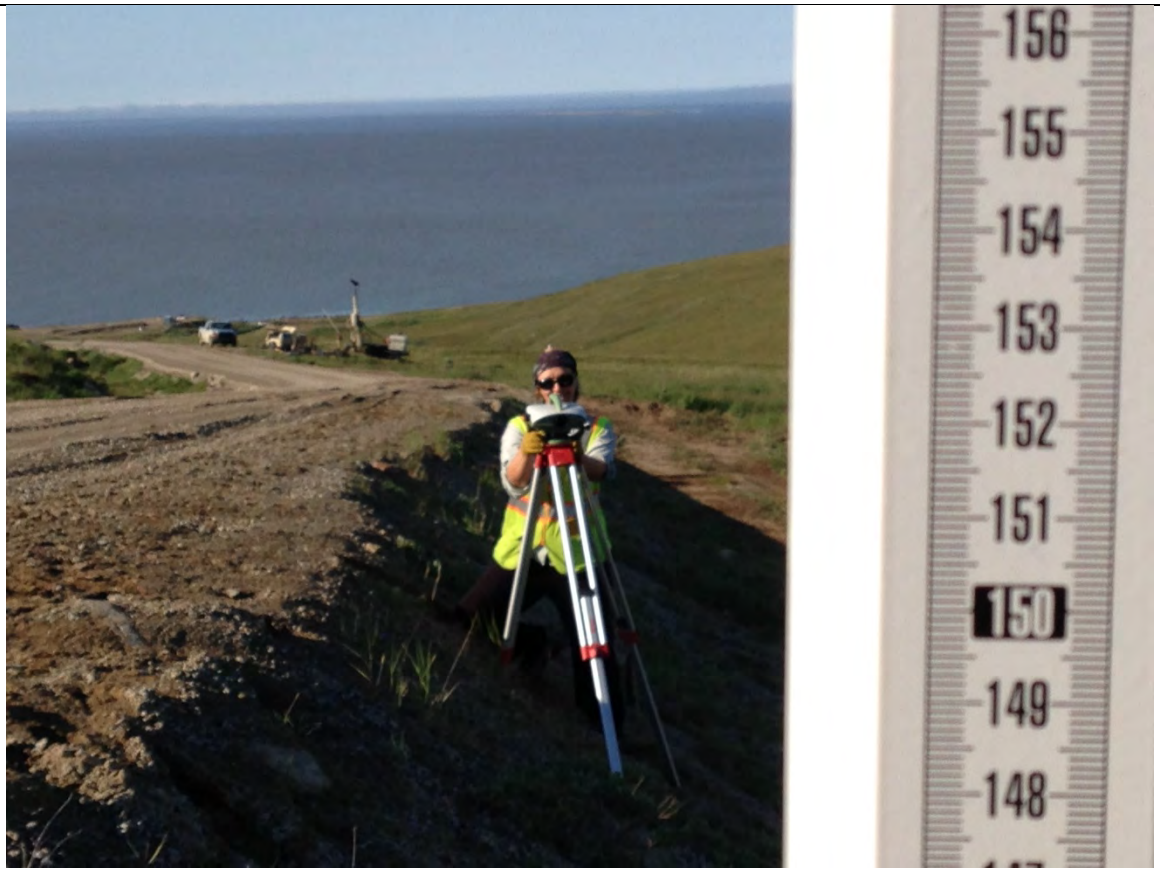
Date: August 5, 2014 Direction: North



Photograph No. 13 Site: SS010
Description: Drill rig setup at boring/monitoring well location SB02/MW02.
Date: August 3, 2014 Direction: Northwest



Photograph No. 14 Site: SS010
Description: Monitoring well MW02 above ground completion with bollards.
Date: August 6, 2014 Direction: West



Photograph No. 15 Site: SS010
Description: Well Survey, turning point between MW02 and MW01. Equipment used was a Leica Digital Level (laser) and Leica Bar Code Rod.
Date: August 3, 2014 Direction: Southwest

APPENDIX C

WELL CONSTRUCTION AND BORING LOGS

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EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW01 **Boring ID:** SB01

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 338.17 ft
Well Depth: 104.0 ft bgs
Depth to Water: 94.0 ft bgs
Completion Date: 8/1/2014
Latitude (DMS) 61 46 31.763300 N
Longitude (DMS): 166 2 46.680805 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 111.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/1/2014

Depth (ft bgs)	Well Completion Well Log	Well Completion Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
0	2" Sch. 40 PVC Riser	Outer surface casing: 0.0 to 3.0 ft. bgs; pea gravel from 0.0 to 4.0 ft bgs	70%		SW-SM	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY. SAND: SOME FINE, MOSTLY MEDIUM, SOME COARSE. GRAVEL: SOME FINE, MOSTLY COARSE, SOME COBBLES. SUBROUNDED-SUBANGULAR.	0	PRIMARY SAMPLE ID: SS010-SB01-2
			NR		NR	NO RECOVERY		
5			60%		SM	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY. SAND: SOME FINE, MOSTLY MEDIUM, SOME COARSE. GRAVEL: SOME FINE, MOSTLY COARSE, SOME COBBLES. SUBROUNDED-SUBANGULAR.	0	
			NR		NR	NO RECOVERY		
10		Seal Casing: Bentonite tremmy grout; 4.0 ft. bgs. to 77 ft. bgs	65%		SW-SM	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY. SAND: SOME FINE, MOSTLY MEDIUM, SOME COARSE. GRAVEL: SOME FINE, MOSTLY COARSE, SOME COBBLES. SUBROUNDED-SUBANGULAR.	0	PRIMARY SAMPLE ID: SS010-SB01-11
			NR		NR	NO RECOVERY		
15			70%		SW-SM	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, MOIST. SAND: SOME FINE, MOSTLY MEDIUM, SOME COARSE. GRAVEL: SOME FINE, MOSTLY COARSE, SOME COBBLES. SUBROUNDED-SUBANGULAR.	0	
			NR		NR	NO RECOVERY		
					SW-SM			

Note:

EA Engineering, Science, and Technology, Inc.

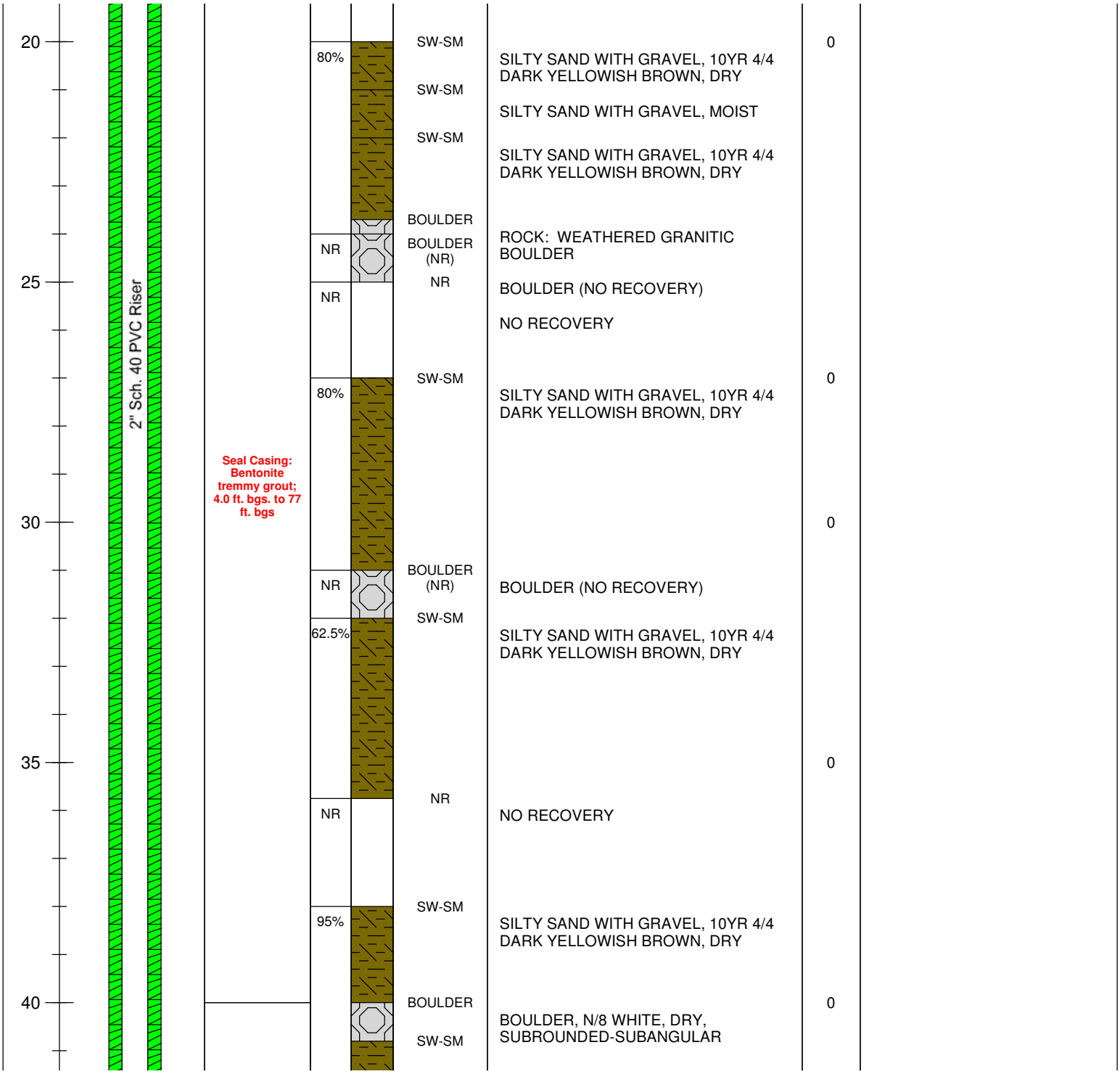
Monitoring Well & Boring Log

Well ID: MW01 **Boring ID:** SB01

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 338.17 ft
Well Depth: 104.0 ft bgs
Depth to Water: 94.0 ft bgs
Completion Date: 8/1/2014
Latitude (DMS) 61 46 31.763300 N
Longitude (DMS): 166 2 46.680805 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 111.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/1/2014



Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW01 **Boring ID:** SB01

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 338.17 ft
Well Depth: 104.0 ft bgs
Depth to Water: 94.0 ft bgs
Completion Date: 8/1/2014
Latitude (DMS) 61 46 31.763300 N
Longitude (DMS): 166 2 46.680805 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 111.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/1/2014

Depth (ft bgs)	Well Completion Well Log	Well Completion Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
45		2" Sch. 40 PVC Riser			BOULDER	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY		
					SW-SM	BOULDER, WHITE, DRY		
			NR		NR			
			NR			SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY		
						NO RECOVERY		
					SW-SM	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY	0	
50		Seal Casing: Bentonite tremmy grout; 4.0 ft. bgs. to 77 ft. bgs	100%					
			100%		SW-SM		0	
					BOULDER	BOULDER		
55					SW-SM	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY		
			NR		NR	NO RECOVERY	0	
			NR					
60					NR	NO RECOVERY. CUTTINGS OBSERVATIONS: SAND AND PULVERIZED ROCK.		
			NR					

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW01 **Boring ID:** SB01

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 338.17 ft
Well Depth: 104.0 ft bgs
Depth to Water: 94.0 ft bgs
Completion Date: 8/1/2014
Latitude (DMS) 61 46 31.763300 N
Longitude (DMS): 166 2 46.680805 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 111.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/1/2014

Depth (ft bgs)	Well Completion: Well Log	Well Completion: Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
65	2" Sch. 40 PVC Riser	Seal Casing: Bentonite tremmy grout; 4.0 ft. bgs. to 77 ft. bgs			BOULDER	BOULDER		
70					NR	NO RECOVERY		
75					BOULDER	BOULDER		
					NR	NO RECOVERY		
80		Bentonite Seal: Pellets (pelplug); 77.0 ft. bgs to 85.0 ft. bgs	NR		NR	NO RECOVERY. MOSTLY BOULDERS & ROCK DUST WITH SAND OBSERVED FROM CUTTINGS.		
85	PVC Riser							

Note:

EA Engineering, Science, and Technology, Inc.

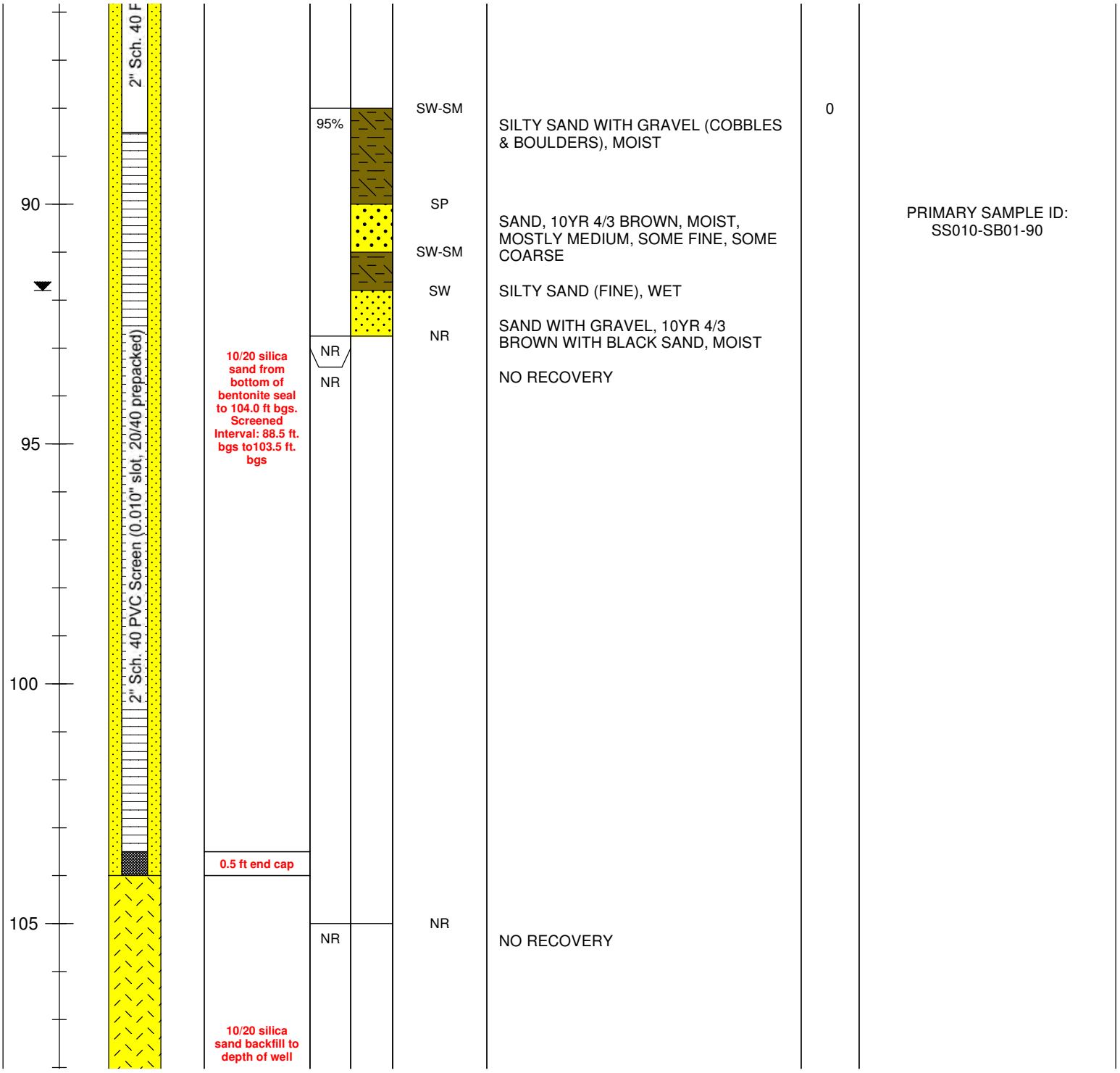
Monitoring Well & Boring Log

Well ID: MW01 **Boring ID:** SB01

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 338.17 ft
Well Depth: 104.0 ft bgs
Depth to Water: 94.0 ft bgs
Completion Date: 8/1/2014
Latitude (DMS) 61 46 31.763300 N
Longitude (DMS): 166 2 46.680805 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 111.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/1/2014



Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW01 **Boring ID:** SB01

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 338.17 ft
Well Depth: 104.0 ft bgs
Depth to Water: 94.0 ft bgs
Completion Date: 8/1/2014
Latitude (DMS) 61 46 31.763300 N
Longitude (DMS): 166 2 46.680805 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 111.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/1/2014

Depth (ft bgs)	Well Completion: Well Log	Well Completion: Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
110								

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW02 **Boring ID:** SB02

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 287.54
Well Depth: 118.0 ft bgs
Depth to Water: 110.6 ft bgs
Completion Date: 8/3/2014
Latitude (DMS) 61 46 26.182094 N
Longitude (DMS): 166 2 51.689665 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 118.5 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/3/2014

Depth (ft bgs)	Well Completion Well Log	Well Completion Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
0		Outer surface casing: 0.0 to 3.0 ft. bgs; pea gravel from 0.0 to 3.0 ft bgs	40%		ORGANICS SW-SM	ORGANICS WITH SILTY SAND AND GRAVEL, 10YR 4/3 BROWN, DRY.	0	
			NR		NR	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY.		
						NO RECOVERY		PRIMARY SAMPLE ID: SS010-SB02-2
5	2" Sch. 40 PVC Riser		40%		ORGANICS SW-SM	WOOD ORGANICS, ~0.25' THICKNESS		
			75%			SILTY SAND WITH GRAVEL	0	
					BOULDER	BOULDER		
			NR		NR	NO RECOVERY		
10		Seal Casing: Bentonite tremmy grout; 3.0 ft. bgs. to 92 ft. bgs	70%		SW-SM	SILTY SAND WITH GRAVEL	0	
			NR		NR	NO RECOVERY		PRIMARY SAMPLE ID: SS010-SB02-13
15			80%		SW-SM	SILTY SAND WITH GRAVEL	0	
					BOULDER	BOULDER, N/8 WHITE, DRY. WEATHERED GRANITIC BOULDER.		
					SW-SM BOULDER	SILTY SAND WITH GRAVEL		

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW02 **Boring ID:** SB02

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 287.54
Well Depth: 118.0 ft bgs
Depth to Water: 110.6 ft bgs
Completion Date: 8/3/2014
Latitude (DMS) 61 46 26.182094 N
Longitude (DMS): 166 2 51.689665 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 118.5 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/3/2014

Depth (ft bgs)	Well Completion Well Log	Well Completion Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
20			NR		NR	BOULDER		
			NR		SW-SM	NO RECOVERY	0	
			80%			SILTY SAND WITH GRAVEL, 10YR 4/3 DARK YELLOWISH BROWN, DRY.		
					SW-SM	MOIST		
			NR		NR	NO RECOVERY		
25			NR		SW-SM		0	
			83%			DRY		
					BOULDER	COBBLE, N/8 WHITE, DRY.		
			NR		NR	NO RECOVERY		
			NR		NR			
					BOULDER	NO RECOVERY. REFUSAL WITH MACROCORE. DRY.		
30						ROCK / BOULDER. NO RECOVERY.		
					NR	NO RECOVERY		
					BOULDER	COBBLES / BOULDER. NO RECOVERY.		
35					NR	NO RECOVERY		
40								

2" Sch. 40 PVC Riser

Seal Casing: Bentonite trammy grout; 3.0 ft. bgs. to 92 ft. bgs

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW02 **Boring ID:** SB02

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 287.54
Well Depth: 118.0 ft bgs
Depth to Water: 110.6 ft bgs
Completion Date: 8/3/2014
Latitude (DMS) 61 46 26.182094 N
Longitude (DMS): 166 2 51.689665 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 118.5 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/3/2014

Depth (ft bgs)	Well Completion: Well Log	Well Completion: Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
40			NR		BOULDER	COBBLES. NO RECOVERY		
					NR	NO RECOVERY		
					BOULDER	BOULDERS. NO RECOVERY		
45					NR	NO RECOVERY		
	2" Sch. 40 PVC Riser	Seal Casing: Bentonite tremmy grout; 3.0 ft. bgs. to 92 ft. bgs						
50			90%		BOULDER	BOULDER, N/8 WHITE.	0	
					SW-SM	SILTY SAND WITH GRAVEL, 10YR 4/4 DARK YELLOWISH BROWN, DRY.		
					BOULDER	BOULDER, WHITE.		
					SW	SAND WITH GRAVEL >15%, 10YR 5/3 BROWN, DRY.		
					SW-SM	SILTY SAND WITH GRAVEL (COBBLES), 10YR 5/3 BROWN, DRY.		
55					SW	SAND WITH GRAVEL >15%, 10YR 5/3 BROWN, DRY, SUBANGULAR-SUBROUNDED.		PRIMARY SAMPLE ID: SS010-SB02-56
			NR		NR	NO RECOVERY. CUTTINGS OBSERVED TO BE SW-SM WITH BOULDERS PERIODICALLY.		
			NR					
60								

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW02 **Boring ID:** SB02

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 287.54
Well Depth: 118.0 ft bgs
Depth to Water: 110.6 ft bgs
Completion Date: 8/3/2014
Latitude (DMS) 61 46 26.182094 N
Longitude (DMS): 166 2 51.689665 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 118.5 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/3/2014

Depth (ft bgs)	Well Completion: Well Log	Well Completion: Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
65	2" Sch. 40 PVC Riser	Seal Casing: Bentonite tremmy grout; 3.0 ft. bgs. to 92 ft. bgs	NR		NR	NO RECOVERY. CUTTINGS OBSERVED TO BE SW-SM WITH BOULDERS PERIODICALLY.		
70								
75								
80								

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW02 **Boring ID:** SB02

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 287.54
Well Depth: 118.0 ft bgs
Depth to Water: 110.6 ft bgs
Completion Date: 8/3/2014
Latitude (DMS) 61 46 26.182094 N
Longitude (DMS): 166 2 51.689665 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 118.5 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/3/2014

Depth (ft bgs)	Well Completion Well Log	Well Completion Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
85			NR		NR	NO RECOVERY. ONLY CUTTINGS OBSERVATION.		
		Seal Casing: Bentonite tremmy grout; 3.0 ft. bgs. to 92 ft. bgs			NR			
					NR	ATTEMPTED MACROCORE. REFUSAL. COULD NOT DRIVE CORE. NO RECOVERY. RESUME DOWNHOLE HAMMER.		
90	2" Sch. 40 PVC Riser					NO RECOVERY		
					BOULDER	BOULDERS. NO RECOVERY		
95		Bentonite Seal: Pellets (pelplug); 92.0 ft. bgs to 100.0 ft. bgs						
					NR	NO RECOVERY		
100					BOULDER	BOULDER. NO RECOVERY		
					BOULDER	COBBLES. NO RECOVERY		
					NR	NO RECOVERY		

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW02 **Boring ID:** SB02

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 287.54
Well Depth: 118.0 ft bgs
Depth to Water: 110.6 ft bgs
Completion Date: 8/3/2014
Latitude (DMS) 61 46 26.182094 N
Longitude (DMS): 166 2 51.689665 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 118.5 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 8/3/2014

Depth (ft bgs)	Well Completion: Well Log	Well Completion: Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
105			NR					
					BOULDER NR	BOULDER. NO RECOVERY NO RECOVERY Bottom of Well @ 118.5 ft bgs. Bottom of Boring @ 118.5 ft bgs.		
110	2" Sch. 40 PVC Screen (0.010" slot, 10/20 prepacked)	10/20 silica sand from bottom of bentonite seal to 104.0 ft bgs. Screened Interval: 88.5 ft. bgs to103.5 ft. bgs						
115		0.5 ft end cap						

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW03 **Boring ID:** SB03

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 413.98 ft.
Well Depth: 81.5 ft bgs
Depth to Water: 75.0 ft bgs
Completion Date: 7/30/2014
Latitude (DMS) 61 46 31.53090 N
Longitude (DMS): 166 2 37.168119 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 84.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 7/30/2014

Depth (ft bgs)	Well Completion Well Log	Well Completion Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
0	2" Sch. 40 PVC Riser	Outer surface casing: 0.0 to 3.0 ft. bgs; pea gravel from 0.0 to 2.5 ft bgs	50%		ML	SANDY SILT, 10YR 3/4 DARK YELLOWISH BROWN, MODERATELY DENSE, DRY. SAND: FINE/MEDIUM. SOME ORGANICS & ROOTS TO 5' BGS	0	SS010-SB03-2
			NR		NR	NO RECOVERY		
5			70%		ML	SANDY SILT, 10YR 3/4 DARK YELLOWISH BROWN, MODERATELY DENSE, DRY. SAND: FINE/MEDIUM	0	
					SM			
			NR		NR	INCREASING GRAVEL, COBBLES, AND SAND		
						NO RECOVERY		
10		Seal Casing: Bentonite tremmy grout; 2.5 ft. bgs. to 62.0 ft. bgs	70%		SM	SILTY SAND WITH GRAVEL, 10YR 3/2 DARK BROWN	0	
							0	
					GP-GM	POORLY GRADED GRAVEL WITH SILT & SAND, 10YR 5/2 GRAYISH BROWN, MODERATELY DENSE, DRY.	0.1	
					SM		0.1	
			NR		NR	SILTY SAND WITH GRAVEL, 10YR 3/2 DARK BROWN	0	SS010-SB03-14
15					SM	NO RECOVERY	0	
			85%		GP-GM	SILTY SAND WITH GRAVEL, 10YR 3/2 DARK BROWN		
						GRAVEL WITH SILT & SAND, 10YR 5/2 GRAYISH BROWN, WEATHERED GRANITIC BOULDER, DRY. 10% SILT, 10% FINE SAND, 15% MEDIUM SAND, 5% COARSE SAND, 60% GRAVEL (MOSTLY COARSE) WITH COBBLES & BOULDERS.		

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW03 **Boring ID:** SB03

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 413.98 ft.
Well Depth: 81.5 ft bgs
Depth to Water: 75.0 ft bgs
Completion Date: 7/30/2014
Latitude (DMS) 61 46 31.53090 N
Longitude (DMS): 166 2 37.168119 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 84.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 7/30/2014

Depth (ft bgs)	Well Completion Well Log	Well Completion Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
20			NR		NR	NO RECOVERY		
			100%		GP	GRAVEL WITH SAND, 10YR 7/2 VERY PALE BROWN, DRY, 25% COARSE SAND, 75% COARSE GRAVEL WITH COBBLE & BOULDERS.	0 0.1 0.1 0 0	
25			60%		GP	GRAVEL WITH SAND, 10YR 7/3 VERY PALE BROWN, DRY, 25% COARSE SAND, 75% COARSE GRAVEL WITH COBBLE & BOULDERS. BASICALLY PULVERIZED COBBLE & BOULDER.	0	
			NR		NR	NO RECOVERY		
30			NR		NR	NO RECOVERY		
35								
40			NR		NR	NO RECOVERY		

2" Sch. 40 PVC Riser

Seal Casing: Bentonite tremmy grout; 2.5 ft. bgs. to 62.0 ft. bgs

Note:

EA Engineering, Science, and Technology, Inc.

Monitoring Well & Boring Log

Well ID: MW03 **Boring ID:** SB03

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 413.98 ft.
Well Depth: 81.5 ft bgs
Depth to Water: 75.0 ft bgs
Completion Date: 7/30/2014
Latitude (DMS) 61 46 31.53090 N
Longitude (DMS): 166 2 37.168119 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 84.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 7/30/2014

Depth (ft bgs)	Well Completion: Well Log	Well Completion: Description	Recovery	Graphic	Group Symbol	Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
45	2" Sch. 40 PVC Riser	Seal Casing: Bentonite trammy grout; 2.5 ft. bgs. to 62.0 ft. bgs						
50			63%		GP	GRAVEL WITH SAND, 10YR 7/2 VERY PALE BROWN, DRY, ANGULAR/SUBANGULAR	0	
					GP	SLIGHTLY MOIST		
					GP	GRAVEL WITH SAND, DRY		
					BOULDER			
			NR		NR	PULVERIZED BOULDERS, GLEY 1 7/10Y LIGHT GRAY, DRY.		
			NR		NR	NO RECOVERY		
55						NO RECOVERY		
60								
			NR		NR	NO RECOVERY		

Note:

EA Engineering, Science, and Technology, Inc.

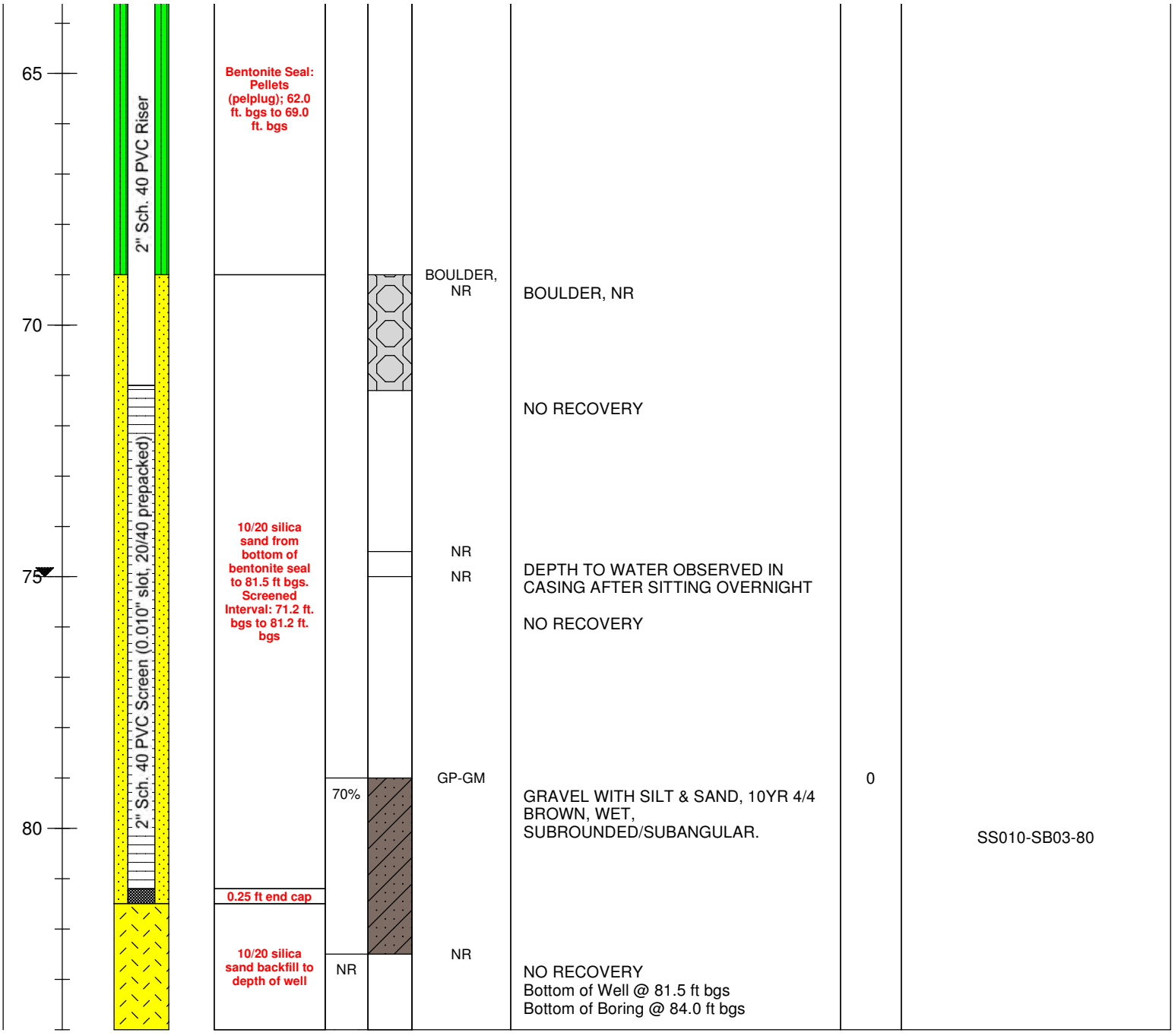
Monitoring Well & Boring Log

Well ID: MW03 **Boring ID:** SB03

PROJECT INFORMATION
Project: Long-Term Monitoring, 2014
Contract Number: FA8903-10-D-8601-0101
Location: Cape Romanzof LRRS
Client: USAF-AFCEC
Site Geologist: M. Blinstrub
Reviewed By: S. Wrenn

WELL INFORMATION
MP Elevation: 413.98 ft.
Well Depth: 81.5 ft bgs
Depth to Water: 75.0 ft bgs
Completion Date: 7/30/2014
Latitude (DMS) 61 46 31.53090 N
Longitude (DMS): 166 2 37.168119 W

BORING INFORMATION
Contractor: Geotek Alaska
Driller: J. Rezin
Drilling Method: DP / Down-the-Hole Hammer
Boring Depth: 84.0 ft bgs
Casing Diameter: 4.5 in.
Completion Date: 7/30/2014



Soil Description- Classification Scheme: Modified ASTM D2488	PID (ppm)	Sample ID
BOULDER, NR		
NO RECOVERY		
DEPTH TO WATER OBSERVED IN CASING AFTER SITTING OVERNIGHT		
NO RECOVERY		
GRAVEL WITH SILT & SAND, 10YR 4/4 BROWN, WET, SUBROUNDED/SUBANGULAR.	0	SS010-SB03-80
NO RECOVERY Bottom of Well @ 81.5 ft bgs Bottom of Boring @ 84.0 ft bgs		

Note:

APPENDIX D

LABORATORY REPORTS (CD ONLY)

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Laboratory Analytical Report

Client: **EA Engineering, Science and Tech**
3 Washington Center
Newburgh, NY 12550

Attn: **Pam Moss**
T: 907-646-0201 F:
PMoss@eaest.com

Project: **Cape Romanzof LTM Fowler Creek**

Workorder No.: **1143658**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Chuck Homestead

Charles.Homestead@sgs.com
General Manager Alaska

Contents (Bookmarked in PDF):

Cover Page
Glossary
Sample Summary Forms
Case Narrative
Sample Results Forms
Batch Summary Forms (by method)
Quality Control Summary Forms (by method)
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO 17025 (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6020, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RL	Reporting Limit
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

Client Name: EA Engineering, Science and Tech.
Project Name: Cape Romanzof LTM Fowler Creek
Workorder No.: 1143658

Analytical Methods

Method Description	Analytical Method
602 Aromatics by 624 (W)	EPA 602/624
625 Semi-Volatiles GC/MS Liq/Liq ext.	EPA 625M SIMS (PAH)

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1143658001	FC-SW01-080514
1143658002	FC-SW01-080514 MS
1143658003	FC-SW01-080514 MSD
1143658004	FC-SW99-080514
1143658005	TB-5-ST009

SGS North America Inc.

Case Narrative

Customer: EAENGRS **EA Engineering, Science and Tech.**

Project: 1143658 **Cape Romanzof LTM Fowler Creek**

NPDL WO:

Refer to the sample receipt form for information on sample condition.

1143658001 PS **FC-SW01-080514**

Revised Report - Revision 2 - This report has been reissued to correct method references in the case narrative and remove the TCLP leaching blank from the report.

1143658002 BMS **FC-SW01-080514 MS**

Revised Report - Revision 2 - This report has been reissued to correct method references in the case narrative and remove the TCLP leaching blank from the report.

1143658003 BMSD **FC-SW01-080514 MSD**

Revised Report - Revision 2 - This report has been reissued to correct method references in the case narrative and remove the TCLP leaching blank from the report.

1143658004 PS **FC-SW99-080514**

624 - BFB (surrogate) recovery is outside of QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.

Revised Report - Revision 2 - This report has been reissued to correct method references in the case narrative and remove the TCLP leaching blank from the report.

1143658005 TB **TB-5-ST009**

Revised Report - Revision 2 - This report has been reissued to correct method references in the case narrative and remove the TCLP leaching blank from the report.

1225806 LCSD **XXX/3165**

625M SIM - LCS/LCSD RPD for anthracene does not meet QC criteria. This analyte was not detected above the LOQ in the associated samples.

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to the associated field samples.

Client Sample ID: **FC-SW01-080514**
SGS Ref. #: 1143658001
Project ID: Cape Romanzof LTM Fowler Creek
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 09:15
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L	1	VMS14376	VXX26289	
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L	1	VMS14376	VXX26289	
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L	1	VMS14376	VXX26289	
Benzene	0.200U	0.400	0.120	ug/L	1	VMS14376	VXX26289	
Chlorobenzene	0.250U	0.500	0.150	ug/L	1	VMS14376	VXX26289	
Ethylbenzene	0.500U	1.00	0.310	ug/L	1	VMS14376	VXX26289	
o-Xylene	0.500U	1.00	0.310	ug/L	1	VMS14376	VXX26289	
P & M -Xylene	1.00U	2.00	0.620	ug/L	1	VMS14376	VXX26289	
Toluene	0.500U	1.00	0.310	ug/L	1	VMS14376	VXX26289	
1,2-Dichloroethane-D4 <surr>	101	70-120		%	1	VMS14376	VXX26289	
4-Bromofluorobenzene <surr>	98.9	75-120		%	1	VMS14376	VXX26289	
Toluene-d8 <surr>	95.8	85-120		%	1	VMS14376	VXX26289	

Batch Information

Analytical Batch: VMS14376
Analytical Method: EPA 602/624
Analysis Date/Time: 08/18/14 02:46
Dilution Factor: 1

Prep Batch: VXX26289
Prep Method: SW5030B
Prep Date/Time: 08/17/14 06:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143658001-C
Analyst: NRB

Client Sample ID: **FC-SW01-080514**
SGS Ref. #: 1143658001
Project ID: Cape Romanzof LTM Fowler Creek
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 09:15
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Xylenes (total)	1.50U	3.00	1.00	ug/L	1	VMS14376	VXX26289	

Batch Information

Analytical Batch: VMS14376
Analytical Method: EPA 602/624
Analysis Date/Time: 08/18/14 02:46
Dilution Factor: 1

Prep Batch: VXX26289
Prep Method: SW5030B
Prep Date/Time: 08/17/14 06:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143658001-C
Analyst: NRB

Client Sample ID: **FC-SW01-080514**
SGS Ref. #: 1143658001
Project ID: Cape Romanzof LTM Fowler Creek
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 09:15
Receipt Date/Time: 08/07/14 11:20

Polynuclear Aromatics GC/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Anthracene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Benzo[a]pyrene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Chrysene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Dibenzo[a,h]anthracene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Fluoranthene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Fluorene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Naphthalene	0.0500U	0.100	0.0310	ug/L	1	XMS8217	XXX31652	
Phenanthrene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
Pyrene	0.0250U	0.0500	0.0150	ug/L	1	XMS8217	XXX31652	
2-Fluorobiphenyl <surr>	56.6	50-110		%	1	XMS8217	XXX31652	
Terphenyl-d14 <surr>	88.7	50-135		%	1	XMS8217	XXX31652	

Batch Information

Analytical Batch: XMS8217
Analytical Method: EPA 625M SIMS (PAH)
Analysis Date/Time: 08/10/14 18:14
Dilution Factor: 1

Prep Batch: XXX31652
Prep Method: SW3520C
Prep Date/Time: 08/09/14 11:45

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1143658001-E
Analyst: RTS

Client Sample ID: **FC-SW99-080514**
SGS Ref. #: 1143658004
Project ID: Cape Romanzof LTM Fowler Creek
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 09:05
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result		LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,2-Dichlorobenzene	0.500U		1.00	0.310	ug/L	1	VMS14362	VXX26267	
1,3-Dichlorobenzene	0.500U		1.00	0.310	ug/L	1	VMS14362	VXX26267	
1,4-Dichlorobenzene	0.250U		0.500	0.150	ug/L	1	VMS14362	VXX26267	
Benzene	0.200U		0.400	0.120	ug/L	1	VMS14362	VXX26267	
Chlorobenzene	0.250U		0.500	0.150	ug/L	1	VMS14362	VXX26267	
Ethylbenzene	0.500U		1.00	0.310	ug/L	1	VMS14362	VXX26267	
o-Xylene	0.500U		1.00	0.310	ug/L	1	VMS14362	VXX26267	
P & M -Xylene	1.00U		2.00	0.620	ug/L	1	VMS14362	VXX26267	
Toluene	0.500U		1.00	0.310	ug/L	1	VMS14362	VXX26267	
1,2-Dichloroethane-D4 <surr>	99.7		70-120		%	1	VMS14362	VXX26267	
4-Bromofluorobenzene <surr>	123	*	75-120		%	1	VMS14362	VXX26267	
Toluene-d8 <surr>	95.3		85-120		%	1	VMS14362	VXX26267	

Batch Information

Analytical Batch: VMS14362
Analytical Method: EPA 602/624
Analysis Date/Time: 08/13/14 18:42
Dilution Factor: 1

Prep Batch: VXX26267
Prep Method: SW5030B
Prep Date/Time: 08/13/14 06:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143658004-B
Analyst: NRB

Client Sample ID: **FC-SW99-080514**
SGS Ref. #: 1143658004
Project ID: Cape Romanzof LTM Fowler Creek
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 09:05
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Xylenes (total)	1.50U	3.00	1.00	ug/L	1	VMS14362	VXX26267	

Batch Information

Analytical Batch: VMS14362
Analytical Method: EPA 602/624
Analysis Date/Time: 08/13/14 18:42
Dilution Factor: 1

Prep Batch: VXX26267
Prep Method: SW5030B
Prep Date/Time: 08/13/14 06:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143658004-B
Analyst: NRB

Client Sample ID: **FC-SW99-080514**
SGS Ref. #: 1143658004
Project ID: Cape Romanzof LTM Fowler Creek
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 09:05
Receipt Date/Time: 08/07/14 11:20

Polynuclear Aromatics GC/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Acenaphthylene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Anthracene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Benzo(a)Anthracene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Benzo[a]pyrene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Benzo[b]Fluoranthene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Benzo[g,h,i]perylene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Benzo[k]fluoranthene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Chrysene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Dibenzo[a,h]anthracene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Fluoranthene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Fluorene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Indeno[1,2,3-c,d] pyrene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Naphthalene	0.0520U	0.104	0.0323	ug/L	1	XMS8217	XXX31652	
Phenanthrene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
Pyrene	0.0261U	0.0521	0.0156	ug/L	1	XMS8217	XXX31652	
2-Fluorobiphenyl <surr>	66	50-110		%	1	XMS8217	XXX31652	
Terphenyl-d14 <surr>	92	50-135		%	1	XMS8217	XXX31652	

Batch Information

Analytical Batch: XMS8217
Analytical Method: EPA 625M SIMS (PAH)
Analysis Date/Time: 08/10/14 19:00
Dilution Factor: 1

Prep Batch: XXX31652
Prep Method: SW3520C
Prep Date/Time: 08/09/14 11:45

Initial Prep Wt./Vol.: 960 mL
Prep Extract Vol.: 1 mL
Container ID:1143658004-E
Analyst: RTS

Client Sample ID: **TB-5-ST009**
SGS Ref. #: 1143658005
Project ID: Cape Romanzof LTM Fowler Creek
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 08:00
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L	1	VMS14362	VXX26267	
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L	1	VMS14362	VXX26267	
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L	1	VMS14362	VXX26267	
Benzene	0.200U	0.400	0.120	ug/L	1	VMS14362	VXX26267	
Chlorobenzene	0.250U	0.500	0.150	ug/L	1	VMS14362	VXX26267	
Ethylbenzene	0.500U	1.00	0.310	ug/L	1	VMS14362	VXX26267	
o-Xylene	0.500U	1.00	0.310	ug/L	1	VMS14362	VXX26267	
P & M -Xylene	1.00U	2.00	0.620	ug/L	1	VMS14362	VXX26267	
Toluene	0.500U	1.00	0.310	ug/L	1	VMS14362	VXX26267	
1,2-Dichloroethane-D4 <surr>	107	70-120		%	1	VMS14362	VXX26267	
4-Bromofluorobenzene <surr>	114	75-120		%	1	VMS14362	VXX26267	
Toluene-d8 <surr>	101	85-120		%	1	VMS14362	VXX26267	

Batch Information

Analytical Batch: VMS14362
Analytical Method: EPA 602/624
Analysis Date/Time: 08/13/14 17:03
Dilution Factor: 1

Prep Batch: VXX26267
Prep Method: SW5030B
Prep Date/Time: 08/13/14 06:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143658005-B
Analyst: NRB

Client Sample ID: **TB-5-ST009**
SGS Ref. #: 1143658005
Project ID: Cape Romanzof LTM Fowler Creek
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 08:00
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Xylenes (total)	1.50U	3.00	1.00	ug/L	1	VMS14362	VXX26267	

Batch Information

Analytical Batch: VMS14362
Analytical Method: EPA 602/624
Analysis Date/Time: 08/13/14 17:03
Dilution Factor: 1

Prep Batch: VXX26267
Prep Method: SW5030B
Prep Date/Time: 08/13/14 06:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143658005-B
Analyst: NRB

Workorder No. 1143658

Volatile Gas Chromatography/Mass Spectroscopy

Method: EPA 602/624

Method Batch Id: VXX26267

Analysis Batch Id: VMS14362

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Trip Blank	1143658005	TB-5-ST009	8/13/2014 5:03:00PM
Paying sample	1143658004	FC-SW99-080514	8/13/2014 6:42:00PM

Workorder No. 1143658

Volatile Gas Chromatography/Mass Spectroscopy

Method: EPA 602/624

Method Batch Id: VXX26267

Analysis Batch Id: VMS14362

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1226844		8/13/2014 1:47:00PM
Instrument Blank	1226854		8/13/2014 1:47:00PM
Lab Control Sample	1226845		8/13/2014 3:07:00PM
Continuing Calib Verification	1226855		8/13/2014 3:07:00PM
Lab Control Sample Duplicate	1226846		8/13/2014 3:24:00PM
Trip Blank	1143658005	TB-5-ST009	8/13/2014 5:03:00PM
Paying sample	1143658004	FC-SW99-080514	8/13/2014 6:42:00PM
Anti-Foam Blank	1226847		8/13/2014 8:54:00PM

SGS Ref.#	1226844	Method Blank	**Printed Date/Time**	09/17/2014	16:39
Client Name	EA Engineering, Science and Tech.		**Prep** **Batch**	VXX26267	
Project Name/#	Cape Romanzof LTM Fowler Creek		**Method**	SW5030B	
Matrix	Water (Surface, Eff., Ground)		**Date**	08/13/2014	

QC results affect the following production samples:

1143658004, 1143658005

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L	08/13/14
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L	08/13/14
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L	08/13/14
Benzene	0.200U	0.400	0.120	ug/L	08/13/14
Chlorobenzene	0.250U	0.500	0.150	ug/L	08/13/14
Ethylbenzene	0.500U	1.00	0.310	ug/L	08/13/14
o-Xylene	0.500U	1.00	0.310	ug/L	08/13/14
P & M -Xylene	1.00U	2.00	0.620	ug/L	08/13/14
Toluene	0.500U	1.00	0.310	ug/L	08/13/14
Xylenes (total)	1.50U	3.00	1.00	ug/L	08/13/14
Surrogates					
1,2-Dichloroethane-D4 <surr>	108	70-120		%	08/13/14
4-Bromofluorobenzene <surr>	105	75-120		%	08/13/14
Toluene-d8 <surr>	95.2	85-120		%	08/13/14

Batch VMS14362
Method EPA 602/624
Instrument VPA 780/5975 GC/MS

SGS Ref.#	1226847	Anti-Foam Blank	**Printed Date/Time**		09/17/2014 16:39
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	VXX26267
Project Name/#	Cape Romanzof LTM Fowler Creek			**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)			**Date**	08/13/2014

QC results affect the following production samples:

1143658004, 1143658005

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L	08/13/14
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L	08/13/14
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L	08/13/14
Benzene	0.200U	0.400	0.120	ug/L	08/13/14
Chlorobenzene	0.250U	0.500	0.150	ug/L	08/13/14
Ethylbenzene	0.500U	1.00	0.310	ug/L	08/13/14
o-Xylene	0.500U	1.00	0.310	ug/L	08/13/14
P & M -Xylene	1.00U	2.00	0.620	ug/L	08/13/14
Toluene	0.500U	1.00	0.310	ug/L	08/13/14
Xylenes (total)	1.50U	3.00	1.00	ug/L	08/13/14

Batch VMS14362
Method EPA 602/624
Instrument VPA 780/5975 GC/MS

SGS Ref.#	1226845 Lab Control Sample		**Printed Date/Time**	09/17/2014	16:39
	1226846 Lab Control Sample Duplicate		**Prep Batch**	VXX26267	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5030B	
Project Name/#	Cape Romanzof LTM Fowler Creek		**Date**	08/13/2014	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143658004, 1143658005

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
1,2-Dichlorobenzene	LCS	27.6	92	(70-120)			30 ug/L	08/13/2014
	LCSD	28.4	95		3	(< 20)	30 ug/L	08/13/2014
1,3-Dichlorobenzene	LCS	28.2	94	(75-125)			30 ug/L	08/13/2014
	LCSD	28.7	96		2	(< 20)	30 ug/L	08/13/2014
1,4-Dichlorobenzene	LCS	29.0	97	(75-125)			30 ug/L	08/13/2014
	LCSD	29.1	97		0	(< 20)	30 ug/L	08/13/2014
Benzene	LCS	29.1	97	(80-120)			30 ug/L	08/13/2014
	LCSD	29.6	99		2	(< 20)	30 ug/L	08/13/2014
Chlorobenzene	LCS	29.5	98	(80-120)			30 ug/L	08/13/2014
	LCSD	29.8	99		1	(< 20)	30 ug/L	08/13/2014
Ethylbenzene	LCS	31.6	105	(75-125)			30 ug/L	08/13/2014
	LCSD	32.0	107		1	(< 20)	30 ug/L	08/13/2014
o-Xylene	LCS	29.4	98	(80-120)			30 ug/L	08/13/2014
	LCSD	31.5	105		7	(< 20)	30 ug/L	08/13/2014
P & M -Xylene	LCS	59.6	99	(75-130)			60 ug/L	08/13/2014
	LCSD	61.1	102		3	(< 20)	60 ug/L	08/13/2014
Toluene	LCS	29.6	99	(75-120)			30 ug/L	08/13/2014
	LCSD	30.3	101		2	(< 20)	30 ug/L	08/13/2014
Xylenes (total)	LCS	88.9	99	(80-120)			90 ug/L	08/13/2014
	LCSD	92.7	103		4	(< 20)	90 ug/L	08/13/2014
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		97	(70-120)				08/13/2014
	LCSD		93		5			08/13/2014
4-Bromofluorobenzene <surr>	LCS		98	(75-120)				08/13/2014
	LCSD		97		1			08/13/2014
Toluene-d8 <surr>	LCS		103	(85-120)				08/13/2014

SGS Ref.#	1226845 Lab Control Sample	**Printed Date/Time**		09/17/2014	16:39
	1226846 Lab Control Sample Duplicate	**Prep**	**Batch**	VXX26267	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5030B	
Project Name/#	Cape Romanzof LTM Fowler Creek		**Date**	08/13/2014	
Matrix	Water (Surface, Eff., Ground)				

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy							
	LCSD	104		1			08/13/2014

Batch	VMS14362
Method	EPA 602/624
Instrument	VPA 780/5975 GC/MS

Workorder No. 1143658

Volatile Gas Chromatography/Mass Spectroscopy

Method: EPA 602/624

Method Batch Id: VXX26289

Analysis Batch Id: VMS14376

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Billable Matrix Spike	1143658002	FC-SW01-080514 MS	8/18/2014 12:18:10AM
Billable Matrix Spike Dup.	1143658003	FC-SW01-080514 MSD	8/18/2014 12:35:00AM
Paying sample	1143658001	FC-SW01-080514	8/18/2014 2:46:00AM

Workorder No. 1143658

Volatile Gas Chromatography/Mass Spectroscopy

Method: EPA 602/624

Method Batch Id: VXX26289

Analysis Batch Id: VMS14376

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1227659		8/17/2014 11:13:00PM
Instrument Blank	1227665		8/17/2014 11:13:00PM
Lab Control Sample	1227660		8/17/2014 11:39:00PM
Continuing Calib Verification	1227666		8/17/2014 11:39:00PM
Lab Control Sample Duplicate	1227661		8/17/2014 11:55:00PM
Billable Matrix Spike	1143658002	FC-SW01-080514 MS	8/18/2014 12:18:10AM
Billable Matrix Spike Dup.	1143658003	FC-SW01-080514 MSD	8/18/2014 12:35:00AM
Paying sample	1143658001	FC-SW01-080514	8/18/2014 2:46:00AM

SGS Ref.#	1227659	Method Blank	**Printed Date/Time**	09/17/2014	16:39
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	VXX26289	
Project Name/#	Cape Romanzof LTM Fowler Creek		**Method**	SW5030B	
Matrix	Water (Surface, Eff., Ground)		**Date**	08/17/2014	

QC results affect the following production samples:

1143658001

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L	08/17/14
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L	08/17/14
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L	08/17/14
Benzene	0.200U	0.400	0.120	ug/L	08/17/14
Chlorobenzene	0.250U	0.500	0.150	ug/L	08/17/14
Ethylbenzene	0.500U	1.00	0.310	ug/L	08/17/14
o-Xylene	0.500U	1.00	0.310	ug/L	08/17/14
P & M -Xylene	1.00U	2.00	0.620	ug/L	08/17/14
Toluene	0.500U	1.00	0.310	ug/L	08/17/14
Xylenes (total)	1.50U	3.00	1.00	ug/L	08/17/14
Surrogates					
1,2-Dichloroethane-D4 <surr>	104	70-120		%	08/17/14
4-Bromofluorobenzene <surr>	104	75-120		%	08/17/14
Toluene-d8 <surr>	99.6	85-120		%	08/17/14

Batch VMS14376
Method EPA 602/624
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	1227660 Lab Control Sample		**Printed Date/Time**	09/17/2014	16:39
	1227661 Lab Control Sample Duplicate		**Prep Batch**	VXX26289	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5030B	
Project Name/#	Cape Romanzof LTM Fowler Creek		**Date**	08/17/2014	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143658001

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
1,2-Dichlorobenzene	LCS	28.8	96	(70-120)			30 ug/L	08/17/2014
	LCSD	29.1	97		1	(< 20)	30 ug/L	08/17/2014
1,3-Dichlorobenzene	LCS	29.6	99	(75-125)			30 ug/L	08/17/2014
	LCSD	30.1	100		2	(< 20)	30 ug/L	08/17/2014
1,4-Dichlorobenzene	LCS	30.2	101	(75-125)			30 ug/L	08/17/2014
	LCSD	31.5	105		4	(< 20)	30 ug/L	08/17/2014
Benzene	LCS	31.5	105	(80-120)			30 ug/L	08/17/2014
	LCSD	31.7	106		1	(< 20)	30 ug/L	08/17/2014
Chlorobenzene	LCS	29.4	98	(80-120)			30 ug/L	08/17/2014
	LCSD	30.2	101		3	(< 20)	30 ug/L	08/17/2014
Ethylbenzene	LCS	31.3	104	(75-125)			30 ug/L	08/17/2014
	LCSD	31.9	106		2	(< 20)	30 ug/L	08/17/2014
o-Xylene	LCS	31.2	104	(80-120)			30 ug/L	08/17/2014
	LCSD	31.8	106		2	(< 20)	30 ug/L	08/17/2014
P & M -Xylene	LCS	62.4	104	(75-130)			60 ug/L	08/17/2014
	LCSD	62.7	105		1	(< 20)	60 ug/L	08/17/2014
Toluene	LCS	30.0	100	(75-120)			30 ug/L	08/17/2014
	LCSD	29.6	99		1	(< 20)	30 ug/L	08/17/2014
Xylenes (total)	LCS	93.6	104	(80-120)			90 ug/L	08/17/2014
	LCSD	94.5	105		1	(< 20)	90 ug/L	08/17/2014
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		99	(70-120)				08/17/2014
	LCSD		100		1			08/17/2014
4-Bromofluorobenzene <surr>	LCS		94	(75-120)				08/17/2014
	LCSD		98		4			08/17/2014
Toluene-d8 <surr>	LCS		102	(85-120)				08/17/2014

SGS Ref.#	1227660 Lab Control Sample		**Printed Date/Time**	09/17/2014	16:39
	1227661 Lab Control Sample Duplicate		**Prep Batch**	VXX26289	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5030B	
Project Name/#	Cape Romanzof LTM Fowler Creek		**Date**	08/17/2014	
Matrix	Water (Surface, Eff., Ground)				

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy							
	LCSD	101		1			08/17/2014

Batch VMS14376
Method EPA 602/624
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	1143658002	Billable Matrix Spike	**Printed Date/Time**	09/17/2014 16:39
	1143658003	Billable Matrix Spike Dup.	**Prep Batch**	VXX26289
			Method	Volatiles Extraction 8240/8260
			Date	08/17/2014
Original	1143658001			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy									
1,2-Dichlorobenzene	BMS	0.500U	29.9	100	(70-120)			30.0 ug/L	08/18/2014
	BMSD		29.5	98		1	(< 20)	30.0 ug/L	08/18/2014
1,3-Dichlorobenzene	BMS	0.500U	30.2	101	(75-125)			30.0 ug/L	08/18/2014
	BMSD		29.7	99		2	(< 20)	30.0 ug/L	08/18/2014
1,4-Dichlorobenzene	BMS	0.250U	30.7	102	(75-125)			30.0 ug/L	08/18/2014
	BMSD		30.8	103		0	(< 20)	30.0 ug/L	08/18/2014
Benzene	BMS	0.200U	31.5	105	(80-120)			30.0 ug/L	08/18/2014
	BMSD		31.7	106		0	(< 20)	30.0 ug/L	08/18/2014
Chlorobenzene	BMS	0.250U	31	103	(80-120)			30.0 ug/L	08/18/2014
	BMSD		30.5	102		1	(< 20)	30.0 ug/L	08/18/2014
Ethylbenzene	BMS	0.500U	31.9	106	(75-125)			30.0 ug/L	08/18/2014
	BMSD		33.3	111		4	(< 20)	30.0 ug/L	08/18/2014
o-Xylene	BMS	0.500U	32.1	107	(80-120)			30.0 ug/L	08/18/2014
	BMSD		33.1	110		3	(< 20)	30.0 ug/L	08/18/2014
P & M -Xylene	BMS	1.00U	66.1	110	(75-130)			60.0 ug/L	08/18/2014
	BMSD		64.8	108		2	(< 20)	60.0 ug/L	08/18/2014
Toluene	BMS	0.500U	29.4	98	(75-120)			30.0 ug/L	08/18/2014
	BMSD		30.7	102		4	(< 20)	30.0 ug/L	08/18/2014
Surrogates									
1,2-Dichloroethane-D4 <surr>	BMS		30.1	100	(70-120)				08/18/2014
	BMSD		30.6	102		2			08/18/2014
4-Bromofluorobenzene <surr>	BMS		29.6	99	(75-120)				08/18/2014
	BMSD		30.1	100		2			08/18/2014
Toluene-d8 <surr>	BMS		29.5	98	(85-120)				08/18/2014
	BMSD		30.7	102		4			08/18/2014

Batch VMS14376
Method EPA 602/624
Instrument HP 5890 Series II MS3 VNA

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy									
Xylenes (total)	BMS	1.50U	98.2	109	(80-120)			90.0 ug/L	08/18/2014
	BMSD		97.9	109		0		90.0 ug/L	08/18/2014

Batch VMS14376
Method EPA 602/624
Instrument HP 5890 Series II MS3 VNA

Workorder No. 1143658

Volatile Gas Chromatography/Mass Spectroscopy

Method: EPA 602/624

Method Batch Id: VXX26267

Analysis Batch Id: VMS14362

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Trip Blank	1143658005	TB-5-ST009	8/13/2014 5:03:00PM
Paying sample	1143658004	FC-SW99-080514	8/13/2014 6:42:00PM

Workorder No. 1143658

Volatile Gas Chromatography/Mass Spectroscopy

Method: EPA 602/624

Method Batch Id: VXX26267

Analysis Batch Id: VMS14362

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1226844		8/13/2014 1:47:00PM
Instrument Blank	1226854		8/13/2014 1:47:00PM
Lab Control Sample	1226845		8/13/2014 3:07:00PM
Continuing Calib Verification	1226855		8/13/2014 3:07:00PM
Lab Control Sample Duplicate	1226846		8/13/2014 3:24:00PM
Trip Blank	1143658005	TB-5-ST009	8/13/2014 5:03:00PM
Paying sample	1143658004	FC-SW99-080514	8/13/2014 6:42:00PM
Anti-Foam Blank	1226847		8/13/2014 8:54:00PM

SGS Ref.#	1226854	Instrument Blank	**Printed Date/Time**	09/17/2014	16:39
Client Name	EA Engineering, Science and Tech.				
Project Name/#	Cape Romanzof LTM Fowler Creek				
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143658004, 1143658005

Parameter	Results	RL/CL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy				
Benzene	0.200U	0.400	ug/L	08/13/14
Toluene	0.500U	1.00	ug/L	08/13/14
Ethylbenzene	0.500U	1.00	ug/L	08/13/14
1,4-Dichlorobenzene	0.250U	0.500	ug/L	08/13/14
Chlorobenzene	0.250U	0.500	ug/L	08/13/14
P & M -Xylene	1.00U	2.00	ug/L	08/13/14
o-Xylene	0.500U	1.00	ug/L	08/13/14
Xylenes (total)	1.50U	3.00	ug/L	08/13/14
1,2-Dichlorobenzene	0.500U	1.00	ug/L	08/13/14
1,3-Dichlorobenzene	0.500U	1.00	ug/L	08/13/14
Surrogates				
1,2-Dichloroethane-D4 <surr>	108	70-120	%	08/13/14
Toluene-d8 <surr>	95.2	85-120	%	08/13/14
4-Bromofluorobenzene <surr>	105	75-120	%	08/13/14

Batch VMS14362
Method EPA 602/624
Instrument VPA 780/5975 GC/MS

SGS Ref.#	1226855 Continuing Calib Verification	**Printed Date/Time**	09/17/2014 16:39
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM Fowler Creek		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143658004, 1143658005

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy						
Benzene	CCV	29.1	97	(80-120)	30 ug/L	08/13/2014
Toluene	CCV	29.6	99	(80-120)	30 ug/L	08/13/2014
Ethylbenzene	CCV	31.6	105	(80-120)	30 ug/L	08/13/2014
1,4-Dichlorobenzene	CCV	29.0	97	(80-120)	30 ug/L	08/13/2014
Chlorobenzene	CCV	29.5	98	(80-120)	30 ug/L	08/13/2014
P & M -Xylene	CCV	59.6	99	(80-120)	60 ug/L	08/13/2014
o-Xylene	CCV	29.4	98	(80-120)	30 ug/L	08/13/2014
Xylenes (total)	CCV	88.9	99	(80-120)	90 ug/L	08/13/2014
1,2-Dichlorobenzene	CCV	27.6	92	(80-120)	30 ug/L	08/13/2014
1,3-Dichlorobenzene	CCV	28.2	94	(80-120)	30 ug/L	08/13/2014
Surrogates						
1,2-Dichloroethane-D4 <surr>	CCV		97	(80-120)		08/13/2014
Toluene-d8 <surr>	CCV		103	(80-120)		08/13/2014
4-Bromofluorobenzene <surr>	CCV		98	(80-120)		08/13/2014

Batch VMS14362
Method EPA 602/624
Instrument VPA 780/5975 GC/MS

Workorder No. 1143658

Volatile Gas Chromatography/Mass Spectroscopy

Method: EPA 602/624

Method Batch Id: VXX26289

Analysis Batch Id: VMS14376

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Billable Matrix Spike	1143658002	FC-SW01-080514 MS	8/18/2014 12:18:10AM
Billable Matrix Spike Dup.	1143658003	FC-SW01-080514 MSD	8/18/2014 12:35:00AM
Paying sample	1143658001	FC-SW01-080514	8/18/2014 2:46:00AM

Workorder No. 1143658

Volatile Gas Chromatography/Mass Spectroscopy

Method: EPA 602/624

Method Batch Id: VXX26289

Analysis Batch Id: VMS14376

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1227659		8/17/2014 11:13:00PM
Instrument Blank	1227665		8/17/2014 11:13:00PM
Lab Control Sample	1227660		8/17/2014 11:39:00PM
Continuing Calib Verification	1227666		8/17/2014 11:39:00PM
Lab Control Sample Duplicate	1227661		8/17/2014 11:55:00PM
Billable Matrix Spike	1143658002	FC-SW01-080514 MS	8/18/2014 12:18:10AM
Billable Matrix Spike Dup.	1143658003	FC-SW01-080514 MSD	8/18/2014 12:35:00AM
Paying sample	1143658001	FC-SW01-080514	8/18/2014 2:46:00AM

SGS Ref.#	1227665	Instrument Blank	**Printed Date/Time**	09/17/2014	16:39
Client Name	EA Engineering, Science and Tech.				
Project Name/#	Cape Romanzof LTM Fowler Creek				
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143658001

Parameter	Results	RL/CL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy				
Benzene	0.200U	0.400	ug/L	08/17/14
Toluene	0.500U	1.00	ug/L	08/17/14
Ethylbenzene	0.500U	1.00	ug/L	08/17/14
1,4-Dichlorobenzene	0.250U	0.500	ug/L	08/17/14
Chlorobenzene	0.250U	0.500	ug/L	08/17/14
P & M -Xylene	1.00U	2.00	ug/L	08/17/14
o-Xylene	0.500U	1.00	ug/L	08/17/14
Xylenes (total)	1.50U	3.00	ug/L	08/17/14
1,2-Dichlorobenzene	0.500U	1.00	ug/L	08/17/14
1,3-Dichlorobenzene	0.500U	1.00	ug/L	08/17/14
Surrogates				
1,2-Dichloroethane-D4 <surr>	104	70-120	%	08/17/14
Toluene-d8 <surr>	99.6	85-120	%	08/17/14
4-Bromofluorobenzene <surr>	104	75-120	%	08/17/14

Batch VMS14376
Method EPA 602/624
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	1227666 Continuing Calib Verification	**Printed Date/Time**	09/17/2014 16:39
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM Fowler Creek		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143658001

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy						
Benzene	CCV	31.5	105	(80-120)	30 ug/L	08/17/2014
Toluene	CCV	30.0	100	(80-120)	30 ug/L	08/17/2014
Ethylbenzene	CCV	31.3	104	(80-120)	30 ug/L	08/17/2014
1,4-Dichlorobenzene	CCV	30.2	101	(80-120)	30 ug/L	08/17/2014
Chlorobenzene	CCV	29.4	98	(80-120)	30 ug/L	08/17/2014
P & M -Xylene	CCV	62.4	104	(80-120)	60 ug/L	08/17/2014
o-Xylene	CCV	31.2	104	(80-120)	30 ug/L	08/17/2014
Xylenes (total)	CCV	93.6	104	(80-120)	90 ug/L	08/17/2014
1,2-Dichlorobenzene	CCV	28.8	96	(80-120)	30 ug/L	08/17/2014
1,3-Dichlorobenzene	CCV	29.6	99	(80-120)	30 ug/L	08/17/2014
Surrogates						
1,2-Dichloroethane-D4 <surr>	CCV		99	(80-120)		08/17/2014
Toluene-d8 <surr>	CCV		102	(80-120)		08/17/2014
4-Bromofluorobenzene <surr>	CCV		94	(80-120)		08/17/2014

Batch VMS14376
Method EPA 602/624
Instrument HP 5890 Series II MS3 VNA

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143658, 1143735, 1143773, 1148348, 1148353, 1148359, 1148362

Queue: **VMS** Batch: **14362**

Method: EPA 602/624, EPA 624, SW8260B

Run Date: 08/13/14 13:47 - 08/13/14 22:17

Extraction Batch(es): VXX26267

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: _____
Printed Name: Nicholas Bryant
Date: 08/14/14

Reviewer's Signature _____
Printed Name: _____
Date: 08/14/14

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\081314\
Data File : A05.D
Acq On : 13 Aug 2014 3:07 pm
Operator : NRB
Sample : CCV/LCS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:36:48 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	30.000	30.000	0.0	92	0.00
2		dichlorodifluoromethane	30.000	29.265	2.4	91	0.00
3		chloromethane	30.000	27.904	7.0	102	0.00
4		vinyl chloride	30.000	28.301	5.7	90	0.00
5		bromomethane	30.000	30.756	-2.5	102	0.00
6		chloroethane	30.000	27.905	7.0	98	0.00
7		trichlorofluoromethane	30.000	30.844	-2.8	96	0.00
8		1,1,2-trichloro-1,2,2-trifl	45.000	44.948	0.1	93	0.00
9		1,1-dichloroethene	30.000	27.860	7.1	90	0.00
10		Acetone	90.000	76.753	14.7	81	0.00
11		Acrylonitrile	45.000	38.191	15.1	86	0.00
12		Methyliodide	45.000	48.253	-7.2	97	0.00
13		Carbon disulfide	45.000	41.367	8.1	89	0.00
14		methylene chloride	30.000	28.988	3.4	92	0.00
15		methyl-t-butyl ether	45.000	44.513	1.1	94	0.00
16		trans-1,2-dichloroethene	30.000	26.688	11.0	89	0.00
17		Vinylacetate	30.000	32.621	-8.7	98	0.00
18		n-hexane	30.000	32.683	-8.9	101	0.00
19		1,1-dichloroethane	30.000	27.693	7.7	92	0.00
20		2-Butanone(MEK)	90.000	78.921	12.3	80	0.00
21		2,2-dichloropropane	30.000	33.479	-11.6	109	0.00
22		cis-1,2-dichloroethene	30.000	28.233	5.9	95	0.00
23		bromochloromethane	30.000	28.344	5.5	95	0.00
24		cyclohexane	30.000	32.958	-9.9	94	0.00
25		chloroform	30.000	28.720	4.3	95	0.00
26	S	Dibromofluoromethane <SURR>	30.000	29.745	0.8	96	0.00
27		1,1,1-trichloroethane	30.000	29.805	0.7	94	0.00
28		carbon tetrachloride	30.000	30.173	-0.6	93	-0.01
29		1,1-dichloropropene	30.000	30.560	-1.9	90	0.00
30	S	1,2-Dichloroethane-D4 <surr	30.000	29.218	2.6	93	0.00
31		benzene	30.000	29.117	2.9	88	0.00
32		1,2-dichloroethane	30.000	28.195	6.0	92	0.00
33		trichloroethene	30.000	29.312	2.3	90	0.00
34		1,2-dichloropropane	30.000	27.879	7.1	88	0.00
35		dibromomethane	30.000	27.006	10.0	89	0.00
36		2-chloroethylvinyl ether	30.000	0.000	100.0#	0	-13.14#
37		bromodichloromethane	30.000	28.924	3.6	91	0.00
38		cis-1,3-dichloropropene	30.000	32.436	-8.1	97	0.00
39		4-Methyl-2-pentanone	90.000	94.707	-5.2	88	0.00
40		1-chloro-3-fluorobenzene<IS	30.000	30.000	0.0	95	0.00
41	S	Toluene-d8 <surr>	30.000	30.928	-3.1	95	0.00
42		toluene	30.000	29.624	1.3	93	0.00
43		trans-1,3-dichloropropene	30.000	33.911	-13.0	96	0.00
44		1,1,2-trichloroethane	30.000	31.654	-5.5	93	0.00
45		tetrachloroethene	30.000	32.238	-7.5	95	0.00
46		1,3-dichloropropane	30.000	30.915	-3.0	95	0.00
47		2-Hexanone	90.000	83.846	6.8	88	0.00
48		dibromochloromethane	30.000	31.224	-4.1	96	0.00
49		1,2-dibromoethane	30.000	30.247	-0.8	94	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\081314\
Data File : A05.D
Acq On : 13 Aug 2014 3:07 pm
Operator : NRB
Sample : CCV/LCS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:36:48 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
50		1-chlorohexane	45.000	47.644	-5.9	110	0.00
51		chlorobenzene	30.000	29.460	1.8	108	0.00
52		1,1,1,2-tetrachloroethane	30.000	30.396	-1.3	106	0.00
53		ethylbenzene	30.000	31.634	-5.4	108	0.00
54		P & M -Xylene	60.000	59.546	0.8	100	0.00
55		o-xylene	30.000	29.387	2.0	95	0.00
56		styrene	30.000	30.726	-2.4	93	0.00
57		bromoform	30.000	28.963	3.5	94	0.00
58		Isopropylbenzene (Cumene)	30.000	31.399	-4.7	98	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	30.000	30.000	0.0	105	0.00
60	S	4-Bromofluorobenzene <Surr>	30.000	29.498	1.7	101	0.00
61		trans 1,4-dichloro-2-butene	45.000	45.479	-1.1	100	0.00
62		bromobenzene	30.000	28.234	5.9	99	0.00
63		1,1,2,2-tetrachloroethane	30.000	28.065	6.4	99	0.00
64		1,2,3-trichloropropane	30.000	27.254	9.2	94	0.00
65		n-propylbenzene	30.000	29.854	0.5	102	0.00
66		2-chlorotoluene	30.000	28.870	3.8	100	0.00
67		4-chlorotoluene	30.000	29.216	2.6	100	0.00
68		1,3,5-trimethylbenzene	30.000	30.350	-1.2	96	0.00
69		tert-butylbenzene	30.000	30.061	-0.2	100	0.00
70		1,2,4-trimethylbenzene	30.000	31.825	-6.1	100	0.00
71		sec-butylbenzene	30.000	31.074	-3.6	104	0.00
72		1,3-dichlorobenzene	30.000	28.160	6.1	101	0.00
73		4-isopropyltoluene	30.000	31.861	-6.2	100	0.00
74		1,4-dichlorobenzene	30.000	29.007	3.3	107	0.00
75		1,2-dichlorobenzene	30.000	27.591	8.0	102	0.00
76		n-butylbenzene	30.000	32.477	-8.3	100	0.00
77		1,2-dibromo-3-chloropropane	30.000	25.551	14.8	94	0.00
78		1,2,4-trichlorobenzene	30.000	27.701	7.7	95	0.00
79		hexachlorobutadiene	30.000	27.987	6.7	98	0.00
80		naphthalene	30.000	29.531	1.6	100	0.00
81		1,2,3-trichlorobenzene	30.000	28.789	4.0	103	0.00

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\081314\
Data File : A05.D
Acq On : 13 Aug 2014 3:07 pm
Operator : NRB
Sample : CCV/LCS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:36:48 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	92	0.00
2		dichlorodifluoromethane	1.989	1.823	8.3	91	0.00
3		chloromethane	1.088	1.012	7.0	102	0.00
4		vinyl chloride	1.680	1.465	12.8	90	0.00
5		bromomethane	0.660	0.615	6.8	102	0.00
6		chloroethane	0.789	0.734	7.0	98	0.00
7		trichlorofluoromethane	2.386	2.274	4.7	96	0.00
8		1,1,2-trichloro-1,2,2-trifl	1.109	1.107	0.2	93	0.00
9		1,1-dichloroethene	1.037	0.963	7.1	90	0.00
10		Acetone	0.444	0.326	26.6#	81	0.00
11		Acrylonitrile	0.567	0.481	15.2	86	0.00
12		Methyliodide	0.941	1.009	-7.2	97	0.00
13		Carbon disulfide	3.301	3.035	8.1	89	0.00
14		methylene chloride	1.375	1.186	13.7	92	0.00
15		methyl-t-butyl ether	3.040	3.008	1.1	94	0.00
16		trans-1,2-dichloroethene	1.291	1.148	11.1	89	0.00
17		Vinylacetate	1.538	1.672	-8.7	98	0.00
18		n-hexane	0.678	0.834	-23.0#	101	0.00
19		1,1-dichloroethane	2.539	2.344	7.7	92	0.00
20		2-Butanone(MEK)	0.752	0.659	12.4	80	0.00
21		2,2-dichloropropane	1.843	2.057	-11.6	109	0.00
22		cis-1,2-dichloroethene	1.445	1.360	5.9	95	0.00
23		bromochloromethane	0.730	0.689	5.6	95	0.00
24		cyclohexane	1.706	1.874	-9.8	94	0.00
25		chloroform	2.753	2.635	4.3	95	0.00
26	S	Dibromofluoromethane <SURR>	1.623	1.610	0.8	96	0.00
27		1,1,1-trichloroethane	2.363	2.347	0.7	94	0.00
28		carbon tetrachloride	1.893	1.904	-0.6	93	-0.01
29		1,1-dichloropropene	1.788	1.821	-1.8	90	0.00
30	S	1,2-Dichloroethane-D4 <surr	1.694	1.650	2.6	93	0.00
31		benzene	5.281	5.125	3.0	88	0.00
32		1,2-dichloroethane	1.976	1.857	6.0	92	0.00
33		trichloroethene	1.404	1.372	2.3	90	0.00
34		1,2-dichloropropane	1.447	1.344	7.1	88	0.00
35		dibromomethane	1.020	0.918	10.0	89	0.00
36		2-chloroethylvinyl ether	0.000	0.000	0.0	0#	-13.14#
37		bromodichloromethane	1.926	1.857	3.6	91	0.00
38		cis-1,3-dichloropropene	1.936	2.093	-8.1	97	0.00
39		4-Methyl-2-pentanone	0.523	0.550	-5.2	88	0.00
40		1-chloro-3-fluorobenzene<IS	1.000	1.000	0.0	95	0.00
41	S	Toluene-d8 <surr>	2.467	2.544	-3.1	95	0.00
42		toluene	1.801	1.779	1.2	93	0.00
43		trans-1,3-dichloropropene	1.014	1.146	-13.0	96	0.00
44		1,1,2-trichloroethane	0.589	0.621	-5.4	93	0.00
45		tetrachloroethene	0.874	0.939	-7.4	95	0.00
46		1,3-dichloropropane	1.153	1.188	-3.0	95	0.00
47		2-Hexanone	0.688	0.641	6.8	88	0.00
48		dibromochloromethane	0.812	0.845	-4.1	96	0.00
49		1,2-dibromoethane	0.748	0.754	-0.8	94	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\081314\
Data File : A05.D
Acq On : 13 Aug 2014 3:07 pm
Operator : NRB
Sample : CCV/LCS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:36:48 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

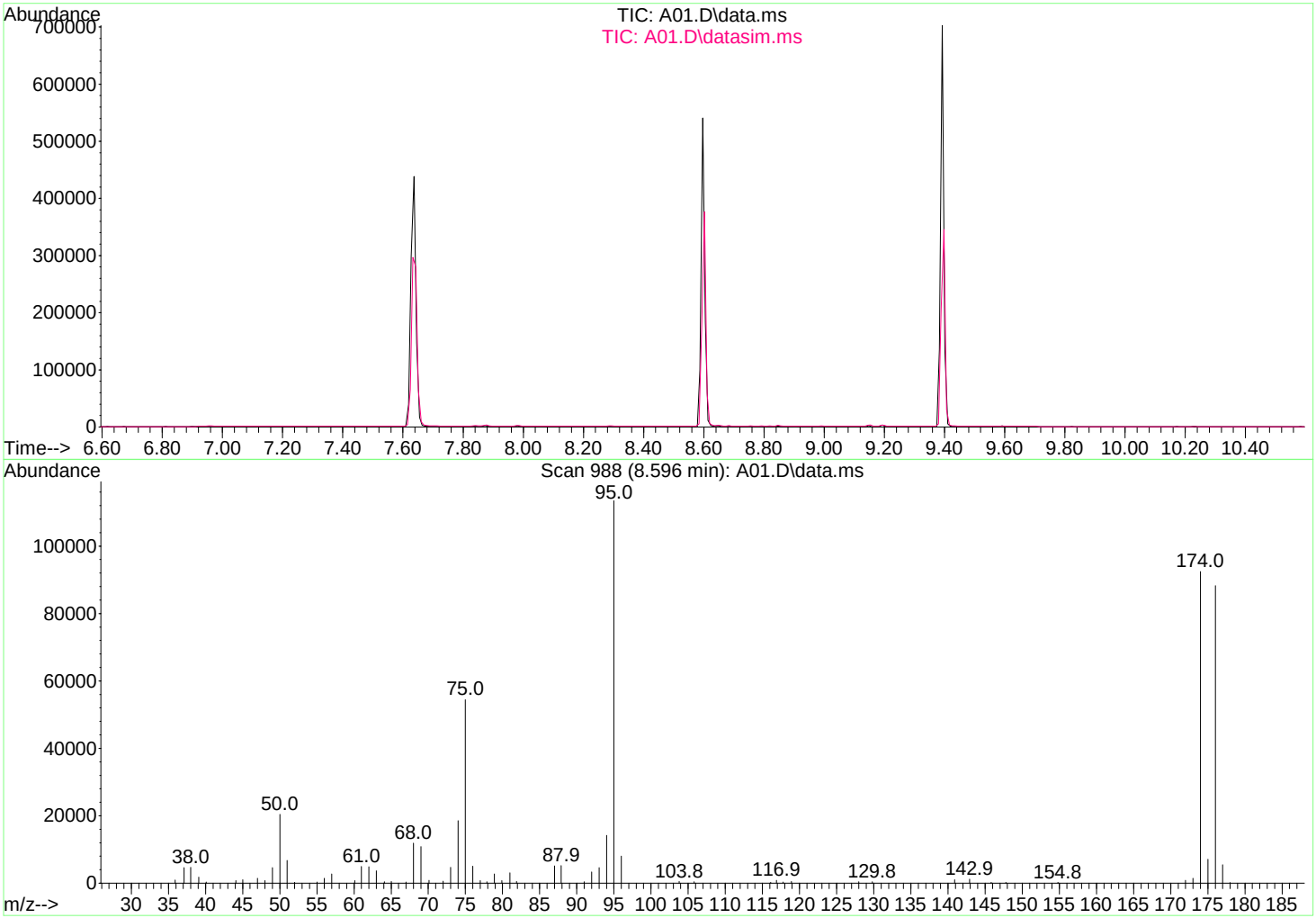
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50		1-chlorohexane	0.628	0.664	-5.7	110	0.00
51		chlorobenzene	2.056	2.019	1.8	108	0.00
52		1,1,1,2-tetrachloroethane	0.724	0.733	-1.2	106	0.00
53		ethylbenzene	0.975	1.028	-5.4	108	0.00
54		P & M -Xylene	1.208	1.199	0.7	100	0.00
55		o-xylene	1.123	1.100	2.0	95	0.00
56		styrene	1.859	1.904	-2.4	93	0.00
57		bromoform	0.634	0.612	3.5	94	0.00
58		Isopropylbenzene (Cumene)	2.899	3.034	-4.7	98	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	1.000	1.000	0.0	105	0.00
60	S	4-Bromofluorobenzene <Surr>	0.923	0.908	1.6	101	0.00
61		trans 1,4-dichloro-2-butene	0.275	0.277	-0.7	100	0.00
62		bromobenzene	0.733	0.690	5.9	99	0.00
63		1,1,2,2-tetrachloroethane	0.907	0.848	6.5	99	0.00
64		1,2,3-trichloropropane	0.265	0.241	9.1	94	0.00
65		n-propylbenzene	3.005	2.990	0.5	102	0.00
66		2-chlorotoluene	1.753	1.687	3.8	100	0.00
67		4-chlorotoluene	1.875	1.826	2.6	100	0.00
68		1,3,5-trimethylbenzene	1.817	1.838	-1.2	96	0.00
69		tert-butylbenzene	1.455	1.458	-0.2	100	0.00
70		1,2,4-trimethylbenzene	1.770	1.878	-6.1	100	0.00
71		sec-butylbenzene	2.118	2.194	-3.6	104	0.00
72		1,3-dichlorobenzene	1.247	1.171	6.1	101	0.00
73		4-isopropyltoluene	1.539	1.635	-6.2	100	0.00
74		1,4-dichlorobenzene	1.260	1.219	3.3	107	0.00
75		1,2-dichlorobenzene	1.264	1.162	8.1	102	0.00
76		n-butylbenzene	1.402	1.517	-8.2	100	0.00
77		1,2-dibromo-3-chloropropane	0.204	0.174	14.7	94	0.00
78		1,2,4-trichlorobenzene	0.618	0.570	7.8	95	0.00
79		hexachlorobutadiene	0.231	0.215	6.9	98	0.00
80		naphthalene	1.674	1.648	1.6	100	0.00
81		1,2,3-trichlorobenzene	0.602	0.578	4.0	103	0.00

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

Data Path : Z:\08\VPA\DATA\081314\
Data File : A01.D
Acq On : 13 Aug 2014 1:47 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: test.P
Integration File signal 2: rteint2.p

Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Title : Purgable Organics By GCMS
Last Update : Tue Aug 12 20:35:07 2014



Spectrum Information: Scan 988

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.0	20440	PASS
75	95	30	80	48.0	54440	PASS
95	95	100	100	100.0	113432	PASS
96	95	5	9	7.1	8023	PASS
173	174	0.00	2	1.5	1430	PASS
174	95	50	100	81.5	92424	PASS
175	174	5	9	7.7	7090	PASS
176	174	95	101	95.5	88304	PASS
177	176	5	9	6.2	5488	PASS

GC/MS QA-QC Check Report

Tune File : Z:\08\VPA\DATA\081314\A01.D
Tune Time : 13 Aug 2014 1:47 pm

Daily Calibration File : Z:\08\VPA\DATA\081214\A10.D

						51571	84416	96036
File	Sample	Surrogate Recovery %				Internal Standard Responses		
A01.D								
	IB	106	108	95	105	43053	85616	98491
A02.D								
	R	107	109	100	102	46701	79537	93457
A03.D								
	ICV	96	99	101	101	46846	77761	90544
A04.D								
	R	109	111	96	102	39772	73547	83623
A05.D								
	CCV/LCS	99	97	103	98	47462	79832	100658
A06.D								
	LCSD	95	93	104	97	51121	82878	90205
A07.D								
	R	107	113	100	104	37644	66066	76892
A08.D								
	R	108	110	100	103	39184	67981	79693
A09.D								
	R	108	105	102	102	42151	75361	82587
A10.D								
	1143773003	105	109	99	96	39821	71199	89877
A11.D								
	1143735016	108	106	100	101	44117	75889	90489
A12.D								
	1143658005	108	107	101	114	44258	75735	80657
A13.D								
	1143735014	112	109	102	100	37631	77676	89853
A14.D								
	1143735015	123*	117	99	110	40231	77670	85083
A15.D								
	1143658001	114	109	98	101	41988	79838	93070
A16.D								
	1143658002	98	111	83*	104	41175	73273	76276
A17.D								
	1143658003	106	109	96	105	38032	68899	96117
A18.D								
	1143658004	115	100	95	123*	42713	76258	69681
A19.D								
	1148353001	96	102	100	104	44622	73317	86521
A20.D								

	1148359003	107	106	101	99	43341	62763	76132
A21.D								
	1148359005	108	108	88	103	45457	80270	96559
A22.D								
	1148359006	107	105	96	101	47373	80871	90704
A23.D								
	1148359004	103	102	111	91	47380	72179	92763
A24.D								
	1143773002	112	104	120*	100	45629	64451	96050
A25.D								
	1148362001	101	103	88	123*	49478	80290	75644
A26.D								
	AF BLANK	109	108	102	103	40011	68600	85767
A27.D								
	1143773002	94	95	100	102	54371	66886	98763
A28.D								
	1148348003	96	95	101	89	48480	77390	89015
A29.D								
	1148348004	94	92	102	102	49807	75934	86960
A30.D								
	1148348005	92	91	104	107	50318	76636	86731
A31.D								
	1148348006	93	86	105	106	50471	78551	85645

(fails) - fails 12hr time check * - fails criteria

Created: Thu Aug 14 12:19:25 2014 VPA

SGS North America Inc.

Instrument Runlog

Instrument: VPA **Calibration Date:** 8/12/2014 **Method:** 8260/524.2
Operator: NRB **Processed By:** NRB **Posted By:** NRB **Analytical Batch:** 14362

Data Path: Z:\08\VPA\DATA\081314\

Daily:		As Needed:			
Verify System Date/Time	☑	Refill Water Tank	☐	Adjust Tune	☐
General System Inspection	☑	Refill Standards	☐	Clean Ion Source	☐
				Check Rough Pump Oil	☐
				Check Vacuum Pressure	☐

Standards:				
	IS/Surr	VW8-33-3	**CCV**	VW8-67-1
	MeOH	P1121	**EG**	VW8-64-4
			ICV	VW8-65-2
			2nd EG	VW8-66-2

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A01.D	1	IB	1		8/13/14 1:47 PM	N/A	
A02.D	2	R	1		8/13/14 2:04 PM	N/A	
A03.D	3	ICV	1		8/13/14 2:25 PM	N/A	
A04.D	4	R	1		8/13/14 2:41 PM	N/A	
A05.D	5	CCV/LCS	1		8/13/14 3:07 PM	N/A	
A06.D	6	LCSD	1		8/13/14 3:24 PM	N/A	
A07.D	7	R	1		8/13/14 3:40 PM	N/A	
A08.D	8	R	1		8/13/14 3:57 PM	N/A	
A09.D	9	R	1		8/13/14 4:13 PM	N/A	
A10.D	10	1143773003A	1		8/13/14 4:30 PM	<2	
A11.D	11	1143735016A	1		8/13/14 4:46 PM	<2	
A12.D	12	1143658005B	1		8/13/14 5:03 PM	<2	
A13.D	13	1143735014A	1		8/13/14 5:19 PM	<2	
A14.D	14	1143735015A	1		8/13/14 5:36 PM	<2	
A15.D	15	1143658001B	1	NP	8/13/14 5:52 PM	<2	1
A16.D	16	1143658002B	1	NP toluene-d8 low	8/13/14 6:09 PM	<2	1
A17.D	17	1143658003B	1	NP	8/13/14 6:25 PM	<2	1
A18.D	18	1143658004B	1		8/13/14 6:42 PM	<2	
A19.D	19	1148353001E	1		8/13/14 6:58 PM	<2	
A20.D	20	1148359003E	1		8/13/14 7:15 PM	<2	
A21.D	21	1148359005E	1		8/13/14 7:31 PM	<2	
A22.D	22	1148359006E	1	possible carryover RR	8/13/14 7:48 PM	<2	1
A23.D	23	1148359004E	1	possible carryover RR	8/13/14 8:04 PM	<2	1
A24.D	24	1143773002A 200X	200	(250uL/50mL)	8/13/14 8:21 PM	<2	
A25.D	25	1148362001B 10X	10	(5mL/50mL)	8/13/14 8:38 PM	<2	
A26.D	26	AF BLANK	1	(1226847	8/13/14 8:54 PM	<2	
A27.D	27	1143773002A 10X	10	(5mL/50mL)	8/13/14 9:11 PM	<2	
A28.D	28	1148348003B 10X	10	(5mL/50mL)	8/13/14 9:27 PM	<2	
A29.D	29	1148348004B 10X	10	(5mL/50mL)	8/13/14 9:44 PM	<2	
A30.D	30	1148348005B 10X	10	(5mL/50mL)	8/13/14 10:00 PM	<2	
A31.D	31	1148348006B 10X	10	(5mL/50mL)	8/13/14 10:17 PM	<2	
A32.D	32	R	1		8/13/14 10:33 PM		
A33.D	33	R	1		8/13/14 10:50 PM		
A34.D	34	R	1		8/13/14 11:06 PM		

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A01.D
Acq On : 13 Aug 2014 1:47 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 14 12:16:49 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

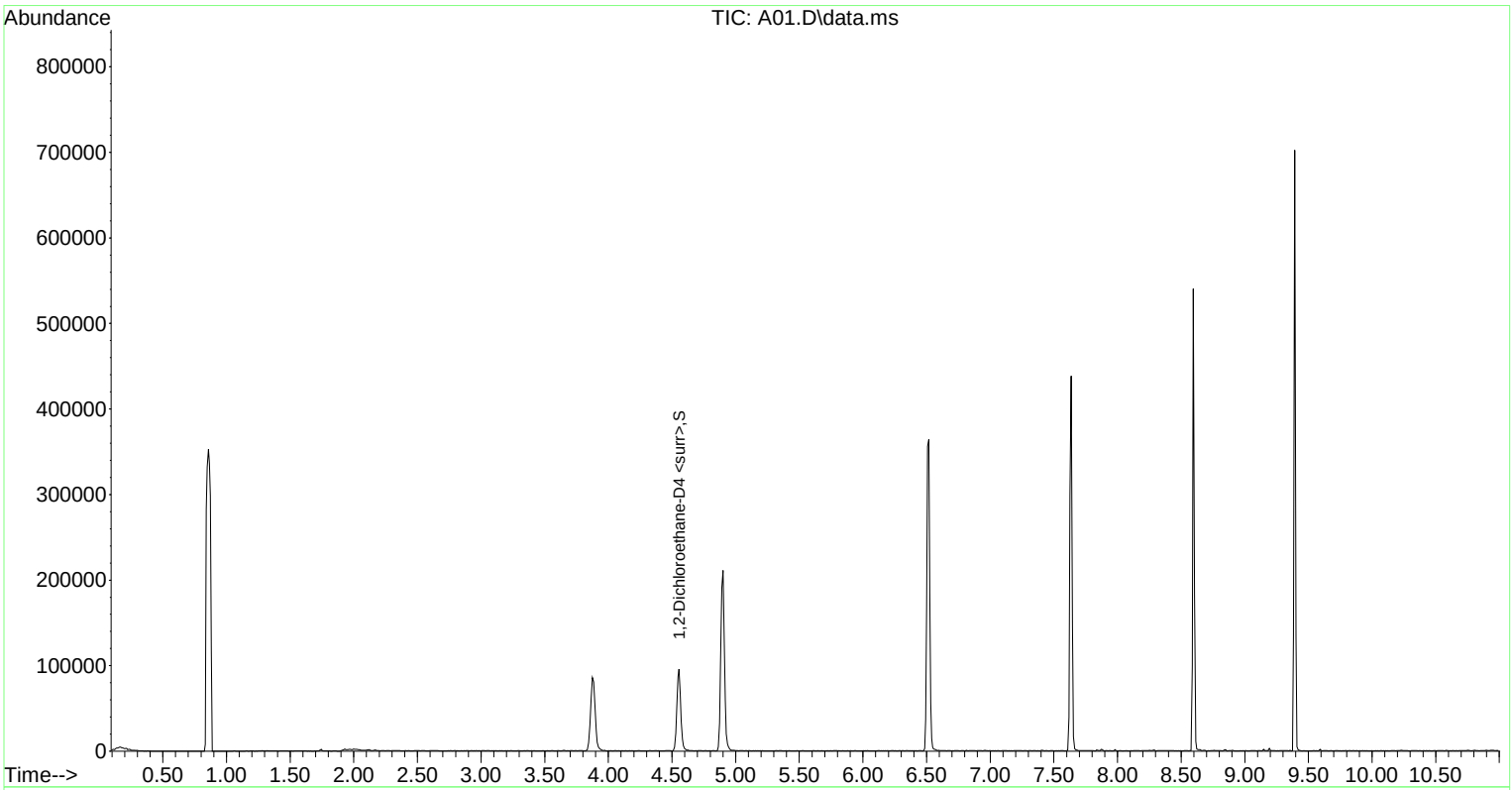
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.897	70	43053	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.633	95	85616	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	98491	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.880	111	73791	31.67	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.57%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	78939	32.48	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 108.27%			
41) Toluene-d8 <surr>	6.515	98	201150	28.56	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 95.20%			
60) 4-Bromofluorobenzene <...	8.602	95	95539	31.53	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 105.10%			
Target Compounds						Qvalue

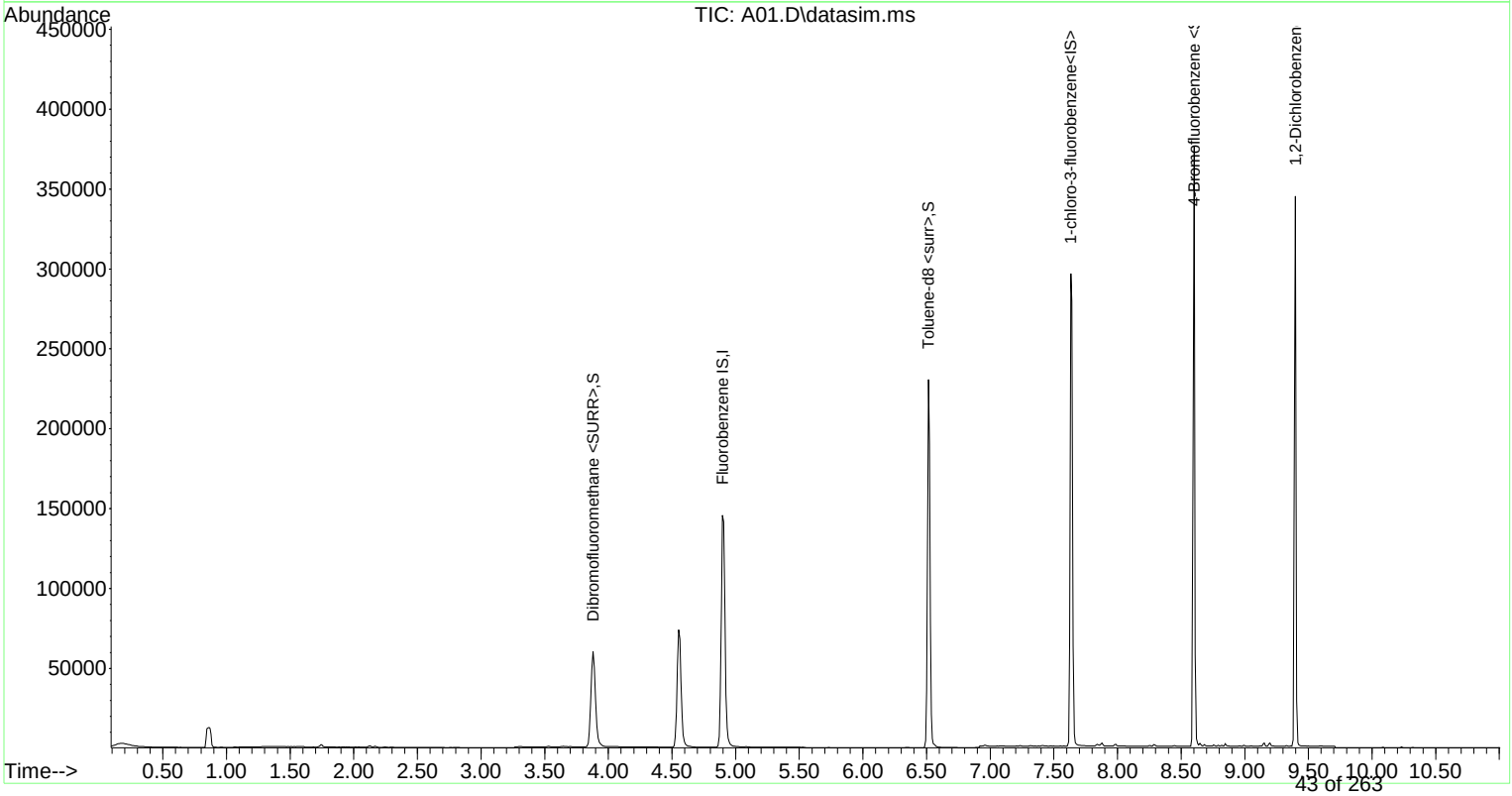
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A01.D
Acq On : 13 Aug 2014 1:47 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 14 12:16:49 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A05.D
Acq On : 13 Aug 2014 3:07 pm
Operator : NRB
Sample : CCV/LCS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:36:48 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	47462	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.633	95	79832	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	100658	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.880	111	76396	29.74	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.13%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	78293	29.22	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 97.40%			
41) Toluene-d8 <surr>	6.515	98	203080	30.93	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 103.10%			
60) 4-Bromofluorobenzene <...	8.602	95	91361	29.50	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 98.33%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	86522	29.26	µg/l	100
3] chloromethane	1.063	50	48025	27.90	µg/l	100
4] vinyl chloride	1.103	62	69525	28.30	µg/l	100
5] bromomethane	1.279	96	29202	30.76	µg/l	99
6] chloroethane	1.351	64	34847	27.91	µg/l	99
7] trichlorofluoromethane	1.432	101	107938	30.84	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	78828	44.95	µg/L	100
9] 1,1-dichloroethene	1.733	96	45721	27.86	µg/l	100
10] Acetone	2.165	43	46488	76.75	µg/L	98
11] Acrylonitrile	2.814	53	34272	38.19	µg/L	99
12] Methyliodide	1.825	142	71806	48.25	µg/L	99
13] Carbon disulfide	1.741	76	216062	41.37	µg/L	100
14] methylene chloride	2.125	84	56288	28.99	µg/l	99
15] methyl-t-butyl ether	2.343	73	214114	44.51	µg/L #	87
16] trans-1,2-dichloroethene	2.246	96	54492	26.69	µg/l	100
17] Vinylacetate	3.033	43	79357	32.62	µg/L	99
18) n-hexane	2.305	56	39575	32.68	µg/L	98
19] 1,1-dichloroethane	2.761	63	111245	27.69	µg/l	100
20] 2-Butanone(MEK)	4.075	43	93874	78.92	µg/L	99
21] 2,2-dichloropropane	3.423	77	97615	33.48	µg/l	99
22] cis-1,2-dichloroethene	3.306	96	64527	28.23	µg/l	99
23] bromochloromethane	3.530	128	32720	28.34	µg/l	99
24) cyclohexane	3.514	56	88966	32.96	µg/L	99
25] chloroform	3.656	83	125076	28.72	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	111414	29.81	µg/l	99
28] carbon tetrachloride	3.783	117	90345	30.17	µg/l	100
29] 1,1-dichloropropene	4.055	75	86435	30.56	µg/l	100
31] benzene	4.384	78	243246	29.12	µg/l	100
32] 1,2-dichloroethane	4.641	62	88122	28.19	µg/l	100
33] trichloroethene	5.091	95	65128	29.31	µg/l	100
34] 1,2-dichloropropane	5.637	63	63803	27.88	µg/l	100
35] dibromomethane	5.531	93	43590	27.01	µg/l	98
37] bromodichloromethane	5.735	83	88117	28.92	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	99344	32.44	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	78334	94.71	µg/L	99
42] toluene	6.562	92	141997	29.62	µg/l	100
43] trans-1,3-dichloropropene	6.963	75	91526	33.91	µg/l	99
44] 1,1,2-trichloroethane	7.090	83	49609	31.65	µg/l	100

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A05.D
Acq On : 13 Aug 2014 3:07 pm
Operator : NRB
Sample : CCV/LCS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:36:48 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

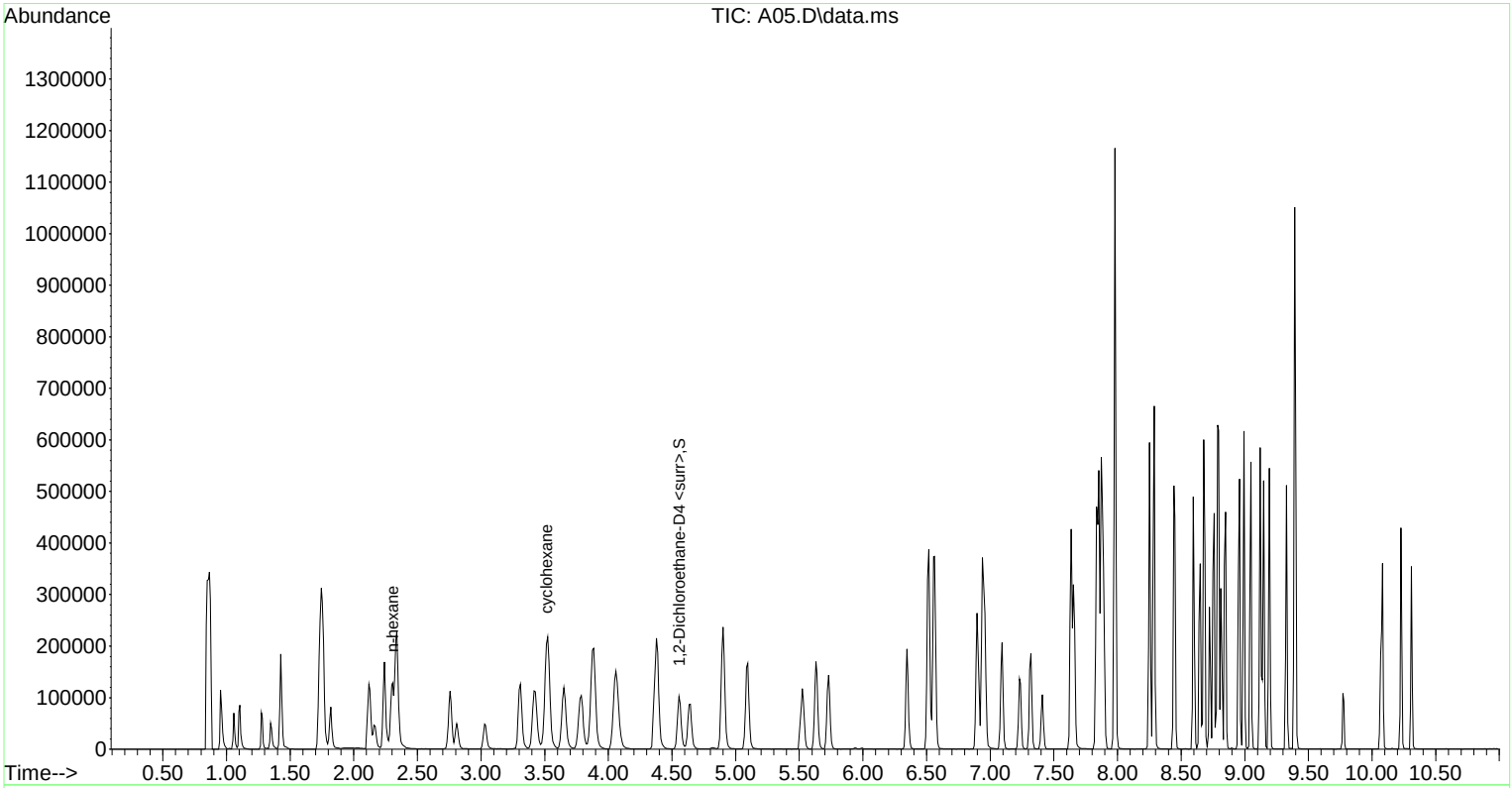
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	74975	32.24	µg/l	100
46] 1,3-dichloropropane	7.316	76	94864	30.92	µg/l	99
47] 2-Hexanone	7.660	43	153465	83.85	µg/L	99
48] dibromochloromethane	7.235	129	67463	31.22	µg/l	100
49] 1,2-dibromoethane	7.407	107	60230	30.25	µg/l	99
50] 1-chlorohexane	7.851	55	79560	47.64	µg/L	98
51] chlorobenzene	7.841	112	161164	29.46	µg/l	100
52] 1,1,1,2-tetrachloroethane	7.896	133	58541	30.40	µg/l	99
53] ethylbenzene	7.878	106	82065	31.63	µg/l	99
54] P & M -Xylene	7.986	106	191406	59.55	µg/l	100
55] o-xylene	8.258	106	87838	29.39	µg/l	99
56] styrene	8.285	104	152027	30.73	µg/l	99
57] bromoform	8.294	173	48850	28.96	µg/l	99
58] Isopropylbenzene (Cumene)	8.448	105	242236	31.40	µg/l	99
61] trans 1,4-dichloro-2-b...	8.819	53	41894	45.48	µg/L	97
62] bromobenzene	8.647	156	69468	28.23	µg/l	99
63] 1,1,2,2-tetrachloroethane	8.728	83	85370	28.07	µg/l	99
64] 1,2,3-trichloropropane	8.792	110	24252	27.25	µg/l	94
65] n-propylbenzene	8.683	91	300956	29.85	µg/l	99
66] 2-chlorotoluene	8.755	91	169812	28.87	µg/l	99
67] 4-chlorotoluene	8.846	91	183822	29.22	µg/l	100
68] 1,3,5-trimethylbenzene	8.792	105	185029	30.35	µg/l	100
69] tert-butylbenzene	8.955	119	146723	30.06	µg/l	99
70] 1,2,4-trimethylbenzene	8.991	105	189008	31.82	µg/l	99
71] sec-butylbenzene	9.045	105	220842	31.07	µg/l	100
72] 1,3-dichlorobenzene	9.154	146	117856	28.16	µg/l	99
73] 4-isopropyltoluene	9.127	119	164537	31.86	µg/l	100
74] 1,4-dichlorobenzene	9.199	146	122671	29.01	µg/l	100
75] 1,2-dichlorobenzene	9.398	146	116975	27.59	µg/l	100
76] n-butylbenzene	9.326	91	152724	32.48	µg/l	99
77] 1,2-dibromo-3-chloropr...	9.776	75	17473	25.55	µg/l	96
78] 1,2,4-trichlorobenzene	10.087	180	57414	27.70	µg/l	99
79] hexachlorobutadiene	10.072	225	21685	27.99	µg/l	98
80] naphthalene	10.232	128	165891	29.53	µg/l	100
81] 1,2,3-trichlorobenzene	10.315	180	58187	28.79	µg/l	100

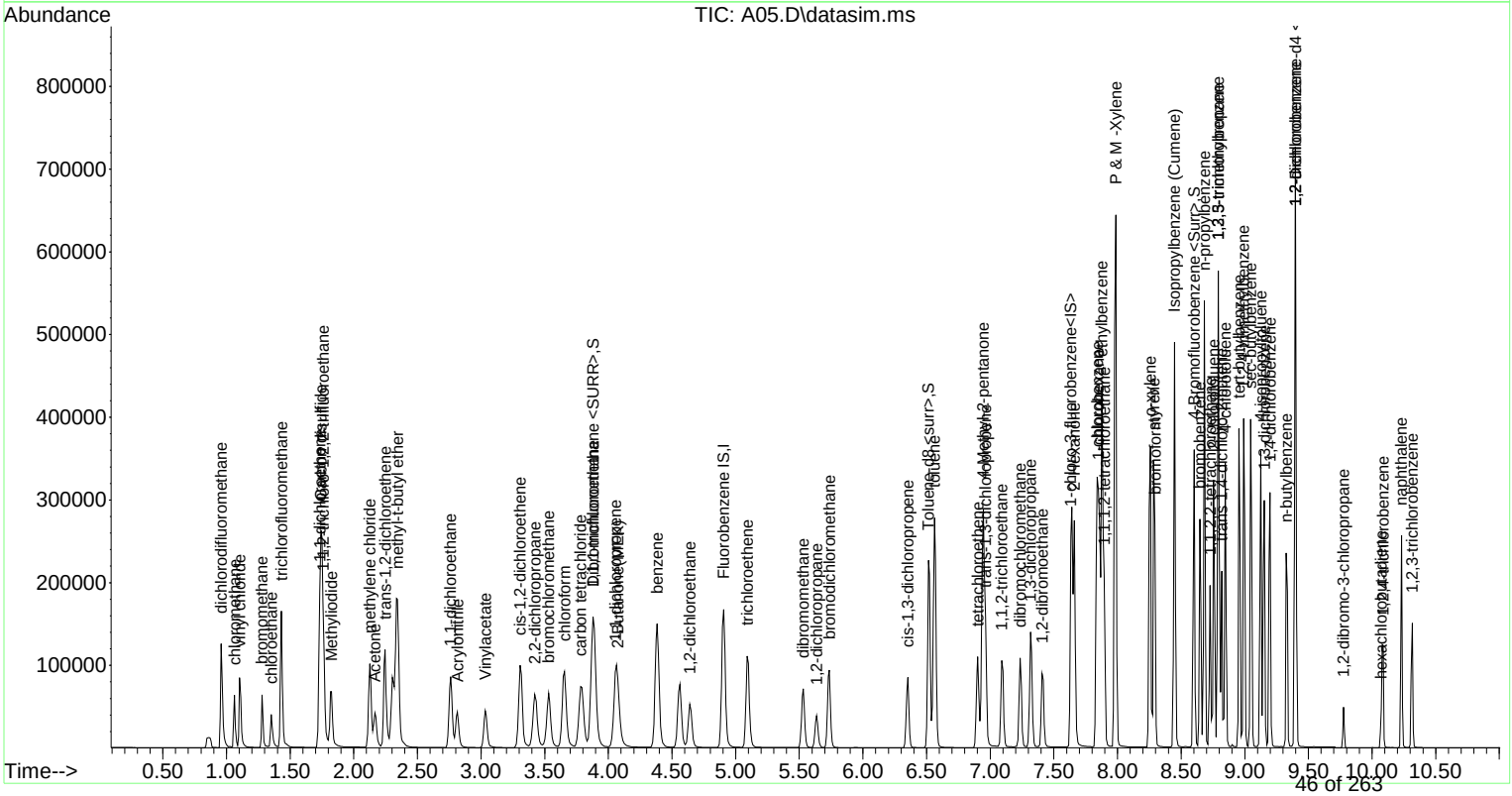
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A05.D
Acq On : 13 Aug 2014 3:07 pm
Operator : NRB
Sample : CCV/LCS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:36:48 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A06.D
Acq On : 13 Aug 2014 3:24 pm
Operator : NRB
Sample : LCSD
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 15:37:17 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	51121	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.643	95	82878	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	90205	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	78955	28.54	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.13%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	80337	27.83	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 92.77%			
41) Toluene-d8 <surr>	6.515	98	212799	31.22	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 104.07%			
60) 4-Bromofluorobenzene <...	8.602	95	80828	29.12	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 97.07%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	83776	26.30	µg/l	100
3] chloromethane	1.063	50	51990	28.05	µg/l	100
4] vinyl chloride	1.103	62	69831	26.38	µg/l	99
5] bromomethane	1.279	96	28153	27.48	µg/l	100
6] chloroethane	1.352	64	34356	25.54	µg/l	99
7] trichlorofluoromethane	1.432	101	105445	27.96	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	77613	41.09	µg/L	99
9] 1,1-dichloroethene	1.733	96	45309	25.63	µg/l	100
10] Acetone	2.174	43	56192	86.42	µg/L	100
11] Acrylonitrile	2.814	53	39482	40.85	µg/L	98
12] Methyliodide	1.825	142	67009	41.81	µg/L	99
13] Carbon disulfide	1.742	76	216187	38.43	µg/L	100
14] methylene chloride	2.125	84	58349	27.83	µg/l	98
15] methyl-t-butyl ether	2.344	73	234391	45.24	µg/L	94
16] trans-1,2-dichloroethene	2.246	96	57533	26.16	µg/l	100
17] Vinylacetate	3.041	43	89283	34.07	µg/L	99
18) n-hexane	2.305	56	42816	32.83	µg/L	98
19] 1,1-dichloroethane	2.761	63	115183	26.62	µg/l	100
20] 2-Butanone(MEK)	4.085	43	121285	94.67	µg/L	100
21] 2,2-dichloropropane	3.423	77	99763	31.77	µg/l	99
22] cis-1,2-dichloroethene	3.316	96	69406	28.19	µg/l	99
23] bromochloromethane	3.540	128	34438	27.70	µg/l	99
24) cyclohexane	3.515	56	95185	32.74	µg/L	98
25] chloroform	3.657	83	130625	27.85	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	114750	28.50	µg/l	100
28] carbon tetrachloride	3.793	117	94747	29.38	µg/l	100
29] 1,1-dichloropropene	4.055	75	95008	31.19	µg/l	100
31] benzene	4.384	78	265904	29.55	µg/l	100
32] 1,2-dichloroethane	4.641	62	90846	26.99	µg/l	99
33] trichloroethene	5.100	95	61352	25.64	µg/l	100
34] 1,2-dichloropropane	5.637	63	63614	25.81	µg/l	100
35] dibromomethane	5.531	93	43858	25.23	µg/l	97
37] bromodichloromethane	5.736	83	94445	28.78	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	105891	32.10	µg/l	100
39] 4-Methyl-2-pentanone	6.946	58	73952	83.01	µg/L	98
42] toluene	6.562	92	150691	30.28	µg/l	100
43] trans-1,3-dichloropropene	6.964	75	80310	28.66	µg/l	99
44] 1,1,2-trichloroethane	7.090	83	46713	28.71	µg/l	99

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A06.D
Acq On : 13 Aug 2014 3:24 pm
Operator : NRB
Sample : LCSD
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 15:37:17 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

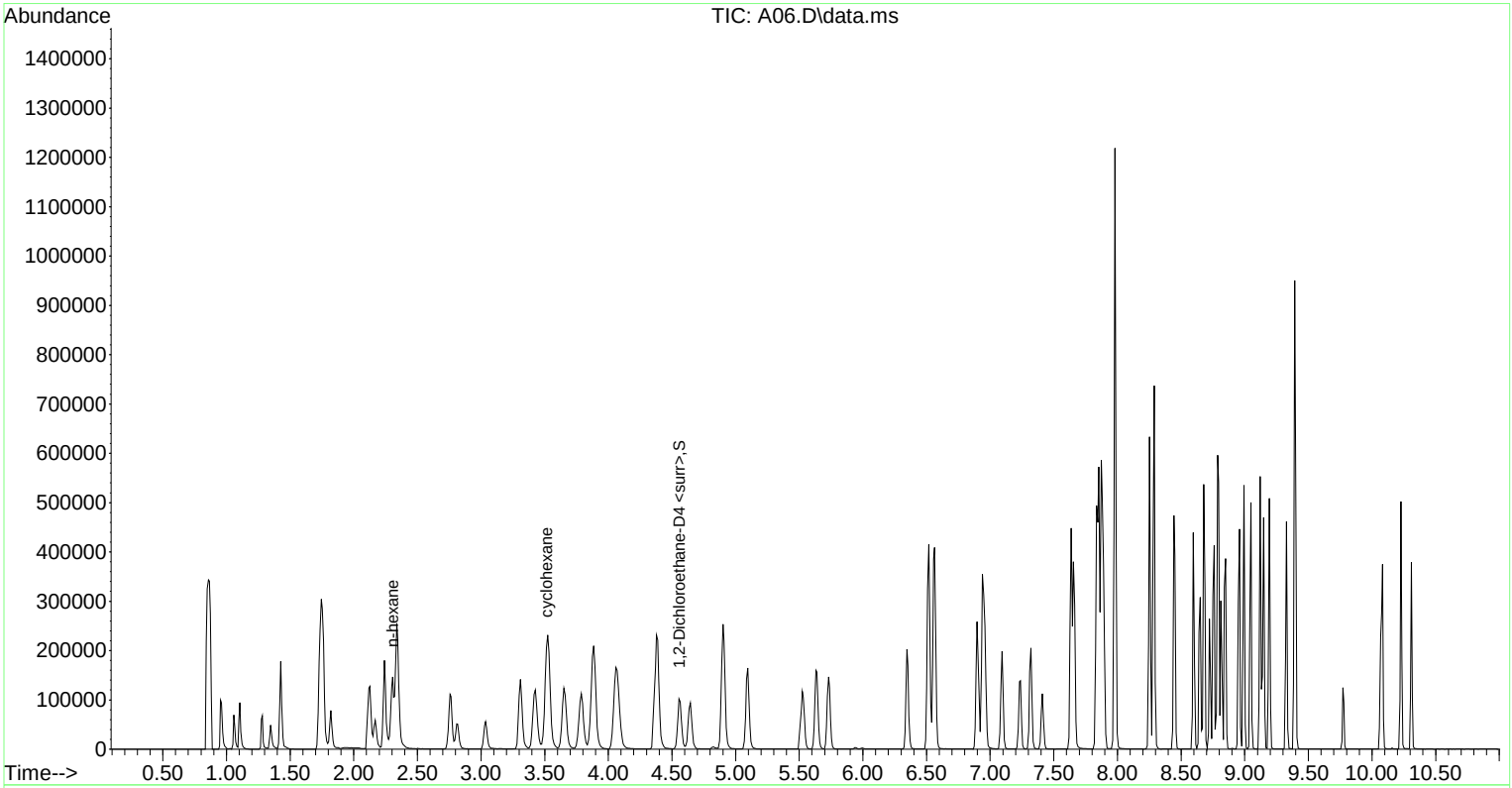
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45] tetrachloroethene	6.903	166	71175	29.48	µg/l		99
46] 1,3-dichloropropane	7.317	76	100918	31.68	µg/l		99
47] 2-Hexanone	7.661	43	179536	94.48	µg/L		100
48] dibromochloromethane	7.235	129	69486	30.98	µg/l		100
49] 1,2-dibromoethane	7.407	107	65336	31.61	µg/l		99
50] 1-chlorohexane	7.851	55	83610	48.23	µg/L		98
51] chlorobenzene	7.842	112	168990	29.75	µg/l		100
52] 1,1,1,2-tetrachloroethane	7.896	133	61661	30.84	µg/l		98
53] ethylbenzene	7.878	106	86102	31.97	µg/l		99
54] P & M -Xylene	7.987	106	204000	61.13	µg/l		100
55] o-xylene	8.258	106	97879	31.54	µg/l		99
56] styrene	8.285	104	168055	32.72	µg/l		100
57] bromoform	8.294	173	54778	31.28	µg/l		100
58] Isopropylbenzene (Cumene)	8.448	105	220601	27.54	µg/l		99
61] trans 1,4-dichloro-2-b...	8.819	53	38944	47.18	µg/L		98
62] bromobenzene	8.647	156	62827	28.49	µg/l		99
63] 1,1,2,2-tetrachloroethane	8.729	83	78153	28.67	µg/l		99
64] 1,2,3-trichloropropane	8.792	110	22903	28.72	µg/l	#	70
65] n-propylbenzene	8.683	91	261734	28.97	µg/l		99
66] 2-chlorotoluene	8.756	91	153327	29.09	µg/l		100
67] 4-chlorotoluene	8.846	91	162124	28.75	µg/l		99
68] 1,3,5-trimethylbenzene	8.792	105	169001	30.93	µg/l		100
69] tert-butylbenzene	8.955	119	128480	29.37	µg/l		99
70] 1,2,4-trimethylbenzene	8.991	105	166110	31.21	µg/l		100
71] sec-butylbenzene	9.045	105	196094	30.79	µg/l		99
72] 1,3-dichlorobenzene	9.154	146	107528	28.67	µg/l		100
73] 4-isopropyltoluene	9.127	119	151566	32.75	µg/l		100
74] 1,4-dichlorobenzene	9.199	146	110267	29.10	µg/l		100
75] 1,2-dichlorobenzene	9.398	146	107809	28.38	µg/l		99
76] n-butylbenzene	9.326	91	143454	34.04	µg/l		100
77] 1,2-dibromo-3-chloropr...	9.776	75	19085	31.14	µg/l		96
78] 1,2,4-trichlorobenzene	10.080	180	64982	34.99	µg/l		99
79] hexachlorobutadiene	10.072	225	24068	34.66	µg/l		99
80] naphthalene	10.232	128	187024	37.15	µg/l		100
81] 1,2,3-trichlorobenzene	10.315	180	62339	34.42	µg/l		100

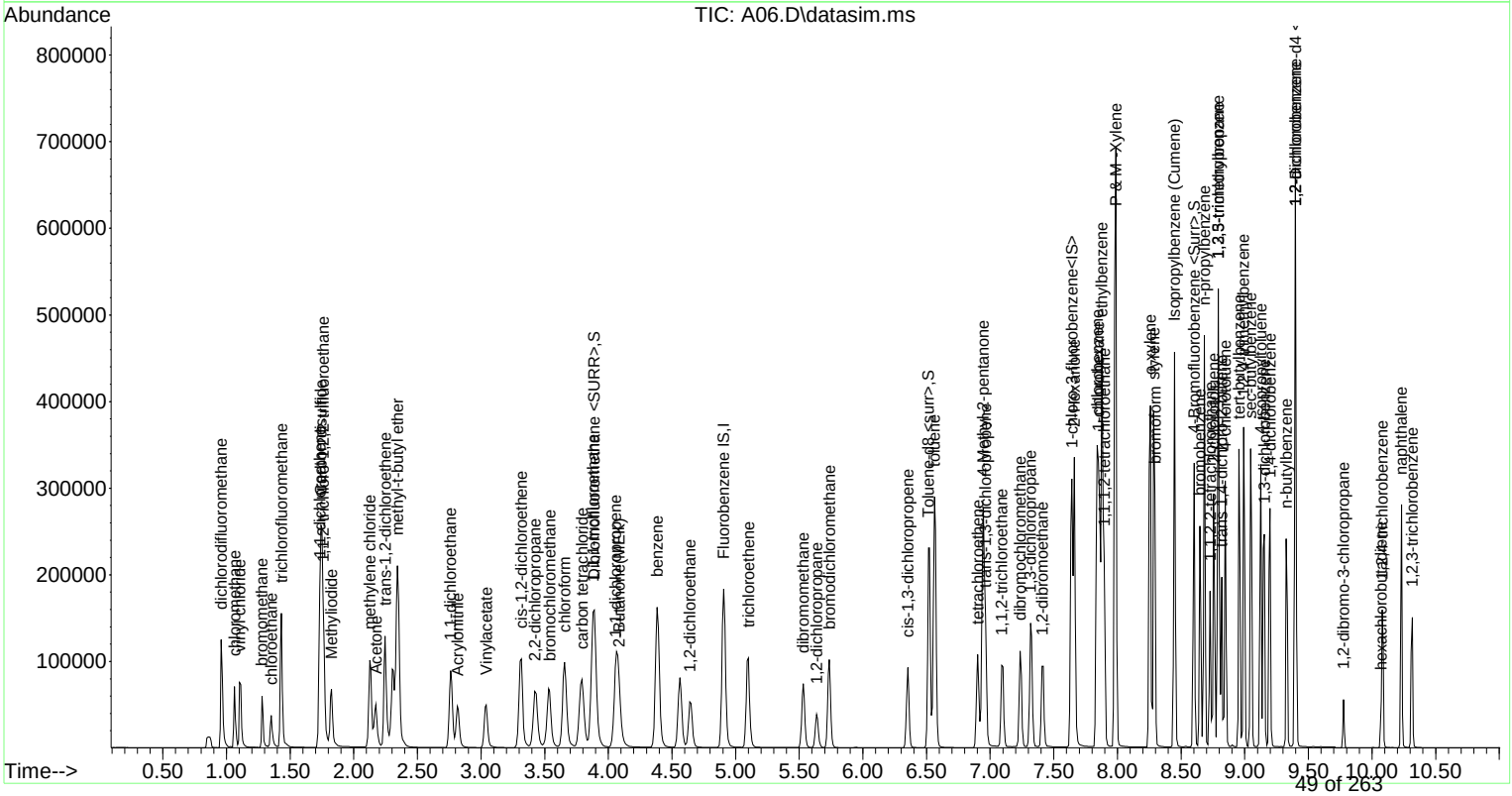
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A06.D
Acq On : 13 Aug 2014 3:24 pm
Operator : NRB
Sample : LCSD
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 15:37:17 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A12.D
Acq On : 13 Aug 2014 5:03 pm
Operator : NRB
Sample : 1143658005B
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 14 11:02:52 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

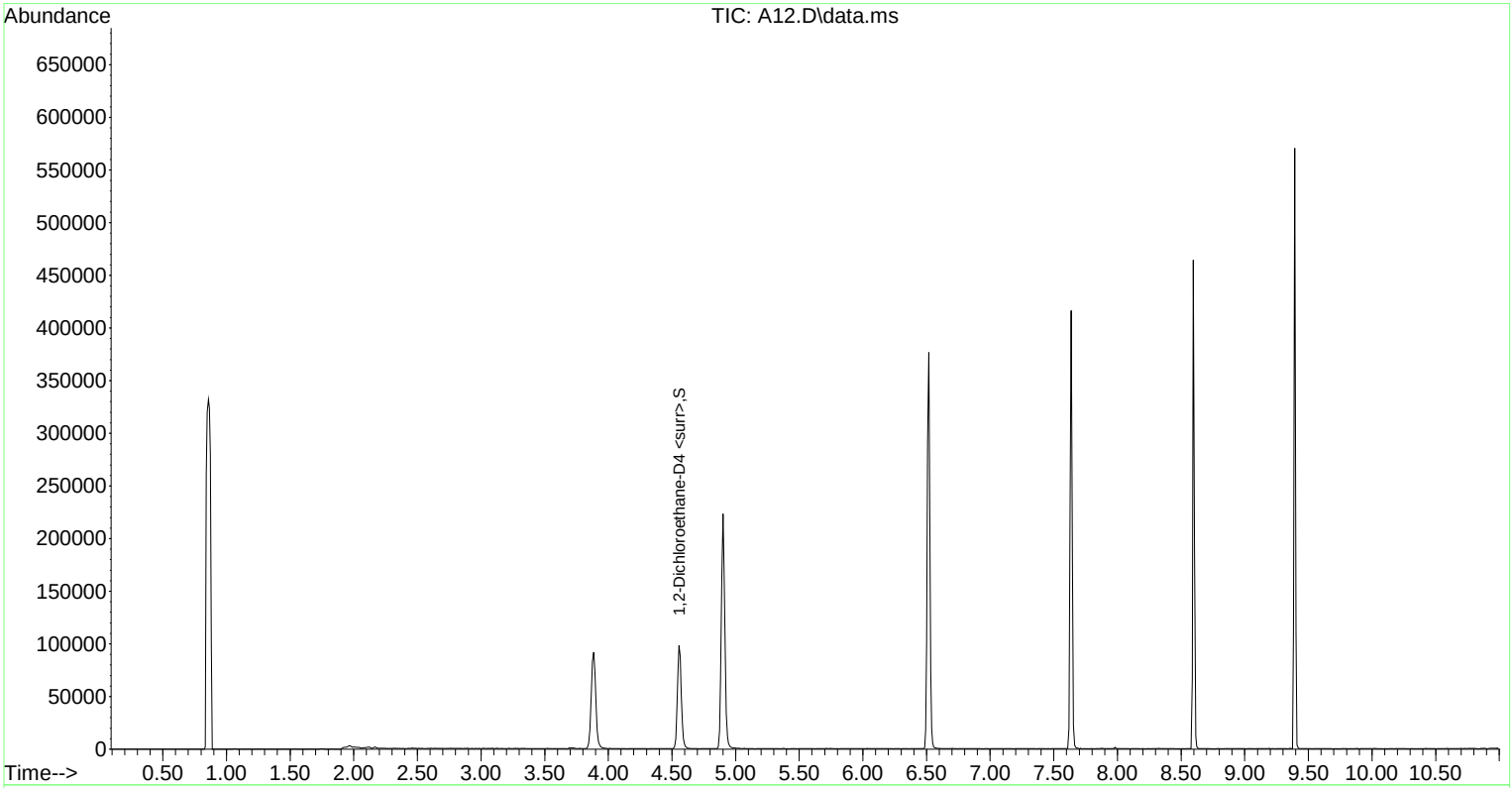
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	44258	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	75735	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	80657	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	77863	32.51	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 108.37%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	79973	32.01	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 106.70%			
41) Toluene-d8 <surr>	6.523	98	187867	30.16	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 100.53%			
60) 4-Bromofluorobenzene <...	8.602	95	85116	34.30	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 114.33%			
Target Compounds						Qvalue

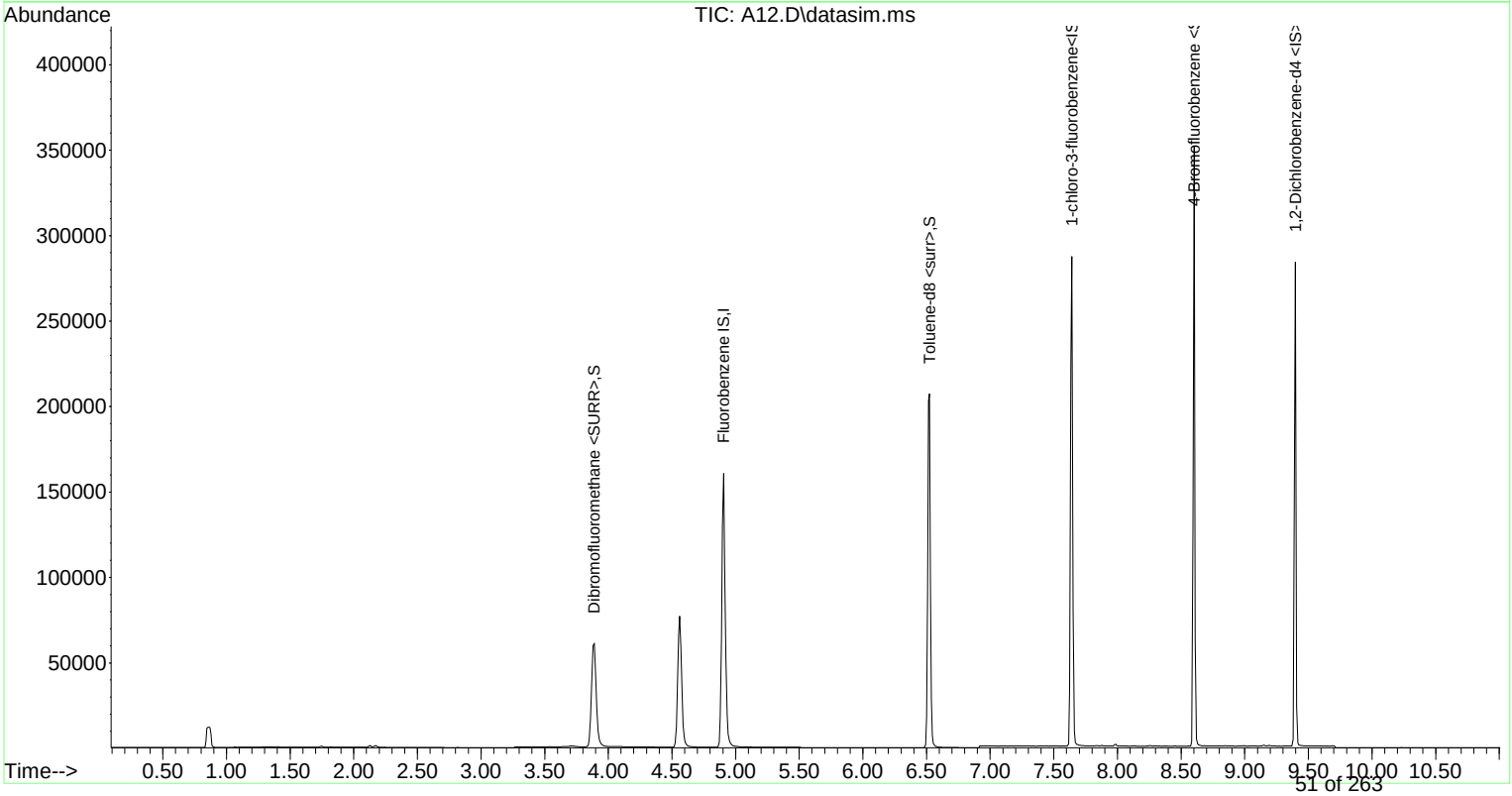
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A12.D
Acq On : 13 Aug 2014 5:03 pm
Operator : NRB
Sample : 1143658005B
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 14 11:02:52 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A18.D
Acq On : 13 Aug 2014 6:42 pm
Operator : NRB
Sample : 1143658004B
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 14 11:12:07 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

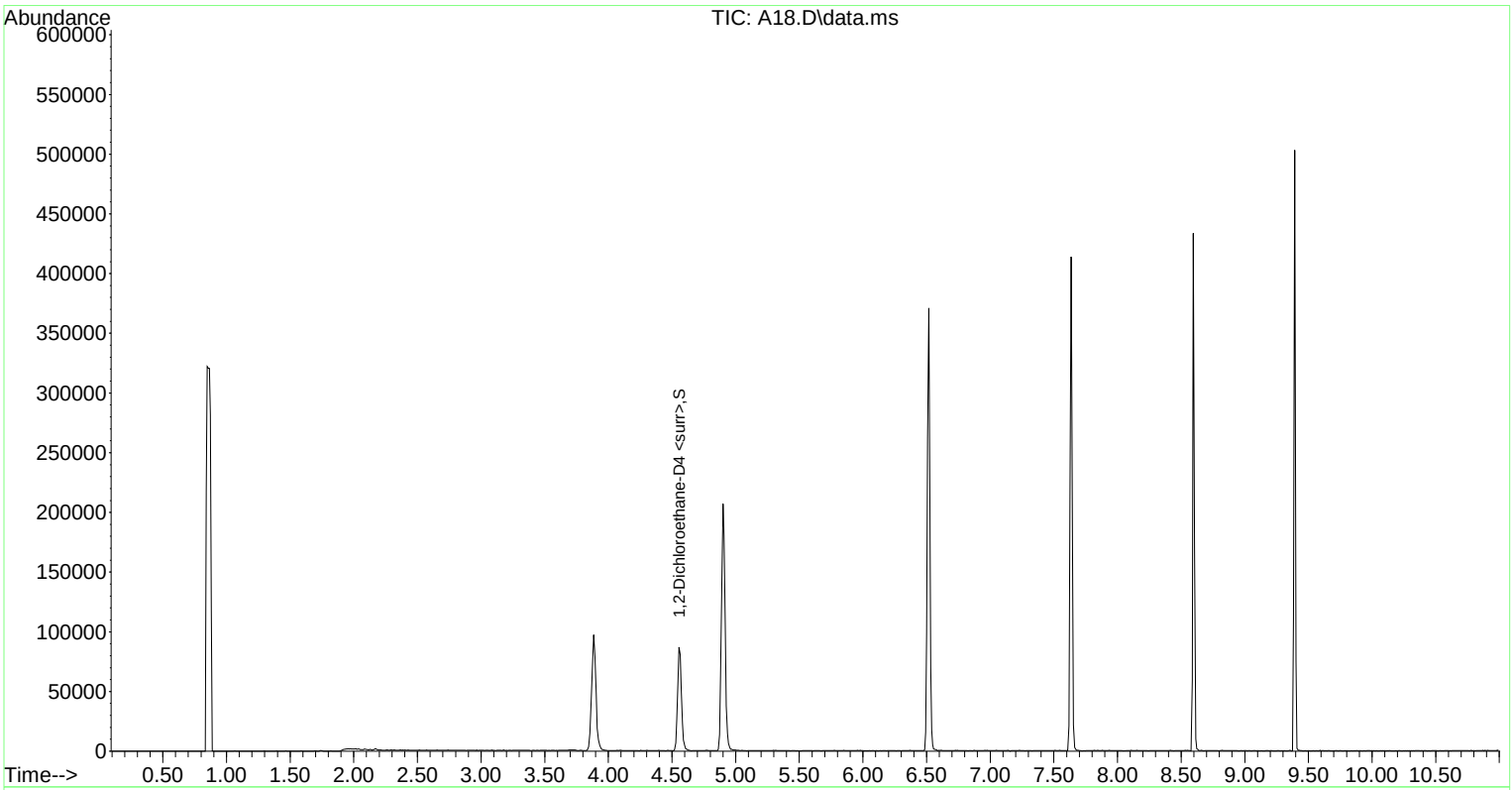
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	42713	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	76258	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	69681	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	79427	34.36	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 114.53%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	72141	29.92	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 99.73%			
41) Toluene-d8 <surr>	6.523	98	179255	28.58	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 95.27%			
60) 4-Bromofluorobenzene <...	8.602	95	79070	36.88	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 122.93%#			
Target Compounds						Qvalue

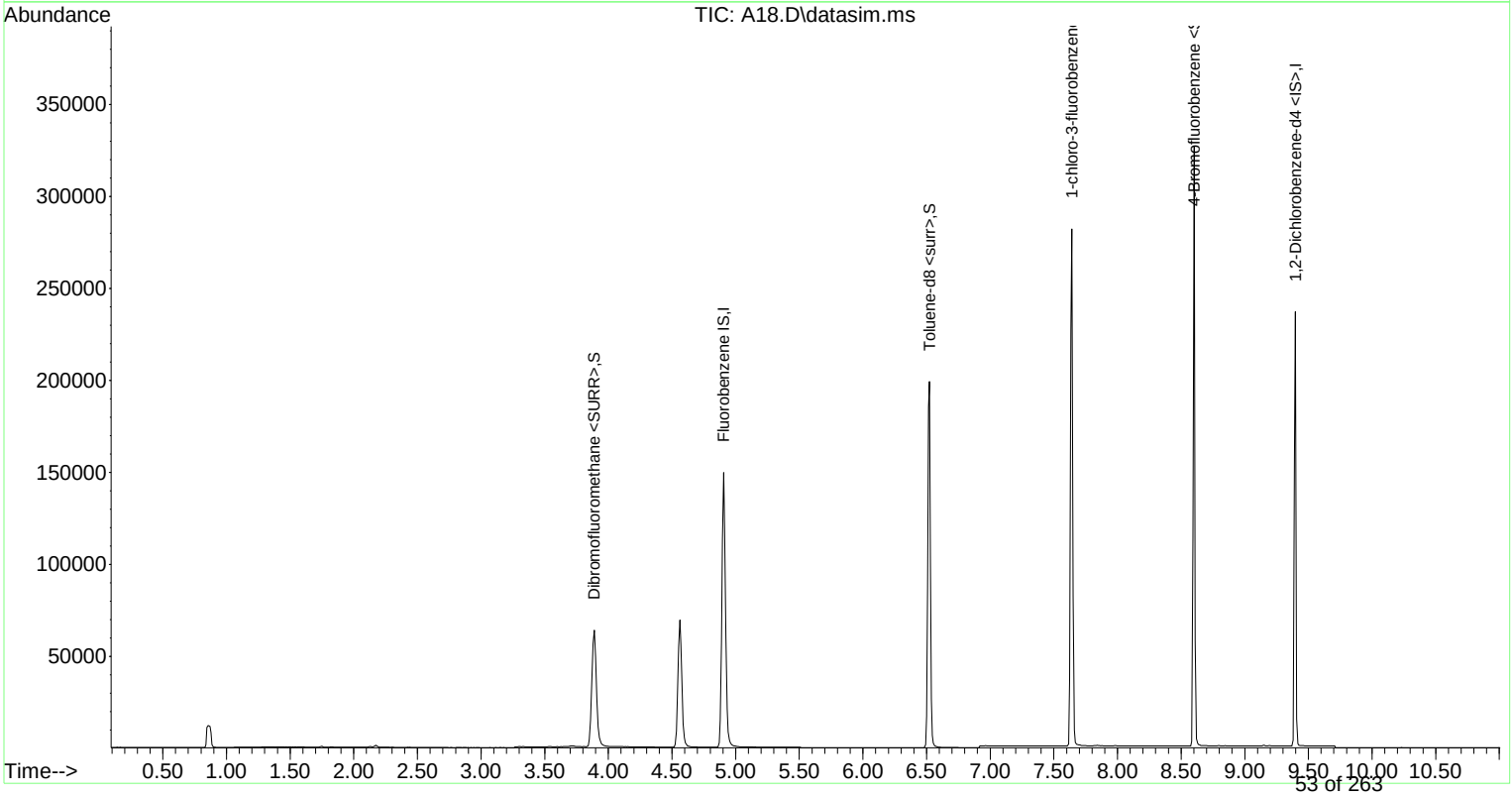
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A18.D
Acq On : 13 Aug 2014 6:42 pm
Operator : NRB
Sample : 1143658004B
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 14 11:12:07 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143658, 1143798, 1143820, 1143824, 1148352, 1148370, 1148372, 1148378

Queue: **VMS** Batch: **14376**

Method: EPA 602/624, SW8260B, SW8260B TCLP

Run Date: 08/17/14 23:13 - 08/18/14 07:26

Extraction Batch(es): VXX26289

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: Nicholas Bryant
Printed Name:
Date: 08/18/14

Reviewer's Signature: Phyllis Woods
Printed Name: Phyllis Woods
Date: 8/18/2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A04.D
Acq On : 17 Aug 2014 11:39 pm
Operator : NRB
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 17 23:50:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	30.000	30.000	0.0	96	0.00
2		dichlorodifluoromethane	30.000	32.187	-7.3	98	0.00
3		chloromethane	30.000	28.100	6.3	95	0.00
4		vinyl chloride	30.000	31.487	-5.0	95	0.00
5		bromomethane	30.000	31.370	-4.6	116	0.00
6		chloroethane	30.000	37.192	-24.0#	113	0.00
7		trichlorofluoromethane	30.000	28.693	4.4	88	0.00
8		1,1,2-trichloro-1,2,2-trifl	45.000	44.231	1.7	94	0.00
9		1,1-dichloroethene	30.000	30.138	-0.5	94	0.00
10		Acetone	90.000	73.616	18.2	81	0.00
11		Acrylonitrile	45.000	44.361	1.4	92	0.00
12		Methyliodide	45.000	46.874	-4.2	96	0.00
13		Carbon disulfide	45.000	45.237	-0.5	95	0.00
14		methylene chloride	30.000	31.520	-5.1	98	0.00
15		methyl-t-butyl ether	45.000	46.530	-3.4	92	0.00
16		trans-1,2-dichloroethene	30.000	30.884	-2.9	94	0.00
17		Vinylacetate	30.000	31.121	-3.7	98	0.00
18		n-hexane	30.000	32.356	-7.9	100	0.00
19		1,1-dichloroethane	30.000	30.336	-1.1	93	0.00
20		2-Butanone(MEK)	90.000	86.555	3.8	91	0.00
21		2,2-dichloropropane	30.000	31.968	-6.6	99	0.00
22		cis-1,2-dichloroethene	30.000	29.997	0.0	89	0.00
23		bromochloromethane	30.000	29.035	3.2	97	0.00
24		cyclohexane	30.000	30.394	-1.3	91	0.00
25		chloroform	30.000	30.359	-1.2	94	0.00
26	S	Dibromofluoromethane <SURR>	30.000	30.253	-0.8	96	0.00
27		1,1,1-trichloroethane	30.000	29.553	1.5	93	0.00
28		carbon tetrachloride	30.000	30.668	-2.2	93	0.00
29		1,1-dichloropropene	30.000	29.998	0.0	92	0.00
30	S	1,2-Dichloroethane-D4 <surr	30.000	29.779	0.7	97	0.00
31		benzene	30.000	31.497	-5.0	94	0.00
32		1,2-dichloroethane	30.000	28.091	6.4	89	0.00
33		trichloroethene	30.000	30.285	-1.0	95	0.00
34		1,2-dichloropropane	30.000	32.353	-7.8	98	0.00
35		dibromomethane	30.000	29.047	3.2	91	0.00
36		2-chloroethylvinyl ether	45.000	0.000	100.0#	0	-12.78#
37		bromodichloromethane	30.000	30.538	-1.8	96	0.00
38		cis-1,3-dichloropropene	30.000	32.257	-7.5	100	0.00
39		4-Methyl-2-pentanone	90.000	82.904	7.9	85	0.00
40		1-chloro-3-fluorobenzene<IS	30.000	30.000	0.0	98	0.00
41	S	Toluene-d8 <surr>	30.000	30.542	-1.8	101	0.00
42		toluene	30.000	29.967	0.1	96	0.00
43		trans-1,3-dichloropropene	30.000	30.712	-2.4	96	0.00
44		1,1,2-trichloroethane	30.000	28.624	4.6	94	0.00
45		tetrachloroethene	30.000	31.996	-6.7	95	0.00
46		1,3-dichloropropane	30.000	27.992	6.7	92	0.00
47		2-Hexanone	90.000	82.701	8.1	89	0.00
48		dibromochloromethane	30.000	31.053	-3.5	100	0.00
49		1,2-dibromoethane	30.000	28.837	3.9	96	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A04.D
Acq On : 17 Aug 2014 11:39 pm
Operator : NRB
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 17 23:50:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
50		1-chlorohexane	45.000	47.356	-5.2	96	0.00
51		chlorobenzene	30.000	29.354	2.2	91	0.00
52		1,1,1,2-tetrachloroethane	30.000	30.543	-1.8	99	0.00
53		ethylbenzene	30.000	31.249	-4.2	94	0.00
54		P & M -Xylene	60.000	62.389	-4.0	91	0.00
55		o-xylene	30.000	31.196	-4.0	92	0.00
56		styrene	30.000	32.298	-7.7	97	0.00
57		bromoform	30.000	31.286	-4.3	101	0.00
58		Isopropylbenzene (Cumene)	30.000	32.385	-7.9	97	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	30.000	30.000	0.0	100	0.00
60	S	4-Bromofluorobenzene <Surr>	30.000	28.252	5.8	96	0.00
61		trans 1,4-dichloro-2-butene	45.000	47.322	-5.2	96	0.00
62		bromobenzene	30.000	29.792	0.7	95	0.00
63		1,1,2,2-tetrachloroethane	30.000	30.085	-0.3	95	0.00
64		1,2,3-trichloropropane	30.000	29.398	2.0	95	0.00
65		n-propylbenzene	30.000	30.245	-0.8	94	0.00
66		2-chlorotoluene	30.000	29.907	0.3	96	0.00
67		4-chlorotoluene	30.000	30.859	-2.9	98	0.00
68		1,3,5-trimethylbenzene	30.000	31.153	-3.8	97	0.00
69		tert-butylbenzene	30.000	30.528	-1.8	95	0.00
70		1,2,4-trimethylbenzene	30.000	31.650	-5.5	94	0.00
71		sec-butylbenzene	30.000	31.851	-6.2	98	0.00
72		1,3-dichlorobenzene	30.000	29.558	1.5	97	0.00
73		4-isopropyltoluene	30.000	33.772	-12.6	100	0.00
74		1,4-dichlorobenzene	30.000	30.210	-0.7	95	0.00
75		1,2-dichlorobenzene	30.000	28.749	4.2	96	0.00
76		n-butylbenzene	30.000	33.355	-11.2	100	0.00
77		1,2-dibromo-3-chloropropane	30.000	28.977	3.4	95	0.00
78		1,2,4-trichlorobenzene	30.000	31.725	-5.8	95	0.00
79		hexachlorobutadiene	30.000	30.276	-0.9	104	0.00
80		naphthalene	30.000	28.856	3.8	97	0.00
81		1,2,3-trichlorobenzene	30.000	30.358	-1.2	91	0.00

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A04.D
Acq On : 17 Aug 2014 11:39 pm
Operator : NRB
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 17 23:50:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	96	0.00
2		dichlorodifluoromethane	2.670	2.865	-7.3	98	0.00
3		chloromethane	2.744	2.570	6.3	95	0.00
4		vinyl chloride	2.248	2.360	-5.0	95	0.00
5		bromomethane	0.643	0.855	-33.0#	116	0.00
6		chloroethane	0.830	1.105	-33.1#	113	0.00
7		trichlorofluoromethane	2.973	2.844	4.3	88	0.00
8		1,1,2-trichloro-1,2,2-trifl	1.465	1.440	1.7	94	0.00
9		1,1-dichloroethene	1.269	1.274	-0.4	94	0.00
10		Acetone	0.662	0.430	35.0#	81	0.00
11		Acrylonitrile	0.538	0.624	-16.0	92	0.00
12		Methyliodide	1.185	1.476	-24.6#	96	0.00
13		Carbon disulfide	4.067	4.088	-0.5	95	0.00
14		methylene chloride	1.656	1.740	-5.1	98	0.00
15		methyl-t-butyl ether	2.621	2.710	-3.4	92	0.00
16		trans-1,2-dichloroethene	1.239	1.275	-2.9	94	0.00
17		Vinylacetate	1.589	1.762	-10.9	98	0.00
18		n-hexane	0.876	0.945	-7.9	100	0.00
19		1,1-dichloroethane	2.246	2.272	-1.2	93	0.00
20		2-Butanone(MEK)	0.810	0.872	-7.7	91	0.00
21		2,2-dichloropropane	1.104	1.292	-17.0	99	0.00
22		cis-1,2-dichloroethene	1.337	1.337	0.0	89	0.00
23		bromochloromethane	0.609	0.671	-10.2	97	0.00
24		cyclohexane	2.310	2.341	-1.3	91	0.00
25		chloroform	2.202	2.228	-1.2	94	0.00
26	S	Dibromofluoromethane <SURR>	1.603	1.617	-0.9	96	0.00
27		1,1,1-trichloroethane	1.646	1.775	-7.8	93	0.00
28		carbon tetrachloride	1.163	1.442	-24.0#	93	0.00
29		1,1-dichloropropene	1.596	1.595	0.1	92	0.00
30	S	1,2-Dichloroethane-D4 <surr	1.585	1.573	0.8	97	0.00
31		benzene	4.905	5.150	-5.0	94	0.00
32		1,2-dichloroethane	1.352	1.533	-13.4	89	0.00
33		trichloroethene	1.326	1.339	-1.0	95	0.00
34		1,2-dichloropropane	1.295	1.396	-7.8	98	0.00
35		dibromomethane	0.776	0.850	-9.5	91	0.00
36		2-chloroethylvinyl ether	0.000	0.000	0.0	0#	-12.78#
37		bromodichloromethane	1.200	1.450	-20.8#	96	0.00
38		cis-1,3-dichloropropene	1.166	1.592	-36.5#	100	0.00
39		4-Methyl-2-pentanone	0.639	0.710	-11.1	85	0.00
40		1-chloro-3-fluorobenzene<IS	1.000	1.000	0.0	98	0.00
41	S	Toluene-d8 <surr>	2.832	2.883	-1.8	101	0.00
42		toluene	1.786	1.784	0.1	96	0.00
43		trans-1,3-dichloropropene	0.551	0.669	-21.4#	96	0.00
44		1,1,2-trichloroethane	0.529	0.505	4.5	94	0.00
45		tetrachloroethene	0.636	0.679	-6.8	95	0.00
46		1,3-dichloropropane	0.863	0.929	-7.6	92	0.00
47		2-Hexanone	0.681	0.772	-13.4	89	0.00
48		dibromochloromethane	0.480	0.603	-25.6#	100	0.00
49		1,2-dibromoethane	0.589	0.636	-8.0	96	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A04.D
Acq On : 17 Aug 2014 11:39 pm
Operator : NRB
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 17 23:50:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

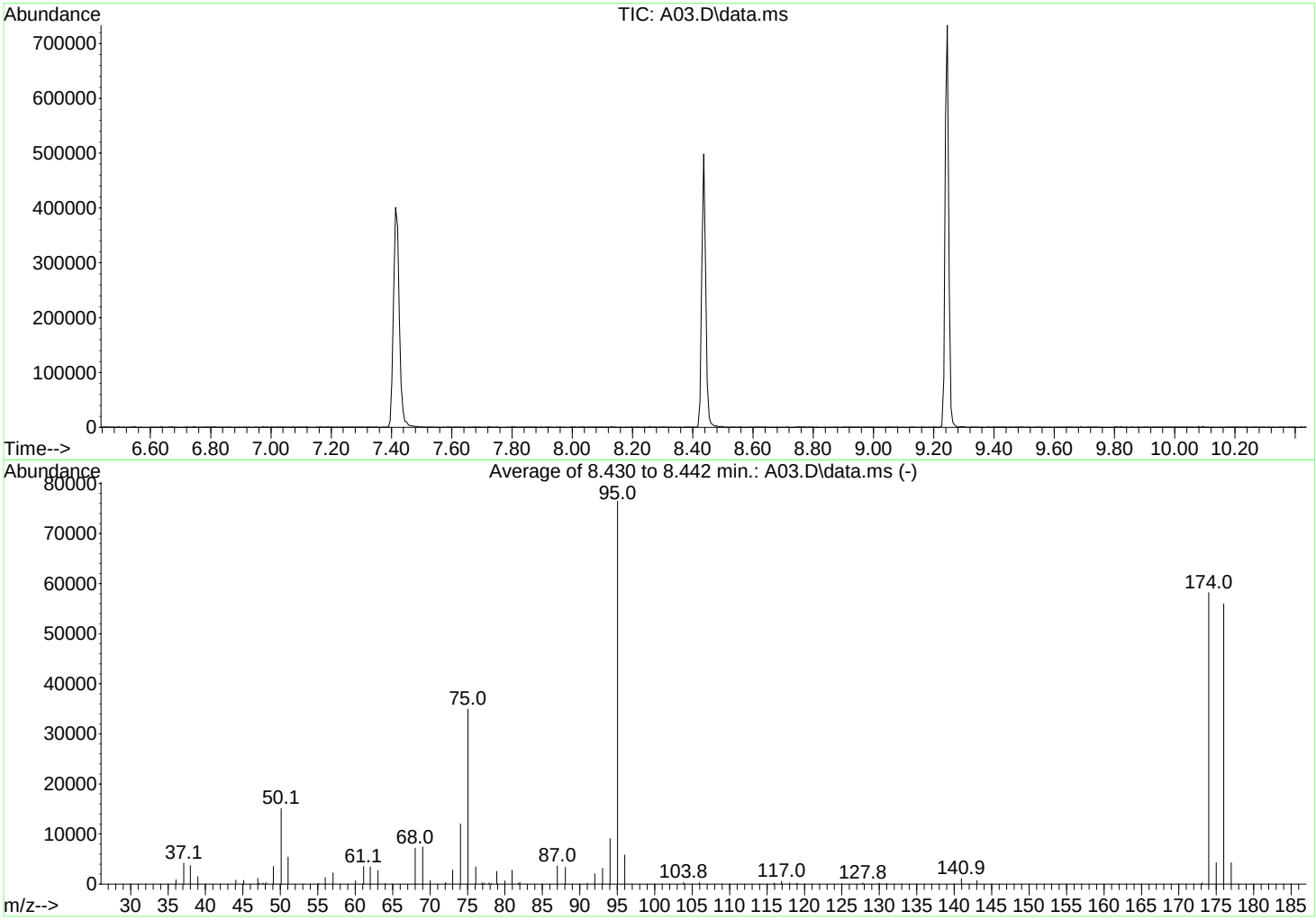
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50		1-chlorohexane	0.731	0.769	-5.2	96	0.00
51		chlorobenzene	1.996	1.953	2.2	91	0.00
52		1,1,1,2-tetrachloroethane	0.486	0.556	-14.4	99	0.00
53		ethylbenzene	1.067	1.111	-4.1	94	0.00
54		P & M -Xylene	1.323	1.376	-4.0	91	0.00
55		o-xylene	1.275	1.326	-4.0	92	0.00
56		styrene	2.032	2.188	-7.7	97	0.00
57		bromoform	0.331	0.409	-23.6#	101	0.00
58		Isopropylbenzene (Cumene)	3.151	3.401	-7.9	97	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	1.000	1.000	0.0	100	0.00
60	S	4-Bromofluorobenzene <Surr>	0.930	0.876	5.8	96	0.00
61		trans 1,4-dichloro-2-butene	0.208	0.219	-5.3	96	0.00
62		bromobenzene	0.598	0.594	0.7	95	0.00
63		1,1,2,2-tetrachloroethane	0.731	0.733	-0.3	95	0.00
64		1,2,3-trichloropropane	0.206	0.209	-1.5	95	0.00
65		n-propylbenzene	3.201	3.227	-0.8	94	0.00
66		2-chlorotoluene	1.832	1.826	0.3	96	0.00
67		4-chlorotoluene	1.932	1.987	-2.8	98	0.00
68		1,3,5-trimethylbenzene	2.016	2.094	-3.9	97	0.00
69		tert-butylbenzene	1.689	1.719	-1.8	95	0.00
70		1,2,4-trimethylbenzene	1.907	2.011	-5.5	94	0.00
71		sec-butylbenzene	2.463	2.615	-6.2	98	0.00
72		1,3-dichlorobenzene	1.170	1.153	1.5	97	0.00
73		4-isopropyltoluene	1.846	2.078	-12.6	100	0.00
74		1,4-dichlorobenzene	1.174	1.183	-0.8	95	0.00
75		1,2-dichlorobenzene	1.167	1.118	4.2	96	0.00
76		n-butylbenzene	1.721	1.913	-11.2	100	0.00
77		1,2-dibromo-3-chloropropane	0.134	0.137	-2.2	95	0.00
78		1,2,4-trichlorobenzene	0.497	0.525	-5.6	95	0.00
79		hexachlorobutadiene	0.196	0.227	-15.8	104	0.00
80		naphthalene	1.759	1.882	-7.0	97	0.00
81		1,2,3-trichlorobenzene	0.497	0.502	-1.0	91	0.00

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

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A03.D
Acq On : 17 Aug 2014 11:13 pm
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 3 Sample Multiplier: 1

Integration File: RTEINT.P

Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 17 23:03:43 2014



AutoFind: Scans 1386, 1387, 1388; Background Corrected with Scan 1381

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.8	15108	PASS
75	95	30	80	45.7	34971	PASS
95	95	100	100	100.0	76445	PASS
96	95	5	9	7.6	5807	PASS
173	174	0.00	2	0.4	212	PASS
174	95	50	100	76.2	58235	PASS
175	174	5	9	7.3	4278	PASS
176	174	95	101	96.1	55944	PASS
177	176	5	9	7.7	4283	PASS

GC/MS QA-QC Check Report

Tune File : Z:\08\VNA\DATA\081714A\A03.D
Tune Time : 17 Aug 2014 11:13 pm

Daily Calibration File : Z:\08\VNA\DATA\081714\A10.D

						44633	87810	115826
File	Sample	Surrogate Recovery %				Internal Standard Responses		
A03.D								
	IB	97	104	100	104	41398	83690	101061
A04.D								
	CCV/LCS	101	99	102	94	42742	85901	115387
A05.D								
	LCSD	104	100	101	98	43402	91000	116712
A06.D								
	1143658002	100	100	98	99	43215	88287	118724
A07.D								
	1143658003	104	102	102	100	42558	85892	116106
A08.D								
	R	97	99	100	108	40577	85381	98903
A09.D								
	R	96	95	97	108	40925	92252	98932
A10.D								
	R	102	101	99	110	38632	84411	96962
A11.D								
	1148372019	100	106	100	110	36355	78801	91649
A12.D								
	1148378027	100	107	102	108	36863	74957	88611
A13.D								
	1143798002	97	97	102	105	36761	71891	86731
A14.D								
	LB 8-17 50	92	101	100	103	37067	73858	88873
A15.D								
	1143658001	99	101	96	99	37311	78363	89370
A16.D								
	1143798001	96	100	101	100	36034	72210	90242
A17.D								
	1148370001	97	102	94	104	36837	78237	89718
A18.D								
	1148370002	97	106	95	103	34719	74342	86718
A19.D								
	1148370003	99	103	99	103	34580	71998	87446
A20.D								
	1148370004	102	107	99	102	33189	71386	86836
A21.D								
	1143824003	96	101	98	104	36891	72095	85870
A22.D								

	1143824004	92	99	94	99	35598	74683	92177
A23.D								
	1143820001	96	97	101	99	36889	71307	91680
A24.D								
	1148352001	96	95	99	105	37825	75495	87533
A25.D								
	1148372009	97	99	101	103	36983	72010	94176
A26.D								
	1148372010	101	99	102	106	35911	72860	85571
A27.D								
	1148372011	96	104	98	105	34577	70367	83042
A28.D								
	1148372012	95	99	101	96	35811	69889	88146
A29.D								
	1148372013	98	101	102	100	34488	70111	89218
A30.D								
	1148372014	99	103	98	104	34319	72032	86408
A31.D								
	1148372015	99	106	96	107	33414	73673	85024
A32.D								
	1143798001	91	96	103	98	37325	71870	94524

(fails) - fails 12hr time check * - fails criteria

Created: Mon Aug 18 13:45:43 2014 VNA

SGS North America Inc.

Instrument Runlog

Instrument: VNA **Calibration Date:** 8/17/2014 **Method:** 8260
Operator: NRB **Processed By:** NRB **Posted By:** NRB **Analytical Batch:** 14376

Data Path: Z:\08\VNA\DATA\081714A\

Daily:		As Needed:			
Verify System Date/Time	✓	Refill Water Tank	☐	Adjust Tune	☐
General System Inspection	✓	Refill Standards	☐	Clean Ion Source	☐
				Check Rough Pump Oil	☐
				Check Vacuum Pressure	☐

Standards:

IS/Surr	VW8-33-3	**CCV**	VW8-67-1
MeOH	P1152	**EG**	VW8-64-4

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A01.D	1	R	1		8/17/14 10:30 PM	N/A	
A02.D	2	R	1		8/17/14 10:47 PM	N/A	
A03.D	3	IB	1		8/17/14 11:13 PM	N/A	
A04.D	4	CCV/LCS	1		8/17/14 11:39 PM	N/A	
A05.D	5	LCSD	1		8/17/14 11:55 PM	N/A	
A06.D	6	1143658002C BMS	1		8/18/14 12:18 AM	N/A	
A07.D	7	1143658003C BMSD	1		8/18/14 12:35 AM	N/A	
A08.D	8	R	1		8/18/14 12:51 AM	N/A	
A09.D	9	R	1		8/18/14 1:07 AM	N/A	
A10.D	10	R	1		8/18/14 1:24 AM	N/A	
A11.D	11	1148372019A	1		8/18/14 1:40 AM	<2	
A12.D	12	1148378027F	1		8/18/14 1:57 AM	<2	
A13.D	13	1143798002A	1		8/18/14 2:13 AM	<2	
A14.D	14	LB 8-17 50X	50	(1mL/50mL) 1227428	8/18/14 2:29 AM	<2	
A15.D	15	1143658001C	1		8/18/14 2:46 AM	<2	
A16.D	16	1143798001B 200X	200		8/18/14 3:03 AM	<2	
A17.D	17	1148370001A 50X	50	(1mL/50mL)	8/18/14 3:19 AM	<2	
A18.D	18	1148370002A 50X	50	(1mL/50mL)	8/18/14 3:35 AM	<2	
A19.D	19	1148370003A 50X	50	(1mL/50mL)	8/18/14 3:52 AM	<2	
A20.D	20	1148370004A 50X	50	(1mL/50mL)	8/18/14 4:08 AM	<2	
A21.D	21	1143824003A 50X	50	(1mL/50mL)	8/18/14 4:25 AM	<2	
A22.D	22	1143824004A 50X	50	(1mL/50mL)	8/18/14 4:41 AM	<2	
A23.D	23	1143820001B 50X	50	(1mL/50mL)	8/18/14 4:58 AM	<2	
A24.D	24	1148352001B 50X	50	(1mL/50mL)	8/18/14 5:14 AM	<2	
A25.D	25	1148372009A	1		8/18/14 5:30 AM	<2	
A26.D	26	1148372010C	1		8/18/14 5:47 AM	<2	
A27.D	27	1148372011A	1		8/18/14 6:03 AM	<2	
A28.D	28	1148372012A	1		8/18/14 6:20 AM	<2	
A29.D	29	1148372013C	1		8/18/14 6:36 AM	<2	
A30.D	30	1148372014C	1		8/18/14 6:52 AM	<2	
A31.D	31	1148372015C	1		8/18/14 7:09 AM	<2	
A32.D	32	1143798001B 10X	10	(5mL/50mL)	8/18/14 7:26 AM	<2	
A33.D	33	R	1		8/18/14 7:42 AM		
A34.D	34	R	1		8/18/14 7:59 AM		
A35.D	35	R	1		8/18/14 8:15 AM		

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A03.D
Acq On : 17 Aug 2014 11:13 pm
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 3 Sample Multiplier: 1

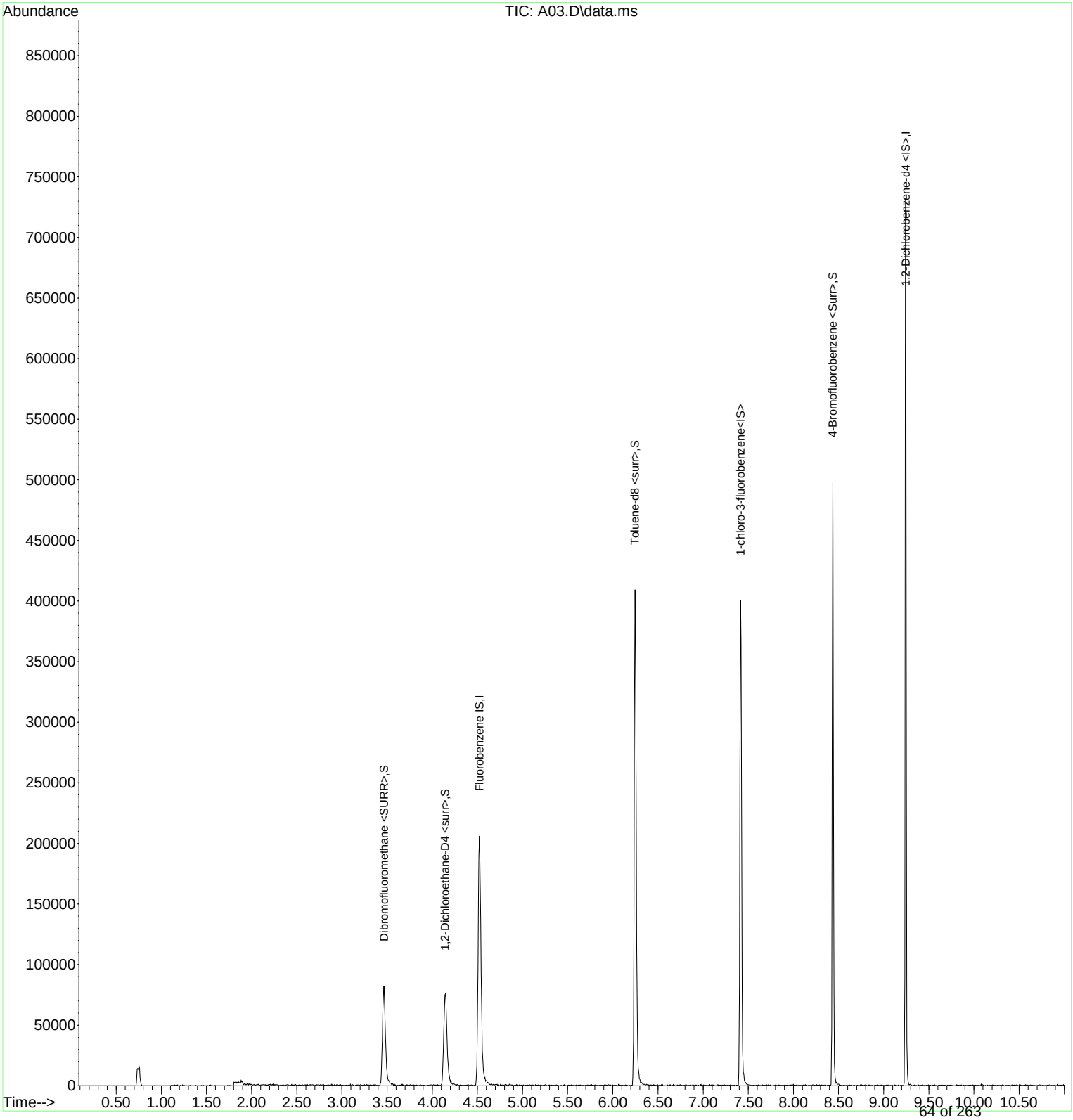
Quant Time: Aug 17 23:49:48 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	41398	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	83690	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	101061	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	64498	29.16	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 97.20%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	68530	31.33	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 104.43%			
41) Toluene-d8 <surr>	6.246	98	236169	29.89	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 99.63%			
60) 4-Bromofluorobenzene <...	8.436	95	97962	31.27	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.23%			
Target Compounds						Qvalue

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

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A03.D
Acq On : 17 Aug 2014 11:13 pm
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 17 23:49:48 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A04.D
Acq On : 17 Aug 2014 11:39 pm
Operator : NRB
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 17 23:50:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	42742	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	85901	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	115387	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	69100	30.25	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.83%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	67245	29.78	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 99.27%			
41) Toluene-d8 <surr>	6.246	98	247655	30.54	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 101.80%			
60) 4-Bromofluorobenzene <...	8.436	95	101070	28.25	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.17%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	122451	32.19	µg/l	100
3) chloromethane	0.928	50	109839	28.10	µg/l	97
4) vinyl chloride	0.969	62	100858	31.49	µg/l	99
5) bromomethane	1.125	96	36529	31.37	µg/l	90
6) chloroethane	1.189	64	47251	37.19	µg/l	91
7) trichlorofluoromethane	1.259	101	121545	28.69	µg/l	94
8) 1,1,2-trichloro-1,2,2-...	1.549	101	92319	44.23	µg/L	95
9) 1,1-dichloroethene	1.526	96	54474	30.14	µg/l	89
10) Acetone	1.920	43	55201	73.62	µg/L	99
11) Acrylonitrile	2.504	53	39983	44.36	µg/L	94
12) Methyliodide	1.607	142	94637	46.87	µg/L	97
13) Carbon disulfide	1.538	76	262104	45.24	µg/L	99
14) methylene chloride	1.884	84	74380	31.52	µg/l	95
15) methyl-t-butyl ether	2.072	73	173725	46.53	µg/L	97
16) trans-1,2-dichloroethene	1.987	96	54509	30.88	µg/l	98
17) Vinylacetate	2.699	43	75329	31.12	µg/L #	92
18) n-hexane	2.042	56	40379	32.36	µg/L	98
19) 1,1-dichloroethane	2.450	63	97095	30.34	µg/l	98
20) 2-Butanone(MEK)	3.642	43	111831	86.55	µg/L #	91
21) 2,2-dichloropropane	3.052	77	55233	31.97	µg/l	99
22) cis-1,2-dichloroethene	2.949	96	57149	30.00	µg/l	96
23) bromochloromethane	3.149	128	28660	29.03	µg/l	88
24) cyclohexane	3.125	56	100047	30.39	µg/L	97
25) chloroform	3.253	83	95247	30.36	µg/l	93
27) 1,1,1-trichloroethane	3.453	97	75868	29.55	µg/l	96
28) carbon tetrachloride	3.374	117	61645	30.67	µg/l	98
29) 1,1-dichloropropene	3.618	75	68191	30.00	µg/l	95
31) benzene	3.940	78	220113	31.50	µg/l	98
32) 1,2-dichloroethane	4.238	62	65504	28.09	µg/l	100
33) trichloroethene	4.731	95	57214	30.29	µg/l	89
34) 1,2-dichloropropane	5.315	63	59679	32.35	µg/l #	96
35) dibromomethane	5.199	93	36315	29.05	µg/l	91
37) bromodichloromethane	5.425	83	61988	30.54	µg/l	91
38) cis-1,3-dichloropropene	6.075	75	68056	32.26	µg/l #	87
39) 4-Methyl-2-pentanone	6.696	58	90995	82.90	µg/L	91
42) toluene	6.294	92	153215	29.97	µg/l	93
43) trans-1,3-dichloropropene	6.714	75	57477	30.71	µg/l	93
44) 1,1,2-trichloroethane	6.848	83	43362	28.62	µg/l	92

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A04.D
Acq On : 17 Aug 2014 11:39 pm
Operator : NRB
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

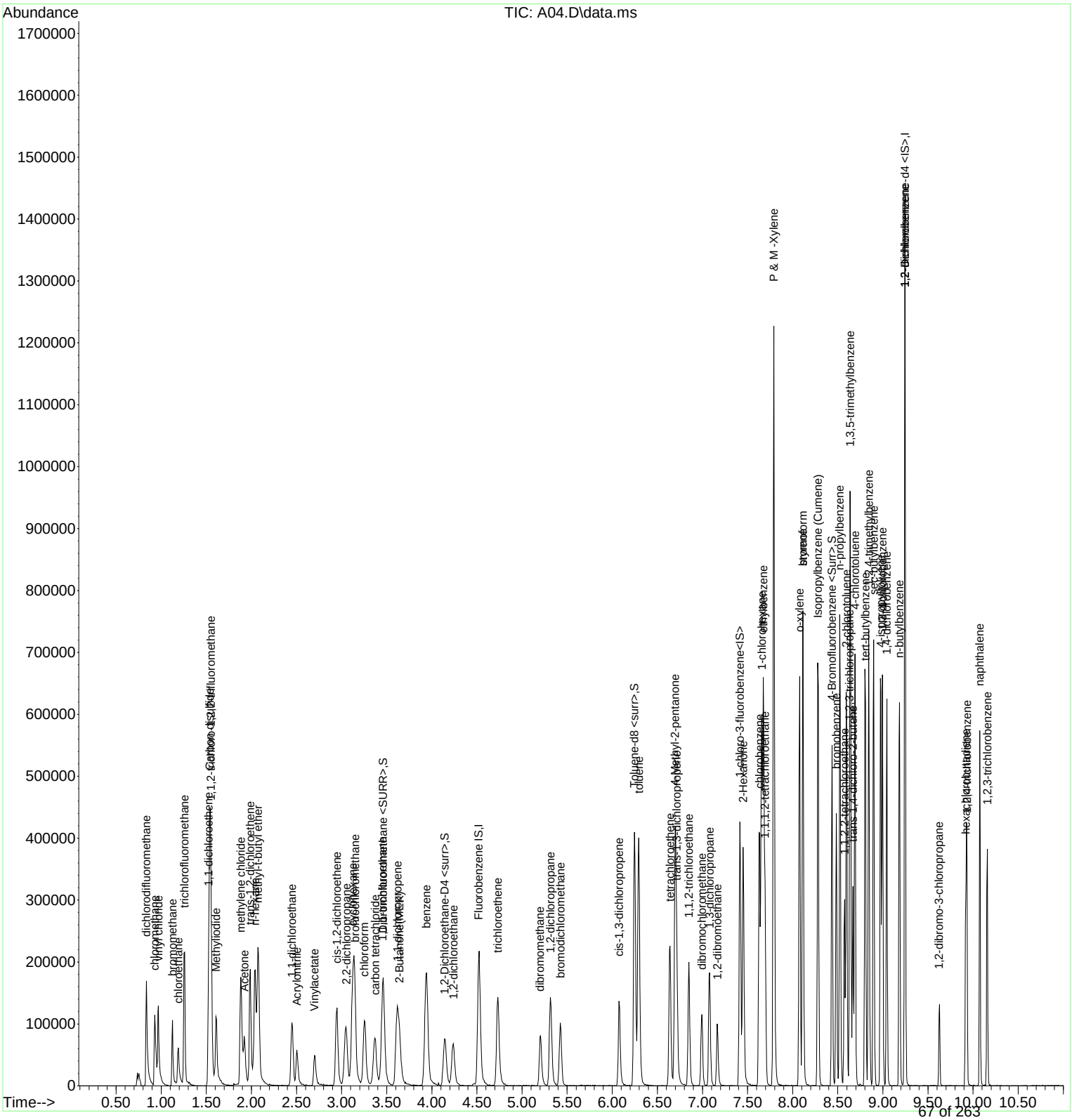
Quant Time: Aug 17 23:50:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) tetrachloroethene	6.641	166	58300	32.00	µg/l	95
46) 1,3-dichloropropane	7.079	76	79768	27.99	µg/l	95
47) 2-Hexanone	7.450	43	198870	82.70	µg/L	98
48) dibromochloromethane	6.994	129	51823	31.05	µg/l	88
49) 1,2-dibromoethane	7.164	107	54595	28.84	µg/l #	88
50) 1-chlorohexane	7.657	55	99134	47.36	µg/L	99
51) chlorobenzene	7.633	112	167788	29.35	µg/l	100
52) 1,1,1,2-tetrachloroethane	7.694	133	47727	30.54	µg/l	94
53) ethylbenzene	7.675	106	95430	31.25	µg/l	95
54) P & M -Xylene	7.791	106	236407	62.39	µg/l	99
55) o-xylene	8.077	106	113879	31.20	µg/l	97
56) styrene	8.113	104	187933	32.30	µg/l	92
57) bromoform	8.113	173	35107	31.29	µg/l	95
58) Isopropylbenzene (Cumene)	8.278	105	292165	32.39	µg/l	94
61) trans 1,4-dichloro-2-b...	8.667	53	37830	47.32	µg/L	95
62) bromobenzene	8.485	156	68579	29.79	µg/l	99
63) 1,1,2,2-tetrachloroethane	8.576	83	84594	30.08	µg/l	99
64) 1,2,3-trichloropropane	8.631	110	24063	29.40	µg/l	97
65) n-propylbenzene	8.521	91	372391	30.25	µg/l	98
66) 2-chlorotoluene	8.594	91	210737	29.91	µg/l	98
67) 4-chlorotoluene	8.691	91	229328	30.86	µg/l	98
68) 1,3,5-trimethylbenzene	8.637	105	241598	31.15	µg/l	98
69) tert-butylbenzene	8.807	119	198313	30.53	µg/l	99
70) 1,2,4-trimethylbenzene	8.844	105	232098	31.65	µg/l	98
71) sec-butylbenzene	8.898	105	301732	31.85	µg/l	99
72) 1,3-dichlorobenzene	8.996	146	133042	29.56	µg/l	96
73) 4-isopropyltoluene	8.977	119	239739	33.77	µg/l	98
74) 1,4-dichlorobenzene	9.044	146	136465	30.21	µg/l	97
75) 1,2-dichlorobenzene	9.245	146	128994	28.75	µg/l	98
76) n-butylbenzene	9.184	91	220779	33.36	µg/l	100
77) 1,2-dibromo-3-chloropr...	9.622	75	15859	28.98	µg/l	93
78) 1,2,4-trichlorobenzene	9.932	180	60624	31.73	µg/l	97
79) hexachlorobutadiene	9.920	225	26238	30.28	µg/l	98
80) naphthalene	10.072	128	217145	28.86	µg/l	99
81) 1,2,3-trichlorobenzene	10.158	180	57981	30.36	µg/l	95

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

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A04.D
Acq On : 17 Aug 2014 11:39 pm
Operator : NRB
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 17 23:50:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A05.D
Acq On : 17 Aug 2014 11:55 pm
Operator : NRB
Sample : LCSD
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 18 00:07:21 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	43402	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	91000	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	116712	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	72659	31.33	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.43%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	68706	29.96	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 99.87%			
41) Toluene-d8 <surr>	6.246	98	259242	30.18	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.60%			
60) 4-Bromofluorobenzene <...	8.436	95	106592	29.46	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.20%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	124006	32.10	µg/l	96
3) chloromethane	0.928	50	116906	29.45	µg/l	97
4) vinyl chloride	0.969	62	107396	33.02	µg/l	100
5) bromomethane	1.126	96	38747	32.68	µg/l	89
6) chloroethane	1.184	64	43519	33.32	µg/l	91
7) trichlorofluoromethane	1.253	101	128434	29.86	µg/l	96
8) 1,1,2-trichloro-1,2,2-...	1.549	101	96833	45.69	µg/L	96
9) 1,1-dichloroethene	1.526	96	54598	29.75	µg/l	97
10) Acetone	1.927	43	59661	78.45	µg/L	98
11) Acrylonitrile	2.505	53	40128	43.89	µg/L	96
12) Methyliodide	1.608	142	103760	49.70	µg/L	96
13) Carbon disulfide	1.538	76	268025	45.56	µg/L	98
14) methylene chloride	1.884	84	70821	29.55	µg/l	99
15) methyl-t-butyl ether	2.079	73	184588	48.69	µg/L	96
16) trans-1,2-dichloroethene	1.987	96	56840	31.71	µg/l	90
17) Vinylacetate	2.705	43	75888	30.91	µg/L #	95
18) n-hexane	2.036	56	36844	29.07	µg/L	98
19) 1,1-dichloroethane	2.450	63	101693	31.29	µg/l	95
20) 2-Butanone(MEK)	3.642	43	108818	83.31	µg/L	94
21) 2,2-dichloropropane	3.046	77	58422	33.10	µg/l	93
22) cis-1,2-dichloroethene	2.949	96	63015	32.57	µg/l	95
23) bromochloromethane	3.149	128	29221	29.15	µg/l	91
24) cyclohexane	3.125	56	97984	29.31	µg/L	91
25) chloroform	3.253	83	98716	30.99	µg/l	94
27) 1,1,1-trichloroethane	3.454	97	80749	30.84	µg/l	97
28) carbon tetrachloride	3.368	117	64009	31.28	µg/l	96
29) 1,1-dichloropropene	3.618	75	72042	31.21	µg/l	90
31) benzene	3.934	78	224959	31.70	µg/l	100
32) 1,2-dichloroethane	4.238	62	67643	28.56	µg/l	98
33) trichloroethene	4.731	95	58162	30.32	µg/l	91
34) 1,2-dichloropropane	5.315	63	58695	31.34	µg/l	100
35) dibromomethane	5.200	93	37083	29.21	µg/l	86
37) bromodichloromethane	5.425	83	63885	30.95	µg/l	95
38) cis-1,3-dichloropropene	6.076	75	67962	31.81	µg/l #	90
39) 4-Methyl-2-pentanone	6.696	58	97957	87.55	µg/L	99
42) toluene	6.295	92	160108	29.56	µg/l	95
43) trans-1,3-dichloropropene	6.714	75	57761	29.36	µg/l	93
44) 1,1,2-trichloroethane	6.848	83	45999	28.66	µg/l	92

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A05.D
Acq On : 17 Aug 2014 11:55 pm
Operator : NRB
Sample : LCSD
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 18 00:07:21 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

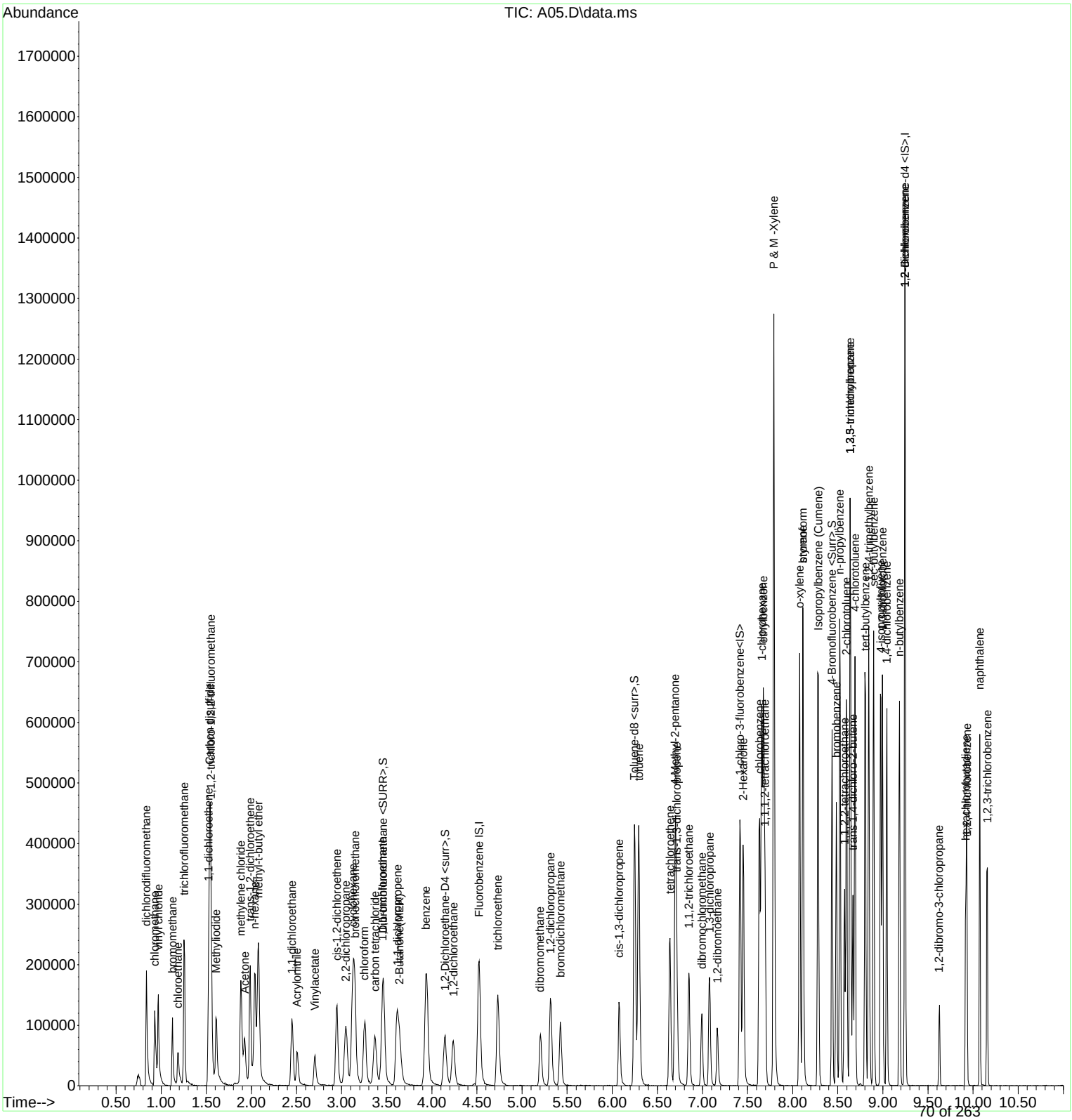
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	61854	32.04	µg/l		93
46) 1,3-dichloropropane	7.079	76	83252	27.58	µg/l		100
47) 2-Hexanone	7.450	43	210719	82.72	µg/L		100
48) dibromochloromethane	6.994	129	52148	29.66	µg/l		96
49) 1,2-dibromoethane	7.165	107	54430	27.17	µg/l	#	91
50) 1-chlorohexane	7.657	55	102657	46.29	µg/L		99
51) chlorobenzene	7.633	112	182950	30.21	µg/l		99
52) 1,1,1,2-tetrachloroethane	7.694	133	49483	29.94	µg/l		95
53) ethylbenzene	7.676	106	103073	31.86	µg/l		91
54) P & M -Xylene	7.791	106	251732	62.71	µg/l		99
55) o-xylene	8.077	106	122905	31.78	µg/l		99
56) styrene	8.114	104	192844	31.28	µg/l		97
57) bromoform	8.114	173	35730	30.26	µg/l		98
58) Isopropylbenzene (Cumene)	8.284	105	298726	31.26	µg/l		100
61) trans 1,4-dichloro-2-b...	8.667	53	38240	47.29	µg/L		94
62) bromobenzene	8.485	156	71339	30.64	µg/l		98
63) 1,1,2,2-tetrachloroethane	8.576	83	91529	32.18	µg/l		98
64) 1,2,3-trichloropropane	8.637	110	23683	28.61	µg/l	#	72
65) n-propylbenzene	8.521	91	388211	31.17	µg/l		97
66) 2-chlorotoluene	8.594	91	216528	30.38	µg/l		100
67) 4-chlorotoluene	8.692	91	234270	31.17	µg/l		95
68) 1,3,5-trimethylbenzene	8.637	105	241265	30.76	µg/l		97
69) tert-butylbenzene	8.807	119	203318	30.94	µg/l		100
70) 1,2,4-trimethylbenzene	8.844	105	243968	32.89	µg/l		97
71) sec-butylbenzene	8.898	105	302095	31.53	µg/l		99
72) 1,3-dichlorobenzene	8.996	146	137160	30.13	µg/l		96
73) 4-isopropyltoluene	8.977	119	240563	33.50	µg/l		99
74) 1,4-dichlorobenzene	9.044	146	144122	31.54	µg/l		98
75) 1,2-dichlorobenzene	9.245	146	131878	29.06	µg/l		97
76) n-butylbenzene	9.184	91	218913	32.70	µg/l		99
77) 1,2-dibromo-3-chloropr...	9.622	75	16815	30.20	µg/l		86
78) 1,2,4-trichlorobenzene	9.933	180	62192	32.18	µg/l		100
79) hexachlorobutadiene	9.920	225	26006	29.68	µg/l		97
80) naphthalene	10.073	128	207762	27.32	µg/l		97
81) 1,2,3-trichlorobenzene	10.158	180	59272	30.68	µg/l		92

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A05.D
Acq On : 17 Aug 2014 11:55 pm
Operator : NRB
Sample : LCSD
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 18 00:07:21 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A06.D
Acq On : 18 Aug 2014 12:18 am
Operator : NRB
Sample : 1143658002C BMS
Misc : [VNA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 18 12:21:11 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	43215	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	88287	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	118724	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.460	111	69118	29.93	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.77%				
30) 1,2-Dichloroethane-D4 ...	4.147	65	68625	30.06	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.20%				
41) Toluene-d8 <surr>	6.246	98	245495	29.46	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 98.20%				
60) 4-Bromofluorobenzene <...	8.436	95	108963	29.60	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.67%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	109628	28.50	µg/l		96
3) chloromethane	0.928	50	115418	29.20	µg/l		94
4) vinyl chloride	0.963	62	107725	33.26	µg/l		99
5) bromomethane	1.126	96	40649	34.32	µg/l		97
6) chloroethane	1.184	64	46830	36.36	µg/l		99
7) trichlorofluoromethane	1.253	101	123121	28.75	µg/l		97
8) 1,1,2-trichloro-1,2,2-...	1.549	101	83031	39.35	µg/L		91
9) 1,1-dichloroethene	1.526	96	47170	25.81	µg/l		95
10) Acetone	1.921	43	51573	67.91	µg/L		98
11) Acrylonitrile	2.505	53	32658	36.55	µg/L		93
12) Methyliodide	1.608	142	102305	49.33	µg/L		99
13) Carbon disulfide	1.538	76	210059	35.86	µg/L		99
14) methylene chloride	1.884	84	69743	29.23	µg/l		96
15) methyl-t-butyl ether	2.073	73	174428	46.21	µg/L		93
16) trans-1,2-dichloroethene	1.987	96	51201	28.69	µg/l		96
17) Vinylacetate	2.699	43	57127	24.13	µg/L	#	97
18) n-hexane	2.036	56	30215	23.95	µg/L	#	91
19) 1,1-dichloroethane	2.450	63	95245	29.43	µg/l	#	95
20) 2-Butanone(MEK)	3.642	43	99435	77.12	µg/L		95
21) 2,2-dichloropropane	3.046	77	50069	29.11	µg/l	#	90
22) cis-1,2-dichloroethene	2.943	96	59456	30.87	µg/l		95
23) bromochloromethane	3.149	128	28808	28.87	µg/l		91
24) cyclohexane	3.119	56	93981	28.24	µg/L		95
25) chloroform	3.253	83	95317	30.05	µg/l		94
27) 1,1,1-trichloroethane	3.454	97	75482	29.12	µg/l		98
28) carbon tetrachloride	3.368	117	58029	28.80	µg/l		81
29) 1,1-dichloropropene	3.618	75	68389	29.76	µg/l		98
31) benzene	3.940	78	222780	31.53	µg/l		99
32) 1,2-dichloroethane	4.232	62	67711	28.71	µg/l	#	95
33) trichloroethene	4.731	95	57862	30.29	µg/l		97
34) 1,2-dichloropropane	5.315	63	61807	33.14	µg/l	#	95
35) dibromomethane	5.206	93	36662	29.00	µg/l		89
37) bromodichloromethane	5.425	83	63386	30.85	µg/l	#	98
38) cis-1,3-dichloropropene	6.076	75	68293	32.06	µg/l		97
39) 4-Methyl-2-pentanone	6.702	58	87223	78.87	µg/L		98
42) toluene	6.295	92	154449	29.39	µg/l		99
43) trans-1,3-dichloropropene	6.714	75	57370	29.95	µg/l		95
44) 1,1,2-trichloroethane	6.848	83	45464	29.20	µg/l		92

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A06.D
Acq On : 18 Aug 2014 12:18 am
Operator : NRB
Sample : 1143658002C BMS
Misc : [VNA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 18 12:21:11 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

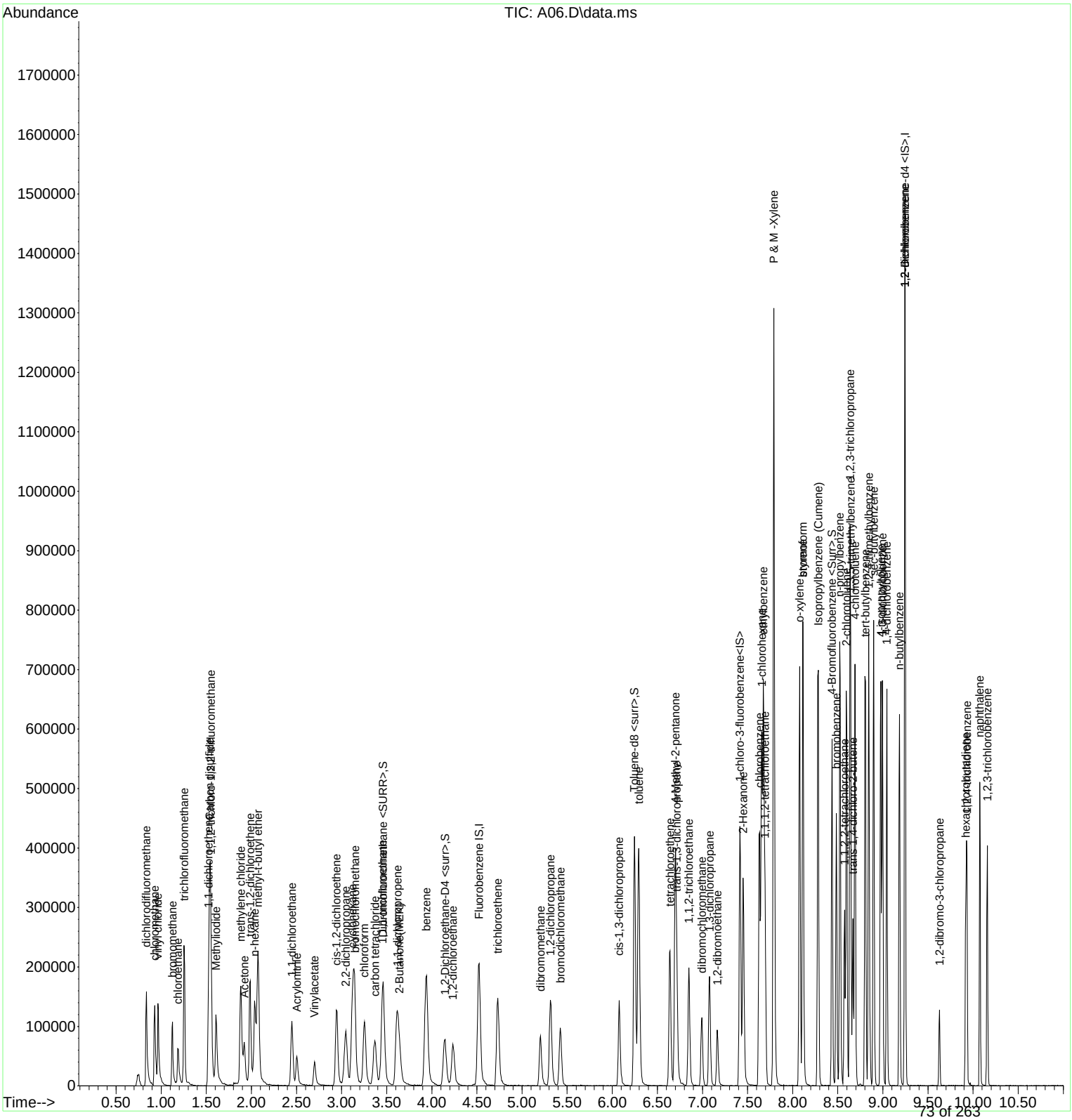
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	58456	31.21	µg/l		97
46) 1,3-dichloropropane	7.079	76	82945	28.32	µg/l		98
47) 2-Hexanone	7.450	43	183733	74.78	µg/L		98
48) dibromochloromethane	6.994	129	51300	30.03	µg/l		100
49) 1,2-dibromoethane	7.165	107	52272	26.90	µg/l	#	92
50) 1-chlorohexane	7.657	55	100711	46.81	µg/L		99
51) chlorobenzene	7.633	112	181952	30.97	µg/l		100
52) 1,1,1,2-tetrachloroethane	7.694	133	46637	29.15	µg/l		94
53) ethylbenzene	7.676	106	100169	31.91	µg/l		94
54) P & M -Xylene	7.791	106	257213	66.05	µg/l		99
55) o-xylene	8.077	106	120602	32.14	µg/l		98
56) styrene	8.114	104	193800	32.41	µg/l		97
57) bromoform	8.114	173	32634	28.78	µg/l		98
58) Isopropylbenzene (Cumene)	8.284	105	307372	33.15	µg/l		97
61) trans 1,4-dichloro-2-b...	8.667	53	34264	41.66	µg/L		99
62) bromobenzene	8.485	156	70563	29.79	µg/l		97
63) 1,1,2,2-tetrachloroethane	8.576	83	81091	28.03	µg/l		98
64) 1,2,3-trichloropropane	8.637	110	21999	26.13	µg/l	#	69
65) n-propylbenzene	8.521	91	383012	30.23	µg/l		99
66) 2-chlorotoluene	8.594	91	217117	29.95	µg/l		96
67) 4-chlorotoluene	8.692	91	233867	30.59	µg/l		98
68) 1,3,5-trimethylbenzene	8.643	105	247611	31.03	µg/l		97
69) tert-butylbenzene	8.807	119	204599	30.61	µg/l		98
70) 1,2,4-trimethylbenzene	8.844	105	241514	32.01	µg/l		98
71) sec-butylbenzene	8.898	105	308062	31.61	µg/l		99
72) 1,3-dichlorobenzene	8.996	146	139683	30.16	µg/l		96
73) 4-isopropyltoluene	8.977	119	240126	32.88	µg/l		98
74) 1,4-dichlorobenzene	9.044	146	142786	30.72	µg/l		96
75) 1,2-dichlorobenzene	9.245	146	138100	29.91	µg/l		99
76) n-butylbenzene	9.184	91	220027	32.31	µg/l		99
77) 1,2-dibromo-3-chloropr...	9.628	75	14676	26.39	µg/l	#	48
78) 1,2,4-trichlorobenzene	9.933	180	60925	30.99	µg/l		100
79) hexachlorobutadiene	9.920	225	27375	30.69	µg/l		99
80) naphthalene	10.073	128	205291	26.55	µg/l		97
81) 1,2,3-trichlorobenzene	10.158	180	60972	31.03	µg/l		99

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A06.D
Acq On : 18 Aug 2014 12:18 am
Operator : NRB
Sample : 1143658002C BMS
Misc : [VNA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 18 12:21:11 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A07.D
Acq On : 18 Aug 2014 12:35 am
Operator : NRB
Sample : 1143658003C BMSD
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 18 12:21:23 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.518	70	42558	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	85892	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	116106	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.460	111	70914	31.18	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 103.93%				
30) 1,2-Dichloroethane-D4 ...	4.147	65	68731	30.57	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 101.90%				
41) Toluene-d8 <surr>	6.246	98	249183	30.73	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 102.43%				
60) 4-Bromofluorobenzene <...	8.436	95	108428	30.12	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.40%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	107663	28.42	µg/l		99
3) chloromethane	0.928	50	112701	28.96	µg/l		94
4) vinyl chloride	0.963	62	102429	32.12	µg/l		97
5) bromomethane	1.126	96	36555	31.52	µg/l		91
6) chloroethane	1.189	64	44638	35.04	µg/l		98
7) trichlorofluoromethane	1.253	101	124832	29.60	µg/l		98
8) 1,1,2-trichloro-1,2,2-...	1.549	101	80378	38.68	µg/L		92
9) 1,1-dichloroethene	1.526	96	48104	26.73	µg/l		87
10) Acetone	1.927	43	54533	73.03	µg/L		96
11) Acrylonitrile	2.504	53	36619	41.13	µg/L		98
12) Methyliodide	1.607	142	90689	45.52	µg/L		97
13) Carbon disulfide	1.538	76	204384	35.43	µg/L		99
14) methylene chloride	1.884	84	69209	29.46	µg/l		96
15) methyl-t-butyl ether	2.073	73	174534	46.95	µg/L		96
16) trans-1,2-dichloroethene	1.981	96	52279	29.75	µg/l		96
17) Vinylacetate	2.699	43	59968	25.54	µg/L	#	92
18) n-hexane	2.036	56	28531	22.96	µg/L		88
19) 1,1-dichloroethane	2.450	63	99553	31.24	µg/l		95
20) 2-Butanone(MEK)	3.642	43	105334	82.35	µg/L		93
21) 2,2-dichloropropane	3.046	77	49699	29.31	µg/l		93
22) cis-1,2-dichloroethene	2.949	96	60043	31.65	µg/l		93
23) bromochloromethane	3.149	128	27534	28.03	µg/l		91
24) cyclohexane	3.131	56	94860	28.94	µg/L		94
25) chloroform	3.259	83	93059	29.79	µg/l		87
27) 1,1,1-trichloroethane	3.454	97	75868	29.67	µg/l		95
28) carbon tetrachloride	3.368	117	59108	29.67	µg/l		92
29) 1,1-dichloropropene	3.618	75	67924	30.01	µg/l		98
31) benzene	3.940	78	220354	31.67	µg/l		100
32) 1,2-dichloroethane	4.232	62	68660	29.56	µg/l		100
33) trichloroethene	4.731	95	57396	30.51	µg/l		94
34) 1,2-dichloropropane	5.315	63	59113	32.18	µg/l	#	97
35) dibromomethane	5.206	93	37269	29.92	µg/l		95
37) bromodichloromethane	5.425	83	62005	30.67	µg/l		98
38) cis-1,3-dichloropropene	6.076	75	64851	31.10	µg/l		96
39) 4-Methyl-2-pentanone	6.696	58	88140	80.79	µg/L		91
42) toluene	6.295	92	157063	30.72	µg/l		97
43) trans-1,3-dichloropropene	6.714	75	56576	30.30	µg/l		93
44) 1,1,2-trichloroethane	6.848	83	45084	29.76	µg/l	#	87

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A07.D
Acq On : 18 Aug 2014 12:35 am
Operator : NRB
Sample : 1143658003C BMSD
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 18 12:21:23 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

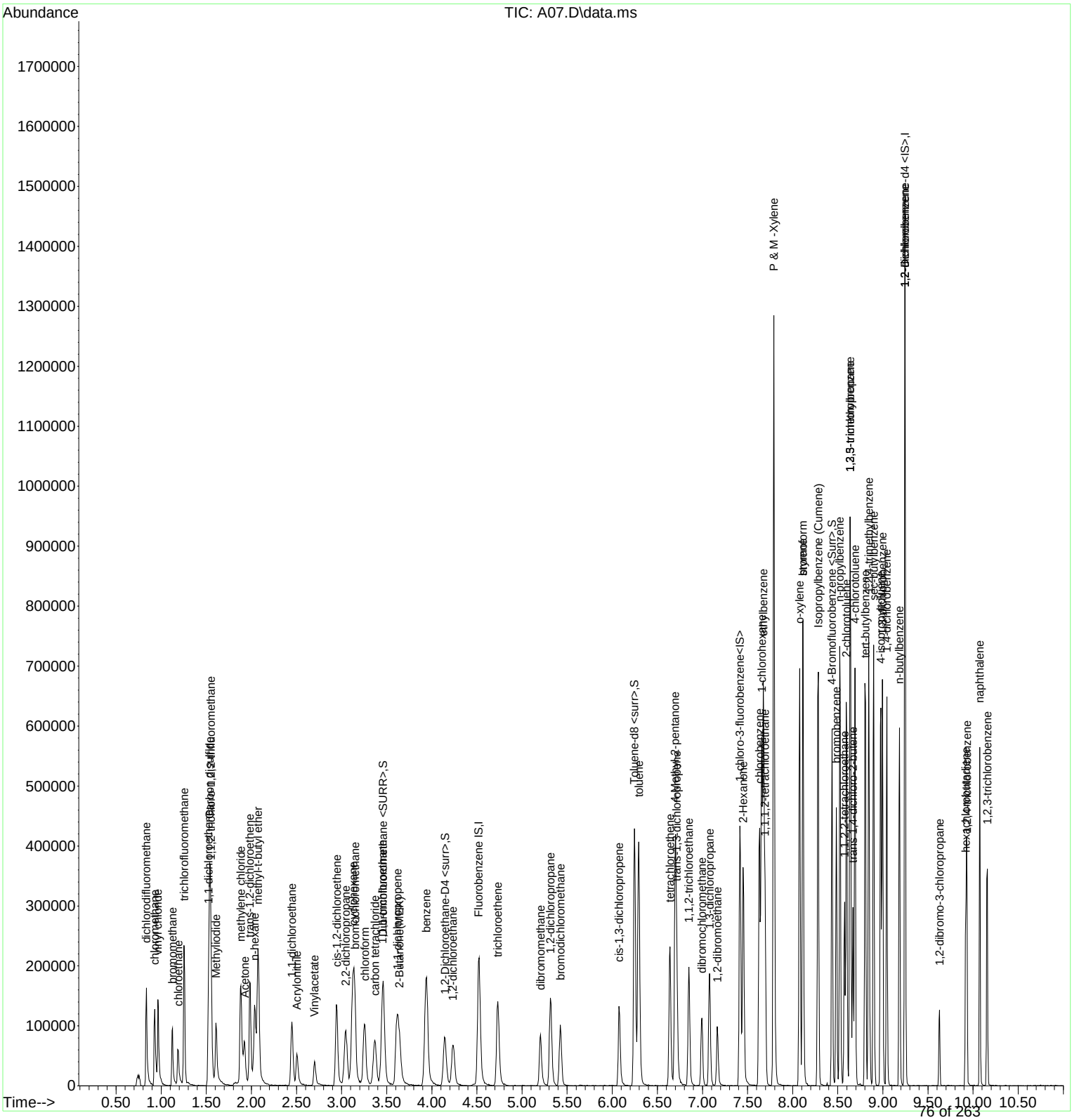
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) tetrachloroethene	6.641	166	57996	31.83	µg/l	87
46) 1,3-dichloropropane	7.079	76	84367	29.60	µg/l	100
47) 2-Hexanone	7.450	43	200059	83.18	µg/L	96
48) dibromochloromethane	6.994	129	49861	30.01	µg/l	99
49) 1,2-dibromoethane	7.164	107	55235	29.17	µg/l #	85
50) 1-chlorohexane	7.657	55	94859	45.32	µg/L	97
51) chlorobenzene	7.633	112	174536	30.54	µg/l	99
52) 1,1,1,2-tetrachloroethane	7.694	133	47266	30.27	µg/l	91
53) ethylbenzene	7.676	106	101621	33.28	µg/l	93
54) P & M -Xylene	7.791	106	245449	64.78	µg/l	98
55) o-xylene	8.077	106	120925	33.13	µg/l	96
56) styrene	8.114	104	188401	32.38	µg/l	96
57) bromoform	8.114	173	33315	29.96	µg/l	100
58) Isopropylbenzene (Cumene)	8.284	105	289010	32.04	µg/l	98
61) trans 1,4-dichloro-2-b...	8.667	53	34863	43.34	µg/L	96
62) bromobenzene	8.485	156	71291	30.78	µg/l	96
63) 1,1,2,2-tetrachloroethane	8.576	83	85747	30.31	µg/l	98
64) 1,2,3-trichloropropane	8.637	110	22554	27.39	µg/l #	73
65) n-propylbenzene	8.521	91	367990	29.70	µg/l	98
66) 2-chlorotoluene	8.594	91	211164	29.78	µg/l	96
67) 4-chlorotoluene	8.691	91	226937	30.35	µg/l	96
68) 1,3,5-trimethylbenzene	8.637	105	239031	30.63	µg/l	96
69) tert-butylbenzene	8.807	119	200634	30.69	µg/l	99
70) 1,2,4-trimethylbenzene	8.844	105	235303	31.89	µg/l	98
71) sec-butylbenzene	8.898	105	294154	30.86	µg/l	99
72) 1,3-dichlorobenzene	8.996	146	134505	29.70	µg/l	97
73) 4-isopropyltoluene	8.977	119	226156	31.66	µg/l	100
74) 1,4-dichlorobenzene	9.044	146	140113	30.83	µg/l	99
75) 1,2-dichlorobenzene	9.245	146	133345	29.53	µg/l	97
76) n-butylbenzene	9.184	91	205587	30.87	µg/l	99
77) 1,2-dibromo-3-chloropr...	9.628	75	15385	28.06	µg/l #	65
78) 1,2,4-trichlorobenzene	9.932	180	59440	30.91	µg/l	94
79) hexachlorobutadiene	9.920	225	25155	28.87	µg/l	93
80) naphthalene	10.072	128	209500	27.69	µg/l #	94
81) 1,2,3-trichlorobenzene	10.158	180	60202	31.33	µg/l	97

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A07.D
Acq On : 18 Aug 2014 12:35 am
Operator : NRB
Sample : 1143658003C BMSD
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 18 12:21:23 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A14.D
Acq On : 18 Aug 2014 2:29 am
Operator : NRB
Sample : LB 8-17 50X
Misc : [VNA]
ALS Vial : 14 Sample Multiplier: 50

Quant Time: Aug 18 12:24:12 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

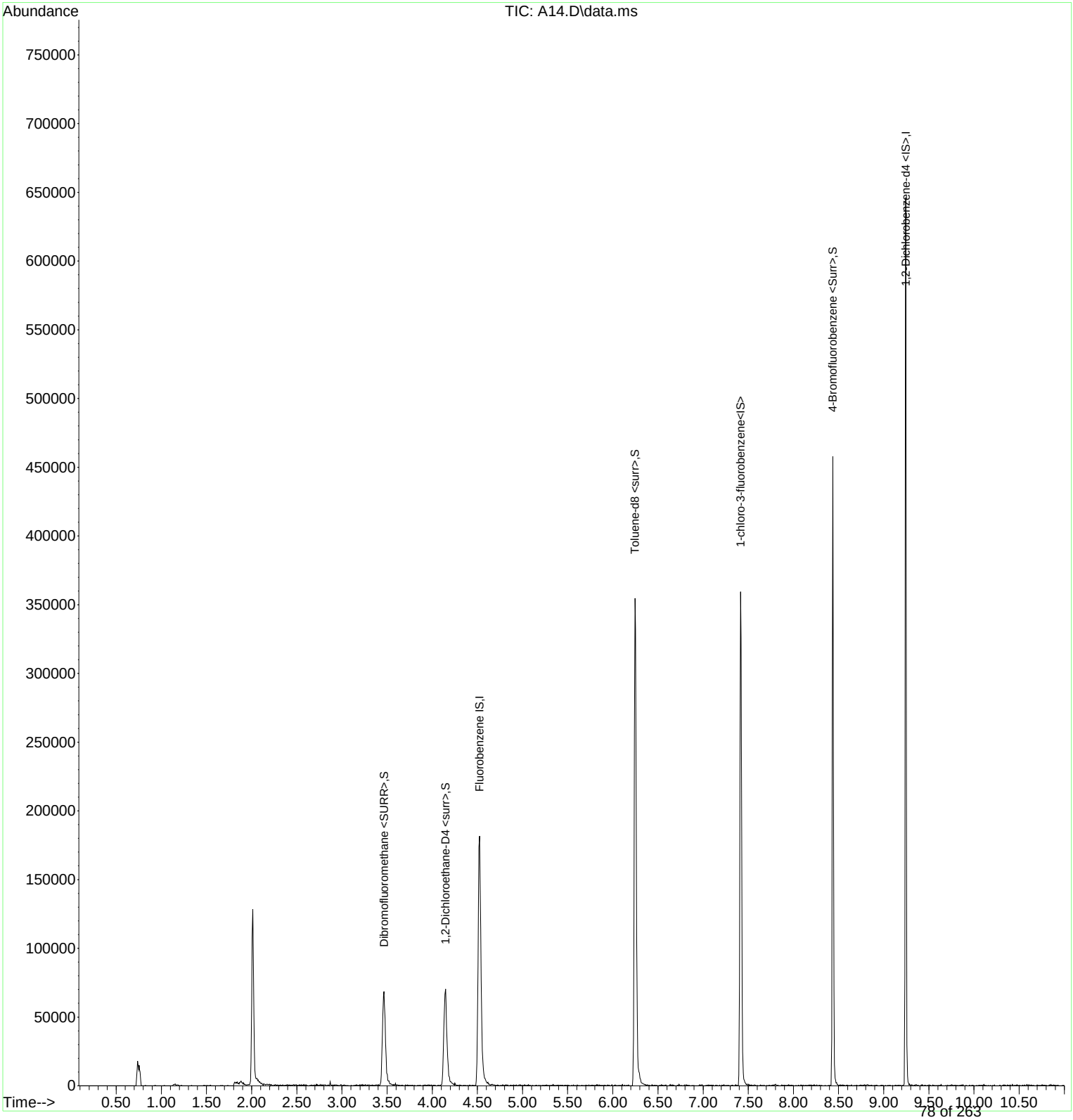
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	37067	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	73858	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	88873	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	54650	27.59	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 91.97%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	59402	30.33	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 101.10%			
41) Toluene-d8 <surr>	6.246	98	209720	30.08	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.27%			
60) 4-Bromofluorobenzene <...	8.436	95	84835	30.79	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 102.63%			
Target Compounds						Qvalue
10) Acetone	1.908	43	247	Below Cal		# 45

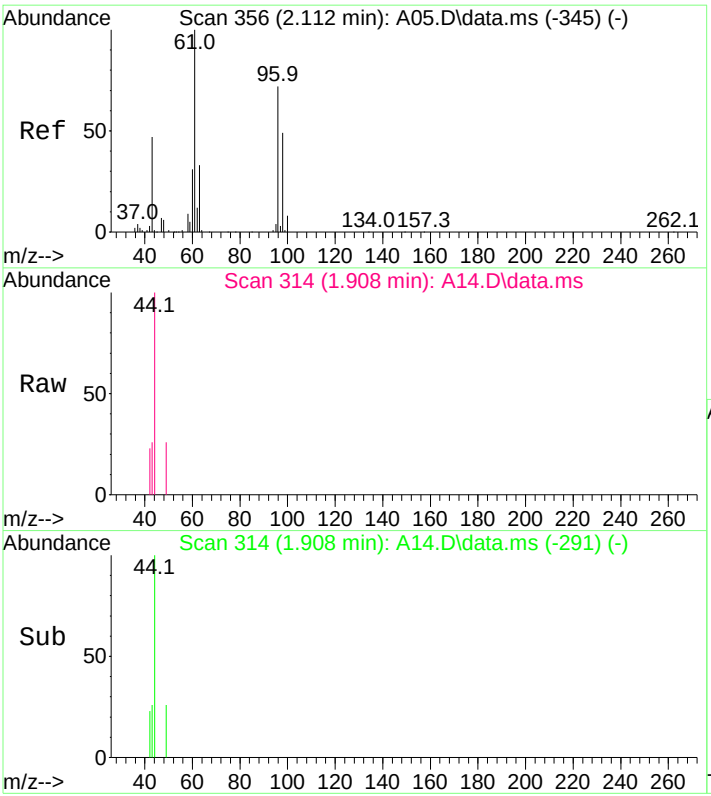
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A14.D
Acq On : 18 Aug 2014 2:29 am
Operator : NRB
Sample : LB 8-17 50X
Misc : [VNA]
ALS Vial : 14 Sample Multiplier: 50

Quant Time: Aug 18 12:24:12 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

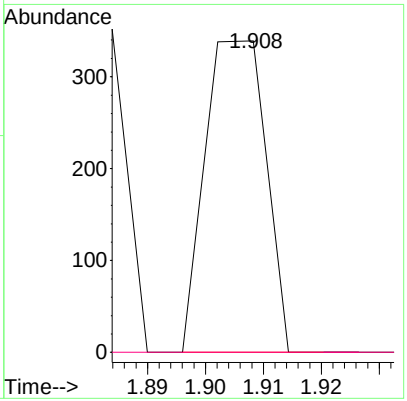




#10
Acetone
Concen: Below Cal
RT: 1.908 min Scan# 314
Delta R.T. -0.012 min
Lab File: A14.D
Acq: 18 Aug 2014 2:29 am

Tgt Ion: 43 Resp: 247

Ion	Ratio	Lower	Upper
43	100		
58	0.0	24.1	36.1#



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A15.D
Acq On : 18 Aug 2014 2:46 am
Operator : NRB
Sample : 1143658001C
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

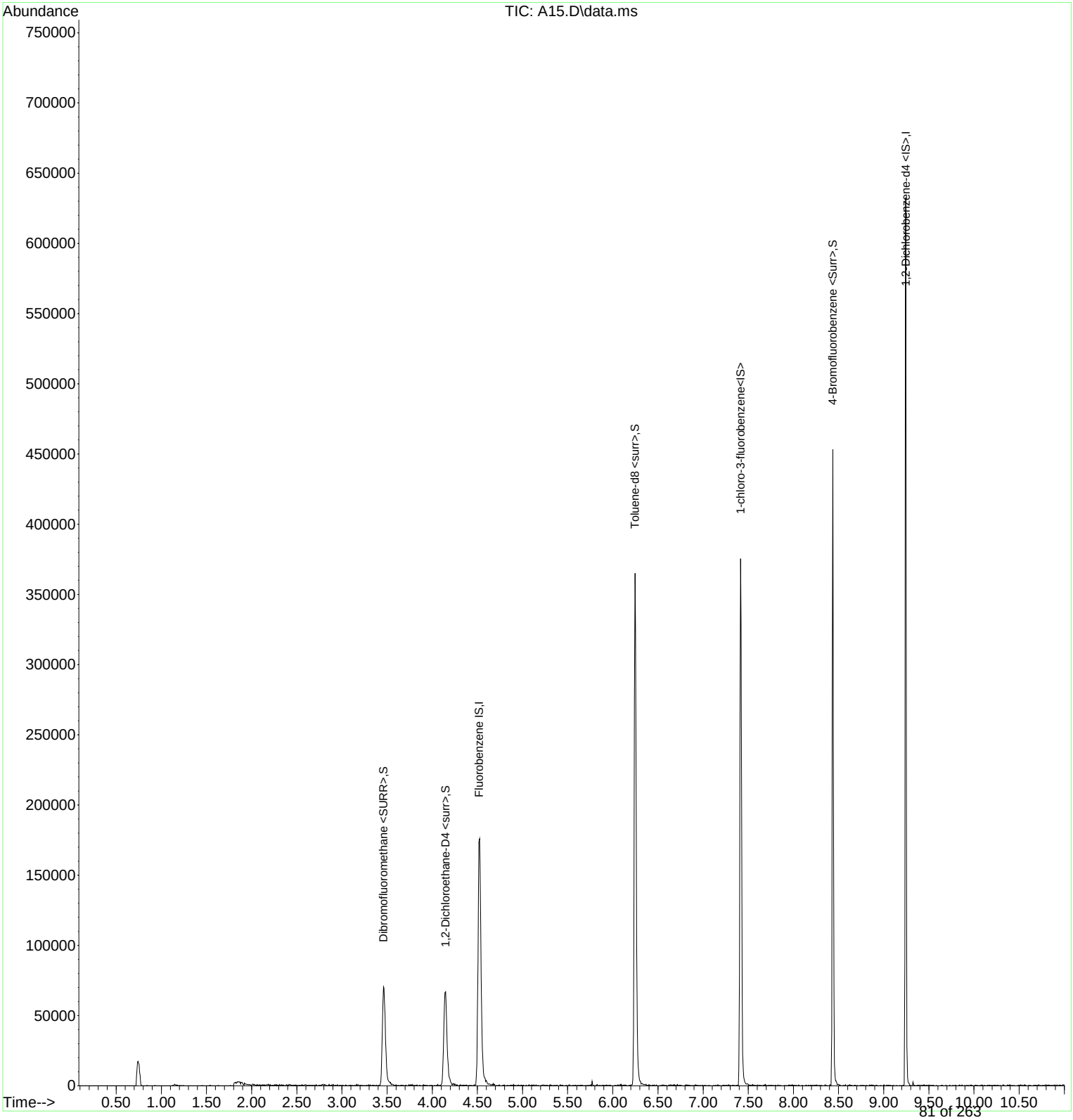
Quant Time: Aug 18 12:24:34 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	37311	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	78363	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	89370	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	58980	29.58	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.60%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	59484	30.18	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.60%			
41) Toluene-d8 <surr>	6.246	98	212576	28.74	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 95.80%			
60) 4-Bromofluorobenzene <...	8.436	95	82187	29.66	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.87%			
Target Compounds						Qvalue

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

Data Path : Z:\08\VNA\DATA\081714A\
Data File : A15.D
Acq On : 18 Aug 2014 2:46 am
Operator : NRB
Sample : 1143658001C
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 18 12:24:34 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



SGS North America Inc.
Calibration Review and Validation for:
Volatile Mass Spec: SW 8260B / SW 8260Modified / EPA 624

Instrument/Date Code in YYYY-MMDD format (e.g., VNA2007-0507): VPA2014-0812

Contents:	Analyst's Review OK	Analyst's Review N/A	Peer Review OK	Peer Review N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Tune Report/Chrom for IB	☑		☑	
Instrument runlog	☑		☑	
Chromatograms for calibration points	☑		☑	
Chromatograms for ICV	☑		☑	
Validation:				
Dates are correct	☑		☑	
The retention time window set correctly GRO beginning of C6 --> beginning of C10	☐	☑	☐	☑
CCC percent relative standard deviation is ≤ 30%	☑		☑	
SPCC average response factor of 0.1 or 0.3	☑		☑	
Cal Table Report Avg RF values are equal to the ICV Avg RF values	☑		☑	
The percent relative standard deviation of the response factor is ≤ 15%	☑	☐	☑	☐
If RSD is >15%, use 1 st (linear) or 2 nd (quadratic) order regression and $r^2 \geq 0.990$.	☑	☐	☑	☐
Minimum of 5 points (or 6 points for 2nd order regression)	☑		☑	
8260B / 624 ICV is 80-120 % recovery	☑	☐	☑	☐
8260B Modified ICV is 50-150 % recovery	☑	☐	☑	☐
Correct calibration levels for LOQ	☑		☑	
Relative retention time shifts meet criteria?	☑		☑	
IS Areas updated/CC ISTD Areas printout	☑		☑	
If any compounds are not calibrated, are they clearly documented?	☑	☐	☑	☐
Manual Integrations - explanations, before and after printouts	☐	☑	☐	☑
Check Critical Pair List				
o-xylene and p&m-xylene	☑		☑	
1,2,4-trimethylbenzene and sec-butylbenzene	☑		☑	
1,3-dichlorobenzene and 1,4-dichlorobenzene	☑		☑	
Hand calculated Response Factor verified:	☑		☑	
Initials: / Date:	NRB 8/13/2014		PLW 8/14/2014	

RF = (As X Cis)/(Ais X Cs)

Shown= 3.274 chloroform @ 1 pt

Calculated= $\frac{4516*30}{41379}$ = 3.2741

Note:
Not calibrated for dichlorodifluoromethane and 2-hexanone.

Calibration Table Report
Method: VPA2014-0812.M
Title: Purgable Organics By GCMS
Last Calibration: Tue Aug 12 20:35:07 2014

Calibration Files

	0.4	1	3	10	30	50	70		
	A06.D	A07.D	A08.D	A09.D	A10.D	A11.D	A12.D		
Compound								Avg	%RSD
Fluorobenzene IS	ISTD								
dichlorodifluoromethane	2.187	2.211	2.077	1.839	1.845	1.945	1.818	1.989	8.5
chloromethane		1.280	1.249	0.924	0.914	1.115	1.046	1.088	14.4
vinyl chloride	2.122	1.762	1.714	1.517	1.492	1.635	1.516	1.680	13.2
bromomethane		0.869	0.724	0.592	0.556	0.624	0.597	0.660	17.7
chloroethane		0.989	0.877	0.736	0.693	0.757	0.684	0.789	15.2
trichlorofluoromethane	2.664	2.669	2.515	2.220	2.181	2.313	2.137	2.386	9.5
1,1,2-trichloro-1,2,2-trifluoroet	0.984	1.269	1.133	1.058	1.097	1.159	1.060	1.109	8.2
1,1-dichloroethene	1.216	1.081	1.034	0.971	0.981	1.032	0.947	1.037	8.8
Acetone		0.672	0.479	0.380	0.372	0.386	0.376	0.444	26.8
Acrylonitrile	0.616	0.669	0.600	0.515	0.513	0.528	0.529	0.567	10.8
Methyliodide	1.025	0.882	0.788	0.829	0.954	1.115	0.992	0.941	12.2
Carbon disulfide		3.829	3.305	3.105	3.129	3.351	3.091	3.301	8.5
methylene chloride		1.999	1.441	1.254	1.183	1.263	1.111	1.375	23.6
methyl-t-butyl ether	3.272	3.148	2.925	2.762	2.960	3.210	3.005	3.040	5.9
trans-1,2-dichloroethene	1.595	1.488	1.236	1.155	1.182	1.228	1.149	1.291	13.8
Vinylacetate	1.504	1.306	1.508	1.399	1.569	1.737	1.741	1.538	10.5
n-hexane		0.441	0.742	0.542	0.763	0.814	0.763	0.678	22.1
1,1-dichloroethane		2.912	2.810	2.406	2.344	2.442	2.321	2.539	10.0
2-Butanone(MEK)	0.823	0.708	0.728	0.689	0.759	0.760	0.795	0.752	6.3
2,2-dichloropropane	2.114	1.890	1.846	1.690	1.730	1.834	1.797	1.843	7.5
cis-1,2-dichloroethene		1.669	1.548	1.336	1.320	1.399	1.395	1.445	9.4
bromochloromethane	0.888	0.753	0.756	0.667	0.665	0.692	0.686	0.730	10.8
cyclohexane	1.219	1.552	1.786	1.666	1.831	1.919	1.971	1.706	15.1
chloroform		3.274	2.933	2.578	2.561	2.619	2.551	2.753	10.7
Dibromofluoromethane <SURR>	1.698	1.718	1.721	1.581	1.546	1.566	1.535	1.623	5.2
1,1,1-trichloroethane	2.541	2.445	2.386	2.254	2.295	2.357	2.262	2.363	4.4
carbon tetrachloride	1.988	1.877	1.911	1.777	1.874	1.935	1.887	1.893	3.4
1,1-dichloropropene	1.816	1.616	1.733	1.718	1.866	1.892	1.874	1.788	5.7
1,2-Dichloroethane-D4 <surr>	1.845	1.833	1.779	1.688	1.626	1.577	1.507	1.694	7.7
benzene	6.272	5.139	4.943	5.017	5.354	5.258	4.980	5.281	8.8
1,2-dichloroethane	2.364	2.097	1.976	1.902	1.858	1.858	1.774	1.976	10.1
trichloroethene	1.605	1.465	1.294	1.378	1.400	1.423	1.266	1.404	8.0
1,2-dichloropropane	1.839	1.470	1.349	1.397	1.411	1.385	1.275	1.447	12.6
dibromomethane	1.315	1.091	1.014	0.943	0.954	0.936	0.888	1.020	14.3
2-chloroethylvinyl ether								0.000	0.0
bromodichloromethane	2.372	1.998	1.638	1.894	1.872	1.900	1.804	1.926	11.7
cis-1,3-dichloropropene	1.983	1.897	1.767	1.835	1.981	2.056	2.033	1.936	5.5
4-Methyl-2-pentanone	0.633	0.529	0.422	0.475	0.574	0.574	0.452	0.523	14.6
1-chloro-3-fluorobenzene<IS>	ISTD								
Toluene-d8 <surr>	2.309	2.463	2.489	2.398	2.536	2.511	2.567	2.467	3.6
toluene	1.96	1.815	1.737	1.708	1.803	1.792	1.795	1.801	4.4
trans-1,3-dichloropropene	1.038	0.923	0.798	0.913	1.127	1.142	1.158	1.014	13.7

1,1,2-trichloroethane	0.633	0.558	0.494	0.557	0.629	0.627	0.626	0.589	9.1
tetrachloroethene	0.845	0.887	0.728	0.848	0.933	0.938	0.938	0.874	8.7
1,3-dichloropropane	1.229	1.093	0.984	1.124	1.188	1.235	1.219	1.153	8.0
2-Hexanone	0.829	0.61	0.656	0.647	0.691	0.702	0.679	0.688	10.1
dibromochloromethane	0.834	0.822	0.685	0.755	0.834	0.871	0.882	0.812	8.5
1,2-dibromoethane	0.819	0.69	0.656	0.712	0.762	0.806	0.793	0.748	8.4
1-chlorohexane	0.631	0.593	0.645	0.632	0.573	0.675	0.645	0.628	5.4
chlorobenzene	2.42	2.027	2.032	1.962	1.769	2.138	2.042	2.056	9.6
1,1,1,2-tetrachloroethane	0.816	0.684	0.657	0.69	0.655	0.783	0.781	0.724	9.3
ethylbenzene		0.936	0.952	0.985	0.903	1.061	1.013	0.975	5.8
P & M -Xylene	1.28	1.135	1.189	1.208	1.132	1.287	1.224	1.208	5.1
o-xylene	1.131	1.058	1.088	1.108	1.099	1.214	1.164	1.123	4.6
styrene	1.744	1.571	1.736	1.876	1.926	2.128	2.033	1.859	10.3
bromoform	0.684	0.565	0.59	0.589	0.618	0.697	0.694	0.634	8.8
Isopropylbenzene (Cumene)	2.725	2.669	2.912	2.862	2.929	3.164	3.032	2.899	5.9
1,2-Dichlorobenzene-d4 <IS>	ISTD								
4-Bromofluorobenzene <Surr>	0.919	0.873	0.94	0.963	0.947	0.91	0.911	0.923	3.2
trans 1,4-dichloro-2-butene	0.319	0.215	0.257	0.27	0.291	0.281	0.289	0.275	11.9
bromobenzene	0.869	0.668	0.715	0.731	0.727	0.711	0.711	0.733	8.6
1,1,2,2-tetrachloroethane	1.148	0.791	0.852	0.884	0.898	0.89	0.883	0.907	12.4
1,2,3-trichloropropane	0.334	0.239	0.244	0.254	0.268	0.257	0.26	0.265	12.0
n-propylbenzene	3.285	2.66	2.87	3.132	3.065	3.017	3.002	3.005	6.6
2-chlorotoluene	2.034	1.581	1.681	1.757	1.776	1.734	1.709	1.753	7.9
4-chlorotoluene	2.213	1.629	1.793	1.893	1.92	1.81	1.867	1.875	9.4
1,3,5-trimethylbenzene	1.815	1.445	1.681	1.911	2.002	1.931	1.933	1.817	10.7
tert-butylbenzene	1.446	1.285	1.421	1.517	1.524	1.499	1.49	1.455	5.7
1,2,4-trimethylbenzene	1.69	1.457	1.515	1.885	1.961	1.938	1.945	1.77	12.2
sec-butylbenzene	2.068	1.83	2.042	2.206	2.209	2.265	2.206	2.118	7.1
1,3-dichlorobenzene	1.594	1.169	1.157	1.206	1.217	1.205	1.184	1.247	12.4
4-isopropyltoluene	1.443	1.238	1.413	1.589	1.709	1.7	1.683	1.539	11.7
1,4-dichlorobenzene	1.506	1.189	1.199	1.253	1.199	1.246	1.231	1.26	8.8
1,2-dichlorobenzene	1.631	1.216	1.218	1.182	1.198	1.213	1.187	1.264	12.9
n-butylbenzene	1.277	1.11	1.223	1.423	1.59	1.61	1.578	1.402	14.4
1,2-dibromo-3-chloropropane	0.265	0.198	0.193	0.191	0.193	0.192	0.194	0.204	13.4
1,2,4-trichlorobenzene	0.733	0.555	0.56	0.509	0.627	0.658	0.682	0.618	12.9
hexachlorobutadiene	0.262	0.213	0.228	0.19	0.231	0.24	0.253	0.231	10.5
naphthalene	1.807	1.396	1.474	1.452	1.72	1.885	1.985	1.674	14.0
1,2,3-trichlorobenzene	0.688	0.542	0.555	0.538	0.589	0.642	0.662	0.602	10.2

Wed Aug 13 17:03:36 2014

Calibration Report VPA

Method Path : Z:\08\VPA\METHOD\
Method File : VPA2014-0812.M
Title : Purgable Organics By GCMS
Last Update : Tue Aug 12 20:35:07 2014
Response Via : Initial Calibration

Calibration Files
.4 =A06 1 =A07 3.0 =A08 10 =A09 30 =A10 50 =A11
70 =A12

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	Fluorobenzene IS		----------ISTD----------			
2)		dichlorodifluoro...	Lin	0.0074	1.8611	-----	0.9989
3)		chloromethane	Avg	-----	1.0879	-----	0.1438
4)		vinyl chloride	Lin	0.0079	1.5445	-----	0.9983
5)		bromomethane	Lin	0.0092	0.5912	-----	0.9978
6)		chloroethane	Avg	-----	0.7893	-----	0.1517
7)		trichlorofluorom...	Lin	0.0107	2.2015	-----	0.9985
8)		1,1,2-trichloro-...	Avg	-----	1.1085	-----	0.0820
9)		1,1-dichloroethene	Avg	-----	1.0373	-----	0.0877
10)		Acetone	Lin	0.0290	0.3715	-----	0.9994
11)		Acrylonitrile	Avg	-----	0.5672	-----	0.1079
12)		Methyliodide	Avg	-----	0.9406	-----	0.1223
13)		Carbon disulfide	Avg	-----	3.3014	-----	0.0850
14)		methylene chloride	Quad	0.0224	1.2539	-0.0515	0.9974
15)		methyl-t-butyl e...	Avg	-----	3.0404	-----	0.0590
16)		trans-1,2-dichlo...	Avg	-----	1.2906	-----	0.1375
17)		Vinylacetate	Avg	-----	1.5377	-----	0.1053
18)		n-hexane	Lin	-0.0133	0.7776	-----	0.9939
19)		1,1-dichloroethane	Avg	-----	2.5391	-----	0.1005
20)		2-Butanone(MEK)	Avg	-----	0.7518	-----	0.0630
21)		2,2-dichloropropane	Avg	-----	1.8430	-----	0.0748
22)		cis-1,2-dichloro...	Avg	-----	1.4446	-----	0.0943
23)		bromochloromethane	Avg	-----	0.7297	-----	0.1084
24)		cyclohexane	Avg	-----	1.7062	-----	0.1514
25)		chloroform	Avg	-----	2.7527	-----	0.1066
26)	S	Dibromofluoromet...	Avg	-----	1.6234	-----	0.0521
27)		1,1,1-trichloroe...	Avg	-----	2.3628	-----	0.0443
28)		carbon tetrachlo...	Avg	-----	1.8926	-----	0.0343
29)		1,1-dichloropropene	Avg	-----	1.7878	-----	0.0571
30)	S	1,2-Dichloroetha...	Avg	-----	1.6937	-----	0.0772
31)		benzene	Avg	-----	5.2805	-----	0.0875
32)		1,2-dichloroethane	Avg	-----	1.9756	-----	0.1011
33)		trichloroethene	Avg	-----	1.4044	-----	0.0804
34)		1,2-dichloropropane	Avg	-----	1.4466	-----	0.1265
35)		dibromomethane	Avg	-----	1.0202	-----	0.1426
36)		2-chloroethylvin...	Avg	-----	-----	-----	0.0000
37)		bromodichloromet...	Avg	-----	1.9257	-----	0.1173
38)		cis-1,3-dichloro...	Avg	-----	1.9359	-----	0.0550
39)		4-Methyl-2-penta...	Avg	-----	0.5228	-----	0.1457
40)		1-chloro-3-fluor...		----------ISTD----------			
41)	S	Toluene-d8 <surr>	Avg	-----	2.4675	-----	0.0358
42)		toluene	Avg	-----	1.8013	-----	0.0444
43)		trans-1,3-dichlo...	Avg	-----	1.0143	-----	0.1369
44)		1,1,2-trichloroe...	Avg	-----	0.5890	-----	0.0914
45)		tetrachloroethene	Avg	-----	0.8740	-----	0.0868
46)		1,3-dichloropropane	Avg	-----	1.1531	-----	0.0801
47)		2-Hexanone	Avg	-----	0.6878	-----	0.1010
48)		dibromochloromet...	Avg	-----	0.8119	-----	0.0852
49)		1,2-dibromoethane	Avg	-----	0.7483	-----	0.0842
50)		1-chlorohexane	Avg	-----	0.6275	-----	0.0544
51)		chlorobenzene	Avg	-----	2.0558	-----	0.0957
52)		1,1,1,2-tetrachl...	Avg	-----	0.7238	-----	0.0929
53)		ethylbenzene	Avg	-----	0.9749	-----	0.0582
54)		P & M -Xylene	Avg	-----	1.2079	-----	0.0514

55)		o-xylene	Avg	-----	1.1233	-----	0.0465
56)		styrene	Avg	-----	1.8593	-----	0.1027
57)		bromoform	Avg	-----	0.6338	-----	0.0884
58)		Isopropylbenzene...	Avg	-----	2.8991	-----	0.0587
59)	I	1,2-Dichlorobenz...	ISTD				
60)	S	4-Bromofluoroben...	Avg	-----	0.9231	-----	0.0323
61)		trans 1,4-dichlo...	Avg	-----	0.2745	-----	0.1187
62)		bromobenzene	Avg	-----	0.7333	-----	0.0861
63)		1,1,2,2-tetrachl...	Avg	-----	0.9066	-----	0.1241
64)		1,2,3-trichlorop...	Avg	-----	0.2652	-----	0.1200
65)		n-propylbenzene	Avg	-----	3.0045	-----	0.0660
66)		2-chlorotoluene	Avg	-----	1.7531	-----	0.0794
67)		4-chlorotoluene	Avg	-----	1.8752	-----	0.0944
68)		1,3,5-trimethylb...	Avg	-----	1.8170	-----	0.1070
69)		tert-butylbenzene	Avg	-----	1.4547	-----	0.0575
70)		1,2,4-trimethylb...	Avg	-----	1.7701	-----	0.1217
71)		sec-butylbenzene	Avg	-----	2.1181	-----	0.0712
72)		1,3-dichlorobenzene	Avg	-----	1.2474	-----	0.1239
73)		4-isopropyltoluene	Avg	-----	1.5392	-----	0.1167
74)		1,4-dichlorobenzene	Avg	-----	1.2604	-----	0.0883
75)		1,2-dichlorobenzene	Avg	-----	1.2636	-----	0.1287
76)		n-butylbenzene	Avg	-----	1.4015	-----	0.1435
77)		1,2-dibromo-3-ch...	Avg	-----	0.2038	-----	0.1336
78)		1,2,4-trichlorob...	Avg	-----	0.6177	-----	0.1289
79)		hexachlorobutadiene	Avg	-----	0.2309	-----	0.1051
80)		naphthalene	Avg	-----	1.6742	-----	0.1395
81)		1,2,3-trichlorob...	Avg	-----	0.6024	-----	0.1017

VPA2014-0812.M Wed Aug 13 17:03:14 2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\081314\
Data File : A03.D
Acq On : 13 Aug 2014 2:25 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 14:53:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	30.000	30.000	0.0	91	0.00
2		dichlorodifluoromethane	30.000	19.122	36.3#	59	0.00
3		chloromethane	30.000	24.465	18.4	88	0.00
4		vinyl chloride	30.000	24.400	18.7	77	0.00
5		bromomethane	30.000	30.309	-1.0	99	0.00
6		chloroethane	30.000	26.001	13.3	90	0.00
7		trichlorofluoromethane	30.000	27.149	9.5	83	0.00
8		1,1,2-trichloro-1,2,2-trifl	45.000	49.070	-9.0	100	0.00
9		1,1-dichloroethene	30.000	26.520	11.6	85	0.00
10		Acetone	90.000	82.716	8.1	86	0.00
11		Acrylonitrile	45.000	40.221	10.6	90	0.00
12		Methyliodide	45.000	47.437	-5.4	94	0.00
13		Carbon disulfide	45.000	44.811	0.4	95	0.00
14		methylene chloride	30.000	29.423	1.9	92	0.00
15		methyl-t-butyl ether	45.000	46.427	-3.2	96	0.00
16		trans-1,2-dichloroethene	30.000	26.014	13.3	86	0.00
17		Vinylacetate	30.000	29.795	0.7	88	0.00
18		n-hexane	30.000	34.031	-13.4	103	0.00
19		1,1-dichloroethane	30.000	27.621	7.9	91	0.00
20		2-Butanone(MEK)	90.000	79.013	12.2	79	0.00
21		2,2-dichloropropane	30.000	32.920	-9.7	106	0.00
22		cis-1,2-dichloroethene	30.000	27.617	7.9	91	0.00
23		bromochloromethane	30.000	27.156	9.5	90	0.00
24		cyclohexane	30.000	33.505	-11.7	95	0.00
25		chloroform	30.000	27.935	6.9	91	0.00
26	S	Dibromofluoromethane <SURR>	30.000	28.883	3.7	92	0.00
27		1,1,1-trichloroethane	30.000	29.320	2.3	91	0.00
28		carbon tetrachloride	30.000	29.826	0.6	91	-0.01
29		1,1-dichloropropene	30.000	29.982	0.1	87	0.00
30	S	1,2-Dichloroethane-D4 <surr	30.000	29.750	0.8	94	0.00
31		benzene	30.000	28.990	3.4	87	0.00
32		1,2-dichloroethane	30.000	27.893	7.0	90	0.00
33		trichloroethene	30.000	30.153	-0.5	92	0.00
34		1,2-dichloropropane	30.000	28.438	5.2	88	0.00
35		dibromomethane	30.000	27.354	8.8	89	0.00
36		2-chloroethylvinyl ether	30.000	0.000	100.0#	0	-13.14#
37		bromodichloromethane	30.000	29.756	0.8	93	0.00
38		cis-1,3-dichloropropene	30.000	31.039	-3.5	92	0.00
39		4-Methyl-2-pentanone	90.000	88.581	1.6	81	0.00
40		1-chloro-3-fluorobenzene<IS	30.000	30.000	0.0	92	0.00
41	S	Toluene-d8 <surr>	30.000	30.331	-1.1	91	0.00
42		toluene	30.000	28.637	4.5	88	0.00
43		trans-1,3-dichloropropene	30.000	32.772	-9.2	91	0.00
44		1,1,2-trichloroethane	30.000	30.097	-0.3	87	0.00
45		tetrachloroethene	30.000	31.226	-4.1	90	0.00
46		1,3-dichloropropane	30.000	30.375	-1.3	90	0.00
47		2-Hexanone	90.000	69.515	22.8#	71	0.00
48		dibromochloromethane	30.000	30.877	-2.9	92	0.00
49		1,2-dibromoethane	30.000	29.998	0.0	90	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\081314\
Data File : A03.D
Acq On : 13 Aug 2014 2:25 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 14:53:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
50		1-chlorohexane	45.000	46.641	-3.6	105	0.00
51		chlorobenzene	30.000	28.461	5.1	102	0.00
52		1,1,1,2-tetrachloroethane	30.000	29.508	1.6	100	0.00
53		ethylbenzene	30.000	30.389	-1.3	101	0.00
54		P & M -Xylene	60.000	59.398	1.0	97	0.00
55		o-xylene	30.000	29.964	0.1	94	0.00
56		styrene	30.000	31.642	-5.5	94	0.00
57		bromoform	30.000	29.741	0.9	94	0.00
58		Isopropylbenzene (Cumene)	30.000	30.612	-2.0	93	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	30.000	30.000	0.0	94	0.00
60	S	4-Bromofluorobenzene <Surr>	30.000	30.162	-0.5	92	0.00
61		trans 1,4-dichloro-2-butene	45.000	32.080	28.7#	63	0.00
62		bromobenzene	30.000	29.250	2.5	93	0.00
63		1,1,2,2-tetrachloroethane	30.000	28.660	4.5	91	0.00
64		1,2,3-trichloropropane	30.000	28.584	4.7	89	0.00
65		n-propylbenzene	30.000	30.509	-1.7	94	0.00
66		2-chlorotoluene	30.000	29.595	1.4	92	0.00
67		4-chlorotoluene	30.000	30.866	-2.9	95	0.00
68		1,3,5-trimethylbenzene	30.000	31.699	-5.7	90	0.00
69		tert-butylbenzene	30.000	31.168	-3.9	93	0.00
70		1,2,4-trimethylbenzene	30.000	32.058	-6.9	91	0.00
71		sec-butylbenzene	30.000	31.047	-3.5	94	0.00
72		1,3-dichlorobenzene	30.000	28.375	5.4	91	0.00
73		4-isopropyltoluene	30.000	32.871	-9.6	93	0.00
74		1,4-dichlorobenzene	30.000	28.767	4.1	95	0.00
75		1,2-dichlorobenzene	30.000	27.525	8.3	91	0.00
76		n-butylbenzene	30.000	33.722	-12.4	93	0.00
77		1,2-dibromo-3-chloropropane	30.000	27.308	9.0	91	0.00
78		1,2,4-trichlorobenzene	30.000	30.785	-2.6	95	0.00
79		hexachlorobutadiene	30.000	31.855	-6.2	100	0.00
80		naphthalene	30.000	32.292	-7.6	99	0.00
81		1,2,3-trichlorobenzene	30.000	30.333	-1.1	97	0.00

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\081314\
Data File : A03.D
Acq On : 13 Aug 2014 2:25 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 14:53:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	91	0.00
2		dichlorodifluoromethane	1.989	1.194	40.0#	59	0.00
3		chloromethane	1.088	0.887	18.5	88	0.00
4		vinyl chloride	1.680	1.264	24.8#	77	0.00
5		bromomethane	0.660	0.606	8.2	99	0.00
6		chloroethane	0.789	0.684	13.3	90	0.00
7		trichlorofluoromethane	2.386	2.003	16.1	83	0.00
8		1,1,2-trichloro-1,2,2-trifl	1.109	1.209	-9.0	100	0.00
9		1,1-dichloroethene	1.037	0.917	11.6	85	0.00
10		Acetone	0.444	0.351	20.9#	86	0.00
11		Acrylonitrile	0.567	0.507	10.6	90	0.00
12		Methyliodide	0.941	0.992	-5.4	94	0.00
13		Carbon disulfide	3.301	3.288	0.4	95	0.00
14		methylene chloride	1.375	1.203	12.5	92	0.00
15		methyl-t-butyl ether	3.040	3.137	-3.2	96	0.00
16		trans-1,2-dichloroethene	1.291	1.119	13.3	86	0.00
17		Vinylacetate	1.538	1.527	0.7	88	0.00
18		n-hexane	0.678	0.869	-28.2#	103	0.00
19		1,1-dichloroethane	2.539	2.338	7.9	91	0.00
20		2-Butanone(MEK)	0.752	0.660	12.2	79	0.00
21		2,2-dichloropropane	1.843	2.022	-9.7	106	0.00
22		cis-1,2-dichloroethene	1.445	1.330	8.0	91	0.00
23		bromochloromethane	0.730	0.661	9.5	90	0.00
24		cyclohexane	1.706	1.906	-11.7	95	0.00
25		chloroform	2.753	2.563	6.9	91	0.00
26	S	Dibromofluoromethane <SURR>	1.623	1.563	3.7	92	0.00
27		1,1,1-trichloroethane	2.363	2.309	2.3	91	0.00
28		carbon tetrachloride	1.893	1.882	0.6	91	-0.01
29		1,1-dichloropropene	1.788	1.787	0.1	87	0.00
30	S	1,2-Dichloroethane-D4 <surr	1.694	1.680	0.8	94	0.00
31		benzene	5.281	5.103	3.4	87	0.00
32		1,2-dichloroethane	1.976	1.837	7.0	90	0.00
33		trichloroethene	1.404	1.412	-0.6	92	0.00
34		1,2-dichloropropane	1.447	1.371	5.3	88	0.00
35		dibromomethane	1.020	0.930	8.8	89	0.00
36		2-chloroethylvinyl ether	0.000	0.000	0.0	0#	-13.14#
37		bromodichloromethane	1.926	1.910	0.8	93	0.00
38		cis-1,3-dichloropropene	1.936	2.003	-3.5	92	0.00
39		4-Methyl-2-pentanone	0.523	0.515	1.5	81	0.00
40		1-chloro-3-fluorobenzene<IS	1.000	1.000	0.0	92	0.00
41	S	Toluene-d8 <surr>	2.467	2.495	-1.1	91	0.00
42		toluene	1.801	1.719	4.6	88	0.00
43		trans-1,3-dichloropropene	1.014	1.108	-9.3	91	0.00
44		1,1,2-trichloroethane	0.589	0.591	-0.3	87	0.00
45		tetrachloroethene	0.874	0.910	-4.1	90	0.00
46		1,3-dichloropropane	1.153	1.168	-1.3	90	0.00
47		2-Hexanone	0.688	0.531	22.8#	71	0.00
48		dibromochloromethane	0.812	0.836	-3.0	92	0.00
49		1,2-dibromoethane	0.748	0.748	0.0	90	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\081314\
Data File : A03.D
Acq On : 13 Aug 2014 2:25 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 14:53:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50		1-chlorohexane	0.628	0.650	-3.5	105	0.00
51		chlorobenzene	2.056	1.950	5.2	102	0.00
52		1,1,1,2-tetrachloroethane	0.724	0.712	1.7	100	0.00
53		ethylbenzene	0.975	0.988	-1.3	101	0.00
54		P & M -Xylene	1.208	1.196	1.0	97	0.00
55		o-xylene	1.123	1.122	0.1	94	0.00
56		styrene	1.859	1.961	-5.5	94	0.00
57		bromoform	0.634	0.628	0.9	94	0.00
58		Isopropylbenzene (Cumene)	2.899	2.958	-2.0	93	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	1.000	1.000	0.0	94	0.00
60	S	4-Bromofluorobenzene <Surr>	0.923	0.928	-0.5	92	0.00
61		trans 1,4-dichloro-2-butene	0.275	0.196	28.7#	63	0.00
62		bromobenzene	0.733	0.715	2.5	93	0.00
63		1,1,2,2-tetrachloroethane	0.907	0.866	4.5	91	0.00
64		1,2,3-trichloropropane	0.265	0.253	4.5	89	0.00
65		n-propylbenzene	3.005	3.055	-1.7	94	0.00
66		2-chlorotoluene	1.753	1.729	1.4	92	0.00
67		4-chlorotoluene	1.875	1.929	-2.9	95	0.00
68		1,3,5-trimethylbenzene	1.817	1.920	-5.7	90	0.00
69		tert-butylbenzene	1.455	1.511	-3.8	93	0.00
70		1,2,4-trimethylbenzene	1.770	1.892	-6.9	91	0.00
71		sec-butylbenzene	2.118	2.192	-3.5	94	0.00
72		1,3-dichlorobenzene	1.247	1.180	5.4	91	0.00
73		4-isopropyltoluene	1.539	1.686	-9.6	93	0.00
74		1,4-dichlorobenzene	1.260	1.209	4.0	95	0.00
75		1,2-dichlorobenzene	1.264	1.159	8.3	91	0.00
76		n-butylbenzene	1.402	1.575	-12.3	93	0.00
77		1,2-dibromo-3-chloropropane	0.204	0.186	8.8	91	0.00
78		1,2,4-trichlorobenzene	0.618	0.634	-2.6	95	0.00
79		hexachlorobutadiene	0.231	0.245	-6.1	100	0.00
80		naphthalene	1.674	1.802	-7.6	99	0.00
81		1,2,3-trichlorobenzene	0.602	0.609	-1.2	97	0.00

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

GC/MS QA-QC Check Report

Tune File : Z:\08\VPA\DATA\081214\A03.D
Tune Time : 12 Aug 2014 4:48 pm

Daily Calibration File : Z:\08\VPA\DATA\081214\A10.D

						51571	84416	96036
File	Sample	Surrogate Recovery %				Internal Standard Responses		
A03.D								
	IB	107	108	98	104	41835	74194	85174
A04.D								
	R	106	110	95	102	42104	75697	94377
A05.D								
	R	107	104	98	105	45627	75488	90882
A06.D								
	0.4	105	106	95	99	45274	82278	92713
A07.D								
	1	104	104	101	96	41379	71306	93958
A08.D								
	3	103	100	102	102	46421	76302	96266
A09.D								
	10	96	96	98	104	48439	81792	94518
A10.D								
	30	100	100	100	100	51571	84416	96036
A11.D								
	50	96	91	102	98	47644	78188	100158
A12.D								
	70	95	89	104	99	54102	70180	84939
A13.D								
	R	105	105	102	100	47712	82877	97566
A14.D								
	ICV	90	92	102	102	52678	86953	97942

(fails) - fails 12hr time check * - fails criteria

Created: Wed Aug 13 17:12:22 2014 VPA

GC/MS QA-QC Check Report

Tune File : Z:\08\VPA\DATA\081314\A02.D
Tune Time : 13 Aug 2014 2:04 pm

Daily Calibration File : Z:\08\VPA\DATA\081214\A10.D

File	Sample	Surrogate Recovery %				Internal Standard Responses		
						51571	84416	96036
A02.D								
	IB	107	109	100	102	46701	79537	93457
A03.D								
	ICV	96	99	101	101	46846	77761	90544

(fails) - fails 12hr time check * - fails criteria

Created: Wed Aug 13 17:11:13 2014 VPA

Calibration RRT Evaluation RRT shifts relative to Cal. 5 RRT = analyte retention time / IS retention time

Initals/Date: NRB 08/13/14 Max RRT shift 0.06

Compound	Cal. 5 RT	Cal. 5 RRT	Cal. 1 RT	RRT shift	Cal 2 RT	RRT shift	Cal 3 RT	RRT shift	Cal 4 RT	RRT shift	Cal 6 RT	RRT shift	Cal 7 RT	RRT shift
Fluorobenzene IS	4.906		4.906		4.906		4.906		4.906		4.906		4.906	
dichlorodifluoromethane	0.959	0.195	0.959	0.000	0.959	0.000	0.959	0.000	0.959	0.000	0.959	0.000	0.959	0.000
chloromethane	1.063	0.217	1.063	0.000	1.063	0.000	1.063	0.000	1.063	0.000	1.063	0.000	1.063	0.000
vinyl chloride	1.103	0.225	1.103	0.000	1.103	0.000	1.103	0.000	1.103	0.000	1.103	0.000	1.103	0.000
bromomethane	1.279	0.261	1.279	0.000	1.279	0.000	1.279	0.000	1.279	0.000	1.279	0.000	1.279	0.000
chloroethane	1.352	0.276	1.351	0.000	1.343	-0.002	1.351	0.000	1.352	0.000	1.352	0.000	1.352	0.000
trichlorofluoromethane	1.432	0.292	1.432	0.000	1.424	-0.002	1.432	0.000	1.432	0.000	1.432	0.000	1.424	-0.002
1,1,2-trichloro-1,2,2-trifluoromethane	1.758	0.358	1.758	0.000	1.758	0.000	1.758	0.000	1.758	0.000	1.758	0.000	1.758	0.000
1,1-dichloroethene	1.733	0.353	1.733	0.000	1.733	0.000	1.733	0.000	1.733	0.000	1.733	0.000	1.733	0.000
Acetone	2.174	0.443	2.173	0.000	2.173	0.000	2.173	0.000	2.173	0.000	2.173	0.000	2.173	0.000
Acrylonitrile	2.814	0.574	2.814	0.000	2.814	0.000	2.814	0.000	2.814	0.000	2.814	0.000	2.814	0.000
Methyliodide	1.817	0.370	1.825	0.002	1.817	0.000	1.825	0.002	1.817	0.000	1.825	0.002	1.817	0.000
Carbon disulfide	1.742	0.355	1.742	0.000	1.742	0.000	1.742	0.000	1.742	0.000	1.742	0.000	1.742	0.000
methylene chloride	2.125	0.433	2.125	0.000	2.125	0.000	2.125	0.000	2.125	0.000	2.125	0.000	2.125	0.000
methyl-t-butyl ether	2.344	0.478	2.343	0.000	2.343	0.000	2.343	0.000	2.343	0.000	2.343	0.000	2.343	0.000
n-hexane	2.246	0.458	2.246	0.000	2.246	0.000	2.246	0.000	2.246	0.000	2.246	0.000	2.246	0.000
trans-1,2-dichloroethene	3.033	0.618	3.033	0.000	3.033	0.000	3.033	0.000	3.033	0.000	3.041	0.002	3.033	0.000
Vinylacetate	2.297	0.468	2.305	0.002	2.305	0.002	2.305	0.002	2.305	0.002	2.305	0.002	2.297	0.000
1,1-dichloroethane	2.761	0.563	2.761	0.000	2.761	0.000	2.761	0.000	2.761	0.000	2.761	0.000	2.761	0.000
2-Butanone(MEK)	4.075	0.831	4.084	0.002	4.084	0.002	4.084	0.002	4.085	0.002	4.075	0.000	4.075	0.000
2,2-dichloropropane	3.423	0.698	3.423	0.000	3.423	0.000	3.423	0.000	3.423	0.000	3.423	0.000	3.423	0.000
cis-1,2-dichloroethene	3.306	0.674	3.316	0.002	3.306	0.000	3.316	0.002	3.306	0.000	3.316	0.002	3.306	0.000
cyclohexane	3.53	0.720	3.54	0.002	3.53	0.000	3.54	0.002	3.54	0.002	3.54	0.002	3.53	0.000
bromochloromethane	3.515	0.716	3.524	0.002	3.514	0.000	3.514	0.000	3.514	0.000	3.514	0.000	3.514	0.000
chloroform	3.656	0.745	3.656	0.000	3.656	0.000	3.656	0.000	3.656	0.000	3.656	0.000	3.656	0.000
Dibromofluoromethane <SURR>	3.89	0.793	3.89	0.000	3.89	0.000	3.89	0.000	3.89	0.000	3.89	0.000	3.89	0.000
1,1,1-trichloroethane	3.88	0.791	3.88	0.000	3.88	0.000	3.88	0.000	3.88	0.000	3.88	0.000	3.88	0.000
carbon tetrachloride	3.793	0.773	3.783	-0.002	3.783	-0.002	3.793	0.000	3.783	-0.002	3.793	0.000	3.783	-0.002
1,1-dichloropropene	4.055	0.827	4.055	0.000	4.055	0.000	4.055	0.000	4.055	0.000	4.055	0.000	4.055	0.000
1,2-Dichloroethane-D4 <surr>	4.555	0.928	4.555	0.000	4.555	0.000	4.555	0.000	4.555	0.000	4.555	0.000	4.555	0.000
benzene	4.384	0.894	4.384	0.000	4.384	0.000	4.384	0.000	4.384	0.000	4.384	0.000	4.384	0.000
1,2-dichloroethane	4.641	0.946	4.641	0.000	4.641	0.000	4.641	0.000	4.641	0.000	4.641	0.000	4.641	0.000
trichloroethene	5.092	1.038	5.091	0.000	5.091	0.000	5.091	0.000	5.092	0.000	5.1	0.002	5.1	0.002
1,2-dichloropropane	5.637	1.149	5.637	0.000	5.637	0.000	5.637	0.000	5.637	0.000	5.637	0.000	5.637	0.000
dibromomethane	5.531	1.127	5.531	0.000	5.531	0.000	5.531	0.000	5.531	0.000	5.531	0.000	5.531	0.000
2-chloroethylvinyl ether	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
bromodichloromethane	5.736	1.169	5.735	0.000	5.735	0.000	5.735	0.000	5.736	0.000	5.736	0.000	5.736	0.000
cis-1,3-dichloropropene	6.352	1.295	6.352	0.000	6.352	0.000	6.352	0.000	6.352	0.000	6.352	0.000	6.352	0.000
4-Methyl-2-pentanone	6.946	1.416	6.945	0.000	6.945	0.000	6.945	0.000	6.945	0.000	6.945	0.000	6.945	0.000
1-chloro-3-fluorobenzene<IS>	7.643		7.642		7.642		7.642		7.642		7.642		7.642	
Toluene-d8 <surr>	6.515	0.852	6.523	0.001	6.515	0.000	6.523	0.001	6.523	0.001	6.523	0.001	6.523	0.001
toluene	6.562	0.859	6.562	0.000	6.562	0.000	6.562	0.000	6.562	0.000	6.562	0.000	6.562	0.000

trans-1,3-dichloropropene	6.964	0.911	6.963	0.000	6.963	0.000	6.963	0.000	6.964	0.000	6.964	0.000	6.964	0.000
1,1,2-trichloroethane	7.09	0.928	7.09	0.000	7.09	0.000	7.09	0.000	7.09	0.000	7.09	0.000	7.09	0.000
tetrachloroethene	6.903	0.903	6.903	0.000	6.903	0.000	6.903	0.000	6.903	0.000	6.903	0.000	6.903	0.000
1,3-dichloropropane	7.317	0.957	7.316	0.000	7.317	0.000	7.317	0.000	7.317	0.000	7.317	0.000	7.317	0.000
2-Hexanone	7.661	1.002	7.66	0.000	7.66	0.000	7.661	0.000	7.661	0.000	7.661	0.000	7.661	0.000
dibromochloromethane	7.235	0.947	7.235	0.000	7.235	0.000	7.235	0.000	7.235	0.000	7.235	0.000	7.235	0.000
1,2-dibromoethane	7.416	0.970	7.407	-0.001	7.416	0.000	7.416	0.000	7.407	-0.001	7.416	0.000	7.416	0.000
1-chlorohexane	7.86	1.028	7.851	-0.001	7.851	-0.001	7.851	-0.001	7.851	-0.001	7.86	0.000	7.86	0.000
chlorobenzene	7.842	1.026	7.842	0.000	7.842	0.000	7.842	0.000	7.842	0.000	7.842	0.000	7.842	0.000
1,1,1,2-tetrachloroethane	7.896	1.033	7.896	0.000	7.896	0.000	7.896	0.000	7.896	0.000	7.896	0.000	7.896	0.000
ethylbenzene	7.878	1.031	7.878	0.000	7.878	0.000	7.878	0.000	7.878	0.000	7.878	0.000	7.878	0.000
P & M -Xylene	7.987	1.045	7.986	0.000	7.986	0.000	7.986	0.000	7.986	0.000	7.986	0.000	7.986	0.000
o-xylene	8.258	1.080	8.258	0.000	8.258	0.000	8.258	0.000	8.258	0.000	8.258	0.000	8.258	0.000
styrene	8.285	1.084	8.285	0.000	8.285	0.000	8.285	0.000	8.285	0.000	8.285	0.000	8.285	0.000
bromoform	8.294	1.085	8.294	0.000	8.294	0.000	8.294	0.000	8.294	0.000	8.294	0.000	8.294	0.000
Isopropylbenzene (Cumene)	8.448	1.105	8.448	0.000	8.448	0.000	8.448	0.000	8.448	0.000	8.448	0.000	8.448	0.000
1,2-Dichlorobenzene-d4 <IS>	9.398		9.398		9.398		9.398		9.398		9.398		9.398	
4-Bromofluorobenzene <Surr>	8.602	0.915	8.602	0.000	8.602	0.000	8.602	0.000	8.602	0.000	8.602	0.000	8.602	0.000
trans 1,4-dichloro-2-butene	8.819	0.938	8.819	0.000	8.819	0.000	8.819	0.000	8.819	0.000	8.819	0.000	8.819	0.000
bromobenzene	8.647	0.920	8.647	0.000	8.647	0.000	8.647	0.000	8.647	0.000	8.647	0.000	8.647	0.000
1,1,2,2-tetrachloroethane	8.729	0.929	8.728	0.000	8.728	0.000	8.728	0.000	8.729	0.000	8.729	0.000	8.729	0.000
1,2,3-trichloropropane	8.792	0.936	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000
n-propylbenzene	8.683	0.924	8.683	0.000	8.683	0.000	8.683	0.000	8.683	0.000	8.683	0.000	8.683	0.000
2-chlorotoluene	8.756	0.932	8.756	0.000	8.756	0.000	8.756	0.000	8.756	0.000	8.756	0.000	8.756	0.000
4-chlorotoluene	8.846	0.941	8.846	0.000	8.846	0.000	8.846	0.000	8.846	0.000	8.846	0.000	8.846	0.000
1,3,5-trimethylbenzene	8.792	0.936	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000
tert-butylbenzene	8.955	0.953	8.955	0.000	8.955	0.000	8.955	0.000	8.955	0.000	8.955	0.000	8.955	0.000
1,2,4-trimethylbenzene	8.991	0.957	8.991	0.000	8.991	0.000	8.991	0.000	8.991	0.000	8.991	0.000	8.991	0.000
sec-butylbenzene	9.045	0.962	9.045	0.000	9.045	0.000	9.045	0.000	9.045	0.000	9.045	0.000	9.045	0.000
1,3-dichlorobenzene	9.154	0.974	9.154	0.000	9.154	0.000	9.154	0.000	9.154	0.000	9.154	0.000	9.154	0.000
4-isopropyltoluene	9.127	0.971	9.127	0.000	9.127	0.000	9.127	0.000	9.127	0.000	9.127	0.000	9.127	0.000
1,4-dichlorobenzene	9.199	0.979	9.199	0.000	9.199	0.000	9.199	0.000	9.199	0.000	9.199	0.000	9.199	0.000
1,2-dichlorobenzene	9.398	1.000	9.398	0.000	9.398	0.000	9.398	0.000	9.398	0.000	9.398	0.000	9.398	0.000
n-butylbenzene	9.326	0.992	9.326	0.000	9.326	0.000	9.326	0.000	9.326	0.000	9.326	0.000	9.326	0.000
1,2-dibromo-3-chloropropane	9.776	1.040	9.776	0.000	9.776	0.000	9.776	0.000	9.776	0.000	9.776	0.000	9.776	0.000
1,2,4-trichlorobenzene	10.08	1.073	10.08	0.000	10.08	0.000	10.08	0.000	10.08	0.000	10.08	0.000	10.08	0.000
hexachlorobutadiene	10.072	1.072	10.072	0.000	10.072	0.000	10.072	0.000	10.072	0.000	10.072	0.000	10.072	0.000
naphthalene	10.232	1.089	10.232	0.000	10.232	0.000	10.232	0.000	10.224	-0.001	10.232	0.000	10.232	0.000
1,2,3-trichlorobenzene	10.308	1.097	10.308	0.000	10.315	0.001	10.308	0.000	10.308	0.000	10.308	0.000	10.308	0.000

CC ISTD Areas

CC Data File : Z:\08\VPA\DATA\081214\A10.D
Date Acquired: 12 Aug 2014 6:44 pm

ISTD Name	Response
Fluorobenzene IS	51571
1-chloro-3-fluorobenzene<IS>	84416
1,2-Dichlorobenzene-d4 <IS>	96036

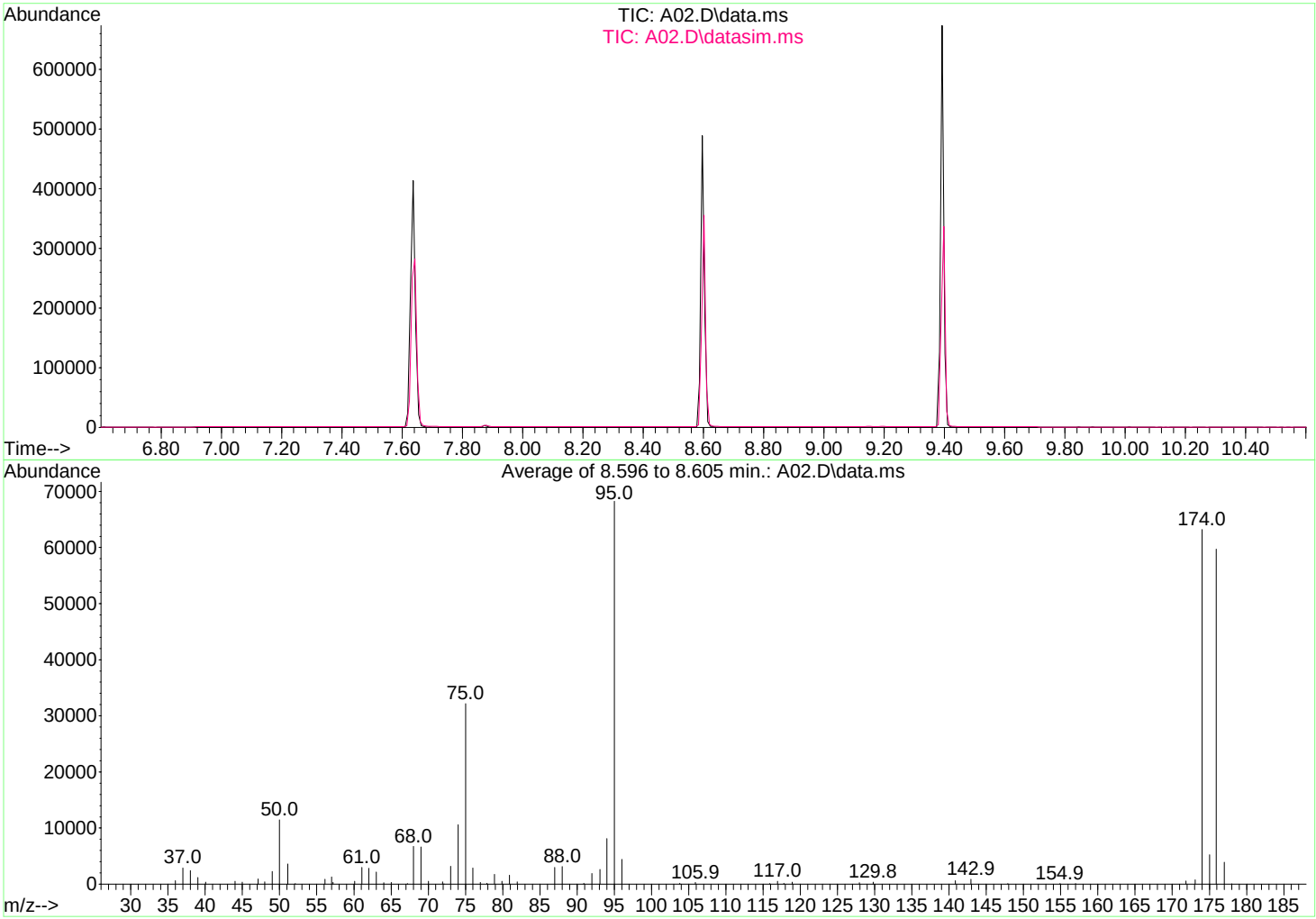
Surrogates

Dibromofluoromethane <SURR>
1,2-Dichloroethane-D4 <surr>
Toluene-d8 <surr>
4-Bromofluorobenzene <Surr>

Data Path : Z:\08\VPA\DATA\081314\
Data File : A02.D
Acq On : 13 Aug 2014 2:04 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: test.P
Integration File signal 2: rteint2.p

Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Title : Purgable Organics By GCMS
Last Update : Tue Aug 12 20:35:07 2014



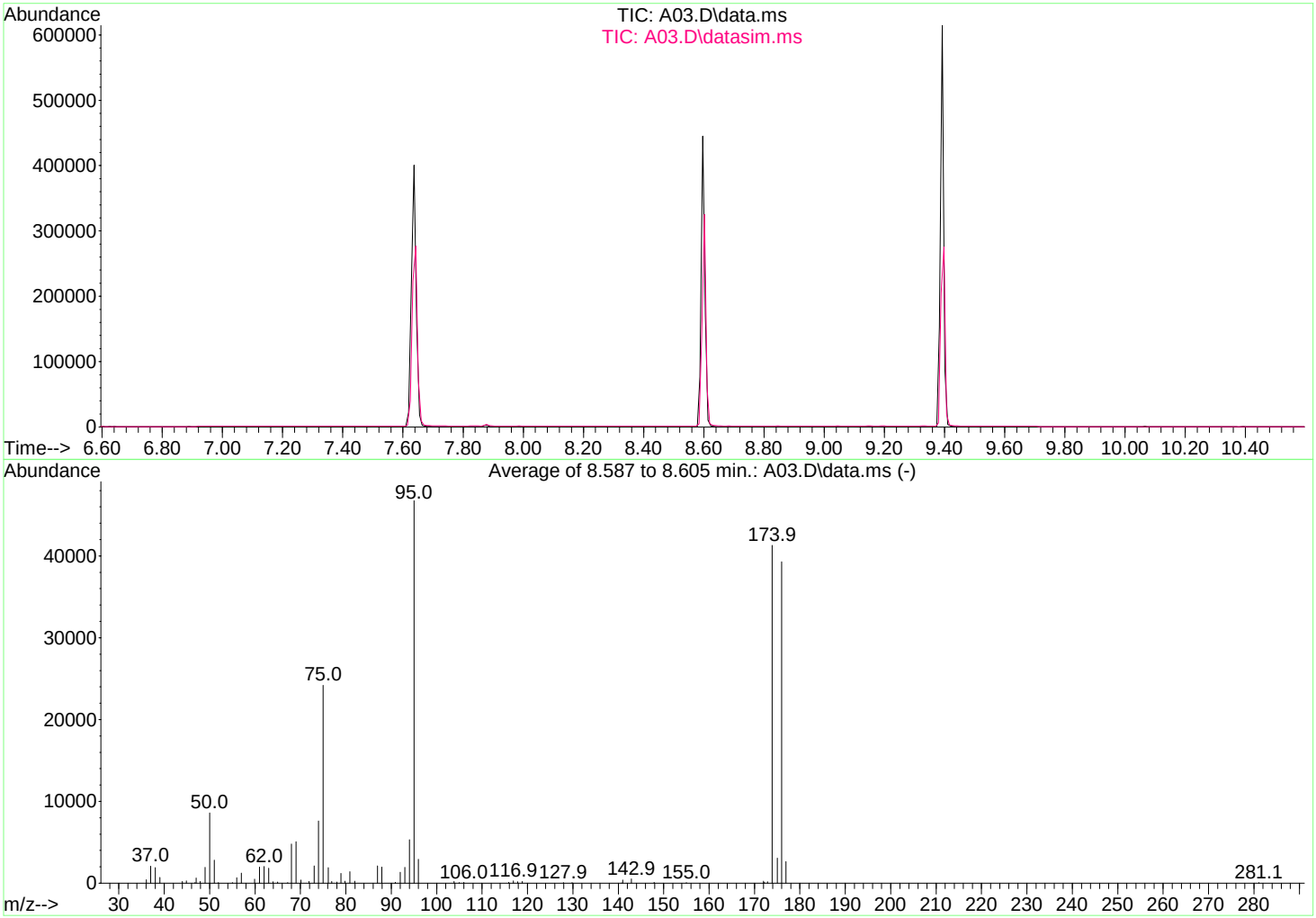
Spectrum Information: Average of 8.596 to 8.605 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	11469	PASS
75	95	30	80	47.2	32189	PASS
95	95	100	100	100.0	68228	PASS
96	95	5	9	6.5	4415	PASS
173	174	0.00	2	1.3	790	PASS
174	95	50	100	92.6	63196	PASS
175	174	5	9	8.3	5259	PASS
176	174	95	101	94.5	59692	~~FAIL*~~ Pass
177	176	5	9	6.5	3903	PASS

Data Path : Z:\08\VPA\DATA\081214\
Data File : A03.D
Acq On : 12 Aug 2014 4:48 pm
Operator : SP
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: test.P
Integration File signal 2: rteint2.p

Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Title : Purgable Organics By GCMS
Last Update : Tue Aug 12 20:35:07 2014



AutoFind: Scans 987, 988, 989; Background Corrected with Scan 983

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.4	8590	PASS
75	95	30	80	51.8	24197	PASS
95	95	100	100	100.0	46741	PASS
96	95	5	9	6.3	2939	PASS
173	174	0.00	2	0.4	174	PASS
174	95	50	100	88.4	41313	PASS
175	174	5	9	7.4	3069	PASS
176	174	95	101	95.1	39285	PASS
177	176	5	9	6.7	2624	PASS

SGS North America Inc.

Instrument Runlog

Instrument: VPA **Calibration Date:** 8/12/2014 **Method:** 8260/524.2
Operator: NRB **Processed By:** NRB **Posted By:** N/A **Analytical Batch:** N/A

Data Path: Z:\08\VPA\DATA\081214\

Daily:		As Needed:			
Verify System Date/Time	☑	Refill Water Tank	☐	Adjust Tune	☐
General System Inspection	☑	Refill Standards	☐	Clean Ion Source	☐
				Check Rough Pump Oil	☐
				Check Vacuum Pressure	☐

Standards:				
IS/Surr	VW8-33-3	**CCV**	VW8-67-1
MeOH	P1121	**EG**	VW8-64-4
		ICV	VW8-65-2
		2nd EG	VW8-66-2

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A01.D	1	R	1		8/12/14 4:15 PM	N/A	
A02.D	2	R	1		8/12/14 4:31 PM	N/A	
A03.D	3	IB	1		8/12/14 4:48 PM	N/A	
A04.D	4	R	1		8/12/14 5:05 PM	N/A	
A05.D	5	R	1		8/12/14 5:21 PM	N/A	
A06.D	6	0.4	1		8/12/14 5:38 PM	N/A	
A07.D	7	1	1		8/12/14 5:54 PM	N/A	
A08.D	8	3	1		8/12/14 6:11 PM	N/A	
A09.D	9	10	1		8/12/14 6:27 PM	N/A	
A10.D	10	30	1		8/12/14 6:44 PM	N/A	
A11.D	11	50	1		8/12/14 7:00 PM	N/A	
A12.D	12	70	1		8/12/14 7:17 PM	N/A	
A13.D	13	R	1		8/12/14 7:33 PM	N/A	
A14.D	14	ICV	1	DCDFM low RR	8/12/14 7:50 PM	N/A	
A15.D	15	R	1		8/12/14 8:06 PM		
A16.D	16	R	1		8/12/14 8:23 PM		
A17.D	17	R	1		8/12/14 8:39 PM		

SGS North America Inc.

Instrument Runlog

Instrument: VPA **Calibration Date:** 8/12/2014 **Method:** 8260/524.2
Operator: NRB **Processed By:** NRB **Posted By:** N/A **Analytical Batch:** N/A

Data Path: Z:\08\VPA\DATA\081314\

Daily:		As Needed:			
Verify System Date/Time	☑	Refill Water Tank	☐	Adjust Tune	☐
General System Inspection	☑	Refill Standards	☐	Clean Ion Source	☐
				Check Rough Pump Oil	☐
				Check Vacuum Pressure	☐

Standards:

IS/Surr	VW8-33-3	**CCV**	VW8-67-1
MeOH	P1121	**EG**	VW8-64-4
		ICV	VW8-65-2
		2nd EG	VW8-66-2

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A15.D		No data found	0		N/A	N/A	
A01.D	1	R	1		8/13/14 1:47 PM	N/A	
A02.D	2	IB	1		8/13/14 2:04 PM	N/A	
A03.D	3	ICV	1		8/13/14 2:25 PM	N/A	
A04.D	4	R	1		8/13/14 2:41 PM	N/A	
A05.D	5	CCV/LCS	1		8/13/14 3:07 PM	N/A	
A06.D	6	LCSD	1		8/13/14 3:24 PM	N/A	
A07.D	7	R	1		8/13/14 3:40 PM	N/A	
A08.D	8	R	1		8/13/14 3:57 PM	N/A	
A09.D	9	R	1		8/13/14 4:13 PM	N/A	
A10.D	10	1143773003A	1		8/13/14 4:30 PM		
A11.D	11	1143735016A	1		8/13/14 4:46 PM		
A12.D	12	1143658005B	1		8/13/14 5:03 PM		
A13.D	13	1143735014A	1		8/13/14 5:19 PM		
A14.D	14	1143735015A	1		8/13/14 5:36 PM		

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A02.D
Acq On : 13 Aug 2014 2:04 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 2 Sample Multiplier: 1

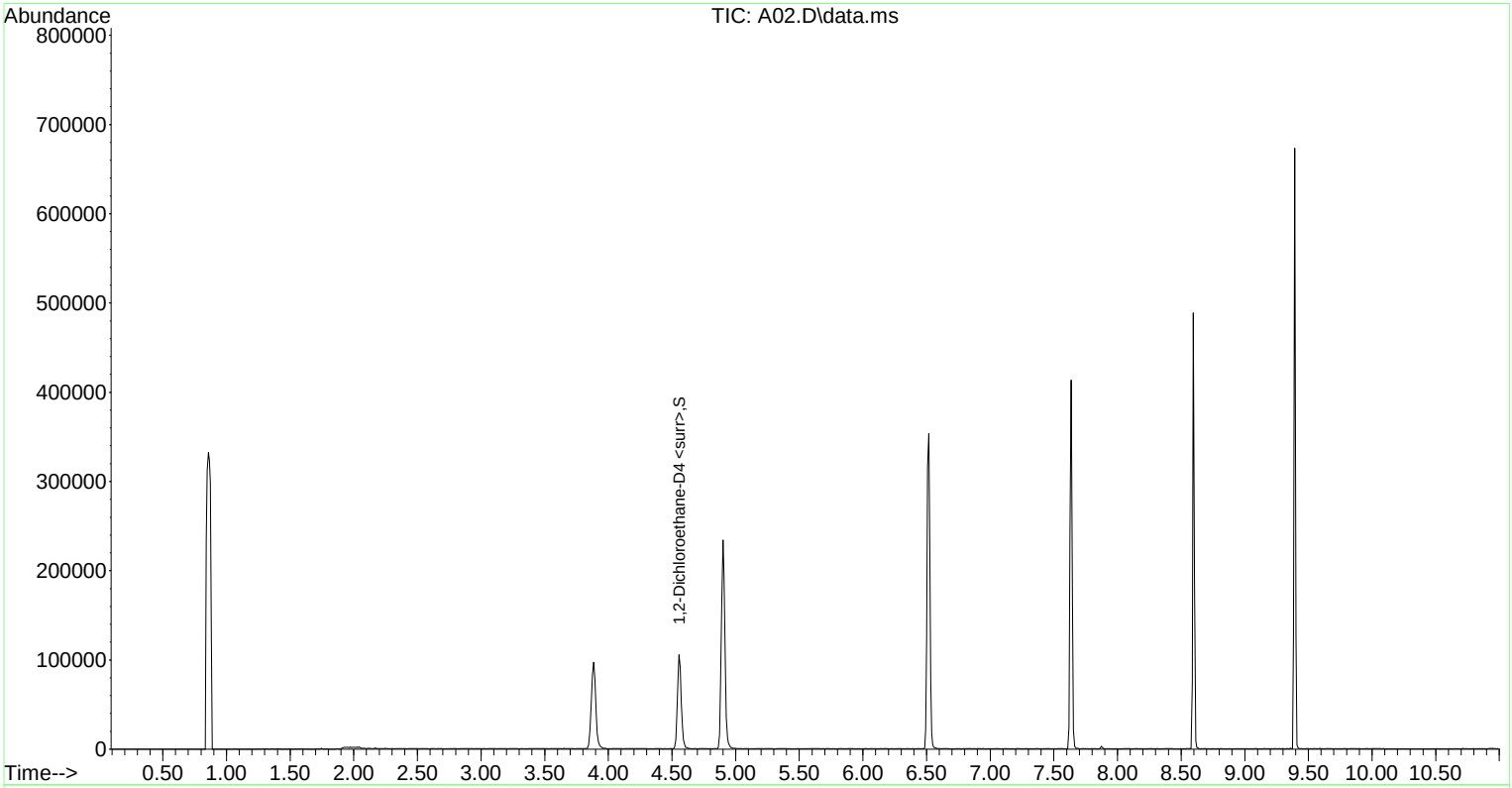
Quant Time: Aug 13 17:10:38 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

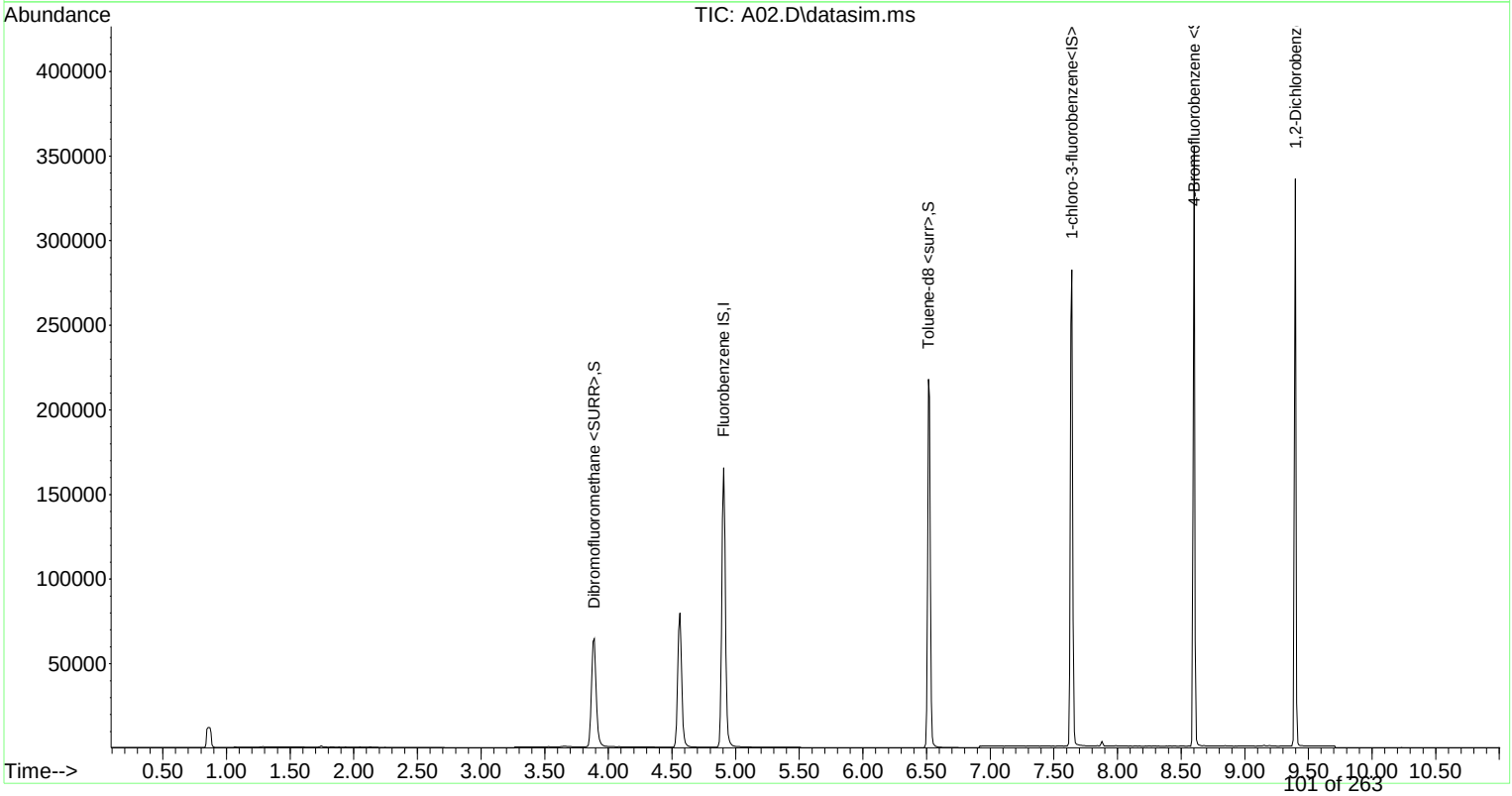
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	46701	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	79537	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	93457	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	81437	32.22	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 107.40%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	85903	32.58	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 108.60%			
41) Toluene-d8 <surr>	6.515	98	196980	30.11	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 100.37%			
60) 4-Bromofluorobenzene <...	8.602	95	87605	30.46	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 101.53%			
Target Compounds						Qvalue

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

Data Path : Z:\08\VPA\DATA\081314\
Data File : A02.D
Acq On : 13 Aug 2014 2:04 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 17:10:38 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A03.D
Acq On : 12 Aug 2014 4:48 pm
Operator : SP
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 16:36:29 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

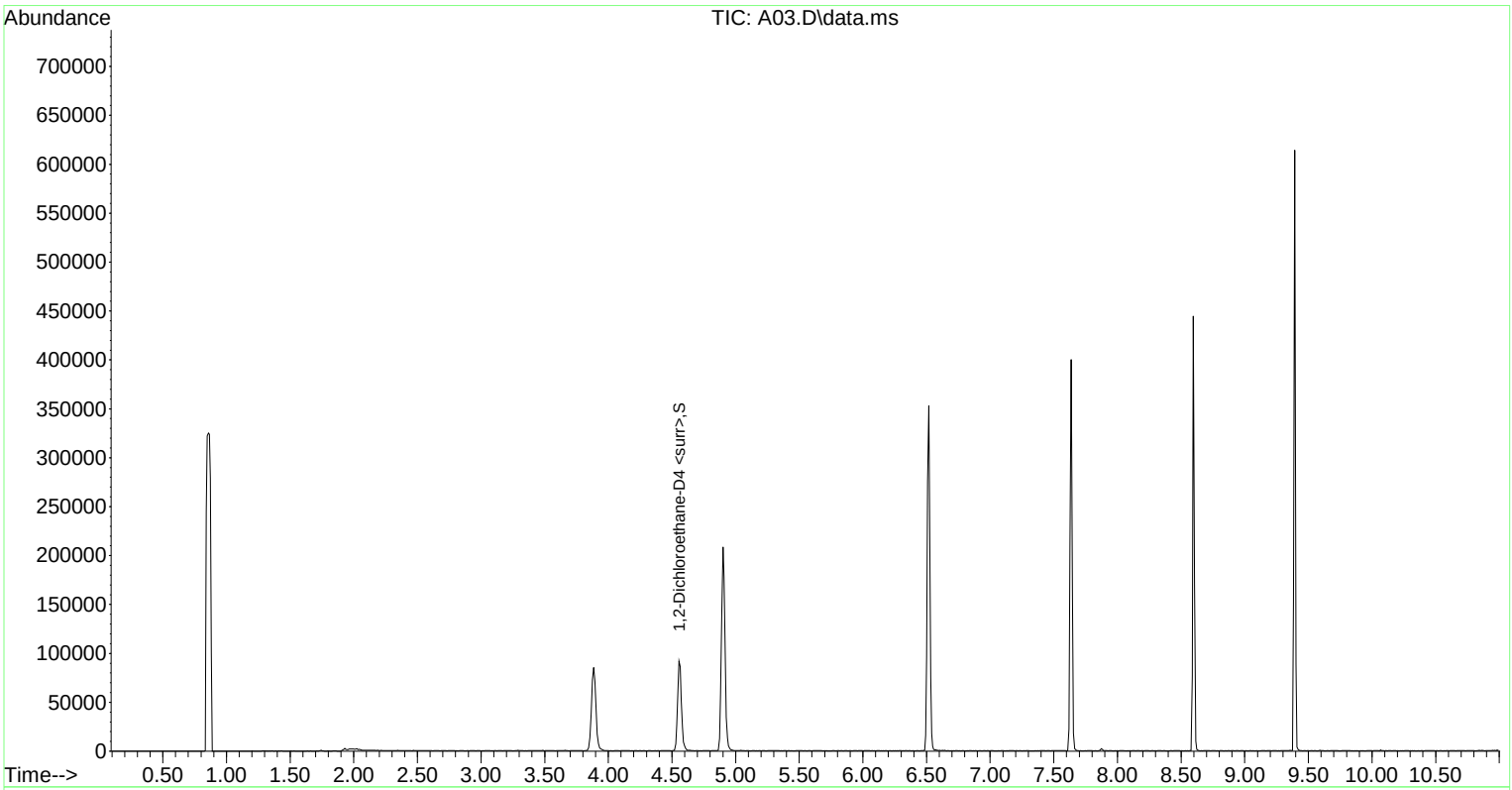
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	41835	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	74194	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	85174	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	72368	31.97	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 106.57%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	76775	32.51	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 108.37%			
41) Toluene-d8 <surr>	6.523	98	178680	29.28	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 97.60%			
60) 4-Bromofluorobenzene <...	8.602	95	82016	31.29	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 104.30%			
Target Compounds						Qvalue

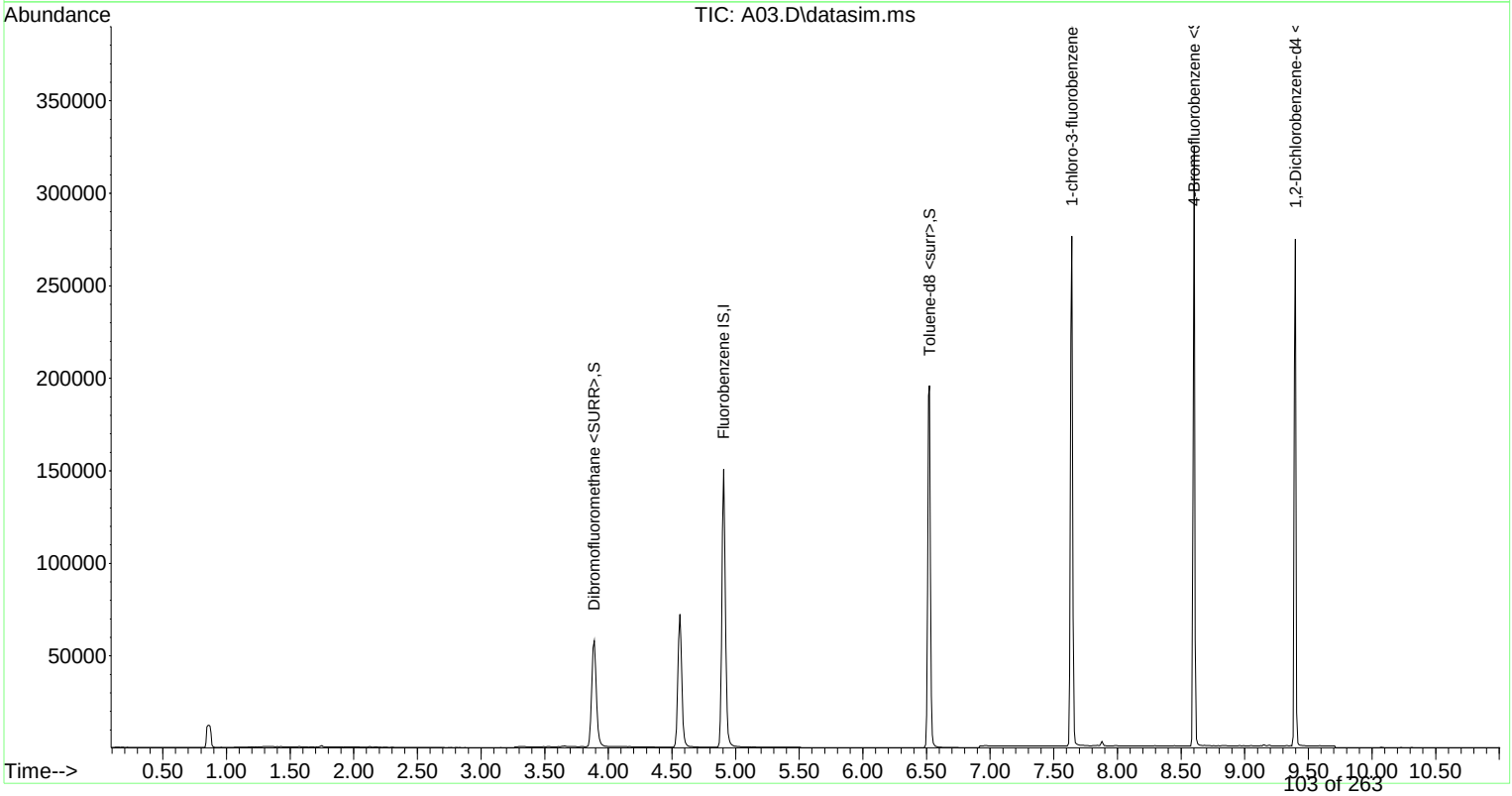
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A03.D
Acq On : 12 Aug 2014 4:48 pm
Operator : SP
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 16:36:29 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A03.D
Acq On : 13 Aug 2014 2:25 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 14:53:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	46846	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.633	95	77761	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	90544	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.880	111	73220	28.88	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.27%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	78683	29.75	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 99.17%			
41) Toluene-d8 <surr>	6.515	98	193993	30.33	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 101.10%			
60) 4-Bromofluorobenzene <...	8.602	95	84032	30.16	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 100.53%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	55922	19.12	µg/l	100
3] chloromethane	1.063	50	41561	24.47	µg/l	99
4] vinyl chloride	1.103	62	59216	24.40	µg/l	100
5] bromomethane	1.279	96	28411	30.31	µg/l	100
6] chloroethane	1.351	64	32047	26.00	µg/l	99
7] trichlorofluoromethane	1.432	101	93834	27.15	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	84940	49.07	µg/L	100
9] 1,1-dichloroethene	1.733	96	42957	26.52	µg/l	99
10] Acetone	2.165	43	49344	82.72	µg/L	97
11] Acrylonitrile	2.814	53	35625	40.22	µg/L	98
12] Methyliodide	1.817	142	69675	47.44	µg/L	97
13] Carbon disulfide	1.741	76	231014	44.81	µg/L	100
14] methylene chloride	2.125	84	56341	29.42	µg/l	98
15] methyl-t-butyl ether	2.343	73	220425	46.43	µg/L	93
16] trans-1,2-dichloroethene	2.246	96	52425	26.01	µg/l	99
17] Vinylacetate	3.033	43	71542	29.80	µg/L	99
18) n-hexane	2.305	56	40698	34.03	µg/L	99
19] 1,1-dichloroethane	2.761	63	109517	27.62	µg/l	100
20] 2-Butanone(MEK)	4.075	43	92764	79.01	µg/L	98
21] 2,2-dichloropropane	3.423	77	94742	32.92	µg/l	99
22] cis-1,2-dichloroethene	3.306	96	62299	27.62	µg/l	98
23] bromochloromethane	3.530	128	30942	27.16	µg/l	99
24) cyclohexane	3.514	56	89268	33.51	µg/L	98
25] chloroform	3.656	83	120077	27.93	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	108179	29.32	µg/l	95
28] carbon tetrachloride	3.783	117	88145	29.83	µg/l	100
29] 1,1-dichloropropene	4.055	75	83701	29.98	µg/l	100
31] benzene	4.384	78	239043	28.99	µg/l	100
32] 1,2-dichloroethane	4.641	62	86048	27.89	µg/l	99
33] trichloroethene	5.091	95	66128	30.15	µg/l	99
34] 1,2-dichloropropane	5.637	63	64238	28.44	µg/l	99
35] dibromomethane	5.531	93	43579	27.35	µg/l	99
37] bromodichloromethane	5.735	83	89477	29.76	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	93832	31.04	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	72316	88.58	µg/L	99
42] toluene	6.561	92	133705	28.64	µg/l	100
43] trans-1,3-dichloropropene	6.963	75	86157	32.77	µg/l	99
44] 1,1,2-trichloroethane	7.090	83	45946	30.10	µg/l	99

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A03.D
Acq On : 13 Aug 2014 2:25 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 14:53:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

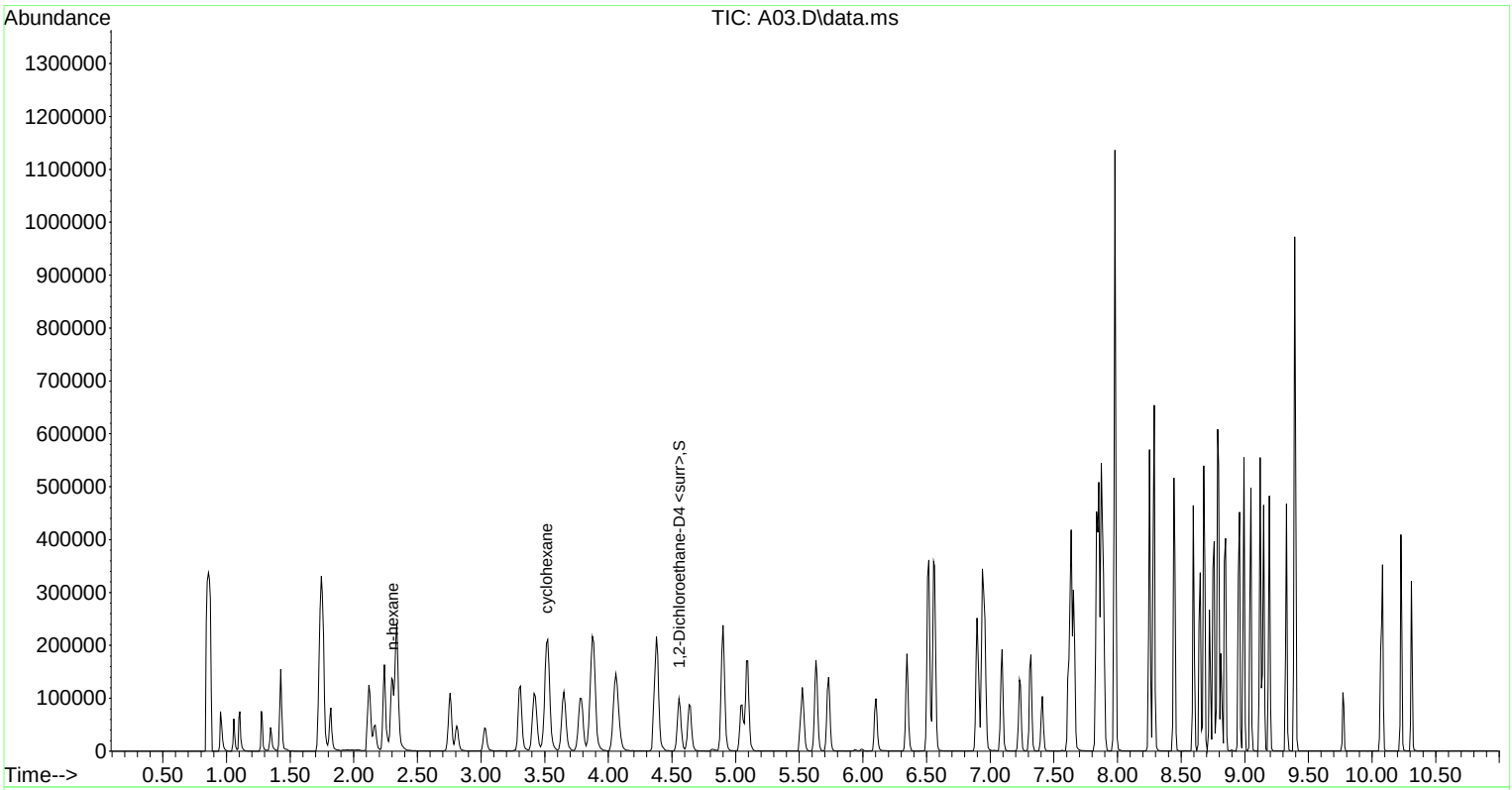
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45] tetrachloroethene	6.903	166	70739	31.23	µg/l		99
46] 1,3-dichloropropane	7.316	76	90787	30.37	µg/l		100
47] 2-Hexanone	7.660	43	123934	69.52	µg/L		91
48] dibromochloromethane	7.235	129	64981	30.88	µg/l		100
49] 1,2-dibromoethane	7.407	107	58184	30.00	µg/l		100
50] 1-chlorohexane	7.851	55	75866	46.64	µg/L		96
51] chlorobenzene	7.841	112	151664	28.46	µg/l		100
52] 1,1,1,2-tetrachloroethane	7.896	133	55358	29.51	µg/l		99
53] ethylbenzene	7.878	106	76791	30.39	µg/l		98
54] P & M -Xylene	7.986	106	185979	59.40	µg/l		99
55] o-xylene	8.258	106	87240	29.96	µg/l		100
56] styrene	8.285	104	152498	31.64	µg/l		86
57] bromoform	8.294	173	48861	29.74	µg/l		100
58] Isopropylbenzene (Cumene)	8.448	105	230038	30.61	µg/l		99
61] trans 1,4-dichloro-2-b...	8.819	53	26582	32.08	µg/L	#	72
62] bromobenzene	8.647	156	64738	29.25	µg/l		99
63] 1,1,2,2-tetrachloroethane	8.728	83	78420	28.66	µg/l		99
64] 1,2,3-trichloropropane	8.792	110	22880	28.58	µg/l		90
65] n-propylbenzene	8.683	91	276657	30.51	µg/l		100
66] 2-chlorotoluene	8.755	91	156586	29.59	µg/l		100
67] 4-chlorotoluene	8.846	91	174694	30.87	µg/l		96
68] 1,3,5-trimethylbenzene	8.792	105	173836	31.70	µg/l		100
69] tert-butylbenzene	8.955	119	136840	31.17	µg/l		100
70] 1,2,4-trimethylbenzene	8.991	105	171265	32.06	µg/l		99
71] sec-butylbenzene	9.045	105	198478	31.05	µg/l		100
72] 1,3-dichlorobenzene	9.154	146	106823	28.37	µg/l		99
73] 4-isopropyltoluene	9.126	119	152700	32.87	µg/l		100
74] 1,4-dichlorobenzene	9.199	146	109432	28.77	µg/l		99
75] 1,2-dichlorobenzene	9.398	146	104970	27.53	µg/l		99
76] n-butylbenzene	9.326	91	142643	33.72	µg/l		99
77] 1,2-dibromo-3-chloropr...	9.775	75	16798	27.31	µg/l		99
78] 1,2,4-trichlorobenzene	10.087	180	57396	30.79	µg/l		100
79] hexachlorobutadiene	10.072	225	22202	31.85	µg/l		100
80] naphthalene	10.232	128	163173	32.29	µg/l		100
81] 1,2,3-trichlorobenzene	10.315	180	55147	30.33	µg/l		99

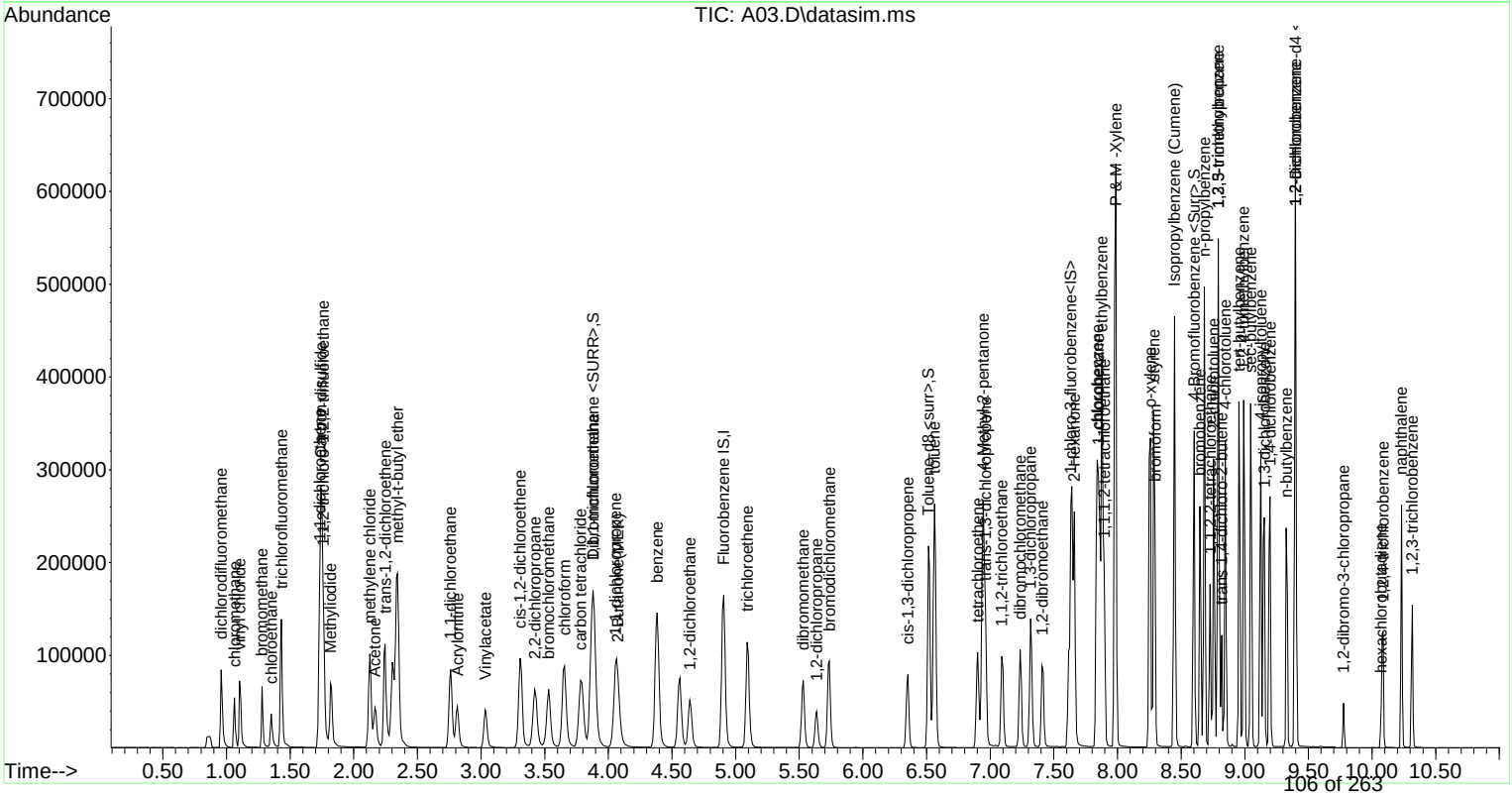
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081314\
Data File : A03.D
Acq On : 13 Aug 2014 2:25 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 14:53:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A04.D
Acq On : 12 Aug 2014 5:05 pm
Operator : SP
Sample : R
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 13 16:36:59 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

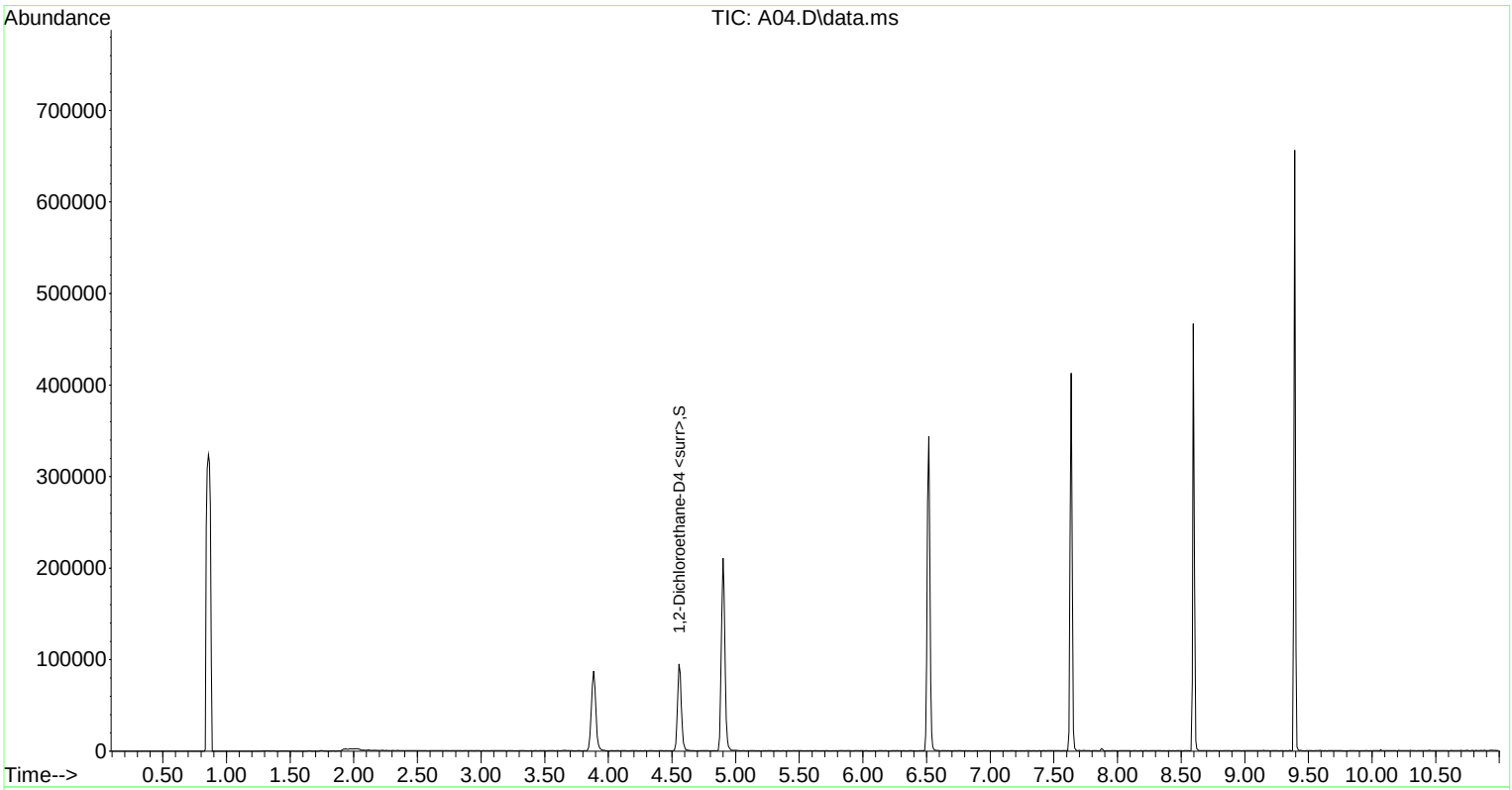
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.906	70	42104	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.642	95	75697	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	94377	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.890	111	72351	31.75	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.83%				
30) 1,2-Dichloroethane-D4 ...	4.555	65	78322	32.95	µg/l		0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 109.83%				
41) Toluene-d8 <surr>	6.523	98	177177	28.46	µg/l		0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 94.87%				
60) 4-Bromofluorobenzene <...	8.602	95	88458	30.46	µg/l		0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 101.53%				
Target Compounds							Qvalue
2] dichlorodifluoromethane	0.863	85	2369	0.79	µg/l	#	1
3] chloromethane	1.063	50	221	0.14	µg/l	#	42
10] Acetone	2.173	43	444	Below Cal		#	42
13] Carbon disulfide	1.742	76	934	0.20	µg/L		99
20] 2-Butanone(MEK)	4.094	43	143	0.14	µg/L	#	48
25] chloroform	3.647	83	628	0.16	µg/l		94
53] ethylbenzene	7.878	106	542	0.22	µg/l		55
54] P & M -Xylene	7.878	106	531	0.17	µg/l	#	14
79] hexachlorobutadiene	10.072	225	259	0.36	µg/l		99

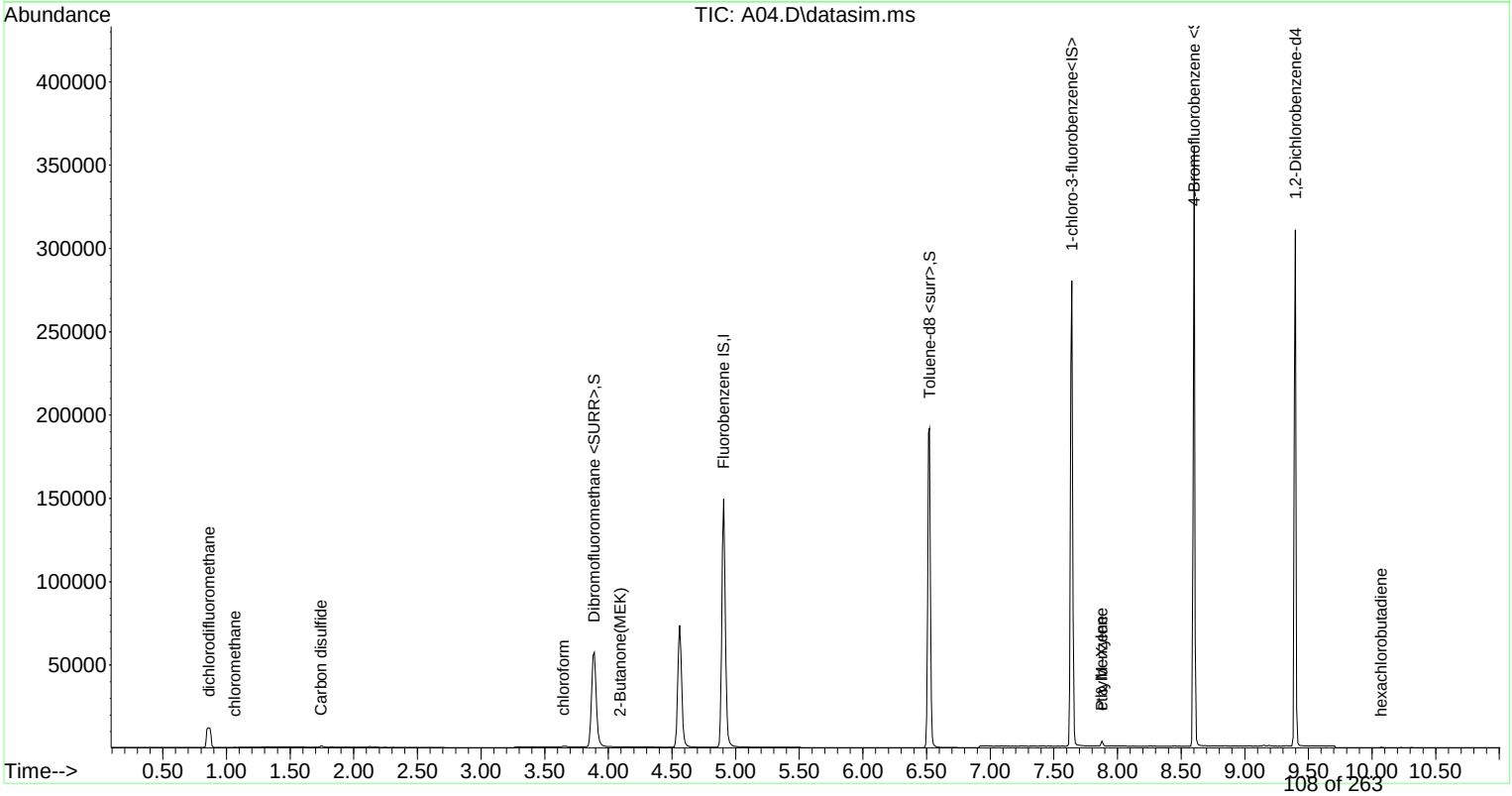
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A04.D
Acq On : 12 Aug 2014 5:05 pm
Operator : SP
Sample : R
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 13 16:36:59 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A05.D
Acq On : 12 Aug 2014 5:21 pm
Operator : SP
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 16:37:09 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

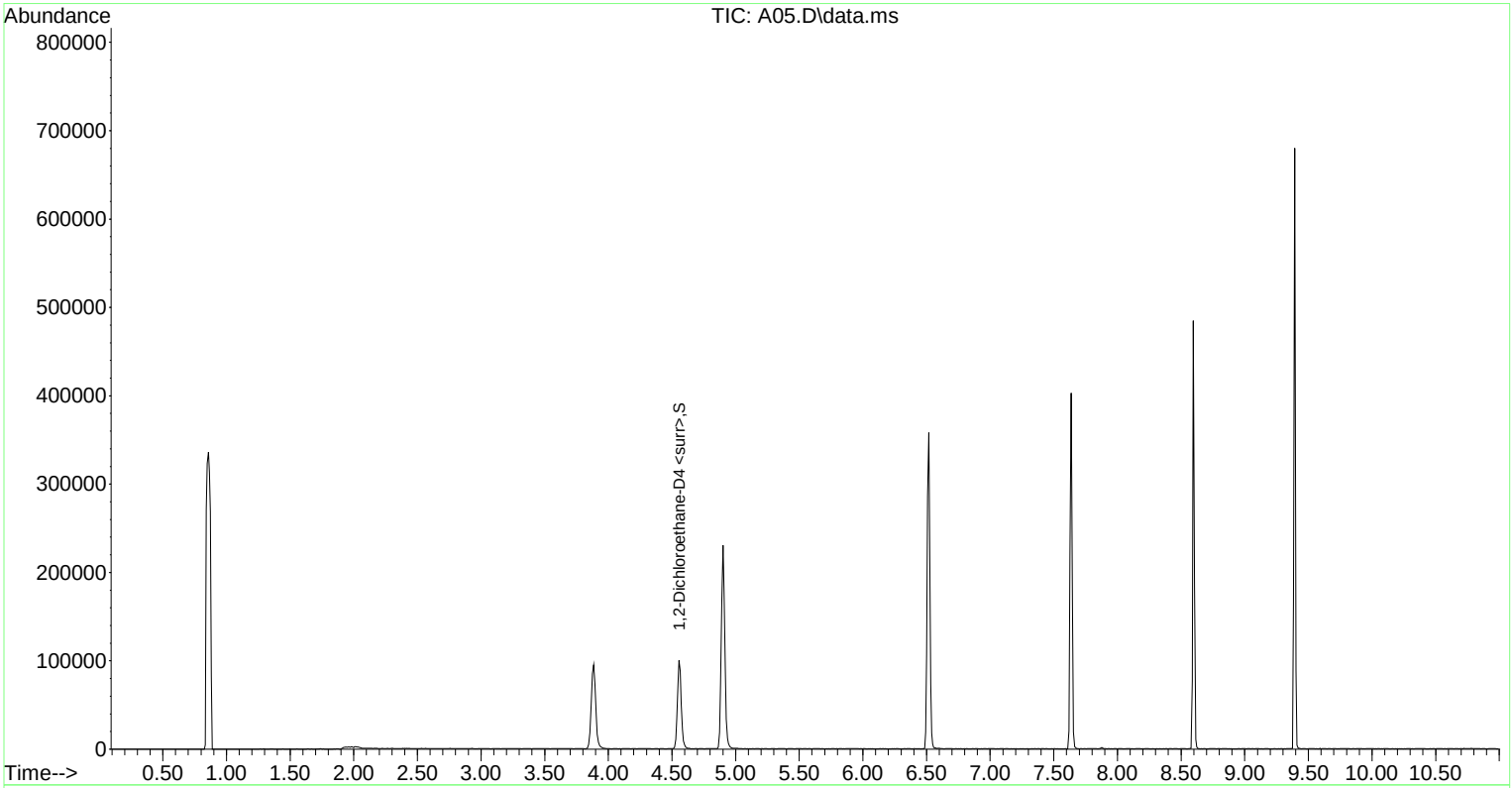
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	45627	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.643	95	75488	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	90882	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	79269	32.10	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 107.00%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	80355	31.19	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 103.97%			
41) Toluene-d8 <surr>	6.515	98	182168	29.34	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 97.80%			
60) 4-Bromofluorobenzene <...	8.602	95	88011	31.47	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 104.90%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.855	85	2328	0.70	µg/l #	1
3] chloromethane	1.063	50	173	0.10	µg/l #	42
10] Acetone	2.173	43	342	Below Cal	#	1
13] Carbon disulfide	1.742	76	643	0.13	µg/L #	73
25] chloroform	3.656	83	622	0.15	µg/l	98
53] ethylbenzene	7.878	106	352	0.14	µg/l #	46
54] P & M -Xylene	7.878	106	347	0.11	µg/l #	36

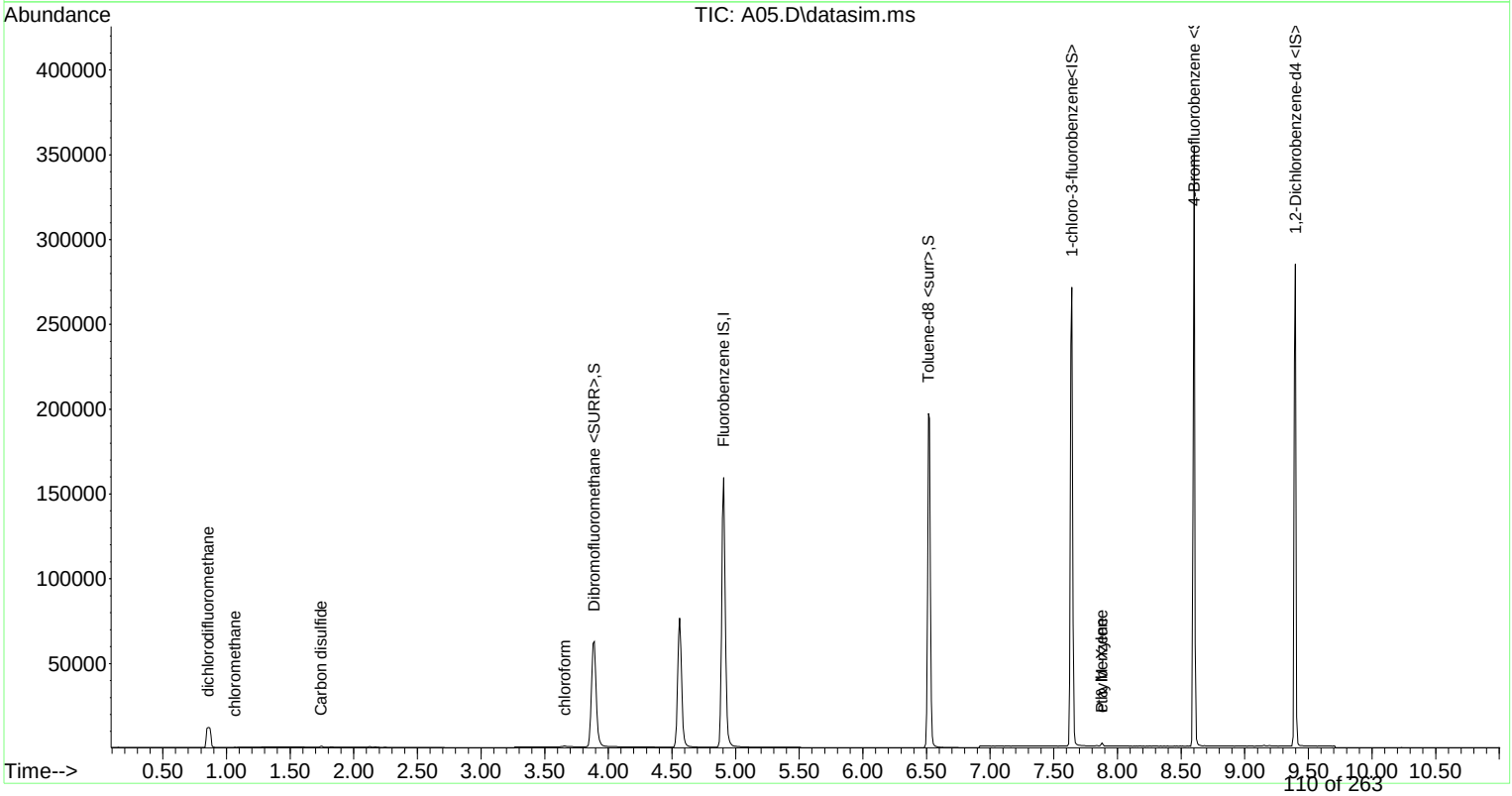
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A05.D
Acq On : 12 Aug 2014 5:21 pm
Operator : SP
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 16:37:09 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A06.D
Acq On : 12 Aug 2014 5:38 pm
Operator : SP
Sample : 0.4
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 20:27:35 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.906	70	45274	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.642	95	82278	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	92713	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.890	111	76860	31.40	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.67%				
30) 1,2-Dichloroethane-D4 ...	4.555	65	83519	31.89	µg/l		0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 106.30%				
41) Toluene-d8 <surr>	6.523	98	189993	28.60	µg/l		0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 95.33%				
60) 4-Bromofluorobenzene <...	8.602	95	85177	29.55	µg/l		0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 98.50%				
Target Compounds							Qvalue
2] dichlorodifluoromethane	0.959	85	1320	0.43	µg/l		98
3] chloromethane	1.063	50	976	0.51	µg/l		93
4] vinyl chloride	1.103	62	1281	0.47	µg/l		83
5] bromomethane	1.279	96	586	0.51	µg/l	#	1
6] chloroethane	1.351	64	710	0.50	µg/l	#	1
7] trichlorofluoromethane	1.432	101	1608	0.44	µg/l		95
8] 1,1,2-trichloro-1,2,2-...	1.758	101	891	0.57	µg/L		98
9] 1,1-dichloroethene	1.733	96	734	0.44	µg/l		94
10] Acetone	2.173	43	1709	1.72	µg/L		97
11] Acrylonitrile	2.814	53	558	0.65	µg/L		96
12] Methyliodide	1.825	142	928	0.62	µg/L		98
13] Carbon disulfide	1.742	76	4162	0.71	µg/L		99
14] methylene chloride	2.125	84	1397	0.53	µg/l		98
15] methyl-t-butyl ether	2.343	73	2963	0.63	µg/L	#	83
16] trans-1,2-dichloroethene	2.246	96	963	0.46	µg/l		100
17] Vinylacetate	3.033	43	908	0.39	µg/L		96
19] 1,1-dichloroethane	2.761	63	2109	0.48	µg/l	#	87
20] 2-Butanone(MEK)	4.084	43	1491	1.25	µg/L		98
21] 2,2-dichloropropane	3.423	77	1276	0.44	µg/l		94
22] cis-1,2-dichloroethene	3.316	96	1234	0.49	µg/l		96
23] bromochloromethane	3.540	128	536	0.46	µg/l		98
24) cyclohexane	3.524	56	736	0.32	µg/L		85
25] chloroform	3.656	83	2612	0.50	µg/l		100
27] 1,1,1-trichloroethane	3.880	97	1534	0.42	µg/l		97
28] carbon tetrachloride	3.783	117	1200	0.41	µg/l		97
29] 1,1-dichloropropene	4.055	75	1096	0.39	µg/l		98
31] benzene	4.384	78	3786	0.43	µg/l		100
32] 1,2-dichloroethane	4.641	62	1427	0.45	µg/l		96
33] trichloroethene	5.091	95	969	0.43	µg/l		97
34] 1,2-dichloropropane	5.637	63	1110	0.45	µg/l	#	88
35] dibromomethane	5.531	93	794	0.46	µg/l		98
37] bromodichloromethane	5.735	83	1432	0.45	µg/l		100
38] cis-1,3-dichloropropene	6.352	75	1197	0.40	µg/l		97
39] 4-Methyl-2-pentanone	6.945	58	1146	1.26	µg/L		92
42] toluene	6.562	92	2150	0.42	µg/l		92
43] trans-1,3-dichloropropene	6.963	75	1139	0.38	µg/l		98
44] 1,1,2-trichloroethane	7.090	83	694	0.40	µg/l		98
45] tetrachloroethene	6.903	166	927	0.38	µg/l		94

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A06.D
Acq On : 12 Aug 2014 5:38 pm
Operator : SP
Sample : 0.4
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 20:27:35 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

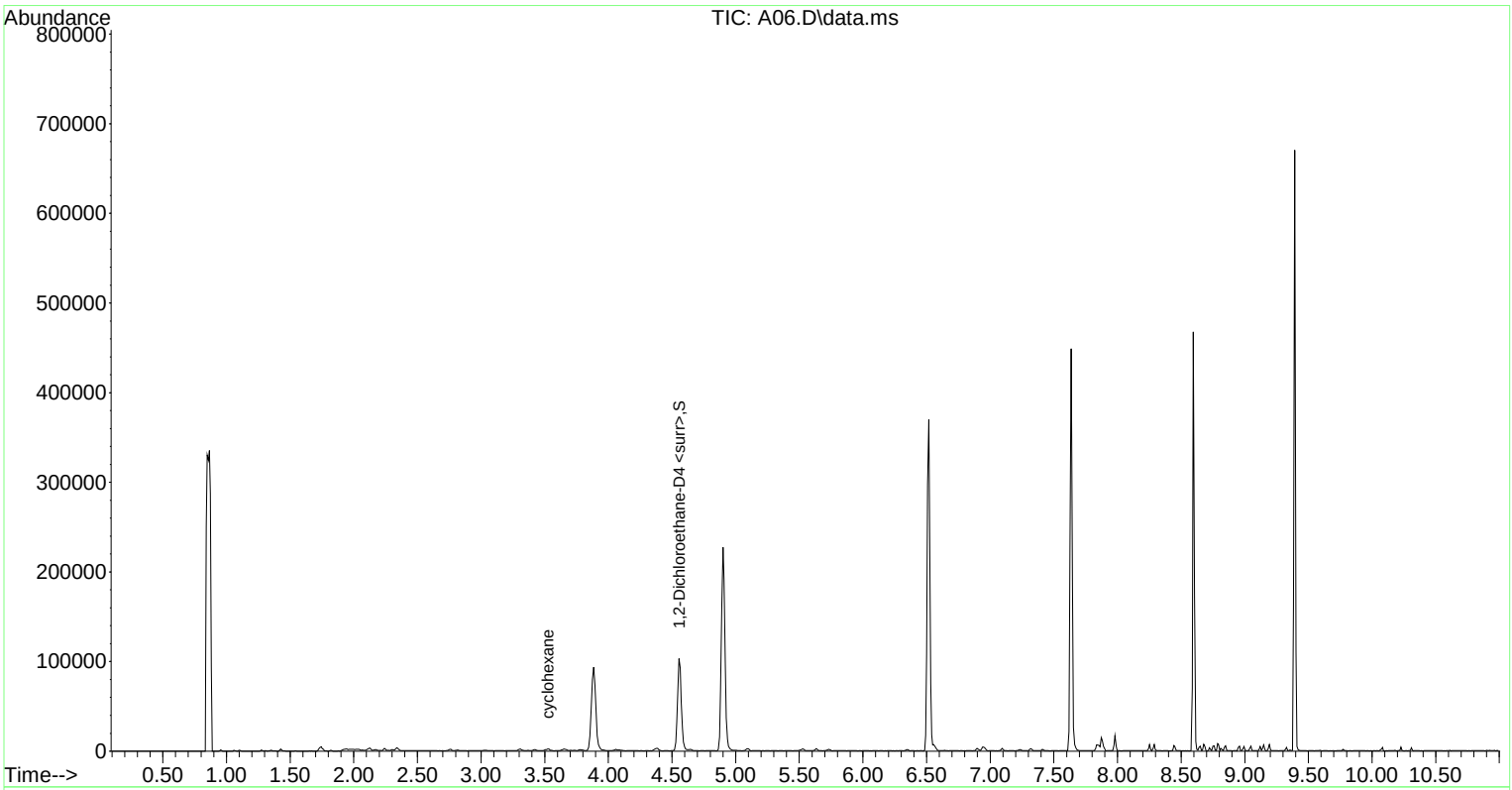
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46] 1,3-dichloropropane	7.316	76	1348	0.41	µg/l		90
47] 2-Hexanone	7.660	43	2729	1.31	µg/L		95
48] dibromochloromethane	7.235	129	915	0.40	µg/l		96
49] 1,2-dibromoethane	7.407	107	899	0.41	µg/l	#	99
50] 1-chlorohexane	7.851	55	1038	0.63	µg/L	#	1
51] chlorobenzene	7.842	112	2655	0.46	µg/l		98
52] 1,1,1,2-tetrachloroethane	7.896	133	895	0.44	µg/l		96
53] ethylbenzene	7.878	106	2358	0.56	µg/l		64
54] P & M -Xylene	7.986	106	2809	0.85	µg/l		98
55] o-xylene	8.258	106	1241	0.41	µg/l		99
56] styrene	8.285	104	1913	0.38	µg/l		80
57] bromoform	8.294	173	750	0.42	µg/l		100
58] Isopropylbenzene (Cumene)	8.448	105	2989	0.39	µg/l		98
61] trans 1,4-dichloro-2-b...	8.819	53	591	0.63	µg/L		92
62] bromobenzene	8.647	156	1074	0.44	µg/l		95
63] 1,1,2,2-tetrachloroethane	8.728	83	1419	0.45	µg/l		99
64] 1,2,3-trichloropropane	8.792	110	413	0.44	µg/l	#	66
65] n-propylbenzene	8.683	91	4061	0.41	µg/l		98
66] 2-chlorotoluene	8.756	91	2514	0.43	µg/l		99
67] 4-chlorotoluene	8.846	91	2736	0.43	µg/l		96
68] 1,3,5-trimethylbenzene	8.792	105	2244	0.38	µg/l		99
69] tert-butylbenzene	8.955	119	1788	0.39	µg/l		88
70] 1,2,4-trimethylbenzene	8.991	105	2089	0.37	µg/l		99
71] sec-butylbenzene	9.045	105	2557	0.39	µg/l		99
72] 1,3-dichlorobenzene	9.154	146	1971	0.45	µg/l		98
73] 4-isopropyltoluene	9.127	119	1784	0.37	µg/l		95
74] 1,4-dichlorobenzene	9.199	146	1862	0.45	µg/l		97
75] 1,2-dichlorobenzene	9.398	146	2016	0.46	µg/l	#	42
76] n-butylbenzene	9.326	91	1579	0.36	µg/l		98
77] 1,2-dibromo-3-chloropr...	9.776	75	328	0.46	µg/l		87
78] 1,2,4-trichlorobenzene	10.080	180	906	0.43	µg/l		98
79] hexachlorobutadiene	10.072	225	324	0.43	µg/l		98
80] naphthalene	10.232	128	2234	0.41	µg/l		98
81] 1,2,3-trichlorobenzene	10.308	180	850	0.43	µg/l		98

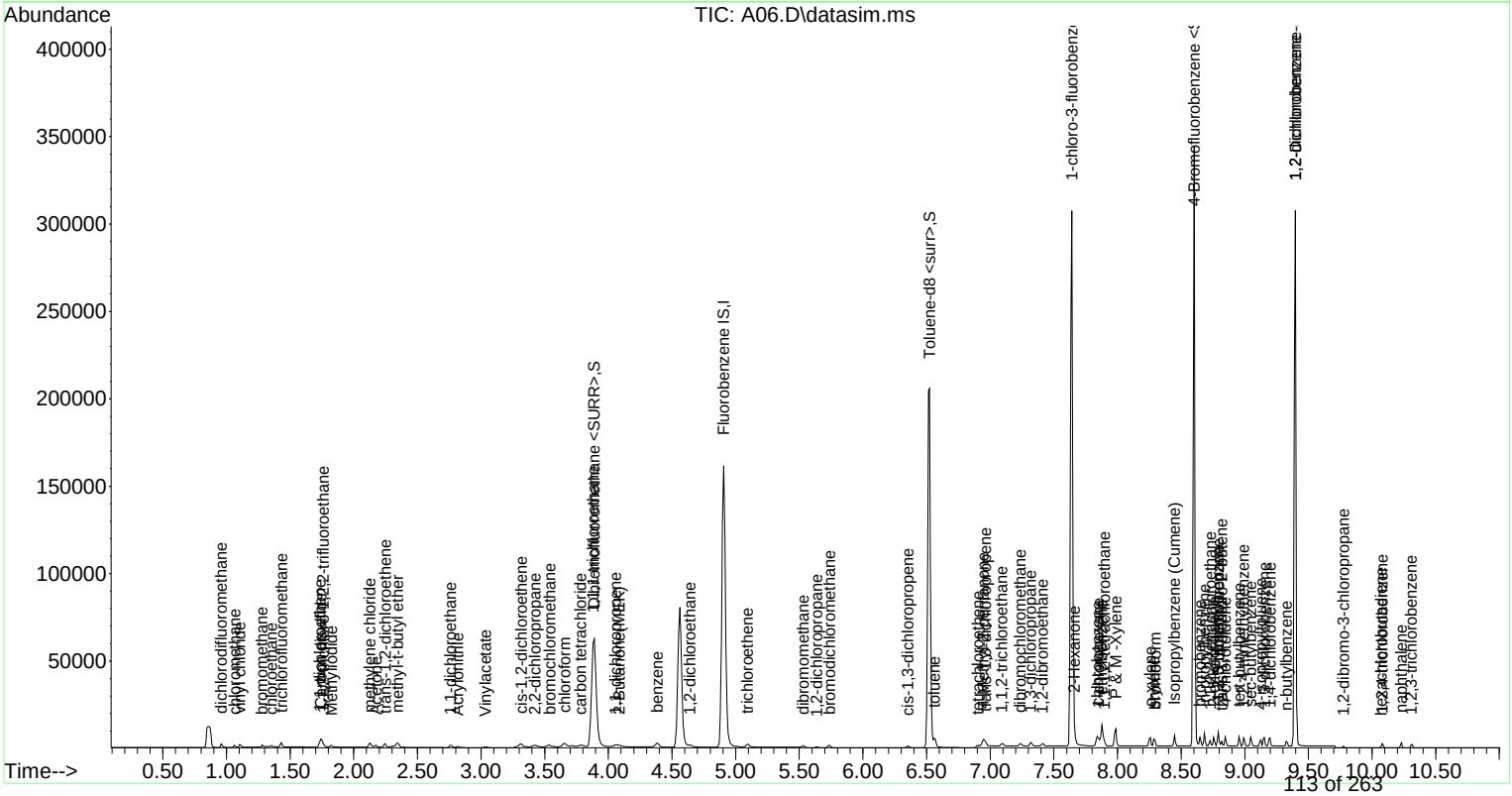
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A06.D
Acq On : 12 Aug 2014 5:38 pm
Operator : SP
Sample : 0.4
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 20:27:35 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A07.D
Acq On : 12 Aug 2014 5:54 pm
Operator : SP
Sample : 1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 12 20:28:02 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	41379	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	71306	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	93958	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	71082	31.16	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 103.87%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	75866	31.11	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 103.70%			
41) Toluene-d8 <surr>	6.515	98	175622	30.33	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 101.10%			
60) 4-Bromofluorobenzene <...	8.602	95	82002	28.69	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 95.63%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	3050	1.06	µg/l	99
3] chloromethane	1.063	50	1765	1.01	µg/l	96
4] vinyl chloride	1.103	62	2430	0.98	µg/l	95
5] bromomethane	1.279	96	1199	1.09	µg/l #	35
6] chloroethane	1.343	64	1364	1.04	µg/l #	1
7] trichlorofluoromethane	1.424	101	3681	1.07	µg/l	98
8] 1,1,2-trichloro-1,2,2-...	1.758	101	2626	1.70	µg/L	99
9] 1,1-dichloroethene	1.733	96	1491	0.99	µg/l	99
10] Acetone	2.173	43	2781	3.04	µg/L	97
11] Acrylonitrile	2.814	53	1384	1.67	µg/L	89
12] Methyliodide	1.817	142	1825	1.39	µg/L	97
13] Carbon disulfide	1.742	76	7922	1.49	µg/L	100
14] methylene chloride	2.125	84	2757	1.09	µg/l	99
15] methyl-t-butyl ether	2.343	73	6514	1.51	µg/L #	83
16] trans-1,2-dichloroethene	2.246	96	2053	1.05	µg/l	96
17] Vinylacetate	3.033	43	1801	0.89	µg/L	97
18) n-hexane	2.305	56	608	0.73	µg/L	97
19] 1,1-dichloroethane	2.761	63	4017	1.00	µg/l	90
20] 2-Butanone(MEK)	4.084	43	2931	2.78	µg/L	98
21] 2,2-dichloropropane	3.423	77	2607	0.99	µg/l	99
22] cis-1,2-dichloroethene	3.306	96	2302	0.99	µg/l	96
23] bromochloromethane	3.530	128	1038	0.98	µg/l	98
24) cyclohexane	3.514	56	2140	1.01	µg/L	96
25] chloroform	3.656	83	4516	0.97	µg/l	99
27] 1,1,1-trichloroethane	3.880	97	3373	1.01	µg/l	99
28] carbon tetrachloride	3.783	117	2589	0.98	µg/l	98
29] 1,1-dichloropropene	4.055	75	2229	0.92	µg/l	99
31] benzene	4.384	78	7088	0.92	µg/l	98
32] 1,2-dichloroethane	4.641	62	2892	1.00	µg/l	99
33] trichloroethene	5.091	95	2020	0.98	µg/l	96
34] 1,2-dichloropropane	5.637	63	2027	0.93	µg/l #	88
35] dibromomethane	5.531	93	1505	0.97	µg/l	96
37] bromodichloromethane	5.735	83	2756	0.96	µg/l	99
38] cis-1,3-dichloropropene	6.352	75	2617	0.97	µg/l	98
39] 4-Methyl-2-pentanone	6.945	58	2190	2.74	µg/L	96
42] toluene	6.562	92	4315	0.98	µg/l	99
43] trans-1,3-dichloropropene	6.963	75	2195	0.90	µg/l	98
44] 1,1,2-trichloroethane	7.090	83	1327	0.92	µg/l	94

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A07.D
Acq On : 12 Aug 2014 5:54 pm
Operator : SP
Sample : 1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 12 20:28:02 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

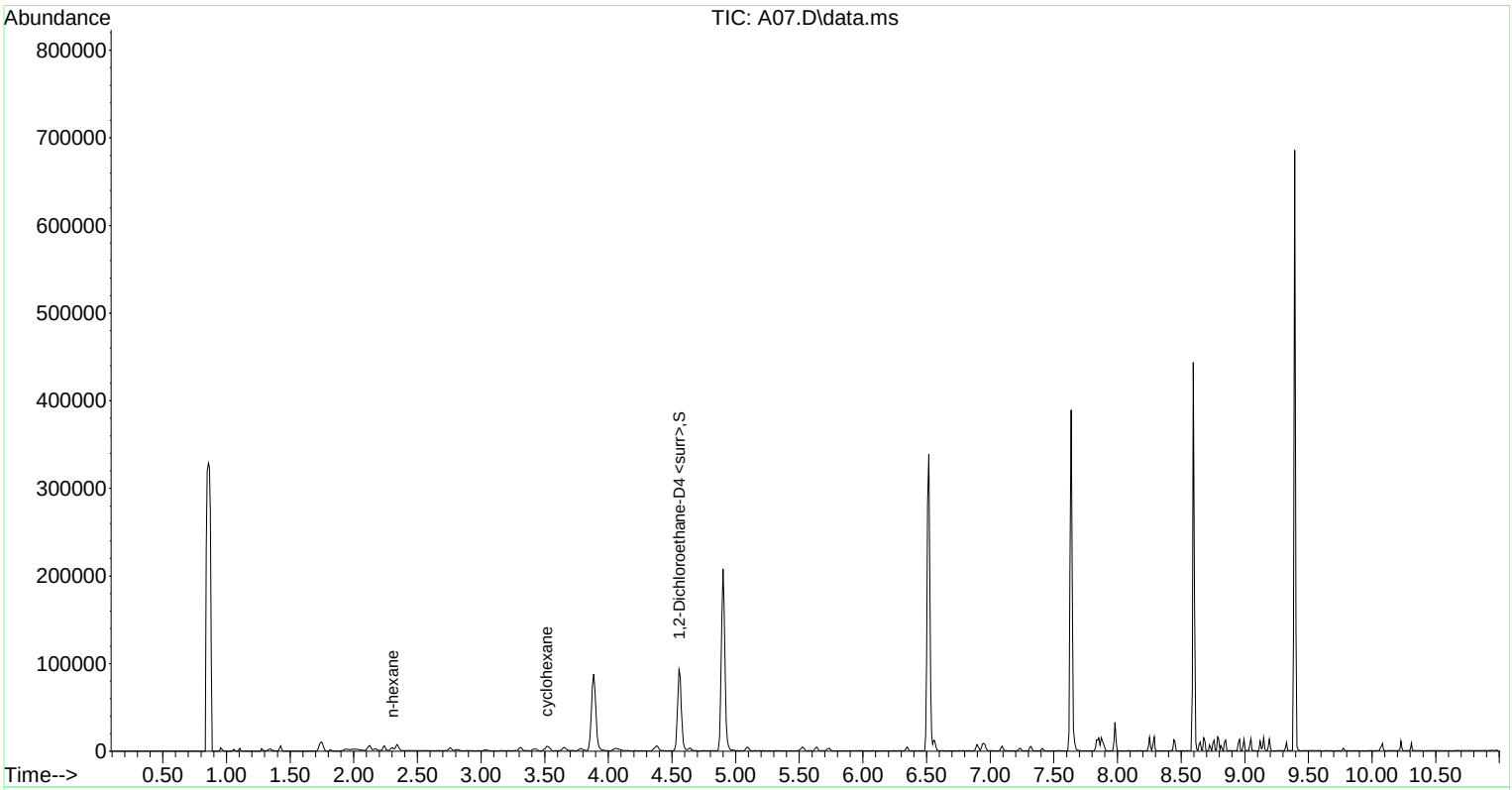
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	2108	1.00	µg/l	98
46] 1,3-dichloropropane	7.317	76	2598	0.93	µg/l	96
47] 2-Hexanone	7.660	43	4350	2.58	µg/L	100
48] dibromochloromethane	7.235	129	1954	0.99	µg/l	99
49] 1,2-dibromoethane	7.416	107	1641	0.91	µg/l #	98
50] 1-chlorohexane	7.851	55	2113	1.48	µg/L	97
51] chlorobenzene	7.842	112	4818	0.98	µg/l	99
52] 1,1,1,2-tetrachloroethane	7.896	133	1626	0.95	µg/l	97
53] ethylbenzene	7.878	106	2225	0.70	µg/l	98
54] P & M -Xylene	7.986	106	5396	1.92	µg/l	100
55] o-xylene	8.258	106	2515	0.97	µg/l	94
56] styrene	8.285	104	3735	0.90	µg/l	95
57] bromoform	8.294	173	1344	0.91	µg/l	95
58] Isopropylbenzene (Cumene)	8.448	105	6345	0.96	µg/l	99
61] trans 1,4-dichloro-2-b...	8.819	53	1009	1.17	µg/L #	75
62] bromobenzene	8.647	156	2093	0.89	µg/l	99
63] 1,1,2,2-tetrachloroethane	8.728	83	2477	0.84	µg/l	94
64] 1,2,3-trichloropropane	8.792	110	750	0.85	µg/l	89
65] n-propylbenzene	8.683	91	8331	0.89	µg/l	99
66] 2-chlorotoluene	8.756	91	4952	0.88	µg/l	100
67] 4-chlorotoluene	8.846	91	5103	0.85	µg/l	100
68] 1,3,5-trimethylbenzene	8.792	105	4526	0.82	µg/l	96
69] tert-butylbenzene	8.955	119	4025	0.91	µg/l	94
70] 1,2,4-trimethylbenzene	8.991	105	4562	0.86	µg/l	99
71] sec-butylbenzene	9.045	105	5732	0.90	µg/l	99
72] 1,3-dichlorobenzene	9.154	146	3661	0.88	µg/l	99
73] 4-isopropyltoluene	9.127	119	3877	0.85	µg/l	99
74] 1,4-dichlorobenzene	9.199	146	3723	0.92	µg/l	99
75] 1,2-dichlorobenzene	9.398	146	3809	0.90	µg/l #	72
76] n-butylbenzene	9.326	91	3477	0.84	µg/l	98
77] 1,2-dibromo-3-chloropr...	9.776	75	621	0.91	µg/l	90
78] 1,2,4-trichlorobenzene	10.080	180	1739	0.87	µg/l	98
79] hexachlorobutadiene	10.072	225	666	0.90	µg/l	99
80] naphthalene	10.232	128	4373	0.85	µg/l	100
81] 1,2,3-trichlorobenzene	10.315	180	1699	0.89	µg/l	100

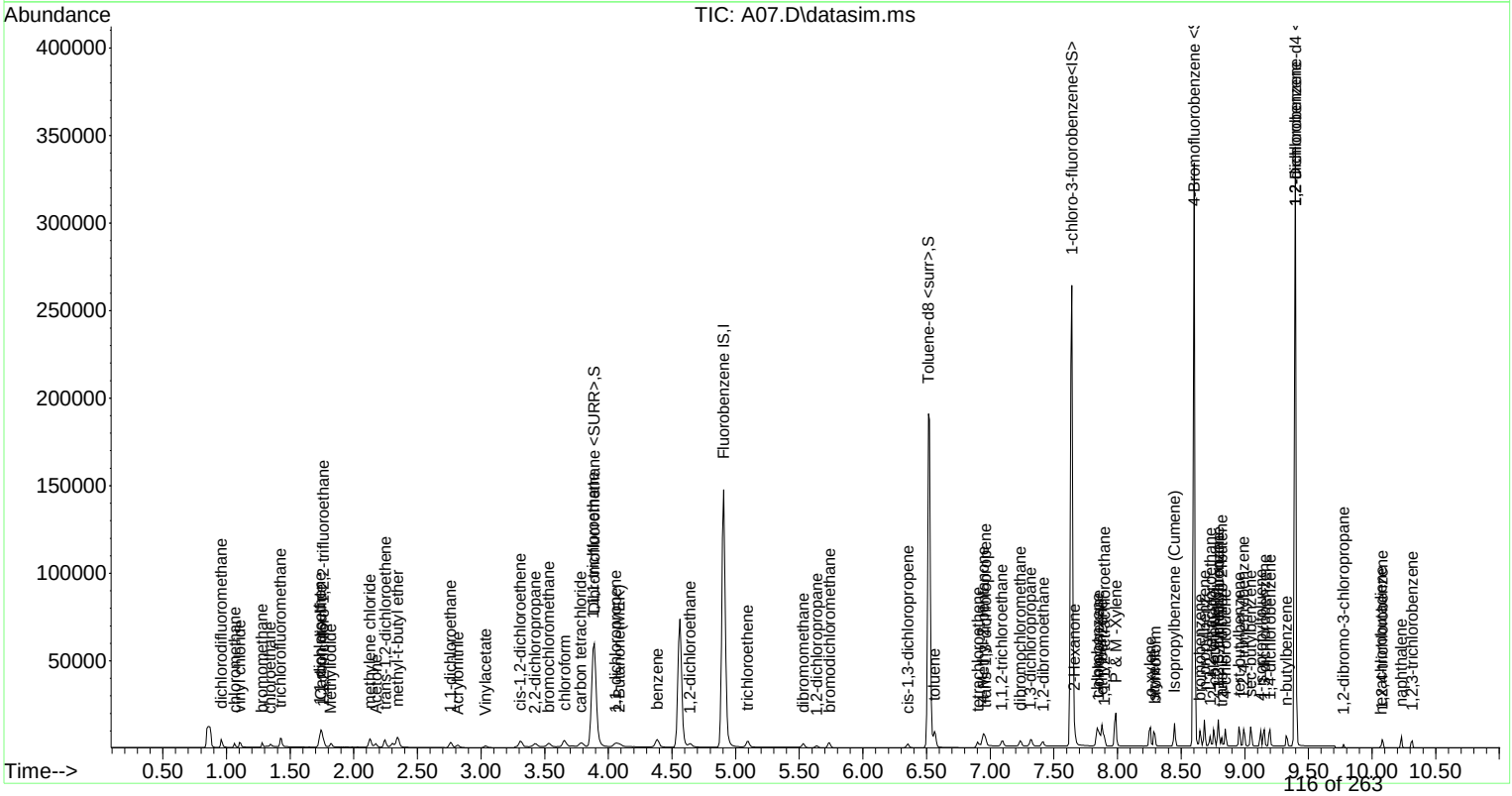
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A07.D
Acq On : 12 Aug 2014 5:54 pm
Operator : SP
Sample : 1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 12 20:28:02 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A08.D
Acq On : 12 Aug 2014 6:11 pm
Operator : SP
Sample : 3
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 12 20:28:31 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	46421	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	76302	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	96266	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	79903	30.91	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 103.03%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	82596	30.14	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 100.47%			
41) Toluene-d8 <surr>	6.523	98	189899	30.48	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 101.60%			
60) 4-Bromofluorobenzene <...	8.602	95	90512	30.67	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 102.23%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	9641	3.00	µg/l	100
3] chloromethane	1.063	50	5797	2.96	µg/l	99
4] vinyl chloride	1.103	62	7958	2.90	µg/l	98
5] bromomethane	1.279	96	3362	2.79	µg/l	82
6] chloroethane	1.351	64	4070	2.82	µg/l #	82
7] trichlorofluoromethane	1.432	101	11676	3.01	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	7889	4.55	µg/L	99
9] 1,1-dichloroethene	1.733	96	4800	2.88	µg/l	98
10] Acetone	2.173	43	6670	6.99	µg/L	100
11] Acrylonitrile	2.814	53	4178	4.50	µg/L	98
12] Methyliodide	1.825	142	5484	3.89	µg/L	96
13] Carbon disulfide	1.742	76	23015	4.00	µg/L	100
14] methylene chloride	2.125	84	6688	2.49	µg/l	99
15] methyl-t-butyl ether	2.343	73	20369	4.28	µg/L #	78
16] trans-1,2-dichloroethene	2.246	96	5738	2.70	µg/l	98
17] Vinylacetate	3.033	43	7000	3.07	µg/L	98
18) n-hexane	2.305	56	3444	3.43	µg/L	79
19] 1,1-dichloroethane	2.761	63	13043	2.92	µg/l	99
20] 2-Butanone(MEK)	4.084	43	10143	8.69	µg/L	100
21] 2,2-dichloropropane	3.423	77	8571	2.92	µg/l	99
22] cis-1,2-dichloroethene	3.316	96	7186	2.82	µg/l	98
23] bromochloromethane	3.540	128	3509	2.96	µg/l	97
24) cyclohexane	3.514	56	8290	3.35	µg/L	95
25] chloroform	3.656	83	13616	2.69	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	11075	2.96	µg/l	99
28] carbon tetrachloride	3.793	117	8873	3.00	µg/l	100
29] 1,1-dichloropropene	4.055	75	8047	2.96	µg/l	99
31] benzene	4.384	78	22945	2.73	µg/l	98
32] 1,2-dichloroethane	4.641	62	9173	2.86	µg/l	99
33] trichloroethene	5.091	95	6005	2.69	µg/l	99
34] 1,2-dichloropropane	5.637	63	6260	2.67	µg/l	99
35] dibromomethane	5.531	93	4707	2.78	µg/l	97
37] bromodichloromethane	5.735	83	7606	2.49	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	8204	2.78	µg/l	99
39] 4-Methyl-2-pentanone	6.945	58	5877	7.04	µg/L	96
42] toluene	6.562	92	13250	2.85	µg/l	100
43] trans-1,3-dichloropropene	6.963	75	6088	2.46	µg/l	100
44] 1,1,2-trichloroethane	7.090	83	3766	2.56	µg/l	99

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A08.D
Acq On : 12 Aug 2014 6:11 pm
Operator : SP
Sample : 3
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 12 20:28:31 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

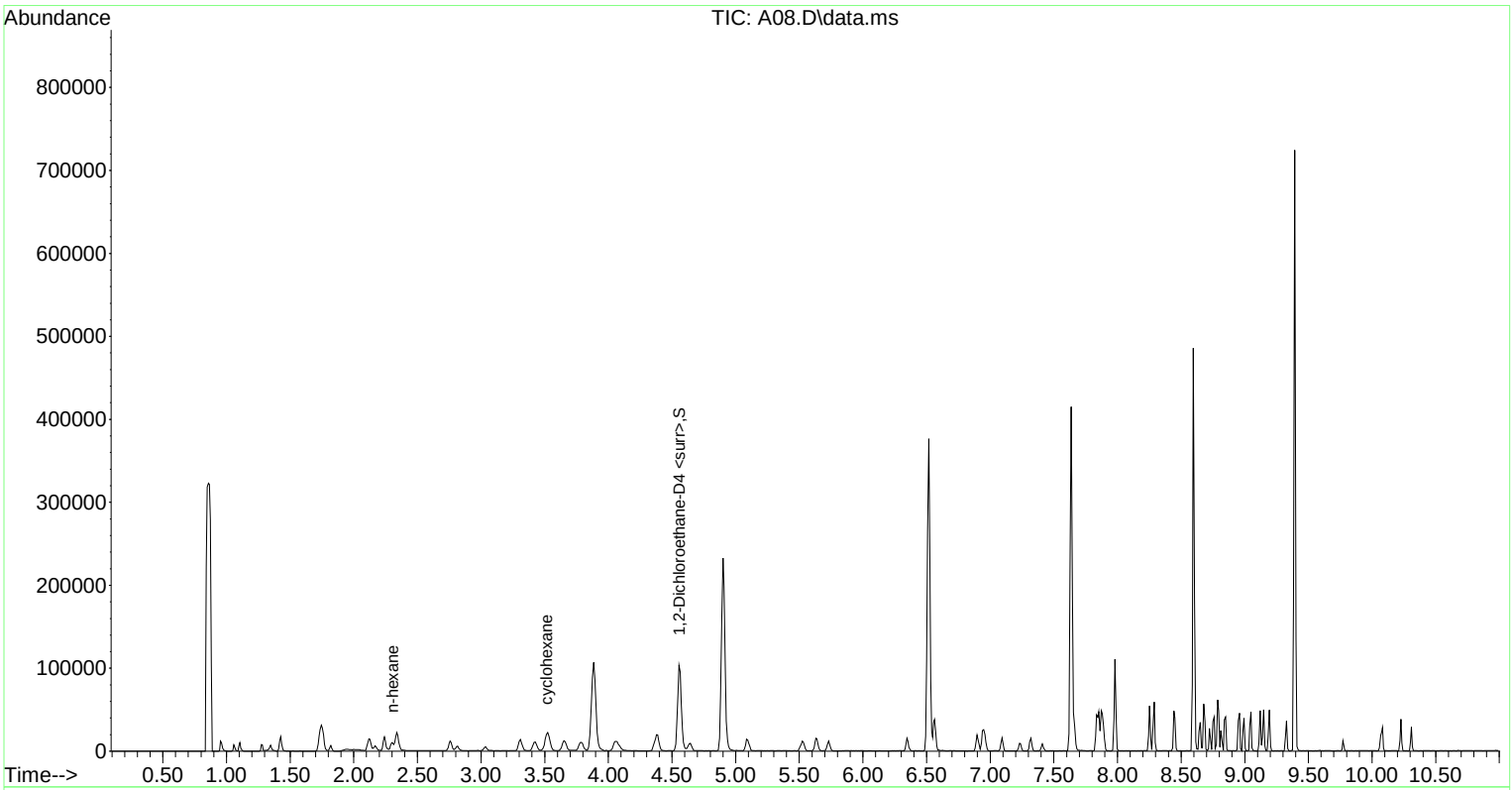
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	5558	2.58	µg/l	98
46] 1,3-dichloropropane	7.317	76	7505	2.63	µg/l	99
47] 2-Hexanone	7.661	43	15027	8.48	µg/L	99
48] dibromochloromethane	7.235	129	5229	2.59	µg/l	98
49] 1,2-dibromoethane	7.416	107	5002	2.69	µg/l	99
50] 1-chlorohexane	7.851	55	7380	4.75	µg/L	91
51] chlorobenzene	7.842	112	15503	2.96	µg/l	98
52] 1,1,1,2-tetrachloroethane	7.896	133	5014	2.80	µg/l	97
53] ethylbenzene	7.878	106	7267	2.31	µg/l	99
54] P & M -Xylene	7.986	106	18147	6.03	µg/l	97
55] o-xylene	8.258	106	8302	2.98	µg/l	100
56] styrene	8.285	104	13249	2.99	µg/l	98
57] bromoform	8.294	173	4501	2.88	µg/l	100
58] Isopropylbenzene (Cumene)	8.448	105	22216	3.11	µg/l	99
61] trans 1,4-dichloro-2-b...	8.819	53	3710	4.28	µg/L	93
62] bromobenzene	8.647	156	6887	2.88	µg/l	98
63] 1,1,2,2-tetrachloroethane	8.728	83	8203	2.77	µg/l	99
64] 1,2,3-trichloropropane	8.792	110	2353	2.70	µg/l	95
65] n-propylbenzene	8.683	91	27630	2.90	µg/l	100
66] 2-chlorotoluene	8.756	91	16179	2.85	µg/l	100
67] 4-chlorotoluene	8.846	91	17265	2.85	µg/l	99
68] 1,3,5-trimethylbenzene	8.792	105	16180	2.90	µg/l	100
69] tert-butylbenzene	8.955	119	13675	3.00	µg/l	99
70] 1,2,4-trimethylbenzene	8.991	105	14583	2.75	µg/l	99
71] sec-butylbenzene	9.045	105	19656	3.01	µg/l	99
72] 1,3-dichlorobenzene	9.154	146	11136	2.70	µg/l	99
73] 4-isopropyltoluene	9.127	119	13601	2.92	µg/l	99
74] 1,4-dichlorobenzene	9.199	146	11541	2.82	µg/l	99
75] 1,2-dichlorobenzene	9.398	146	11723	2.78	µg/l	91
76] n-butylbenzene	9.326	91	11770	2.82	µg/l	98
77] 1,2-dibromo-3-chloropr...	9.776	75	1857	2.73	µg/l	93
78] 1,2,4-trichlorobenzene	10.080	180	5393	2.72	µg/l	99
79] hexachlorobutadiene	10.072	225	2195	2.93	µg/l	99
80] naphthalene	10.232	128	14188	2.76	µg/l	100
81] 1,2,3-trichlorobenzene	10.308	180	5343	2.81	µg/l	99

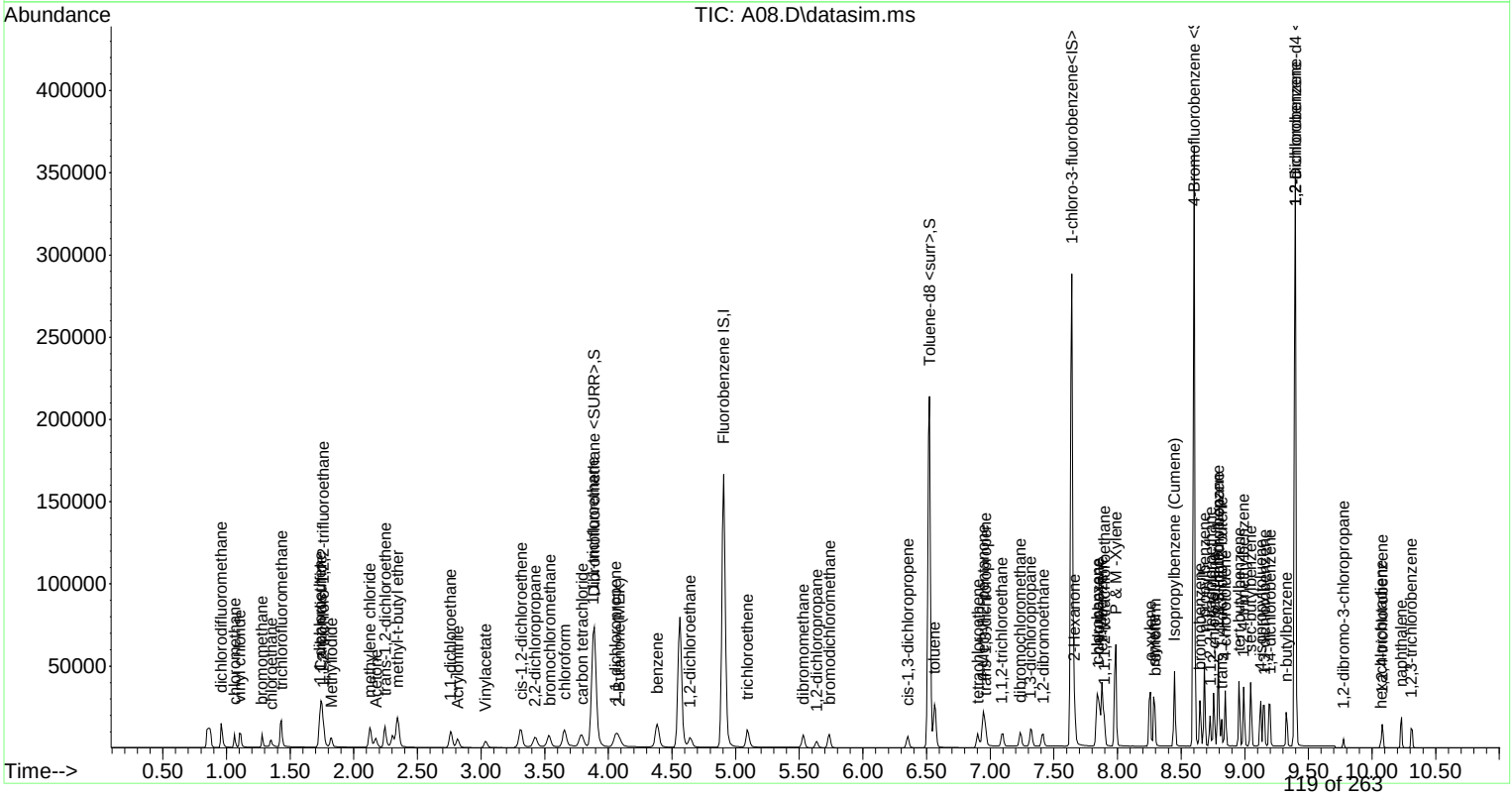
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A08.D
Acq On : 12 Aug 2014 6:11 pm
Operator : SP
Sample : 3
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 12 20:28:31 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A09.D
Acq On : 12 Aug 2014 6:27 pm
Operator : SP
Sample : 10
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 20:28:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	48439	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	81792	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	94518	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	76564	28.69	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.63%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	81773	28.87	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 96.23%			
41) Toluene-d8 <surr>	6.523	98	196138	29.50	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 98.33%			
60) 4-Bromofluorobenzene <...	8.602	95	91022	31.12	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 103.73%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	29693	9.05	µg/l	99
3] chloromethane	1.063	50	14915	7.72	µg/l	96
4] vinyl chloride	1.103	62	24489	8.81	µg/l	99
5] bromomethane	1.279	96	9563	7.98	µg/l	96
6] chloroethane	1.352	64	11890	8.23	µg/l	93
7] trichlorofluoromethane	1.432	101	35842	9.06	µg/l	99
8] 1,1,2-trichloro-1,2,2-...	1.758	101	25622	14.32	µg/L	99
9] 1,1-dichloroethene	1.733	96	15677	9.19	µg/l	99
10] Acetone	2.173	43	18407	20.03	µg/L	100
11] Acrylonitrile	2.814	53	12471	13.26	µg/L	97
12] Methyliodide	1.817	142	20079	13.89	µg/L	97
13] Carbon disulfide	1.742	76	75191	12.96	µg/L	100
14] methylene chloride	2.125	84	20252	7.66	µg/l	99
15] methyl-t-butyl ether	2.343	73	66894	13.75	µg/L #	79
16] trans-1,2-dichloroethene	2.246	96	18649	8.68	µg/l	99
17] Vinylacetate	3.033	43	22583	9.60	µg/L	99
18) n-hexane	2.305	56	8756	8.72	µg/L	94
19] 1,1-dichloroethane	2.761	63	38846	8.61	µg/l	99
20] 2-Butanone(MEK)	4.085	43	33375	27.87	µg/L	99
21] 2,2-dichloropropane	3.423	77	27281	9.11	µg/l	99
22] cis-1,2-dichloroethene	3.306	96	21569	8.44	µg/l	99
23] bromochloromethane	3.540	128	10777	8.95	µg/l	99
24) cyclohexane	3.514	56	26892	10.34	µg/L	97
25] chloroform	3.656	83	41629	8.23	µg/l	99
27] 1,1,1-trichloroethane	3.880	97	36399	9.46	µg/l	99
28] carbon tetrachloride	3.783	117	28685	9.42	µg/l	99
29] 1,1-dichloropropene	4.055	75	27735	9.82	µg/l	99
31] benzene	4.384	78	81013	9.39	µg/l	99
32] 1,2-dichloroethane	4.641	62	30717	9.33	µg/l	100
33] trichloroethene	5.092	95	22255	9.65	µg/l	100
34] 1,2-dichloropropane	5.637	63	22564	9.36	µg/l	100
35] dibromomethane	5.531	93	15226	8.87	µg/l	99
37] bromodichloromethane	5.736	83	30585	9.69	µg/l	99
38] cis-1,3-dichloropropene	6.352	75	29625	9.69	µg/l	99
39] 4-Methyl-2-pentanone	6.945	58	23028	27.08	µg/L	99
42] toluene	6.562	92	46565	9.46	µg/l	100
43] trans-1,3-dichloropropene	6.964	75	24892	9.51	µg/l	100
44] 1,1,2-trichloroethane	7.090	83	15173	9.70	µg/l	100

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A09.D
Acq On : 12 Aug 2014 6:27 pm
Operator : SP
Sample : 10
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 20:28:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

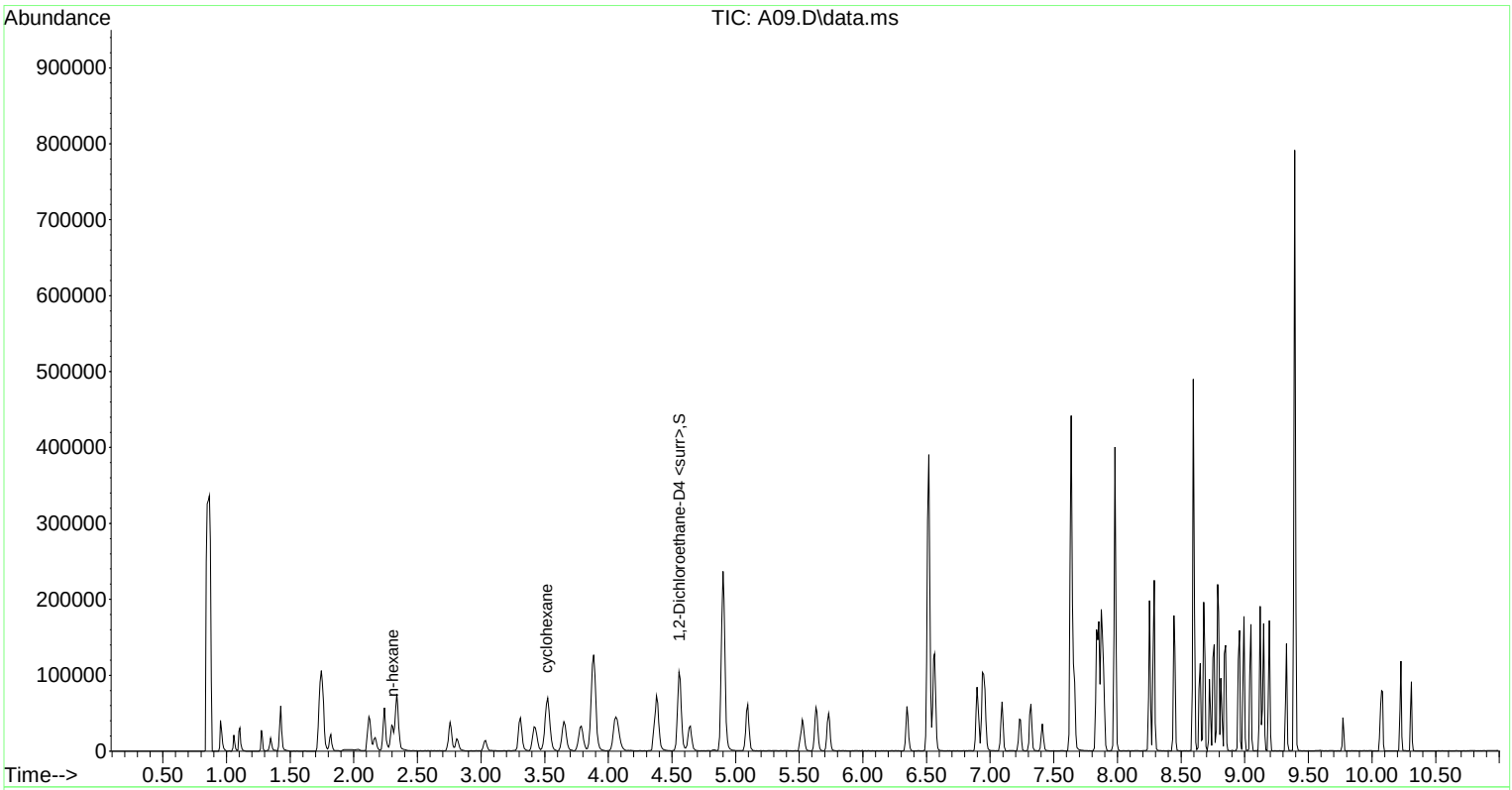
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	23133	10.00	µg/l	97
46] 1,3-dichloropropane	7.317	76	30638	10.00	µg/l	100
47] 2-Hexanone	7.661	43	52923	28.27	µg/L	99
48] dibromochloromethane	7.235	129	20592	9.61	µg/l	98
49] 1,2-dibromoethane	7.407	107	19413	9.78	µg/l	100
50] 1-chlorohexane	7.851	55	25837	15.42	µg/L	99
51] chlorobenzene	7.842	112	53499	9.61	µg/l	100
52] 1,1,1,2-tetrachloroethane	7.896	133	18814	9.85	µg/l	98
53] ethylbenzene	7.878	106	26851	8.31	µg/l	99
54] P & M -Xylene	7.986	106	65854	20.32	µg/l	99
55] o-xylene	8.258	106	30214	10.10	µg/l	98
56] styrene	8.285	104	51140	10.59	µg/l	99
57] bromoform	8.294	173	16070	9.67	µg/l	99
58] Isopropylbenzene (Cumene)	8.448	105	78040	10.15	µg/l	100
61] trans 1,4-dichloro-2-b...	8.819	53	12773	15.00	µg/L	94
62] bromobenzene	8.647	156	23037	9.85	µg/l	98
63] 1,1,2,2-tetrachloroethane	8.729	83	27848	9.66	µg/l	100
64] 1,2,3-trichloropropane	8.792	110	7989	9.47	µg/l	99
65] n-propylbenzene	8.683	91	98683	10.43	µg/l	100
66] 2-chlorotoluene	8.756	91	55358	9.95	µg/l	99
67] 4-chlorotoluene	8.846	91	59646	10.02	µg/l	99
68] 1,3,5-trimethylbenzene	8.792	105	60206	10.79	µg/l	99
69] tert-butylbenzene	8.955	119	47805	10.55	µg/l	99
70] 1,2,4-trimethylbenzene	8.991	105	59401	11.08	µg/l	99
71] sec-butylbenzene	9.045	105	69501	10.65	µg/l	99
72] 1,3-dichlorobenzene	9.154	146	37984	9.50	µg/l	99
73] 4-isopropyltoluene	9.127	119	50068	10.75	µg/l	99
74] 1,4-dichlorobenzene	9.199	146	39478	9.87	µg/l	98
75] 1,2-dichlorobenzene	9.398	146	37226	9.17	µg/l	97
76] n-butylbenzene	9.326	91	44829	10.74	µg/l	100
77] 1,2-dibromo-3-chloropr...	9.776	75	6006	9.17	µg/l	98
78] 1,2,4-trichlorobenzene	10.080	180	16043	8.53	µg/l	99
79] hexachlorobutadiene	10.072	225	5997	8.47	µg/l	98
80] naphthalene	10.224	128	45759	9.25	µg/l	100
81] 1,2,3-trichlorobenzene	10.308	180	16961	9.24	µg/l	99

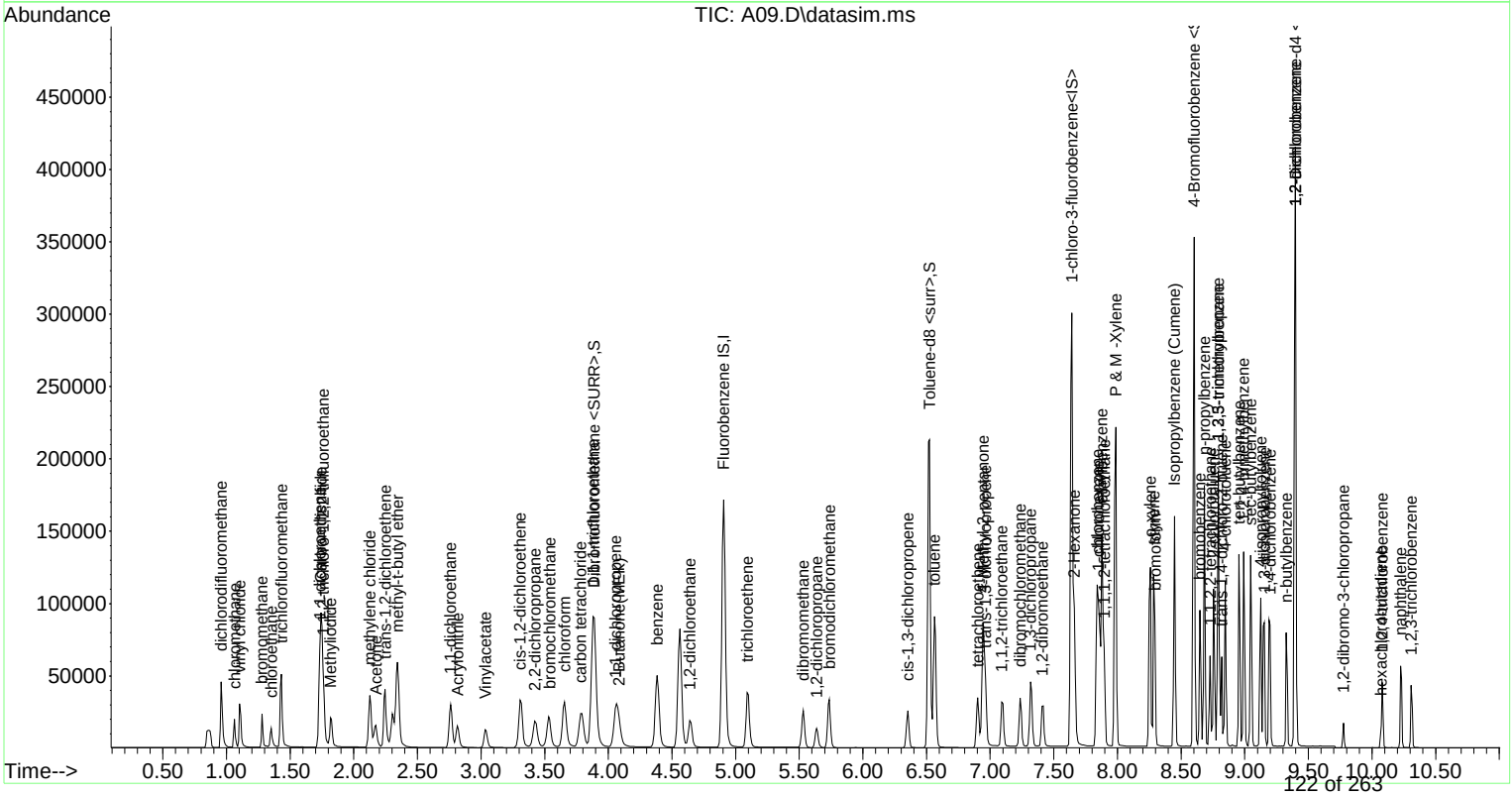
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A09.D
Acq On : 12 Aug 2014 6:27 pm
Operator : SP
Sample : 10
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 20:28:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A10.D
Acq On : 12 Aug 2014 6:44 pm
Operator : SP
Sample : 30
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 12 20:27:03 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	51571	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.643	95	84416	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	96036	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	79726	30.00	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.00%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	83867	30.00	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 100.00%			
41) Toluene-d8 <surr>	6.515	98	214072	30.00	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 100.00%			
60) 4-Bromofluorobenzene <...	8.602	95	90900	30.00	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	95137	30.00	µg/l	100
3] chloromethane	1.063	50	47142	30.00	µg/l	100
4] vinyl chloride	1.103	62	76950	30.00	µg/l	100
5] bromomethane	1.279	96	28668	30.00	µg/l	100
6] chloroethane	1.352	64	35733	30.00	µg/l	100
7] trichlorofluoromethane	1.432	101	112475	30.00	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	84840	45.00	µg/L	100
9] 1,1-dichloroethene	1.733	96	50578	30.00	µg/l	100
10] Acetone	2.174	43	57498	90.00	µg/L	100
11] Acrylonitrile	2.814	53	39713	45.00	µg/L	100
12] Methyliodide	1.817	142	73830	45.00	µg/L	100
13] Carbon disulfide	1.742	76	242022	45.00	µg/L	100
14] methylene chloride	2.125	84	60991	30.00	µg/l	100
15] methyl-t-butyl ether	2.344	73	228947	45.00	µg/L	100
16] trans-1,2-dichloroethene	2.246	96	60956	30.00	µg/l	100
17] Vinylacetate	3.033	43	80906	30.00	µg/L	100
18) n-hexane	2.297	56	39328	30.00	µg/L	100
19] 1,1-dichloroethane	2.761	63	120866	30.00	µg/l	100
20] 2-Butanone(MEK)	4.075	43	117383	90.00	µg/L	100
21] 2,2-dichloropropane	3.423	77	89193	30.00	µg/l	100
22] cis-1,2-dichloroethene	3.306	96	68091	30.00	µg/l	100
23] bromochloromethane	3.530	128	34306	30.00	µg/l	100
24) cyclohexane	3.515	56	94429	30.00	µg/L	100
25] chloroform	3.656	83	132048	30.00	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	118330	30.00	µg/l	100
28] carbon tetrachloride	3.793	117	96627	30.00	µg/l	100
29] 1,1-dichloropropene	4.055	75	96215	30.00	µg/l	100
31] benzene	4.384	78	276136	30.00	µg/l	100
32] 1,2-dichloroethane	4.641	62	95829	30.00	µg/l	100
33] trichloroethene	5.092	95	72222	30.00	µg/l	100
34] 1,2-dichloropropane	5.637	63	72790	30.00	µg/l	100
35] dibromomethane	5.531	93	49186	30.00	µg/l	100
37] bromodichloromethane	5.736	83	96529	30.00	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	102143	30.00	µg/l	100
39] 4-Methyl-2-pentanone	6.946	58	88787	90.00	µg/L	100
42] toluene	6.562	92	152197	30.00	µg/l	100
43] trans-1,3-dichloropropene	6.964	75	95160	30.00	µg/l	100
44] 1,1,2-trichloroethane	7.090	83	53063	30.00	µg/l	100

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A10.D
Acq On : 12 Aug 2014 6:44 pm
Operator : SP
Sample : 30
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 12 20:27:03 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

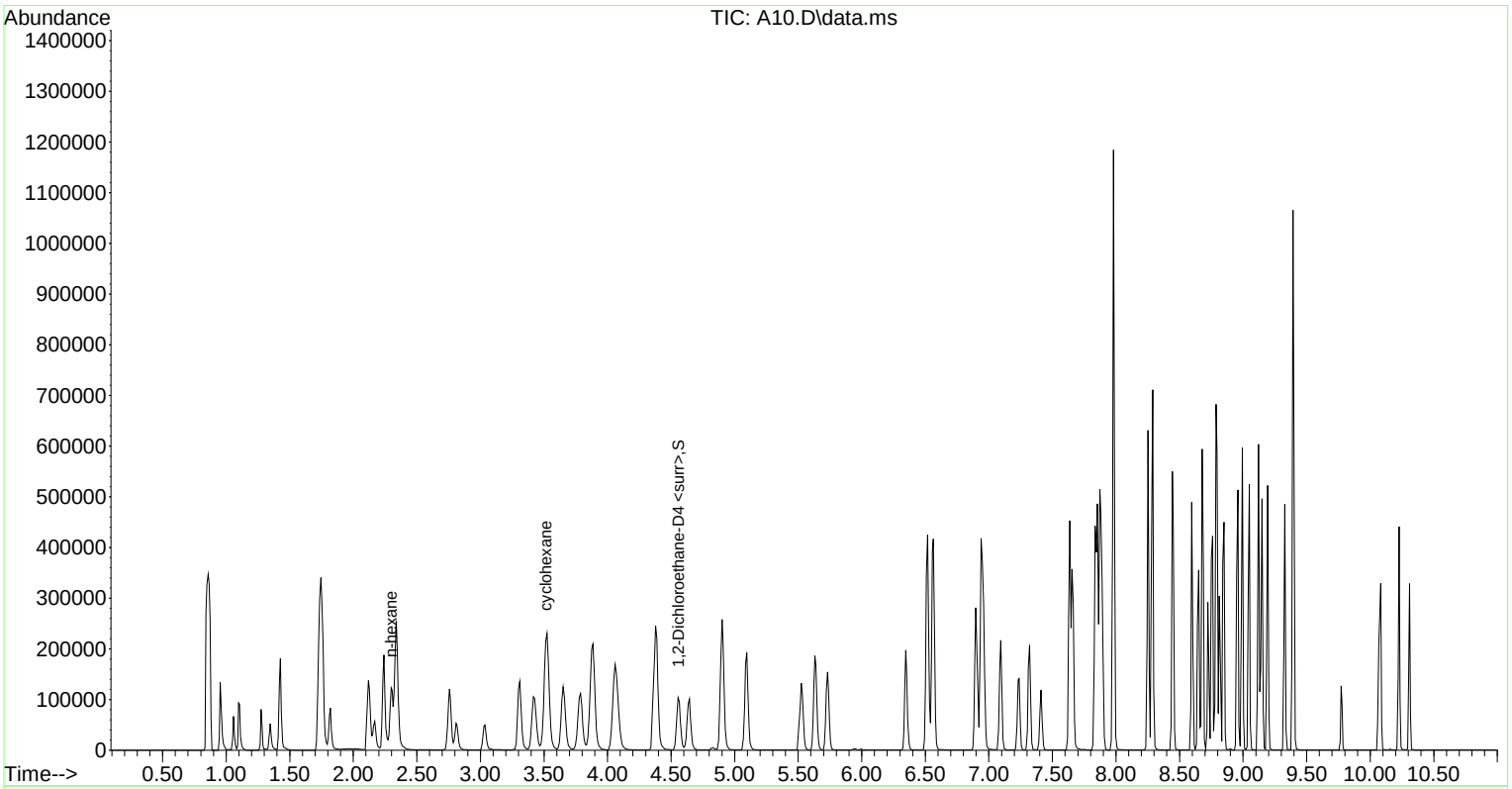
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	78777	30.00	µg/l	100
46] 1,3-dichloropropane	7.317	76	100327	30.00	µg/l	100
47] 2-Hexanone	7.661	43	174978	90.00	µg/L	100
48] dibromochloromethane	7.235	129	70381	30.00	µg/l	100
49] 1,2-dibromoethane	7.416	107	64325	30.00	µg/l	100
50] 1-chlorohexane	7.860	55	72596	45.00	µg/L	100
51] chlorobenzene	7.842	112	149331	30.00	µg/l	100
52] 1,1,1,2-tetrachloroethane	7.896	133	55313	30.00	µg/l	100
53] ethylbenzene	7.878	106	76199	30.00	µg/l	100
54] P & M -Xylene	7.987	106	191146	60.00	µg/l	100
55] o-xylene	8.258	106	92752	30.00	µg/l	100
56] styrene	8.285	104	162606	30.00	µg/l	100
57] bromoform	8.294	173	52165	30.00	µg/l	100
58] Isopropylbenzene (Cumene)	8.448	105	247259	30.00	µg/l	100
61] trans 1,4-dichloro-2-b...	8.819	53	41885	45.00	µg/L	100
62] bromobenzene	8.647	156	69830	30.00	µg/l	100
63] 1,1,2,2-tetrachloroethane	8.729	83	86275	30.00	µg/l	100
64] 1,2,3-trichloropropane	8.792	110	25720	30.00	µg/l	100
65] n-propylbenzene	8.683	91	294341	30.00	µg/l	100
66] 2-chlorotoluene	8.756	91	170522	30.00	µg/l	100
67] 4-chlorotoluene	8.846	91	184382	30.00	µg/l	100
68] 1,3,5-trimethylbenzene	8.792	105	192310	30.00	µg/l	100
69] tert-butylbenzene	8.955	119	146390	30.00	µg/l	100
70] 1,2,4-trimethylbenzene	8.991	105	188310	30.00	µg/l	100
71] sec-butylbenzene	9.045	105	212121	30.00	µg/l	100
72] 1,3-dichlorobenzene	9.154	146	116899	30.00	µg/l	100
73] 4-isopropyltoluene	9.127	119	164092	30.00	µg/l	100
74] 1,4-dichlorobenzene	9.199	146	115160	30.00	µg/l	100
75] 1,2-dichlorobenzene	9.398	146	115061	30.00	µg/l	100
76] n-butylbenzene	9.326	91	152669	30.00	µg/l	100
77] 1,2-dibromo-3-chloropr...	9.776	75	18511	30.00	µg/l	100
78] 1,2,4-trichlorobenzene	10.080	180	60245	30.00	µg/l	100
79] hexachlorobutadiene	10.072	225	22142	30.00	µg/l	100
80] naphthalene	10.232	128	165149	30.00	µg/l	100
81] 1,2,3-trichlorobenzene	10.308	180	56575	30.00	µg/l	100

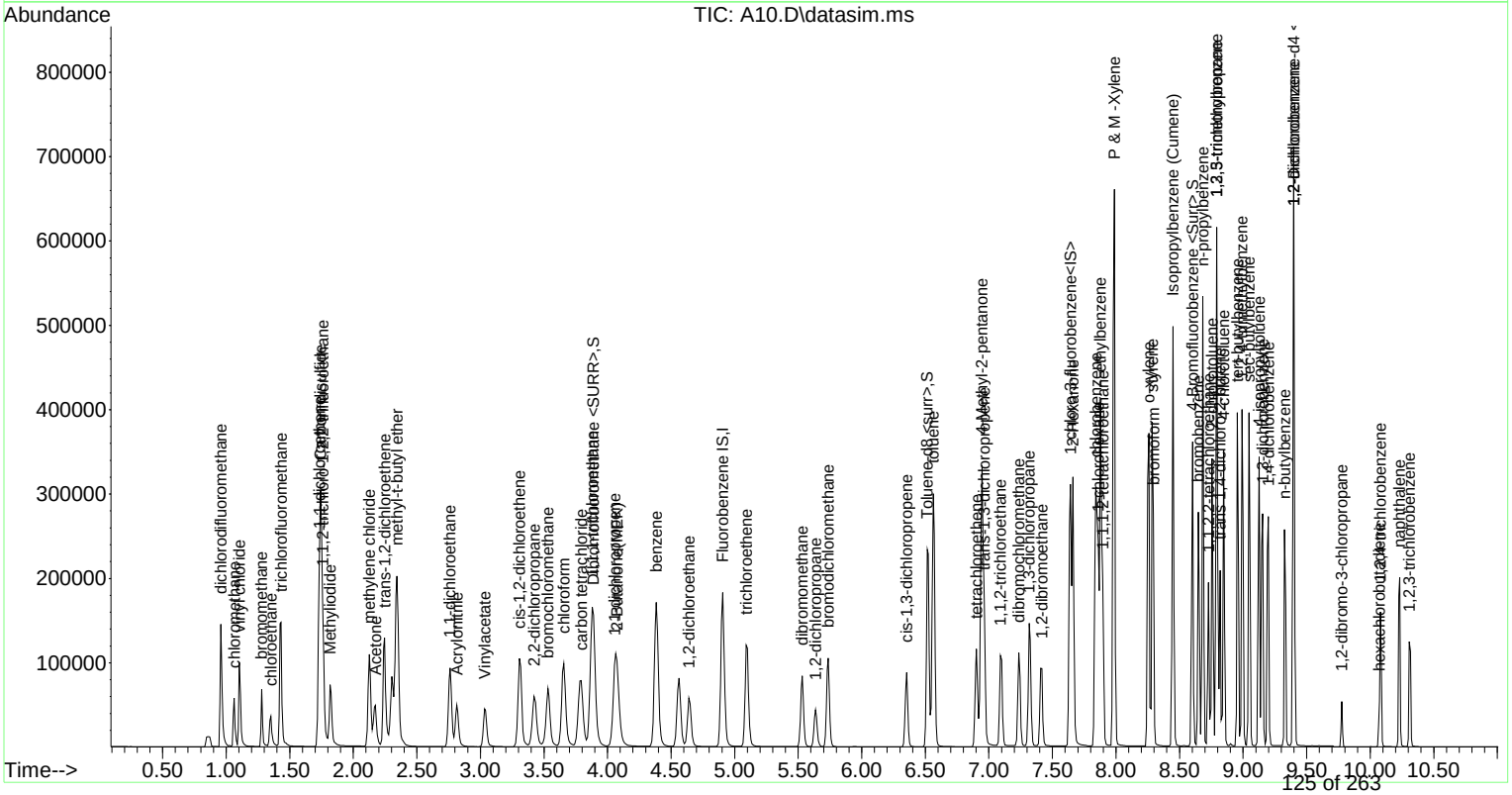
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A10.D
Acq On : 12 Aug 2014 6:44 pm
Operator : SP
Sample : 30
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 12 20:27:03 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A11.D
Acq On : 12 Aug 2014 7:00 pm
Operator : SP
Sample : 50
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 12 20:29:26 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	47644	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	78188	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	100158	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	74594	28.67	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.57%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	75136	27.43	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 91.43%			
41) Toluene-d8 <surr>	6.523	98	196327	30.73	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 102.43%			
60) 4-Bromofluorobenzene <...	8.602	95	91124	29.50	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 98.33%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	154443	48.21	µg/l	100
3] chloromethane	1.063	50	88556	47.13	µg/l	100
4] vinyl chloride	1.103	62	129863	47.90	µg/l	99
5] bromomethane	1.279	96	49561	43.18	µg/l	99
6] chloroethane	1.352	64	60079	43.42	µg/l	99
7] trichlorofluoromethane	1.432	101	183703	47.66	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	138076	77.86	µg/L	100
9] 1,1-dichloroethene	1.733	96	81930	49.02	µg/l	99
10] Acetone	2.173	43	91996	107.52	µg/L	100
11] Acrylonitrile	2.814	53	62904	69.05	µg/L	98
12] Methyliodide	1.825	142	132759	89.68	µg/L	98
13] Carbon disulfide	1.742	76	399091	70.74	µg/L	100
14] methylene chloride	2.125	84	100309	40.09	µg/l	98
15] methyl-t-butyl ether	2.343	73	382378	79.04	µg/L #	95
16] trans-1,2-dichloroethene	2.246	96	97525	46.73	µg/l	100
17] Vinylacetate	3.041	43	137967	57.77	µg/L	99
18) n-hexane	2.305	56	64671	61.66	µg/L	84
19] 1,1-dichloroethane	2.761	63	193898	44.65	µg/l	100
20] 2-Butanone(MEK)	4.075	43	181112	153.14	µg/L	100
21] 2,2-dichloropropane	3.423	77	145656	49.56	µg/l	99
22] cis-1,2-dichloroethene	3.316	96	111119	45.06	µg/l	100
23] bromochloromethane	3.540	128	54980	46.98	µg/l	100
24) cyclohexane	3.514	56	152385	57.73	µg/L	98
25] chloroform	3.656	83	207996	42.96	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	187127	49.52	µg/l	100
28] carbon tetrachloride	3.793	117	153629	51.09	µg/l	100
29] 1,1-dichloropropene	4.055	75	150215	53.34	µg/l	100
31] benzene	4.384	78	417497	49.32	µg/l	99
32] 1,2-dichloroethane	4.641	62	147534	46.24	µg/l	100
33] trichloroethene	5.100	95	113022	49.85	µg/l	99
34] 1,2-dichloropropane	5.637	63	110000	46.95	µg/l	100
35] dibromomethane	5.531	93	74327	44.91	µg/l	98
37] bromodichloromethane	5.736	83	150905	48.83	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	163255	53.55	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	136780	161.11	µg/L	99
42] toluene	6.562	92	233465	49.70	µg/l	100
43] trans-1,3-dichloropropene	6.964	75	148775	57.65	µg/l	99
44] 1,1,2-trichloroethane	7.090	83	81714	53.80	µg/l	98

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A11.D
Acq On : 12 Aug 2014 7:00 pm
Operator : SP
Sample : 50
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 12 20:29:26 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

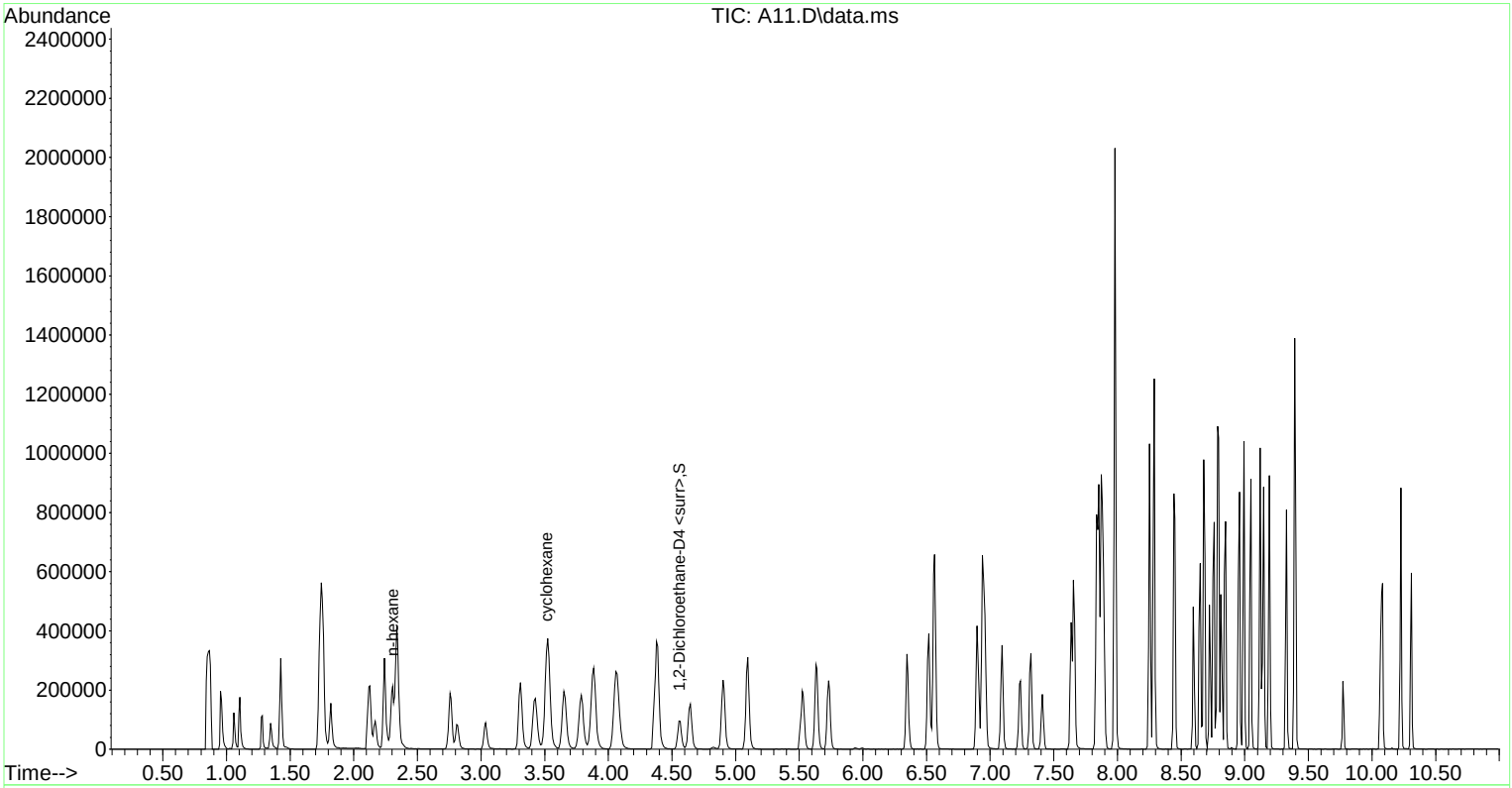
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	122210	54.32	µg/l	99
46] 1,3-dichloropropane	7.317	76	160893	54.05	µg/l	99
47] 2-Hexanone	7.661	43	274393	152.75	µg/L	100
48] dibromochloromethane	7.235	129	113477	54.41	µg/l	100
49] 1,2-dibromoethane	7.416	107	105037	54.39	µg/l	99
50] 1-chlorohexane	7.860	55	131855	80.99	µg/L	99
51] chlorobenzene	7.842	112	278631	51.95	µg/l	99
52] 1,1,1,2-tetrachloroethane	7.896	133	102063	54.83	µg/l	98
53] ethylbenzene	7.878	106	138203	45.54	µg/l	99
54] P & M -Xylene	7.986	106	335374	106.77	µg/l	99
55] o-xylene	8.258	106	158260	54.39	µg/l	100
56] styrene	8.285	104	277340	58.14	µg/l	100
57] bromoform	8.294	173	90810	55.85	µg/l	100
58] Isopropylbenzene (Cumene)	8.448	105	412370	55.00	µg/l	99
61] trans 1,4-dichloro-2-b...	8.819	53	70377	77.47	µg/L	99
62] bromobenzene	8.647	156	118756	48.26	µg/l	99
63] 1,1,2,2-tetrachloroethane	8.729	83	148532	48.86	µg/l	100
64] 1,2,3-trichloropropane	8.792	110	42900	48.30	µg/l	95
65] n-propylbenzene	8.683	91	503640	50.20	µg/l	100
66] 2-chlorotoluene	8.756	91	289460	49.25	µg/l	100
67] 4-chlorotoluene	8.846	91	302196	48.23	µg/l	99
68] 1,3,5-trimethylbenzene	8.792	105	322343	53.71	µg/l	100
69] tert-butylbenzene	8.955	119	250218	51.73	µg/l	99
70] 1,2,4-trimethylbenzene	8.991	105	323517	55.66	µg/l	100
71] sec-butylbenzene	9.045	105	378166	53.85	µg/l	100
72] 1,3-dichlorobenzene	9.154	146	201160	47.90	µg/l	100
73] 4-isopropyltoluene	9.127	119	283753	56.09	µg/l	100
74] 1,4-dichlorobenzene	9.199	146	208009	49.24	µg/l	100
75] 1,2-dichlorobenzene	9.398	146	202491	47.52	µg/l	99
76] n-butylbenzene	9.326	91	268807	58.68	µg/l	99
77] 1,2-dibromo-3-chloropr...	9.776	75	32128	46.85	µg/l	99
78] 1,2,4-trichlorobenzene	10.080	180	109780	54.16	µg/l	100
79] hexachlorobutadiene	10.072	225	39990	52.72	µg/l	99
80] naphthalene	10.232	128	314699	58.10	µg/l	100
81] 1,2,3-trichlorobenzene	10.308	180	107124	54.17	µg/l	100

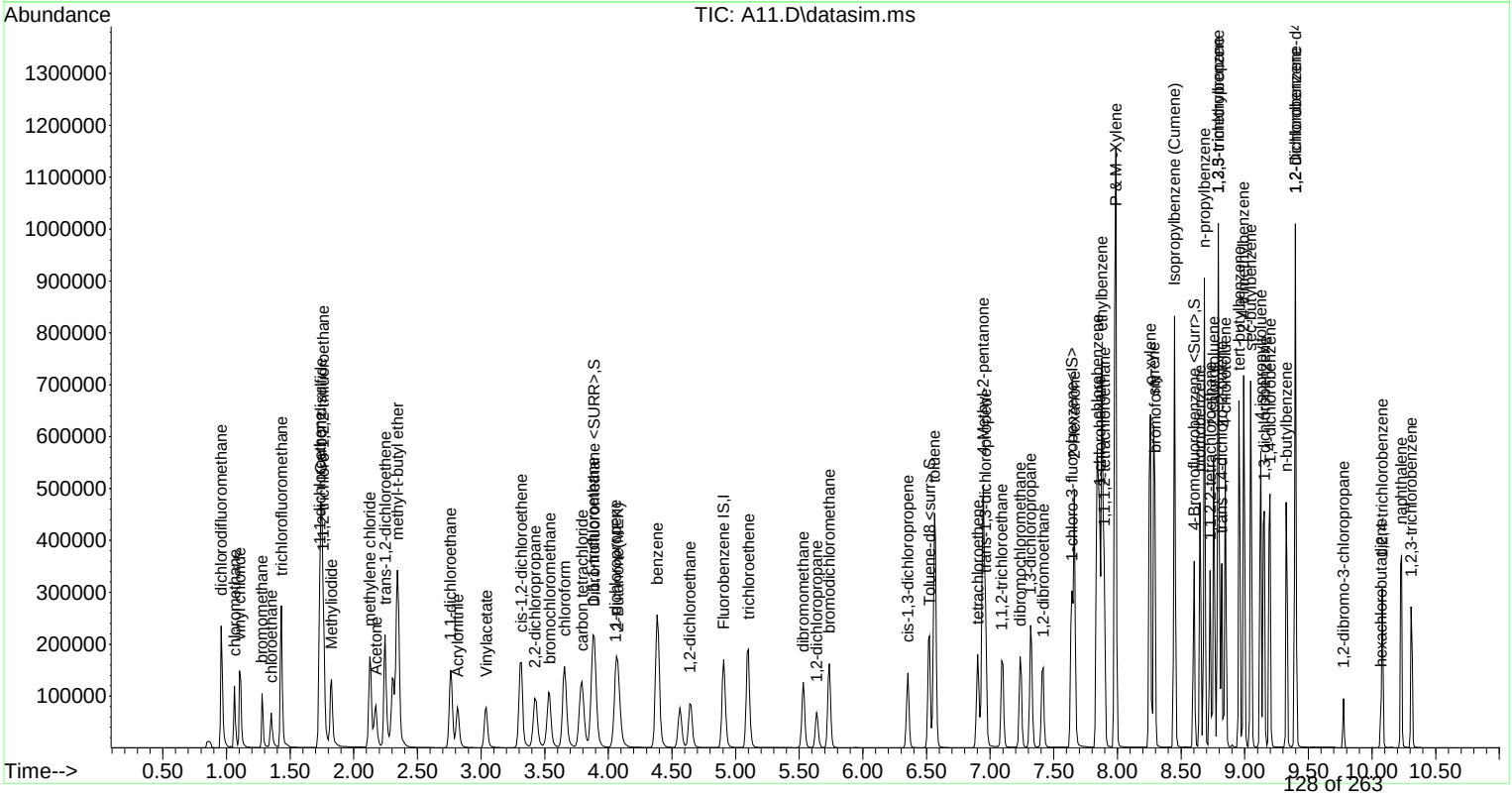
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A11.D
Acq On : 12 Aug 2014 7:00 pm
Operator : SP
Sample : 50
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 12 20:29:26 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A12.D
Acq On : 12 Aug 2014 7:17 pm
Operator : SP
Sample : 70
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 12 20:29:52 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	54102	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	70180	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	84939	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	83052	28.37	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.57%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	81548	26.70	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 89.00%			
41) Toluene-d8 <surr>	6.523	98	180128	31.21	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 104.03%			
60) 4-Bromofluorobenzene <...	8.602	95	77348	29.59	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 98.63%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	229458	63.98	µg/l	100
3] chloromethane	1.063	50	132021	62.92	µg/l	100
4] vinyl chloride	1.103	62	191359	63.17	µg/l	100
5] bromomethane	1.279	96	75312	59.26	µg/l	99
6] chloroethane	1.352	64	86395	56.72	µg/l	100
7] trichlorofluoromethane	1.424	101	269804	62.71	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	200645	100.37	µg/L	100
9] 1,1-dichloroethene	1.733	96	119536	63.90	µg/l	99
10] Acetone	2.173	43	142290	153.07	µg/L	100
11] Acrylonitrile	2.814	53	100156	97.91	µg/L	99
12] Methyliodide	1.817	142	187793	110.71	µg/L	99
13] Carbon disulfide	1.742	76	585215	93.08	µg/L	100
14] methylene chloride	2.125	84	140192	51.51	µg/l	99
15] methyl-t-butyl ether	2.343	73	569037	103.78	µg/L	96
16] trans-1,2-dichloroethene	2.246	96	145060	62.33	µg/l	100
17] Vinylacetate	3.033	43	219760	79.25	µg/L	100
18) n-hexane	2.297	56	96371	78.87	µg/L	98
19] 1,1-dichloroethane	2.761	63	293037	60.73	µg/l	100
20] 2-Butanone(MEK)	4.075	43	301056	222.04	µg/L	100
21] 2,2-dichloropropane	3.423	77	226890	68.26	µg/l	100
22] cis-1,2-dichloroethene	3.306	96	176136	63.82	µg/l	99
23] bromochloromethane	3.530	128	86627	65.83	µg/l	99
24) cyclohexane	3.514	56	248858	80.88	µg/L	96
25] chloroform	3.656	83	322038	59.97	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	285510	67.00	µg/l	99
28] carbon tetrachloride	3.783	117	238185	69.79	µg/l	100
29] 1,1-dichloropropene	4.055	75	236607	73.39	µg/l	100
31] benzene	4.384	78	628720	66.02	µg/l	100
32] 1,2-dichloroethane	4.641	62	223915	62.85	µg/l	100
33] trichloroethene	5.100	95	159755	63.08	µg/l	100
34] 1,2-dichloropropane	5.637	63	160957	61.70	µg/l	100
35] dibromomethane	5.531	93	112155	60.96	µg/l	99
37] bromodichloromethane	5.736	83	227783	65.59	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	256590	73.50	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	171226	181.61	µg/L	99
42] toluene	6.562	92	293920	69.75	µg/l	100
43] trans-1,3-dichloropropene	6.964	75	189680	79.94	µg/l	100
44] 1,1,2-trichloroethane	7.090	83	102517	74.41	µg/l	99

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A12.D
Acq On : 12 Aug 2014 7:17 pm
Operator : SP
Sample : 70
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 12 20:29:52 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration

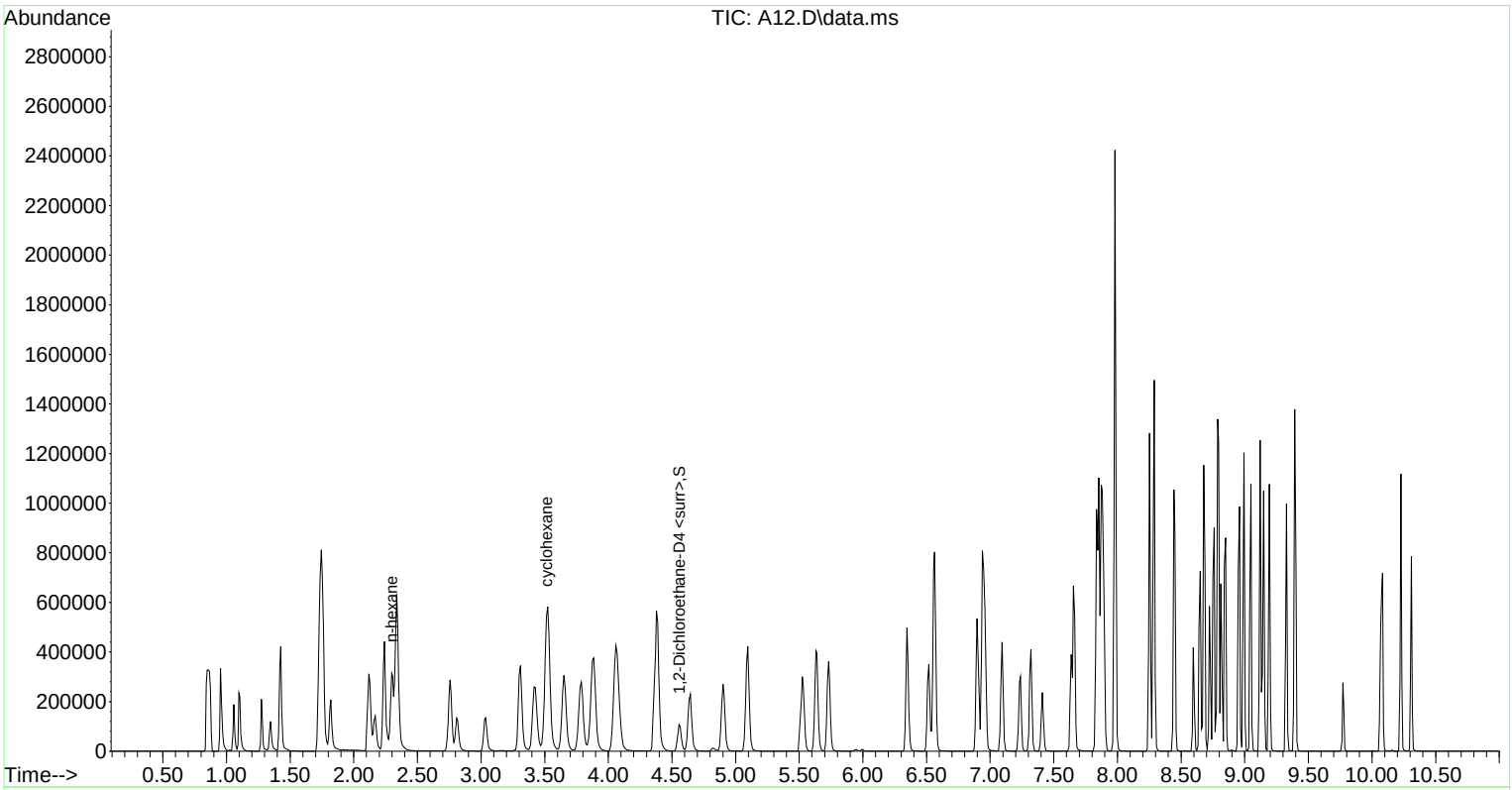
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	153602	75.13	µg/l	99
46] 1,3-dichloropropane	7.317	76	199697	74.03	µg/l	99
47] 2-Hexanone	7.661	43	333623	207.34	µg/L	100
48] dibromochloromethane	7.235	129	144464	76.06	µg/l	100
49] 1,2-dibromoethane	7.416	107	129785	74.14	µg/l	99
50] 1-chlorohexane	7.860	55	158387	107.89	µg/L	99
51] chlorobenzene	7.842	112	334450	69.54	µg/l	100
52] 1,1,1,2-tetrachloroethane	7.896	133	127849	75.51	µg/l	99
53] ethylbenzene	7.878	106	165838	62.04	µg/l	99
54] P & M -Xylene	7.986	106	401013	141.91	µg/l	100
55] o-xylene	8.258	106	190607	72.54	µg/l	99
56] styrene	8.285	104	332984	76.56	µg/l	100
57] bromoform	8.294	173	113575	76.60	µg/l	100
58] Isopropylbenzene (Cumene)	8.448	105	496559	73.22	µg/l	99
61] trans 1,4-dichloro-2-b...	8.819	53	86004	110.64	µg/L	98
62] bromobenzene	8.647	156	140913	67.87	µg/l	99
63] 1,1,2,2-tetrachloroethane	8.729	83	175040	68.19	µg/l	99
64] 1,2,3-trichloropropane	8.792	110	51554	68.66	µg/l	95
65] n-propylbenzene	8.683	91	595027	69.95	µg/l	100
66] 2-chlorotoluene	8.756	91	338758	68.25	µg/l	99
67] 4-chlorotoluene	8.846	91	370031	69.69	µg/l	100
68] 1,3,5-trimethylbenzene	8.792	105	383194	74.49	µg/l	99
69] tert-butylbenzene	8.955	119	295322	71.70	µg/l	99
70] 1,2,4-trimethylbenzene	8.991	105	385462	76.91	µg/l	99
71] sec-butylbenzene	9.045	105	437284	72.92	µg/l	100
72] 1,3-dichlorobenzene	9.154	146	234565	66.42	µg/l	100
73] 4-isopropyltoluene	9.127	119	333457	76.52	µg/l	100
74] 1,4-dichlorobenzene	9.199	146	243943	68.36	µg/l	100
75] 1,2-dichlorobenzene	9.398	146	235351	65.79	µg/l	99
76] n-butylbenzene	9.326	91	312691	78.80	µg/l	98
77] 1,2-dibromo-3-chloropr...	9.776	75	38509	66.73	µg/l	98
78] 1,2,4-trichlorobenzene	10.080	180	135080	77.23	µg/l	100
79] hexachlorobutadiene	10.072	225	50196	76.77	µg/l	99
80] naphthalene	10.232	128	393414	82.99	µg/l	100
81] 1,2,3-trichlorobenzene	10.308	180	131278	76.97	µg/l	100

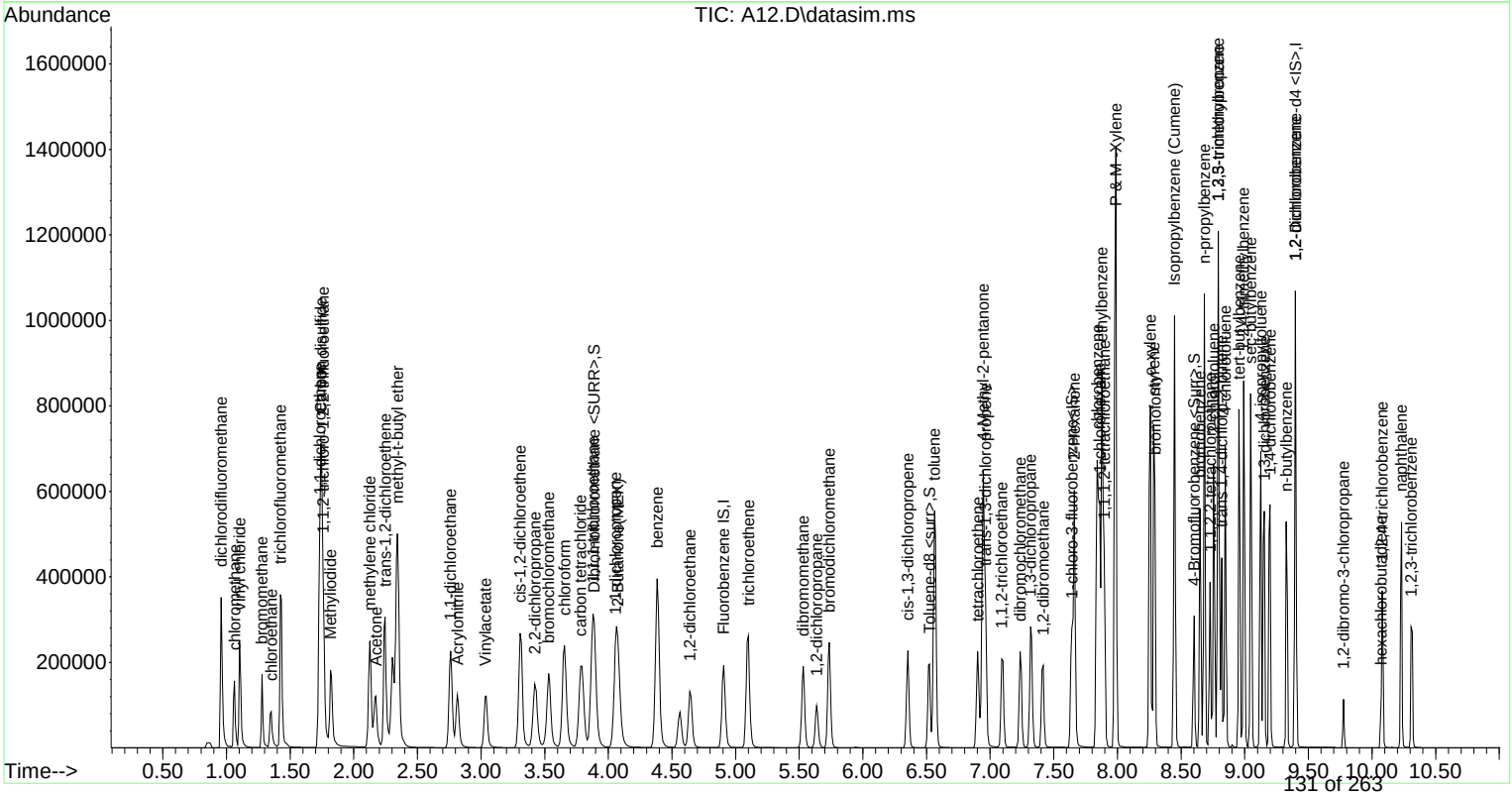
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A12.D
Acq On : 12 Aug 2014 7:17 pm
Operator : SP
Sample : 70
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 12 20:29:52 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:26:28 2014
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A13.D
Acq On : 12 Aug 2014 7:33 pm
Operator : SP
Sample : R
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 12 20:32:51 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:32:33 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	47712	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.643	95	82877	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	97566	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	81405	31.53	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.10%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	85127	31.60	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 105.33%			
41) Toluene-d8 <surr>	6.523	98	208277	30.55	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 101.83%			
60) 4-Bromofluorobenzene <...	8.602	95	89972	29.97	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 99.90%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.863	85	2297	0.73	µg/l #	1
3] chloromethane	1.063	50	1612	0.93	µg/l	98
4] vinyl chloride	1.103	62	350	0.13	µg/l #	42
5] bromomethane	1.287	96	631	0.20	µg/l #	42
6] chloroethane	1.352	64	332	0.26	µg/l #	1
8] 1,1,2-trichloro-1,2,2-...	1.758	101	225	0.13	µg/L	98
9] 1,1-dichloroethene	1.733	96	169	0.10	µg/l	78
10] Acetone	2.173	43	1812	0.72	µg/L	88
11] Acrylonitrile	2.814	53	350	0.39	µg/L	93
12] Methyliodide	1.825	142	1204	0.80	µg/L	98
13] Carbon disulfide	1.750	76	5239	1.00	µg/L	98
14] methylene chloride	2.125	84	927	Below Cal		95
16] trans-1,2-dichloroethene	2.246	96	460	0.22	µg/l	97
20] 2-Butanone(MEK)	4.094	43	1037	0.87	µg/L	90
22] cis-1,2-dichloroethene	3.316	96	521	0.23	µg/l	90
23] bromochloromethane	3.540	128	315	0.27	µg/l	96
25] chloroform	3.647	83	735	0.17	µg/l	100
32] 1,2-dichloroethane	4.641	62	315	0.10	µg/l #	77
35] dibromomethane	5.531	93	422	0.26	µg/l	97
38] cis-1,3-dichloropropene	6.352	75	361	0.12	µg/l #	54
39] 4-Methyl-2-pentanone	6.945	58	391	0.47	µg/L #	64
43] trans-1,3-dichloropropene	6.964	75	616	0.22	µg/l	93
45] tetrachloroethene	6.903	166	270	0.11	µg/l	82
47] 2-Hexanone	7.670	43	1137	0.60	µg/L	100
49] 1,2-dibromoethane	7.416	107	224	0.11	µg/l #	86
50] 1-chlorohexane	7.860	55	425	0.25	µg/L #	46
51] chlorobenzene	7.842	112	750	0.13	µg/l	96
53] ethylbenzene	7.878	106	729	0.27	µg/l	69
54] P & M -Xylene	7.986	106	823	0.25	µg/l	97
55] o-xylene	8.258	106	371	0.12	µg/l	100
56] styrene	8.294	104	764	0.15	µg/l	79
58] Isopropylbenzene (Cumene)	8.448	105	1483	0.19	µg/l	95
61] trans 1,4-dichloro-2-b...	8.819	53	274	0.31	µg/L	86
62] bromobenzene	8.647	156	510	0.21	µg/l	95
63] 1,1,2,2-tetrachloroethane	8.729	83	361	0.12	µg/l #	95
64] 1,2,3-trichloropropane	8.792	110	95	0.11	µg/l #	11
65] n-propylbenzene	8.683	91	2899	0.30	µg/l	97
66] 2-chlorotoluene	8.756	91	1445	0.25	µg/l	99

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A13.D
Acq On : 12 Aug 2014 7:33 pm
Operator : SP
Sample : R
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 12 20:32:51 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:32:33 2014
Response via : Initial Calibration

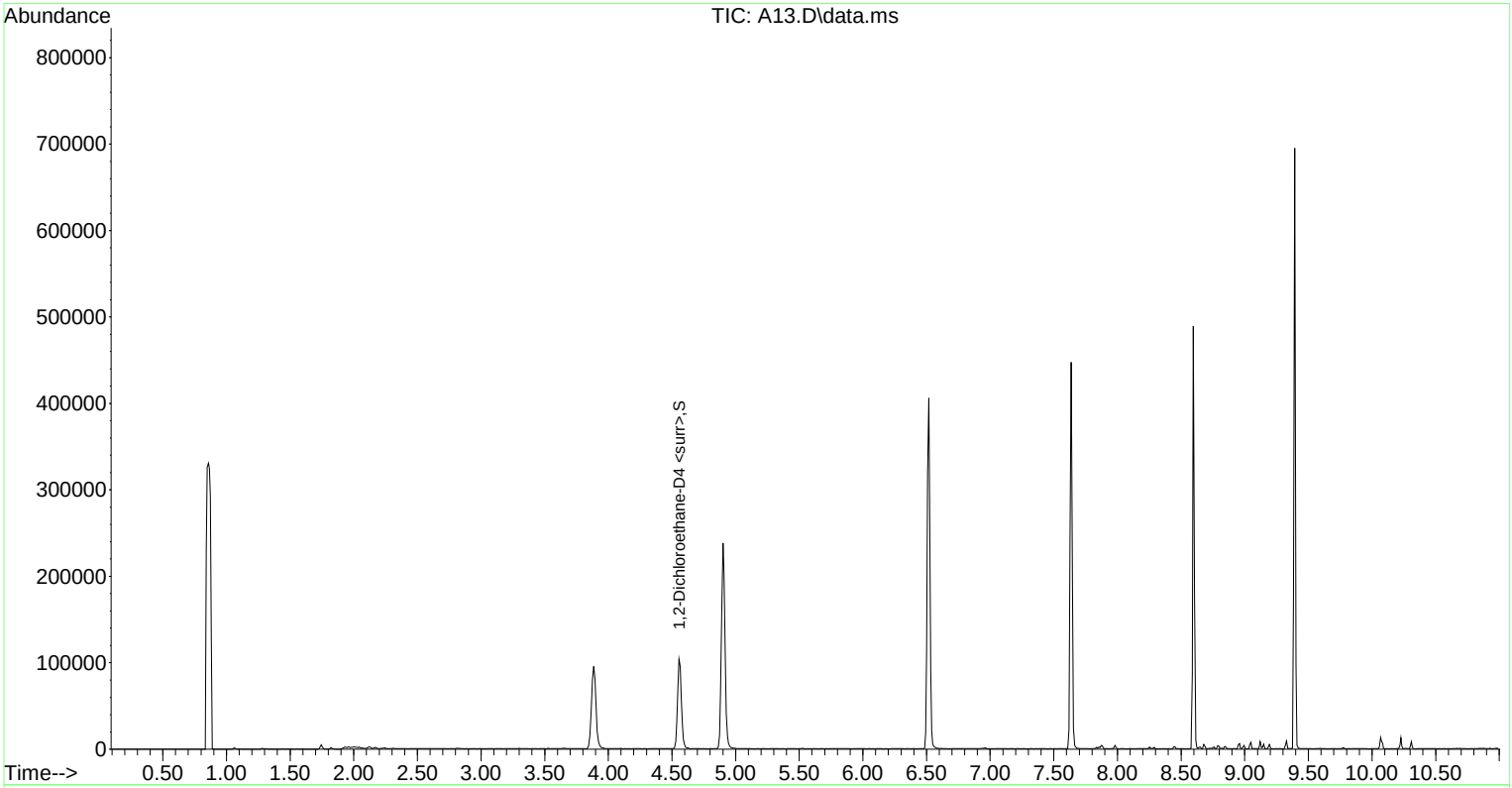
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
67] 4-chlorotoluene	8.846	91	1748	0.29	µg/l		97
68] 1,3,5-trimethylbenzene	8.792	105	1940	0.33	µg/l		99
69] tert-butylbenzene	8.955	119	2014	0.43	µg/l		97
70] 1,2,4-trimethylbenzene	8.991	105	1824	0.32	µg/l		98
71] sec-butylbenzene	9.045	105	3664	0.53	µg/l		100
72] 1,3-dichlorobenzene	9.154	146	1637	0.40	µg/l		98
73] 4-isopropyltoluene	9.127	119	2688	0.54	µg/l		97
74] 1,4-dichlorobenzene	9.199	146	1463	0.36	µg/l		94
75] 1,2-dichlorobenzene	9.398	146	1432	0.35	µg/l	#	18
76] n-butylbenzene	9.326	91	3540	0.78	µg/l		100
77] 1,2-dibromo-3-chloropr...	9.776	75	311	0.47	µg/l	#	57
78] 1,2,4-trichlorobenzene	10.080	180	1649	0.82	µg/l		96
79] hexachlorobutadiene	10.072	225	1563	2.08	µg/l		97
80] naphthalene	10.232	128	5034	0.92	µg/l		99
81] 1,2,3-trichlorobenzene	10.308	180	1792	0.91	µg/l		99

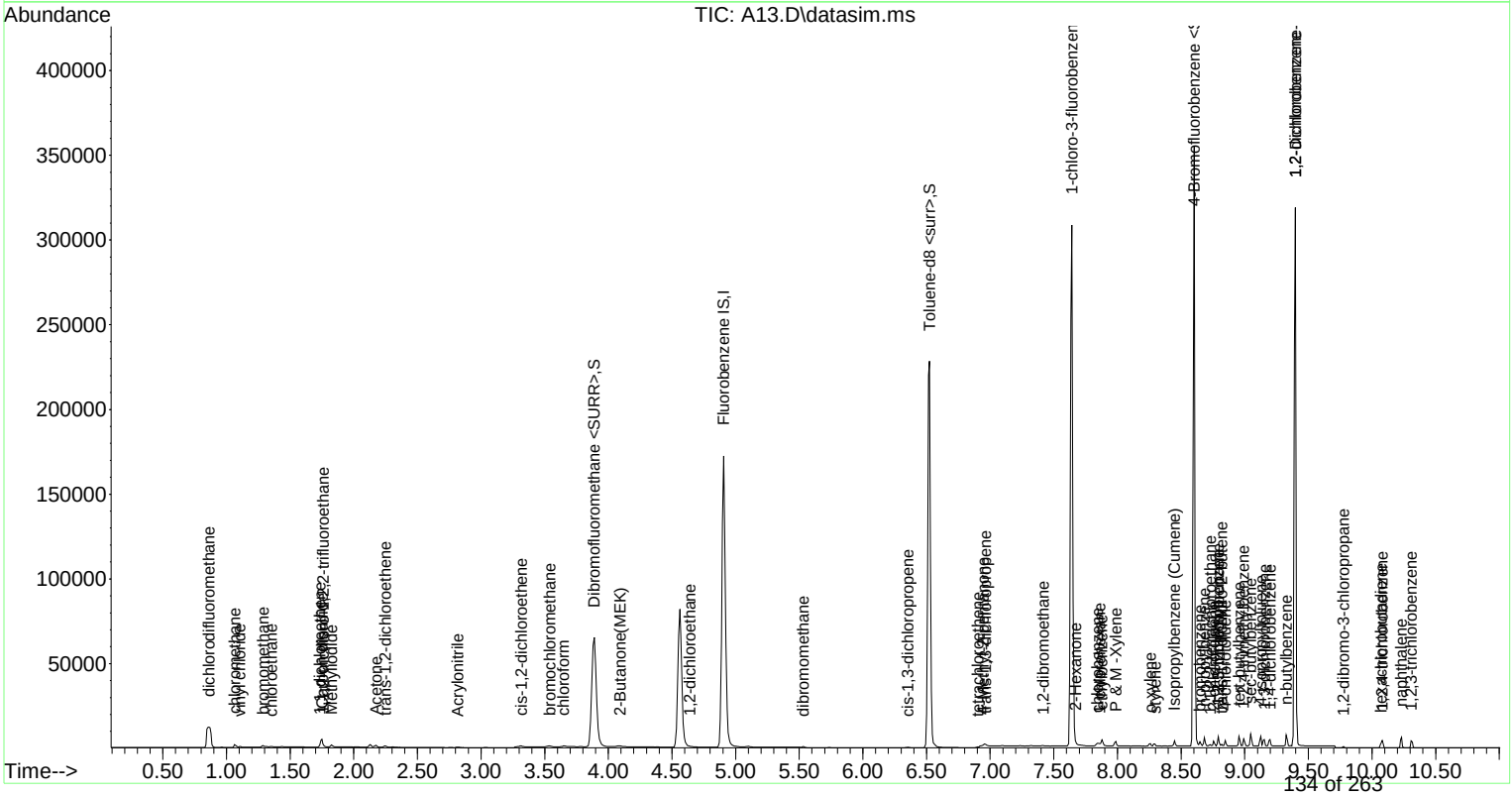
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A13.D
Acq On : 12 Aug 2014 7:33 pm
Operator : SP
Sample : R
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 12 20:32:51 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:32:33 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A14.D
Acq On : 12 Aug 2014 7:50 pm
Operator : SP
Sample : ICV
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 12 20:35:12 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	52678	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	86953	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	97942	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	76787	26.94	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 89.80%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	81880	27.53	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 91.77%			
41) Toluene-d8 <surr>	6.523	98	218302	30.52	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 101.73%			
60) 4-Bromofluorobenzene <...	8.602	95	92421	30.67	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 102.23%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	66782	20.31	µg/l	100
3] chloromethane	1.063	50	60538	31.69	µg/l	99
4] vinyl chloride	1.103	62	69193	25.36	µg/l	100
5] bromomethane	1.279	96	32338	30.69	µg/l	100
6] chloroethane	1.351	64	35211	25.40	µg/l	99
7] trichlorofluoromethane	1.432	101	99351	25.55	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	89707	46.09	µg/L	99
9] 1,1-dichloroethene	1.733	96	46398	25.47	µg/l	99
10] Acetone	2.173	43	56066	83.60	µg/L	99
11] Acrylonitrile	2.814	53	38543	38.70	µg/L	99
12] Methyliodide	1.825	142	69712	42.21	µg/L	99
13] Carbon disulfide	1.742	76	251394	43.37	µg/L	100
14] methylene chloride	2.125	84	61356	28.44	µg/l	99
15] methyl-t-butyl ether	2.343	73	230018	43.08	µg/L #	88
16] trans-1,2-dichloroethene	2.246	96	58139	25.66	µg/l	100
17] Vinylacetate	3.033	43	72838	26.98	µg/L	100
18) n-hexane	2.305	56	39532	29.47	µg/L	97
19] 1,1-dichloroethane	2.761	63	115366	25.88	µg/l	100
20] 2-Butanone(MEK)	4.075	43	104171	78.91	µg/L	99
21] 2,2-dichloropropane	3.423	77	91985	28.42	µg/l	100
22] cis-1,2-dichloroethene	3.306	96	67382	26.56	µg/l	99
23] bromochloromethane	3.540	128	33141	25.87	µg/l	99
24) cyclohexane	3.514	56	92782	30.97	µg/L	99
25] chloroform	3.656	83	125774	26.02	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	111759	26.94	µg/l	95
28] carbon tetrachloride	3.793	117	92169	27.73	µg/l	100
29] 1,1-dichloropropene	4.055	75	88141	28.08	µg/l	99
31] benzene	4.384	78	263728	28.44	µg/l	100
32] 1,2-dichloroethane	4.641	62	92678	26.72	µg/l	100
33] trichloroethene	5.100	95	72234	29.29	µg/l	99
34] 1,2-dichloropropane	5.637	63	73663	29.00	µg/l	99
35] dibromomethane	5.531	93	47980	26.78	µg/l	99
37] bromodichloromethane	5.735	83	98671	29.18	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	101207	29.77	µg/l	99
39] 4-Methyl-2-pentanone	6.945	58	83035	90.45	µg/L	99
42] toluene	6.562	92	146948	28.15	µg/l	100
43] trans-1,3-dichloropropene	6.963	75	93619	31.85	µg/l	99
44] 1,1,2-trichloroethane	7.090	83	51689	30.28	µg/l	99

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A14.D
Acq On : 12 Aug 2014 7:50 pm
Operator : SP
Sample : ICV
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 12 20:35:12 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration

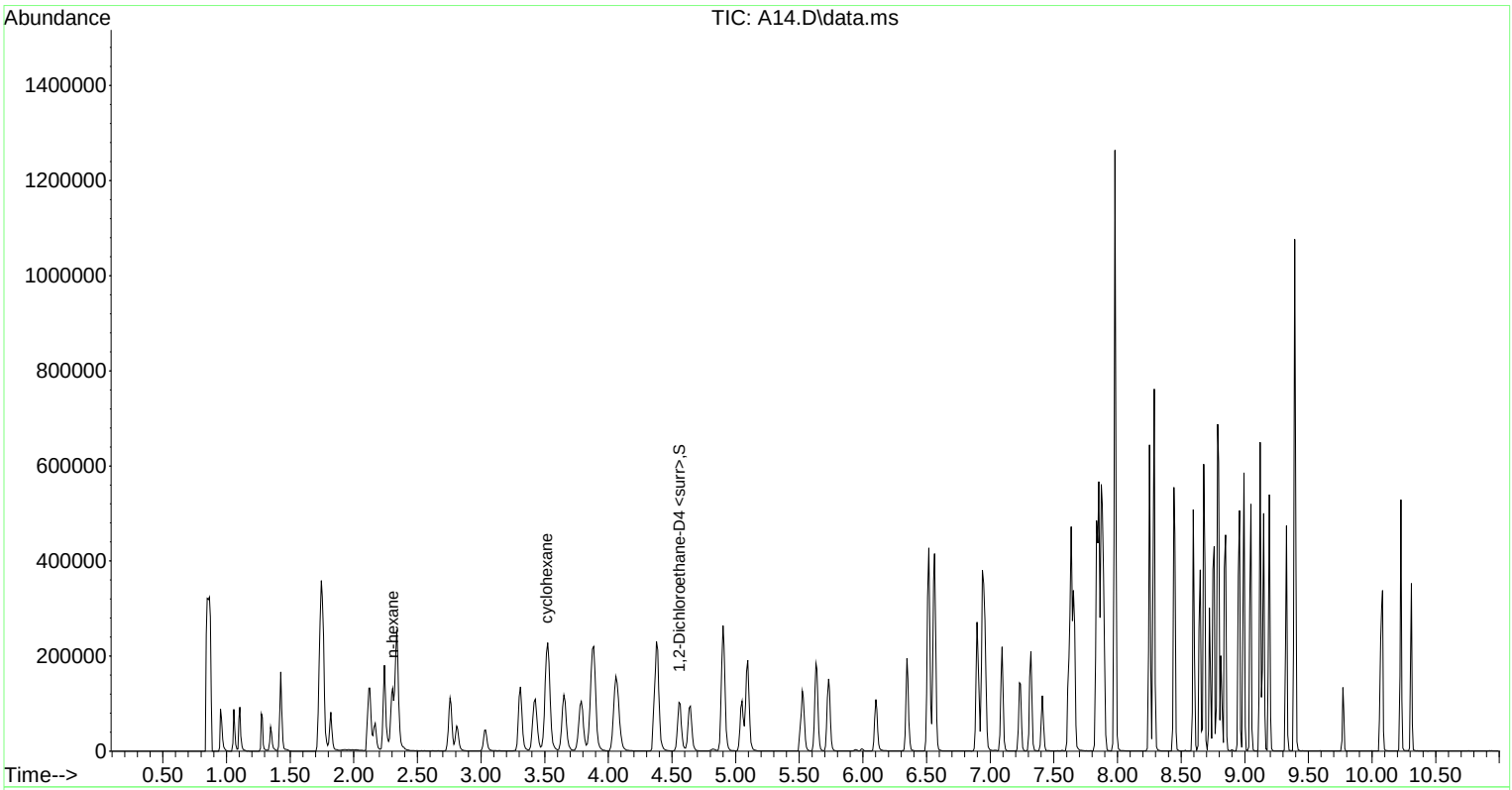
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45] tetrachloroethene	6.903	166	78193	30.87	µg/l		99
46] 1,3-dichloropropane	7.317	76	101204	30.28	µg/l		99
47] 2-Hexanone	7.660	43	148363	74.42	µg/L		93
48] dibromochloromethane	7.235	129	70879	30.12	µg/l		99
49] 1,2-dibromoethane	7.416	107	64606	29.79	µg/l		99
50] 1-chlorohexane	7.860	55	82783	45.51	µg/L		99
51] chlorobenzene	7.842	112	168474	28.27	µg/l		100
52] 1,1,1,2-tetrachloroethane	7.896	133	60477	28.83	µg/l		99
53] ethylbenzene	7.878	106	86108	30.47	µg/l		99
54] P & M -Xylene	7.986	106	205314	58.64	µg/l		99
55] o-xylene	8.258	106	96703	29.70	µg/l		99
56] styrene	8.285	104	168462	31.26	µg/l		99
57] bromoform	8.294	173	54004	29.40	µg/l		99
58] Isopropylbenzene (Cumene)	8.448	105	256340	30.51	µg/l		99
61] trans 1,4-dichloro-2-b...	8.819	53	28710	32.03	µg/L	#	72
62] bromobenzene	8.647	156	71600	29.91	µg/l		99
63] 1,1,2,2-tetrachloroethane	8.728	83	86966	29.38	µg/l		100
64] 1,2,3-trichloropropane	8.792	110	25710	29.69	µg/l		88
65] n-propylbenzene	8.683	91	303261	30.92	µg/l		100
66] 2-chlorotoluene	8.756	91	173045	30.24	µg/l		99
67] 4-chlorotoluene	8.846	91	194206	31.72	µg/l		97
68] 1,3,5-trimethylbenzene	8.792	105	189785	31.99	µg/l		100
69] tert-butylbenzene	8.955	119	151275	31.85	µg/l		99
70] 1,2,4-trimethylbenzene	8.991	105	193009	33.40	µg/l		99
71] sec-butylbenzene	9.045	105	222330	32.15	µg/l		100
72] 1,3-dichlorobenzene	9.154	146	118374	29.07	µg/l		100
73] 4-isopropyltoluene	9.127	119	168907	33.61	µg/l		100
74] 1,4-dichlorobenzene	9.199	146	124217	30.19	µg/l		100
75] 1,2-dichlorobenzene	9.398	146	116160	28.16	µg/l		100
76] n-butylbenzene	9.326	91	153792	33.61	µg/l		100
77] 1,2-dibromo-3-chloropr...	9.776	75	18650	28.03	µg/l		98
78] 1,2,4-trichlorobenzene	10.080	180	63324	31.40	µg/l		100
79] hexachlorobutadiene	10.072	225	24199	32.10	µg/l		97
80] naphthalene	10.232	128	181209	33.15	µg/l		100
81] 1,2,3-trichlorobenzene	10.308	180	61086	31.06	µg/l		99

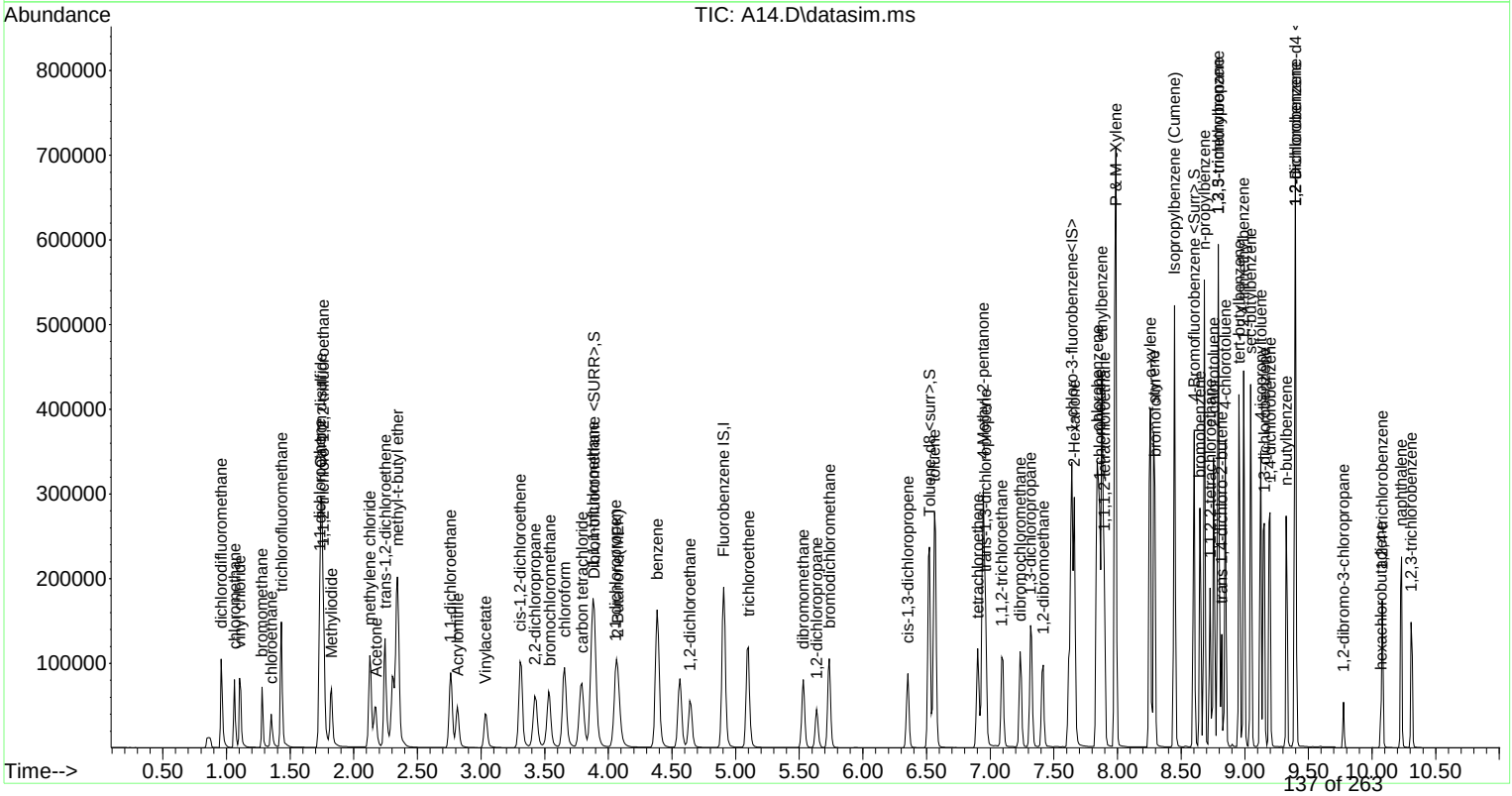
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\081214\
Data File : A14.D
Acq On : 12 Aug 2014 7:50 pm
Operator : SP
Sample : ICV
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 12 20:35:12 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0812.M
Quant Title : Purgable Organics By GCMS
QLast Update : Tue Aug 12 20:35:07 2014
Response via : Initial Calibration





SGS North America Inc.
Calibration Review and Validation for:
Volatile Mass Spec: SW 8260B / SW 8260Modified / EPA 624

Instrument/Date Code in YYYY-MMDD format (e.g., VNA2007-0507): VNA2014-0817

Contents:	Analyst's Review OK	Analyst's Review N/A	Peer Review OK	Peer Review N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Tune Report/Chrom for IB	☑		☑	
Instrument runlog	☑		☑	
Chromatograms for calibration points	☑		☑	
Chromatograms for ICV	☑		☑	
Validation:				
Dates are correct	☑		☑	
The retention time window set correctly GRO beginning of C6 --> beginning of C10	☐	☑	☐	☑
CCC percent relative standard deviation is ≤ 30%	☑		☑	
SPCC average response factor of 0.1 or 0.3	☑		☑	
Cal Table Report Avg RF values are equal to the ICV Avg RF values	☑		☑	
The percent relative standard deviation of the response factor is ≤ 15%	☑	☐	☑	☐
If RSD is >15%, use 1 st (linear) or 2 nd (quadratic) order regression and $r^2 \geq 0.990$.	☑	☐	☑	☐
Minimum of 5 points (or 6 points for 2nd order regression)	☑		☑	
8260B / 624 ICV is 80-120 % recovery	☑	☐	☑	☐
8260B Modified ICV is 50-150 % recovery	☑	☐	☑	☐
Correct calibration levels for LOQ	☑		☑	
Relative retention time shifts meet criteria?	☑		☑	
IS Areas updated/CC ISTD Areas printout	☑		☑	
If any compounds are not calibrated, are they clearly documented?	☐	☑	☐	☑
Manual Integrations - explanations, before and after printouts	☐	☑	☐	☑
Check Critical Pair List				
o-xylene and p&m-xylene	☑		☑	
1,2,4-trimethylbenzene and sec-butylbenzene	☑		☑	
1,3-dichlorobenzene and 1,4-dichlorobenzene	☑		☑	
Hand calculated Response Factor verified:	☑		☑	
Initials: / Date:	NRB 8/18/2014		PLW 8/18/2014	

RF = (As X Cis)/(Ais X Cs)

Shown= 2.785 chloromethane @ 1 pt

Calculated= $\frac{3586*30}{38632}$ = 2.7847

Note:

Calibration Table Report
Method: VNA2014-0817.M
Title: Purgable Organics By GCMS
Last Calibration: Sun Aug 17 23:03:43 2014

Calibration Files

	0.4	1	3	10	30	50	70		
	A16.D	A07.D	A08.D	A09.D	A10.D	A11.D	A12.D		
Compound								Avg	%RSD
Fluorobenzene IS	ISTD								
dichlorodifluoromethane	2.258	2.525	2.710	2.790	2.799	2.787	2.822	2.670	7.8
chloromethane	3.469	2.785	2.671	2.380	2.583	2.574	2.744	2.744	12.6
vinyl chloride	2.056	1.969	2.340	2.181	2.377	2.394	2.420	2.248	8.0
bromomethane	0.717	0.383	0.494	0.498	0.706	0.824	0.880	0.643	29.0
chloroethane	0.709	0.735	0.988	0.800	0.934	0.853	0.789	0.830	12.3
trichlorofluoromethane	2.846	3.137	2.877	2.913	3.102	2.865	3.073	2.973	4.2
1,1,2-trichloro-1,2,2-trifluorome	1.488	1.449	1.417	1.425	1.472	1.463	1.541	1.465	2.9
1,1-dichloroethene		1.291	1.271	1.210	1.293	1.297	1.250	1.269	2.7
Acetone	1.035	0.918	0.624	0.496	0.509	0.509	0.539	0.662	33.6
Acrylonitrile		0.130	0.522	0.551	0.647	0.661	0.718	0.538	39.5
Methyliodide	0.943	0.516	0.755	0.976	1.474	1.713	1.919	1.185	44.1
Carbon disulfide	4.315	3.675	3.879	3.890	4.126	4.118	4.464	4.067	6.7
methylene chloride	2.039	1.370	1.568	1.651	1.698	1.612	1.657	1.656	12.1
methyl-t-butyl ether	2.111	2.318	2.718	2.539	2.829	2.810	3.020	2.621	12.1
trans-1,2-dichloroethene	1.022	1.229	1.279	1.189	1.295	1.288	1.369	1.239	8.9
Vinylacetate		1.107	1.450	1.418	1.718	1.855	1.985	1.589	20.4
n-hexane		0.791	0.873	0.885	0.902	0.897	0.908	0.876	5.0
1,1-dichloroethane	2.043	2.097	2.221	2.162	2.347	2.323	2.532	2.246	7.5
2-Butanone(MEK)		0.295	0.843	0.782	0.914	0.977	1.048	0.810	33.2
2,2-dichloropropane		0.588	1.069	0.960	1.246	1.305	1.456	1.104	27.9
cis-1,2-dichloroethene		1.186	1.174	1.258	1.434	1.429	1.543	1.337	11.4
bromochloromethane		0.444	0.493	0.632	0.664	0.705	0.716	0.609	18.7
cyclohexane		1.990	2.075	2.252	2.450	2.466	2.629	2.310	10.7
chloroform	2.271	2.116	2.199	1.989	2.267	2.213	2.359	2.202	5.5
Dibromofluoromethane <SURR>	1.585	1.600	1.586	1.582	1.610	1.615	1.644	1.603	1.4
1,1,1-trichloroethane		0.978	1.549	1.574	1.837	1.913	2.026	1.646	22.9
carbon tetrachloride	0.777	0.527	0.978	1.225	1.480	1.506	1.650	1.163	35.9
1,1-dichloropropene		1.599	1.344	1.525	1.654	1.642	1.809	1.596	9.7
1,2-Dichloroethane-D4 <surr>	1.573	1.659	1.623	1.540	1.551	1.542	1.608	1.585	2.9
benzene	3.682	4.924	4.766	4.789	5.274	5.308	5.591	4.905	12.6
1,2-dichloroethane	0.247	1.288	1.463	1.522	1.648	1.625	1.668	1.352	37.4
trichloroethene		1.318	1.169	1.244	1.356	1.379	1.491	1.326	8.4
1,2-dichloropropane		1.027	1.199	1.249	1.359	1.407	1.528	1.295	13.6
dibromomethane		0.381	0.822	0.803	0.890	0.858	0.904	0.776	25.4
2-chloroethylvinyl ether								0.000	0.0
bromodichloromethane	0.219	1.194	1.166	1.275	1.447	1.500	1.598	1.200	38.5
cis-1,3-dichloropropene	0.223	0.848	0.929	1.193	1.521	1.631	1.818	1.166	47.1
4-Methyl-2-pentanone	0.195	0.483	0.672	0.674	0.803	0.807	0.842	0.639	36.2
1-chloro-3-fluorobenzene<IS>	ISTD								
Toluene-d8 <surr>	2.821	2.866	2.846	2.840	2.786	2.819	2.844	2.832	0.9
toluene	1.804	1.74	1.673	1.793	1.823	1.835	1.83	1.786	3.3
trans-1,3-dichloropropene		0.238	0.357	0.529	0.682	0.712	0.787	0.551	39.4

1,1,2-trichloroethane	0.683	0.451	0.452	0.52	0.528	0.522	0.548	0.529	14.6
tetrachloroethene	0.603	0.494	0.601	0.637	0.697	0.695	0.728	0.636	12.5
1,3-dichloropropane	0.508	0.708	0.849	0.986	0.988	0.995	1.009	0.863	22.2
2-Hexanone	0.16	0.488	0.688	0.796	0.845	0.883	0.905	0.681	39.7
dibromochloromethane	0.217	0.291	0.441	0.521	0.592	0.623	0.671	0.48	35.9
1,2-dibromoethane		0.454	0.53	0.551	0.649	0.655	0.693	0.589	15.6
1-chlorohexane		0.574	0.708	0.773	0.781	0.765	0.785	0.731	11.2
chlorobenzene	2.085	1.753	1.926	1.962	2.094	2.059	2.094	1.996	6.3
1,1,1,2-tetrachloroethane	0.345	0.354	0.468	0.51	0.552	0.571	0.6	0.486	21.1
ethylbenzene	0.775	0.955	1.104	1.186	1.154	1.129	1.163	1.067	14.0
P & M -Xylene	0.986	1.2	1.279	1.436	1.478	1.44	1.445	1.323	13.7
o-xylene	1.299	1.052	1.063	1.298	1.407	1.402	1.403	1.275	12.2
styrene		1.613	1.764	2.154	2.203	2.19	2.269	2.032	13.4
bromoform		0.121	0.232	0.314	0.397	0.438	0.486	0.331	41.3
Isopropylbenzene (Cumene)	2.78	2.593	2.961	3.408	3.426	3.394	3.493	3.151	11.6
1,2-Dichlorobenzene-d4 <IS>	ISTD								
4-Bromofluorobenzene <Surr>	0.986	0.956	0.955	0.936	0.907	0.878	0.892	0.93	4.2
trans 1,4-dichloro-2-butene		0.156	0.186	0.214	0.226	0.219	0.246	0.208	15.4
bromobenzene	0.511	0.601	0.618	0.601	0.625	0.608	0.626	0.598	6.7
1,1,2,2-tetrachloroethane	0.575	0.747	0.724	0.736	0.771	0.759	0.805	0.731	10.1
1,2,3-trichloropropane	0.248	0.126	0.235	0.192	0.218	0.207	0.218	0.206	19.3
n-propylbenzene	2.796	3.244	3.152	3.335	3.406	3.165	3.31	3.201	6.3
2-chlorotoluene	1.766	1.85	1.822	1.829	1.887	1.797	1.872	1.832	2.3
4-chlorotoluene	1.79	1.803	1.983	1.961	2.011	1.944	2.033	1.932	5.0
1,3,5-trimethylbenzene	1.913	1.866	1.883	2.098	2.142	2.053	2.159	2.016	6.2
tert-butylbenzene	1.76	1.541	1.61	1.685	1.808	1.68	1.739	1.689	5.4
1,2,4-trimethylbenzene	1.455	1.702	1.892	2.03	2.133	2.005	2.129	1.907	13.1
sec-butylbenzene	2.129	2.249	2.338	2.693	2.668	2.533	2.632	2.463	9.1
1,3-dichlorobenzene	1.311	1.014	1.164	1.138	1.189	1.142	1.234	1.17	7.9
4-isopropyltoluene	1.405	1.596	1.775	1.979	2.069	2.015	2.081	1.846	14.2
1,4-dichlorobenzene	1.254	1.096	1.023	1.18	1.244	1.171	1.253	1.174	7.5
1,2-dichlorobenzene	1.244	1.148	1.196	1.142	1.157	1.113	1.167	1.167	3.6
n-butylbenzene		1.336	1.54	1.722	1.906	1.856	1.966	1.721	14.1
1,2-dibromo-3-chloropropane		0.105	0.094	0.136	0.144	0.153	0.171	0.134	21.7
1,2,4-trichlorobenzene		0.393	0.455	0.461	0.548	0.55	0.574	0.497	14.3
hexachlorobutadiene		0.142	0.152	0.205	0.217	0.232	0.23	0.196	20.2
naphthalene		1.281	1.659	1.712	1.942	1.922	2.04	1.759	15.7
1,2,3-trichlorobenzene	0.486	0.419	0.434	0.488	0.55	0.534	0.565	0.497	11.3

Mon Aug 18 12:14:33 2014

Calibration Report VNA

Method Path : Z:\08\VNA\METHOD\
Method File : VNA2014-0817.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 17 23:03:43 2014
Response Via : Initial Calibration

Calibration Files
.4 =A16 1 =A07 3 =A08 10 =A09 30 =A10 50 =A11
70 =A12

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	Fluorobenzene IS		----------ISTD----------			
2)		dichlorodifluoro...	Avg	-----	2.6702	-----	0.0779
3)		chloromethane	Avg	-----	2.7436	-----	0.1262
4)		vinyl chloride	Avg	-----	2.2483	-----	0.0803
5)		bromomethane	Lin	-0.0612	0.8758	-----	0.9929
6)		chloroethane	Quad	-0.0155	1.0255	-0.0978	0.9990
7)		trichlorofluorom...	Avg	-----	2.9732	-----	0.0421
8)		1,1,2-trichloro-...	Avg	-----	1.4650	-----	0.0286
9)		1,1-dichloroethene	Avg	-----	1.2687	-----	0.0266
10)		Acetone	Lin	0.0255	0.5159	-----	0.9978
11)		Acrylonitrile	Quad	-0.0209	0.5939	0.0357	0.9995
12)		Methyliodide	Quad	-0.0117	0.9988	0.2725	0.9983
13)		Carbon disulfide	Avg	-----	4.0667	-----	0.0670
14)		methylene chloride	Avg	-----	1.6563	-----	0.1208
15)		methyl-t-butyl e...	Avg	-----	2.6205	-----	0.1213
16)		trans-1,2-dichlo...	Avg	-----	1.2388	-----	0.0894
17)		Vinylacetate	Quad	-0.0125	1.4804	0.2224	0.9997
18)		n-hexane	Avg	-----	0.8759	-----	0.0498
19)		1,1-dichloroethane	Avg	-----	2.2465	-----	0.0748
20)		2-Butanone(MEK)	Quad	-0.0428	0.8300	0.0318	0.9994
21)		2,2-dichloropropane	Quad	-0.0122	1.0285	0.1836	0.9991
22)		cis-1,2-dichloro...	Avg	-----	1.3372	-----	0.1138
23)		bromochloromethane	Lin	-0.0130	0.7062	-----	0.9987
24)		cyclohexane	Avg	-----	2.3104	-----	0.1072
25)		chloroform	Avg	-----	2.2021	-----	0.0546
26)	S	Dibromofluoromet...	Avg	-----	1.6031	-----	0.0137
27)		1,1,1-trichloroe...	Quad	-0.0221	1.6686	0.1581	0.9998
28)		carbon tetrachlo...	Quad	-0.0127	1.2421	0.1772	0.9987
29)		1,1-dichloropropene	Avg	-----	1.5955	-----	0.0969
30)	S	1,2-Dichloroetha...	Avg	-----	1.5850	-----	0.0291
31)		benzene	Avg	-----	4.9050	-----	0.1262
32)		1,2-dichloroethane	Lin	-0.0177	1.6556	-----	0.9996
33)		trichloroethene	Avg	-----	1.3260	-----	0.0844
34)		1,2-dichloropropane	Avg	-----	1.2947	-----	0.1357
35)		dibromomethane	Lin	-0.0156	0.8937	-----	0.9991
36)		2-chloroethylvin...	Avg	-----	-----	-----	0.0000
37)		bromodichloromet...	Quad	-0.0121	1.3088	0.1255	0.9997
38)		cis-1,3-dichloro...	Quad	-0.0146	1.2098	0.2648	0.9994
39)		4-Methyl-2-penta...	Quad	-0.0232	0.7338	0.0163	0.9995
40)		1-chloro-3-fluor...		----------ISTD----------			
41)	S	Toluene-d8 <surr>	Avg	-----	2.8319	-----	0.0091
42)		toluene	Avg	-----	1.7856	-----	0.0331
43)		trans-1,3-dichlo...	Quad	-0.0141	0.5686	0.0965	0.9991
44)		1,1,2-trichloroe...	Avg	-----	0.5291	-----	0.1465
45)		tetrachloroethene	Avg	-----	0.6363	-----	0.1251
46)		1,3-dichloropropane	Lin	-0.0082	1.0040	-----	0.9998
47)		2-Hexanone	Quad	-0.0286	0.8101	0.0145	0.9999
48)		dibromochloromet...	Quad	-0.0054	0.5199	0.0658	0.9997
49)		1,2-dibromoethane	Lin	-0.0112	0.6729	-----	0.9976
50)		1-chlorohexane	Avg	-----	0.7311	-----	0.1120
51)		chlorobenzene	Avg	-----	1.9963	-----	0.0634
52)		1,1,1,2-tetrachl...	Quad	-0.0031	0.5081	0.0400	0.9998
53)		ethylbenzene	Avg	-----	1.0665	-----	0.1399
54)		P & M -Xylene	Avg	-----	1.3233	-----	0.1366

55)		o-xylene	Avg	-----	1.2749	-----	0.1222
56)		styrene	Avg	-----	2.0321	-----	0.1342
57)		bromoform	Quad	-0.0078	0.3263	0.0701	0.9998
58)		Isopropylbenzene...	Avg	-----	3.1507	-----	0.1161
59)	I	1,2-Dichlorobenz...	ISTD				
60)	S	4-Bromofluoroben...	Avg	-----	0.9301	-----	0.0420
61)		trans 1,4-dichlo...	Avg	-----	0.2078	-----	0.1545
62)		bromobenzene	Avg	-----	0.5985	-----	0.0671
63)		1,1,2,2-tetrachl...	Avg	-----	0.7311	-----	0.1005
64)		1,2,3-trichlorop...	Lin	-0.0004	0.2132	-----	0.9974
65)		n-propylbenzene	Avg	-----	3.2012	-----	0.0626
66)		2-chlorotoluene	Avg	-----	1.8320	-----	0.0230
67)		4-chlorotoluene	Avg	-----	1.9321	-----	0.0504
68)		1,3,5-trimethylb...	Avg	-----	2.0163	-----	0.0624
69)		tert-butylbenzene	Avg	-----	1.6889	-----	0.0540
70)		1,2,4-trimethylb...	Avg	-----	1.9066	-----	0.1306
71)		sec-butylbenzene	Avg	-----	2.4630	-----	0.0910
72)		1,3-dichlorobenzene	Avg	-----	1.1703	-----	0.0787
73)		4-isopropyltoluene	Avg	-----	1.8456	-----	0.1423
74)		1,4-dichlorobenzene	Avg	-----	1.1745	-----	0.0749
75)		1,2-dichlorobenzene	Avg	-----	1.1666	-----	0.0364
76)		n-butylbenzene	Avg	-----	1.7209	-----	0.1408
77)		1,2-dibromo-3-ch...	Quad	-0.0011	0.1247	0.0194	0.9992
78)		1,2,4-trichlorob...	Avg	-----	0.4968	-----	0.1430
79)		hexachlorobutadiene	Lin	-0.0044	0.2297	-----	0.9986
80)		naphthalene	Lin	-0.0305	1.9882	-----	0.9985
81)		1,2,3-trichlorob...	Avg	-----	0.4966	-----	0.1134

VNA2014-0817.M Mon Aug 18 12:13:18 2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081714\
Data File : A17.D
Acq On : 17 Aug 2014 9:35 am
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 17 23:03:47 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	30.000	30.000	0.0	90	0.00
2		dichlorodifluoromethane	30.000	33.226	-10.8	95	0.00
3		chloromethane	30.000	29.563	1.5	94	0.00
4		vinyl chloride	30.000	32.835	-9.5	93	0.00
5		bromomethane	30.000	33.247	-10.8	116	0.00
6		chloroethane	30.000	34.602	-15.3	100	0.00
7		trichlorofluoromethane	30.000	32.089	-7.0	92	0.00
8		1,1,2-trichloro-1,2,2-trifl	45.000	46.400	-3.1	93	0.00
9		1,1-dichloroethene	30.000	31.805	-6.0	94	0.00
10		Acetone	90.000	78.211	13.1	81	0.00
11		Acrylonitrile	45.000	44.548	1.0	87	0.00
12		Methyliodide	45.000	47.795	-6.2	93	0.00
13		Carbon disulfide	45.000	47.410	-5.4	94	0.00
14		methylene chloride	30.000	32.180	-7.3	94	0.00
15		methyl-t-butyl ether	45.000	48.514	-7.8	90	0.00
16		trans-1,2-dichloroethene	30.000	32.136	-7.1	92	0.00
17		Vinylacetate	30.000	29.319	2.3	86	0.00
18		n-hexane	30.000	30.465	-1.5	89	0.00
19		1,1-dichloroethane	30.000	33.949	-13.2	98	0.00
20		2-Butanone(MEK)	90.000	88.453	1.7	88	0.00
21		2,2-dichloropropane	30.000	29.357	2.1	85	0.00
22		cis-1,2-dichloroethene	30.000	33.393	-11.3	94	0.00
23		bromochloromethane	30.000	30.418	-1.4	96	0.00
24		cyclohexane	30.000	33.435	-11.5	95	0.00
25		chloroform	30.000	31.364	-4.5	92	0.00
26	S	Dibromofluoromethane <SURR>	30.000	31.374	-4.6	94	0.00
27		1,1,1-trichloroethane	30.000	31.086	-3.6	92	0.00
28		carbon tetrachloride	30.000	30.260	-0.9	87	0.00
29		1,1-dichloropropene	30.000	32.379	-7.9	94	0.00
30	S	1,2-Dichloroethane-D4 <surr	30.000	30.120	-0.4	93	0.00
31		benzene	30.000	33.419	-11.4	93	0.00
32		1,2-dichloroethane	30.000	31.034	-3.4	93	0.00
33		trichloroethene	30.000	32.087	-7.0	94	0.00
34		1,2-dichloropropane	30.000	32.013	-6.7	92	0.00
35		dibromomethane	30.000	31.208	-4.0	93	0.00
36		2-chloroethylvinyl ether	45.000	0.000	100.0#	0	-12.78#
37		bromodichloromethane	30.000	32.098	-7.0	95	0.00
38		cis-1,3-dichloropropene	30.000	31.433	-4.8	92	0.00
39		4-Methyl-2-pentanone	90.000	86.826	3.5	84	0.00
40		1-chloro-3-fluorobenzene<IS	30.000	30.000	0.0	95	0.00
41	S	Toluene-d8 <surr>	30.000	29.457	1.8	94	0.00
42		toluene	30.000	30.457	-1.5	94	0.00
43		trans-1,3-dichloropropene	30.000	28.696	4.3	86	0.00
44		1,1,2-trichloroethane	30.000	29.445	1.8	93	0.00
45		tetrachloroethene	30.000	33.215	-10.7	96	0.00
46		1,3-dichloropropane	30.000	28.725	4.2	91	0.00
47		2-Hexanone	90.000	82.059	8.8	86	0.00
48		dibromochloromethane	30.000	29.729	0.9	92	0.00
49		1,2-dibromoethane	30.000	29.406	2.0	94	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081714\
Data File : A17.D
Acq On : 17 Aug 2014 9:35 am
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 17 23:03:47 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
50		1-chlorohexane	45.000	48.238	-7.2	95	0.00
51		chlorobenzene	30.000	31.057	-3.5	93	0.00
52		1,1,1,2-tetrachloroethane	30.000	29.930	0.2	93	0.00
53		ethylbenzene	30.000	31.420	-4.7	92	0.00
54		P & M -Xylene	60.000	66.181	-10.3	93	0.00
55		o-xylene	30.000	32.190	-7.3	92	0.00
56		styrene	30.000	33.065	-10.2	96	0.00
57		bromoform	30.000	30.230	-0.8	93	0.00
58		Isopropylbenzene (Cumene)	30.000	32.076	-6.9	93	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	30.000	30.000	0.0	94	0.00
60	S	4-Bromofluorobenzene <Surr>	30.000	29.622	1.3	95	0.00
61		trans 1,4-dichloro-2-butene	45.000	44.436	1.3	85	0.00
62		bromobenzene	30.000	31.128	-3.8	94	0.00
63		1,1,2,2-tetrachloroethane	30.000	30.150	-0.5	90	0.00
64		1,2,3-trichloropropane	30.000	28.711	4.3	88	0.00
65		n-propylbenzene	30.000	32.209	-7.4	95	0.00
66		2-chlorotoluene	30.000	31.850	-6.2	97	0.00
67		4-chlorotoluene	30.000	32.397	-8.0	98	0.00
68		1,3,5-trimethylbenzene	30.000	32.618	-8.7	96	0.00
69		tert-butylbenzene	30.000	31.834	-6.1	93	0.00
70		1,2,4-trimethylbenzene	30.000	33.230	-10.8	93	0.00
71		sec-butylbenzene	30.000	32.379	-7.9	94	0.00
72		1,3-dichlorobenzene	30.000	31.233	-4.1	97	0.00
73		4-isopropyltoluene	30.000	34.613	-15.4	97	0.00
74		1,4-dichlorobenzene	30.000	30.755	-2.5	91	0.00
75		1,2-dichlorobenzene	30.000	30.596	-2.0	97	0.00
76		n-butylbenzene	30.000	33.902	-13.0	96	0.00
77		1,2-dibromo-3-chloropropane	30.000	29.533	1.6	92	0.00
78		1,2,4-trichlorobenzene	30.000	32.977	-9.9	94	0.00
79		hexachlorobutadiene	30.000	29.697	1.0	97	0.00
80		naphthalene	30.000	28.293	5.7	89	0.00
81		1,2,3-trichlorobenzene	30.000	31.770	-5.9	90	0.00

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081714\
Data File : A17.D
Acq On : 17 Aug 2014 9:35 am
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 17 23:03:47 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	90	0.00
2		dichlorodifluoromethane	2.670	2.957	-10.7	95	0.00
3		chloromethane	2.744	2.704	1.5	94	0.00
4		vinyl chloride	2.248	2.461	-9.5	93	0.00
5		bromomethane	0.643	0.909	-41.4#	116	0.00
6		chloroethane	0.830	1.037	-24.9#	100	0.00
7		trichlorofluoromethane	2.973	3.180	-7.0	92	0.00
8		1,1,2-trichloro-1,2,2-trifl	1.465	1.511	-3.1	93	0.00
9		1,1-dichloroethene	1.269	1.345	-6.0	94	0.00
10		Acetone	0.662	0.457	31.0#	81	0.00
11		Acrylonitrile	0.538	0.627	-16.5	87	0.00
12		Methyliodide	1.185	1.514	-27.8#	93	0.00
13		Carbon disulfide	4.067	4.285	-5.4	94	0.00
14		methylene chloride	1.656	1.777	-7.3	94	0.00
15		methyl-t-butyl ether	2.621	2.825	-7.8	90	0.00
16		trans-1,2-dichloroethene	1.239	1.327	-7.1	92	0.00
17		Vinylacetate	1.589	1.647	-3.7	86	0.00
18		n-hexane	0.876	0.890	-1.6	89	0.00
19		1,1-dichloroethane	2.246	2.542	-13.2	98	0.00
20		2-Butanone(MEK)	0.810	0.894	-10.4	88	0.00
21		2,2-dichloropropane	1.104	1.170	-6.0	85	0.00
22		cis-1,2-dichloroethene	1.337	1.488	-11.3	94	0.00
23		bromochloromethane	0.609	0.703	-15.4	96	0.00
24		cyclohexane	2.310	2.575	-11.5	95	0.00
25		chloroform	2.202	2.302	-4.5	92	0.00
26	S	Dibromofluoromethane <SURR>	1.603	1.677	-4.6	94	0.00
27		1,1,1-trichloroethane	1.646	1.877	-14.0	92	0.00
28		carbon tetrachloride	1.163	1.420	-22.1#	87	0.00
29		1,1-dichloropropene	1.596	1.722	-7.9	94	0.00
30	S	1,2-Dichloroethane-D4 <surr	1.585	1.591	-0.4	93	0.00
31		benzene	4.905	5.464	-11.4	93	0.00
32		1,2-dichloroethane	1.352	1.695	-25.4#	93	0.00
33		trichloroethene	1.326	1.418	-6.9	94	0.00
34		1,2-dichloropropane	1.295	1.382	-6.7	92	0.00
35		dibromomethane	0.776	0.914	-17.8	93	0.00
36		2-chloroethylvinyl ether	0.000	0.000	0.0	0#	-12.78#
37		bromodichloromethane	1.200	1.532	-27.7#	95	0.00
38		cis-1,3-dichloropropene	1.166	1.544	-32.4#	92	0.00
39		4-Methyl-2-pentanone	0.639	0.746	-16.7	84	0.00
40		1-chloro-3-fluorobenzene<IS	1.000	1.000	0.0	95	0.00
41	S	Toluene-d8 <surr>	2.832	2.781	1.8	94	0.00
42		toluene	1.786	1.813	-1.5	94	0.00
43		trans-1,3-dichloropropene	0.551	0.618	-12.2	86	0.00
44		1,1,2-trichloroethane	0.529	0.519	1.9	93	0.00
45		tetrachloroethene	0.636	0.705	-10.8	96	0.00
46		1,3-dichloropropane	0.863	0.953	-10.4	91	0.00
47		2-Hexanone	0.681	0.765	-12.3	86	0.00
48		dibromochloromethane	0.480	0.574	-19.6	92	0.00
49		1,2-dibromoethane	0.589	0.648	-10.0	94	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081714\
Data File : A17.D
Acq On : 17 Aug 2014 9:35 am
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 17 23:03:47 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50		1-chlorohexane	0.731	0.784	-7.3	95	0.00
51		chlorobenzene	1.996	2.067	-3.6	93	0.00
52		1,1,1,2-tetrachloroethane	0.486	0.544	-11.9	93	0.00
53		ethylbenzene	1.067	1.117	-4.7	92	0.00
54		P & M -Xylene	1.323	1.460	-10.4	93	0.00
55		o-xylene	1.275	1.368	-7.3	92	0.00
56		styrene	2.032	2.240	-10.2	96	0.00
57		bromoform	0.331	0.392	-18.4	93	0.00
58		Isopropylbenzene (Cumene)	3.151	3.369	-6.9	93	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	1.000	1.000	0.0	94	0.00
60	S	4-Bromofluorobenzene <Surr>	0.930	0.918	1.3	95	0.00
61		trans 1,4-dichloro-2-butene	0.208	0.205	1.4	85	0.00
62		bromobenzene	0.598	0.621	-3.8	94	0.00
63		1,1,2,2-tetrachloroethane	0.731	0.735	-0.5	90	0.00
64		1,2,3-trichloropropane	0.206	0.204	1.0	88	0.00
65		n-propylbenzene	3.201	3.437	-7.4	95	0.00
66		2-chlorotoluene	1.832	1.945	-6.2	97	0.00
67		4-chlorotoluene	1.932	2.086	-8.0	98	0.00
68		1,3,5-trimethylbenzene	2.016	2.192	-8.7	96	0.00
69		tert-butylbenzene	1.689	1.792	-6.1	93	0.00
70		1,2,4-trimethylbenzene	1.907	2.112	-10.7	93	0.00
71		sec-butylbenzene	2.463	2.658	-7.9	94	0.00
72		1,3-dichlorobenzene	1.170	1.218	-4.1	97	0.00
73		4-isopropyltoluene	1.846	2.129	-15.3	97	0.00
74		1,4-dichlorobenzene	1.174	1.204	-2.6	91	0.00
75		1,2-dichlorobenzene	1.167	1.190	-2.0	97	0.00
76		n-butylbenzene	1.721	1.945	-13.0	96	0.00
77		1,2-dibromo-3-chloropropane	0.134	0.140	-4.5	92	0.00
78		1,2,4-trichlorobenzene	0.497	0.546	-9.9	94	0.00
79		hexachlorobutadiene	0.196	0.223	-13.8	97	0.00
80		naphthalene	1.759	1.845	-4.9	89	0.00
81		1,2,3-trichlorobenzene	0.497	0.526	-5.8	90	0.00

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

GC/MS QA-QC Check Report

Tune File : Z:\08\VNA\DATA\081714\A05.D
Tune Time : 17 Aug 2014 6:11 am

Daily Calibration File : Z:\08\VNA\DATA\081714\A10.D

						44633	87810	115826	
File	Sample	Surrogate Recovery %				Internal Standard Responses			
A05.D									
	IB	99	99	100	107	41935	84666	96597	
A06.D									
	0.4	99	100	100	101	41984	82396	103188	
A07.D									
	1	100	104	101	101	38632	79162	97706	
A08.D									
	3	99	101	101	100	41248	85219	104880	
A09.D									
	10	99	97	100	99	43728	83091	109294	
A10.D									
	30	100	100	100	100	44633	87810	115826	
A11.D									
	50	101	98	100	94	46258	91297	125883	
A12.D									
	70	103	101	100	96	46324	93183	124812	
A13.D									
	R	98	98	97	108	44510	90627	104425	
A14.D									
	R	98	101	101	106	41421	87422	100005	
A15.D									
	R	102	105	100	105	40484	84273	99616	
A16.D									
	0.4	99	101	101	104	40716	80962	97397	
A17.D									
	ICV	105	100	98	99	40247	83083	109060	

(fails) - fails 12hr time check * - fails criteria

Created: Mon Aug 18 12:09:10 2014 VNA

Calibration RRT Evaluation RRT shifts relative to Cal. 5 RRT = analyte retention time / IS retention time

Initals/Date: NRB 08/18/14 Max RRT shift 0.06

Compound	Cal. 5 RT	Cal. 5 RRT	Cal. 1 RT	RRT shift	Cal 2 RT	RRT shift	Cal 3 RT	RRT shift	Cal 4 RT	RRT shift	Cal 6 RT	RRT shift	Cal 7 RT	RRT shift
Fluorobenzene IS	4.524		4.524		4.524		4.524		4.524		4.518		4.524	
dichlorodifluoromethane	0.835	0.185	0.835	0.000	0.835	0.000	0.835	0.000	0.835	0.000	0.835	0.000	0.835	0.000
chloromethane	0.928	0.205	0.928	0.000	0.928	0.000	0.928	0.000	0.928	0.000	0.928	0.000	0.928	0.000
vinyl chloride	0.963	0.213	0.969	0.001	0.969	0.001	0.969	0.001	0.969	0.001	0.963	0.000	0.963	0.000
bromomethane	1.125	0.249	1.125	0.000	1.125	0.000	1.125	0.000	1.125	0.000	1.126	0.001	1.125	0.000
chloroethane	1.184	0.262	1.184	0.000	1.183	0.000	1.189	0.001	1.183	0.000	1.184	0.000	1.184	0.000
trichlorofluoromethane	1.253	0.277	1.253	0.000	1.253	0.000	1.253	0.000	1.253	0.000	1.253	0.000	1.253	0.000
1,1,2-trichloro-1,2,2-trifluoromethane	1.549	0.342	1.549	0.000	1.555	0.001	1.549	0.000	1.549	0.000	1.549	0.000	1.549	0.000
1,1-dichloroethene	1.526	0.337	1.526	0.000	1.526	0.000	1.526	0.000	1.526	0.000	1.526	0.000	1.526	0.000
Acetone	1.92	0.424	1.927	0.002	1.926	0.001	1.932	0.003	1.926	0.001	1.927	0.002	1.926	0.001
Acrylonitrile	2.504	0.553	2.504	0.000	2.523	0.004	2.516	0.003	2.51	0.001	2.505	0.001	2.504	0.000
Methyliodide	1.607	0.355	1.613	0.001	1.607	0.000	1.613	0.001	1.607	0.000	1.608	0.001	1.607	0.000
Carbon disulfide	1.538	0.340	1.538	0.000	1.538	0.000	1.538	0.000	1.538	0.000	1.538	0.000	1.538	0.000
methylene chloride	1.884	0.416	1.884	0.000	1.89	0.001	1.89	0.001	1.884	0.000	1.884	0.001	1.884	0.000
methyl-t-butyl ether	2.073	0.458	2.073	0.000	2.085	0.003	2.078	0.001	2.079	0.001	2.079	0.002	2.079	0.001
n-hexane	1.987	0.439	1.987	0.000	1.987	0.000	1.987	0.000	1.987	0.000	1.987	0.001	1.987	0.000
trans-1,2-dichloroethene	2.699	0.597	2.724	0.006	2.717	0.004	2.711	0.003	2.705	0.001	2.699	0.001	2.699	0.000
Vinylacetate	2.036	0.450	2.079	0.010	2.03	-0.001	2.036	0.000	2.036	0.000	2.036	0.001	2.036	0.000
1,1-dichloroethane	2.45	0.542	2.444	-0.001	2.45	0.000	2.45	0.000	2.45	0.000	2.45	0.001	2.45	0.000
2-Butanone(MEK)	3.642	0.805	3.679	0.008	3.66	0.004	3.66	0.004	3.654	0.003	3.642	0.001	3.642	0.000
2,2-dichloropropane	3.046	0.673	3.058	0.003	3.046	0.000	3.04	-0.001	3.04	-0.001	3.046	0.001	3.046	0.000
cis-1,2-dichloroethene	2.949	0.652	2.955	0.001	2.942	-0.002	2.948	0.000	2.948	0.000	2.949	0.001	2.949	0.000
cyclohexane	3.149	0.696	3.155	0.001	3.155	0.001	3.143	-0.001	3.155	0.001	3.143	0.000	3.143	-0.001
bromochloromethane	3.125	0.691	3.119	-0.001	3.137	0.003	3.125	0.000	3.131	0.001	3.125	0.001	3.125	0.000
chloroform	3.253	0.719	3.247	-0.001	3.253	0.000	3.259	0.001	3.259	0.001	3.253	0.001	3.253	0.000
Dibromofluoromethane <SURR>	3.466	0.766	3.46	-0.001	3.466	0.000	3.466	0.000	3.459	-0.002	3.46	0.000	3.466	0.000
1,1,1-trichloroethane	3.453	0.763	3.454	0.000	3.447	-0.001	3.459	0.001	3.453	0.000	3.454	0.001	3.453	0.000
carbon tetrachloride	3.368	0.744	3.368	0.000	3.374	0.001	3.374	0.001	3.368	0.000	3.368	0.001	3.368	0.000
1,1-dichloropropene	3.612	0.798	3.612	0.000	3.624	0.003	3.618	0.001	3.618	0.001	3.612	0.001	3.612	0.000
1,2-Dichloroethane-D4 <surr>	4.141	0.915	4.141	0.000	4.153	0.003	4.147	0.001	4.147	0.001	4.147	0.003	4.147	0.001
benzene	3.94	0.871	3.94	0.000	3.934	-0.001	3.94	0.000	3.94	0.000	3.94	0.001	3.94	0.000
1,2-dichloroethane	4.232	0.935	4.226	-0.001	4.25	0.004	4.244	0.003	4.244	0.003	4.238	0.003	4.232	0.000
trichloroethene	4.731	1.046	4.737	0.001	4.737	0.001	4.737	0.001	4.737	0.001	4.731	0.001	4.731	0.000
1,2-dichloropropane	5.315	1.175	5.321	0.001	5.321	0.001	5.321	0.001	5.315	0.000	5.315	0.002	5.315	0.000
dibromomethane	5.199	1.149	5.2	0.000	5.205	0.001	5.205	0.001	5.205	0.001	5.206	0.003	5.199	0.000
2-chloroethylvinyl ether	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
bromodichloromethane	5.425	1.199	5.419	-0.001	5.437	0.003	5.431	0.001	5.424	0.000	5.425	0.002	5.425	0.000
cis-1,3-dichloropropene	6.075	1.343	6.094	0.004	6.088	0.003	6.081	0.001	6.081	0.001	6.076	0.002	6.075	0.000
4-Methyl-2-pentanone	6.696	1.480	6.72	0.005	6.708	0.003	6.702	0.001	6.702	0.001	6.702	0.003	6.696	0.000
1-chloro-3-fluorobenzene<IS>	7.414		7.414		7.414		7.414		7.414		7.414		7.414	
Toluene-d8 <surr>	6.246	0.842	6.246	0.000	6.246	0.000	6.246	0.000	6.246	0.000	6.246	0.000	6.246	0.000
toluene	6.295	0.849	6.295	0.000	6.3	0.001	6.294	0.000	6.294	0.000	6.295	0.000	6.294	0.000

trans-1,3-dichloropropene	6.714	0.906	6.714	0.000	6.732	0.002	6.72	0.001	6.714	0.000	6.714	0.000	6.714	0.000
1,1,2-trichloroethane	6.848	0.924	6.848	0.000	6.854	0.001	6.854	0.001	6.848	0.000	6.848	0.000	6.848	0.000
tetrachloroethene	6.641	0.896	6.647	0.001	6.635	-0.001	6.641	0.000	6.641	0.000	6.641	0.000	6.641	0.000
1,3-dichloropropane	7.079	0.955	7.085	0.001	7.085	0.001	7.079	0.000	7.079	0.000	7.079	0.000	7.079	0.000
2-Hexanone	7.45	1.005	7.469	0.003	7.462	0.002	7.456	0.001	7.456	0.001	7.45	0.000	7.45	0.000
dibromochloromethane	6.994	0.943	7	0.001	6.988	-0.001	7	0.001	6.988	-0.001	6.994	0.000	6.994	0.000
1,2-dibromoethane	7.164	0.966	7.177	0.002	7.176	0.002	7.164	0.000	7.164	0.000	7.165	0.000	7.164	0.000
1-chlorohexane	7.657	1.033	7.663	0.001	7.663	0.001	7.657	0.000	7.657	0.000	7.657	0.000	7.657	0.000
chlorobenzene	7.633	1.030	7.645	0.002	7.639	0.001	7.633	0.000	7.633	0.000	7.633	0.000	7.633	0.000
1,1,1,2-tetrachloroethane	7.694	1.038	7.694	0.000	7.7	0.001	7.694	0.000	7.694	0.000	7.694	0.000	7.694	0.000
ethylbenzene	7.675	1.035	7.682	0.001	7.681	0.001	7.681	0.001	7.675	0.000	7.676	0.000	7.675	0.000
P & M -Xylene	7.791	1.051	7.797	0.001	7.791	0.000	7.791	0.000	7.791	0.000	7.791	0.000	7.791	0.000
o-xylene	8.077	1.089	8.077	0.000	8.077	0.000	8.077	0.000	8.077	0.000	8.077	0.000	8.077	0.000
styrene	8.114	1.094	8.12	0.001	8.119	0.001	8.119	0.001	8.113	0.000	8.114	0.000	8.113	0.000
bromoform	8.114	1.094	8.113	0.000	8.113	0.000	8.113	0.000	8.113	0.000	8.114	0.000	8.113	0.000
Isopropylbenzene (Cumene)	8.284	1.117	8.284	0.000	8.284	0.000	8.284	0.000	8.284	0.000	8.284	0.000	8.284	0.000
1,2-Dichlorobenzene-d4 <IS>	9.245		9.245		9.245		9.245		9.245		9.245		9.245	
4-Bromofluorobenzene <Surr>	8.436	0.912	8.436	0.000	8.436	0.000	8.436	0.000	8.436	0.000	8.436	0.000	8.436	0.000
trans 1,4-dichloro-2-butene	8.667	0.937	8.667	0.000	8.667	0.000	8.667	0.000	8.667	0.000	8.667	0.000	8.667	0.000
bromobenzene	8.485	0.918	8.485	0.000	8.484	0.000	8.484	0.000	8.485	0.000	8.485	0.000	8.485	0.000
1,1,2,2-tetrachloroethane	8.576	0.928	8.576	0.000	8.576	0.000	8.576	0.000	8.576	0.000	8.576	0.000	8.576	0.000
1,2,3-trichloropropane	8.631	0.934	8.637	0.001	8.637	0.001	8.637	0.001	8.637	0.001	8.637	0.001	8.637	0.001
n-propylbenzene	8.521	0.922	8.527	0.001	8.527	0.001	8.527	0.001	8.527	0.001	8.521	0.000	8.521	0.000
2-chlorotoluene	8.594	0.930	8.6	0.001	8.6	0.001	8.6	0.001	8.594	0.000	8.594	0.000	8.594	0.000
4-chlorotoluene	8.691	0.940	8.698	0.001	8.691	0.000	8.691	0.000	8.691	0.000	8.692	0.000	8.691	0.000
1,3,5-trimethylbenzene	8.643	0.935	8.643	0.000	8.643	0.000	8.643	0.000	8.643	0.000	8.637	-0.001	8.637	-0.001
tert-butylbenzene	8.807	0.953	8.807	0.000	8.807	0.000	8.807	0.000	8.807	0.000	8.801	-0.001	8.801	-0.001
1,2,4-trimethylbenzene	8.844	0.957	8.85	0.001	8.843	0.000	8.843	0.000	8.843	0.000	8.844	0.000	8.844	0.000
sec-butylbenzene	8.898	0.962	8.898	0.000	8.898	0.000	8.898	0.000	8.898	0.000	8.898	0.000	8.898	0.000
1,3-dichlorobenzene	8.996	0.973	9.002	0.001	9.002	0.001	9.002	0.001	8.996	0.000	8.996	0.000	8.996	0.000
4-isopropyltoluene	8.977	0.971	8.977	0.000	8.977	0.000	8.977	0.000	8.977	0.000	8.977	0.000	8.971	-0.001
1,4-dichlorobenzene	9.044	0.978	9.05	0.001	9.044	0.000	9.044	0.000	9.044	0.000	9.044	0.000	9.044	0.000
1,2-dichlorobenzene	9.245	1.000	9.245	0.000	9.251	0.001	9.245	0.000	9.245	0.000	9.245	0.000	9.245	0.000
n-butylbenzene	9.184	0.993	9.19	0.001	9.184	0.000	9.184	0.000	9.184	0.000	9.184	0.000	9.178	-0.001
1,2-dibromo-3-chloropropane	9.622	1.041	9.628	0.001	9.628	0.001	9.628	0.001	9.628	0.001	9.622	0.000	9.622	0.000
1,2,4-trichlorobenzene	9.932	1.074	9.933	0.000	9.932	0.000	9.932	0.000	9.932	0.000	9.933	0.000	9.932	0.000
hexachlorobutadiene	9.92	1.073	9.914	-0.001	9.914	-0.001	9.92	0.000	9.92	0.000	9.92	0.000	9.92	0.000
naphthalene	10.072	1.089	10.079	0.001	10.078	0.001	10.072	0.000	10.072	0.000	10.073	0.000	10.072	0.000
1,2,3-trichlorobenzene	10.158	1.099	10.158	0.000	10.157	0.000	10.157	0.000	10.157	0.000	10.158	0.000	10.158	0.000

CC ISTD Areas

CC Data File : Z:\08\VNA\DATA\081714\A10.D
Date Acquired: 17 Aug 2014 7:39 am

ISTD Name	Response
Fluorobenzene IS	44633
1-chloro-3-fluorobenzene<IS>	87810
1,2-Dichlorobenzene-d4 <IS>	115826

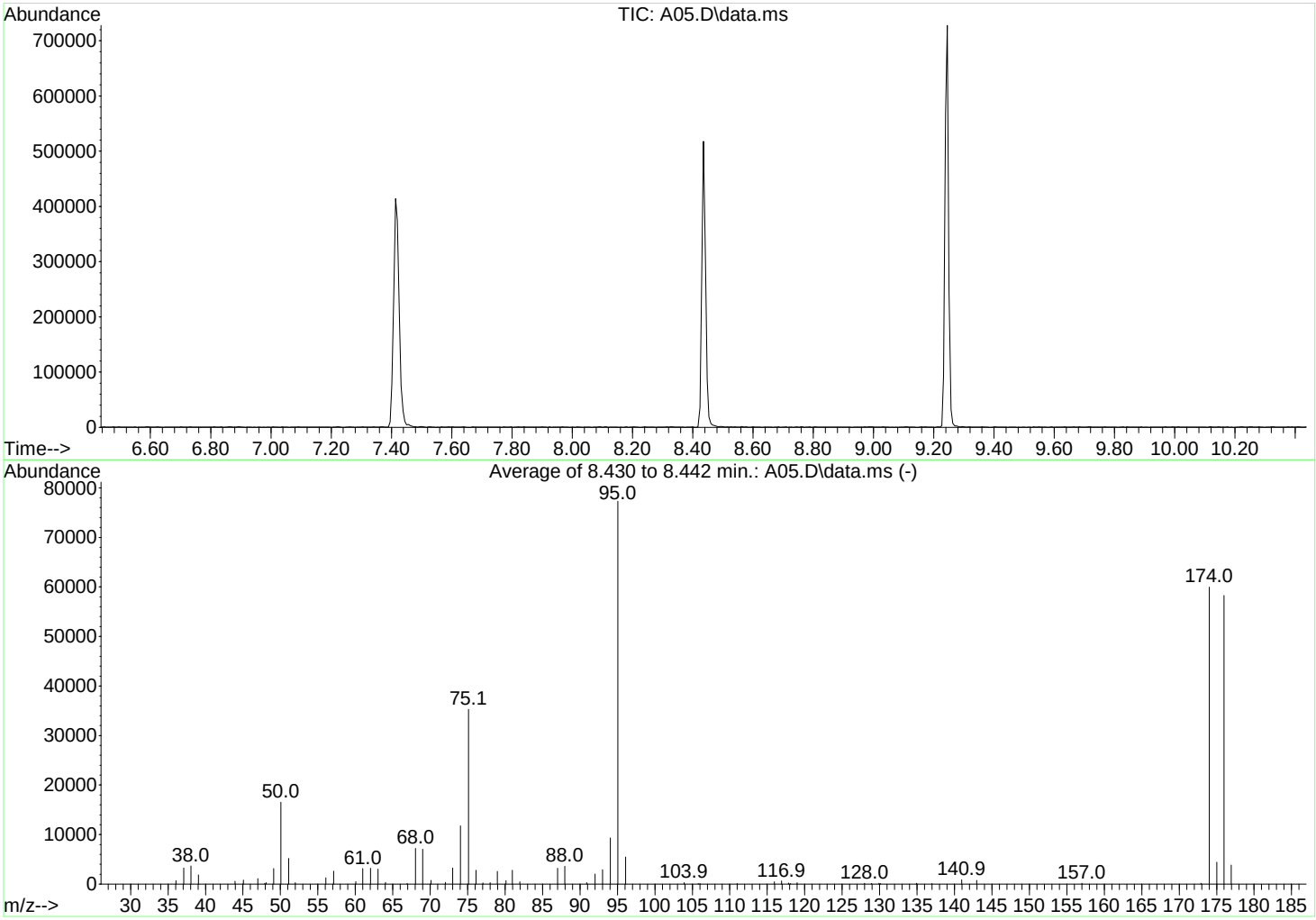
Surrogates

Dibromofluoromethane <SURR>
1,2-Dichloroethane-D4 <surr>
Toluene-d8 <surr>
4-Bromofluorobenzene <Surr>

Data Path : Z:\08\VNA\DATA\081714\
Data File : A05.D
Acq On : 17 Aug 2014 6:11 am
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Integration File: RTEINT.P

Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 17 23:03:43 2014



AutoFind: Scans 1386, 1387, 1388; Background Corrected with Scan 1381

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.4	16557	PASS
75	95	30	80	45.6	35253	PASS
95	95	100	100	100.0	77285	PASS
96	95	5	9	7.1	5476	PASS
173	174	0.00	2	0.3	191	PASS
174	95	50	100	77.6	59979	PASS
175	174	5	9	7.4	4412	PASS
176	174	95	101	97.2	58299	PASS
177	176	5	9	6.6	3854	PASS

SGS North America Inc.

Instrument Runlog

Instrument: VNA **Calibration Date:** 8/17/2014 **Method:** 8260
Operator: NRB **Processed By:** NRB **Posted By:** N/A **Analytical Batch:** N/A

Data Path: Z:\08\VNA\DATA\081714\

Daily:		As Needed:			
Verify System Date/Time	☑	Refill Water Tank	☐	Adjust Tune	☐
General System Inspection	☑	Refill Standards	☐	Clean Ion Source	☐
				Check Rough Pump Oil	☐
				Check Vacuum Pressure	☐

Standards:

IS/Surr	VW8-33-3	**CCV**	VW8-67-1
MeOH	P1152	**EG**	VW8-64-4
		ICV	VW8-65-2
		2nd EG	VW8-66-2

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A01.D	1	R	1		8/17/14 4:50 AM	N/A	
A02.D	2	R	1		8/17/14 5:06 AM	N/A	
A03.D	3	R	1		8/17/14 5:38 AM	N/A	
A04.D	4	R	1		8/17/14 5:54 AM	N/A	
A05.D	5	IB	1		8/17/14 6:11 AM	N/A	
A06.D	6	0.4	1	NU	8/17/14 6:33 AM	N/A	
A07.D	7	1	1		8/17/14 6:50 AM	N/A	
A08.D	8	3	1		8/17/14 7:06 AM	N/A	
A09.D	9	10	1		8/17/14 7:23 AM	N/A	
A10.D	10	30	1		8/17/14 7:39 AM	N/A	
A11.D	11	50	1		8/17/14 7:56 AM	N/A	
A12.D	12	70	1		8/17/14 8:13 AM	N/A	
A13.D	13	R	1		8/17/14 8:29 AM	N/A	
A14.D	14	R	1		8/17/14 8:46 AM	N/A	
A15.D	15	R	1		8/17/14 9:02 AM	N/A	
A16.D	16	0.4	1		8/17/14 9:19 AM	N/A	
A17.D	17	ICV	1		8/17/14 9:35 AM	N/A	
A18.D	18	R	1		8/17/14 9:52 AM		
A19.D	19	R	1		8/17/14 10:08 AM		
A20.D	20	R	1		8/17/14 10:25 AM		

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A05.D
Acq On : 17 Aug 2014 6:11 am
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 18 11:54:49 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

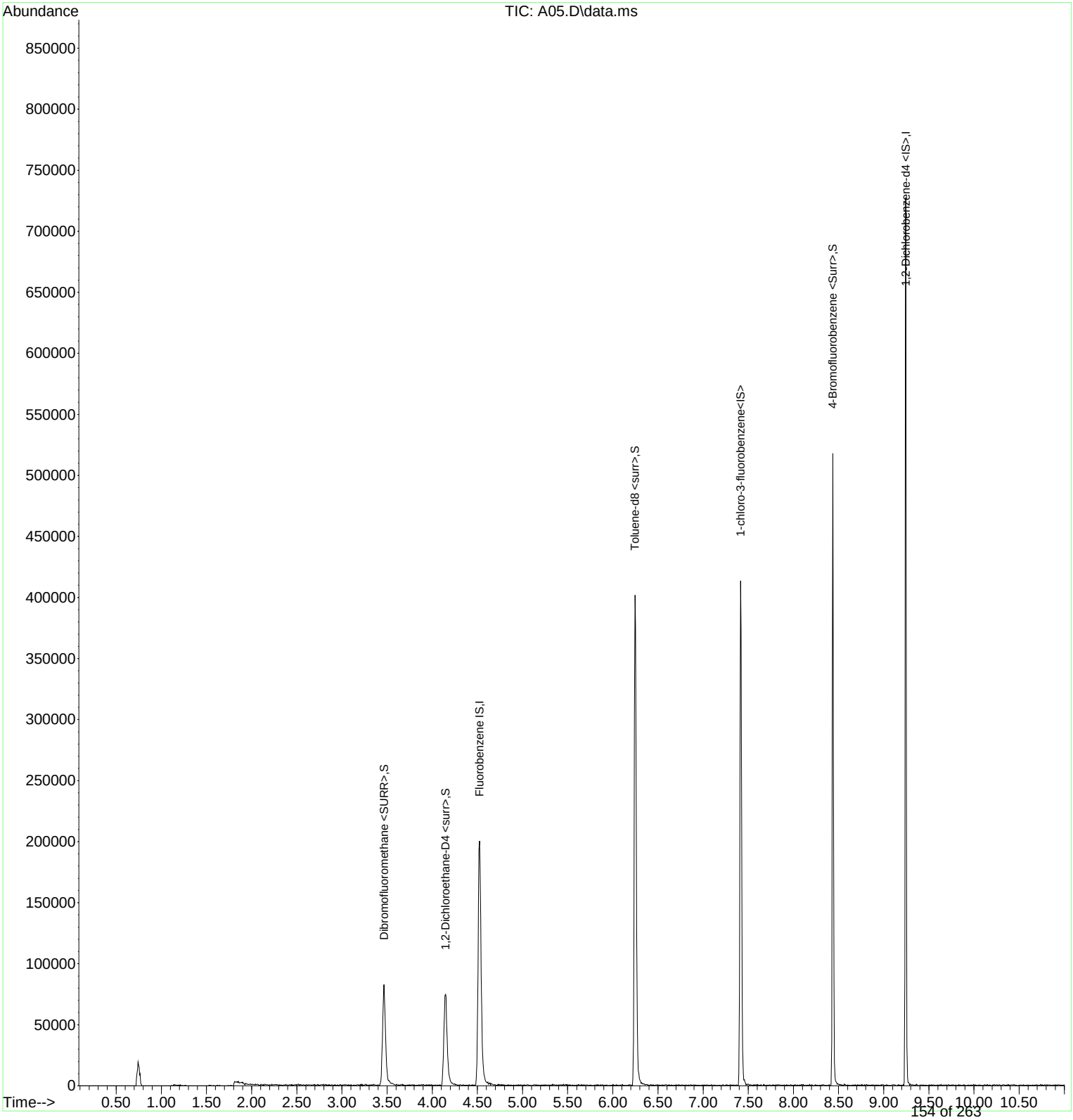
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	41935	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	84666	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	96597	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	66403	29.63	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.77%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	65632	29.62	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 98.73%			
41) Toluene-d8 <surr>	6.246	98	239936	30.02	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.07%			
60) 4-Bromofluorobenzene <...	8.436	95	96203	32.12	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 107.07%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A05.D
Acq On : 17 Aug 2014 6:11 am
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 18 11:54:49 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A06.D
Acq On : 17 Aug 2014 6:33 am
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 17 06:48:09 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	41984	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	82396	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	103188	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.466	111	65639	29.84	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.47%				
30) 1,2-Dichloroethane-D4 ...	4.141	65	64752	29.85	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 99.50%				
41) Toluene-d8 <surr>	6.246	98	239338	29.99	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 99.97%				
60) 4-Bromofluorobenzene <...	8.436	95	99176	30.37	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.23%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.841	85	2162	0.56	µg/l		89
3) chloromethane	0.934	50	2770	0.73	µg/l		91
4) vinyl chloride	0.969	62	1795	0.51	µg/l	#	88
5) bromomethane	1.126	96	389	0.84	µg/l	#	46
6) chloroethane	1.184	64	620	0.92	µg/l	#	44
7) trichlorofluoromethane	1.259	101	2548	0.66	µg/l		87
8) 1,1,2-trichloro-1,2,2-...	1.549	101	1783	0.95	µg/L	#	73
9) 1,1-dichloroethene	1.526	96	926	0.57	µg/l	#	30
10) Acetone	1.927	43	2353	2.83	µg/L		97
11) Acrylonitrile	2.523	53	250	1.45	µg/L	#	14
12) Methyliodide	1.608	142	764	1.26	µg/L		88
13) Carbon disulfide	1.538	76	5419	1.08	µg/L		96
14) methylene chloride	1.890	84	1403	0.64	µg/l	#	74
15) methyl-t-butyl ether	2.073	73	3428	0.86	µg/L	#	74
16) trans-1,2-dichloroethene	1.987	96	1102	0.61	µg/l	#	68
17) Vinylacetate	2.724	43	534	0.80	µg/L	#	79
18) n-hexane	2.054	56	280	0.25	µg/L	#	24
19) 1,1-dichloroethane	2.444	63	2109	0.65	µg/l	#	87
20) 2-Butanone(MEK)	3.660	43	391	2.54	µg/L	#	54
21) 2,2-dichloropropane	3.058	77	623	0.77	µg/l	#	56
22) cis-1,2-dichloroethene	2.955	96	1197	0.63	µg/l	#	81
23) bromochloromethane	3.143	128	234	1.09	µg/l	#	57
24) cyclohexane	3.125	56	1239	0.38	µg/L	#	75
25) chloroform	3.259	83	2257	0.78	µg/l	#	70
27) 1,1,1-trichloroethane	3.460	97	872	1.04	µg/l	#	23
28) carbon tetrachloride	3.368	117	422	0.60	µg/l	#	5
29) 1,1-dichloropropene	3.624	75	1037	0.46	µg/l	#	40
31) benzene	3.946	78	4574	0.80	µg/l	#	91
32) 1,2-dichloroethane	4.238	62	993	0.68	µg/l	#	79
33) trichloroethene	4.731	95	927	1.02	µg/l	#	40
34) 1,2-dichloropropane	5.321	63	1133	1.02	µg/l	#	94
35) dibromomethane	5.206	93	248	0.60	µg/l	#	6
37) bromodichloromethane	5.425	83	938	0.85	µg/l	#	67
38) cis-1,3-dichloropropene	6.082	75	1134	0.99	µg/l	#	52
39) 4-Methyl-2-pentanone	6.708	58	1339	2.91	µg/L		93
42) toluene	6.289	92	3093	0.63	µg/l	#	62
43) trans-1,3-dichloropropene	6.727	75	124	0.79	µg/l	#	52
44) 1,1,2-trichloroethane	6.860	83	737	0.50	µg/l	#	51

Data Path : Z:\08\VNA\DATA\081714\
Data File : A06.D
Acq On : 17 Aug 2014 6:33 am
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 17 06:48:09 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

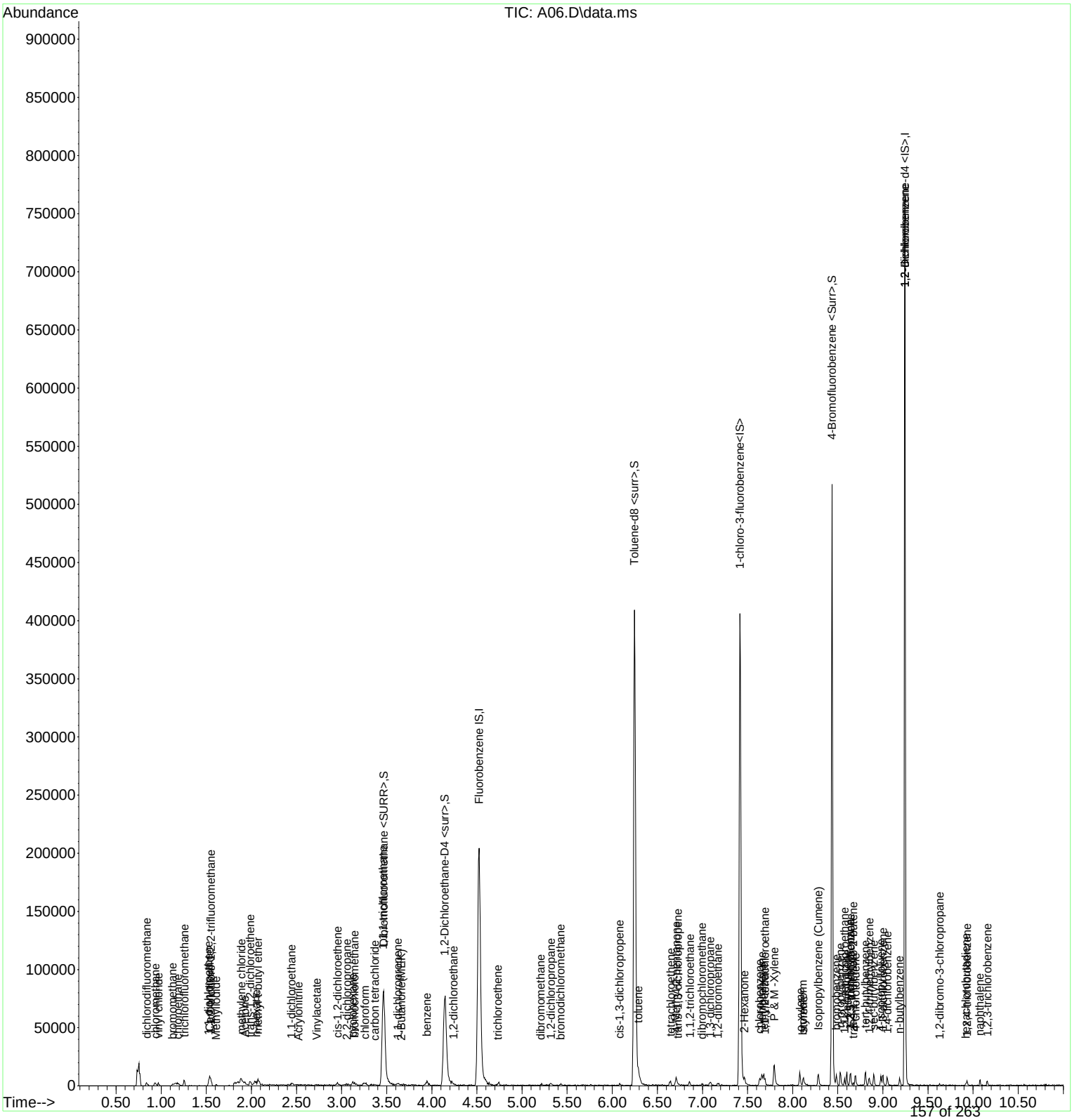
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.647	166	899	0.50	µg/l		92
46) 1,3-dichloropropane	7.085	76	1466	0.73	µg/l		94
47) 2-Hexanone	7.463	43	2711	2.61	µg/L		94
48) dibromochloromethane	6.994	129	692	0.88	µg/l		100
49) 1,2-dibromoethane	7.171	107	940	0.54	µg/l	#	89
50) 1-chlorohexane	7.657	55	1643	0.79	µg/L	#	76
51) chlorobenzene	7.633	112	3321	0.61	µg/l	#	76
52) 1,1,1,2-tetrachloroethane	7.694	133	464	0.69	µg/l	#	77
53) ethylbenzene	7.682	106	1572	0.50	µg/l	#	80
54) P & M -Xylene	7.797	106	4456	1.15	µg/l	#	67
55) o-xylene	8.083	106	1919	0.53	µg/l		77
56) styrene	8.120	104	3296	0.96	µg/l		91
57) bromoform	8.114	173	320	0.95	µg/l	#	76
58) Isopropylbenzene (Cumene)	8.284	105	5099	0.56	µg/l		96
61) trans 1,4-dichloro-2-b...	8.673	53	588	1.22	µg/L	#	23
62) bromobenzene	8.485	156	1252	0.58	µg/l	#	20
63) 1,1,2,2-tetrachloroethane	8.576	83	1592	0.74	µg/l	#	93
64) 1,2,3-trichloropropane	8.637	110	322	0.64	µg/l	#	29
65) n-propylbenzene	8.527	91	7145	0.65	µg/l		97
66) 2-chlorotoluene	8.600	91	4501	0.73	µg/l	#	86
67) 4-chlorotoluene	8.698	91	3299	0.48	µg/l		94
68) 1,3,5-trimethylbenzene	8.643	105	3291	0.47	µg/l	#	76
69) tert-butylbenzene	8.807	119	3589	0.59	µg/l	#	77
70) 1,2,4-trimethylbenzene	8.850	105	3898	0.56	µg/l	#	65
71) sec-butylbenzene	8.898	105	4562	0.53	µg/l	#	86
72) 1,3-dichlorobenzene	9.002	146	2367	0.60	µg/l	#	88
73) 4-isopropyltoluene	8.977	119	4058	0.61	µg/l	#	92
74) 1,4-dichlorobenzene	9.050	146	2443	0.79	µg/l		89
75) 1,2-dichlorobenzene	9.245	146	2465	0.61	µg/l	#	35
76) n-butylbenzene	9.184	91	3096	0.91	µg/l	#	87
77) 1,2-dibromo-3-chloropr...	9.628	75	112	0.94	µg/l	#	1
78) 1,2,4-trichlorobenzene	9.933	180	968	0.84	µg/l	#	66
79) hexachlorobutadiene	9.920	225	341	0.46	µg/l	#	43
80) naphthalene	10.073	128	2555	0.74	µg/l	#	78
81) 1,2,3-trichlorobenzene	10.158	180	826	0.46	µg/l	#	23

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A06.D
Acq On : 17 Aug 2014 6:33 am
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 17 06:48:09 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A07.D
Acq On : 17 Aug 2014 6:50 am
Operator : NRB
Sample : 1
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 17 22:36:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	38632	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	79162	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	97706	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.466	111	61815	30.03	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.10%				
30) 1,2-Dichloroethane-D4 ...	4.153	65	64102	31.23	µg/l		0.01
Spiked Amount 30.000	Range 80 - 137		Recovery = 104.10%				
41) Toluene-d8 <surr>	6.246	98	226911	30.44	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 101.47%				
60) 4-Bromofluorobenzene <...	8.436	95	93431	30.20	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.67%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	3252	1.00	µg/l		100
3) chloromethane	0.928	50	3586	0.95	µg/l		89
4) vinyl chloride	0.969	62	2536	0.92	µg/l		100
5) bromomethane	1.125	96	493	0.70	µg/l		96
6) chloroethane	1.183	64	946	0.93	µg/l	#	46
7) trichlorofluoromethane	1.253	101	4039	1.04	µg/l	#	70
8) 1,1,2-trichloro-1,2,2-...	1.555	101	2799	1.48	µg/L	#	89
9) 1,1-dichloroethene	1.526	96	1663	1.21	µg/l		92
10) Acetone	1.926	43	3547	3.36	µg/L		98
11) Acrylonitrile	2.523	53	252	0.50	µg/L	#	32
12) Methyliodide	1.607	142	997	0.79	µg/L	#	76
13) Carbon disulfide	1.538	76	7098	1.36	µg/L	#	94
14) methylene chloride	1.890	84	1764	0.80	µg/l	#	77
15) methyl-t-butyl ether	2.085	73	4477	1.44	µg/L	#	76
16) trans-1,2-dichloroethene	1.987	96	1583	1.04	µg/l	#	82
17) Vinylacetate	2.717	43	1426	1.00	µg/L	#	84
18) n-hexane	2.030	56	1018	1.23	µg/L	#	23
19) 1,1-dichloroethane	2.450	63	2700	0.97	µg/l	#	86
20) 2-Butanone(MEK)	3.660	43	1141	2.08	µg/L	#	53
21) 2,2-dichloropropane	3.046	77	757	0.79	µg/l	#	54
22) cis-1,2-dichloroethene	2.942	96	1527	1.23	µg/l	#	66
23) bromochloromethane	3.155	128	572	0.80	µg/l	#	55
24) cyclohexane	3.137	56	2563	1.11	µg/L		92
25) chloroform	3.253	83	2725	0.95	µg/l	#	66
27) 1,1,1-trichloroethane	3.447	97	1260	0.82	µg/l	#	87
28) carbon tetrachloride	3.374	117	679	0.57	µg/l	#	42
29) 1,1-dichloropropene	3.624	75	2059	1.34	µg/l	#	87
31) benzene	3.934	78	6341	1.06	µg/l		95
32) 1,2-dichloroethane	4.250	62	1658	1.21	µg/l	#	10
33) trichloroethene	4.737	95	1697	1.17	µg/l	#	57
34) 1,2-dichloropropane	5.321	63	1322	1.01	µg/l	#	95
35) dibromomethane	5.205	93	491	0.77	µg/l		94
37) bromodichloromethane	5.437	83	1537	1.25	µg/l	#	83
38) cis-1,3-dichloropropene	6.088	75	1092	0.98	µg/l	#	37
39) 4-Methyl-2-pentanone	6.708	58	1864	2.93	µg/L	#	92
42) toluene	6.300	92	4592	0.97	µg/l		80
43) trans-1,3-dichloropropene	6.732	75	627	0.52	µg/l	#	49
44) 1,1,2-trichloroethane	6.854	83	1191	0.92	µg/l		89

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A07.D
Acq On : 17 Aug 2014 6:50 am
Operator : NRB
Sample : 1
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 17 22:36:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

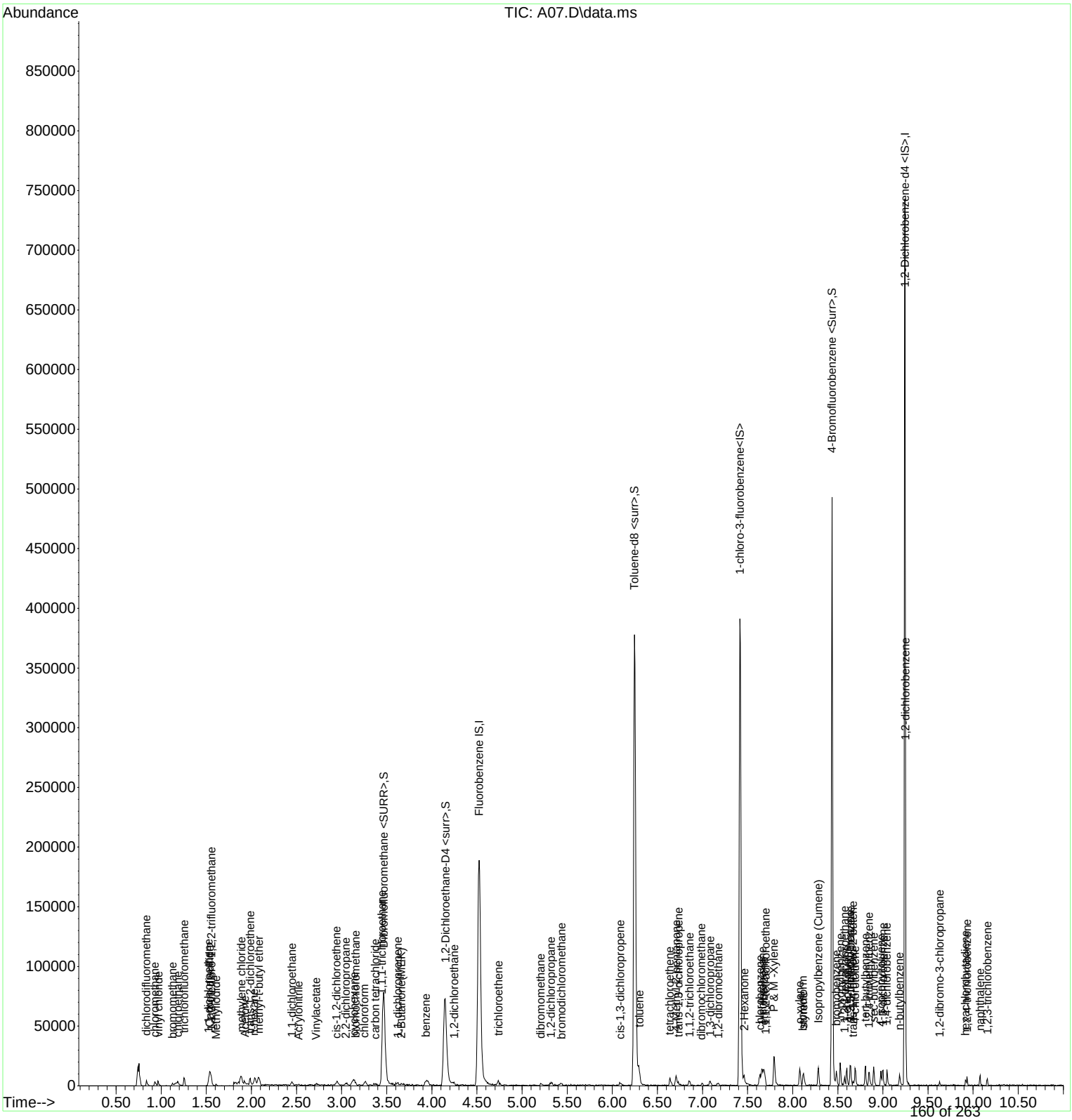
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.635	166	1304	0.83	µg/l	#	74
46) 1,3-dichloropropane	7.085	76	1868	0.96	µg/l	#	42
47) 2-Hexanone	7.462	43	3866	2.94	µg/L	#	76
48) dibromochloromethane	6.988	129	769	0.79	µg/l	#	79
49) 1,2-dibromoethane	7.176	107	1197	1.13	µg/l	#	75
50) 1-chlorohexane	7.663	55	2273	1.45	µg/L		95
51) chlorobenzene	7.639	112	4626	0.89	µg/l	#	84
52) 1,1,1,2-tetrachloroethane	7.700	133	933	0.85	µg/l	#	65
53) ethylbenzene	7.681	106	2520	0.99	µg/l	#	94
54) P & M -Xylene	7.791	106	6332	1.96	µg/l		92
55) o-xylene	8.077	106	2777	0.84	µg/l	#	71
56) styrene	8.119	104	4257	0.97	µg/l		99
57) bromoform	8.113	173	320	0.47	µg/l	#	29
58) Isopropylbenzene (Cumene)	8.284	105	6841	0.88	µg/l		99
61) trans 1,4-dichloro-2-b...	8.667	53	760	1.22	µg/L	#	63
62) bromobenzene	8.484	156	1956	1.04	µg/l		97
63) 1,1,2,2-tetrachloroethane	8.576	83	2434	1.07	µg/l	#	74
64) 1,2,3-trichloropropane	8.637	110	410	0.73	µg/l	#	63
65) n-propylbenzene	8.527	91	10565	1.03	µg/l		95
66) 2-chlorotoluene	8.600	91	6026	1.01	µg/l		90
67) 4-chlorotoluene	8.691	91	5871	0.96	µg/l	#	84
68) 1,3,5-trimethylbenzene	8.643	105	6077	0.95	µg/l		96
69) tert-butylbenzene	8.807	119	5019	0.90	µg/l		88
70) 1,2,4-trimethylbenzene	8.843	105	5544	0.97	µg/l	#	85
71) sec-butylbenzene	8.898	105	7324	0.96	µg/l	#	91
72) 1,3-dichlorobenzene	9.002	146	3301	0.87	µg/l	#	81
73) 4-isopropyltoluene	8.977	119	5197	0.94	µg/l	#	83
74) 1,4-dichlorobenzene	9.044	146	3570	0.92	µg/l	#	81
75) 1,2-dichlorobenzene	9.251	146	3739	0.97	µg/l		97
76) n-butylbenzene	9.184	91	4350	0.90	µg/l	#	84
77) 1,2-dibromo-3-chloropr...	9.628	75	343	0.84	µg/l	#	69
78) 1,2,4-trichlorobenzene	9.932	180	1280	1.04	µg/l		83
79) hexachlorobutadiene	9.914	225	462	0.95	µg/l	#	39
80) naphthalene	10.078	128	4173	0.86	µg/l		99
81) 1,2,3-trichlorobenzene	10.157	180	1365	0.86	µg/l	#	80

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A07.D
Acq On : 17 Aug 2014 6:50 am
Operator : NRB
Sample : 1
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 17 22:36:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A08.D
Acq On : 17 Aug 2014 7:06 am
Operator : NRB
Sample : 3
Misc : [VNA]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 17 22:37:14 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	41248	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	85219	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	104880	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.466	111	65410	29.82	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.40%				
30) 1,2-Dichloroethane-D4 ...	4.147	65	66938	30.40	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 101.33%				
41) Toluene-d8 <surr>	6.246	98	242548	30.17	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.57%				
60) 4-Bromofluorobenzene <...	8.436	95	100173	30.12	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.40%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	11178	3.16	µg/l	#	86
3) chloromethane	0.928	50	11019	2.79	µg/l		90
4) vinyl chloride	0.969	62	9654	3.21	µg/l		100
5) bromomethane	1.125	96	2039	2.81	µg/l		91
6) chloroethane	1.189	64	4077	3.52	µg/l	#	89
7) trichlorofluoromethane	1.253	101	11866	2.89	µg/l		93
8) 1,1,2-trichloro-1,2,2-...	1.549	101	8767	4.38	µg/L	#	82
9) 1,1-dichloroethene	1.526	96	5241	3.42	µg/l		97
10) Acetone	1.932	43	7727	7.28	µg/L	#	81
11) Acrylonitrile	2.516	53	3228	5.42	µg/L		94
12) Methyliodide	1.613	142	4672	3.69	µg/L		89
13) Carbon disulfide	1.538	76	23999	4.37	µg/L	#	94
14) methylene chloride	1.890	84	6467	2.82	µg/l		89
15) methyl-t-butyl ether	2.078	73	16814	4.90	µg/L	#	91
16) trans-1,2-dichloroethene	1.987	96	5274	3.18	µg/l	#	79
17) Vinylacetate	2.711	43	5983	3.64	µg/L	#	84
18) n-hexane	2.036	56	3603	3.73	µg/L		93
19) 1,1-dichloroethane	2.450	63	9160	3.06	µg/l		96
20) 2-Butanone(MEK)	3.660	43	10429	14.29	µg/L	#	74
21) 2,2-dichloropropane	3.040	77	4411	3.87	µg/l	#	54
22) cis-1,2-dichloroethene	2.948	96	4842	3.46	µg/l		97
23) bromochloromethane	3.143	128	2033	2.77	µg/l		82
24) cyclohexane	3.125	56	8558	3.34	µg/L		88
25) chloroform	3.259	83	9071	2.98	µg/l	#	73
27) 1,1,1-trichloroethane	3.459	97	6391	3.62	µg/l		95
28) carbon tetrachloride	3.374	117	4034	2.95	µg/l		99
29) 1,1-dichloropropene	3.618	75	5543	3.28	µg/l		98
31) benzene	3.940	78	19659	3.07	µg/l	#	85
32) 1,2-dichloroethane	4.244	62	6034	3.78	µg/l	#	78
33) trichloroethene	4.737	95	4821	3.08	µg/l	#	77
34) 1,2-dichloropropane	5.321	63	4944	3.38	µg/l	#	95
35) dibromomethane	5.205	93	3390	4.28	µg/l	#	73
37) bromodichloromethane	5.431	83	4810	3.48	µg/l	#	88
38) cis-1,3-dichloropropene	6.081	75	3833	3.17	µg/l	#	81
39) 4-Methyl-2-pentanone	6.702	58	8311	11.24	µg/L	#	90
42) toluene	6.294	92	14259	2.85	µg/l		82
43) trans-1,3-dichloropropene	6.720	75	3043	2.52	µg/l		91
44) 1,1,2-trichloroethane	6.854	83	3854	2.84	µg/l		84

Data Path : Z:\08\VNA\DATA\081714\
Data File : A08.D
Acq On : 17 Aug 2014 7:06 am
Operator : NRB
Sample : 3
Misc : [VNA]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 17 22:37:14 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

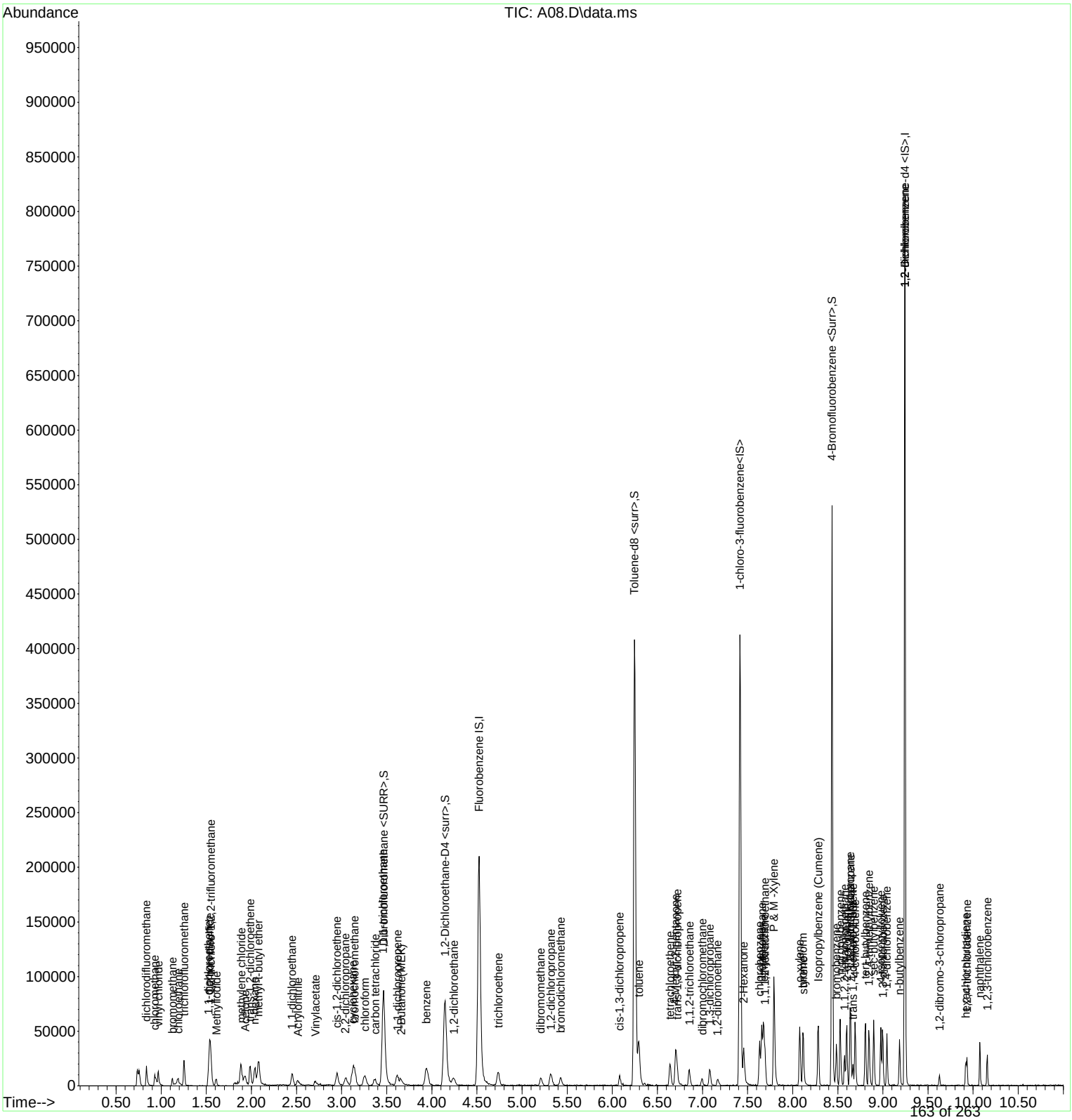
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	5122	3.01	µg/l	#	69
46) 1,3-dichloropropane	7.079	76	7232	3.34	µg/l		98
47) 2-Hexanone	7.456	43	17598	11.36	µg/L		92
48) dibromochloromethane	7.000	129	3762	3.44	µg/l		83
49) 1,2-dibromoethane	7.164	107	4514	3.66	µg/l	#	67
50) 1-chlorohexane	7.657	55	9044	5.11	µg/L		90
51) chlorobenzene	7.633	112	16414	2.94	µg/l		97
52) 1,1,1,2-tetrachloroethane	7.694	133	3992	3.27	µg/l		92
53) ethylbenzene	7.681	106	9407	3.32	µg/l		81
54) P & M -Xylene	7.791	106	21791	6.21	µg/l		88
55) o-xylene	8.077	106	9059	2.65	µg/l		93
56) styrene	8.119	104	15035	3.14	µg/l		90
57) bromoform	8.113	173	1979	2.78	µg/l		87
58) Isopropylbenzene (Cumene)	8.284	105	25234	3.02	µg/l		100
61) trans 1,4-dichloro-2-b...	8.667	53	2925	4.42	µg/L	#	83
62) bromobenzene	8.484	156	6486	3.15	µg/l		98
63) 1,1,2,2-tetrachloroethane	8.576	83	7596	3.08	µg/l	#	96
64) 1,2,3-trichloropropane	8.637	110	2462	3.65	µg/l	#	71
65) n-propylbenzene	8.527	91	33060	3.00	µg/l		96
66) 2-chlorotoluene	8.600	91	19114	2.98	µg/l	#	81
67) 4-chlorotoluene	8.691	91	20802	3.14	µg/l		89
68) 1,3,5-trimethylbenzene	8.643	105	19754	2.90	µg/l		94
69) tert-butylbenzene	8.807	119	16882	2.88	µg/l		100
70) 1,2,4-trimethylbenzene	8.843	105	19847	3.16	µg/l		91
71) sec-butylbenzene	8.898	105	24517	2.99	µg/l		95
72) 1,3-dichlorobenzene	9.002	146	12213	2.99	µg/l	#	80
73) 4-isopropyltoluene	8.977	119	18614	3.11	µg/l		94
74) 1,4-dichlorobenzene	9.044	146	10731	2.66	µg/l		97
75) 1,2-dichlorobenzene	9.245	146	12548	3.03	µg/l	#	89
76) n-butylbenzene	9.184	91	16152	3.08	µg/l		91
77) 1,2-dibromo-3-chloropr...	9.628	75	987	2.47	µg/l	#	42
78) 1,2,4-trichlorobenzene	9.932	180	4772	3.43	µg/l		98
79) hexachlorobutadiene	9.920	225	1592	3.04	µg/l		91
80) naphthalene	10.072	128	17402	3.25	µg/l	#	93
81) 1,2,3-trichlorobenzene	10.157	180	4554	2.76	µg/l		96

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A08.D
Acq On : 17 Aug 2014 7:06 am
Operator : NRB
Sample : 3
Misc : [VNA]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 17 22:37:14 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A09.D
Acq On : 17 Aug 2014 7:23 am
Operator : NRB
Sample : 10
Misc : [VNA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 17 22:37:43 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	43728	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	83091	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	109294	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.459	111	69190	29.81	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.37%				
30) 1,2-Dichloroethane-D4 ...	4.147	65	67324	29.07	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 96.90%				
41) Toluene-d8 <surr>	6.246	98	235987	30.08	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.27%				
60) 4-Bromofluorobenzene <...	8.436	95	102254	29.60	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.67%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	40667	10.66	µg/l		94
3) chloromethane	0.928	50	34684	8.57	µg/l		96
4) vinyl chloride	0.969	62	31789	9.98	µg/l		96
5) bromomethane	1.125	96	7266	9.58	µg/l		87
6) chloroethane	1.183	64	11662	9.60	µg/l		93
7) trichlorofluoromethane	1.253	101	42458	9.79	µg/l		89
8) 1,1,2-trichloro-1,2,2-...	1.549	101	31160	14.74	µg/L		93
9) 1,1-dichloroethene	1.526	96	17641	10.66	µg/l		99
10) Acetone	1.926	43	21688	20.76	µg/L	#	80
11) Acrylonitrile	2.510	53	12050	17.87	µg/L	#	90
12) Methyliodide	1.607	142	21340	15.69	µg/L		92
13) Carbon disulfide	1.538	76	85059	14.67	µg/L		99
14) methylene chloride	1.884	84	24059	9.91	µg/l		97
15) methyl-t-butyl ether	2.079	73	55516	15.22	µg/L	#	93
16) trans-1,2-dichloroethene	1.987	96	17332	9.89	µg/l		95
17) Vinylacetate	2.705	43	20672	11.45	µg/L	#	83
18) n-hexane	2.036	56	12904	11.98	µg/L		94
19) 1,1-dichloroethane	2.450	63	31514	9.95	µg/l	#	96
20) 2-Butanone(MEK)	3.654	43	34207	40.39	µg/L		96
21) 2,2-dichloropropane	3.040	77	13988	11.23	µg/l	#	86
22) cis-1,2-dichloroethene	2.948	96	18340	11.80	µg/l		95
23) bromochloromethane	3.155	128	9216	11.33	µg/l	#	75
24) cyclohexane	3.131	56	32830	11.59	µg/L		99
25) chloroform	3.259	83	28989	9.17	µg/l		97
27) 1,1,1-trichloroethane	3.453	97	22946	11.73	µg/l	#	88
28) carbon tetrachloride	3.368	117	17856	11.64	µg/l		91
29) 1,1-dichloropropene	3.618	75	22232	11.84	µg/l		97
31) benzene	3.940	78	69808	10.22	µg/l		99
32) 1,2-dichloroethane	4.244	62	22184	12.34	µg/l		99
33) trichloroethene	4.737	95	18127	10.73	µg/l		94
34) 1,2-dichloropropane	5.315	63	18203	11.34	µg/l	#	92
35) dibromomethane	5.205	93	11705	12.92	µg/l		97
37) bromodichloromethane	5.424	83	18581	12.03	µg/l		88
38) cis-1,3-dichloropropene	6.081	75	17393	12.66	µg/l	#	88
39) 4-Methyl-2-pentanone	6.702	58	29469	35.78	µg/L	#	95
42) toluene	6.294	92	49657	10.15	µg/l		93
43) trans-1,3-dichloropropene	6.714	75	14643	11.71	µg/l		92
44) 1,1,2-trichloroethane	6.848	83	14398	10.66	µg/l		88

Data Path : Z:\08\VNA\DATA\081714\
Data File : A09.D
Acq On : 17 Aug 2014 7:23 am
Operator : NRB
Sample : 10
Misc : [VNA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 17 22:37:43 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

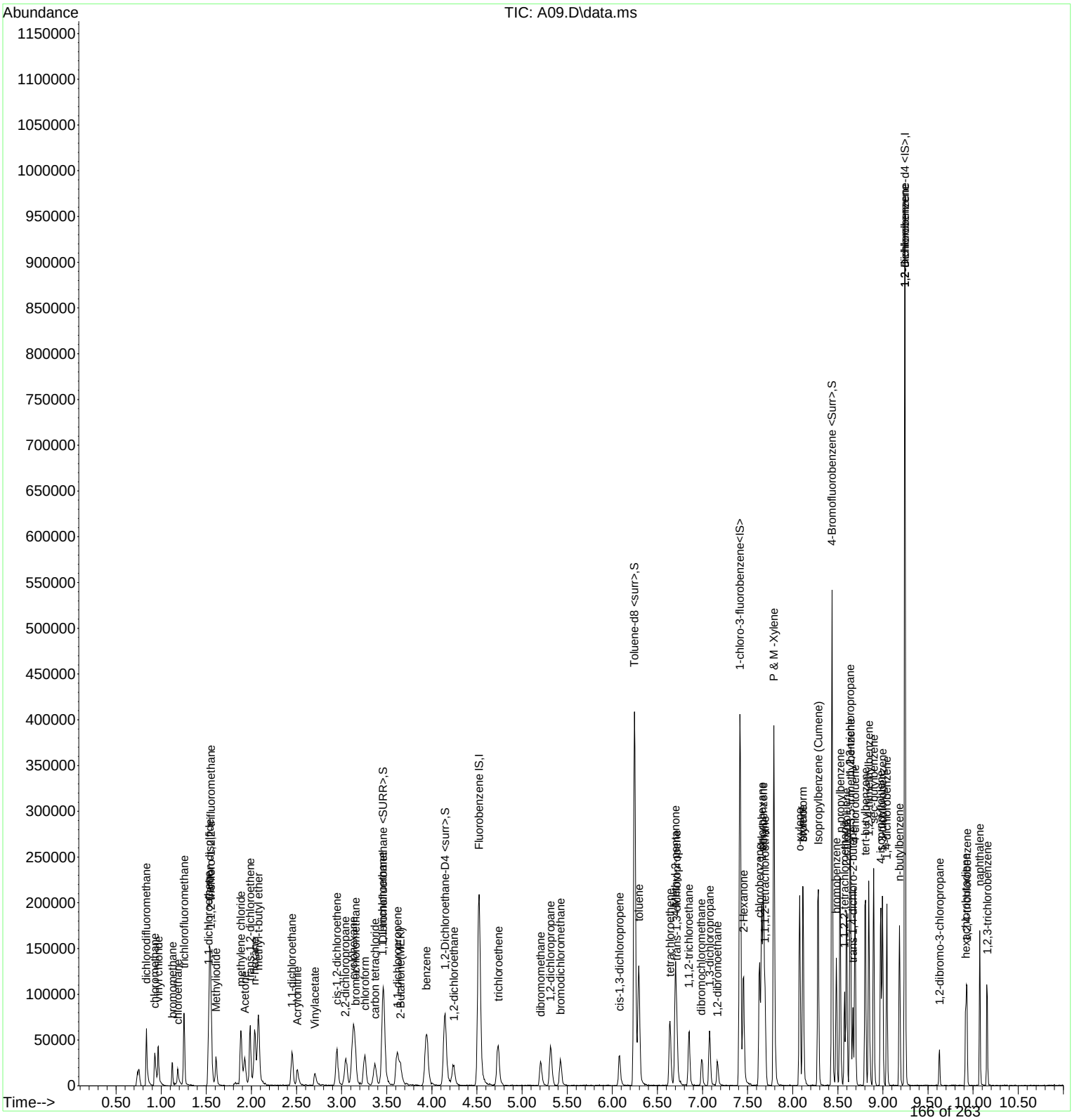
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	17637	10.50	µg/l		97
46) 1,3-dichloropropane	7.079	76	27317	12.21	µg/l		95
47) 2-Hexanone	7.456	43	66157	40.10	µg/L		99
48) dibromochloromethane	6.988	129	14426	12.62	µg/l		92
49) 1,2-dibromoethane	7.164	107	15253	12.03	µg/l	#	79
50) 1-chlorohexane	7.657	55	32126	17.76	µg/L		95
51) chlorobenzene	7.633	112	54352	9.99	µg/l		98
52) 1,1,1,2-tetrachloroethane	7.694	133	14130	11.45	µg/l		96
53) ethylbenzene	7.675	106	32838	11.46	µg/l		93
54) P & M -Xylene	7.791	106	79522	22.51	µg/l		94
55) o-xylene	8.077	106	35939	10.60	µg/l		98
56) styrene	8.113	104	59649	12.09	µg/l		96
57) bromoform	8.113	173	8688	11.79	µg/l	#	80
58) Isopropylbenzene (Cumene)	8.284	105	94400	11.24	µg/l		97
61) trans 1,4-dichloro-2-b...	8.667	53	11702	16.43	µg/L	#	80
62) bromobenzene	8.485	156	21899	10.17	µg/l		92
63) 1,1,2,2-tetrachloroethane	8.576	83	26831	10.36	µg/l		97
64) 1,2,3-trichloropropane	8.637	110	6991	9.97	µg/l	#	77
65) n-propylbenzene	8.527	91	121503	10.47	µg/l		100
66) 2-chlorotoluene	8.594	91	66625	9.99	µg/l		96
67) 4-chlorotoluene	8.691	91	71432	10.27	µg/l		97
68) 1,3,5-trimethylbenzene	8.643	105	76420	10.59	µg/l		99
69) tert-butylbenzene	8.807	119	61381	10.03	µg/l		96
70) 1,2,4-trimethylbenzene	8.843	105	73971	11.02	µg/l		97
71) sec-butylbenzene	8.898	105	98094	11.15	µg/l		97
72) 1,3-dichlorobenzene	8.996	146	41442	9.78	µg/l		97
73) 4-isopropyltoluene	8.977	119	72115	11.22	µg/l		96
74) 1,4-dichlorobenzene	9.044	146	42984	10.18	µg/l		95
75) 1,2-dichlorobenzene	9.245	146	41593	9.70	µg/l		96
76) n-butylbenzene	9.184	91	62723	11.15	µg/l		96
77) 1,2-dibromo-3-chloropr...	9.628	75	4969	11.37	µg/l	#	69
78) 1,2,4-trichlorobenzene	9.932	180	16785	11.22	µg/l		89
79) hexachlorobutadiene	9.920	225	7476	12.75	µg/l		99
80) naphthalene	10.072	128	62357	10.92	µg/l		96
81) 1,2,3-trichlorobenzene	10.157	180	17767	10.26	µg/l		96

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A09.D
Acq On : 17 Aug 2014 7:23 am
Operator : NRB
Sample : 10
Misc : [VNA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 17 22:37:43 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A10.D
Acq On : 17 Aug 2014 7:39 am
Operator : NRB
Sample : 30
Misc : [VNA]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 17 22:35:42 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	44633	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	87810	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	115826	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	71847	30.00	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.00%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	69206	30.00	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.00%			
41) Toluene-d8 <surr>	6.246	98	244680	30.00	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.00%			
60) 4-Bromofluorobenzene <...	8.436	95	105092	30.00	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	124927	30.00	µg/l	100
3) chloromethane	0.928	50	115266	30.00	µg/l	100
4) vinyl chloride	0.963	62	106094	30.00	µg/l	100
5) bromomethane	1.125	96	31494	30.00	µg/l	100
6) chloroethane	1.184	64	41682	30.00	µg/l	100
7) trichlorofluoromethane	1.253	101	138465	30.00	µg/l	100
8) 1,1,2-trichloro-1,2,2-...	1.549	101	98524	45.00	µg/L	100
9) 1,1-dichloroethene	1.526	96	57712	30.00	µg/l	100
10) Acetone	1.920	43	68168	90.00	µg/L	100
11) Acrylonitrile	2.504	53	43313	45.00	µg/L	100
12) Methyliodide	1.607	142	98661	45.00	µg/L	100
13) Carbon disulfide	1.538	76	276225	45.00	µg/L	100
14) methylene chloride	1.884	84	75802	30.00	µg/l	100
15) methyl-t-butyl ether	2.073	73	189370	45.00	µg/L	100
16) trans-1,2-dichloroethene	1.987	96	57811	30.00	µg/l	100
17) Vinylacetate	2.699	43	76665	30.00	µg/L	100
18) n-hexane	2.036	56	40244	30.00	µg/L	100
19) 1,1-dichloroethane	2.450	63	104764	30.00	µg/l	100
20) 2-Butanone(MEK)	3.642	43	122358	90.00	µg/L	100
21) 2,2-dichloropropane	3.046	77	55596	30.00	µg/l	100
22) cis-1,2-dichloroethene	2.949	96	63986	30.00	µg/l	100
23) bromochloromethane	3.149	128	29628	30.00	µg/l	100
24) cyclohexane	3.125	56	109350	30.00	µg/L	100
25) chloroform	3.253	83	101191	30.00	µg/l	100
27) 1,1,1-trichloroethane	3.453	97	81975	30.00	µg/l	100
28) carbon tetrachloride	3.368	117	66054	30.00	µg/l	100
29) 1,1-dichloropropene	3.612	75	73830	30.00	µg/l	100
31) benzene	3.940	78	235380	30.00	µg/l	100
32) 1,2-dichloroethane	4.232	62	73573	30.00	µg/l	100
33) trichloroethene	4.731	95	60502	30.00	µg/l	100
34) 1,2-dichloropropane	5.315	63	60669	30.00	µg/l	100
35) dibromomethane	5.199	93	39716	30.00	µg/l	100
37) bromodichloromethane	5.425	83	64574	30.00	µg/l	100
38) cis-1,3-dichloropropene	6.075	75	67865	30.00	µg/l	100
39) 4-Methyl-2-pentanone	6.696	58	107485	90.00	µg/L	100
42) toluene	6.295	92	160109	30.00	µg/l	100
43) trans-1,3-dichloropropene	6.714	75	59874	30.00	µg/l	100
44) 1,1,2-trichloroethane	6.848	83	46370	30.00	µg/l	100

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A10.D
Acq On : 17 Aug 2014 7:39 am
Operator : NRB
Sample : 30
Misc : [VNA]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 17 22:35:42 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

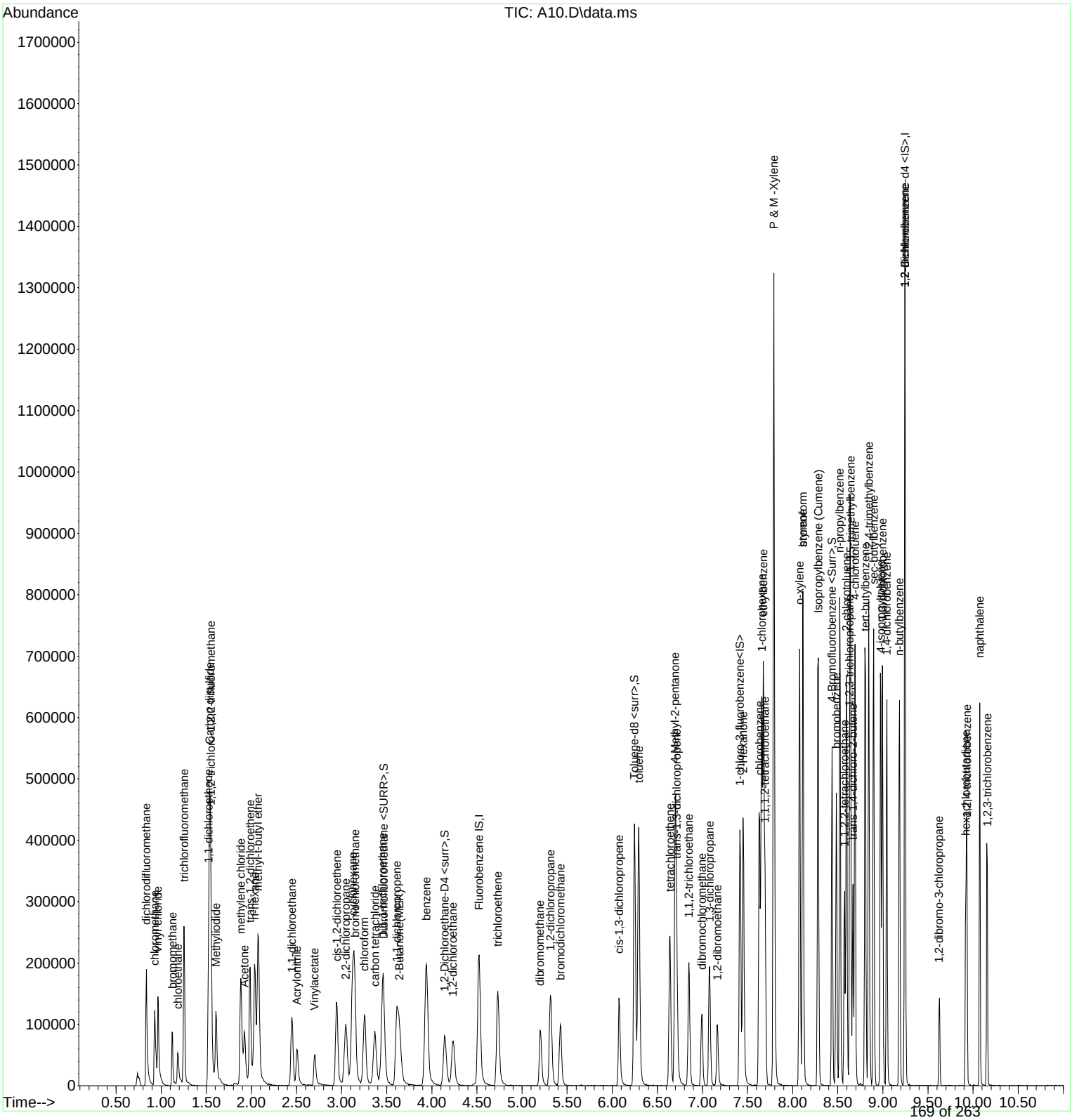
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) tetrachloroethene	6.641	166	61180	30.00	µg/l	100
46) 1,3-dichloropropane	7.079	76	86795	30.00	µg/l	100
47) 2-Hexanone	7.450	43	222640	90.00	µg/L	100
48) dibromochloromethane	6.994	129	52008	30.00	µg/l	100
49) 1,2-dibromoethane	7.164	107	57025	30.00	µg/l	100
50) 1-chlorohexane	7.657	55	102935	45.00	µg/L	100
51) chlorobenzene	7.633	112	183894	30.00	µg/l	100
52) 1,1,1,2-tetrachloroethane	7.694	133	48434	30.00	µg/l	100
53) ethylbenzene	7.675	106	101295	30.00	µg/l	100
54) P & M -Xylene	7.791	106	259512	60.00	µg/l	100
55) o-xylene	8.077	106	123546	30.00	µg/l	100
56) styrene	8.114	104	193457	30.00	µg/l	100
57) bromoform	8.114	173	34898	30.00	µg/l	100
58) Isopropylbenzene (Cumene)	8.284	105	300835	30.00	µg/l	100
61) trans 1,4-dichloro-2-b...	8.667	53	39347	45.00	µg/L	100
62) bromobenzene	8.485	156	72398	30.00	µg/l	100
63) 1,1,2,2-tetrachloroethane	8.576	83	89293	30.00	µg/l	100
64) 1,2,3-trichloropropane	8.631	110	25212	30.00	µg/l	100
65) n-propylbenzene	8.521	91	394480	30.00	µg/l	100
66) 2-chlorotoluene	8.594	91	218601	30.00	µg/l	100
67) 4-chlorotoluene	8.691	91	232963	30.00	µg/l	100
68) 1,3,5-trimethylbenzene	8.643	105	248120	30.00	µg/l	100
69) tert-butylbenzene	8.807	119	209421	30.00	µg/l	100
70) 1,2,4-trimethylbenzene	8.844	105	247058	30.00	µg/l	100
71) sec-butylbenzene	8.898	105	309054	30.00	µg/l	100
72) 1,3-dichlorobenzene	8.996	146	137667	30.00	µg/l	100
73) 4-isopropyltoluene	8.977	119	239607	30.00	µg/l	100
74) 1,4-dichlorobenzene	9.044	146	144104	30.00	µg/l	100
75) 1,2-dichlorobenzene	9.245	146	133997	30.00	µg/l	100
76) n-butylbenzene	9.184	91	220815	30.00	µg/l	100
77) 1,2-dibromo-3-chloropr...	9.622	75	16692	30.00	µg/l	100
78) 1,2,4-trichlorobenzene	9.932	180	63485	30.00	µg/l	100
79) hexachlorobutadiene	9.920	225	25174	30.00	µg/l	100
80) naphthalene	10.072	128	224961	30.00	µg/l	100
81) 1,2,3-trichlorobenzene	10.158	180	63737	30.00	µg/l	100

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A10.D
Acq On : 17 Aug 2014 7:39 am
Operator : NRB
Sample : 30
Misc : [VNA]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 17 22:35:42 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A11.D
Acq On : 17 Aug 2014 7:56 am
Operator : NRB
Sample : 50
Misc : [VNA]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 17 22:38:13 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	46258	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	91297	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	125883	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	74708	30.35	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.17%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	71315	29.25	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 97.50%			
41) Toluene-d8 <surr>	6.246	98	257343	29.88	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 99.60%			
60) 4-Bromofluorobenzene <...	8.436	95	110515	28.13	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 93.77%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	214892	52.69	µg/l	96
3) chloromethane	0.928	50	198456	46.91	µg/l	96
4) vinyl chloride	0.963	62	184604	53.94	µg/l	97
5) bromomethane	1.126	96	63526	70.90	µg/l	93
6) chloroethane	1.184	64	65770	50.99	µg/l	100
7) trichlorofluoromethane	1.253	101	220875	48.45	µg/l	98
8) 1,1,2-trichloro-1,2,2-...	1.549	101	169144	75.53	µg/L	94
9) 1,1-dichloroethene	1.526	96	99993	55.81	µg/l	98
10) Acetone	1.927	43	117646	111.89	µg/L	97
11) Acrylonitrile	2.505	53	76440	98.70	µg/L	98
12) Methyliodide	1.608	142	198121	120.89	µg/L	99
13) Carbon disulfide	1.538	76	476227	77.20	µg/L	98
14) methylene chloride	1.884	84	124252	48.65	µg/l	94
15) methyl-t-butyl ether	2.079	73	324986	82.52	µg/L	95
16) trans-1,2-dichloroethene	1.987	96	99314	52.92	µg/l	99
17) Vinylacetate	2.699	43	143034	69.14	µg/L	97
18) n-hexane	2.036	56	69125	58.59	µg/L	93
19) 1,1-dichloroethane	2.450	63	179113	52.83	µg/l #	98
20) 2-Butanone(MEK)	3.642	43	226058	226.55	µg/L	98
21) 2,2-dichloropropane	3.046	77	100586	70.17	µg/l	99
22) cis-1,2-dichloroethene	2.949	96	110165	63.39	µg/l	98
23) bromochloromethane	3.143	128	54328	59.97	µg/l	86
24) cyclohexane	3.125	56	190141	60.73	µg/L	95
25) chloroform	3.253	83	170640	50.86	µg/l	91
27) 1,1,1-trichloroethane	3.454	97	147517	66.56	µg/l	97
28) carbon tetrachloride	3.368	117	116096	65.86	µg/l	96
29) 1,1-dichloropropene	3.612	75	126564	60.92	µg/l	93
31) benzene	3.940	78	409247	55.40	µg/l	99
32) 1,2-dichloroethane	4.238	62	125270	62.55	µg/l	100
33) trichloroethene	4.731	95	106288	57.64	µg/l	92
34) 1,2-dichloropropane	5.315	63	108485	61.07	µg/l #	97
35) dibromomethane	5.206	93	66166	64.92	µg/l	98
37) bromodichloromethane	5.425	83	115675	66.19	µg/l	97
38) cis-1,3-dichloropropene	6.076	75	125709	77.10	µg/l	93
39) 4-Methyl-2-pentanone	6.702	58	186679	199.97	µg/L	97
42) toluene	6.295	92	279243	51.61	µg/l	97
43) trans-1,3-dichloropropene	6.714	75	108299	70.69	µg/l	98
44) 1,1,2-trichloroethane	6.848	83	79370	52.73	µg/l	96

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A11.D
Acq On : 17 Aug 2014 7:56 am
Operator : NRB
Sample : 50
Misc : [VNA]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 17 22:38:13 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

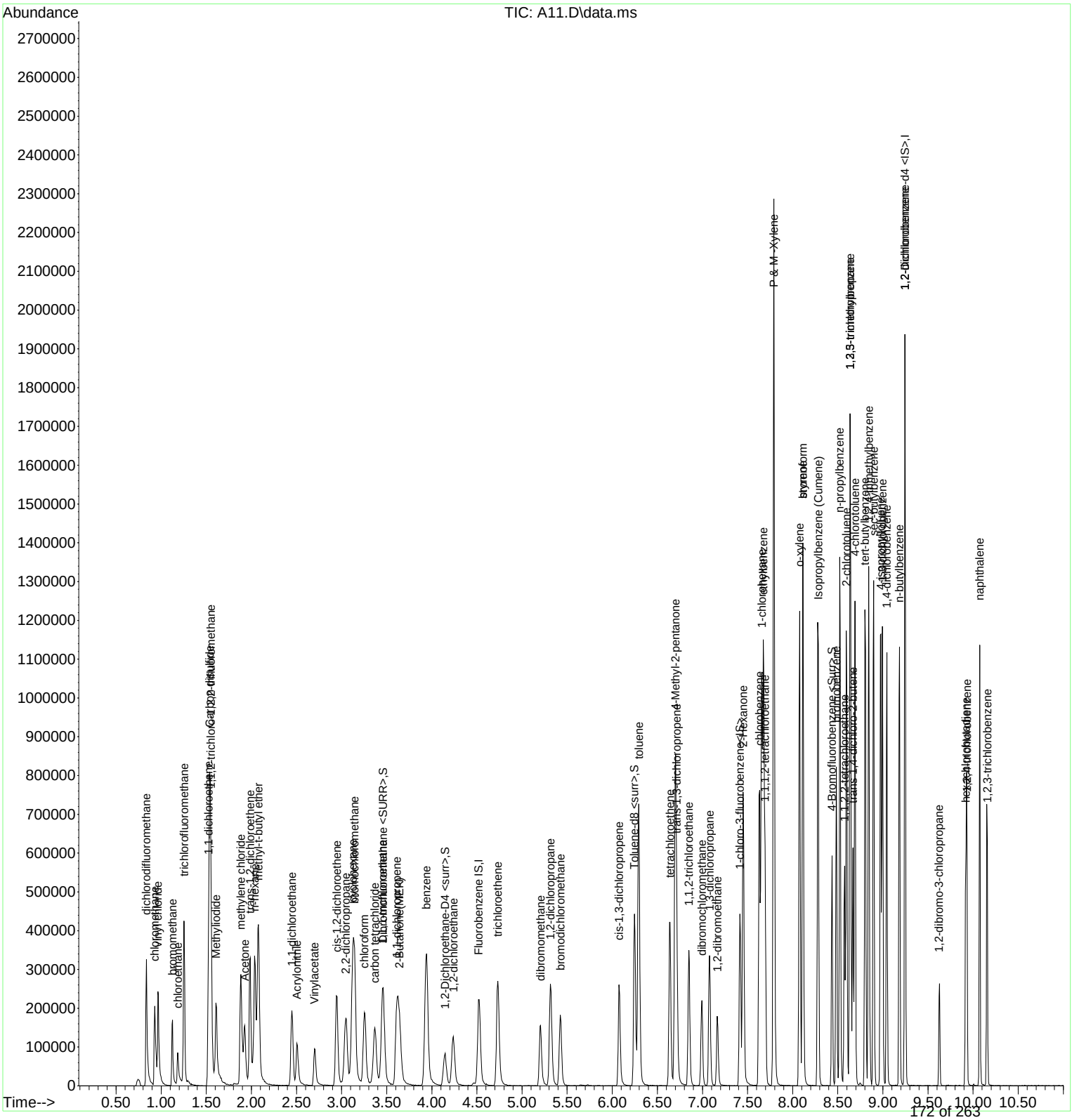
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	105731	55.94	µg/l		93
46) 1,3-dichloropropane	7.079	76	151328	59.27	µg/l		100
47) 2-Hexanone	7.450	43	402984	205.77	µg/L		98
48) dibromochloromethane	6.994	129	94855	69.62	µg/l		98
49) 1,2-dibromoethane	7.165	107	99694	66.76	µg/l	#	92
50) 1-chlorohexane	7.657	55	174624	85.40	µg/L		96
51) chlorobenzene	7.633	112	313331	52.00	µg/l		98
52) 1,1,1,2-tetrachloroethane	7.694	133	86848	61.17	µg/l		98
53) ethylbenzene	7.676	106	171795	53.74	µg/l		94
54) P & M -Xylene	7.791	106	438357	110.55	µg/l		99
55) o-xylene	8.077	106	213330	55.93	µg/l		98
56) styrene	8.114	104	333216	59.21	µg/l		99
57) bromoform	8.114	173	66637	72.87	µg/l		98
58) Isopropylbenzene (Cumene)	8.284	105	516393	54.85	µg/l		96
61) trans 1,4-dichloro-2-b...	8.667	53	69048	82.15	µg/L		92
62) bromobenzene	8.485	156	127599	51.20	µg/l		97
63) 1,1,2,2-tetrachloroethane	8.576	83	159145	52.76	µg/l		98
64) 1,2,3-trichloropropane	8.637	110	43355	52.89	µg/l	#	71
65) n-propylbenzene	8.521	91	664107	49.72	µg/l		99
66) 2-chlorotoluene	8.594	91	376983	49.22	µg/l		100
67) 4-chlorotoluene	8.692	91	407794	50.74	µg/l		99
68) 1,3,5-trimethylbenzene	8.637	105	430825	51.53	µg/l		98
69) tert-butylbenzene	8.801	119	352453	49.98	µg/l		94
70) 1,2,4-trimethylbenzene	8.844	105	420589	53.61	µg/l		100
71) sec-butylbenzene	8.898	105	531382	52.01	µg/l		100
72) 1,3-dichlorobenzene	8.996	146	239565	49.24	µg/l		96
73) 4-isopropyltoluene	8.977	119	422824	55.78	µg/l		99
74) 1,4-dichlorobenzene	9.044	146	245694	50.42	µg/l		98
75) 1,2-dichlorobenzene	9.245	146	233434	47.69	µg/l		97
76) n-butylbenzene	9.184	91	389338	58.12	µg/l		100
77) 1,2-dibromo-3-chloropr...	9.622	75	32150	60.50	µg/l		93
78) 1,2,4-trichlorobenzene	9.933	180	115407	63.41	µg/l		97
79) hexachlorobutadiene	9.920	225	48709	67.17	µg/l		96
80) naphthalene	10.073	128	403246	59.10	µg/l		98
81) 1,2,3-trichlorobenzene	10.158	180	111956	55.00	µg/l		95

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A11.D
Acq On : 17 Aug 2014 7:56 am
Operator : NRB
Sample : 50
Misc : [VNA]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 17 22:38:13 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A12.D
Acq On : 17 Aug 2014 8:13 am
Operator : NRB
Sample : 70
Misc : [VNA]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 17 22:38:40 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	46324	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	93183	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	124812	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	76148	30.76	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 102.53%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	74505	30.44	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 101.47%			
41) Toluene-d8 <surr>	6.246	98	265016	30.13	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.43%			
60) 4-Bromofluorobenzene <...	8.436	95	111382	28.78	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.93%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	304995	73.97	µg/l	94
3) chloromethane	0.928	50	296620	70.02	µg/l	95
4) vinyl chloride	0.963	62	261567	75.34	µg/l	99
5) bromomethane	1.125	96	95170	97.68	µg/l	92
6) chloroethane	1.184	64	85319	66.59	µg/l	96
7) trichlorofluoromethane	1.253	101	332174	72.35	µg/l	100
8) 1,1,2-trichloro-1,2,2-...	1.549	101	249869	110.46	µg/L	92
9) 1,1-dichloroethene	1.526	96	135073	74.48	µg/l	97
10) Acetone	1.926	43	174785	171.11	µg/L	96
11) Acrylonitrile	2.504	53	116404	140.07	µg/L	95
12) Methyliodide	1.607	142	311212	170.04	µg/L	95
13) Carbon disulfide	1.538	76	723808	115.26	µg/L	98
14) methylene chloride	1.884	84	179086	70.02	µg/l	93
15) methyl-t-butyl ether	2.079	73	489587	120.99	µg/L	95
16) trans-1,2-dichloroethene	1.987	96	147975	77.36	µg/l	97
17) Vinylacetate	2.699	43	214516	96.91	µg/L #	96
18) n-hexane	2.036	56	98149	80.92	µg/L	98
19) 1,1-dichloroethane	2.450	63	273735	78.91	µg/l	98
20) 2-Butanone(MEK)	3.642	43	339750	312.37	µg/L	96
21) 2,2-dichloropropane	3.046	77	157425	101.45	µg/l	91
22) cis-1,2-dichloroethene	2.949	96	166745	91.02	µg/l	96
23) bromochloromethane	3.143	128	77352	82.27	µg/l	84
24) cyclohexane	3.125	56	284143	86.97	µg/L	97
25) chloroform	3.253	83	254968	74.98	µg/l	93
27) 1,1,1-trichloroethane	3.453	97	219032	93.23	µg/l	93
28) carbon tetrachloride	3.368	117	178354	94.08	µg/l	91
29) 1,1-dichloropropene	3.612	75	195558	89.61	µg/l	96
31) benzene	3.940	78	604379	79.80	µg/l	100
32) 1,2-dichloroethane	4.232	62	180308	86.40	µg/l	99
33) trichloroethene	4.731	95	161211	84.32	µg/l	95
34) 1,2-dichloropropane	5.315	63	165141	88.69	µg/l #	98
35) dibromomethane	5.199	93	97686	90.94	µg/l	91
37) bromodichloromethane	5.425	83	172745	93.24	µg/l	100
38) cis-1,3-dichloropropene	6.075	75	196464	109.12	µg/l	94
39) 4-Methyl-2-pentanone	6.696	58	273081	276.66	µg/L	97
42) toluene	6.294	92	397999	71.76	µg/l	98
43) trans-1,3-dichloropropene	6.714	75	171200	100.08	µg/l	100
44) 1,1,2-trichloroethane	6.848	83	119045	76.13	µg/l	97

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A12.D
Acq On : 17 Aug 2014 8:13 am
Operator : NRB
Sample : 70
Misc : [VNA]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 17 22:38:40 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

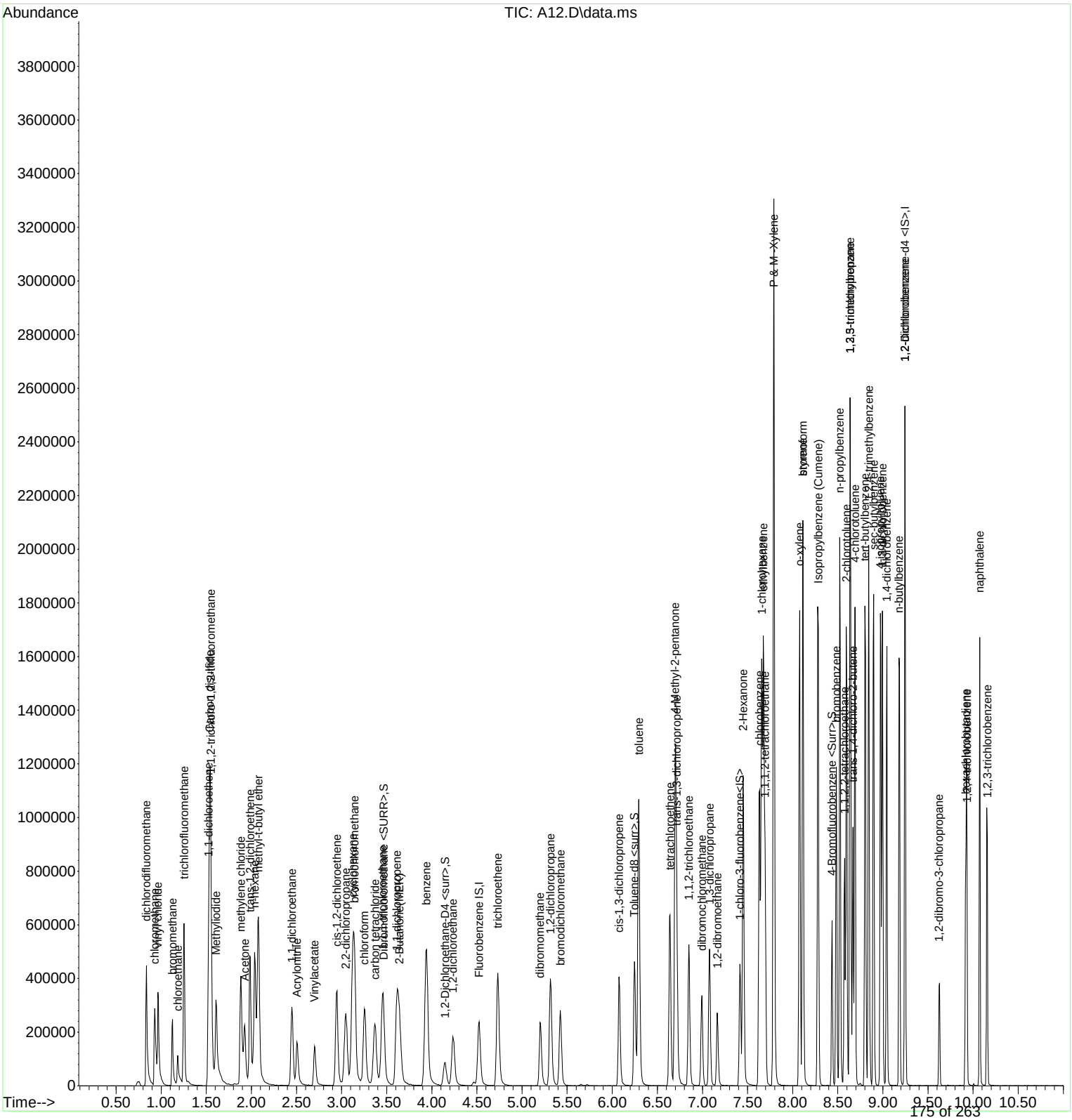
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	158236	80.06	µg/l		94
46) 1,3-dichloropropane	7.079	76	219400	81.83	µg/l		97
47) 2-Hexanone	7.450	43	590122	279.05	µg/L		98
48) dibromochloromethane	6.994	129	145810	97.89	µg/l		95
49) 1,2-dibromoethane	7.164	107	150763	93.40	µg/l	#	93
50) 1-chlorohexane	7.657	55	255985	119.78	µg/L		94
51) chlorobenzene	7.633	112	455234	73.42	µg/l		98
52) 1,1,1,2-tetrachloroethane	7.694	133	130468	86.50	µg/l		96
53) ethylbenzene	7.675	106	252905	76.34	µg/l		95
54) P & M -Xylene	7.791	106	628483	152.90	µg/l		100
55) o-xylene	8.077	106	305141	77.06	µg/l		97
56) styrene	8.113	104	493269	83.18	µg/l		96
57) bromoform	8.113	173	105562	102.57	µg/l		99
58) Isopropylbenzene (Cumene)	8.284	105	759470	77.61	µg/l		97
61) trans 1,4-dichloro-2-b...	8.667	53	107270	124.05	µg/L		89
62) bromobenzene	8.485	156	182177	73.16	µg/l		100
63) 1,1,2,2-tetrachloroethane	8.576	83	234359	77.05	µg/l		100
64) 1,2,3-trichloropropane	8.637	110	63479	76.62	µg/l	#	65
65) n-propylbenzene	8.521	91	963918	72.38	µg/l		98
66) 2-chlorotoluene	8.594	91	545223	71.53	µg/l		98
67) 4-chlorotoluene	8.691	91	591980	73.64	µg/l		97
68) 1,3,5-trimethylbenzene	8.637	105	628628	74.94	µg/l		95
69) tert-butylbenzene	8.801	119	506565	72.09	µg/l		89
70) 1,2,4-trimethylbenzene	8.844	105	620008	78.16	µg/l		100
71) sec-butylbenzene	8.898	105	766468	74.80	µg/l		99
72) 1,3-dichlorobenzene	8.996	146	359500	73.84	µg/l		94
73) 4-isopropyltoluene	8.971	119	605994	78.92	µg/l		96
74) 1,4-dichlorobenzene	9.044	146	364970	74.69	µg/l		97
75) 1,2-dichlorobenzene	9.245	146	339767	70.01	µg/l		96
76) n-butylbenzene	9.178	91	572521	83.44	µg/l		92
77) 1,2-dibromo-3-chloropr...	9.622	75	49718	89.19	µg/l		99
78) 1,2,4-trichlorobenzene	9.932	180	167170	88.55	µg/l		97
79) hexachlorobutadiene	9.920	225	66970	88.94	µg/l		90
80) naphthalene	10.072	128	594238	84.76	µg/l		98
81) 1,2,3-trichlorobenzene	10.158	180	164582	79.67	µg/l		99

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A12.D
Acq On : 17 Aug 2014 8:13 am
Operator : NRB
Sample : 70
Misc : [VNA]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 17 22:38:40 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A13.D
Acq On : 17 Aug 2014 8:29 am
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 11:56:32 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	44510	30.00	µg/l	# 0.00
40) 1-chloro-3-fluorobenze...	7.414	95	90627	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	104425	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	70211	29.52	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.40%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	69273	29.46	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 98.20%			
41) Toluene-d8 <surr>	6.246	98	249726	29.19	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 97.30%			
60) 4-Bromofluorobenzene <...	8.436	95	104891	32.40	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 108.00%			
Target Compounds						Qvalue
3) chloromethane	0.928	50	617	0.15	µg/l #	40
5) bromomethane	1.131	96	301	2.33	µg/l	92
10) Acetone	1.926	43	4708	4.67	µg/L #	85
11) Acrylonitrile	2.523	53	314	1.41	µg/L #	18
12) Methyliodide	1.619	142	526	0.70	µg/L #	31
13) Carbon disulfide	1.538	76	6153	1.02	µg/L #	91
14) methylene chloride	1.884	84	894	0.36	µg/l #	61
16) trans-1,2-dichloroethene	1.993	96	254	0.14	µg/l #	9
17) Vinylacetate	2.723	43	145	0.32	µg/L #	84
20) 2-Butanone(MEK)	3.672	43	1942	3.11	µg/L #	56
23) bromochloromethane	3.149	128	134	0.68	µg/l #	1
32) 1,2-dichloroethane	4.238	62	112	0.37	µg/l #	78
35) dibromomethane	5.224	93	166	0.65	µg/l #	5
39) 4-Methyl-2-pentanone	6.714	58	258	1.19	µg/L #	36
47) 2-Hexanone	7.469	43	925	1.44	µg/L #	83
51) chlorobenzene	7.645	112	648	0.11	µg/l #	42
53) ethylbenzene	7.681	106	714	0.22	µg/l #	64
61) trans 1,4-dichloro-2-b...	8.697	53	110	0.15	µg/L #	3
62) bromobenzene	8.491	156	312	0.15	µg/l #	49
65) n-propylbenzene	8.527	91	1238	0.11	µg/l #	54
66) 2-chlorotoluene	8.600	91	956	0.15	µg/l #	43
67) 4-chlorotoluene	8.704	91	1127	0.17	µg/l	90
68) 1,3,5-trimethylbenzene	8.643	105	838	0.12	µg/l #	75
69) tert-butylbenzene	8.807	119	956	0.16	µg/l	90
70) 1,2,4-trimethylbenzene	8.850	105	708	0.11	µg/l #	29
71) sec-butylbenzene	8.898	105	2289	0.27	µg/l	96
72) 1,3-dichlorobenzene	9.002	146	1221	0.30	µg/l #	77
73) 4-isopropyltoluene	8.983	119	1500	0.23	µg/l #	49
74) 1,4-dichlorobenzene	9.044	146	988	0.24	µg/l #	68
75) 1,2-dichlorobenzene	9.251	146	696	0.17	µg/l #	30
76) n-butylbenzene	9.190	91	2811	0.47	µg/l	97
77) 1,2-dibromo-3-chloropr...	9.628	75	111	0.52	µg/l #	80
78) 1,2,4-trichlorobenzene	9.926	180	768	0.44	µg/l #	44
79) hexachlorobutadiene	9.920	225	2230	3.37	µg/l #	86
80) naphthalene	10.072	128	3023	0.90	µg/l #	75
81) 1,2,3-trichlorobenzene	10.157	180	918	0.53	µg/l	82

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A13.D
Acq On : 17 Aug 2014 8:29 am
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 11:56:32 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

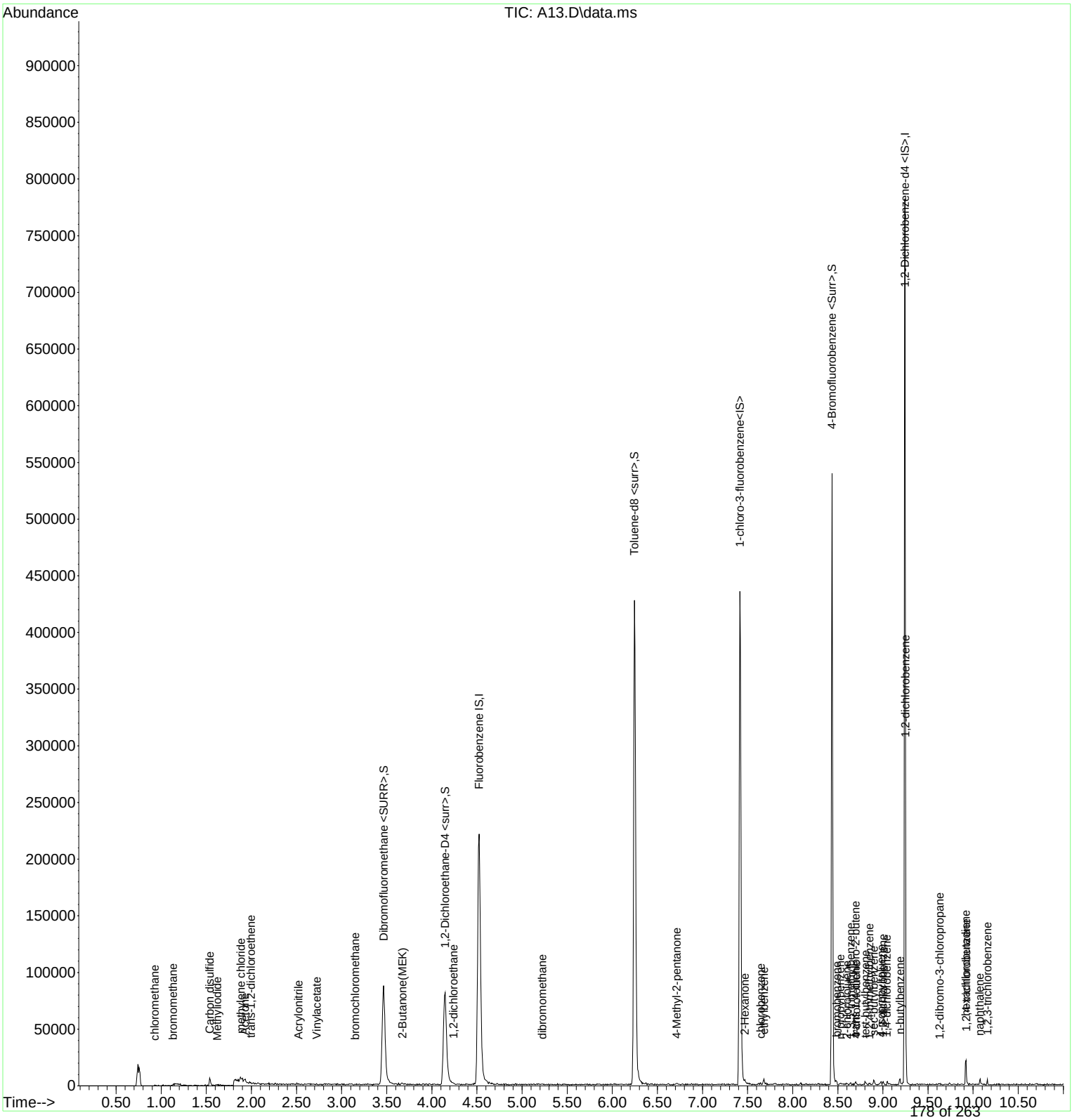
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A13.D
Acq On : 17 Aug 2014 8:29 am
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 11:56:32 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A14.D
Acq On : 17 Aug 2014 8:46 am
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 18 11:56:40 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

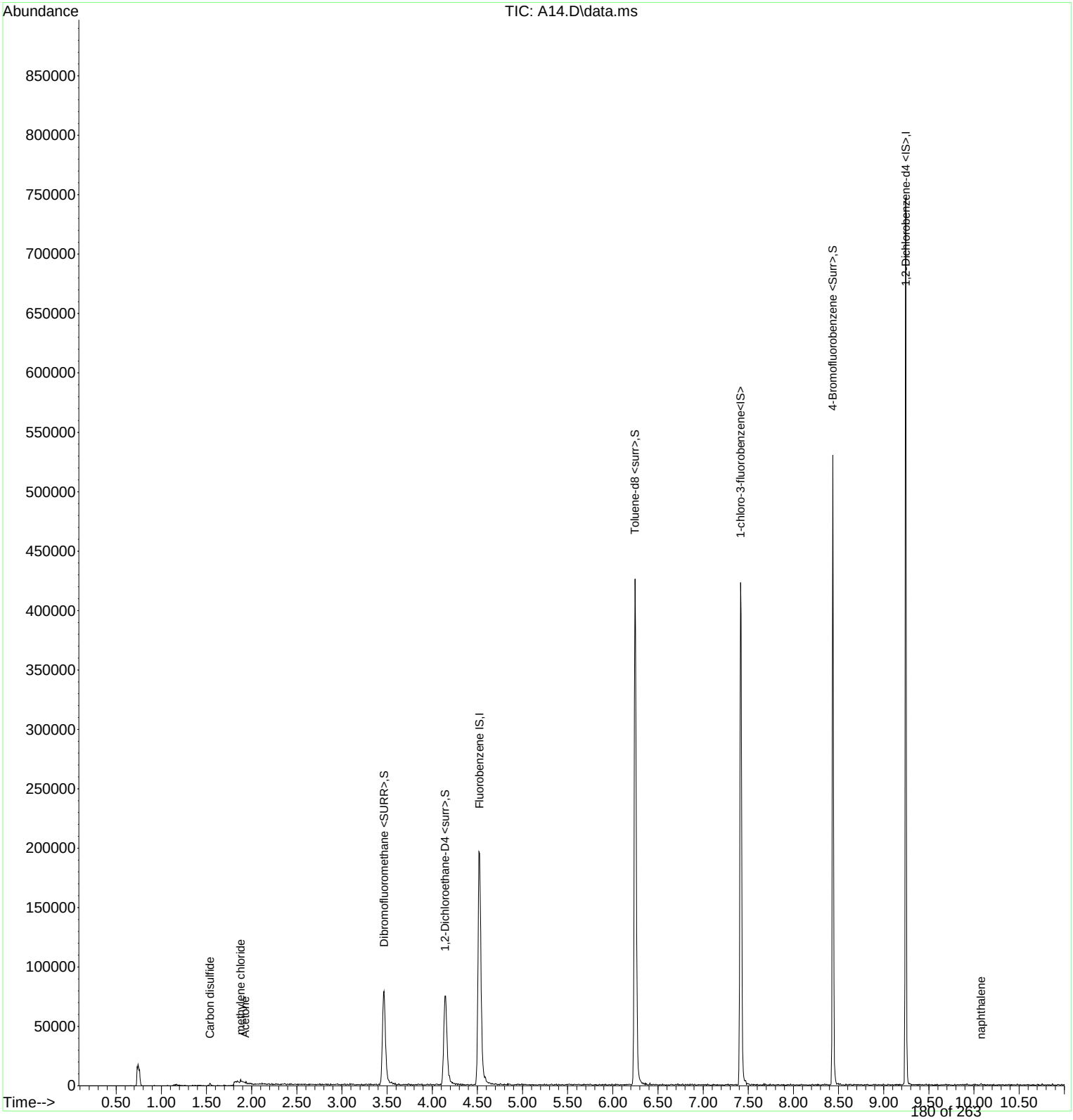
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	41421	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	87422	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	100005	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	65071	29.40	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.00%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	66046	30.18	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.60%			
41) Toluene-d8 <surr>	6.246	98	248876	30.16	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.53%			
60) 4-Bromofluorobenzene <...	8.436	95	98318	31.71	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.70%			
Target Compounds						Qvalue
10) Acetone	1.927	43	1451	0.56	µg/L #	45
13) Carbon disulfide	1.538	76	1882	0.34	µg/L #	73
14) methylene chloride	1.878	84	523	0.23	µg/l #	32
80) naphthalene	10.079	128	631	0.56	µg/l #	75

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A14.D
Acq On : 17 Aug 2014 8:46 am
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 18 11:56:40 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A15.D
Acq On : 17 Aug 2014 9:02 am
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 18 11:56:48 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

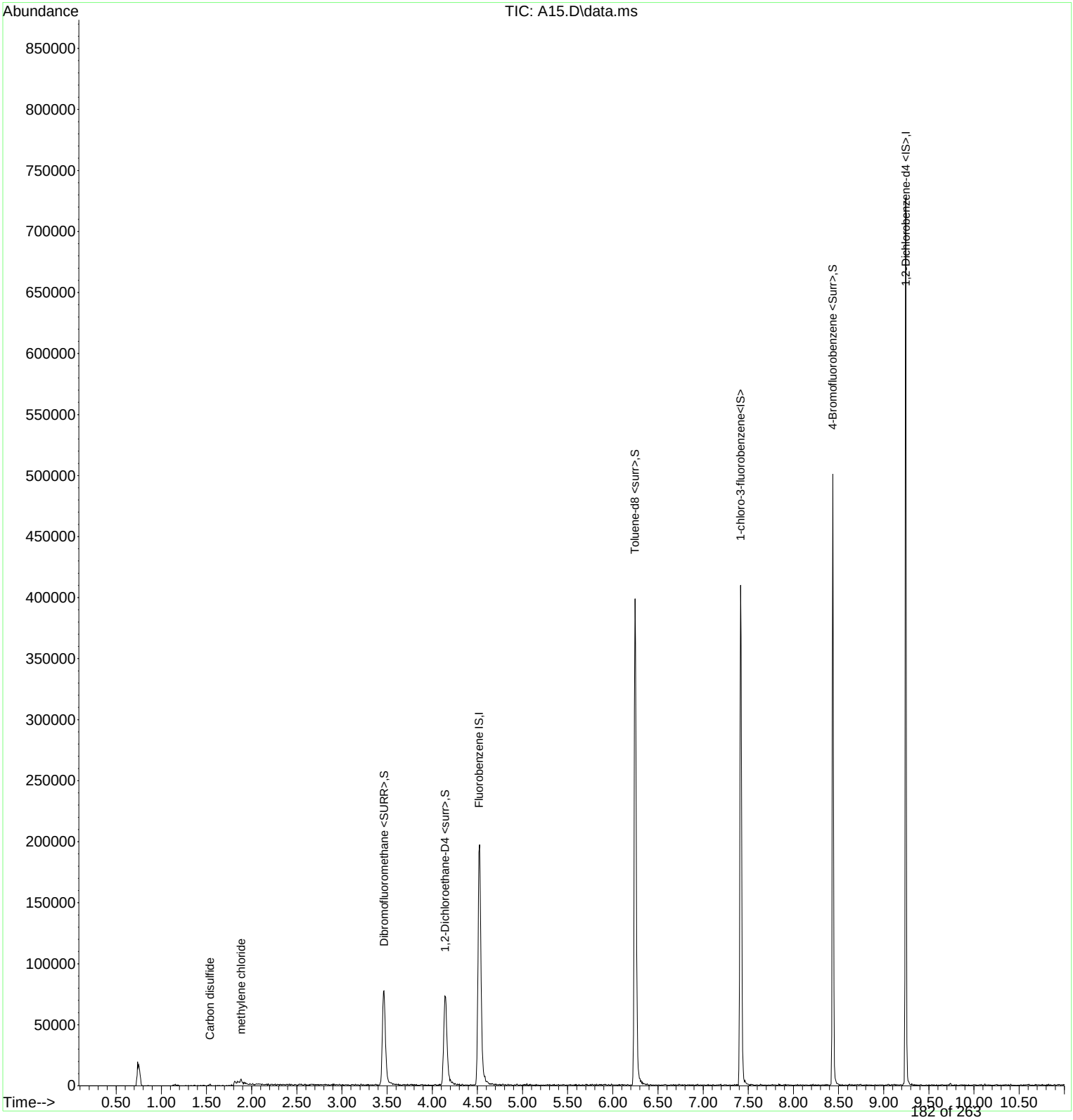
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	40484	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	84273	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	99616	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	66235	30.62	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 102.07%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	67068	31.36	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 104.53%			
41) Toluene-d8 <surr>	6.246	98	237819	29.90	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 99.67%			
60) 4-Bromofluorobenzene <...	8.436	95	97390	31.53	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.10%			
Target Compounds						Qvalue
10) Acetone	1.921	43	857	Below Cal	#	45
13) Carbon disulfide	1.538	76	1283	0.23	µg/L #	73
14) methylene chloride	1.884	84	502	0.22	µg/l #	75

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A15.D
Acq On : 17 Aug 2014 9:02 am
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 18 11:56:48 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A16.D
Acq On : 17 Aug 2014 9:19 am
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 17 22:36:19 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	40716	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	80962	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	97397	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.460	111	64546	29.77	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.23%				
30) 1,2-Dichloroethane-D4 ...	4.141	65	64026	30.21	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.70%				
41) Toluene-d8 <surr>	6.246	98	228421	30.19	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.63%				
60) 4-Bromofluorobenzene <...	8.436	95	96050	31.25	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.17%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	1226	0.36	µg/l	#	84
3) chloromethane	0.928	50	1883	0.46	µg/l	#	75
4) vinyl chloride	0.969	62	1116	0.37	µg/l	#	50
6) chloroethane	1.184	64	385	0.35	µg/l	#	34
7) trichlorofluoromethane	1.253	101	1545	0.38	µg/l		87
8) 1,1,2-trichloro-1,2,2-...	1.549	101	1212	0.60	µg/L	#	66
9) 1,1-dichloroethene	1.526	96	331	0.26	µg/l		91
10) Acetone	1.927	43	1686	1.61	µg/L	#	45
12) Methyliodide	1.613	142	768	0.47	µg/L	#	31
13) Carbon disulfide	1.538	76	3514	0.61	µg/L	#	94
14) methylene chloride	1.884	84	1107	0.44	µg/l	#	67
15) methyl-t-butyl ether	2.073	73	1719	0.51	µg/L	#	79
16) trans-1,2-dichloroethene	1.987	96	555	0.35	µg/l	#	60
17) Vinylacetate	2.724	43	272	0.18	µg/L	#	84
18) n-hexane	2.079	56	132	0.17	µg/L	#	23
19) 1,1-dichloroethane	2.444	63	1109	0.37	µg/l	#	50
20) 2-Butanone(MEK)	3.679	43	116	0.17	µg/L	#	56
21) 2,2-dichloropropane	3.058	77	223	0.20	µg/l	#	54
22) cis-1,2-dichloroethene	2.955	96	153	0.13	µg/l	#	60
24) cyclohexane	3.119	56	515	0.22	µg/L		94
25) chloroform	3.247	83	1233	0.40	µg/l		83
27) 1,1,1-trichloroethane	3.454	97	419	0.24	µg/l	#	24
29) 1,1-dichloropropene	3.612	75	174	0.13	µg/l	#	38
31) benzene	3.940	78	1999	0.33	µg/l	#	52
32) 1,2-dichloroethane	4.226	62	134	0.10	µg/l	#	78
33) trichloroethene	4.737	95	386	0.28	µg/l		91
34) 1,2-dichloropropane	5.321	63	365	0.26	µg/l	#	95
35) dibromomethane	5.200	93	115	0.15	µg/l	#	5
37) bromodichloromethane	5.419	83	119	0.11	µg/l	#	25
38) cis-1,3-dichloropropene	6.094	75	121	0.10	µg/l	#	49
39) 4-Methyl-2-pentanone	6.720	58	317	0.47	µg/L	#	52
42) toluene	6.295	92	1947	0.40	µg/l	#	62
45) tetrachloroethene	6.647	166	651	0.37	µg/l	#	57
46) 1,3-dichloropropane	7.085	76	548	0.27	µg/l	#	42
47) 2-Hexanone	7.469	43	519	0.38	µg/L	#	26
48) dibromochloromethane	7.000	129	234	0.21	µg/l	#	10
49) 1,2-dibromoethane	7.177	107	114	0.11	µg/l	#	21
50) 1-chlorohexane	7.663	55	696	0.43	µg/L	#	83

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A16.D
Acq On : 17 Aug 2014 9:19 am
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 16 Sample Multiplier: 1

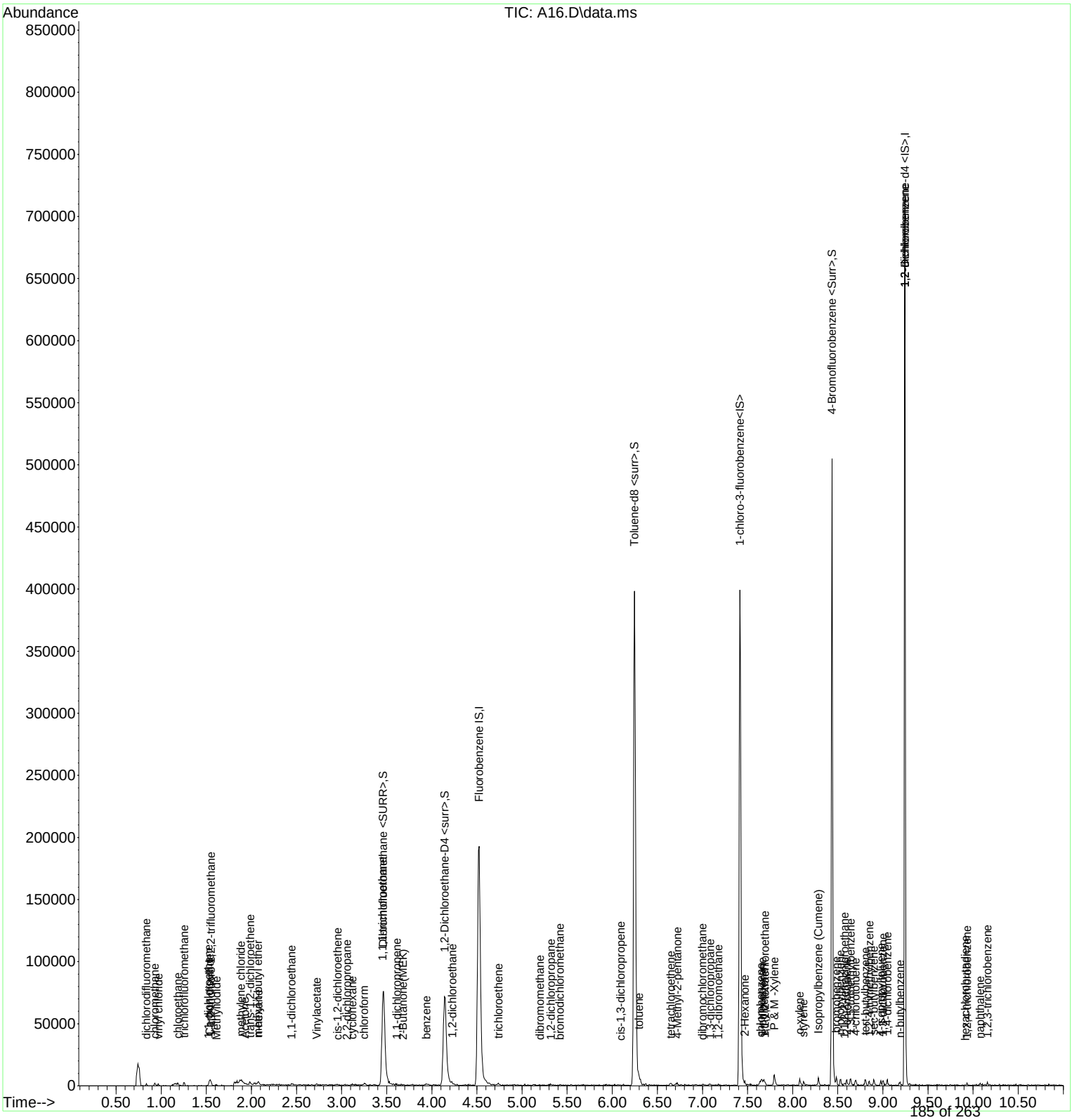
Quant Time: Aug 17 22:36:19 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) chlorobenzene	7.645	112	2251	0.40	µg/l	#	73
52) 1,1,1,2-tetrachloroethane	7.694	133	372	0.31	µg/l	#	63
53) ethylbenzene	7.682	106	837	0.32	µg/l	#	67
54) P & M -Xylene	7.797	106	2129	0.64	µg/l		86
55) o-xylene	8.077	106	1402	0.38	µg/l	#	72
56) styrene	8.120	104	1265	0.28	µg/l		88
58) Isopropylbenzene (Cumene)	8.284	105	3001	0.36	µg/l		96
62) bromobenzene	8.485	156	663	0.36	µg/l	#	64
63) 1,1,2,2-tetrachloroethane	8.576	83	747	0.34	µg/l	#	96
65) n-propylbenzene	8.527	91	3631	0.36	µg/l	#	78
66) 2-chlorotoluene	8.600	91	2294	0.39	µg/l	#	73
67) 4-chlorotoluene	8.698	91	2325	0.38	µg/l		96
68) 1,3,5-trimethylbenzene	8.643	105	2484	0.38	µg/l	#	83
69) tert-butylbenzene	8.807	119	2285	0.39	µg/l		88
70) 1,2,4-trimethylbenzene	8.850	105	1889	0.32	µg/l		90
71) sec-butylbenzene	8.898	105	2765	0.36	µg/l		92
72) 1,3-dichlorobenzene	9.002	146	1703	0.42	µg/l		90
73) 4-isopropyltoluene	8.977	119	1824	0.32	µg/l		97
74) 1,4-dichlorobenzene	9.050	146	1628	0.40	µg/l	#	83
75) 1,2-dichlorobenzene	9.245	146	1615	0.41	µg/l	#	51
76) n-butylbenzene	9.190	91	1584	0.31	µg/l	#	81
78) 1,2,4-trichlorobenzene	9.933	180	254	0.21	µg/l		82
79) hexachlorobutadiene	9.914	225	115	0.23	µg/l	#	39
80) naphthalene	10.079	128	1610	0.31	µg/l	#	75
81) 1,2,3-trichlorobenzene	10.158	180	631	0.38	µg/l	#	64

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

Data Path : Z:\08\VNA\DATA\081714\
Data File : A16.D
Acq On : 17 Aug 2014 9:19 am
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 17 22:36:19 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 22:34:58 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A17.D
Acq On : 17 Aug 2014 9:35 am
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 17 23:03:47 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	40247	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	83083	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	109060	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	67477	31.37	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.57%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	64045	30.12	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.40%			
41) Toluene-d8 <surr>	6.246	98	231026	29.46	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 98.20%			
60) 4-Bromofluorobenzene <...	8.436	95	100161	29.62	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.73%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	119026	33.23	µg/l	99
3) chloromethane	0.928	50	108812	29.56	µg/l	96
4) vinyl chloride	0.969	62	99038	32.84	µg/l	100
5) bromomethane	1.125	96	36602	33.25	µg/l	99
6) chloroethane	1.189	64	41743	34.60	µg/l	96
7) trichlorofluoromethane	1.253	101	127996	32.09	µg/l	98
8) 1,1,2-trichloro-1,2,2-...	1.549	101	91194	46.40	µg/L	93
9) 1,1-dichloroethene	1.526	96	54132	31.81	µg/l	98
10) Acetone	1.926	43	55159	78.21	µg/L	98
11) Acrylonitrile	2.504	53	37824	44.55	µg/L	97
12) Methyliodide	1.607	142	91410	47.80	µg/L	98
13) Carbon disulfide	1.538	76	258658	47.41	µg/L	100
14) methylene chloride	1.884	84	71505	32.18	µg/l	87
15) methyl-t-butyl ether	2.072	73	170559	48.51	µg/L	99
16) trans-1,2-dichloroethene	1.987	96	53408	32.14	µg/l	93
17) Vinylacetate	2.699	43	66270	29.32	µg/L #	97
18) n-hexane	2.042	56	35800	30.46	µg/L	93
19) 1,1-dichloroethane	2.450	63	102316	33.95	µg/l	98
20) 2-Butanone(MEK)	3.642	43	107888	88.45	µg/L	98
21) 2,2-dichloropropane	3.046	77	47091	29.36	µg/l	98
22) cis-1,2-dichloroethene	2.949	96	59905	33.39	µg/l	99
23) bromochloromethane	3.149	128	28298	30.42	µg/l	88
24) cyclohexane	3.125	56	103633	33.43	µg/L	99
25) chloroform	3.253	83	92657	31.36	µg/l	89
27) 1,1,1-trichloroethane	3.460	97	75527	31.09	µg/l	98
28) carbon tetrachloride	3.374	117	57169	30.26	µg/l	90
29) 1,1-dichloropropene	3.618	75	69306	32.38	µg/l	94
31) benzene	3.940	78	219911	33.42	µg/l	94
32) 1,2-dichloroethane	4.232	62	68216	31.03	µg/l	99
33) trichloroethene	4.731	95	57079	32.09	µg/l	93
34) 1,2-dichloropropane	5.315	63	55605	32.01	µg/l #	97
35) dibromomethane	5.199	93	36786	31.21	µg/l	91
37) bromodichloromethane	5.425	83	61657	32.10	µg/l	94
38) cis-1,3-dichloropropene	6.075	75	62123	31.43	µg/l #	87
39) 4-Methyl-2-pentanone	6.702	58	90029	86.83	µg/L	97
42) toluene	6.294	92	150611	30.46	µg/l	96
43) trans-1,3-dichloropropene	6.714	75	51350	28.70	µg/l	96
44) 1,1,2-trichloroethane	6.848	83	43142	29.44	µg/l	98

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A17.D
Acq On : 17 Aug 2014 9:35 am
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 17 23:03:47 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration

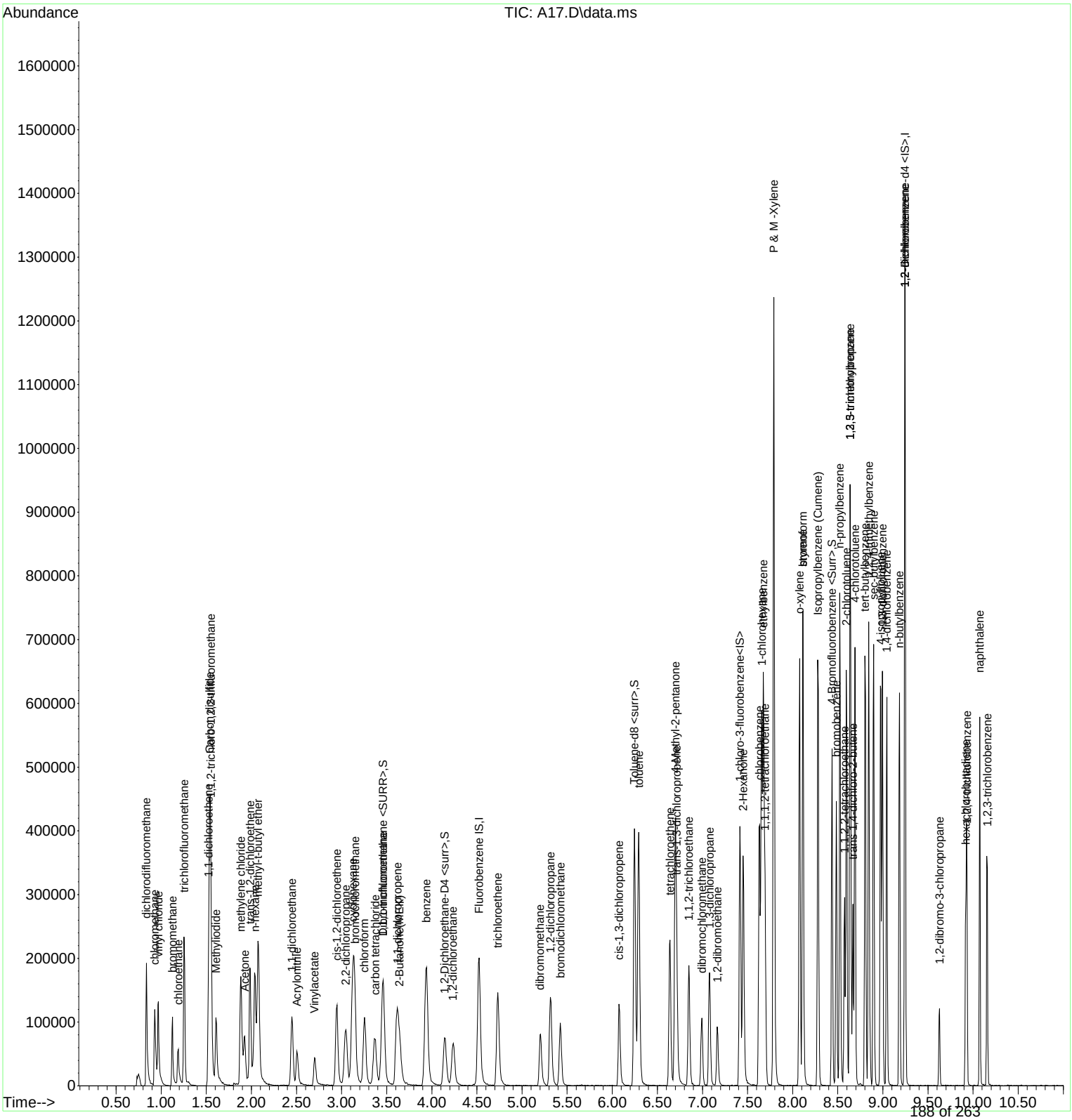
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	58536	33.22	µg/l		94
46) 1,3-dichloropropane	7.079	76	79189	28.73	µg/l		96
47) 2-Hexanone	7.450	43	190763	82.06	µg/L		97
48) dibromochloromethane	6.994	129	47728	29.73	µg/l		89
49) 1,2-dibromoethane	7.164	107	53864	29.41	µg/l	#	97
50) 1-chlorohexane	7.657	55	97668	48.24	µg/L		99
51) chlorobenzene	7.633	112	171703	31.06	µg/l		99
52) 1,1,1,2-tetrachloroethane	7.694	133	45162	29.93	µg/l	#	89
53) ethylbenzene	7.675	106	92803	31.42	µg/l		97
54) P & M -Xylene	7.791	106	242547	66.18	µg/l		97
55) o-xylene	8.077	106	113653	32.19	µg/l		98
56) styrene	8.113	104	186088	33.07	µg/l		94
57) bromoform	8.113	173	32581	30.23	µg/l		100
58) Isopropylbenzene (Cumene)	8.278	105	279881	32.08	µg/l		94
61) trans 1,4-dichloro-2-b...	8.667	53	33575	44.44	µg/L		95
62) bromobenzene	8.485	156	67726	31.13	µg/l		96
63) 1,1,2,2-tetrachloroethane	8.576	83	80128	30.15	µg/l		100
64) 1,2,3-trichloropropane	8.637	110	22211	28.71	µg/l	#	68
65) n-propylbenzene	8.521	91	374831	32.21	µg/l		96
66) 2-chlorotoluene	8.594	91	212123	31.85	µg/l		95
67) 4-chlorotoluene	8.691	91	227551	32.40	µg/l		99
68) 1,3,5-trimethylbenzene	8.637	105	239084	32.62	µg/l		98
69) tert-butylbenzene	8.801	119	195457	31.83	µg/l		91
70) 1,2,4-trimethylbenzene	8.844	105	230325	33.23	µg/l		99
71) sec-butylbenzene	8.898	105	289919	32.38	µg/l		97
72) 1,3-dichlorobenzene	8.996	146	132875	31.23	µg/l		95
73) 4-isopropyltoluene	8.977	119	232233	34.61	µg/l		99
74) 1,4-dichlorobenzene	9.044	146	131311	30.76	µg/l		95
75) 1,2-dichlorobenzene	9.245	146	129751	30.60	µg/l		97
76) n-butylbenzene	9.184	91	212092	33.90	µg/l		100
77) 1,2-dibromo-3-chloropr...	9.628	75	15318	29.53	µg/l	#	66
78) 1,2,4-trichlorobenzene	9.932	180	59561	32.98	µg/l		99
79) hexachlorobutadiene	9.920	225	24316	29.70	µg/l		98
80) naphthalene	10.072	128	201171	28.29	µg/l		97
81) 1,2,3-trichlorobenzene	10.158	180	57351	31.77	µg/l		94

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081714\
Data File : A17.D
Acq On : 17 Aug 2014 9:35 am
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 17 23:03:47 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0817.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 17 23:03:43 2014
Response via : Initial Calibration



Workorder No. 1143658

Polynuclear Aromatics GC/MS

Method: EPA 625M SIMS (PAH)

Method Batch Id: XXX31652

Analysis Batch Id: XMS8217

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1225992		8/10/2014 1:57:00PM
Continuing Calib Verification	1225993		8/10/2014 2:29:00PM
Method Blank	1225804		8/10/2014 2:44:00PM
Lab Control Sample	1225805		8/10/2014 2:59:00PM
Lab Control Sample Duplicate	1225806		8/10/2014 3:14:00PM
Paying sample	1143658001	FC-SW01-080514	8/10/2014 6:14:00PM
Billable Matrix Spike	1143658002	FC-SW01-080514 MS	8/10/2014 6:29:00PM
Billable Matrix Spike Dup.	1143658003	FC-SW01-080514 MSD	8/10/2014 6:44:00PM
Paying sample	1143658004	FC-SW99-080514	8/10/2014 7:00:00PM

SGS Ref.#	1225992 Instrument Blank	**Printed Date/Time**	09/17/2014 16:40
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM Fowler Creek		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143658001, 1143658004

Parameter	Results	RL/CL	Units	Analysis Date
Polynuclear Aromatics GC/MS				
Naphthalene	100U	100	ug/L	08/10/14
Acenaphthylene	50.0U	50.0	ug/L	08/10/14
Acenaphthene	50.0U	50.0	ug/L	08/10/14
Fluorene	50.0U	50.0	ug/L	08/10/14
Phenanthrene	50.0U	50.0	ug/L	08/10/14
Anthracene	50.0U	50.0	ug/L	08/10/14
Fluoranthene	50.0U	50.0	ug/L	08/10/14
Pyrene	50.0U	50.0	ug/L	08/10/14
Benzo(a)Anthracene	50.0U	50.0	ug/L	08/10/14
Chrysene	50.0U	50.0	ug/L	08/10/14
Benzo[b]Fluoranthene	50.0U	50.0	ug/L	08/10/14
Benzo[k]fluoranthene	50.0U	50.0	ug/L	08/10/14
Benzo[a]pyrene	50.0U	50.0	ug/L	08/10/14
Indeno[1,2,3-c,d] pyrene	50.0U	50.0	ug/L	08/10/14
Dibenzo[a,h]anthracene	50.0U	50.0	ug/L	08/10/14
Benzo[g,h,i]perylene	50.0U	50.0	ug/L	08/10/14
Surrogates				
Terphenyl-d14 <surr>	92.1	80-120	%	08/10/14
2-Fluorobiphenyl <surr>	95.5	80-120	%	08/10/14

Batch	XMS8217
Method	EPA 625M SIMS (PAH)
Instrument	HP 6890/5973 MS SVQA

SGS Ref.#	1225993 Continuing Calib Verification	**Printed Date/Time**	09/17/2014 16:40
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM Fowler Creek		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143658001, 1143658004

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS						
Naphthalene	CCV	441	88	(80-120)	500 ug/L	08/10/2014
Acenaphthylene	CCV	466	93	(80-120)	500 ug/L	08/10/2014
Acenaphthene	CCV	469	94	(80-120)	500 ug/L	08/10/2014
Fluorene	CCV	487	97	(80-120)	500 ug/L	08/10/2014
Phenanthrene	CCV	505	101	(80-120)	500 ug/L	08/10/2014
Anthracene	CCV	502	100	(80-120)	500 ug/L	08/10/2014
Fluoranthene	CCV	452	90	(80-120)	500 ug/L	08/10/2014
Pyrene	CCV	457	91	(80-120)	500 ug/L	08/10/2014
Benzo(a)Anthracene	CCV	477	95	(80-120)	500 ug/L	08/10/2014
Chrysene	CCV	479	96	(80-120)	500 ug/L	08/10/2014
Benzo[b]Fluoranthene	CCV	519	104	(80-120)	500 ug/L	08/10/2014
Benzo[k]fluoranthene	CCV	463	93	(80-120)	500 ug/L	08/10/2014
Benzo[a]pyrene	CCV	502	100	(80-120)	500 ug/L	08/10/2014
Indeno[1,2,3-c,d] pyrene	CCV	511	102	(80-120)	500 ug/L	08/10/2014
Dibenzo[a,h]anthracene	CCV	523	105	(80-120)	500 ug/L	08/10/2014
Benzo[g,h,i]perylene	CCV	508	102	(80-120)	500 ug/L	08/10/2014
Surrogates						
Terphenyl-d14 <surr>	CCV		92	(80-120)		08/10/2014
2-Fluorobiphenyl <surr>	CCV		92	(80-120)		08/10/2014

Batch	XMS8217
Method	EPA 625M SIMS (PAH)
Instrument	HP 6890/5973 MS SVQA

Workorder No. 1143658

Polynuclear Aromatics GC/MS

Method: EPA 625M SIMS (PAH)

Method Batch Id: XXX31652

Analysis Batch Id: XMS8217

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1225992		8/10/2014 1:57:00PM
Continuing Calib Verification	1225993		8/10/2014 2:29:00PM
Method Blank	1225804		8/10/2014 2:44:00PM
Lab Control Sample	1225805		8/10/2014 2:59:00PM
Lab Control Sample Duplicate	1225806		8/10/2014 3:14:00PM
Paying sample	1143658001	FC-SW01-080514	8/10/2014 6:14:00PM
Billable Matrix Spike	1143658002	FC-SW01-080514 MS	8/10/2014 6:29:00PM
Billable Matrix Spike Dup.	1143658003	FC-SW01-080514 MSD	8/10/2014 6:44:00PM
Paying sample	1143658004	FC-SW99-080514	8/10/2014 7:00:00PM

SGS Ref.#	1225804 Method Blank	**Printed Date/Time**	09/17/2014 16:40
Client Name	EA Engineering, Science and Tech.	**Prep Batch**	XXX31652
Project Name/#	Cape Romanzof LTM Fowler Creek	**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)	**Date**	08/09/2014

QC results affect the following production samples:

1143658001, 1143658004

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Polynuclear Aromatics GC/MS					
Acenaphthene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Anthracene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Benzo[a]pyrene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Chrysene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Dibenzo[a,h]anthracene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Fluoranthene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Fluorene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Naphthalene	0.0500U	0.100	0.0310	ug/L	08/10/14
Phenanthrene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Pyrene	0.0250U	0.0500	0.0150	ug/L	08/10/14
Surrogates					
2-Fluorobiphenyl <surr>	80.1	50-110		%	08/10/14
Terphenyl-d14 <surr>	97.2	50-135		%	08/10/14

Batch	XMS8217
Method	EPA 625M SIMS (PAH)
Instrument	HP 6890/5973 MS SVQA

SGS Ref.#	1225805 Lab Control Sample		**Printed Date/Time**	09/17/2014	16:40
	1225806 Lab Control Sample Duplicate		**Prep Batch**	XXX31652	
Client Name	EA Engineering, Science and Tech.		**Method**	SW3520C	
Project Name/#	Cape Romanzof LTM Fowler Creek		**Date**	08/09/2014	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143658001, 1143658004

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD		RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS									
Acenaphthene	LCS	0.286	57	(45-110)				0.5 ug/L	08/10/2014
	LCSD	0.369	74		25		(< 30)	0.5 ug/L	08/10/2014
Acenaphthylene	LCS	0.284	57	(50-105)				0.5 ug/L	08/10/2014
	LCSD	0.376	75		28		(< 30)	0.5 ug/L	08/10/2014
Anthracene	LCS	0.297	59	(55-110)				0.5 ug/L	08/10/2014
	LCSD	0.404	81		31	*	(< 30)	0.5 ug/L	08/10/2014
Benzo(a)Anthracene	LCS	0.416	83	(55-110)				0.5 ug/L	08/10/2014
	LCSD	0.429	86		3		(< 30)	0.5 ug/L	08/10/2014
Benzo[a]pyrene	LCS	0.393	79	(55-110)				0.5 ug/L	08/10/2014
	LCSD	0.432	87		10		(< 30)	0.5 ug/L	08/10/2014
Benzo[b]Fluoranthene	LCS	0.416	83	(45-120)				0.5 ug/L	08/10/2014
	LCSD	0.444	89		7		(< 30)	0.5 ug/L	08/10/2014
Benzo[g,h,i]perylene	LCS	0.445	89	(40-125)				0.5 ug/L	08/10/2014
	LCSD	0.444	89		0		(< 30)	0.5 ug/L	08/10/2014
Benzo[k]fluoranthene	LCS	0.439	88	(45-125)				0.5 ug/L	08/10/2014
	LCSD	0.478	96		9		(< 30)	0.5 ug/L	08/10/2014
Chrysene	LCS	0.438	88	(55-110)				0.5 ug/L	08/10/2014
	LCSD	0.445	89		2		(< 30)	0.5 ug/L	08/10/2014
Dibenzo[a,h]anthracene	LCS	0.449	90	(40-125)				0.5 ug/L	08/10/2014
	LCSD	0.452	91		1		(< 30)	0.5 ug/L	08/10/2014
Fluoranthene	LCS	0.357	71	(55-115)				0.5 ug/L	08/10/2014
	LCSD	0.400	80		11		(< 30)	0.5 ug/L	08/10/2014
Fluorene	LCS	0.296	59	(50-110)				0.5 ug/L	08/10/2014
	LCSD	0.393	79		28		(< 30)	0.5 ug/L	08/10/2014
Indeno[1,2,3-c,d] pyrene	LCS	0.451	90	(45-125)				0.5 ug/L	08/10/2014
	LCSD	0.453	91		0		(< 30)	0.5 ug/L	08/10/2014

SGS Ref.#	1225805 Lab Control Sample		**Printed Date/Time**	09/17/2014	16:40
	1225806 Lab Control Sample Duplicate		**Prep Batch**	XXX31652	
Client Name	EA Engineering, Science and Tech.		**Method**	SW3520C	
Project Name/#	Cape Romanzof LTM Fowler Creek		**Date**	08/09/2014	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS								
Naphthalene	LCS	0.271	54	(40-100)			0.5 ug/L	08/10/2014
	LCSD	0.338	68		22	(< 30)	0.5 ug/L	08/10/2014
Phenanthrene	LCS	0.324	65	(50-115)			0.5 ug/L	08/10/2014
	LCSD	0.418	84		26	(< 30)	0.5 ug/L	08/10/2014
Pyrene	LCS	0.359	72	(50-130)			0.5 ug/L	08/10/2014
	LCSD	0.384	77		7	(< 30)	0.5 ug/L	08/10/2014
Surrogates								
2-Fluorobiphenyl <surr>	LCS		62	(50-110)				08/10/2014
	LCSD		80		25			08/10/2014
Terphenyl-d14 <surr>	LCS		91	(50-135)				08/10/2014
	LCSD		96		5			08/10/2014

Batch	XMS8217
Method	EPA 625M SIMS (PAH)
Instrument	HP 6890/5973 MS SVQA

SGS Ref.#	1143658002	Billable Matrix Spike	**Printed Date/Time**		09/17/2014 16:40
	1143658003	Billable Matrix Spike Dup.	**Prep**	**Batch**	XXX31652
				Method	Liquid/Liquid Extraction for 62
				Date	08/09/2014
Original	1143658001				
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS									
Acenaphthene	BMS	0.0250U	.313	63	(45-110)			0.500 ug/L	08/10/2014
	BMSD		0.305	61		3	(< 30)	0.500 ug/L	08/10/2014
Acenaphthylene	BMS	0.0250U	.317	64	(50-105)			0.500 ug/L	08/10/2014
	BMSD		0.310	62		2	(< 30)	0.500 ug/L	08/10/2014
Anthracene	BMS	0.0250U	.359	72	(55-110)			0.500 ug/L	08/10/2014
	BMSD		0.360	72		0	(< 30)	0.500 ug/L	08/10/2014
Benzo(a)Anthracene	BMS	0.0250U	.419	84	(55-110)			0.500 ug/L	08/10/2014
	BMSD		0.436	87		4	(< 30)	0.500 ug/L	08/10/2014
Benzo[a]pyrene	BMS	0.0250U	.415	83	(55-110)			0.500 ug/L	08/10/2014
	BMSD		0.428	86		3	(< 30)	0.500 ug/L	08/10/2014
Benzo[b]Fluoranthene	BMS	0.0250U	.417	83	(45-120)			0.500 ug/L	08/10/2014
	BMSD		0.431	86		3	(< 30)	0.500 ug/L	08/10/2014
Benzo[g,h,i]perylene	BMS	0.0250U	.433	87	(40-125)			0.500 ug/L	08/10/2014
	BMSD		0.440	88		2	(< 30)	0.500 ug/L	08/10/2014
Benzo[k]fluoranthene	BMS	0.0250U	.434	87	(45-125)			0.500 ug/L	08/10/2014
	BMSD		0.437	87		1	(< 30)	0.500 ug/L	08/10/2014
Chrysene	BMS	0.0250U	.438	88	(55-110)			0.500 ug/L	08/10/2014
	BMSD		0.456	91		4	(< 30)	0.500 ug/L	08/10/2014
Dibenzo[a,h]anthracene	BMS	0.0250U	.43	86	(40-125)			0.500 ug/L	08/10/2014
	BMSD		0.447	89		4	(< 30)	0.500 ug/L	08/10/2014
Fluoranthene	BMS	0.0250U	.392	79	(55-115)			0.500 ug/L	08/10/2014
	BMSD		0.399	80		2	(< 30)	0.500 ug/L	08/10/2014
Fluorene	BMS	0.0250U	.337	68	(50-110)			0.500 ug/L	08/10/2014
	BMSD		0.321	64		5	(< 30)	0.500 ug/L	08/10/2014
Indeno[1,2,3-c,d] pyrene	BMS	0.0250U	.435	87	(45-125)			0.500 ug/L	08/10/2014
	BMSD		0.447	89		3	(< 30)	0.500 ug/L	08/10/2014
Naphthalene	BMS	0.0500U	.312	62	(40-100)			0.500 ug/L	08/10/2014
	BMSD		0.309	62		1	(< 30)	0.500 ug/L	08/10/2014
Phenanthrene	BMS	0.0250U	.37	74	(50-115)			0.500 ug/L	08/10/2014
	BMSD		0.372	74		0	(< 30)	0.500 ug/L	08/10/2014
Pyrene	BMS	0.0250U	.381	76	(50-130)			0.500 ug/L	08/10/2014
	BMSD		0.387	78		2	(< 30)	0.500 ug/L	08/10/2014
Surrogates									
2-Fluorobiphenyl <surr>	BMS		.33	66	(50-110)				08/10/2014
	BMSD		0.307	61		7			08/10/2014
Terphenyl-d14 <surr>	BMS		.456	91	(50-135)				08/10/2014
	BMSD		0.461	92		1			08/10/2014

SGS Ref.#	1143658002	Billable Matrix Spike	**Printed Date/Time**		09/17/2014 16:40
	1143658003	Billable Matrix Spike Dup.	**Prep**	**Batch**	XXX31652
				Method	Liquid/Liquid Extraction for 62
				Date	08/09/2014
Original	1143658001				
Matrix	Water (Surface, Eff., Ground)				

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Polynuclear Aromatics GC/MS

Batch	XMS8217
Method	EPA 625M SIMS (PAH)
Instrument	HP 6890/5973 MS SVQA

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):

1143579, 1143655, 1143656, 1143657, 1143658, 1143659, 1143668, 1143681, 1148344

Queue: **XMS** Batch: **8217**

Method: 8270D SIMS (PAH), EPA 625M SIMS (PAH)

Run Date: 08/10/14 13:57 - 08/11/14 01:59

Extraction Batch(es): XXX31650, XXX31652

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: Revathy Smith

Printed Name: Revathy Smith

Date: 8/11/14

Reviewer's Signature: Phyllis Woods

Printed Name: Phyllis Woods

Date: 8/11/2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1004.D
Acq On : 10 Aug 2014 2:29 pm
Operator : RTS
Sample : CCV PAH
Misc : [SQA]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 11 13:43:32 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Acenaphthene-d10	500.000	500.000	0.0	162	0.00
2	S	2-Fluorobiphenyl	500.000	461.607	7.7	162	0.00
3	P	Naphthalene	500.000	440.846	11.8	148	0.00
4	P	2-Methylnaphthalene	500.000	456.803	8.6	156	0.00
5		1-Methylnaphthalene	500.000	449.998	10.0	156	0.00
6		2,6-Dimethylnaphthalene	500.000	473.432	5.3	163	0.00
7		1,6,7-Trimethynaphthalene	500.000	484.031	3.2	168	0.00
8		Biphenyl	500.000	463.991	7.2	159	0.00
9	P	Acenaphthylene	500.000	466.206	6.8	162	0.00
10	P	Acenaphthene	500.000	469.486	6.1	163	0.00
11	P	Fluorene	500.000	487.036	2.6	166	0.00
12	P	Phenanthrene	500.000	504.992	-1.0	174	0.00
13	P	Anthracene	500.000	501.725	-0.3	172	0.00
14	P	1-methylphenanthrene	500.000	515.846	-3.2	177	0.00
15	I	Chrysene-d12	500.000	500.000	0.0	194	0.00
16	P	Fluoranthene	500.000	452.093	9.6	181	0.00
17		Pyrene	500.000	456.498	8.7	184	0.00
18	S	Terphenyl-d14	500.000	461.415	7.7	190	0.00
19	P	Benzo(a)anthracene	500.000	477.134	4.6	196	0.00
20	P	Chrysene	500.000	478.746	4.3	198	0.00
21	P	Benzo[b]fluoranthene	500.000	518.608	-3.7	209	0.00
22	P	Benzo[k]fluoranthene	500.000	463.121	7.4	191	0.00
23	P	Benzo(e)pyrene	500.000	487.630	2.5	204	0.00
24	P	Benzo[a]pyrene	500.000	501.511	-0.3	209	0.00
25	P	Indeno[1,2,3-c,d]pyrene	500.000	510.673	-2.1	213	0.00
26	P	Dibenzo[a,h]anthracene	500.000	523.327	-4.7	219	0.00
27	P	Benzo[g,h,i]perylene	500.000	507.931	-1.6	212	0.01

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1004.D
Acq On : 10 Aug 2014 2:29 pm
Operator : RTS
Sample : CCV PAH
Misc : [SQA]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 11 13:43:32 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

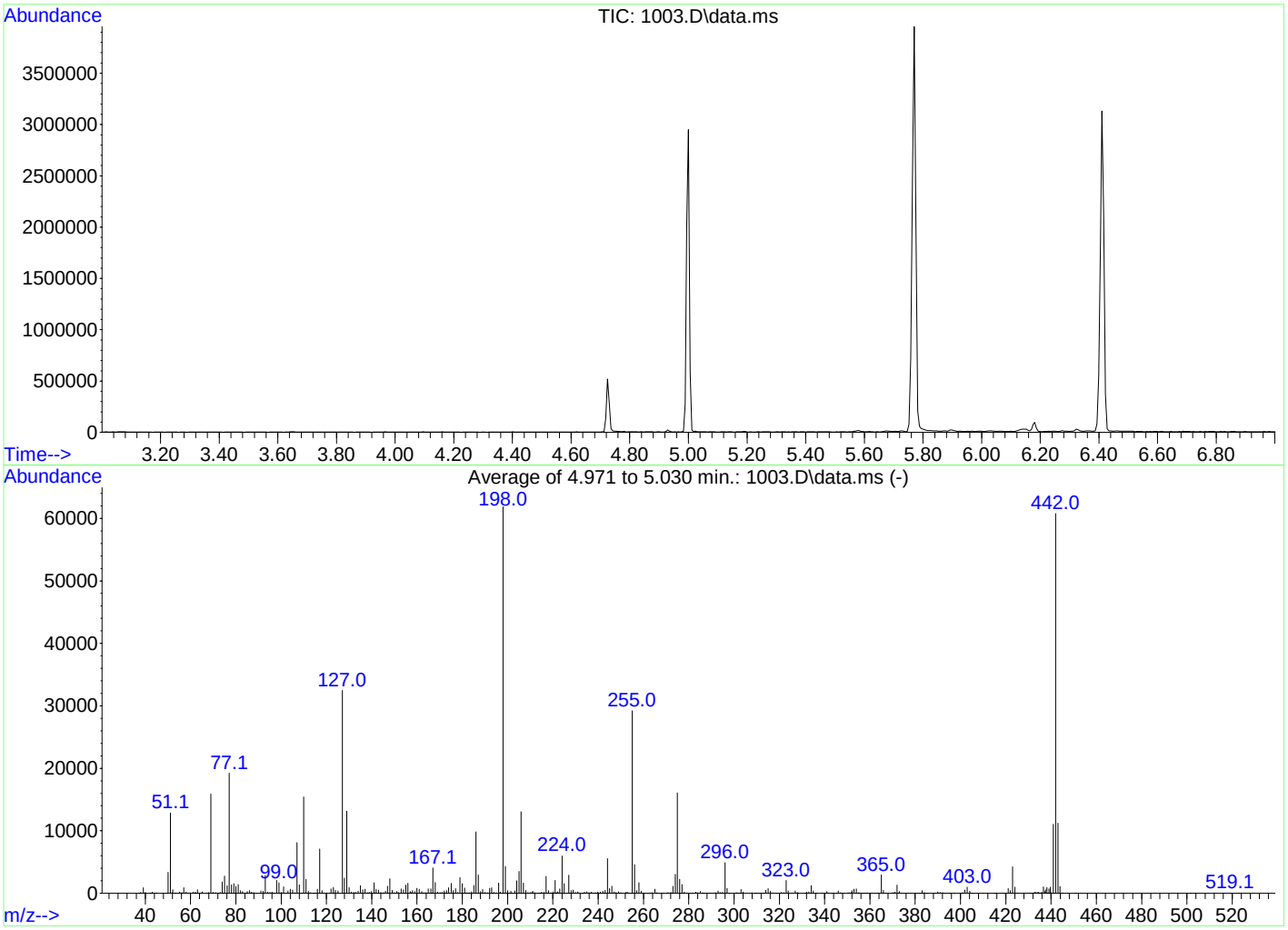
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Acenaphthene-d10	1.000	1.000	0.0	162	0.00
2	S	2-Fluorobiphenyl	1.292	1.193	7.7	162	0.00
3	P	Naphthalene	1.411	1.244	11.8	148	0.00
4	P	2-Methylnaphthalene	1.230	1.124	8.6	156	0.00
5		1-Methylnaphthalene	1.114	1.002	10.1	156	0.00
6		2,6-Dimethylnaphthalene	1.167	1.105	5.3	163	0.00
7		1,6,7-Trimethynaphthalene	0.999	0.967	3.2	168	0.00
8		Biphenyl	1.592	1.478	7.2	159	0.00
9	P	Acenaphthylene	1.894	1.766	6.8	162	0.00
10	P	Acenaphthene	1.131	1.062	6.1	163	0.00
11	P	Fluorene	1.349	1.314	2.6	166	0.00
12	P	Phenanthrene	1.661	1.678	-1.0	174	0.00
13	P	Anthracene	1.637	1.642	-0.3	172	0.00
14	P	1-methylphenanthrene	0.966	0.996	-3.1	177	0.00
15	I	Chrysene-d12	1.000	1.000	0.0	194	0.00
16	P	Fluoranthene	1.720	1.555	9.6	181	0.00
17		Pyrene	1.797	1.640	8.7	184	0.00
18	S	Terphenyl-d14	0.815	0.752	7.7	190	0.00
19	P	Benzo(a)anthracene	1.167	1.114	4.5	196	0.00
20	P	Chrysene	1.120	1.072	4.3	198	0.00
21	P	Benzo[b]fluoranthene	1.312	1.361	-3.7	209#	0.00
22	P	Benzo[k]fluoranthene	1.288	1.193	7.4	191	0.00
23	P	Benzo(e)pyrene	1.252	1.221	2.5	204#	0.00
24	P	Benzo[a]pyrene	1.183	1.186	-0.3	209#	0.00
25	P	Indeno[1,2,3-c,d]pyrene	1.666	1.702	-2.2	213#	0.00
26	P	Dibenzo[a,h]anthracene	1.359	1.423	-4.7	219#	0.00
27	P	Benzo[g,h,i]perylene	1.402	1.424	-1.6	212#	0.01

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

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1003.D
Acq On : 10 Aug 2014 2:12 pm
Operator : RTS
Sample : TUNE
Misc : [SQA]
ALS Vial : 2 Sample Multiplier: 1

Integration File: 2MNAPH.P

Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Title : SGS 8270D SIM
Last Update : Sun Aug 10 13:51:03 2014



AutoFind: Averaged scan 356 to 366; Bkg corrected with scan 355)

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	20.8	12849	PASS
68	69	0.00	2	0.9	145	PASS
69	69	100	100	100.0	15892	PASS
70	69	0.00	2	0.8	133	PASS
127	198	10	80	52.5	32451	PASS
197	198	0.00	2	0.3	205	PASS
198	198	100	100	100.0	61834	PASS
199	198	5	9	6.9	4287	PASS
275	198	10	60	26.0	16056	PASS
365	198	1	100	4.7	2930	PASS
441	442	0.01	24	18.1	11022	PASS
442	198	50	200	98.3	60780	PASS
443	442	15	24	18.5	11248	PASS

GC/MS QA-QC Check Report

Tune File : Z:\08\SQA\DATA\081014\1003.D
Tune Time : 10 Aug 2014 2:12 pm

Daily Calibration File : Z:\08\SQA\DATA\080814A\0809.D

				14530	8913
File	Sample	Surrogate Recovery %		Internal Standard Responses	
1002.D (fails)	IB	95*	92	20360	14981
1004.D	CCV PAH	92*	92	23543	17328
1005.D	MB 31652	80*	97	16952	11814
1006.D	LCS 31652	62*	91	17357	11792
1007.D	LCSD 31652	80*	96	16274	11654
1008.D	1143656047	54*	84	16682	11156
1009.D	1143656048	62*	88	17762	12219
1010.D	1143656050	60*	86	15632	10566
1011.D	1143656051	56*	88	18268	12409
1012.D	1143656052	55*	90	17146	10728
1013.D	1143656053	54*	87	18811	12996
1014.D	1143656054	59*	85	20062	13612
1015.D	1143657001	52*	87	15990	10571
1016.D	1143657002	14*	20*	16643	11668
1017.D	1143657004	57*	91	17100	11608
1018.D	1143657005	68*	97	16905	11811
1019.D	1143658001	57*	89	17638	11982
1020.D	1143658002	66*	91	17344	11958
1021.D	1143658003	61*	92	17066	11483
1022.D	1143658004	66*	92	16949	11041
1023.D	1143655001	44*	71*	17957	11818

1024.D	1143655002	73*	91	16108	10351
1025.D	1143655003	62*	82	17387	11781
1026.D	1143659001	53*	90	17873	12166
1027.D	1143668001	13*	19*	16118	10567
1028.D	1148344005	80*	81	18657	12882
1029.D	MB 31650	58*	69*	15518	10254
1030.D	LCS 31650	78*	100	17881	12327
1031.D	1143579003	71*	77*	17475	11788
1032.D	1143579010	89*	106	14977	8153
1033.D	1143579014	53*	96	15149	10085
1034.D	1143579024	38*	104	14916	9566
1035.D	1143579025	41*	99	17341	11921
1036.D	1143579027	15*	98	16168	10922
1037.D	1143579034	88*	98	17410	11497
1038.D	1143579035	71*	77*	17216	11626
1039.D	1143579036	87*	102	17264	11617
1040.D	1143579037	86*	106	16495	10437
1041.D	1143579082	179*	106	16155	8182
1042.D	1143656012	85*	99	16042	9648
1043.D	1143656032	36*	98	52821*	10638
1044.D	1143656039	211*	103	22607	10117
1045.D	1143681001	8*	8*	14107	8100
1046.D	1143681002	162*	23*	23430	8268
1047.D	1143656010	12*	15*	12229	6528
1048.D	1143656027	34*	24*	13949	7139

1049.D

	1143656028	31*	20*	14603	8978

1050.D

	1143656029	34*	19*	13939	8538

1051.D

(fails)	1143579017	18*	21*	13305	7549

(fails) - fails 12hr time check * - fails criteria

Created: Mon Aug 11 13:48:10 2014 SQA

Instrument Runlog

Instrument: SQA **Calibration Date:** 8/8/2014 **Method:** SIM-PAH
Operator: RTS **Processed By:** RTS **Posted By:** RTS **Analytical Batch:** 8217

Data Path: Z:\08\SQA\DATA\081014\

Daily:		As Needed:			
Verify System Date/Time	✓	Adjust Tune		Clip Column/Guard Column	✓
General System Inspection	✓	Clean Ion Source		Replace Inlet Seal ☐ Septa ✓ Liner ✓	
		Check Rough Pump Oil		Verify Acquisition Parameters	
		Check Vacuum Pressure		Rinse or Replace Weldment/Split Lines	

Standards:				
	IB	SVW16-131-8	**IS**	SVW16-44-5
	Tune	SVW16-14-22	**CCV-PAH**	SVW16-131-4
	MeCl2	P454		

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	Rerun
1001.D	1	R	1		8/10/14 1:42 PM	
1002.D	1	IB	1		8/10/14 1:57 PM	
1003.D	2	TUNE	1		8/10/14 2:12 PM	
1004.D	3	CCV PAH	1		8/10/14 2:29 PM	
1005.D	4	MB 31652	1		8/10/14 2:44 PM	
1006.D	5	LCS 31652	1		8/10/14 2:59 PM	
1007.D	6	LCSD 31652	1		8/10/14 3:14 PM	
1008.D	7	1143656047	1	removed from batch pending QA	8/10/14 3:29 PM	
1009.D	8	1143656048	1	BMSD missing, pending QA	8/10/14 3:44 PM	
1010.D	9	1143656050	1		8/10/14 3:59 PM	
1011.D	10	1143656051	1		8/10/14 4:14 PM	
1012.D	11	1143656052	1		8/10/14 4:29 PM	
1013.D	12	1143656053	1		8/10/14 4:44 PM	
1014.D	13	1143656054	1		8/10/14 4:59 PM	
1015.D	14	1143657001	1	removed from batch pending QA	8/10/14 5:14 PM	
1016.D	15	1143657002	1	BMSD missing, pending QA	8/10/14 5:29 PM	
1017.D	16	1143657004	1		8/10/14 5:44 PM	
1018.D	17	1143657005	1		8/10/14 6:00 PM	
1019.D	18	1143658001	1		8/10/14 6:14 PM	
1020.D	19	1143658002	1		8/10/14 6:29 PM	
1021.D	20	1143658003	1		8/10/14 6:44 PM	
1022.D	21	1143658004	1		8/10/14 7:00 PM	
1023.D	22	1143655001	1	surr biased low, re-extract	8/10/14 7:15 PM	
1024.D	23	1143655002	1		8/10/14 7:30 PM	
1025.D	24	1143655003	1		8/10/14 7:44 PM	
1026.D	25	1143659001	1		8/10/14 8:00 PM	
1027.D	26	1143668001 5X	5	200 uL/1 mL	8/10/14 8:15 PM	
1028.D	27	1148344005	1		8/10/14 8:29 PM	
1029.D	28	MB 31650	1		8/10/14 8:44 PM	
1030.D	29	LCS 31650	1		8/10/14 8:59 PM	
1031.D	30	1143579003	1		8/10/14 9:14 PM	
1032.D	31	1143579010	1		8/10/14 9:29 PM	
1033.D	32	1143579014	1		8/10/14 9:44 PM	
1034.D	33	1143579024	1	surr biased low, re-extract	8/10/14 9:59 PM	
1035.D	34	1143579025	1	surr biased low, re-extract	8/10/14 10:14 PM	
1036.D	35	1143579027	1	surr biased low, re-extract	8/10/14 10:29 PM	
1037.D	36	1143579034	1		8/10/14 10:44 PM	
1038.D	37	1143579035	1		8/10/14 10:59 PM	
1039.D	38	1143579036	1		8/10/14 11:14 PM	

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	Rerun
1040.D	39	1143579037	1		8/10/14 11:29 PM	
1041.D	40	1143579082	1		8/10/14 11:44 PM	
1042.D	41	1143656012	1		8/10/14 11:59 PM	
1043.D	42	1143656032	1		8/11/14 12:14 AM	
1044.D	43	1143656039	1		8/11/14 12:29 AM	
1045.D	44	1143681001 10X	10	100 uL/1 mL	8/11/14 12:44 AM	
1046.D	45	1143681002 5X	5	200 uL/1 mL	8/11/14 12:59 AM	
1047.D	46	1143656010 5X	5	200 uL/1 mL	8/11/14 1:14 AM	
1048.D	47	1143656027 5X	5	200 uL/1 mL	8/11/14 1:29 AM	
1049.D	48	1143656028 5X	5	200 uL/1 mL	8/11/14 1:44 AM	
1050.D	49	1143656029 5X	5	200 uL/1 mL	8/11/14 1:59 AM	
1051.D	50	1143579017 5X	5	200 uL/1 mL	8/11/14 2:13 AM	
1052.D	100	R	1		8/11/14 2:28 AM	
1053.D	100	R	1		8/11/14 2:43 AM	
1054.D	100	R	1		8/11/14 2:58 AM	
1055.D	100	R	1		8/11/14 3:13 AM	
1056.D	100	R	1		8/11/14 3:28 AM	
1057.D	100	R	1		8/11/14 3:43 AM	
1058.D	100	R	1		8/11/14 3:58 AM	
1059.D	100	R	1		8/11/14 4:13 AM	
1060.D	100	R	1		8/11/14 4:28 AM	
1061.D	100	R	1		8/11/14 4:43 AM	
1062.D	100	R	1		8/11/14 4:58 AM	
1063.D	100	R	1		8/11/14 5:13 AM	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1002.D
Acq On : 10 Aug 2014 1:57 pm
Operator : RTS
Sample : IB
Misc : [SQA]
ALS Vial : 1 Sample Multiplier: 1

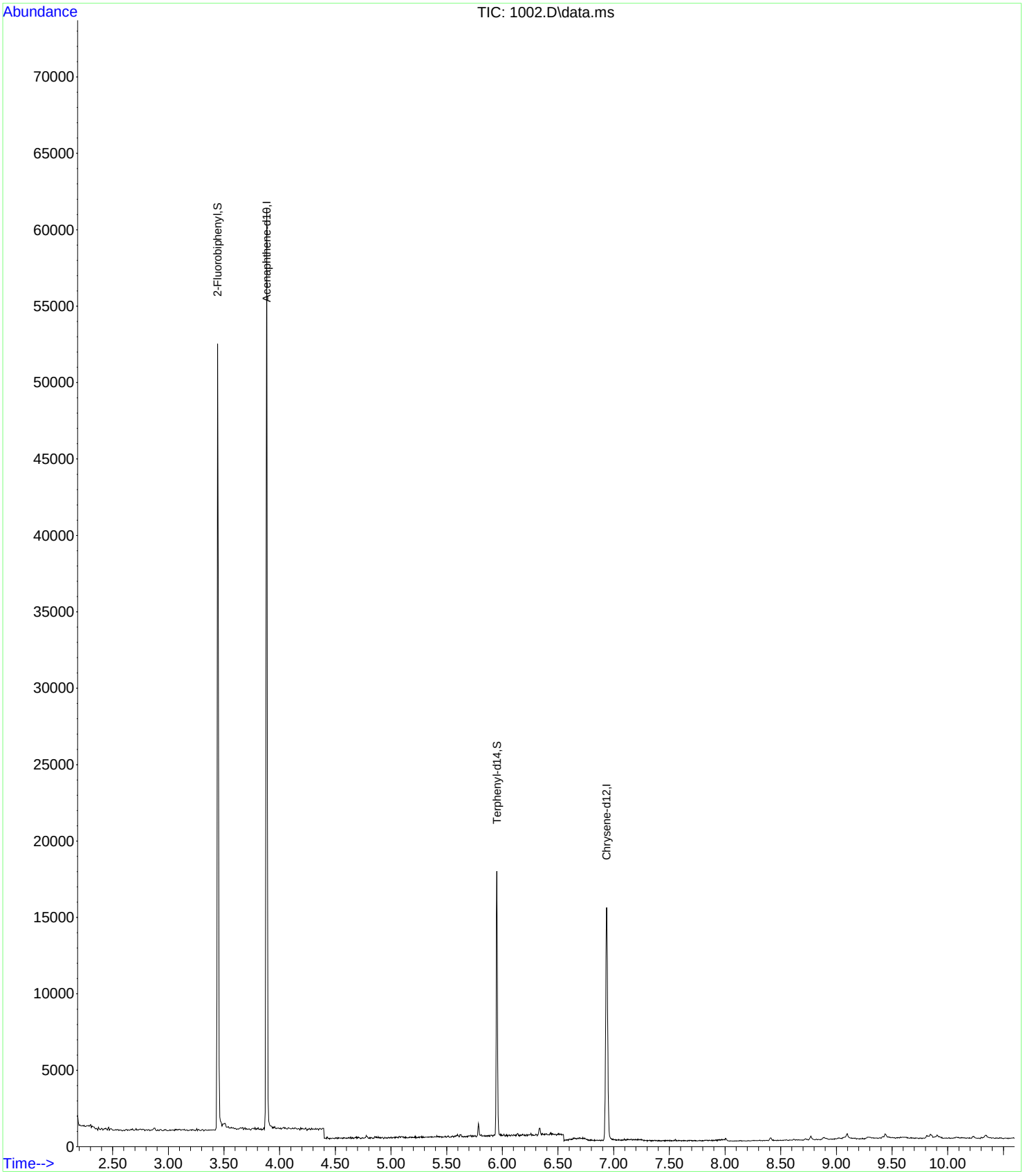
Quant Time: Aug 11 13:43:26 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	20360	500.00	ng/mL	0.00
15) Chrysene-d12	6.936	240	14981	500.00	ng/mL	0.01
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.442	172	25117	477.48	ng/mL	0.00
Spiked Amount 500.000			Recovery = 95.50%			
18) Terphenyl-d14	5.951	244	11242	460.43	ng/mL	0.01
Spiked Amount 500.000	Range 80 - 120		Recovery = 92.09%			
Target Compounds						Qvalue

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

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1002.D
Acq On : 10 Aug 2014 1:57 pm
Operator : RTS
Sample : IB
Misc : [SQA]
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 11 13:43:26 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1004.D
Acq On : 10 Aug 2014 2:29 pm
Operator : RTS
Sample : CCV PAH
Misc : [SQA]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 11 13:43:32 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

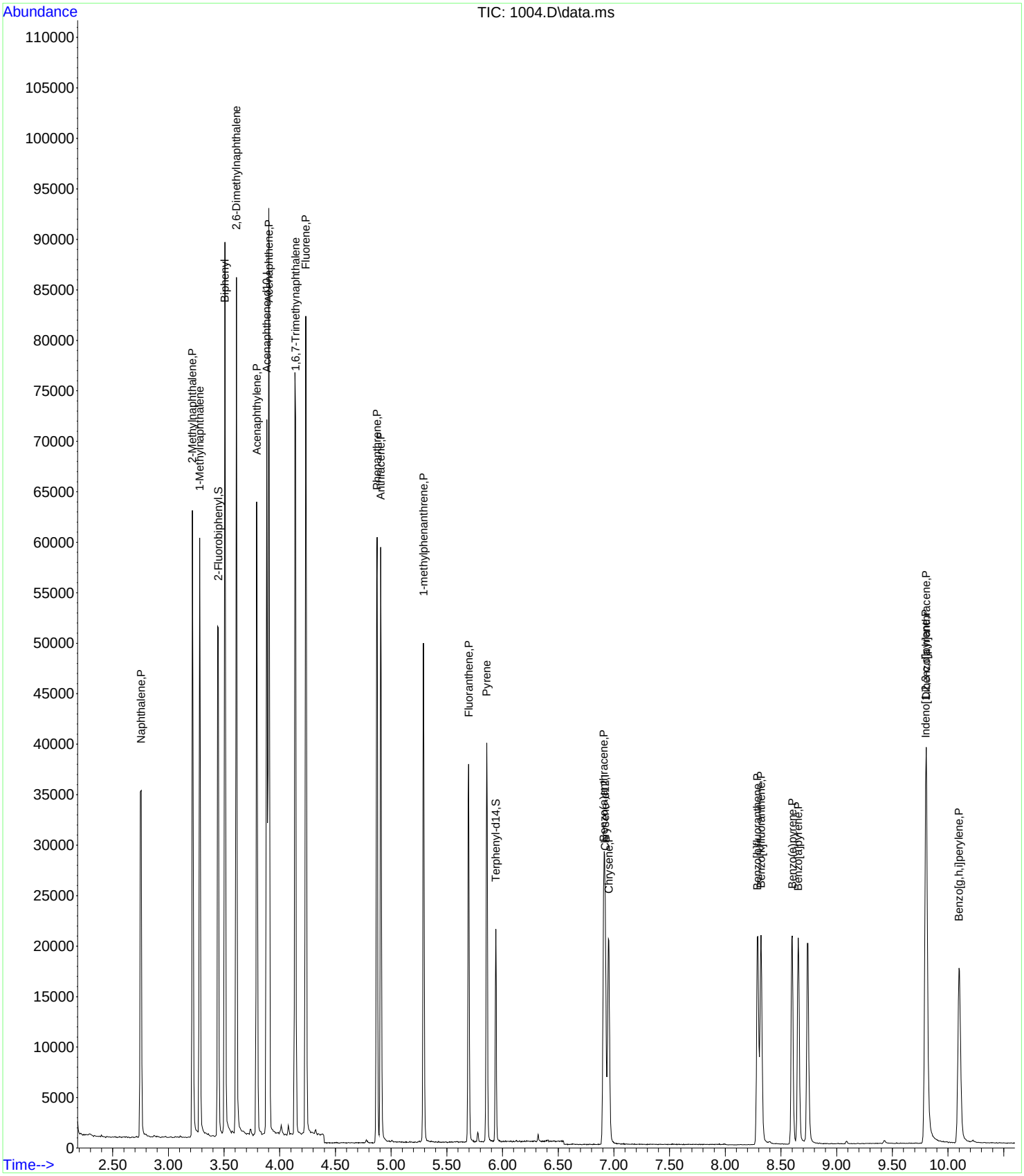
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	23543	500.00	ng/mL	0.00
15) Chrysene-d12	6.922	240	17328	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	28078	461.61	ng/mL	0.00
Spiked Amount 500.000			Recovery = 92.32%			
18) Terphenyl-d14	5.939	244	13031	461.42	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 92.28%			
Target Compounds						Qvalue
3) Naphthalene	2.756	128	29289	440.85	ng/mL	96
4) 2-Methylnaphthalene	3.216	142	26456	456.80	ng/mL	98
5) 1-Methylnaphthalene	3.280	142	23600	450.00	ng/mL	98
6) 2,6-Dimethylnaphthalene	3.611	156	26007	473.43	ng/mL	86
7) 1,6,7-Trimethynaphthalene	4.142	170	22767	484.03	ng/mL#	55
8) Biphenyl	3.507	154	34792	463.99	ng/mL	99
9) Acenaphthylene	3.792	152	41580	466.21	ng/mL	98
10) Acenaphthene	3.902	154	24996	469.49	ng/mL	100
11) Fluorene	4.233	166	30934	487.04	ng/mL	98
12) Phenanthrene	4.874	178	39503	504.99	ng/mL	100
13) Anthracene	4.907	178	38668	501.72	ng/mL	100
14) 1-methylphenanthrene	5.290	192	23453	515.85	ng/mL	100
16) Fluoranthene	5.696	202	26944	452.09	ng/mL	96
17) Pyrene	5.858	202	28423	456.50	ng/mL	95
19) Benzo(a)anthracene	6.907	228	19301	477.13	ng/mL	100
20) Chrysene	6.954	228	18579	478.75	ng/mL	100
21) Benzo[b]fluoranthene	8.288	252	23580	518.61	ng/mL	100
22) Benzo[k]fluoranthene	8.321	252	20670	463.12	ng/mL	100
23) Benzo(e)pyrene	8.601	252	21150	487.63	ng/mL	100
24) Benzo[a]pyrene	8.655	252	20554	501.51	ng/mL	100
25) Indeno[1,2,3-c,d]pyrene	9.798	276	29492	510.67	ng/mL	99
26) Dibenzo[a,h]anthracene	9.803	278	24652	523.33	ng/mL	99
27) Benzo[g,h,i]perylene	10.098	276	24679	507.93	ng/mL	97

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1004.D
Acq On : 10 Aug 2014 2:29 pm
Operator : RTS
Sample : CCV PAH
Misc : [SQA]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 11 13:43:32 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1005.D
Acq On : 10 Aug 2014 2:44 pm
Operator : RTS
Sample : MB 31652
Misc : [SQA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 13:43:35 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

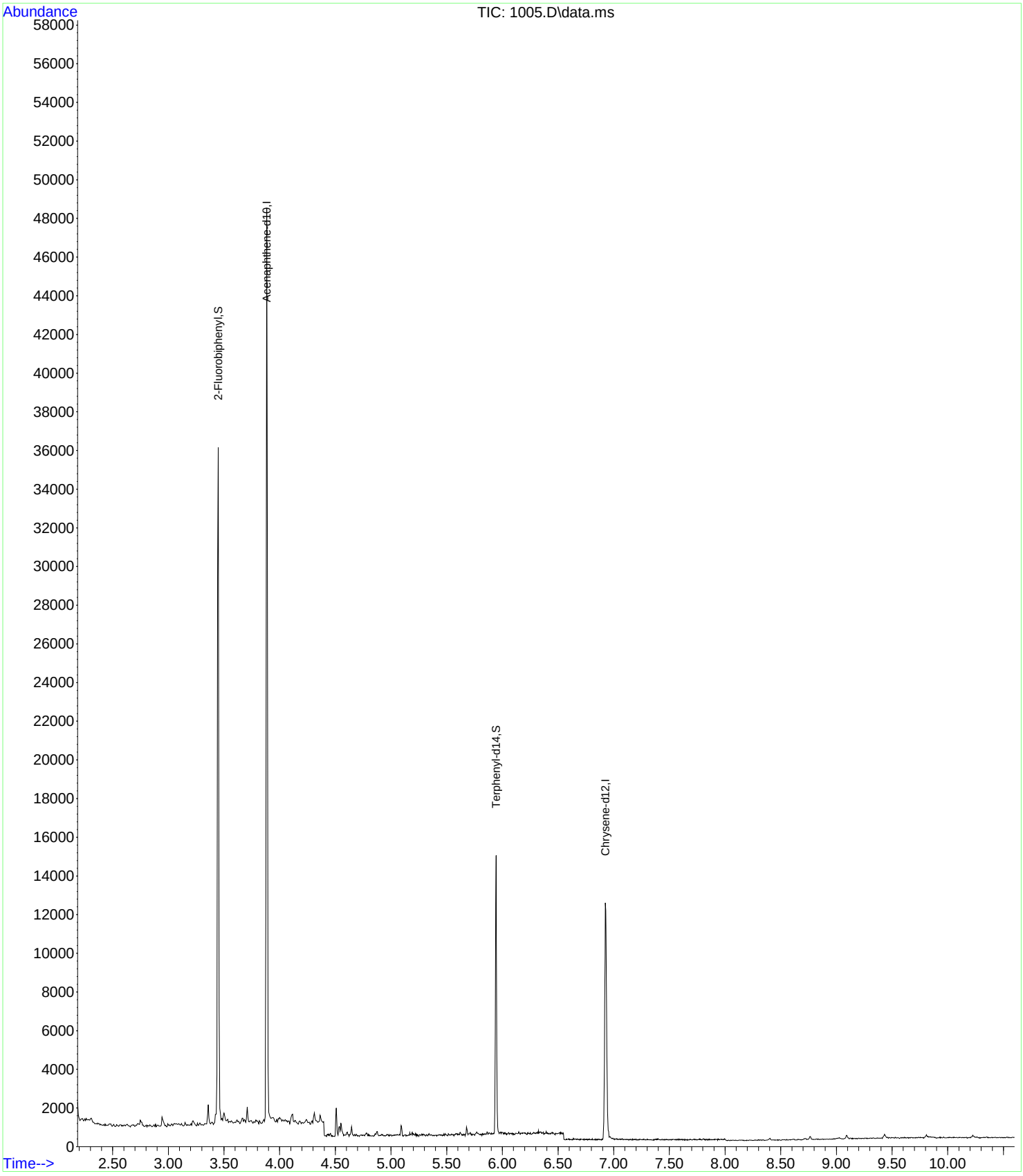
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	16952	500.00	ng/mL	0.00
15) Chrysene-d12	6.925	240	11814	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	17536	400.39	ng/mL	0.00
Spiked Amount 500.000			Recovery = 80.08%			
18) Terphenyl-d14	5.943	244	9362	486.22	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 97.24%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1005.D
Acq On : 10 Aug 2014 2:44 pm
Operator : RTS
Sample : MB 31652
Misc : [SQA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 13:43:35 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1006.D
Acq On : 10 Aug 2014 2:59 pm
Operator : RTS
Sample : LCS 31652
Misc : [SQA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 13:43:38 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

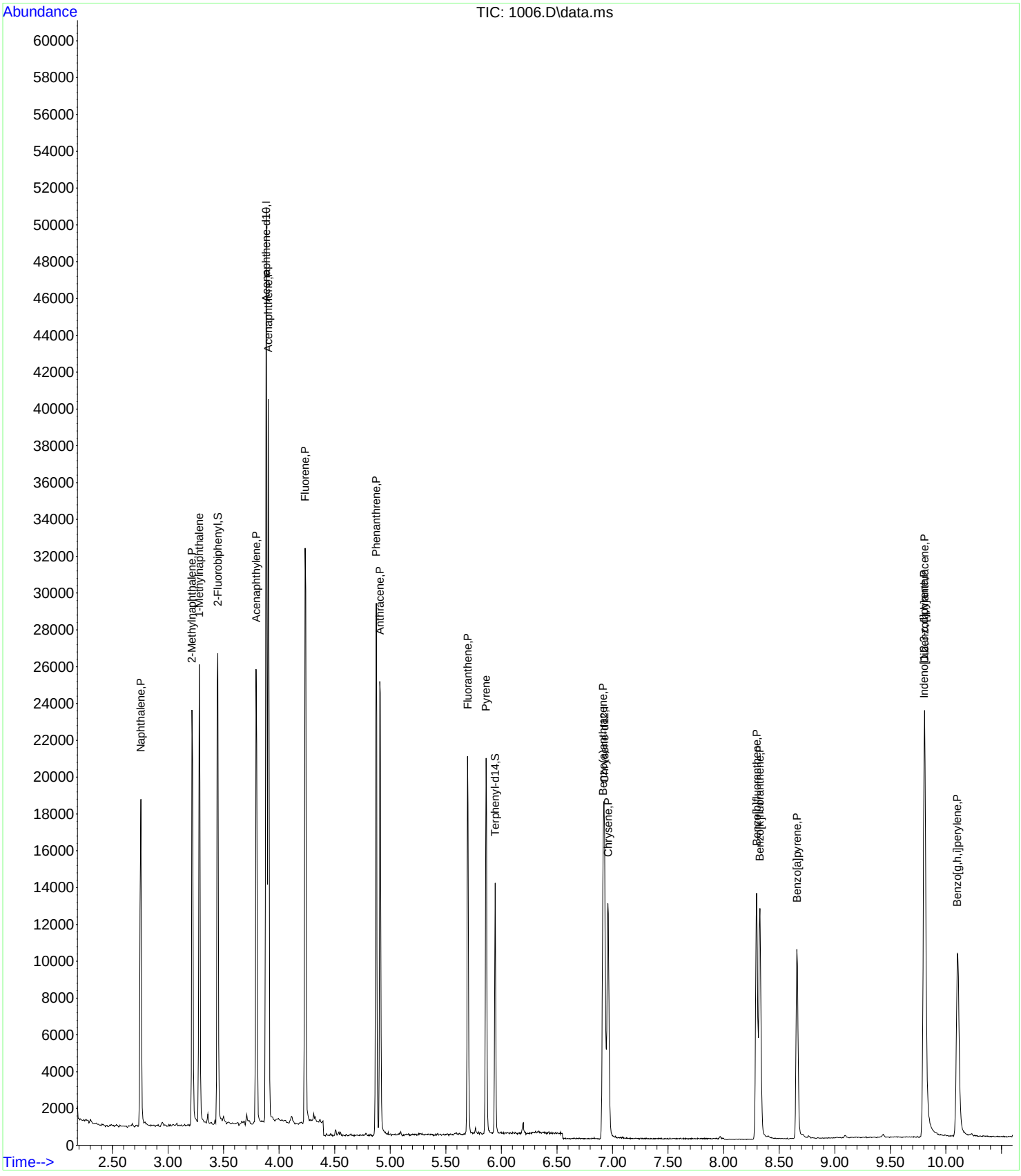
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	17357	500.00	ng/mL	0.00
15) Chrysene-d12	6.928	240	11792	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	13947	311.01	ng/mL	0.00
Spiked Amount 500.000			Recovery = 62.20%			
18) Terphenyl-d14	5.943	244	8780	456.85	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 91.37%			
Target Compounds						Qvalue
3) Naphthalene	2.756	128	13267	270.86	ng/mL	98
4) 2-Methylnaphthalene	3.216	142	10881	254.84	ng/mL	94
5) 1-Methylnaphthalene	3.280	142	10958	283.41	ng/mL	95
9) Acenaphthylene	3.792	152	18683	284.14	ng/mL	99
10) Acenaphthene	3.903	154	11227	286.02	ng/mL	97
11) Fluorene	4.233	166	13837	295.50	ng/mL	99
12) Phenanthrene	4.874	178	18670	323.73	ng/mL	99
13) Anthracene	4.907	178	16856	296.66	ng/mL	100
16) Fluoranthene	5.696	202	14473	356.85	ng/mL	98
17) Pyrene	5.862	202	15212	359.02	ng/mL	93
19) Benzo(a)anthracene	6.916	228	11449	415.90	ng/mL	100
20) Chrysene	6.959	228	11555	437.54	ng/mL	96
21) Benzo[b]fluoranthene	8.297	252	12860	415.62	ng/mL	98
22) Benzo[k]fluoranthene	8.326	252	13330	438.88	ng/mL	98
24) Benzo[a]pyrene	8.659	252	10965	393.15	ng/mL	98
25) Indeno[1,2,3-c,d]pyrene	9.803	276	17742	451.44	ng/mL	99
26) Dibenzo[a,h]anthracene	9.808	278	14409	449.49	ng/mL	97
27) Benzo[g,h,i]perylene	10.103	276	14721	445.22	ng/mL	98

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1006.D
Acq On : 10 Aug 2014 2:59 pm
Operator : RTS
Sample : LCS 31652
Misc : [SQA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 13:43:38 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1007.D
Acq On : 10 Aug 2014 3:14 pm
Operator : RTS
Sample : LCSD 31652
Misc : [SQA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 11 13:43:41 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

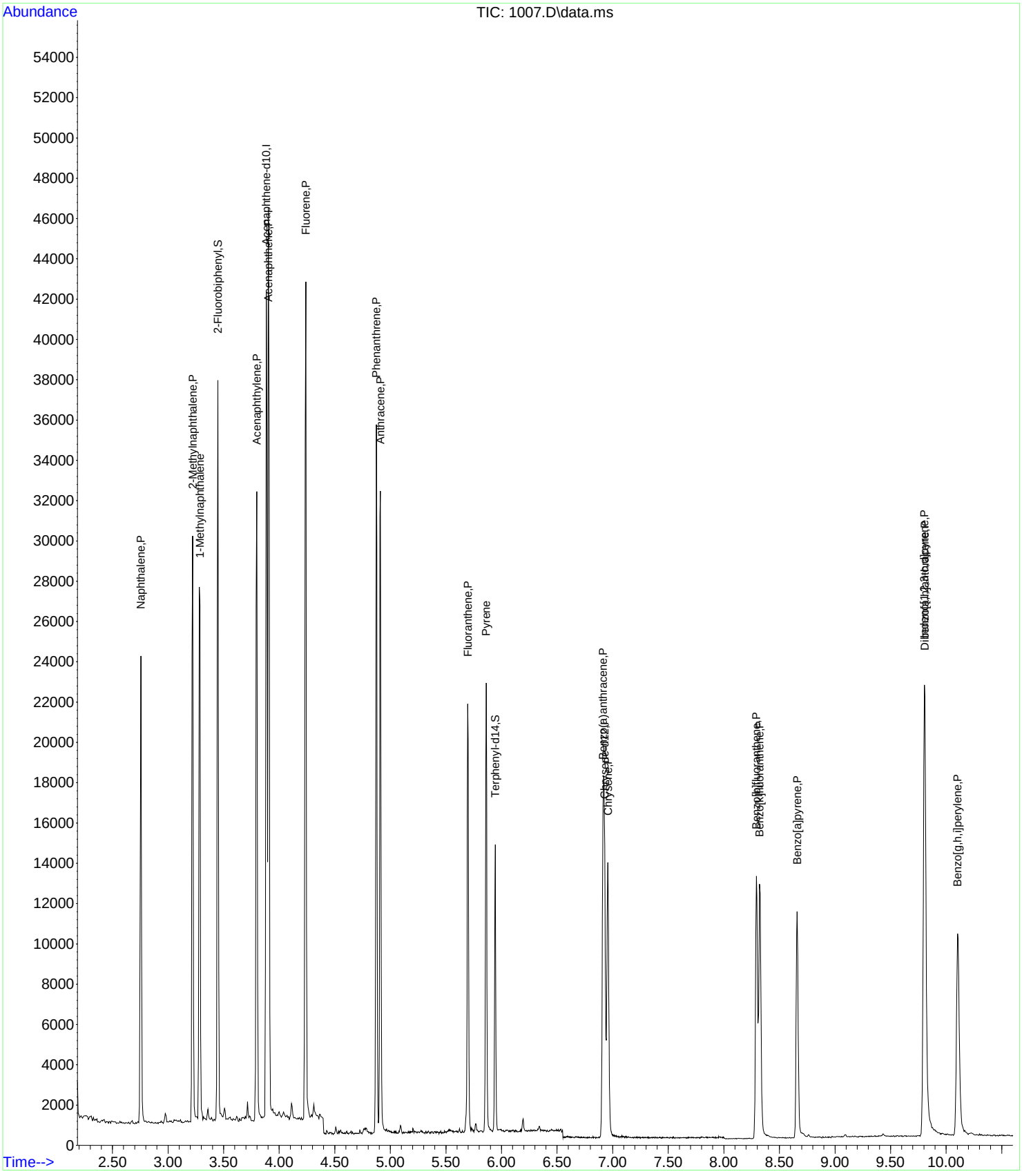
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	16274	500.00	ng/mL	0.00
15) Chrysene-d12	6.928	240	11654	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	16774	398.94	ng/mL	0.00
Spiked Amount 500.000			Recovery = 79.79%			
18) Terphenyl-d14	5.943	244	9106	479.42	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 95.88%			
Target Compounds						Qvalue
3) Naphthalene	2.756	128	15542	338.42	ng/mL	98
4) 2-Methylnaphthalene	3.222	142	13206	329.87	ng/mL	94
5) 1-Methylnaphthalene	3.287	142	12866	354.90	ng/mL	91
9) Acenaphthylene	3.799	152	23207	376.43	ng/mL	98
10) Acenaphthene	3.903	154	13582	369.05	ng/mL	97
11) Fluorene	4.240	166	17274	393.45	ng/mL	93
12) Phenanthrene	4.874	178	22624	418.40	ng/mL	96
13) Anthracene	4.911	178	21536	404.25	ng/mL	98
16) Fluoranthene	5.696	202	16029	399.89	ng/mL	99
17) Pyrene	5.862	202	16095	384.36	ng/mL	95
19) Benzo(a)anthracene	6.913	228	11658	428.51	ng/mL	99
20) Chrysene	6.957	228	11604	444.59	ng/mL	94
21) Benzo[b]fluoranthene	8.293	252	13588	444.35	ng/mL	99
22) Benzo[k]fluoranthene	8.322	252	14348	477.99	ng/mL	96
24) Benzo[a]pyrene	8.659	252	11915	432.27	ng/mL	98
25) Indeno[1,2,3-c,d]pyrene	9.803	276	17577	452.54	ng/mL	98
26) Dibenzo[a,h]anthracene	9.808	278	14328	452.25	ng/mL	98
27) Benzo[g,h,i]perylene	10.103	276	14509	444.01	ng/mL	96

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1007.D
Acq On : 10 Aug 2014 3:14 pm
Operator : RTS
Sample : LCSD 31652
Misc : [SQA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 11 13:43:41 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1019.D
Acq On : 10 Aug 2014 6:14 pm
Operator : RTS
Sample : 1143658001
Misc : [SQA]
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 11 13:44:17 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

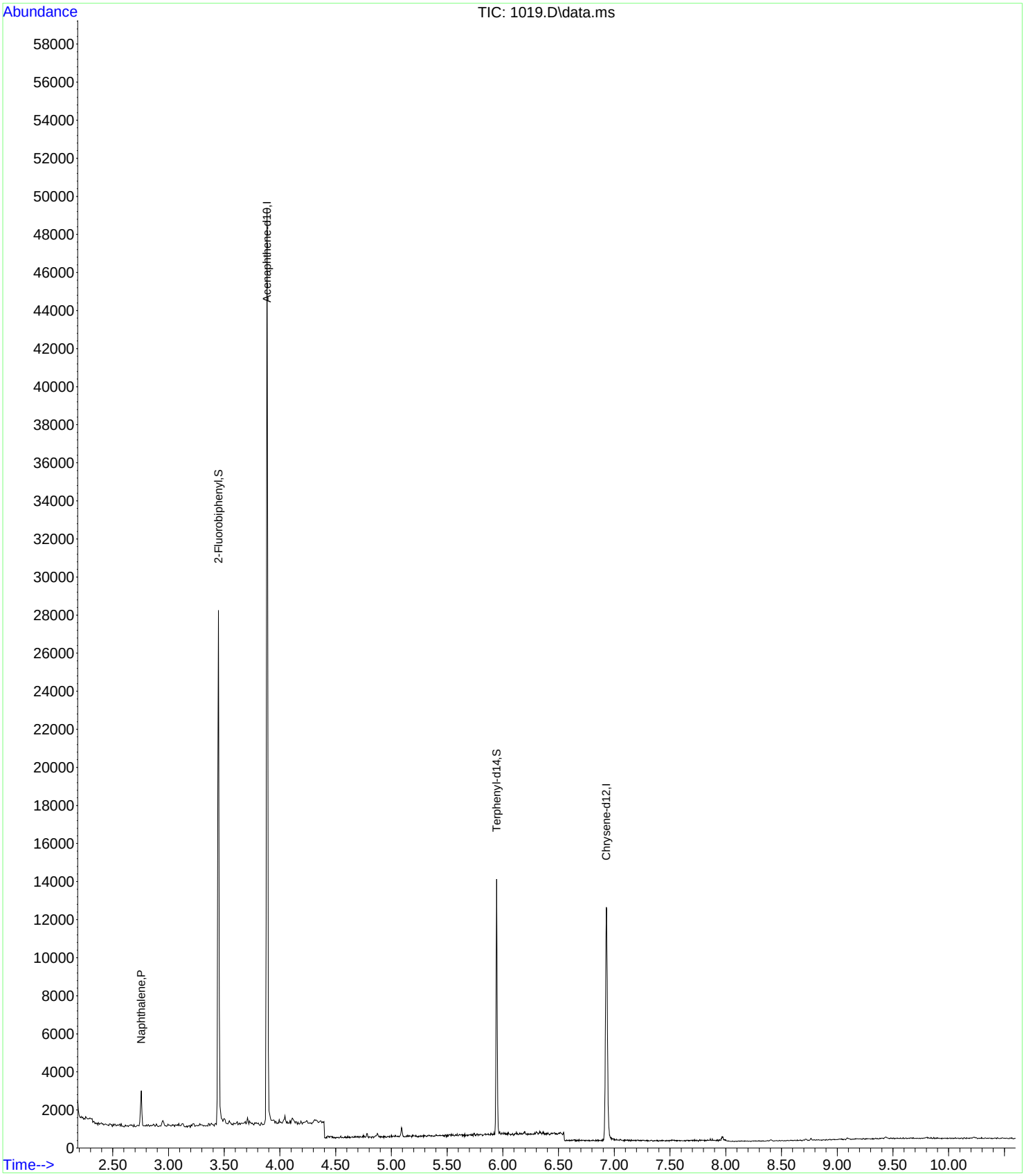
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	17638	500.00	ng/mL	0.00
15) Chrysene-d12	6.928	240	11982	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	12907	283.23	ng/mL	0.00
Spiked Amount 500.000			Recovery = 56.65%			
18) Terphenyl-d14	5.943	244	8658	443.35	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 88.67%			
Target Compounds						Qvalue
3) Naphthalene	2.756	128	1347	27.06	ng/mL	97

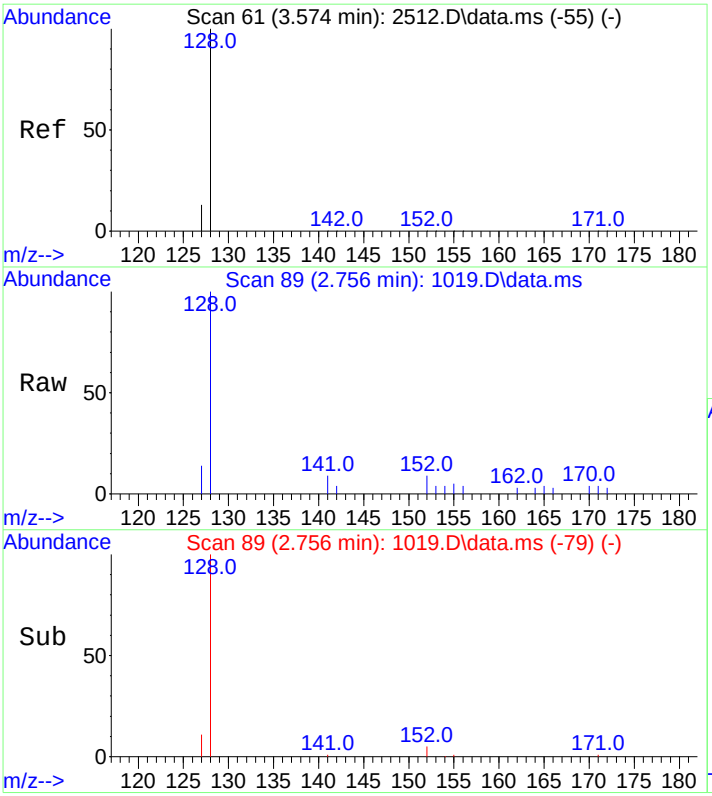
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1019.D
Acq On : 10 Aug 2014 6:14 pm
Operator : RTS
Sample : 1143658001
Misc : [SQA]
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 11 13:44:17 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

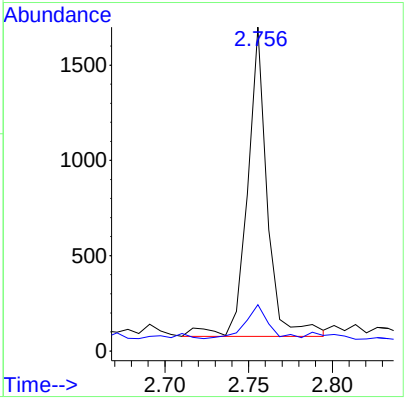




#3
Naphthalene
Concen: 27.06 ng/mL
RT: 2.756 min Scan# 89
Delta R.T. -0.000 min
Lab File: 1019.D
Acq: 10 Aug 2014 6:14 pm

Tgt Ion:128 Resp: 1347

Ion	Ratio	Lower	Upper
128	100		
127	14.3	9.3	17.3



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1020.D
Acq On : 10 Aug 2014 6:29 pm
Operator : RTS
Sample : 1143658002
Misc : [SQA]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 11 13:44:20 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

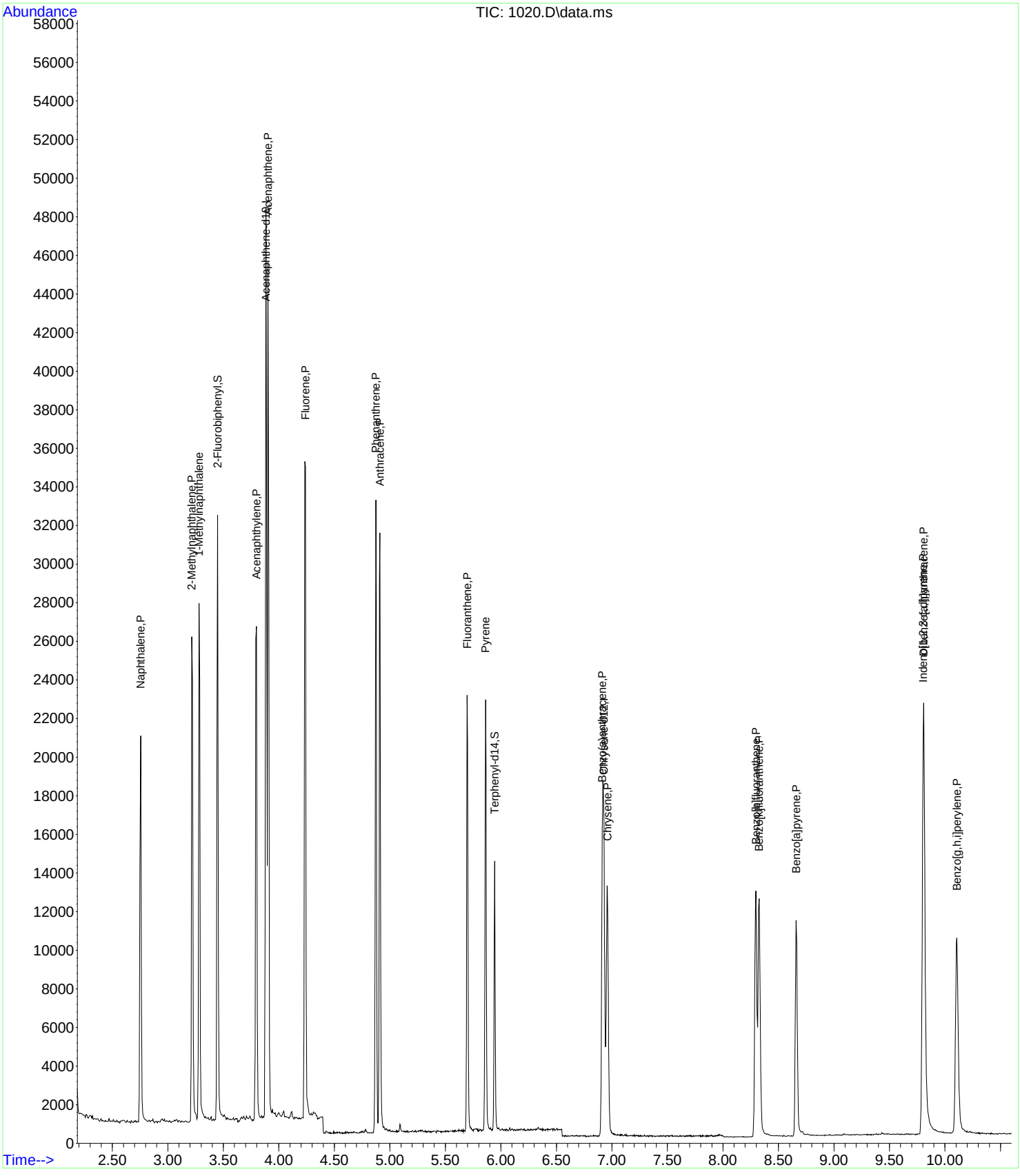
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	17344	500.00	ng/mL	0.00
15) Chrysene-d12	6.927	240	11958	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	14779	329.81	ng/mL	0.00
Spiked Amount 500.000			Recovery = 65.96%			
18) Terphenyl-d14	5.943	244	8889	456.10	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 91.22%			
Target Compounds						Qvalue
3) Naphthalene	2.755	128	15279	312.17	ng/mL	95
4) 2-Methylnaphthalene	3.216	142	12505	293.09	ng/mL	95
5) 1-Methylnaphthalene	3.280	142	12302	318.41	ng/mL	95
9) Acenaphthylene	3.799	152	20849	317.32	ng/mL	98
10) Acenaphthene	3.902	154	12293	313.42	ng/mL	96
11) Fluorene	4.239	166	15784	337.33	ng/mL	92
12) Phenanthrene	4.873	178	21324	370.03	ng/mL	97
13) Anthracene	4.910	178	20403	359.35	ng/mL	96
16) Fluoranthene	5.696	202	16138	392.38	ng/mL	99
17) Pyrene	5.862	202	16381	381.24	ng/mL	95
19) Benzo(a)anthracene	6.913	228	11693	418.87	ng/mL	98
20) Chrysene	6.959	228	11742	438.44	ng/mL	100
21) Benzo[b]fluoranthene	8.297	252	13082	416.93	ng/mL	98
22) Benzo[k]fluoranthene	8.326	252	13358	433.70	ng/mL	100
24) Benzo[a]pyrene	8.659	252	11735	414.91	ng/mL	99
25) Indeno[1,2,3-c,d]pyrene	9.803	276	17344	435.19	ng/mL	98
26) Dibenzo[a,h]anthracene	9.808	278	13977	429.96	ng/mL	100
27) Benzo[g,h,i]perylene	10.107	276	14517	432.96	ng/mL	98

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1020.D
Acq On : 10 Aug 2014 6:29 pm
Operator : RTS
Sample : 1143658002
Misc : [SQA]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 11 13:44:20 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1021.D
Acq On : 10 Aug 2014 6:44 pm
Operator : RTS
Sample : 1143658003
Misc : [SQA]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 11 13:44:23 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

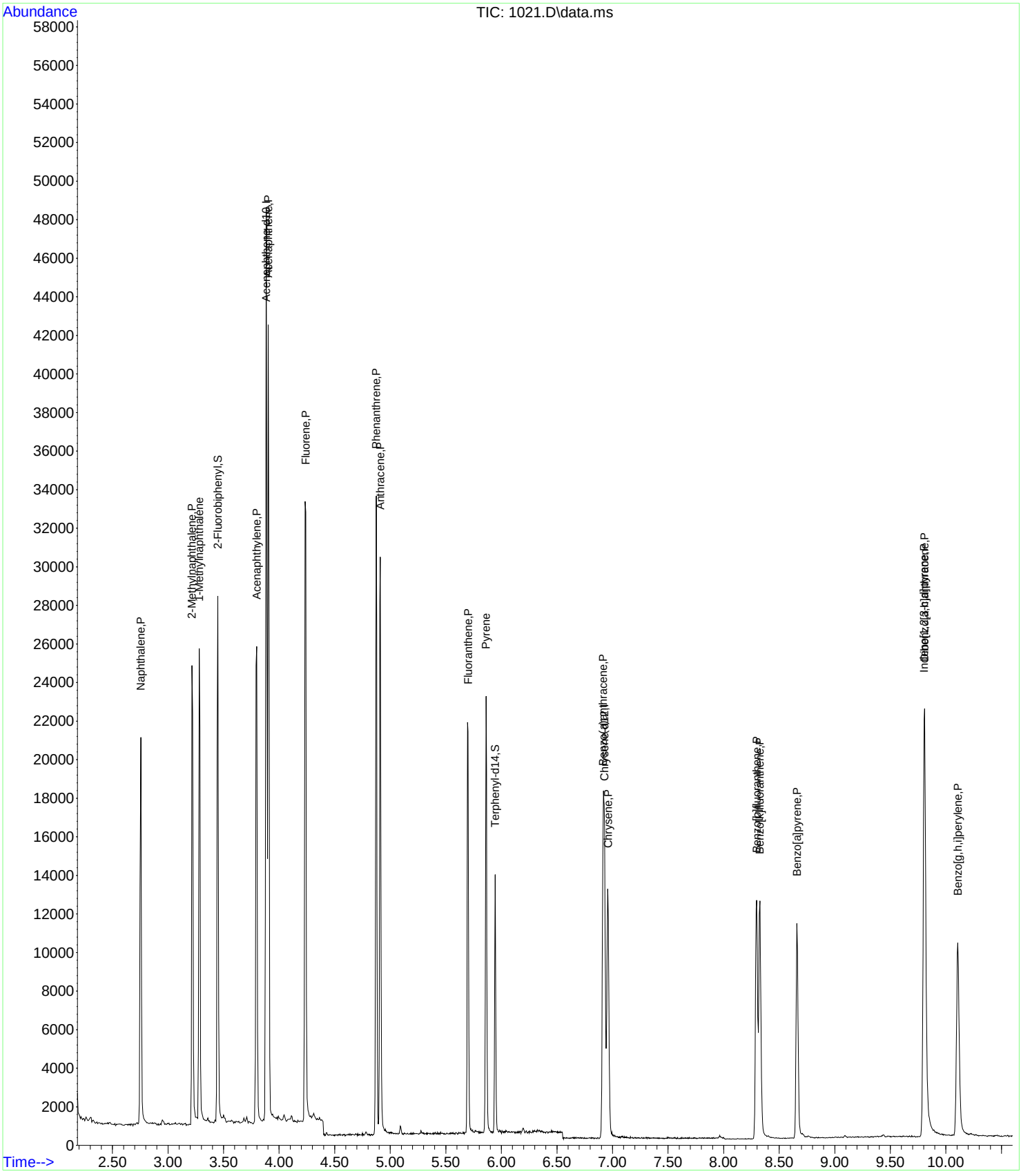
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	17066	500.00	ng/mL	0.00
15) Chrysene-d12	6.927	240	11483	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	13531	306.88	ng/mL	0.00
Spiked Amount 500.000			Recovery = 61.38%			
18) Terphenyl-d14	5.943	244	8623	460.75	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 92.15%			
Target Compounds						Qvalue
3) Naphthalene	2.755	128	14879	308.95	ng/mL	99
4) 2-Methylnaphthalene	3.216	142	11542	274.93	ng/mL	94
5) 1-Methylnaphthalene	3.280	142	11226	295.29	ng/mL	97
9) Acenaphthylene	3.799	152	20030	309.82	ng/mL	96
10) Acenaphthene	3.902	154	11776	305.13	ng/mL	99
11) Fluorene	4.239	166	14774	320.89	ng/mL	93
12) Phenanthrene	4.873	178	21066	371.51	ng/mL	94
13) Anthracene	4.910	178	20115	360.05	ng/mL	98
16) Fluoranthene	5.700	202	15747	398.71	ng/mL	95
17) Pyrene	5.862	202	15983	387.37	ng/mL	97
19) Benzo(a)anthracene	6.916	228	11697	436.34	ng/mL	99
20) Chrysene	6.959	228	11725	455.92	ng/mL	100
21) Benzo[b]fluoranthene	8.297	252	12994	431.25	ng/mL	98
22) Benzo[k]fluoranthene	8.326	252	12926	437.03	ng/mL	99
24) Benzo[a]pyrene	8.659	252	11625	428.03	ng/mL	97
25) Indeno[1,2,3-c,d]pyrene	9.803	276	17088	446.50	ng/mL	99
26) Dibenzo[a,h]anthracene	9.808	278	13941	446.59	ng/mL	99
27) Benzo[g,h,i]perylene	10.107	276	14152	439.53	ng/mL	97

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1021.D
Acq On : 10 Aug 2014 6:44 pm
Operator : RTS
Sample : 1143658003
Misc : [SQA]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 11 13:44:23 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1022.D
Acq On : 10 Aug 2014 7:00 pm
Operator : RTS
Sample : 1143658004
Misc : [SQA]
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 11 13:44:26 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.883	164	16949	500.00	ng/mL	0.00
15) Chrysene-d12	6.931	240	11041	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	14448	329.94	ng/mL	0.00
Spiked Amount 500.000			Recovery = 65.99%			
18) Terphenyl-d14	5.943	244	8281	460.19	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 92.04%			

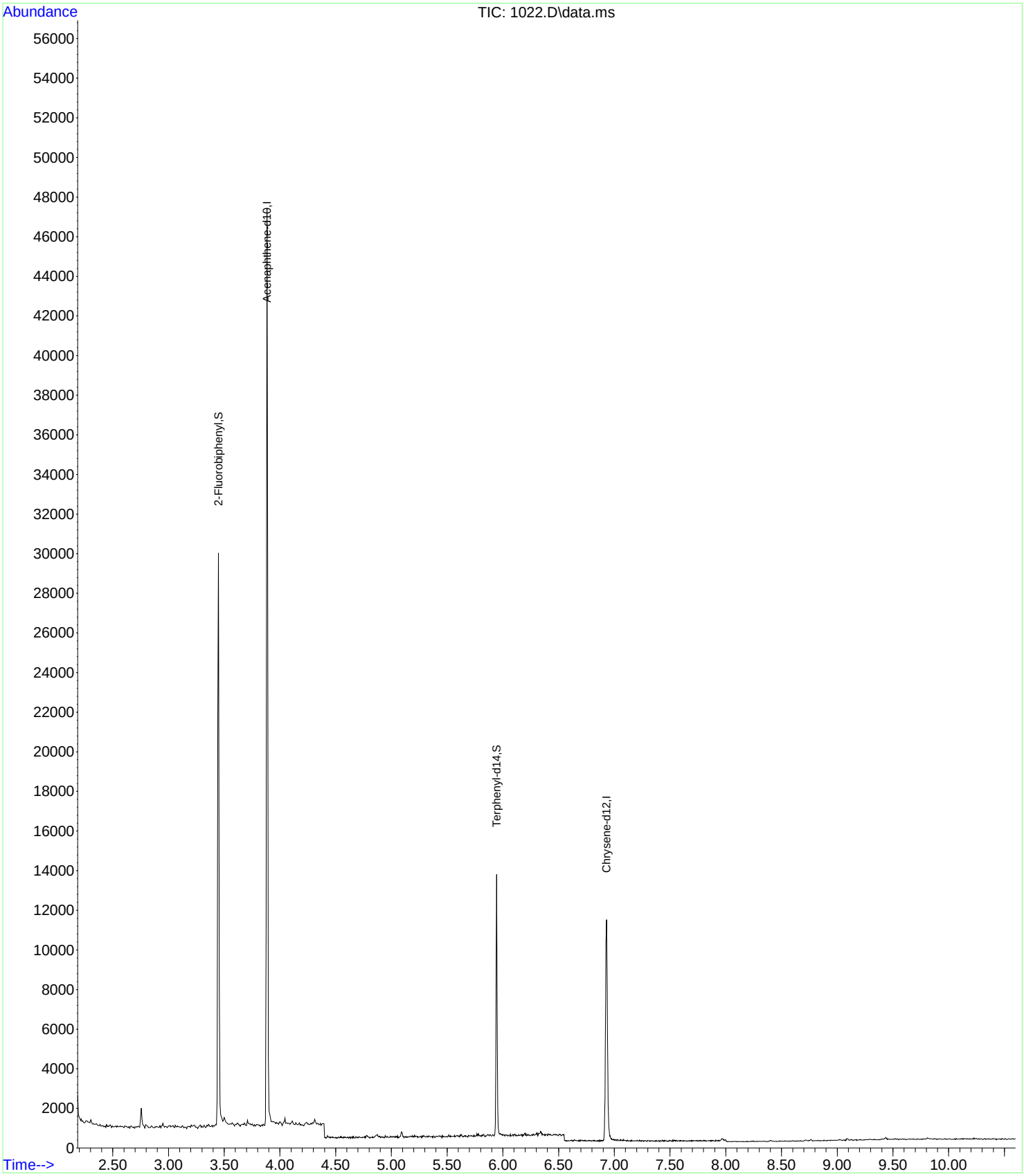
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SQA\DATA\081014\
Data File : 1022.D
Acq On : 10 Aug 2014 7:00 pm
Operator : RTS
Sample : 1143658004
Misc : [SQA]
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 11 13:44:26 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808A.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



SGS Alaska Division Peer Review Report - Prep

Batch: **31652** Queue: **XXX**

09-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1225804	MB	3520PAHSIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/16/14 12:19		
1225805	LCS	3520PAHSIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/16/14 12:19		
1225806	LCSD	3520PAHSIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/16/14 12:19		
1143656047	PS	3520PAHSIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/09/14 17:25		1143656047-I
1143656048	BMS	3520PAHSIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/09/14 17:25	1143656047	1143656048-I
1143656050	PS	3520PAHSIM	SG	970	mL	1	mL	0.001030928	0.001	08/09/14 11:45	08/09/14 17:55		1143656050-H
1143656051	PS	3520PAHSIM	SG	935	mL	1	mL	0.001069519	0.001	08/09/14 11:45	08/09/14 17:15		1143656051-H
1143656052	PS	3520PAHSIM	SG	850	mL	1	mL	0.001176471	0.001	08/09/14 11:45	08/09/14 17:10		1143656052-H
1143656053	PS	3520PAHSIM	SG	900	mL	1	mL	0.001111111	0.001	08/09/14 11:45	08/09/14 17:40		1143656053-H
1143656054	PS	3520PAHSIM	SG	970	mL	1	mL	0.001030928	0.001	08/09/14 11:45	08/09/14 17:20		1143656054-H
1143657001	PS	3520PAHSIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/11/14 12:37		1143657001-E
1143657002	BMS	3520PAHSIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/11/14 12:37	1143657001	1143657002-E
1143657004	PS	3520PAHSIM	SG	850	mL	1	mL	0.001176471	0.001	08/09/14 11:45	08/11/14 13:00		1143657004-E
1143657005	PS	3520PAHSIM	SG	980	mL	1	mL	0.001020408	0.001	08/09/14 11:45	08/11/14 13:40		1143657005-E
1143658001	PS	3520625SIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/12/14 09:15		1143658001-E
1143658002	BMS	3520625SIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/12/14 09:15	1143658001	1143658002-E
1143658003	BMSD	3520625SIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/12/14 09:15	1143658001	1143658003-E
1143658004	PS	3520625SIM	SG	960	mL	1	mL	0.001041667	0.001	08/09/14 11:45	08/12/14 09:05		1143658004-E
1143655001	PS	3520625SIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/13/14 15:30		1143655001-D
1143655002	PS	3520625SIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/13/14 15:20		1143655002-D
1143655003	PS	3520625SIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/13/14 15:00		1143655003-D
1143659001	PS	3520625SIM	SG	950	mL	1	mL	0.001052632	0.001	08/09/14 11:45	08/14/14 12:55		1143659001-D
1143668001	PS	3520625SIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/14/14 08:00		1143668001-D
1148344005	PS	3520625SIM	SG	1000	mL	1	mL	0.001	0.001	08/09/14 11:45	08/13/14 09:20		1148344005-H

Analyst's Signature: CCZ **Peer Reviewer's Signature:** Revathy Smith

1

XXX 31652 Waters 3520/8270S

Extraction Method:3520/8270S
Start Date/Time: 8/9/2014 11:45:44AM
End Date/Time: 8/9/2014 3:45:44PM
TV Temp (C): 38
TV ID: 9
Surrogate Lot ID:SVW16-24-11
Surrogate Amount Added (mL):1
Surrogate Conc. ug/mL:0.5

LCS(D)/MS(D) Lot ID:SVW16-23-10
LCS(D)/MS(D) Amount Added (mL):1
LCS(D)/MS(D) Conc. ug/mL:0.5
Silica Gel Lot #:
Hexane Lot #:
Na2SO4 Lot #:PW5-3-11
Pipettes (1 or 2 mL) Lot #:P1012
Pipettes (5 or 10mL) Lot #:

CH2Cl2 Lot #:P001057
HCl Lot #:
H2SO4 Lot #:
NaOH Lot #:
Additional Spike Lot#:
Comments:

Lab Sample ID	Sample Type	Initial Vol (ml)	Final Vol (ml)	Initial pH (5-9)	Final pH (>11)	Original HSN	Paired HSN	Container_Id	Comments
1225804	MB	1000	1						
1225805	LCS	1000	1						
1225806	LCSD	1000	1				1225805		
1143656047	PS	1000	1					1143656047-I	
1143656048	BMS	1000	1			1143656047		1143656048-I	
1143656050	PS	970	1					1143656050-H	
1143656051	PS	935	1					1143656051-H	
1143656052	PS	850	1					1143656052-H	
1143656053	PS	900	1					1143656053-H	
1143656054	PS	970	1					1143656054-H	
1143657001	PS	1000	1					1143657001-E	
1143657002	BMS	1000	1			1143657001		1143657002-E	
1143657004	PS	850	1					1143657004-E	
1143657005	PS	980	1					1143657005-E	
1143658001	PS	1000	1					1143658001-E	
1143658002	BMS	1000	1			1143658001		1143658002-E	
1143658003	BMSD	1000	1			1143658001	1143658002	1143658003-E	
1143658004	PS	960	1					1143658004-E	
1143655001	PS	1000	1					1143655001-D	
1143655002	PS	1000	1					1143655002-D	
1143655003	PS	1000	1					1143655003-D	
1143659001	PS	950	1					1143659001-D	
1143668001	PS	1000	1					1143668001-D	
1148344005	PS	1000	1					1148344005-H	

Analyst Initials who performed each of the following steps:

Measure Sample Volume:SG
Spike/Surrogate:SG
Witness Spike/Surrogate:CCZ

Concentrate:CCZ
Posted By:CCZ

SGS North American Inc.
Calibration Review and Validation for:
PAH SIM: SW 8270D-SIM / EPA 625M-SIM

Instrument/Date Code in YYYY-MMDD format (e.g., SQA2007-0507): SQA2014-0808

	Analyst's Review		Peer Review	
Contents:	OK	N/A	OK	N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Tune Report (DFTPP)	☑		☑	
Instrument and handwritten logbook	☑		☑	
Chromatograms for calibration points	☑		☑	
Chromatograms for ICV & IB	☑		☑	
Validation:				
Correct dates	☑		☑	
The percent relative standard deviation of the response factor is ≤ 20%	☑	☐	☑	☐
If RSD is >20%, use 1 st (linear) or 2 nd (non-linear) order regression and $r^2 \geq 0.990$.	☐	☑	☐	☑
Minimum of 5 points (or 6 points for 2nd order regression)	☑		☑	
ICV recovery is 80-120%	☑		☑	
Correct calibration levels for LOQ	☑		☑	
Average RF's are greater than their minimum average RF's	☑		☑	
IS Areas updated/CC ISTD Areas printout	☑		☑	
If any compounds are not calibrated, are they clearly documented?	☐	☑	☐	☑
Relative retention time shifts meet criteria	☑		☑	
Manual Integrations - explanations, before and after printouts	☐	☑	☐	☑
Check critical pair list				
Acenaphthene and acenaphthalene	☑	☐	☑	☐
Benzo(b)fluoranthene and benzo(k)fluoranthene	☑	☐	☑	☐
Benzo(a)anthracene and chrysene	☑	☐	☑	☐
1-methylnaphthalene and 2-methylnaphthalene	☑	☐	☑	☐
Hand calculated Response Factor verified:	☑		☑	
Initials:	RTS		Initials:	PLW
Date:	8/10/2014		Date:	8/11/2014

RF=(As X Cis)/(Ais X Cs)

Shown= 1.355 (2-Fluorobiphenyl RF Cal-1)

Calculated= (500/50) * (1992/14700) 1.3551

Note:

Calibration Table Report
Method: SQA2014-0808.M
Title: SGS 8270D SIM
Last Calibration: Sun Aug 10 13:51:03 2014

Calibration Files

Compound	50 0806.D	100 0807.D	250 0808.D	500 0809.D	1000 0810.D	2000 0811.D	2500 0812.D	Avg	%RSD	Min RF
Acenaphthene-d10	ISTD									
2-Fluorobiphenyl	1.355	1.405	1.392	1.192	1.273	1.218	1.207	1.292	7.043	
Naphthalene	1.357	1.510	1.516	1.366	1.438	1.377	1.313	1.411	5.581	0.700
2-Methylnaphthalene	1.235	1.229	1.373	1.168	1.239	1.208	1.157	1.230	5.749	0.400
1-Methylnaphthalene	1.131	1.166	1.211	1.042	1.124	1.081	1.042	1.114	5.672	
2,6-Dimethylnaphthal	1.197	1.176	1.247	1.099	1.162	1.147	1.139	1.167	4.019	
1,6,7-Trimethynapht	1.009	1.008	1.092	0.933	0.991	0.984	0.977	0.999	4.824	
Biphenyl	1.594	1.666	1.743	1.505	1.607	1.547	1.486	1.592	5.690	
Acenaphthylene	1.903	1.993	2.073	1.770	1.881	1.853	1.786	1.894	5.740	0.900
Acenaphthene	1.215	1.135	1.201	1.057	1.118	1.103	1.085	1.131	5.159	0.900
Fluorene	1.327	1.401	1.477	1.285	1.321	1.334	1.298	1.349	5.011	0.900
Phenanthrene	1.698	1.672	1.807	1.562	1.620	1.641	1.629	1.661	4.649	0.700
Anthracene	1.620	1.617	1.775	1.550	1.604	1.642	1.650	1.637	4.207	0.700
1-methylphenanthrene	0.970	0.957	1.060	0.910	0.923	0.963	0.977	0.966	5.036	
Chrysene-d12	ISTD									
Fluoranthene	1.719	1.734	1.824	1.672	1.794	1.711	1.583	1.720	4.615	0.600
Pyrene	1.790	1.815	1.943	1.733	1.845	1.786	1.664	1.797	4.863	0.600
Terphenyl-d14	0.851	0.818	0.867	0.771	0.824	0.799	0.774	0.815	4.463	
Benzo(a)anthracene	1.141	1.159	1.236	1.106	1.178	1.197	1.152	1.167	3.576	0.800
Chrysene	1.127	1.062	1.218	1.052	1.120	1.160	1.100	1.120	5.101	0.700
Benzo[b]fluoranthene	1.269	1.250	1.401	1.265	1.338	1.368	1.292	1.312	4.421	0.700
Benzo[k]fluoranthene	1.309	1.199	1.366	1.211	1.245	1.347	1.337	1.288	5.311	0.700
Benzo(e)pyrene	1.271	1.198	1.357	1.163	1.227	1.286	1.259	1.252	5.080	
Benzo[a]pyrene	1.166	1.091	1.252	1.101	1.163	1.260	1.245	1.183	6.003	0.700
Indeno[1,2,3-c,d]pyr	1.635	1.555	1.817	1.553	1.575	1.760	1.771	1.666	6.798	0.500
Dibenzo[a,h]anthrace	1.255	1.285	1.466	1.265	1.306	1.468	1.469	1.359	7.556	0.400
Benzo[g,h,i]perylene	1.365	1.342	1.508	1.308	1.331	1.479	1.481	1.402	5.978	0.500

Sun Aug 10 15:36:00 2014

Method Path : Z:\08\SQA\METHOD\
Method File : SQA2014-0808.M
Title : SGS 8270D SIM
Last Update : Sun Aug 10 13:51:03 2014
Response Via : Initial Calibration

Calibration Files
50 =0806 100 =0807 250 =0808 500 =0809 1000=0810 2000=0811
2500=0812

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	Acenaphthene-d10		ISTD			
2)	S	2-Fluorobiphenyl	Avg	-----	1.2918	-----	0.0704
3)	P	Naphthalene	Avg	-----	1.4110	-----	0.0558
4)	P	2-Methylnaphthalene	Avg	-----	1.2300	-----	0.0575
5)		1-Methylnaphthalene	Avg	-----	1.1138	-----	0.0567
6)		2,6-Dimethylnaph...	Avg	-----	1.1667	-----	0.0402
7)		1,6,7-Trimethyna...	Avg	-----	0.9989	-----	0.0482
8)		Biphenyl	Avg	-----	1.5925	-----	0.0569
9)	P	Acenaphthylene	Avg	-----	1.8942	-----	0.0574
10)	P	Acenaphthene	Avg	-----	1.1307	-----	0.0516
11)	P	Fluorene	Avg	-----	1.3489	-----	0.0501
12)	P	Phenanthrene	Avg	-----	1.6613	-----	0.0465
13)	P	Anthracene	Avg	-----	1.6368	-----	0.0421
14)	P	1-methylphenanth...	Avg	-----	0.9656	-----	0.0504
15)	I	Chrysene-d12		ISTD			
16)	P	Fluoranthene	Avg	-----	1.7197	-----	0.0462
17)		Pyrene	Avg	-----	1.7966	-----	0.0486
18)	S	Terphenyl-d14	Avg	-----	0.8149	-----	0.0446
19)	P	Benzo(a)anthracene	Avg	-----	1.1672	-----	0.0358
20)	P	Chrysene	Avg	-----	1.1198	-----	0.0510
21)	P	Benzo[b]fluorant...	Avg	-----	1.3120	-----	0.0442
22)	P	Benzo[k]fluorant...	Avg	-----	1.2879	-----	0.0531
23)	P	Benzo(e)pyrene	Avg	-----	1.2515	-----	0.0508
24)	P	Benzo[a]pyrene	Avg	-----	1.1826	-----	0.0600
25)	P	Indeno[1,2,3-c,d...	Avg	-----	1.6664	-----	0.0680
26)	P	Dibenzo[a,h]anth...	Avg	-----	1.3593	-----	0.0756
27)	P	Benzo[g,h,i]pery...	Avg	-----	1.4020	-----	0.0598

SQA2014-0808.M Sun Aug 10 15:37:11 2014

GC/MS QA-QC Check Report

Tune File : Z:\08\SQA\DATA\080814A\0805.D
Tune Time : 8 Aug 2014 10:50 pm

Daily Calibration File : Z:\08\SQA\DATA\080814A\0809.D

					14530	8913
File	Sample	Surrogate Recovery %			Internal Standard Responses	
0804.D (fails)	IB	93*	96		15673	10174
0806.D	PAH CAL 1	0	0*		14700	9203
0807.D	PAH CAL 2	21*	19*		13819	8366
0808.D	PAH CAL 3	50*	52*		14986	9649
0809.D	PAH CAL 4	86*	91		14530	8913
0810.D	PAH CAL 5	190*	199*		13106	7616
0811.D	PAH CAL 6	368*	387*		15293	9714
0812.D	PAH CAL 7	462*	471*		16641	11657
0813.D	PAH ICV	0	0*		15473	9969
0814.D	CCV PAH	93*	94		16089	10702
0815.D	MB 31643	35*	101		14631	9989
0816.D	LCS 31643	39*	94		14913	9904
0817.D	LCSD 31643	24*	90		14462	9871
0818.D	114306047	26*	96		14801	9607
0819.D	114306048	45*	95		12743	7956
0820.D	114306049	24*	92		14793	9678
0821.D	114306050	56*	96		14572	9695
0822.D	114306051	55*	94		12584	7864
0823.D	114306052	56*	103		14453	8519
0824.D	114306053	67*	99		15139	10157
0825.D	114306054	74*	97		14418	8600

0826.D

	1143657001	54* 101	13171	8705

0827.D

	1143657002	73* 100	13499	8669

0828.D

	1143657003	85* 102	13003	9227

0829.D

	1143657004	72* 104	12912	8903

0830.D

	1143657005	79* 105	12824	8538

0831.D

	1145658001	83* 108	11209	7168

0832.D

	1145658002	62* 102	13453	9091

0833.D

	1145658003	79* 106	12851	8360

0834.D

	1145658004	72* 108	12080	7452

(fails) - fails 12hr time check * - fails criteria

Created: Sun Aug 10 15:26:17 2014 SQA

Calibration RRT Evaluation:	8/8/14	RRT shifts relative to Cal. 4												
Instrument ID:	SQA	Max RRT shift 0.06												
Compound	**Cal. 4 RT**	**Cal. 4 RRT**	**Cal. 1 RT**	**RRT shift**	**Cal 2 RT**	**RRT shift**	**Cal 3 RT**	**RRT shift**	**Cal 5 RT**	**RRT shift**	**Cal 6 RT**	**RRT shift**	**Cal 7 RT**	**RRT shift**
Acenaphthene-d10	3.89		3.89		3.889		3.89		3.89		3.889		3.889	
2-Flourobiphenyl	3.449	0.8866324	3.449	0.000	3.449	0.000	3.449	0.000	3.449	0.000	3.449	0.000	3.449	0.000
Naphthalene	2.756	0.7084833	2.762	0.002	2.762	0.002	2.756	0.000	2.756	0.000	2.755	0.000	2.755	0.000
2-Methylnaphthalene	3.222	0.8282776	3.222	0.000	3.222	0.000	3.222	0.000	3.222	0.000	3.222	0.000	3.222	0.000
1-Methylnaphthalene	3.287	0.8449871	3.287	0.000	3.287	0.000	3.287	0.000	3.287	0.000	3.287	0.000	3.287	0.000
2,6-Dimethylnaphthalene	3.617	0.9298201	3.617	0.000	3.617	0.000	3.617	0.000	3.617	0.000	3.617	0.000	3.617	0.000
1,6,7-Trimethynaphthalene	4.142	1.0647815	4.149	0.002	4.149	0.002	4.149	0.002	4.142	0.000	4.142	0.000	4.142	0.000
Biphenyl	3.514	0.9033419	3.514	0.000	3.514	0.000	3.514	0.000	3.514	0.000	3.514	0.000	3.514	0.000
Acenaphthylene	3.799	0.9766067	3.799	0.000	3.799	0.000	3.799	0.000	3.799	0.000	3.799	0.000	3.799	0.000
Acenaphthene	3.909	1.0048843	3.909	0.000	3.909	0.000	3.909	0.000	3.909	0.000	3.909	0.000	3.909	0.000
Fluorene	4.24	1.0899743	4.24	0.000	4.239	0.000	4.24	0.000	4.24	0.000	4.239	0.000	4.239	0.000
Phenanthrene	4.877	1.2537275	4.881	0.001	4.88	0.001	4.877	0.000	4.877	0.000	4.876	0.000	4.877	0.000
Anthracene	4.914	1.2632391	4.914	0.000	4.913	0.000	4.914	0.000	4.914	0.000	4.913	0.000	4.914	0.000
1-methylphenanthrene	5.298	1.3619537	5.298	0.000	5.297	0.000	5.298	0.000	5.298	0.000	5.297	0.000	5.298	0.000
Chrysene-d12	6.942		6.942		6.939		6.942		6.939		6.942		6.939	
Fluoranthene	5.704	0.8216652	5.704	0.000	5.706	0.001	5.707	0.000	5.704	0.000	5.706	0.000	5.703	0.000
Pyrene	5.87	0.8455776	5.87	0.000	5.872	0.001	5.873	0.000	5.87	0.000	5.872	0.000	5.869	0.000
Terphenyl-d14	5.954	0.8576779	5.954	0.000	5.953	0.000	5.954	0.000	5.951	0.000	5.953	0.000	5.95	0.000
Benzo(a)anthracene	6.928	0.9979833	6.928	0.000	6.927	0.000	6.931	0.000	6.928	0.000	6.93	0.000	6.925	0.000
Chrysene	6.971	1.0041775	6.971	0.000	6.971	0.000	6.971	0.000	6.968	0.000	6.971	0.000	6.968	0.000
Benzo[b]fluoranthene	8.307	1.1966292	8.307	0.000	8.307	0.001	8.307	0.000	8.307	0.001	8.307	0.000	8.302	0.000
Benzo[k]fluoranthene	8.336	1.2008067	8.336	0.000	8.336	0.001	8.336	0.000	8.336	0.001	8.336	0.000	8.331	0.000
Benzo(e)pyrene	8.611	1.2404206	8.616	0.001	8.616	0.001	8.616	0.001	8.611	0.001	8.616	0.001	8.611	0.001
Benzo[a]pyrene	8.669	1.2487756	8.669	0.000	8.669	0.001	8.669	0.000	8.669	0.001	8.669	0.000	8.669	0.001
Indeno[1,2,3-c,d]pyrene	9.818	1.4142898	9.818	0.000	9.818	0.001	9.818	0.000	9.818	0.001	9.813	-0.001	9.813	0.000
Dibenzo[a,h]anthracene	9.823	1.4150101	9.823	0.000	9.822	0.000	9.823	0.000	9.823	0.001	9.822	0.000	9.818	0.000
Benzo[g,h,i]perylene	10.117	1.457361	10.122	0.001	10.122	0.001	10.122	0.001	10.117	0.001	10.117	0.000	10.117	0.001

Instrument Runlog

Instrument: SQA **Calibration Date:** 8/8/2014 **Method:** SIM-PAH
Operator: RTS **Processed By:** RTS **Posted By:** RTS **Analytical Batch:** 8215

Data Path: Z:\08\SQA\DATA\080814A\

Daily:		As Needed:			
Verify System Date/Time	✓	Adjust Tune		Clip Column/Guard Column	✓
General System Inspection	✓	Clean Ion Source		Replace Inlet Seal ☐ Septa ✓ Liner ✓	
		Check Rough Pump Oil		Verify Acquisition Parameters	
		Check Vacuum Pressure		Rinse or Replace Weldment/Split Lines	

Standards:				
	IB	SVW16-131-8	**IS**	SVW16-44-5
	Tune	SVW16-14-22	**CCV-PAH**	SVW16-131-4
	MeCl2	P454		

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	Rerun
0801.D	6	MIDPOINT	1	column clipped	8 Aug 2014 9:50 pm	
0802.D	6	MIDPOINT	1	RT window check	8 Aug 2014 10:05 pm	
0803.D	1	R	1		8 Aug 2014 10:20 pm	
0804.D	1	IB	1		8 Aug 2014 10:35 pm	
0805.D	2	TUNE	1		8 Aug 2014 10:50 pm	
0806.D	3	PAH CAL 1	1	SVW16-131-1	8 Aug 2014 11:07 pm	
0807.D	4	PAH CAL 2	1	SVW16-131-2	8 Aug 2014 11:22 pm	
0808.D	5	PAH CAL 3	1	SVW16-131-3	8 Aug 2014 11:37 pm	
0809.D	6	PAH CAL 4	1	SVW16-131-4	8 Aug 2014 11:52 pm	
0810.D	7	PAH CAL 5	1	SVW16-131-5	9 Aug 2014 12:07 am	
0811.D	8	PAH CAL 6	1	SVW16-131-6	9 Aug 2014 12:22 am	
0812.D	9	PAH CAL 7	1	SVW16-131-7	9 Aug 2014 12:37 am	
0813.D	10	PAH ICV	1	SVW16-23-10	9 Aug 2014 12:52 am	
0814.D	6	CCV PAH	1		9 Aug 2014 1:07 am	
0815.D	11	MB 31643	1		9 Aug 2014 1:22 am	
0816.D	12	LCS 31643	1		9 Aug 2014 1:37 am	
0817.D	13	LCSD 31643	1		9 Aug 2014 1:52 am	
0818.D	14	114306047	1		9 Aug 2014 2:07 am	
0819.D	15	114306048	1		9 Aug 2014 2:22 am	
0820.D	16	114306049	1		9 Aug 2014 2:36 am	
0821.D	17	114306050	1		9 Aug 2014 2:51 am	
0822.D	18	114306051	1		9 Aug 2014 3:06 am	
0823.D	19	114306052	1		9 Aug 2014 3:21 am	
0824.D	20	114306053	1		9 Aug 2014 3:36 am	
0825.D	21	114306054	1		9 Aug 2014 3:51 am	
0826.D	22	1143657001	1		9 Aug 2014 4:06 am	
0827.D	23	1143657002	1		9 Aug 2014 4:21 am	
0828.D	24	1143657003	1		9 Aug 2014 4:36 am	
0829.D	25	1143657004	1		9 Aug 2014 4:51 am	
0830.D	26	1143657005	1		9 Aug 2014 5:05 am	
0831.D	27	1145658001	1		9 Aug 2014 5:20 am	
0832.D	28	1145658002	1		9 Aug 2014 5:35 am	
0833.D	29	1145658003	1		9 Aug 2014 5:50 am	
0834.D	30	1145658004	1		9 Aug 2014 6:05 am	

CC ISTD Areas

CC Data File : Z:\08\SQA\DATA\080814A\0809.D
Date Acquired: 8 Aug 2014 11:52 pm

ISTD Name	Response
Acenaphthene-d10	14530
Chrysene-d12	8913

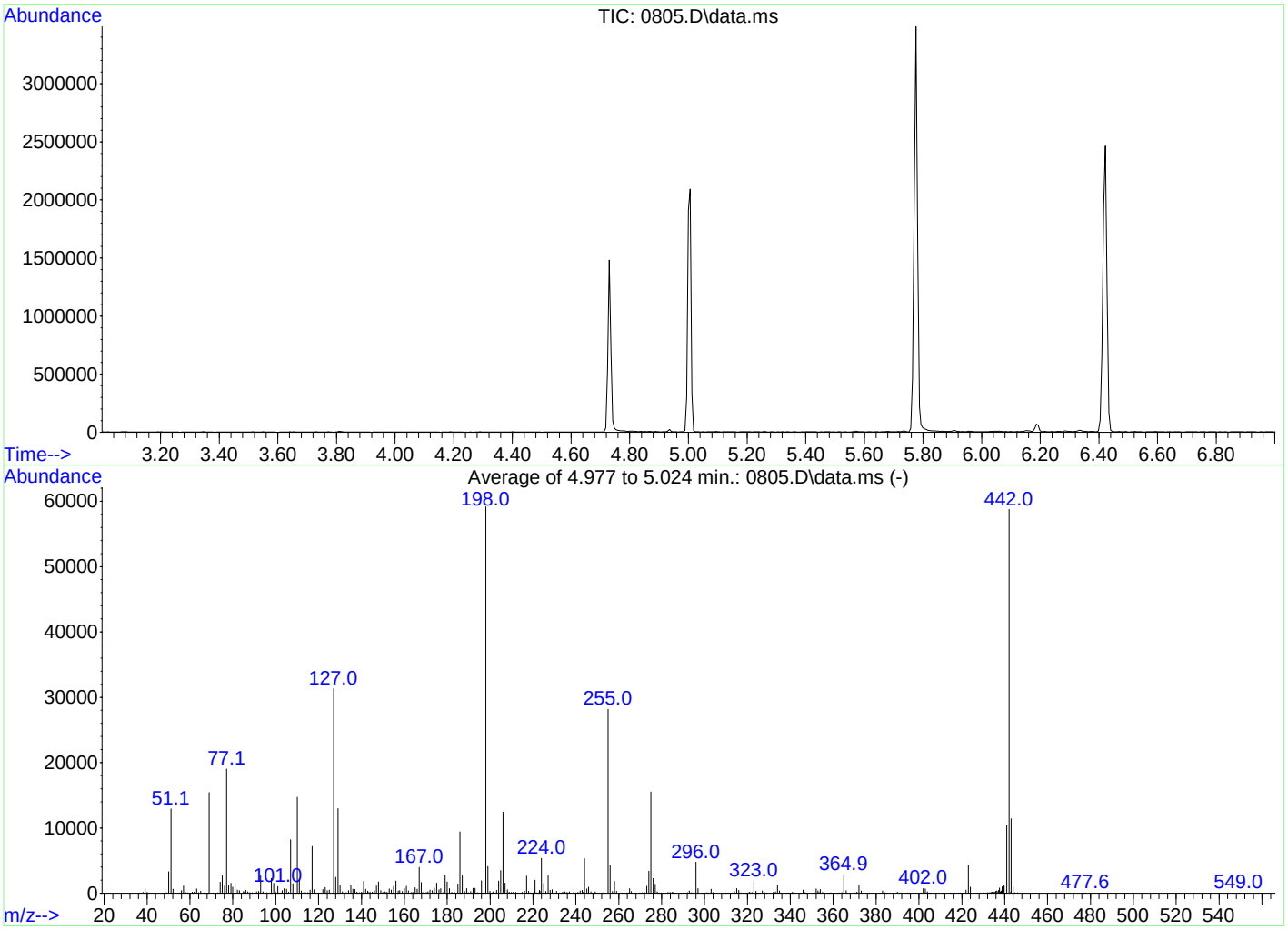
Surrogates

2-Fluorobiphenyl
Terphenyl-d14

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0805.D
Acq On : 8 Aug 2014 10:50 pm
Operator : RTS
Sample : TUNE
Misc : [SQA]
ALS Vial : 2 Sample Multiplier: 1

Integration File: 2MNAPH.P

Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Title : SGS 8270D SIM
Last Update : Sun Aug 10 13:51:03 2014



AutoFind: Averaged scan 357 to 365; Bkg corrected with scan 356)

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	21.9	12935	PASS
68	69	0.00	2	0.1	21	PASS
69	69	100	100	100.0	15409	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	52.9	31303	PASS
197	198	0.00	2	0.1	31	PASS
198	198	100	100	100.0	59135	PASS
199	198	5	9	6.9	4089	PASS
275	198	10	60	26.3	15525	PASS
365	198	1	100	4.8	2814	PASS
441	442	0.01	24	17.8	10461	PASS
442	198	50	200	99.4	58770	PASS
443	442	15	24	19.4	11409	PASS

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0804.D
Acq On : 8 Aug 2014 10:35 pm
Operator : RTS
Sample : IB
Misc : [SQA]
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 15:31:29 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

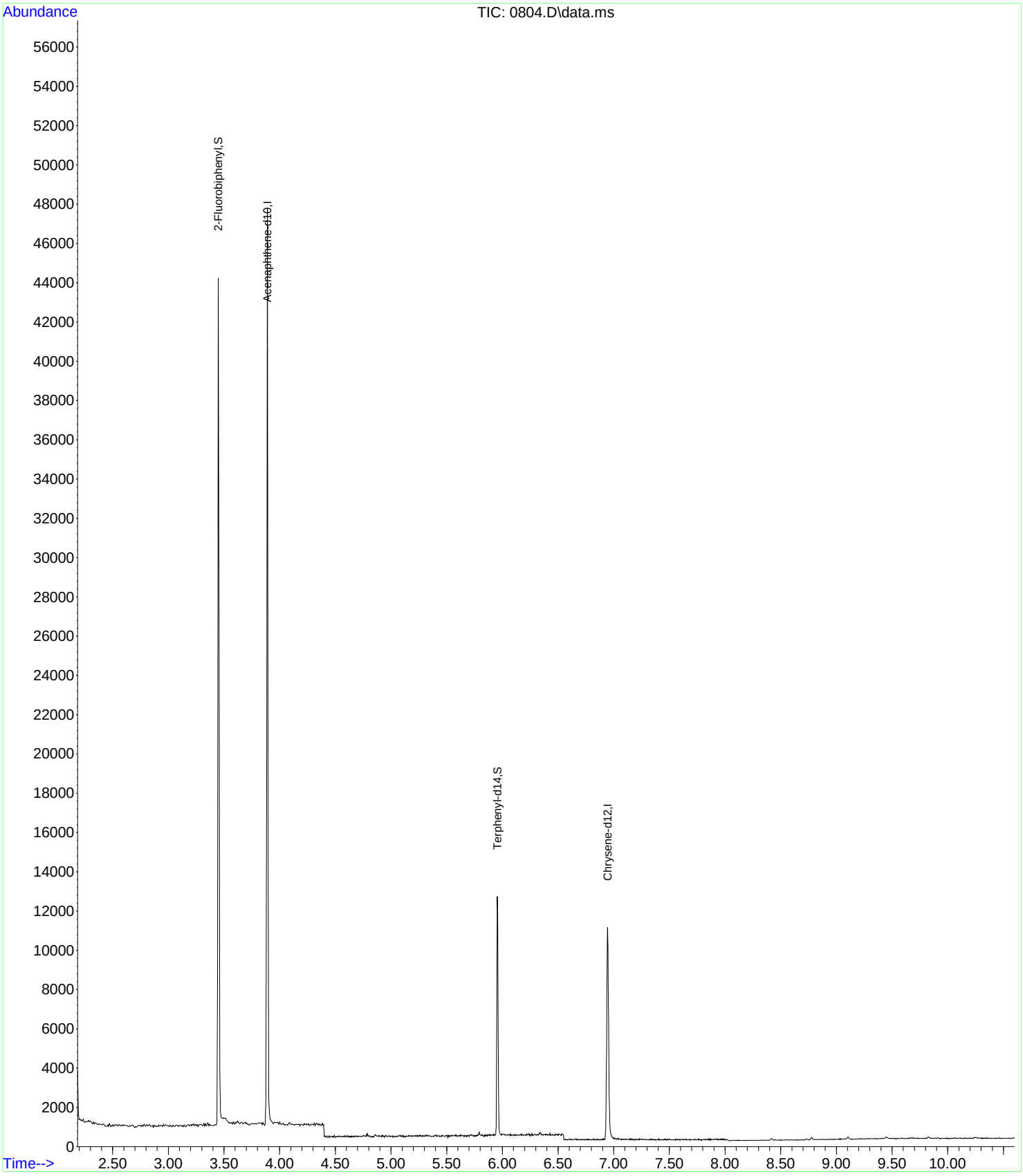
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.890	164	15673	500.00	ng/mL	0.00
15) Chrysene-d12	6.945	240	10174	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	18922	467.29	ng/mL	0.00
Spiked Amount 500.000			Recovery = 93.46%			
18) Terphenyl-d14	5.954	244	7922	477.76	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 95.55%			

Target Compounds Qvalue

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

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0804.D
Acq On : 8 Aug 2014 10:35 pm
Operator : RTS
Sample : IB
Misc : [SQA]
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 15:31:29 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0805.D
Acq On : 8 Aug 2014 10:50 pm
Operator : RTS
Sample : TUNE
Misc : [SQA]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 15:31:59 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	0.000	164	0	0.00	ng/mL	-3.89
15) Chrysene-d12	0.000	240	0	0.00	ng/mL	-6.94
System Monitoring Compounds						
2) 2-Fluorobiphenyl	0.000	172	0	0.00	ng/mL	
Spiked Amount 500.000			Recovery =	0.00%		
18) Terphenyl-d14	0.000	244	0	0.00	ng/mL	
Spiked Amount 500.000	Range 80 - 120		Recovery =	0.00%#		

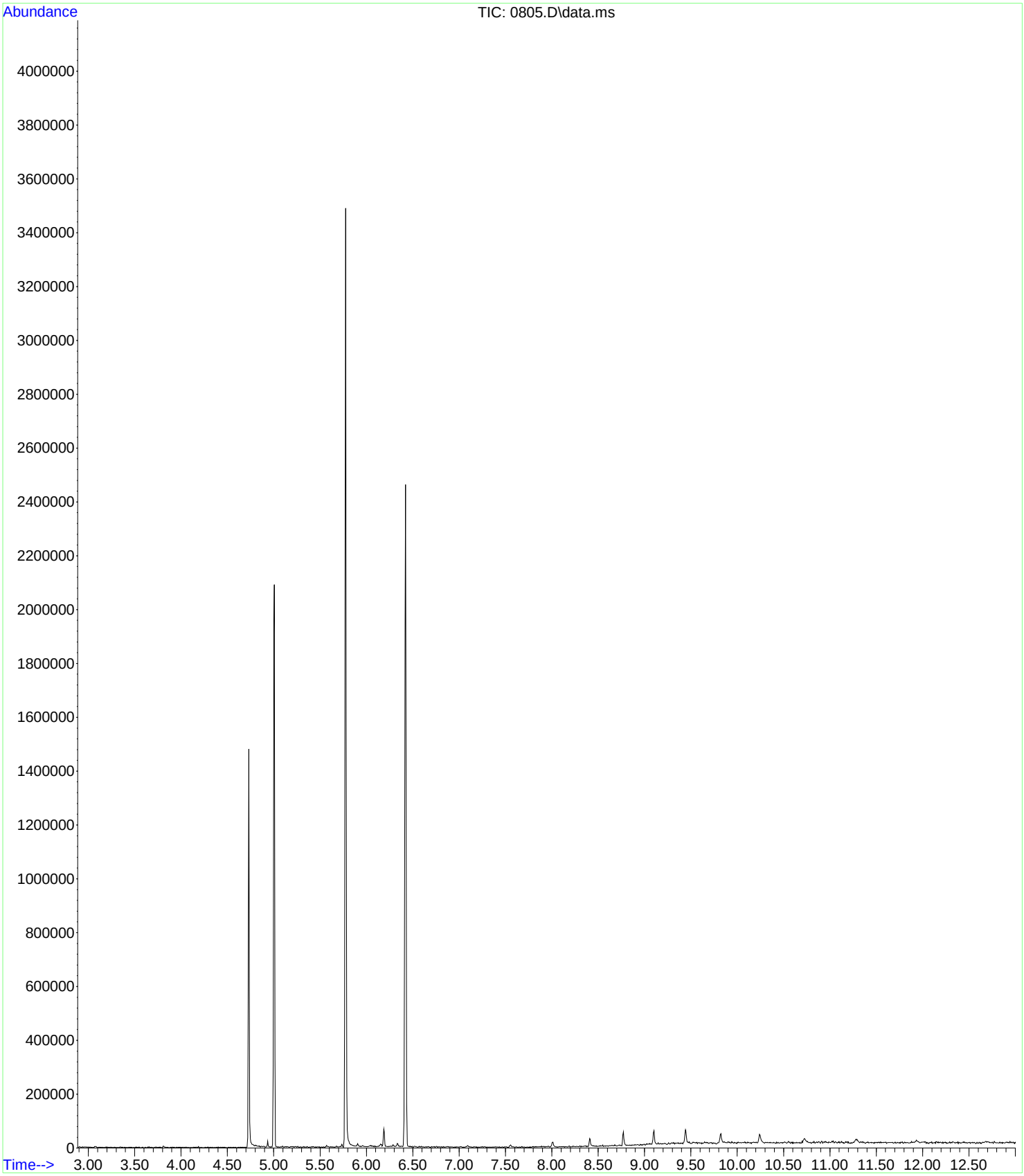
Target Compounds	Qvalue

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0805.D
Acq On : 8 Aug 2014 10:50 pm
Operator : RTS
Sample : TUNE
Misc : [SQA]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 15:31:59 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0806.D
Acq On : 8 Aug 2014 11:07 pm
Operator : RTS
Sample : PAH CAL 1
Misc : [SQA]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 10 15:33:32 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

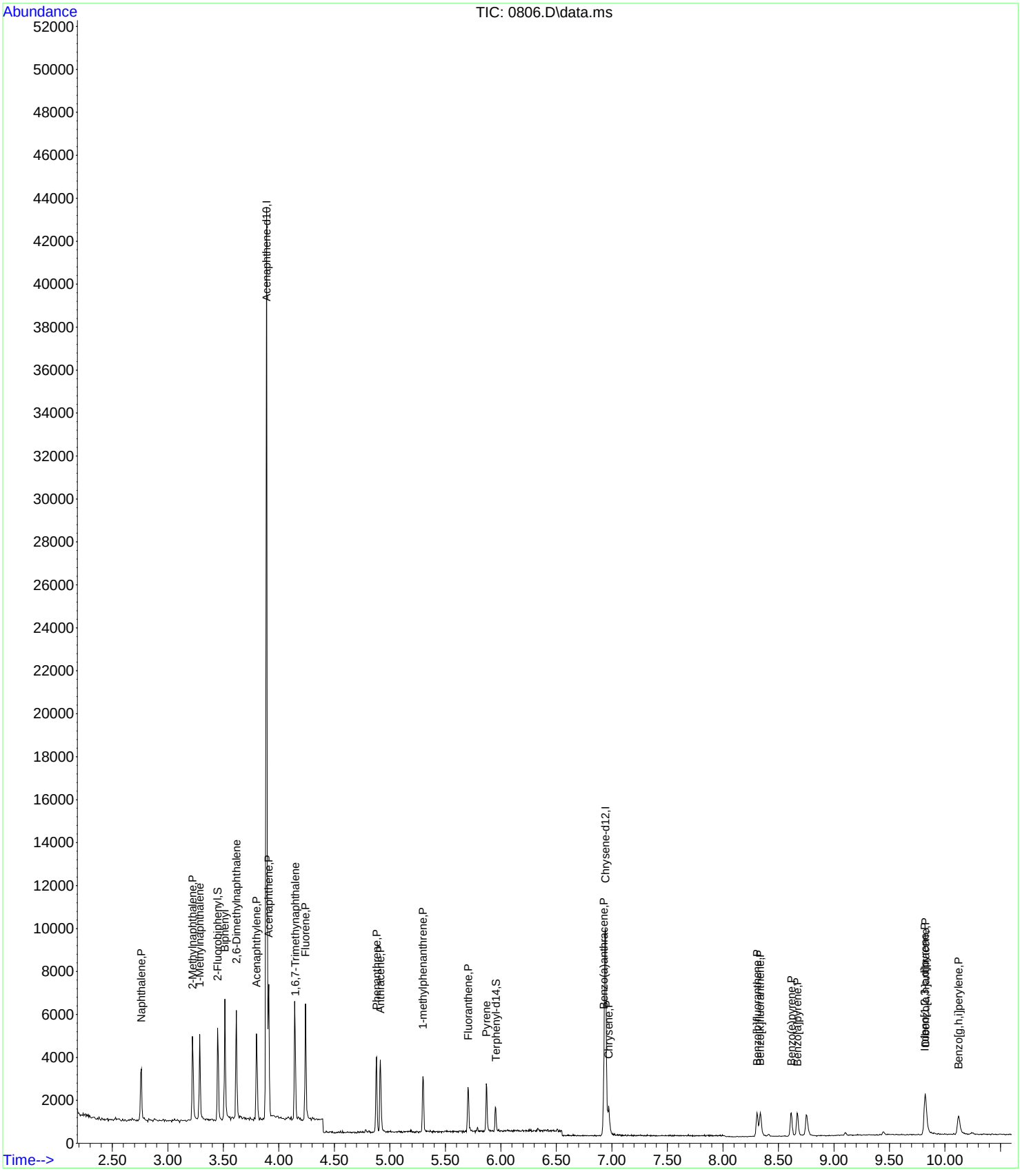
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.890	164	14700	500.00	ng/mL	0.00
15) Chrysene-d12	6.942	240	9203	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	1992	52.45	ng/mL	0.00
Spiked Amount 500.000			Recovery = 10.49%			
18) Terphenyl-d14	5.954	244	783	52.20	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 10.44%#			
Target Compounds						Qvalue
3) Naphthalene	2.762	128	1995	48.09	ng/mL	96
4) 2-Methylnaphthalene	3.222	142	1815	50.19	ng/mL	98
5) 1-Methylnaphthalene	3.287	142	1662	50.75	ng/mL	100
6) 2,6-Dimethylnaphthalene	3.617	156	1759	51.28	ng/mL	85
7) 1,6,7-Trimethynaphthalene	4.149	170	1483	50.50	ng/mL#	53
8) Biphenyl	3.514	154	2343	50.04	ng/mL	98
9) Acenaphthylene	3.799	152	2797	50.23	ng/mL	97
10) Acenaphthene	3.909	154	1786	53.73	ng/mL	92
11) Fluorene	4.240	166	1950	49.17	ng/mL	97
12) Phenanthrene	4.881	178	2496	51.10	ng/mL	93
13) Anthracene	4.914	178	2382	49.50	ng/mL	92
14) 1-methylphenanthrene	5.298	192	1426	50.23	ng/mL	96
16) Fluoranthene	5.704	202	1582	49.98	ng/mL#	90
17) Pyrene	5.870	202	1647	49.81	ng/mL	91
19) Benzo(a)anthracene	6.928	228	1050	48.87	ng/mL	95
20) Chrysene	6.971	228	1037	50.31	ng/mL	85
21) Benzo[b]fluoranthene	8.307	252	1168	48.37	ng/mL	93
22) Benzo[k]fluoranthene	8.336	252	1205	50.83	ng/mL	87
23) Benzo(e)pyrene	8.616	252	1170	50.79	ng/mL#	86
24) Benzo[a]pyrene	8.669	252	1073	49.29	ng/mL	91
25) Indeno[1,2,3-c,d]pyrene	9.818	276	1505	49.07	ng/mL	94
26) Dibenzo[a,h]anthracene	9.823	278	1155	46.17	ng/mL#	81
27) Benzo[g,h,i]perylene	10.122	276	1256	48.67	ng/mL	87

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0806.D
Acq On : 8 Aug 2014 11:07 pm
Operator : RTS
Sample : PAH CAL 1
Misc : [SQA]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 10 15:33:32 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0807.D
Acq On : 8 Aug 2014 11:22 pm
Operator : RTS
Sample : PAH CAL 2
Misc : [SQA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 10 15:33:47 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

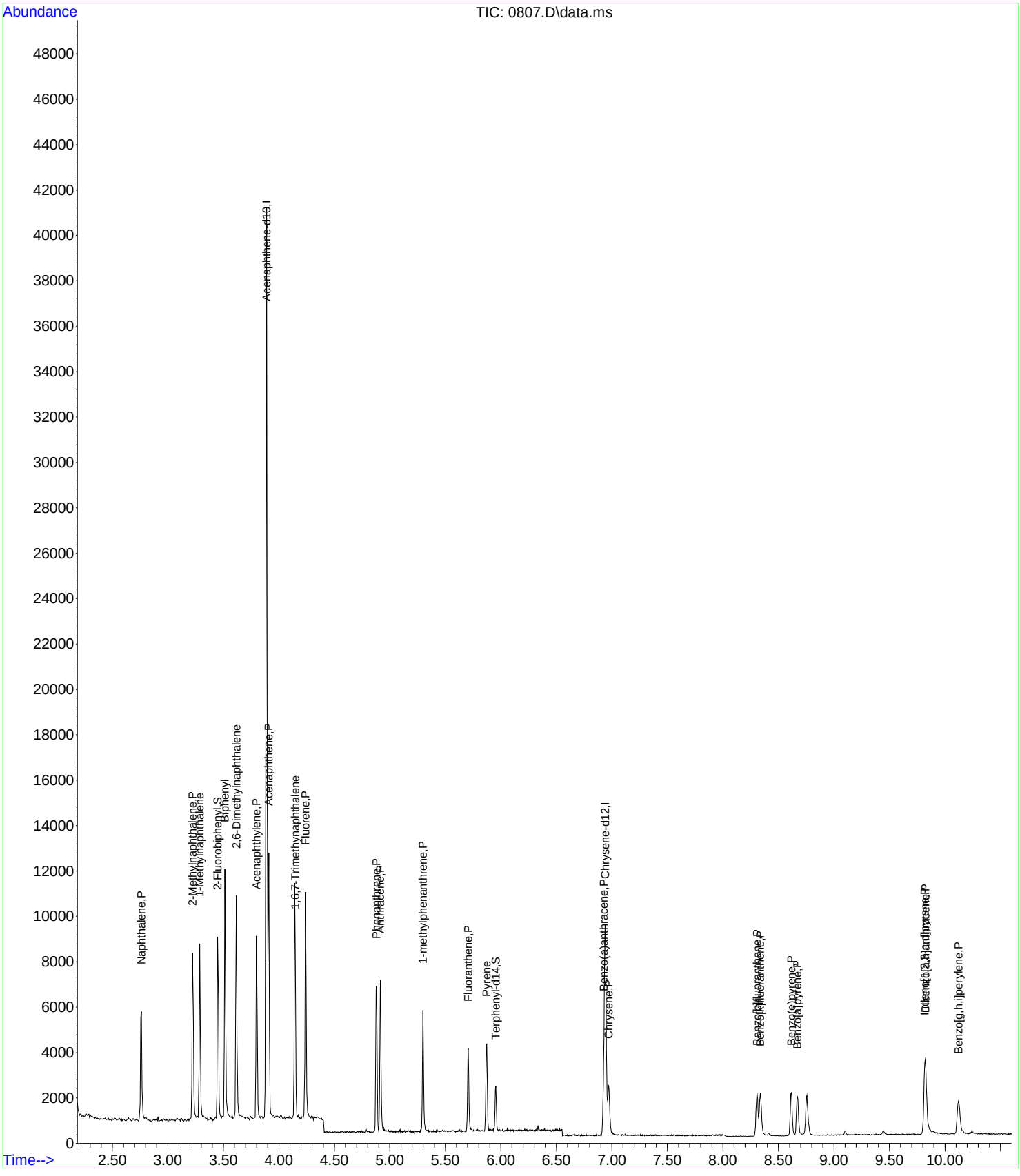
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.889	164	13819	500.00	ng/mL	0.00
15) Chrysene-d12	6.939	240	8366	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	3882	108.73	ng/mL	0.00
Spiked Amount 500.000			Recovery = 21.75%			
18) Terphenyl-d14	5.953	244	1369	100.40	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 20.08%#			
Target Compounds						Qvalue
3) Naphthalene	2.762	128	4174	107.03	ng/mL	99
4) 2-Methylnaphthalene	3.222	142	3398	99.96	ng/mL	99
5) 1-Methylnaphthalene	3.287	142	3223	104.70	ng/mL	100
6) 2,6-Dimethylnaphthalene	3.617	156	3249	100.76	ng/mL	84
7) 1,6,7-Trimethynaphthalene	4.149	170	2785	100.87	ng/mL#	54
8) Biphenyl	3.514	154	4604	104.60	ng/mL	95
9) Acenaphthylene	3.799	152	5509	105.23	ng/mL	99
10) Acenaphthene	3.909	154	3137	100.38	ng/mL	95
11) Fluorene	4.239	166	3872	103.86	ng/mL	98
12) Phenanthrene	4.880	178	4622	100.66	ng/mL	95
13) Anthracene	4.913	178	4468	98.77	ng/mL	93
14) 1-methylphenanthrene	5.297	192	2644	99.08	ng/mL	96
16) Fluoranthene	5.706	202	2902	100.85	ng/mL	97
17) Pyrene	5.872	202	3037	101.03	ng/mL	92
19) Benzo(a)anthracene	6.927	228	1940	99.33	ng/mL	87
20) Chrysene	6.971	228	1777	94.84	ng/mL	99
21) Benzo[b]fluoranthene	8.307	252	2091	95.25	ng/mL	98
22) Benzo[k]fluoranthene	8.336	252	2006	93.09	ng/mL	95
23) Benzo(e)pyrene	8.616	252	2004	95.70	ng/mL	90
24) Benzo[a]pyrene	8.669	252	1826	92.28	ng/mL	97
25) Indeno[1,2,3-c,d]pyrene	9.818	276	2601	93.28	ng/mL	98
26) Dibenzo[a,h]anthracene	9.822	278	2150	94.53	ng/mL	99
27) Benzo[g,h,i]perylene	10.122	276	2246	95.75	ng/mL	100

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0807.D
Acq On : 8 Aug 2014 11:22 pm
Operator : RTS
Sample : PAH CAL 2
Misc : [SQA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 10 15:33:47 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0808.D
Acq On : 8 Aug 2014 11:37 pm
Operator : RTS
Sample : PAH CAL 3
Misc : [SQA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 10 15:33:59 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

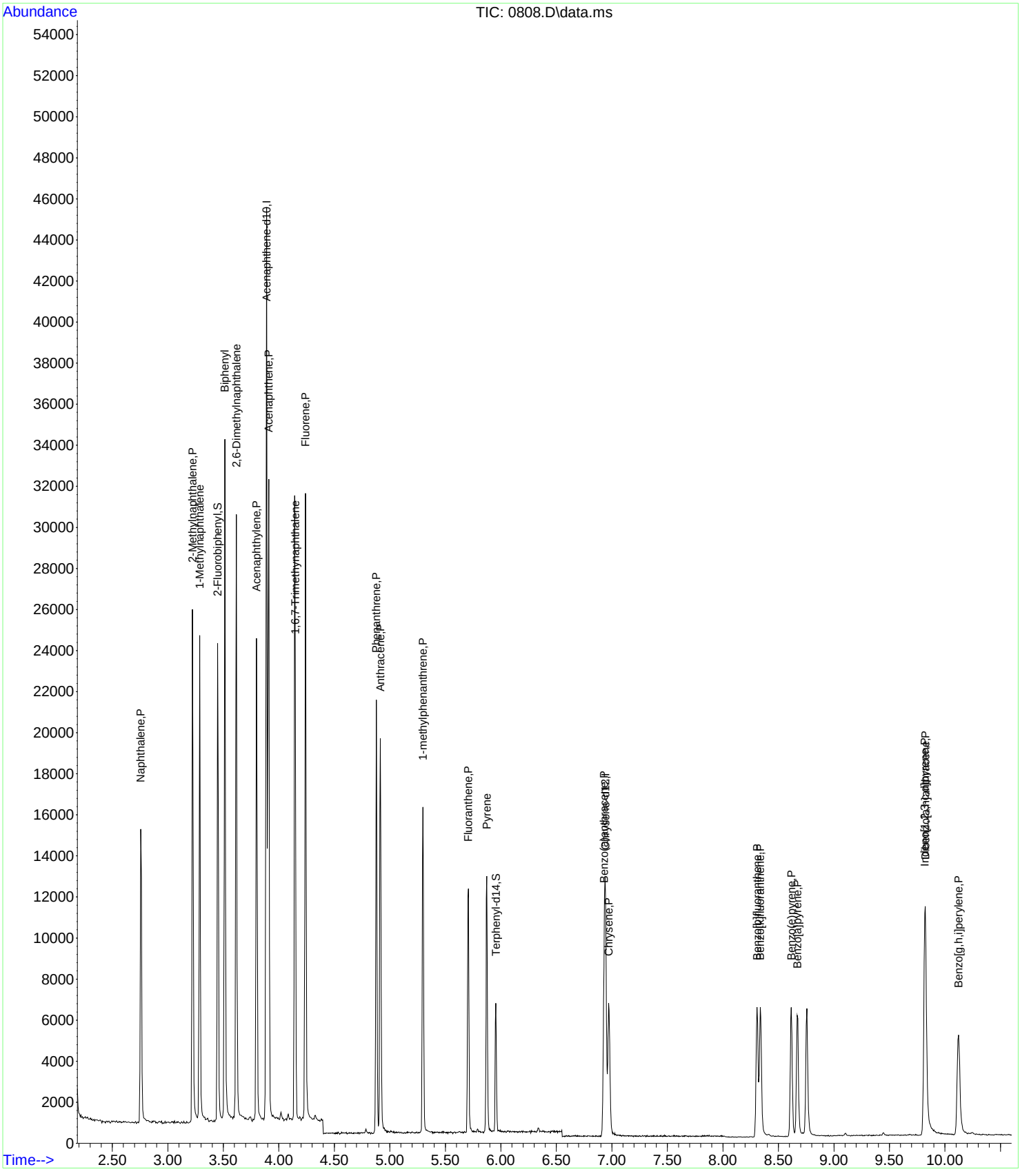
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.890	164	14986	500.00	ng/mL	0.00
15) Chrysene-d12	6.942	240	9649	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	10434	269.48	ng/mL	0.00
Spiked Amount 500.000			Recovery = 53.90%			
18) Terphenyl-d14	5.954	244	4182	265.93	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 53.19%#			
Target Compounds						Qvalue
3) Naphthalene	2.756	128	11358	268.57	ng/mL	99
4) 2-Methylnaphthalene	3.222	142	10285	278.99	ng/mL	99
5) 1-Methylnaphthalene	3.287	142	9074	271.81	ng/mL	98
6) 2,6-Dimethylnaphthalene	3.617	156	9346	267.28	ng/mL	91
7) 1,6,7-Trimethynaphthalene	4.149	170	8180	273.21	ng/mL#	46
8) Biphenyl	3.514	154	13061	273.64	ng/mL	97
9) Acenaphthylene	3.799	152	15535	273.64	ng/mL	99
10) Acenaphthene	3.909	154	8998	265.51	ng/mL	100
11) Fluorene	4.240	166	11069	273.78	ng/mL	99
12) Phenanthrene	4.877	178	13541	271.95	ng/mL	97
13) Anthracene	4.914	178	13297	271.05	ng/mL	98
14) 1-methylphenanthrene	5.298	192	7945	274.53	ng/mL	99
16) Fluoranthene	5.707	202	8801	265.19	ng/mL	96
17) Pyrene	5.873	202	9373	270.34	ng/mL	93
19) Benzo(a)anthracene	6.931	228	5964	264.77	ng/mL	97
20) Chrysene	6.971	228	5875	271.87	ng/mL	95
21) Benzo[b]fluoranthene	8.307	252	6761	267.04	ng/mL	100
22) Benzo[k]fluoranthene	8.336	252	6591	265.20	ng/mL	100
23) Benzo(e)pyrene	8.616	252	6548	271.12	ng/mL	94
24) Benzo[a]pyrene	8.669	252	6041	264.70	ng/mL	96
25) Indeno[1,2,3-c,d]pyrene	9.818	276	8764	272.53	ng/mL	98
26) Dibenzo[a,h]anthracene	9.823	278	7075	269.72	ng/mL	98
27) Benzo[g,h,i]perylene	10.122	276	7274	268.85	ng/mL	97

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0808.D
Acq On : 8 Aug 2014 11:37 pm
Operator : RTS
Sample : PAH CAL 3
Misc : [SQA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 10 15:33:59 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0809.D
Acq On : 8 Aug 2014 11:52 pm
Operator : RTS
Sample : PAH CAL 4
Misc : [SQA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 10 15:34:10 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

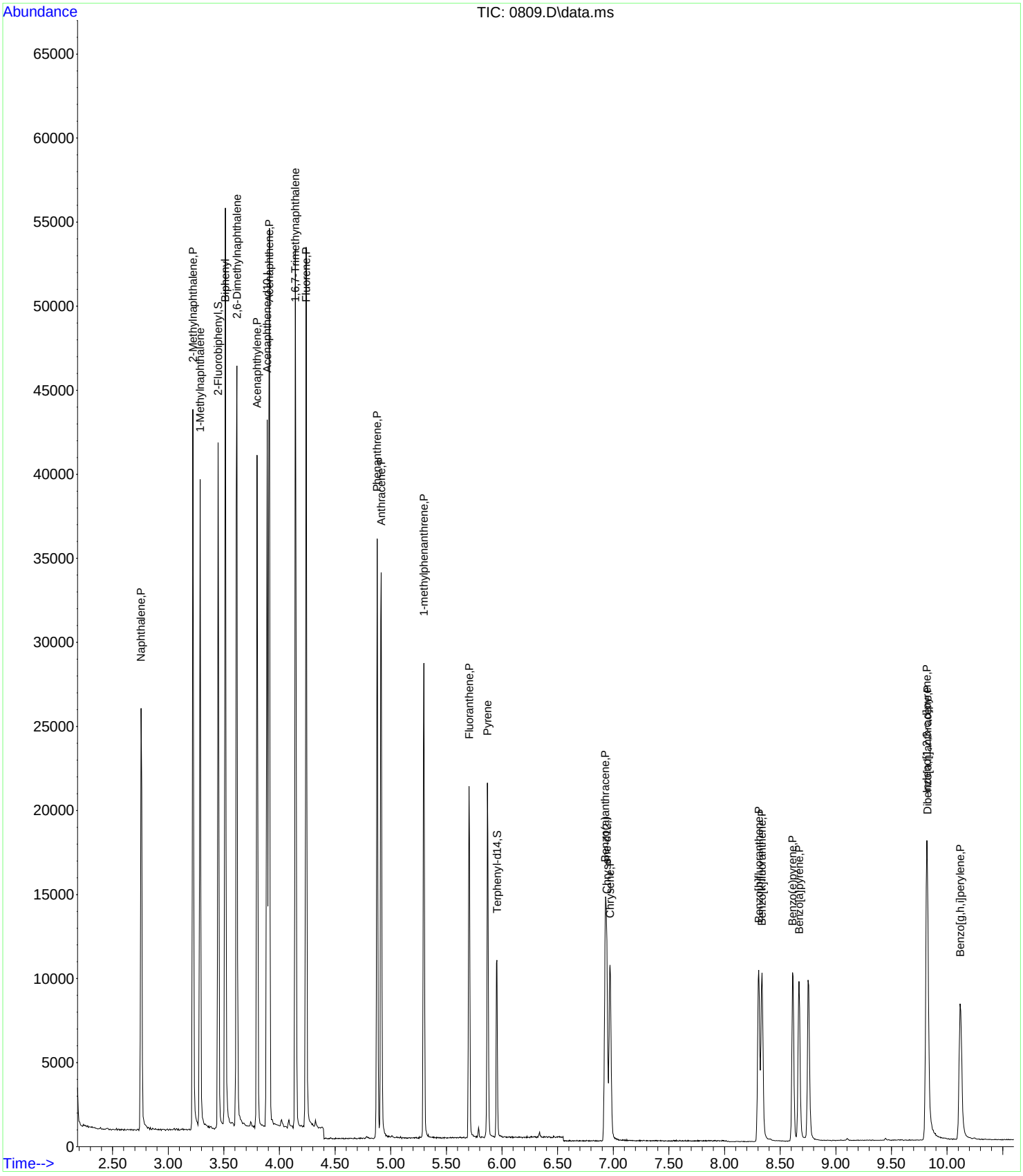
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.890	164	14530	500.00	ng/mL	0.00
15) Chrysene-d12	6.942	240	8913	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	17327	461.56	ng/mL	0.00
Spiked Amount 500.000			Recovery = 92.31%			
18) Terphenyl-d14	5.954	244	6872	473.07	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 94.61%			
Target Compounds						Qvalue
3) Naphthalene	2.756	128	19846	484.01	ng/mL	100
4) 2-Methylnaphthalene	3.222	142	16975	474.91	ng/mL	100
5) 1-Methylnaphthalene	3.287	142	15141	467.79	ng/mL	100
6) 2,6-Dimethylnaphthalene	3.617	156	15972	471.11	ng/mL	100
7) 1,6,7-Trimethynaphthalene	4.142	170	13554	466.91	ng/mL	100
8) Biphenyl	3.514	154	21868	472.54	ng/mL	100
9) Acenaphthylene	3.799	152	25721	467.28	ng/mL	100
10) Acenaphthene	3.909	154	15358	467.39	ng/mL	100
11) Fluorene	4.240	166	18665	476.16	ng/mL	100
12) Phenanthrene	4.877	178	22695	470.09	ng/mL	100
13) Anthracene	4.914	178	22525	473.56	ng/mL	100
14) 1-methylphenanthrene	5.298	192	13216	471.00	ng/mL	100
16) Fluoranthene	5.704	202	14906	486.24	ng/mL	100
17) Pyrene	5.870	202	15444	482.23	ng/mL	100
19) Benzo(a)anthracene	6.928	228	9860	473.87	ng/mL	100
20) Chrysene	6.971	228	9375	469.65	ng/mL	100
21) Benzo[b]fluoranthene	8.307	252	11276	482.14	ng/mL	100
22) Benzo[k]fluoranthene	8.336	252	10798	470.35	ng/mL	100
23) Benzo(e)pyrene	8.611	252	10362	464.46	ng/mL	100
24) Benzo[a]pyrene	8.669	252	9816	465.63	ng/mL	100
25) Indeno[1,2,3-c,d]pyrene	9.818	276	13842	465.97	ng/mL	100
26) Dibenzo[a,h]anthracene	9.823	278	11279	465.50	ng/mL	100
27) Benzo[g,h,i]perylene	10.117	276	11662	466.63	ng/mL	100

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0809.D
Acq On : 8 Aug 2014 11:52 pm
Operator : RTS
Sample : PAH CAL 4
Misc : [SQA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 10 15:34:10 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0810.D
Acq On : 9 Aug 2014 12:07 am
Operator : RTS
Sample : PAH CAL 5
Misc : [SQA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 10 15:34:21 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

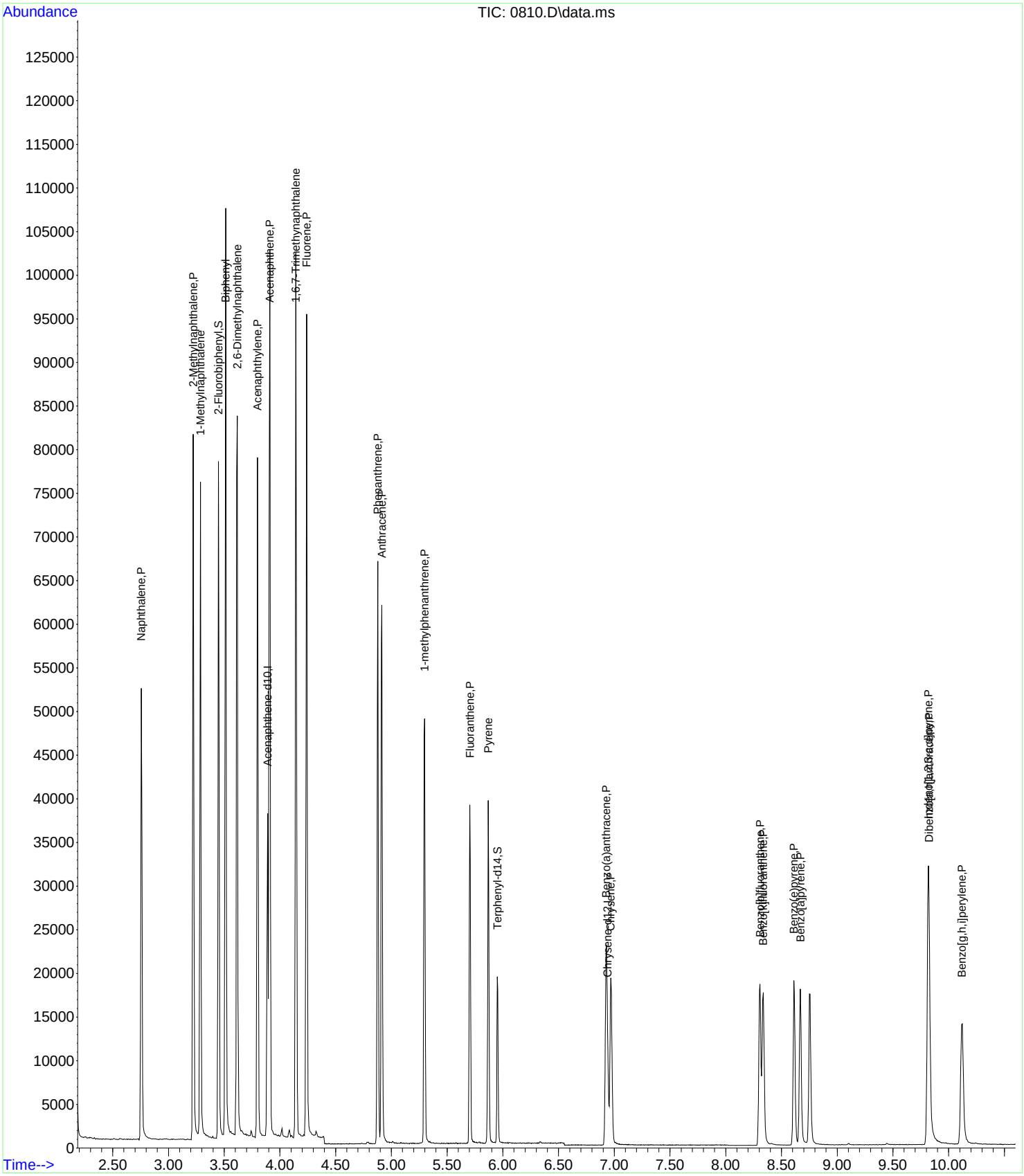
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.890	164	13106	500.00	ng/mL	0.00
15) Chrysene-d12	6.939	240	7616	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	33360	985.20	ng/mL	0.00
Spiked Amount 500.000			Recovery = 197.04%			
18) Terphenyl-d14	5.951	244	12556	1011.55	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120		Recovery = 202.31%#			
Target Compounds						Qvalue
3) Naphthalene	2.756	128	37684	1018.90	ng/mL	100
4) 2-Methylnaphthalene	3.222	142	32486	1007.61	ng/mL	97
5) 1-Methylnaphthalene	3.287	142	29462	1009.14	ng/mL	98
6) 2,6-Dimethylnaphthalene	3.617	156	30447	995.64	ng/mL	96
7) 1,6,7-Trimethynaphthalene	4.142	170	25973	991.93	ng/mL	93
8) Biphenyl	3.514	154	42110	1008.81	ng/mL	97
9) Acenaphthylene	3.799	152	49301	992.98	ng/mL	99
10) Acenaphthene	3.909	154	29312	988.98	ng/mL	97
11) Fluorene	4.240	166	34623	979.22	ng/mL	95
12) Phenanthrene	4.877	178	42452	974.87	ng/mL	99
13) Anthracene	4.914	178	42035	979.75	ng/mL	98
14) 1-methylphenanthrene	5.298	192	24187	955.64	ng/mL	99
16) Fluoranthene	5.704	202	27327	1043.23	ng/mL	99
17) Pyrene	5.870	202	28110	1027.19	ng/mL	95
19) Benzo(a)anthracene	6.928	228	17950	1009.59	ng/mL	99
20) Chrysene	6.968	228	17065	1000.48	ng/mL	99
21) Benzo[b]fluoranthene	8.307	252	20388	1020.21	ng/mL	98
22) Benzo[k]fluoranthene	8.336	252	18966	966.83	ng/mL	99
23) Benzo(e)pyrene	8.611	252	18686	980.21	ng/mL	100
24) Benzo[a]pyrene	8.669	252	17716	983.49	ng/mL	96
25) Indeno[1,2,3-c,d]pyrene	9.818	276	23984	944.89	ng/mL	99
26) Dibenzo[a,h]anthracene	9.823	278	19896	960.97	ng/mL	99
27) Benzo[g,h,i]perylene	10.117	276	20268	949.10	ng/mL	96

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0810.D
Acq On : 9 Aug 2014 12:07 am
Operator : RTS
Sample : PAH CAL 5
Misc : [SQA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 10 15:34:21 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0811.D
Acq On : 9 Aug 2014 12:22 am
Operator : RTS
Sample : PAH CAL 6
Misc : [SQA]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 10 15:34:33 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

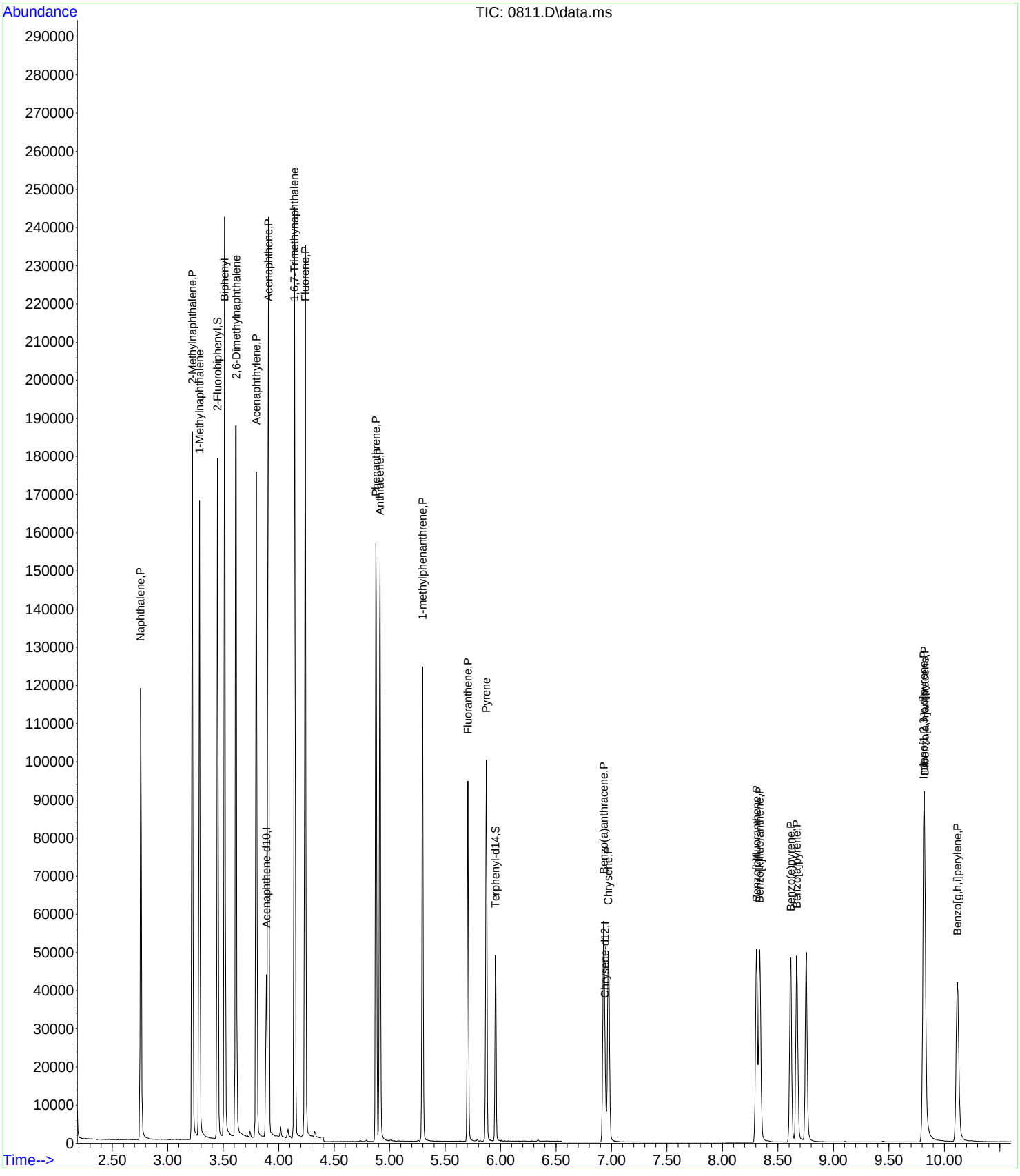
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.889	164	15293	500.00	ng/mL	0.00
15) Chrysene-d12	6.942	240	9714	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	74509	1885.75	ng/mL	0.00
Spiked Amount 500.000				Recovery = 377.15%		
18) Terphenyl-d14	5.953	244	31057	1961.66	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120			Recovery = 392.33%#		
Target Compounds						Qvalue
3) Naphthalene	2.755	128	84244	1952.05	ng/mL	99
4) 2-Methylnaphthalene	3.222	142	73901	1964.37	ng/mL	95
5) 1-Methylnaphthalene	3.287	142	66107	1940.51	ng/mL	98
6) 2,6-Dimethylnaphthalene	3.617	156	70180	1966.75	ng/mL	93
7) 1,6,7-Trimethynaphthalene	4.142	170	60199	1970.27	ng/mL	98
8) Biphenyl	3.514	154	94619	1942.58	ng/mL	100
9) Acenaphthylene	3.799	152	113328	1956.14	ng/mL	98
10) Acenaphthene	3.909	154	67502	1951.81	ng/mL	97
11) Fluorene	4.239	166	81611	1978.07	ng/mL	97
12) Phenanthrene	4.876	178	100373	1975.34	ng/mL	97
13) Anthracene	4.913	178	100456	2006.59	ng/mL	97
14) 1-methylphenanthrene	5.297	192	58892	1994.10	ng/mL	100
16) Fluoranthene	5.706	202	66497	1990.30	ng/mL	98
17) Pyrene	5.872	202	69399	1988.26	ng/mL	95
19) Benzo(a)anthracene	6.930	228	46509	2050.92	ng/mL	100
20) Chrysene	6.971	228	45062	2071.30	ng/mL	98
21) Benzo[b]fluoranthene	8.307	252	53165	2085.80	ng/mL	100
22) Benzo[k]fluoranthene	8.336	252	52332	2091.57	ng/mL	98
23) Benzo(e)pyrene	8.616	252	49979	2055.50	ng/mL	96
24) Benzo[a]pyrene	8.669	252	48952	2130.61	ng/mL	98
25) Indeno[1,2,3-c,d]pyrene	9.813	276	68397	2112.64	ng/mL	100
26) Dibenzo[a,h]anthracene	9.822	278	57043	2160.10	ng/mL	98
27) Benzo[g,h,i]perylene	10.117	276	57476	2110.16	ng/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0811.D
Acq On : 9 Aug 2014 12:22 am
Operator : RTS
Sample : PAH CAL 6
Misc : [SQA]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 10 15:34:33 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0812.D
Acq On : 9 Aug 2014 12:37 am
Operator : RTS
Sample : PAH CAL 7
Misc : [SQA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 10 15:34:46 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

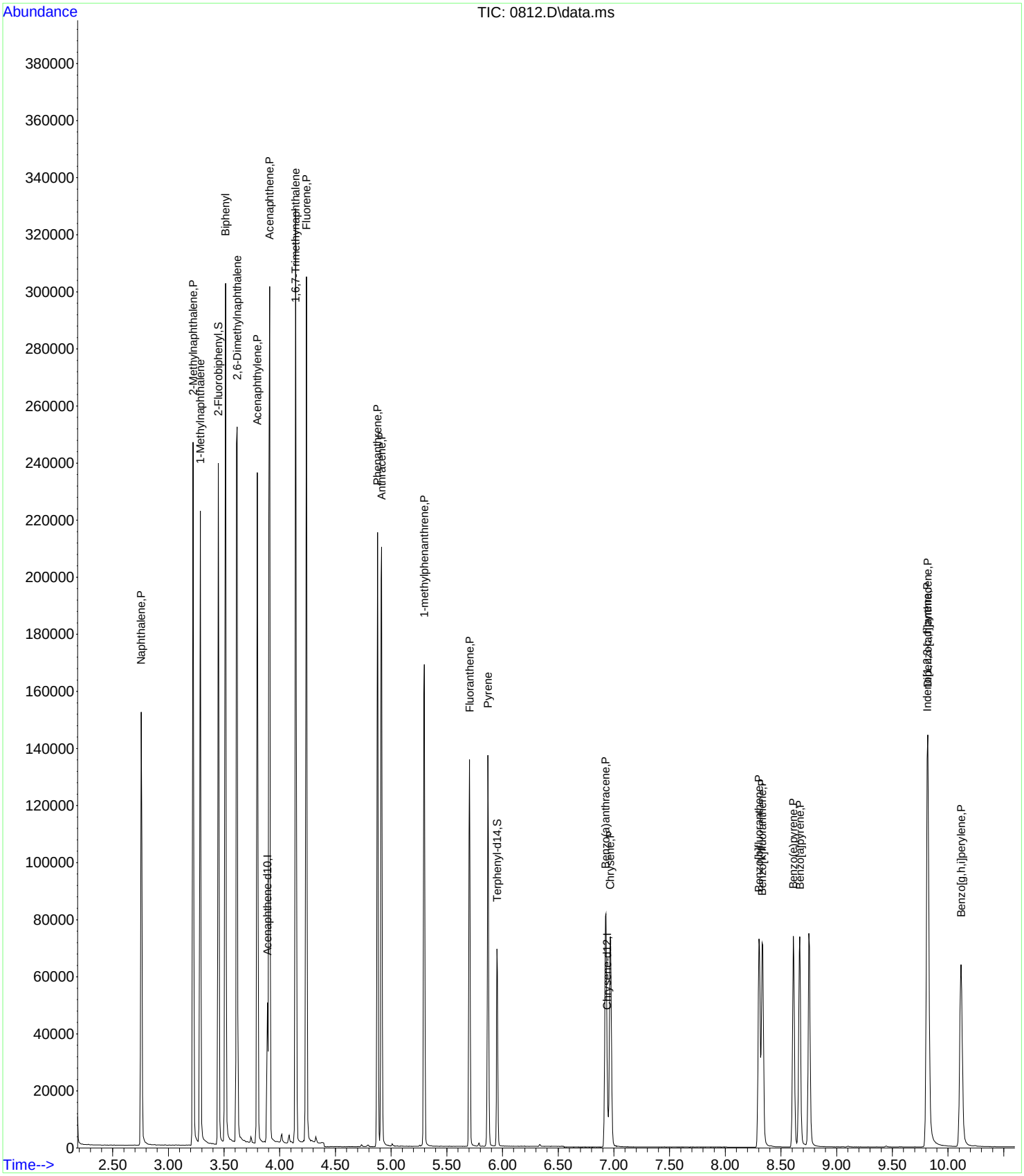
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.889	164	16641	500.00	ng/mL	0.00
15) Chrysene-d12	6.939	240	11657	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	3.449	172	100455	2336.47	ng/mL	0.00
Spiked Amount 500.000				Recovery = 467.29%		
18) Terphenyl-d14	5.950	244	45107	2374.21	ng/mL	0.00
Spiked Amount 500.000	Range 80 - 120			Recovery = 474.84%#		
Target Compounds						Qvalue
3) Naphthalene	2.755	128	109256	2326.54	ng/mL	100
4) 2-Methylnaphthalene	3.222	142	96308	2352.61	ng/mL	96
5) 1-Methylnaphthalene	3.287	142	86714	2339.21	ng/mL	97
6) 2,6-Dimethylnaphthalene	3.617	156	94774	2440.84	ng/mL	95
7) 1,6,7-Trimethynaphthalene	4.142	170	81258	2444.08	ng/mL	91
8) Biphenyl	3.514	154	123672	2333.37	ng/mL	100
9) Acenaphthylene	3.799	152	148615	2357.43	ng/mL	97
10) Acenaphthene	3.909	154	90317	2399.96	ng/mL	95
11) Fluorene	4.239	166	108004	2405.73	ng/mL	97
12) Phenanthrene	4.877	178	135579	2452.05	ng/mL	97
13) Anthracene	4.914	178	137277	2519.96	ng/mL	97
14) 1-methylphenanthrene	5.298	192	81287	2529.44	ng/mL	98
16) Fluoranthene	5.703	202	92238	2300.58	ng/mL	99
17) Pyrene	5.869	202	97013	2316.12	ng/mL	96
19) Benzo(a)anthracene	6.925	228	67172	2468.37	ng/mL	99
20) Chrysene	6.968	228	64119	2456.02	ng/mL	99
21) Benzo[b]fluoranthene	8.302	252	75288	2461.40	ng/mL	100
22) Benzo[k]fluoranthene	8.331	252	77935	2595.66	ng/mL	99
23) Benzo(e)pyrene	8.611	252	73372	2514.62	ng/mL	99
24) Benzo[a]pyrene	8.669	252	72540	2631.01	ng/mL	98
25) Indeno[1,2,3-c,d]pyrene	9.813	276	103201	2656.34	ng/mL	100
26) Dibenzo[a,h]anthracene	9.818	278	85597	2701.11	ng/mL	100
27) Benzo[g,h,i]perylene	10.117	276	86310	2640.59	ng/mL	99

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0812.D
Acq On : 9 Aug 2014 12:37 am
Operator : RTS
Sample : PAH CAL 7
Misc : [SQA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 10 15:34:46 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0813.D
Acq On : 9 Aug 2014 12:52 am
Operator : RTS
Sample : PAH ICV
Misc : [SQA]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 10 15:34:58 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration

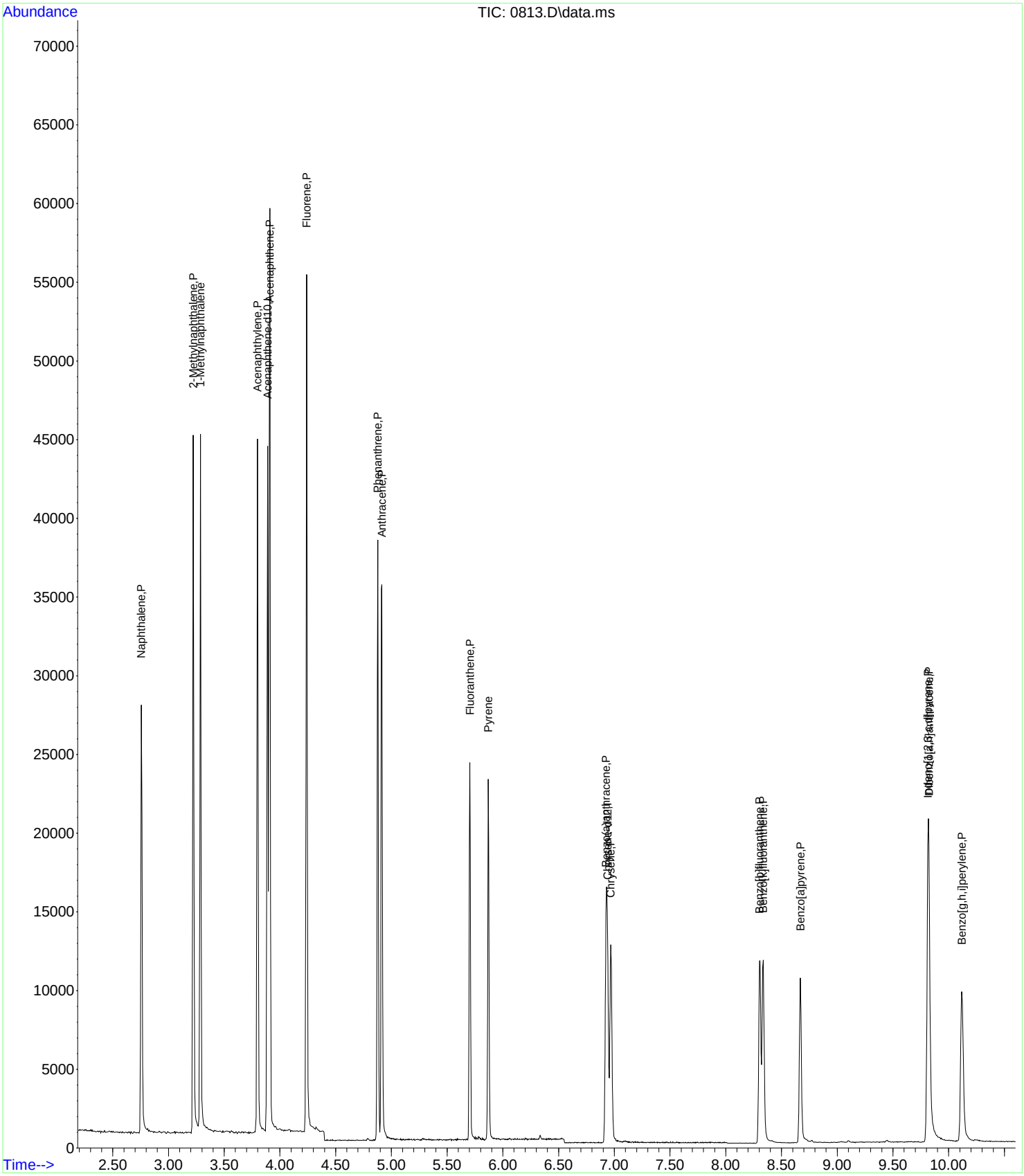
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	3.889	164	15473	500.00	ng/mL	0.00
15) Chrysene-d12	6.939	240	9969	500.00	ng/mL	0.00
System Monitoring Compounds						
2) 2-Fluorobiphenyl	0.000	172	0	0.00	ng/mL	
Spiked Amount 500.000			Recovery = 0.00%			
18) Terphenyl-d14	0.000	244	0	0.00	ng/mL	
Spiked Amount 500.000	Range 80 - 120		Recovery = 0.00%#			
Target Compounds						Qvalue
3) Naphthalene	2.755	128	20873	478.03	ng/mL	99
4) 2-Methylnaphthalene	3.222	142	17191	451.64	ng/mL	99
5) 1-Methylnaphthalene	3.287	142	16671	483.67	ng/mL	99
9) Acenaphthylene	3.799	152	28611	488.11	ng/mL	99
10) Acenaphthene	3.909	154	16817	480.60	ng/mL	97
11) Fluorene	4.239	166	20235	484.75	ng/mL	96
12) Phenanthrene	4.877	178	24738	481.18	ng/mL	99
13) Anthracene	4.914	178	24904	491.67	ng/mL	98
16) Fluoranthene	5.703	202	16547	482.59	ng/mL	100
17) Pyrene	5.869	202	16735	467.19	ng/mL	98
19) Benzo(a)anthracene	6.925	228	11010	473.09	ng/mL	99
20) Chrysene	6.968	228	11134	498.69	ng/mL	97
21) Benzo[b]fluoranthene	8.302	252	13240	506.15	ng/mL	97
22) Benzo[k]fluoranthene	8.336	252	11798	459.47	ng/mL	97
24) Benzo[a]pyrene	8.669	252	11046	468.47	ng/mL	97
25) Indeno[1,2,3-c,d]pyrene	9.813	276	16264	489.51	ng/mL	100
26) Dibenzo[a,h]anthracene	9.822	278	13569	500.69	ng/mL	99
27) Benzo[g,h,i]perylene	10.117	276	13626	487.46	ng/mL	99

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SQA\DATA\080814A\
Data File : 0813.D
Acq On : 9 Aug 2014 12:52 am
Operator : RTS
Sample : PAH ICV
Misc : [SQA]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 10 15:34:58 2014
Quant Method : Z:\08\SQA\METHOD\SQA2014-0808.M
Quant Title : SGS 8270D SIM
QLast Update : Sun Aug 10 13:51:03 2014
Response via : Initial Calibration



1143658

Long, Alesha (Anchorage)

From: Nelson, Justin (Anchorage)
Sent: Monday, August 25, 2014 12:06 PM
To: Long, Alesha (Anchorage)
Subject: FW: Alaska 611 sites

From: Moss, Pamela [mailto:pmoss@eaest.com]
Sent: Monday, August 25, 2014 12:01 PM
To: Nelson, Justin (Anchorage)
Subject: Alaska 611 sites

Justin per our phone conversation, EA does require and EQUIS EDD in addition to the ERPIMS 6.0 electronic deliverable. I hope this is something the lab is able to provide. thank you.

Pam

Pamela J. Moss
Senior Scientist
EA Engineering, Science, and Technology, Inc.
5655 S. Yosemite St., Suite 320
Greenwood Village, CO 80111
303-590-9143 (office)
303-810-6903 (cell)
pmoss@eaest.com

EA Engineering, Science, and Technology, Inc.

SGS 1143658

SGS North America Inc.
CHAIN OF CUSTODY RECORD

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North Carolina Indiana
West Virgina Kentucky
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Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Page 1 of 1

Section 1

CLIENT: EA Engineering
CONTACT: Kyle Waldron PHONE NO: 907-646-0201
PROJECT NAME: Cape Romanzof LRRS Fowler Creek PROJECT/ NPDES/ WSID/ PERMIT#: 62421101
REPORTS TO: Pam Moss E-MAIL: PMoss@eaest.com
INVOICE TO: EA Engineering QUOTE #: P.O. #: 12540

Section 3

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incremental Soils	Preservative: HCl	Preservative: Unpres. 4°C							REMARKS/ LOC ID
							TAH	TAqH							
(1) A-E (3) A-E	FC-SW01-080514	08/05/14	0915	water	15	G	9	6							MS/MSD
(2) A-E	FC-SW99-080514	08/05/14	0905	water	5	G	3	2							
(5) A-C	TB-5-ST009	08/05/14	0800	water	3	G	3								Trip Blank

Section 5

	Date	Time	
Relinquished By: (1) Evana Burt-Toland	8/6/14	1030	Received By: GoldstreakBethel/ANC
Relinquished By: (2) Goldstreak Bethel /ANC	8/7/14		Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	8/7/14	11:20	Received For Laboratory By: Cory D

Section 4

DOD Project? ~~Yes~~ No

Cooler ID: 3 of 5

Data Deliverable Requirements: See Contract

Requested Turnaround Time and/or Special Instructions: Per contract & holding time requirements (ADEC)

Temp Blank °C: 0.5 #200 or Ambient [ ]
(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle) IF INTACT BROKEN ABSENT
(See attached Sample Receipt Form)

[ ] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
[ ] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

http://www.sgs.com/terms-and-conditions

SGS

1143658

SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	(Yes) No N/A (Yes) No	☐ *Exemption permitted if sampler hand carries/delivers.*
Temperature blank compliant* (i.e., 0-6°C after CF)? *If >6°C, were samples collected <8 hours ago?* *If <0°C, were all sample containers ice free?* Cooler ID: 3 of 5 @ 0.5 w/ Therm.ID: 006 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."	(Yes) No Yes No N/A Yes No N/A	☐ *Exemption permitted if chilled & collected <8 hrs ago.* *Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.*
Delivery method (specify all that apply): (Client (hand carried)) Alert Courier USPS Lynden AK Air UPS FedEx RAVN C&D Delivery Carlile Pen Air Warp Speed Other: _____ → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	Tracking/AB # or see attached or N/A Yes No (N/A)	
→ For samples received with payment, note amount ($) and whether cash / check / CC (**circle one**) was received.		
→ For samples **received in FBKS**, ANCH staff will verify all criteria are reviewed. SRF initiated in FBKS by:		
Were samples received within hold time? Do samples **match COC*** (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	(Yes) No N/A (Yes) No N/A (Yes) No N/A	*Note: Refer to form F-083 "Sample Guide" for hold times.* *Note: If times differ <1hr, record details and login per COC.*
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other:	(Yes) No	
Were **proper containers** (type/mass/volume/preservative*) used? Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	(Yes) No N/A (Yes) No N/A (Yes) No N/A Yes No (N/A)	☐ *Exemption permitted for metals (e.g., 200.8/6020A).*
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	Yes No (N/A) Yes No (N/A)	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved..., lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	Yes No (N/A)	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	Yes No (N/A)	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	(Yes) No N/A	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	Yes No (N/A)	SRF Completed by: EWF PM notified: N/A
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	Yes No (N/A)	Peer Reviewed by: N/A
Additional notes (if applicable):		

Note to Client: *Any "no" circled above indicates non-compliance with standard procedures and may impact data quality.*

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1143658001-A	HCL to pH < 2	OK			
1143658001-B	HCL to pH < 2	OK			
1143658001-C	HCL to pH < 2	OK			
1143658001-D	No Preservative Required	OK			
1143658001-E	No Preservative Required	OK			
1143658002-A	HCL to pH < 2	OK			
1143658002-B	HCL to pH < 2	OK			
1143658002-C	HCL to pH < 2	OK			
1143658002-D	No Preservative Required	OK			
1143658002-E	No Preservative Required	OK			
1143658003-A	HCL to pH < 2	OK			
1143658003-B	HCL to pH < 2	OK			
1143658003-C	HCL to pH < 2	OK			
1143658003-D	No Preservative Required	OK			
1143658003-E	No Preservative Required	OK			
1143658004-A	HCL to pH < 2	OK			
1143658004-B	HCL to pH < 2	OK			
1143658004-C	HCL to pH < 2	OK			
1143658004-D	No Preservative Required	OK			
1143658004-E	No Preservative Required	OK			
1143658005-A	HCL to pH < 2	OK			
1143658005-B	HCL to pH < 2	OK			
1143658005-C	HCL to pH < 2	OK			

Container Condition Glossary

OK - The container was received at an acceptable pH for the analysis requested.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

BU - The container was received with headspace greater than 6mm.

SGS North America Inc.

RunLog

METHODS: EPA 602/624, EPA 624, SW8260B

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1226844	MB	8/13/2014 1:47:00 PM	VPA	1	14362VMS	26267VXX	1
	1226854	IB	8/13/2014 1:47:00 PM	VPA	1	14362VMS		2
	1226845	LCS	8/13/2014 3:07:00 PM	VPA	1	14362VMS	26267VXX	3
	1226855	CCV	8/13/2014 3:07:00 PM	VPA	1	14362VMS		4
	1226846	LCSD	8/13/2014 3:24:00 PM	VPA	1	14362VMS	26267VXX	5
1143773	1143773003	TB	8/13/2014 4:30:00 PM	VPA	1	14362VMS	26267VXX	6
1143735	1143735016	TB	8/13/2014 4:46:00 PM	VPA	1	14362VMS	26267VXX	7
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
1143735	1143735014	PS	8/13/2014 5:19:00 PM	VPA	1	14362VMS	26267VXX	9
1143735	1143735015	PS	8/13/2014 5:36:00 PM	VPA	1	14362VMS	26267VXX	10
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
1148353	1148353001	PS	8/13/2014 6:58:00 PM	VPA	1	14362VMS	26267VXX	12
1148359	1148359003	PS	8/13/2014 7:15:00 PM	VPA	1	14362VMS	26267VXX	13
1148359	1148359005	PS	8/13/2014 7:31:00 PM	VPA	1	14362VMS	26267VXX	14
1143773	1143773002	PS	8/13/2014 8:21:00 PM	VPA	200	14362VMS	26267VXX	15
1148362	1148362001	PS	8/13/2014 8:38:00 PM	VPA	10	14362VMS	26267VXX	16
	1226847	AFB	8/13/2014 8:54:00 PM	VPA	1	14362VMS	26267VXX	17
1143773	1143773002	PS	8/13/2014 9:11:00 PM	VPA	10	14362VMS	26267VXX	18
1148348	1148348003	PS	8/13/2014 9:27:00 PM	VPA	10	14362VMS	26267VXX	19
1148348	1148348008	PS	8/13/2014 9:27:00 PM	VPA	1	14362VMS	26267VXX	23
1148348	1148348004	PS	8/13/2014 9:44:00 PM	VPA	10	14362VMS	26267VXX	20
1148348	1148348005	PS	8/13/2014 10:00:00 PM	VPA	10	14362VMS	26267VXX	21
1148348	1148348006	PS	8/13/2014 10:17:00 PM	VPA	10	14362VMS	26267VXX	22

Calibration: VPA2014-0812

SGS North America Inc.

RunLog

METHODS: EPA 602/624, SW8260B, SW8260B TCLP

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1227659	MB	8/17/2014 11:13:00 PM	VNA	1	14376VMS	26289VXX	1
	1227665	IB	8/17/2014 11:13:00 PM	VNA	1	14376VMS		2
	1227660	LCS	8/17/2014 11:39:00 PM	VNA	1	14376VMS	26289VXX	3
	1227666	CCV	8/17/2014 11:39:00 PM	VNA	1	14376VMS		4
	1227661	LCSD	8/17/2014 11:55:00 PM	VNA	1	14376VMS	26289VXX	5
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
1148372	1148372019	TB	8/18/2014 1:40:00 AM	VNA	1	14376VMS	26289VXX	8
1148378	1148378027	PS	8/18/2014 1:57:00 AM	VNA	1	14376VMS	26289VXX	9
1143798	1143798002	TB	8/18/2014 2:13:00 AM	VNA	1	14376VMS	26289VXX	10
	1227428	LB	8/18/2014 2:29:00 AM	VNA	50	14376VMS	26289VXX	11
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
1143798	1143798001	PS	8/18/2014 3:03:00 AM	VNA	200	14376VMS	26289VXX	13
1148370	1148370001	PS	8/18/2014 3:19:00 AM	VNA	50	14376VMS	26289VXX	14
1148370	1148370002	PS	8/18/2014 3:35:00 AM	VNA	50	14376VMS	26289VXX	15
1148370	1148370003	PS	8/18/2014 3:52:00 AM	VNA	50	14376VMS	26289VXX	16
1148370	1148370004	PS	8/18/2014 4:08:00 AM	VNA	50	14376VMS	26289VXX	17
1143824	1143824003	PS	8/18/2014 4:25:00 AM	VNA	50	14376VMS	26289VXX	18
1143824	1143824004	PS	8/18/2014 4:41:00 AM	VNA	50	14376VMS	26289VXX	19
1143820	1143820001	PS	8/18/2014 4:58:00 AM	VNA	50	14376VMS	26289VXX	20
1148352	1148352001	PS	8/18/2014 5:14:00 AM	VNA	50	14376VMS	26289VXX	21
1148372	1148372009	PS	8/18/2014 5:30:00 AM	VNA	1	14376VMS	26289VXX	22
1148372	1148372010	PS	8/18/2014 5:47:00 AM	VNA	1	14376VMS	26289VXX	23
1148372	1148372011	PS	8/18/2014 6:03:00 AM	VNA	1	14376VMS	26289VXX	24
1148372	1148372012	PS	8/18/2014 6:20:00 AM	VNA	1	14376VMS	26289VXX	25
1148372	1148372013	PS	8/18/2014 6:36:00 AM	VNA	1	14376VMS	26289VXX	26
1148372	1148372014	PS	8/18/2014 6:52:00 AM	VNA	1	14376VMS	26289VXX	27
1148372	1148372015	PS	8/18/2014 7:09:00 AM	VNA	1	14376VMS	26289VXX	28
1143798	1143798001	PS	8/18/2014 7:26:00 AM	VNA	10	14376VMS	26289VXX	29

Calibration: VNA2014-0817

SGS North America Inc.

RunLog

METHODS: 8270D SIMS (PAH), EPA 625M SIMS (PAH)

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1225992	IB	8/10/2014 1:57:00 PM	SQA	1	8217XMS		1
	1225993	CCV	8/10/2014 2:29:00 PM	SQA	1	8217XMS		2
	1225804	MB	8/10/2014 2:44:00 PM	SQA	1	8217XMS	31652XXX	3
	1225805	LCS	8/10/2014 2:59:00 PM	SQA	1	8217XMS	31652XXX	4
	1225806	LCSD	8/10/2014 3:14:00 PM	SQA	1	8217XMS	31652XXX	5
1143656	1143656047	PS	8/10/2014 3:29:00 PM	SQA	1	8217XMS	31652XXX	6
1143656	1143656050	PS	8/10/2014 3:59:00 PM	SQA	1	8217XMS	31652XXX	9
1143656	1143656051	PS	8/10/2014 4:14:00 PM	SQA	1	8217XMS	31652XXX	10
1143656	1143656052	PS	8/10/2014 4:29:00 PM	SQA	1	8217XMS	31652XXX	11
1143656	1143656053	PS	8/10/2014 4:44:00 PM	SQA	1	8217XMS	31652XXX	12
1143656	1143656054	PS	8/10/2014 4:59:00 PM	SQA	1	8217XMS	31652XXX	13
1143657	1143657001	PS	8/10/2014 5:14:00 PM	SQA	1	8217XMS	31652XXX	14
1143657	1143657004	PS	8/10/2014 5:44:00 PM	SQA	1	8217XMS	31652XXX	17
1143657	1143657005	PS	8/10/2014 6:00:00 PM	SQA	1	8217XMS	31652XXX	18
1143658	1143658001	PS	8/10/2014 6:14:00 PM	SQA	1	8217XMS	31652XXX	19
1143658	1143658002	BMS	8/10/2014 6:29:00 PM	SQA	1	8217XMS	31652XXX	20
1143658	1143658003	BMSD	8/10/2014 6:44:00 PM	SQA	1	8217XMS	31652XXX	21
1143658	1143658004	PS	8/10/2014 7:00:00 PM	SQA	1	8217XMS	31652XXX	22
1143655	1143655002	PS	8/10/2014 7:30:00 PM	SQA	1	8217XMS	31652XXX	24
1143655	1143655003	PS	8/10/2014 7:44:00 PM	SQA	1	8217XMS	31652XXX	25
1143659	1143659001	PS	8/10/2014 8:00:00 PM	SQA	1	8217XMS	31652XXX	26
1143668	1143668001	PS	8/10/2014 8:15:00 PM	SQA	5	8217XMS	31652XXX	27
1148344	1148344005	PS	8/10/2014 8:29:00 PM	SQA	1	8217XMS	31652XXX	28
	1225792	MB	8/10/2014 8:44:00 PM	SQA	1	8217XMS	31650XXX	29
	1225793	LCS	8/10/2014 8:59:00 PM	SQA	1	8217XMS	31650XXX	30
1143579	1143579003	PS	8/10/2014 9:14:00 PM	SQA	1	8217XMS	31650XXX	31
1143579	1143579010	PS	8/10/2014 9:29:00 PM	SQA	1	8217XMS	31650XXX	32
1143579	1143579014	PS	8/10/2014 9:44:00 PM	SQA	1	8217XMS	31650XXX	33
1143579	1143579034	PS	8/10/2014 10:44:00 PM	SQA	1	8217XMS	31650XXX	37
1143579	1143579035	PS	8/10/2014 10:59:00 PM	SQA	1	8217XMS	31650XXX	38
1143579	1143579036	BMS	8/10/2014 11:14:00 PM	SQA	1	8217XMS	31650XXX	39
1143579	1143579037	BMSD	8/10/2014 11:29:00 PM	SQA	1	8217XMS	31650XXX	40
1143579	1143579082	PS	8/10/2014 11:44:00 PM	SQA	1	8217XMS	31650XXX	41
1143656	1143656012	PS	8/10/2014 11:59:00 PM	SQA	1	8217XMS	31650XXX	42
1143656	1143656032	PS	8/11/2014 12:14:00 AM	SQA	1	8217XMS	31650XXX	43
1143656	1143656039	PS	8/11/2014 12:29:00 AM	SQA	1	8217XMS	31650XXX	44
1143681	1143681001	PS	8/11/2014 12:44:00 AM	SQA	10	8217XMS	31650XXX	45
1143681	1143681002	PS	8/11/2014 12:59:00 AM	SQA	5	8217XMS	31650XXX	46
1143656	1143656010	PS	8/11/2014 1:14:00 AM	SQA	5	8217XMS	31650XXX	47
1143656	1143656027	PS	8/11/2014 1:29:00 AM	SQA	5	8217XMS	31650XXX	48
1143656	1143656028	BMS	8/11/2014 1:44:00 AM	SQA	5	8217XMS	31650XXX	49
1143656	1143656029	BMSD	8/11/2014 1:59:00 AM	SQA	5	8217XMS	31650XXX	50

Calibration: SQA 2014-0808A

Laboratory Analytical Report

Client: **EA Engineering, Science and Tech**
3 Washington Center
Newburgh, NY 12550

Attn: **Pam Moss**
T: 907-646-0201 F:
PMoss@eaest.com

Project: **Cape Romanzof**

Workorder No.: **1143648**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Chuck Homestead

Charles.Homestead@sgs.com
General Manager Alaska

Contents (Bookmarked in PDF):

Cover Page
Glossary
Sample Summary Forms
Case Narrative
Sample Results Forms
Batch Summary Forms (by method)
Quality Control Summary Forms (by method)
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO 17025 (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6020, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RL	Reporting Limit
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

Client Name: EA Engineering, Science and Tech.
Project Name: Cape Romanzof
Workorder No.: 1143648

Analytical Methods

Method Description	Analytical Method
Diesel/Residual Range Organics	AK102
Diesel/Residual Range Organics	AK103
Gasoline Range Organics (S)	AK101
Percent Solids SM2540G	SM21 2540G

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1143648001	SS010-SB01-90
1143648002	SS010-SB01-11
1143648003	SS010-SB01-2
1143648004	SS010-SB01-2 MS
1143648005	SS010-SB01-2 MSD
1143648006	SS010-SB03-80
1143648007	SS010-SB03-14D
1143648008	SS010-SB03-14
1143648009	SS010-SB03-2
1143648010	SS010-SB02-13
1143648011	SS010-SB02-2
1143648012	SS010-SB02-56
1143648013	TB-Soil-1

Client Name: EA Engineering, Science and Tech.
Project Name: Cape Romanzof
Workorder No.: 1143648

Sample Comments

Refer to the sample receipt form for information on sample condition.

Lab Sample ID	Sample Type	Client Sample ID
1143648002	PS	SS010-SB01-11
	AK103 - Unknown hydrocarbon with several peaks is present.	
1143648004	* BMS	SS010-SB01-2 MS
	AK103 - BMS recoveries are outside QC criteria, possibly due to a non-homogeneous sample. See the LCS/LCSD for precision and accuracy.	
1143648009	PS	SS010-SB03-2
	AK103 - Unknown hydrocarbon with several peaks is present.	
1143648011	PS	SS010-SB02-2
	AK102/103 - Unknown hydrocarbon with several peaks is present.	

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Client Sample ID: **SS010-SB01-90**
SGS Ref. #: 1143648001
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 84.6

Collection Date/Time: 07/31/14 19:45
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.879J	2.47	0.742	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	104	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 20:54
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 07/31/14 19:45

Initial Prep Wt./Vol.: 94.487 g
Prep Extract Vol.: 39.5442 mL
Container ID:1143648001-B
Analyst: ST

Client Sample ID: **SS010-SB01-90**
SGS Ref. #: 1143648001
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 84.6

Collection Date/Time: 07/31/14 19:45
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	11.8U	23.6	7.31	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	11.8U	23.6	7.31	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	89.9	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	89.7	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 20:16
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.057 g
Prep Extract Vol.: 1 mL
Container ID:1143648001-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 20:16
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.057 g
Prep Extract Vol.: 1 mL
Container ID:1143648001-A
Analyst: AYC

Client Sample ID: **SS010-SB01-90**
SGS Ref. #: 1143648001
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 84.6

Collection Date/Time: 07/31/14 19:45
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	84.6			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648001-A
Analyst: MJN

Client Sample ID: **SS010-SB01-11**
SGS Ref. #: 1143648002
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 90.0

Collection Date/Time: 07/31/14 07:40
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.981J	2.47	0.742	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	92	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 21:13
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 07/31/14 07:40

Initial Prep Wt./Vol.: 72.567 g
Prep Extract Vol.: 32.2862 mL
Container ID:1143648002-B
Analyst: ST

Client Sample ID: **SS010-SB01-11**
SGS Ref. #: 1143648002
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 90.0

Collection Date/Time: 07/31/14 07:40
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	10.2J	21.9	6.80	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	90.4	21.9	6.80	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	98.5	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	103	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 20:26
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.415 g
Prep Extract Vol.: 1 mL
Container ID:1143648002-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 20:26
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.415 g
Prep Extract Vol.: 1 mL
Container ID:1143648002-A
Analyst: AYC

Client Sample ID: **SS010-SB01-11**
SGS Ref. #: 1143648002
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 90.0

Collection Date/Time: 07/31/14 07:40
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	90.0			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648002-A
Analyst: MJN

Client Sample ID: **SS010-SB01-2**
SGS Ref. #: 1143648003
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 93.2

Collection Date/Time: 07/30/14 19:40
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.932J	2.22	0.667	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	96.8	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 19:37
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 07/30/14 19:40

Initial Prep Wt./Vol.: 72.081 g
Prep Extract Vol.: 29.8951 mL
Container ID:1143648003-D
Analyst: ST

Client Sample ID: **SS010-SB01-2**
SGS Ref. #: 1143648003
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 93.2

Collection Date/Time: 07/30/14 19:40
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	10.6U	21.2	6.59	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	16.9J	21.2	6.59	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	69.9	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	70.5	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 20:36
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.296 g
Prep Extract Vol.: 1 mL
Container ID:1143648003-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 20:36
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.296 g
Prep Extract Vol.: 1 mL
Container ID:1143648003-A
Analyst: AYC

Client Sample ID: **SS010-SB01-2**
SGS Ref. #: 1143648003
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 93.2

Collection Date/Time: 07/30/14 19:40
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	93.2			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648003-A
Analyst: MJN

Client Sample ID: **SS010-SB03-80**
SGS Ref. #: 1143648006
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 89.8

Collection Date/Time: 07/29/14 20:00
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	1.42J	3.28	0.985	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	90.2	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 21:32
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 07/29/14 20:00

Initial Prep Wt./Vol.: 51.269 g
Prep Extract Vol.: 30.228 mL
Container ID:1143648006-B
Analyst: ST

Client Sample ID: **SS010-SB03-80**
SGS Ref. #: 1143648006
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 89.8

Collection Date/Time: 07/29/14 20:00
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	10.9U	21.9	6.80	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	10.9U	21.9	6.80	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	95.4	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	97.7	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 21:06
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.444 g
Prep Extract Vol.: 1 mL
Container ID:1143648006-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 21:06
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.444 g
Prep Extract Vol.: 1 mL
Container ID:1143648006-A
Analyst: AYC

Client Sample ID: **SS010-SB03-80**
SGS Ref. #: 1143648006
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 89.8

Collection Date/Time: 07/29/14 20:00
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	89.8			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648006-A
Analyst: MJN

Client Sample ID: **SS010-SB03-14D**
SGS Ref. #: 1143648007
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.2

Collection Date/Time: 07/29/14 14:45
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	1.36J	2.99	0.898	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	88.6	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 21:51
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 07/29/14 14:45

Initial Prep Wt./Vol.: 52.669 g
Prep Extract Vol.: 29.0872 mL
Container ID:1143648007-B
Analyst: ST

Client Sample ID: **SS010-SB03-14D**
SGS Ref. #: 1143648007
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.2

Collection Date/Time: 07/29/14 14:45
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	10.7U	21.4	6.64	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	7.90J	21.4	6.64	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	73.7	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	75.1	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 21:16
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.373 g
Prep Extract Vol.: 1 mL
Container ID:1143648007-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 21:16
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.373 g
Prep Extract Vol.: 1 mL
Container ID:1143648007-A
Analyst: AYC

Client Sample ID: **SS010-SB03-14D**
SGS Ref. #: 1143648007
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.2

Collection Date/Time: 07/29/14 14:45
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	92.2			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648007-A
Analyst: MJN

Client Sample ID: **SS010-SB03-14**
SGS Ref. #: 1143648008
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.5

Collection Date/Time: 07/29/14 14:15
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	1.21J	2.98	0.895	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	89.3	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 22:11
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 07/29/14 14:15

Initial Prep Wt./Vol.: 52.443 g
Prep Extract Vol.: 28.9473 mL
Container ID:1143648008-B
Analyst: ST

Client Sample ID: **SS010-SB03-14**
SGS Ref. #: 1143648008
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.5

Collection Date/Time: 07/29/14 14:15
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	10.8U	21.6	6.69	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	10.8U	21.6	6.69	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	80	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	81.1	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 21:25
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.083 g
Prep Extract Vol.: 1 mL
Container ID:1143648008-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 21:25
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.083 g
Prep Extract Vol.: 1 mL
Container ID:1143648008-A
Analyst: AYC

Client Sample ID: **SS010-SB03-14**
SGS Ref. #: 1143648008
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.5

Collection Date/Time: 07/29/14 14:15
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	92.5			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648008-A
Analyst: MJN

Client Sample ID: **SS010-SB03-2**
SGS Ref. #: 1143648009
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 83.1

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	2.02J	3.89	1.17	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	86.7	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 23:08
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 07/29/14 12:00

Initial Prep Wt./Vol.: 52.394 g
Prep Extract Vol.: 33.8753 mL
Container ID:1143648009-B
Analyst: ST

Client Sample ID: **SS010-SB03-2**
SGS Ref. #: 1143648009
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 83.1

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	17.3J	24.0	7.44	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	214	24.0	7.44	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	97.7	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	111	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 21:35
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.112 g
Prep Extract Vol.: 1 mL
Container ID:1143648009-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 21:35
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.112 g
Prep Extract Vol.: 1 mL
Container ID:1143648009-A
Analyst: AYC

Client Sample ID: **SS010-SB03-2**
SGS Ref. #: 1143648009
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 83.1

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	83.1			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648009-A
Analyst: MJN

Client Sample ID: **SS010-SB02-13**
SGS Ref. #: 1143648010
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 91.5

Collection Date/Time: 08/02/14 10:35
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.917J	1.80	0.541	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	99.1	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 23:28
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 08/02/14 10:35

Initial Prep Wt./Vol.: 101.988 g
Prep Extract Vol.: 33.6377 mL
Container ID:1143648010-B
Analyst: ST

Client Sample ID: **SS010-SB02-13**
SGS Ref. #: 1143648010
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 91.5

Collection Date/Time: 08/02/14 10:35
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	10.9U	21.8	6.76	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	10.9U	21.8	6.76	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	95	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	97	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 21:45
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.074 g
Prep Extract Vol.: 1 mL
Container ID:1143648010-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 21:45
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.074 g
Prep Extract Vol.: 1 mL
Container ID:1143648010-A
Analyst: AYC

Client Sample ID: **SS010-SB02-13**
SGS Ref. #: 1143648010
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 91.5

Collection Date/Time: 08/02/14 10:35
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	91.5			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648010-A
Analyst: MJN

Client Sample ID: **SS010-SB02-2**
SGS Ref. #: 1143648011
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 81.4

Collection Date/Time: 08/02/14 10:10
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	1.62J	3.05	0.916	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	66	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/13/14 23:47
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 08/02/14 10:10

Initial Prep Wt./Vol.: 80.298 g
Prep Extract Vol.: 39.9138 mL
Container ID:1143648011-B
Analyst: ST

Client Sample ID: **SS010-SB02-2**
SGS Ref. #: 1143648011
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 81.4

Collection Date/Time: 08/02/14 10:10
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	50.5	24.4	7.55	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	494	24.4	7.55	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	121	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	111	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 21:55
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.237 g
Prep Extract Vol.: 1 mL
Container ID:1143648011-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 21:55
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.237 g
Prep Extract Vol.: 1 mL
Container ID:1143648011-A
Analyst: AYC

Client Sample ID: **SS010-SB02-2**
SGS Ref. #: 1143648011
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 81.4

Collection Date/Time: 08/02/14 10:10
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	81.4			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648011-A
Analyst: MJN

Client Sample ID: **SS010-SB02-56**
SGS Ref. #: 1143648012
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 95.4

Collection Date/Time: 08/02/14 15:00
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.848J	1.67	0.501	mg/Kg	1	VFC12045	VXX26266	
4-Bromofluorobenzene <surr>	94.7	50-150		%	1	VFC12045	VXX26266	

Batch Information

Analytical Batch: VFC12045
Analytical Method: AK101
Analysis Date/Time: 08/14/14 00:06
Dilution Factor: 1

Prep Batch: VXX26266
Prep Method: SW5035A
Prep Date/Time: 08/02/14 15:00

Initial Prep Wt./Vol.: 91.524 g
Prep Extract Vol.: 29.1803 mL
Container ID:1143648012-B
Analyst: ST

Client Sample ID: **SS010-SB02-56**
SGS Ref. #: 1143648012
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 95.4

Collection Date/Time: 08/02/14 15:00
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	10.4U	20.8	6.46	mg/Kg	1	XFC11487	XXX31655	
Residual Range Organics	12.7J	20.8	6.46	mg/Kg	1	XFC11487	XXX31655	
5a Androstane <surr>	89.2	50-150		%	1	XFC11487	XXX31655	
n-Triacontane-d62 <surr>	98.7	50-150		%	1	XFC11487	XXX31655	

Batch Information

Analytical Batch: XFC11487
Analytical Method: AK102
Analysis Date/Time: 08/12/14 22:05
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.186 g
Prep Extract Vol.: 1 mL
Container ID:1143648012-A
Analyst: AYC

Analytical Batch: XFC11487
Analytical Method: AK103
Analysis Date/Time: 08/12/14 22:05
Dilution Factor: 1
Prep Batch: XXX31655
Prep Method: SW3550C
Prep Date/Time: 08/11/14 08:47
Initial Prep Wt./Vol.: 30.186 g
Prep Extract Vol.: 1 mL
Container ID:1143648012-A
Analyst: AYC

Client Sample ID: **SS010-SB02-56**
SGS Ref. #: 1143648012
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)
Percent Solids: 95.4

Collection Date/Time: 08/02/14 15:00
Receipt Date/Time: 08/07/14 11:20

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	95.4			%	1	SPT9419		

Batch Information

Analytical Batch: SPT9419
Analytical Method: SM21 2540G
Analysis Date/Time: 08/08/14 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1143648012-A
Analyst: MJN

Client Sample ID: **TB-Soil-1**
SGS Ref. #: 1143648013
Project ID: Cape Romanzof
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 07/29/14 08:00
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	1.27J	2.51	0.754	mg/Kg	1	VFC12043	VXX26261	
4-Bromofluorobenzene <surr>	88.5	50-150		%	1	VFC12043	VXX26261	

Batch Information

Analytical Batch: VFC12043
Analytical Method: AK101
Analysis Date/Time: 08/13/14 03:57
Dilution Factor: 1

Prep Batch: VXX26261
Prep Method: SW5035A
Prep Date/Time: 07/29/14 08:00

Initial Prep Wt./Vol.: 49.721 g
Prep Extract Vol.: 25 mL
Container ID:1143648013-A
Analyst: ST

Workorder No. 1143648

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26261

Analysis Batch Id: VFC12043

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226564		8/13/2014 1:24:00AM
Continuing Calib Verification	1226566		8/13/2014 2:21:00AM
Method Blank	1226559		8/13/2014 2:59:00AM
Lab Control Sample	1226560		8/13/2014 3:19:00AM
Lab Control Sample Duplicate	1226561		8/13/2014 3:38:00AM
Trip Blank	1143648013	TB-Soil-1	8/13/2014 3:57:00AM
Continuing Calib Verification	1226567		8/13/2014 8:57:00AM
Continuing Calib Verification	1226568		8/13/2014 1:25:00PM

SGS Ref.#	1226564	Instrument Blank	**Printed Date/Time**	09/09/2014 18:14
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143648013

Parameter	Results	RL/CL	Units	Analysis Date
Volatile Fuels Department				
Gasoline Range Organics	0.0500U	0.100	mg/L	08/13/14
Surrogates				
4-Bromofluorobenzene <surr>	93.3	50-150	%	08/13/14

Batch VFC12043
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226566 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:14
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648013

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.926	93	(75-125)	1.00 mg/L	08/13/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		96	(75-125)		08/13/2014

Batch VFC12043
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226567 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:14
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648013

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.915	92	(75-125)	1.00 mg/L	08/13/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		96	(75-125)		08/13/2014

Batch VFC12043
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226568 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:14
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648013

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.930	93	(75-125)	1.00 mg/L	08/13/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		104	(75-125)		08/13/2014

Batch VFC12043
Method AK101
Instrument Agilent 7890A PID/FID

Workorder No. 1143648

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26261

Analysis Batch Id: VFC12043

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226564		8/13/2014 1:24:00AM
Continuing Calib Verification	1226566		8/13/2014 2:21:00AM
Method Blank	1226559		8/13/2014 2:59:00AM
Lab Control Sample	1226560		8/13/2014 3:19:00AM
Lab Control Sample Duplicate	1226561		8/13/2014 3:38:00AM
Trip Blank	1143648013	TB-Soil-1	8/13/2014 3:57:00AM
Continuing Calib Verification	1226567		8/13/2014 8:57:00AM
Continuing Calib Verification	1226568		8/13/2014 1:25:00PM

SGS Ref.#	1226559	Method Blank	**Printed Date/Time**	09/09/2014	18:14
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	VXX26261	
Project Name/#	Cape Romanzof		**Method**	SW5035A	
Matrix	Soil/Solid (dry weight)		**Date**	08/12/2014	

QC results affect the following production samples:

1143648013

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Gasoline Range Organics	1.20J	2.50	0.750	mg/Kg	08/13/14
Surrogates					
4-Bromofluorobenzene <surr>	92.2	50-150		%	08/13/14
Batch VFC12043					
Method AK101					
Instrument Agilent 7890A PID/FID					

SGS Ref.#	1226560	Lab Control Sample	**Printed Date/Time**	09/09/2014	18:14
	1226561	Lab Control Sample Duplicate	**Prep Batch**	VXX26261	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5035A	
Project Name/#	Cape Romanzof		**Date**	08/12/2014	
Matrix	Soil/Solid (dry weight)				

QC results affect the following production samples:

1143648013

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	10.1	101	(60-120)			10.0 mg/Kg	08/13/2014
	LCSD	10.1	101		0	(< 20)	10.0 mg/Kg	08/13/2014
Surrogates								
4-Bromofluorobenzene <surr>	LCS		95	(50-150)				08/13/2014
	LCSD		97		1			08/13/2014

Batch VFC12043
Method AK101
Instrument Agilent 7890A PID/FID

Workorder No. 1143648

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26266

Analysis Batch Id: VFC12045

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226865		8/13/2014 3:27:00PM
Continuing Calib Verification	1226867		8/13/2014 4:24:00PM
Lab Control Sample	1226842		8/13/2014 5:22:00PM
Lab Control Sample Duplicate	1226843		8/13/2014 5:41:00PM
Paying sample	1143648003	SS010-SB01-2	8/13/2014 7:37:00PM
Billable Matrix Spike	1143648004	SS010-SB01-2 MS	8/13/2014 7:56:00PM
Billable Matrix Spike Dup.	1143648005	SS010-SB01-2 MSD	8/13/2014 8:15:00PM
Paying sample	1143648001	SS010-SB01-90	8/13/2014 8:54:00PM
Paying sample	1143648002	SS010-SB01-11	8/13/2014 9:13:00PM
Paying sample	1143648006	SS010-SB03-80	8/13/2014 9:32:00PM
Paying sample	1143648007	SS010-SB03-14D	8/13/2014 9:51:00PM
Paying sample	1143648008	SS010-SB03-14	8/13/2014 10:11:00PM
Continuing Calib Verification	1226868		8/13/2014 10:49:00PM
Paying sample	1143648009	SS010-SB03-2	8/13/2014 11:08:00PM
Paying sample	1143648010	SS010-SB02-13	8/13/2014 11:28:00PM
Paying sample	1143648011	SS010-SB02-2	8/13/2014 11:47:00PM
Paying sample	1143648012	SS010-SB02-56	8/14/2014 12:06:00AM
Method Blank	1226841		8/14/2014 3:36:00AM
Continuing Calib Verification	1226869		8/14/2014 3:55:00AM

SGS Ref.#	1226865	Instrument Blank	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	Results	RL/CL	Units	Analysis Date
Volatile Fuels Department				
Gasoline Range Organics	0.0365J	0.100	mg/L	08/13/14
Surrogates				
4-Bromofluorobenzene <surr>	93.7	50-150	%	08/13/14

Batch VFC12045
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226867 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.961	96	(75-125)	1.00 mg/L	08/13/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		96	(75-125)		08/13/2014

Batch VFC12045
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226868 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.931	93	(75-125)	1.00 mg/L	08/13/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		120	(75-125)		08/13/2014

Batch VFC12045
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226869 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.909	91	(75-125)	1.00 mg/L	08/14/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		99	(75-125)		08/14/2014

Batch VFC12045
Method AK101
Instrument Agilent 7890A PID/FID

Workorder No. 1143648

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26266

Analysis Batch Id: VFC12045

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226865		8/13/2014 3:27:00PM
Continuing Calib Verification	1226867		8/13/2014 4:24:00PM
Lab Control Sample	1226842		8/13/2014 5:22:00PM
Lab Control Sample Duplicate	1226843		8/13/2014 5:41:00PM
Paying sample	1143648003	SS010-SB01-2	8/13/2014 7:37:00PM
Billable Matrix Spike	1143648004	SS010-SB01-2 MS	8/13/2014 7:56:00PM
Billable Matrix Spike Dup.	1143648005	SS010-SB01-2 MSD	8/13/2014 8:15:00PM
Paying sample	1143648001	SS010-SB01-90	8/13/2014 8:54:00PM
Paying sample	1143648002	SS010-SB01-11	8/13/2014 9:13:00PM
Paying sample	1143648006	SS010-SB03-80	8/13/2014 9:32:00PM
Paying sample	1143648007	SS010-SB03-14D	8/13/2014 9:51:00PM
Paying sample	1143648008	SS010-SB03-14	8/13/2014 10:11:00PM
Continuing Calib Verification	1226868		8/13/2014 10:49:00PM
Paying sample	1143648009	SS010-SB03-2	8/13/2014 11:08:00PM
Paying sample	1143648010	SS010-SB02-13	8/13/2014 11:28:00PM
Paying sample	1143648011	SS010-SB02-2	8/13/2014 11:47:00PM
Paying sample	1143648012	SS010-SB02-56	8/14/2014 12:06:00AM
Method Blank	1226841		8/14/2014 3:36:00AM
Continuing Calib Verification	1226869		8/14/2014 3:55:00AM

SGS Ref.#	1226841	Method Blank	**Printed Date/Time**	09/09/2014	18:15
Client Name	EA Engineering, Science and Tech.		**Prep** **Batch**	VXX26266	
Project Name/#	Cape Romanzof		**Method**	SW5035A	
Matrix	Soil/Solid (dry weight)		**Date**	08/13/2014	

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Gasoline Range Organics	1.16J	2.50	0.750	mg/Kg	08/14/14
Surrogates					
4-Bromofluorobenzene <surr>	93.3	50-150		%	08/14/14
Batch VFC12045					
Method AK101					
Instrument Agilent 7890A PID/FID					

SGS Ref.#	1226842 Lab Control Sample		**Printed Date/Time**	09/09/2014	18:15
	1226843 Lab Control Sample Duplicate		**Prep Batch**	VXX26266	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5035A	
Project Name/#	Cape Romanzof		**Date**	08/13/2014	
Matrix	Soil/Solid (dry weight)				

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	9.96	100	(60-120)			10.0 mg/Kg	08/13/2014
	LCSD	10.4	104		4	(< 20)	10.0 mg/Kg	08/13/2014
Surrogates								
4-Bromofluorobenzene <surr>	LCS		95	(50-150)				08/13/2014
	LCSD		95		0			08/13/2014

Batch VFC12045
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1143648004	Billable Matrix Spike	**Printed Date/Time**	09/09/2014 18:15
	1143648005	Billable Matrix Spike Dup.	**Prep Batch**	VXX26266
			Method	AK101 Extraction (S)
			Date	07/30/2014
Original	1143648003			
Matrix	Soil/Solid (dry weight)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department									
Gasoline Range Organics	BMS	0.932J	8.19	81	(60-120)			8.93 mg/Kg	08/13/2014
	BMSD		8.05	80		2	(< 20)	8.93 mg/Kg	08/13/2014
Surrogates									
4-Bromofluorobenzene <surr>	BMS		0.887	95	(50-150)				08/13/2014
	BMSD		0.869	93		2			08/13/2014

Batch VFC12045
Method AK101
Instrument Agilent 7890A PID/FID

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143648, 1143656

Queue: **VFC** Batch: **12043**

Method: AK101, AK101 8021B, AK101/8021B

Run Date: 08/13/14 01:24 - 08/13/14 13:25

Extraction Batch(es): VXX26261

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: SHERAB TENZIN
Date: 8/13/14

Reviewer's Signature
Printed Name: Candace Ede
Date: 8/18/14

Evaluate Continuing Calibration Report

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1253.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On   : 13 Aug 2014   2:21 am
Operator : ST
Sample   : CCV
Misc   :
ALS Vial : 53   Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:32:35 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj.   :
Signal #1 Phase :   Signal #2 Phase:
Signal #1 Info :   Signal #2 Info :

Min. RRF   :   0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25%   Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	PID-aaa -TFT	1.000	1.000	0.0	0#	0.00
2		PID-benzene	0.000	1.249	0.0	0#	0.00
3	S	PID-1,4-DFB<Surr>	0.000	1.448	0.0	0#	0.00
4		PID-toluene	0.000	14.708	0.0	0#	0.00
5		PID-ethylbenzene	0.000	1.778	0.0	0#	0.00
6		PID-p&m-xylene	0.000	8.017	0.0	0#	0.00
7		PID-o-xylene	0.000	2.495	0.0	0#	0.00
8		PID-BFB<Surr>	0.000	2.936	0.0	0#	0.00

Signal #2

10	S	FID-1,4-DFB #2	341.197	0.000 E3	100.0#	0#	0.00
11	S	FID-TRI-ALPHA #2	245.113	0.000 E3	100.0#	0#	0.00
12	H	FID-GRO #2	296.994	275.099 E3	7.4	93	0.00
13	S	FID-4-BFB<Surr> #2	243.990	0.000 E3	100.0#	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

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

GC QA-QC Check Report

Daily Calibration File : Z:\07\VHA\DATA\073114\3112.d
Time Acquired : 31 Jul 2014 11:15 am

						30364300
File	Sample	Surrogate Recovery %				Internal Standard Responses
1250.d (fails)	IB	111	98	94	93	33935120
1251.d (fails)	NAS	110	98	97	94	33833984
1252.d (fails)	CCV2	117	99	95	96	34266729
1253.d (fails)	CCV	114	113	95	96	33802598
1254.d (fails)	R	111	100	96	95	33912941
1255.d (fails)	MB	109	100	100	92	33996700
1256.d (fails)	LCS GRO	108	109	109	95	34924317
1257.d (fails)	LCSD GRO	109	105	105	97	34843807
1258.d (fails)	1143648013	109	99	99	88	34554969
1259.d (fails)	1143656027	108	97	95	97	34105327
1260.d (fails)	1143656028	111	102	92	98	33647914
1261.d (fails)	1143656029	108	102	93	97	34233879
1262.d (fails)	R	108	98	97	1*	34833993
1263.d (fails)	1143656043	107	98	99	76	34566728
1264.d (fails)	1143656044	108	103	94	69	34695242
1265.d (fails)	1143656045	108	106	107	91	34697472
1266.d (fails)	R	108	99	95	-0*	34465655
1267.d (fails)	1143656024	108	98	97	81	34734072
1268.d (fails)	1143656025	109	97	93	119	33773584
1269.d (fails)	1143656026	108	96	94	161*	34412386
1270.d (fails)	1143656030	109	97	96	79	33875100
1271.d (fails)	1143656031	109	97	95	89	34294013

```
---------------------------------------------------------------------------
1272.d
(fails)  R           109   97   93   95    33895563
---------------------------------------------------------------------------
1273.d
(fails)  CCV         115  112   94   96    33835225
---------------------------------------------------------------------------
1274.d
(fails)  1143656032  1098* 971* 941* 1462*   34139523
---------------------------------------------------------------------------
1275.d
(fails)  1143656033  113   97   90  817*   32140526
---------------------------------------------------------------------------
1276.d
(fails)  1143656034  108   96   96  837*   34275252
---------------------------------------------------------------------------
1277.d
(fails)  1143656035  110   96   94  337*   33531324
---------------------------------------------------------------------------
1278.d
(fails)  1143656036  110   97   93   95    33935816
---------------------------------------------------------------------------
1279.d
(fails)  1143656037  107   96   96  140    34521327
---------------------------------------------------------------------------
1280.d
(fails)  1143656038  113   98   91  482*   32770346
---------------------------------------------------------------------------
1281.d
(fails)  1143656039  109   97   93  199*   33613121
---------------------------------------------------------------------------
1282.d
(fails)  1143656040  110   97   92  157*   33865696
---------------------------------------------------------------------------
1283.d
(fails)  1143656041  116  103   91  737*   32289270
---------------------------------------------------------------------------
1284.d
(fails)  1143656042  110   97   94   73    34364932
---------------------------------------------------------------------------
1285.d
(fails)  1143656021  1023* 967* 1049* 154*   36532885
---------------------------------------------------------------------------
1286.d
(fails)  R           110   99   95   97    34459076
---------------------------------------------------------------------------
1287.d
(fails)  CCV         113  111   96  104    34492348
---------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Wed Aug 13 14:55:54 2014  VHA
```

Instrument Runlog

Instrument: VHA **Calibration Date:** 7/31/2014 **Method:** AK101/BTEX
Operator: ST **Processed By:** ST **Posted By:** ST **Analytical Batch:** 12041
12043

Data Path: Z:\08\VHA\DATA\08122014\

Daily:		As Needed:	
Verify System Date/Time	✓	Refill Water Tank	
General System Inspection	✓	Refill Standards	

Standards:						
	IS	VW8-83-3	**CCV2**	VW8-104-6		
	Cent. DFB	VW8-84-6	**CCV**	VW8-101-1		
	BFB	VW8-62-3	**MeOH**	P-968		
	NAS	VW8-105-2				

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1201.d	1	R	1			8/12/14 9:39 AM	N/A	
1202.d	2	R	1			8/12/14 9:58 AM	N/A	
1203.d	3	R	1			8/12/14 10:18 AM	N/A	
1204.d	4	R	1			8/12/14 10:37 AM	N/A	
1205.d	5	IB	1			8/12/14 10:56 AM	N/A	
1206.d	6	WRONG INJECTION	1			8/12/14 11:21 AM	N/A	
1207.d	7	NAS	1			8/12/14 11:40 AM	N/A	
1208.d	8	CCV2	1			8/12/14 11:59 AM	N/A	
1209.d	9	CCV	1			8/12/14 12:18 PM	N/A	
1210.d	10	R	1			8/12/14 12:37 PM	N/A	
1211.d	11	MB	1			8/12/14 12:56 PM	N/A	
1212.d	12	LCS GRO	1			8/12/14 1:15 PM	N/A	
1213.d	13	LCSD GRO	1			8/12/14 1:34 PM	N/A	
1214.d	14	1143656004-B	1		SOIL	8/12/14 1:53 PM	N/A	
1215.d	15	1143656005-B	1		SOIL	8/12/14 2:12 PM	N/A	
1216.d	16	1143656006-B	1		SOIL	8/12/14 2:31 PM	N/A	
1217.d	17	1143656007-B	1		SOIL	8/12/14 2:50 PM	N/A	
1218.d	18	1143656008-B	1		SOIL	8/12/14 3:09 PM	N/A	
1219.d	19	1143656009-B	1		SOIL	8/12/14 3:28 PM	N/A	
1220.d	20	1143656010-B	1		SOIL	8/12/14 3:47 PM	N/A	
1221.d	21	1143656011-B	1		SOIL	8/12/14 4:07 PM	N/A	
1222.d	22	1143656012-C	1		SOIL	8/12/14 4:26 PM	N/A	
1223.d	23	1143656013-C	1		SOIL	8/12/14 4:45 PM	N/A	
1224.d	24	1143656014-B	1		SOIL	8/12/14 5:04 PM	N/A	
1225.d	25	R	1			8/12/14 5:25 PM	N/A	
1226.d	26	LCS BTEX	1			8/12/14 5:44 PM	N/A	
1227.d	27	LCSD BTEX	1			8/12/14 6:03 PM	N/A	
1228.d	28	CCV2	1			8/12/14 6:22 PM	N/A	
1229.d	29	CCV	1			8/12/14 6:41 PM	N/A	
1230.d	30	1143757001-B PS	1	RR GRO HIGH / CREATED STN	SOIL	8/12/14 7:00 PM	N/A	10X
1231.d	31	1143757001-B MS	1		SOIL	8/12/14 7:20 PM	N/A	
1232.d	32	1143757001-B MSD	1		SOIL	8/12/14 7:39 PM	N/A	
1233.d	33	R	1			8/12/14 7:58 PM	N/A	
1234.d	34	1143656015-B 2X	2	RP	SOIL	8/12/14 8:17 PM	N/A	1
1235.d	35	1143656016-B	1		SOIL	8/12/14 8:36 PM	N/A	
1236.d	36	1143656017-B	1		SOIL	8/12/14 8:56 PM	N/A	
1237.d	37	1143656018-B	1		SOIL	8/12/14 9:15 PM	N/A	
1238.d	38	1143656019-B	1		SOIL	8/12/14 9:34 PM	N/A	
1239.d	39	1143656020-B	1		SOIL	8/12/14 9:53 PM	N/A	
1240.d	40	1143656022-B	1		SOIL	8/12/14 10:12 PM	N/A	
1241.d	41	1143656023-B	1		SOIL	8/12/14 10:32 PM	N/A	

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1242.d	42	1143757001-B 10X	10	100U/50ML	SOIL	8/12/14 10:51 PM	N/A	
1243.d	43	R	1			8/12/14 11:10 PM	N/A	
1244.d	44	CCV2	1			8/12/14 11:29 PM	N/A	
1245.d	45	CCV	1			8/12/14 11:48 PM	N/A	
1246.d	46	R	1			8/13/14 12:07 AM	N/A	
1247.d	47	R	1			8/13/14 12:26 AM	N/A	
1248.d	48	R	1			8/13/14 12:46 AM	N/A	
1249.d	49	R	1			8/13/14 1:05 AM	N/A	
1250.d	50	IB	1			8/13/14 1:24 AM	N/A	
1251.d	51	NAS	1			8/13/14 1:43 AM	N/A	
1252.d	52	CCV2	1			8/13/14 2:02 AM	N/A	
1253.d	53	CCV	1			8/13/14 2:21 AM	N/A	
1254.d	54	R	1			8/13/14 2:40 AM	N/A	
1255.d	55	MB	1			8/13/14 2:59 AM	N/A	
1256.d	56	LCS GRO	1			8/13/14 3:19 AM	N/A	
1257.d	57	LCSD GRO	1			8/13/14 3:38 AM	N/A	
1258.d	58	1143648013-A	1		SOIL	8/13/14 3:57 AM	N/A	
1259.d	59	1143656027-G PS	1		SOIL	8/13/14 4:16 AM	N/A	
1260.d	60	1143656028-G BMS	1		SOIL	8/13/14 4:35 AM	N/A	
1261.d	61	1143656029-G BMSD	1		SOIL	8/13/14 4:54 AM	N/A	
1262.d	62	R	1			8/13/14 5:13 AM	N/A	
1263.d	63	1143656043-E PS	1		SOIL	8/13/14 5:33 AM	N/A	
1264.d	64	1143656044-E BMS	1		SOIL	8/13/14 5:52 AM	N/A	
1265.d	65	1143656045-E BMSD	1		SOIL	8/13/14 6:11 AM	N/A	
1266.d	66	R	1			8/13/14 6:30 AM	N/A	
1267.d	67	1143656024-B	1		SOIL	8/13/14 6:49 AM	N/A	
1268.d	68	1143656025-B	1		SOIL	8/13/14 7:08 AM	N/A	
1269.d	69	1143656026-B	1		SOIL	8/13/14 7:27 AM	N/A	
1270.d	70	1143656030-B	1		SOIL	8/13/14 7:50 AM	N/A	
1271.d	71	1143656031-B	1		SOIL	8/13/14 8:09 AM	N/A	
1272.d	72	R	1			8/13/14 8:38 AM	N/A	
1273.d	73	CCV	1			8/13/14 8:57 AM	N/A	
1274.d	74	1143656032-B 10X	10	100U/50ML	SOIL	8/13/14 9:16 AM	N/A	
1275.d	75	1143656033-B	1	RP	SOIL	8/13/14 9:35 AM	N/A	10X
1276.d	76	1143656034-B	1	RP	SOIL	8/13/14 9:55 AM	N/A	10X
1277.d	77	1143656035-B	1		SOIL	8/13/14 10:14 AM	N/A	
1278.d	78	1143656036-B	1		SOIL	8/13/14 10:33 AM	N/A	
1279.d	79	1143656037-B	1		SOIL	8/13/14 10:52 AM	N/A	
1280.d	80	1143656038-B	1	RP	SOIL	8/13/14 11:11 AM	N/A	10X
1281.d	81	1143656039-C	1		SOIL	8/13/14 11:30 AM	N/A	
1282.d	82	1143656040-B	1		SOIL	8/13/14 11:49 AM	N/A	
1283.d	83	1143656041-B	1		SOIL	8/13/14 12:08 PM	N/A	
1284.d	84	1143656042-B	1	RP SUSPECTED CARRIER OVER	SOIL	8/13/14 12:27 PM	N/A	1X
1285.d	85	1143656021-B 10X	10	RP SUSPECTED CARRIER OVER	SOIL	8/13/14 12:47 PM	N/A	1X
1286.d	86	R	1			8/13/14 1:06 PM	N/A	
1287.d	87	CCV	1			8/13/14 1:25 PM	N/A	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1250.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 1:24 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 50 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:31:55 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33935120	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47607041	55.461 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.92%
10) S	FID-1,4-DFB #2	3.748	16802089	49.245 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.49%
11) S	FID-TRI-ALPHA #2	4.681	11484871	46.855 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.71%
13) S	FID-4-BFB<Surr> #2	8.671	10270817	46.655 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.31%
	Target Compounds			
2)	PID-benzene	0.000	0	N.D. ppb
4)	PID-toluene	5.904	54836	0.026 ppb
5)	PID-ethylbenzene	7.554	10302	0.005 ppb
6)	PID-p&m-xylene	7.913	209172	0.095 ppb
7)	PID-o-xylene	8.303	48273	0.026 ppb
8)	PID-BFB<Surr>	8.670	98685634	51.201 ppb
12) H	FID-GRO #2	5.717	7125581	23.992 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

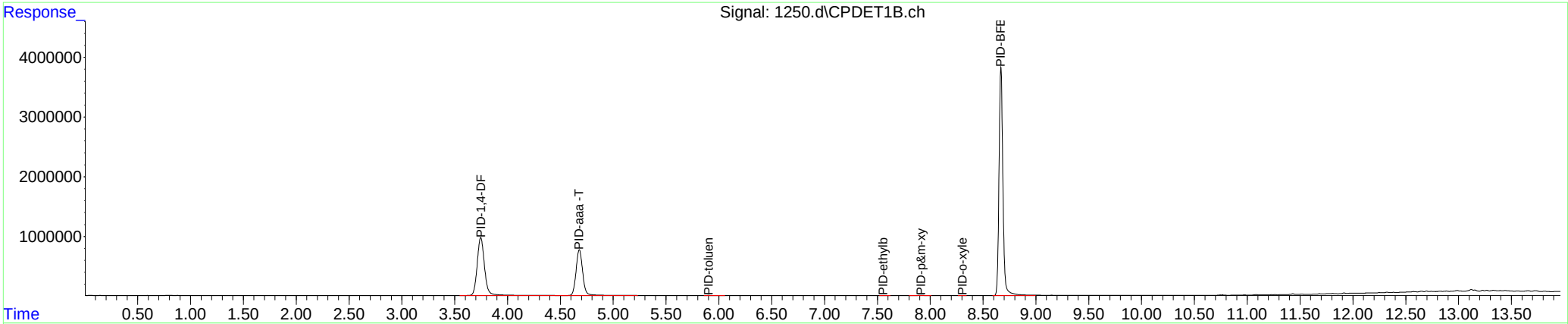
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1250.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 1:24 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 50 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:31:55 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1252.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 2:02 am
Operator : ST
Sample : CCV2
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:32:17 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.681	34266729	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	50631655	58.413 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	116.83%
10) S	FID-1,4-DFB #2	3.748	16959546	49.706 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	99.41%
11) S	FID-TRI-ALPHA #2	4.682	11636069	47.472 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.94%
13) S	FID-4-BFB<Surr> #2	8.671	10527906	47.833 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.67%
	Target Compounds			
2)	PID-benzene	3.325	252380901	110.084 ppb
4)	PID-toluene	5.901	239006064	110.633 ppb
5)	PID-ethylbenzene	7.656	208563124	108.694 ppb
6)	PID-p&m-xylene	7.908	493972548	223.097 ppb
7)	PID-o-xylene	8.301	210130490	110.847 ppb
8)	PID-BFB<Surr>	8.670	99788322	51.273 ppb
12) H	FID-GRO #2	5.717	307366459	1034.925 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

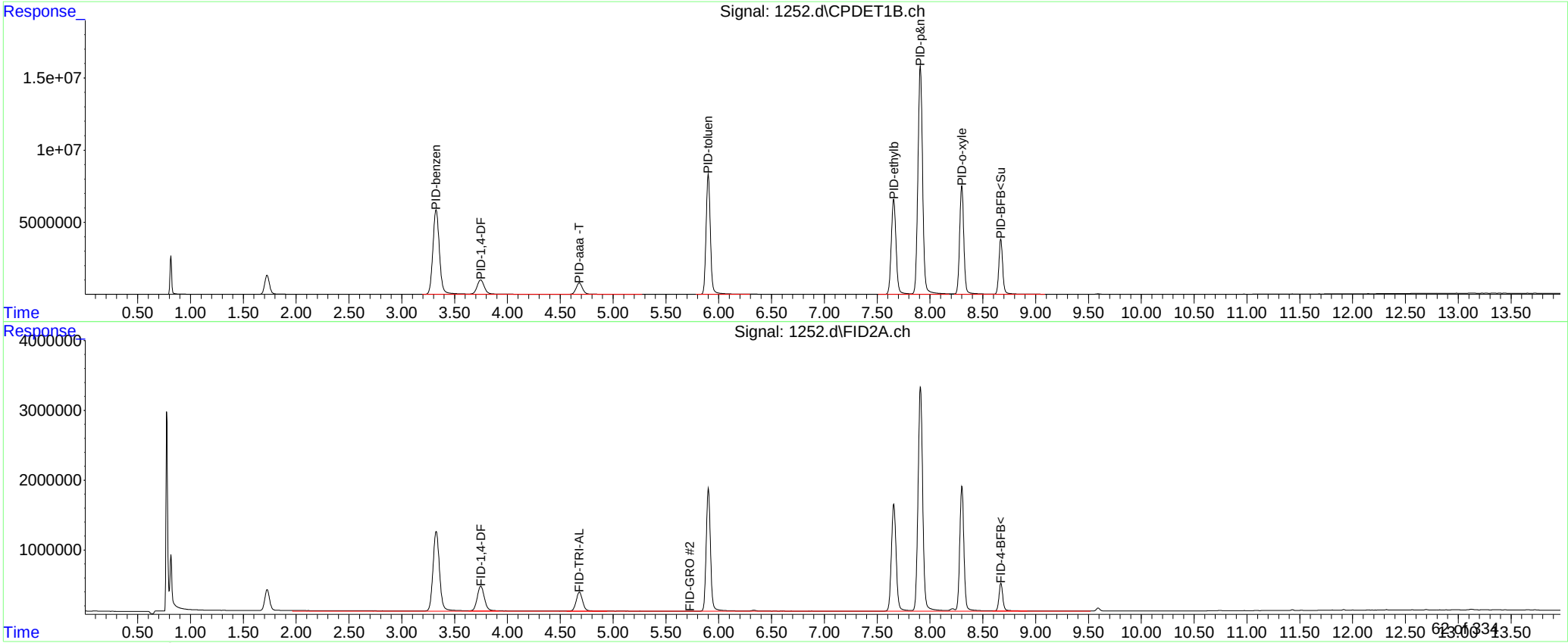
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1252.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 2:02 am
Operator : ST
Sample : CCV2
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:32:17 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1253.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 2:21 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:32:35 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I PID-aaa -TFT	4.681	33802598	50.000 ppb
System Monitoring Compounds			
3) S PID-1,4-DFB<Surr>	3.748	48937745	57.234 ppb
Spiked Amount 50.000 Range 80 - 120		Recovery = 114.47%	
10) S FID-1,4-DFB #2	3.749	19223624	56.342 ppb
Spiked Amount 50.000 Range 80 - 120		Recovery = 112.68%	
11) S FID-TRI-ALPHA #2	4.682	11604188	47.342 ppb
Spiked Amount 50.000 Range 50 - 150		Recovery = 94.68%	
13) S FID-4-BFB<Surr> #2	8.671	10571619	48.033 ppb
Spiked Amount 50.000 Range 50 - 150		Recovery = 96.07%	
Target Compounds			
2) PID-benzene	3.325	42227247	18.672 ppb
4) PID-toluene	5.901	497179427	233.299 ppb
5) PID-ethylbenzene	7.656	60098672	31.751 ppb
6) PID-p&m-xylene	7.905	270979701	124.065 ppb
7) PID-o-xylene	8.301	84343505	45.103 ppb
8) PID-BFB<Surr>	8.670	99254060	51.698 ppb
12) H FID-GRO #2	5.717	275099100	926.278 ppb
SemiQuant Compounds - Not Calibrated on this Instrument			

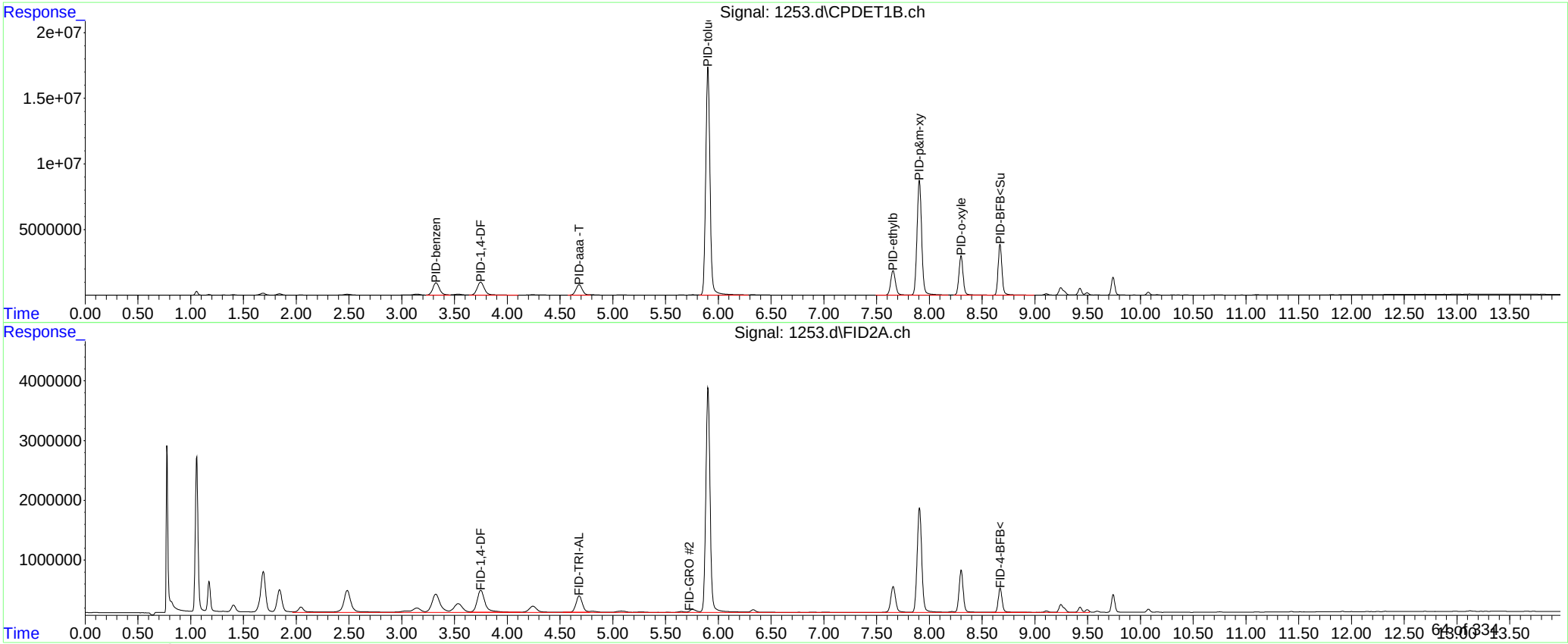
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1253.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 2:21 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:32:35 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1255.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 2:59 am
Operator : ST
Sample : MB
Misc :
ALS Vial : 55 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:33:00 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33996700	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	46713748	54.321 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	108.64%
10) S	FID-1,4-DFB #2	3.748	17002585	49.832 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	99.66%
11) S	FID-TRI-ALPHA #2	4.681	12196077	49.757 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.51%
13) S	FID-4-BFB<Surr> #2	8.671	10145600	46.081 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.16%
	Target Compounds			
2)	PID-benzene	3.327	56456	0.025 ppb
4)	PID-toluene	5.904	173472	0.081 ppb
5)	PID-ethylbenzene	7.662	50920	0.027 ppb
6)	PID-p&m-xylene	7.913	346344	0.158 ppb
7)	PID-o-xylene	8.304	131277	0.070 ppb
8)	PID-BFB<Surr>	8.670	97357953	50.421 ppb
12) H	FID-GRO #2	5.717	14288449	48.110 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

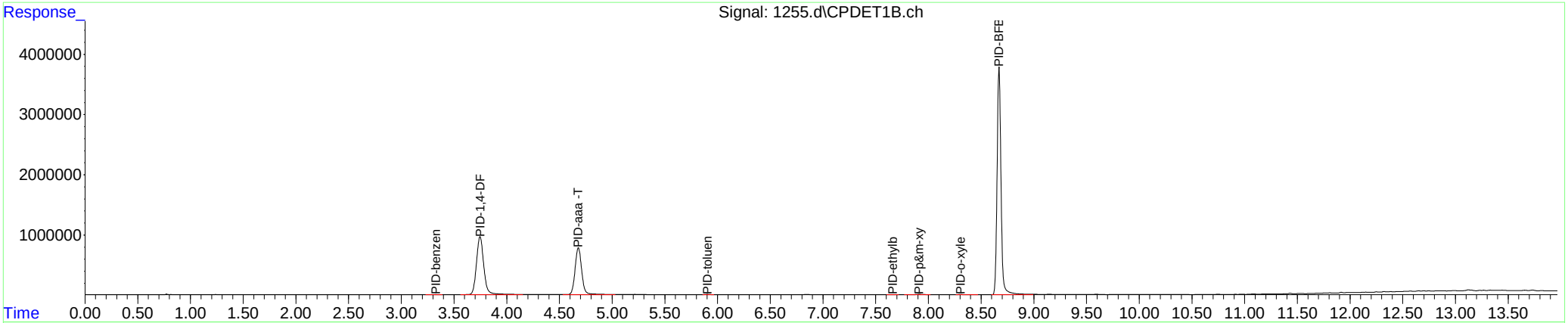
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1255.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 2:59 am
Operator : ST
Sample : MB
Misc :
ALS Vial : 55 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:33:00 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1256.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 3:19 am
Operator : ST
Sample : LCS GRO
Misc :
ALS Vial : 56 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:33:16 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	34924317	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47735136	54.035 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	108.07%
10) S	FID-1,4-DFB #2	3.748	18571026	54.429 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	108.86%
11) S	FID-TRI-ALPHA #2	4.681	13318992	54.338 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	108.68%
13) S	FID-4-BFB<Surr> #2	8.671	10476604	47.598 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.20%
	Target Compounds			
2)	PID-benzene	3.324	16839488	7.207 ppb
4)	PID-toluene	5.901	201680108	91.598 ppb
5)	PID-ethylbenzene	7.657	24776514	12.669 ppb
6)	PID-p&m-xylene	7.905	110833816	49.114 ppb
7)	PID-o-xylene	8.301	34430932	17.821 ppb
8)	PID-BFB<Surr>	8.670	98754879	49.786 ppb
12) H	FID-GRO #2	5.717	119795523	403.360 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

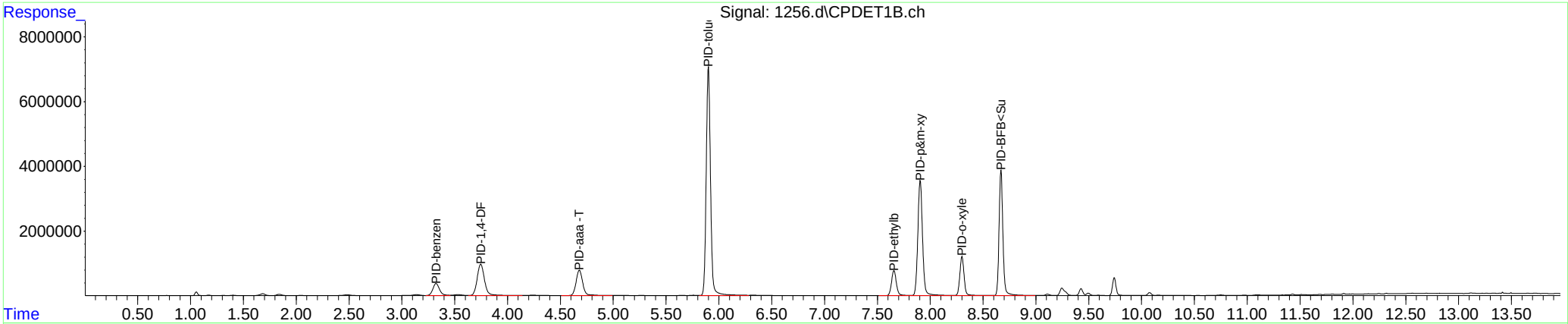
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1256.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 3:19 am
Operator : ST
Sample : LCS GRO
Misc :
ALS Vial : 56 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:33:16 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1257.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 3:38 am
Operator : ST
Sample : LCSD GRO
Misc :
ALS Vial : 57 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:33:27 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	34843807	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48114727	54.590 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.18%
10) S	FID-1,4-DFB #2	3.747	17945957	52.597 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	105.19%
11) S	FID-TRI-ALPHA #2	4.681	12810902	52.265 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	104.53%
13) S	FID-4-BFB<Surr> #2	8.671	10626532	48.285 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.57%
	Target Compounds			
2)	PID-benzene	3.324	16665894	7.149 ppb
4)	PID-toluene	5.901	197538621	89.924 ppb
5)	PID-ethylbenzene	7.657	24460520	12.537 ppb
6)	PID-p&m-xylene	7.905	108057180	47.994 ppb
7)	PID-o-xylene	8.301	33771424	17.520 ppb
8)	PID-BFB<Surr>	8.670	101115065	51.094 ppb
12) H	FID-GRO #2	5.717	119733007	403.150 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

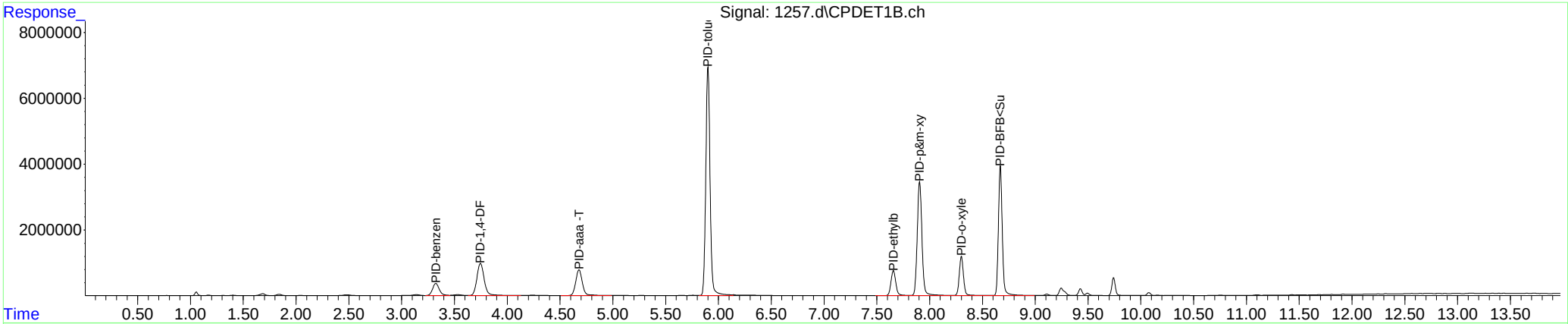
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1257.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 3:38 am
Operator : ST
Sample : LCSD GRO
Misc :
ALS Vial : 57 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 07:33:27 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1258.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 3:57 am
Operator : ST
Sample : 1143648013-A
Misc :
ALS Vial : 58 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 08:34:28 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	34554969	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47418990	54.251 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	108.50%
10) S	FID-1,4-DFB #2	3.748	16804084	49.250 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.50%
11) S	FID-TRI-ALPHA #2	4.681	12175692	49.674 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.35%
13) S	FID-4-BFB<Surr> #2	8.671	9741819	44.231 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	88.46%
	Target Compounds			
2)	PID-benzene	3.320	57757	0.025 ppb
4)	PID-toluene	5.903	497529	0.228 ppb
5)	PID-ethylbenzene	7.661	64570	0.033 ppb
6)	PID-p&m-xylene	7.911	292977	0.131 ppb
7)	PID-o-xylene	8.304	120723	0.063 ppb
8)	PID-BFB<Surr>	8.670	93171442	47.473 ppb
12) H	FID-GRO #2	5.717	14973853	50.418 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

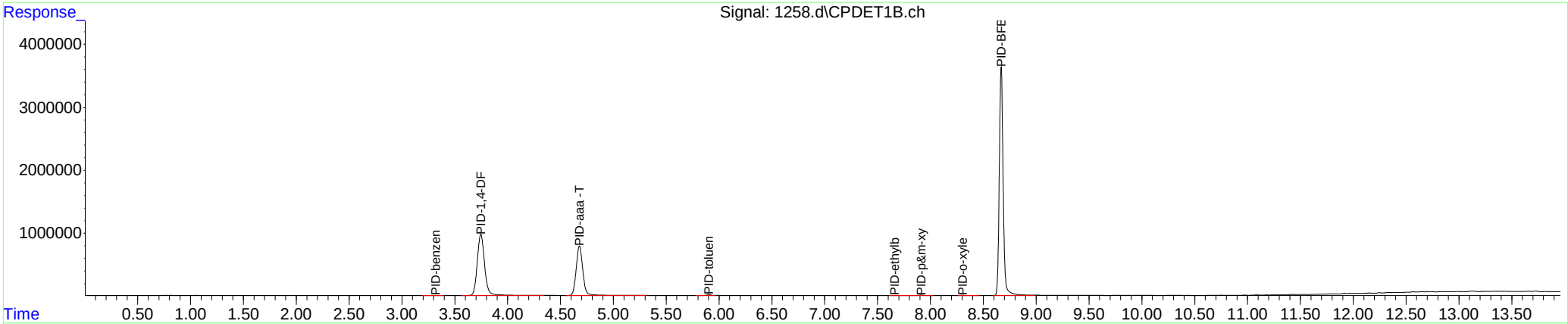
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1258.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 3:57 am
Operator : ST
Sample : 1143648013-A
Misc :
ALS Vial : 58 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 08:34:28 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1273.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 8:57 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 11:01:13 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33835225	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	49170364	57.451 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	114.90%
10) S	FID-1,4-DFB #2	3.748	19158198	56.150 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	112.30%
11) S	FID-TRI-ALPHA #2	4.681	11572808	47.214 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.43%
13) S	FID-4-BFB<Surr> #2	8.671	10563118	47.994 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.99%
	Target Compounds			
2)	PID-benzene	3.325	43178403	19.074 ppb
4)	PID-toluene	5.901	506225206	237.315 ppb
5)	PID-ethylbenzene	7.656	59948596	31.641 ppb
6)	PID-p&m-xylene	7.904	270992462	123.951 ppb
7)	PID-o-xylene	8.300	83739299	44.737 ppb
8)	PID-BFB<Surr>	8.669	101291506	52.709 ppb
12) H	FID-GRO #2	5.717	271754499	915.017 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

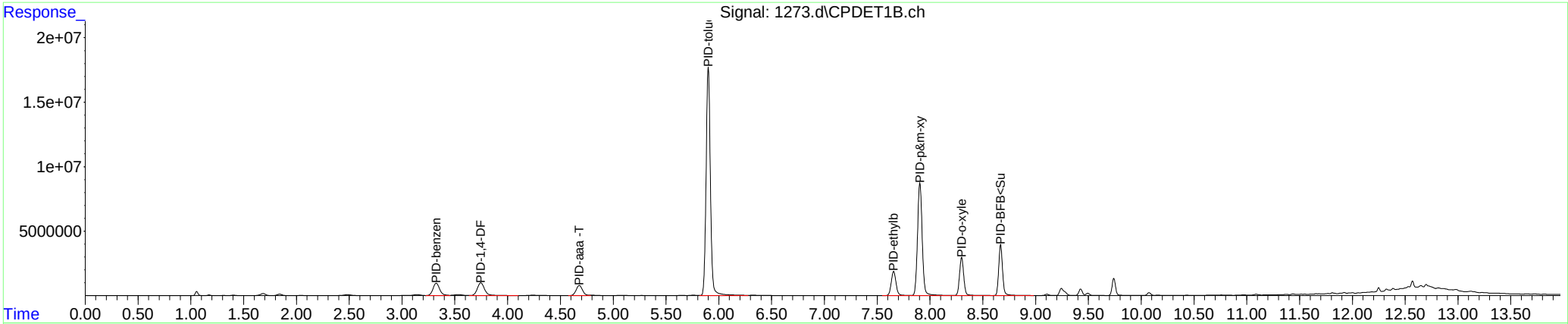
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1273.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 8:57 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 11:01:13 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1287.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 1:25 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 87 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 13:43:08 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	34492348	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	49355299	56.568 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	113.14%
10) S	FID-1,4-DFB #2	3.748	19013437	55.726 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	111.45%
11) S	FID-TRI-ALPHA #2	4.681	11745299	47.918 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.84%
13) S	FID-4-BFB<Surr> #2	8.677	11438243	52.004 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	104.01%
	Target Compounds			
2)	PID-benzene	3.324	42944663	18.609 ppb
4)	PID-toluene	5.900	505476563	232.449 ppb
5)	PID-ethylbenzene	7.656	60142745	31.139 ppb
6)	PID-p&m-xylene	7.905	268227103	120.349 ppb
7)	PID-o-xylene	8.300	82781606	43.383 ppb
8)	PID-BFB<Surr>	8.674	105042422	53.619 ppb
12) H	FID-GRO #2	5.717	276235024	930.103 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

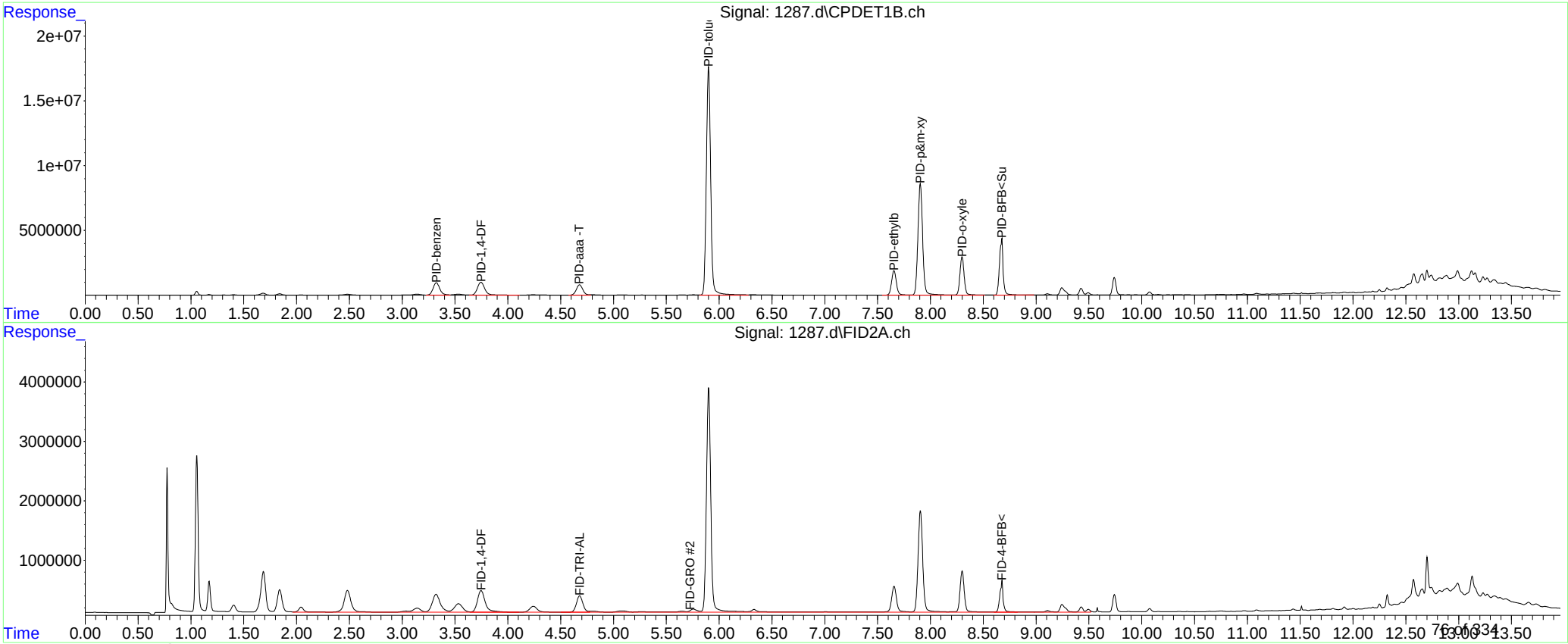
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08122014\
Data File : 1287.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 1:25 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 87 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 13:43:08 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Save Page | Fill Weights | Post Results

VXX Preparation Tare & Start Amounts

Lims Code: VF.GRO..P2

Analysis Start Date/Time: 08/12/2014 08:00:00
Finish Date/Time:
Technician: ST

Posted By: ST
Batch Released By:

Queue & Batch: VXX-26261

#	AFlag	WO No.	Type	Tare Wt g	Tare & Sample g	COMMENTS FLAGS	SCHED	BTL #	WT_Date (yyyy/mm/dd hh:mm)
01	C	1226559	MB	1.00000	70.78000		17298040		
02	C	1226560	LCS	1.00000	70.78000		17298042		
03	C	1226561	LCSD	1.00000	70.78000		17298044		
04	C	1143648013	TB	118.64000	188.14100		17284914	A	2014/08/12 10:00
05	C	1143656024	PS	126.40000	209.61500		17284156	B	2014/08/07 17:20
06	C	1143656025	PS	126.19000	210.02900		17284165	B	2014/08/07 17:20
07	C	1143656026	PS	128.30000	221.94000		17284174	B	2014/08/07 17:20
08	C	1143656027	PS	126.52000	196.95700		17284183	G	2014/08/07 17:20
09	C	1143656028	BMS	126.52	196.957		17284199	G	2014/08/07 17:20
10	C	1143656029	BMSD	126.52	196.957		17284210	G	2014/08/07 17:20
11	C	1143656030	PS	127.97	216.226		17284219	B	2014/08/07 17:20
12	C	1143656031	PS	126.7	192.199		17284228	B	2014/08/07 17:20
13	C	1143656032	PS	128.94	208.201		17284239	C	2014/08/07 17:20
14	C	1143656035	PS	128.32	207.746		17284268	B	2014/08/07 17:20
15	C	1143656036	PS	126.19	210.768		17284277	B	2014/08/07 17:20
16	C	1143656037	PS	126.58	217.519		17284286	B	2014/08/07 17:20
17	C	1143656039	PS	126.83	220.88		17284308	C	2014/08/07 17:20
18	C	1143656040	PS	126.99	208.759		17284317	B	2014/08/07 17:20
19	C	1143656041	PS	128.72000	216.58900		17284326	B	2014/08/07 17:20
20	C	1143656043	PS	126.64000	186.98400		17284348	E	2014/08/07 17:20
21	C	1143656044	BMS	126.64000	186.98400		17284365	E	2014/08/07 17:20
22	C	1143656045	BMSD	126.64000	186.98400		17284382	E	2014/08/07 17:20

NOTES

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143648, 1143656, 1143689

Queue: **VFC** Batch: **12045**

Method: AK101, AK101 8021B, AK101/8021B

Run Date: 08/13/14 15:27 - 08/14/14 03:55

Extraction Batch(es): VXX26266

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: SHERAB TENZIN
Date: 8/14/14

Reviewer's Signature
Printed Name: Candace Ede
Date: 8/18/14

Evaluate Continuing Calibration Report

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1308.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On   : 13 Aug 2014   4:24 pm
Operator : ST
Sample   : CCV
Misc   :
ALS Vial : 8   Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 16:39:14 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj.   :
Signal #1 Phase :   Signal #2 Phase:
Signal #1 Info :   Signal #2 Info :

Min. RRF   :   0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25%   Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	PID-aaa -TFT	1.000	1.000	0.0	0#	0.00
2		PID-benzene	0.000	1.291	0.0	0#	0.00
3	S	PID-1,4-DFB<Surr>	0.000	1.443	0.0	0#	0.00
4		PID-toluene	0.000	15.111	0.0	0#	0.00
5		PID-ethylbenzene	0.000	1.807	0.0	0#	0.00
6		PID-p&m-xylene	0.000	8.244	0.0	0#	0.00
7		PID-o-xylene	0.000	2.544	0.0	0#	0.00
8		PID-BFB<Surr>	0.000	3.002	0.0	0#	0.00
Signal #2							
10	S	FID-1,4-DFB #2	341.197	0.000 E3	100.0#	0#	0.00
11	S	FID-TRI-ALPHA #2	245.113	0.000 E3	100.0#	0#	0.00
12	H	FID-GRO #2	296.994	285.323 E3	3.9	97	0.00
13	S	FID-4-BFB<Surr> #2	243.990	0.000 E3	100.0#	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

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

GC QA-QC Check Report

Daily Calibration File : Z:\07\VHA\DATA\073114\3112.d
Time Acquired : 31 Jul 2014 11:15 am

30364300

File	Sample	Surrogate Recovery %				Internal Standard Responses
1305.d						
(fails)	IB	107	98	96	94	35152489
1306.d						
(fails)	NAS	107	98	100	90	34514621
1307.d						
(fails)	CCV2	115	101	101	97	34741903
1308.d						
(fails)	CCV	114	113	96	96	33842052
1309.d						
(fails)	R	104	99	103	92	36264292
1310.d						
(fails)	MB	107	97	98	88	34779366
1311.d						
(fails)	LCS GRO	109	101	97	95	34680995
1312.d						
(fails)	LCSD GRO	109	102	93	95	34606893
1313.d						
(fails)	R	108	97	96	-0*	34895775
1314.d						
(fails)	R	108	97	96	-0*	34549757
1315.d						
(fails)	1143656015	100	98	104	51	37884119
1316.d						
(fails)	1143656021	104	98	100	193*	35985317
1317.d						
(fails)	1143656042	103	97	100	84	36765168
1318.d						
(fails)	1143648003	100	97	104	81	37931031
1319.d						
(fails)	1143648004	101	102	104	80	37756507
1320.d						
(fails)	1143648005	99	101	105	78	38217772
1321.d						
(fails)	R	74*	71*	102	-0*	37541331
1322.d						
(fails)	1143648001	101	96	101	66	37644039
1323.d						
(fails)	1143648002	101	97	101	71	37742946
1324.d						
(fails)	1143648006	100	98	104	75	37676134
1325.d						
(fails)	1143648007	102	99	103	76	37413356
1326.d						
(fails)	1143648008	105	100	102	77	36378639

1327.d						
(fails)	R	102	100	102	98	37240648
1328.d						
(fails)	CCV	107	119	107	120	36706750
1329.d						
(fails)	1143648009	105	99	104	64	36072533
1330.d						
(fails)	1143648010	105	98	103	74	36164042
1331.d						
(fails)	1143648011	105	86	99	41*	36235871
1332.d						
(fails)	1143648012	105	98	98	81	36429806
1333.d						
(fails)	1143689001	113	125*	92	722*	33762985
1334.d						
(fails)	1143689002	111	101	93	203*	33977906
1335.d						
(fails)	1143689003	104	98	100	81	36615299
1336.d						
(fails)	1143689016	112	116	92	572*	33578432
1337.d						
(fails)	1143656033	1037*	968*	977*	1061*	36644667
1338.d						
(fails)	1143656038	1037*	967*	1000*	489*	36811428
1339.d						
(fails)	1143656034	1043*	964*	976*	721*	36344113
1340.d						
(fails)	R	103	98	99	99	37338175
1341.d						
(fails)	R	104	97	99	97	36313018
1342.d						
(fails)	R	103	94	96	96	36039762
1344.d						
(fails)	MB	103	97	101	93	37129424
1345.d						
(fails)	CCV	102	113	104	99	38443716

(fails) - fails 24hr time check * - fails criteria

Created: Thu Aug 14 11:12:08 2014 VHA

Instrument Runlog

Instrument: VHA **Calibration Date:** 7/31/2014 **Method:** AK101/BTEX
Operator: ST **Processed By:** ST **Posted By:** ST **Analytical Batch:** 12045

Data Path: Z:\08\VHA\DATA\08132014\

Daily:		As Needed:	
Verify System Date/Time	☑	Refill Water Tank	☐
General System Inspection	☑	Refill Standards	☐

Standards:

IS	VW8-83-3	**CCV2**	VW8-104-6		
Cent. DFB	VW8-84-6	**CCV**	VW8-101-1		
BFB	VW8-62-3	**MeOH**	P-968		
NAS	VW8-105-2				

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1301.d	1	R	1			8/13/14 2:10 PM	N/A	
1302.d	2	R	1			8/13/14 2:29 PM	N/A	
1303.d	3	R	1			8/13/14 2:49 PM	N/A	
1304.d	4	R	1			8/13/14 3:08 PM	N/A	
1305.d	5	IB	1			8/13/14 3:27 PM	N/A	
1306.d	6	NAS	1			8/13/14 3:46 PM	N/A	
1307.d	7	CCV2	1	NU		8/13/14 4:05 PM	N/A	
1308.d	8	CCV	1			8/13/14 4:24 PM	N/A	
1309.d	9	R	1			8/13/14 4:44 PM	N/A	
1310.d	10	MB	1	RR FOR DOD		8/13/14 5:03 PM	N/A	
1311.d	11	LCS GRO	1			8/13/14 5:22 PM	N/A	
1312.d	12	LCSD GRO	1			8/13/14 5:41 PM	N/A	
1313.d	13	R	1			8/13/14 6:00 PM	N/A	
1314.d	14	R	1			8/13/14 6:19 PM	N/A	
1315.d	15	1143656015-B	1		SOIL	8/13/14 6:39 PM	N/A	
1316.d	16	1143656021-B	1		SOIL	8/13/14 6:59 PM	N/A	
1317.d	17	1143656042-B	1		SOIL	8/13/14 7:18 PM	N/A	
1318.d	18	1143648003-B PS	1		SOIL	8/13/14 7:37 PM	N/A	
1319.d	19	1143648004-B BMS	1		SOIL	8/13/14 7:56 PM	N/A	
1320.d	20	1143648005-B BMSD	1		SOIL	8/13/14 8:15 PM	N/A	
1321.d	21	R	1			8/13/14 8:34 PM	N/A	
1322.d	22	1143648001-B	1		SOIL	8/13/14 8:54 PM	N/A	
1323.d	23	1143648002-B	1		SOIL	8/13/14 9:13 PM	N/A	
1324.d	24	1143648006-B	1		SOIL	8/13/14 9:32 PM	N/A	
1325.d	25	1143648007-B	1		SOIL	8/13/14 9:51 PM	N/A	
1326.d	26	1143648008-B	1		SOIL	8/13/14 10:11 PM	N/A	
1327.d	27	R	1			8/13/14 10:30 PM	N/A	
1328.d	28	CCV	1			8/13/14 10:49 PM	N/A	
1329.d	29	1143648009-B	1		SOIL	8/13/14 11:08 PM	N/A	
1330.d	30	1143648010-B	1		SOIL	8/13/14 11:28 PM	N/A	
1331.d	31	1143648011-B	1		SOIL	8/13/14 11:47 PM	N/A	
1332.d	32	1143648012-B	1		SOIL	8/14/14 12:06 AM	N/A	
1333.d	33	1143689001-B	1	RP	SOIL	8/14/14 12:25 AM	N/A	10X
1334.d	34	1143689002-B	1		SOIL	8/14/14 12:44 AM	N/A	
1335.d	35	1143689003-B	1	RP SUSPECTED CARRIER OVER	SOIL	8/14/14 1:03 AM	N/A	1X
1336.d	36	1143689016-B	1		SOIL	8/14/14 1:22 AM	N/A	
1337.d	37	1143656033-B 10X	1	100UL/50ML	SOIL	8/14/14 1:41 AM	N/A	
1338.d	38	1143656038-B 10X	1	100UL/50ML	SOIL	8/14/14 2:00 AM	N/A	
1339.d	39	1143656034-B 10X	1	100UL/50ML	SOIL	8/14/14 2:20 AM	N/A	
1340.d	40	R	1			8/14/14 2:39 AM	N/A	
1341.d	41	R	1			8/14/14 2:58 AM	N/A	

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1342.d	42	R	1			8/14/14 3:17 AM	N/A	
1344.d	44	MB	1			8/14/14 3:36 AM	N/A	
1345.d	45	CCV	1			8/14/14 3:55 AM	N/A	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1305.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 3:27 pm
Operator : ST
Sample : IB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 15:50:04 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	35152489	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47712575	53.659 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	107.32%
10) S	FID-1,4-DFB #2	3.747	16699206	48.943 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	97.89%
11) S	FID-TRI-ALPHA #2	4.680	11726642	47.842 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.68%
13) S	FID-4-BFB<Surr> #2	8.671	10310195	46.835 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.67%
	Target Compounds			
2)	PID-benzene	3.317	17682	0.008 ppb
4)	PID-toluene	5.904	51939	0.023 ppb
5)	PID-ethylbenzene	7.555	11662	0.006 ppb
6)	PID-p&m-xylene	7.912	141138	0.062 ppb
7)	PID-o-xylene	8.299	79918	0.041 ppb
8)	PID-BFB<Surr>	8.670	100233142	50.203 ppb
12) H	FID-GRO #2	5.717	10824184	36.446 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

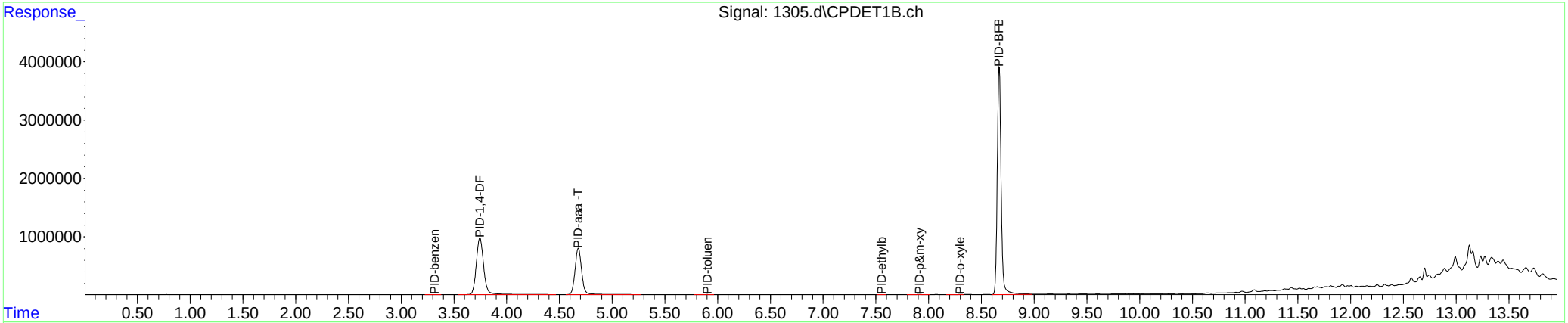
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1305.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 3:27 pm
Operator : ST
Sample : IB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 15:50:04 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1308.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 4:24 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 16:39:14 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33842052	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	48840702	57.054 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	114.11%
10) S	FID-1,4-DFB #2	3.749	19309887	56.595 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	113.19%
11) S	FID-TRI-ALPHA #2	4.681	11824529	48.241 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.48%
13) S	FID-4-BFB<Surr> #2	8.671	10521798	47.805 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.61%
	Target Compounds			
2)	PID-benzene	3.325	43676027	19.290 ppb
4)	PID-toluene	5.901	511382943	239.684 ppb
5)	PID-ethylbenzene	7.657	61159776	32.274 ppb
6)	PID-p&m-xylene	7.905	278986739	127.582 ppb
7)	PID-o-xylene	8.301	86102671	45.990 ppb
8)	PID-BFB<Surr>	8.670	101600367	52.859 ppb
12) H	FID-GRO #2	5.717	285322579	960.701 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

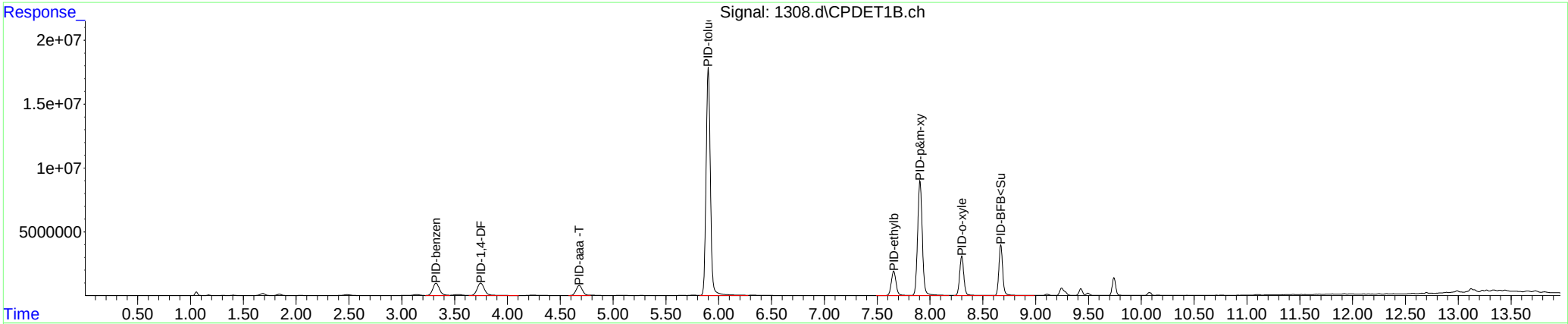
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1308.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 4:24 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 16:39:14 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1311.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 5:22 pm
Operator : ST
Sample : LCS GRO
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 17:43:08 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	34680995	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47841184	54.535 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.07%
10) S	FID-1,4-DFB #2	3.748	17147729	50.258 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	100.52%
11) S	FID-TRI-ALPHA #2	4.681	11923702	48.646 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.29%
13) S	FID-4-BFB<Surr> #2	8.671	10423926	47.357 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.71%
	Target Compounds			
2)	PID-benzene	3.325	16372959	7.056 ppb
4)	PID-toluene	5.901	197964518	90.541 ppb
5)	PID-ethylbenzene	7.657	23225141	11.959 ppb
6)	PID-p&m-xylene	7.905	108049032	48.216 ppb
7)	PID-o-xylene	8.301	33409625	17.414 ppb
8)	PID-BFB<Surr>	8.670	101438421	51.498 ppb
12) H	FID-GRO #2	5.717	118285777	398.277 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

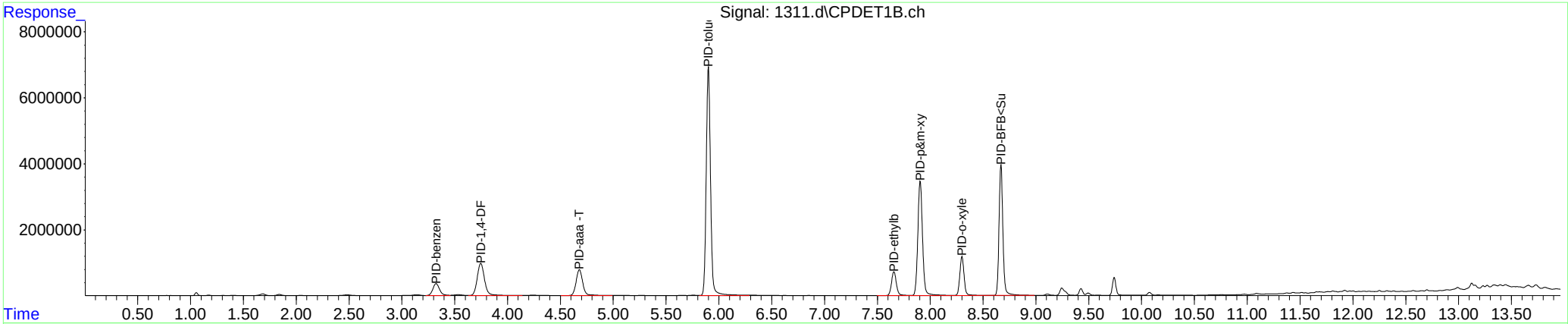
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1311.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 5:22 pm
Operator : ST
Sample : LCS GRO
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 17:43:08 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1312.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 5:41 pm
Operator : ST
Sample : LCSD GRO
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 18:01:17 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	34606893	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47859276	54.672 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.34%
10) S	FID-1,4-DFB #2	3.747	17344590	50.835 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	101.67%
11) S	FID-TRI-ALPHA #2	4.681	11346703	46.292 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.58%
13) S	FID-4-BFB<Surr> #2	8.672	10406677	47.277 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.55%
	Target Compounds			
2)	PID-benzene	3.324	17198398	7.428 ppb
4)	PID-toluene	5.901	207756874	95.223 ppb
5)	PID-ethylbenzene	7.657	24442731	12.613 ppb
6)	PID-p&m-xylene	7.906	113628988	50.815 ppb
7)	PID-o-xylene	8.301	35120706	18.345 ppb
8)	PID-BFB<Surr>	8.670	97961552	49.839 ppb
12) H	FID-GRO #2	5.717	123490442	415.801 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

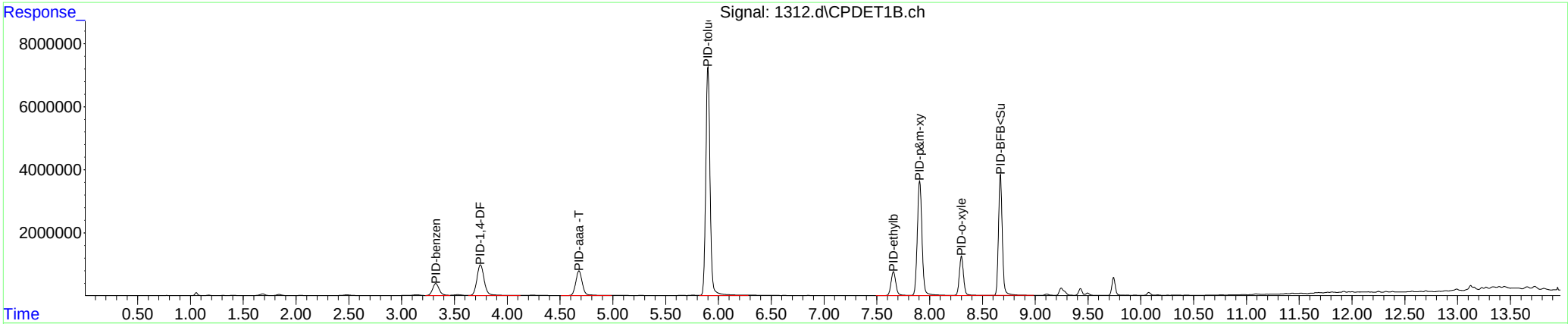
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1312.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 5:41 pm
Operator : ST
Sample : LCSD GRO
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 18:01:17 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1318.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 7:37 pm
Operator : ST
Sample : 1143648003-D PS (Sig #1); 1143648003-B PS (Sig #2)
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 19:57:42 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	37931031	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48057714	50.088 ppb
Spiked Amount	50.000 Range 80 - 120		Recovery =	100.18%
10) S	FID-1,4-DFB #2	3.747	16589831	48.622 ppb
Spiked Amount	50.000 Range 80 - 120		Recovery =	97.24%
11) S	FID-TRI-ALPHA #2	4.680	12705862	51.837 ppb
Spiked Amount	50.000 Range 50 - 150		Recovery =	103.67%
13) S	FID-4-BFB<Surr> #2	8.671	8918711	40.460 ppb
Spiked Amount	50.000 Range 50 - 150		Recovery =	80.92%
	Target Compounds			
2)	PID-benzene	3.323	29825	0.012 ppb
4)	PID-toluene	5.904	304862	0.127 ppb
5)	PID-ethylbenzene	7.659	1176302	0.554 ppb
6)	PID-p&m-xylene	7.910	211078	0.086 ppb
7)	PID-o-xylene	8.291	80358	0.038 ppb
8)	PID-BFB<Surr>	8.670	82523024	38.305 ppb
12) H	FID-GRO #2	5.717	12442987	41.896 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

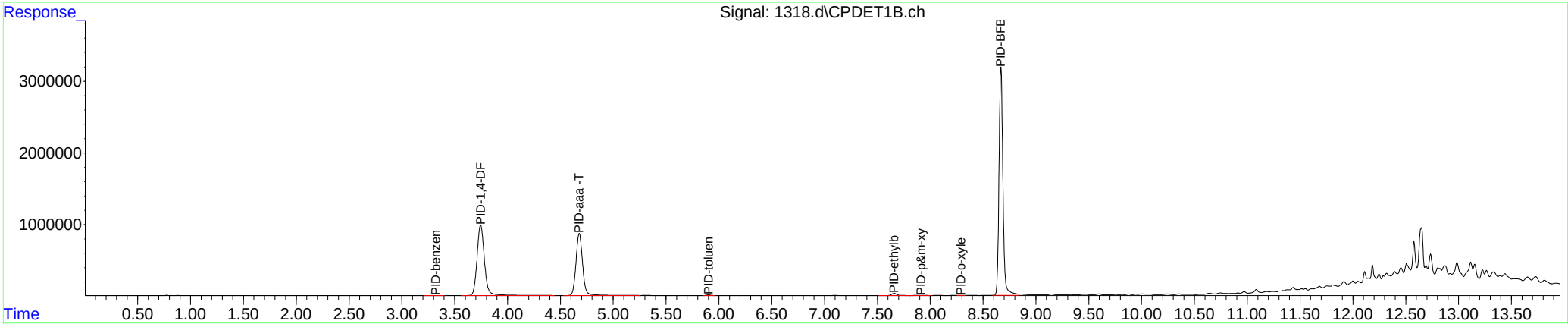
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1318.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 7:37 pm
Operator : ST
Sample : 1143648003-D PS (Sig #1); 1143648003-B PS (Sig #2)
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 19:57:42 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1319.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 7:56 pm
Operator : ST
Sample : 1143648004-D BMS (Sig #1); 1143648004-B BMS (Sig #2)
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 20:17:18 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	37756507	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48239839	50.510 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	101.02%
10) S	FID-1,4-DFB #2	3.747	17329128	50.789 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	101.58%
11) S	FID-TRI-ALPHA #2	4.681	12770131	52.099 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	104.20%
13) S	FID-4-BFB<Surr> #2	8.671	8794143	39.889 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	79.78%
	Target Compounds			
2)	PID-benzene	3.324	16794448	6.648 ppb
4)	PID-toluene	5.901	201681661	84.728 ppb
5)	PID-ethylbenzene	7.657	24624303	11.647 ppb
6)	PID-p&m-xylene	7.905	110034565	45.102 ppb
7)	PID-o-xylene	8.301	34330995	16.436 ppb
8)	PID-BFB<Surr>	8.670	85094487	39.681 ppb
12) H	FID-GRO #2	5.717	109333862	368.135 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

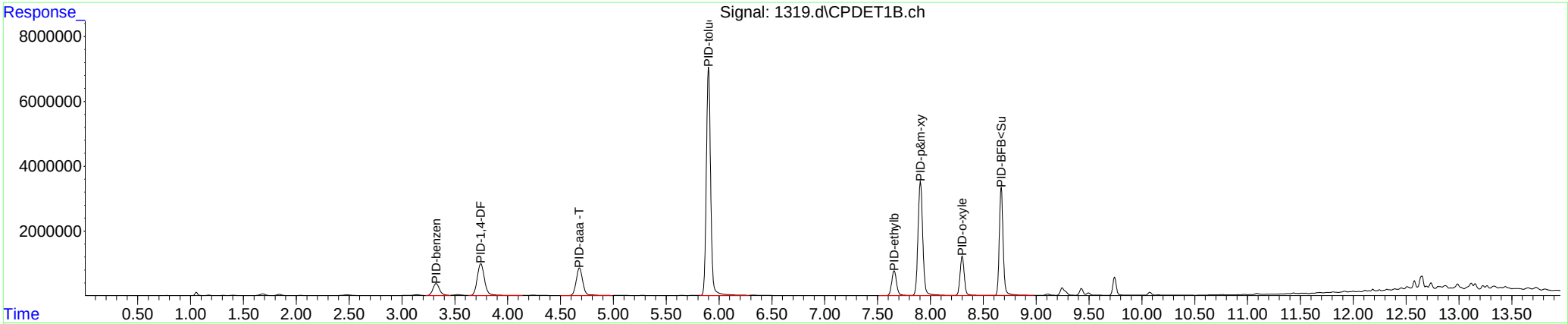
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1319.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 7:56 pm
Operator : ST
Sample : 1143648004-D BMS (Sig #1); 1143648004-B BMS (Sig #2)
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 13 20:17:18 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1320.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 8:15 pm
Operator : ST
Sample : 1143648005-D BMSD (Sig #1); 1143648005-B BMSD (Sig #2)
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:46:52 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	38217772	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	48089306	49.745 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	99.49%
10) S	FID-1,4-DFB #2	3.748	17244952	50.542 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	101.08%
11) S	FID-TRI-ALPHA #2	4.681	12909581	52.668 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	105.34%
13) S	FID-4-BFB<Surr> #2	8.671	8609683	39.044 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	78.09%
	Target Compounds			
2)	PID-benzene	3.324	16496402	6.452 ppb
4)	PID-toluene	5.901	198888631	82.546 ppb
5)	PID-ethylbenzene	7.657	24400692	11.402 ppb
6)	PID-p&m-xylene	7.905	108501031	43.937 ppb
7)	PID-o-xylene	8.301	33867288	16.018 ppb
8)	PID-BFB<Surr>	8.670	84265790	38.821 ppb
12) H	FID-GRO #2	5.717	107470116	361.860 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

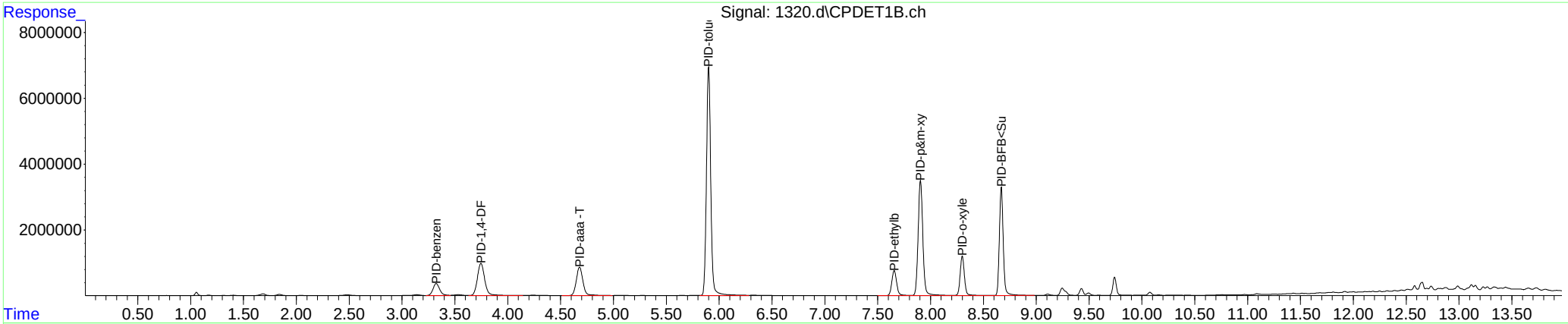
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1320.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 8:15 pm
Operator : ST
Sample : 1143648005-D BMSD (Sig #1); 1143648005-B BMSD (Sig #2)
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:46:52 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1322.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 8:54 pm
Operator : ST
Sample : 1143648001-B
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:47:18 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	37644039	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47898578	50.303 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	100.61%
10) S	FID-1,4-DFB #2	3.747	16368913	47.975 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	95.95%
11) S	FID-TRI-ALPHA #2	4.681	12396780	50.576 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.15%
13) S	FID-4-BFB<Surr> #2	8.671	7239503	32.765 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	65.53%
	Target Compounds			
2)	PID-benzene	3.322	36350	0.014 ppb
4)	PID-toluene	5.904	345661	0.146 ppb
5)	PID-ethylbenzene	7.660	783118	0.372 ppb
6)	PID-p&m-xylene	7.910	166101	0.068 ppb
7)	PID-o-xylene	8.302	73988	0.036 ppb
8)	PID-BFB<Surr>	8.670	70834287	33.130 ppb
12) H	FID-GRO #2	5.717	10554384	35.537 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

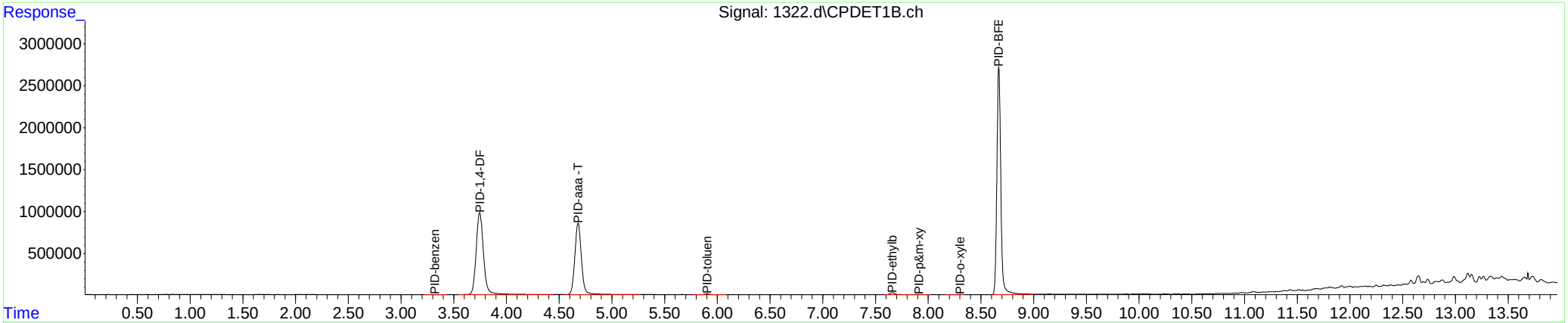
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1322.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 8:54 pm
Operator : ST
Sample : 1143648001-B
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:47:18 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1323.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 9:13 pm
Operator : ST
Sample : 1143648002-B
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:47:31 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	37742946	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48014331	50.292 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	100.58%
10) S	FID-1,4-DFB #2	3.747	16590126	48.623 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	97.25%
11) S	FID-TRI-ALPHA #2	4.680	12431113	50.716 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.43%
13) S	FID-4-BFB<Surr> #2	8.671	7864307	35.628 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	71.26%
	Target Compounds			
2)	PID-benzene	3.317	57171	0.023 ppb
4)	PID-toluene	5.903	338397	0.142 ppb
5)	PID-ethylbenzene	7.659	861085	0.407 ppb
6)	PID-p&m-xylene	7.910	156047	0.064 ppb
7)	PID-o-xylene	8.305	60688	0.029 ppb
8)	PID-BFB<Surr>	8.670	76651120	35.757 ppb
12) H	FID-GRO #2	5.717	11780219	39.665 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

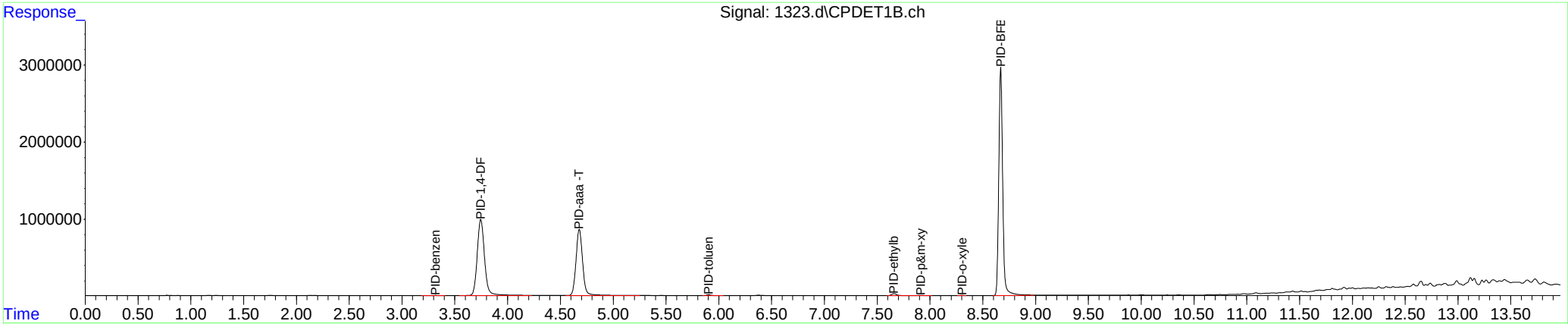
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1323.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 9:13 pm
Operator : ST
Sample : 1143648002-B
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:47:31 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1324.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 9:32 pm
Operator : ST
Sample : 1143648006-B
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:47:44 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	37676134	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47837711	50.196 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	100.39%
10) S	FID-1,4-DFB #2	3.747	16711746	48.980 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	97.96%
11) S	FID-TRI-ALPHA #2	4.680	12709046	51.850 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.70%
13) S	FID-4-BFB<Surr> #2	8.671	8233270	37.319 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	74.64%
	Target Compounds			
2)	PID-benzene	3.319	31722	0.013 ppb
4)	PID-toluene	5.904	337323	0.142 ppb
5)	PID-ethylbenzene	7.659	1035700	0.491 ppb
6)	PID-p&m-xylene	7.911	166074	0.068 ppb
7)	PID-o-xylene	8.301	45307	0.022 ppb
8)	PID-BFB<Surr>	8.670	80968175	37.838 ppb
12) H	FID-GRO #2	5.717	12879634	43.367 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

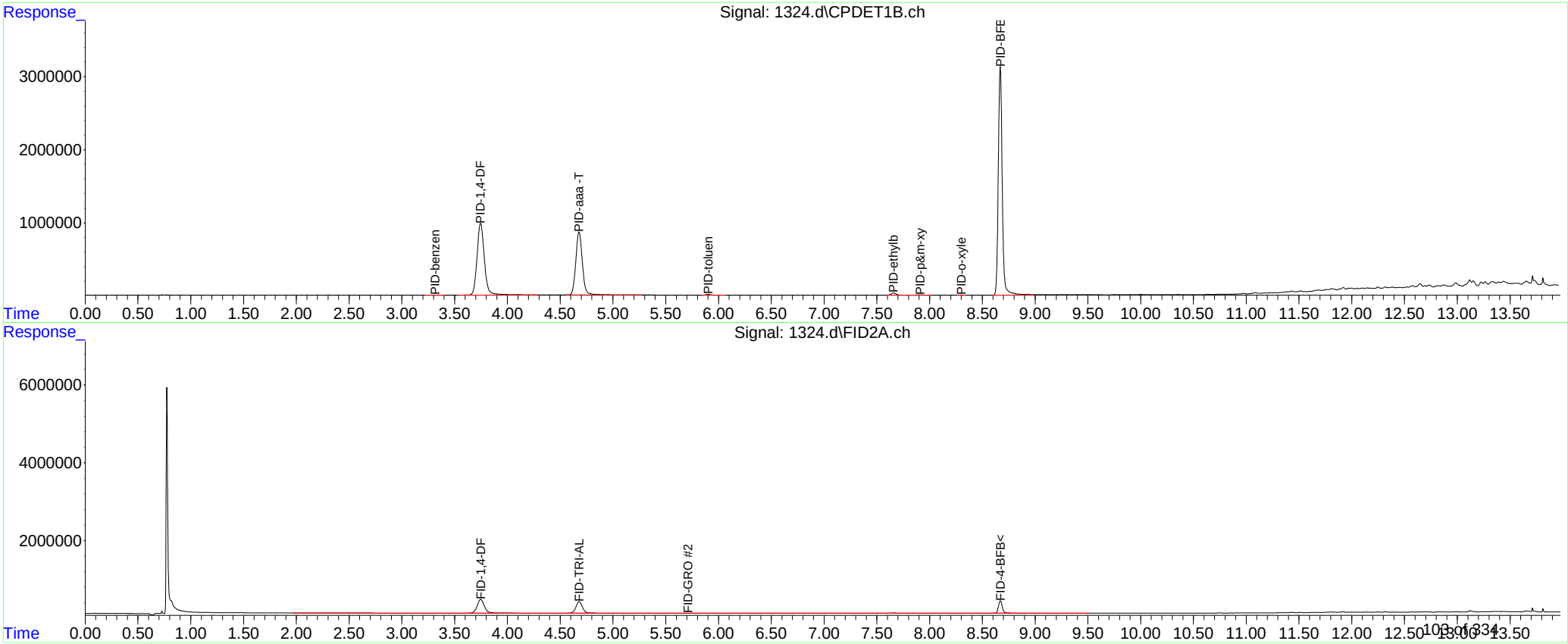
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1324.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 9:32 pm
Operator : ST
Sample : 1143648006-B
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:47:44 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1325.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 9:51 pm
Operator : ST
Sample : 1143648007-B
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:47:56 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	37413356	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48225278	50.958 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	101.92%
10) S	FID-1,4-DFB #2	3.747	16813689	49.279 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.56%
11) S	FID-TRI-ALPHA #2	4.680	12594817	51.384 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	102.77%
13) S	FID-4-BFB<Surr> #2	8.671	8402567	38.095 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	76.19%
	Target Compounds			
2)	PID-benzene	3.313	35460	0.014 ppb
4)	PID-toluene	5.903	302213	0.128 ppb
5)	PID-ethylbenzene	7.659	1008521	0.481 ppb
6)	PID-p&m-xylene	7.911	162396	0.067 ppb
7)	PID-o-xylene	8.305	66445	0.032 ppb
8)	PID-BFB<Surr>	8.670	82622539	38.882 ppb
12) H	FID-GRO #2	5.717	13455144	45.304 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

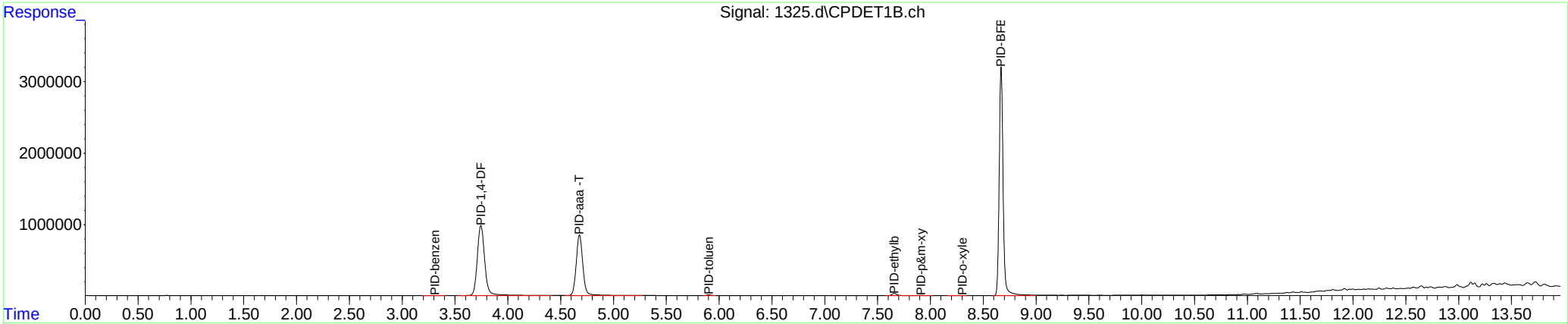
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1325.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 9:51 pm
Operator : ST
Sample : 1143648007-B
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:47:56 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1326.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 10:11 pm
Operator : ST
Sample : 1143648008-B
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:48:07 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	36378639	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48370443	52.565 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	105.13%
10) S	FID-1,4-DFB #2	3.747	17003440	49.835 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	99.67%
11) S	FID-TRI-ALPHA #2	4.680	12474995	50.895 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.79%
13) S	FID-4-BFB<Surr> #2	8.671	8501195	38.546 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	77.09%
	Target Compounds			
2)	PID-benzene	3.319	39097	0.016 ppb
4)	PID-toluene	5.904	336313	0.147 ppb
5)	PID-ethylbenzene	7.660	847247	0.416 ppb
6)	PID-p&m-xylene	7.911	157380	0.067 ppb
7)	PID-o-xylene	8.303	64016	0.032 ppb
8)	PID-BFB<Surr>	8.670	83396366	40.363 ppb
12) H	FID-GRO #2	5.717	12061058	40.610 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

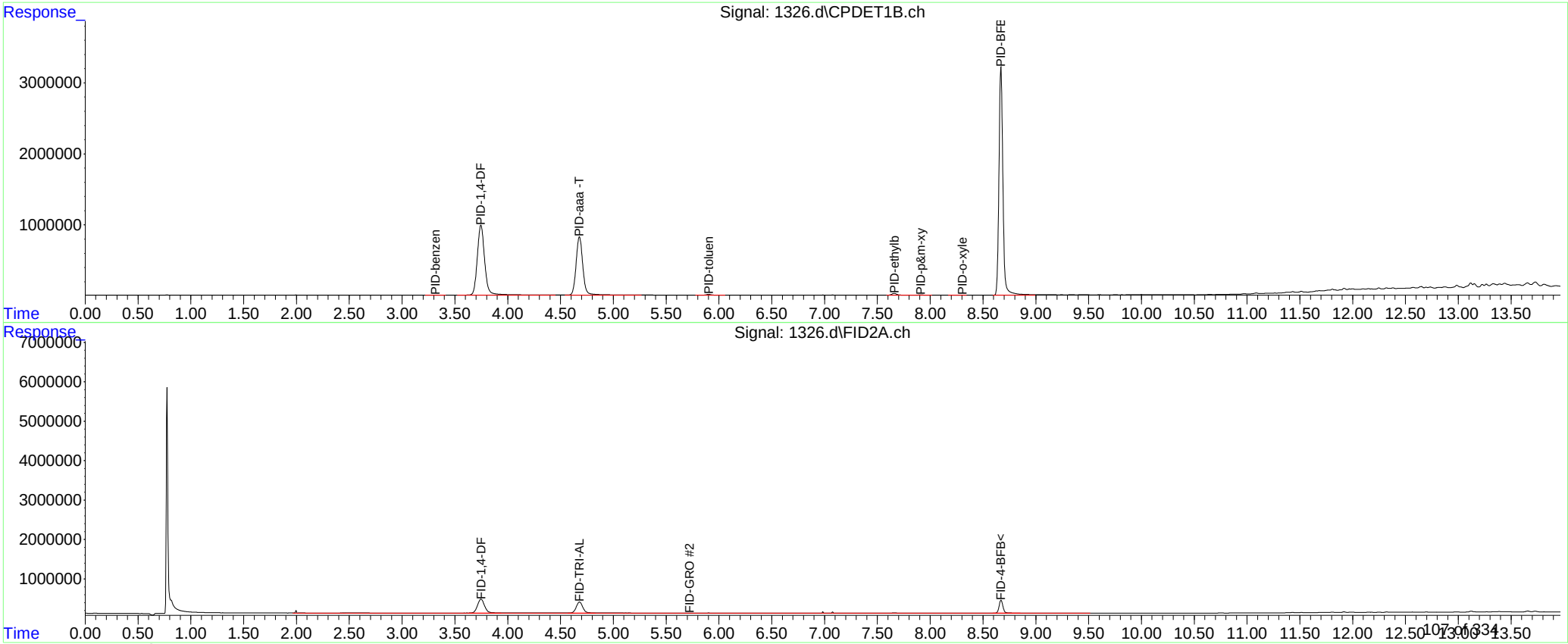
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1326.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 10:11 pm
Operator : ST
Sample : 1143648008-B
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:48:07 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1328.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 10:49 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:48:29 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	36706750	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	49836809	53.674 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	107.35%
10) S	FID-1,4-DFB #2	3.748	20220751	59.264 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	118.53%
11) S	FID-TRI-ALPHA #2	4.681	13172333	53.740 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	107.48%
13) S	FID-4-BFB<Surr> #2	8.671	13209502	60.120 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	120.24%
	Target Compounds			
2)	PID-benzene	3.325	43513140	17.718 ppb
4)	PID-toluene	5.901	511493613	221.026 ppb
5)	PID-ethylbenzene	7.656	60664568	29.514 ppb
6)	PID-p&m-xylene	7.905	277503959	117.000 ppb
7)	PID-o-xylene	8.300	86392995	42.544 ppb
8)	PID-BFB<Surr>	8.670	105751016	50.724 ppb
12) H	FID-GRO #2	5.717	276375483	930.576 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

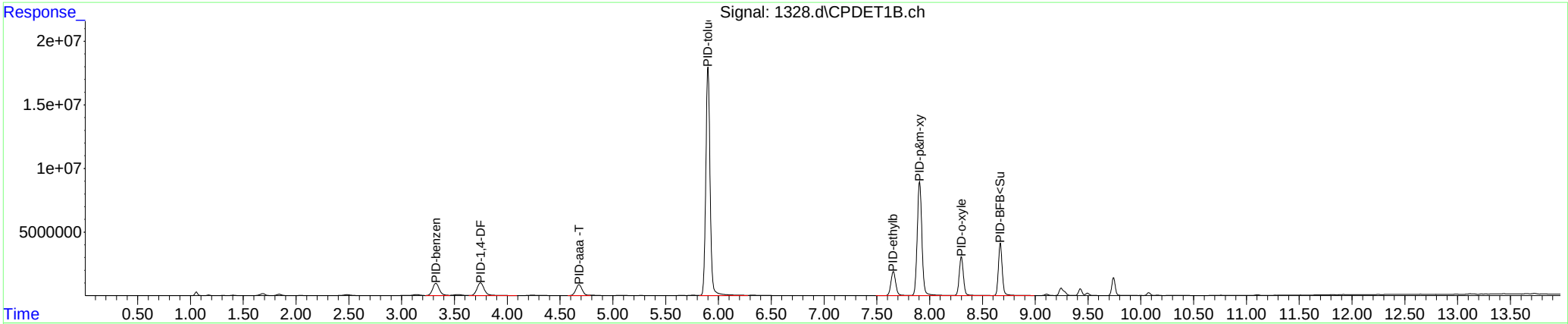
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1328.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 10:49 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:48:29 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1329.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 11:08 pm
Operator : ST
Sample : 1143648009-B
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:48:43 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	36072533	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48034575	52.643 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	105.29%
10) S	FID-1,4-DFB #2	3.747	16943352	49.659 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	99.32%
11) S	FID-TRI-ALPHA #2	4.681	12769502	52.096 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	104.19%
13) S	FID-4-BFB<Surr> #2	8.671	7073970	32.007 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	64.01%
	Target Compounds			
2)	PID-benzene	3.326	112044	0.046 ppb
4)	PID-toluene	5.916	695293	0.306 ppb
5)	PID-ethylbenzene	7.660	944984	0.468 ppb
6)	PID-p&m-xylene	7.910	514178	0.221 ppb
7)	PID-o-xylene	8.304	166284	0.083 ppb
8)	PID-BFB<Surr>	8.670	69248098	33.799 ppb
12) H	FID-GRO #2	5.717	15408833	51.883 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

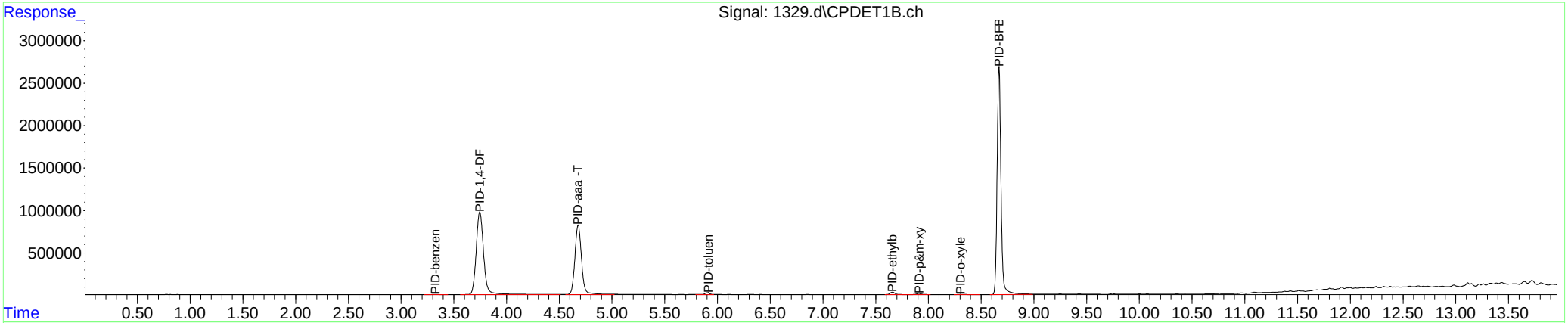
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1329.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 11:08 pm
Operator : ST
Sample : 1143648009-B
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:48:43 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1330.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 11:28 pm
Operator : ST
Sample : 1143648010-B
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:48:54 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	36164042	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47989773	52.461 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	104.92%
10) S	FID-1,4-DFB #2	3.748	16743405	49.073 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.15%
11) S	FID-TRI-ALPHA #2	4.681	12631796	51.535 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.07%
13) S	FID-4-BFB<Surr> #2	8.671	8125467	36.825 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	73.65%
	Target Compounds			
2)	PID-benzene	3.326	58874	0.024 ppb
4)	PID-toluene	5.904	403327	0.177 ppb
5)	PID-ethylbenzene	7.661	251806	0.124 ppb
6)	PID-p&m-xylene	7.910	325511	0.139 ppb
7)	PID-o-xylene	8.305	83688	0.042 ppb
8)	PID-BFB<Surr>	8.670	79777201	38.840 ppb
12) H	FID-GRO #2	5.717	15123796	50.923 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

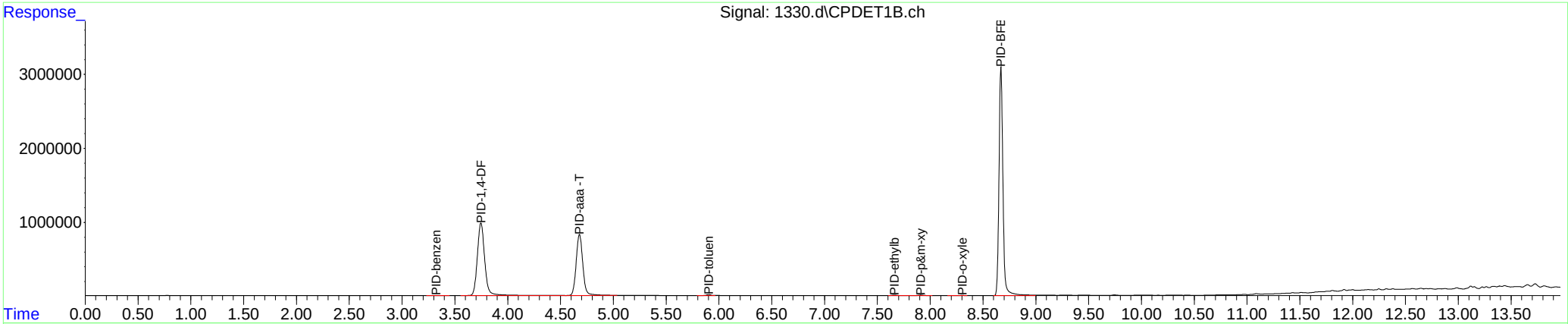
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1330.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 11:28 pm
Operator : ST
Sample : 1143648010-B
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:48:54 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1331.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 11:47 pm
Operator : ST
Sample : 1143648011-B
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:49:05 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	36235871	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47958465	52.323 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	104.65%
10) S	FID-1,4-DFB #2	3.747	14688389	43.050 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	86.10%
11) S	FID-TRI-ALPHA #2	4.680	12187657	49.723 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.45%
13) S	FID-4-BFB<Surr> #2	8.672	4602955	20.685 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	41.37%#
	Target Compounds			
2)	PID-benzene	3.317	45407	0.019 ppb
4)	PID-toluene	5.904	237298	0.104 ppb
5)	PID-ethylbenzene	7.661	14947	0.007 ppb
6)	PID-p&m-xylene	7.910	146135	0.062 ppb
7)	PID-o-xylene	8.306	46730	0.023 ppb
8)	PID-BFB<Surr>	8.670	45208294	21.966 ppb
12) H	FID-GRO #2	5.717	15728653	52.959 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

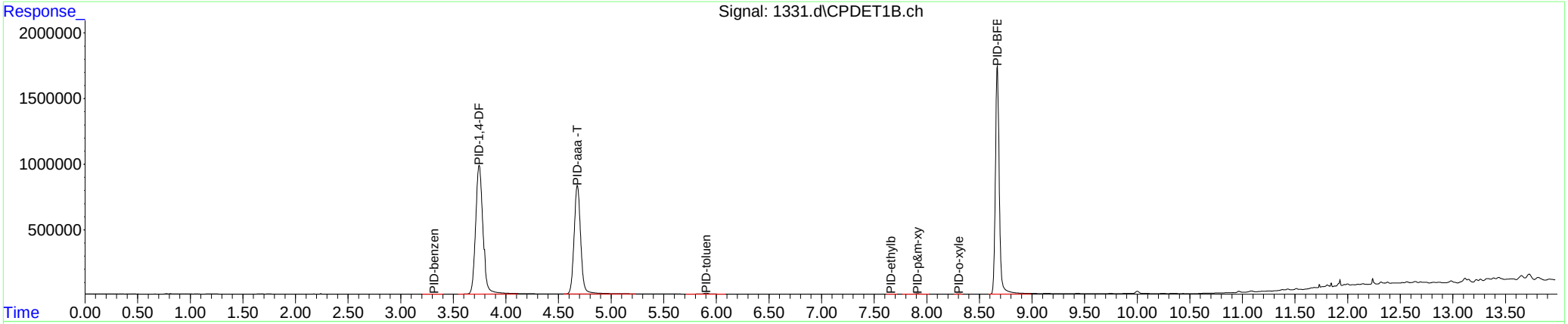
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1331.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 13 Aug 2014 11:47 pm
Operator : ST
Sample : 1143648011-B
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:49:05 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1332.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 14 Aug 2014 12:06 am
Operator : ST
Sample : 1143648012-B
Misc :
ALS Vial : 32 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:49:19 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	36429806	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	48300548	52.415 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	104.83%
10) S	FID-1,4-DFB #2	3.748	16754069	49.104 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.21%
11) S	FID-TRI-ALPHA #2	4.681	12069337	49.240 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.48%
13) S	FID-4-BFB<Surr> #2	8.671	8944178	40.576 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	81.15%
	Target Compounds			
2)	PID-benzene	3.321	63602	0.026 ppb
4)	PID-toluene	5.904	202893	0.088 ppb
5)	PID-ethylbenzene	7.662	71172	0.035 ppb
6)	PID-p&m-xylene	7.911	294076	0.125 ppb
7)	PID-o-xylene	8.304	116376	0.058 ppb
8)	PID-BFB<Surr>	8.670	88378455	42.714 ppb
12) H	FID-GRO #2	5.717	15083002	50.786 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

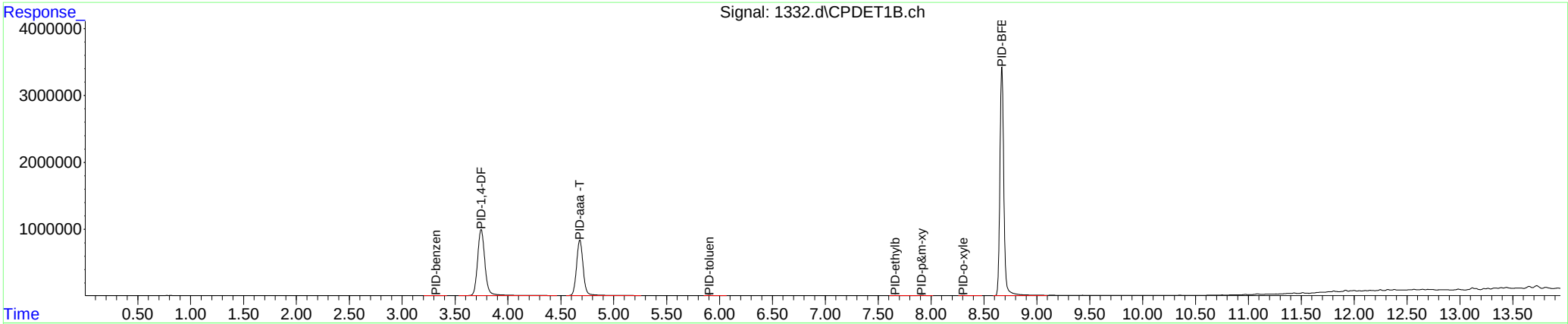
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1332.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 14 Aug 2014 12:06 am
Operator : ST
Sample : 1143648012-B
Misc :
ALS Vial : 32 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:49:19 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1344.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 14 Aug 2014 3:36 am
Operator : ST
Sample : MB
Misc :
ALS Vial : 44 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:08:28 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	37129424	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	48307582	51.435 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	102.87%
10) S	FID-1,4-DFB #2	3.748	16621127	48.714 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	97.43%
11) S	FID-TRI-ALPHA #2	4.681	12372777	50.478 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.96%
13) S	FID-4-BFB<Surr> #2	8.671	10273146	46.666 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.33%
	Target Compounds			
2)	PID-benzene	0.000	0	N.D. ppb
4)	PID-toluene	5.903	41848	0.018 ppb
5)	PID-ethylbenzene	7.661	34462	0.017 ppb
6)	PID-p&m-xylene	7.910	310403	0.129 ppb
7)	PID-o-xylene	8.302	69372	0.034 ppb
8)	PID-BFB<Surr>	8.670	101254199	48.015 ppb
12) H	FID-GRO #2	5.717	13829045	46.563 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

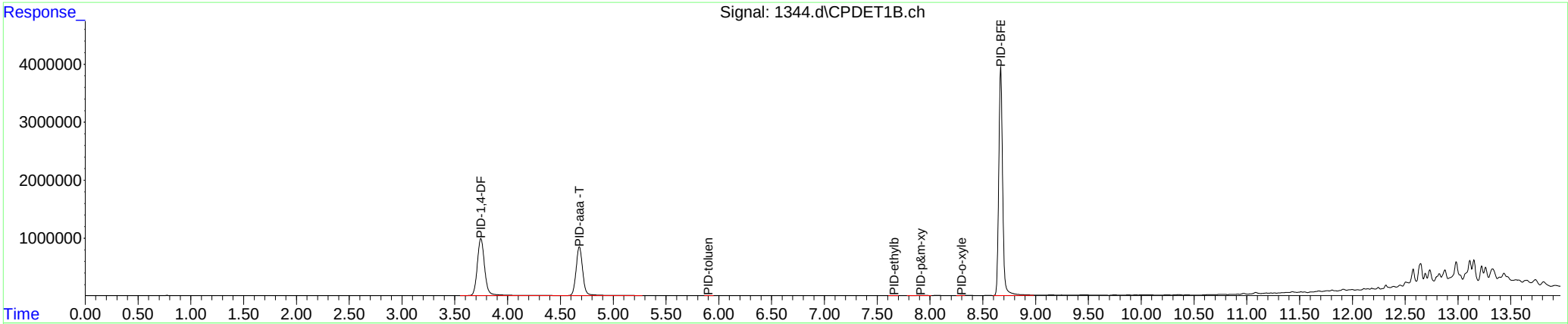
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1344.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 14 Aug 2014 3:36 am
Operator : ST
Sample : MB
Misc :
ALS Vial : 44 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:08:28 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1345.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 14 Aug 2014 3:55 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 45 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:08:41 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	38443716	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	49618118	51.024 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	102.05%
10) S	FID-1,4-DFB #2	3.748	19251575	56.424 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	112.85%
11) S	FID-TRI-ALPHA #2	4.681	12726140	51.920 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.84%
13) S	FID-4-BFB<Surr> #2	8.671	10930586	49.678 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.36%
	Target Compounds			
2)	PID-benzene	3.325	42681249	16.594 ppb
4)	PID-toluene	5.901	508112540	209.645 ppb
5)	PID-ethylbenzene	7.656	60393790	28.055 ppb
6)	PID-p&m-xylene	7.905	277439317	111.688 ppb
7)	PID-o-xylene	8.300	86521191	40.682 ppb
8)	PID-BFB<Surr>	8.670	106589499	48.817 ppb
12) H	FID-GRO #2	5.717	269986086	909.062 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

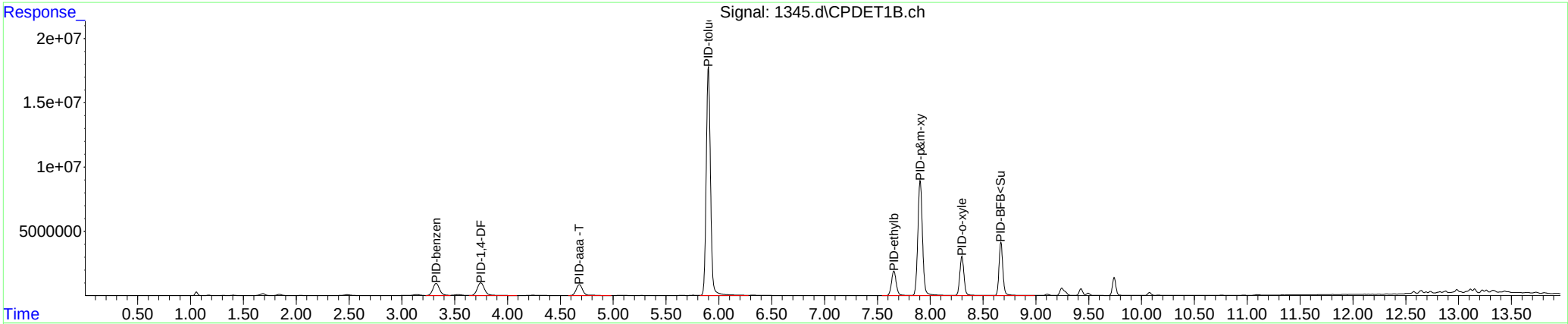
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08132014\
Data File : 1345.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 14 Aug 2014 3:55 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 45 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 14 06:08:41 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Save Page | Fill Weights | Post Results

VXX Preparation Tare & Start Amounts

Lims Code: VF.GRO..P2

Analysis Start Date/Time: 08/13/2014 08:00:00
Finish Date/Time:
Technician: ST

Posted By: ST
Batch Released By:

Queue & Batch: VXX-26266

#	AFlag	WO No.	Type	Tare Wt g	Tare & Sample g	COMMENTS FLAGS	SCHED	BTL #	WT_Date (yyyy/mm/dd hh:mm)
01	C	1226841	MB	1.00000	70.78000		17299838		
02	C	1226842	LCS	1.00000	70.78000		17299840		
03	C	1226843	LCSD	1.00000	70.78000		17299842		
04	C	1143648001	PS	128.29000	242.55700		17284802	B	2014/08/12 10:00
05	C	1143648002	PS	126.27000	218.61700		17284854	B	2014/08/12 10:00
06	C	1143648003	PS	126.76000	218.62100		17284859	D	2014/08/12 10:00
07	C	1143648004	BMS	126.76000	218.62100		17284867	D	2014/08/12 10:00
08	C	1143648005	BMSD	126.76000	218.62100		17284877	D	2014/08/12 10:00
09	C	1143648006	PS	126.08	197.129		17284882	B	2014/08/12 10:00
10	C	1143648007	PS	126.17	198.619		17284887	B	2014/08/12 10:00
11	C	1143648008	PS	125.85	198.073		17284892	B	2014/08/12 10:00
12	C	1143648009	PS	126.61	198.784		17284897	B	2014/08/12 10:00
13	C	1143648010	PS	126.35	248.118		17284902	B	2014/08/12 10:00
14	C	1143648011	PS	128.19	228.268		17284907	B	2014/08/12 10:00
15	C	1143648012	PS	128.31	239.614		17284912	B	2014/08/12 10:00
16	C	1143656015	PS	128.17	176.377		17284074	B	2014/08/07 17:20
17	C	1143656021	PS	125.79	192.312		17284129	B	2014/08/07 17:20
18	C	1143656033	PS	126.89	179.459		17284250	B	2014/08/07 17:20
19	C	1143656034	PS	127.27000	210.32800		17284259	B	2014/08/07 17:20
20	C	1143656038	PS	126.52000	193.26100		17284295	B	2014/08/07 17:20
21	C	1143656042	PS	128.39000	224.44600		17284335	B	2014/08/07 17:20
22	C	1143689002	PS	114.26200	161.93300		17287773	B	2014/08/12 16:36
23	C	1143689016	PS	118.46200	172.76000		17288180	B	2014/08/12 16:36

NOTES

SGS North America Inc.
Calibration Review and Validation for:
Volatile Fuels - AK101 or 8015C and 8021B or 602

CDS Instrument/Date Code in YYYY-MMDD format (e.g., VHA2007-0507): VHA2014-0731

	Analyst's Review		Peer Review	
Contents:	OK	N/A	OK	N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Runlog	☑		☑	
QA-QC Check Report	☑		☑	
Chromatograms for IB, NAS, Cal Stds, and ICVs	☑		☑	
Validation:				
Dates are correct.	☑		☑	
IB and NAS have been run at beginning of sequence.	☑		☑	
The retention time window is set correctly for GRO: Beginning of C6 --> Beginning of C10	☑		☑	
Analyte RT windows are set correctly.	☑		☑	
Criteria of ± 0.05 met for surrogates for AK101 and 8015C (FID).	☑		☑	
IS Area updated, CC ISTD Area Report included.	☑		☑	
If the Calibration Fit type is Average RF:				
The percent RSD of the response factor is ≤ 20% for GRO by 8015C	☑	☐	☑	☐
The percent RSD of the response factor is ≤ 25% for GRO by AK101	☑	☐	☑	☐
The percent RSD of the response factor is ≤ 20% for BTEX by 8021B	☑	☐	☑	☐
The percent RSD of the response factor is ≤ 10% for BTEX by 602	☐	☑	☐	☑
If the Calibration Fit type is Linear, then there are at least 5 pts and $r^2 \geq 0.995$	☐	☑	☑	☐
If the Calibration Fit type is Quadratic, then there are at least 6 pts and $r^2 \geq 0.990$	☐	☑	☑	☐
Correct Calibration levels for LOQ.	☐	☐	☑	☐
The ICV has 75-125% recovery for GRO method AK101	☑	☐	☑	☐
The ICV has 80-120% recovery for GRO method 8015C	☑	☐	☑	☐
The ICV has 80-120% recovery for BTEX	☑	☐	☑	☐
Manual Integrations - explanations, before and after printouts	☐	☑	☐	☑
Hand calculations verified.	☑		☑	
	Initials:	ST	Initials:	CDE
	Date:	7/31/2014	Date:	8/1/2014

Hand calculate response factor of BTEX (any one compound) using RF = (As x Cis) / (Ais x Cs)

Shown: 0.5=3.025

Calculated: $\frac{895167 \times 50 / 29587460 \times 0.5}{3.02549}$

Hand calculate ICV concentration of GRO using Area/RF

Shown: 1908.566

Calculated: $\frac{566832663/296994}{1908.566}$

Notes:

Calibration Table Report
Method: VHA2014-0731.M
Title: GRO/BTEX by AK101/8015C and 8021B/EPA602
Last Calibration: Thu Jul 31 15:00:03 2014

Calibration Files

Compound	0.5 3108.d	1 3109.d	10 3110.d	50 3111.d	100 3112.d	G3 3120.d	G1 3118.d	G2 3119.d	G4 3121.d	G5 3122.d	G6 3123.d	150 3113.d	200 3114.d	240 3115.d	Avg	%RSD
PID-aaa -TFT	ISTD															
PID-benzene	3.025	3.041	2.580	3.359	3.542							3.729	3.701	3.784	3.345	12.806
PID-1,4-DFB<Surr>		0.918	1.146	1.359	1.381							1.417	1.368		1.265	15.443
PID-toluene		3.098	2.515	3.289	3.279							3.333	3.252	3.300	3.152	9.239
PID-ethylbenzene		3.144	2.185	2.808	2.861							2.909	2.830	2.862	2.800	10.478
PID-p&m-xylene		3.245	2.643	3.357	3.378							3.401	3.288	3.304	3.231	8.201
PID-o-xylene		2.727	2.332	2.859	2.886							2.902	2.815	2.841	2.766	7.218
PID-BFB<Surr>			2.793	2.938	2.847							2.863	2.758		2.840	2.430
Column #2															0.000	0.000
FID-1,4-DFB #2					#########										341197.000	0.000
FID-TRI-ALPHA #2		245112.566													245113.000	0.000
FID-GRO #2						295271.684	297909.887	296058.740	295082.639	297600.578	300040.628				296994.000	0.639
FID-4-BFB<Surr> #2	359246.881	218553.444	233041.308	#########								215916.016	220338.601		243990.000	23.283

Fri Aug 01 06:48:02 2014

Calibration Report VHA

Method Path : Z:\07\VHA\METHOD\
Method File : VHA2014-0731.M
Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
Last Update : Thu Jul 31 15:00:03 2014
Response Via : Initial Calibration

Calibration Files
0.5 =3108 1 =3109 10 =3110 50 =3111 100 =3112
G3 =3120 G1 =3118 G2 =3119 G4 =3121 G5 =3122
G6 =3123 150 =3113 200 =3114 240 =3115

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	PID-aaa -TFT		----------ISTD----------			
2)		PID-benzene	Avg	-----	3.3453	-----	0.1281
3)	S	PID-1,4-DFB<Surr>	Avg	-----	1.2648	-----	0.1544
4)		PID-toluene	Avg	-----	3.1522	-----	0.0924
5)		PID-ethylbenzene	Avg	-----	2.7998	-----	0.1048
6)		PID-p&m-xylene	Avg	-----	3.2308	-----	0.0820
7)		PID-o-xylene	Avg	-----	2.7661	-----	0.0722
8)		PID-BFB<Surr>	Avg	-----	2.8398	-----	0.0243

Signal #2

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
10)	S	FID-1,4-DFB #2	Avg	-----	0.5618	-----	-1.0000
11)	S	FID-TRI-ALPHA #2	Avg	-----	0.4135	-----	-1.0000
12)	H	FID-GRO #2	Avg	-----	-----	-----	0.0000
13)	S	FID-4-BFB<Surr> #2	Lin	0.0089	0.3481	-----	0.9998

VHA2014-0731.M Thu Jul 31 15:13:33 2014

GC QA-QC Check Report

Daily Calibration File : Z:\07\VHA\DATA\073114\3112.d
Time Acquired : 31 Jul 2014 11:15 am

30364300

File	Sample	Surrogate Recovery %				Internal Standard Responses
3104.d (fails)	IB	102	101	103	101	30859973
3105.d (fails)	NAS	104	101	106	106	30321438
3106.d (fails)	R	98	92	92	109	29448851
3107.d (fails)	R	0*	0*	100	-1*	29695478
3108.d (fails)	.5	0*	0*	100	-1*	29587460
3109.d (fails)	1	1*	2*	102	2*	29740481
3110.d (fails)	10	23*	20*	100	24*	29640118
3111.d (fails)	50	54*	49*	103	53	30247471
3112.d	100	109	100	103	99	30364289
3113.d	150	168*	153*	100	148	30575202
3114.d	200	270*	264*	104	252*	31354116
3115.d	240	0*	0*	102	8*	30934120
3116.d	R	0*	1*	102	-1*	29871991
3117.d	R	0*	0*	0*	-1*	32221*
3118.d	G1	0*	1*	1*	-0*	65908*
3119.d	G2	853*	0*	2*	0*	67277*
3120.d	G3	0*	0*	1*	2*	158583*
3121.d	G4	0*	0*	2*	7*	315026*
3122.d	G5	0*	0*	2*	11*	467266*
3123.d	G6	0*	0*	2*	15*	619533*
3124.d	R	105	99	97	105	29356580
3125.d	ICV BTES	118	108	105	120	31634188

```
--------------------------------------------------------------------------------
3126.d
         ICV GRO     114  135* 103  113    30284955
--------------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Thu Jul 31 16:49:54 2014  VHA
```

CC ISTD Areas

CC Data File : Z:\07\VHA\DATA\073114\3112.d
Date Acquired: 31 Jul 2014 11:15 am

ISTD Name	Response
PID-aaa -TFT	30364300

Surrogates

PID-1,4-DFB<Surr>
FID-1,4-DFB #2
FID-TRI-ALPHA #2
FID-4-BFB<Surr> #2

Instrument Runlog

Instrument: VHA **Calibration Date:** 7/31/2014 **Method:** AK101/BTEX
Operator: ST **Processed By:** ST **Posted By:** ST **Analytical Batch:**

Data Path: Z:\07\VHA\DATA\073114\

Daily:		As Needed:	
Verify System Date/Time	✓	Refill Water Tank	
General System Inspection	✓	Refill Standards	

Standards:							
	IS	VW8-83-3	**CCV2**	VW8-104-5		ICV BTEX	VF2-100-4
	Cent. DFB	VW8-84-6	**CCV**	VW8-101-1		ICV GRO	VW8-102-1
	BFB	VW8-62-3	**MeOH**	P-968		DFB_cal	VW8-84-2
	NAS	VW8-105-2					

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
3101.d	1	R	1			7/31/14 7:44 AM	N/A	
3102.d	2	R	1			7/31/14 8:03 AM	N/A	
3103.d	3	R	1			7/31/14 8:23 AM	N/A	
3104.d	4	IB	1			7/31/14 8:42 AM	N/A	
3105.d	5	NAS	1			7/31/14 9:01 AM	N/A	
3106.d	6	R	1			7/31/14 9:20 AM	N/A	
3107.d	7	R	1			7/31/14 9:39 AM	N/A	
3108.d	8	0.5	1	0.5uL CCV2 + 0.0uL BFB+0.0uL DFB --> 100 mL		7/31/14 9:58 AM	N/A	
3109.d	9	1	1	1.0uL CCV2 + 2uL BFB and DFB --> 100 mL		7/31/14 10:17 AM	N/A	
3110.d	10	10	1	5uL CCV2 + 12.5uL BFB and DFB--> 50 mL		7/31/14 10:36 AM	N/A	
3111.d	11	50	1	25uL CCV2 + 25uL BFB and DFB --> 50 mL		7/31/14 10:55 AM	N/A	
3112.d	12	100	1	50uL CCV2 + 50uL BFB and DFB--> 50 mL		7/31/14 11:15 AM	N/A	
3113.d	13	150	1	75uL CCV2 + 75uL BFB and DFB--> 50 mL		7/31/14 11:34 AM	N/A	
3114.d	14	200	1	100uL CCV2 + 125uL BFB and DFB --> 50 mL		7/31/14 11:53 AM	N/A	
3115.d	15	240	1	120uL CCV2 + 0.0 uL BFB and DFB --> 50 mL		7/31/14 12:12 PM	N/A	
3116.d	16	R	1			7/31/14 12:31 PM	N/A	
3117.d	17	R	1			7/31/14 12:50 PM	N/A	
3118.d	18	G1	1	10uL CCV --> 100 mL		7/31/14 1:09 PM	N/A	
3119.d	19	G2	1	40uL CCV --> 100 mL		7/31/14 1:28 PM	N/A	
3120.d	20	G3	1	50uL CCV --> 50 mL		7/31/14 1:47 PM	N/A	
3121.d	21	G4	1	100uL CCV --> 50 mL		7/31/14 2:07 PM	N/A	
3122.d	22	G5	1	150uL CCV --> 50 mL		7/31/14 2:26 PM	N/A	
3123.d	23	G6	1	200uL CCV --> 50 mL		7/31/14 2:45 PM	N/A	
3124.d	24	R	1			7/31/14 3:04 PM	N/A	
3125.d	25	ICV BTES	1			7/31/14 3:24 PM	N/A	
3126.d	26	ICV GRO	1	2100 TV PASSED=90.8%		7/31/14 3:43 PM	N/A	
3127.d	27	R	1			7/31/14 4:02 PM	N/A	
3128.d	28	R	1			7/31/14 4:21 PM		

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3104.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 8:42 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:02:33 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30859973	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.745	39888114	51.099 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	102.20%
10) S	FID-1,4-DFB #2	3.747	17243510	50.538 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	101.08%
11) S	FID-TRI-ALPHA #2	4.680	12648808	51.604 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.21%
13) S	FID-4-BFB<Surr> #2	8.670	11139746	50.636 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.27%
	Target Compounds			
2)	PID-benzene	3.325	17622	0.009 ppb
4)	PID-toluene	5.903	73882	0.038 ppb
5)	PID-ethylbenzene	7.660	74694	0.043 ppb
6)	PID-p&m-xylene	7.910	123155	0.062 ppb
7)	PID-o-xylene	8.304	26580	0.016 ppb
8)	PID-BFB<Surr>	8.669	88130328	50.281 ppb
12) H	FID-GRO #2	5.717	12532304	42.197 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

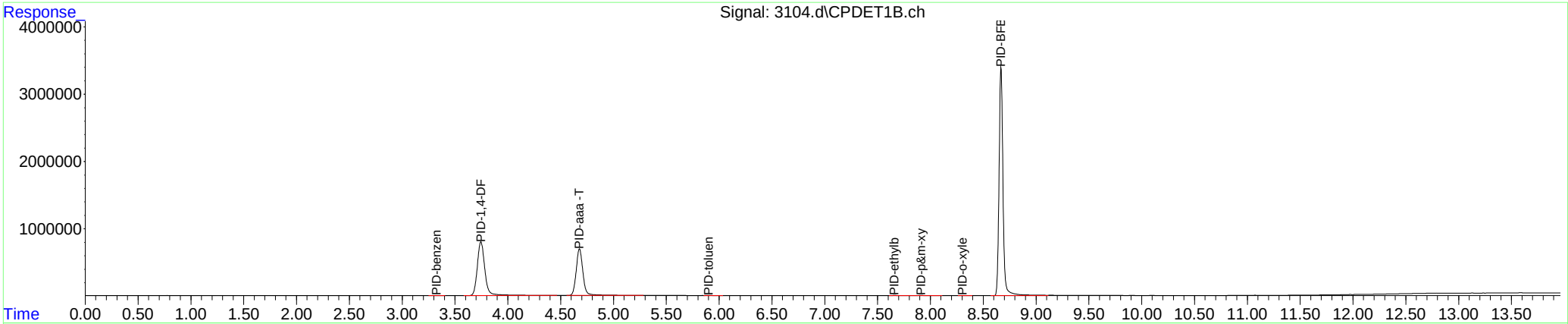
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3104.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 8:42 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:02:33 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:01 am
Operator : ST
Sample : NAS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:03:08 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30321438	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	39732436	51.803 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	103.61%
10) S	FID-1,4-DFB #2	3.747	17241421	50.532 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	101.06%
11) S	FID-TRI-ALPHA #2	4.680	12978805	52.950 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	105.90%
13) S	FID-4-BFB<Surr> #2	8.670	11670725	53.069 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	106.14%
	Target Compounds			
2)	PID-benzene	3.318	28695	0.014 ppb
4)	PID-toluene	5.891	262954	0.138 ppb
5)	PID-ethylbenzene	7.660	167689	0.099 ppb
6)	PID-p&m-xylene	7.910	114132	0.058 ppb
7)	PID-o-xylene	8.210	11354672	6.769 ppb
8)	PID-BFB<Surr>	8.669	92061241	53.457 ppb
12) H	FID-GRO #2	5.717	127360029	428.830 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

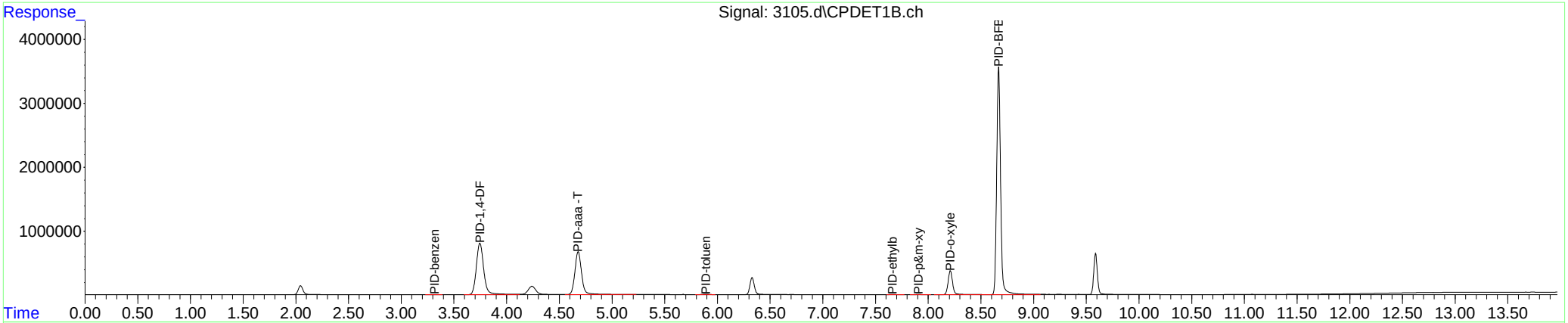
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

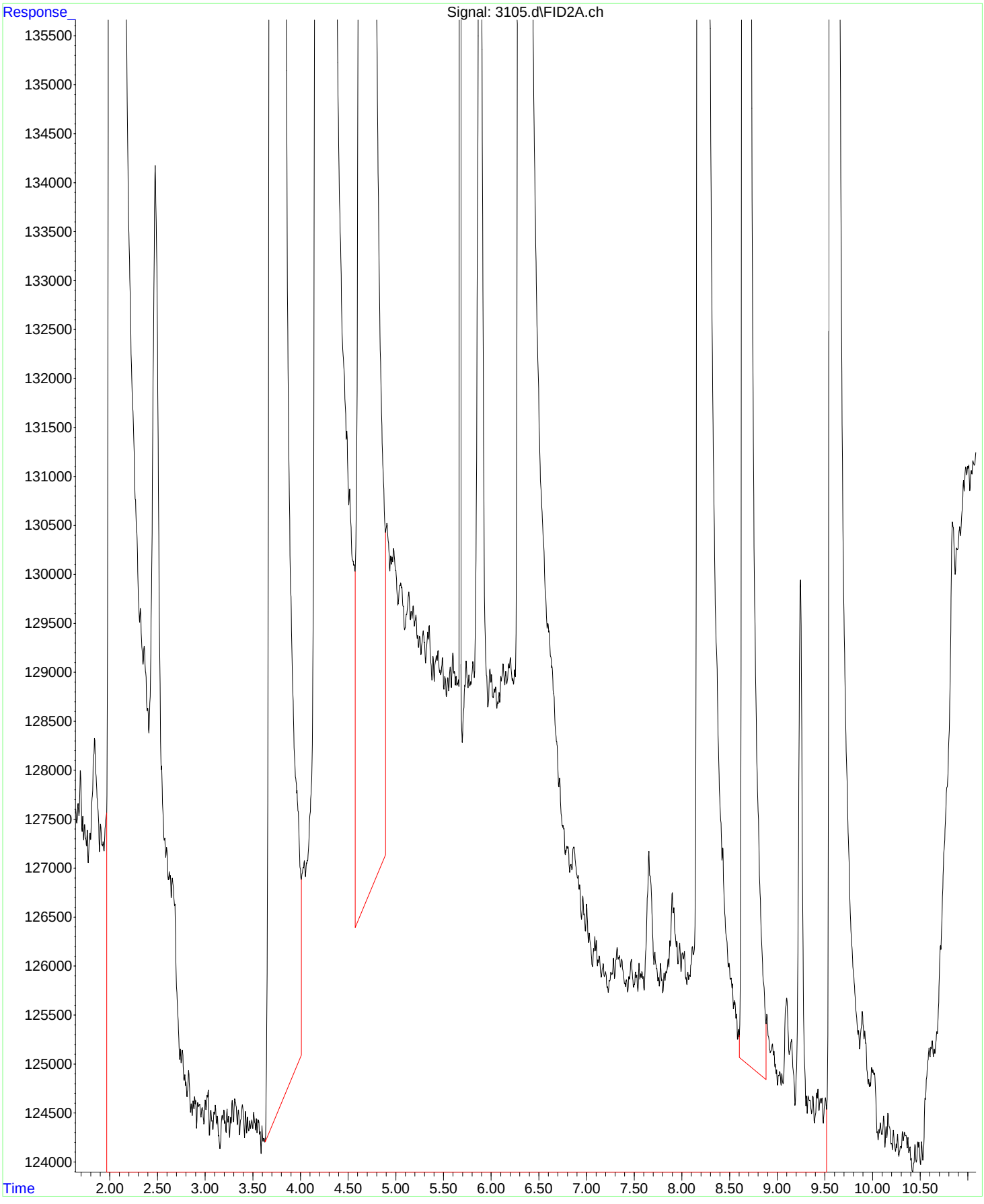
Data Path : Z:\07\VHA\DATA\073114\
Data File : 3105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:01 am
Operator : ST
Sample : NAS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:03:08 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



File :Z:\07\VHA\DATA\073114\3105.d
Operator : ST
Acquired : 31 Jul 2014 9:01 am using AcqMethod VHA_ACQ 2012.M
Instrument : VHA
Sample Name: NAS
Misc Info :
Vial Number: 5



Area Percent Report

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On   : 31 Jul 2014   9:01 am
Sample   : NAS
Misc   :
ALS Vial : 5   Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e

Method   : Z:\07\VHA\METHOD\VHA2014-0731.M
Title   : GRO/BTEX by AK101/8015C and 8021B/EPA602

Signal #1 : CPDET1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.045	1.938	2.305	PV	140028	4595645	4.99%	2.179%
2	2.311	2.305	2.405	VB	514	15933	0.02%	0.008%
3	2.473	2.405	2.558	BV	782	29590	0.03%	0.014%
4	3.318	3.226	3.390	VV	661	28695	0.03%	0.014%
5	3.746	3.591	4.121	PV	806392	39732436	43.16%	18.839%
6	4.241	4.121	4.556	VV	130559	7275168	7.90%	3.450%
7	4.679	4.556	5.231	VV	671846	30321438	32.94%	14.377%
8	5.241	5.231	5.274	VV	1210	27599	0.03%	0.013%
9	5.306	5.274	5.439	VV	928	54076	0.06%	0.026%
10	5.675	5.611	5.723	BB	5638	35270	0.04%	0.017%
11	5.891	5.789	5.979	PV	7365	262954	0.29%	0.125%
12	6.329	6.236	6.591	PV	267650	8068591	8.76%	3.826%
13	6.623	6.591	6.672	VV	1349	53583	0.06%	0.025%
14	6.715	6.672	6.802	VV	777	35950	0.04%	0.017%
15	7.557	7.507	7.602	BV	467	13489	0.01%	0.006%
16	7.660	7.602	7.773	VV	4936	167689	0.18%	0.080%
17	7.910	7.827	8.026	VV	3090	114132	0.12%	0.054%
18	8.210	8.055	8.593	BV	376236	11354672	12.33%	5.384%
19	8.669	8.593	9.064	VV	3553656	92061241	100.00%	43.651%
20	9.093	9.064	9.129	VV	4613	169976	0.18%	0.081%
21	9.148	9.129	9.195	VV	4208	142604	0.15%	0.068%
22	9.243	9.195	9.327	VV	6981	298540	0.32%	0.142%
23	9.336	9.327	9.344	VV	2116	21371	0.02%	0.010%
24	9.354	9.344	9.380	VV	2105	43552	0.05%	0.021%
25	9.427	9.380	9.522	VV	3842	184960	0.20%	0.088%
26	9.588	9.522	9.854	VV	641577	15745034	17.10%	7.466%
27	9.887	9.854	9.979	VV	1030	49133	0.05%	0.023%

Sum of corrected areas: 210903320

Signal #2 : FID2A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.089	0.053	0.253	PV	4698	179392	0.52%	0.096%
2	0.350	0.325	0.373	PV	348	5230	0.02%	0.003%
3	1.693	1.678	1.711	PV	529	5102	0.01%	0.003%
4	1.842	1.800	1.893	VV	1150	35115	0.10%	0.019%
5	2.046	1.940	2.314	VV	1084230	34438071	100.00%	18.422%
6	2.322	2.314	2.350	VV	3269	65826	0.19%	0.035%
7	2.362	2.350	2.394	VV	2955	72183	0.21%	0.039%
8	2.399	2.394	2.411	VV	2388	22958	0.07%	0.012%
9	2.477	2.411	2.573	VV	8040	411045	1.19%	0.220%
10	3.747	3.627	4.010	PV	359813	17241421	50.07%	9.223%
11	4.041	4.010	4.054	VV	1910	48926	0.14%	0.026%
12	4.242	4.054	4.509	VV	592612	30204437	87.71%	16.157%
13	4.516	4.509	4.572	VV	4616	154280	0.45%	0.083%
14	4.680	4.572	4.893	VV	288757	12978805	37.69%	6.943%
15	4.907	4.893	4.938	VV	3348	84340	0.24%	0.045%

16	4.947	4.938	4.967	VV	2927	50854	0.15%	0.027%
17	4.978	4.967	5.024	VV	2924	90002	0.26%	0.048%
18	5.052	5.024	5.094	VV	2408	94135	0.27%	0.050%
19	5.137	5.094	5.172	VV	2116	89808	0.26%	0.048%
20	5.600	5.583	5.642	VB	426	6885	0.02%	0.004%
21	5.675	5.647	5.698	BV	55710	351250	1.02%	0.188%
22	5.739	5.698	5.758	PV	872	19597	0.06%	0.010%
23	5.767	5.758	5.789	VV	772	13079	0.04%	0.007%
24	5.810	5.789	5.826	VV	974	19240	0.06%	0.010%
25	5.884	5.826	5.967	VV	10924	401482	1.17%	0.215%
26	6.126	6.092	6.143	VV	1434	39388	0.11%	0.021%
27	6.330	6.235	6.711	VV	839778	24820615	72.07%	13.277%
28	7.322	7.296	7.334	PV	177	2070	0.01%	0.001%
29	7.654	7.579	7.708	BV	1325	42219	0.12%	0.023%
30	7.900	7.824	7.960	VV	1109	49175	0.14%	0.026%
31	8.211	8.122	8.542	VV	870960	25326516	73.54%	13.548%
32	8.670	8.602	8.884	VV	457275	11670725	33.89%	6.243%
33	9.100	9.062	9.127	VV	1008	25171	0.07%	0.013%
34	9.244	9.189	9.316	PV	5368	141386	0.41%	0.076%
35	9.590	9.518	9.866	PV	1157976	27716458	80.48%	14.826%
36	9.894	9.866	9.912	VV	803	17695	0.05%	0.009%
37	9.919	9.912	9.968	VV	592	9285	0.03%	0.005%

Sum of corrected areas: 186944166

VHA2014-0731.M Thu Jul 31 15:13:20 2014

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3106.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:20 am
Operator : ST
Sample : R
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 10:24:19 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 06:55:22 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29448851	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	39522949	48.767 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	97.53%
10) S	FID-1,4-DFB #2	3.747	17069967	45.865 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	91.73%
11) S	FID-TRI-ALPHA #2	4.680	12024704	46.058 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.12%
13) S	FID-4-BFB<Surr> #2	8.670	11593778	54.320 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	108.64%
	Target Compounds			
2)	PID-benzene	3.333	19115	0.007 ppb
4)	PID-toluene	5.904	78921	0.031 ppb
5)	PID-ethylbenzene	7.660	279758	0.125 ppb
6)	PID-p&m-xylene	7.910	121306	0.046 ppb
7)	PID-o-xylene	8.300	33283	0.014 ppb
8)	PID-BFB<Surr>	8.669	91795401	68.239 ppb
12) H	FID-GRO #2	5.717	15407504	NoCal ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

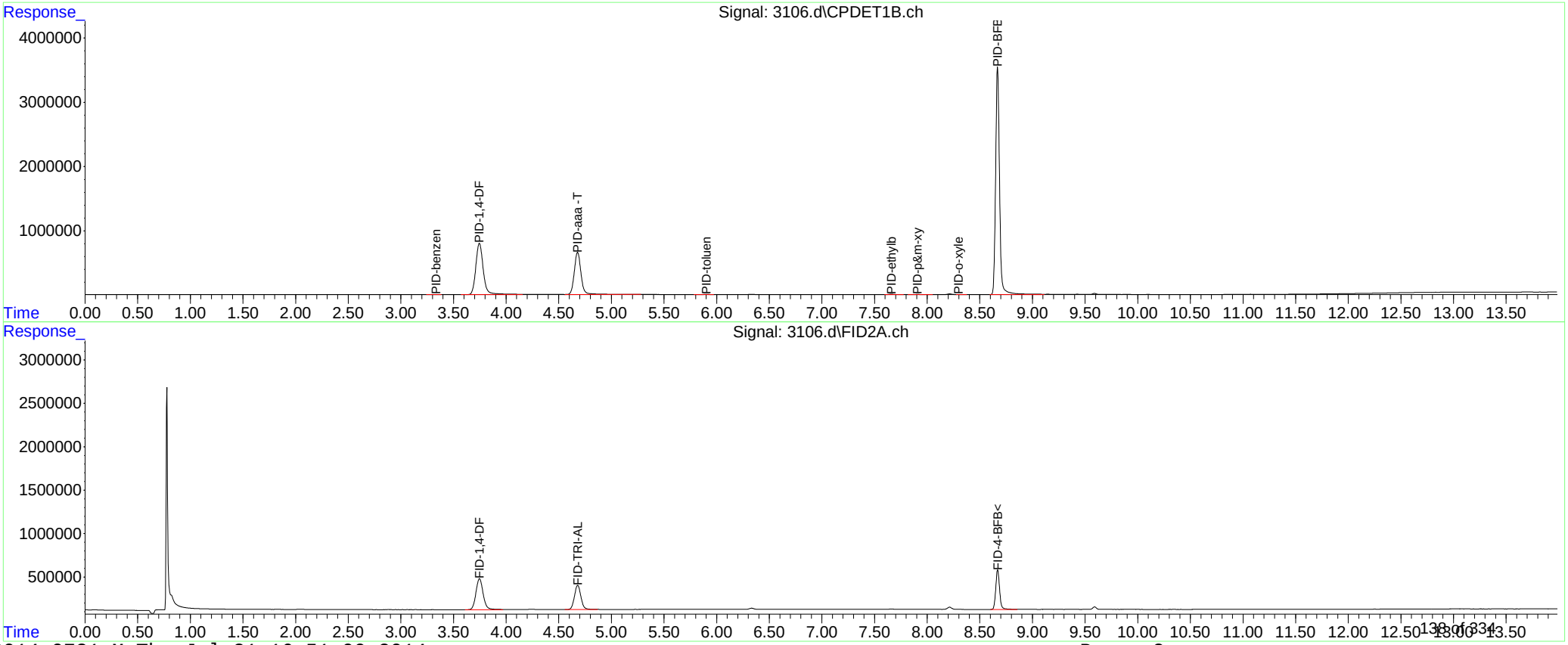
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3106.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:20 am
Operator : ST
Sample : R
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 10:24:19 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 06:55:22 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3107.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:39 am
Operator : ST
Sample : R
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:04:25 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29695478	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.752	42522	0.057 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.11%#
10) S	FID-1,4-DFB #2	3.740	5286	0.015 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.03%#
11) S	FID-TRI-ALPHA #2	4.680	12291590	50.147 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.29%
13) S	FID-4-BFB<Surr> #2	8.676	27200	N.D. ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
2)	PID-benzene	0.000	0	N.D. ppb
4)	PID-toluene	5.902	63694	0.034 ppb
5)	PID-ethylbenzene	7.660	193415	0.116 ppb
6)	PID-p&m-xylene	7.910	57856	0.030 ppb
7)	PID-o-xylene	8.302	18842	0.011 ppb
8)	PID-BFB<Surr>	8.675	268007	0.159 ppb
12) H	FID-GRO #2	5.717	13404337	45.133 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

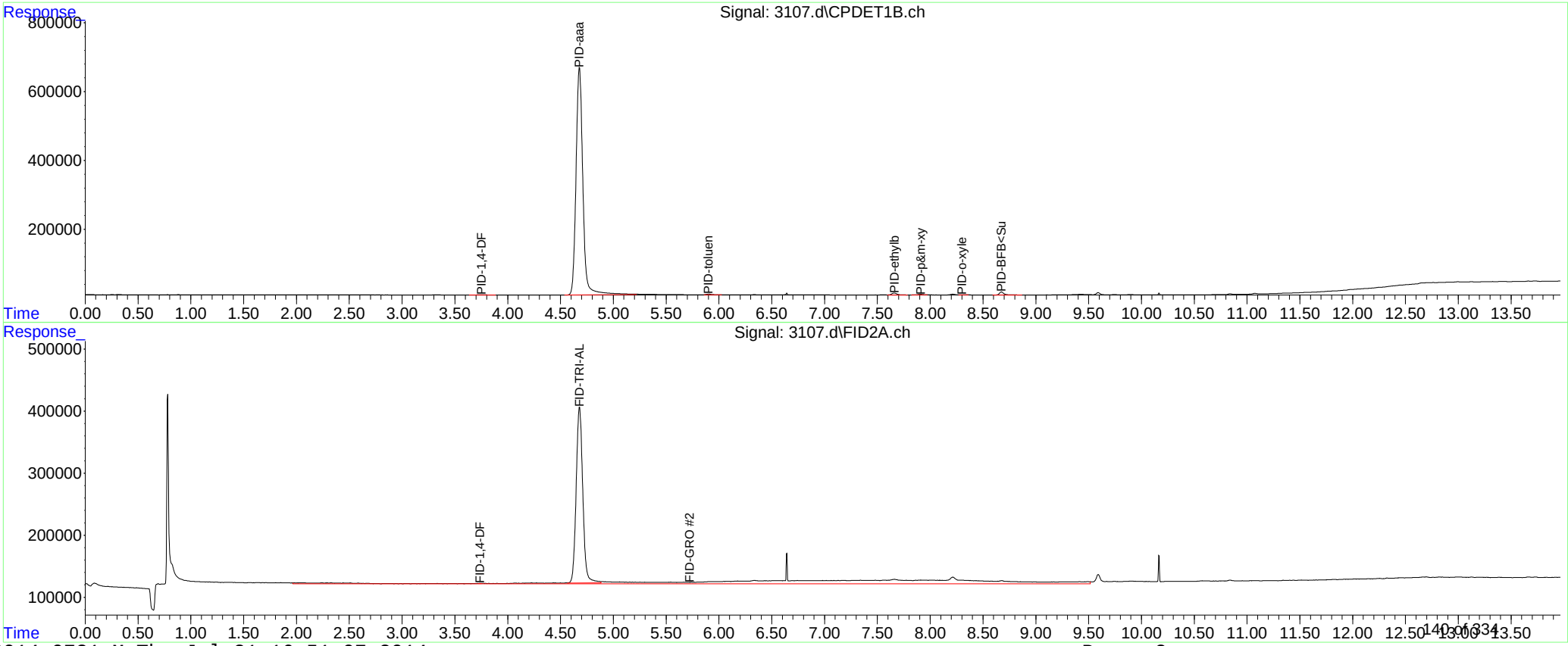
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3107.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:39 am
Operator : ST
Sample : R
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:04:25 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:58 am
Operator : ST
Sample : .5
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:04:35 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29587460	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.680	12302373	50.191 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.38%
13) S	FID-4-BFB<Surr> #2	8.673	1915	N.D. ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
2)	PID-benzene	3.323	895167	0.452 ppb
4)	PID-toluene	5.902	984777	0.528 ppb
5)	PID-ethylbenzene	7.658	1200389	0.725 ppb
6)	PID-p&m-xylene	7.909	2018799	1.056 ppb
7)	PID-o-xylene	8.301	865987	0.529 ppb
8)	PID-BFB<Surr>	8.675	98770	0.059 ppb
12) H	FID-GRO #2	5.717	13790342	46.433 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

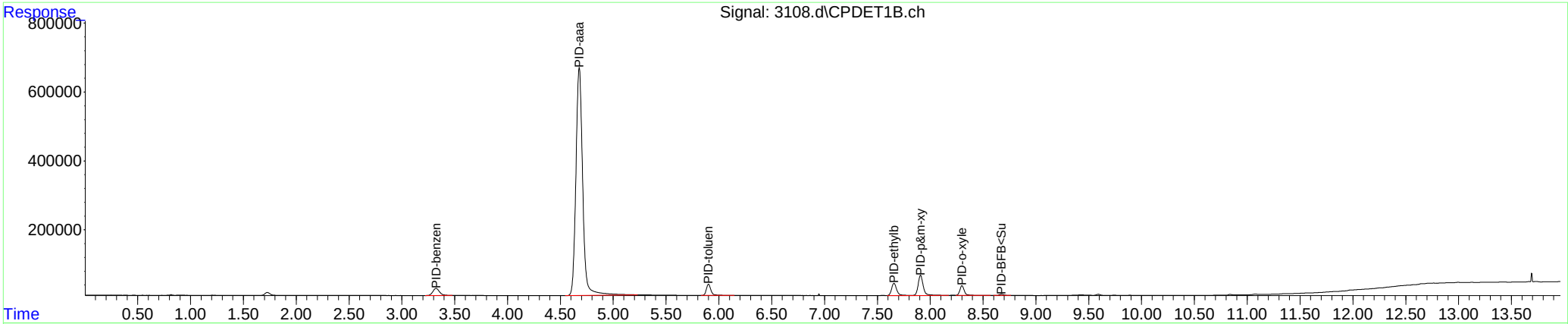
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:58 am
Operator : ST
Sample : .5
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:04:35 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3109.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:17 am
Operator : ST
Sample : 1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:05:36 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	29740481	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.749	545883	0.726 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	1.45%#
10) S	FID-1,4-DFB #2	3.746	268260	0.786 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	1.57%#
11) S	FID-TRI-ALPHA #2	4.681	12441975	50.760 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.52%
13) S	FID-4-BFB<Surr> #2	8.672	359247	1.240 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	2.48%#
	Target Compounds			
2)	PID-benzene	3.324	1809079	0.909 ppb
4)	PID-toluene	5.902	1842694	0.983 ppb
5)	PID-ethylbenzene	7.658	1870017	1.123 ppb
6)	PID-p&m-xylene	7.908	3859807	2.009 ppb
7)	PID-o-xylene	8.301	1621753	0.986 ppb
8)	PID-BFB<Surr>	8.672	1441290	0.853 ppb
12) H	FID-GRO #2	5.717	13301922	44.789 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

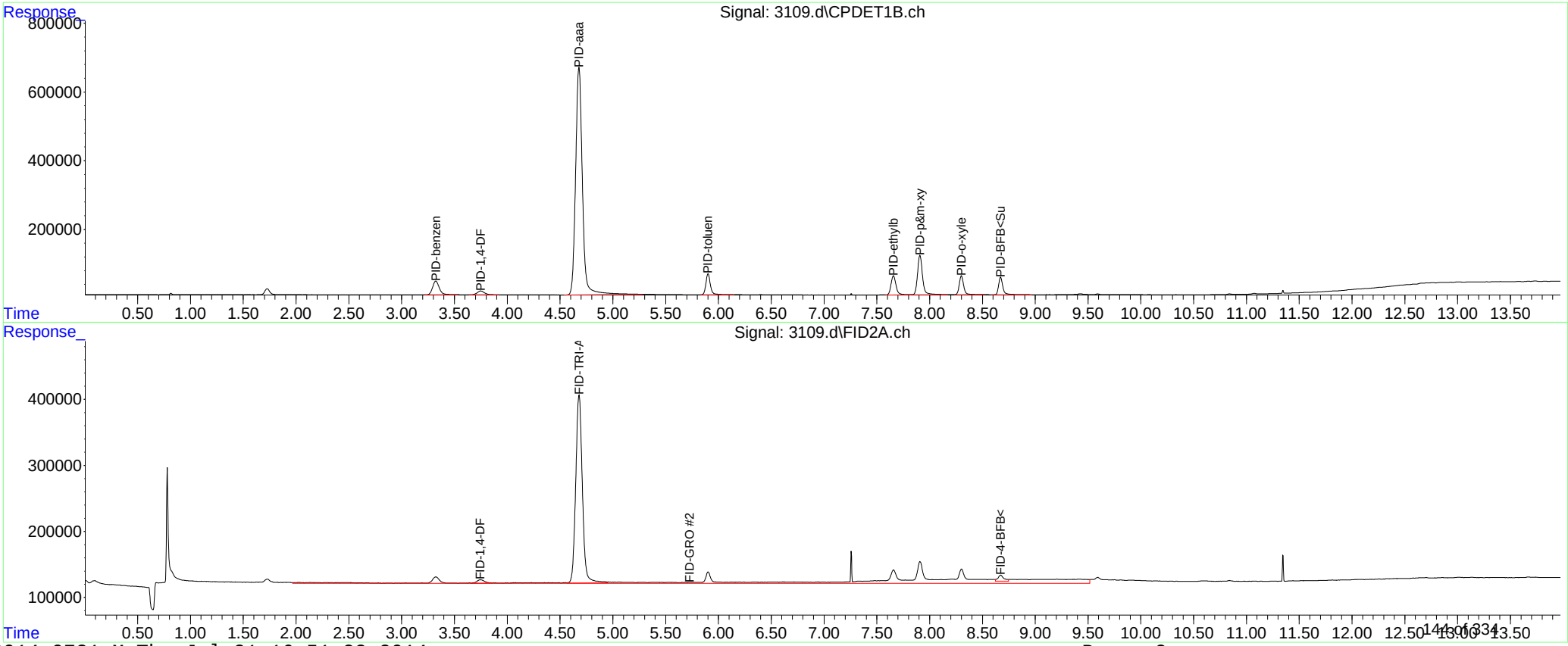
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3109.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:17 am
Operator : ST
Sample : 1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:05:36 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3110.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:36 am
Operator : ST
Sample : 10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:06:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.678	29640118	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	8491259	11.325 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	22.65%#
10) S	FID-1,4-DFB #2	3.747	3466409	10.160 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	20.32%#
11) S	FID-TRI-ALPHA #2	4.679	12255628	50.000 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.00%
13) S	FID-4-BFB<Surr> #2	8.670	2731918	12.111 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	24.22%#
	Target Compounds			
2)	PID-benzene	3.323	15297227	7.714 ppb
4)	PID-toluene	5.900	14906025	7.977 ppb
5)	PID-ethylbenzene	7.655	12954742	7.805 ppb
6)	PID-p&m-xylene	7.906	31331740	16.359 ppb
7)	PID-o-xylene	8.300	13826981	8.432 ppb
8)	PID-BFB<Surr>	8.669	20694960	12.293 ppb
12) H	FID-GRO #2	5.717	32202556	108.428 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

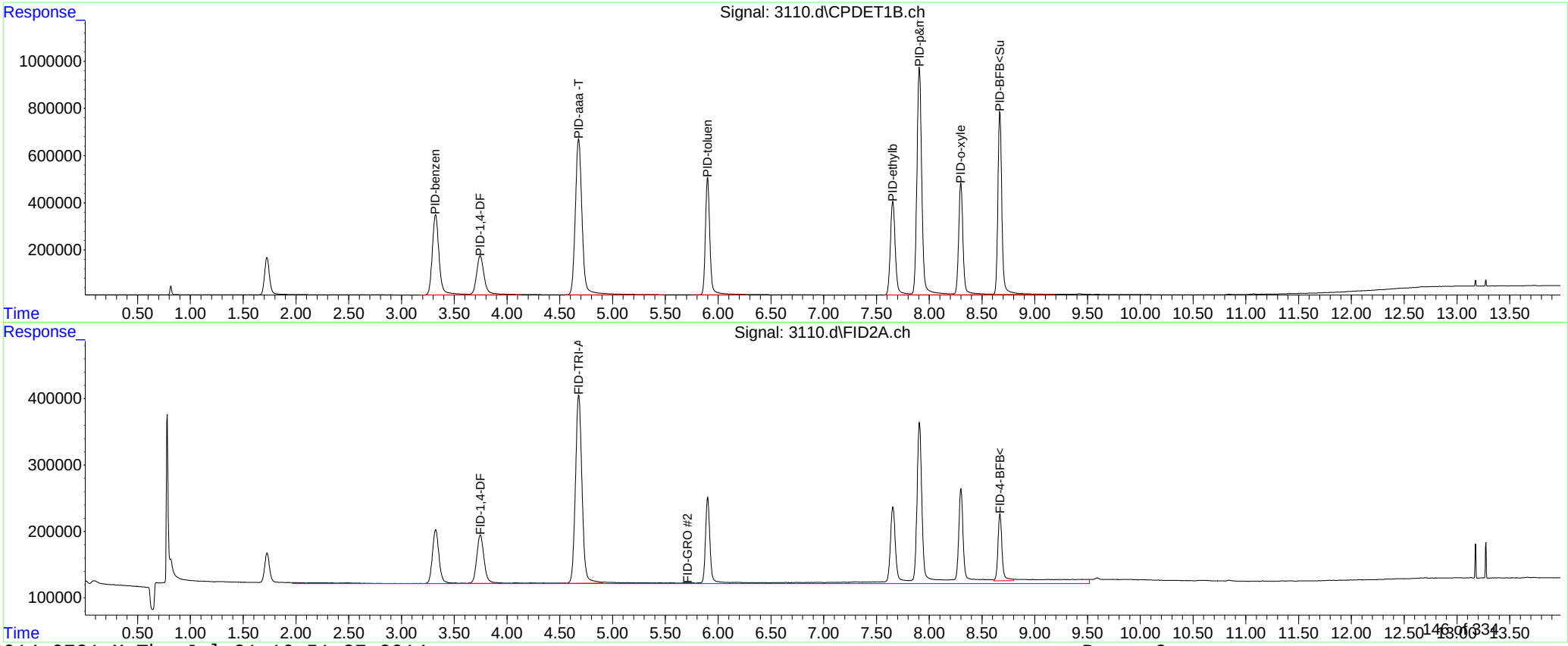
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3110.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:36 am
Operator : ST
Sample : 10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:06:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3111.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:55 am
Operator : ST
Sample : 50
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:06:41 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30247471	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	20548553	26.857 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	53.71%#
10) S	FID-1,4-DFB #2	3.747	8332197	24.420 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	48.84%#
11) S	FID-TRI-ALPHA #2	4.680	12665586	51.673 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.35%
13) S	FID-4-BFB<Surr> #2	8.670	5826033	26.289 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	52.58%
	Target Compounds			
2)	PID-benzene	3.324	101587761	50.199 ppb
4)	PID-toluene	5.900	99495738	52.175 ppb
5)	PID-ethylbenzene	7.655	84931945	50.144 ppb
6)	PID-p&m-xylene	7.907	203079762	103.906 ppb
7)	PID-o-xylene	8.300	86483718	51.683 ppb
8)	PID-BFB<Surr>	8.669	44430611	25.863 ppb
12) H	FID-GRO #2	5.717	160404319	540.093 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

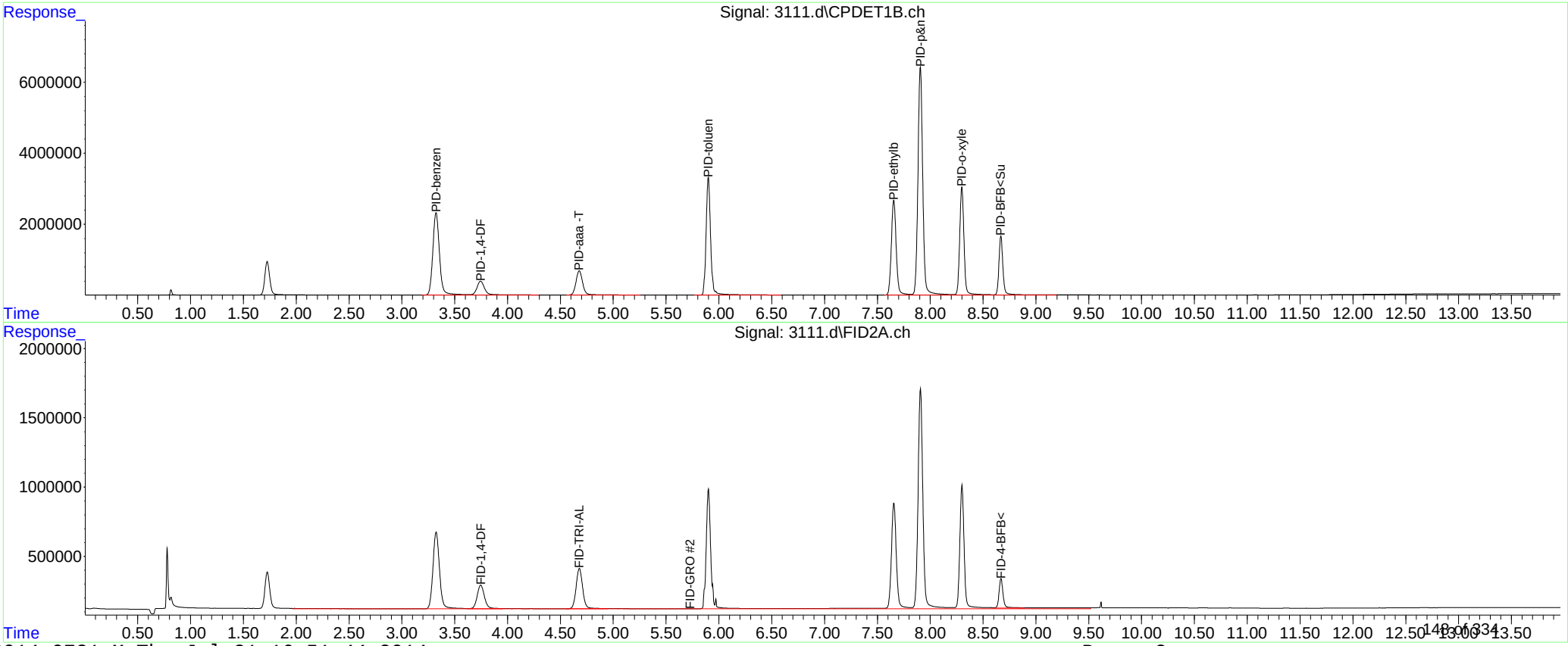
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3111.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:55 am
Operator : ST
Sample : 50
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:06:41 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3112.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:15 am
Operator : ST
Sample : 100
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:07:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	30364289	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	41936544	54.600 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.20%
10) S	FID-1,4-DFB #2	3.747	17059860	50.000 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	100.00%
11) S	FID-TRI-ALPHA #2	4.681	12634979	51.548 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.10%
13) S	FID-4-BFB<Surr> #2	8.670	10842061	49.272 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.54%
	Target Compounds			
2)	PID-benzene	3.325	215105203	105.883 ppb
4)	PID-toluene	5.900	199109657	104.011 ppb
5)	PID-ethylbenzene	7.655	173736569	102.181 ppb
6)	PID-p&m-xylene	7.907	410225401	209.085 ppb
7)	PID-o-xylene	8.300	175269730	104.340 ppb
8)	PID-BFB<Surr>	8.669	86446565	50.126 ppb
12) H	FID-GRO #2	5.717	313089047	1054.193 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

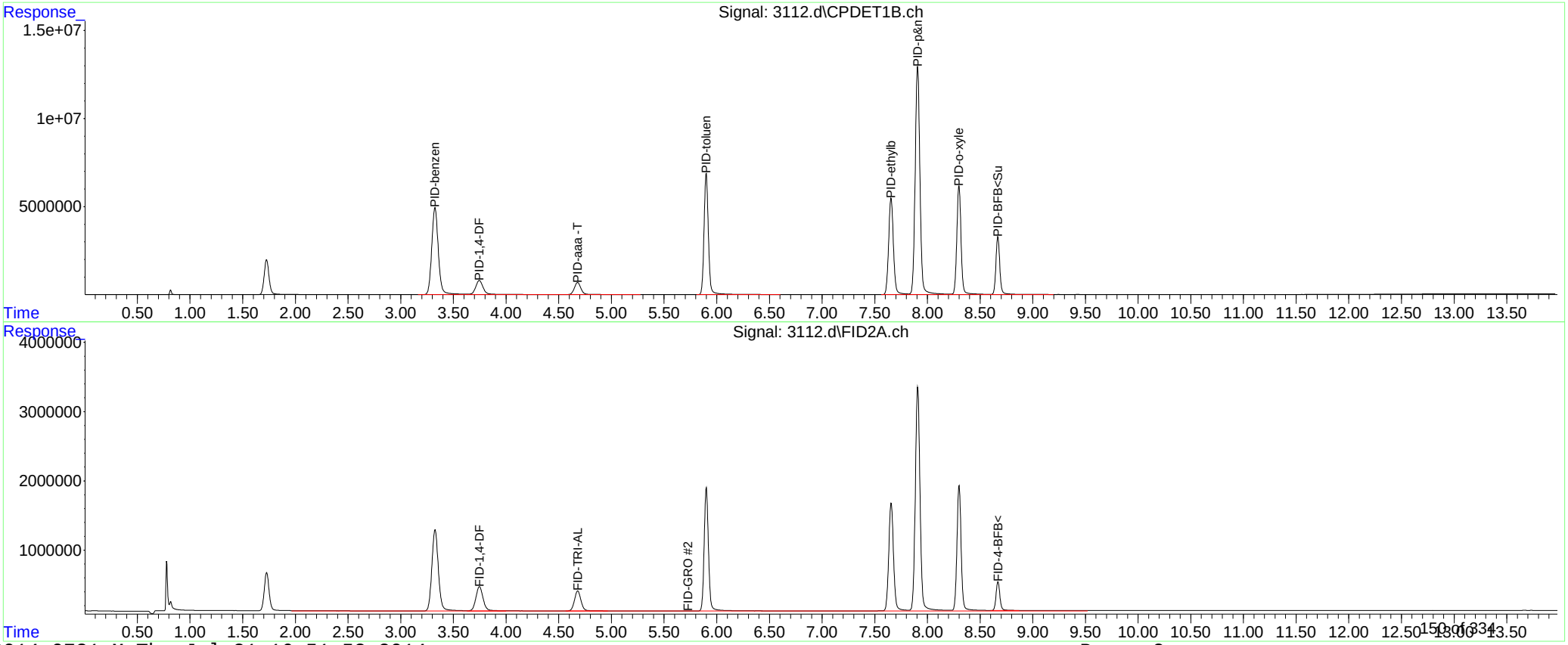
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3112.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:15 am
Operator : ST
Sample : 100
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:07:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3113.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:34 am
Operator : ST
Sample : 150
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:07:58 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	30575202	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	64975299	84.012 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	168.02%#
10) S	FID-1,4-DFB #2	3.748	26148740	76.638 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	153.28%#
11) S	FID-TRI-ALPHA #2	4.681	12216987	49.842 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.68%
13) S	FID-4-BFB<Surr> #2	8.670	16193701	73.794 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	147.59%
	Target Compounds			
2)	PID-benzene	3.327	342015854	167.192 ppb
4)	PID-toluene	5.901	305740351	158.611 ppb
5)	PID-ethylbenzene	7.656	266824487	155.846 ppb
6)	PID-p&m-xylene	7.907	623919725	315.807 ppb
7)	PID-o-xylene	8.300	266204807	157.381 ppb
8)	PID-BFB<Surr>	8.669	131315699	75.618 ppb
12) H	FID-GRO #2	5.717	475536894	1601.167 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

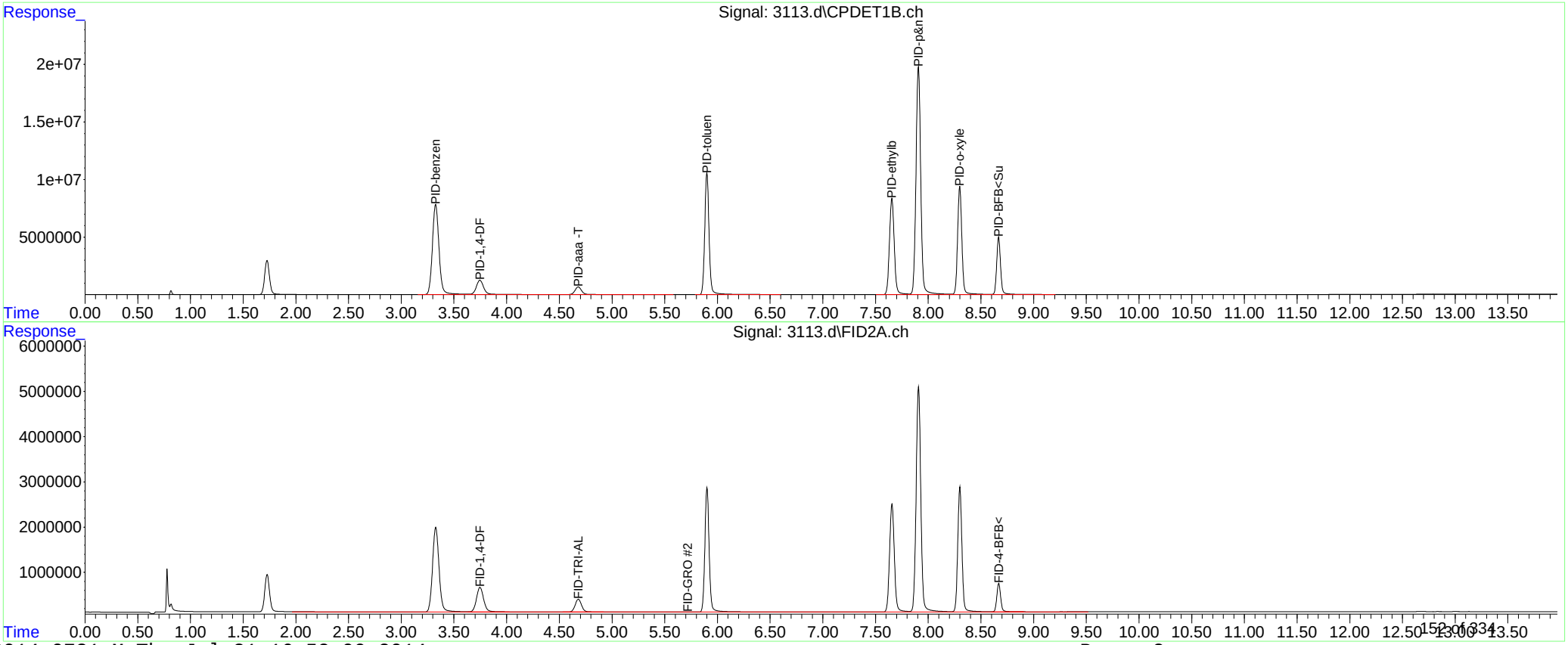
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3113.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:34 am
Operator : ST
Sample : 150
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:07:58 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3114.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:53 am
Operator : ST
Sample : 200
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:08:34 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	31354116	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	107257131	135.237 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	270.47%#
10) S	FID-1,4-DFB #2	3.747	45042898	132.014 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	264.03%#
11) S	FID-TRI-ALPHA #2	4.680	12702104	51.822 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.64%
13) S	FID-4-BFB<Surr> #2	8.670	27542325	125.794 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	251.59%#
	Target Compounds			
2)	PID-benzene	3.327	464218798	221.292 ppb
4)	PID-toluene	5.900	407882290	206.343 ppb
5)	PID-ethylbenzene	7.656	354954536	202.171 ppb
6)	PID-p&m-xylene	7.908	824785415	407.108 ppb
7)	PID-o-xylene	8.300	353035631	203.531 ppb
8)	PID-BFB<Surr>	8.669	216210470	121.411 ppb
12) H	FID-GRO #2	5.717	635392661	2139.412 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

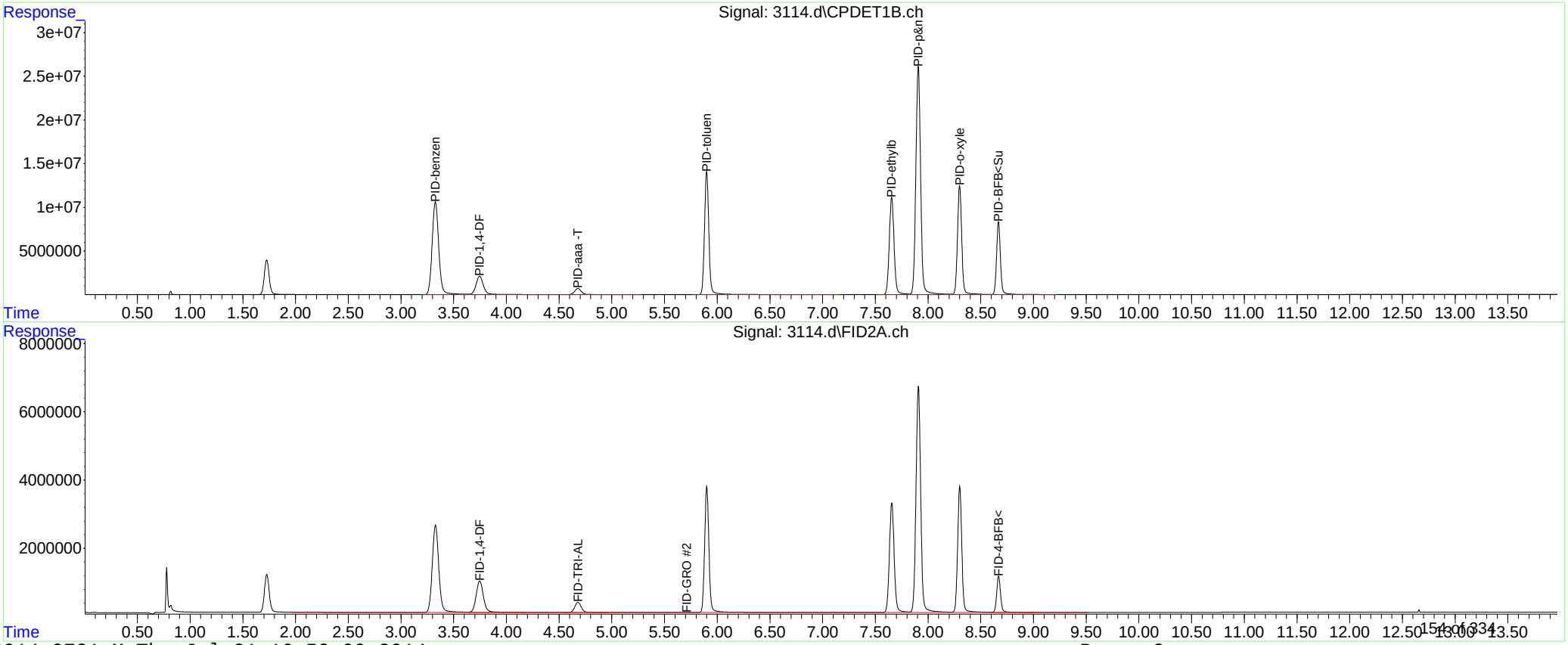
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3114.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:53 am
Operator : ST
Sample : 200
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:08:34 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3115.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:12 pm
Operator : ST
Sample : 240
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:09:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30934120	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.680	12484510	50.934 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.87%
13) S	FID-4-BFB<Surr> #2	8.682	1001528	4.183 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	8.37%#
	Target Compounds			
2)	PID-benzene	3.326	561865351	271.477 ppb
4)	PID-toluene	5.900	489961652	251.232 ppb
5)	PID-ethylbenzene	7.656	424897263	245.294 ppb
6)	PID-p&m-xylene	7.908	981324648	490.951 ppb
7)	PID-o-xylene	8.300	421859245	246.511 ppb
8)	PID-BFB<Surr>	8.678	5082627	2.893 ppb
12) H	FID-GRO #2	5.717	761592001	2564.334 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

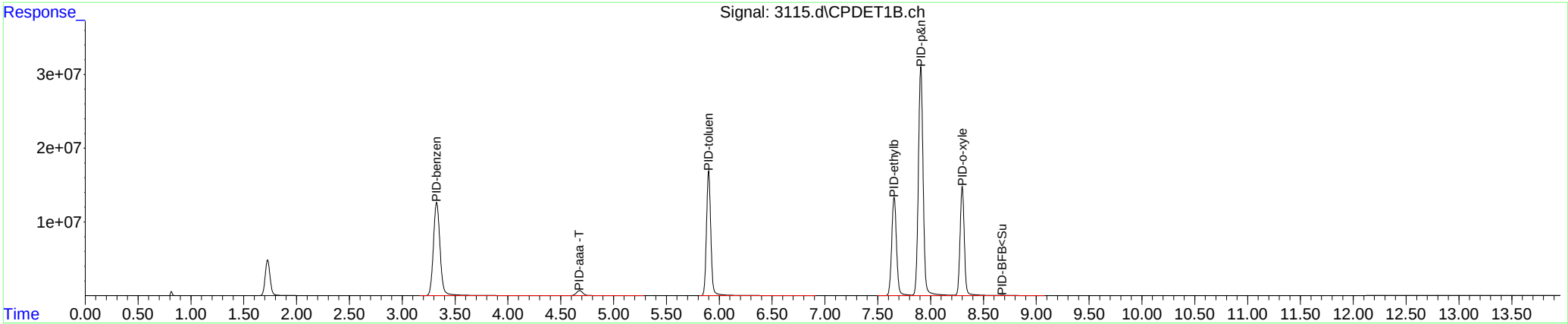
(f)=RT Delta > 1/2 Window (m)=manual int.

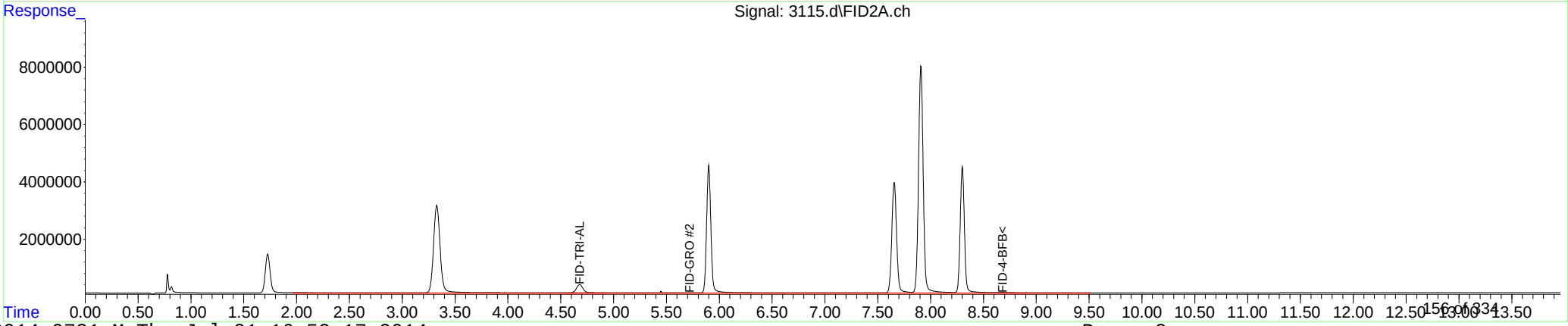
Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3115.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:12 pm
Operator : ST
Sample : 240
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:09:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3116.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:31 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:09:55 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29871991	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	3.718f	89951	0.264 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.53%#
11) S	FID-TRI-ALPHA #2	4.680	12518200	51.071 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	102.14%
13) S	FID-4-BFB<Surr> #2	8.680	19979	N.D. ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
2)	PID-benzene	3.326	359796	0.180 ppb
4)	PID-toluene	5.903	427634	0.227 ppb
5)	PID-ethylbenzene	7.659	615344	0.368 ppb
6)	PID-p&m-xylene	7.910	1316105	0.682 ppb
7)	PID-o-xylene	8.302	603886	0.365 ppb
8)	PID-BFB<Surr>	8.675	160890	0.095 ppb
12) H	FID-GRO #2	5.717	8194638	27.592 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

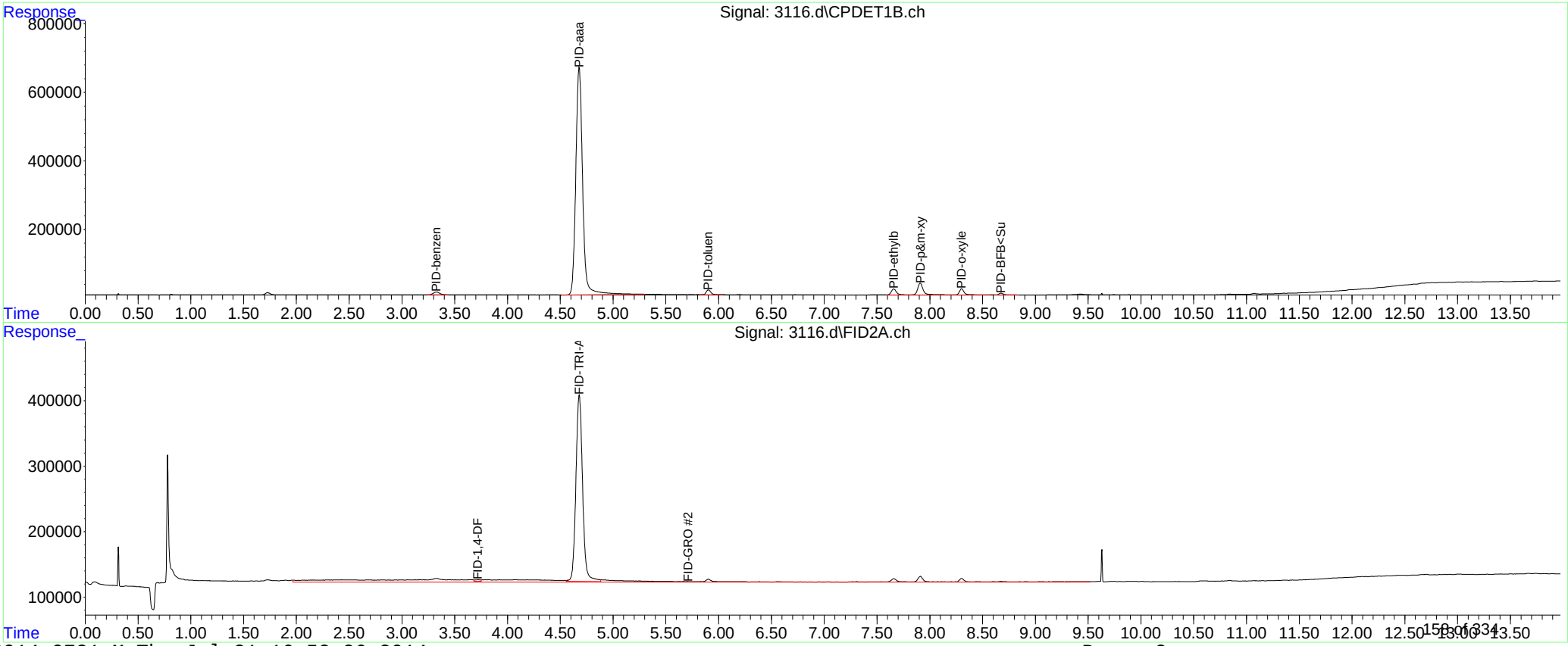
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3116.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:31 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:09:55 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3117.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:50 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:02 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.682	32221	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	3.764	9145	0.027 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.05%#
11) S	FID-TRI-ALPHA #2	4.681	45381	0.185 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.37%#
13) S	FID-4-BFB<Surr> #2	8.681	13717	N.D. ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
2)	PID-benzene	3.324	86375	40.067 ppb
4)	PID-toluene	5.904	220959	108.772 ppb
5)	PID-ethylbenzene	7.658	1085205	601.461 ppb
6)	PID-p&m-xylene	7.910	386840	185.802 ppb
7)	PID-o-xylene	8.302	164378	92.216 ppb
8)	PID-BFB<Surr>	8.676	88285	48.242 ppb
12) H	FID-GRO #2	5.717	7955267	26.786 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

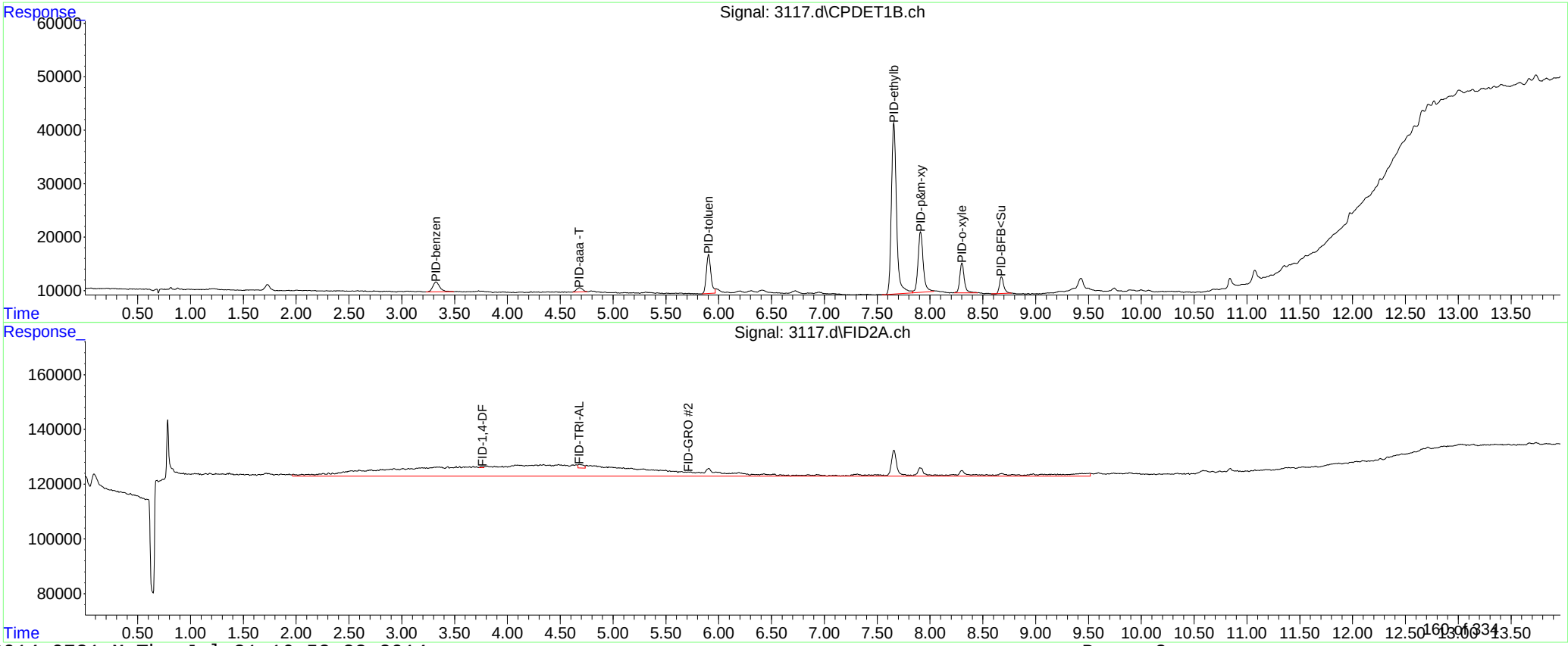
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3117.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:50 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:02 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3118.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:09 pm
Operator : ST
Sample : G1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:08 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	PID-aaa -TFT	4.808	65908	50.000	ppb
	System Monitoring Compounds				
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D.	ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#	
10) S	FID-1,4-DFB #2	3.767	100141	0.293	ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.59%#	
11) S	FID-TRI-ALPHA #2	4.674	119073	0.486	ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.97%#	
13) S	FID-4-BFB<Surr> #2	8.688	37347	N.D.	ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#	
	Target Compounds				
2)	PID-benzene	0.000	0	N.D.	ppb
4)	PID-toluene	0.000	0	N.D.	ppb
5)	PID-ethylbenzene	7.905f	21239967	5755.114	ppb
6)	PID-p&m-xylene	8.301f	6879343	1615.362	ppb
7)	PID-o-xylene	8.681f	220117	60.370	ppb
8)	PID-BFB<Surr>	9.110f	183648	49.059	ppb
12) H	FID-GRO #2	5.717	29790989	100.308	ppb
	SemiQuant Compounds - Not Calibrated on this Instrument				

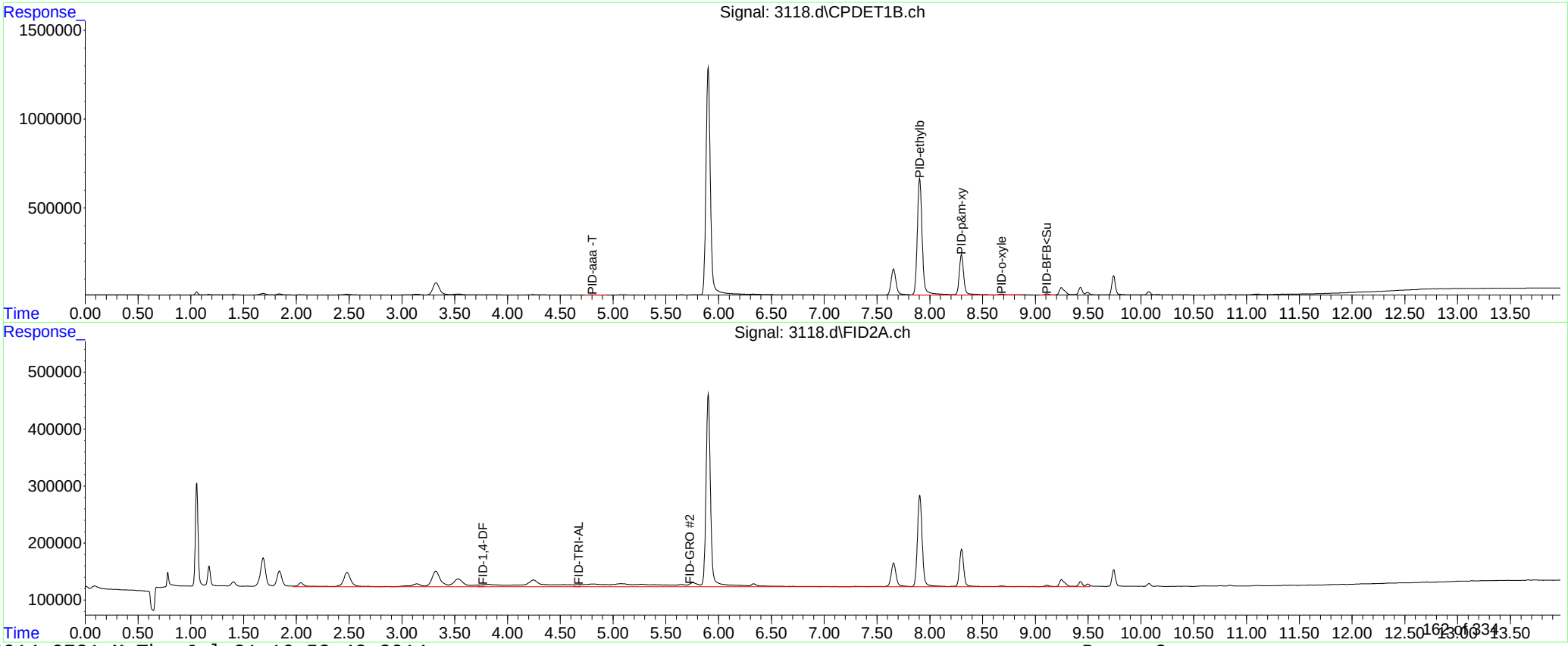
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3118.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:09 pm
Operator : ST
Sample : G1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:08 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3119.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:28 pm
Operator : ST
Sample : G2
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:41 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.658	67277	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.819	725918	426.564 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	853.13%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.645f	211045	0.861 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	1.72%#
13) S	FID-4-BFB<Surr> #2	8.687	135310	0.214 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.43%#
	Target Compounds			
2)	PID-benzene	3.324	13957492	3100.833 ppb
4)	PID-toluene	5.900	167541648	39500.739 ppb
5)	PID-ethylbenzene	7.656	20416949	5419.555 ppb
6)	PID-p&m-xylene	7.904	91576080	21065.785 ppb
7)	PID-o-xylene	8.300	28846061	7750.423 ppb
8)	PID-BFB<Surr>	8.685	953078	249.424 ppb
12) H	FID-GRO #2	5.717	118423496	398.740 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

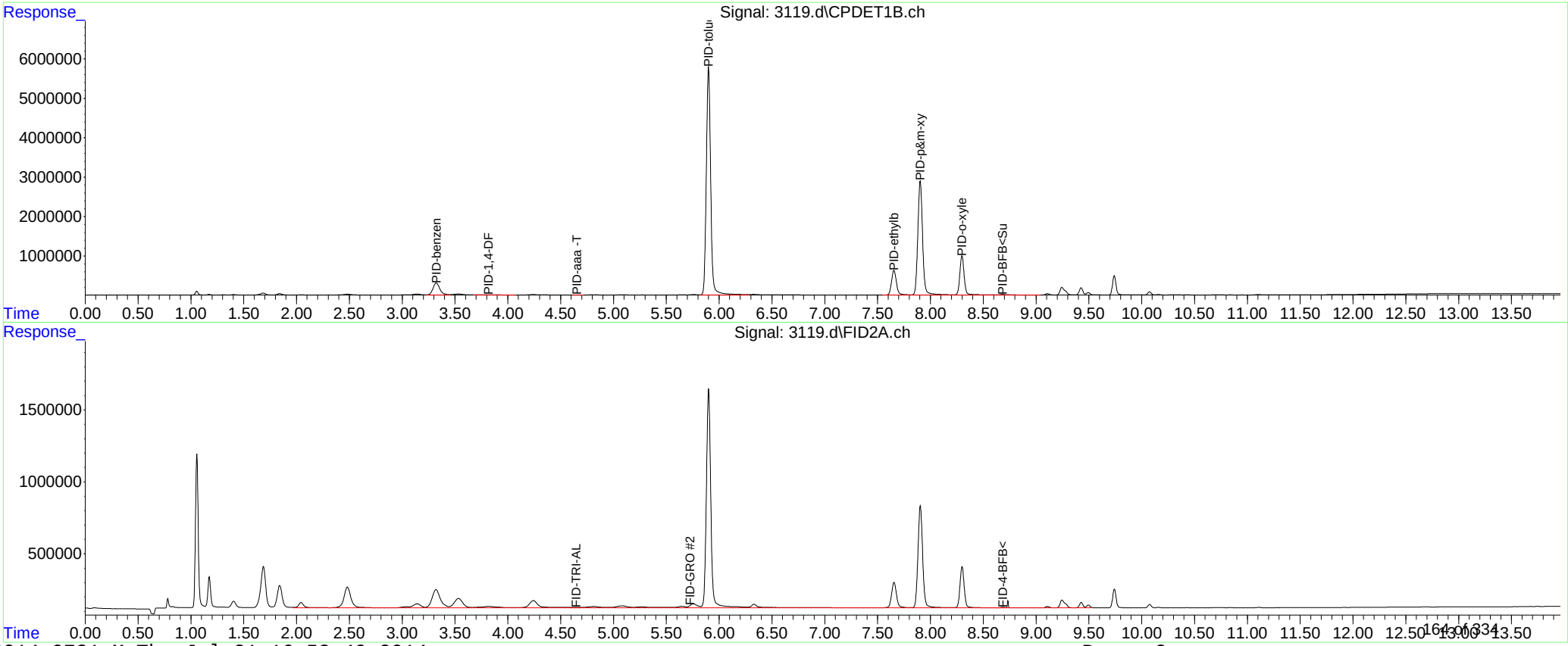
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3119.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:28 pm
Operator : ST
Sample : G2
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:41 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3120.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:47 pm
Operator : ST
Sample : G3
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:11:09 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.654	158583	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.654f	122268	0.499 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	1.00%#
13) S	FID-4-BFB<Surr> #2	8.687	356123	1.225 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	2.45%#
	Target Compounds			
2)	PID-benzene	3.325	38015288	3582.945 ppb
4)	PID-toluene	5.901	425527321	42561.875 ppb
5)	PID-ethylbenzene	7.656	51616681	5812.644 ppb
6)	PID-p&m-xylene	7.904	231150100	22557.998 ppb
7)	PID-o-xylene	8.300	72684309	8284.961 ppb
8)	PID-BFB<Surr>	8.685	1690905	187.733 ppb
12) H	FID-GRO #2	5.717	295271684	994.201 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

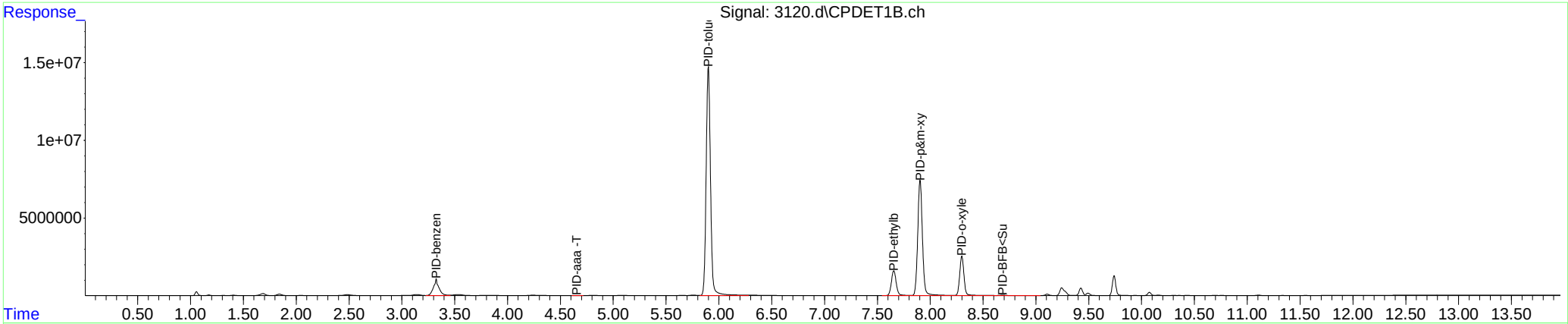
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3120.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:47 pm
Operator : ST
Sample : G3
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:11:09 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3121.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:07 pm
Operator : ST
Sample : G4
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:11:40 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.654	315026	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.653f	221571	0.904 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	1.81%#
13) S	FID-4-BFB<Surr> #2	8.687	832156	3.407 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	6.81%#
	Target Compounds			
2)	PID-benzene	3.326	75985080	3605.122 ppb
4)	PID-toluene	5.901	843923283	42491.885 ppb
5)	PID-ethylbenzene	7.656	102827107	5829.093 ppb
6)	PID-p&m-xylene	7.905	457933333	22496.681 ppb
7)	PID-o-xylene	8.300	144359505	8283.329 ppb
8)	PID-BFB<Surr>	8.686	2889621	161.500 ppb
12) H	FID-GRO #2	5.717	590165277	1987.128 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

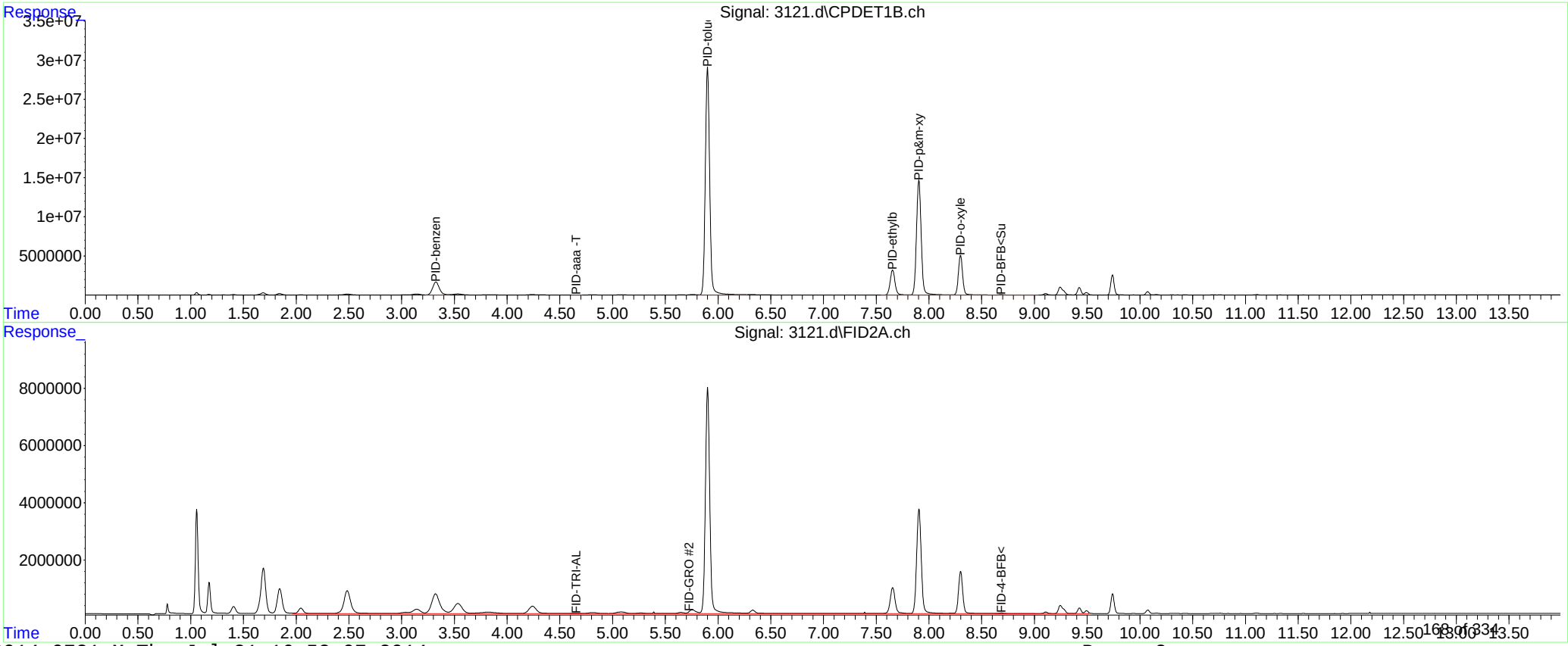
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3121.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:07 pm
Operator : ST
Sample : G4
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:11:40 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3122.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:26 pm
Operator : ST
Sample : G5
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:12:12 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.654	467266	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.651f	256038	1.045 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	2.09%#
13) S	FID-4-BFB<Surr> #2	8.687	1314067	5.615 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	11.23%#
	Target Compounds			
2)	PID-benzene	3.327	118721759	3797.562 ppb
4)	PID-toluene	5.902	1268317414	43054.035 ppb
5)	PID-ethylbenzene	7.655	155882063	5957.615 ppb
6)	PID-p&m-xylene	7.905	687532543	22771.536 ppb
7)	PID-o-xylene	8.299	217466279	8412.679 ppb
8)	PID-BFB<Surr>	8.685	4391620	165.477 ppb
12) H	FID-GRO #2	5.717	892801734	3006.127 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

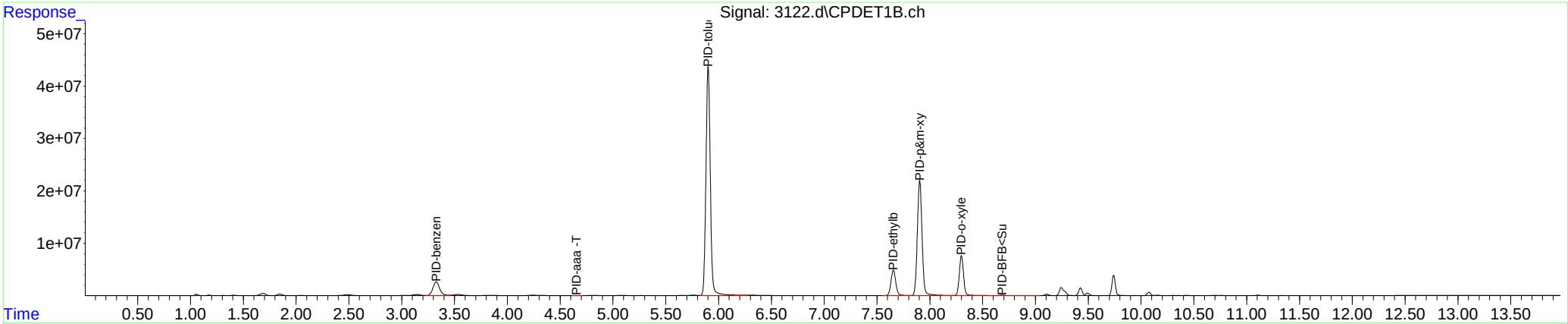
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3122.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:26 pm
Operator : ST
Sample : G5
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:12:12 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3123.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:45 pm
Operator : ST
Sample : G6
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:12:42 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.654	619533	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.657	227681	0.929 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	1.86%#
13) S	FID-4-BFB<Surr> #2	8.687	1731773	7.529 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	15.06%#
	Target Compounds			
2)	PID-benzene	3.328	160667666	3876.168 ppb
4)	PID-toluene	5.903	1686147488	43169.901 ppb
5)	PID-ethylbenzene	7.656	209986388	6052.949 ppb
6)	PID-p&m-xylene	7.906	919973357	22981.264 ppb
7)	PID-o-xylene	8.300	292408066	8531.616 ppb
8)	PID-BFB<Surr>	8.685	5874692	166.955 ppb
12) H	FID-GRO #2	5.717	1200162513	4041.033 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

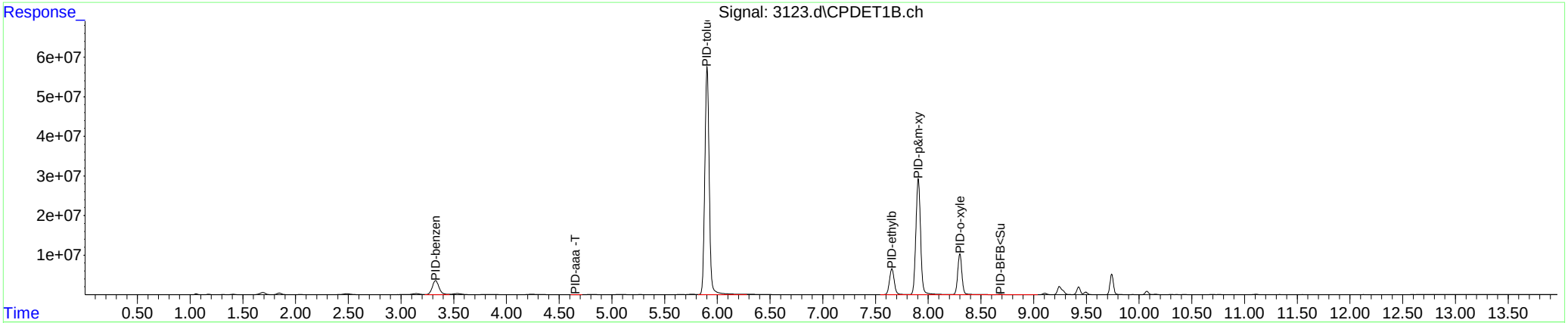
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3123.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:45 pm
Operator : ST
Sample : G6
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:12:42 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3124.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:04 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:41:53 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29356580	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	39088913	52.639 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	105.28%
10) S	FID-1,4-DFB #2	3.747	16805522	49.255 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.51%
11) S	FID-TRI-ALPHA #2	4.680	11888838	48.504 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.01%
13) S	FID-4-BFB<Surr> #2	8.670	11527219	52.412 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	104.82%
	Target Compounds			
2)	PID-benzene	3.327	167779	0.085 ppb
4)	PID-toluene	5.902	1329283	0.718 ppb
5)	PID-ethylbenzene	7.659	863405	0.525 ppb
6)	PID-p&m-xylene	7.908	1083753	0.571 ppb
7)	PID-o-xylene	8.302	350660	0.216 ppb
8)	PID-BFB<Surr>	8.669	85815480	51.468 ppb
12) H	FID-GRO #2	5.717	17977266	60.531 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

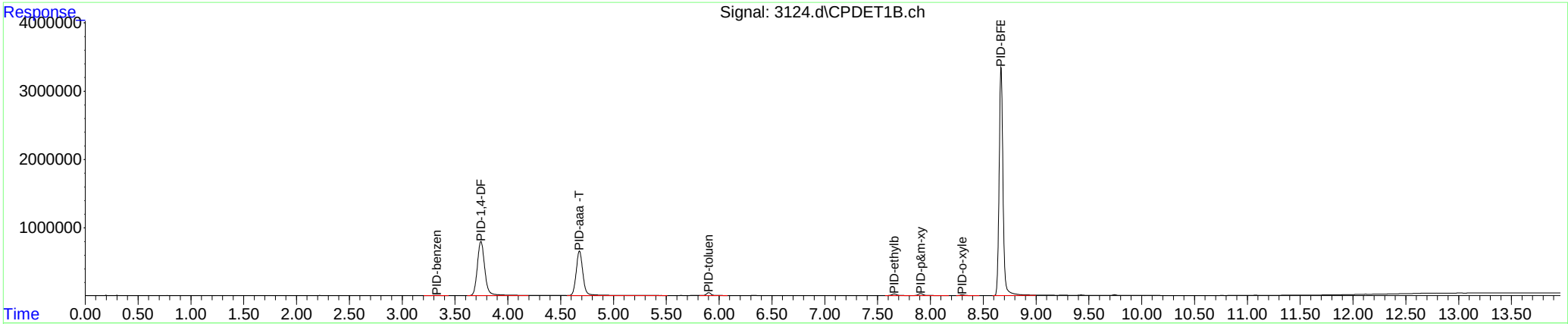
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3124.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:04 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:41:53 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3125.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:24 pm
Operator : ST
Sample : ICV BTES
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:47:35 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	31634188	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47028509	58.772 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	117.54%
10) S	FID-1,4-DFB #2	3.747	18496321	54.210 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	108.42%
11) S	FID-TRI-ALPHA #2	4.681	12876463	52.533 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	105.07%
13) S	FID-4-BFB<Surr> #2	8.670	13143387	59.817 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	119.63%
	Target Compounds			
2)	PID-benzene	3.327	471361592	222.708 ppb
4)	PID-toluene	5.900	417588164	209.383 ppb
5)	PID-ethylbenzene	7.656	361826852	204.260 ppb
6)	PID-p&m-xylene	7.908	835263526	408.630 ppb
7)	PID-o-xylene	8.300	359505791	205.426 ppb
8)	PID-BFB<Surr>	8.669	99009225	55.106 ppb
12) H	FID-GRO #2	5.717	653704021	2201.068 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

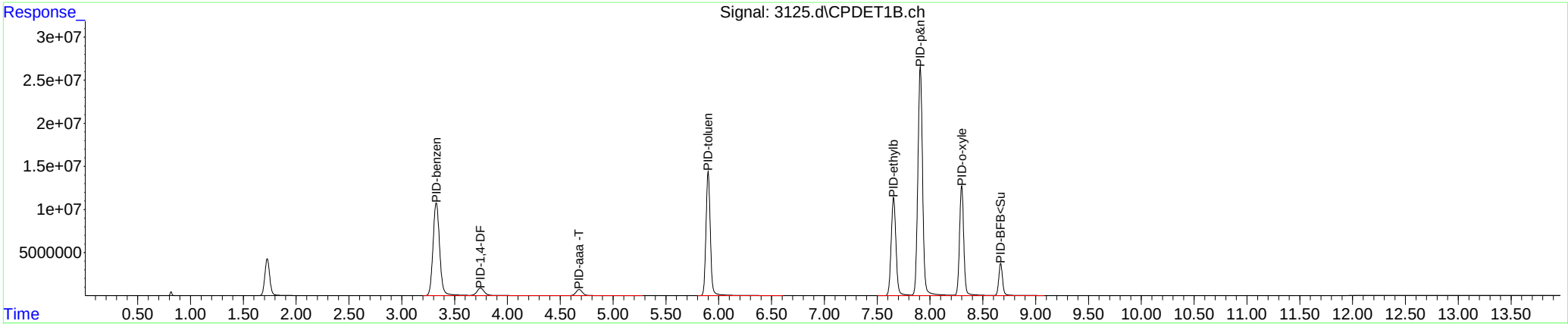
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3125.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:24 pm
Operator : ST
Sample : ICV BTES
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:47:35 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3126.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:43 pm
Operator : ST
Sample : ICV GRO
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 16:30:57 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30284955	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	43660267	56.993 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	113.99%
10) S	FID-1,4-DFB #2	3.748	22959613	67.291 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	134.58%#
11) S	FID-TRI-ALPHA #2	4.680	12662349	51.659 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.32%
13) S	FID-4-BFB<Surr> #2	8.670	12468568	56.725 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	113.45%
	Target Compounds			
2)	PID-benzene	3.326	81160288	40.055 ppb
4)	PID-toluene	5.900	793313638	415.497 ppb
5)	PID-ethylbenzene	7.655	98621844	58.155 ppb
6)	PID-p&m-xylene	7.904	430937273	220.217 ppb
7)	PID-o-xylene	8.299	135942009	81.140 ppb
8)	PID-BFB<Surr>	8.669	90291263	52.492 ppb
12) H	FID-GRO #2	5.717	566832663	1908.566 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

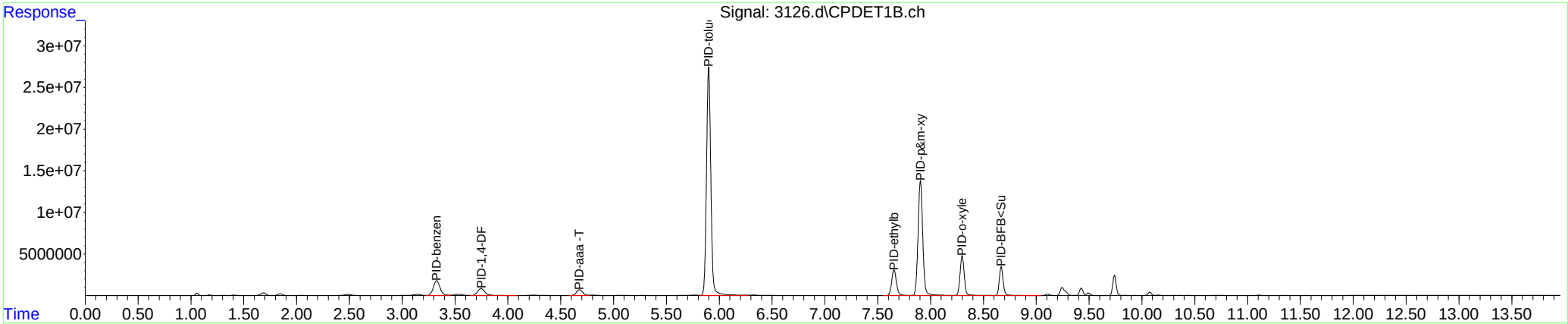
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3126.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:43 pm
Operator : ST
Sample : ICV GRO
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 16:30:57 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Workorder No. 1143648

Semivolatile Organic Fuels Department

Method: AK102

Method Batch Id: XXX31655

Analysis Batch Id: XFC11487

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226413		8/12/2014 12:02:00PM
Continuing Calib Verification	1226414		8/12/2014 4:48:00PM
Continuing Calib Verification	1226416		8/12/2014 7:17:00PM
Method Blank	1225891		8/12/2014 7:47:00PM
Lab Control Sample	1225892		8/12/2014 7:57:00PM
Lab Control Sample Duplicate	1225893		8/12/2014 8:06:00PM
Paying sample	1143648001	SS010-SB01-90	8/12/2014 8:16:00PM
Paying sample	1143648002	SS010-SB01-11	8/12/2014 8:26:00PM
Paying sample	1143648003	SS010-SB01-2	8/12/2014 8:36:00PM
Billable Matrix Spike	1143648004	SS010-SB01-2 MS	8/12/2014 8:46:00PM
Billable Matrix Spike Dup.	1143648005	SS010-SB01-2 MSD	8/12/2014 8:56:00PM
Paying sample	1143648006	SS010-SB03-80	8/12/2014 9:06:00PM
Paying sample	1143648007	SS010-SB03-14D	8/12/2014 9:16:00PM
Paying sample	1143648008	SS010-SB03-14	8/12/2014 9:25:00PM
Paying sample	1143648009	SS010-SB03-2	8/12/2014 9:35:00PM
Paying sample	1143648010	SS010-SB02-13	8/12/2014 9:45:00PM
Paying sample	1143648011	SS010-SB02-2	8/12/2014 9:55:00PM
Paying sample	1143648012	SS010-SB02-56	8/12/2014 10:05:00PM
Continuing Calib Verification	1226418		8/12/2014 10:15:00PM
Continuing Calib Verification	1226420		8/13/2014 12:03:00AM
Continuing Calib Verification	1226422		8/13/2014 3:51:00AM

SGS Ref.#	1226413	Instrument Blank	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	Results	RL/CL	Units	Analysis Date
Semivolatile Organic Fuels Department				
Diesel Range Organics	300U	600	mg/L	08/12/14
Surrogates				
5a Androstane <surr>	101	75-125	%	08/12/14

Batch XFC11487
Method AK102
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226414 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	CCVB 4640	93	(75-125)	5000 mg/L	08/12/2014

Batch XFC11487
Method AK102
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226416 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	CCVB 4860	97	(75-125)	5000 mg/L	08/12/2014

Batch XFC11487
Method AK102
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226418 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Diesel Range Organics	CCVB	5000	100	(75-125)	5000 mg/L	08/12/2014

Batch XFC11487
Method AK102
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226420 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Diesel Range Organics	CCVB 5240		105	(75-125)	5000 mg/L	08/13/2014

Batch XFC11487
Method AK102
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226422 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Diesel Range Organics	CCVB	5380	108	(75-125)	5000 mg/L	08/13/2014

Batch XFC11487
Method AK102
Instrument HP 6890 Series II FID SV D R

Workorder No. 1143648

Semivolatile Organic Fuels Department

Method: AK102

Method Batch Id: XXX31655

Analysis Batch Id: XFC11487

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226413		8/12/2014 12:02:00PM
Continuing Calib Verification	1226414		8/12/2014 4:48:00PM
Continuing Calib Verification	1226416		8/12/2014 7:17:00PM
Method Blank	1225891		8/12/2014 7:47:00PM
Lab Control Sample	1225892		8/12/2014 7:57:00PM
Lab Control Sample Duplicate	1225893		8/12/2014 8:06:00PM
Paying sample	1143648001	SS010-SB01-90	8/12/2014 8:16:00PM
Paying sample	1143648002	SS010-SB01-11	8/12/2014 8:26:00PM
Paying sample	1143648003	SS010-SB01-2	8/12/2014 8:36:00PM
Billable Matrix Spike	1143648004	SS010-SB01-2 MS	8/12/2014 8:46:00PM
Billable Matrix Spike Dup.	1143648005	SS010-SB01-2 MSD	8/12/2014 8:56:00PM
Paying sample	1143648006	SS010-SB03-80	8/12/2014 9:06:00PM
Paying sample	1143648007	SS010-SB03-14D	8/12/2014 9:16:00PM
Paying sample	1143648008	SS010-SB03-14	8/12/2014 9:25:00PM
Paying sample	1143648009	SS010-SB03-2	8/12/2014 9:35:00PM
Paying sample	1143648010	SS010-SB02-13	8/12/2014 9:45:00PM
Paying sample	1143648011	SS010-SB02-2	8/12/2014 9:55:00PM
Paying sample	1143648012	SS010-SB02-56	8/12/2014 10:05:00PM
Continuing Calib Verification	1226418		8/12/2014 10:15:00PM
Continuing Calib Verification	1226420		8/13/2014 12:03:00AM
Continuing Calib Verification	1226422		8/13/2014 3:51:00AM

SGS Ref.#	1225891	Method Blank	**Printed Date/Time**	09/09/2014	18:15
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	XXX31655	
Project Name/#	Cape Romanzof		**Method**	SW3550C	
Matrix	Soil/Solid (dry weight)		**Date**	08/11/2014	

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg	08/12/14
Surrogates					
5a Androstane <surr>	88	60-120		%	08/12/14
Batch	XFC11487				
Method	AK102				
Instrument	HP 6890 Series II FID SV D R				

SGS Ref.#	1225892	Lab Control Sample	**Printed Date/Time**	09/09/2014	18:15
	1225893	Lab Control Sample Duplicate	**Prep Batch**	XXX31655	
Client Name	EA Engineering, Science and Tech.		**Method**	SW3550C	
Project Name/#	Cape Romanzof		**Date**	08/11/2014	
Matrix	Soil/Solid (dry weight)				

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Diesel Range Organics	LCS	162	98	(75-125)			167 mg/Kg	08/12/2014
	LCSD	152	91		6	(< 20)	167 mg/Kg	08/12/2014
Surrogates								
5a Androstane <surr>	LCS		111	(60-120)				08/12/2014
	LCSD		104		6			08/12/2014

Batch XFC11487
Method AK102
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1143648004	Billable Matrix Spike	**Printed Date/Time**	09/09/2014 18:15
	1143648005	Billable Matrix Spike Dup.	**Prep Batch**	XXX31655
			Method	Sonication Extraction Soil AK1
			Date	08/11/2014
Original	1143648003			
Matrix	Soil/Solid (dry weight)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount		Analysis Date
Semivolatile Organic Fuels Department										
Diesel Range Organics	BMS	10.6U	108	61	(60-140)			178	mg/Kg	08/12/2014
	BMSD		127	72		15	(< 50)	176	mg/Kg	08/12/2014
Surrogates										
5a Androstane <surr>	BMS		2.50	70	(50-150)					08/12/2014
	BMSD		2.82	80		12				08/12/2014

Batch XFC11487
Method AK102
Instrument HP 6890 Series II FID SV D R

Workorder No. 1143648

Semivolatile Organic Fuels Department

Method: AK103

Method Batch Id: XXX31655

Analysis Batch Id: XFC11487

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226413		8/12/2014 12:02:00PM
Continuing Calib Verification	1226415		8/12/2014 4:58:00PM
Continuing Calib Verification	1226417		8/12/2014 7:27:00PM
Method Blank	1225891		8/12/2014 7:47:00PM
Lab Control Sample	1225892		8/12/2014 7:57:00PM
Lab Control Sample Duplicate	1225893		8/12/2014 8:06:00PM
Paying sample	1143648001	SS010-SB01-90	8/12/2014 8:16:00PM
Paying sample	1143648002	SS010-SB01-11	8/12/2014 8:26:00PM
Paying sample	1143648003	SS010-SB01-2	8/12/2014 8:36:00PM
Billable Matrix Spike	1143648004	SS010-SB01-2 MS	8/12/2014 8:46:00PM
Billable Matrix Spike Dup.	1143648005	SS010-SB01-2 MSD	8/12/2014 8:56:00PM
Paying sample	1143648006	SS010-SB03-80	8/12/2014 9:06:00PM
Paying sample	1143648007	SS010-SB03-14D	8/12/2014 9:16:00PM
Paying sample	1143648008	SS010-SB03-14	8/12/2014 9:25:00PM
Paying sample	1143648009	SS010-SB03-2	8/12/2014 9:35:00PM
Paying sample	1143648010	SS010-SB02-13	8/12/2014 9:45:00PM
Paying sample	1143648011	SS010-SB02-2	8/12/2014 9:55:00PM
Paying sample	1143648012	SS010-SB02-56	8/12/2014 10:05:00PM
Continuing Calib Verification	1226419		8/12/2014 10:25:00PM
Continuing Calib Verification	1226421		8/13/2014 12:13:00AM
Continuing Calib Verification	1226423		8/13/2014 4:01:00AM

SGS Ref.#	1226413	Instrument Blank	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	Results	RL/CL	Units	Analysis Date
Semivolatile Organic Fuels Department				
Residual Range Organics	250U	500	mg/L	08/12/14
Surrogates				
n-Triacontane-d62 <surr>	105	75-125	%	08/12/14

Batch XFC11487
Method AK103
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226415 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	CCVR	4600	92	(75-125)	5000 mg/L	08/12/2014

Batch XFC11487
Method AK103
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226417 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	CCVR	5010	100	(75-125)	5000 mg/L	08/12/2014

Batch XFC11487
Method AK103
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226419 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	CCVR	5140	103	(75-125)	5000 mg/L	08/12/2014

Batch XFC11487
Method AK103
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226421 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	CCVR	5190	104	(75-125)	5000 mg/L	08/13/2014

Batch XFC11487
Method AK103
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1226423 Continuing Calib Verification	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	CCVR	5460	109	(75-125)	5000 mg/L	08/13/2014

Batch XFC11487
Method AK103
Instrument HP 6890 Series II FID SV D R

Workorder No. 1143648

Semivolatile Organic Fuels Department

Method: AK103

Method Batch Id: XXX31655

Analysis Batch Id: XFC11487

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226413		8/12/2014 12:02:00PM
Continuing Calib Verification	1226415		8/12/2014 4:58:00PM
Continuing Calib Verification	1226417		8/12/2014 7:27:00PM
Method Blank	1225891		8/12/2014 7:47:00PM
Lab Control Sample	1225892		8/12/2014 7:57:00PM
Lab Control Sample Duplicate	1225893		8/12/2014 8:06:00PM
Paying sample	1143648001	SS010-SB01-90	8/12/2014 8:16:00PM
Paying sample	1143648002	SS010-SB01-11	8/12/2014 8:26:00PM
Paying sample	1143648003	SS010-SB01-2	8/12/2014 8:36:00PM
Billable Matrix Spike	1143648004	SS010-SB01-2 MS	8/12/2014 8:46:00PM
Billable Matrix Spike Dup.	1143648005	SS010-SB01-2 MSD	8/12/2014 8:56:00PM
Paying sample	1143648006	SS010-SB03-80	8/12/2014 9:06:00PM
Paying sample	1143648007	SS010-SB03-14D	8/12/2014 9:16:00PM
Paying sample	1143648008	SS010-SB03-14	8/12/2014 9:25:00PM
Paying sample	1143648009	SS010-SB03-2	8/12/2014 9:35:00PM
Paying sample	1143648010	SS010-SB02-13	8/12/2014 9:45:00PM
Paying sample	1143648011	SS010-SB02-2	8/12/2014 9:55:00PM
Paying sample	1143648012	SS010-SB02-56	8/12/2014 10:05:00PM
Continuing Calib Verification	1226419		8/12/2014 10:25:00PM
Continuing Calib Verification	1226421		8/13/2014 12:13:00AM
Continuing Calib Verification	1226423		8/13/2014 4:01:00AM

SGS Ref.#	1225891	Method Blank	**Printed Date/Time**	09/09/2014	18:15
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	XXX31655	
Project Name/#	Cape Romanzof		**Method**	SW3550C	
Matrix	Soil/Solid (dry weight)		**Date**	08/11/2014	

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Residual Range Organics	10.0U	20.0	6.20	mg/Kg	08/12/14
Surrogates					
n-Triacontane-d62 <surr>	92	60-120		%	08/12/14
Batch	XFC11487				
Method	AK103				
Instrument	HP 6890 Series II FID SV D R				

SGS Ref.#	1225892	Lab Control Sample	**Printed Date/Time**	09/09/2014	18:15
	1225893	Lab Control Sample Duplicate	**Prep Batch**	XXX31655	
Client Name	EA Engineering, Science and Tech.		**Method**	SW3550C	
Project Name/#	Cape Romanzof		**Date**	08/11/2014	
Matrix	Soil/Solid (dry weight)				

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Residual Range Organics	LCS	156	94	(60-120)			167 mg/Kg	08/12/2014
	LCSD	147	88		6	(< 20)	167 mg/Kg	08/12/2014
Surrogates								
n-Triacontane-d62 <surr>	LCS		98	(60-120)				08/12/2014
	LCSD		96		2			08/12/2014

Batch XFC11487
Method AK103
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	1143648004	Billable Matrix Spike	**Printed Date/Time**	09/09/2014 18:15
	1143648005	Billable Matrix Spike Dup.	**Prep Batch**	XXX31655
			Method	Sonication Extraction Soil AK1
			Date	08/11/2014
Original	1143648003			
Matrix	Soil/Solid (dry weight)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount		Analysis Date
Semivolatile Organic Fuels Department										
Residual Range Organics	BMS	16.9J	117	56*	(60-140)			178	mg/Kg	08/12/2014
	BMSD		132	65		12	(< 50)	176	mg/Kg	08/12/2014
Surrogates										
n-Triacontane-d62 <surr>	BMS		2.20	62	(50-150)					08/12/2014
	BMSD		2.49	71		13				08/12/2014

Batch	XFC11487
Method	AK103
Instrument	HP 6890 Series II FID SV D R

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143572, 1143648, 1143734, 1143757

Queue: **XFC** Batch: **11487**

Method: AK102, AK102/103

Run Date: 08/12/14 12:02 - 08/13/14 04:01

Extraction Batch(es): XXX31651, XXX31655, XXX31679

Notes:

RUSH

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: ANGELO CALDERON
Date: 08-13-14

Reviewer's Signature: Elizabeth Brandemuhl
Printed Name: Elizabeth Brandemuhl
Date: 8-13-2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_037.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 4:48 pm
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 21:29:06 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 H	DRO	503.876	426.190	15.4	95	0.00
3 H	RRO	221.732	5.370	97.6#	2#	0.00

Evaluate Continuing Calibration Report - Not Founds

2 S	5-ALPHA <Surr>	468.390	0.000	100.0#	0#	-2.02#
4 S	DTC<Surr>	347.238	0.000	100.0#	0#	-2.96#

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

Instrument Runlog

Instrument: SDR **Calibration Date:** 8/12/2014 **Method:** AK102/103
Operator: AYC **Processed By:** AYC **Posted By:** AYC **Analytical Batch:** 11487

Data Path: Z:\08\SD\DATA\SD081214\

Daily:		As Needed:			
Verify System Date/Time	✓	Clip Column/Guard Column		Verify Acquisition Parameters	
General System Inspection	✓	Replace Inlet Seal		Septa ✓ Liner ✓	Rinse or Replace Weldment/Split Lines

Standards:				
	IB	SVW15-41-11	**CCVR**	VF3-1-1
	NAS	VF3-3-1	**CCVB**	VF2-109-10
	MeCl2	P-454		

Data File	Vial	Sample ID	Dilution	DRO	RRO	Notes	Acquisition Time	Rerun
SD0812_001.D	5	R	1				8/12/14 10:53 AM	
SD0812_002.D	5	R	1				8/12/14 11:03 AM	
SD0812_003.D	5	R	1				8/12/14 11:12 AM	
SD0812_004.D	5	R	1				8/12/14 11:22 AM	
SD0812_005.D	5	R	1				8/12/14 11:32 AM	
SD0812_006.D	5	R	1				8/12/14 11:42 AM	
SD0812_007.D	5	R	1				8/12/14 11:52 AM	
SD0812_008.D	1	IB	1			SDR2014-0812.M	8/12/14 12:02 PM	
SD0812_009.D	2	NAS	1				8/12/14 12:12 PM	
SD0812_010.D	5	R	1				8/12/14 12:22 PM	
SD0812_011.D	5	R	1				8/12/14 12:32 PM	
SD0812_012.D	5	R	1				8/12/14 12:41 PM	
SD0812_013.D	6	SURR 15	1			VF3-7-1	8/12/14 12:51 PM	
SD0812_014.D	7	SURR 50	1			VF3-7-2	8/12/14 1:01 PM	
SD0812_015.D	8	SURR 100	1			VF3-7-3	8/12/14 1:11 PM	
SD0812_016.D	9	SURR 150	1			VF3-7-4	8/12/14 1:21 PM	
SD0812_017.D	10	SURR 200	1			VF3-7-5	8/12/14 1:31 PM	
SD0812_018.D	5	R	1				8/12/14 1:41 PM	
SD0812_019.D	11	DRO 300	1			VF3-7-7	8/12/14 1:51 PM	
SD0812_020.D	12	DRO 1000	1			VF3-7-8	8/12/14 2:01 PM	
SD0812_021.D	13	DRO 5000	1			VF3-7-9	8/12/14 2:10 PM	
SD0812_022.D	14	DRO 10000	1			VF3-7-10	8/12/14 2:20 PM	
SD0812_023.D	15	DRO 20000	1			VF3-7-11	8/12/14 2:30 PM	
SD0812_024.D	5	R	1				8/12/14 2:40 PM	
SD0812_025.D	16	RRO 500	1			VF3-7-14	8/12/14 2:50 PM	
SD0812_026.D	17	RRO 1000	1			VF3-7-15	8/12/14 3:00 PM	
SD0812_027.D	18	RRO 5000	1			VF3-7-16	8/12/14 3:10 PM	
SD0812_028.D	19	RRO 10000	1			VF3-7-17	8/12/14 3:20 PM	
SD0812_029.D	20	RRO 20000	1			VF3-7-18	8/12/14 3:29 PM	
SD0812_030.D	5	R	1				8/12/14 3:39 PM	
SD0812_031.D	5	R	1				8/12/14 3:49 PM	
SD0812_032.D	21	1CVB	1	88		VF3-5-1	8/12/14 3:59 PM	
SD0812_033.D	22	ICVR	1		99	OW1-3-2	8/12/14 4:09 PM	
SD0812_034.D	5	R	1				8/12/14 4:19 PM	
SD0812_035.D	5	R	1				8/12/14 4:29 PM	
SD0812_036.D	5	R	1				8/12/14 4:39 PM	
SD0812_037.D	3	CCVB	1				8/12/14 4:48 PM	
SD0812_038.D	4	CCVR	1				8/12/14 4:58 PM	
SD0812_039.D	5	R	1				8/12/14 5:08 PM	
SD0812_040.D	23	1225801 MB 31651	1				8/12/14 5:18 PM	
SD0812_041.D	24	1225802 LCS 31651	1				8/12/14 5:28 PM	

Data File	Vial	Sample ID	Dilution	DRO	RRO	Notes	Acquisition Time	Rerun
SD0812_042.D	25	1225803 LCSD 31651	1				8/12/14 5:38 PM	
SD0812_043.D	26	1143572001	1				8/12/14 5:48 PM	
SD0812_044.D	27	1143572002	1				8/12/14 5:58 PM	
SD0812_045.D	28	1143572003	1				8/12/14 6:08 PM	
SD0812_046.D	29	1143572004	1				8/12/14 6:18 PM	
SD0812_047.D	30	1143572005	1				8/12/14 6:28 PM	
SD0812_048.D	31	1143572006	1				8/12/14 6:37 PM	
SD0812_049.D	32	1143572007	1				8/12/14 6:47 PM	
SD0812_050.D	33	1143572008	1				8/12/14 6:57 PM	
SD0812_051.D	34	1143572009	1				8/12/14 7:07 PM	
SD0812_052.D	3	CCVB	1				8/12/14 7:17 PM	
SD0812_053.D	4	CCVR	1				8/12/14 7:27 PM	
SD0812_054.D	5	R	1				8/12/14 7:37 PM	
SD0812_055.D	35	1225891 MB 31655	1				8/12/14 7:47 PM	
SD0812_056.D	36	1225892 LCS 31655	1				8/12/14 7:57 PM	
SD0812_057.D	37	1225893 LCSD 31655	1				8/12/14 8:06 PM	
SD0812_058.D	38	1143648001	1				8/12/14 8:16 PM	
SD0812_059.D	39	1143648002	1				8/12/14 8:26 PM	
SD0812_060.D	40	1143648003	1				8/12/14 8:36 PM	
SD0812_061.D	41	1143648004 BMS	1				8/12/14 8:46 PM	
SD0812_062.D	42	1143648005 BMSD	1				8/12/14 8:56 PM	
SD0812_063.D	43	1143648006	1				8/12/14 9:06 PM	
SD0812_064.D	44	1143648007	1				8/12/14 9:16 PM	
SD0812_065.D	45	1143648008	1				8/12/14 9:25 PM	
SD0812_066.D	46	1143648009	1				8/12/14 9:35 PM	
SD0812_067.D	47	1143648010	1				8/12/14 9:45 PM	
SD0812_068.D	48	1143648011	1				8/12/14 9:55 PM	
SD0812_069.D	49	1143648012	1				8/12/14 10:05 PM	
SD0812_070.D	3	CCVB	1				8/12/14 10:15 PM	
SD0812_071.D	4	CCVR	1				8/12/14 10:25 PM	
SD0812_072.D	5	R	1				8/12/14 10:35 PM	
SD0812_073.D	50	1226334 MB 31679	1				8/12/14 10:45 PM	
SD0812_074.D	51	1226335 LCS 31679	1				8/12/14 10:54 PM	
SD0812_075.D	52	1226336 LCSD 31679	1				8/12/14 11:04 PM	
SD0812_076.D	53	1143757001	1				8/12/14 11:14 PM	
SD0812_077.D	54	1143734067	1		x		8/12/14 11:24 PM	
SD0812_078.D	55	1143734068 BMS	1		x		8/12/14 11:34 PM	
SD0812_079.D	56	1143734069 BMSD	1		x		8/12/14 11:44 PM	
SD0812_080.D	5	R	1				8/12/14 11:54 PM	
SD0812_081.D	3	CCVB	1				8/13/14 12:03 AM	
SD0812_082.D	4	CCVR	1				8/13/14 12:13 AM	
SD0812_083.D	57	1143734009	1		x		8/13/14 12:23 AM	
SD0812_084.D	58	1143734053	1		x		8/13/14 12:33 AM	
SD0812_085.D	59	1143734054	1		x		8/13/14 12:43 AM	
SD0812_086.D	60	1143734055	1		x		8/13/14 12:53 AM	
SD0812_087.D	61	1143734056	1		x		8/13/14 1:03 AM	
SD0812_088.D	62	1143734057	1		x		8/13/14 1:13 AM	
SD0812_089.D	63	1143734058	1		x		8/13/14 1:22 AM	
SD0812_090.D	64	1143734059	1		x		8/13/14 1:32 AM	
SD0812_091.D	65	1143734063	1		x		8/13/14 1:42 AM	
SD0812_092.D	66	1143734064	1		x		8/13/14 1:52 AM	
SD0812_093.D	67	1143734065	1		x		8/13/14 2:02 AM	
SD0812_094.D	68	1143734066	1		x		8/13/14 2:12 AM	
SD0812_095.D	69	1143734070	1		x		8/13/14 2:22 AM	
SD0812_096.D	70	1143734007 4X	4		x	NU, 250/1, DRO OR, RR 20X	8/13/14 2:32 AM	20
SD0812_097.D	71	1143734008 4X	4		x	NU, 250/1, DRO OR, RR 20X	8/13/14 2:41 AM	20

Data File	Vial	Sample ID	Dilution	DRO	RRO	Notes	Acquisition Time	Rerun
SD0812_098.D	72	1143734010 4X	4		x	NU, 250/1, DRO OR, RR 50X	8/13/14 2:51 AM	50
SD0812_099.D	73	1143734052 4X	4		x	250/1	8/13/14 3:01 AM	
SD0812_100.D	74	1143734060 4X	4		x	250/1	8/13/14 3:11 AM	
SD0812_101.D	75	1143734061 4X BMS	4		x	250/1	8/13/14 3:21 AM	
SD0812_102.D	76	1143734062 4X BMSD	4		x	250/1	8/13/14 3:31 AM	
SD0812_103.D	5	R	1				8/13/14 3:41 AM	
SD0812_104.D	3	CCVB	1				8/13/14 3:51 AM	
SD0812_105.D	4	CCVR	1				8/13/14 4:01 AM	
SD0812_106.D	5	R	1				8/13/14 4:10 AM	
SD0812_107.D	5	R	1				8/13/14 4:20 AM	
SD0812_108.D	5	R	1				8/13/14 4:30 AM	
SD0812_109.D	5	R	1				8/13/14 4:40 AM	
SD0812_110.D	5	R	1				8/13/14 4:50 AM	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_008.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:02 pm
Operator : AYC
Sample : IB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:00:40 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.025	47519	101.451 µg/mL
4) S	DTC<Surr>	2.965	36550	105.258 µg/mL
Target Compounds				
1) H	DRO	1.671	77396	34.221 µg/mL
3) H	RRO	3.068	23625	121.466 µg/mL

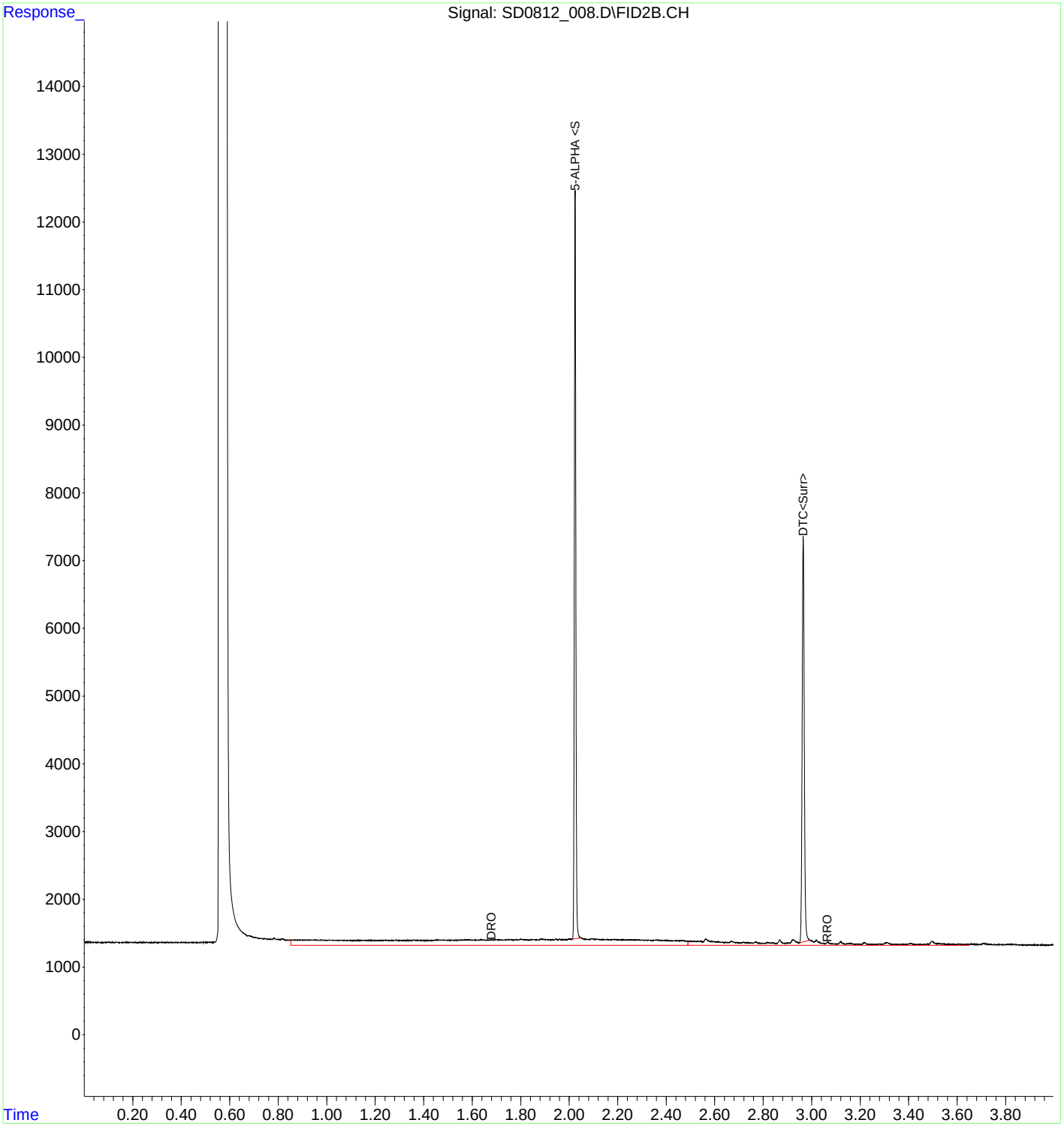
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_008.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:02 pm
Operator : AYC
Sample : IB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:00:40 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_037.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 4:48 pm
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 21:29:06 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
	Target Compounds				
1) H	DRO	1.671	2130951	4642.048	µg/mL
3) H	RRO	3.068	26852	135.268	µg/mL

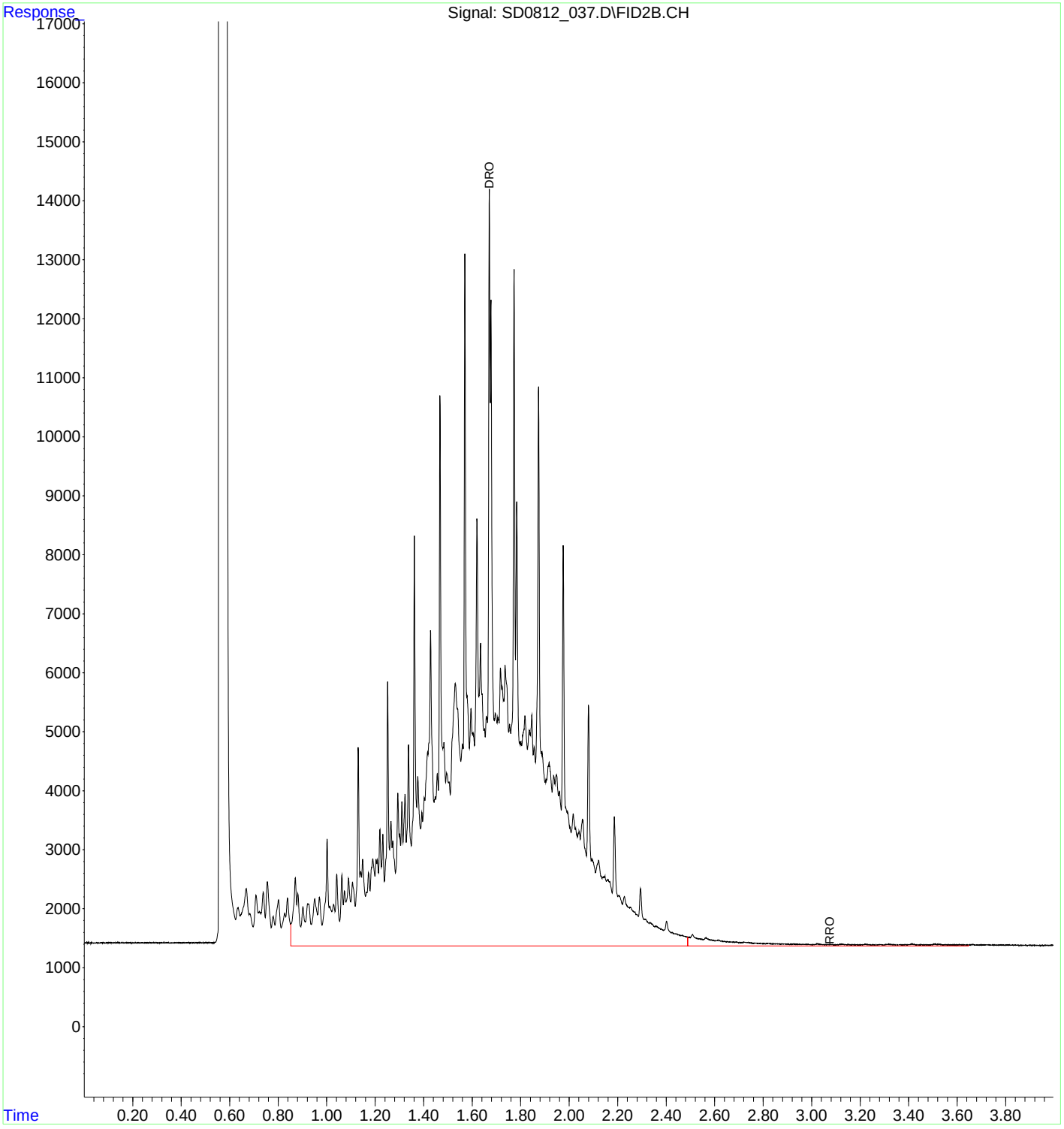
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_037.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 4:48 pm
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 21:29:06 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_038.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 4:58 pm
Operator : AYC
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 21:29:34 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	158186	215.500	µg/mL
3) H	RRO	3.068	1071586	4603.124	µg/mL

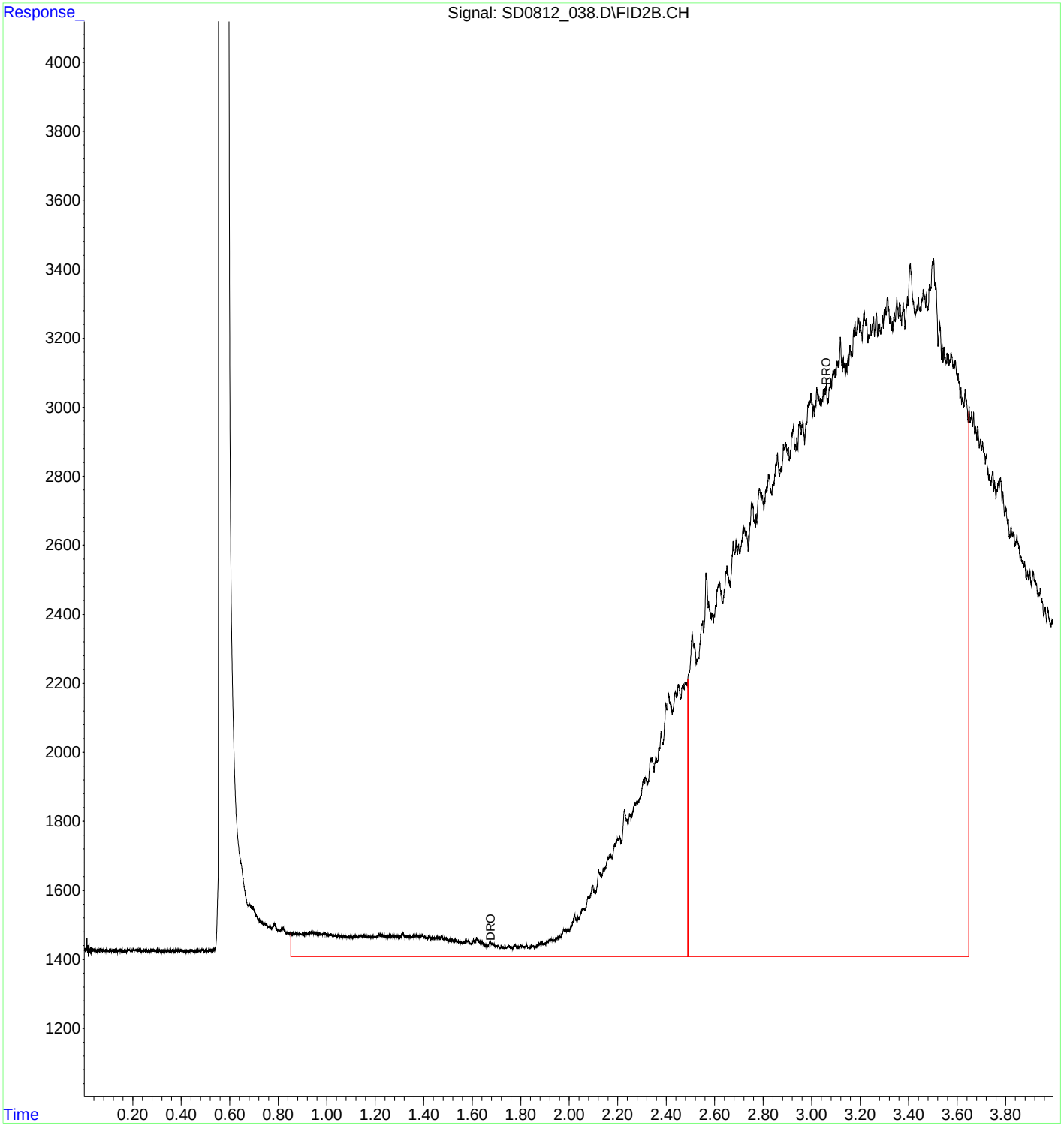
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_038.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 4:58 pm
Operator : AYC
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 21:29:34 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_052.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 7:17 pm
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:38:27 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
	Target Compounds				
1) H	DRO	1.671	2230114	4864.553	µg/mL
3) H	RRO	3.068	27248	136.961	µg/mL

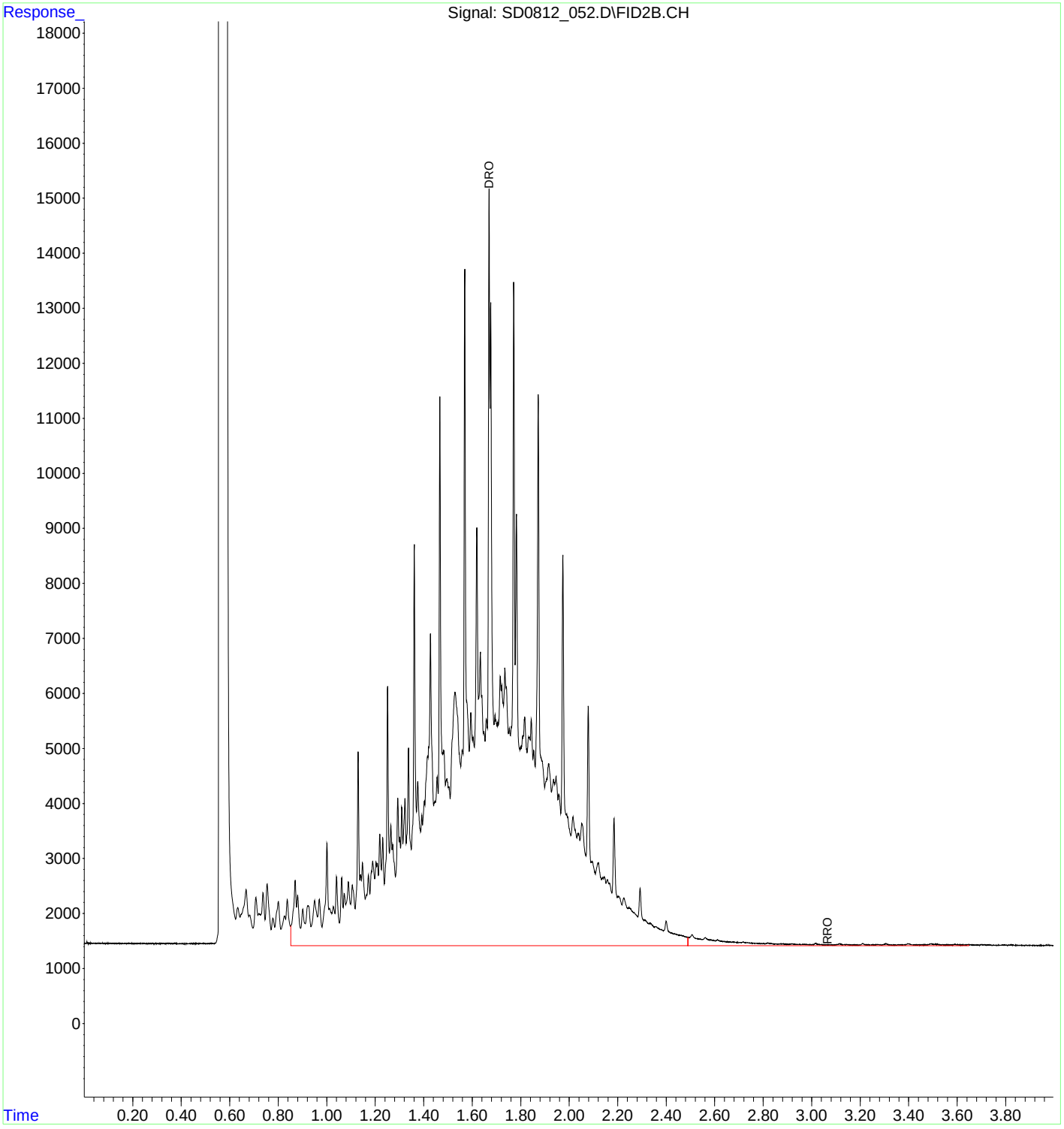
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_052.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 7:17 pm
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:38:27 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_053.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 7:27 pm
Operator : AYC
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 20:44:27 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	214888	342.729	µg/mL
3) H	RRO	3.068	1165825	5006.142	µg/mL

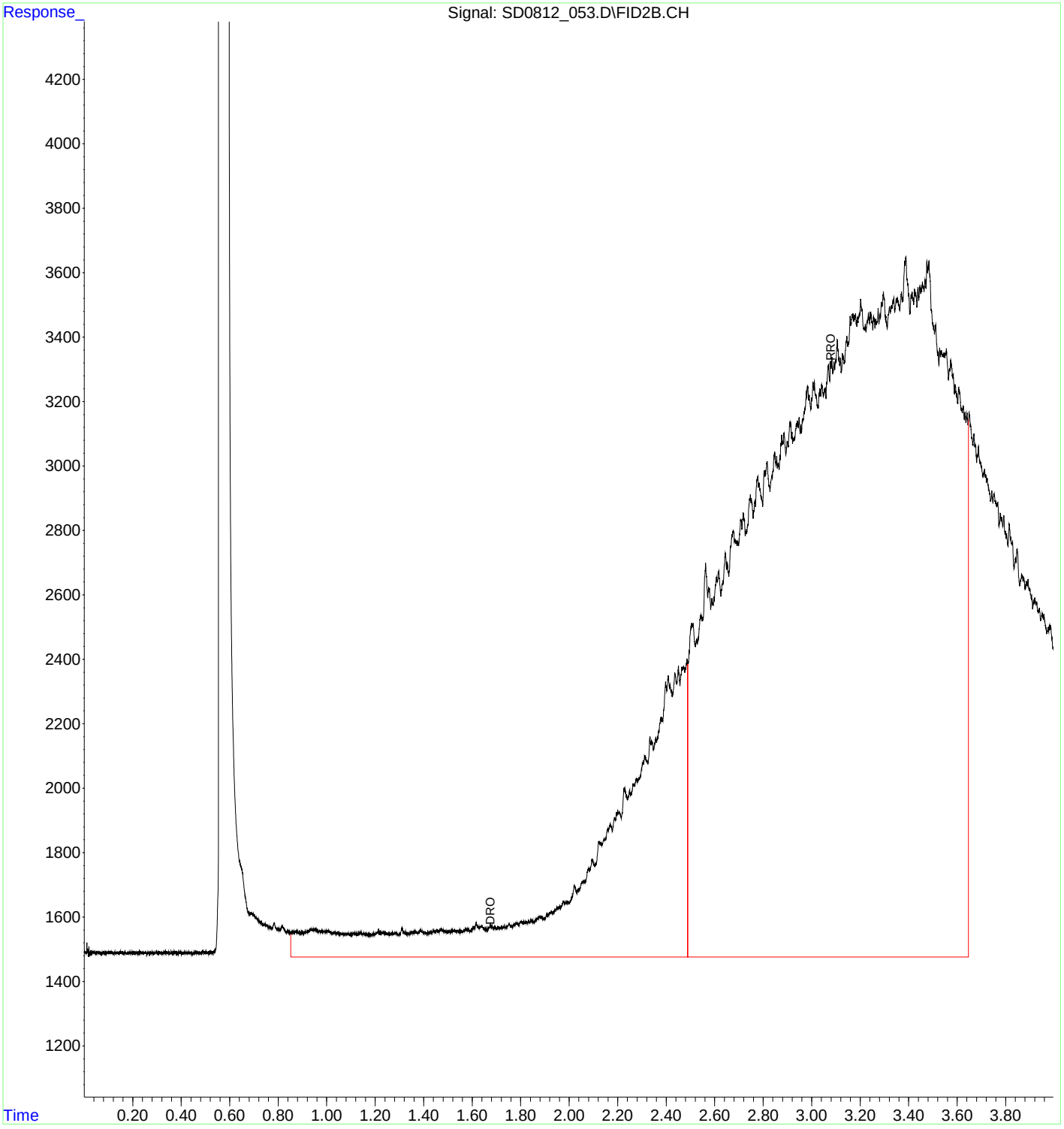
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_053.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 7:27 pm
Operator : AYC
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 20:44:27 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_055.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 7:47 pm
Operator : AYC
Sample : 1225891 MB 31655
Misc :
ALS Vial : 35 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:40:10 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.024	41230	88.025 µg/mL
4) S	DTC<Surr>	2.957	31934	91.964 µg/mL
Target Compounds				
1) H	DRO	1.671	77943	35.449 µg/mL
3) H	RRO	3.068	14787	83.673 µg/mL

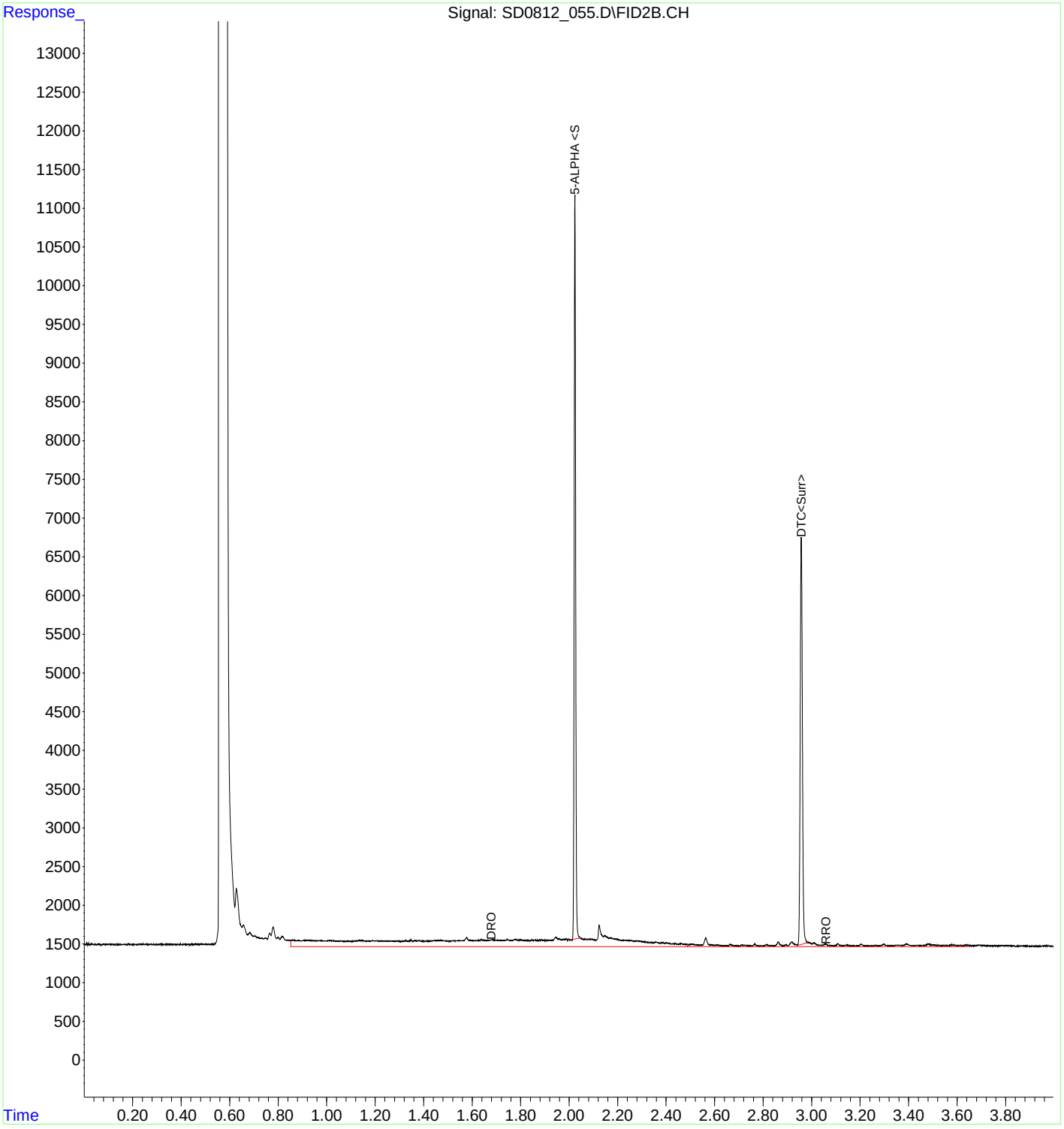
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_055.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 7:47 pm
Operator : AYC
Sample : 1225891 MB 31655
Misc :
ALS Vial : 35 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:40:10 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_056.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 7:57 pm
Operator : AYC
Sample : 1225892 LCS 31655
Misc :
ALS Vial : 36 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:40:56 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.025	51821	110.637	µg/mL
4) S	DTC<Surr>	2.961	33895	97.613	µg/mL
Target Compounds					
1) H	DRO	1.671	2234601	4874.622	µg/mL
3) H	RRO	3.068	1087892	4672.859	µg/mL

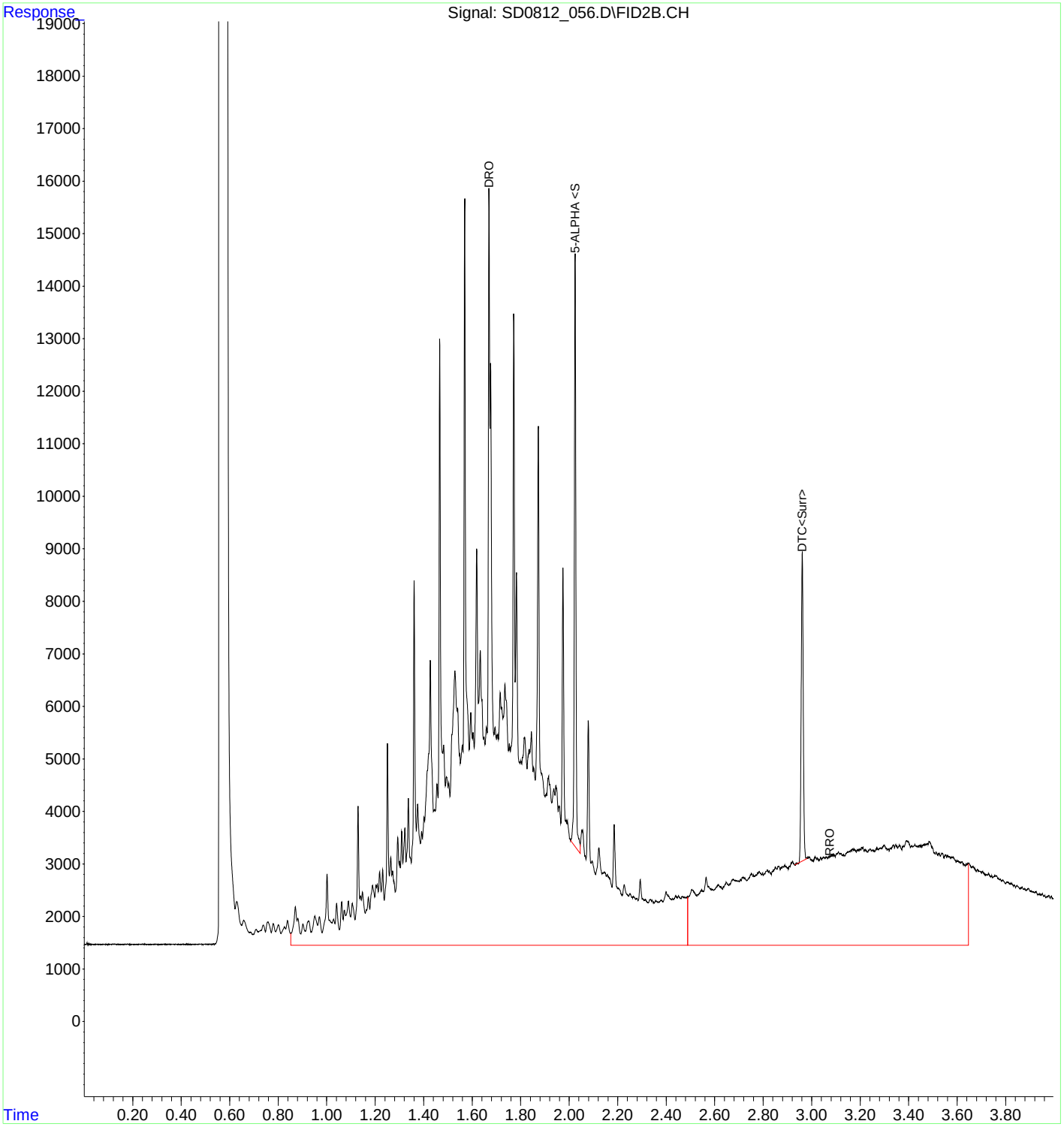
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_056.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 7:57 pm
Operator : AYC
Sample : 1225892 LCS 31655
Misc :
ALS Vial : 36 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:40:56 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_057.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:06 pm
Operator : AYC
Sample : 1225893 LCSD 31655
Misc :
ALS Vial : 37 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 20:45:21 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.025	48807	104.203	µg/mL
4) S	DTC<Surr>	2.957	33197	95.602	µg/mL
Target Compounds					
1) H	DRO	1.671	2098968	4570.285	µg/mL
3) H	RRO	3.068	1023204	4396.217	µg/mL

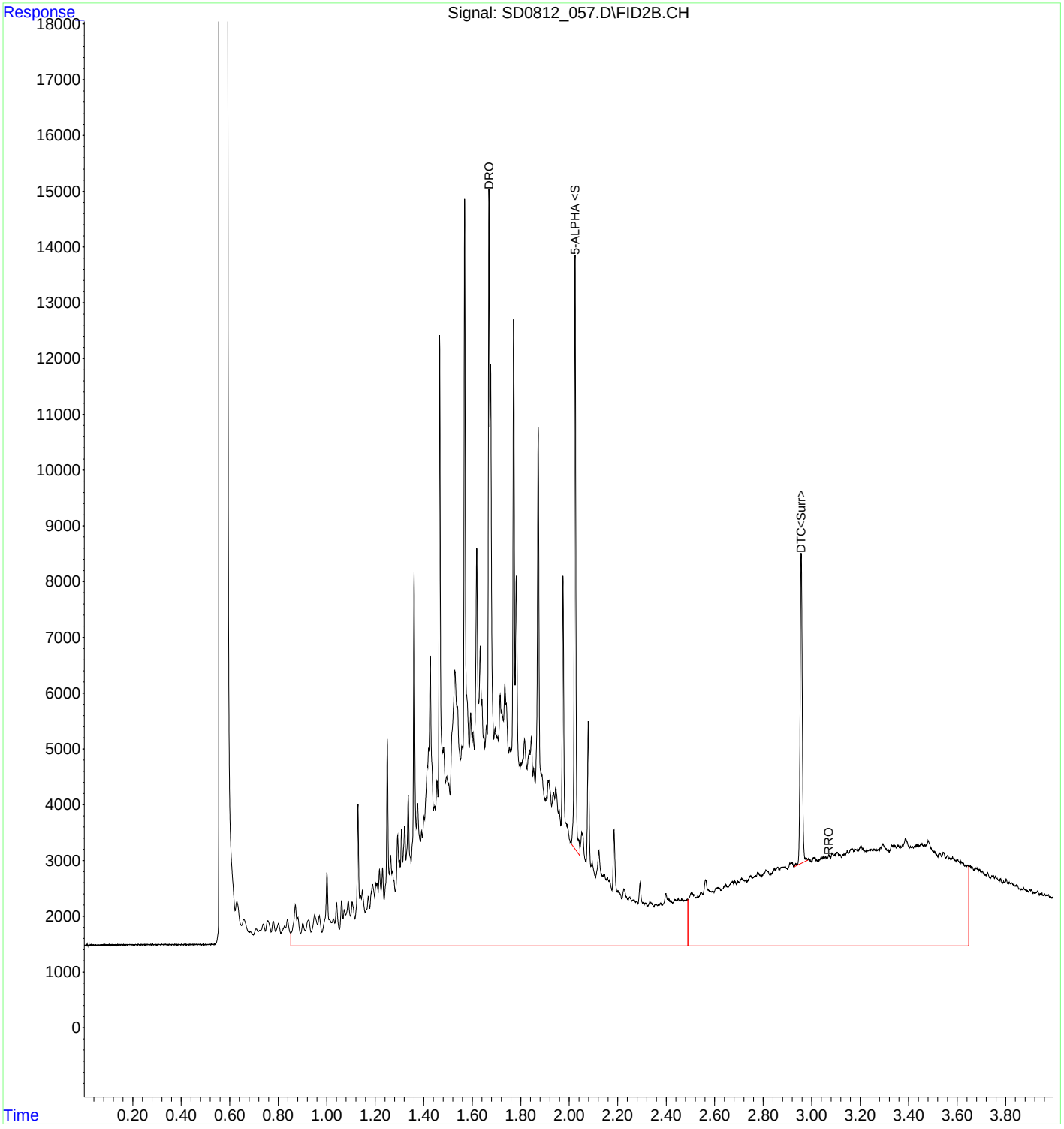
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_057.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:06 pm
Operator : AYC
Sample : 1225893 LCSD 31655
Misc :
ALS Vial : 37 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 20:45:21 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_058.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:16 pm
Operator : AYC
Sample : 1143648001
Misc :
ALS Vial : 38 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:42:16 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.023	42131	89.948 µg/mL
4) S	DTC<Surr>	2.959	31152	89.712 µg/mL
Target Compounds				
1) H	DRO	1.671	106842	100.291 µg/mL
3) H	RRO	3.068	36110	174.861 µg/mL

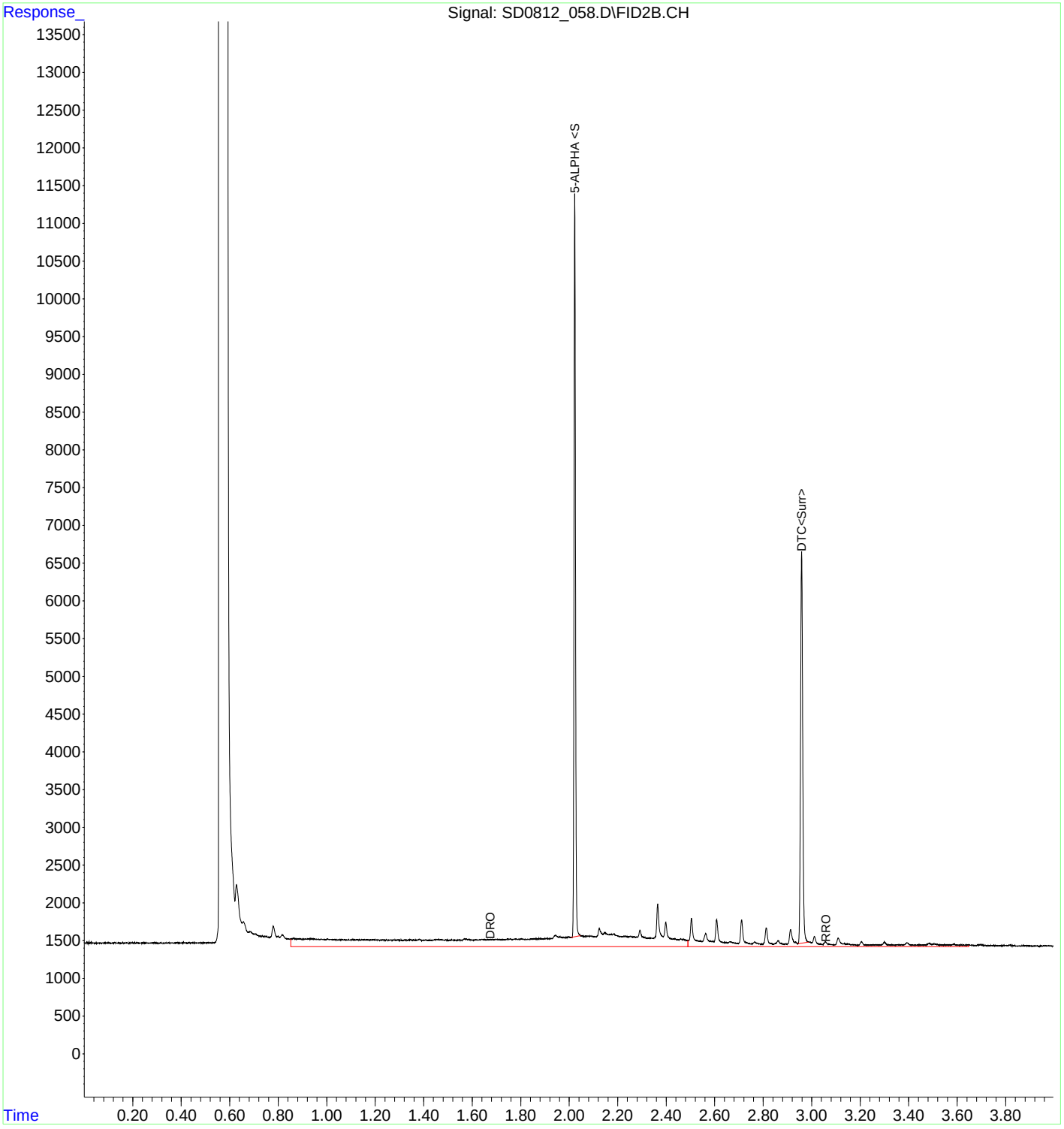
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_058.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:16 pm
Operator : AYC
Sample : 1143648001
Misc :
ALS Vial : 38 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:42:16 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_059.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:26 pm
Operator : AYC
Sample : 1143648002
Misc :
ALS Vial : 39 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:42:48 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.024	46147	98.522	µg/mL
4) S	DTC<Surr>	2.956	35737	102.917	µg/mL
Target Compounds					
1) H	DRO	1.671	187103	280.385	µg/mL
3) H	RRO	3.068	573805	2474.340	µg/mL

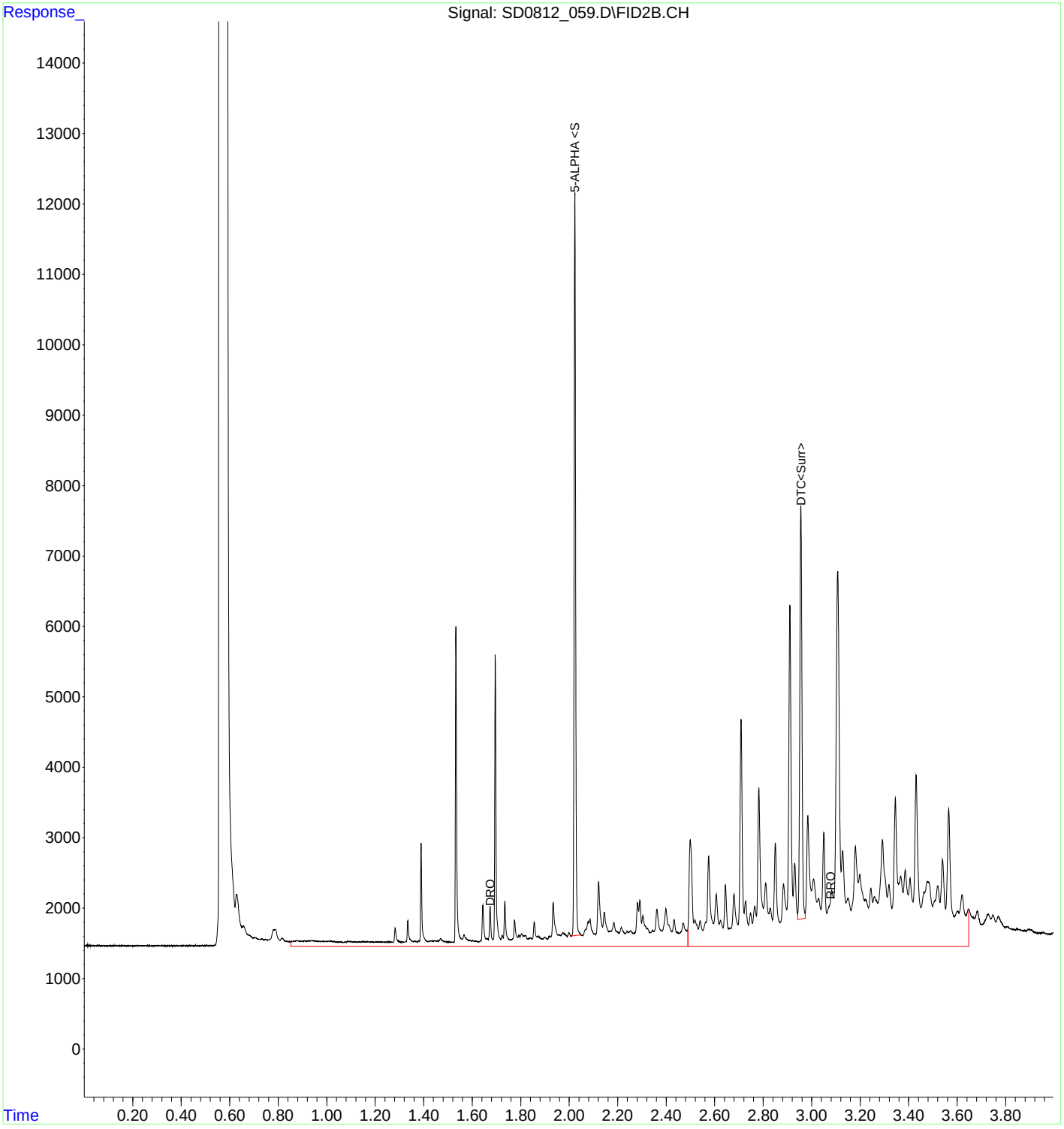
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_059.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:26 pm
Operator : AYC
Sample : 1143648002
Misc :
ALS Vial : 39 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:42:48 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_060.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:36 pm
Operator : AYC
Sample : 1143648003
Misc :
ALS Vial : 40 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:43:24 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.024	32762	69.946 µg/mL
4) S	DTC<Surr>	2.956	24488	70.521 µg/mL
Target Compounds				
1) H	DRO	1.671	99426	83.651 µg/mL
3) H	RRO	3.068	106704	476.757 µg/mL

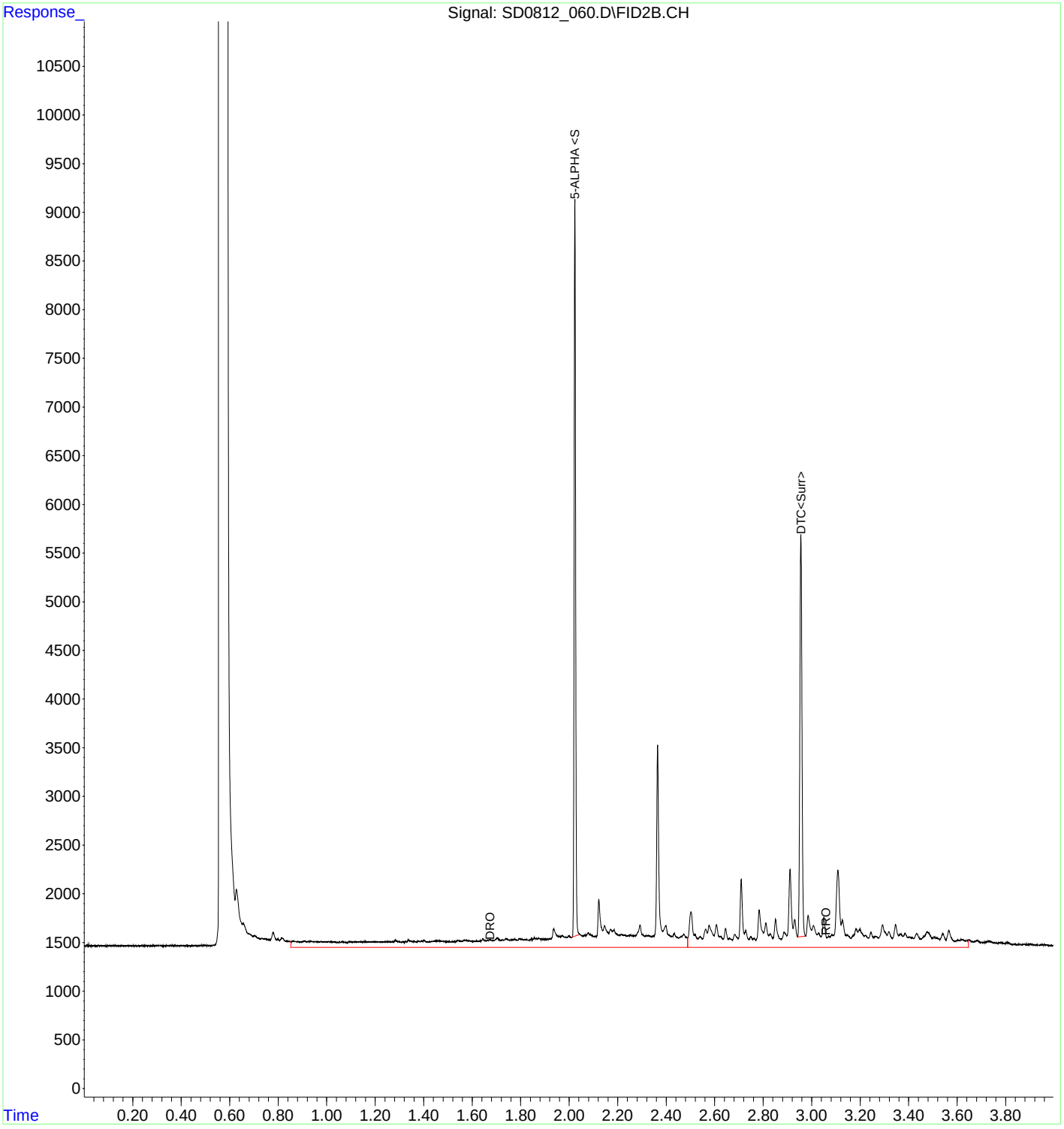
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_060.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:36 pm
Operator : AYC
Sample : 1143648003
Misc :
ALS Vial : 40 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:43:24 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_061.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:46 pm
Operator : AYC
Sample : 1143648004 BMS
Misc :
ALS Vial : 41 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:44:00 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.023	32858	70.152 µg/mL
4) S	DTC<Surr>	2.960	21397	61.620 µg/mL
Target Compounds				
1) H	DRO	1.671	1420706	3048.380 µg/mL
3) H	RRO	3.068	760274	3271.782 µg/mL

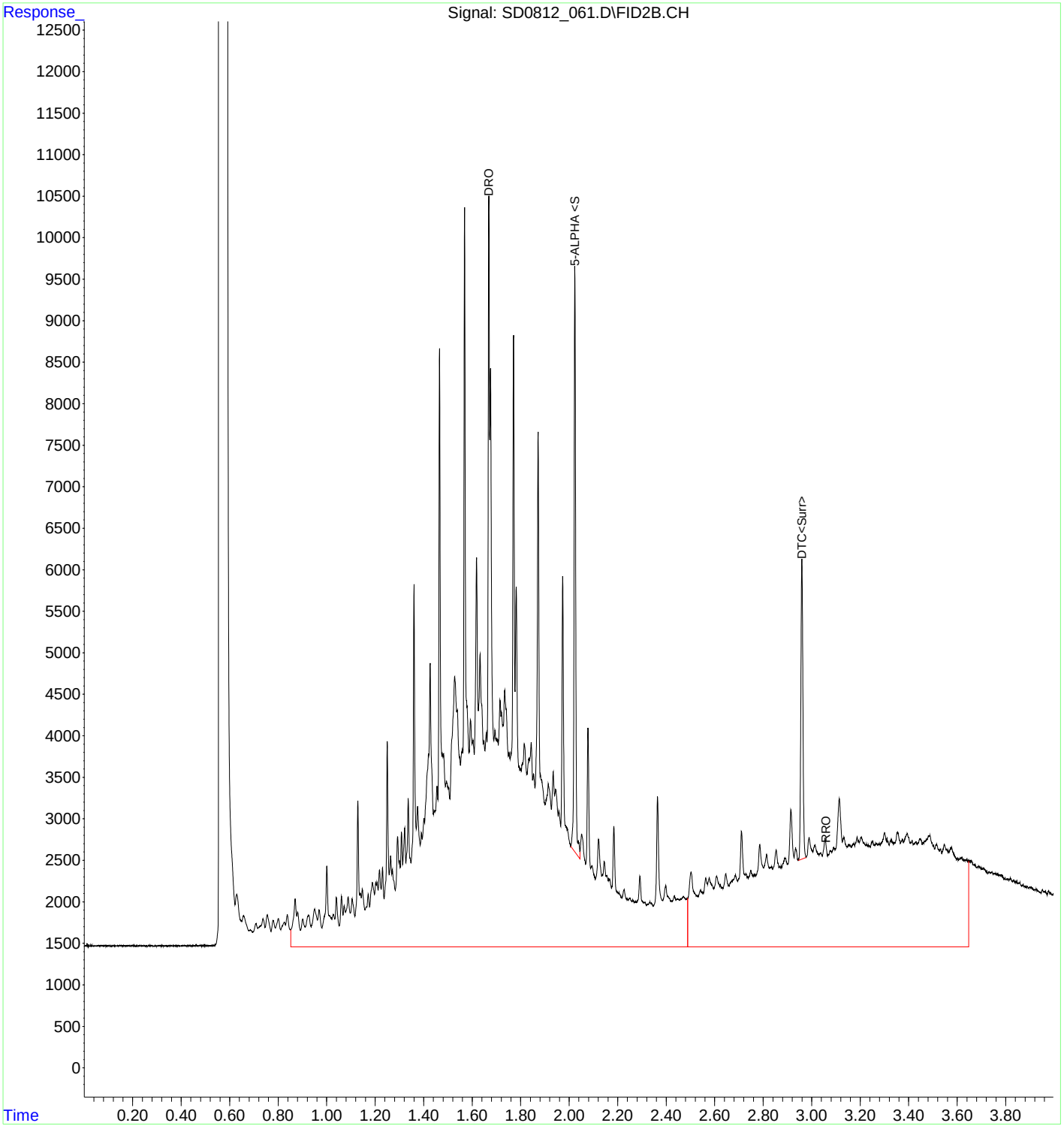
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_061.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:46 pm
Operator : AYC
Sample : 1143648004 BMS
Misc :
ALS Vial : 41 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:44:00 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_062.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:56 pm
Operator : AYC
Sample : 1143648005 BMSD
Misc :
ALS Vial : 42 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:44:46 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.025	37539	80.145	µg/mL
4) S	DTC<Surr>	2.956	24557	70.720	µg/mL
Target Compounds					
1) H	DRO	1.671	1666824	3600.625	µg/mL
3) H	RRO	3.068	870982	3745.230	µg/mL

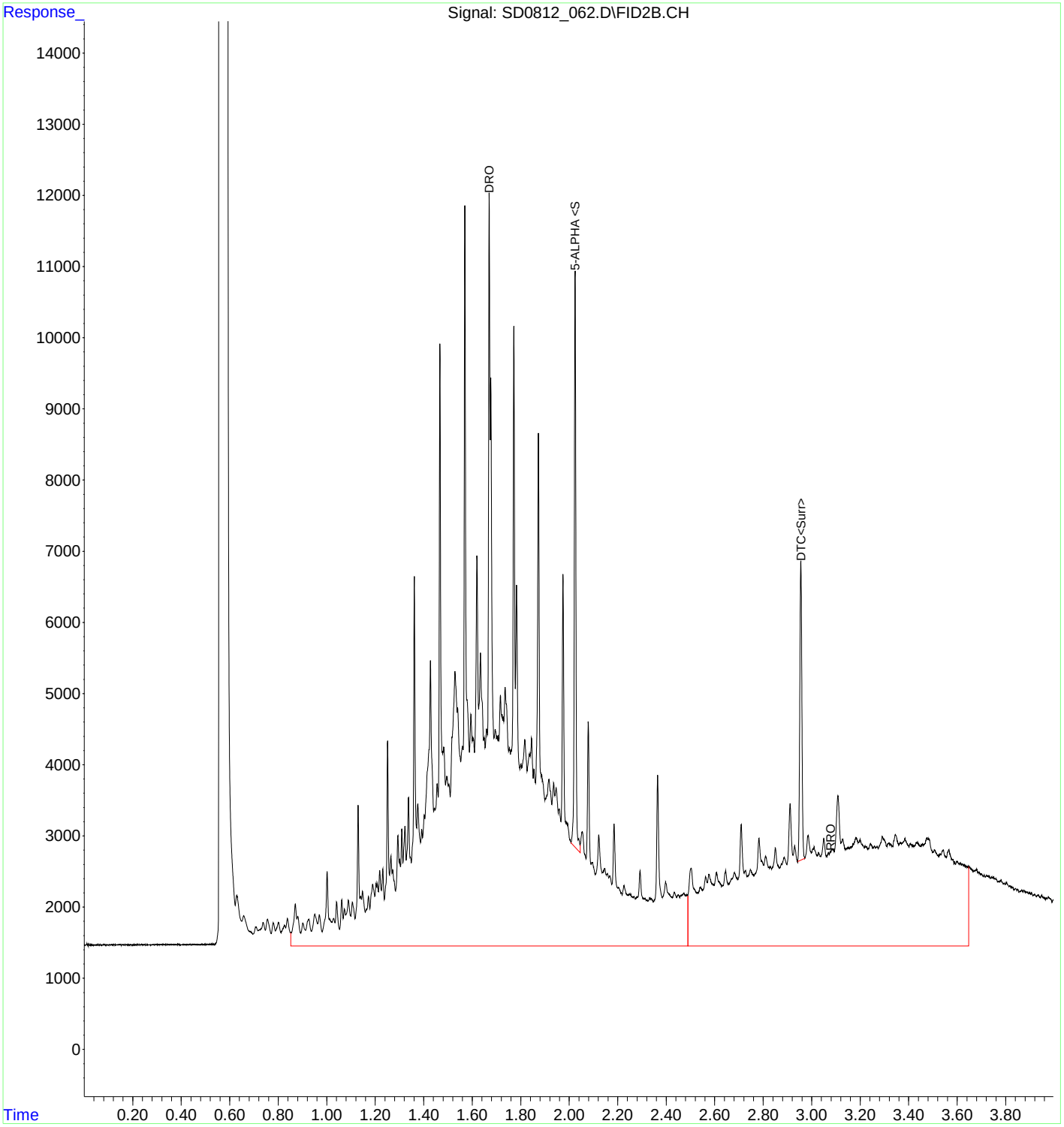
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_062.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 8:56 pm
Operator : AYC
Sample : 1143648005 BMSD
Misc :
ALS Vial : 42 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:44:46 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_063.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:06 pm
Operator : AYC
Sample : 1143648006
Misc :
ALS Vial : 43 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:45:19 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.024	44685	95.401 µg/mL
4) S	DTC<Surr>	2.956	33936	97.731 µg/mL
Target Compounds				
1) H	DRO	1.671	66292	9.304 µg/mL
3) H	RRO	3.068	25159	128.026 µg/mL

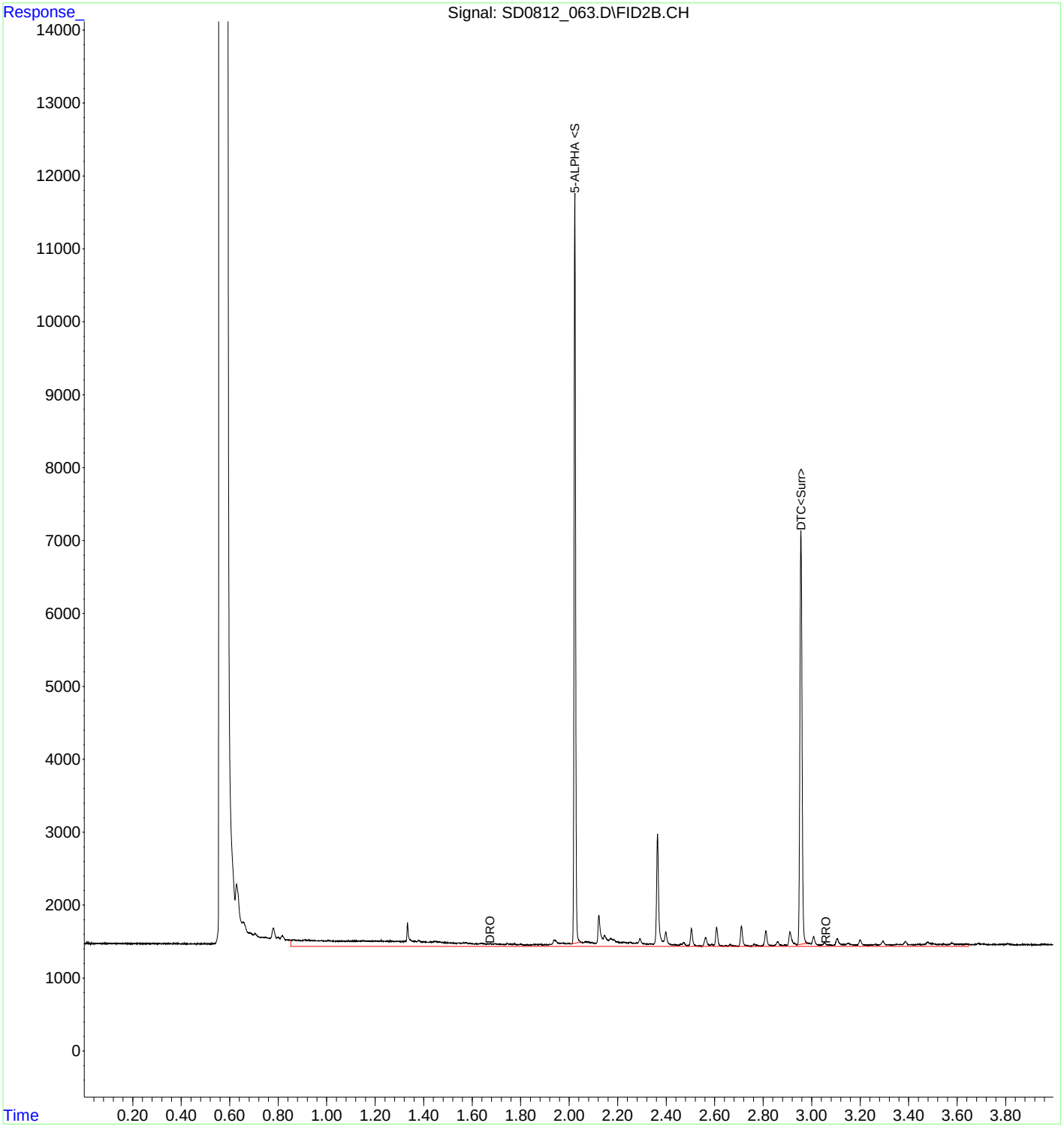
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_063.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:06 pm
Operator : AYC
Sample : 1143648006
Misc :
ALS Vial : 43 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:45:19 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_064.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:16 pm
Operator : AYC
Sample : 1143648007
Misc :
ALS Vial : 44 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:45:52 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.024	34533	73.726 µg/mL
4) S	DTC<Surr>	2.955	26071	75.082 µg/mL
Target Compounds				
1) H	DRO	1.671	99202	83.150 µg/mL
3) H	RRO	3.068	46995	221.411 µg/mL

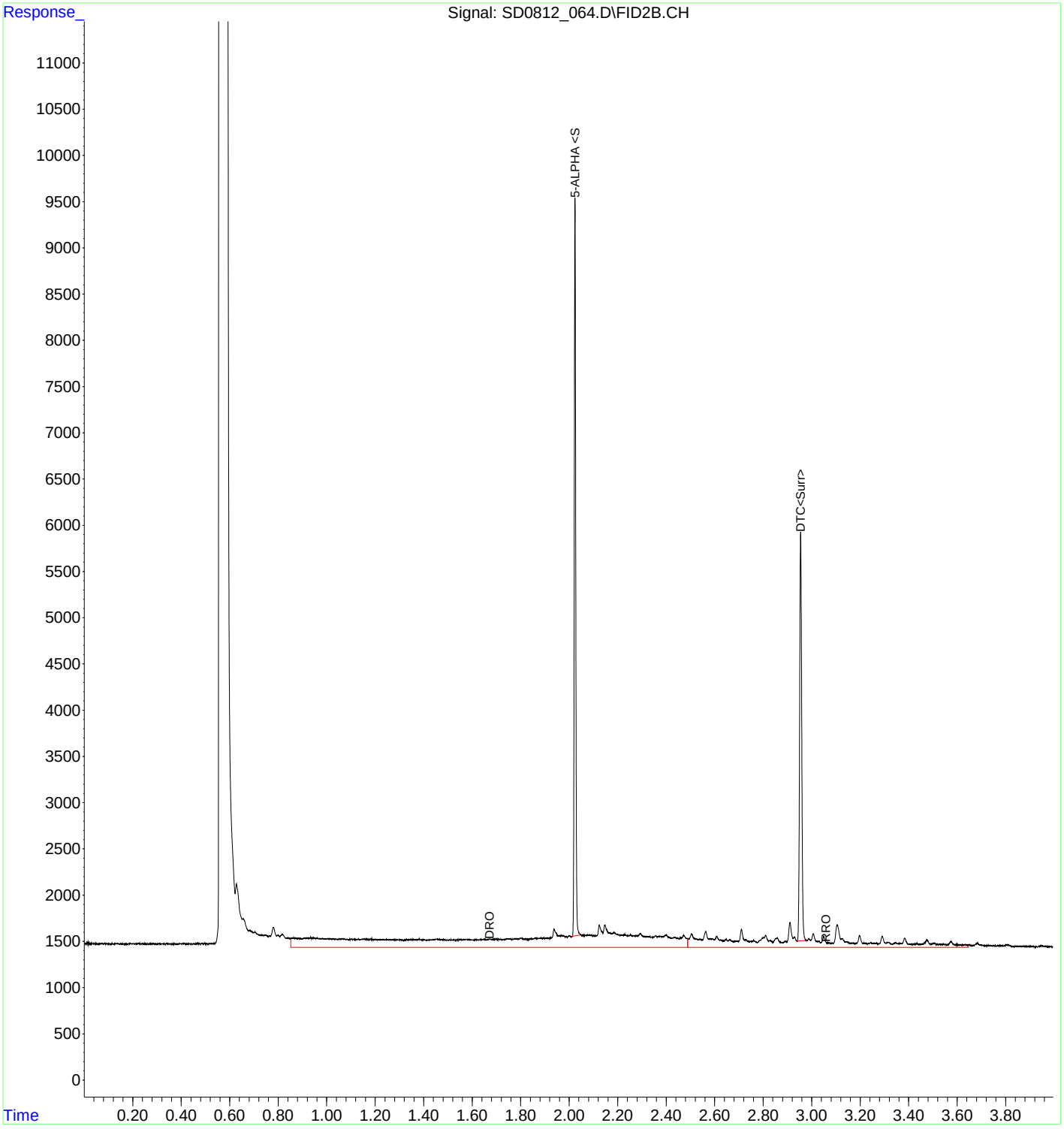
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_064.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:16 pm
Operator : AYC
Sample : 1143648007
Misc :
ALS Vial : 44 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:45:52 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_065.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:25 pm
Operator : AYC
Sample : 1143648008
Misc :
ALS Vial : 45 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:46:27 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.024	37480	80.018 µg/mL
4) S	DTC<Surr>	2.960	28174	81.137 µg/mL
Target Compounds				
1) H	DRO	1.671	72207	22.576 µg/mL
3) H	RRO	3.068	26413	133.390 µg/mL

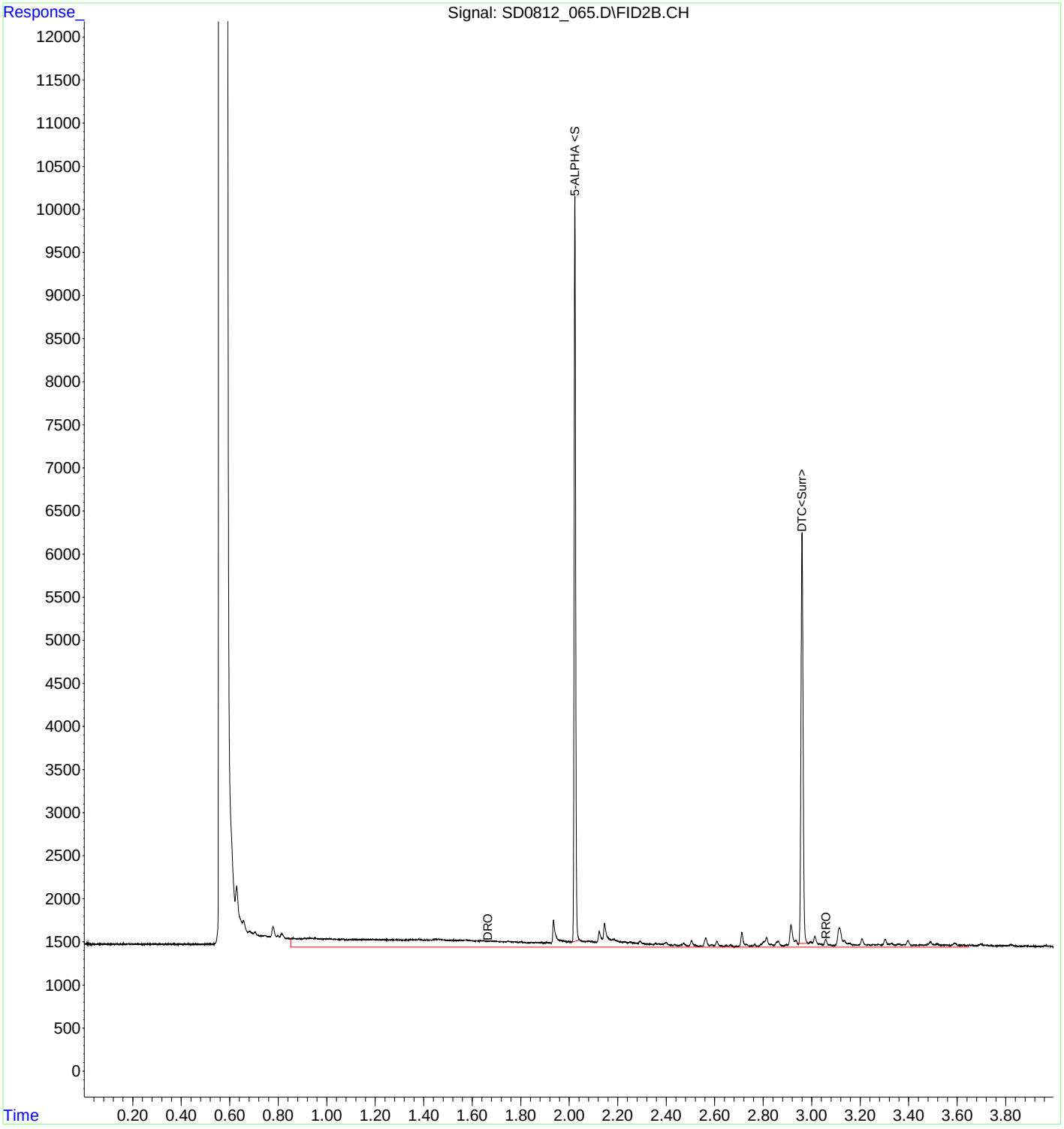
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_065.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:25 pm
Operator : AYC
Sample : 1143648008
Misc :
ALS Vial : 45 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:46:27 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_066.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:35 pm
Operator : AYC
Sample : 1143648009
Misc :
ALS Vial : 46 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:47:01 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.024	45775	97.730	µg/mL
4) S	DTC<Surr>	2.956	38512	110.911	µg/mL
Target Compounds					
1) H	DRO	1.671	254737	432.143	µg/mL
3) H	RRO	3.068	1249432	5363.693	µg/mL

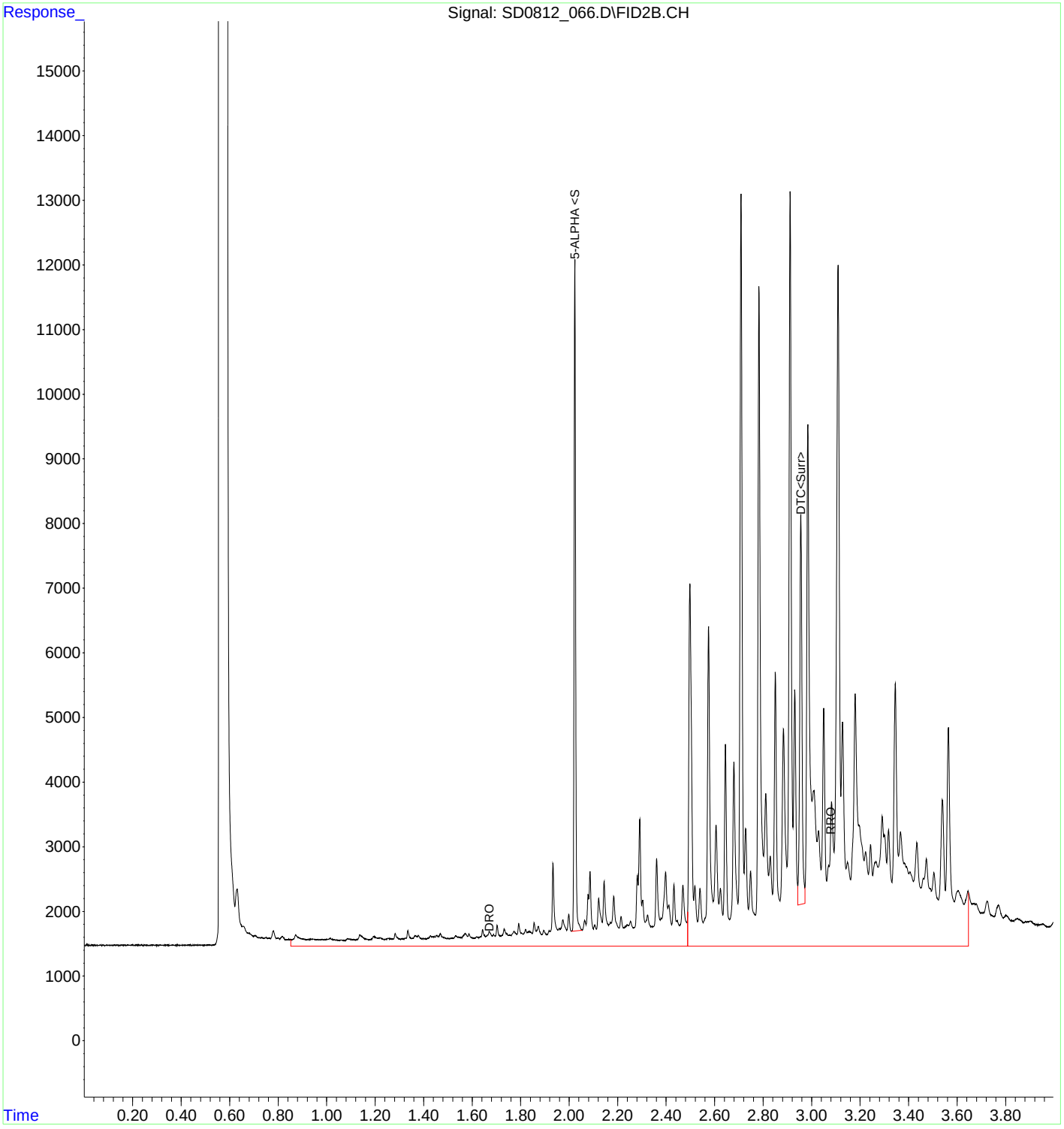
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_066.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:35 pm
Operator : AYC
Sample : 1143648009
Misc :
ALS Vial : 46 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:47:01 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_067.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:45 pm
Operator : AYC
Sample : 1143648010
Misc :
ALS Vial : 47 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:47:35 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.024	44523	95.055 µg/mL
4) S	DTC<Surr>	2.957	33671	96.967 µg/mL
Target Compounds				
1) H	DRO	1.671	71624	21.269 µg/mL
3) H	RRO	3.068	32393	158.966 µg/mL

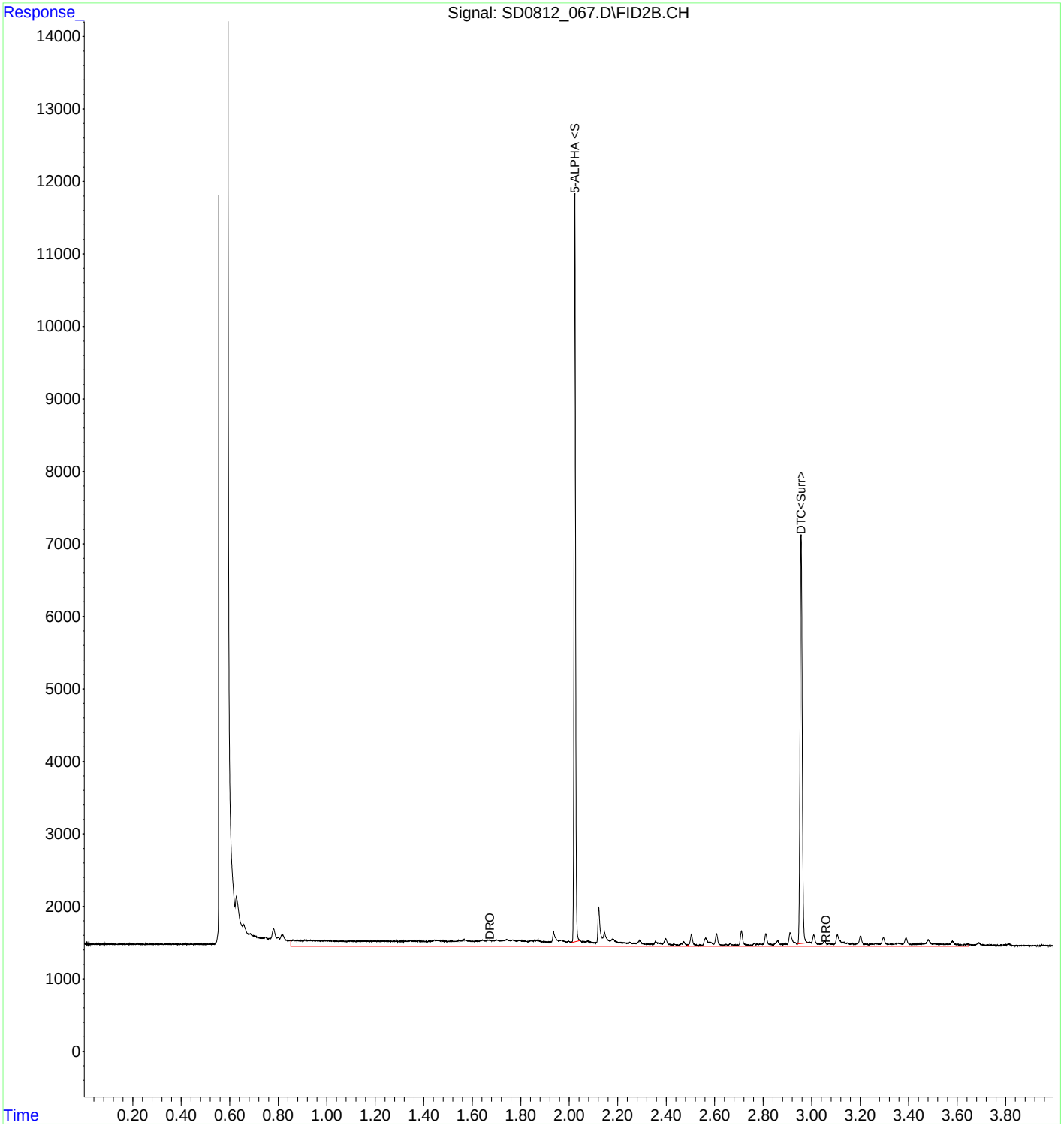
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_067.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:45 pm
Operator : AYC
Sample : 1143648010
Misc :
ALS Vial : 47 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:47:35 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_068.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:55 pm
Operator : AYC
Sample : 1143648011
Misc :
ALS Vial : 48 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:48:53 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	2.024	56505	120.637 µg/mL
4) S	DTC<Surr>	2.954	38600	111.164 µg/mLm
Target Compounds				
1) H	DRO	1.671	615922	1242.581 µg/mL
3) H	RRO	3.068	2842042	12174.566 µg/mL

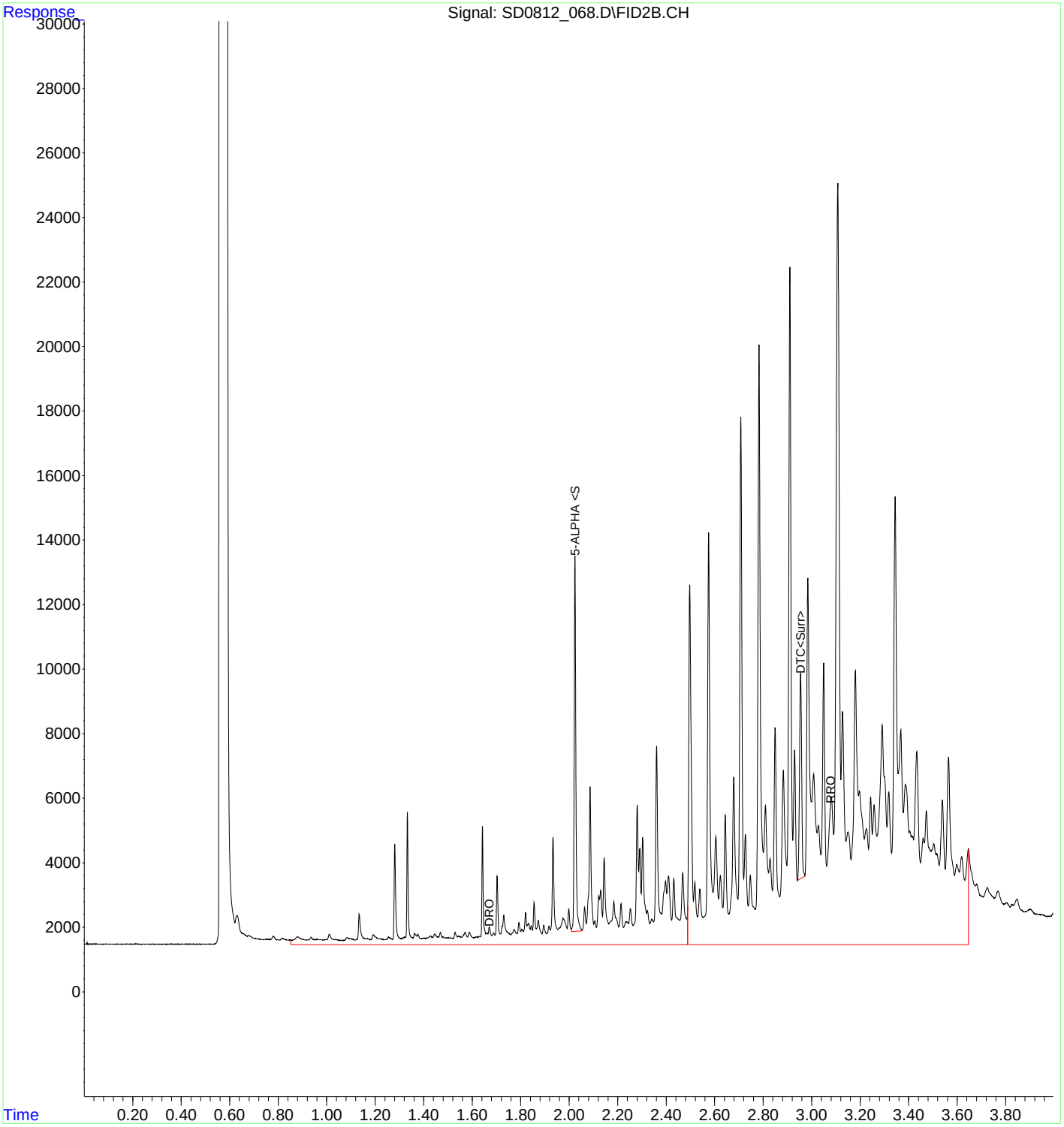
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_068.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:55 pm
Operator : AYC
Sample : 1143648011
Misc :
ALS Vial : 48 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:48:53 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

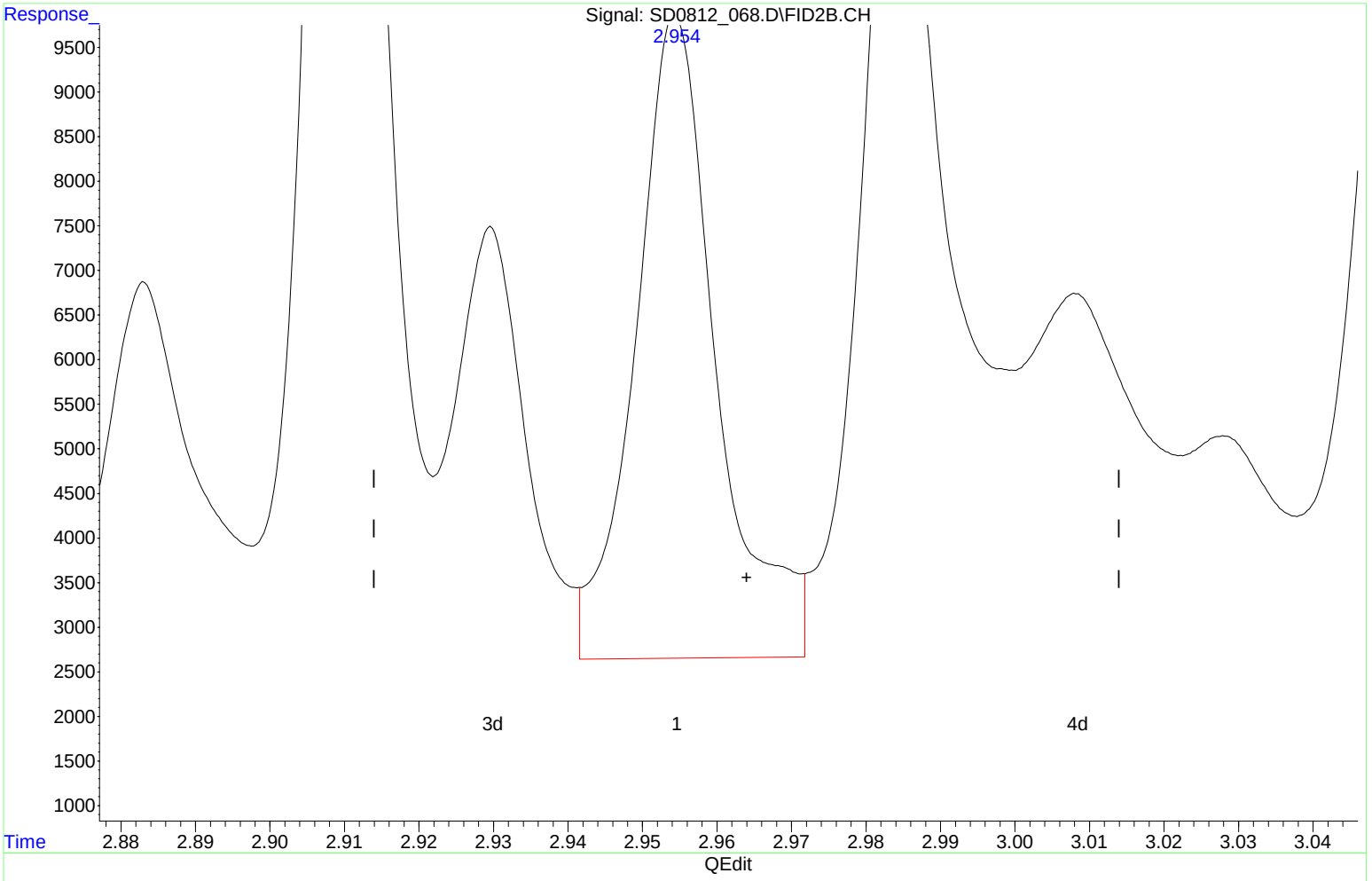


Quantitation Report (Qedit)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_068.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:55 pm
Operator : AYC
Sample : 1143648011
Misc :
ALS Vial : 48 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:48:07 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



(4) DTC<Surr> (S)

2.955min 155.897 µg/mL

response 54133

O
+BLC
08-13-14

ANGELO CALDERON

Elizabeth Brandemuhl
Elizabeth Brandemuhl

8-13-2014

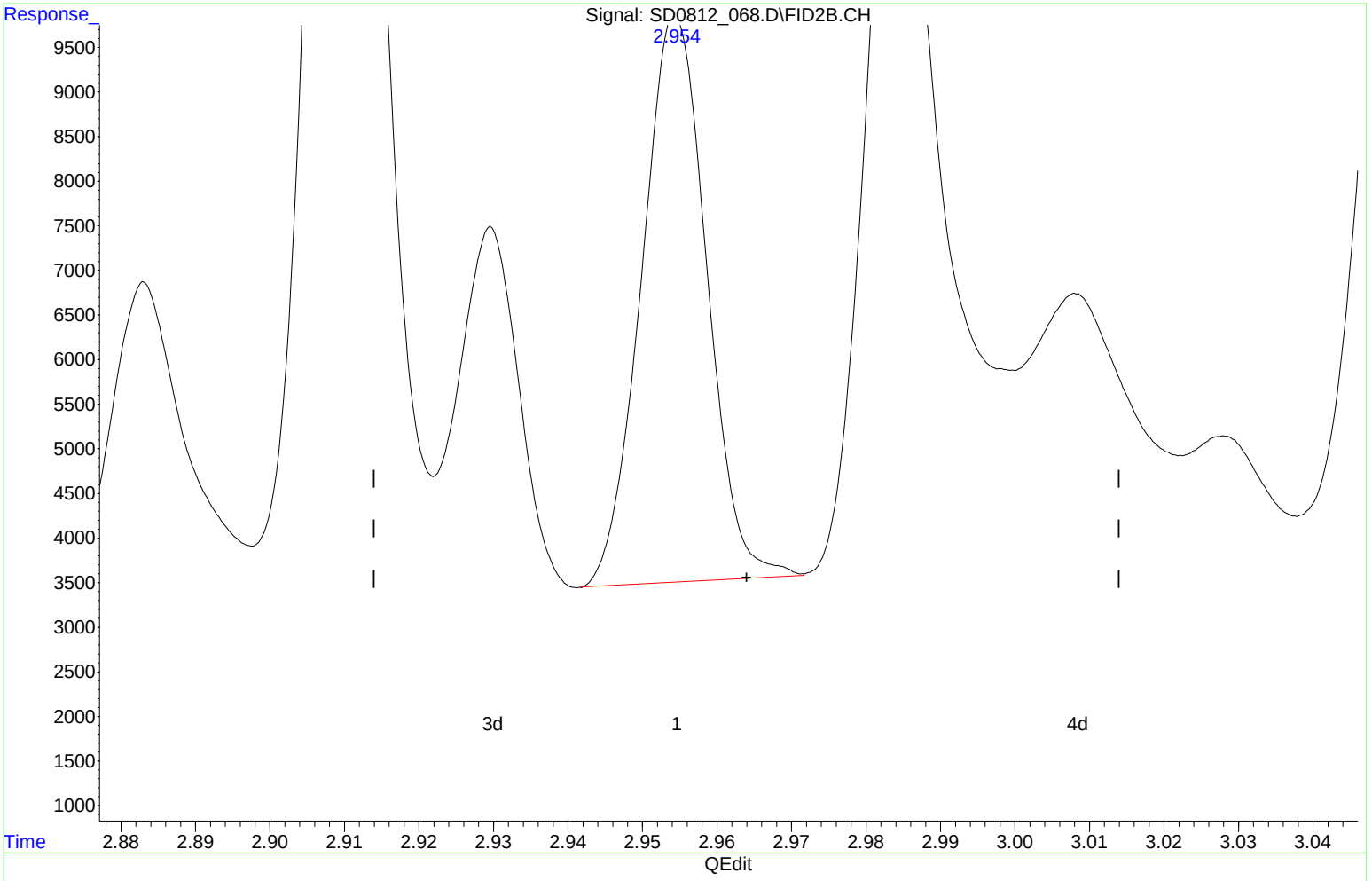
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_068.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 9:55 pm
Operator : AYC
Sample : 1143648011
Misc :
ALS Vial : 48 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:48:07 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



(4) DTC<Surr> (S)

2.954min 111.164 µg/mL m

response 38600

M

08-13-14

ANGELO CALDERON

Elizabeth Brandemuhl

Elizabeth Brandemuhl

8-13-2014

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_069.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 10:05 pm
Operator : AYC
Sample : 1143648012
Misc :
ALS Vial : 49 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:51:58 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.024	41771	89.181	µg/mL
4) S	DTC<Surr>	2.957	34290	98.752	µg/mL
Target Compounds					
1) H	DRO	1.671	124751	140.476	µg/mL
3) H	RRO	3.068	81084	367.195	µg/mL

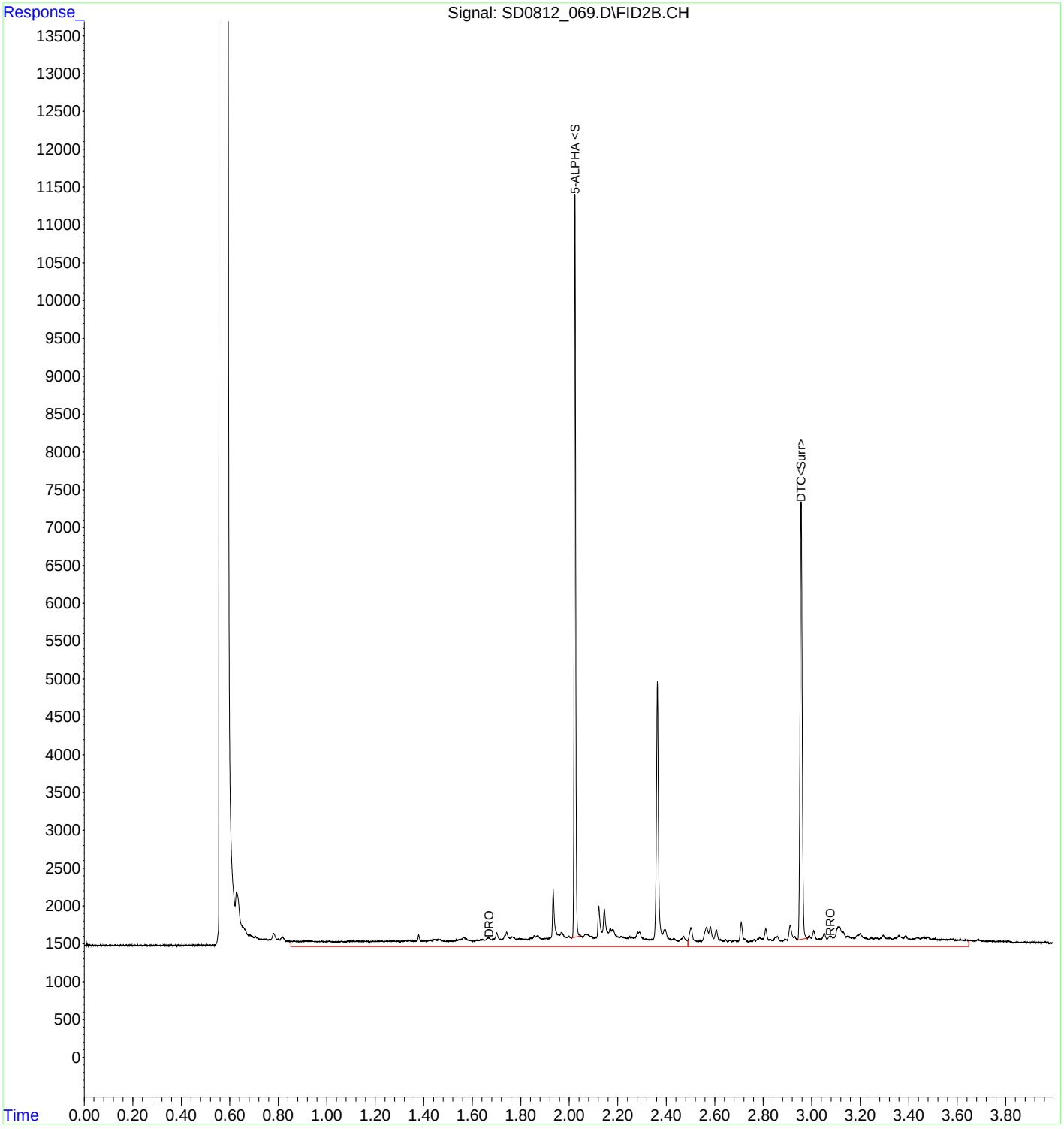
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_069.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 10:05 pm
Operator : AYC
Sample : 1143648012
Misc :
ALS Vial : 49 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:51:58 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_070.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 10:15 pm
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:52:30 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	2289516	4997.840	µg/mL
3) H	RRO	3.068	36530	176.655	µg/mL

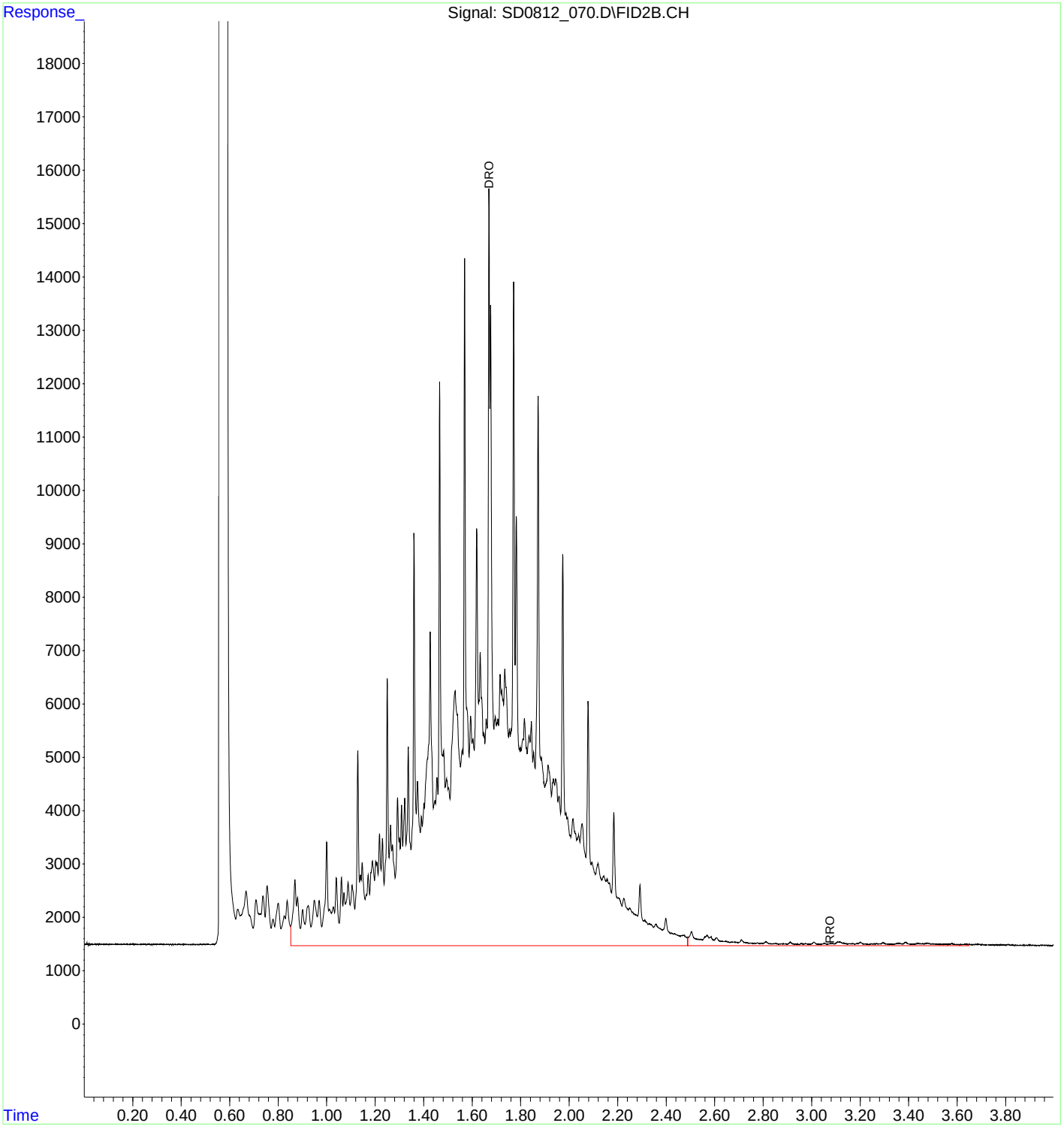
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_070.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 10:15 pm
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:52:30 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_071.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 10:25 pm
Operator : AYC
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:53:09 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	213055	338.615	µg/mL
3) H	RRO	3.068	1196257	5136.287	µg/mL

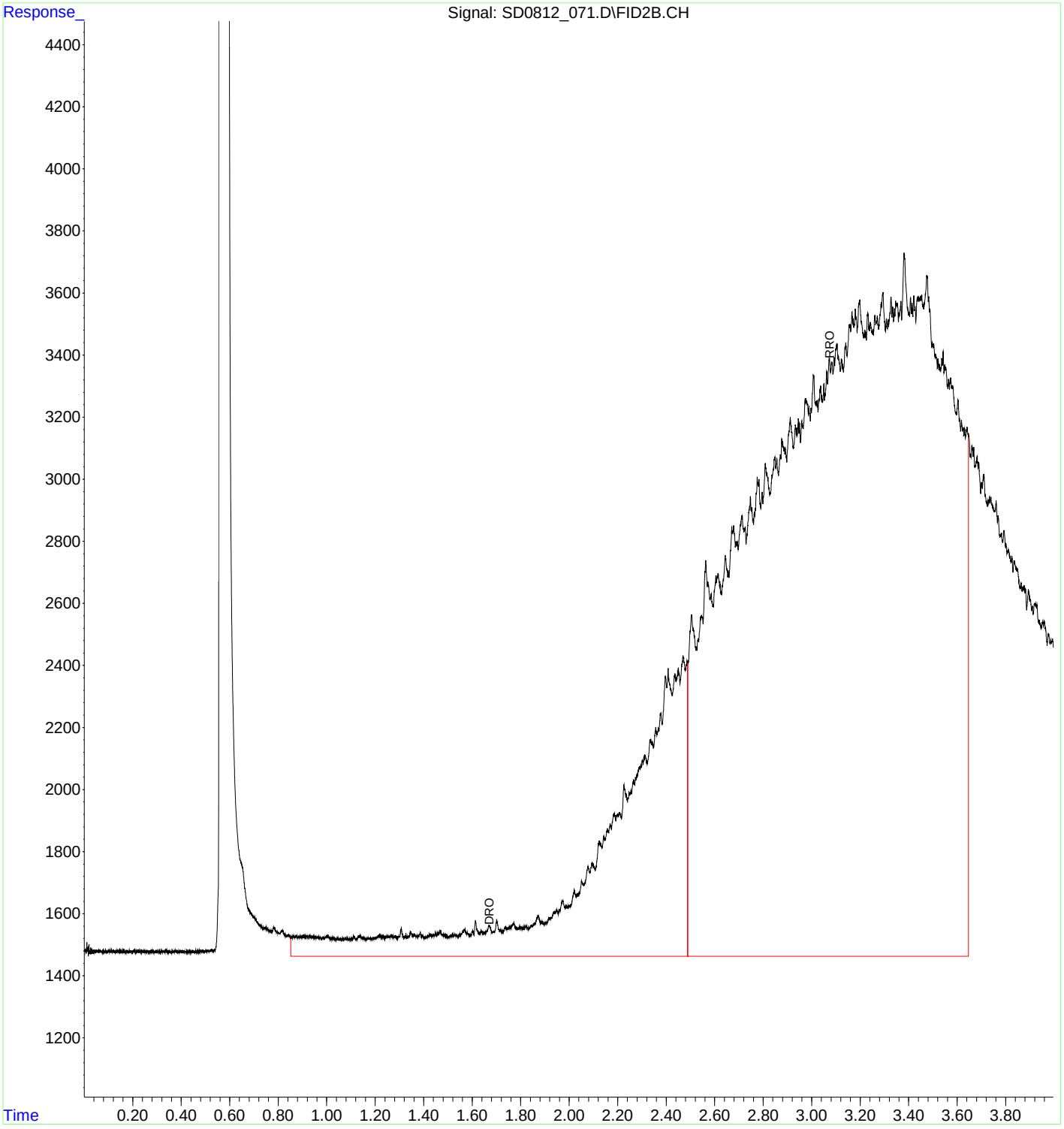
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_071.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 10:25 pm
Operator : AYC
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:53:09 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_104.D
Signal(s) : FID2B.CH
Acq On : 13 Aug 2014 3:51 am
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 09:16:54 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
	Target Compounds				
1) H	DRO	1.671	2458836	5377.768	µg/mL
3) H	RRO	3.068	33275	162.735	µg/mL

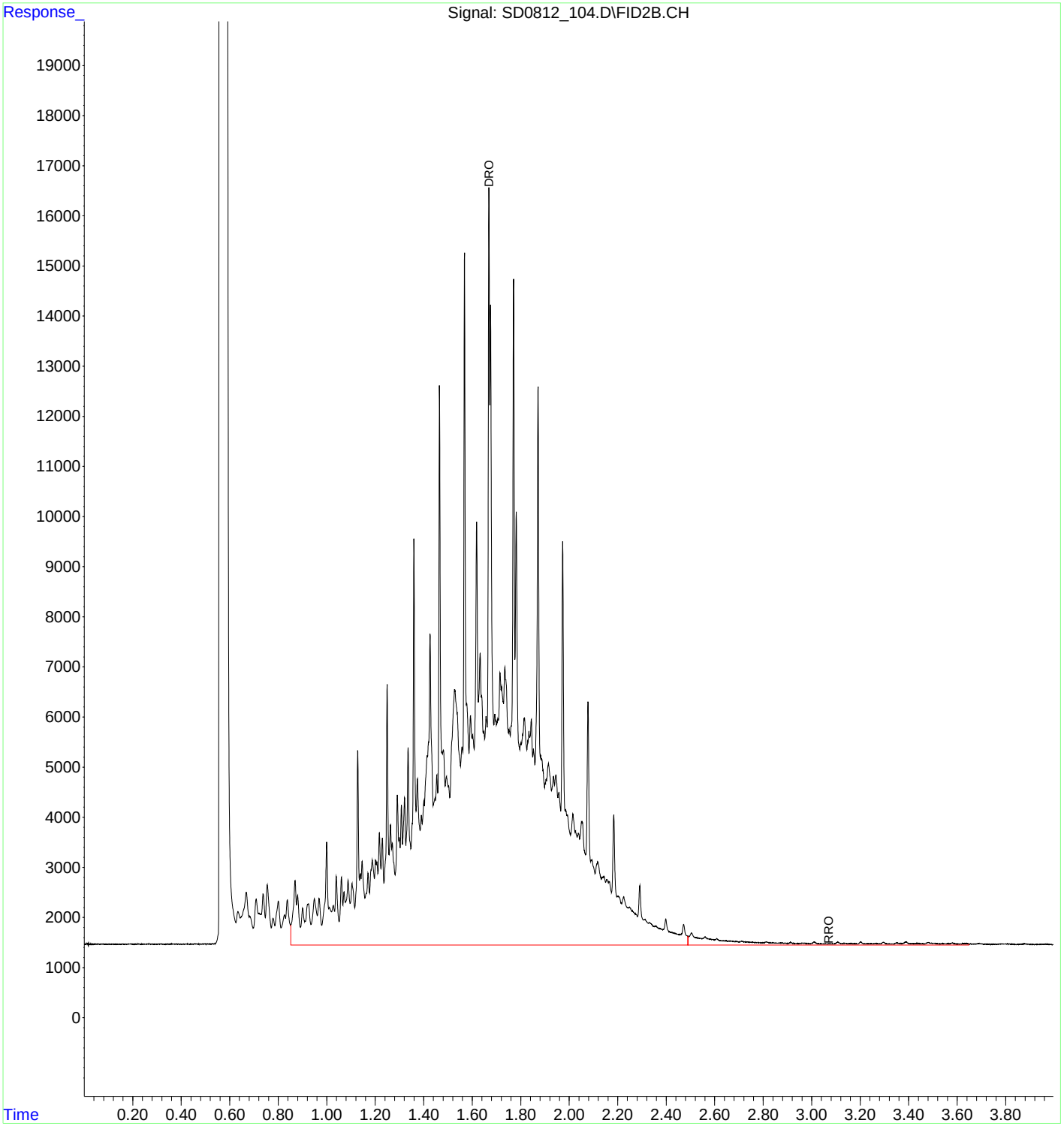
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_104.D
Signal(s) : FID2B.CH
Acq On : 13 Aug 2014 3:51 am
Operator : AYC
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 09:16:54 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_105.D
Signal(s) : FID2B.CH
Acq On : 13 Aug 2014 4:01 am
Operator : AYC
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:22:50 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	221224	356.945	µg/mL
3) H	RRO	3.068	1270994	5455.903	µg/mL

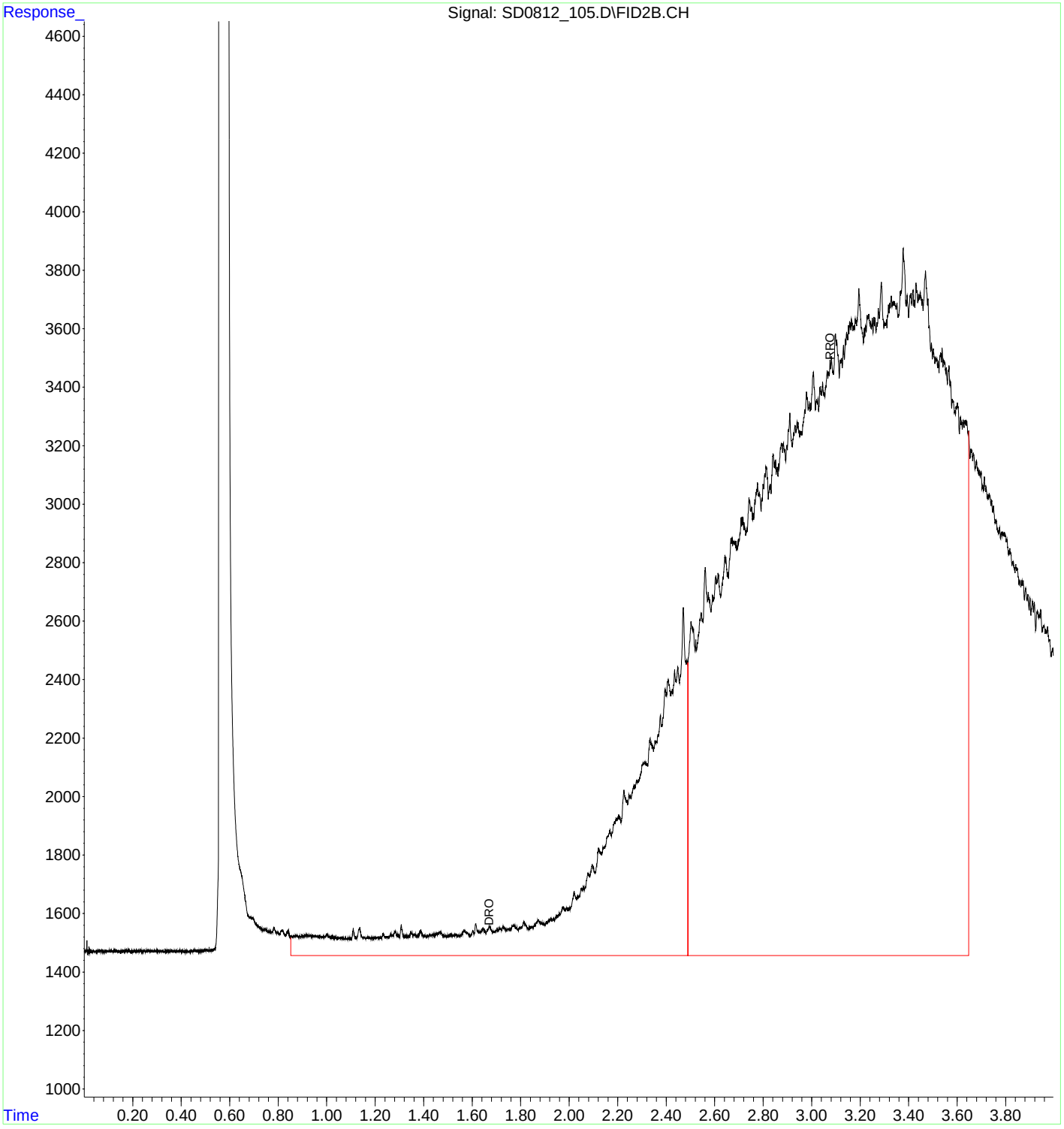
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_105.D
Signal(s) : FID2B.CH
Acq On : 13 Aug 2014 4:01 am
Operator : AYC
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 13 08:22:50 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



SGS Alaska Division Peer Review Report - Prep

Batch: **31655** Queue: **XXX**

11-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1225891	MB	3550/102+3	CKN	30	g	1	mL	0.033333333	0.033	08/11/14 08:47	08/25/14 08:47		
1225892	LCS	3550/102+3	CKN	30	g	1	mL	0.033333333	0.033	08/11/14 08:47	08/25/14 08:47		
1225893	LCSD	3550/102+3	CKN	30	g	1	mL	0.033333333	0.033	08/11/14 08:47	08/25/14 08:47		
1143648001	PS	3550/102+3	CKN	30.057	g	1	mL	0.033270120	0.033	08/11/14 08:47	08/14/14 19:45		1143648001-A
1143648002	PS	3550/102+3	CKN	30.415	g	1	mL	0.032878514	0.033	08/11/14 08:47	08/14/14 07:40		1143648002-A
1143648003	PS	3550/102+3	CKN	30.296	g	1	mL	0.033007658	0.033	08/11/14 08:47	08/13/14 19:40		1143648003-A
1143648004	BMS	3550/102+3	CKN	30.069	g	1	mL	0.033256843	0.033	08/11/14 08:47	08/13/14 19:40	1143648003	1143648004-A
1143648005	BMSD	3550/102+3	CKN	30.435	g	1	mL	0.032856908	0.033	08/11/14 08:47	08/13/14 19:40	1143648003	1143648005-A
1143648006	PS	3550/102+3	CKN	30.444	g	1	mL	0.032847195	0.033	08/11/14 08:47	08/12/14 20:00		1143648006-A
1143648007	PS	3550/102+3	CKN	30.373	g	1	mL	0.032923979	0.033	08/11/14 08:47	08/12/14 14:45		1143648007-A
1143648008	PS	3550/102+3	CKN	30.083	g	1	mL	0.033241366	0.033	08/11/14 08:47	08/12/14 14:15		1143648008-A
1143648009	PS	3550/102+3	CKN	30.112	g	1	mL	0.033209352	0.033	08/11/14 08:47	08/12/14 12:00		1143648009-A
1143648010	PS	3550/102+3	CKN	30.074	g	1	mL	0.033251313	0.033	08/11/14 08:47	08/16/14 10:35		1143648010-A
1143648011	PS	3550/102+3	CKN	30.237	g	1	mL	0.033072064	0.033	08/11/14 08:47	08/16/14 10:10		1143648011-A
1143648012	PS	3550/102+3	CKN	30.186	g	1	mL	0.033127940	0.033	08/11/14 08:47	08/16/14 15:00		1143648012-A

Posted by: Christy Ngan

Analyst's Signature: CKN

Peer Reviewer's Signature: AYC

1

XXX 31655 Soil 3550/102+3

Extraction Method:3550/102+3
Start Date/Time: 8/11/2014 8:47:44AM
End Date/Time: 8/11/2014 10:51:44AM
TV Temp (C): 38
TV ID: 8
Surrogate Lot ID:SVW15-41-12
Surrogate Amount Added (mL):1
Surrogate Conc. ug/mL:100

Comments:

LCS(D)/MS(D) Lot ID:VF2-136-9
LCS(D)/MS(D) Amount Added (mL):1
LCS(D)/MS(D) Conc. ug/mL:5000
Florisil Lot#:
Isooctane Lot #:
Silica Gel Lot #:
Hexane Lot #:
Na2SO4 Lot #:PW5-3-11

Glass Wool Lot #:PPW5-5-1
Pipettes (1 or 2 mL) Lot #:P1012
Pipettes (5 or 10 mL) Lot #:
Ch2CL2 Lot #:P001065
Sand Lot #:PW5-4-3
Teflon Lot #:
H2SO4 Lot #:
Additional Spike Lots:

Lab Sample ID	Sample Type	Initial Weight (g)	Final Volume (ml)	Original HSN	Paired HSN	Container_Id	Comments
1225891	MB	30.0	1				
1225892	LCS	30.0	1				
1225893	LCSD	30.0	1		1225892		
1143648001	PS	30.057	1			1143648001-A	
1143648002	PS	30.415	1			1143648002-A	
1143648003	PS	30.296	1			1143648003-A	
1143648004	BMS	30.069	1	1143648003		1143648004-A	
1143648005	BMSD	30.435	1	1143648003	1143648004	1143648005-A	
1143648006	PS	30.444	1			1143648006-A	
1143648007	PS	30.373	1			1143648007-A	
1143648008	PS	30.083	1			1143648008-A	
1143648009	PS	30.112	1			1143648009-A	
1143648010	PS	30.074	1			1143648010-A	
1143648011	PS	30.237	1			1143648011-A	
1143648012	PS	30.186	1			1143648012-A	

Analyst Initials who performed each of the following steps:

Spike/Surrogate:MM
Witness Spike/Surrogate:CKN
Concentrate:CKN
Posted By:CKN

SGS North America Inc.
Calibration Review and Validation for:
Semivolatile Fuels - AK102/103 or 8015C or AK102/103-SV or 8015C-SV

Instrument/Date Code in YYYY-MMDD format (e.g., SDF2007-0507) SDR2014-0812
Instrument Method File Name (e.g. SDF013008_SVA.met) SDR2014-0812.M

Contents:	Analyst's Review OK	Analyst's Review N/A	Peer Review OK	Peer Review N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Runlog	☑		☑	
Chromatograms for IB, NAS, Cal Stds, and ICVs	☑		☑	
Validation:				
Dates are correct	☑		☑	
IB and NAS have been run at the beginning of the sequence	☑		☑	
The retention time group window is set correctly and shown with NAS:				
AK102 DRO: C10 --> Beginning of C25	☑	☐	☑	☐
AK103 RRO: Beginning of C25 --> Through C36	☑	☐	☑	☐
8015C DRO: C10 --> Beginning of C28	☐	☑	☐	☐
8015C RRO: Beginning of C28 --> Through C36	☐	☑	☐	☐
Surrogate RT windows are set correctly.				
Criteria of ± 0.05 met for AK methods	☑	☐	☑	☐
Criteria of ± 0.03 met for 8015C	☐	☑	☐	☑
If the Calibration Fit type is Linear, then there are at least 5 points.	☑	☐	☑	☐
If the Calibration Fit type is Quadratic, then there are at least 6 points.	☐	☑	☐	☑
If the Calibration Fit type is Average RF:				
The percent RSD of the response factor is ≤ 25% for AK102/103	☑	☐	☑	☐
The percent RSD of the response factor is ≤ 20% for 8015C	☐	☑	☐	☑
If the Calibration Fit type is Linear or Quadratic:				
The correlation coefficient is r^2 >0.995 for AK102/103.	☑	☐	☑	☐
The correlation coefficient is r^2 >0.99 for 8015C.	☐	☑	☐	☑
For AK102/103, the ICV has 75%-125% recovery.	☑	☐	☑	☐
For 8015C, the ICV has 80-120% recovery.	☐	☑	☐	☑
Manual Integrations - explanations, before and after printouts	☐	☑	☐	☑
Hand calculations for ICV concentrations of DRO and RRO verified:	☑		☑	
Average RF Equation = Area/RF				
Linear Equation = (Area - Constant Term)/Linear Term	Initials:	AYC	Initials:	MCM
	Date:	8/12/2014	Date:	8/13/2014

Hand Calculated DRO ICV Concentration:

Shown: 4393.859ug/ml

Calculated: $\frac{2020341-62145=4393.825ug/ml}{445.67}$

Hand Calculated RRO ICV Concentration:

Shown: 4956.219ug/ml

Calculated: $\frac{1154151+4778.1=4956.289ug/ml}{233.83}$

Note:

Calibration Table Report
Method: SDR2014-0812.M
Title: DRO/RRO by Method AK 102/103
Last Calibration: Tue Aug 12 16:00:34 2014

Calibration Files

Compound	1 SD0812_025.D	2 SD0812_026.D	3 SD0812_027.D	4 SD0812_028.D	5 SD0812_029.D	Avg	%RSD
DRO	669.511	516.935	446.409	419.191	467.334	503.876	19.700
5-ALPHA <Surr>	458.363	498.170	436.030	458.009	491.376	468.390	5.517
RRO	217.733	182.256	237.073	239.739	231.857	221.732	10.664
DTC<Surr>	316.022	374.330	325.725	345.503	374.609	347.238	7.786

Tue Aug 12 16:29:04 2014

Calibration Report SD

Method Path : Z:\08\SD\METHOD\
Method File : SDR2014-0812.M
Title : DRO/RRO by Method AK 102/103
Last Update : Tue Aug 12 16:00:34 2014
Response Via : Initial Calibration

Calibration Files
1 =SD0812_025 2 =SD0812_026 3 =SD0812_027 4 =SD0812_028 5 =SD0812_029

	Compound	Fit	Constant	Linear	Quad	RSD/Cf
1) H	DRO	Lin	6.2145 e4	4.4567 e2	-----	0.9970
2) S	5-ALPHA <Surr>	Avg	-----	4.6839 e2	-----	0.0552
3) H	RRO	Lin	-4.7781 e3	2.3383 e2	-----	0.9994
4) S	DTC<Surr>	Avg	-----	3.4724 e2	-----	0.0779

SDR2014-0812.M Tue Aug 12 16:28:30 2014

Instrument Runlog

Instrument: SDR **Calibration Date:** 8/12/2014 **Method:** AK102/103
Operator: AYC **Processed By:** AYC **Posted By:** _____ **Analytical Batch:** _____

Data Path: Z:\08\SD\DATA\SD081214\

Daily:		As Needed:			
Verify System Date/Time	☑	Clip Column/Guard Column	☐	Verify Acquisition Parameters	☐
General System Inspection	☑	Replace Inlet Seal ☐ Septa ☑ Liner ☑		Rinse or Replace Weldment/Split Lines	☐

Standards:				
IB	SVW15-41-11	**CCVR**	VF3-1-1
NAS	VF3-3-1	**CCVB**	VF2-109-10
MeCl2	P-454		

Data File	Vial	Sample ID	Dilution	DRO	RRO	Notes	Acquisition Time	Rerun
SD0812_001.D	5	R	1				8/12/14 10:53 AM	
SD0812_002.D	5	R	1				8/12/14 11:03 AM	
SD0812_003.D	5	R	1				8/12/14 11:12 AM	
SD0812_004.D	5	R	1				8/12/14 11:22 AM	
SD0812_005.D	5	R	1				8/12/14 11:32 AM	
SD0812_006.D	5	R	1				8/12/14 11:42 AM	
SD0812_007.D	5	R	1				8/12/14 11:52 AM	
SD0812_008.D	1	IB	1			SDR2014-0812.M	8/12/14 12:02 PM	
SD0812_009.D	2	NAS	1				8/12/14 12:12 PM	
SD0812_010.D	5	R	1				8/12/14 12:22 PM	
SD0812_011.D	5	R	1				8/12/14 12:32 PM	
SD0812_012.D	5	R	1				8/12/14 12:41 PM	
SD0812_013.D	6	SURR 15	1			VF3-7-1	8/12/14 12:51 PM	
SD0812_014.D	7	SURR 50	1			VF3-7-2	8/12/14 1:01 PM	
SD0812_015.D	8	SURR 100	1			VF3-7-3	8/12/14 1:11 PM	
SD0812_016.D	9	SURR 150	1			VF3-7-4	8/12/14 1:21 PM	
SD0812_017.D	10	SURR 200	1			VF3-7-5	8/12/14 1:31 PM	
SD0812_018.D	5	R	1				8/12/14 1:41 PM	
SD0812_019.D	11	DRO 300	1			VF3-7-7	8/12/14 1:51 PM	
SD0812_020.D	12	DRO 1000	1			VF3-7-8	8/12/14 2:01 PM	
SD0812_021.D	13	DRO 5000	1			VF3-7-9	8/12/14 2:10 PM	
SD0812_022.D	14	DRO 10000	1			VF3-7-10	8/12/14 2:20 PM	
SD0812_023.D	15	DRO 20000	1			VF3-7-11	8/12/14 2:30 PM	
SD0812_024.D	5	R	1				8/12/14 2:40 PM	
SD0812_025.D	16	RRO 500	1			VF3-7-14	8/12/14 2:50 PM	
SD0812_026.D	17	RRO 1000	1			VF3-7-15	8/12/14 3:00 PM	
SD0812_027.D	18	RRO 5000	1			VF3-7-16	8/12/14 3:10 PM	
SD0812_028.D	19	RRO 10000	1			VF3-7-17	8/12/14 3:20 PM	
SD0812_029.D	20	RRO 20000	1			VF3-7-18	8/12/14 3:29 PM	
SD0812_030.D	5	R	1				8/12/14 3:39 PM	
SD0812_031.D	5	R	1				8/12/14 3:49 PM	
SD0812_032.D	21	1CVB	1	88		VF3-5-1	8/12/14 3:59 PM	
SD0812_033.D	22	ICVR	1		99	OW1-3-2	8/12/14 4:09 PM	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_008.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:02 pm
Operator : AYC
Sample : IB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:00:40 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.025	47519	101.451	µg/mL
4) S	DTC<Surr>	2.965	36550	105.258	µg/mL
Target Compounds					
1) H	DRO	1.671	77396	34.221	µg/mL
3) H	RRO	3.068	23625	121.466	µg/mL

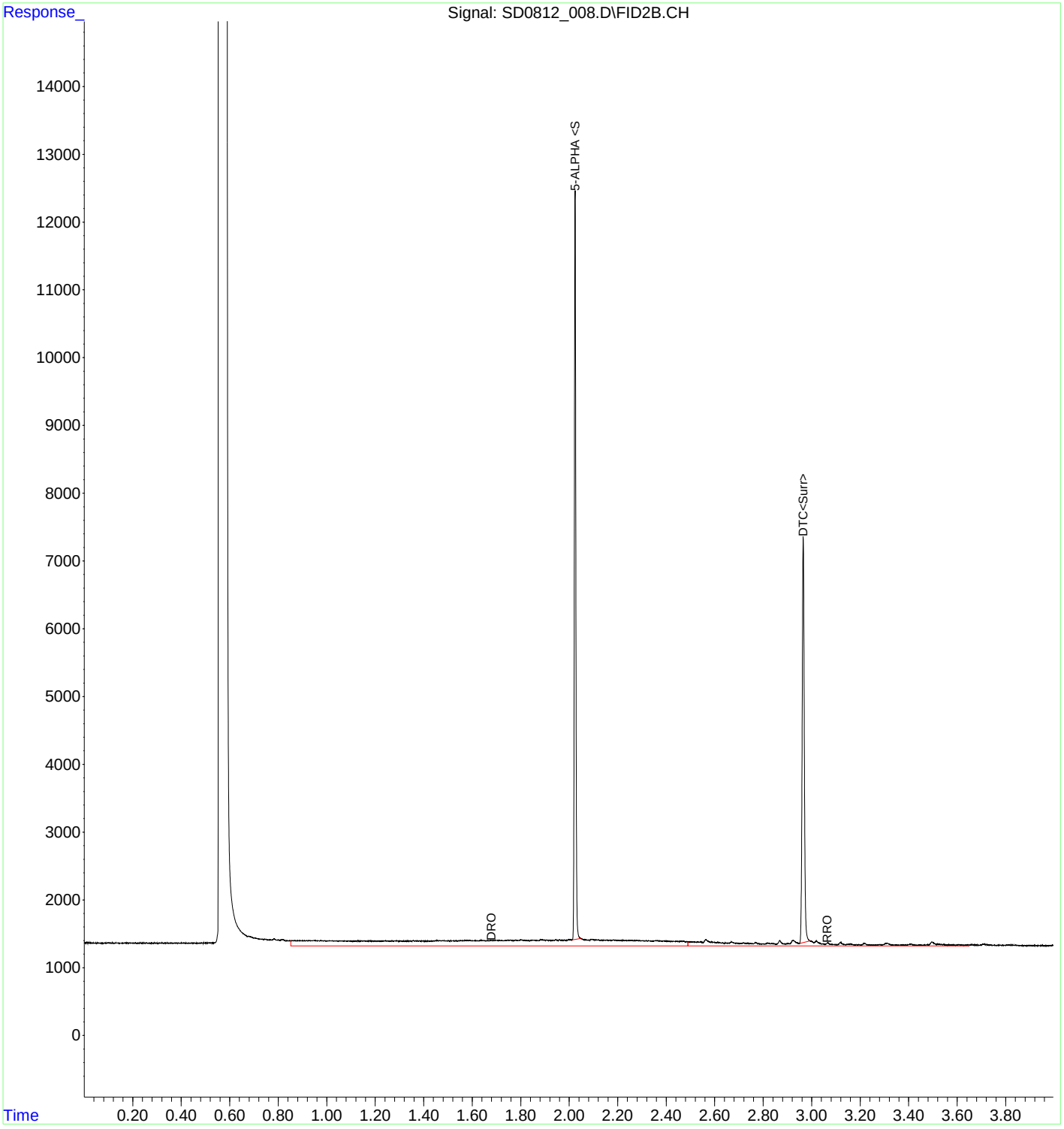
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_008.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:02 pm
Operator : AYC
Sample : IB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:00:40 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_009.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:12 pm
Operator : AYC
Sample : NAS
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:32:48 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Thu Aug 07 14:21:12 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	3319029	8481.020	µg/mL
3) H	RRO	3.068	1738614	9413.894	µg/mL

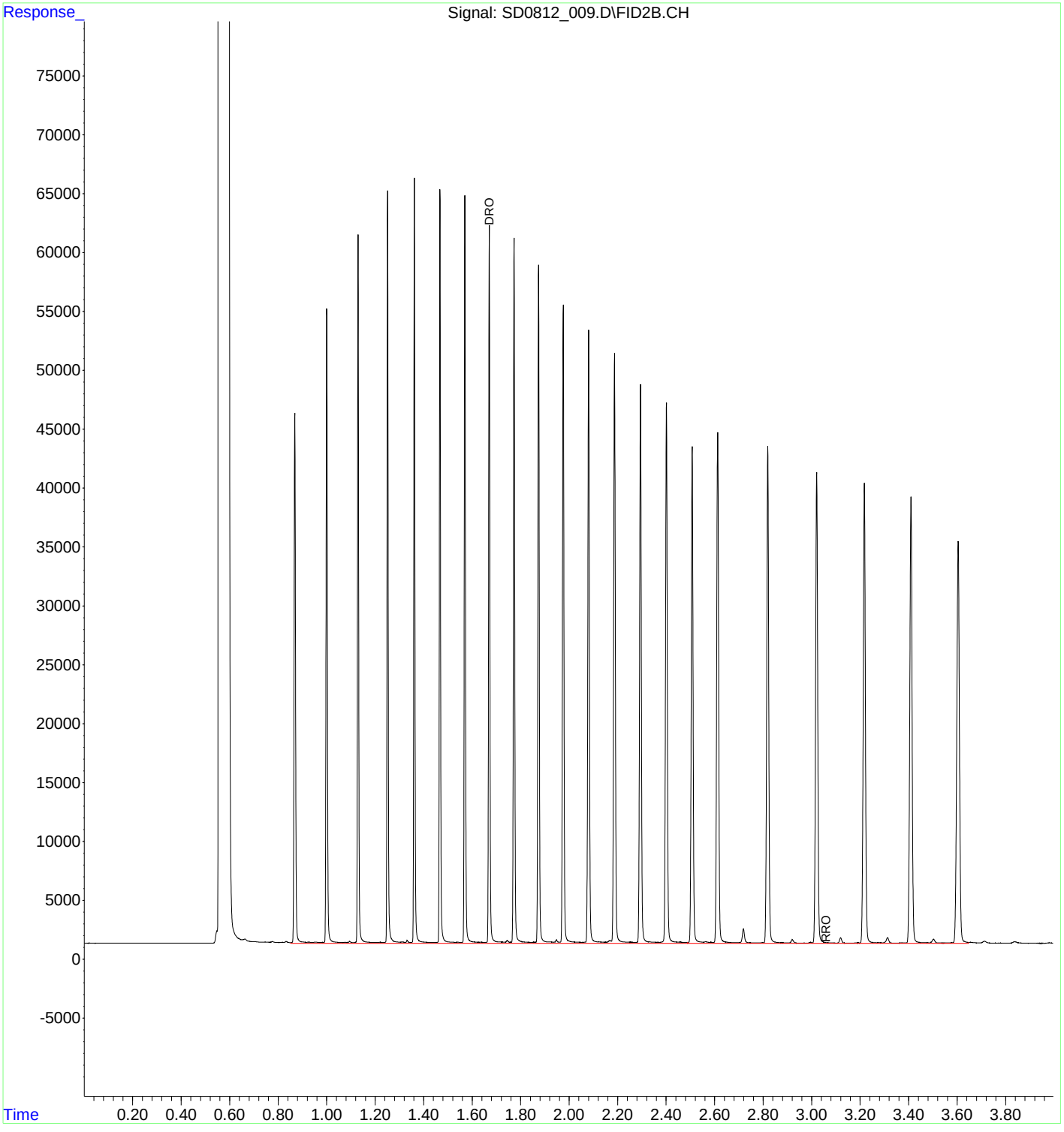
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

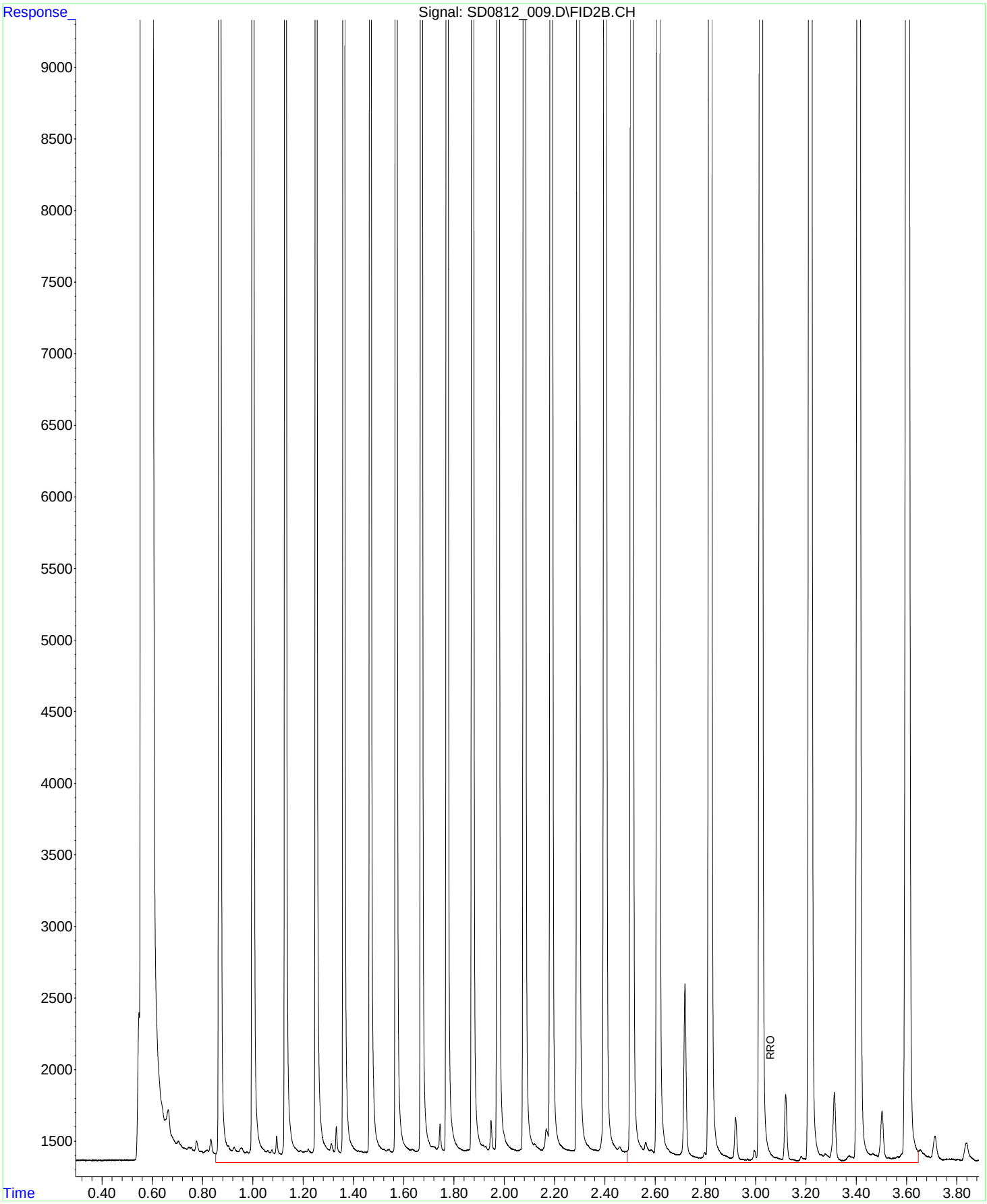
Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_009.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:12 pm
Operator : AYC
Sample : NAS
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:32:48 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Thu Aug 07 14:21:12 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



File :Z:\08\SD\DATA\SD081214\SD0812_009.D
Operator : AYC
Acquired : 12 Aug 2014 12:12 pm using AcqMethod SD_MXTREAR_2013.M
Instrument : SD
Sample Name: NAS
Misc Info :
Vial Number: 2



Area Percent Report

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_009.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:12 pm
Sample : NAS
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\08\SD\METHOD\SDR2014-0812.M
Title : DRO/RRO by Method AK 102/103

Signal : FID2B.CH

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.556	0.533	0.568	BV	7485038	49050389	100.00%	48.953%
2	0.572	0.568	0.649	VV	5146068	46223059	94.24%	46.131%
3	0.869	0.852	0.902	BB	44831	189944	0.39%	0.190%
4	1.000	0.986	1.035	BB	53608	194810	0.40%	0.194%
5	1.130	1.114	1.165	BB	59712	199563	0.41%	0.199%
6	1.252	1.235	1.290	BB	63433	203073	0.41%	0.203%
7	1.362	1.347	1.395	BB	64585	206712	0.42%	0.206%
8	1.467	1.453	1.505	BB	63650	210923	0.43%	0.211%
9	1.570	1.555	1.605	BB	63266	214740	0.44%	0.214%
10	1.671	1.655	1.707	BB	60506	215413	0.44%	0.215%
11	1.773	1.758	1.809	BB	59444	220238	0.45%	0.220%
12	1.874	1.859	1.909	BB	57286	223905	0.46%	0.223%
13	1.976	1.960	2.014	BB	54048	224476	0.46%	0.224%
14	2.080	2.062	2.116	BB	51839	227197	0.46%	0.227%
15	2.187	2.175	2.223	VB	49890	231200	0.47%	0.231%
16	2.295	2.275	2.330	BB	47202	231047	0.47%	0.231%
17	2.401	2.378	2.439	BB	45653	230655	0.47%	0.230%
18	2.508	2.489	2.544	BB	41957	218316	0.45%	0.218%
19	2.613	2.594	2.652	BB	43230	237480	0.48%	0.237%
20	2.719	2.703	2.744	BB	1189	7269	0.01%	0.007%
21	2.819	2.786	2.860	BB	42067	240260	0.49%	0.240%
22	3.021	3.004	3.064	BB	39848	243956	0.50%	0.243%
23	3.120	3.104	3.140	BB	453	2916	0.01%	0.003%
24	3.218	3.199	3.259	BB	38996	241141	0.49%	0.241%
25	3.313	3.286	3.333	BB	457	3247	0.01%	0.003%
26	3.410	3.390	3.453	BB	37869	248778	0.51%	0.248%
27	3.605	3.575	3.647	BB	34059	258090	0.53%	0.258%

Sum of corrected areas: 100198795

SDR2014-0812.M Tue Aug 12 15:27:57 2014

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_010.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:22 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:03:36 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	78091	35.781	µg/mL
3) H	RRO	3.068	17232	94.129	µg/mL

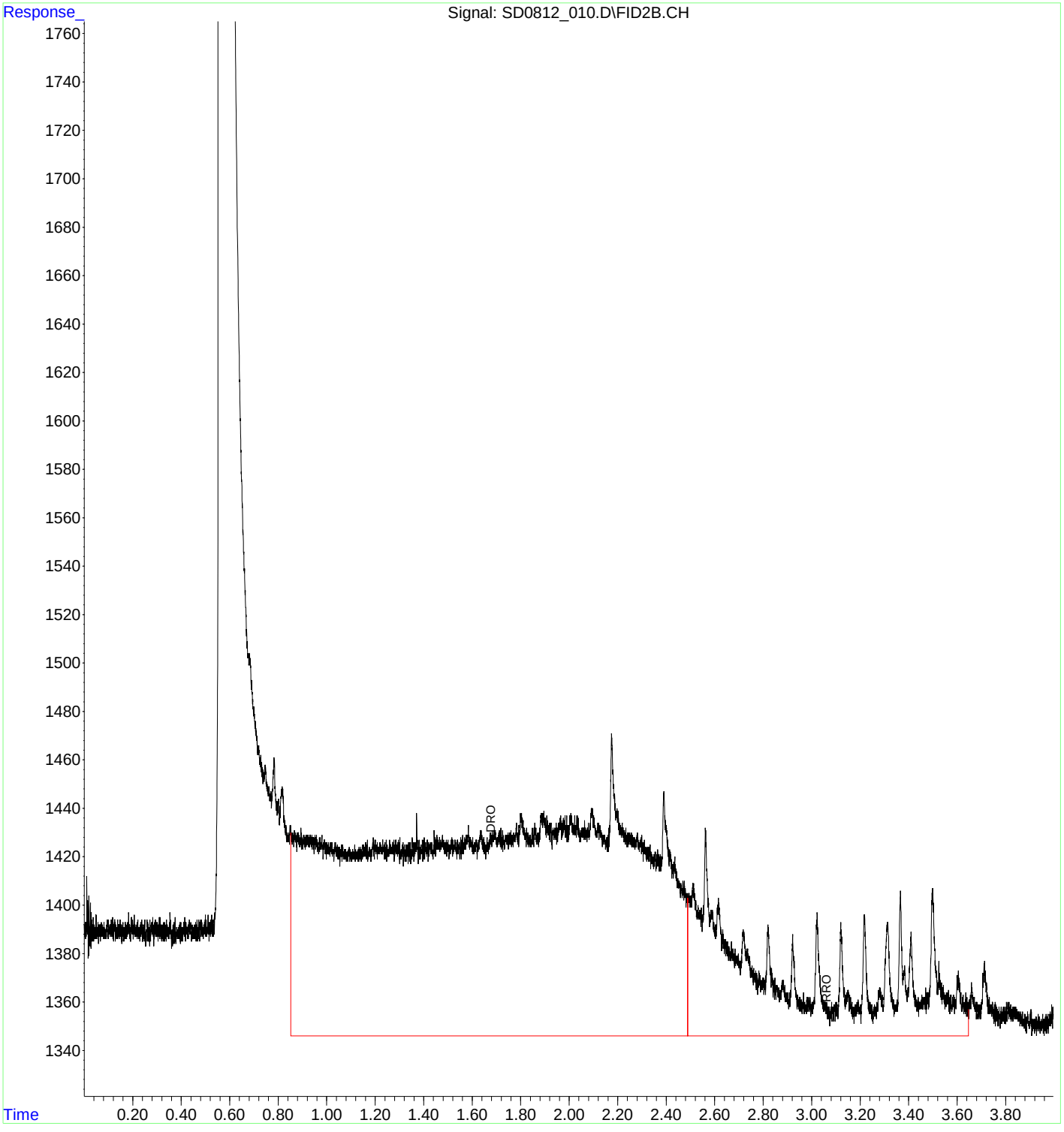
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_010.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:22 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:03:36 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_011.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:32 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:03:57 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
	Target Compounds				
1) H	DRO	1.671	24502	N.D.	µg/mL
3) H	RRO	3.068	14752	83.523	µg/mL

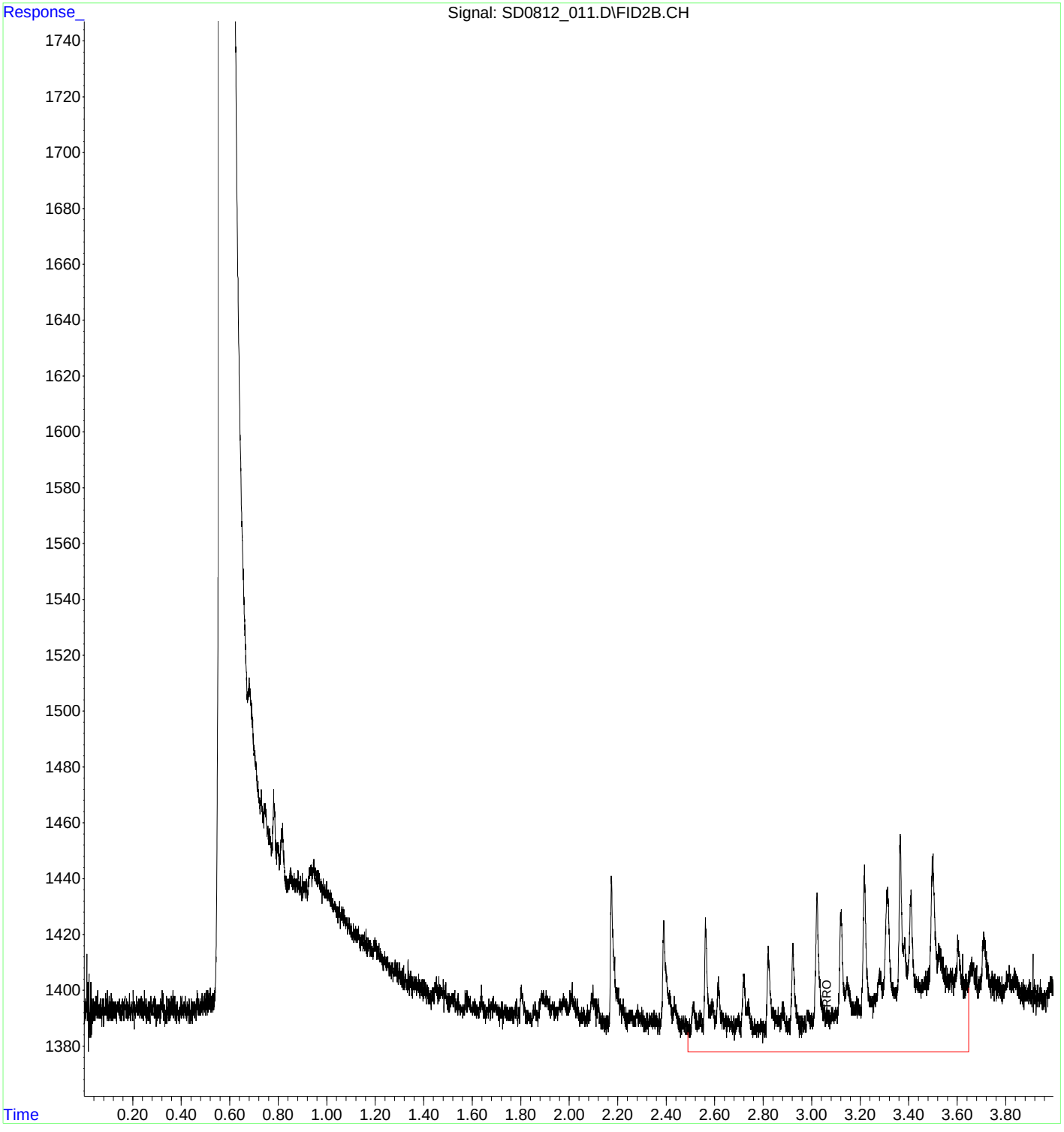
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_011.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:32 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:03:57 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_012.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:41 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:04:17 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

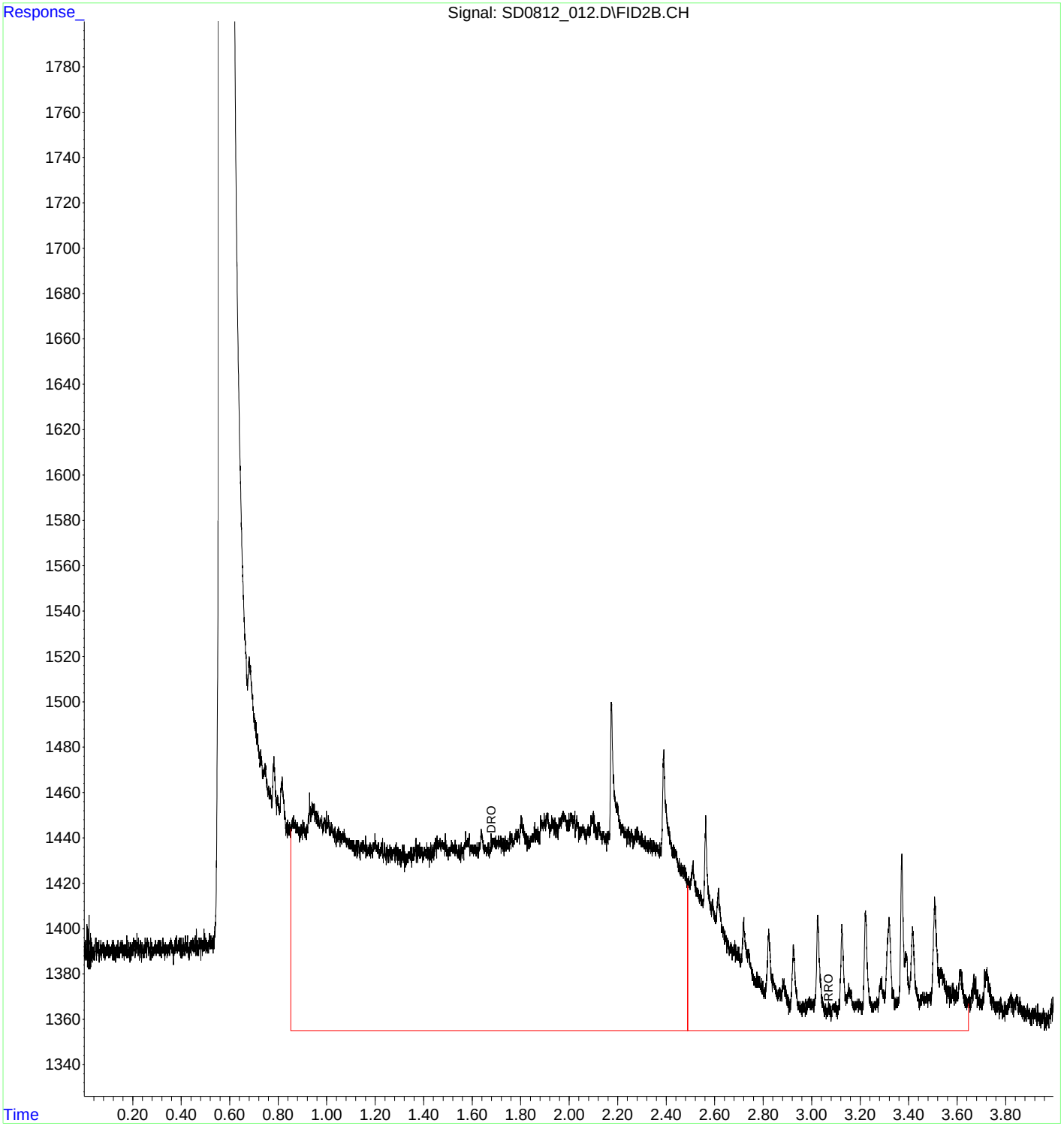
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	83164	47.162	µg/mL
3) H	RRO	3.068	18278	98.601	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_012.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:41 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:04:17 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_013.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:51 pm
Operator : AYC
Sample : SURR 15
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:36:21 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:35:05 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.025	6875	15.768	µg/mL
4) S	DTC<Surr>	2.967	4740	14.553	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

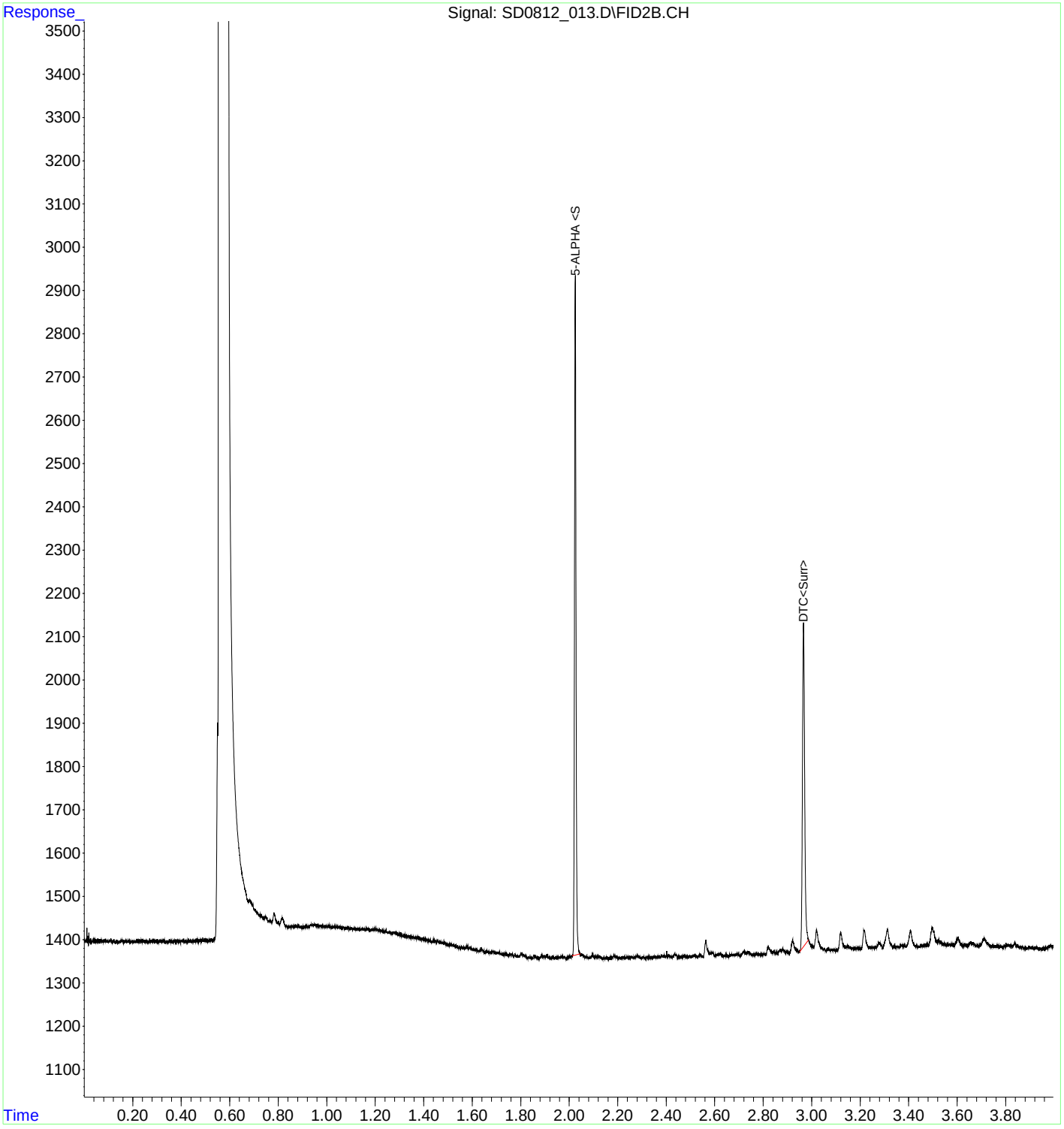
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_013.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 12:51 pm
Operator : AYC
Sample : SURR 15
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:36:21 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:35:05 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_014.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:01 pm
Operator : AYC
Sample : SURR 50
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:37:27 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:36:43 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.024	24909	55.699	µg/mL
4) S	DTC<Surr>	2.966	18717	58.330	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

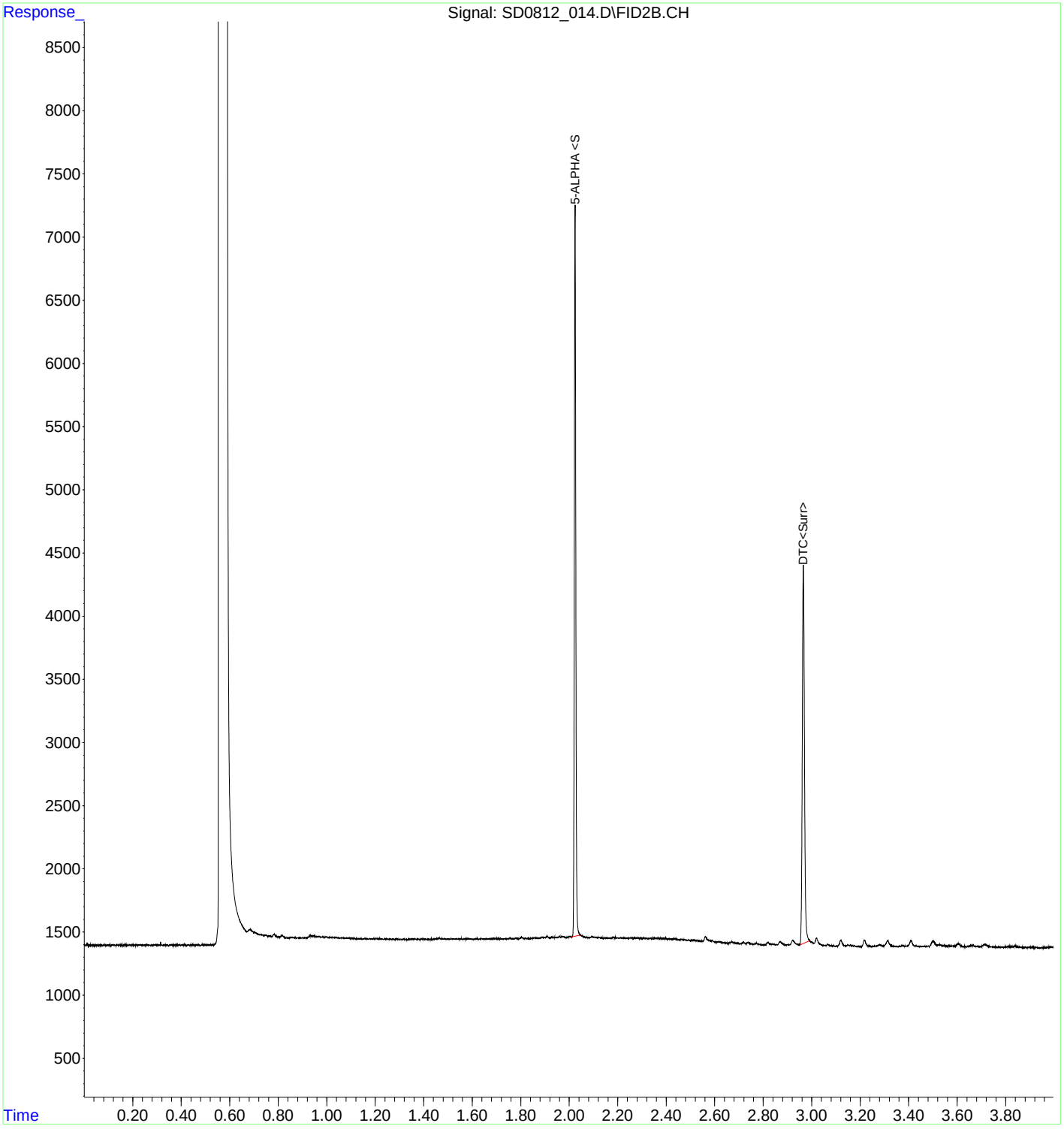
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_014.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:01 pm
Operator : AYC
Sample : SURR 50
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:37:27 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:36:43 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_015.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:11 pm
Operator : AYC
Sample : SURR 100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:06:05 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.025	43603	93.091	µg/mL
4) S	DTC<Surr>	2.964	32573	93.805	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

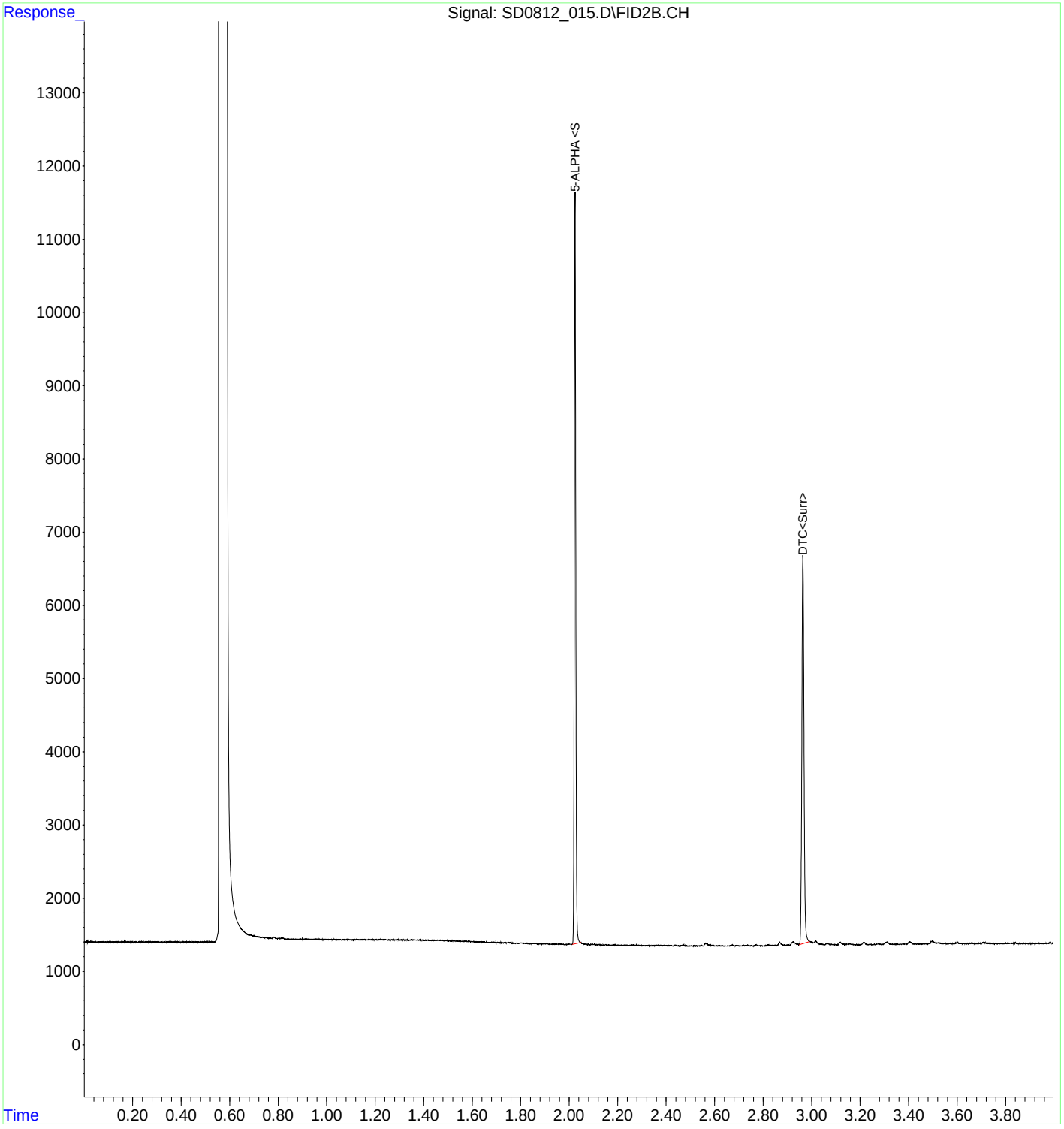
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_015.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:11 pm
Operator : AYC
Sample : SURR 100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:06:05 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_016.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:21 pm
Operator : AYC
Sample : SURR 150
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:38:39 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:37:50 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.025	68701	148.003	µg/mL
4) S	DTC<Surr>	2.969	51826	153.016	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

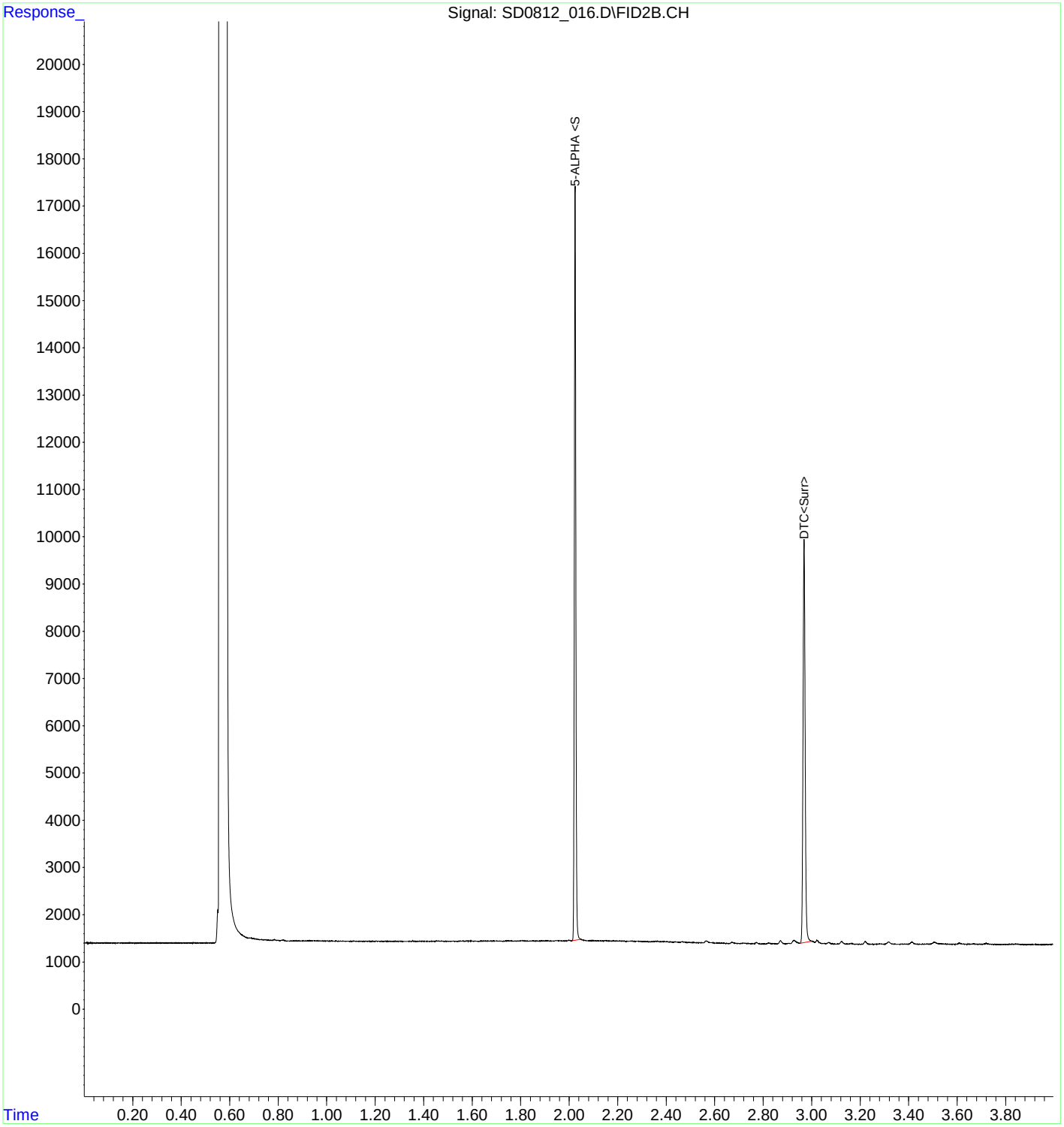
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_016.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:21 pm
Operator : AYC
Sample : SURR 150
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:38:39 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:37:50 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_017.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:31 pm
Operator : AYC
Sample : SURR 200
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:39:37 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:38:58 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	2.025	98275	212.421	µg/mL
4) S	DTC<Surr>	2.965	74922	220.103	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

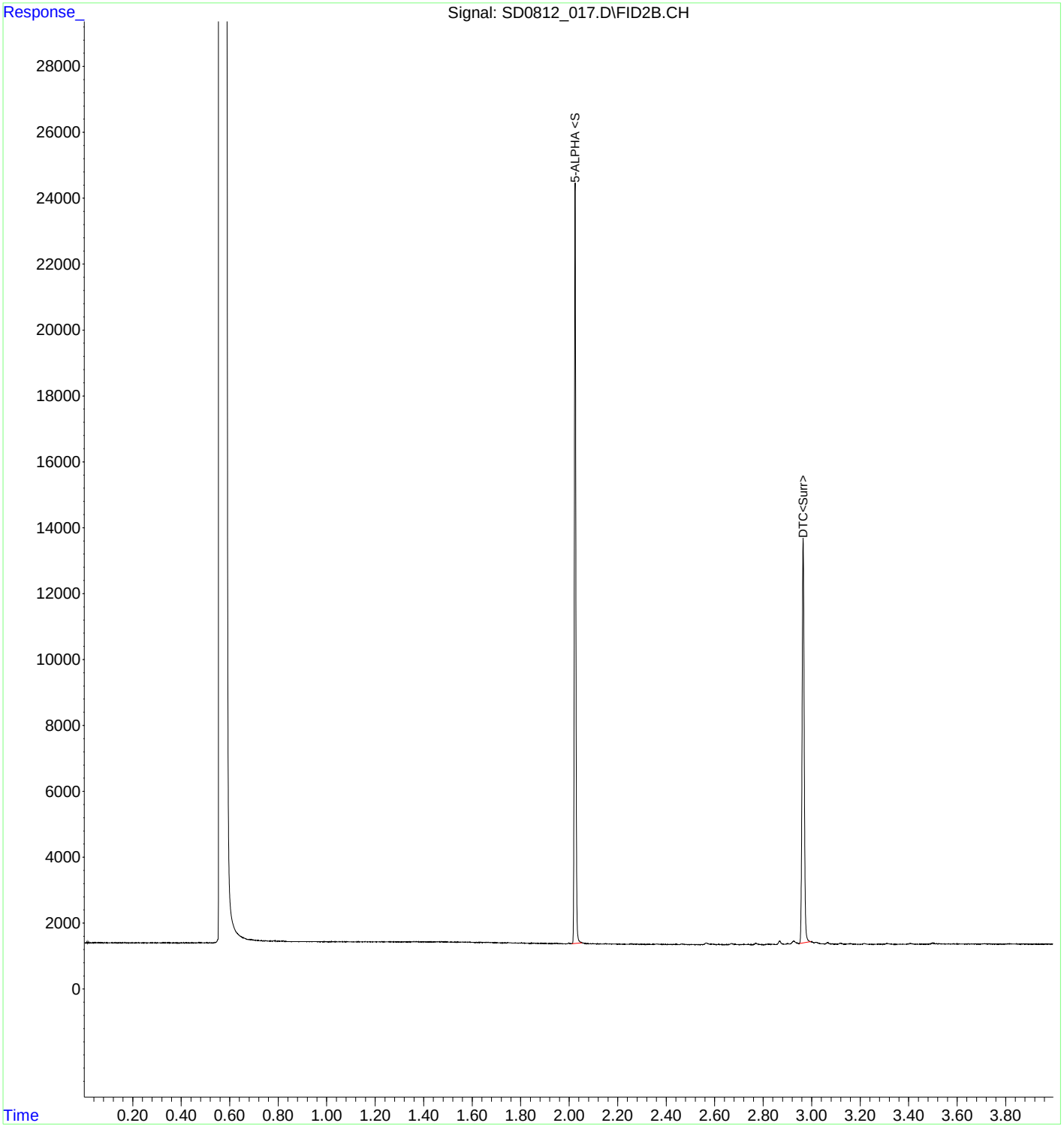
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_017.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:31 pm
Operator : AYC
Sample : SURR 200
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:39:37 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:38:58 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_018.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:41 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:07:42 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	78523	36.750	µg/mL
3) H	RRO	3.068	21600	112.807	µg/mL

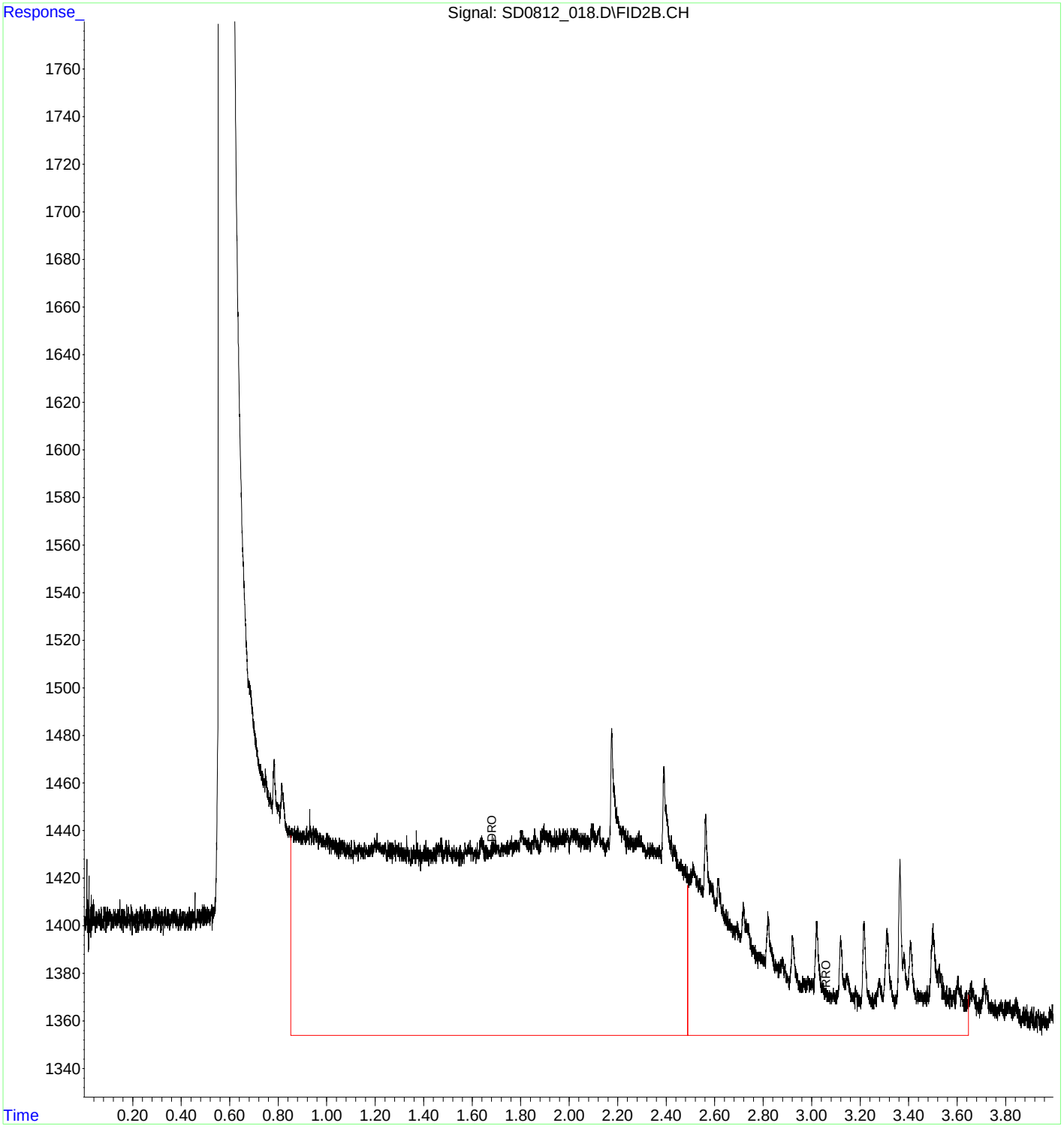
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_018.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:41 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:07:42 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_019.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:51 pm
Operator : AYC
Sample : DRO 300
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:42:46 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:41:56 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	1.671	200853	449.931	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

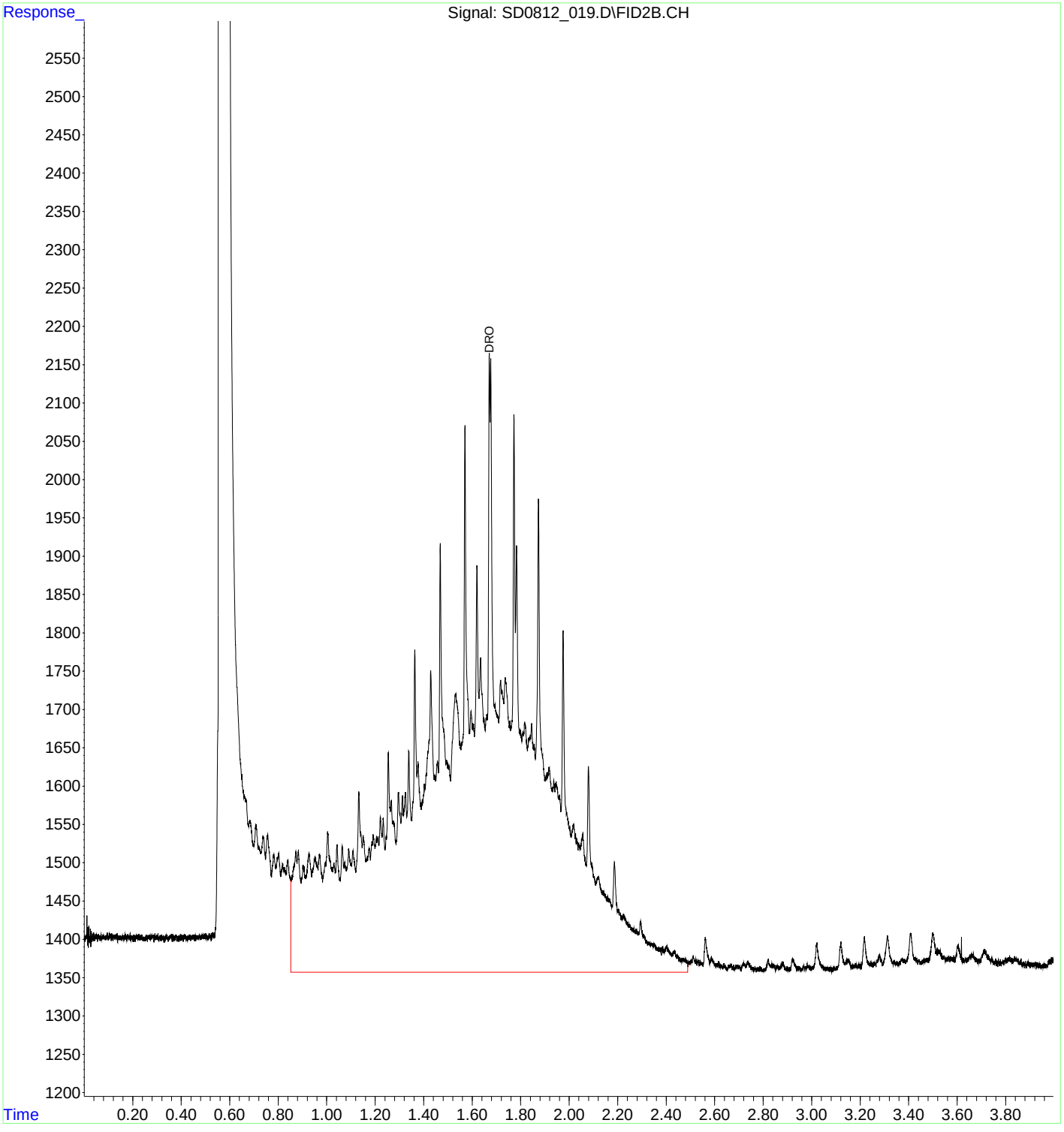
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_019.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 1:51 pm
Operator : AYC
Sample : DRO 300
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:42:46 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:41:56 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_020.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:01 pm
Operator : AYC
Sample : DRO 1000
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:43:38 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:43:00 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	1.671	516935	1031.386	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

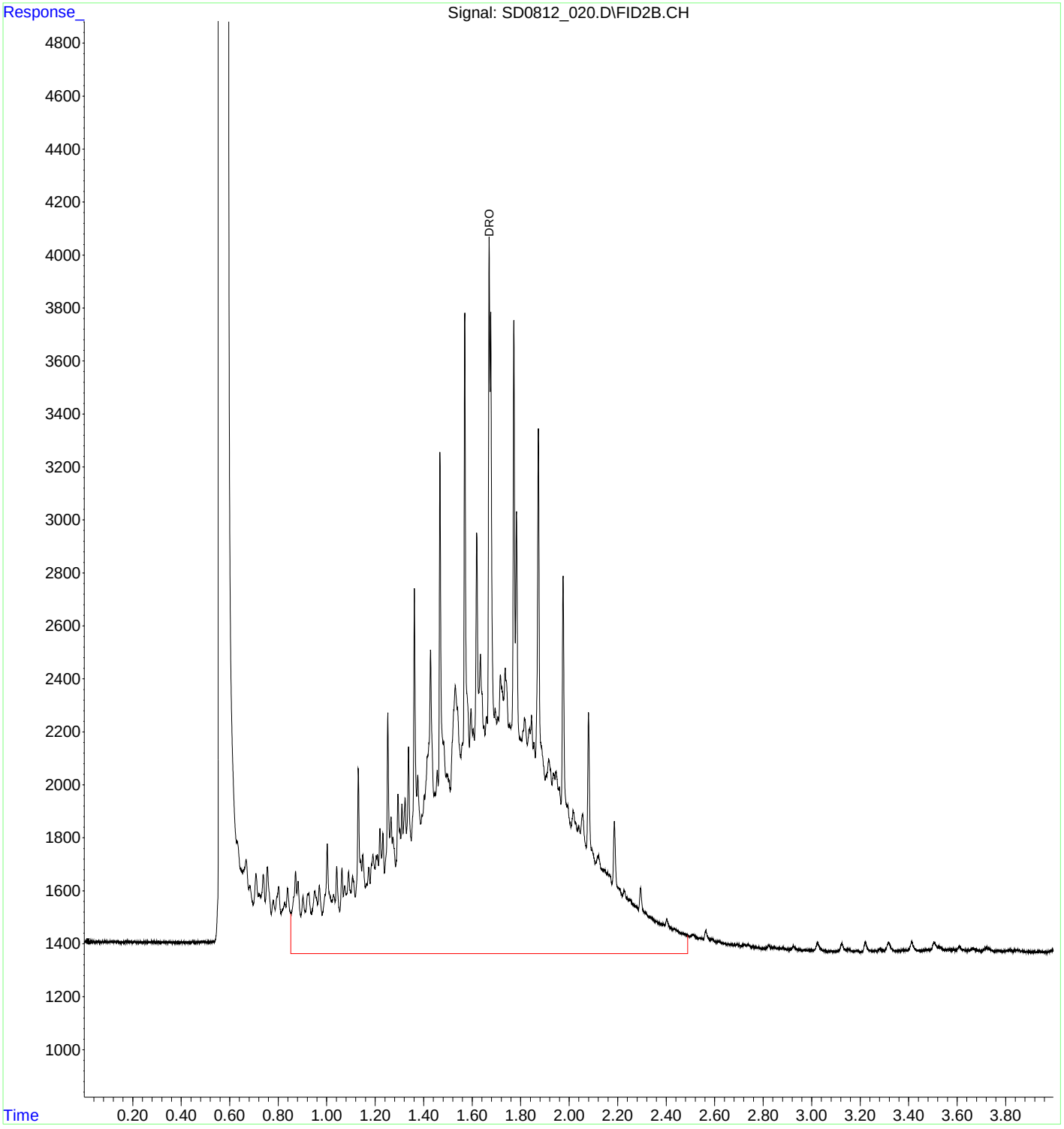
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_020.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:01 pm
Operator : AYC
Sample : DRO 1000
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:43:38 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:43:00 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_021.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:10 pm
Operator : AYC
Sample : DRO 5000
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:09:08 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	1.671	2232043	4868.881	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

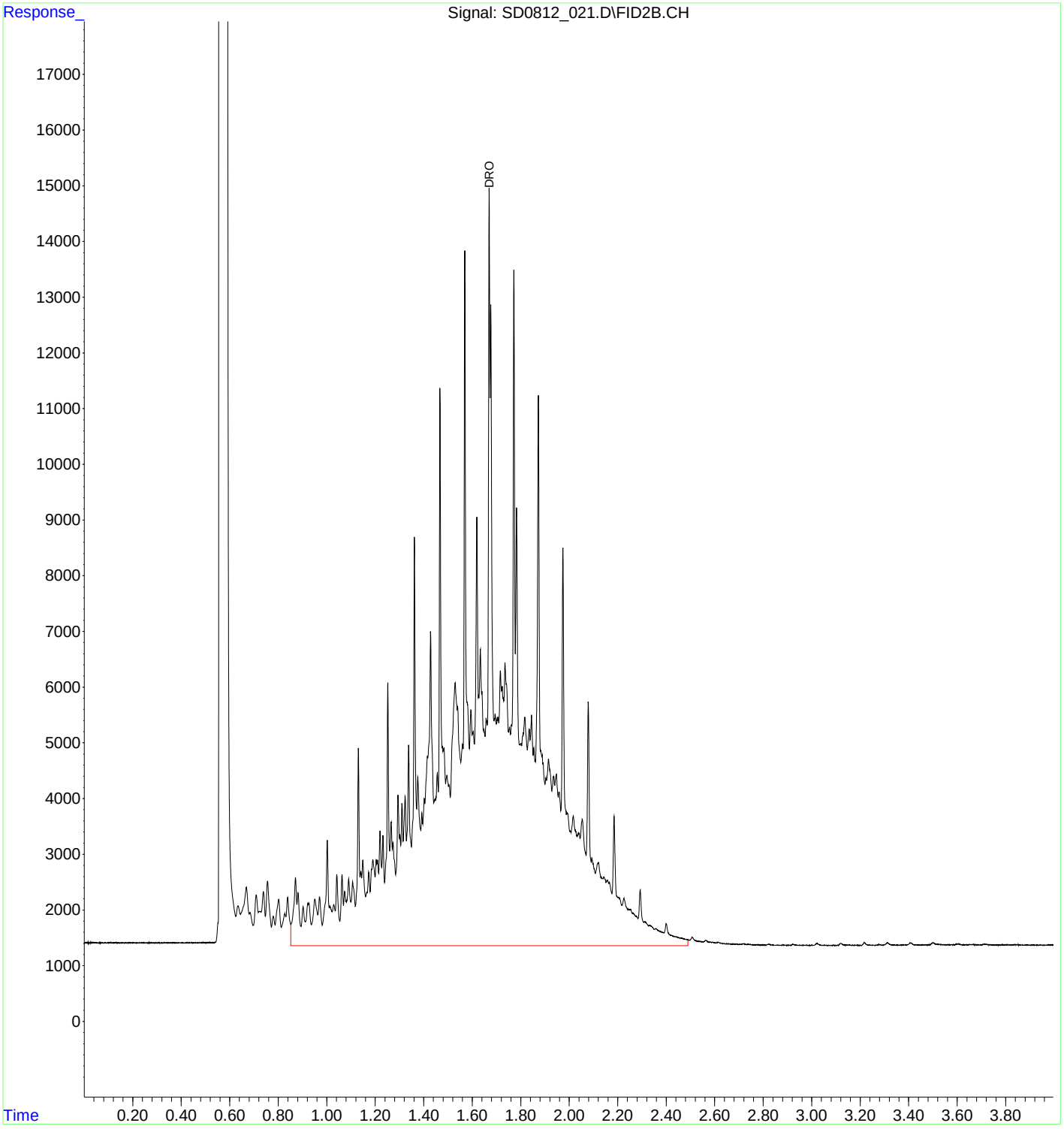
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_021.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:10 pm
Operator : AYC
Sample : DRO 5000
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:09:08 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_022.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:20 pm
Operator : AYC
Sample : DRO 10000
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:44:48 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:43:57 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	1.671	4191909	9506.279	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

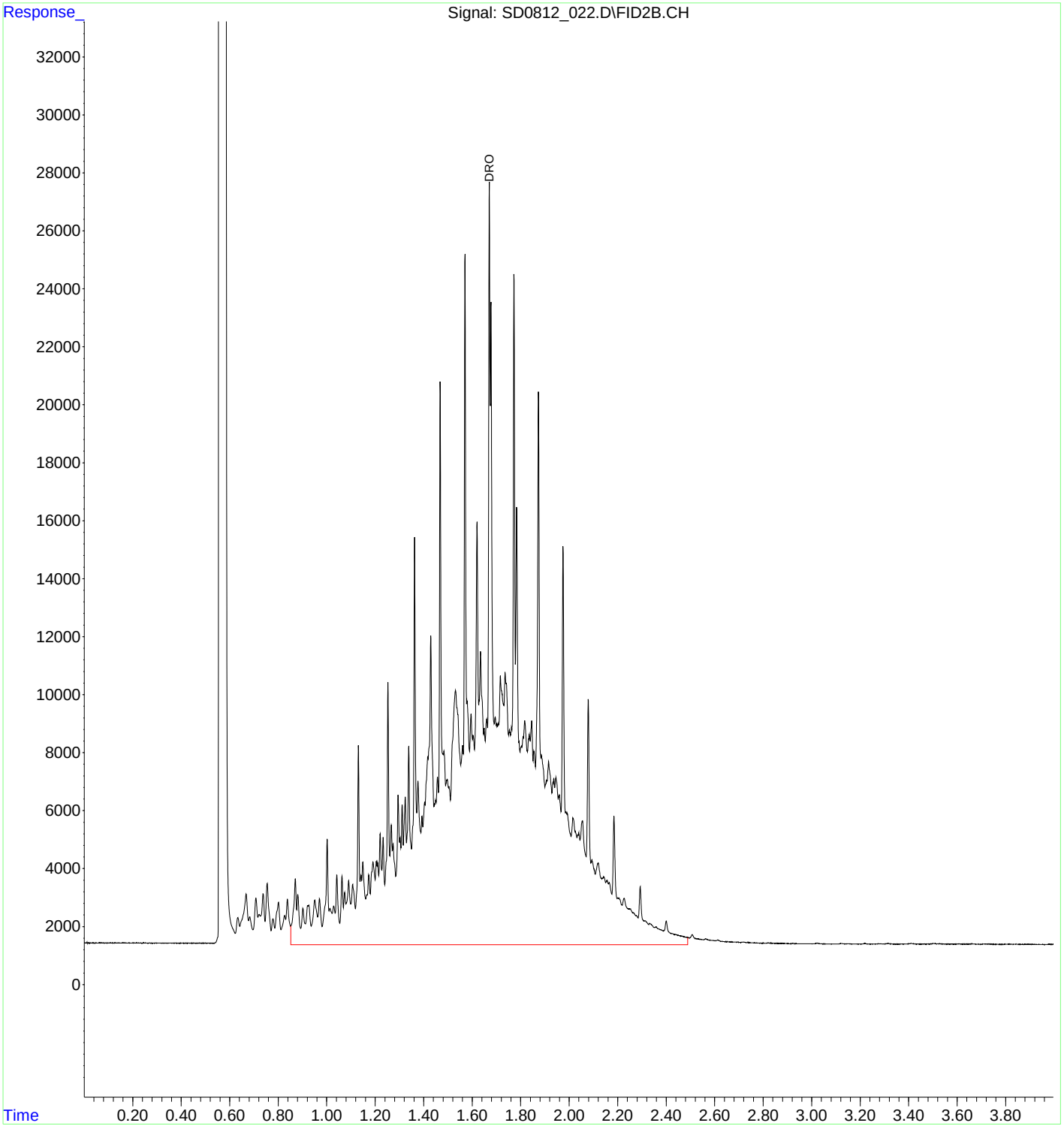
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_022.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:20 pm
Operator : AYC
Sample : DRO 10000
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:44:48 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:43:57 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_023.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:30 pm
Operator : AYC
Sample : DRO 20000
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:46:01 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:45:02 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	1.671	9346683	22163.289	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

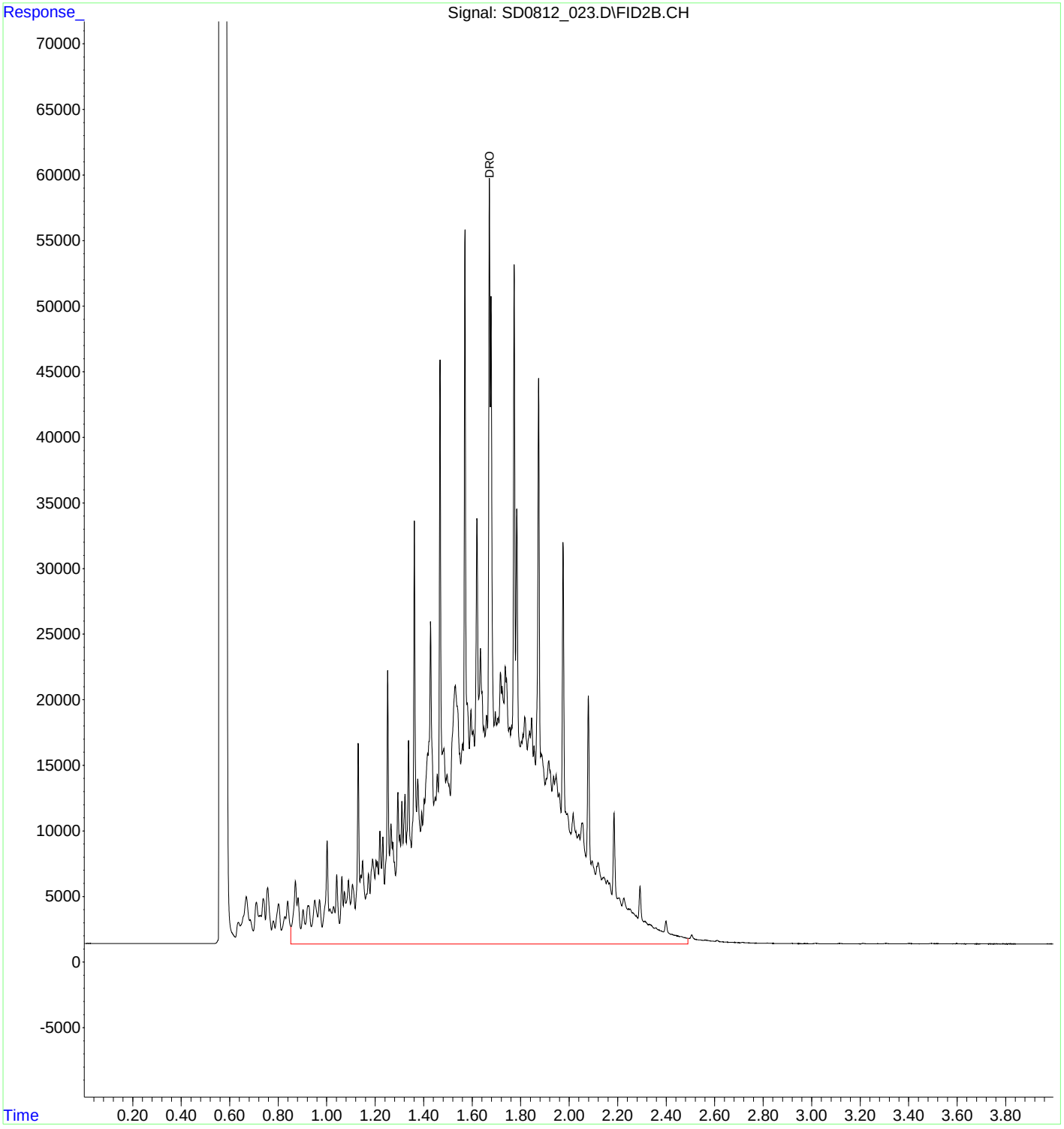
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_023.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:30 pm
Operator : AYC
Sample : DRO 20000
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:46:01 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:45:02 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_024.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:40 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:11:28 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
	Target Compounds				
1) H	DRO	1.671	105114	96.415	µg/mL
3) H	RRO	3.068	22256	115.612	µg/mL

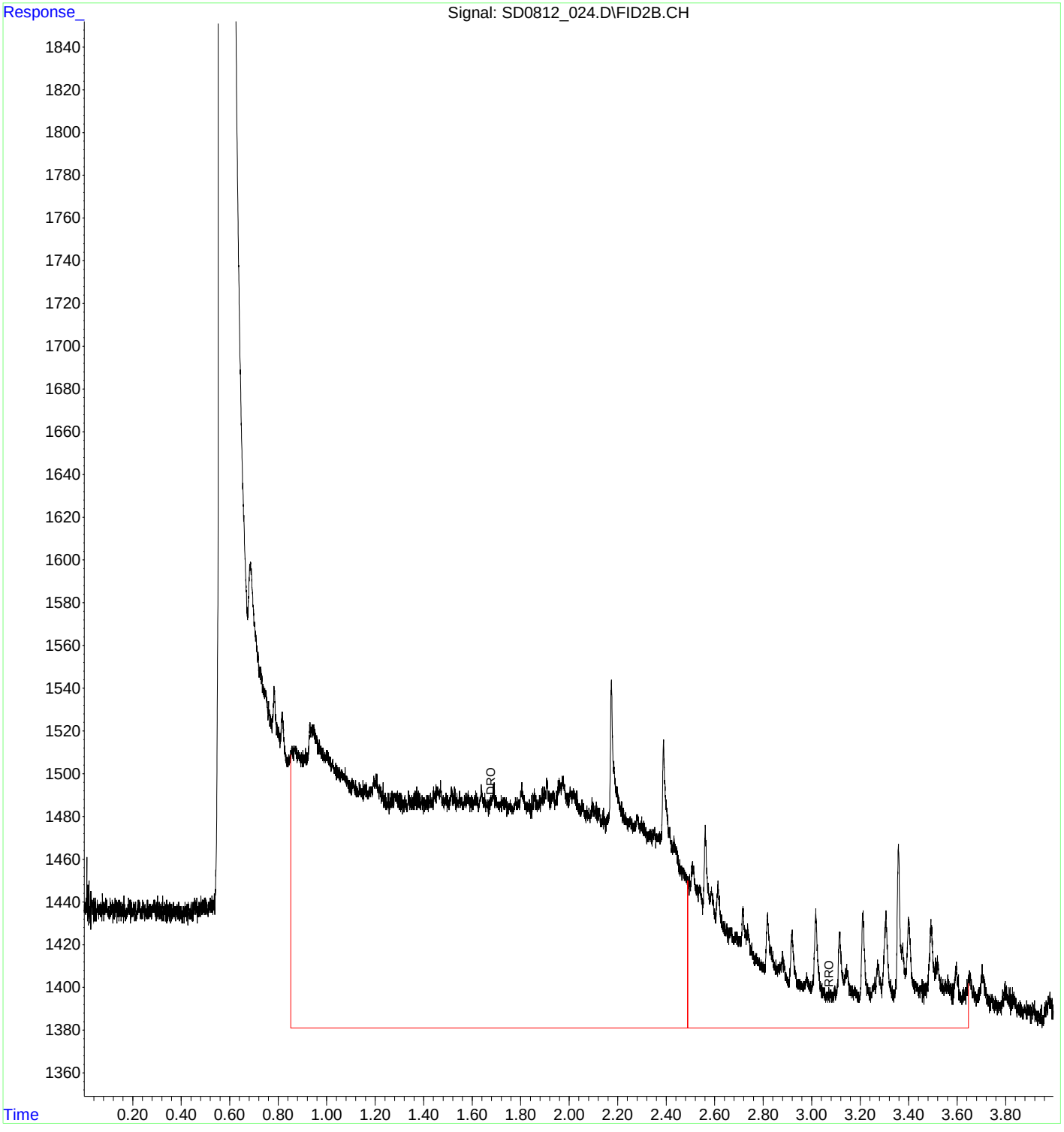
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_024.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:40 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:11:28 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_025.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:50 pm
Operator : AYC
Sample : RRO 500
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:49:46 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:49:01 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	3.068	108867	459.211	µg/mL

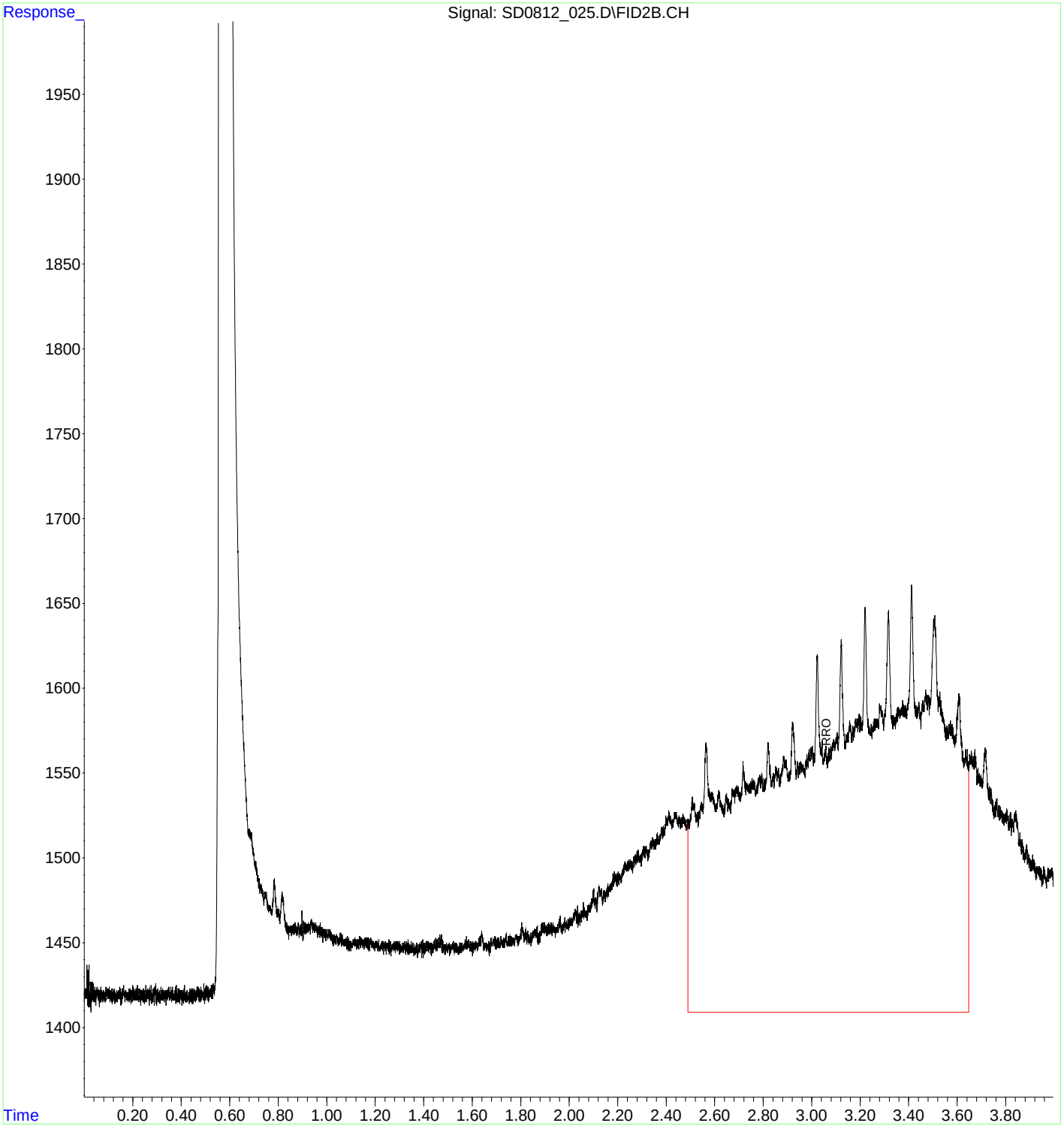
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_025.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 2:50 pm
Operator : AYC
Sample : RRO 500
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:49:46 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:49:01 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_026.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:00 pm
Operator : AYC
Sample : RRO 1000
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:51:01 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:50:11 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
	Target Compounds				
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	3.068	182256	806.786	µg/mL

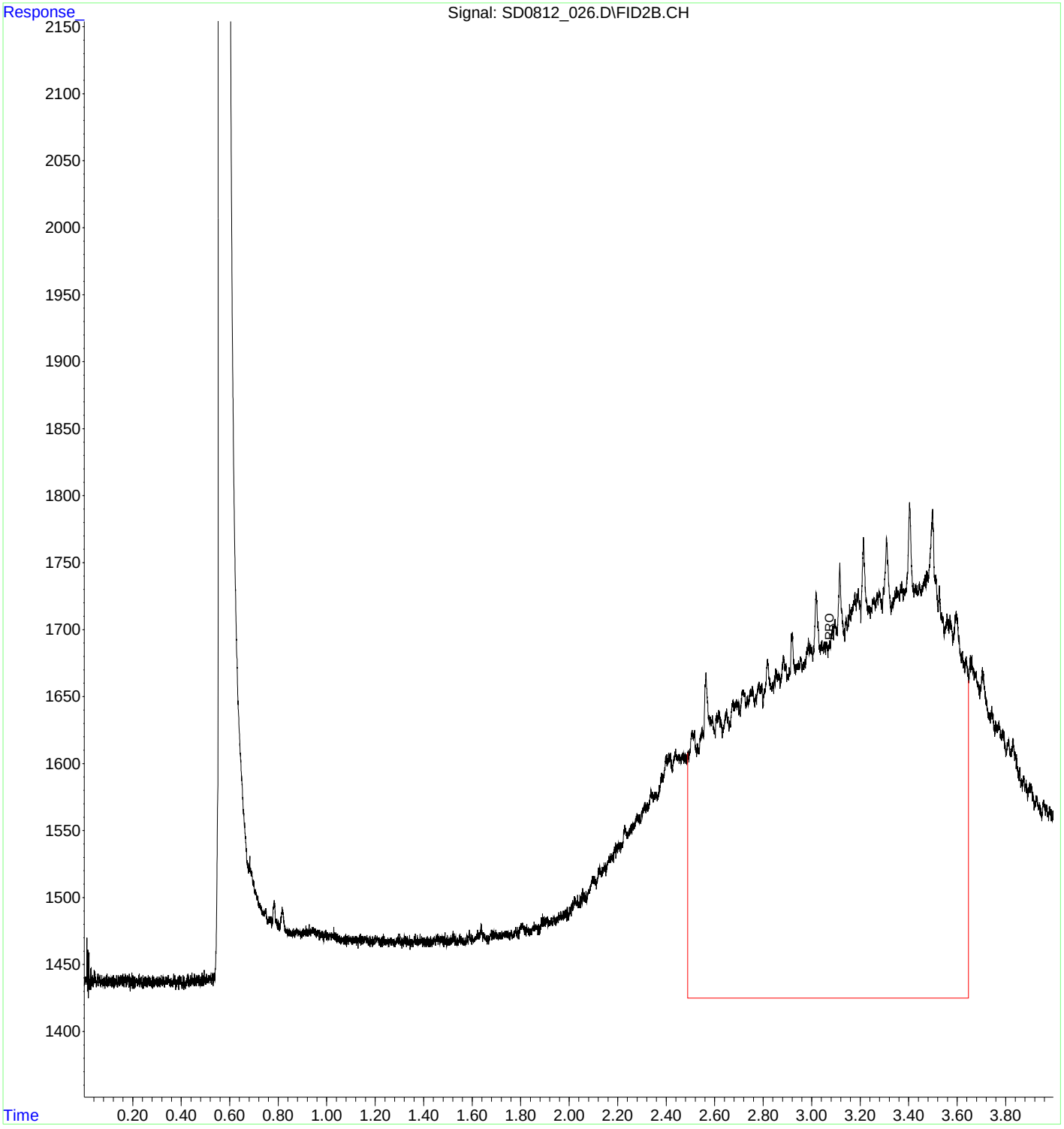
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_026.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:00 pm
Operator : AYC
Sample : RRO 1000
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:51:01 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:50:11 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_027.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:10 pm
Operator : AYC
Sample : RRO 5000
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:12:58 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	3.068	1185364	5089.700	µg/mL

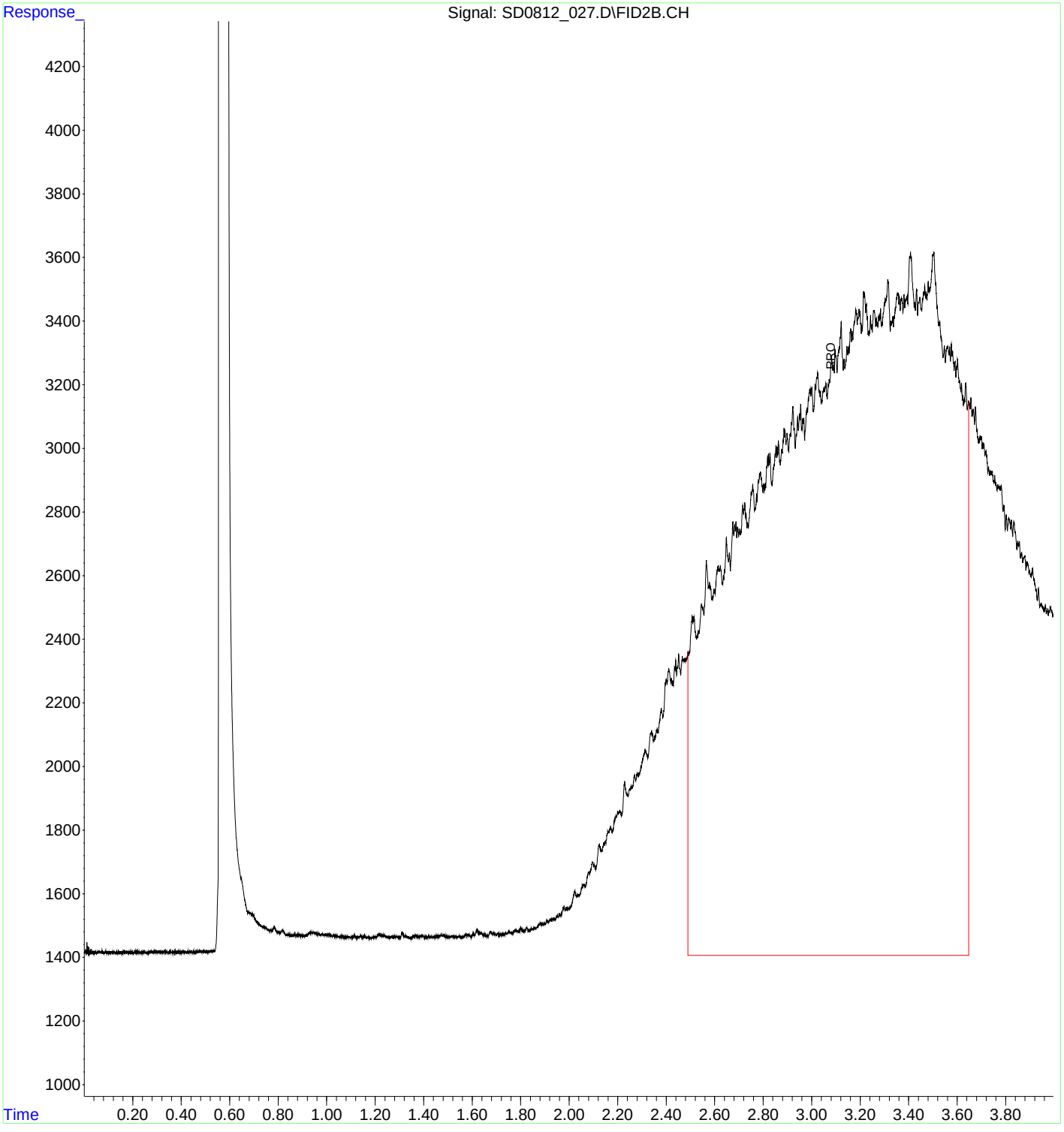
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_027.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:10 pm
Operator : AYC
Sample : RRO 5000
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:12:58 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_028.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:20 pm
Operator : AYC
Sample : RRO 10000
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:52:01 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:51:15 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	3.068	2397392	10157.123	µg/mL

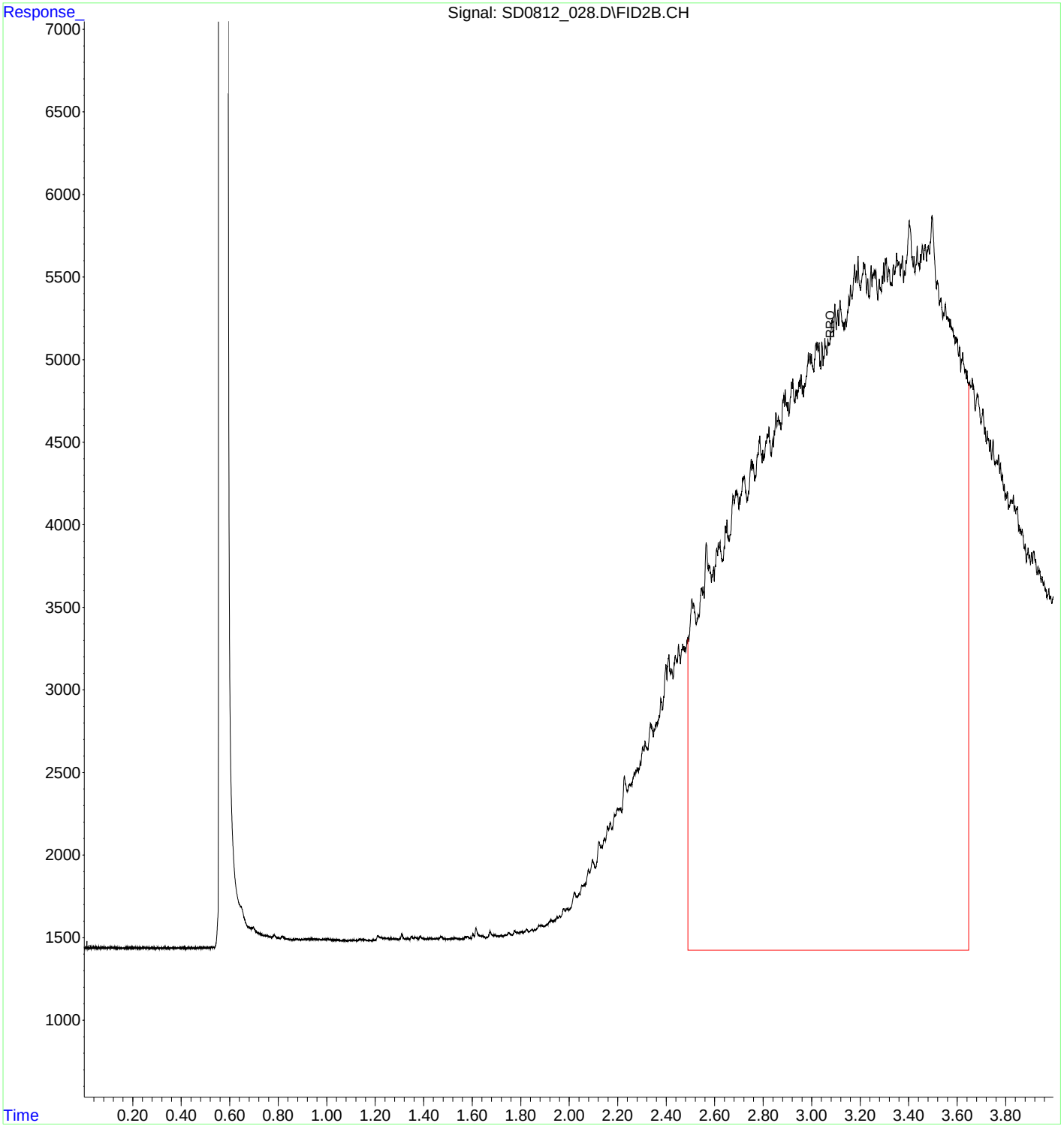
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_028.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:20 pm
Operator : AYC
Sample : RRO 10000
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:52:01 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:51:15 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_029.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:29 pm
Operator : AYC
Sample : RRO 20000
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:52:53 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:52:16 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	3.068	4637149	19331.092	µg/mL

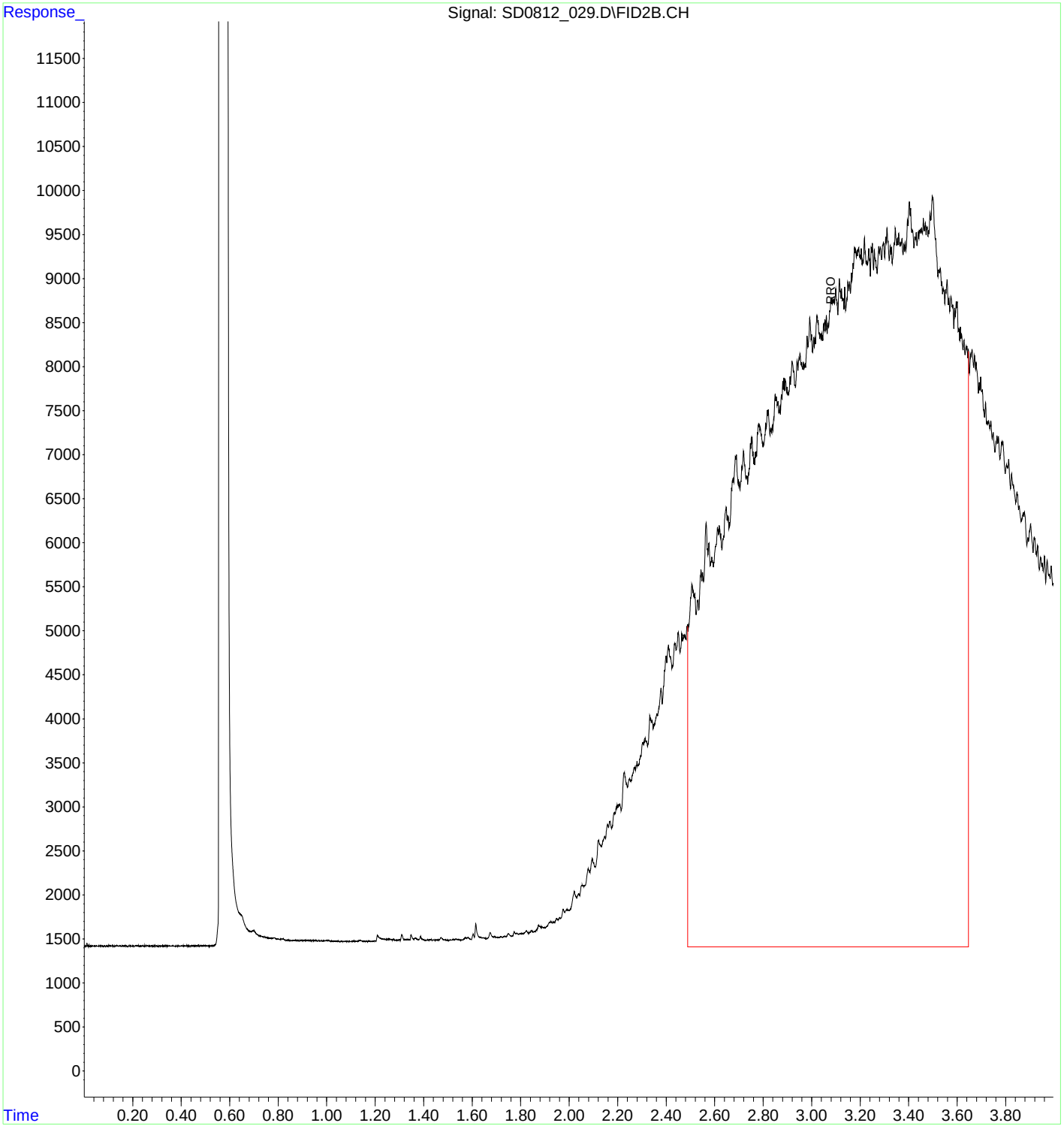
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_029.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:29 pm
Operator : AYC
Sample : RRO 20000
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 15:52:53 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 15:52:16 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_030.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:39 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:14:12 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	65678	7.926	µg/mL
3) H	RRO	3.068	18817	100.907	µg/mL

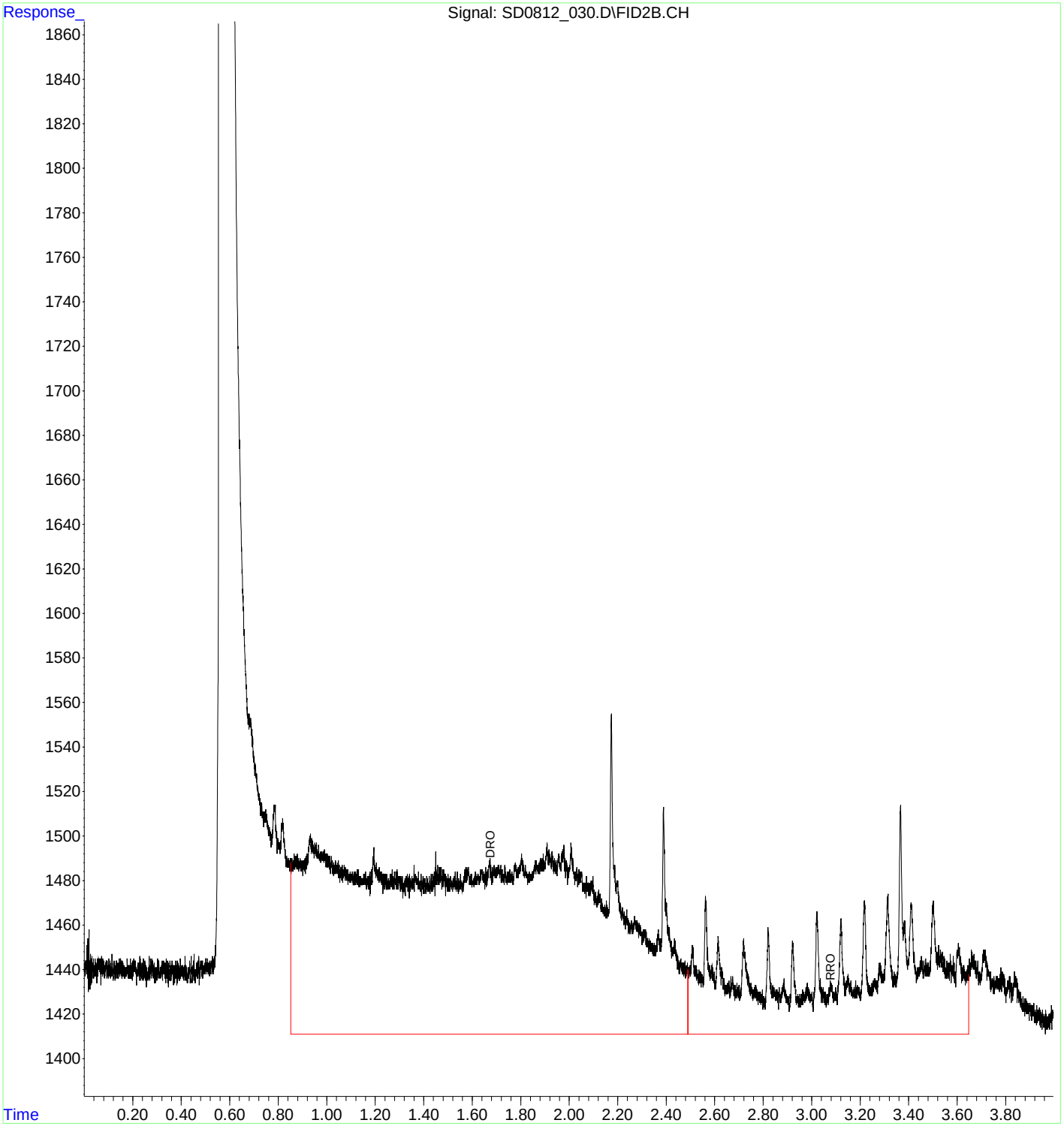
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_030.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:39 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:14:12 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_031.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:49 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:14:34 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	82385	45.415	µg/mL
3) H	RRO	3.068	21343	111.707	µg/mL

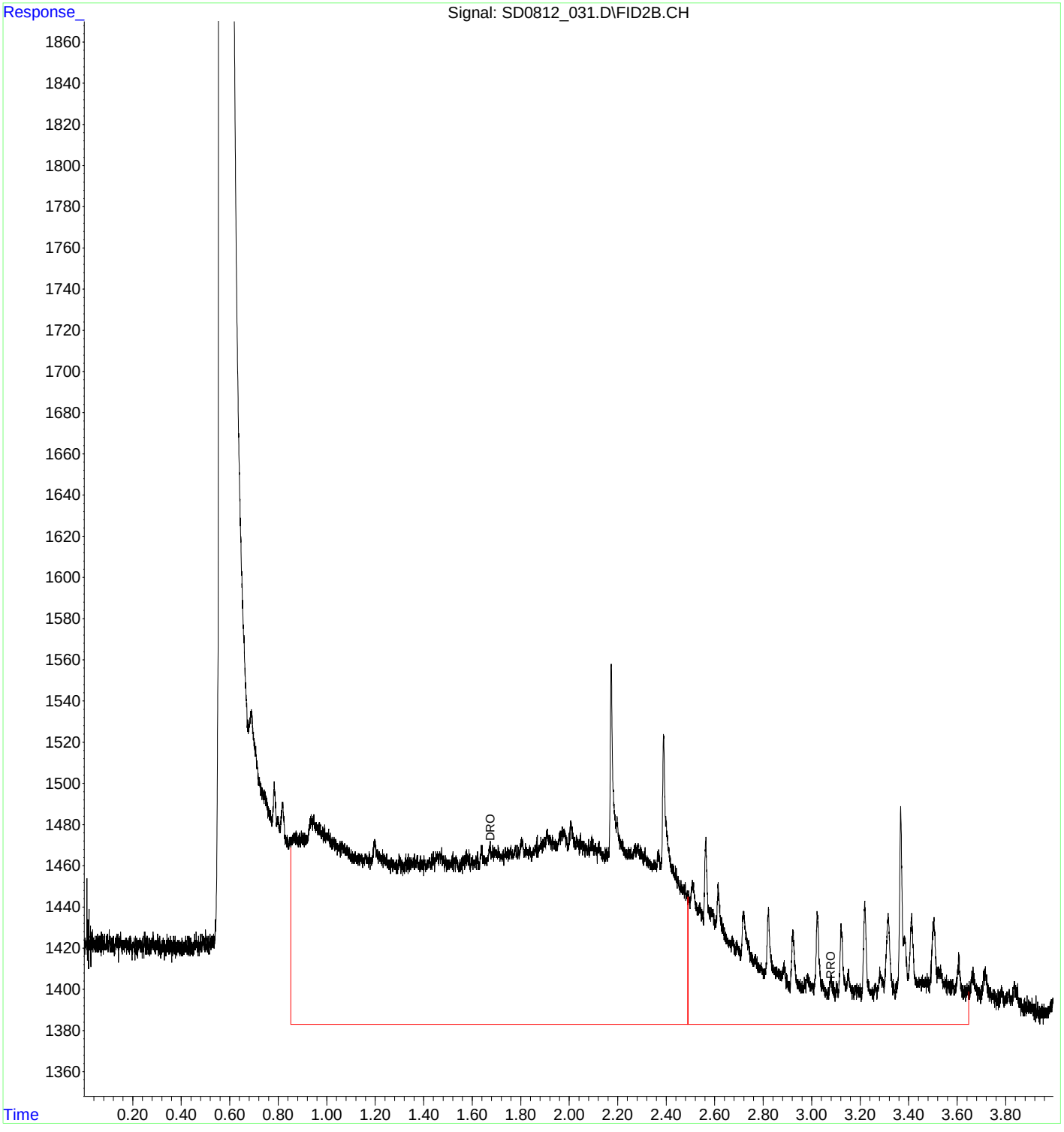
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_031.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:49 pm
Operator : AYC
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:14:34 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_032.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:59 pm
Operator : AYC
Sample : 1CVB
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:14:56 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	1.671	2020341	4393.859	µg/mL
3) H	RRO	3.068	23297	120.066	µg/mL

88% REC.
AYC
08-12-14

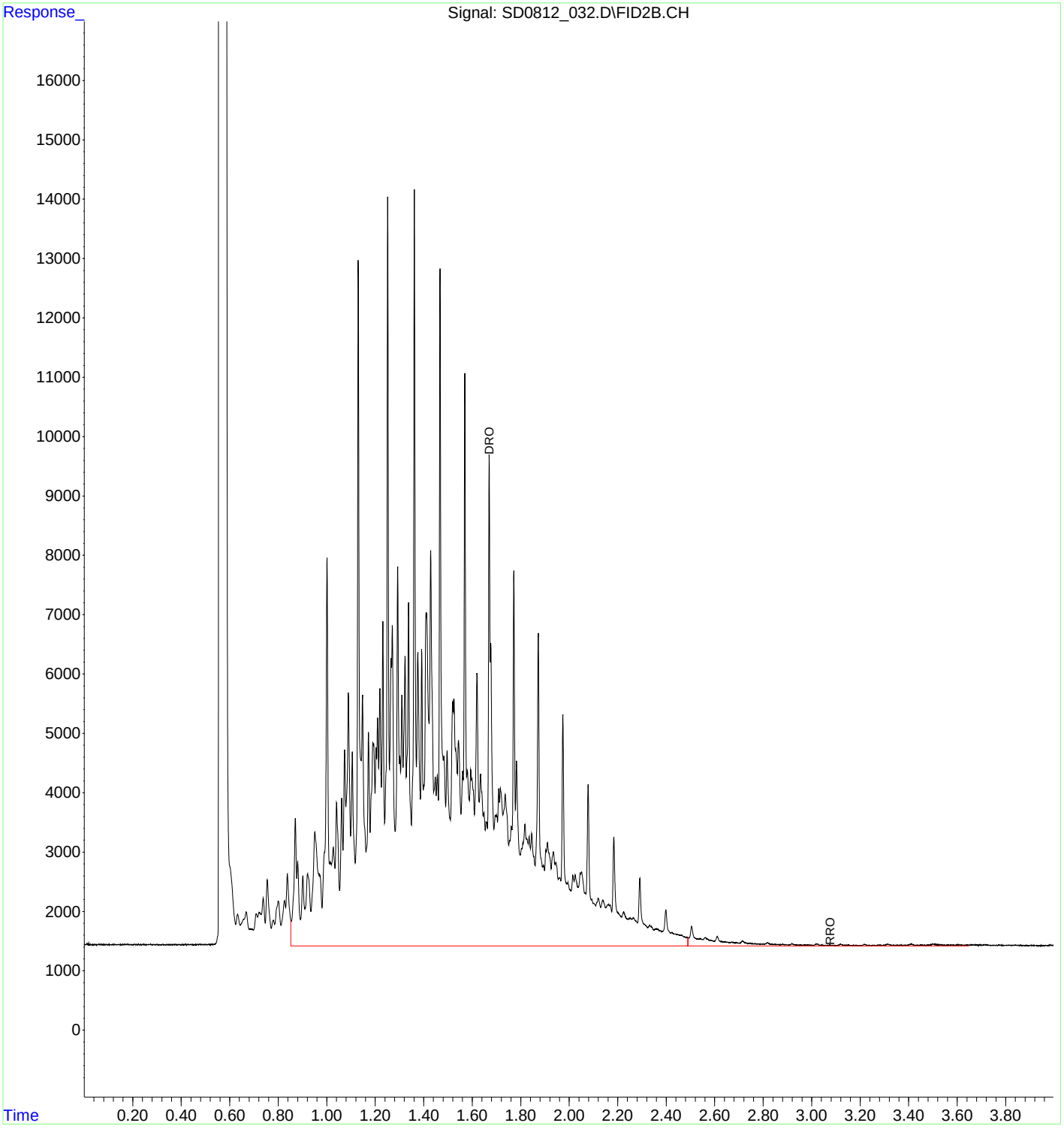
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_032.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 3:59 pm
Operator : AYC
Sample : 1CVB
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:14:56 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_033.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 4:09 pm
Operator : AYC
Sample : ICVR
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:16:20 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
2) S 5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds				
1) H DRO	1.671	226295	368.323	µg/mL
3) H RRO	3.068	1154151	4956.219	µg/mL

99%REC.
AYC
08-12-14

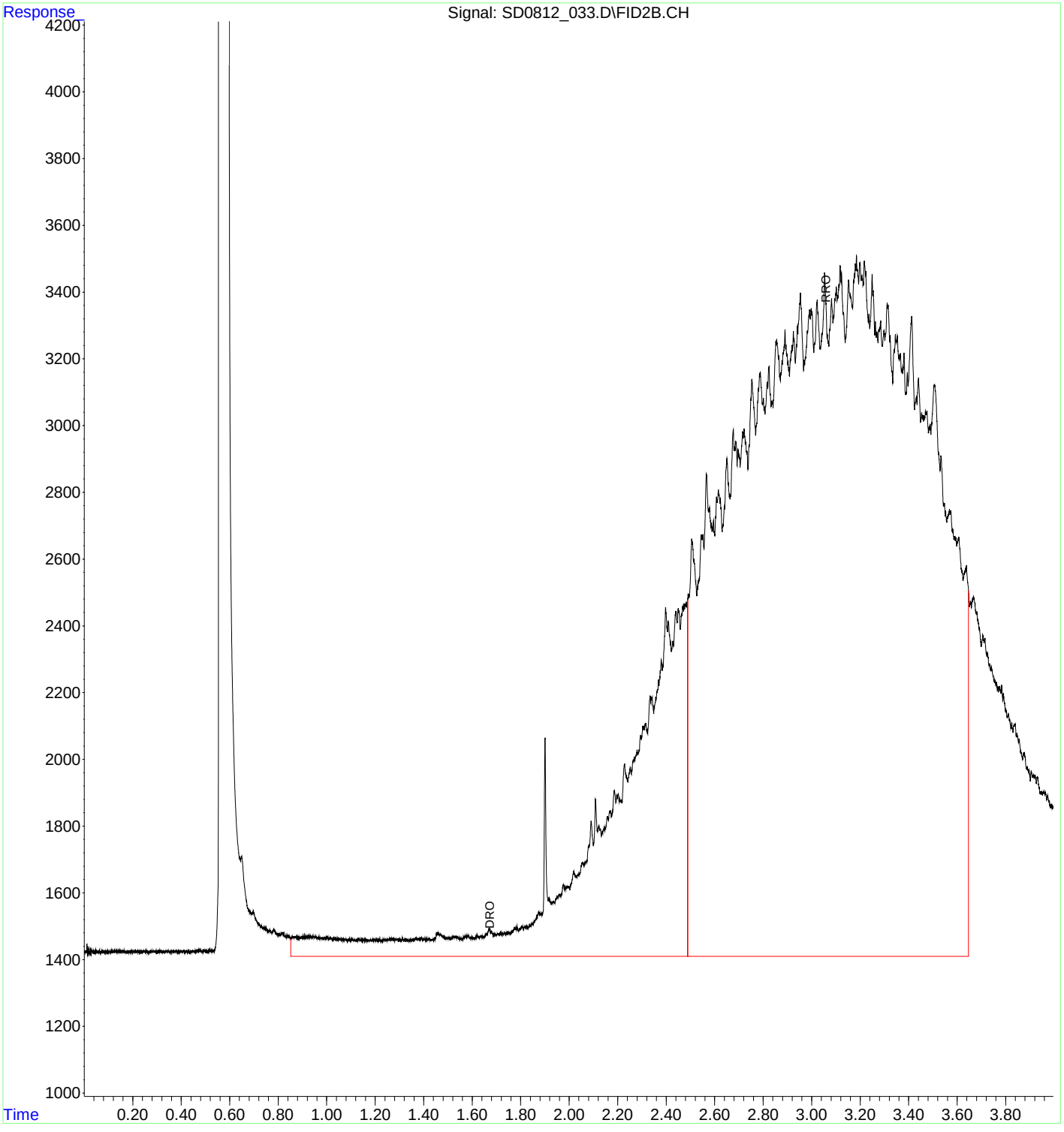
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SD\DATA\SD081214\
Data File : SD0812_033.D
Signal(s) : FID2B.CH
Acq On : 12 Aug 2014 4:09 pm
Operator : AYC
Sample : ICVR
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 16:16:20 2014
Quant Method : Z:\08\SD\METHOD\SDR2014-0812.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Tue Aug 12 16:00:34 2014
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Workorder No. 1143648

Solids

Method: SM21 2540G

Method Batch Id: SPT9419

Analysis Batch Id: SPT9419

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225889		8/8/2014 6:30:00PM
Duplicate	1225890		8/8/2014 6:30:00PM
Paying sample	1143648001	SS010-SB01-90	8/8/2014 6:30:00PM
Paying sample	1143648002	SS010-SB01-11	8/8/2014 6:30:00PM
Paying sample	1143648003	SS010-SB01-2	8/8/2014 6:30:00PM
Billable Matrix Spike	1143648004	SS010-SB01-2 MS	8/8/2014 6:30:00PM
Billable Matrix Spike Dup.	1143648005	SS010-SB01-2 MSD	8/8/2014 6:30:00PM
Paying sample	1143648006	SS010-SB03-80	8/8/2014 6:30:00PM
Paying sample	1143648007	SS010-SB03-14D	8/8/2014 6:30:00PM
Paying sample	1143648008	SS010-SB03-14	8/8/2014 6:30:00PM
Paying sample	1143648009	SS010-SB03-2	8/8/2014 6:30:00PM
Paying sample	1143648010	SS010-SB02-13	8/8/2014 6:30:00PM
Paying sample	1143648011	SS010-SB02-2	8/8/2014 6:30:00PM
Paying sample	1143648012	SS010-SB02-56	8/8/2014 6:30:00PM
QC Required Sample	1143671004		8/8/2014 6:30:00PM

Workorder No. 1143648

Solids

Method: SM21 2540G

Method Batch Id: SPT9419

Analysis Batch Id: SPT9419

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225889		8/8/2014 6:30:00PM
Duplicate	1225890		8/8/2014 6:30:00PM
Paying sample	1143648001	SS010-SB01-90	8/8/2014 6:30:00PM
Paying sample	1143648002	SS010-SB01-11	8/8/2014 6:30:00PM
Paying sample	1143648003	SS010-SB01-2	8/8/2014 6:30:00PM
Billable Matrix Spike	1143648004	SS010-SB01-2 MS	8/8/2014 6:30:00PM
Billable Matrix Spike Dup.	1143648005	SS010-SB01-2 MSD	8/8/2014 6:30:00PM
Paying sample	1143648006	SS010-SB03-80	8/8/2014 6:30:00PM
Paying sample	1143648007	SS010-SB03-14D	8/8/2014 6:30:00PM
Paying sample	1143648008	SS010-SB03-14	8/8/2014 6:30:00PM
Paying sample	1143648009	SS010-SB03-2	8/8/2014 6:30:00PM
Paying sample	1143648010	SS010-SB02-13	8/8/2014 6:30:00PM
Paying sample	1143648011	SS010-SB02-2	8/8/2014 6:30:00PM
Paying sample	1143648012	SS010-SB02-56	8/8/2014 6:30:00PM
QC Required Sample	1143671004		8/8/2014 6:30:00PM

SGS Ref.#	1225889	Method Blank	**Printed Date/Time**	09/09/2014	18:15
Client Name	EA Engineering, Science and Tech.		**Prep Batch**		
Project Name/#	Cape Romanzof		**Method**		
Matrix	Soil/Solid (dry weight)		**Date**		

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Solids					
Total Solids	100			%	08/08/14
Batch SPT9419					
Method SM21 2540G					
Instrument					

SGS Ref.#	1225890	Duplicate	**Printed Date/Time**	09/09/2014 18:15
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	
Project Name/#	Cape Romanzof		**Method**	
Original	1143671004		**Date**	
Matrix	Soil/Solid (dry weight)			

QC results affect the following production samples:

1143648001, 1143648002, 1143648003, 1143648006, 1143648007, 1143648008, 1143648009, 1143648010, 1143648011, 1143648012

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Solids						
Total Solids	95.7	95.7	%	0	(< 15)	08/08/2014

Batch SPT9419
Method SM21 2540G
Instrument

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143225, 1143538, 1143620, 1143648, 1143656, 1143671, 1143681

Queue: **SPT** Batch: **9419**

Method: SM21 2540G

Run Date: 08/08/14 18:30 - 08/08/14 18:30

Extraction Batch(es):

Notes: BWS/D data copied from PS
Data for 3225 #13-17 copied from #1-5

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: Matt Negro
Printed Name: Matt Negro
Date: 08/11/14

Reviewer's Signature
Printed Name: Alice Kwok
Date: 08/11/14

SGS North America Inc.

Percent Solids Bench Sheet

Batch Number: SPT 9419

Posted by/date: MJN 08/11/14

Method: SM2540G

	Start	Finish
Date/Time:	08/08/14 18:30	08/11/14 08:20
Temperature °C (105±5 °C):	104	104
Technician:	MJN	MJN

#	Sample ID and Container:	Balance ID (Wet Wt)	Initial Pan Wt. g	Wet Sample & Pan g	Dry Sample & Pan g	% Solids	Comments
1	Method Blank	B08	0.979	12.232	12.229	99.97	1225889
	Dup. 3671-4A	B08	0.980	12.595	12.094	95.69	1225890

MJN 08/11/14

Public\Solids\Solids_Control\TS_Data_Log(CP-0005_rev090509)

SGS

Temp Store | Temp Restore | Post Results

Total Solids Bench Sheet

Lims Code: EPA 160.3

Analysis Start Date/Time: 08/08/2014 18:30:00
Finish Date/Time: 08/11/2014 08:20:00
Technician: MJN
Start Temp: 104 End Temp: 104

Posted By: MJN
Balance ID: B08
Queue & Batch: SPT-9419

#	AFlag	WO No.	Type	Pan Tare Wt g	Wet Pan & Sample g	Dry Pan & Sample g	Solids, Percent	FLAGS	SCHED	Sample ID
01 C		1225889	MB	0.979	12.232	12.229	99.97334		17289349	
02 C		1143225013	PS	1.327	12.753	8.302	61.04499		17287431	A
03 C		1143225014	PS	1.325	12.643	8.203	60.77045		17287435	A
04 C		1143225015	PS	1.313	12.022	8.71	69.07274		17287438	A
05 C		1143225016	PS	1.33	13.205	8.667	61.78526		17287441	A
06 C		1143225017	PS	1.326	12.913	8.276	59.98101		17287444	A
07 C		1143538027	PS	1.001	13.674	11.591	83.56348		17282621	A
08 C		1143538030	PS	0.985	13.751	11.285	80.68306		17282622	A
09 C		1143538031	BMS	0.985	13.751	11.285	80.68306		17282623	A
10 C		1143538032	BMSD	0.985	13.751	11.285	80.68306		17282624	A
11 C		1143538035	PS	0.995	13.459	10.95	79.87003		17282625	A
12 C		1143538036	PS	1.011	13.258	10.877	80.55850		17282626	A
13 C		1143538037	PS	0.999	13.132	11.006	82.47754		17282627	A
14 C		1143538038	PS	0.975	13.118	10.996	82.52491		17282628	A
15 C		1143538039	PS	0.972	13.44	11.488	84.34392		17282629	A
16 C		1143538040	PS	1.006	13.062	11.301	85.39317		17282630	A
17 C		1143538054	PS	0.986	12.299	10.374	82.98418		17282442	A
18 C		1143538055	PS	0.992	12.289	10.362	82.94237		17282445	A
19 C		1143538056	PS	0.986	12.324	10.22	81.44294		17282448	A
20 C		1143538057	PS	0.988	12.85	10.72	82.04350		17282451	A
21 C		1143538058	PS	0.992	12.968	11.491	87.66700		17282454	A
22 C		1143538059	PS	0.982	12.269	10.669	85.82440		17282458	A
23 C		1143538060	PS	0.968	13.453	11.928	87.78534		17282461	A
24 C		1143538061	PS	0.976	12.03	9.925	80.95712		17282464	A
25 C		1143538062	PS	0.991	12.903	10.642	81.01914		17282467	A
26 C		1143620001	PS	1.007	13.04	12.891	98.76174		17281923	A
27 C		1143620002	PS	0.996	13.272	13.243	99.76377		17281929	A
28 C		1143648001	PS	0.993	13.239	11.354	84.60722		17284799	A
29 C		1143648002	PS	0.987	13.536	12.276	89.95936		17284851	A
30 C		1143648003	PS	0.984	13.515	12.664	93.20884		17284856	A
31 C		1143648004	BMS	0.984	13.515	12.664	93.20884		17284864	A
32 C		1143648005	BMSD	0.984	13.515	12.664	93.20884		17284874	A
33 C		1143648006	PS	0.997	13.471	12.199	89.80279		17284879	A
34 C		1143648007	PS	0.999	13.125	12.184	92.23982		17284884	A
35 C		1143648008	PS	0.992	12.803	11.914	92.47312		17284889	A
36 C		1143648009	PS	0.975	13.496	11.375	83.06046		17284894	A
37 C		1143648010	PS	0.984	14.279	13.153	91.53065		17284899	A
38 C		1143648011	PS	0.985	12.674	10.503	81.42698		17284904	A
39 C		1143648012	PS	0.98	12.168	11.657	95.43261		17284909	A
40 C		1143656003	PS	0.977	13.444	9.659	69.63985		17283914	A
41 C		1143656004	PS	1.019	13.012	8.968	66.28033		17283923	A
42 C		1143656005	PS	0.998	13.85	12.057	86.04886		17283932	A
43 C		1143656006	PS	1.002	13.424	7.475	52.10916		17283941	A
44 C		1143656007	PS	1.008	13.857	11.377	80.69889		17283950	A
45 C		1143656008	PS	0.992	13.328	8.652	62.09468		17283959	A
46 C		1143656009	PS	1.007	13.157	11.688	87.90947		17283968	A
47 C		1143656010	PS	1.003	13.275	7.523	53.12907		17283977	A
48 C		1143656011	PS	1.006	13.021	9.463	70.38702		17283988	A
49 C		1143656012	PS	0.996	13.982	12.906	91.71415		17284043	A
50 C		1143656013	PS	0.986	13.947	12.817	91.28154		17284055	A
51 C		1143656014	PS	0.979	14.805	12.178	80.99957		17284064	A

Notes: BMS/D data copied from PS Data for 3223 #13-17 Loaded from 3223 #1-5

Remember to transcribe all notes (esp. regarding manual entries, etc) onto the PRR Cover Page

Percent Solids Bench Sheet

The print out taped in below corresponds to the batch on the previous page.

MJN 08/11/14

Public\Solids\Solids_Control\TS_Data_Log(CP-0005_rev090509)

52 C	1143656015	PS	0.993	14.036	5.575	35.12995		17284073	A
53 C	1143656016	PS	0.996	13.318	12.243	91.27577		17284082	A
54 C	1143656017	PS	0.976	12.374	10.823	86.39235		17284091	A
55 C	1143656018	PS	0.989	12.677	12.339	97.10815		17284100	A
56 C	1143656019	PS	0.979	13.225	12.147	91.19713		17284109	A
57 C	1143656020	PS	0.983	12.393	11.954	96.15250		17284118	A
58 C	1143656021	PS	0.98	12.279	9.442	74.89158		17284128	A
59 C	1143656022	PS	1.01	13.311	12.723	95.21990		17284137	A
60 C	1143656023	PS	0.994	12.786	4.717	31.57225		17284146	A
61 C	1143656024	PS	1.011	13.616	13.083	95.77152		17284155	A
62 C	1143656025	PS	0.997	13.282	10.902	80.62678		17284164	A
63 C	1143656026	PS	0.984	13.338	12.815	95.76655		17284173	A
64 C	1143656027	PS	1.015	13.1	10.649	79.71866		17284182	A
65 C	1143656028	BMS	1.015	13.1	10.649	79.71866		17284196	A
66 C	1143656029	BMSD	1.015	13.1	10.649	79.71866		17284207	A
67 C	1143656030	PS	0.999	13.301	12.839	96.24451		17284218	A
68 C	1143656031	PS	0.995	13.068	10.322	77.25503		17284227	A
69 C	1143656032	PS	1.001	13.055	12.593	96.16725		17284236	A
70 C	1143656033	PS	0.998	13.185	11.847	89.02109		17284249	A
71 C	1143656034	PS	1.017	13.5	12.814	94.50453		17284258	A
72 C	1143656035	PS	1.017	13.66	12.784	93.07126		17284267	A
73 C	1143656036	PS	1.006	13.795	13.341	96.45007		17284276	A
74 C	1143656037	PS	0.988	12.484	11.59	92.22338		17284285	A
75 C	1143656038	PS	0.997	13.28	11.353	84.31165		17284294	A
76 C	1143656039	PS	0.977	13.097	12.654	96.34488		17284305	A
77 C	1143656040	PS	0.965	12.625	11.797	92.89880		17284316	A
78 C	1143656041	PS	0.973	13.095	11.236	84.66425		17284325	A
79 C	1143656042	PS	1.006	12.582	11.316	89.06358		17284334	A
80 C	1143656043	PS	1	12.147	10.54	85.58357		17284347	A
81 C	1143656044	BMS	1	12.147	10.54	85.58357		17284364	A
82 C	1143656045	BMSD	1	12.147	10.54	85.58357		17284381	A
83 C	1143671003	PS	1.002	13.013	12.35	94.48006		17286206	A
84 C	1143671004	PS	0.989	12.792	12.287	95.72143		17286210	A
85 C	1225890	DUP	0.98	12.595	12.094	95.68661		17289350	
86 C	1143671005	BMS	0.989	12.792	12.287	95.72143		17286213	A
87 C	1143671006	BMSD	0.989	12.792	12.287	95.72143		17286219	A
88 C	1143671007	PS	0.972	12.354	11.603	93.40186		17286227	A
89 C	1143671008	PS	0.974	12.512	12.15	96.86254		17286230	A
90 C	1143671009	PS	0.977	12.547	12.141	96.49092		17286233	A
91 C	1143671010	PS	0.986	12.21	11.466	93.37135		17286236	A
92 C	1143671011	PS	0.982	12.192	11.601	94.72792		17286239	A
93 C	1143681001	PS	0.985	12.452	11.579	92.38685		17287253	A
94 C	1143681002	PS	0.976	12.721	11.422	88.93997		17287264	A
95 C	1143681003	PS	0.964	12.336	11.078	88.93774		17287269	A
96 C	1143681004	PS	0.98	12.525	11.626	92.21308		17287274	A

Notes: BMS/D data copied from PS

Remember to transcribe all notes (esp. regarding manual entries, etc) onto the PRR Cover Page

1143648

Long, Alesha (Anchorage)

From: Nelson, Justin (Anchorage)
Sent: Monday, August 25, 2014 12:06 PM
To: Long, Alesha (Anchorage)
Subject: FW: Alaska 611 sites

From: Moss, Pamela [mailto:pmoss@eaest.com]
Sent: Monday, August 25, 2014 12:01 PM
To: Nelson, Justin (Anchorage)
Subject: Alaska 611 sites

Justin per our phone conversation, EA does require and EQUIS EDD in addition to the ERPIMS 6.0 electronic deliverable. I hope this is something the lab is able to provide. thank you.

Pam

Pamela J. Moss
Senior Scientist
EA Engineering, Science, and Technology, Inc.
5655 S. Yosemite St., Suite 320
Greenwood Village, CO 80111
303-590-9143 (office)
303-810-6903 (cell)
pmoss@eaest.com

EA Engineering, Science, and Technology, Inc.

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1143648

Locations Nationwide
Alaska, Maryland, New Jersey, New York, North Carolina, Indiana, West Virgina, Kentucky
www.us.sgs.com

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Section 1

CLIENT: EA Engineering
CONTACT: Kyle Waldron PHONE NO: 907-646-0201
PROJECT NAME: Cape Romanzof Demolition PROJECT/ PWSID/ PERMIT#: 62421101 p.3
REPORTS TO: Pam Moss E-MAIL: PMOSS@eaest.com
INVOICE TO: EA Engineering QUOTE #: P.O. #: 12540

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incremental Soils	Preservative: Unpres.	Preservative: MeOH	REMARKS/ LOC ID
							AK102/103 DRO/RRO	AK101 GRO	
(1) A-B	SS010-SB01-90	7/31/14	1945	Soil	2	G	1	1	
(2) A-B	SB010-SB01-11	7/31/14	0740	Soil	2	G	1	1	
(3)(4)(5) A-F	SS010-SB01-2	7/30/14	1940	Soil	6	G	3	3	MS/MSD
(6) A-B	SS010-SB03-80	7/29/14	2000	Soil	2	G	1	1	
(7) A-B	SS010-SB03-14D	7/29/14	1445	Soil	2	G	1	1	
(8) A-B	SS010-SB03-14	7/29/14	1415	Soil	2	G	1	1	
(9) A-B	SS010-SB03-2	7/29/14	1200	Soil	2	G	1	1	
(10) A-B	SS010-SB02-13	8/02/14	1035	Soil	2	G	1	1	
(11) A-B	SS010-SB02-2	8/02/14	1010	Soil	2	G	1	1	
(13) A	TB-Soil-1	7/29/14	0800	QC	1	QC		1	Trip Blank

Section 5

	Date	Time	
Relinquished By: (1) Evana Burt-Toland	8/6/14	1030	Received By: Goldstreak BET/ANC
Relinquished By: (2) Goldstreak BET/ANC	8/7/14		Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	8/7/14	11:20	Received For Laboratory By:

Section 4

DOD Project? ~~Yes~~ No
Cooler ID: 2 of 5

Data Deliverable Requirements: Per Contract

Requested Turnaround Time and/or Special Instructions: Per Contract & ADEC holding time requirements

Temp Blank °C: 2.6 #71 IF
or Ambient [ ]
(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle) (INTACT) BROKEN ABSENT
(See attached Sample Receipt Form)

[ ] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
[ ] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

http://www.sgs.com/terms-and-conditions

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1143648

Nationwide
Maryland
New York
Indiana
Kentucky
www.us.sgs.com

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Section 1

CLIENT: EA Engineering
Kyle Waldron
CONTACT: Pam Moss
PHONE NO: 907-646-0201
PROJECT NAME: Cape Romanzof LTM
PROJECT/ PWSID/ PERMIT#: 62421101 p.3
REPORTS TO: Pam Moss
E-MAIL: PMoss@eaest.com
INVOICE TO: EA Engineering
QUOTE #:
P.O. #: 12540

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incremental Soils	Preservative: AK102 / 103 DRO/RRO	Preservative: AK101 GRO	Preservative: UNPres. HCl EDT	Preservative: MeOH HCl EDT	REMARKS/ LOC ID
(12) A-B	SS010-SB02-56	08/02/14	1500	Soil	2	G	1	1			
						G					
						G					
						G					
						G					
						G					
						G					
						G					
						G					
						G					

Section 5

	Date	Time	
Relinquished By: (1) Evara Burt-Toland	8/6/14	1030	Received By: Goldstreak BETIANC
Relinquished By: (2) Goldstreak BETIANC	8/7/14		Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	8/7/14	11:20	Received For Laboratory By:

Section 4

DOD Project? ~~Yes~~ No

Cooler ID: 2 of 5

Data Deliverable Requirements: Per Contract

Requested Turnaround Time and/or Special Instructions: Per Contract & ADEC Requirements for holding/process times.

Temp Blank °C: 2.6 #71
or Ambient [ ]
(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
(See attached Sample Receipt Form)

[ ] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
[ ] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

http://www.sgs.com/terms-and-conditions

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1143648

SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	(Yes) No N/A (Yes) No	☐ *Exemption permitted if sampler hand carries/delivers.*
Temperature blank compliant* (i.e., 0-6°C after CF)? *If >6°C, were samples collected <8 hours ago?* *If <0°C, were all sample containers ice free?* Cooler ID: 1 @ 2.6 w/ Therm.ID: 71 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."	(Yes) No Yes No (N/A) Yes No (N/A)	☐ *Exemption permitted if chilled & collected <8 hrs ago.* *Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.*
Delivery method (specify all that apply): ~~Client (hand carried)~~ USPS Lynden AK Air Alert Courier UPS FedEx RAVN C&D Delivery Carlile Pen Air Warp Speed Other: _____ → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	Tracking/AB # or see attached or (N/A) Yes No (N/A)	
→ For samples received with payment, note amount ($) and whether cash / check / CC (**circle one**) was received.		
→ For samples **received in FBKS**, ANCH staff will verify all criteria are reviewed. SRF initiated in FBKS by:		
Were samples received within hold time? Do samples **match COC*** (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	(Yes) No N/A (Yes) No N/A (Yes) No N/A	*Note: Refer to form F-083 "Sample Guide" for hold times.* *Note: If times differ <1hr, record details and login per COC.*
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other:	(Yes) No	
Were **proper containers** (type/mass/volume/preservative*) used? Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	(Yes) No N/A (Yes) No N/A Yes No (N/A) (Yes) No N/A	☐ *Exemption permitted for metals (e.g., 200.8/6020A).*
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	Yes No (N/A) Yes No (N/A)	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved…, lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	Yes No (N/A)	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	Yes No (N/A)	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	(Yes) No (N/A)	8/7/14
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	Yes No (N/A)	SRF Completed by: PM notified: N/A
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	(Yes) No N/A	Peer Reviewed by: TLD N/A
Additional notes (if applicable):		

Note to Client: *Any "no" circled above indicates non-compliance with standard procedures and may impact data quality.*

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1143648001-A	No Preservative Required	OK			
1143648001-B	Methanol field pres. 4 C	OK			
1143648002-A	No Preservative Required	OK			
1143648002-B	Methanol field pres. 4 C	OK			
1143648003-A	No Preservative Required	OK			
1143648003-B	No Preservative Required	OK			
1143648003-C	No Preservative Required	OK			
1143648003-D	Methanol field pres. 4 C	OK			
1143648003-E	Methanol field pres. 4 C	OK			
1143648003-F	Methanol field pres. 4 C	OK			
1143648004-A	No Preservative Required	OK			
1143648004-B	No Preservative Required	OK			
1143648004-C	No Preservative Required	OK			
1143648004-D	Methanol field pres. 4 C	OK			
1143648004-E	Methanol field pres. 4 C	OK			
1143648004-F	Methanol field pres. 4 C	OK			
1143648005-A	No Preservative Required	OK			
1143648005-B	No Preservative Required	OK			
1143648005-C	No Preservative Required	OK			
1143648005-D	Methanol field pres. 4 C	OK			
1143648005-E	Methanol field pres. 4 C	OK			
1143648005-F	Methanol field pres. 4 C	OK			
1143648006-A	No Preservative Required	OK			
1143648006-B	Methanol field pres. 4 C	OK			
1143648007-A	No Preservative Required	OK			
1143648007-B	Methanol field pres. 4 C	OK			
1143648008-A	No Preservative Required	OK			
1143648008-B	Methanol field pres. 4 C	OK			
1143648009-A	No Preservative Required	OK			
1143648009-B	Methanol field pres. 4 C	OK			
1143648010-A	No Preservative Required	OK			
1143648010-B	Methanol field pres. 4 C	OK			
1143648011-A	No Preservative Required	OK			
1143648011-B	Methanol field pres. 4 C	OK			
1143648012-A	No Preservative Required	OK			
1143648012-B	Methanol field pres. 4 C	OK			
1143648013-A	Methanol field pres. 4 C	OK			

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

OK - The container was received at an acceptable pH for the analysis requested.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

BU - The container was received with headspace greater than 6mm.

RunLog

METHODS: AK101, AK101 8021B, AK101/8021B

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1226564	IB	8/13/2014 1:24:00 AM	VHA	1	12043VFC		1
	1226565	CCV2	8/13/2014 2:02:00 AM	VHA	1	12043VFC		2
	1226566	CCV	8/13/2014 2:21:00 AM	VHA	1	12043VFC		3
	1226559	MB	8/13/2014 2:59:00 AM	VHA	1	12043VFC	26261VXX	4
	1226560	LCS	8/13/2014 3:19:00 AM	VHA	1	12043VFC	26261VXX	5
	1226561	LCSD	8/13/2014 3:38:00 AM	VHA	1	12043VFC	26261VXX	6
1143648	1143648013	TB	8/13/2014 3:57:00 AM	VHA	1	12043VFC	26261VXX	7
1143656	1143656027	PS	8/13/2014 4:16:00 AM	VHA	1	12043VFC	26261VXX	8
1143656	1143656028	BMS	8/13/2014 4:35:00 AM	VHA	1	12043VFC	26261VXX	9
1143656	1143656029	BMSD	8/13/2014 4:54:00 AM	VHA	1	12043VFC	26261VXX	10
1143656	1143656043	PS	8/13/2014 5:33:00 AM	VHA	1	12043VFC	26261VXX	11
1143656	1143656044	BMS	8/13/2014 5:52:00 AM	VHA	1	12043VFC	26261VXX	12
1143656	1143656045	BMSD	8/13/2014 6:11:00 AM	VHA	1	12043VFC	26261VXX	13
1143656	1143656024	PS	8/13/2014 6:49:00 AM	VHA	1	12043VFC	26261VXX	14
1143656	1143656025	PS	8/13/2014 7:08:00 AM	VHA	1	12043VFC	26261VXX	15
1143656	1143656026	PS	8/13/2014 7:27:00 AM	VHA	1	12043VFC	26261VXX	16
1143656	1143656030	PS	8/13/2014 7:50:00 AM	VHA	1	12043VFC	26261VXX	17
1143656	1143656031	PS	8/13/2014 8:09:00 AM	VHA	1	12043VFC	26261VXX	18
	1226567	CCV	8/13/2014 8:57:00 AM	VHA	1	12043VFC		19
1143656	1143656032	PS	8/13/2014 9:16:00 AM	VHA	10	12043VFC	26261VXX	20
1143656	1143656035	PS	8/13/2014 10:14:00 AM	VHA	1	12043VFC	26261VXX	21
1143656	1143656036	PS	8/13/2014 10:33:00 AM	VHA	1	12043VFC	26261VXX	22
1143656	1143656037	PS	8/13/2014 10:52:00 AM	VHA	1	12043VFC	26261VXX	23
1143656	1143656039	PS	8/13/2014 11:30:00 AM	VHA	1	12043VFC	26261VXX	24
1143656	1143656040	PS	8/13/2014 11:49:00 AM	VHA	1	12043VFC	26261VXX	25
1143656	1143656041	PS	8/13/2014 12:08:00 PM	VHA	1	12043VFC	26261VXX	26
	1226568	CCV	8/13/2014 1:25:00 PM	VHA	1	12043VFC		27

Calibration: VHA2014-0731

RunLog

METHODS: AK101, AK101 8021B, AK101/8021B

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1226865	IB	8/13/2014 3:27:00 PM	VHA	1	12045VFC		1
	1226867	CCV	8/13/2014 4:24:00 PM	VHA	1	12045VFC		2
	1226842	LCS	8/13/2014 5:22:00 PM	VHA	1	12045VFC	26266VXX	3
	1226843	LCSD	8/13/2014 5:41:00 PM	VHA	1	12045VFC	26266VXX	4
1143656	1143656015	PS	8/13/2014 6:39:00 PM	VHA	1	12045VFC	26266VXX	5
1143656	1143656021	PS	8/13/2014 6:59:00 PM	VHA	1	12045VFC	26266VXX	6
1143656	1143656042	PS	8/13/2014 7:18:00 PM	VHA	1	12045VFC	26266VXX	7
1143648	1143648003	PS	8/13/2014 7:37:00 PM	VHA	1	12045VFC	26266VXX	8
1143648	1143648004	BMS	8/13/2014 7:56:00 PM	VHA	1	12045VFC	26266VXX	9
1143648	1143648005	BMSD	8/13/2014 8:15:00 PM	VHA	1	12045VFC	26266VXX	10
1143648	1143648001	PS	8/13/2014 8:54:00 PM	VHA	1	12045VFC	26266VXX	11
1143648	1143648002	PS	8/13/2014 9:13:00 PM	VHA	1	12045VFC	26266VXX	12
1143648	1143648006	PS	8/13/2014 9:32:00 PM	VHA	1	12045VFC	26266VXX	13
1143648	1143648007	PS	8/13/2014 9:51:00 PM	VHA	1	12045VFC	26266VXX	14
1143648	1143648008	PS	8/13/2014 10:11:00 PM	VHA	1	12045VFC	26266VXX	15
	1226868	CCV	8/13/2014 10:49:00 PM	VHA	1	12045VFC		16
1143648	1143648009	PS	8/13/2014 11:08:00 PM	VHA	1	12045VFC	26266VXX	17
1143648	1143648010	PS	8/13/2014 11:28:00 PM	VHA	1	12045VFC	26266VXX	18
1143648	1143648011	PS	8/13/2014 11:47:00 PM	VHA	1	12045VFC	26266VXX	19
1143648	1143648012	PS	8/14/2014 12:06:00 AM	VHA	1	12045VFC	26266VXX	20
1143689	1143689002	PS	8/14/2014 12:44:00 AM	VHA	1	12045VFC	26266VXX	21
1143689	1143689016	PS	8/14/2014 1:22:00 AM	VHA	1	12045VFC	26266VXX	22
1143656	1143656033	PS	8/14/2014 1:41:00 AM	VHA	10	12045VFC	26266VXX	23
1143656	1143656038	PS	8/14/2014 2:00:00 AM	VHA	10	12045VFC	26266VXX	24
1143656	1143656034	PS	8/14/2014 2:20:00 AM	VHA	10	12045VFC	26266VXX	25
	1226841	MB	8/14/2014 3:36:00 AM	VHA	1	12045VFC	26266VXX	26
	1226869	CCV	8/14/2014 3:55:00 AM	VHA	1	12045VFC		27

Calibration: VHA2014-0731

RunLog

METHODS: AK102, AK102/103

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1226413	IB	8/12/2014 12:02:00 PM	SDR	1	11487XFC		1
	1226414	CCVB	8/12/2014 4:48:00 PM	SDR	1	11487XFC		2
	1226415	CCVR	8/12/2014 4:58:00 PM	SDR	1	11487XFC		3
	1225801	MB	8/12/2014 5:18:00 PM	SDR	1	11487XFC	31651XXX	4
	1225802	LCS	8/12/2014 5:28:00 PM	SDR	1	11487XFC	31651XXX	5
	1225803	LCSD	8/12/2014 5:38:00 PM	SDR	1	11487XFC	31651XXX	6
1143572	1143572001	PS	8/12/2014 5:48:00 PM	SDR	1	11487XFC	31651XXX	7
1143572	1143572002	PS	8/12/2014 5:58:00 PM	SDR	1	11487XFC	31651XXX	8
1143572	1143572003	PS	8/12/2014 6:08:00 PM	SDR	1	11487XFC	31651XXX	9
1143572	1143572004	PS	8/12/2014 6:18:00 PM	SDR	1	11487XFC	31651XXX	10
1143572	1143572005	PS	8/12/2014 6:28:00 PM	SDR	1	11487XFC	31651XXX	11
1143572	1143572006	PS	8/12/2014 6:37:00 PM	SDR	1	11487XFC	31651XXX	12
1143572	1143572007	PS	8/12/2014 6:47:00 PM	SDR	1	11487XFC	31651XXX	13
1143572	1143572008	PS	8/12/2014 6:57:00 PM	SDR	1	11487XFC	31651XXX	14
1143572	1143572009	PS	8/12/2014 7:07:00 PM	SDR	1	11487XFC	31651XXX	15
	1226416	CCVB	8/12/2014 7:17:00 PM	SDR	1	11487XFC		16
	1226417	CCVR	8/12/2014 7:27:00 PM	SDR	1	11487XFC		17
	1225891	MB	8/12/2014 7:47:00 PM	SDR	1	11487XFC	31655XXX	18
	1225892	LCS	8/12/2014 7:57:00 PM	SDR	1	11487XFC	31655XXX	19
	1225893	LCSD	8/12/2014 8:06:00 PM	SDR	1	11487XFC	31655XXX	20
1143648	1143648001	PS	8/12/2014 8:16:00 PM	SDR	1	11487XFC	31655XXX	21
1143648	1143648002	PS	8/12/2014 8:26:00 PM	SDR	1	11487XFC	31655XXX	22
1143648	1143648003	PS	8/12/2014 8:36:00 PM	SDR	1	11487XFC	31655XXX	23
1143648	1143648004	BMS	8/12/2014 8:46:00 PM	SDR	1	11487XFC	31655XXX	24
1143648	1143648005	BMSD	8/12/2014 8:56:00 PM	SDR	1	11487XFC	31655XXX	25
1143648	1143648006	PS	8/12/2014 9:06:00 PM	SDR	1	11487XFC	31655XXX	26
1143648	1143648007	PS	8/12/2014 9:16:00 PM	SDR	1	11487XFC	31655XXX	27
1143648	1143648008	PS	8/12/2014 9:25:00 PM	SDR	1	11487XFC	31655XXX	28
1143648	1143648009	PS	8/12/2014 9:35:00 PM	SDR	1	11487XFC	31655XXX	29
1143648	1143648010	PS	8/12/2014 9:45:00 PM	SDR	1	11487XFC	31655XXX	30
1143648	1143648011	PS	8/12/2014 9:55:00 PM	SDR	1	11487XFC	31655XXX	31
1143648	1143648012	PS	8/12/2014 10:05:00 PM	SDR	1	11487XFC	31655XXX	32
	1226418	CCVB	8/12/2014 10:15:00 PM	SDR	1	11487XFC		33
	1226419	CCVR	8/12/2014 10:25:00 PM	SDR	1	11487XFC		34
	1226334	MB	8/12/2014 10:45:00 PM	SDR	1	11487XFC	31679XXX	35
	1226335	LCS	8/12/2014 10:54:00 PM	SDR	1	11487XFC	31679XXX	36
	1226336	LCSD	8/12/2014 11:04:00 PM	SDR	1	11487XFC	31679XXX	37
1143757	1143757001	PS	8/12/2014 11:14:00 PM	SDR	1	11487XFC	31679XXX	38
1143734	1143734067	PS	8/12/2014 11:24:00 PM	SDR	1	11487XFC	31679XXX	39
1143734	1143734068	BMS	8/12/2014 11:34:00 PM	SDR	1	11487XFC	31679XXX	40
1143734	1143734069	BMSD	8/12/2014 11:44:00 PM	SDR	1	11487XFC	31679XXX	41
	1226420	CCVB	8/13/2014 12:03:00 AM	SDR	1	11487XFC		42
	1226421	CCVR	8/13/2014 12:13:00 AM	SDR	1	11487XFC		43
1143734	1143734009	PS	8/13/2014 12:23:00 AM	SDR	1	11487XFC	31679XXX	44
1143734	1143734053	PS	8/13/2014 12:33:00 AM	SDR	1	11487XFC	31679XXX	45
1143734	1143734054	PS	8/13/2014 12:43:00 AM	SDR	1	11487XFC	31679XXX	46
1143734	1143734055	PS	8/13/2014 12:53:00 AM	SDR	1	11487XFC	31679XXX	47
1143734	1143734056	PS	8/13/2014 1:03:00 AM	SDR	1	11487XFC	31679XXX	48
1143734	1143734057	PS	8/13/2014 1:13:00 AM	SDR	1	11487XFC	31679XXX	49
1143734	1143734058	PS	8/13/2014 1:22:00 AM	SDR	1	11487XFC	31679XXX	50
1143734	1143734059	PS	8/13/2014 1:32:00 AM	SDR	1	11487XFC	31679XXX	51
1143734	1143734063	PS	8/13/2014 1:42:00 AM	SDR	1	11487XFC	31679XXX	52
1143734	1143734064	PS	8/13/2014 1:52:00 AM	SDR	1	11487XFC	31679XXX	53
1143734	1143734065	PS	8/13/2014 2:02:00 AM	SDR	1	11487XFC	31679XXX	54

RunLog

METHODS: AK102, AK102/103

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
1143734	1143734066	PS	8/13/2014 2:12:00 AM	SDR	1	11487XFC	31679XXX	55
1143734	1143734070	PS	8/13/2014 2:22:00 AM	SDR	1	11487XFC	31679XXX	56
1143734	1143734052	PS	8/13/2014 3:01:00 AM	SDR	4	11487XFC	31679XXX	57
1143734	1143734060	PS	8/13/2014 3:11:00 AM	SDR	4	11487XFC	31679XXX	58
1143734	1143734061	BMS	8/13/2014 3:21:00 AM	SDR	4	11487XFC	31679XXX	59
1143734	1143734062	BMSD	8/13/2014 3:31:00 AM	SDR	4	11487XFC	31679XXX	60
	1226422	CCVB	8/13/2014 3:51:00 AM	SDR	1	11487XFC		61
	1226423	CCVR	8/13/2014 4:01:00 AM	SDR	1	11487XFC		62

Calibration: SDR2014-0812

RunLog

METHODS: SM21 2540G

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1225889	MB	8/8/2014 6:30:00 PM		1	9419SPT		1
1143225	1143225013	PS	8/8/2014 6:30:00 PM		1	9419SPT		2
1143225	1143225014	PS	8/8/2014 6:30:00 PM		1	9419SPT		3
1143225	1143225015	PS	8/8/2014 6:30:00 PM		1	9419SPT		4
1143225	1143225016	PS	8/8/2014 6:30:00 PM		1	9419SPT		5
1143225	1143225017	PS	8/8/2014 6:30:00 PM		1	9419SPT		6
1143538	1143538027	PS	8/8/2014 6:30:00 PM		1	9419SPT		7
1143538	1143538030	PS	8/8/2014 6:30:00 PM		1	9419SPT		8
1143538	1143538031	BMS	8/8/2014 6:30:00 PM		1	9419SPT		9
1143538	1143538032	BMSD	8/8/2014 6:30:00 PM		1	9419SPT		10
1143538	1143538035	PS	8/8/2014 6:30:00 PM		1	9419SPT		11
1143538	1143538036	PS	8/8/2014 6:30:00 PM		1	9419SPT		12
1143538	1143538037	PS	8/8/2014 6:30:00 PM		1	9419SPT		13
1143538	1143538038	PS	8/8/2014 6:30:00 PM		1	9419SPT		14
1143538	1143538039	PS	8/8/2014 6:30:00 PM		1	9419SPT		15
1143538	1143538040	PS	8/8/2014 6:30:00 PM		1	9419SPT		16
1143538	1143538054	PS	8/8/2014 6:30:00 PM		1	9419SPT		17
1143538	1143538055	PS	8/8/2014 6:30:00 PM		1	9419SPT		18
1143538	1143538056	PS	8/8/2014 6:30:00 PM		1	9419SPT		19
1143538	1143538057	PS	8/8/2014 6:30:00 PM		1	9419SPT		20
1143538	1143538058	PS	8/8/2014 6:30:00 PM		1	9419SPT		21
1143538	1143538059	PS	8/8/2014 6:30:00 PM		1	9419SPT		22
1143538	1143538060	PS	8/8/2014 6:30:00 PM		1	9419SPT		23
1143538	1143538061	PS	8/8/2014 6:30:00 PM		1	9419SPT		24
1143538	1143538062	PS	8/8/2014 6:30:00 PM		1	9419SPT		25
1143620	1143620001	PS	8/8/2014 6:30:00 PM		1	9419SPT		26
1143620	1143620002	PS	8/8/2014 6:30:00 PM		1	9419SPT		27
1143648	1143648001	PS	8/8/2014 6:30:00 PM		1	9419SPT		28
1143648	1143648002	PS	8/8/2014 6:30:00 PM		1	9419SPT		29
1143648	1143648003	PS	8/8/2014 6:30:00 PM		1	9419SPT		30
1143648	1143648004	BMS	8/8/2014 6:30:00 PM		1	9419SPT		31
1143648	1143648005	BMSD	8/8/2014 6:30:00 PM		1	9419SPT		32
1143648	1143648006	PS	8/8/2014 6:30:00 PM		1	9419SPT		33
1143648	1143648007	PS	8/8/2014 6:30:00 PM		1	9419SPT		34
1143648	1143648008	PS	8/8/2014 6:30:00 PM		1	9419SPT		35
1143648	1143648009	PS	8/8/2014 6:30:00 PM		1	9419SPT		36
1143648	1143648010	PS	8/8/2014 6:30:00 PM		1	9419SPT		37
1143648	1143648011	PS	8/8/2014 6:30:00 PM		1	9419SPT		38
1143648	1143648012	PS	8/8/2014 6:30:00 PM		1	9419SPT		39
1143656	1143656003	PS	8/8/2014 6:30:00 PM		1	9419SPT		40
1143656	1143656004	PS	8/8/2014 6:30:00 PM		1	9419SPT		41
1143656	1143656005	PS	8/8/2014 6:30:00 PM		1	9419SPT		42
1143656	1143656006	PS	8/8/2014 6:30:00 PM		1	9419SPT		43
1143656	1143656007	PS	8/8/2014 6:30:00 PM		1	9419SPT		44
1143656	1143656008	PS	8/8/2014 6:30:00 PM		1	9419SPT		45
1143656	1143656009	PS	8/8/2014 6:30:00 PM		1	9419SPT		46
1143656	1143656010	PS	8/8/2014 6:30:00 PM		1	9419SPT		47
1143656	1143656011	PS	8/8/2014 6:30:00 PM		1	9419SPT		48
1143656	1143656012	PS	8/8/2014 6:30:00 PM		1	9419SPT		49
1143656	1143656013	PS	8/8/2014 6:30:00 PM		1	9419SPT		50
1143656	1143656014	PS	8/8/2014 6:30:00 PM		1	9419SPT		51
1143656	1143656015	PS	8/8/2014 6:30:00 PM		1	9419SPT		52
1143656	1143656016	PS	8/8/2014 6:30:00 PM		1	9419SPT		53
1143656	1143656017	PS	8/8/2014 6:30:00 PM		1	9419SPT		54

RunLog

METHODS: SM21 2540G

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
1143656	1143656018	PS	8/8/2014 6:30:00 PM		1	9419SPT		55
1143656	1143656019	PS	8/8/2014 6:30:00 PM		1	9419SPT		56
1143656	1143656020	PS	8/8/2014 6:30:00 PM		1	9419SPT		57
1143656	1143656021	PS	8/8/2014 6:30:00 PM		1	9419SPT		58
1143656	1143656022	PS	8/8/2014 6:30:00 PM		1	9419SPT		59
1143656	1143656023	PS	8/8/2014 6:30:00 PM		1	9419SPT		60
1143656	1143656024	PS	8/8/2014 6:30:00 PM		1	9419SPT		61
1143656	1143656025	PS	8/8/2014 6:30:00 PM		1	9419SPT		62
1143656	1143656026	PS	8/8/2014 6:30:00 PM		1	9419SPT		63
1143656	1143656027	PS	8/8/2014 6:30:00 PM		1	9419SPT		64
1143656	1143656028	BMS	8/8/2014 6:30:00 PM		1	9419SPT		65
1143656	1143656029	BMSD	8/8/2014 6:30:00 PM		1	9419SPT		66
1143656	1143656030	PS	8/8/2014 6:30:00 PM		1	9419SPT		67
1143656	1143656031	PS	8/8/2014 6:30:00 PM		1	9419SPT		68
1143656	1143656032	PS	8/8/2014 6:30:00 PM		1	9419SPT		69
1143656	1143656033	PS	8/8/2014 6:30:00 PM		1	9419SPT		70
1143656	1143656034	PS	8/8/2014 6:30:00 PM		1	9419SPT		71
1143656	1143656035	PS	8/8/2014 6:30:00 PM		1	9419SPT		72
1143656	1143656036	PS	8/8/2014 6:30:00 PM		1	9419SPT		73
1143656	1143656037	PS	8/8/2014 6:30:00 PM		1	9419SPT		74
1143656	1143656038	PS	8/8/2014 6:30:00 PM		1	9419SPT		75
1143656	1143656039	PS	8/8/2014 6:30:00 PM		1	9419SPT		76
1143656	1143656040	PS	8/8/2014 6:30:00 PM		1	9419SPT		77
1143656	1143656041	PS	8/8/2014 6:30:00 PM		1	9419SPT		78
1143656	1143656042	PS	8/8/2014 6:30:00 PM		1	9419SPT		79
1143656	1143656043	PS	8/8/2014 6:30:00 PM		1	9419SPT		80
1143656	1143656044	BMS	8/8/2014 6:30:00 PM		1	9419SPT		81
1143656	1143656045	BMSD	8/8/2014 6:30:00 PM		1	9419SPT		82
1143671	1143671003	PS	8/8/2014 6:30:00 PM		1	9419SPT		83
1143671	1143671004	PS	8/8/2014 6:30:00 PM		1	9419SPT		84
	1225890	DUP	8/8/2014 6:30:00 PM		1	9419SPT		85
1143671	1143671005	BMS	8/8/2014 6:30:00 PM		1	9419SPT		86
1143671	1143671006	BMSD	8/8/2014 6:30:00 PM		1	9419SPT		87
1143671	1143671007	PS	8/8/2014 6:30:00 PM		1	9419SPT		88
1143671	1143671008	PS	8/8/2014 6:30:00 PM		1	9419SPT		89
1143671	1143671009	PS	8/8/2014 6:30:00 PM		1	9419SPT		90
1143671	1143671010	PS	8/8/2014 6:30:00 PM		1	9419SPT		91
1143671	1143671011	PS	8/8/2014 6:30:00 PM		1	9419SPT		92
1143681	1143681001	PS	8/8/2014 6:30:00 PM		1	9419SPT		93
1143681	1143681002	PS	8/8/2014 6:30:00 PM		1	9419SPT		94
1143681	1143681003	PS	8/8/2014 6:30:00 PM		1	9419SPT		95
1143681	1143681004	PS	8/8/2014 6:30:00 PM		1	9419SPT		96

Calibration: NA

Laboratory Analytical Report

Client: **EA Engineering, Science and Tech**
3 Washington Center
Newburgh, NY 12550

Attn: **Pam Moss**
T: 907-646-0201 F:
PMoss@eaest.com

Project: **Cape Romanzof LTM ST009**

Workorder No.: **1143647**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Chuck Homestead

Charles.Homestead@sgs.com
General Manager Alaska

Contents (Bookmarked in PDF):

Cover Page
Glossary
Sample Summary Forms
Case Narrative
Sample Results Forms
Batch Summary Forms (by method)
Quality Control Summary Forms (by method)
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO 17025 (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6020, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RL	Reporting Limit
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

Client Name: EA Engineering, Science and Tech.
Project Name: Cape Romanzof LTM ST009
Workorder No.: 1143647

Analytical Methods

Method Description	Analytical Method
DRO Low Volume (W)	AK102
DRO/RRO Low Volume Water	AK102
DRO/RRO Low Volume Water	AK103
Gasoline Range Organics (W)	AK101
Volatile Organic Compounds (W)	SW8260B

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1143647001	MW-9-073014
1143647002	MW-4-073014
1143647003	MW-7-073014
1143647004	SS010-SB-EB1
1143647005	TB-2-ST009

Case Narrative

SGS Client: **EA Engineering, Science and Tech.**
SGS Project: **1143647**
Project Name/Site: **Cape Romanzof LTM ST009**
Project Contact: **Pam Moss**

Refer to sample receipt form for information on sample condition.

MW-9-073014 (1143647001) PS

AK102 - The pattern is consistent with a weathered gasoline.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

MW-4-073014 (1143647002) PS

AK102 - The pattern is consistent with a weathered gasoline.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

MW-7-073014 (1143647003) PS

8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.
AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.
AK102 - The pattern is consistent with a weathered gasoline.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

AFB for HBN 1625446 [VXX/26253 (1226238) AFB

8260B - Antifoam blank recoverry for hexachlorobutadiene does not meet QC criteria. This compound was not detected in the associated samples that used antifoam.

CCV for HBN 1625448 [VMS/14356 (1226242) CCV

8260B - CCV recoveries for chloromethane and 2,2,-dichloropropane do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

IB for HBN 1625358 [VMS/14353] (1225840) IB

8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.

LCS for HBN 1625446 [VXX/26253 (1226232) LCS

8260B - LCS recovery for chloroethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

LCSD for HBN 1625446 [VXX/2625 (1226233) LCSD

8260B - LCSD recovery for chloroethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

MB for HBN 1625357 [VXX/26244] (1225836) MB

8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.

MB for HBN 1625504 [XXX/31687] (1226490) MB

AK103 - MB result does not meet QC criteria (biased high); however the associated samples are below the LOQ.

TB-2-ST009 (1143647005) TB

Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

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Member of SGS Group

Client Sample ID: **MW-9-073014**
SGS Ref. #: 1143647001
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 09:40
Receipt Date/Time: 08/07/14 11:21

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.293	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	121	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 13:25
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647001-D
Analyst: ST

Client Sample ID: **MW-9-073014**
SGS Ref. #: 1143647001
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 09:40
Receipt Date/Time: 08/07/14 11:21

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	1.04	0.607	0.182	mg/L	1	XFC11497	XXX31687	
5a Androstane <surr>	93.2	50-150		%	1	XFC11497	XXX31687	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/15/14 03:12
Dilution Factor: 1

Prep Batch: XXX31687
Prep Method: SW3520C
Prep Date/Time: 08/13/14 09:20

Initial Prep Wt./Vol.: 247 mL
Prep Extract Vol.: 1 mL
Container ID:1143647001-G
Analyst: EAB

Client Sample ID: **MW-9-073014**
SGS Ref. #: 1143647001
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 09:40
Receipt Date/Time: 08/07/14 11:21

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U	0.400	0.120	ug/L	1	VMS14353	VXX26244	
Ethylbenzene	0.640J	1.00	0.310	ug/L	1	VMS14353	VXX26244	
o-Xylene	0.500U	1.00	0.310	ug/L	1	VMS14353	VXX26244	
P & M -Xylene	1.06J	2.00	0.620	ug/L	1	VMS14353	VXX26244	
Toluene	0.500U	1.00	0.310	ug/L	1	VMS14353	VXX26244	
Xylenes (total)	1.06J	3.00	1.00	ug/L	1	VMS14353	VXX26244	
1,2-Dichloroethane-D4 <surr>	120	70-120		%	1	VMS14353	VXX26244	
4-Bromofluorobenzene <surr>	102	75-120		%	1	VMS14353	VXX26244	
Toluene-d8 <surr>	93.7	85-120		%	1	VMS14353	VXX26244	

Batch Information

Analytical Batch: VMS14353
Analytical Method: SW8260B
Analysis Date/Time: 08/08/14 21:24
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647001-A
Analyst: NRB

Client Sample ID: **MW-4-073014**
SGS Ref. #: 1143647002
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 14:20
Receipt Date/Time: 08/07/14 11:21

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0727J	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	98.6	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 13:44
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647002-D
Analyst: ST

Client Sample ID: **MW-4-073014**
SGS Ref. #: 1143647002
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 14:20
Receipt Date/Time: 08/07/14 11:21

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	1.21	0.600	0.180	mg/L	1	XFC11497	XXX31687	
5a Androstane <surr>	87.9	50-150		%	1	XFC11497	XXX31687	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/15/14 03:32
Dilution Factor: 1

Prep Batch: XXX31687
Prep Method: SW3520C
Prep Date/Time: 08/13/14 09:20

Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143647002-G
Analyst: EAB

Client Sample ID: **MW-4-073014**
SGS Ref. #: 1143647002
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 14:20
Receipt Date/Time: 08/07/14 11:21

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U	0.400	0.120	ug/L	1	VMS14356	VXX26244	
Ethylbenzene	0.500U	1.00	0.310	ug/L	1	VMS14356	VXX26244	
o-Xylene	0.500U	1.00	0.310	ug/L	1	VMS14356	VXX26244	
P & M -Xylene	1.00U	2.00	0.620	ug/L	1	VMS14356	VXX26244	
Toluene	0.500U	1.00	0.310	ug/L	1	VMS14356	VXX26244	
Xylenes (total)	1.50U	3.00	1.00	ug/L	1	VMS14356	VXX26244	
1,2-Dichloroethane-D4 <surr>	98.7	70-120		%	1	VMS14356	VXX26244	
4-Bromofluorobenzene <surr>	102	75-120		%	1	VMS14356	VXX26244	
Toluene-d8 <surr>	97.4	85-120		%	1	VMS14356	VXX26244	

Batch Information

Analytical Batch: VMS14356
Analytical Method: SW8260B
Analysis Date/Time: 08/11/14 13:05
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647002-A
Analyst: NRB

Client Sample ID: **MW-7-073014**
SGS Ref. #: 1143647003
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 17:20
Receipt Date/Time: 08/07/14 11:21

Volatile Fuels Department

Parameter	Result		LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.495		0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	152	*	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 14:03
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647003-D
Analyst: ST

Client Sample ID: **MW-7-073014**
SGS Ref. #: 1143647003
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 17:20
Receipt Date/Time: 08/07/14 11:21

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	2.87	0.630	0.189	mg/L	1	XFC11497	XXX31687	
5a Androstane <surr>	85	50-150		%	1	XFC11497	XXX31687	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/15/14 03:53
Dilution Factor: 1

Prep Batch: XXX31687
Prep Method: SW3520C
Prep Date/Time: 08/13/14 09:20

Initial Prep Wt./Vol.: 238 mL
Prep Extract Vol.: 1 mL
Container ID:1143647003-G
Analyst: EAB

Client Sample ID: **MW-7-073014**
SGS Ref. #: 1143647003
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 17:20
Receipt Date/Time: 08/07/14 11:21

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result		LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U		0.400	0.120	ug/L	1	VMS14353	VXX26244	
Ethylbenzene	2.00		1.00	0.310	ug/L	1	VMS14353	VXX26244	
o-Xylene	0.970J		1.00	0.310	ug/L	1	VMS14353	VXX26244	
P & M -Xylene	4.38		2.00	0.620	ug/L	1	VMS14353	VXX26244	
Toluene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
Xylenes (total)	5.35		3.00	1.00	ug/L	1	VMS14353	VXX26244	
1,2-Dichloroethane-D4 <surr>	127	*	70-120		%	1	VMS14353	VXX26244	
4-Bromofluorobenzene <surr>	92.7		75-120		%	1	VMS14353	VXX26244	
Toluene-d8 <surr>	94.9		85-120		%	1	VMS14353	VXX26244	

Batch Information

Analytical Batch: VMS14353
Analytical Method: SW8260B
Analysis Date/Time: 08/08/14 21:57
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647003-A
Analyst: NRB

Client Sample ID: **SS010-SB-EB1**
SGS Ref. #: 1143647004
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 15:45
Receipt Date/Time: 08/07/14 11:21

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0470J	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	101	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 14:22
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647004-B
Analyst: ST

Client Sample ID: **SS010-SB-EB1**
SGS Ref. #: 1143647004
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 15:45
Receipt Date/Time: 08/07/14 11:21

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.372J	0.600	0.180	mg/L	1	XFC11497	XXX31687	
Residual Range Organics	0.250U	0.500	0.150	mg/L	1	XFC11497	XXX31687	
5a Androstane <surr>	88.2	50-150		%	1	XFC11497	XXX31687	
n-Triacontane-d62 <surr>	90.7	50-150		%	1	XFC11497	XXX31687	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/15/14 04:13
Dilution Factor: 1
Prep Batch: XXX31687
Prep Method: SW3520C
Prep Date/Time: 08/13/14 09:20
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143647004-D
Analyst: EAB

Analytical Batch: XFC11497
Analytical Method: AK103
Analysis Date/Time: 08/15/14 04:13
Dilution Factor: 1
Prep Batch: XXX31687
Prep Method: SW3520C
Prep Date/Time: 08/13/14 09:20
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143647004-D
Analyst: EAB

Client Sample ID: **TB-2-ST009**
SGS Ref. #: 1143647005
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 08:00
Receipt Date/Time: 08/07/14 11:21

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0513J	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	95	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 13:05
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647005-D
Analyst: ST

Client Sample ID: **TB-2-ST009**
SGS Ref. #: 1143647005
Project ID: Cape Romanzof LTM ST009
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/30/14 08:00
Receipt Date/Time: 08/07/14 11:21

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result		LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U		0.400	0.120	ug/L	1	VMS14353	VXX26244	
Ethylbenzene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
o-Xylene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
P & M -Xylene	1.00U		2.00	0.620	ug/L	1	VMS14353	VXX26244	
Toluene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
Xylenes (total)	1.50U		3.00	1.00	ug/L	1	VMS14353	VXX26244	
1,2-Dichloroethane-D4 <surr>	128	*	70-120		%	1	VMS14353	VXX26244	
4-Bromofluorobenzene <surr>	98.5		75-120		%	1	VMS14353	VXX26244	
Toluene-d8 <surr>	73.2	*	85-120		%	1	VMS14353	VXX26244	

Batch Information

Analytical Batch: VMS14353
Analytical Method: SW8260B
Analysis Date/Time: 08/08/14 20:01
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143647005-A
Analyst: NRB

Workorder No. 1143647

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26250

Analysis Batch Id: VFC12037

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1226157		8/11/2014 8:30:00AM
Instrument Blank	1226163		8/11/2014 8:30:00AM
Lab Control Sample	1226158		8/11/2014 9:35:00AM
Continuing Calib Verification	1226164		8/11/2014 9:35:00AM
Trip Blank	1143647005	TB-2-ST009	8/11/2014 1:05:00PM
Paying sample	1143647001	MW-9-073014	8/11/2014 1:25:00PM
Paying sample	1143647002	MW-4-073014	8/11/2014 1:44:00PM
Paying sample	1143647003	MW-7-073014	8/11/2014 2:03:00PM
Paying sample	1143647004	SS010-SB-EB1	8/11/2014 2:22:00PM
Lab Control Sample Duplicate	1226159		8/11/2014 4:17:00PM
Continuing Calib Verification	1226165		8/11/2014 4:17:00PM
Continuing Calib Verification	1226166		8/11/2014 8:08:00PM

SGS Ref.#	1226163 Instrument Blank	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004, 1143647005

Parameter	Results	RL/CL	Units	Analysis Date
Volatile Fuels Department				
Gasoline Range Organics	0.0500U	0.100	mg/L	08/11/14
Surrogates				
4-Bromofluorobenzene <surr>	96	50-150	%	08/11/14

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226164 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004, 1143647005

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.856	86	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		99	(75-125)		08/11/2014

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226165 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004, 1143647005

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.963	96	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		103	(75-125)		08/11/2014

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226166 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004, 1143647005

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.955	96	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		100	(75-125)		08/11/2014

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

Workorder No. 1143647

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26250

Analysis Batch Id: VFC12037

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1226157		8/11/2014 8:30:00AM
Instrument Blank	1226163		8/11/2014 8:30:00AM
Lab Control Sample	1226158		8/11/2014 9:35:00AM
Continuing Calib Verification	1226164		8/11/2014 9:35:00AM
Trip Blank	1143647005	TB-2-ST009	8/11/2014 1:05:00PM
Paying sample	1143647001	MW-9-073014	8/11/2014 1:25:00PM
Paying sample	1143647002	MW-4-073014	8/11/2014 1:44:00PM
Paying sample	1143647003	MW-7-073014	8/11/2014 2:03:00PM
Paying sample	1143647004	SS010-SB-EB1	8/11/2014 2:22:00PM
Lab Control Sample Duplicate	1226159		8/11/2014 4:17:00PM
Continuing Calib Verification	1226165		8/11/2014 4:17:00PM
Continuing Calib Verification	1226166		8/11/2014 8:08:00PM

SGS Ref.#	1226157 Method Blank	**Printed Date/Time**	09/03/2014 17:10	
Client Name	EA Engineering, Science and Tech.	**Prep**	**Batch**	VXX26250
Project Name/#	Cape Romanzof LTM ST009		**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)		**Date**	08/11/2014

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004, 1143647005

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	08/11/14
Surrogates					
4-Bromofluorobenzene <surr>	96	50-150		%	08/11/14
Batch VFC12037					
Method AK101					
Instrument Agilent 7890A PID/FID					

SGS Ref.#	1226158 Lab Control Sample	**Printed Date/Time**	09/03/2014	17:10
	1226159 Lab Control Sample Duplicate	**Prep Batch**	VXX26250	
Client Name	EA Engineering, Science and Tech.	**Method**	SW5030B	
Project Name/#	Cape Romanzof LTM ST009	**Date**	08/11/2014	
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004, 1143647005

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	0.856	86	(60-120)			1.00 mg/L	08/11/2014
	LCSD	0.963	96		12	(< 20)	1.00 mg/L	08/11/2014
Surrogates								
4-Bromofluorobenzene <surr>	LCS		99	(50-150)				08/11/2014
	LCSD		103		4			08/11/2014

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646, 1143647, 1143699, 1148349

Queue: **VFC** Batch: **12037**

Method: AK101, AK101 8021B, AK101/8021B

Run Date: 08/11/14 08:30 - 08/11/14 20:08

Extraction Batch(es): VXX26250

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: SHERAB TENZIN
Date: 8/12/14

Reviewer's Signature: Elizabeth Brandemuhl
Printed Name: Elizabeth Brandemuhl
Date: 8-12-2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On   : 11 Aug 2014   9:35 am
Operator : ST
Sample   : CCV
Misc   :
ALS Vial : 8   Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj.   :
Signal #1 Phase :   Signal #2 Phase:
Signal #1 Info :   Signal #2 Info :

Min. RRF   :   0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25%   Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	PID-aaa -TFT	1.000	1.000	0.0	0#	0.00
2		PID-benzene	0.000	1.145	0.0	0#	0.00
3	S	PID-1,4-DFB<Surr>	0.000	1.383	0.0	0#	0.00
4		PID-toluene	0.000	13.734	0.0	0#	0.00
5		PID-ethylbenzene	0.000	1.671	0.0	0#	0.00
6		PID-p&m-xylene	0.000	7.453	0.0	0#	0.00
7		PID-o-xylene	0.000	2.344	0.0	0#	0.00
8		PID-BFB<Surr>	0.000	2.949	0.0	0#	0.00
Signal #2							
10	S	FID-1,4-DFB #2	341.197	0.000 E3	100.0#	0#	0.00
11	S	FID-TRI-ALPHA #2	245.113	0.000 E3	100.0#	0#	0.00
12	H	FID-GRO #2	296.994	254.192 E3	14.4	86	0.00
13	S	FID-4-BFB<Surr> #2	243.990	0.000 E3	100.0#	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

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

GC QA-QC Check Report

Daily Calibration File : Z:\07\VHA\DATA\073114\3112.d
Time Acquired : 31 Jul 2014 11:15 am

30364300

File	Sample	Surrogate Recovery %				Internal Standard Responses
1105.d (fails)	IB	109	98	96	96	33514988
1106.d (fails)	NAS	108	98	98	96	33529954
1107.d (fails)	CCV2	118	102	95	102	33535872
1108.d (fails)	CCV	109	111	96	99	34410799
1109.d (fails)	CCV2	119	101	94	97	33062446
1110.d (fails)	1143645007	111	98	94	92	32934588
1111.d (fails)	1143645001	111	99	93	94	32553799
1112.d (fails)	1143645002	117	112	92	98	32091523
1113.d (fails)	1143645003	115	111	94	99	32944645
1114.d (fails)	R	112	101	93	96	33326537
1115.d (fails)	1143645004	110	100	96	93	33054838
1116.d (fails)	1143645005	115	104	96	100	32356954
1117.d (fails)	1143645006	110	103	101	95	33600231
1118.d (fails)	R	111	99	100	93	33021473
1119.d (fails)	1143647005	111	99	95	95	33117937
1120.d (fails)	1143647001	113	86	98	121	33777558
1121.d (fails)	1143647002	108	98	95	99	33559458
1122.d (fails)	1143647003	105	104	107	152*	34811576
1123.d (fails)	1143647004	111	99	94	101	33267911
1124.d (fails)	R	108	99	100	110	33921909
1125.d (fails)	1143646001	111	100	95	99	33537357
1126.d (fails)	1143646002	113	112	96	98	33548835

1127.d							
(fails)	1143646003	113	112	96	97	33505481	
1128.d							
(fails)	R	110	99	97	97	33485391	
1129.d							
(fails)	CCV	116	111	93	103	32574014	
1130.d							
(fails)	1143646006	110	98	94	92	33606933	
1131.d							
(fails)	1143646004	111	100	95	95	33028367	
1132.d							
(fails)	1143646005	110	99	96	95	33600498	
1133.d							
(fails)	1143646007	107	100	98	98	34170668	
1134.d							
(fails)	1143646008	109	99	97	94	33822918	
1135.d							
(fails)	R	110	99	95	95	33601426	
1136.d							
(fails)	1143699006	111	100	95	93	32929459	
1137.d							
(fails)	1148349012	111	99	95	96	33094816	
1138.d							
(fails)	1148349001	111	99	95	95	33241876	
1139.d							
(fails)	1148349002	110	98	94	98	33351934	
1140.d							
(fails)	R	111	100	96	97	33428064	
1141.d							
(fails)	CCV	114	114	96	100	33491778	

(fails) - fails 24hr time check * - fails criteria

Created: Tue Aug 12 12:11:12 2014 VHA

Instrument Runlog

Instrument: VHA **Calibration Date:** 7/31/2014 **Method:** AK101/BTEX
Operator: ST **Processed By:** ST **Posted By:** ST **Analytical Batch:** 12037

Data Path: Z:\08\VHA\DATA\08112014\

Daily:		As Needed:	
Verify System Date/Time	✓	Refill Water Tank	
General System Inspection	✓	Refill Standards	

Standards:						
	IS	VW8-83-3	CCV2	VW8-104-6		
	Cent. DFB	VW8-84-6	CCV	VW8-101-1		
	BFB	VW8-62-3	MeOH	P-968		
	NAS	VW8-105-2				

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1101.d	1	R	1			8/11/14 7:14 AM	N/A	
1102.d	2	R	1			8/11/14 7:33 AM	N/A	
1103.d	3	R	1			8/11/14 7:52 AM	N/A	
1104.d	4	R	1			8/11/14 8:11 AM	N/A	
1105.d	5	IB	1			8/11/14 8:30 AM	N/A	
1106.d	6	NAS	1			8/11/14 8:57 AM	N/A	
1107.d	7	CCV2	1	NU		8/11/14 9:16 AM	N/A	
1108.d	8	CCV	1			8/11/14 9:35 AM	N/A	
1109.d	9	CCV2	1	NU		8/11/14 9:54 AM	N/A	
1110.d	10	1143645007-A	1		WATER	8/11/14 10:13 AM	<2	
1111.d	11	1143645001-C PS	1		WATER	8/11/14 10:32 AM	<2	
1112.d	12	1143645002-C BMS	1		WATER	8/11/14 10:51 AM	<2	
1113.d	13	1143645003-C BMSD	1		WATER	8/11/14 11:11 AM	<2	
1114.d	14	R	1			8/11/14 11:30 AM	N/A	
1115.d	15	1143645004-C	1		WATER	8/11/14 11:49 AM	<2	
1116.d	16	1143645005-C	1		WATER	8/11/14 12:08 PM	<2	
1117.d	17	1143645006-C	1		WATER	8/11/14 12:27 PM	<2	
1118.d	18	R	1			8/11/14 12:46 PM	N/A	
1119.d	19	1143647005-D	1		WATER	8/11/14 1:05 PM	<2	
1120.d	20	1143647001-D	1		WATER	8/11/14 1:25 PM	<2	
1121.d	21	1143647002-D	1		WATER	8/11/14 1:44 PM	<2	
1122.d	22	1143647003-D	1		WATER	8/11/14 2:03 PM	<2	
1123.d	23	1143647004-B	1		WATER	8/11/14 2:22 PM	<2	
1124.d	24	R	1			8/11/14 2:41 PM	N/A	
1125.d	25	1143646001-C PS	1		WATER	8/11/14 3:00 PM	<2	
1126.d	26	1143646002-C BMS	1		WATER	8/11/14 3:20 PM	<2	
1127.d	27	1143646003-C BMSD	1		WATER	8/11/14 3:39 PM	<2	
1128.d	28	R	1			8/11/14 3:58 PM	N/A	
1129.d	29	CCV	1			8/11/14 4:17 PM	N/A	
1130.d	30	1143646006-A	1		WATER	8/11/14 4:36 PM	<2	
1131.d	31	1143646004-C	1		WATER	8/11/14 4:56 PM	<2	
1132.d	32	1143646005-C	1		WATER	8/11/14 5:15 PM	<2	
1133.d	33	1143646007-C	1		WATER	8/11/14 5:34 PM	<2	
1134.d	34	1143646008-C	1		WATER	8/11/14 5:53 PM	<2	
1135.d	35	R	1			8/11/14 6:13 PM	N/A	
1136.d	36	1143699006-A	1		WATER	8/11/14 6:32 PM	<2	
1137.d	37	1148349012-A	1		WATER	8/11/14 6:51 PM	<2	
1138.d	38	1148349001-E	1		WATER	8/11/14 7:10 PM	<2	
1139.d	39	1148349002-A	1		WATER	8/11/14 7:29 PM	<2	
1140.d	40	R	1			8/11/14 7:48 PM	N/A	
1141.d	41	CCV	1			8/11/14 8:08 PM	N/A	

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1142.d	42	R	1			8/11/14 8:27 PM	N/A	
1143.d	43	R	1			8/11/14 8:46 PM	N/A	
1144.d	44	R	1			8/11/14 9:05 PM	N/A	
1145.d	45	R	1			8/11/14 9:24 PM	N/A	
1146.d	46	IB	1			8/11/14 9:43 PM	N/A	
1147.d	47	NAS	1			8/11/14 10:02 PM	N/A	
1148.d	48	CCV	1			8/11/14 10:21 PM	N/A	
1149.d	49	R	1			8/11/14 10:40 PM	N/A	
1150.d	50	MB	1			8/11/14 11:00 PM	N/A	
1151.d	51	LCS GRO	1			8/11/14 11:19 PM	N/A	
1152.d	52	LCSD GRO	1			8/11/14 11:38 PM	N/A	
1153.d	53	1143566011-A TB	1		SOIL	8/11/14 11:57 PM	N/A	
1154.d	54	1143656001-A TB	1		SOIL	8/12/14 12:16 AM	N/A	
1155.d	55	1143656002-A TB	1		SOIL	8/12/14 12:35 AM	N/A	
1156.d	56	1143579060-B	1		SOIL	8/12/14 12:54 AM	N/A	
1157.d	57	1143579061-B	1		SOIL	8/12/14 1:14 AM	N/A	
1158.d	58	1143579062-B	1		SOIL	8/12/14 1:33 AM	N/A	
1159.d	59	1143579063-B	1		SOIL	8/12/14 1:52 AM	N/A	
1160.d	60	1143579067-B	1		SOIL	8/12/14 2:11 AM	N/A	
1161.d	61	1143579068-B	1		SOIL	8/12/14 2:30 AM	N/A	
1162.d	62	1143579072-B	1		SOIL	8/12/14 2:49 AM	N/A	
1163.d	63	1143579073-B	1		SOIL	8/12/14 3:09 AM	N/A	
1164.d	64	1143566001-C	1		SOIL	8/12/14 3:28 AM	N/A	
1165.d	65	1143566002-C	1		SOIL	8/12/14 3:47 AM	N/A	
1166.d	66	1143566003-C	1		SOIL	8/12/14 4:06 AM	N/A	
1167.d	67	1143566004-C	1		SOIL	8/12/14 4:25 AM	N/A	
1168.d	68	R	1			8/12/14 4:44 AM	N/A	
1169.d	69	CCV	1			8/12/14 5:03 AM	N/A	
1170.d	70	1143566005-C	1		SOIL	8/12/14 5:22 AM	N/A	
1171.d	71	1143554001-C	1		SOIL	8/12/14 5:41 AM	N/A	
1172.d	72	1143554002-C	1		SOIL	8/12/14 6:01 AM	N/A	
1173.d	73	1143554003-C	1		SOIL	8/12/14 6:20 AM	N/A	
1174.d	74	1143656003-B	1		SOIL	8/12/14 6:39 AM	N/A	
1175.d	75	R	1			8/12/14 6:58 AM	N/A	
1176.d	76	CCV	1			8/12/14 7:17 AM	N/A	
1177.d	77	R	1			8/12/14 7:36 AM	N/A	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:30 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 08:48:15 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33514988	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46399663	54.732 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.46%
10) S	FID-1,4-DFB #2	3.747	16788734	49.205 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.41%
11) S	FID-TRI-ALPHA #2	4.680	11770893	48.022 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.04%
13) S	FID-4-BFB<Surr> #2	8.671	10564092	47.999 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.00%
	Target Compounds			
2)	PID-benzene	3.318	14975	0.007 ppb
4)	PID-toluene	5.905	22589	0.011 ppb
5)	PID-ethylbenzene	7.664	40829	0.022 ppb
6)	PID-p&m-xylene	7.915	63791	0.029 ppb
7)	PID-o-xylene	8.298	10381	0.006 ppb
8)	PID-BFB<Surr>	8.670	98758041	51.881 ppb
12) H	FID-GRO #2	5.717	5959936	20.068 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

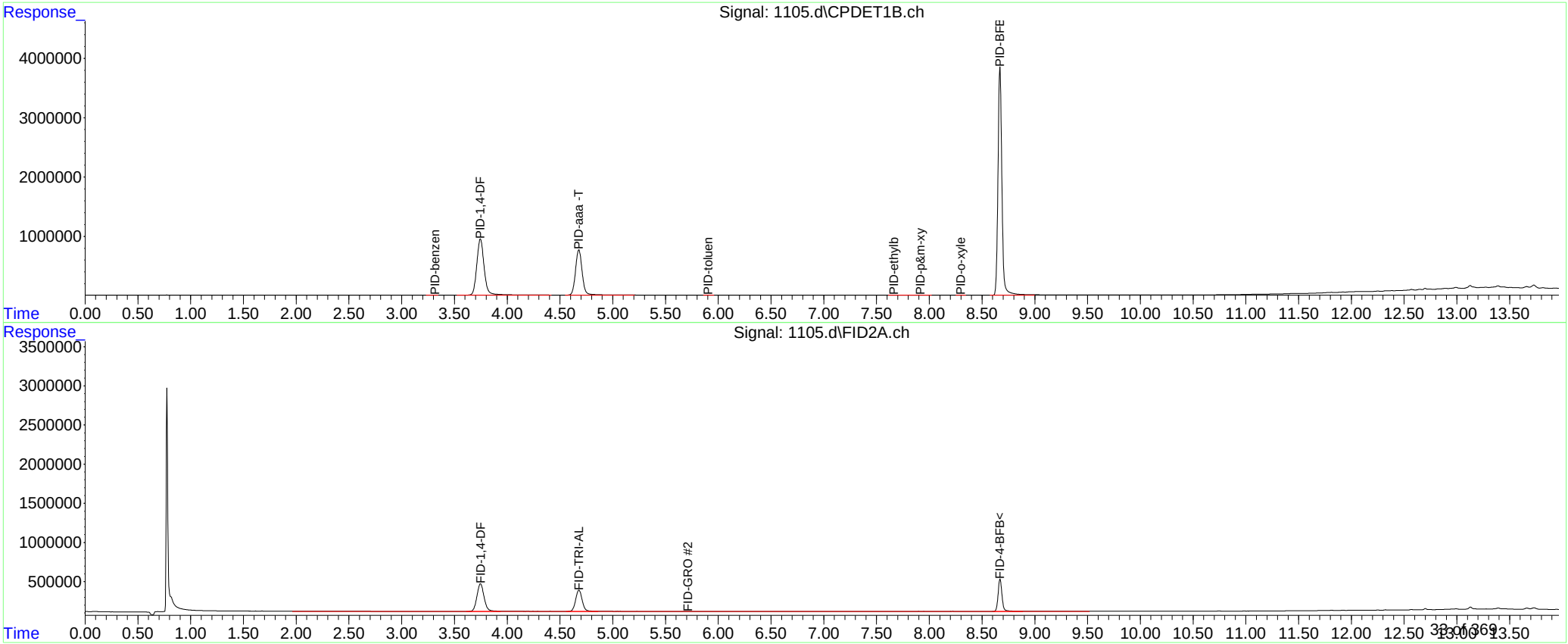
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:30 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 08:48:15 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 9:35 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	34410799	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47598891	54.685 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.37%
10) S	FID-1,4-DFB #2	3.747	18923728	55.463 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.93%
11) S	FID-TRI-ALPHA #2	4.681	11744112	47.913 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.83%
13) S	FID-4-BFB<Surr> #2	8.670	10925332	49.654 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.31%
	Target Compounds			
2)	PID-benzene	3.324	39404485	17.115 ppb
4)	PID-toluene	5.900	472583362	217.838 ppb
5)	PID-ethylbenzene	7.656	57485200	29.833 ppb
6)	PID-p&m-xylene	7.904	256478376	115.350 ppb
7)	PID-o-xylene	8.300	80643416	42.362 ppb
8)	PID-BFB<Surr>	8.669	101464433	51.915 ppb
12) H	FID-GRO #2	5.717	254191788	855.882 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

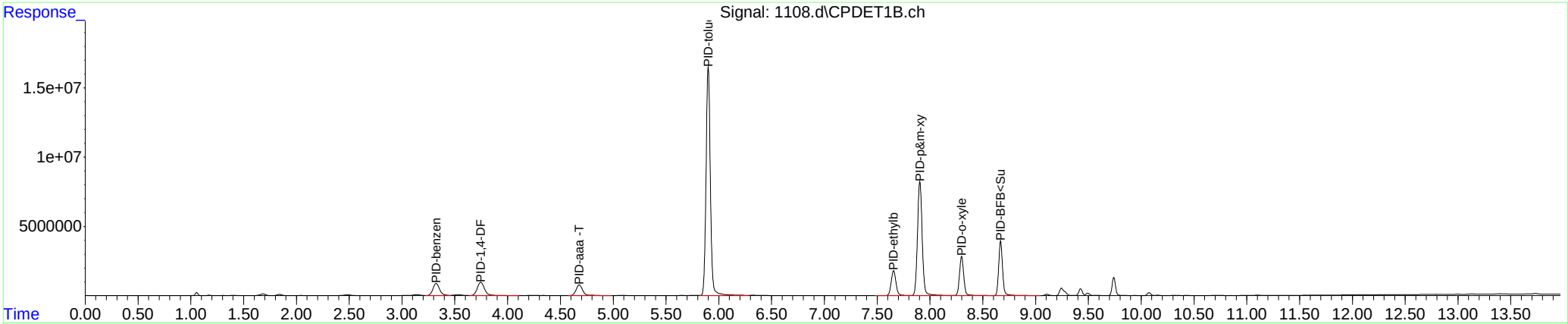
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 9:35 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1119.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 1:05 pm
Operator : ST
Sample : 1143647005-D
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 13:42:34 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33117937	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.745	46458473	55.458 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.92%
10) S	FID-1,4-DFB #2	3.746	16818675	49.293 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.59%
11) S	FID-TRI-ALPHA #2	4.680	11582441	47.254 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.51%
13) S	FID-4-BFB<Surr> #2	8.671	10452268	47.486 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.97%
	Target Compounds			
2)	PID-benzene	3.315	22775	0.010 ppb
4)	PID-toluene	5.903	102198	0.049 ppb
5)	PID-ethylbenzene	7.662	62970	0.034 ppb
6)	PID-p&m-xylene	7.910	400809	0.187 ppb
7)	PID-o-xylene	8.302	109612	0.060 ppb
8)	PID-BFB<Surr>	8.670	98756947	52.503 ppb
12) H	FID-GRO #2	5.717	15225617	51.266 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

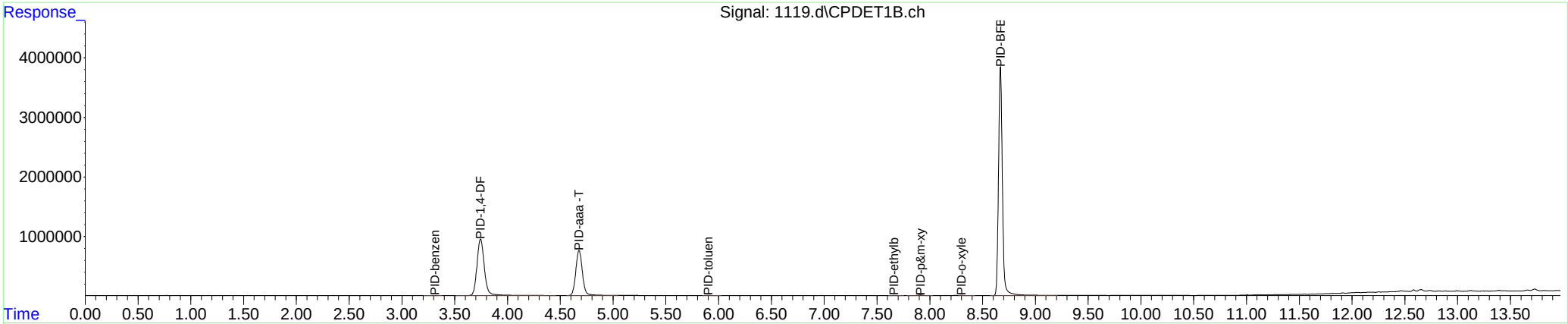
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1119.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 1:05 pm
Operator : ST
Sample : 1143647005-D
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 13:42:34 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1120.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 1:25 pm
Operator : ST
Sample : 1143647001-D
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 13:43:18 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
Internal Standards				
1) I	PID-aaa -TFT	4.679	33777558	50.000 ppb
System Monitoring Compounds				
3) S	PID-1,4-DFB<Surr>	3.746	48175013	56.384 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	112.77%
10) S	FID-1,4-DFB #2	3.747	14668023	42.990 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	85.98%
11) S	FID-TRI-ALPHA #2	4.680	11987969	48.908 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.82%
13) S	FID-4-BFB<Surr> #2	8.673	13264487	60.372 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	120.74%
Target Compounds				
2)	PID-benzene	3.332	118044	0.052 ppb
4)	PID-toluene	5.902	364072	0.171 ppb
5)	PID-ethylbenzene	7.655	2098981	1.110 ppb
6)	PID-p&m-xylene	7.916	5634281	2.582 ppb
7)	PID-o-xylene	8.306	3223907	1.725 ppb
8)	PID-BFB<Surr>	8.670	107377712	55.971 ppb
12) H	FID-GRO #2	5.717	86945797	292.753 ppb
SemiQuant Compounds - Not Calibrated on this Instrument				

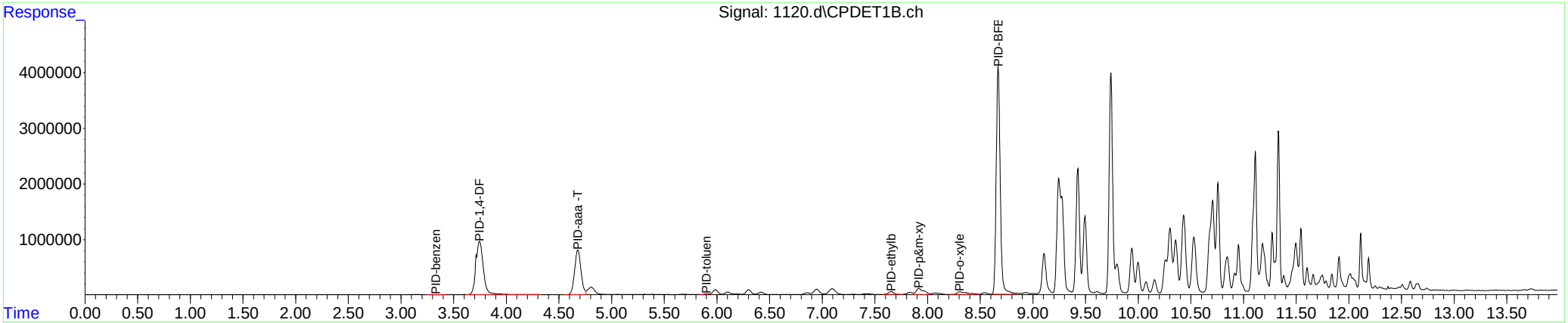
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1120.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 1:25 pm
Operator : ST
Sample : 1143647001-D
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 13:43:18 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1121.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 1:44 pm
Operator : ST
Sample : 1143647002-D
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 14:25:34 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33559458	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46027753	54.221 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	108.44%
10) S	FID-1,4-DFB #2	3.747	16697145	48.937 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	97.87%
11) S	FID-TRI-ALPHA #2	4.680	11698393	47.727 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.45%
13) S	FID-4-BFB<Surr> #2	8.671	10847847	49.299 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.60%
	Target Compounds			
2)	PID-benzene	3.315	10361	0.005 ppb
4)	PID-toluene	5.905	98510	0.047 ppb
5)	PID-ethylbenzene	7.752	39717	0.021 ppb
6)	PID-p&m-xylene	7.849	516041	0.238 ppb
7)	PID-o-xylene	8.359	1566370	0.844 ppb
8)	PID-BFB<Surr>	8.670	99566408	52.237 ppb
12) H	FID-GRO #2	5.717	21596452	72.717 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

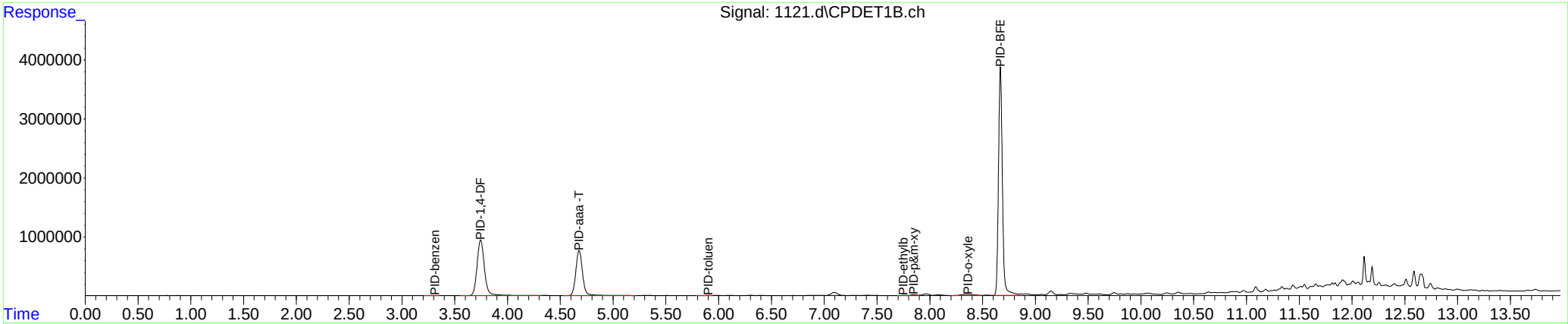
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1121.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 1:44 pm
Operator : ST
Sample : 1143647002-D
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 14:25:34 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1122.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 2:03 pm
Operator : ST
Sample : 1143647003-D
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 14:26:25 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.681	34811576	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46216544	52.485 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	104.97%
10) S	FID-1,4-DFB #2	3.747	17659283	51.757 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	103.51%
11) S	FID-TRI-ALPHA #2	4.681	13150846	53.652 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	107.30%
13) S	FID-4-BFB<Surr> #2	8.676	16657878	75.921 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	151.84%#
	Target Compounds			
2)	PID-benzene	3.322	142751	0.061 ppb
4)	PID-toluene	5.898	159330	0.073 ppb
5)	PID-ethylbenzene	7.656	5088419	2.610 ppb
6)	PID-p&m-xylene	7.914	13804442	6.137 ppb
7)	PID-o-xylene	8.304	5712673	2.966 ppb
8)	PID-BFB<Surr>	8.672	117751291	59.555 ppb
12) H	FID-GRO #2	5.717	146886718	494.578 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

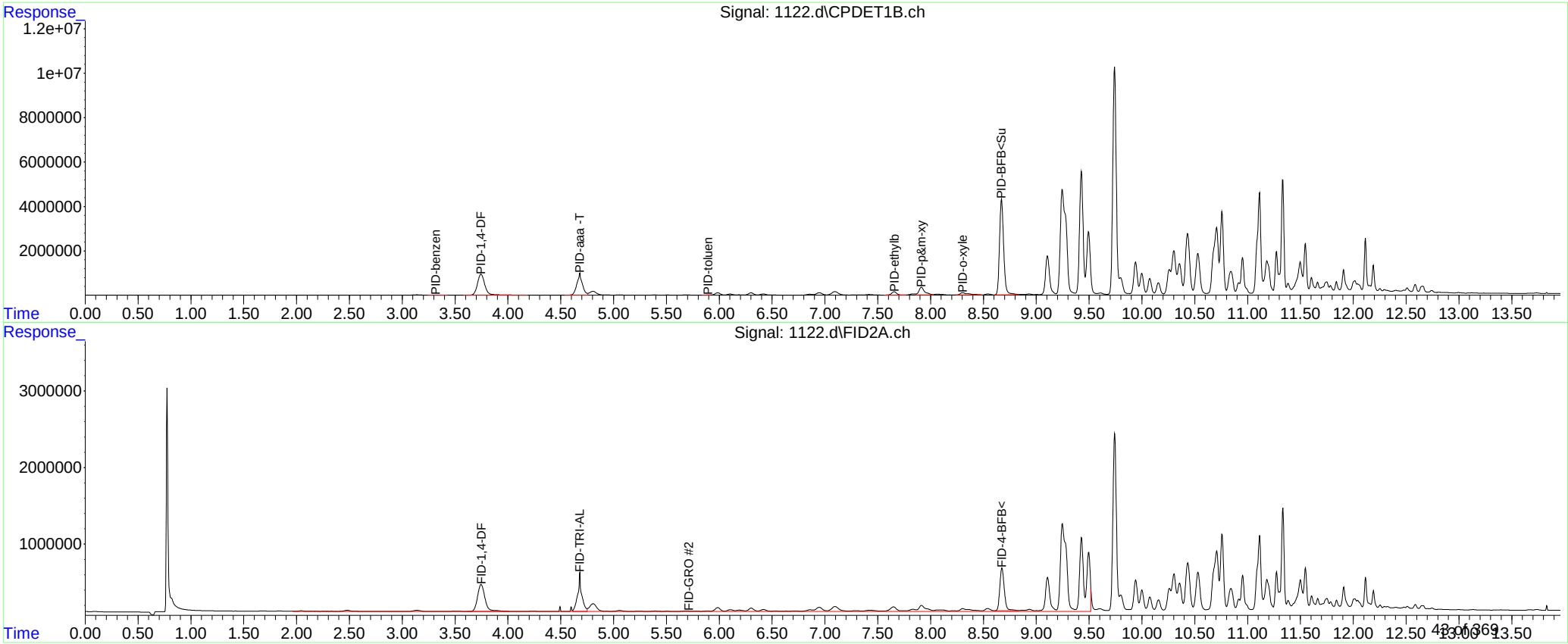
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1122.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 2:03 pm
Operator : ST
Sample : 1143647003-D
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 14:26:25 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1123.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 2:22 pm
Operator : ST
Sample : 1143647004-B
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 14:58:09 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33267911	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46691692	55.485 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.97%
10) S	FID-1,4-DFB #2	3.747	16853760	49.396 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.79%
11) S	FID-TRI-ALPHA #2	4.680	11478278	46.829 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.66%
13) S	FID-4-BFB<Surr> #2	8.670	11059765	50.270 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.54%
	Target Compounds			
2)	PID-benzene	3.323	39304	0.018 ppb
4)	PID-toluene	5.901	5121120	2.442 ppb
5)	PID-ethylbenzene	7.661	115560	0.062 ppb
6)	PID-p&m-xylene	7.910	306166	0.142 ppb
7)	PID-o-xylene	8.304	189417	0.103 ppb
8)	PID-BFB<Surr>	8.669	98929676	52.357 ppb
12) H	FID-GRO #2	5.717	13950170	46.971 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

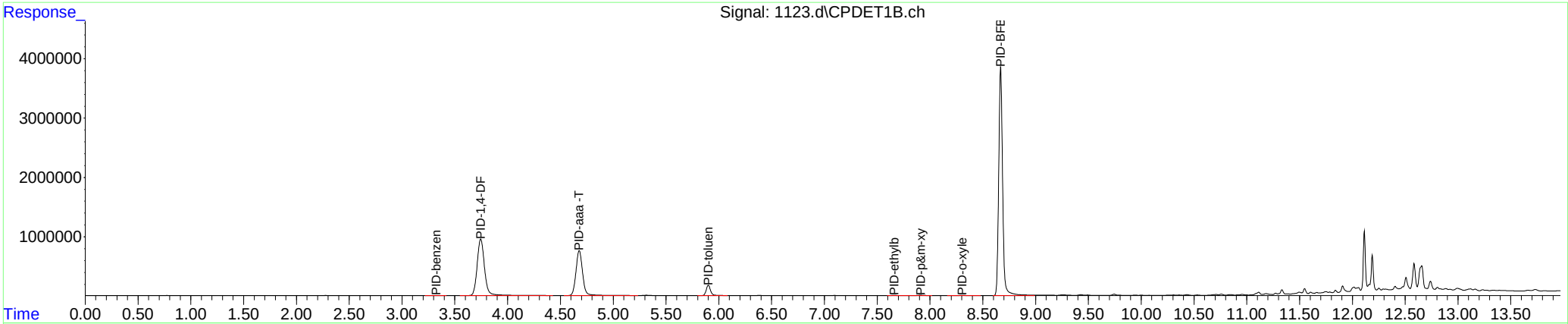
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1123.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 2:22 pm
Operator : ST
Sample : 1143647004-B
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 14:58:09 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1129.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:17 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 16:32:03 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	32574014	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47732265	57.930 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	115.86%
10) S	FID-1,4-DFB #2	3.748	18892184	55.370 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.74%
11) S	FID-TRI-ALPHA #2	4.681	11386370	46.454 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.91%
13) S	FID-4-BFB<Surr> #2	8.671	11307816	51.407 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	102.81%
	Target Compounds			
2)	PID-benzene	3.325	42212667	19.369 ppb
4)	PID-toluene	5.901	495566808	241.313 ppb
5)	PID-ethylbenzene	7.656	59804555	32.787 ppb
6)	PID-p&m-xylene	7.905	271047920	128.777 ppb
7)	PID-o-xylene	8.300	84340248	46.803 ppb
8)	PID-BFB<Surr>	8.670	105300605	56.916 ppb
12) H	FID-GRO #2	5.717	286031357	963.088 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

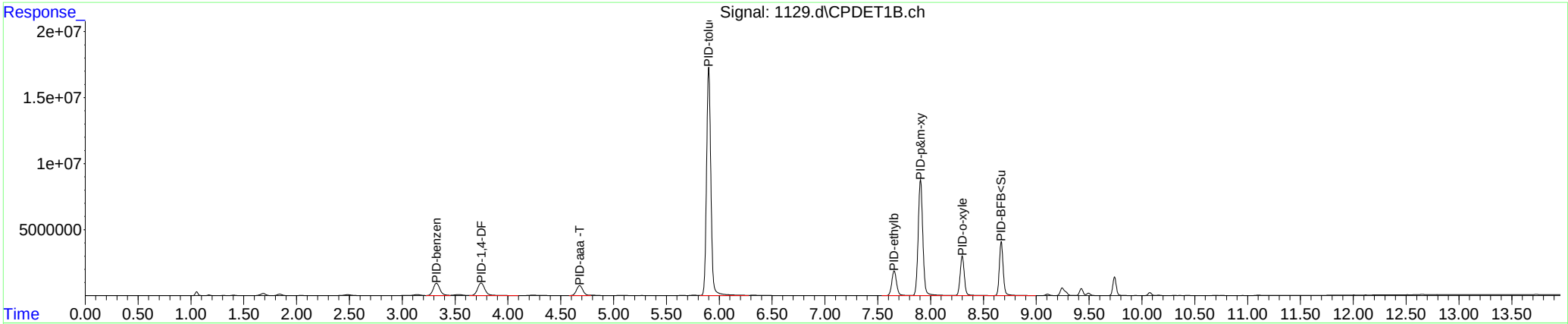
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1129.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:17 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 16:32:03 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1141.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:08 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 41 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:24:10 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33491778	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48359986	57.084 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	114.17%
10) S	FID-1,4-DFB #2	3.747	19491684	57.127 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	114.25%
11) S	FID-TRI-ALPHA #2	4.681	11808116	48.174 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.35%
13) S	FID-4-BFB<Surr> #2	8.671	11008394	50.035 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.07%
	Target Compounds			
2)	PID-benzene	3.324	42798127	19.100 ppb
4)	PID-toluene	5.901	503196170	238.314 ppb
5)	PID-ethylbenzene	7.656	61151144	32.607 ppb
6)	PID-p&m-xylene	7.905	275838930	127.462 ppb
7)	PID-o-xylene	8.300	85932161	46.379 ppb
8)	PID-BFB<Surr>	8.669	104766253	55.076 ppb
12) H	FID-GRO #2	5.717	283683598	955.183 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

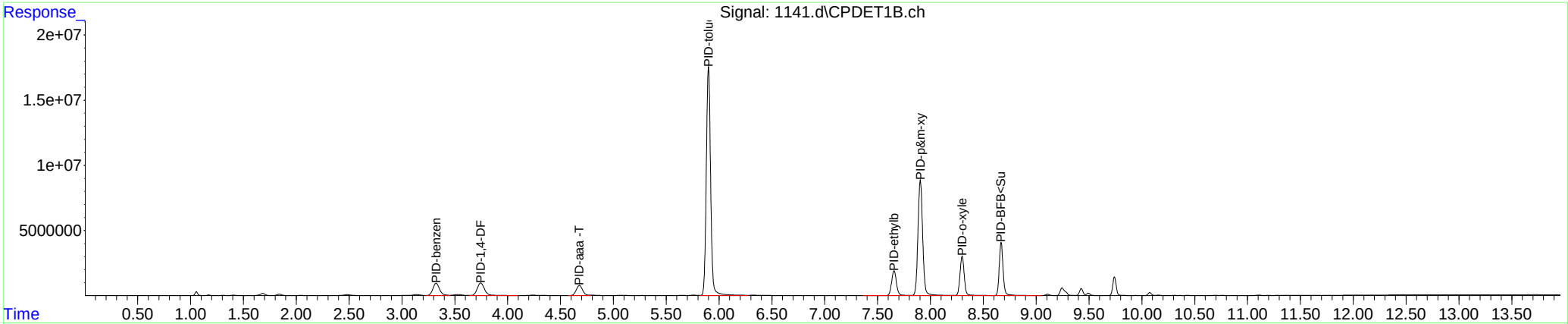
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1141.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:08 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 41 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:24:10 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



SGS North America Inc.
Calibration Review and Validation for:
Volatile Fuels - AK101 or 8015C and 8021B or 602

CDS Instrument/Date Code in YYYY-MMDD format (e.g., VHA2007-0507): VHA2014-0731

Contents:	Analyst's Review OK	Analyst's Review N/A	Peer Review OK	Peer Review N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Runlog	☑		☑	
QA-QC Check Report	☑		☑	
Chromatograms for IB, NAS, Cal Stds, and ICVs	☑		☑	
Validation:				
Dates are correct.	☑		☑	
IB and NAS have been run at beginning of sequence.	☑		☑	
The retention time window is set correctly for GRO: Beginning of C6 --> Beginning of C10	☑		☑	
Analyte RT windows are set correctly.	☑		☑	
Criteria of ± 0.05 met for surrogates for AK101 and 8015C (FID).	☑		☑	
IS Area updated, CC ISTD Area Report included.	☑		☑	
If the Calibration Fit type is Average RF:				
The percent RSD of the response factor is ≤ 20% for GRO by 8015C	☑	☐	☑	☐
The percent RSD of the response factor is ≤ 25% for GRO by AK101	☑	☐	☑	☐
The percent RSD of the response factor is ≤ 20% for BTEX by 8021B	☑	☐	☑	☐
The percent RSD of the response factor is ≤ 10% for BTEX by 602	☐	☑	☐	☑
If the Calibration Fit type is Linear, then there are at least 5 pts and $r^2 \geq 0.995$	☐	☑	☑	☐
If the Calibration Fit type is Quadratic, then there are at least 6 pts and $r^2 \geq 0.990$	☐	☑	☑	☐
Correct Calibration levels for LOQ.	☐	☐	☑	☐
The ICV has 75-125% recovery for GRO method AK101	☑	☐	☑	☐
The ICV has 80-120% recovery for GRO method 8015C	☑	☐	☑	☐
The ICV has 80-120% recovery for BTEX	☑	☐	☑	☐
Manual Integrations - explanations, before and after printouts	☐	☑	☐	☑
Hand calculations verified.	☑		☑	
	Initials:	ST	Initials:	CDE
	Date:	7/31/2014	Date:	8/1/2014

Hand calculate response factor of BTEX (any one compound) using RF = (As x Cis) / (Ais x Cs)

Shown: 0.5=3.025

Calculated: $\frac{895167 \times 50 / 29587460 \times 0.5}{3.02549}$

Hand calculate ICV concentration of GRO using Area/RF

Shown: 1908.566

Calculated: $\frac{566832663/296994}{1908.566}$

Notes:

Calibration Table Report
Method: VHA2014-0731.M
Title: GRO/BTEX by AK101/8015C and 8021B/EPA602
Last Calibration: Thu Jul 31 15:00:03 2014

Calibration Files

Compound	0.5 3108.d	1 3109.d	10 3110.d	50 3111.d	100 3112.d	G3 3120.d	G1 3118.d	G2 3119.d	G4 3121.d	G5 3122.d	G6 3123.d	150 3113.d	200 3114.d	240 3115.d	Avg	%RSD
PID-aaa -TFT	ISTD															
PID-benzene	3.025	3.041	2.580	3.359	3.542							3.729	3.701	3.784	3.345	12.806
PID-1,4-DFB<Surr>		0.918	1.146	1.359	1.381							1.417	1.368		1.265	15.443
PID-toluene		3.098	2.515	3.289	3.279							3.333	3.252	3.300	3.152	9.239
PID-ethylbenzene		3.144	2.185	2.808	2.861							2.909	2.830	2.862	2.800	10.478
PID-p&m-xylene		3.245	2.643	3.357	3.378							3.401	3.288	3.304	3.231	8.201
PID-o-xylene		2.727	2.332	2.859	2.886							2.902	2.815	2.841	2.766	7.218
PID-BFB<Surr>			2.793	2.938	2.847							2.863	2.758		2.840	2.430
Column #2															0.000	0.000
FID-1,4-DFB #2					#########										341197.000	0.000
FID-TRI-ALPHA #2			245112.566												245113.000	0.000
FID-GRO #2						295271.684	297909.887	296058.740	295082.639	297600.578	300040.628				296994.000	0.639
FID-4-BFB<Surr> #2		359246.881	218553.444	233041.308	#########							215916.016	220338.601		243990.000	23.283

Fri Aug 01 06:48:02 2014

Calibration Report VHA

Method Path : Z:\07\VHA\METHOD\
Method File : VHA2014-0731.M
Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
Last Update : Thu Jul 31 15:00:03 2014
Response Via : Initial Calibration

Calibration Files
0.5 =3108 1 =3109 10 =3110 50 =3111 100 =3112
G3 =3120 G1 =3118 G2 =3119 G4 =3121 G5 =3122
G6 =3123 150 =3113 200 =3114 240 =3115

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	PID-aaa -TFT			ISTD		
2)		PID-benzene	Avg	-----	3.3453	-----	0.1281
3)	S	PID-1,4-DFB<Surr>	Avg	-----	1.2648	-----	0.1544
4)		PID-toluene	Avg	-----	3.1522	-----	0.0924
5)		PID-ethylbenzene	Avg	-----	2.7998	-----	0.1048
6)		PID-p&m-xylene	Avg	-----	3.2308	-----	0.0820
7)		PID-o-xylene	Avg	-----	2.7661	-----	0.0722
8)		PID-BFB<Surr>	Avg	-----	2.8398	-----	0.0243

Signal #2

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
10)	S	FID-1,4-DFB #2	Avg	-----	0.5618	-----	-1.0000
11)	S	FID-TRI-ALPHA #2	Avg	-----	0.4135	-----	-1.0000
12)	H	FID-GRO #2	Avg	-----	-----	-----	0.0000
13)	S	FID-4-BFB<Surr> #2	Lin	0.0089	0.3481	-----	0.9998

VHA2014-0731.M Thu Jul 31 15:13:33 2014

GC QA-QC Check Report

Daily Calibration File : Z:\07\VHA\DATA\073114\3112.d
Time Acquired : 31 Jul 2014 11:15 am

30364300

File	Sample	Surrogate Recovery %				Internal Standard Responses
3104.d (fails)	IB	102	101	103	101	30859973
3105.d (fails)	NAS	104	101	106	106	30321438
3106.d (fails)	R	98	92	92	109	29448851
3107.d (fails)	R	0*	0*	100	-1*	29695478
3108.d (fails)	.5	0*	0*	100	-1*	29587460
3109.d (fails)	1	1*	2*	102	2*	29740481
3110.d (fails)	10	23*	20*	100	24*	29640118
3111.d (fails)	50	54*	49*	103	53	30247471
3112.d	100	109	100	103	99	30364289
3113.d	150	168*	153*	100	148	30575202
3114.d	200	270*	264*	104	252*	31354116
3115.d	240	0*	0*	102	8*	30934120
3116.d	R	0*	1*	102	-1*	29871991
3117.d	R	0*	0*	0*	-1*	32221*
3118.d	G1	0*	1*	1*	-0*	65908*
3119.d	G2	853*	0*	2*	0*	67277*
3120.d	G3	0*	0*	1*	2*	158583*
3121.d	G4	0*	0*	2*	7*	315026*
3122.d	G5	0*	0*	2*	11*	467266*
3123.d	G6	0*	0*	2*	15*	619533*
3124.d	R	105	99	97	105	29356580
3125.d	ICV BTES	118	108	105	120	31634188

```
--------------------------------------------------------------------------------
3126.d
         ICV GRO     114  135* 103  113    30284955
--------------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Thu Jul 31 16:49:54 2014  VHA
```

CC ISTD Areas

CC Data File : Z:\07\VHA\DATA\073114\3112.d
Date Acquired: 31 Jul 2014 11:15 am

ISTD Name	Response
PID-aaa -TFT	30364300

Surrogates

PID-1,4-DFB<Surr>
FID-1,4-DFB #2
FID-TRI-ALPHA #2
FID-4-BFB<Surr> #2

Instrument Runlog

Instrument: VHA **Calibration Date:** 7/31/2014 **Method:** AK101/BTEX
Operator: ST **Processed By:** ST **Posted By:** ST **Analytical Batch:**

Data Path: Z:\07\VHA\DATA\073114\

Daily:		As Needed:	
Verify System Date/Time	☑	Refill Water Tank	☐
General System Inspection	☑	Refill Standards	☐

Standards:							
	IS	VW8-83-3	**CCV2**	VW8-104-5		ICV BTEX	VF2-100-4
	Cent. DFB	VW8-84-6	**CCV**	VW8-101-1		ICV GRO	VW8-102-1
	BFB	VW8-62-3	**MeOH**	P-968		DFB_cal	VW8-84-2
	NAS	VW8-105-2					

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
3101.d	1	R	1			7/31/14 7:44 AM	N/A	
3102.d	2	R	1			7/31/14 8:03 AM	N/A	
3103.d	3	R	1			7/31/14 8:23 AM	N/A	
3104.d	4	IB	1			7/31/14 8:42 AM	N/A	
3105.d	5	NAS	1			7/31/14 9:01 AM	N/A	
3106.d	6	R	1			7/31/14 9:20 AM	N/A	
3107.d	7	R	1			7/31/14 9:39 AM	N/A	
3108.d	8	0.5	1	0.5uL CCV2 + 0.0uL BFB+0.0uL DFB --> 100 mL		7/31/14 9:58 AM	N/A	
3109.d	9	1	1	1.0uL CCV2 + 2uL BFB and DFB --> 100 mL		7/31/14 10:17 AM	N/A	
3110.d	10	10	1	5uL CCV2 + 12.5uL BFB and DFB--> 50 mL		7/31/14 10:36 AM	N/A	
3111.d	11	50	1	25uL CCV2 + 25uL BFB and DFB --> 50 mL		7/31/14 10:55 AM	N/A	
3112.d	12	100	1	50uL CCV2 + 50uL BFB and DFB--> 50 mL		7/31/14 11:15 AM	N/A	
3113.d	13	150	1	75uL CCV2 + 75uL BFB and DFB--> 50 mL		7/31/14 11:34 AM	N/A	
3114.d	14	200	1	100uL CCV2 + 125uL BFB and DFB --> 50 mL		7/31/14 11:53 AM	N/A	
3115.d	15	240	1	120uL CCV2 + 0.0 uL BFB and DFB --> 50 mL		7/31/14 12:12 PM	N/A	
3116.d	16	R	1			7/31/14 12:31 PM	N/A	
3117.d	17	R	1			7/31/14 12:50 PM	N/A	
3118.d	18	G1	1	10uL CCV --> 100 mL		7/31/14 1:09 PM	N/A	
3119.d	19	G2	1	40uL CCV --> 100 mL		7/31/14 1:28 PM	N/A	
3120.d	20	G3	1	50uL CCV --> 50 mL		7/31/14 1:47 PM	N/A	
3121.d	21	G4	1	100uL CCV --> 50 mL		7/31/14 2:07 PM	N/A	
3122.d	22	G5	1	150uL CCV --> 50 mL		7/31/14 2:26 PM	N/A	
3123.d	23	G6	1	200uL CCV --> 50 mL		7/31/14 2:45 PM	N/A	
3124.d	24	R	1			7/31/14 3:04 PM	N/A	
3125.d	25	ICV BTES	1			7/31/14 3:24 PM	N/A	
3126.d	26	ICV GRO	1	2100 TV PASSED=90.8%		7/31/14 3:43 PM	N/A	
3127.d	27	R	1			7/31/14 4:02 PM	N/A	
3128.d	28	R	1			7/31/14 4:21 PM		

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3104.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 8:42 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:02:33 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30859973	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.745	39888114	51.099 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	102.20%
10) S	FID-1,4-DFB #2	3.747	17243510	50.538 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	101.08%
11) S	FID-TRI-ALPHA #2	4.680	12648808	51.604 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.21%
13) S	FID-4-BFB<Surr> #2	8.670	11139746	50.636 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.27%
	Target Compounds			
2)	PID-benzene	3.325	17622	0.009 ppb
4)	PID-toluene	5.903	73882	0.038 ppb
5)	PID-ethylbenzene	7.660	74694	0.043 ppb
6)	PID-p&m-xylene	7.910	123155	0.062 ppb
7)	PID-o-xylene	8.304	26580	0.016 ppb
8)	PID-BFB<Surr>	8.669	88130328	50.281 ppb
12) H	FID-GRO #2	5.717	12532304	42.197 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

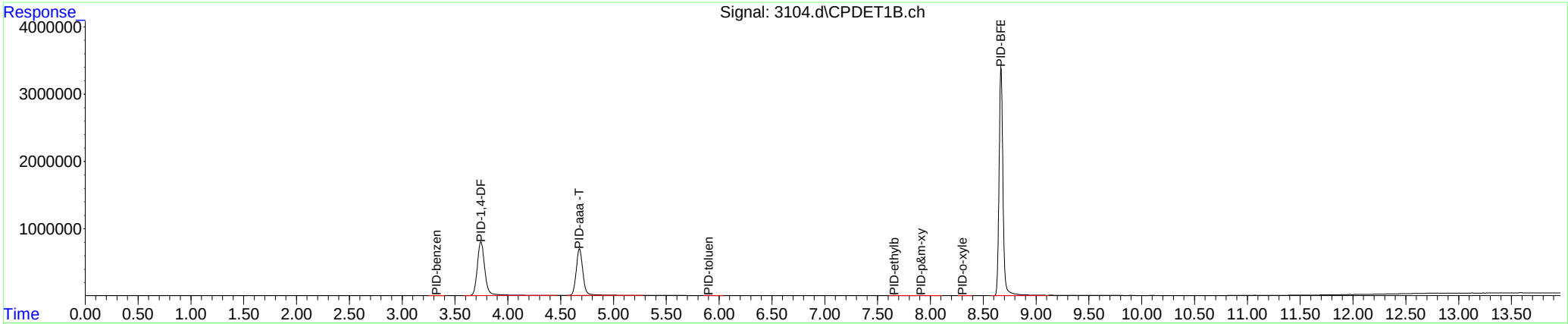
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3104.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 8:42 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:02:33 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:01 am
Operator : ST
Sample : NAS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:03:08 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30321438	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	39732436	51.803 ppb
Spiked Amount	50.000 Range	80 - 120	Recovery =	103.61%
10) S	FID-1,4-DFB #2	3.747	17241421	50.532 ppb
Spiked Amount	50.000 Range	80 - 120	Recovery =	101.06%
11) S	FID-TRI-ALPHA #2	4.680	12978805	52.950 ppb
Spiked Amount	50.000 Range	50 - 150	Recovery =	105.90%
13) S	FID-4-BFB<Surr> #2	8.670	11670725	53.069 ppb
Spiked Amount	50.000 Range	50 - 150	Recovery =	106.14%
	Target Compounds			
2)	PID-benzene	3.318	28695	0.014 ppb
4)	PID-toluene	5.891	262954	0.138 ppb
5)	PID-ethylbenzene	7.660	167689	0.099 ppb
6)	PID-p&m-xylene	7.910	114132	0.058 ppb
7)	PID-o-xylene	8.210	11354672	6.769 ppb
8)	PID-BFB<Surr>	8.669	92061241	53.457 ppb
12) H	FID-GRO #2	5.717	127360029	428.830 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

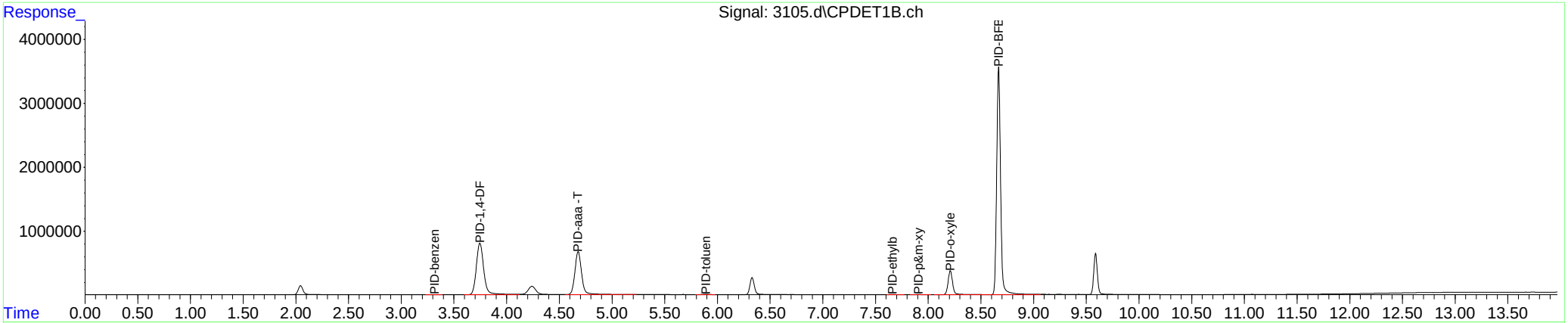
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

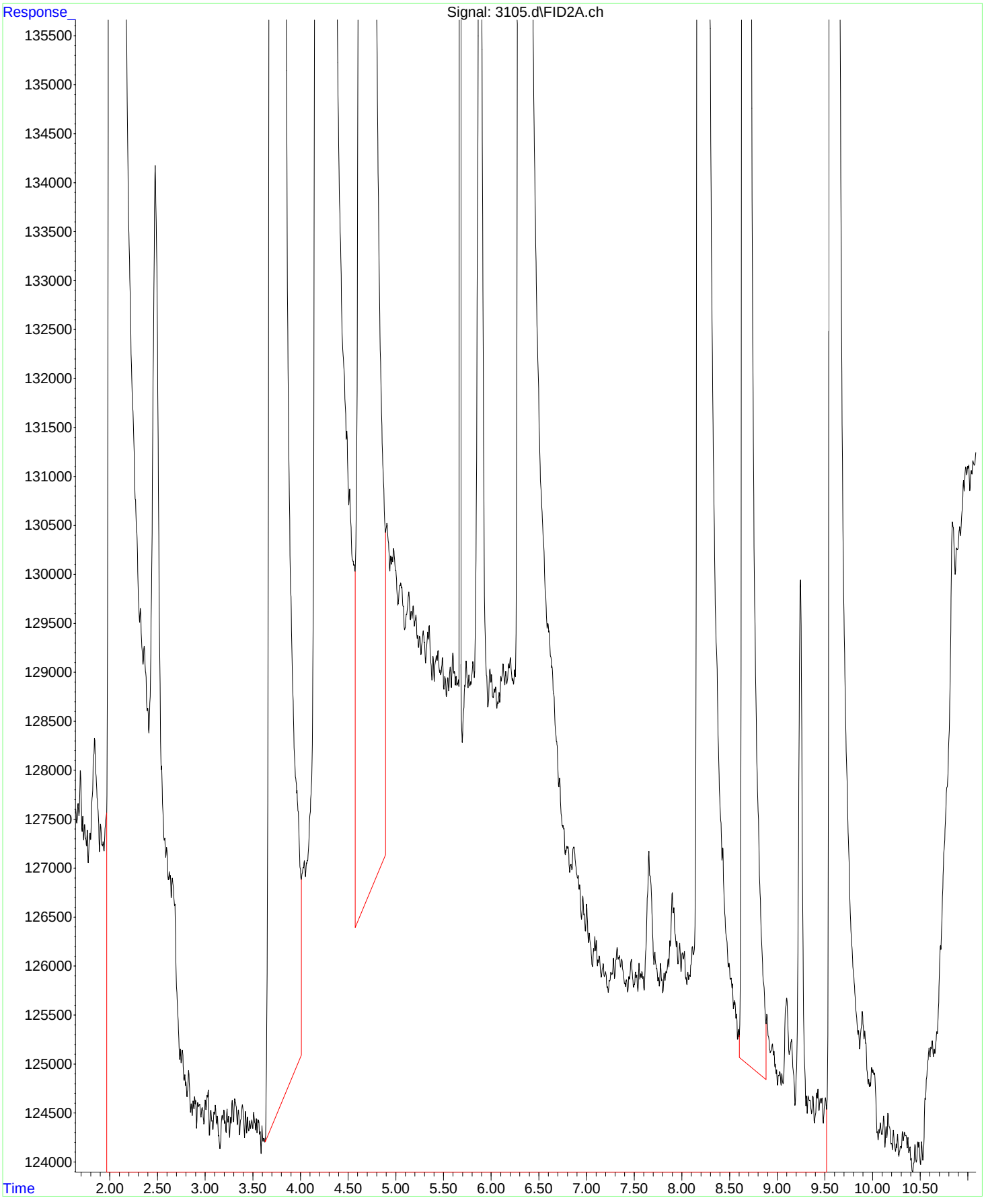
Data Path : Z:\07\VHA\DATA\073114\
Data File : 3105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:01 am
Operator : ST
Sample : NAS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:03:08 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



File :Z:\07\VHA\DATA\073114\3105.d
Operator : ST
Acquired : 31 Jul 2014 9:01 am using AcqMethod VHA_ACQ 2012.M
Instrument : VHA
Sample Name: NAS
Misc Info :
Vial Number: 5



Area Percent Report

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On   : 31 Jul 2014   9:01 am
Sample   : NAS
Misc   :
ALS Vial : 5   Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e

Method   : Z:\07\VHA\METHOD\VHA2014-0731.M
Title   : GRO/BTEX by AK101/8015C and 8021B/EPA602

Signal #1 : CPDET1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.045	1.938	2.305	PV	140028	4595645	4.99%	2.179%
2	2.311	2.305	2.405	VB	514	15933	0.02%	0.008%
3	2.473	2.405	2.558	BV	782	29590	0.03%	0.014%
4	3.318	3.226	3.390	VV	661	28695	0.03%	0.014%
5	3.746	3.591	4.121	PV	806392	39732436	43.16%	18.839%
6	4.241	4.121	4.556	VV	130559	7275168	7.90%	3.450%
7	4.679	4.556	5.231	VV	671846	30321438	32.94%	14.377%
8	5.241	5.231	5.274	VV	1210	27599	0.03%	0.013%
9	5.306	5.274	5.439	VV	928	54076	0.06%	0.026%
10	5.675	5.611	5.723	BB	5638	35270	0.04%	0.017%
11	5.891	5.789	5.979	PV	7365	262954	0.29%	0.125%
12	6.329	6.236	6.591	PV	267650	8068591	8.76%	3.826%
13	6.623	6.591	6.672	VV	1349	53583	0.06%	0.025%
14	6.715	6.672	6.802	VV	777	35950	0.04%	0.017%
15	7.557	7.507	7.602	BV	467	13489	0.01%	0.006%
16	7.660	7.602	7.773	VV	4936	167689	0.18%	0.080%
17	7.910	7.827	8.026	VV	3090	114132	0.12%	0.054%
18	8.210	8.055	8.593	BV	376236	11354672	12.33%	5.384%
19	8.669	8.593	9.064	VV	3553656	92061241	100.00%	43.651%
20	9.093	9.064	9.129	VV	4613	169976	0.18%	0.081%
21	9.148	9.129	9.195	VV	4208	142604	0.15%	0.068%
22	9.243	9.195	9.327	VV	6981	298540	0.32%	0.142%
23	9.336	9.327	9.344	VV	2116	21371	0.02%	0.010%
24	9.354	9.344	9.380	VV	2105	43552	0.05%	0.021%
25	9.427	9.380	9.522	VV	3842	184960	0.20%	0.088%
26	9.588	9.522	9.854	VV	641577	15745034	17.10%	7.466%
27	9.887	9.854	9.979	VV	1030	49133	0.05%	0.023%

Sum of corrected areas: 210903320

Signal #2 : FID2A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.089	0.053	0.253	PV	4698	179392	0.52%	0.096%
2	0.350	0.325	0.373	PV	348	5230	0.02%	0.003%
3	1.693	1.678	1.711	PV	529	5102	0.01%	0.003%
4	1.842	1.800	1.893	VV	1150	35115	0.10%	0.019%
5	2.046	1.940	2.314	VV	1084230	34438071	100.00%	18.422%
6	2.322	2.314	2.350	VV	3269	65826	0.19%	0.035%
7	2.362	2.350	2.394	VV	2955	72183	0.21%	0.039%
8	2.399	2.394	2.411	VV	2388	22958	0.07%	0.012%
9	2.477	2.411	2.573	VV	8040	411045	1.19%	0.220%
10	3.747	3.627	4.010	PV	359813	17241421	50.07%	9.223%
11	4.041	4.010	4.054	VV	1910	48926	0.14%	0.026%
12	4.242	4.054	4.509	VV	592612	30204437	87.71%	16.157%
13	4.516	4.509	4.572	VV	4616	154280	0.45%	0.083%
14	4.680	4.572	4.893	VV	288757	12978805	37.69%	6.943%
15	4.907	4.893	4.938	VV	3348	84340	0.24%	0.045%

16	4.947	4.938	4.967	VV	2927	50854	0.15%	0.027%
17	4.978	4.967	5.024	VV	2924	90002	0.26%	0.048%
18	5.052	5.024	5.094	VV	2408	94135	0.27%	0.050%
19	5.137	5.094	5.172	VV	2116	89808	0.26%	0.048%
20	5.600	5.583	5.642	VB	426	6885	0.02%	0.004%
21	5.675	5.647	5.698	BV	55710	351250	1.02%	0.188%
22	5.739	5.698	5.758	PV	872	19597	0.06%	0.010%
23	5.767	5.758	5.789	VV	772	13079	0.04%	0.007%
24	5.810	5.789	5.826	VV	974	19240	0.06%	0.010%
25	5.884	5.826	5.967	VV	10924	401482	1.17%	0.215%
26	6.126	6.092	6.143	VV	1434	39388	0.11%	0.021%
27	6.330	6.235	6.711	VV	839778	24820615	72.07%	13.277%
28	7.322	7.296	7.334	PV	177	2070	0.01%	0.001%
29	7.654	7.579	7.708	BV	1325	42219	0.12%	0.023%
30	7.900	7.824	7.960	VV	1109	49175	0.14%	0.026%
31	8.211	8.122	8.542	VV	870960	25326516	73.54%	13.548%
32	8.670	8.602	8.884	VV	457275	11670725	33.89%	6.243%
33	9.100	9.062	9.127	VV	1008	25171	0.07%	0.013%
34	9.244	9.189	9.316	PV	5368	141386	0.41%	0.076%
35	9.590	9.518	9.866	PV	1157976	27716458	80.48%	14.826%
36	9.894	9.866	9.912	VV	803	17695	0.05%	0.009%
37	9.919	9.912	9.968	VV	592	9285	0.03%	0.005%

Sum of corrected areas: 186944166

VHA2014-0731.M Thu Jul 31 15:13:20 2014

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3106.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:20 am
Operator : ST
Sample : R
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 10:24:19 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 06:55:22 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29448851	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	39522949	48.767 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	97.53%
10) S	FID-1,4-DFB #2	3.747	17069967	45.865 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	91.73%
11) S	FID-TRI-ALPHA #2	4.680	12024704	46.058 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.12%
13) S	FID-4-BFB<Surr> #2	8.670	11593778	54.320 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	108.64%
	Target Compounds			
2)	PID-benzene	3.333	19115	0.007 ppb
4)	PID-toluene	5.904	78921	0.031 ppb
5)	PID-ethylbenzene	7.660	279758	0.125 ppb
6)	PID-p&m-xylene	7.910	121306	0.046 ppb
7)	PID-o-xylene	8.300	33283	0.014 ppb
8)	PID-BFB<Surr>	8.669	91795401	68.239 ppb
12) H	FID-GRO #2	5.717	15407504	NoCal ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

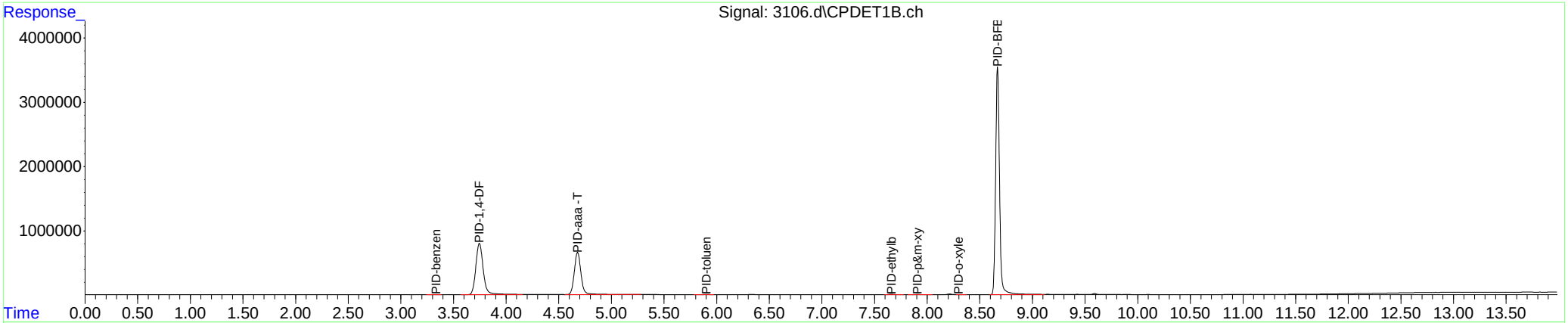
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3106.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:20 am
Operator : ST
Sample : R
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 10:24:19 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 06:55:22 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3107.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:39 am
Operator : ST
Sample : R
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:04:25 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29695478	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.752	42522	0.057 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.11%#
10) S	FID-1,4-DFB #2	3.740	5286	0.015 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.03%#
11) S	FID-TRI-ALPHA #2	4.680	12291590	50.147 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.29%
13) S	FID-4-BFB<Surr> #2	8.676	27200	N.D. ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
2)	PID-benzene	0.000	0	N.D. ppb
4)	PID-toluene	5.902	63694	0.034 ppb
5)	PID-ethylbenzene	7.660	193415	0.116 ppb
6)	PID-p&m-xylene	7.910	57856	0.030 ppb
7)	PID-o-xylene	8.302	18842	0.011 ppb
8)	PID-BFB<Surr>	8.675	268007	0.159 ppb
12) H	FID-GRO #2	5.717	13404337	45.133 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

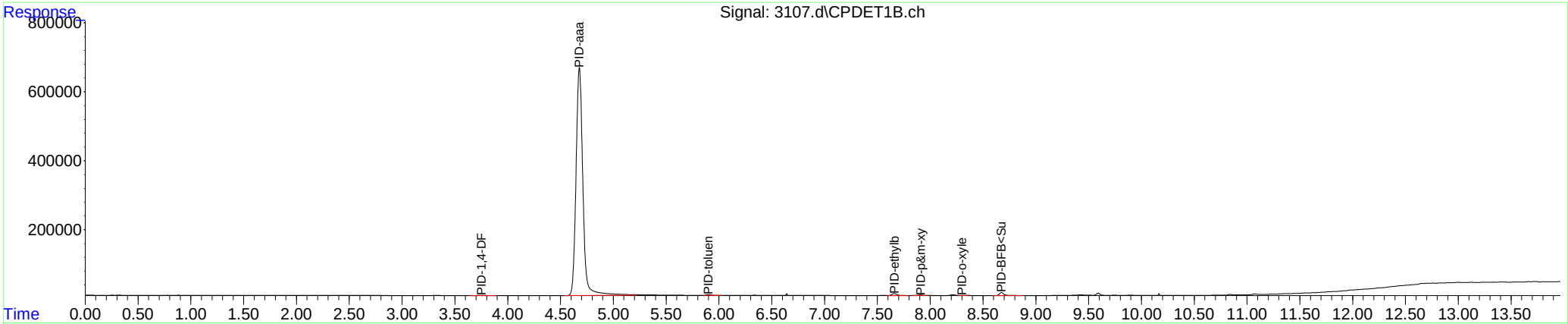
(f)=RT Delta > 1/2 Window (m)=manual int.

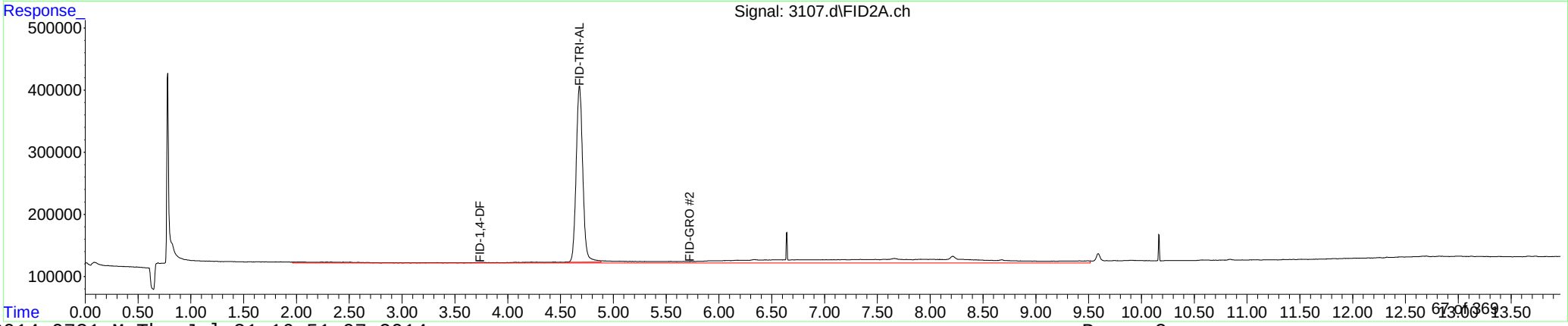
Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3107.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:39 am
Operator : ST
Sample : R
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:04:25 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:58 am
Operator : ST
Sample : .5
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:04:35 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29587460	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.680	12302373	50.191 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.38%
13) S	FID-4-BFB<Surr> #2	8.673	1915	N.D. ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
2)	PID-benzene	3.323	895167	0.452 ppb
4)	PID-toluene	5.902	984777	0.528 ppb
5)	PID-ethylbenzene	7.658	1200389	0.725 ppb
6)	PID-p&m-xylene	7.909	2018799	1.056 ppb
7)	PID-o-xylene	8.301	865987	0.529 ppb
8)	PID-BFB<Surr>	8.675	98770	0.059 ppb
12) H	FID-GRO #2	5.717	13790342	46.433 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

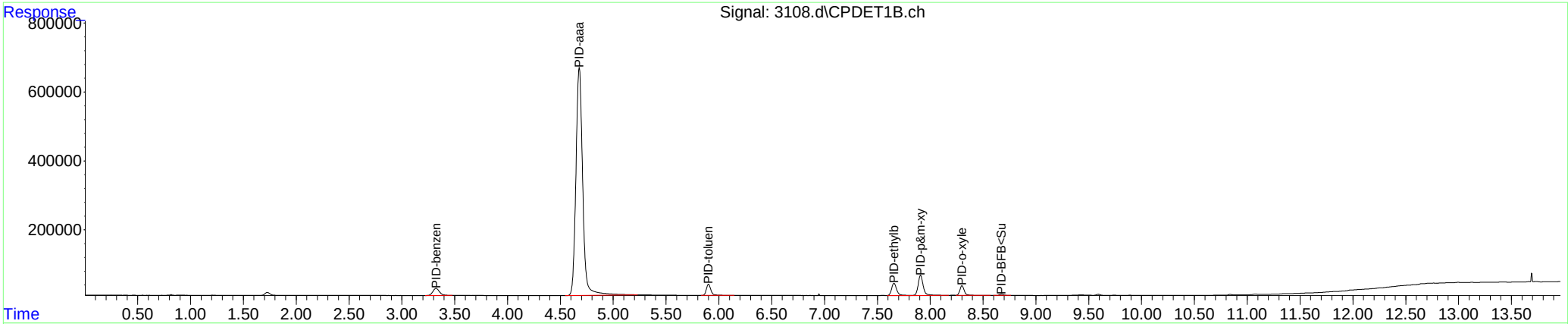
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 9:58 am
Operator : ST
Sample : .5
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:04:35 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3109.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:17 am
Operator : ST
Sample : 1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:05:36 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	29740481	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.749	545883	0.726 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	1.45%#
10) S	FID-1,4-DFB #2	3.746	268260	0.786 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	1.57%#
11) S	FID-TRI-ALPHA #2	4.681	12441975	50.760 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.52%
13) S	FID-4-BFB<Surr> #2	8.672	359247	1.240 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	2.48%#
	Target Compounds			
2)	PID-benzene	3.324	1809079	0.909 ppb
4)	PID-toluene	5.902	1842694	0.983 ppb
5)	PID-ethylbenzene	7.658	1870017	1.123 ppb
6)	PID-p&m-xylene	7.908	3859807	2.009 ppb
7)	PID-o-xylene	8.301	1621753	0.986 ppb
8)	PID-BFB<Surr>	8.672	1441290	0.853 ppb
12) H	FID-GRO #2	5.717	13301922	44.789 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

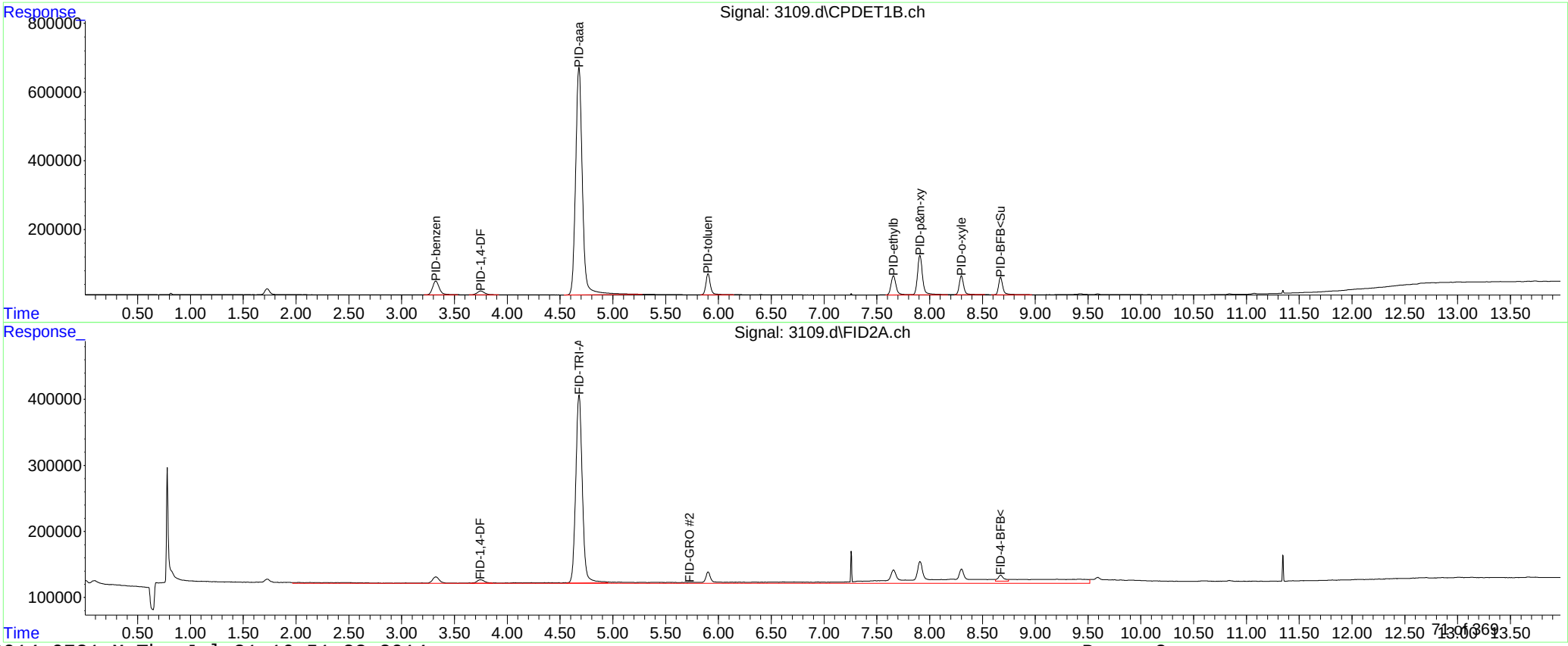
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3109.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:17 am
Operator : ST
Sample : 1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:05:36 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3110.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:36 am
Operator : ST
Sample : 10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:06:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.678	29640118	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	8491259	11.325 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	22.65%#
10) S	FID-1,4-DFB #2	3.747	3466409	10.160 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	20.32%#
11) S	FID-TRI-ALPHA #2	4.679	12255628	50.000 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.00%
13) S	FID-4-BFB<Surr> #2	8.670	2731918	12.111 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	24.22%#
	Target Compounds			
2)	PID-benzene	3.323	15297227	7.714 ppb
4)	PID-toluene	5.900	14906025	7.977 ppb
5)	PID-ethylbenzene	7.655	12954742	7.805 ppb
6)	PID-p&m-xylene	7.906	31331740	16.359 ppb
7)	PID-o-xylene	8.300	13826981	8.432 ppb
8)	PID-BFB<Surr>	8.669	20694960	12.293 ppb
12) H	FID-GRO #2	5.717	32202556	108.428 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

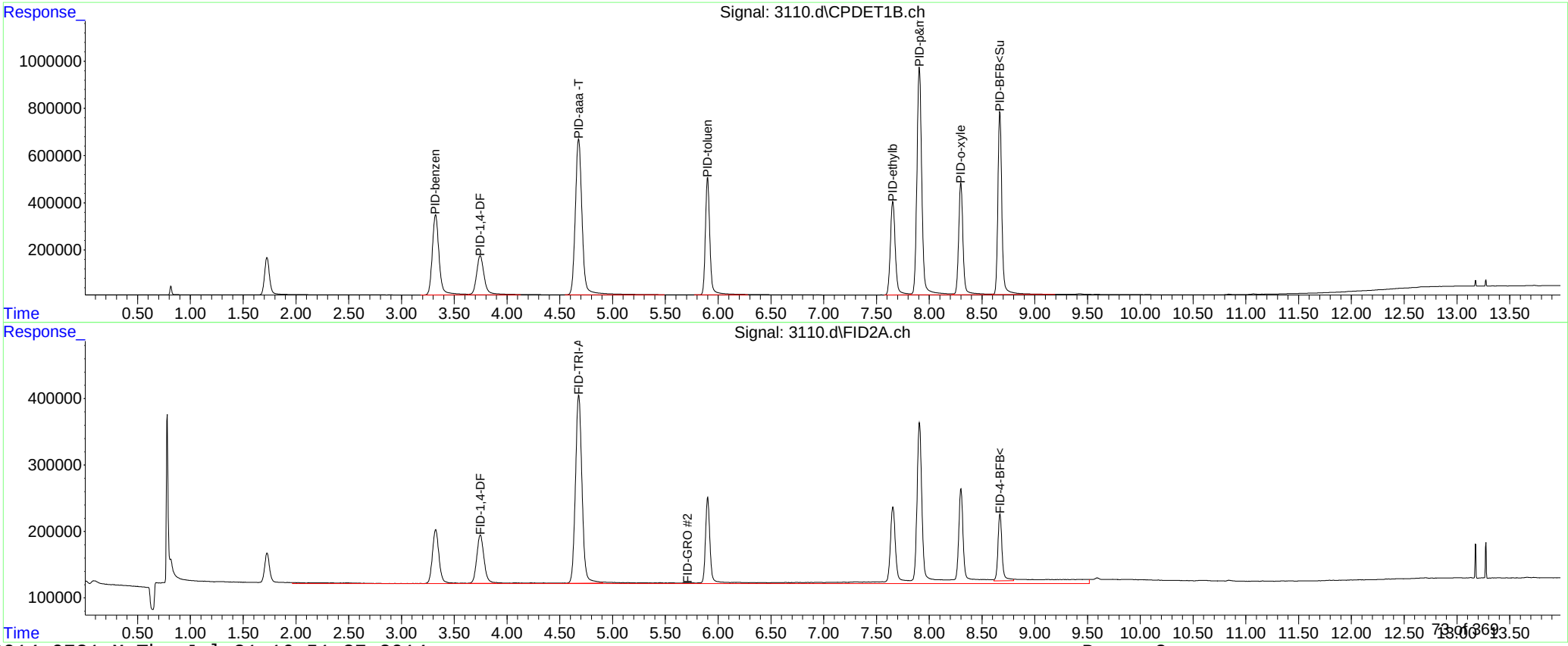
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3110.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:36 am
Operator : ST
Sample : 10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:06:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3111.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:55 am
Operator : ST
Sample : 50
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:06:41 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30247471	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	20548553	26.857 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	53.71%#
10) S	FID-1,4-DFB #2	3.747	8332197	24.420 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	48.84%#
11) S	FID-TRI-ALPHA #2	4.680	12665586	51.673 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.35%
13) S	FID-4-BFB<Surr> #2	8.670	5826033	26.289 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	52.58%
	Target Compounds			
2)	PID-benzene	3.324	101587761	50.199 ppb
4)	PID-toluene	5.900	99495738	52.175 ppb
5)	PID-ethylbenzene	7.655	84931945	50.144 ppb
6)	PID-p&m-xylene	7.907	203079762	103.906 ppb
7)	PID-o-xylene	8.300	86483718	51.683 ppb
8)	PID-BFB<Surr>	8.669	44430611	25.863 ppb
12) H	FID-GRO #2	5.717	160404319	540.093 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

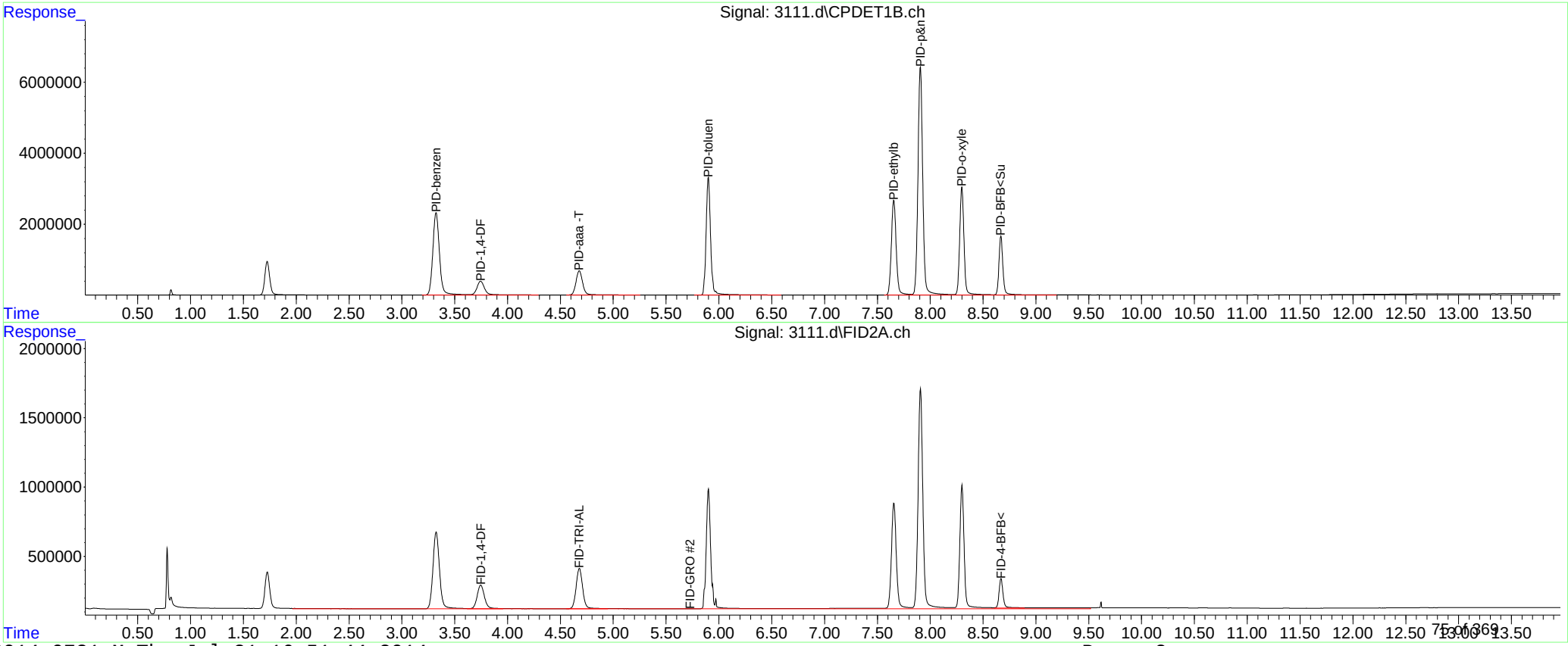
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3111.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 10:55 am
Operator : ST
Sample : 50
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:06:41 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3112.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:15 am
Operator : ST
Sample : 100
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:07:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	30364289	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	41936544	54.600 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.20%
10) S	FID-1,4-DFB #2	3.747	17059860	50.000 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	100.00%
11) S	FID-TRI-ALPHA #2	4.681	12634979	51.548 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.10%
13) S	FID-4-BFB<Surr> #2	8.670	10842061	49.272 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.54%
	Target Compounds			
2)	PID-benzene	3.325	215105203	105.883 ppb
4)	PID-toluene	5.900	199109657	104.011 ppb
5)	PID-ethylbenzene	7.655	173736569	102.181 ppb
6)	PID-p&m-xylene	7.907	410225401	209.085 ppb
7)	PID-o-xylene	8.300	175269730	104.340 ppb
8)	PID-BFB<Surr>	8.669	86446565	50.126 ppb
12) H	FID-GRO #2	5.717	313089047	1054.193 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

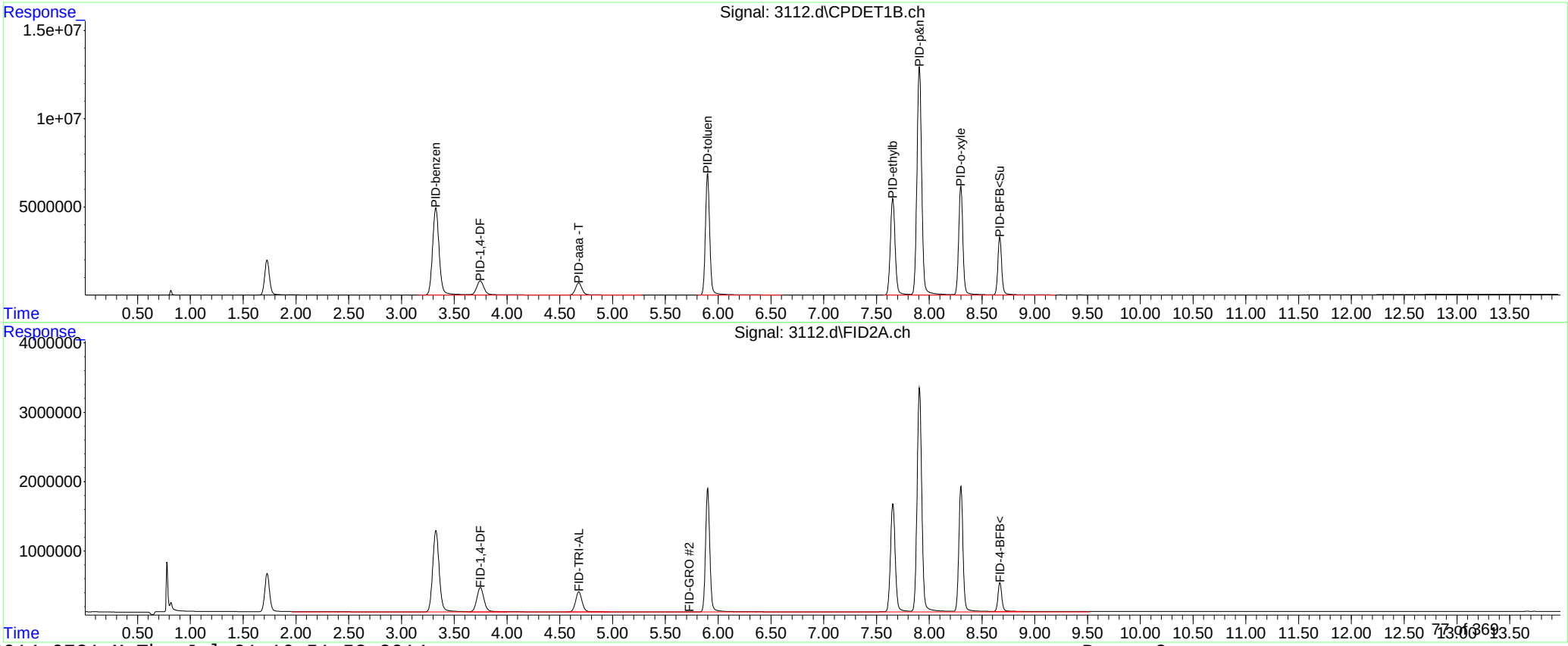
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3112.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:15 am
Operator : ST
Sample : 100
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:07:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3113.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:34 am
Operator : ST
Sample : 150
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:07:58 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	30575202	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	64975299	84.012 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	168.02%#
10) S	FID-1,4-DFB #2	3.748	26148740	76.638 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	153.28%#
11) S	FID-TRI-ALPHA #2	4.681	12216987	49.842 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.68%
13) S	FID-4-BFB<Surr> #2	8.670	16193701	73.794 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	147.59%
	Target Compounds			
2)	PID-benzene	3.327	342015854	167.192 ppb
4)	PID-toluene	5.901	305740351	158.611 ppb
5)	PID-ethylbenzene	7.656	266824487	155.846 ppb
6)	PID-p&m-xylene	7.907	623919725	315.807 ppb
7)	PID-o-xylene	8.300	266204807	157.381 ppb
8)	PID-BFB<Surr>	8.669	131315699	75.618 ppb
12) H	FID-GRO #2	5.717	475536894	1601.167 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

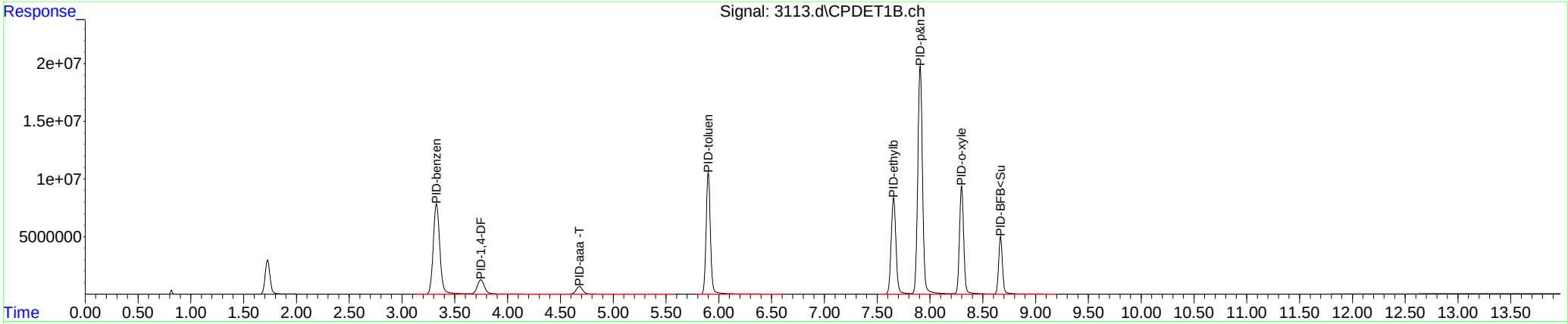
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3113.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:34 am
Operator : ST
Sample : 150
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:07:58 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3114.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:53 am
Operator : ST
Sample : 200
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:08:34 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	31354116	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	107257131	135.237 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	270.47%#
10) S	FID-1,4-DFB #2	3.747	45042898	132.014 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	264.03%#
11) S	FID-TRI-ALPHA #2	4.680	12702104	51.822 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.64%
13) S	FID-4-BFB<Surr> #2	8.670	27542325	125.794 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	251.59%#
	Target Compounds			
2)	PID-benzene	3.327	464218798	221.292 ppb
4)	PID-toluene	5.900	407882290	206.343 ppb
5)	PID-ethylbenzene	7.656	354954536	202.171 ppb
6)	PID-p&m-xylene	7.908	824785415	407.108 ppb
7)	PID-o-xylene	8.300	353035631	203.531 ppb
8)	PID-BFB<Surr>	8.669	216210470	121.411 ppb
12) H	FID-GRO #2	5.717	635392661	2139.412 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

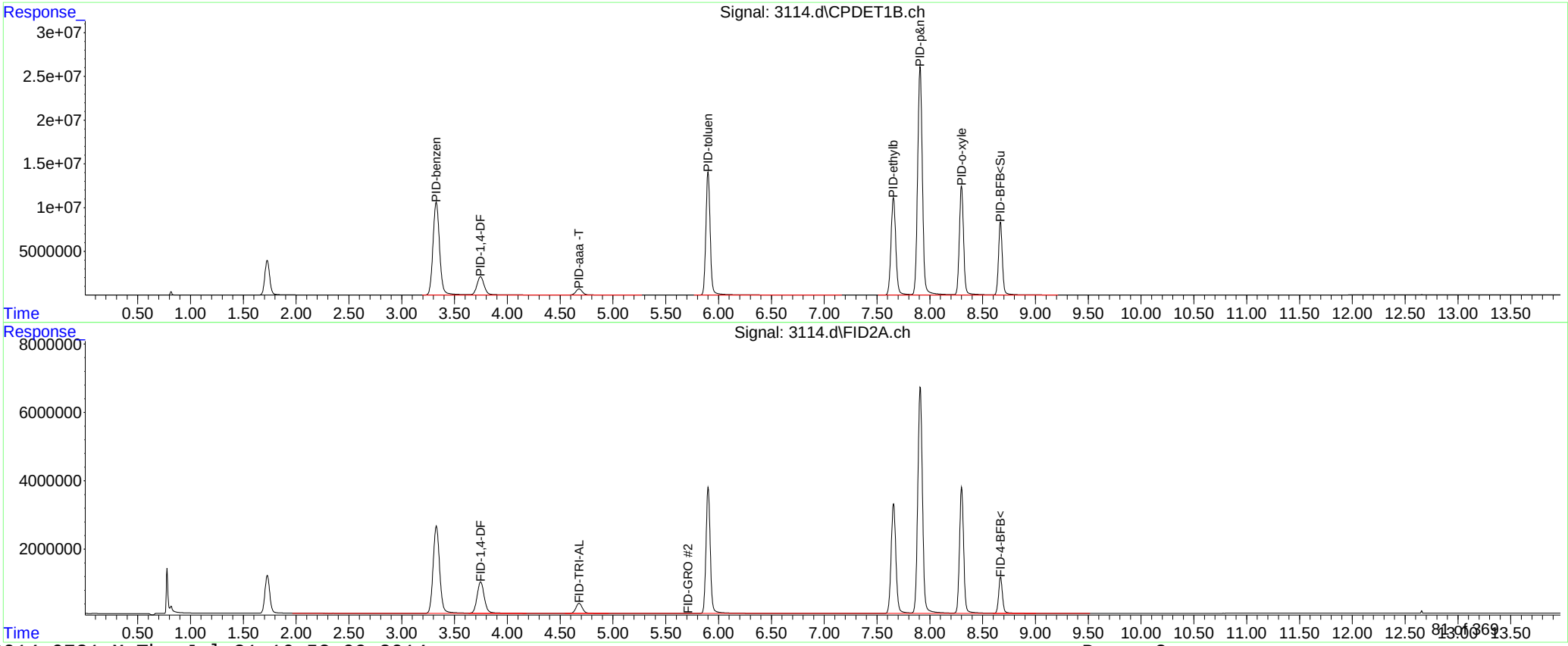
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3114.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 11:53 am
Operator : ST
Sample : 200
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:08:34 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3115.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:12 pm
Operator : ST
Sample : 240
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:09:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30934120	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.680	12484510	50.934 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	101.87%
13) S	FID-4-BFB<Surr> #2	8.682	1001528	4.183 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	8.37%#
	Target Compounds			
2)	PID-benzene	3.326	561865351	271.477 ppb
4)	PID-toluene	5.900	489961652	251.232 ppb
5)	PID-ethylbenzene	7.656	424897263	245.294 ppb
6)	PID-p&m-xylene	7.908	981324648	490.951 ppb
7)	PID-o-xylene	8.300	421859245	246.511 ppb
8)	PID-BFB<Surr>	8.678	5082627	2.893 ppb
12) H	FID-GRO #2	5.717	761592001	2564.334 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

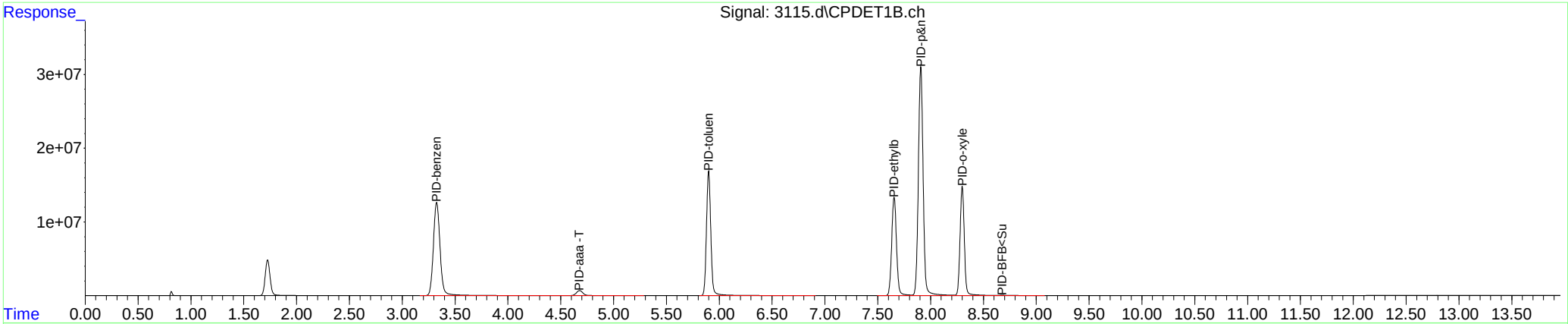
(f)=RT Delta > 1/2 Window (m)=manual int.

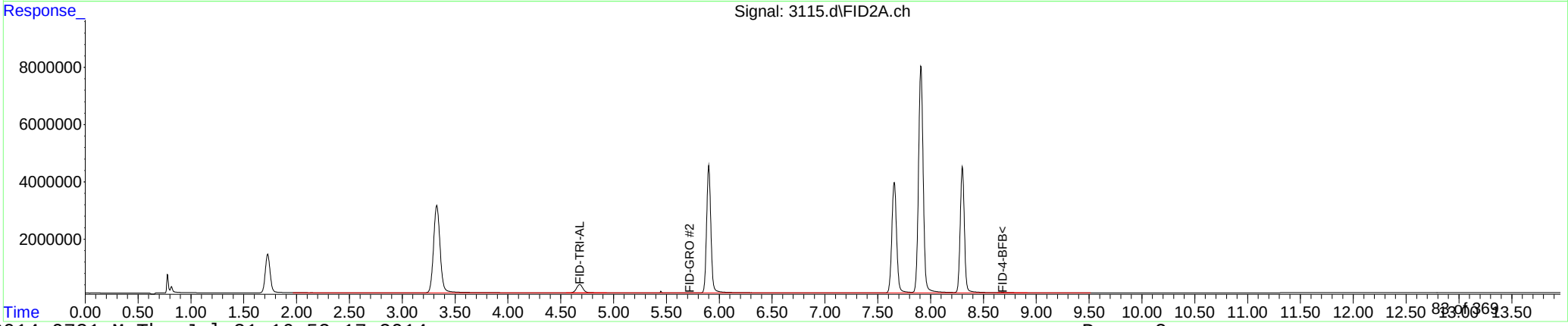
Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3115.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:12 pm
Operator : ST
Sample : 240
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:09:15 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3116.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:31 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:09:55 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29871991	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	3.718f	89951	0.264 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.53%#
11) S	FID-TRI-ALPHA #2	4.680	12518200	51.071 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	102.14%
13) S	FID-4-BFB<Surr> #2	8.680	19979	N.D. ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
2)	PID-benzene	3.326	359796	0.180 ppb
4)	PID-toluene	5.903	427634	0.227 ppb
5)	PID-ethylbenzene	7.659	615344	0.368 ppb
6)	PID-p&m-xylene	7.910	1316105	0.682 ppb
7)	PID-o-xylene	8.302	603886	0.365 ppb
8)	PID-BFB<Surr>	8.675	160890	0.095 ppb
12) H	FID-GRO #2	5.717	8194638	27.592 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

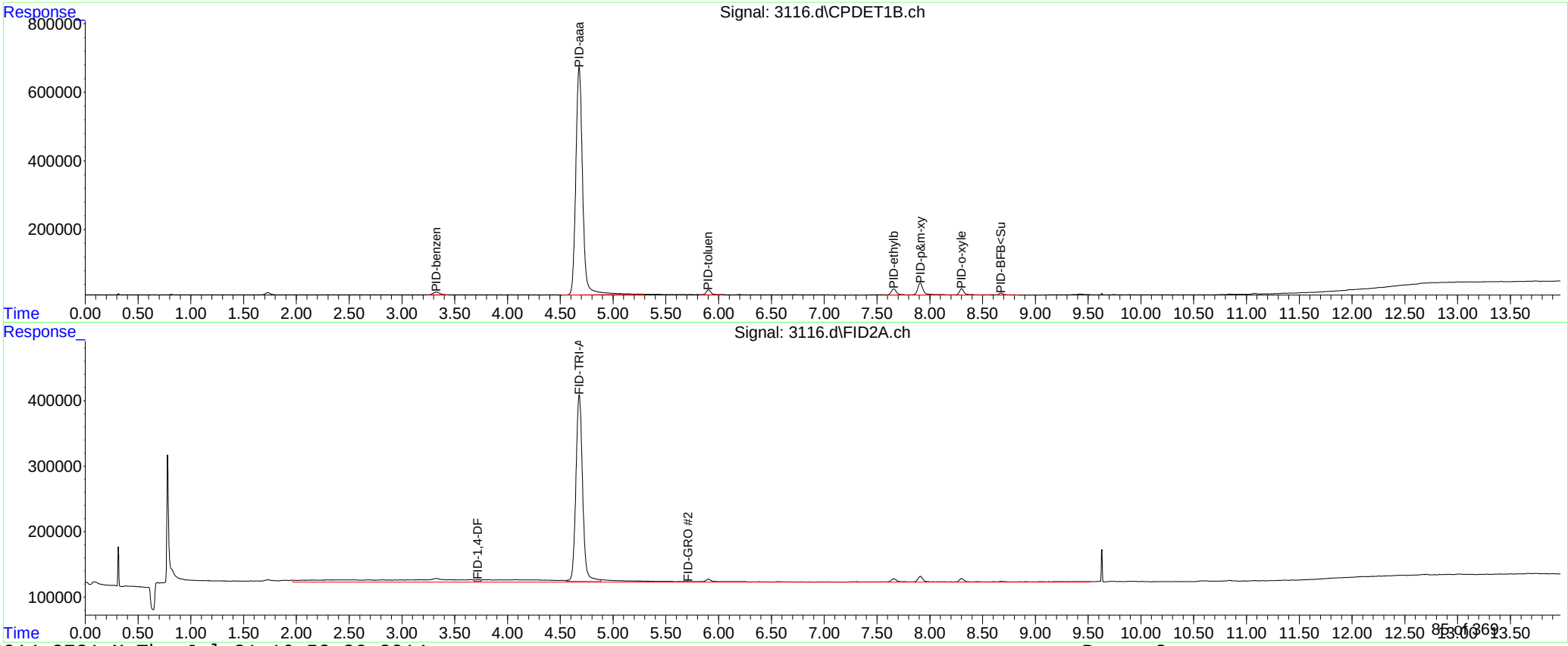
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3116.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:31 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:09:55 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3117.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:50 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:02 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.682	32221	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	3.764	9145	0.027 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.05%#
11) S	FID-TRI-ALPHA #2	4.681	45381	0.185 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.37%#
13) S	FID-4-BFB<Surr> #2	8.681	13717	N.D. ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
2)	PID-benzene	3.324	86375	40.067 ppb
4)	PID-toluene	5.904	220959	108.772 ppb
5)	PID-ethylbenzene	7.658	1085205	601.461 ppb
6)	PID-p&m-xylene	7.910	386840	185.802 ppb
7)	PID-o-xylene	8.302	164378	92.216 ppb
8)	PID-BFB<Surr>	8.676	88285	48.242 ppb
12) H	FID-GRO #2	5.717	7955267	26.786 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

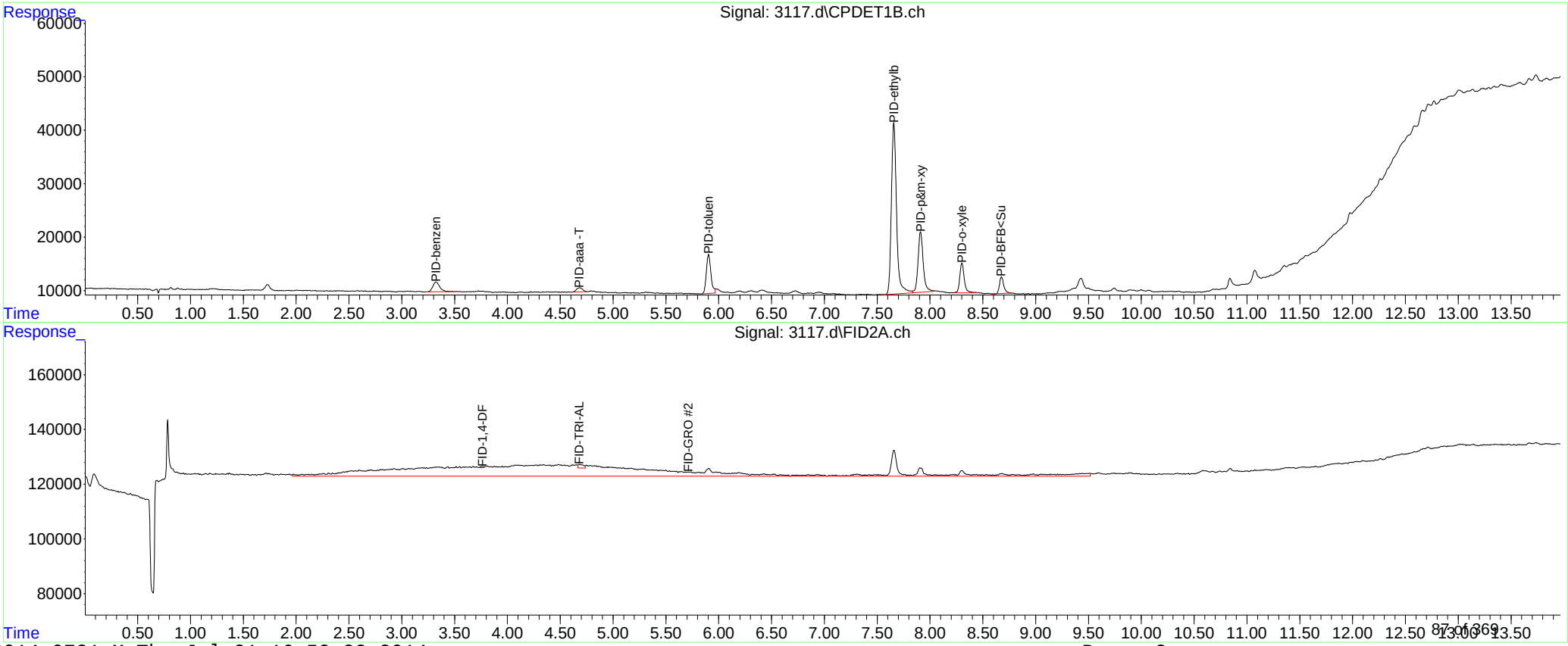
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3117.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 12:50 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:02 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3118.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:09 pm
Operator : ST
Sample : G1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:08 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	PID-aaa -TFT	4.808	65908	50.000	ppb
	System Monitoring Compounds				
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D.	ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#	
10) S	FID-1,4-DFB #2	3.767	100141	0.293	ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.59%#	
11) S	FID-TRI-ALPHA #2	4.674	119073	0.486	ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.97%#	
13) S	FID-4-BFB<Surr> #2	8.688	37347	N.D.	ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#	
	Target Compounds				
2)	PID-benzene	0.000	0	N.D.	ppb
4)	PID-toluene	0.000	0	N.D.	ppb
5)	PID-ethylbenzene	7.905f	21239967	5755.114	ppb
6)	PID-p&m-xylene	8.301f	6879343	1615.362	ppb
7)	PID-o-xylene	8.681f	220117	60.370	ppb
8)	PID-BFB<Surr>	9.110f	183648	49.059	ppb
12) H	FID-GRO #2	5.717	29790989	100.308	ppb
	SemiQuant Compounds - Not Calibrated on this Instrument				

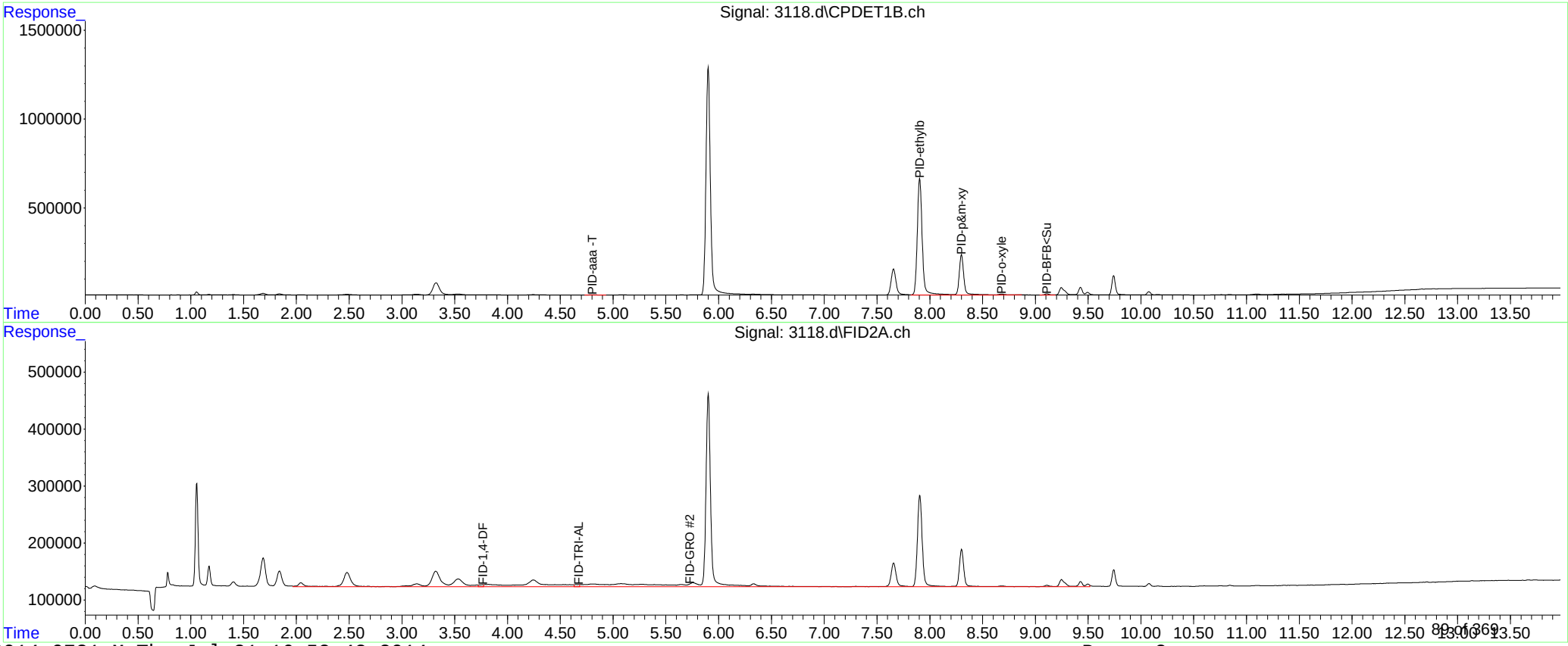
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3118.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:09 pm
Operator : ST
Sample : G1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:08 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3119.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:28 pm
Operator : ST
Sample : G2
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:41 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.658	67277	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.819	725918	426.564 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	853.13%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.645f	211045	0.861 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	1.72%#
13) S	FID-4-BFB<Surr> #2	8.687	135310	0.214 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.43%#
	Target Compounds			
2)	PID-benzene	3.324	13957492	3100.833 ppb
4)	PID-toluene	5.900	167541648	39500.739 ppb
5)	PID-ethylbenzene	7.656	20416949	5419.555 ppb
6)	PID-p&m-xylene	7.904	91576080	21065.785 ppb
7)	PID-o-xylene	8.300	28846061	7750.423 ppb
8)	PID-BFB<Surr>	8.685	953078	249.424 ppb
12) H	FID-GRO #2	5.717	118423496	398.740 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

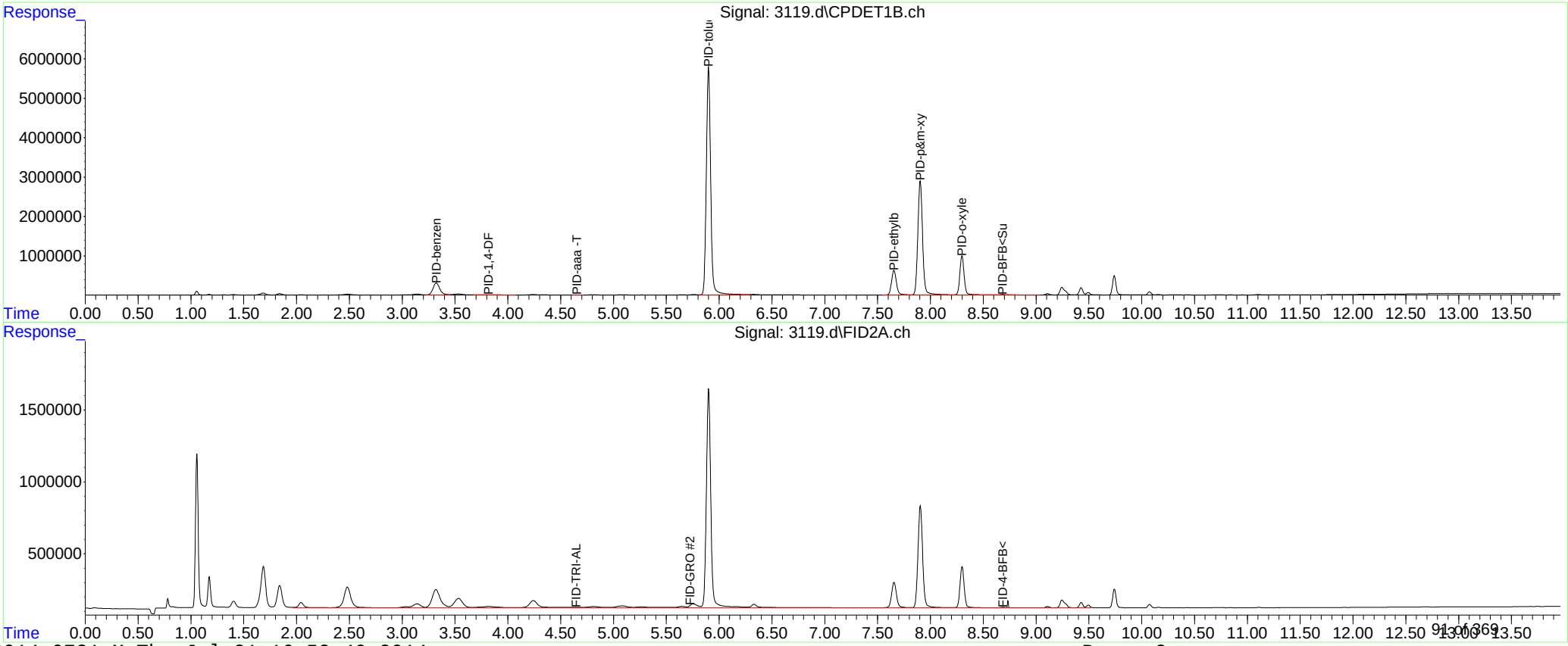
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3119.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:28 pm
Operator : ST
Sample : G2
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:10:41 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



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Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3120.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:47 pm
Operator : ST
Sample : G3
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:11:09 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.654	158583	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.654f	122268	0.499 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	1.00%#
13) S	FID-4-BFB<Surr> #2	8.687	356123	1.225 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	2.45%#
	Target Compounds			
2)	PID-benzene	3.325	38015288	3582.945 ppb
4)	PID-toluene	5.901	425527321	42561.875 ppb
5)	PID-ethylbenzene	7.656	51616681	5812.644 ppb
6)	PID-p&m-xylene	7.904	231150100	22557.998 ppb
7)	PID-o-xylene	8.300	72684309	8284.961 ppb
8)	PID-BFB<Surr>	8.685	1690905	187.733 ppb
12) H	FID-GRO #2	5.717	295271684	994.201 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

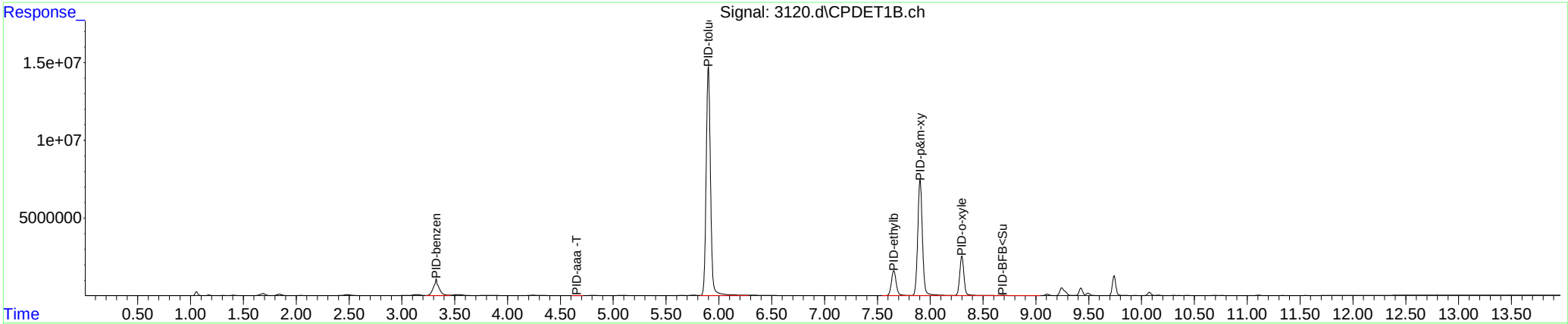
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3120.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 1:47 pm
Operator : ST
Sample : G3
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:11:09 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3121.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:07 pm
Operator : ST
Sample : G4
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:11:40 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.654	315026	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.653f	221571	0.904 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	1.81%#
13) S	FID-4-BFB<Surr> #2	8.687	832156	3.407 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	6.81%#
	Target Compounds			
2)	PID-benzene	3.326	75985080	3605.122 ppb
4)	PID-toluene	5.901	843923283	42491.885 ppb
5)	PID-ethylbenzene	7.656	102827107	5829.093 ppb
6)	PID-p&m-xylene	7.905	457933333	22496.681 ppb
7)	PID-o-xylene	8.300	144359505	8283.329 ppb
8)	PID-BFB<Surr>	8.686	2889621	161.500 ppb
12) H	FID-GRO #2	5.717	590165277	1987.128 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

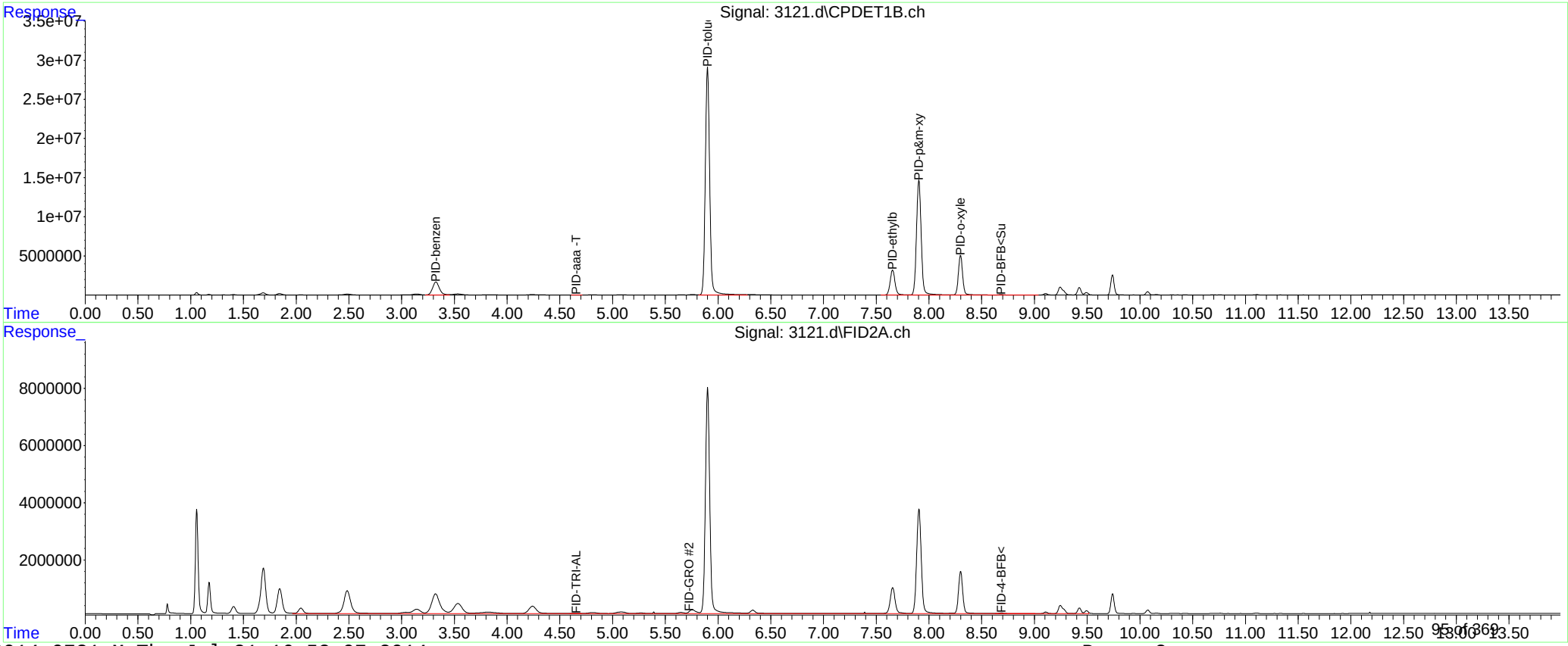
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3121.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:07 pm
Operator : ST
Sample : G4
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:11:40 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3122.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:26 pm
Operator : ST
Sample : G5
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:12:12 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.654	467266	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.651f	256038	1.045 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	2.09%#
13) S	FID-4-BFB<Surr> #2	8.687	1314067	5.615 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	11.23%#
	Target Compounds			
2)	PID-benzene	3.327	118721759	3797.562 ppb
4)	PID-toluene	5.902	1268317414	43054.035 ppb
5)	PID-ethylbenzene	7.655	155882063	5957.615 ppb
6)	PID-p&m-xylene	7.905	687532543	22771.536 ppb
7)	PID-o-xylene	8.299	217466279	8412.679 ppb
8)	PID-BFB<Surr>	8.685	4391620	165.477 ppb
12) H	FID-GRO #2	5.717	892801734	3006.127 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

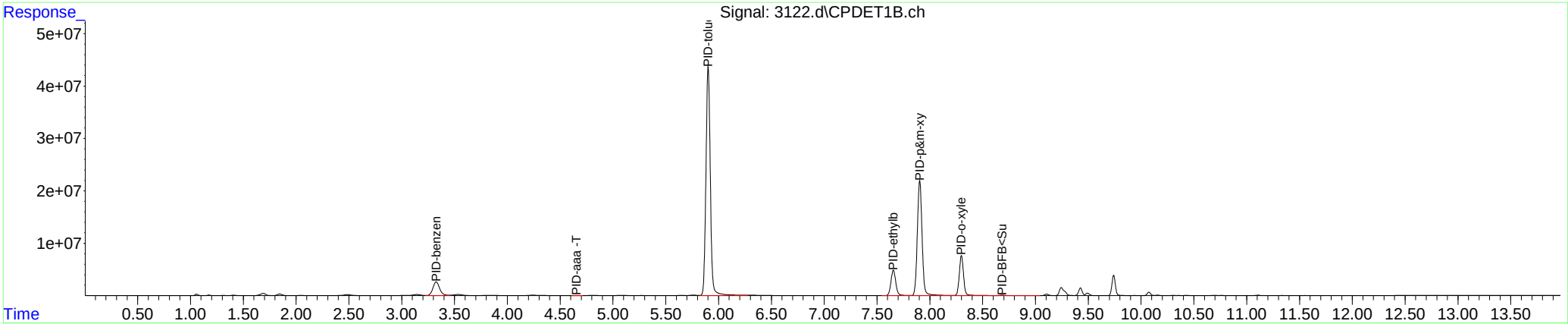
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3122.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:26 pm
Operator : ST
Sample : G5
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:12:12 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3123.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:45 pm
Operator : ST
Sample : G6
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:12:42 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.654	619533	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
10) S	FID-1,4-DFB #2	0.000	0	N.D. ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	0.00%#
11) S	FID-TRI-ALPHA #2	4.657	227681	0.929 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	1.86%#
13) S	FID-4-BFB<Surr> #2	8.687	1731773	7.529 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	15.06%#
	Target Compounds			
2)	PID-benzene	3.328	160667666	3876.168 ppb
4)	PID-toluene	5.903	1686147488	43169.901 ppb
5)	PID-ethylbenzene	7.656	209986388	6052.949 ppb
6)	PID-p&m-xylene	7.906	919973357	22981.264 ppb
7)	PID-o-xylene	8.300	292408066	8531.616 ppb
8)	PID-BFB<Surr>	8.685	5874692	166.955 ppb
12) H	FID-GRO #2	5.717	1200162513	4041.033 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

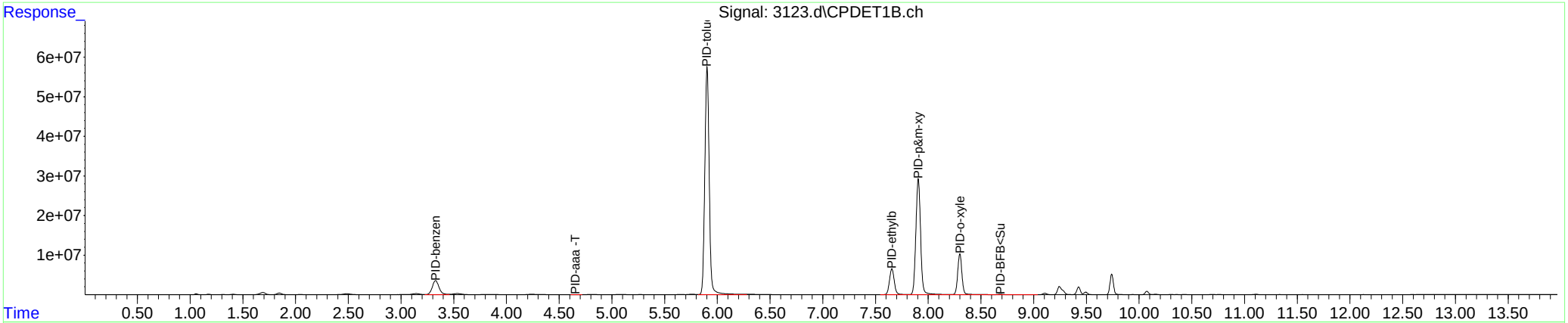
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3123.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 2:45 pm
Operator : ST
Sample : G6
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:12:42 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3124.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:04 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:41:53 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	29356580	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	39088913	52.639 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	105.28%
10) S	FID-1,4-DFB #2	3.747	16805522	49.255 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.51%
11) S	FID-TRI-ALPHA #2	4.680	11888838	48.504 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.01%
13) S	FID-4-BFB<Surr> #2	8.670	11527219	52.412 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	104.82%
	Target Compounds			
2)	PID-benzene	3.327	167779	0.085 ppb
4)	PID-toluene	5.902	1329283	0.718 ppb
5)	PID-ethylbenzene	7.659	863405	0.525 ppb
6)	PID-p&m-xylene	7.908	1083753	0.571 ppb
7)	PID-o-xylene	8.302	350660	0.216 ppb
8)	PID-BFB<Surr>	8.669	85815480	51.468 ppb
12) H	FID-GRO #2	5.717	17977266	60.531 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

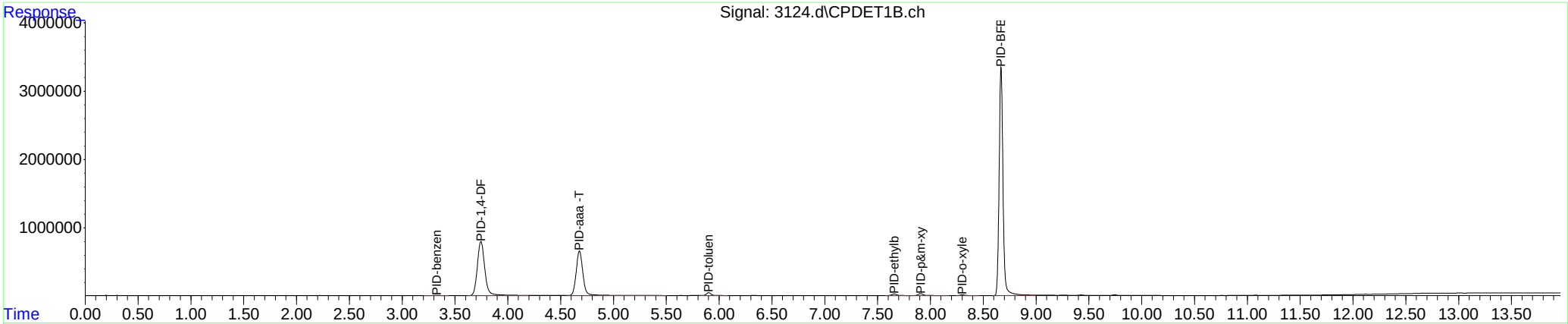
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3124.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:04 pm
Operator : ST
Sample : R
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:41:53 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3125.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:24 pm
Operator : ST
Sample : ICV BTES
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:47:35 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	31634188	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47028509	58.772 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	117.54%
10) S	FID-1,4-DFB #2	3.747	18496321	54.210 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	108.42%
11) S	FID-TRI-ALPHA #2	4.681	12876463	52.533 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	105.07%
13) S	FID-4-BFB<Surr> #2	8.670	13143387	59.817 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	119.63%
	Target Compounds			
2)	PID-benzene	3.327	471361592	222.708 ppb
4)	PID-toluene	5.900	417588164	209.383 ppb
5)	PID-ethylbenzene	7.656	361826852	204.260 ppb
6)	PID-p&m-xylene	7.908	835263526	408.630 ppb
7)	PID-o-xylene	8.300	359505791	205.426 ppb
8)	PID-BFB<Surr>	8.669	99009225	55.106 ppb
12) H	FID-GRO #2	5.717	653704021	2201.068 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

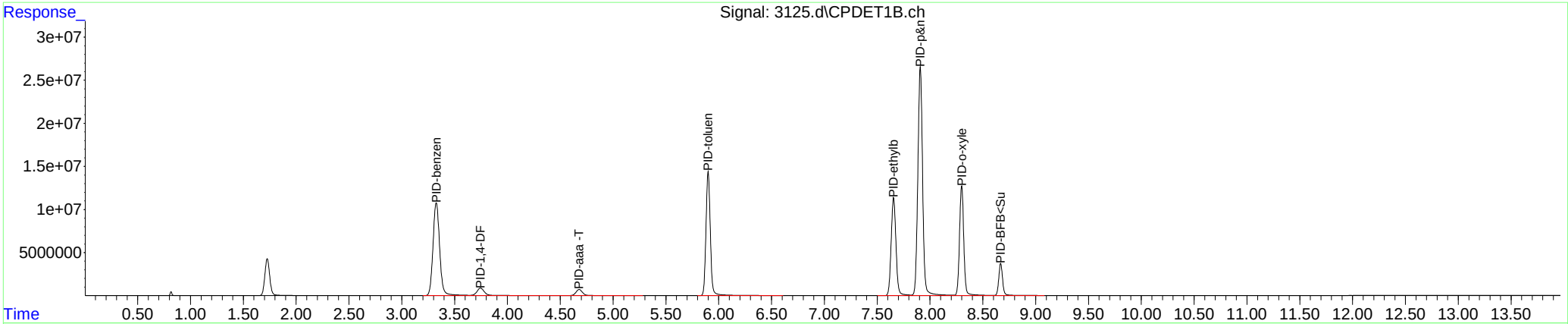
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3125.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:24 pm
Operator : ST
Sample : ICV BTES
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 15:47:35 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3126.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:43 pm
Operator : ST
Sample : ICV GRO
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 16:30:57 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	30284955	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	43660267	56.993 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	113.99%
10) S	FID-1,4-DFB #2	3.748	22959613	67.291 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	134.58%#
11) S	FID-TRI-ALPHA #2	4.680	12662349	51.659 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	103.32%
13) S	FID-4-BFB<Surr> #2	8.670	12468568	56.725 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	113.45%
	Target Compounds			
2)	PID-benzene	3.326	81160288	40.055 ppb
4)	PID-toluene	5.900	793313638	415.497 ppb
5)	PID-ethylbenzene	7.655	98621844	58.155 ppb
6)	PID-p&m-xylene	7.904	430937273	220.217 ppb
7)	PID-o-xylene	8.299	135942009	81.140 ppb
8)	PID-BFB<Surr>	8.669	90291263	52.492 ppb
12) H	FID-GRO #2	5.717	566832663	1908.566 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

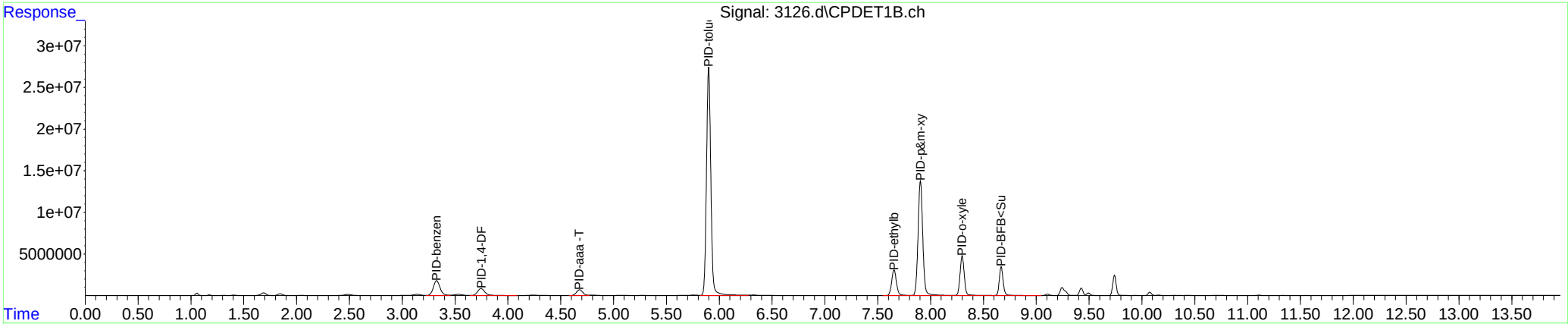
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\VHA\DATA\073114\
Data File : 3126.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 31 Jul 2014 3:43 pm
Operator : ST
Sample : ICV GRO
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 31 16:30:57 2014
Quant Method : Z:\07\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Workorder No. 1143647

Semivolatile Organic Fuels Department

Method: AK102

Method Batch Id: XXX31687

Analysis Batch Id: XFC11497

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1227217		8/14/2014 4:31:00PM
Continuing Calib Verification	1227218		8/14/2014 5:12:00PM
Continuing Calib Verification	1227220		8/14/2014 11:45:00PM
Method Blank	1226490		8/15/2014 2:10:00AM
Lab Control Sample	1226491		8/15/2014 2:30:00AM
Lab Control Sample Duplicate	1226492		8/15/2014 2:51:00AM
Paying sample	1143647001	MW-9-073014	8/15/2014 3:12:00AM
Paying sample	1143647002	MW-4-073014	8/15/2014 3:32:00AM
Paying sample	1143647003	MW-7-073014	8/15/2014 3:53:00AM
Paying sample	1143647004	SS010-SB-EB1	8/15/2014 4:13:00AM
Continuing Calib Verification	1227222		8/15/2014 4:34:00AM

SGS Ref.#	1227217	Instrument Blank	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof LTM ST009			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter	Results	RL/CL	Units	Analysis Date
Semivolatile Organic Fuels Department				
Diesel Range Organics	76.0J	150	mg/L	08/14/14
Surrogates				
5a Androstane <surr>	105	75-125	%	08/14/14

Batch XFC11497
Method AK102
Instrument HP 7890A FID SV E F

SGS Ref.#	1227218 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Diesel Range Organics	CCVB 5110		102	(75-125)	5000 mg/L	08/14/2014

Batch XFC11497
Method AK102
Instrument HP 7890A FID SV E F

SGS Ref.#	1227220 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Diesel Range Organics	CCVB 5050		101	(75-125)	5000 mg/L	08/14/2014

Batch XFC11497
Method AK102
Instrument HP 7890A FID SV E F

SGS Ref.#	1227222 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Diesel Range Organics	CCVB	5160	103	(75-125)	5000 mg/L	08/15/2014

Batch XFC11497
Method AK102
Instrument HP 7890A FID SV E F

Workorder No. 1143647

Semivolatile Organic Fuels Department

Method: AK102

Method Batch Id: XXX31687

Analysis Batch Id: XFC11497

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1227217		8/14/2014 4:31:00PM
Continuing Calib Verification	1227218		8/14/2014 5:12:00PM
Continuing Calib Verification	1227220		8/14/2014 11:45:00PM
Method Blank	1226490		8/15/2014 2:10:00AM
Lab Control Sample	1226491		8/15/2014 2:30:00AM
Lab Control Sample Duplicate	1226492		8/15/2014 2:51:00AM
Paying sample	1143647001	MW-9-073014	8/15/2014 3:12:00AM
Paying sample	1143647002	MW-4-073014	8/15/2014 3:32:00AM
Paying sample	1143647003	MW-7-073014	8/15/2014 3:53:00AM
Paying sample	1143647004	SS010-SB-EB1	8/15/2014 4:13:00AM
Continuing Calib Verification	1227222		8/15/2014 4:34:00AM

SGS Ref.#	1226490	Method Blank	**Printed Date/Time**	09/03/2014	17:10
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	XXX31687	
Project Name/#	Cape Romanzof LTM ST009		**Method**	SW3520C	
Matrix	Water (Surface, Eff., Ground)		**Date**	08/13/2014	

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	0.0740J	0.150	0.0450	mg/L	08/15/14
Surrogates					
5a Androstane <surr>	79.4	60-120		%	08/15/14

Batch XFC11497
Method AK102
Instrument HP 7890A FID SV E F

SGS Ref.#	1226491	Lab Control Sample	**Printed Date/Time**	09/03/2014	17:10
	1226492	Lab Control Sample Duplicate	**Prep Batch**	XXX31687	
Client Name	EA Engineering, Science and Tech.		**Method**	SW3520C	
Project Name/#	Cape Romanzof LTM ST009		**Date**	08/13/2014	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Diesel Range Organics	LCS	4.64	93	(75-125)			5 mg/L	08/15/2014
	LCSD	4.87	97		5	(< 20)	5 mg/L	08/15/2014
Surrogates								
5a Androstane <surr>	LCS		92	(60-120)				08/15/2014
	LCSD		95		4			08/15/2014

Batch	XFC11497	
Method	AK102	
Instrument	HP 7890A	FID SV E F

Workorder No. 1143647

Semivolatile Organic Fuels Department

Method: AK103

Method Batch Id: XXX31687

Analysis Batch Id: XFC11497

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1227217		8/14/2014 4:31:00PM
Continuing Calib Verification	1227219		8/14/2014 5:33:00PM
Continuing Calib Verification	1227221		8/15/2014 12:06:00AM
Method Blank	1226490		8/15/2014 2:10:00AM
Lab Control Sample	1226491		8/15/2014 2:30:00AM
Lab Control Sample Duplicate	1226492		8/15/2014 2:51:00AM
Paying sample	1143647004	SS010-SB-EB1	8/15/2014 4:13:00AM
Continuing Calib Verification	1227223		8/15/2014 4:54:00AM

SGS Ref.#	1227217	Instrument Blank	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof LTM ST009			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter	Results	RL/CL	Units	Analysis Date
Semivolatile Organic Fuels Department				
Residual Range Organics	84.0J	125	mg/L	08/14/14
Surrogates				
n-Triacontane-d62 <surr>	105	75-125	%	08/14/14
Batch XFC11497				
Method AK103				
Instrument HP 7890A FID SV E F				

SGS Ref.#	1227219 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	CCVR	5390	108	(75-125)	5000 mg/L	08/14/2014

Batch XFC11497
Method AK103
Instrument HP 7890A FID SV E F

SGS Ref.#	1227221 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	CCVR	5360	107	(75-125)	5000 mg/L	08/15/2014

Batch XFC11497
Method AK103
Instrument HP 7890A FID SV E F

SGS Ref.#	1227223 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:10
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	CCVR	5350	107	(75-125)	5000 mg/L	08/15/2014

Batch XFC11497
Method AK103
Instrument HP 7890A FID SV E F

Workorder No. 1143647

Semivolatile Organic Fuels Department

Method: AK103

Method Batch Id: XXX31687

Analysis Batch Id: XFC11497

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1227217		8/14/2014 4:31:00PM
Continuing Calib Verification	1227219		8/14/2014 5:33:00PM
Continuing Calib Verification	1227221		8/15/2014 12:06:00AM
Method Blank	1226490		8/15/2014 2:10:00AM
Lab Control Sample	1226491		8/15/2014 2:30:00AM
Lab Control Sample Duplicate	1226492		8/15/2014 2:51:00AM
Paying sample	1143647004	SS010-SB-EB1	8/15/2014 4:13:00AM
Continuing Calib Verification	1227223		8/15/2014 4:54:00AM

SGS Ref.#	1226490	Method Blank	**Printed Date/Time**	09/03/2014	17:10
Client Name	EA Engineering, Science and Tech.		**Prep** **Batch**	XXX31687	
Project Name/#	Cape Romanzof LTM ST009		**Method**	SW3520C	
Matrix	Water (Surface, Eff., Ground)		**Date**	08/13/2014	

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter	Results		LOQ/CL	DL	Units	Analysis Date
Semivolatile Organic Fuels Department						
Residual Range Organics	0.270	*	0.125	0.0375	mg/L	08/15/14
Surrogates						
n-Triacontane-d62 <surr>	89.3		60-120		%	08/15/14
Batch XFC11497						
Method AK103						
Instrument HP 7890A FID SV E F						

SGS Ref.#	1226491 Lab Control Sample	**Printed Date/Time**	09/03/2014	17:10
	1226492 Lab Control Sample Duplicate	**Prep Batch**	XXX31687	
Client Name	EA Engineering, Science and Tech.	**Method**	SW3520C	
Project Name/#	Cape Romanzof LTM ST009	**Date**	08/13/2014	
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647004

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Residual Range Organics	LCS	4.79	96	(60-120)			5 mg/L	08/15/2014
	LCSD	4.98	100		4	(< 20)	5 mg/L	08/15/2014
Surrogates								
n-Triacontane-d62 <surr>	LCS		85	(60-120)				08/15/2014
	LCSD		90		5			08/15/2014

Batch XFC11497
Method AK103
Instrument HP 7890A FID SV E F

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143646, 1143647, 1143699, 1148359

Queue: **XFC** Batch: **11497**

Method: AK102 LV, AK102/103 LV

Run Date: 08/14/14 16:31 - 08/15/14 04:54

Extraction Batch(es): XXX31685, XXX31687

Notes:

There is one DOD sample that is detect in a batch with an MB greater than 1/2 the LOQ for DRO. The PM for that sample, CGH, okayed posting the sample with a comment on the MB.

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: Elizabeth Brandemuhl
Printed Name: Elizabeth Brandemuhl
Date: 8-15-2014

Reviewer's Signature: Mary C McDonald
Printed Name: Mary C McDonald
Date: 8/15/14

Evaluate Continuing Calibration Report

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1410.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 5:12 pm
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 14 17:39:32 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 H	DRO	130.920	122.845 E3	6.2	102	0.00
3 H	RRO	77.726	9.829 E3	87.4#	15#	0.00

Evaluate Continuing Calibration Report - Not Founds

2 S	5-ALPHA <Surr>	136.643	0.000 E3	100.0#	0#	-7.19#
4 S	DTC<Surr>	110.840	0.000 E3	100.0#	0#	-10.81#

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

Instrument Runlog

Instrument: SEF **Calibration Date:** 7/29/2014 **Method:** AK102/103
Operator: EAB **Processed By:** EAB **Posted By:** EAB **Analytical Batch:** 11497

Data Path: Z:\08\SE\DATA\SE081414\

Daily:		As Needed:			
Verify System Date/Time	✓	Clip Column/Guard Column	☐	Verify Acquisition Parameters	☐
General System Inspection	✓	Replace Inlet Seal ☐ Septa ✓ Liner ✓		Rinse or Replace Weldment/Split Lines	☐

Standards:

IB	SVW15-41-11	**CCVR**	VF3-1-1
NAS	VF3-3-1	**CCVB**	VF2-109-10
MeCl2	P-454		

Data File	Vial	Sample ID	Dilution	DRO	RRO	Notes	Acquisition Time	Rerun
1402.D	5	R	1				8/14/14 3:50 PM	
1404.D	5	R	1				8/14/14 4:10 PM	
1406.D	1	IB	1	105	105		8/14/14 4:31 PM	
1408.D	2	NAS	1				8/14/14 4:52 PM	
1410.D	3	CCVB	1	102			8/14/14 5:12 PM	
1412.D	4	CCVR	1		108		8/14/14 5:33 PM	
1414.D	5	R	1				8/14/14 5:54 PM	
1416.D	6	1226447 MB 31685	1			Confirms original runs. NU	8/14/14 6:14 PM	
1418.D	7	1143646001	1	ND	√	UNK	8/14/14 6:35 PM	
1420.D	8	1143646002 BMS	1				8/14/14 6:56 PM	
1422.D	9	1143646003 BMSD	1				8/14/14 7:16 PM	
1424.D	10	1143646004	1	ND			8/14/14 7:37 PM	
1426.D	11	1143646005	1	ND			8/14/14 7:57 PM	
1428.D	12	1143646007	1	ND			8/14/14 8:18 PM	
1430.D	13	1143646008	1	ND			8/14/14 8:38 PM	
1432.D	14	1143699001	1	ND			8/14/14 8:59 PM	
1434.D	15	1143699002	1	ND			8/14/14 9:20 PM	
1436.D	16	1143699004	1	ND			8/14/14 9:40 PM	
1438.D	17	1148359001	1	ND	√	UNK	8/14/14 10:01 PM	
1440.D	18	1148359003	1	ND	√	UNK	8/14/14 10:22 PM	
1442.D	19	1148359004	1	ND	√	UNK	8/14/14 10:42 PM	
1444.D	20	1148359005	1	ND	√	UNK	8/14/14 11:03 PM	
1446.D	21	1148359006	1	ND	√	UNK	8/14/14 11:24 PM	
1448.D	3	CCVB	1	101/Q			8/14/14 11:45 PM	
1450.D	4	CCVR	1		107		8/15/14 12:06 AM	
1452.D	22	1148359002	1	√	√	DOD. OK per CGH. UNK	8/15/14 12:26 AM	
1454.D	23	1143699003	1	√	√	NON-DOD UNK	8/15/14 12:47 AM	
1456.D	24	1143699005	1		√	UNK	8/15/14 1:07 AM	
1458.D	5	R	1				8/15/14 1:28 AM	
1460.D	5	R	1				8/15/14 1:49 AM	
1462.D	25	1226490 MB 31687	1		√	RRO is ND in sample	8/15/14 2:10 AM	
1464.D	26	1226491 LCS 31687	1	93	96		8/15/14 2:30 AM	
1466.D	27	1226492 LCSD 31687	1	97	100		8/15/14 2:51 AM	
1468.D	28	1143647001	1	√	X	GAS	8/15/14 3:12 AM	
1470.D	29	1143647002	1	√	X	GAS	8/15/14 3:32 AM	
1472.D	30	1143647003	1	√	X	GAS	8/15/14 3:53 AM	
1474.D	31	1143647004	1		ND		8/15/14 4:13 AM	
1476.D	3	CCVB	1	103			8/15/14 4:34 AM	
1478.D	4	CCVR	1		107		8/15/14 4:54 AM	
1480.D	5	R	1				8/15/14 5:15 AM	
1482.D	5	R	1				8/15/14 5:36 AM	

Data File	Vial	Sample ID	Dilution	DRO	RRO	Notes	Acquisition Time	Rerun
1484.D	5	R	1				8/15/14 5:56 AM	
1486.D	1	IB	1				8/15/14 6:17 AM	
1488.D	2	NAS	1				8/15/14 6:37 AM	
1490.D	3	CCVB	1				8/15/14 6:58 AM	
1492.D	4	CCVR	1				8/15/14 7:19 AM	
1494.D	34	1143579070 SG BMS	1			NU	8/15/14 7:39 AM	
1496.D	35	1143579071 SG BMSD	1			Confirms original. Post Original Data.	8/15/14 7:59 AM	
1498.D	3	CCVB	1				8/15/14 8:20 AM	
1500.D	4	CCVR	1				8/15/14 8:41 AM	
1502.D	5	R	1				8/15/14 9:02 AM	
1504.D	5	R	1				8/15/14 9:22 AM	
1506.D	5	R	1				8/15/14 9:43 AM	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1406.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 4:31 pm
Operator : EAB
Sample : IB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 14 17:07:03 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

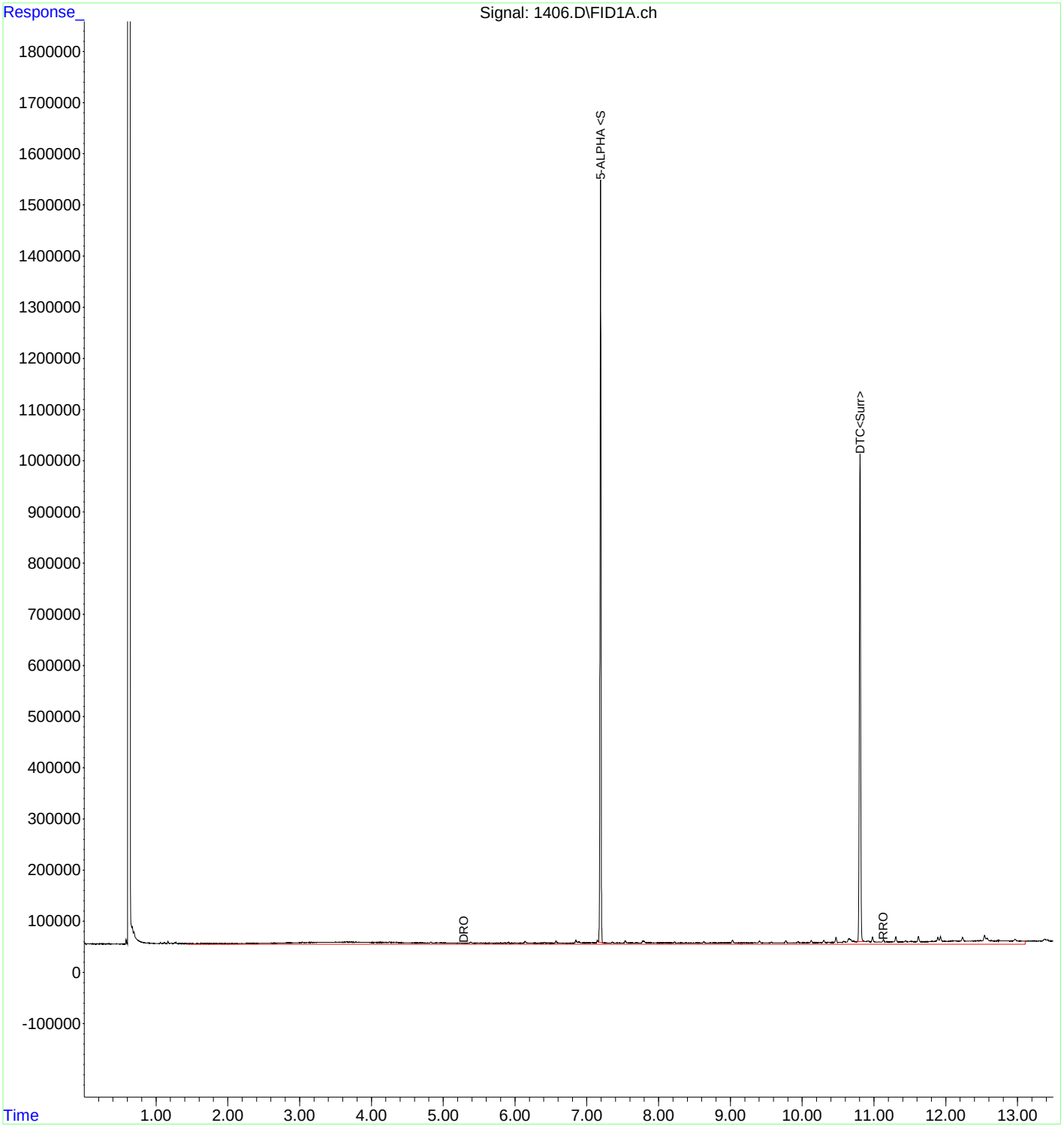
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.191	14328780	104.863	µg/mL
4) S	DTC<Surr>	10.806	11646610	105.076	µg/mL
Target Compounds					
1) H	DRO	5.295	12986692	76.003	µg/mL
3) H	RRO	11.128	12973629	83.979	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1406.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 4:31 pm
Operator : EAB
Sample : IB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 14 17:07:03 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1410.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 5:12 pm
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 14 17:39:32 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.295	614226879	5107.642	µg/mL
3) H	RRO	11.128	9828971	28.623	µg/mL

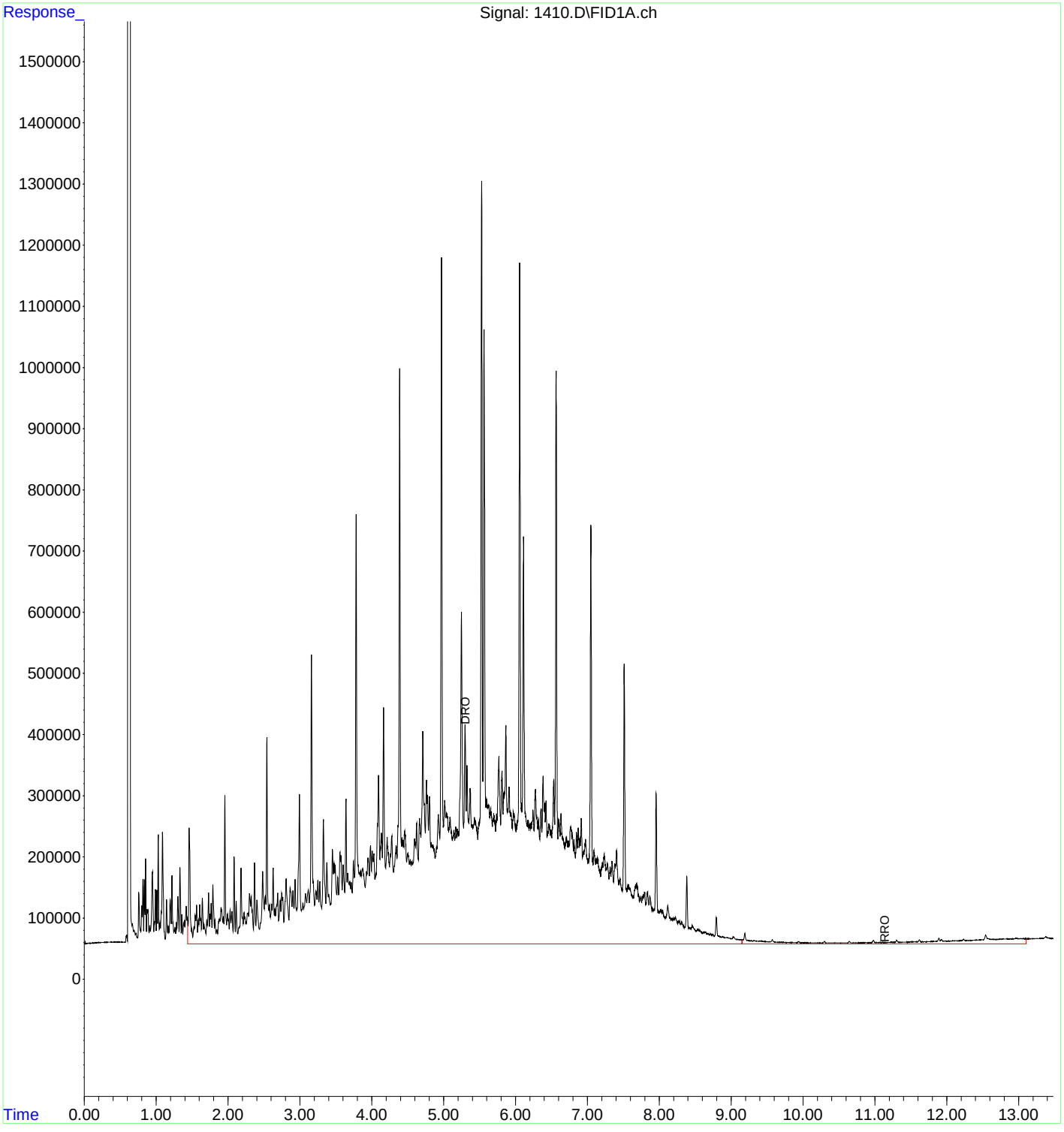
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1410.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 5:12 pm
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 14 17:39:32 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1412.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 5:33 pm
Operator : EAB
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:40:28 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.295	47308563	363.235	µg/mL
3) H	RRO	11.128	314600128	5393.498	µg/mL

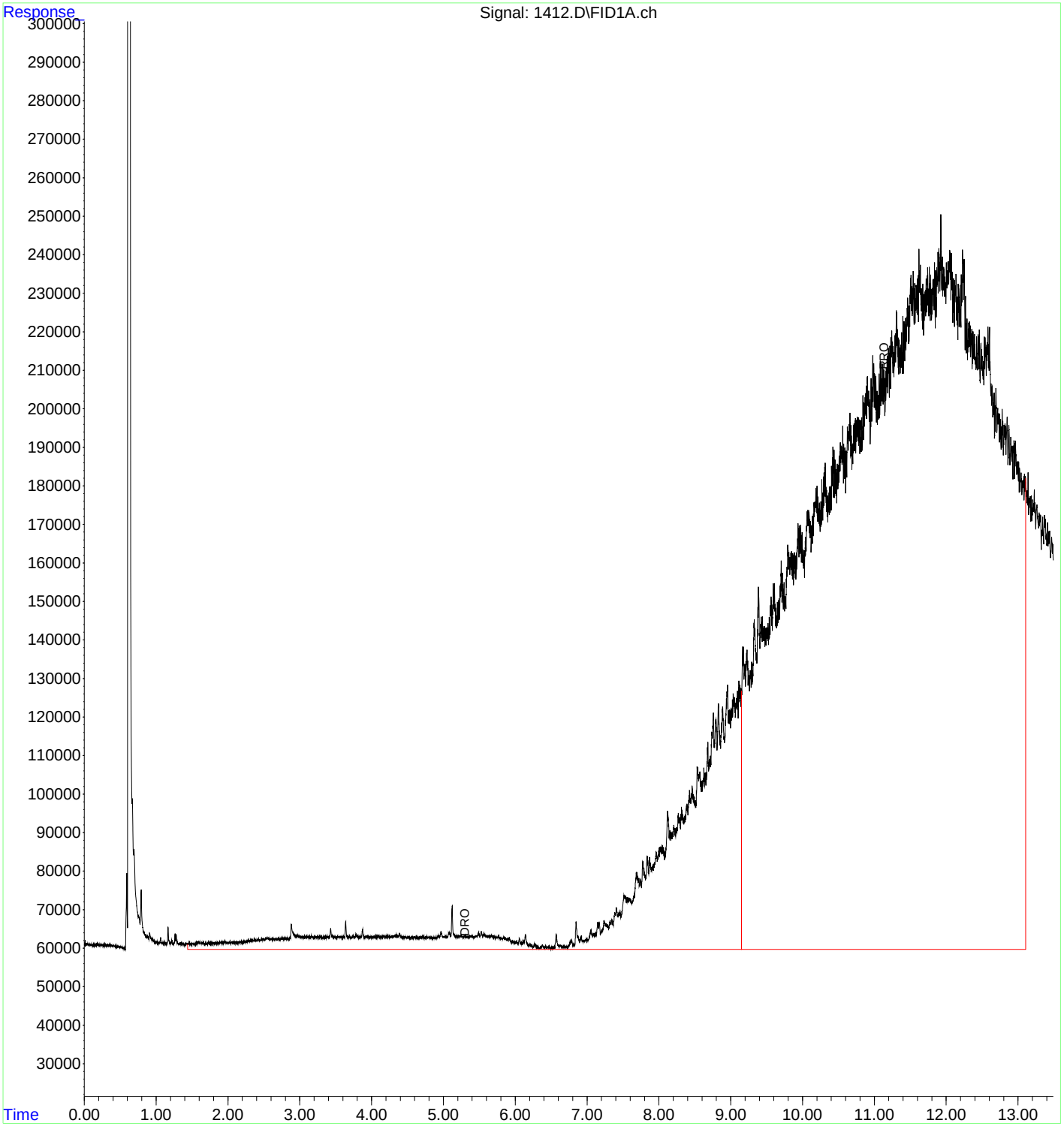
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1412.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 5:33 pm
Operator : EAB
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:40:28 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1448.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 11:45 pm
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:46:34 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.295	607388658	5050.415	µg/mL
3) H	RRO	11.128	7672980	N.D.	µg/mL

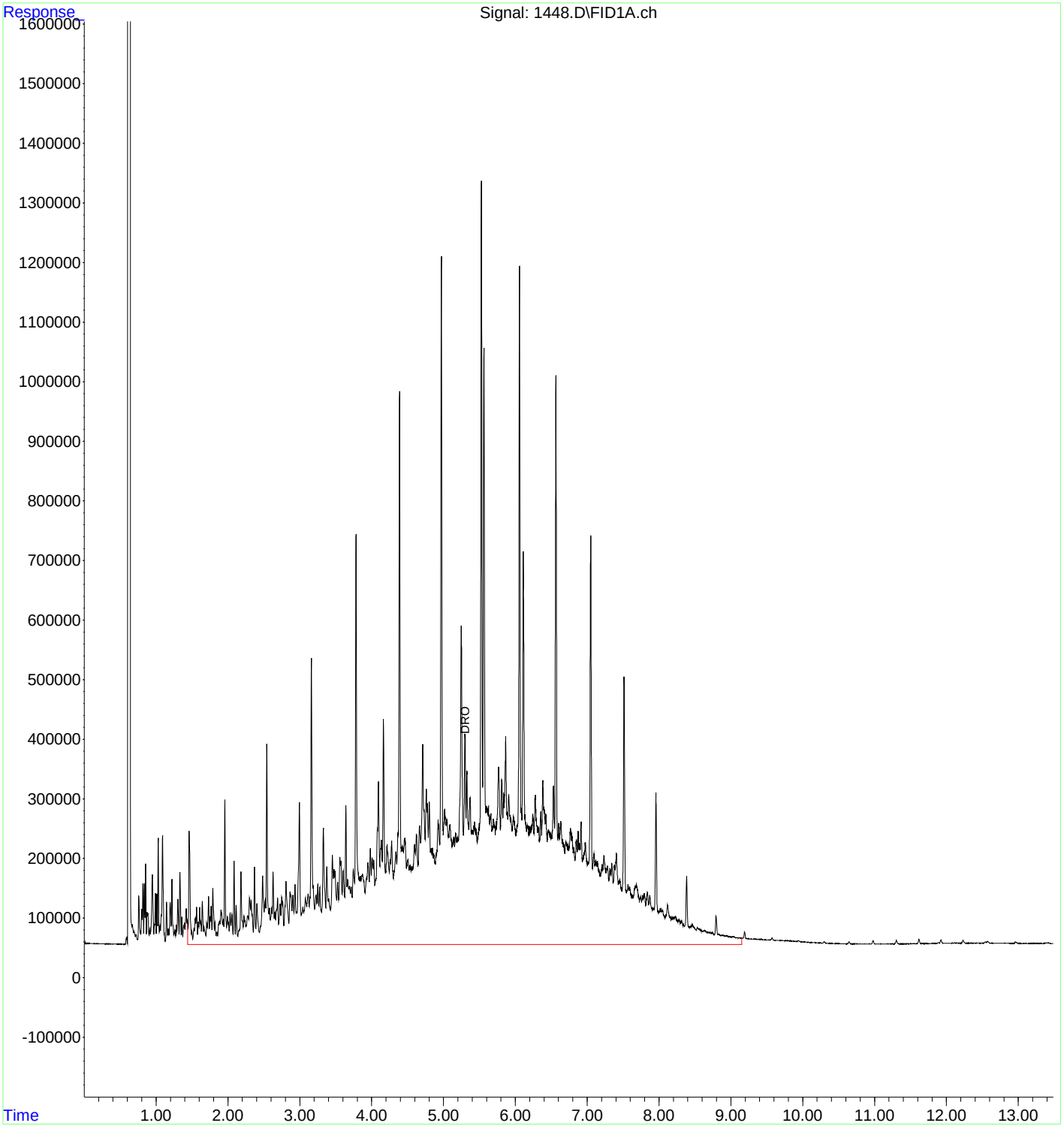
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1448.D
Signal(s) : FID1A.ch
Acq On : 14 Aug 2014 11:45 pm
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:46:34 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1450.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 12:06 am
Operator : EAB
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:46:52 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

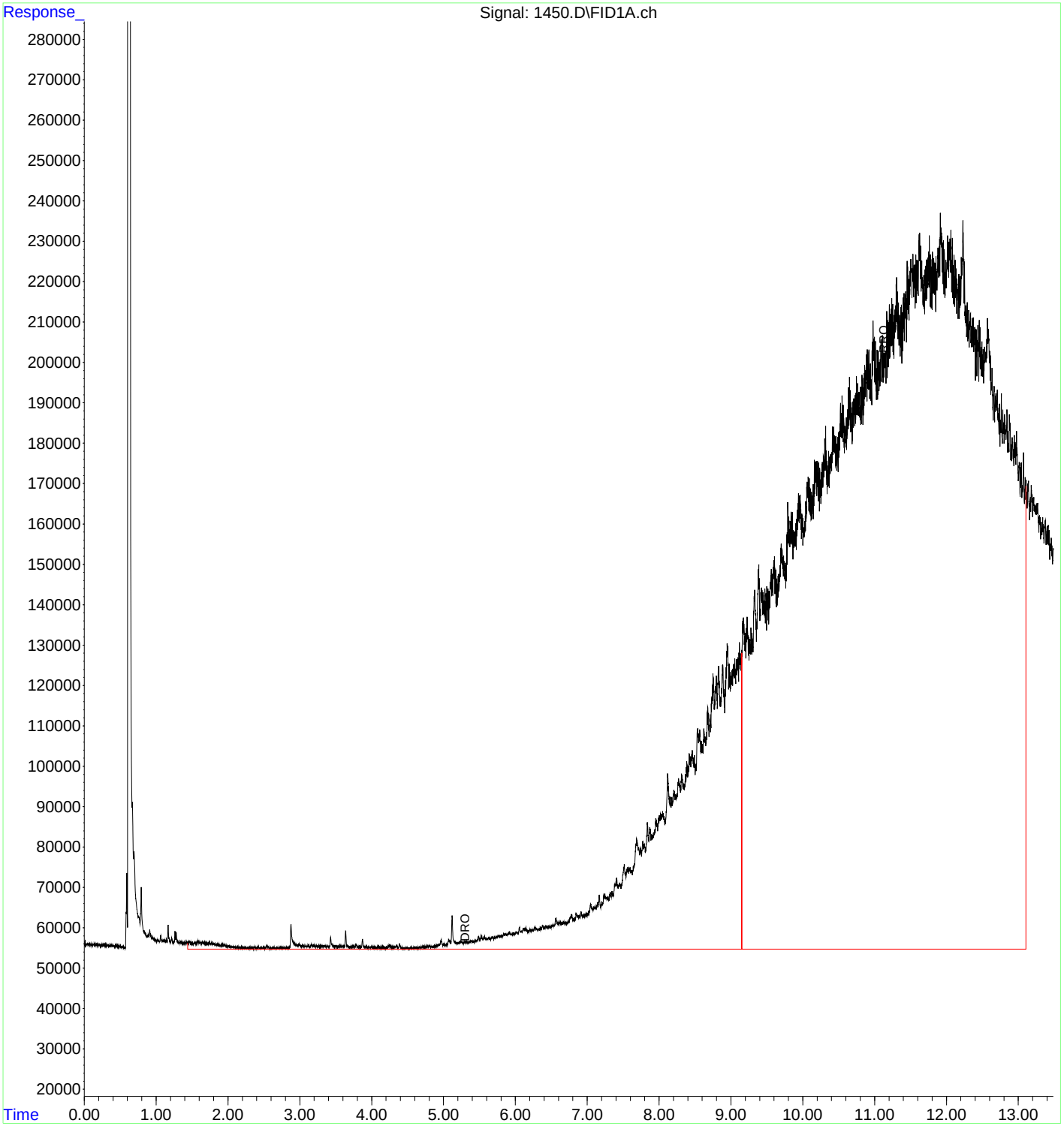
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.295	53842332	417.915	µg/mL
3) H	RRO	11.128	312614012	5358.536	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1450.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 12:06 am
Operator : EAB
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:46:52 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1462.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 2:10 am
Operator : EAB
Sample : 1226490 MB 31687
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:49:11 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

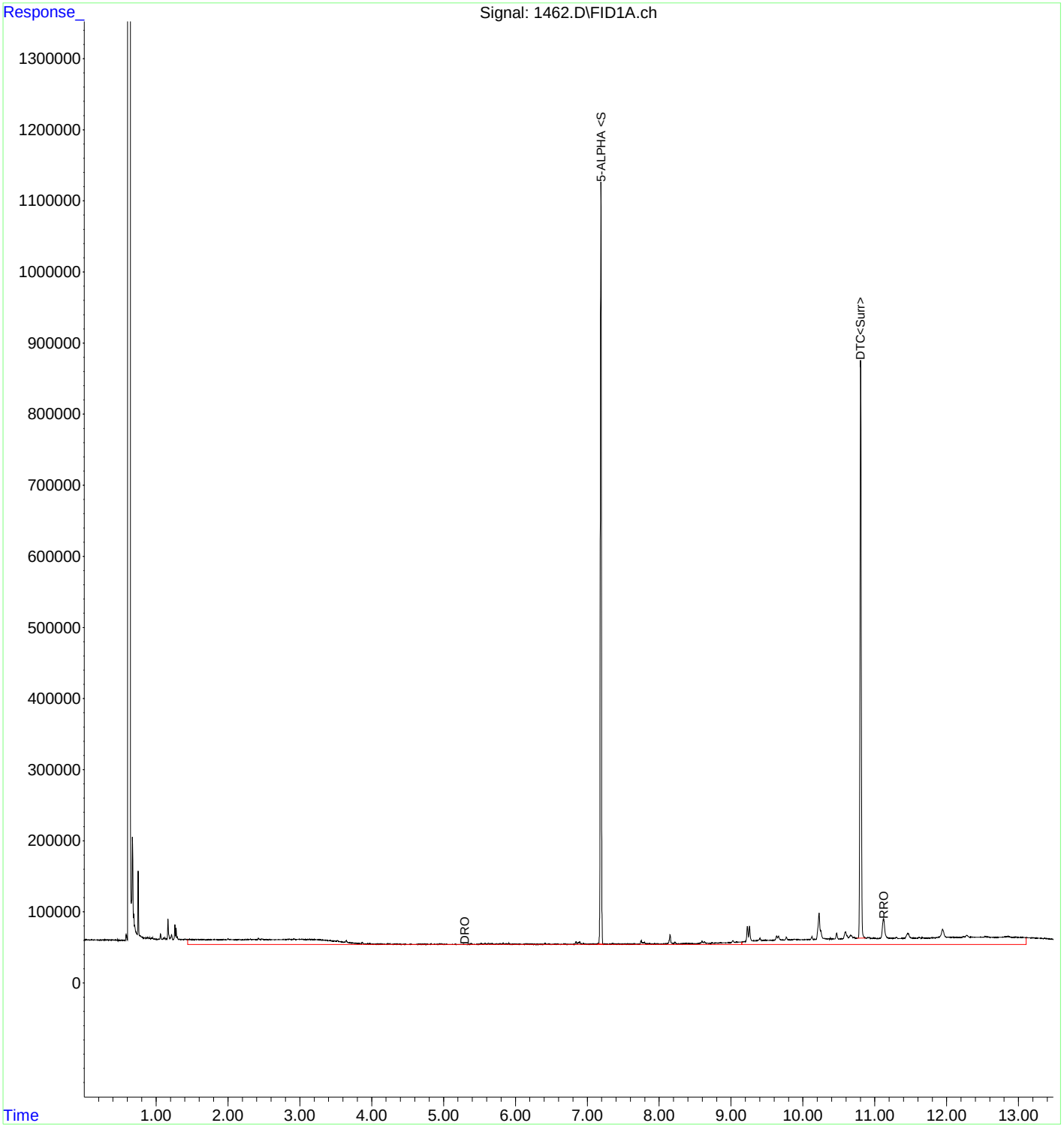
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	7.189	10851687	79.416 µg/mL
4) S	DTC<Surr>	10.803	9897012	89.291 µg/mL
Target Compounds				
1) H	DRO	5.295	12750803	74.029 µg/mL
3) H	RRO	11.128	23512647	269.496 µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1462.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 2:10 am
Operator : EAB
Sample : 1226490 MB 31687
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:49:11 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1464.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 2:30 am
Operator : EAB
Sample : 1226491 LCS 31687
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:49:30 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.191	12512985	91.574	µg/mL
4) S	DTC<Surr>	10.805	9447998	85.240	µg/mL
Target Compounds					
1) H	DRO	5.295	557894896	4636.213	µg/mL
3) H	RRO	11.128	280497035	4793.183	µg/mL

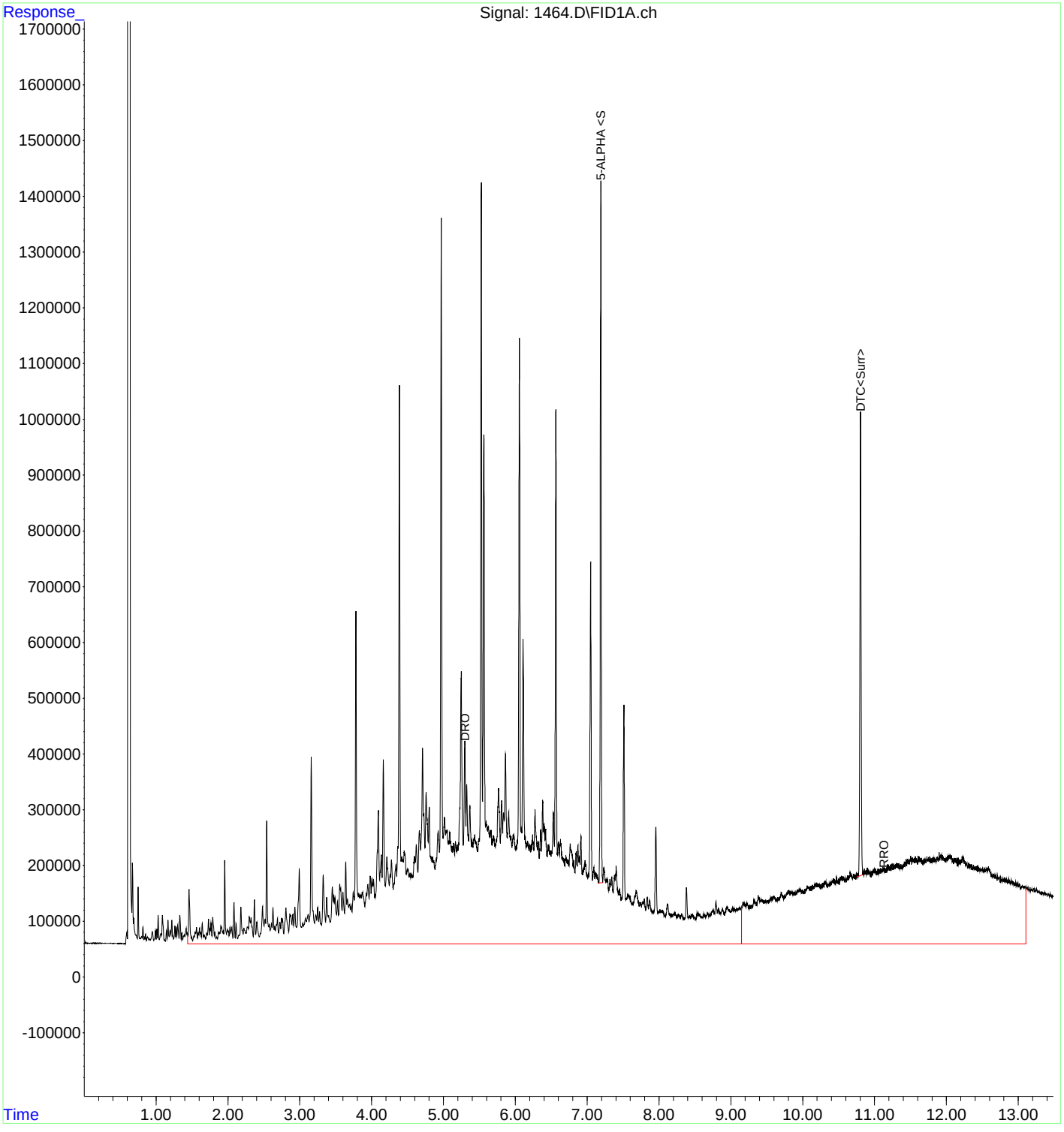
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1464.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 2:30 am
Operator : EAB
Sample : 1226491 LCS 31687
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:49:30 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1466.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 2:51 am
Operator : EAB
Sample : 1226492 LCSD 31687
Misc :
ALS Vial : 27 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:50:02 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.191	13010295	95.214	µg/mL
4) S	DTC<Surr>	10.804	9945279	89.727	µg/mL
Target Compounds					
1) H	DRO	5.295	585394936	4866.354	µg/mL
3) H	RRO	11.128	291333396	4983.935	µg/mL

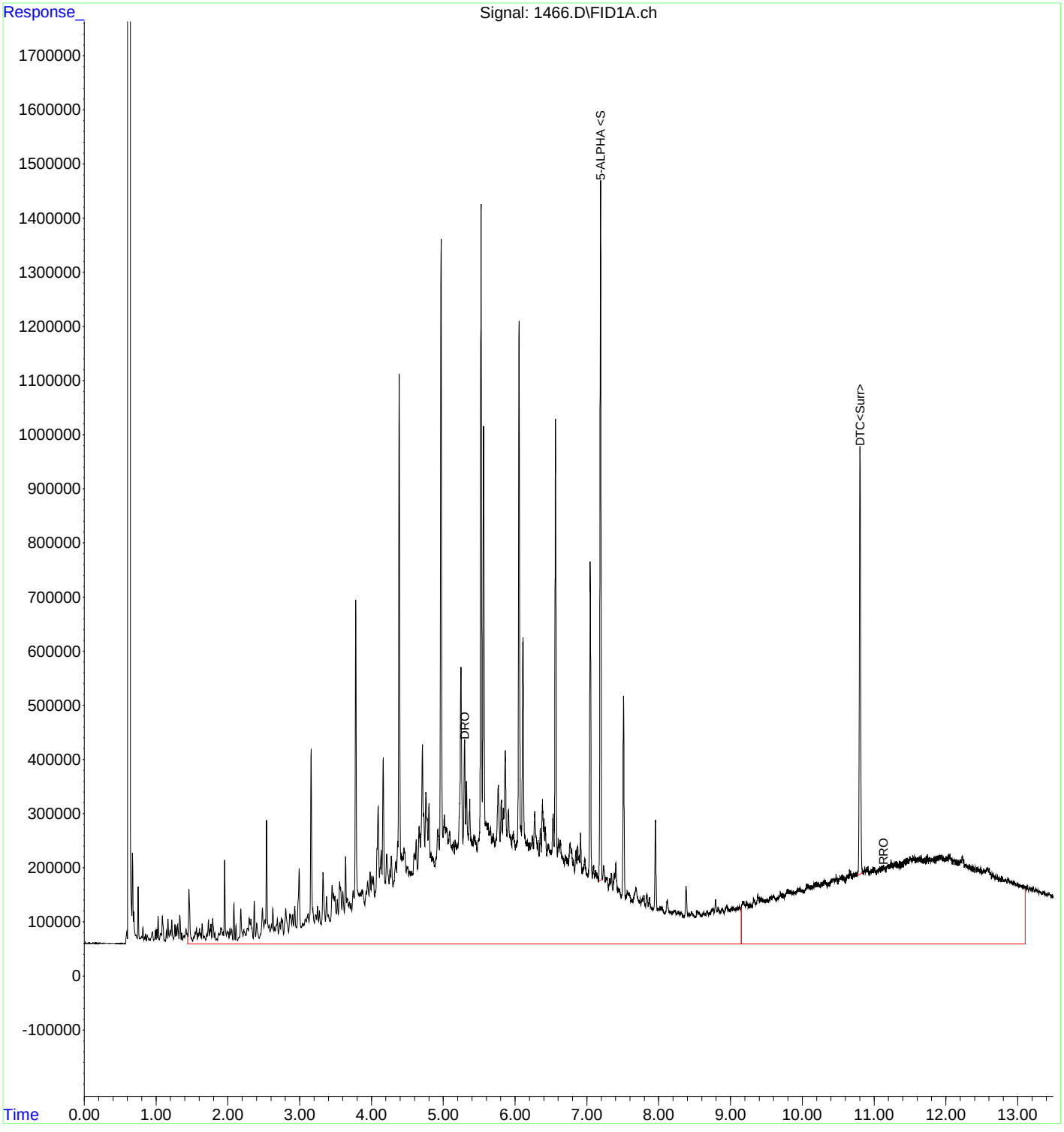
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1466.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 2:51 am
Operator : EAB
Sample : 1226492 LCSD 31687
Misc :
ALS Vial : 27 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:50:02 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1468.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 3:12 am
Operator : EAB
Sample : 1143647001
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:50:14 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.188	12741143	93.244	µg/mL
4) S	DTC<Surr>	10.804	10980516	99.066	µg/mL
Target Compounds					
1) H	DRO	5.295	34682608	257.571	µg/mL
3) H	RRO	11.128	6788999	N.D.	µg/mL

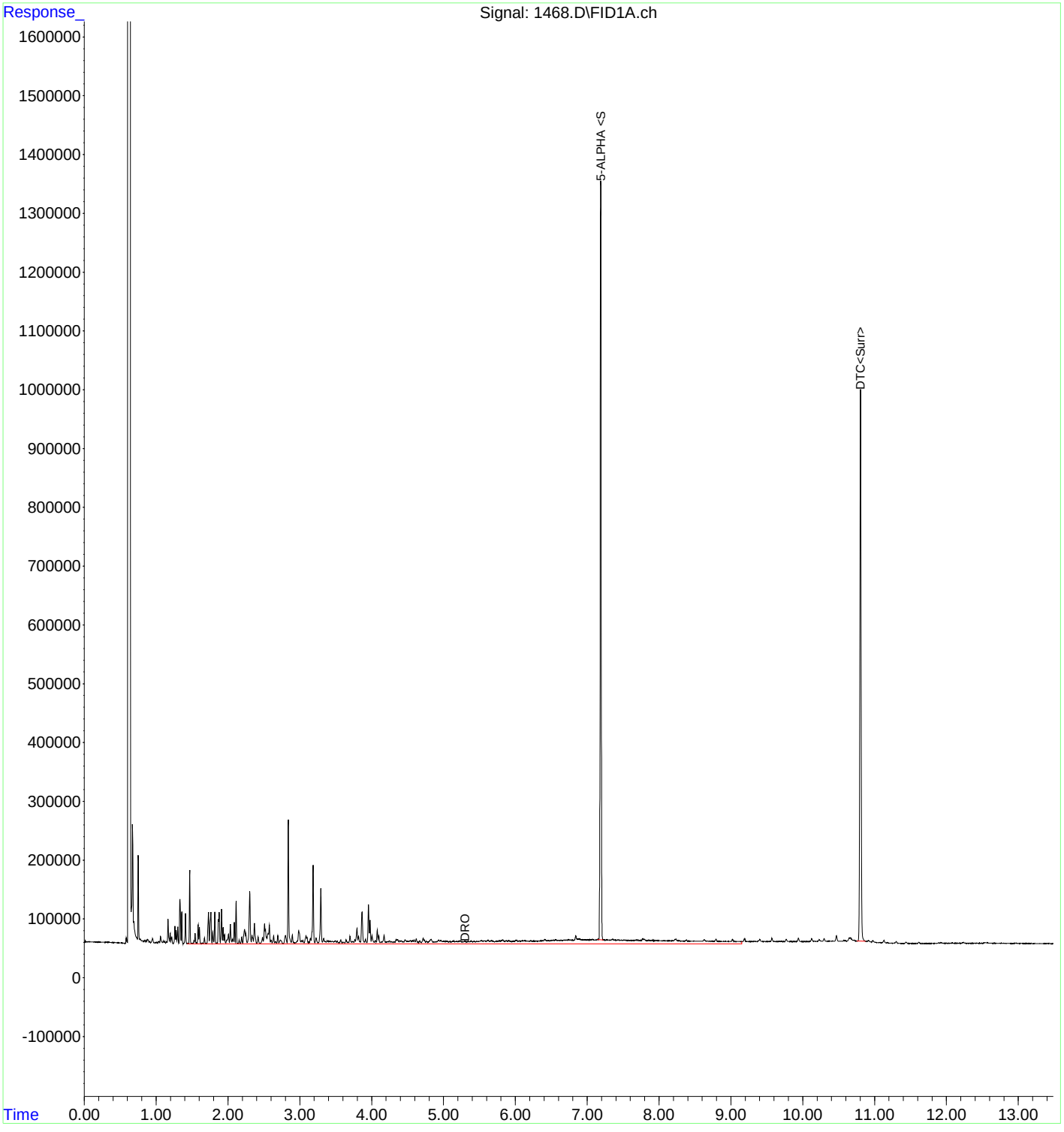
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1468.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 3:12 am
Operator : EAB
Sample : 1143647001
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:50:14 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1470.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 3:32 am
Operator : EAB
Sample : 1143647002
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:52:46 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

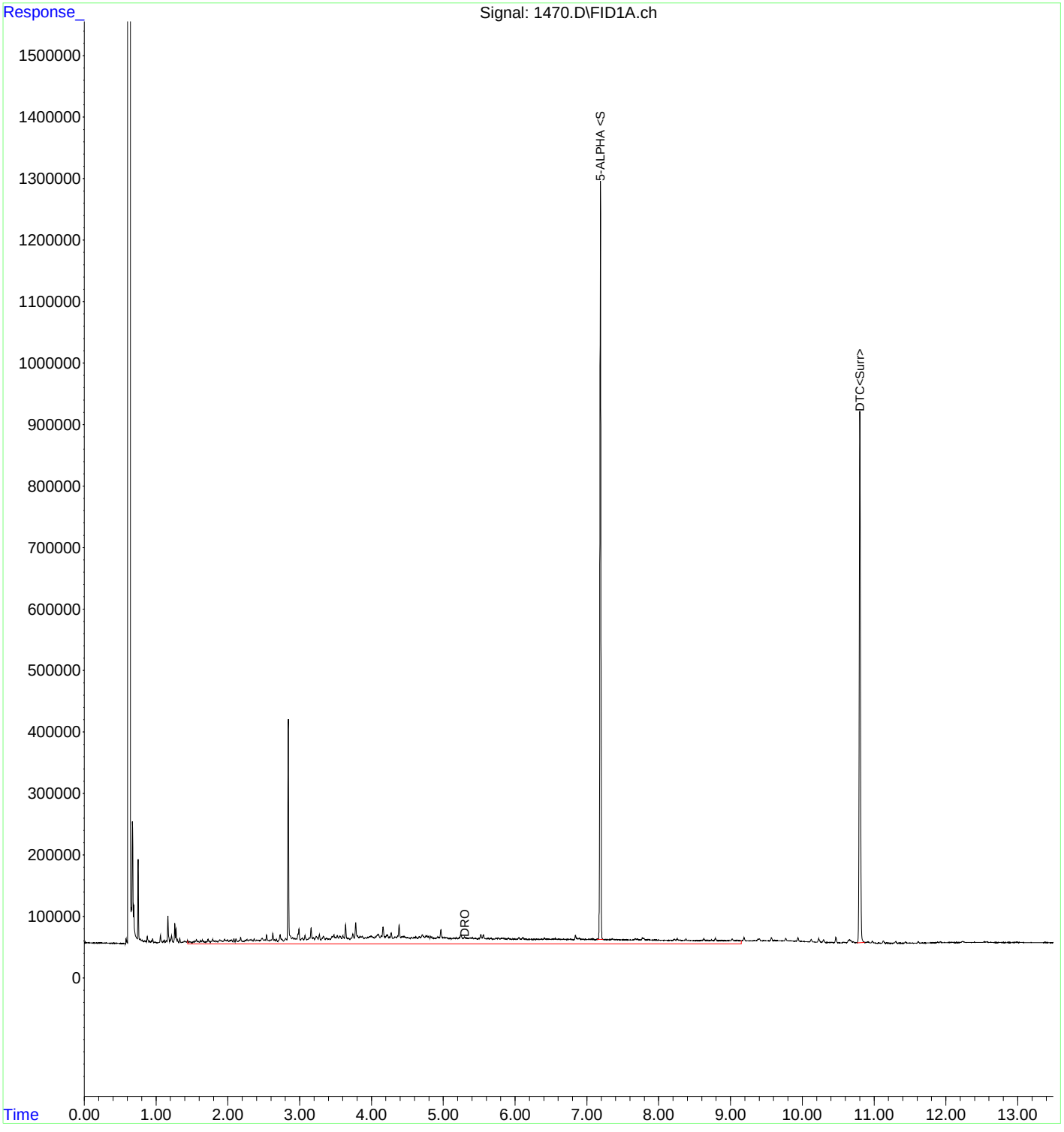
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.189	12011587	87.905	µg/mL
4) S	DTC<Surr>	10.802	10244870	92.429	µg/mL
Target Compounds					
1) H	DRO	5.295	39994543	302.026	µg/mL
3) H	RRO	11.128	7182493	N.D.	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1470.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 3:32 am
Operator : EAB
Sample : 1143647002
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:52:46 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1472.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 3:53 am
Operator : EAB
Sample : 1143647003
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:54:27 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.189	11609511	84.962	µg/mL
4) S	DTC<Surr>	10.803	10118731	91.291	µg/mL
Target Compounds					
1) H	DRO	5.295	85534953	683.143	µg/mL
3) H	RRO	11.128	7832907	N.D.	µg/mL

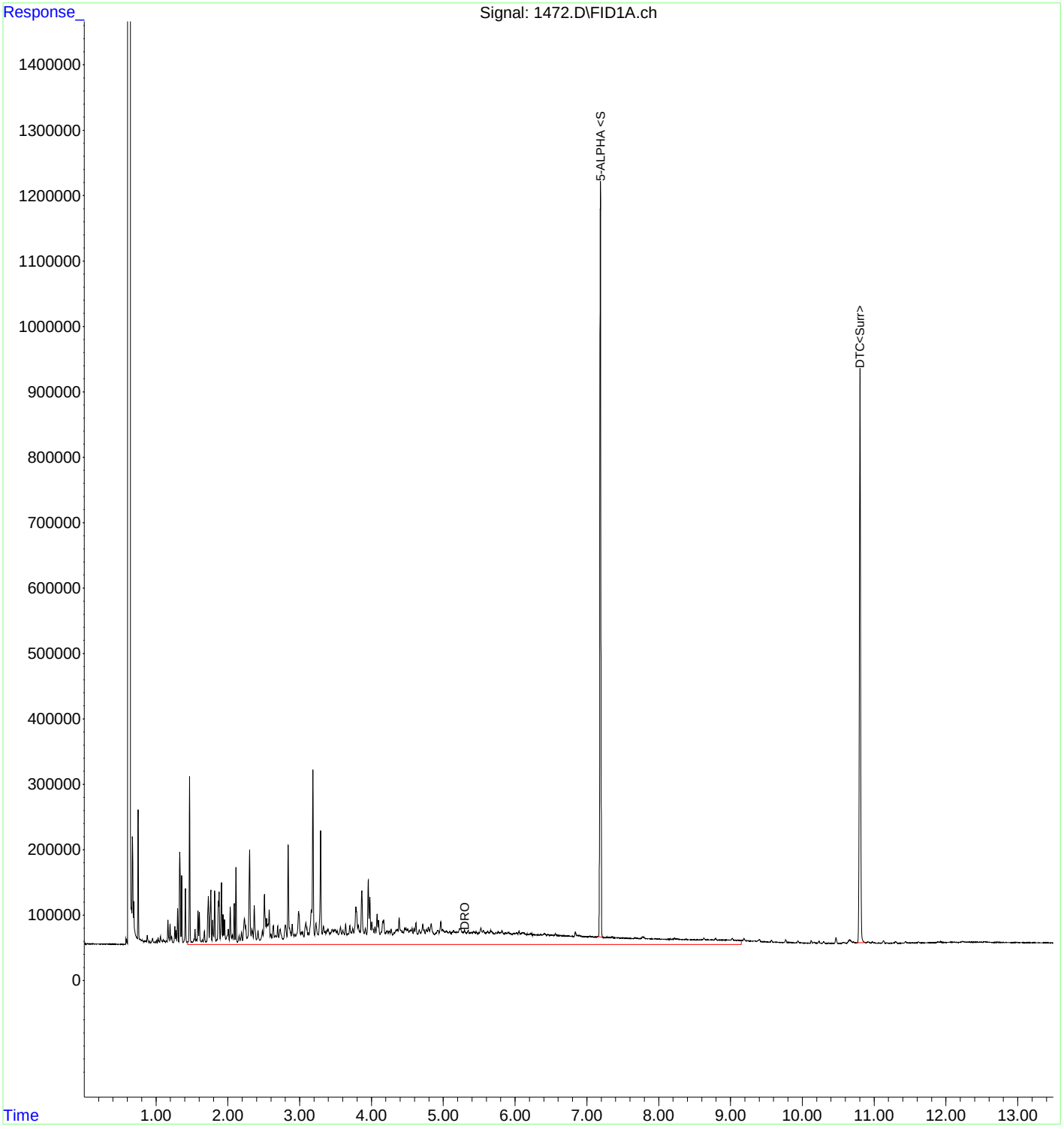
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1472.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 3:53 am
Operator : EAB
Sample : 1143647003
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:54:27 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1474.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 4:13 am
Operator : EAB
Sample : 1143647004
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:54:44 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.189	12046267	88.159	µg/mL
4) S	DTC<Surr>	10.802	10056715	90.732	µg/mL
Target Compounds					
1) H	DRO	5.295	15005900	92.902	µg/mL
3) H	RRO	11.128	4467084	N.D.	µg/mL

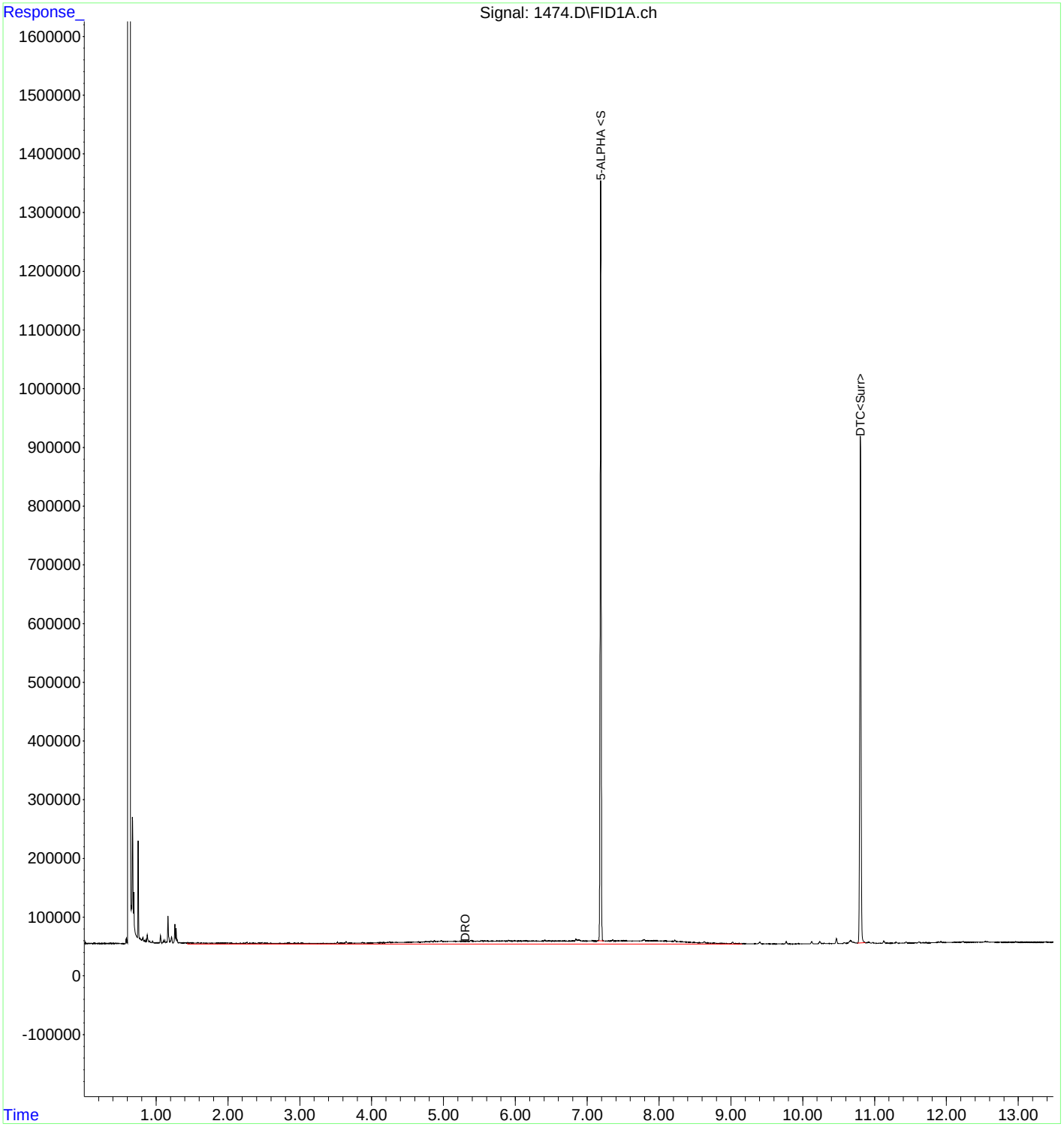
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1474.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 4:13 am
Operator : EAB
Sample : 1143647004
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:54:44 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1476.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 4:34 am
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:55:13 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.295	620746074	5162.200	µg/mL
3) H	RRO	11.128	5307493	N.D.	µg/mL

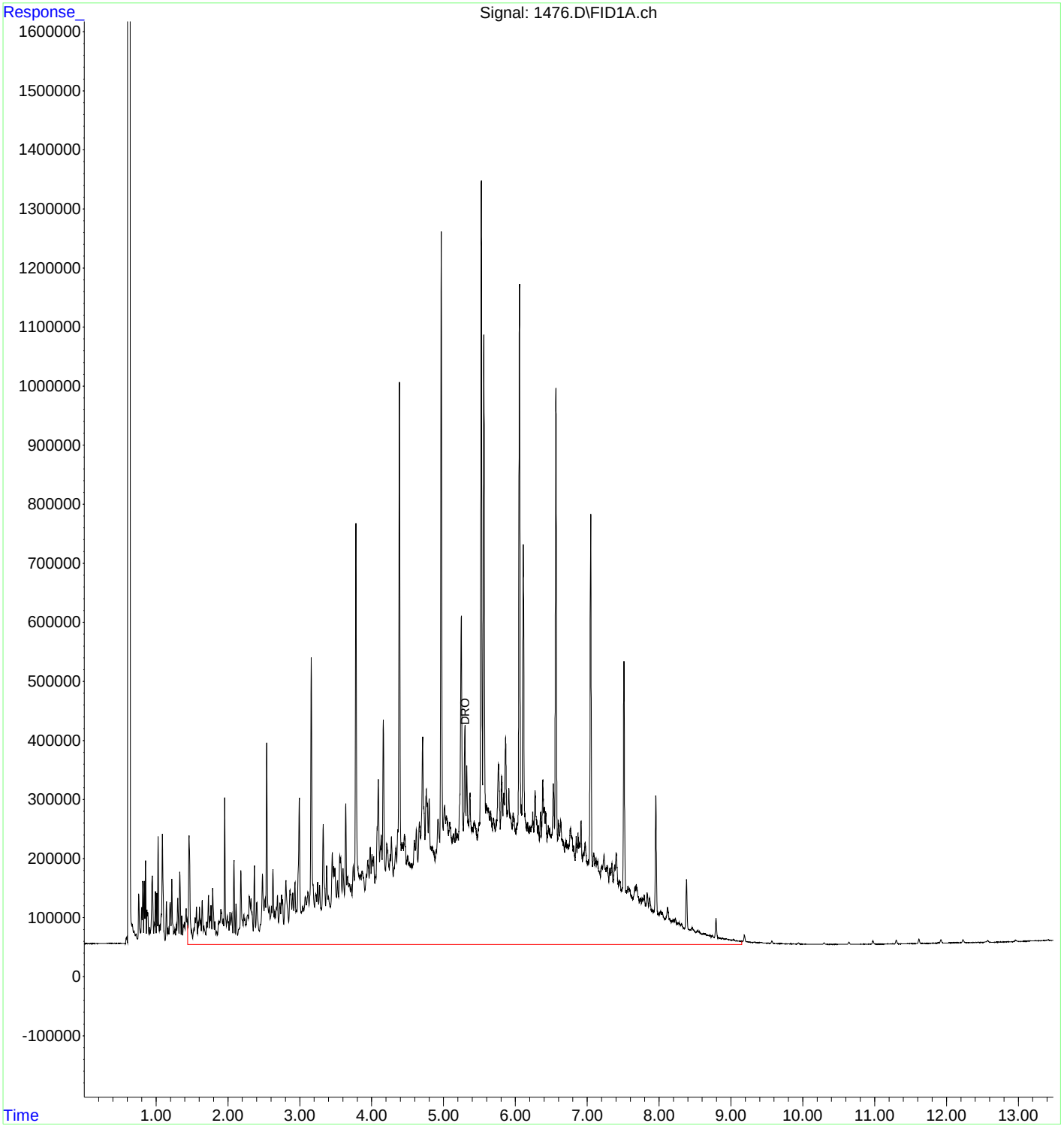
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1476.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 4:34 am
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:55:13 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1478.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 4:54 am
Operator : EAB
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:55:28 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.295	47531908	365.104	µg/mL
3) H	RRO	11.128	312409140	5354.930	µg/mL

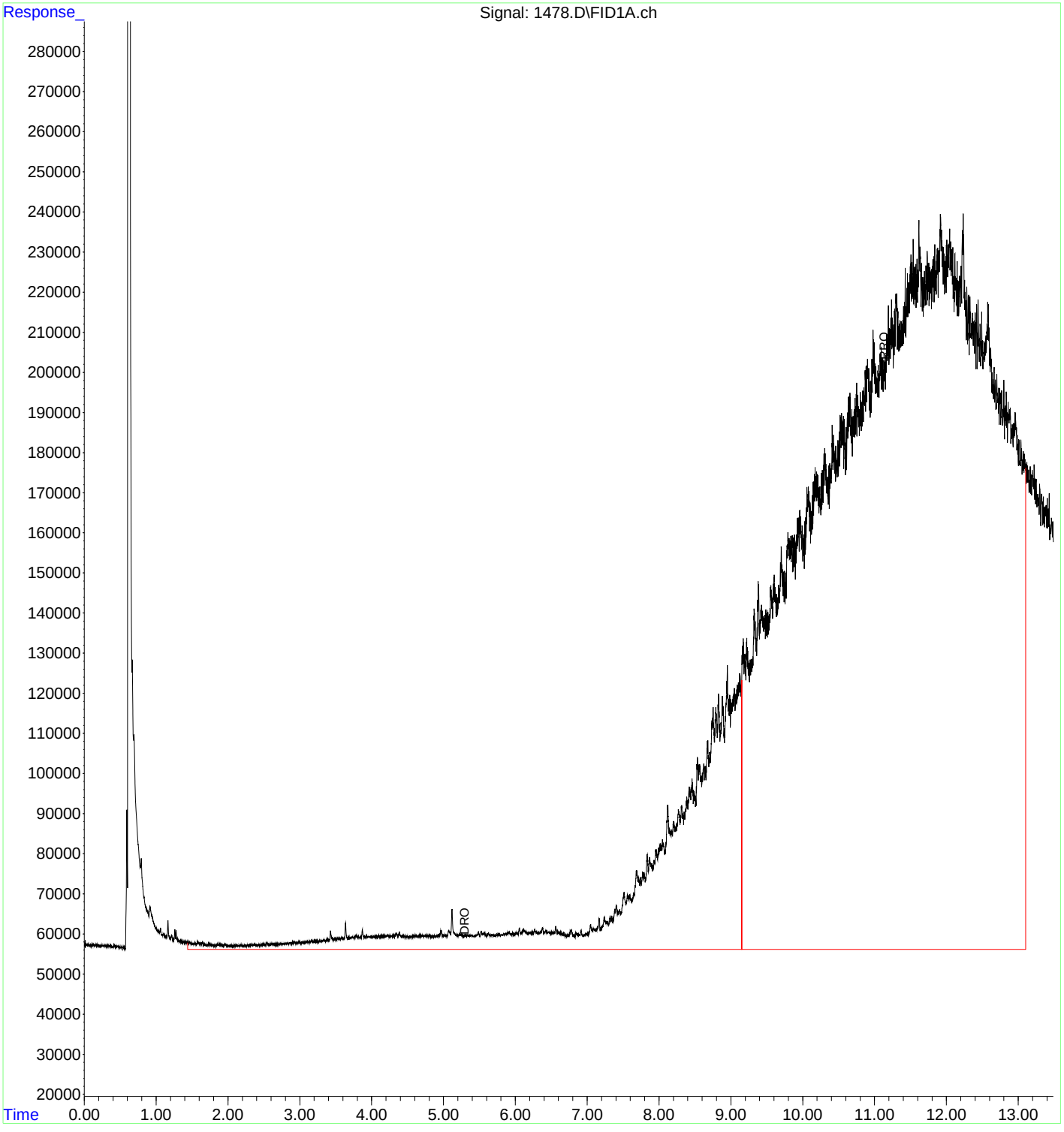
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : Z:\08\SE\DATA\SE081414\
Data File : 1478.D
Signal(s) : FID1A.ch
Acq On : 15 Aug 2014 4:54 am
Operator : EAB
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 15 10:55:28 2014
Quant Method : Z:\08\SE\METHOD\SEF-LV-2014-0729C.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



SGS Alaska Division Peer Review Report - Prep

Batch: **31687** Queue: **XXX**

13-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1226490	MB	35201023LV	SG	1000	mL	1	mL	0.001	0.004	08/13/14 09:20	08/27/14 11:14		
1226491	LCS	35201023LV	SG	1000	mL	1	mL	0.001	0.004	08/13/14 09:20	08/27/14 11:14		
1226492	LCSD	35201023LV	SG	1000	mL	1	mL	0.001	0.004	08/13/14 09:20	08/27/14 11:14		
1143647001	PS	3520/102LV	SG	247	mL	1	mL	0.004048583	0.004	08/13/14 09:20	08/13/14 09:40		1143647001-G
1143647002	PS	3520/102LV	SG	250	mL	1	mL	0.004	0.004	08/13/14 09:20	08/13/14 14:20		1143647002-G
1143647003	PS	3520/102LV	SG	238	mL	1	mL	0.004201681	0.004	08/13/14 09:20	08/13/14 17:20		1143647003-G
1143647004	PS	35201023LV	SG	250	mL	1	mL	0.004	0.004	08/13/14 09:20	08/13/14 15:45		1143647004-D

Analyst's Signature: SG

Peer Reviewer's Signature: Elizabeth Brandemuhl

Elizabeth Brandemuhl

XXX 31687 Waters 35201023LV

Extraction Method:3520/1023LV
Start Date/Time: 8/13/2014 9:20:44AM
End Date/Time: 8/13/2014 1:20:44PM
TV Temp (C): 38
TV ID: 8
Surrogate Lot ID:SVW15-41-12
Surrogate Amount Added (mL):1
Surrogate Conc. ug/mL:100

LCS(D)/MS(D) Lot ID:VF2-136-9
LCS(D)/MS(D) Amount Added (mL):1
LCS(D)/MS(D) Conc. ug/mL:5000
Silica Gel Lot #:
Hexane Lot #:
Na2SO4 Lot #:PW5-3-11
Pipettes (1 or 2 mL) Lot #:P1012
Pipettes (5 or 10mL) Lot #:

CH2Cl2 Lot #:P001057
HCl Lot #:PW6-2-1
H2SO4 Lot #:
NaOH Lot #:
Additional Spike Lot#:
Comments:

Lab Sample ID	Sample Type	Initial Vol (ml)	Final Vol (ml)	Initial pH (5-9)	Final pH (>11)	Original HSN	Paired HSN	Container_Id	Comments
1226490	MB	1000	1						
1226491	LCS	1000	1						
1226492	LCSD	1000	1				1226491		
1143647001	PS	247	1					1143647001-G	
1143647002	PS	250	1					1143647002-G	
1143647003	PS	238	1					1143647003-G	
1143647004	PS	250	1					1143647004-D	

Analyst Initials who performed each of the following steps:

Measure Sample Volume:CCZ
Spike/Surrogate:SG
Witness Spike/Surrogate:CCZ

Concentrate:SG
Posted By:SG

SGS North America Inc.
Calibration Review and Validation for:
Semivolatile Fuels - AK102/103 or 8015C or AK102/103-SV or 8015C-SV

Instrument/Date Code in YYYY-MMDD format (e.g., SDF2007-0507) SEF2014-0729-LV
Instrument Method File Name (e.g. SDF013008_SVA.met) SEF-LV-2014-0729.M

Contents:	Analyst's Review OK	Analyst's Review N/A	Peer Review OK	Peer Review N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Runlog	☑		☑	
Chromatograms for IB, NAS, Cal Stds, and ICVs	☑		☑	
Validation:				
Dates are correct	☑		☑	
IB and NAS have been run at the beginning of the sequence	☑		☑	
The retention time group window is set correctly and shown with NAS:				
AK102 DRO: C10 --> Beginning of C25	☑	☐	☑	☐
AK103 RRO: Beginning of C25 --> Through C36	☑	☐	☑	☐
8015C DRO: C10 --> Beginning of C28	☐	☑	☐	☑
8015C RRO: Beginning of C28 --> Through C36	☐	☑	☐	☑
Surrogate RT windows are set correctly.				
Criteria of ± 0.05 met for AK methods	☑	☐	☑	☐
Criteria of ± 0.03 met for 8015C	☐	☑	☐	☑
If the Calibration Fit type is Linear, then there are at least 5 points.	☑	☐	☑	☐
If the Calibration Fit type is Quadratic, then there are at least 6 points.	☐	☑	☐	☑
If the Calibration Fit type is Average RF:				
The percent RSD of the response factor is ≤ 25% for AK102/103	☑	☐	☑	☐
The percent RSD of the response factor is ≤ 20% for 8015C	☐	☑	☐	☑
If the Calibration Fit type is Linear or Quadratic:				
The correlation coefficient is r^2 >0.995 for AK102/103.	☑	☐	☑	☐
The correlation coefficient is r^2 >0.99 for 8015C.	☐	☑	☐	☑
For AK102/103, the ICV has 75%-125% recovery.	☑	☐	☑	☐
For 8015C, the ICV has 80-120% recovery.	☐	☑	☐	☑
Manual Integrations - explanations, before and after printouts	☐	☑	☐	☑
Hand calculations for ICV concentrations of DRO and RRO verified:	☑		☑	
Average RF Equation = Area/RF				
Linear Equation = (Area - Constant Term)/Linear Term	Initials:	EAB	Initials:	MCM
	Date:	7/30/2014	Date:	7/30/2014

Hand Calculated DRO ICV Concentration:

Shown: 5818.654 ug/mL

Calculated: $\frac{(699187007-3904900)}{119490}$ 5818.747 ug/mL

Hand Calculated RRO ICV Concentration:

Shown: 5966.070 ug/mL

Calculated: $\frac{(347127144-8202900)}{56809}$ 5966.031 ug/mL

Note:

Calibration Table Report
Method: SEF-LV-2014-0729.M
Title: DRO/RRO by Method AK 102/103
Last Calibration: Wed Jul 30 08:34:18 2014

Calibration Files

Compound	1 2948.D	2 2950.D	3 2952.D	4 2954.D	5 2956.D	6 2958.D	Avg	%RSD
DRO	157591.618	130687.420	126524.090	120056.295	119742.109		130920.000	11.917
5-ALPHA <Surr>	133575.203	138144.370	136364.815	138581.840	136548.367		136643.000	1.441
RRO	113413.843	97592.675	71829.676	67435.891	58981.304	57103.095	77726.100	29.257
DTC<Surr>	109211.175	112561.778	110668.061	111856.129	109902.352		110840.000	1.240

Wed Jul 30 08:40:31 2014

Calibration Report SE

Method Path : Z:\07\SE\METHOD\
Method File : SEF-LV-2014-0729.M
Title : DRO/RRO by Method AK 102/103
Last Update : Wed Jul 30 08:34:18 2014
Response Via : Initial Calibration

Calibration Files
1 =2948 2 =2950 3 =2952 4 =2954 5 =2956
6 =2958

	Compound	Fit	Constant	Linear	Quad	RSD/Cf
1) H	DRO	Lin	3.9049 e6	1.1949 e5	-----	0.9999
2) S	5-ALPHA <Surr>	Avg	-----	1.3664 e5	-----	0.0144
3) H	RRO	Lin	8.2029 e6	5.6809 e4	-----	0.9992
4) S	DTC<Surr>	Avg	-----	1.1084 e5	-----	0.0124

SEF-LV-2014-0729.M Wed Jul 30 08:50:03 2014

Instrument Runlog

Instrument: SEF **Calibration Date:** 7/29/2014 **Method:** AK102/103
Operator: EAB **Processed By:** EAB **Posted By:** _____ **Analytical Batch:** _____

Data Path: Z:\07\SE\DATA\SE072914\

Daily:		As Needed:			
Verify System Date/Time	✓	Clip Column/Guard Column	✓	Verify Acquisition Parameters	
General System Inspection	✓	Replace Inlet Seal ✓ Septa ✓ Liner	✓	Rinse or Replace Weldment/Split Lines	

Standards:				
IB	SVW15-41-11	**CCVR**	VF3-1-1	
NAS	VF3-3-1	**CCVB**	VF2-109-10	
MeCl2	P-454			

Data File	Vial	Sample ID	Dilution	DRO	RRO	Notes	Acquisition Time	Rerun
2902.D	5	R	1				7/29/14 7:58 PM	
2908.D	5	R	1				7/29/14 8:30 PM	
2910.D	5	R	1				7/29/14 8:51 PM	
2912.D	5	R	1				7/29/14 9:11 PM	
2914.D	5	R	1				7/29/14 9:32 PM	
2916.D	5	R	1				7/29/14 9:53 PM	
2918.D	1	IB	1	95	93	SEF-LV-2014-0729.M	7/29/14 10:13 PM	
2920.D	2	NAS	1				7/29/14 10:34 PM	
2922.D	3	CCVB	1	99			7/29/14 10:54 PM	
2924.D	4	CCVR	1		100		7/29/14 11:16 PM	
2926.D	6	SURR 15	1			VF3-6-1	7/29/14 11:36 PM	
2928.D	7	SURR 50	1			VF3-6-2	7/29/14 11:57 PM	
2930.D	8	SURR 100	1			VF3-6-3	7/30/14 12:17 AM	
2932.D	9	SURR 150	1			VF3-6-4	7/30/14 12:38 AM	
2934.D	10	SURR 200	1			VF3-6-5	7/30/14 12:59 AM	
2936.D	11	DRO 100	1			VF3-6-6	7/30/14 1:19 AM	
2938.D	12	DRO 300	1			VF3-6-7	7/30/14 1:40 AM	
2940.D	13	DRO 1000	1			VF3-6-8	7/30/14 2:01 AM	
2942.D	14	DRO 5000	1			VF3-6-9	7/30/14 2:21 AM	
2944.D	15	DRO 10000	1			VF3-6-10	7/30/14 2:42 AM	
2946.D	5	R	1				7/30/14 3:02 AM	
2948.D	17	RRO 125	1			VF3-6-12	7/30/14 3:23 AM	
2950.D	18	RRO 250	1			VF3-6-13	7/30/14 3:44 AM	
2952.D	19	RRO 500	1			VF3-6-14	7/30/14 4:04 AM	
2954.D	20	RRO 1000	1			VF3-6-15	7/30/14 4:25 AM	
2956.D	21	RRO 5000	1			VF3-6-16	7/30/14 4:45 AM	
2958.D	22	RRO 10000	1			VF3-6-17	7/30/14 5:06 AM	
2960.D	5	R	1				7/30/14 5:26 AM	
2962.D	25	ICVR	1		119	OW1-3-2	7/30/14 5:47 AM	
2964.D	24	ICVB	1	116		VF3-5-1	7/30/14 6:08 AM	
2966.D	5	R	1				7/30/14 6:28 AM	
2968.D	5	R	4				7/30/14 6:49 AM	
2970.D	5	R	4				7/30/14 7:10 AM	
2972.D	5	R	4				7/30/14 7:30 AM	
2974.D	5	R	4				7/30/14 7:51 AM	
2976.D	5	R	1				7/30/14 8:12 AM	

Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2918.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 10:13 pm
Operator : EAB
Sample : IB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:34:42 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

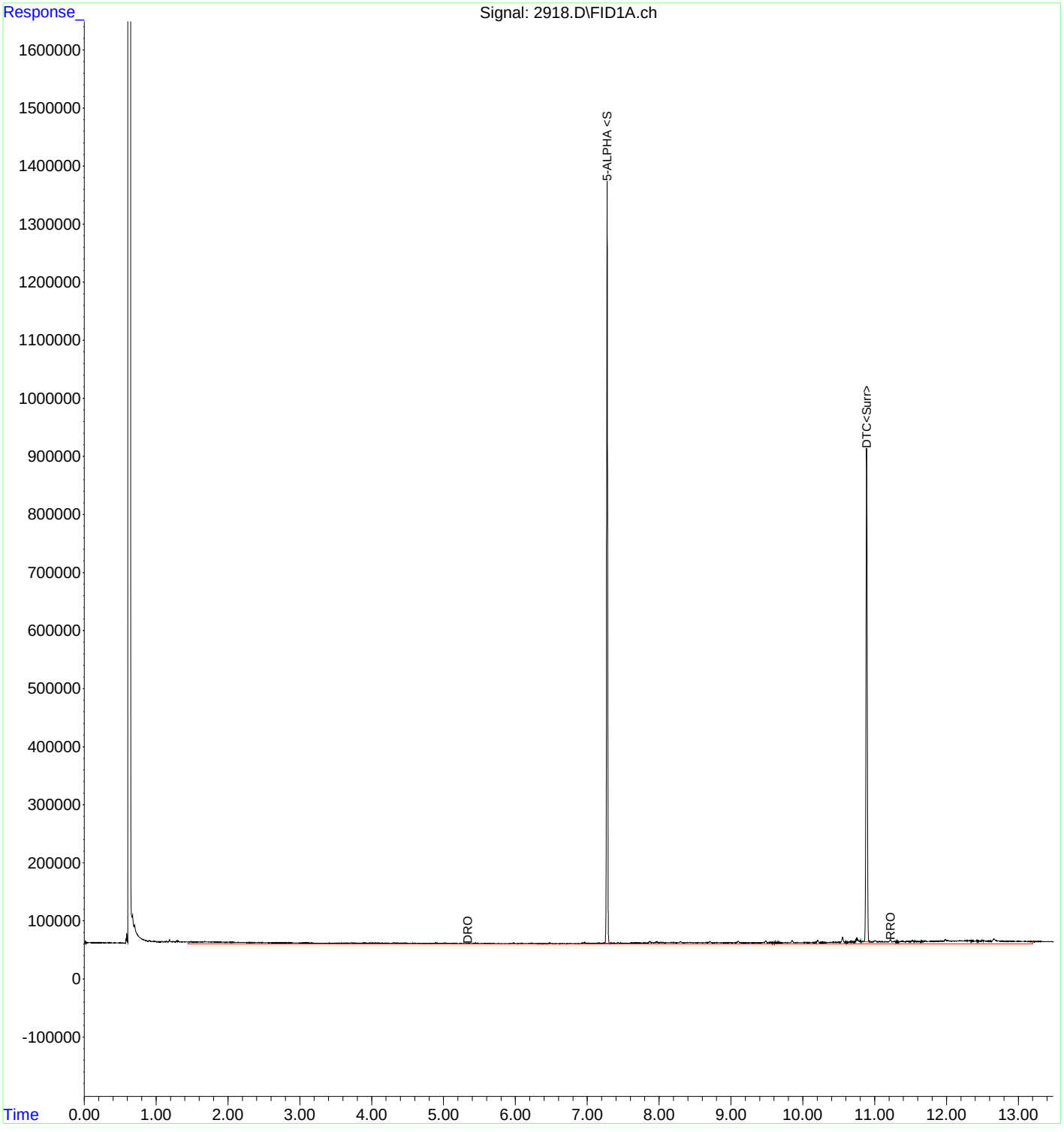
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
2) S	5-ALPHA <Surr>	7.277	13002731	95.158 µg/mL
4) S	DTC<Surr>	10.888	10342606	93.311 µg/mL
Target Compounds				
1) H	DRO	5.336	6866230	24.783 µg/mL
3) H	RRO	11.212	9069398	15.253 µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2918.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 10:13 pm
Operator : EAB
Sample : IB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:34:42 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2920.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 10:34 pm
Operator : EAB
Sample : NAS
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:34:50 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	1097908181	9155.458	µg/mL
3) H	RRO	11.212	552163689	9575.320	µg/mL

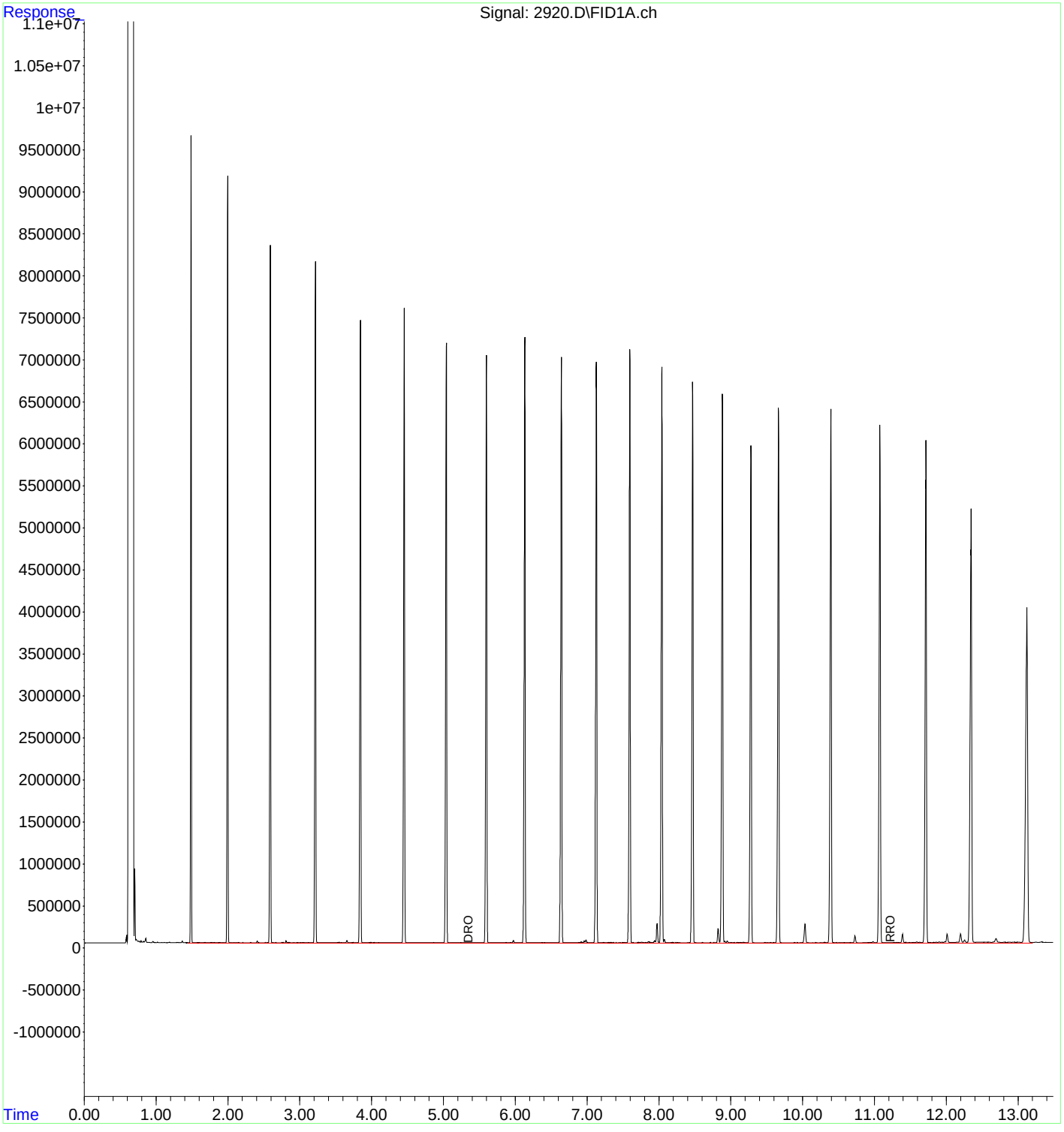
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

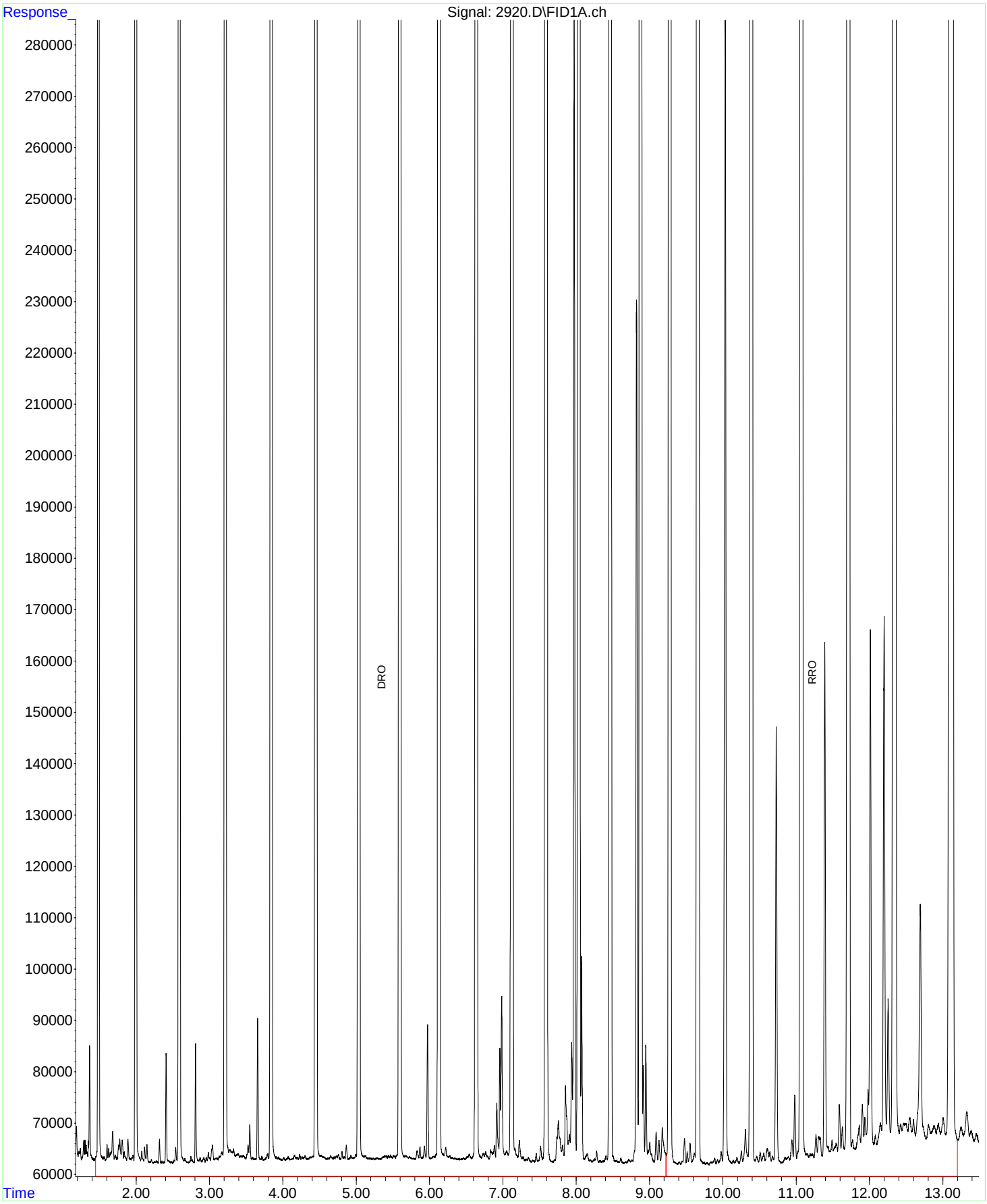
Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2920.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 10:34 pm
Operator : EAB
Sample : NAS
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:34:50 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



File :Z:\07\SE\DATA\SE072914\2920.D
Operator : EAB
Acquired : 29 Jul 2014 10:34 pm using AcqMethod SE_SVF_HVR_ACQ.M
Instrument : SE
Sample Name: NAS
Misc Info :
Vial Number: 2



Area Percent Report

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2920.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 10:34 pm
Sample : NAS
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e

Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Title : DRO/RRO by Method AK 102/103

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.593	0.569	0.600	BB	84547	474359	0.00%	0.002%
2	0.611	0.599	0.633	BB	1072207555	8858932498	71.29%	35.232%
3	0.646	0.633	0.665	BB	1369179541	12426180269	100.00%	49.420%
4	0.672	0.665	0.693	BB	277796565	2235635886	17.99%	8.891%
5	0.701	0.693	0.718	BB	799100	5722652	0.05%	0.023%
6	0.792	0.783	0.808	BB	14870	98622	0.00%	0.000%
7	0.857	0.838	0.879	BB	45938	402422	0.00%	0.002%
8	0.954	0.929	0.976	BB	13451	118094	0.00%	0.000%
9	1.365	1.298	1.384	BB	21052	148518	0.00%	0.001%
10	1.487	1.446	1.526	BB	9607822	64676292	0.52%	0.257%
11	1.997	1.958	2.034	BB	9120877	66464757	0.53%	0.264%
12	2.409	2.388	2.433	BB	21131	166477	0.00%	0.001%
13	2.591	2.555	2.632	BB	8296683	68104882	0.55%	0.271%
14	2.810	2.786	2.838	BB	22869	170560	0.00%	0.001%
15	3.219	3.175	3.260	BB	8101870	68990675	0.56%	0.274%
16	3.657	3.624	3.682	BB	27391	237486	0.00%	0.001%
17	3.846	3.801	3.890	BB	7406274	70227880	0.57%	0.279%
18	4.456	4.410	4.498	BB	7534565	71293429	0.57%	0.284%
19	5.041	4.990	5.083	BB	7073983	72184767	0.58%	0.287%
20	5.600	5.551	5.645	BB	6979868	71868850	0.58%	0.286%
21	5.974	5.946	6.003	BB	25746	248407	0.00%	0.001%
22	6.133	6.085	6.175	BB	7177954	73013678	0.59%	0.290%
23	6.643	6.592	6.689	BB	6980652	73697723	0.59%	0.293%
24	6.959	6.945	6.971	BB	15178	93770	0.00%	0.000%
25	6.986	6.971	7.017	BB	24885	208355	0.00%	0.001%
26	7.128	7.070	7.175	BB	6810436	73513097	0.59%	0.292%
27	7.595	7.538	7.652	BB	6986758	74152200	0.60%	0.295%
28	7.939	7.893	7.951	BB	12761	78325	0.00%	0.000%
29	7.973	7.952	8.000	BB	222420	2293711	0.02%	0.009%
30	8.042	8.004	8.063	BB	6820849	75048081	0.60%	0.298%
31	8.075	8.063	8.107	BB	29802	232996	0.00%	0.001%
32	8.469	8.419	8.516	BB	6669613	74948045	0.60%	0.298%
33	8.824	8.772	8.845	BB	162110	1831927	0.01%	0.007%
34	8.883	8.846	8.907	BB	6415746	74315376	0.60%	0.296%
35	8.949	8.937	8.973	BB	20603	196664	0.00%	0.001%
36	9.280	9.225	9.332	BB	5897138	70457988	0.57%	0.280%
37	9.664	9.608	9.712	BB	6337865	76455784	0.62%	0.304%
38	10.034	9.982	10.078	BB	219249	3022311	0.02%	0.012%
39	10.394	10.337	10.440	BB	6321656	76631143	0.62%	0.305%
40	10.728	10.689	10.773	BB	84118	993386	0.01%	0.004%
41	11.076	11.018	11.131	BB	6124831	76705446	0.62%	0.305%
42	11.391	11.347	11.430	BB	98431	1142977	0.01%	0.005%
43	11.717	11.653	11.750	BB	5970709	74840268	0.60%	0.298%
44	12.012	11.993	12.061	BB	94672	1079461	0.01%	0.004%
45	12.200	12.123	12.230	BB	99512	1351522	0.01%	0.005%
46	12.255	12.235	12.287	BB	24989	316388	0.00%	0.001%

47	12.347	12.293	12.404	BB	5133747	76068302	0.61%	0.303%
48	12.692	12.622	12.741	BB	43619	809546	0.01%	0.003%
49	13.123	13.037	13.199	BB	3981173	78382098	0.63%	0.312%

Sum of corrected areas: 25144228347

SEF-LV-2014-0729.M Wed Jul 30 08:23:01 2014

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2922.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 10:54 pm
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:35:28 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	594113944	4939.322	µg/mL
3) H	RRO	11.212	8254900	0.915	µg/mL

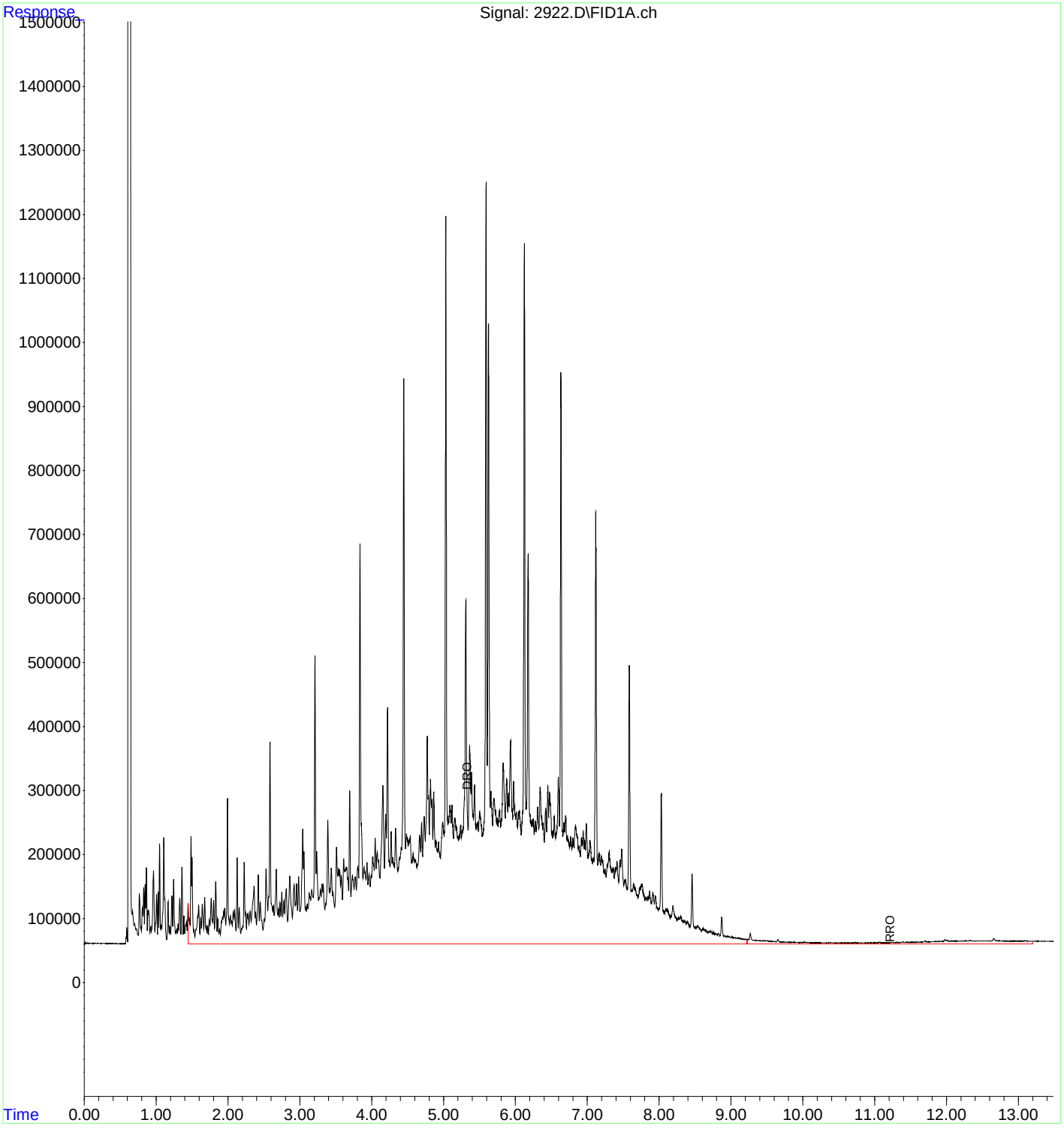
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2922.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 10:54 pm
Operator : EAB
Sample : CCVB
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:35:28 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2924.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 11:16 pm
Operator : EAB
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:35:42 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

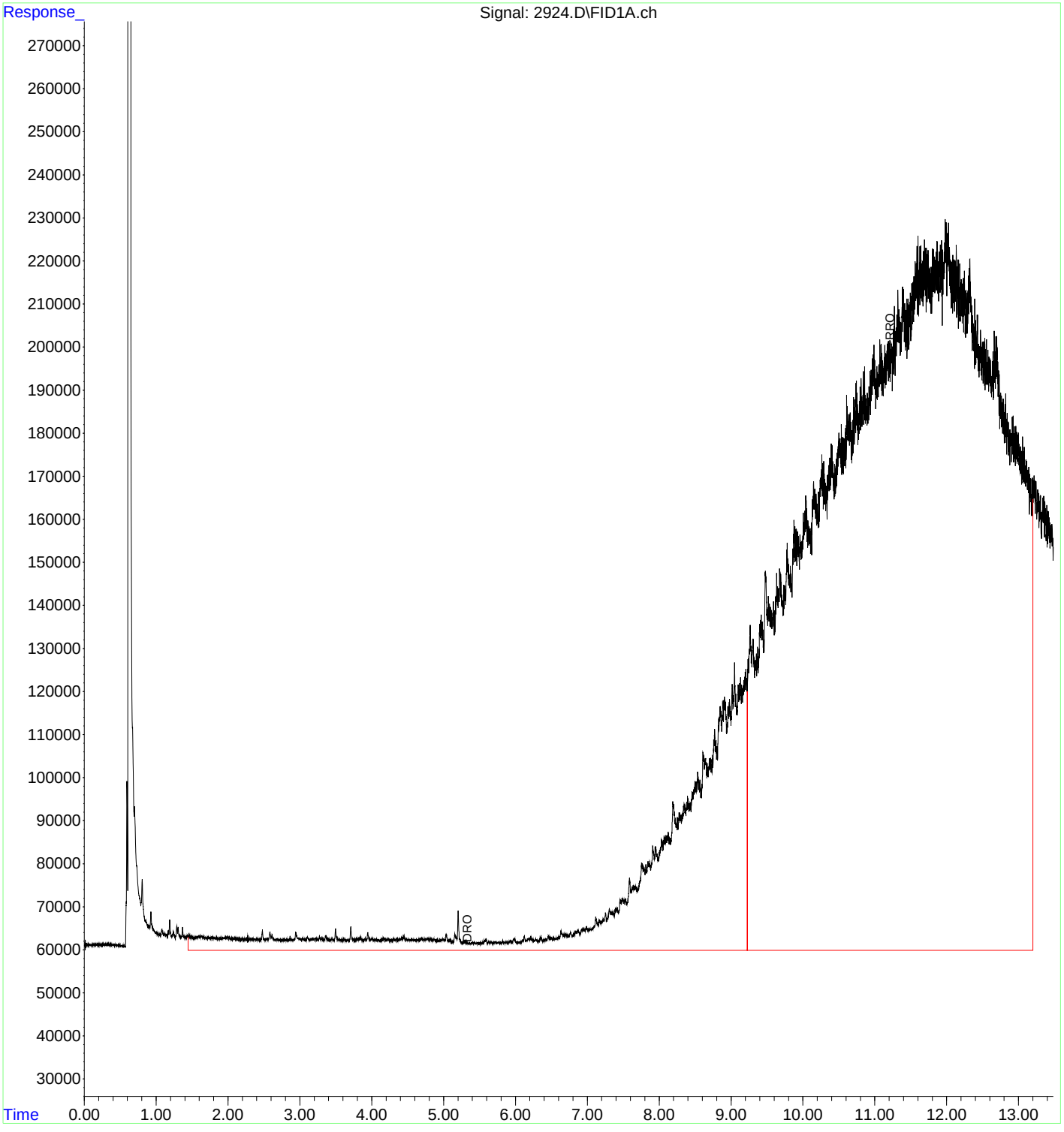
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	47041579	361.001	µg/mL
3) H	RRO	11.212	290839102	4975.234	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2924.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 11:16 pm
Operator : EAB
Sample : CCVR
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:35:42 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2926.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 11:36 pm
Operator : EAB
Sample : SURR 15
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:27:10 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.273	2003628	14.663	µg/mL
4) S	DTC<Surr>	10.887	1638168	14.785	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

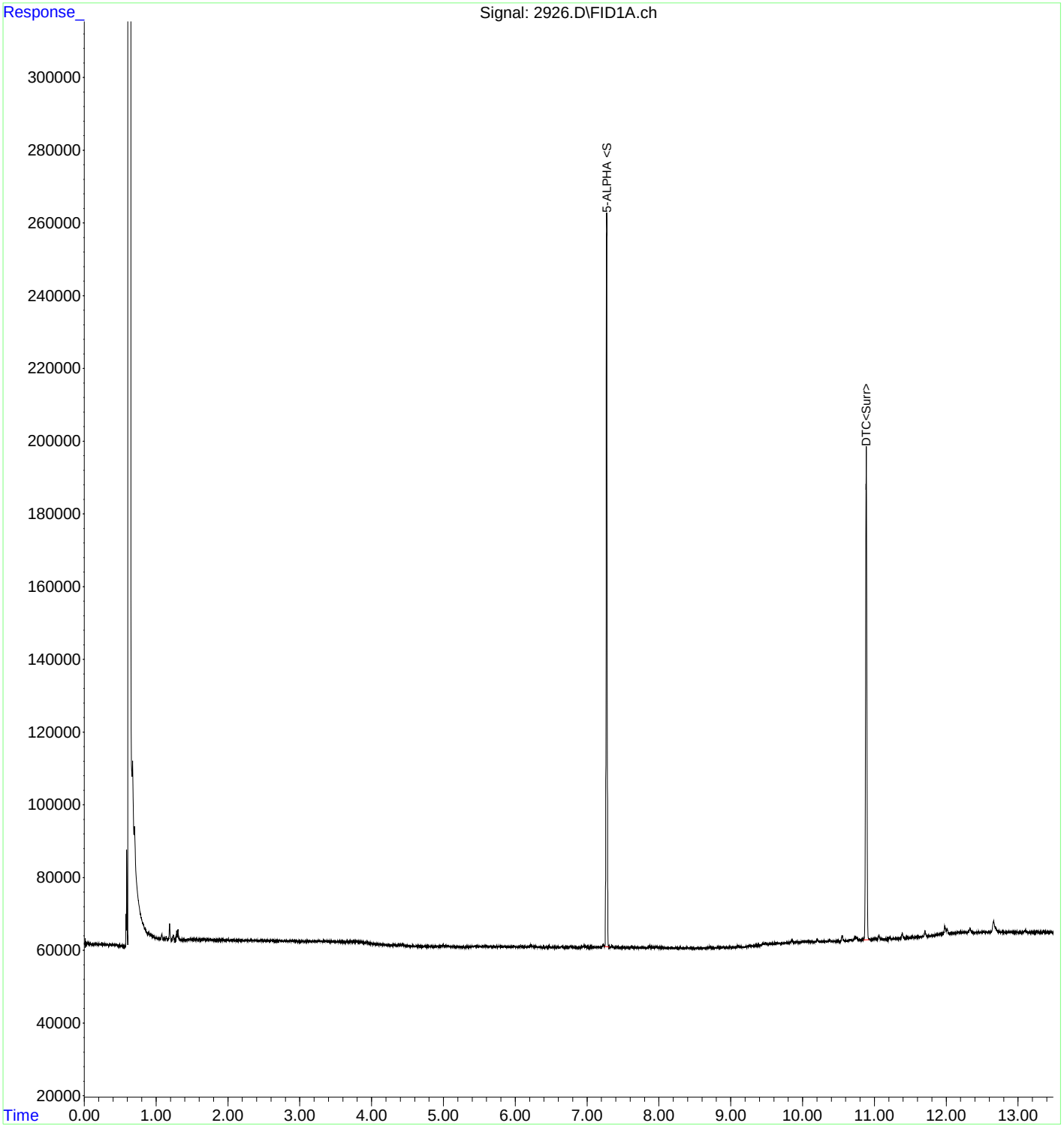
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2926.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 11:36 pm
Operator : EAB
Sample : SURR 15
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:27:10 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2928.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 11:57 pm
Operator : EAB
Sample : SURR 50
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:27:28 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.274	6907219	50.550	µg/mL
4) S	DTC<Surr>	10.886	5628089	50.795	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

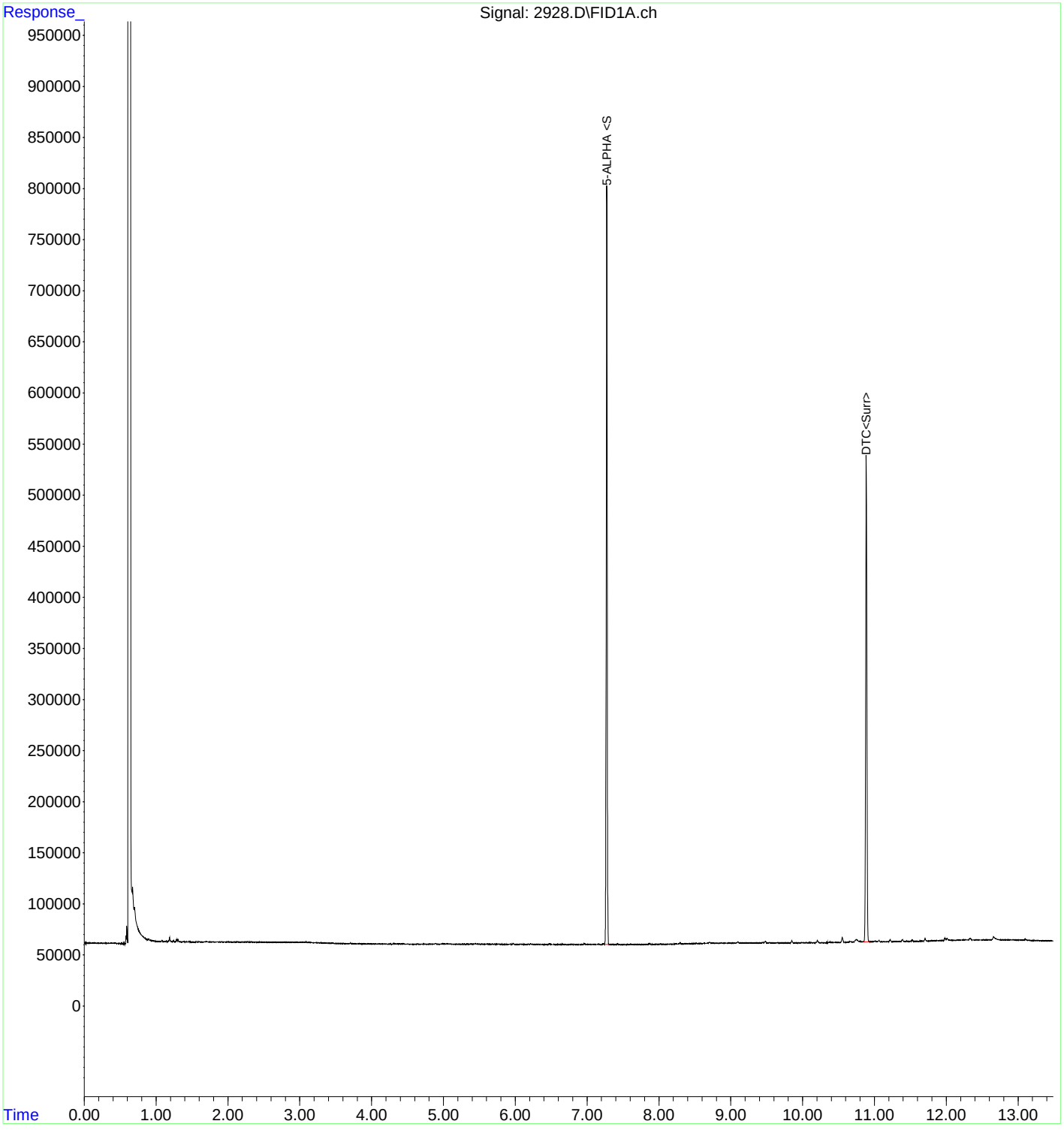
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2928.D
Signal(s) : FID1A.ch
Acq On : 29 Jul 2014 11:57 pm
Operator : EAB
Sample : SURR 50
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:27:28 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2930.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 12:17 am
Operator : EAB
Sample : SURR 100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:27:46 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

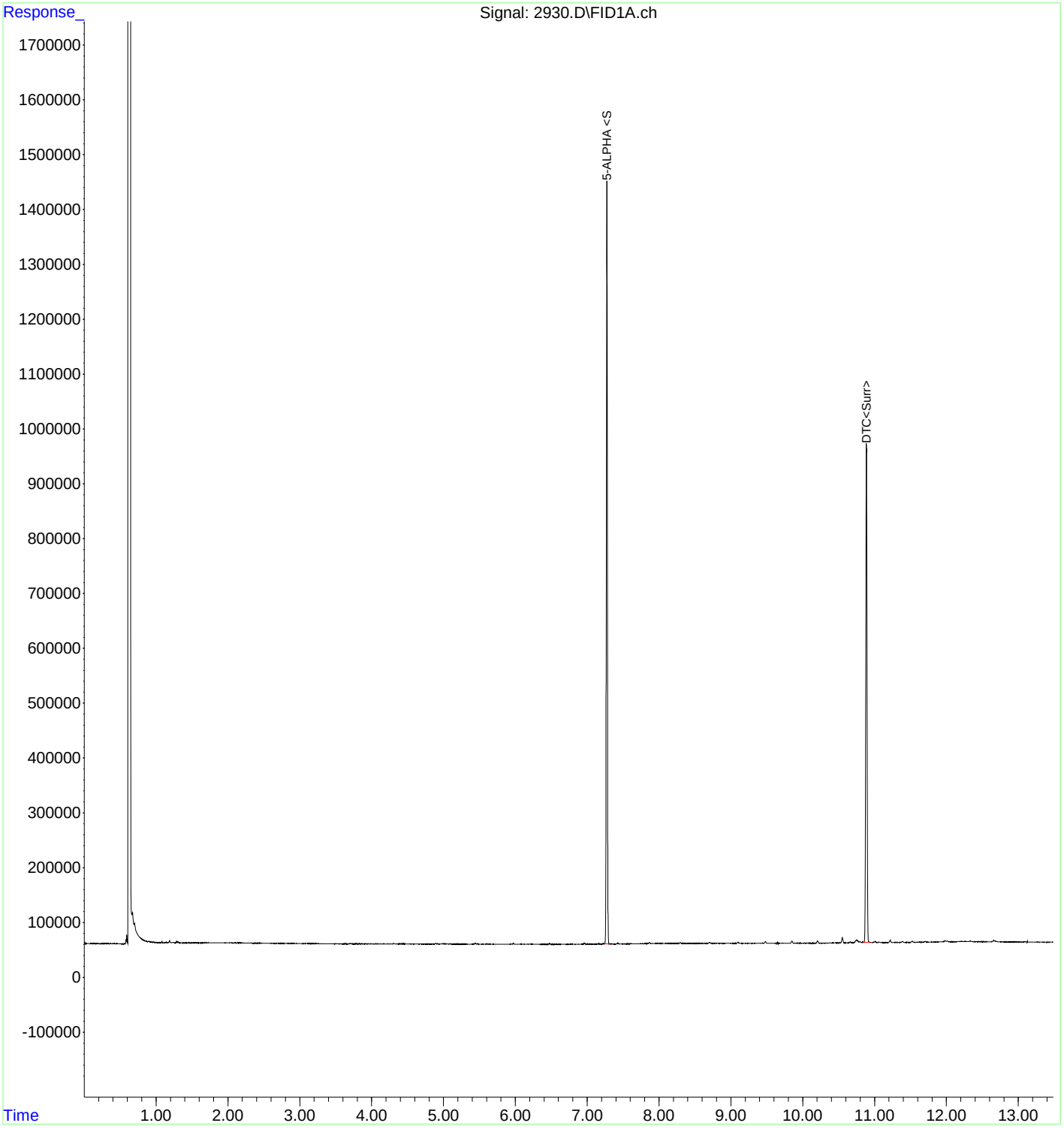
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.274	13636482	99.798	µg/mL
4) S	DTC<Surr>	10.886	11066806	99.881	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2930.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 12:17 am
Operator : EAB
Sample : SURR 100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:27:46 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2932.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 12:38 am
Operator : EAB
Sample : SURR 150
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:03 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.274	20787276	152.130	µg/mL
4) S	DTC<Surr>	10.889	16778419	151.430	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

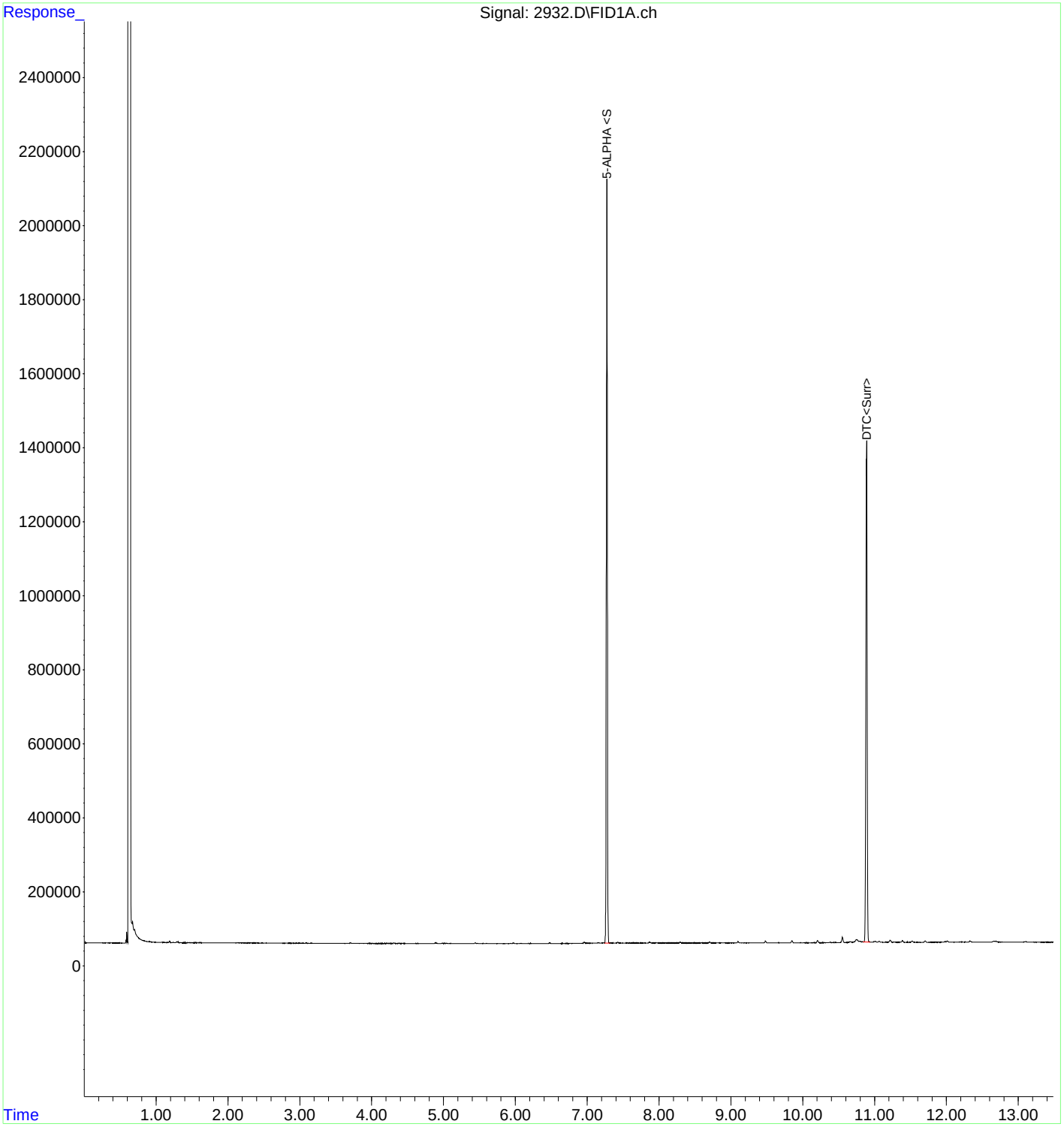
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2932.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 12:38 am
Operator : EAB
Sample : SURR 150
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:03 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2934.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 12:59 am
Operator : EAB
Sample : SURR 200
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:14 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	7.275	27309674	199.864	µg/mL
4) S	DTC<Surr>	10.888	21980470	198.380	µg/mL
Target Compounds					
1) H	DRO	0.000	0	N.D.	µg/mLd
3) H	RRO	0.000	0	N.D.	µg/mLd

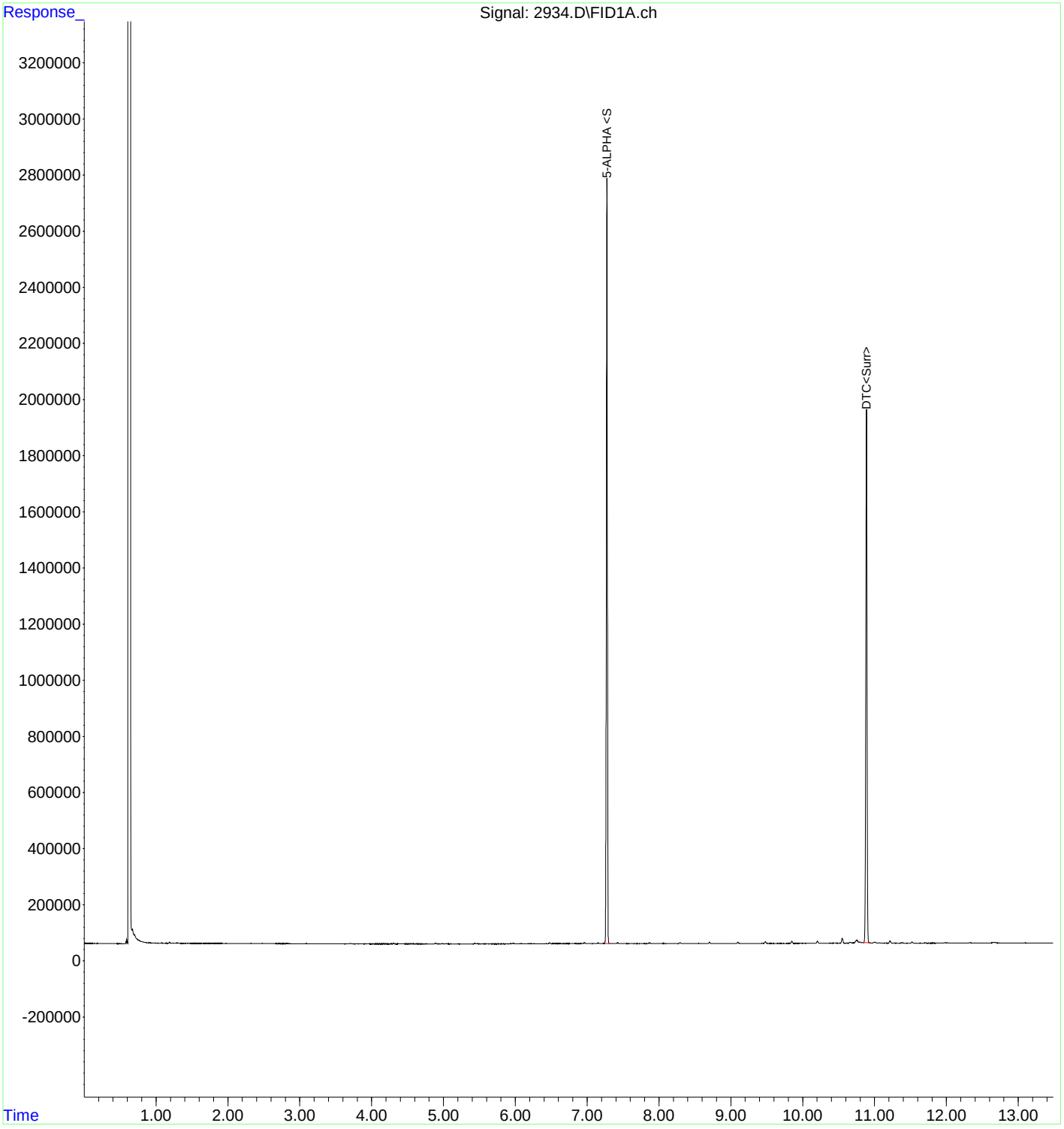
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2934.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 12:59 am
Operator : EAB
Sample : SURR 200
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:14 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2936.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 1:19 am
Operator : EAB
Sample : DRO 100
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:28 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	5.336	15759162	99.439	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

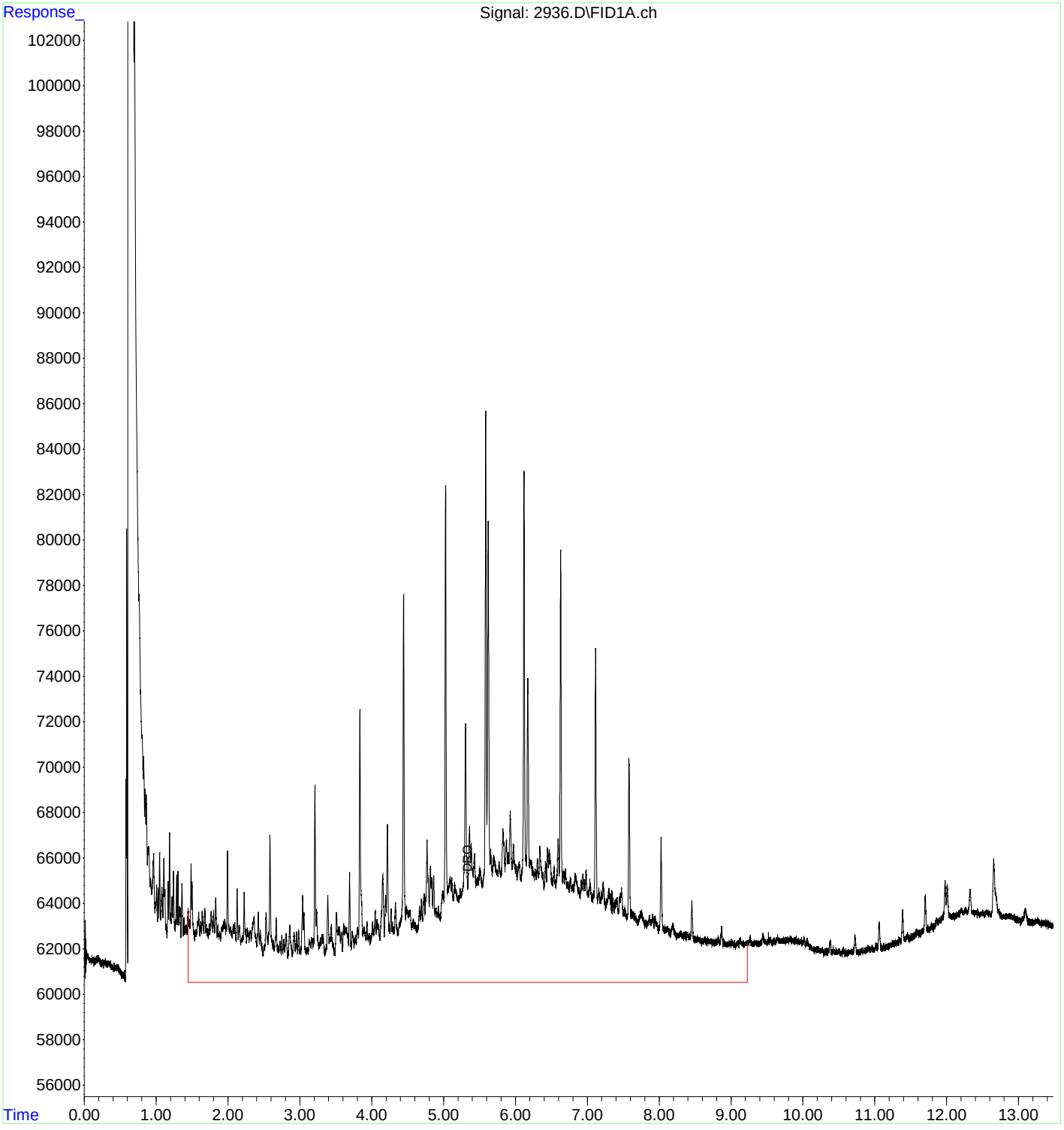
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2936.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 1:19 am
Operator : EAB
Sample : DRO 100
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:28 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2938.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 1:40 am
Operator : EAB
Sample : DRO 300
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:43 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	5.336	39206226	295.811	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

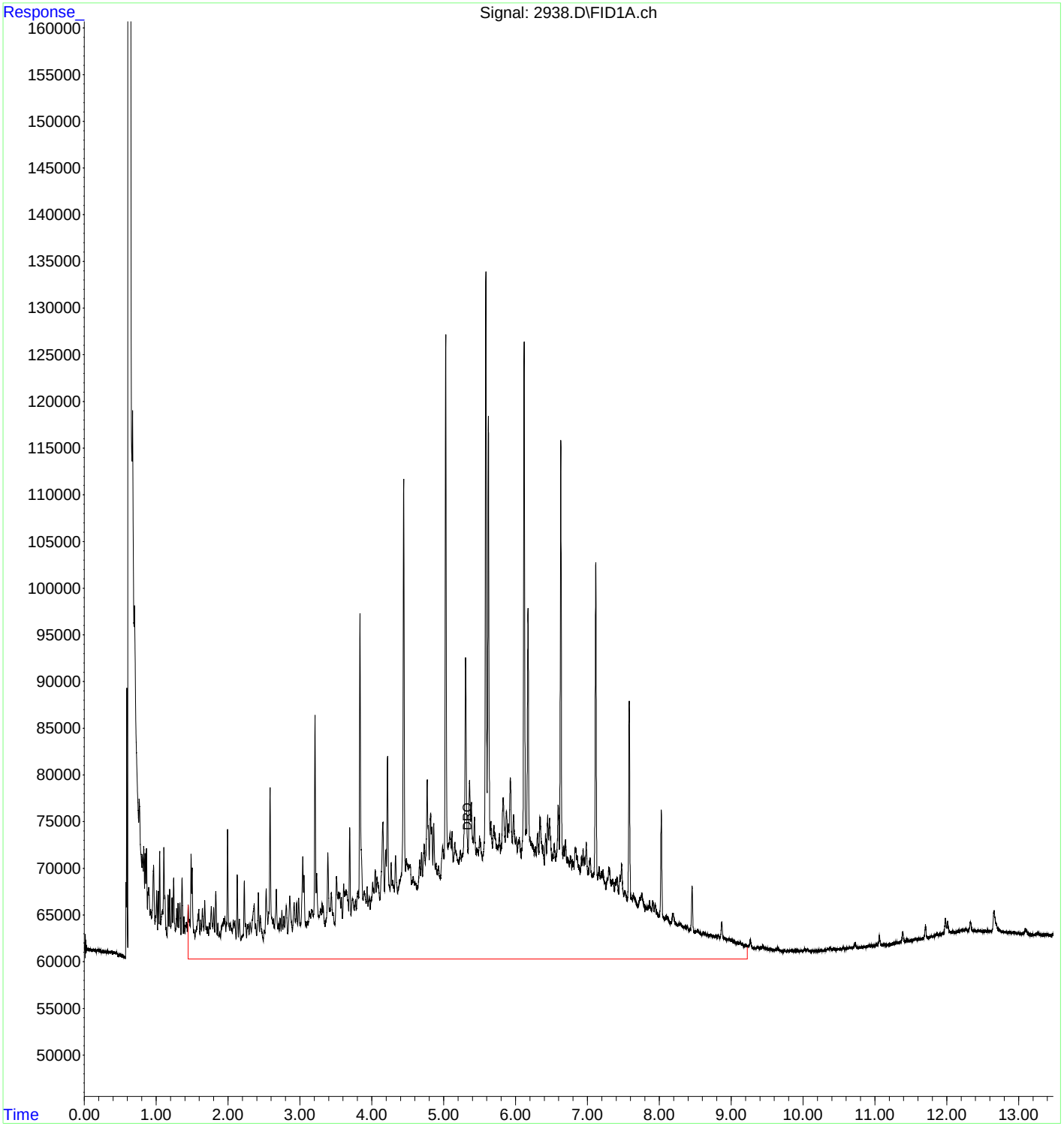
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2938.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 1:40 am
Operator : EAB
Sample : DRO 300
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:43 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2940.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 2:01 am
Operator : EAB
Sample : DRO 1000
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:56 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	5.336	126524090	1027.107	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

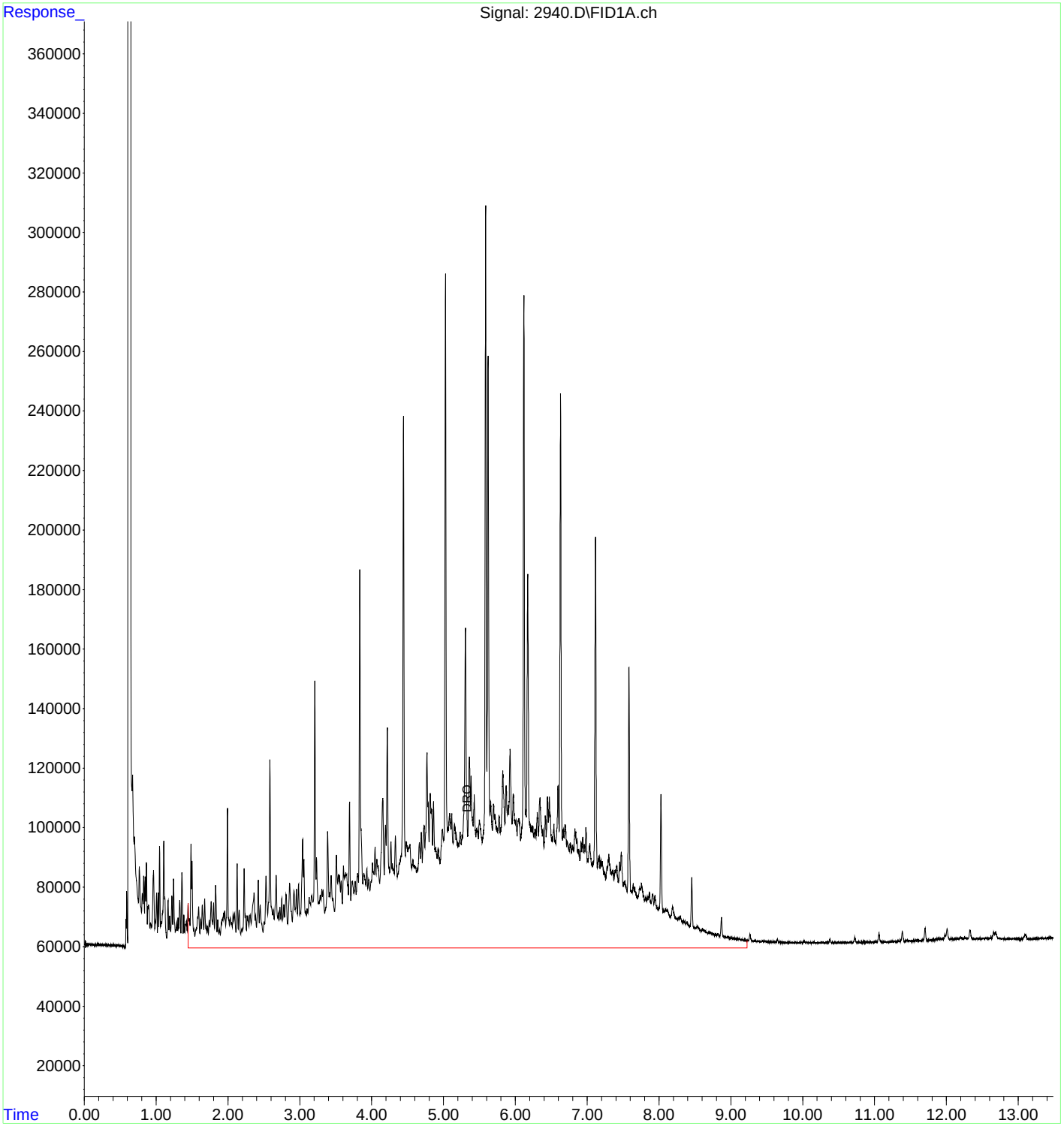
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2940.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 2:01 am
Operator : EAB
Sample : DRO 1000
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:28:56 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2942.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 2:21 am
Operator : EAB
Sample : DRO 5000
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:29:09 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	5.336	600281477	4994.875	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

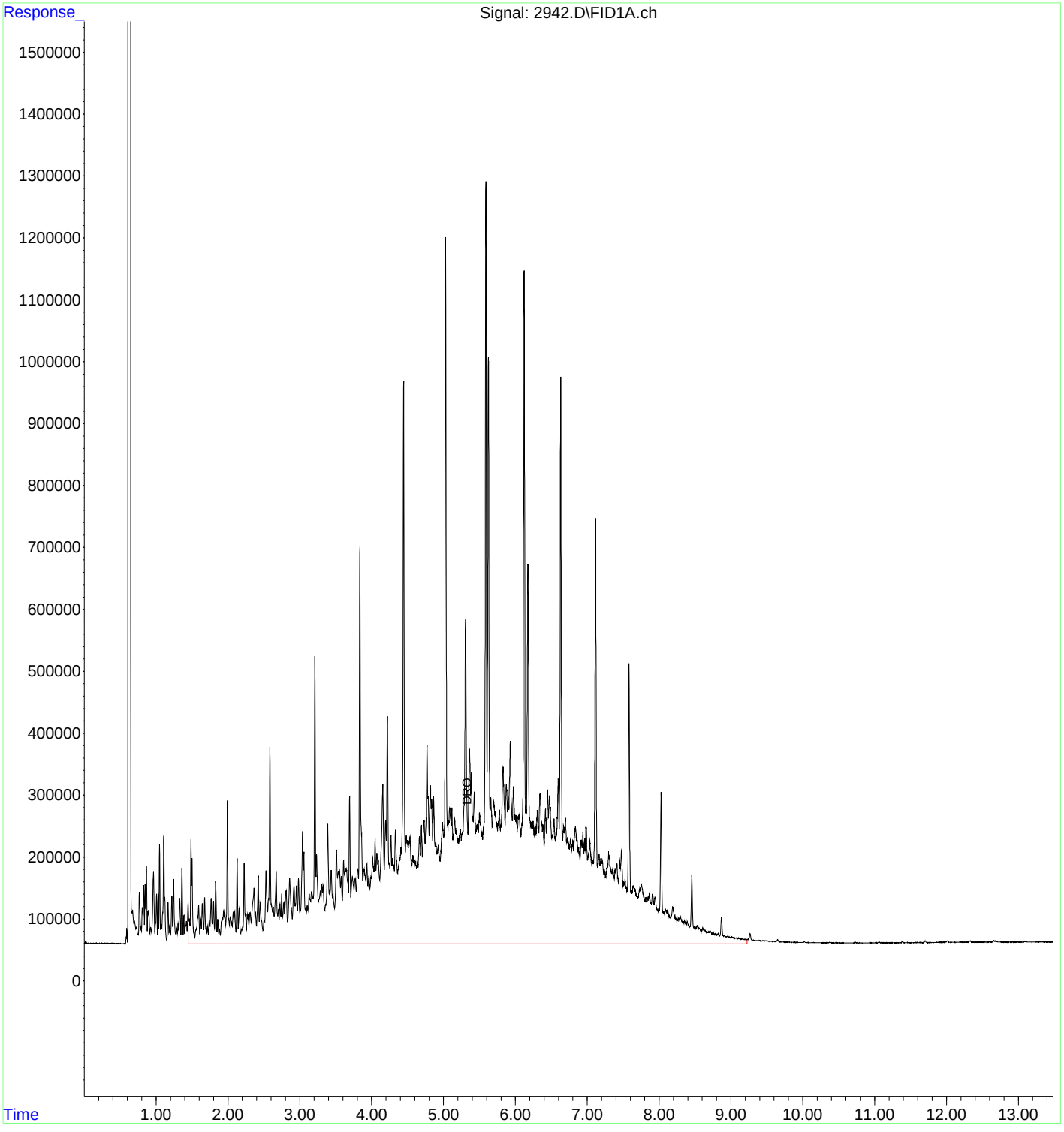
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2942.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 2:21 am
Operator : EAB
Sample : DRO 5000
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:29:09 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2944.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 2:42 am
Operator : EAB
Sample : DRO 10000
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:29:32 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

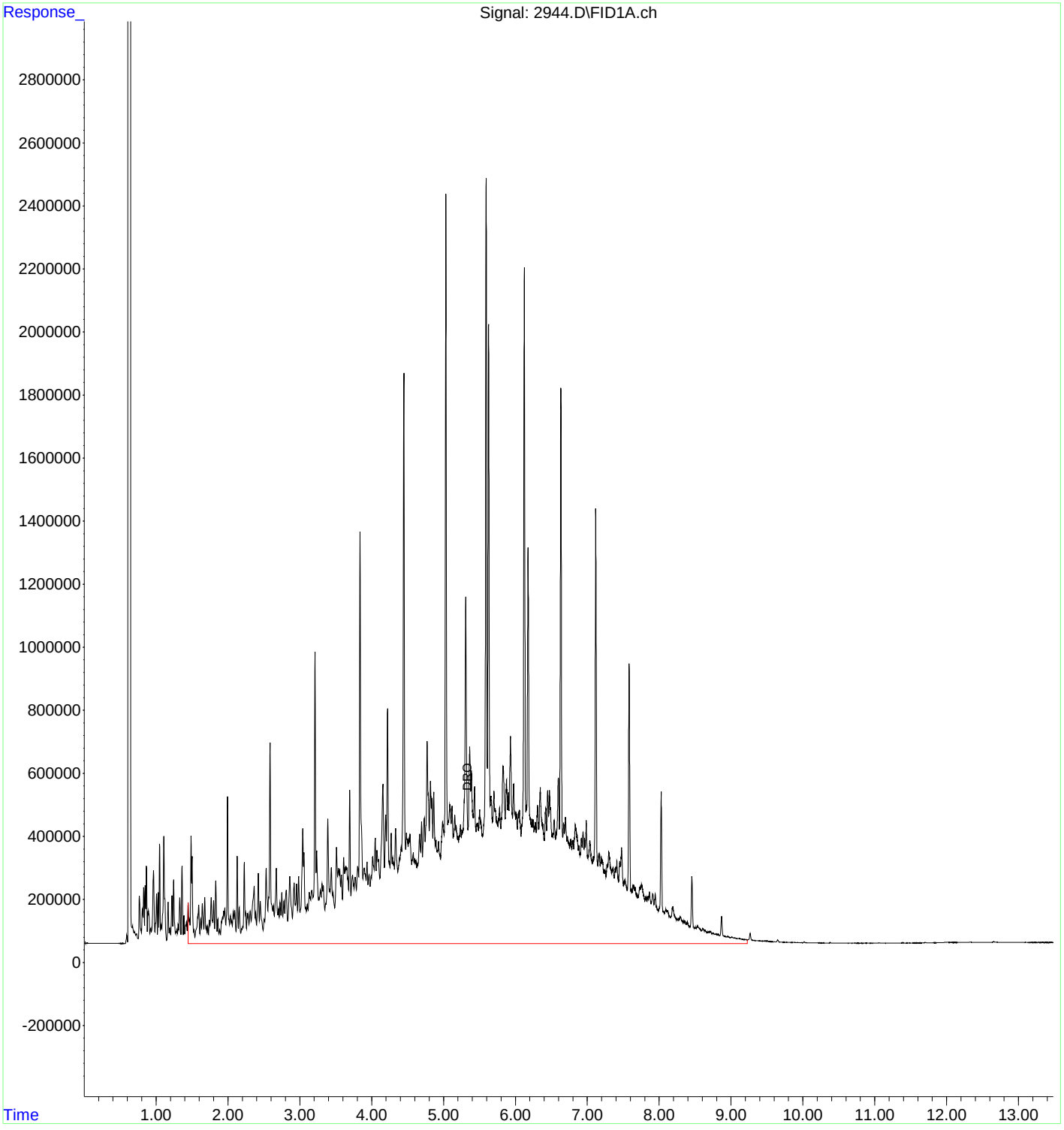
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	5.336	1197421088	9995.981	µg/mL
3) H	RRO	0.000	0	N.D.	µg/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2944.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 2:42 am
Operator : EAB
Sample : DRO 10000
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:29:32 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2946.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 3:02 am
Operator : EAB
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:40:14 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

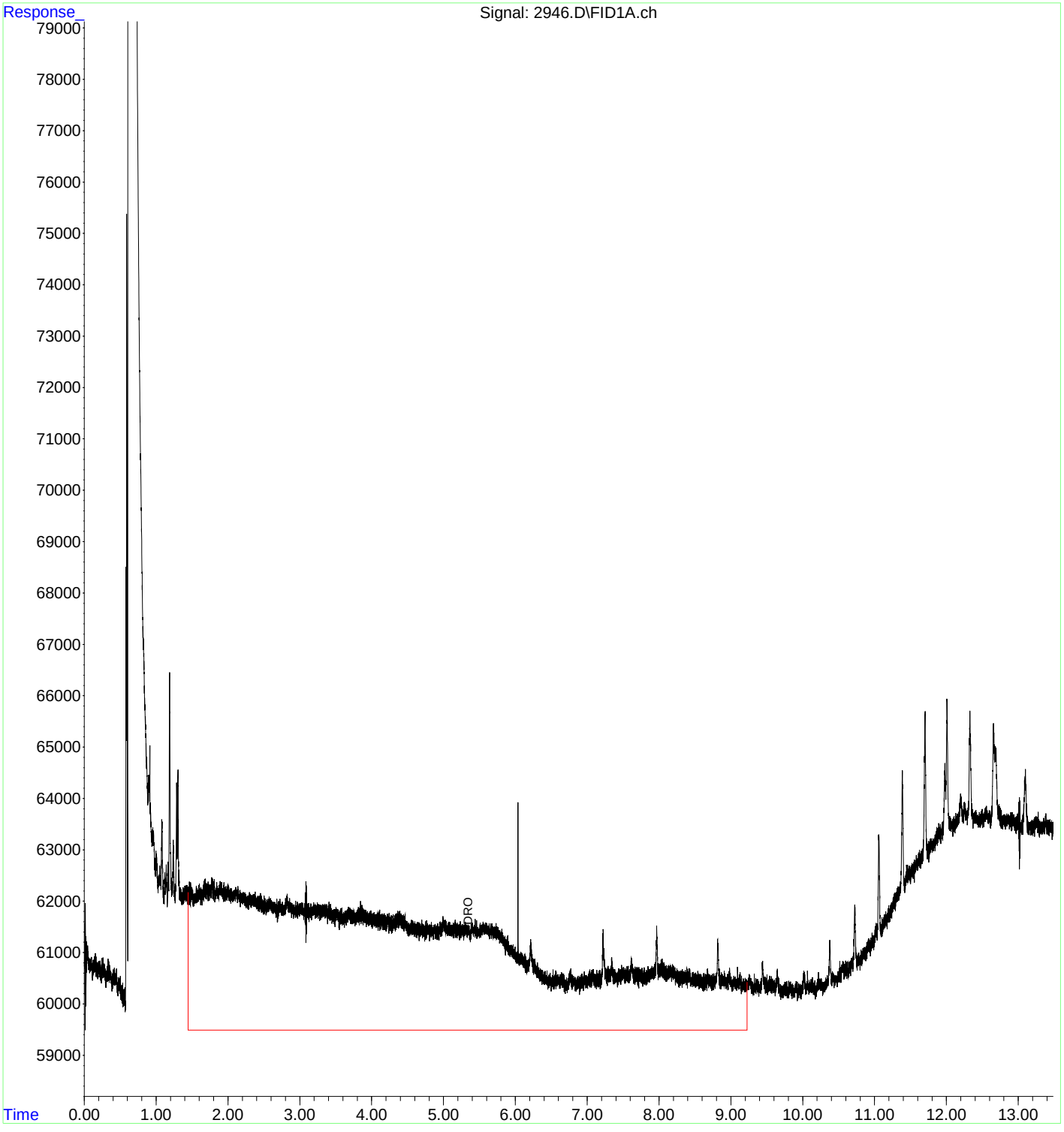
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	8103529	35.137	µg/mL
3) H	RRO	11.212	6035318	N.D.	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2946.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 3:02 am
Operator : EAB
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:40:14 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2948.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 3:23 am
Operator : EAB
Sample : RRO 125
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:02 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

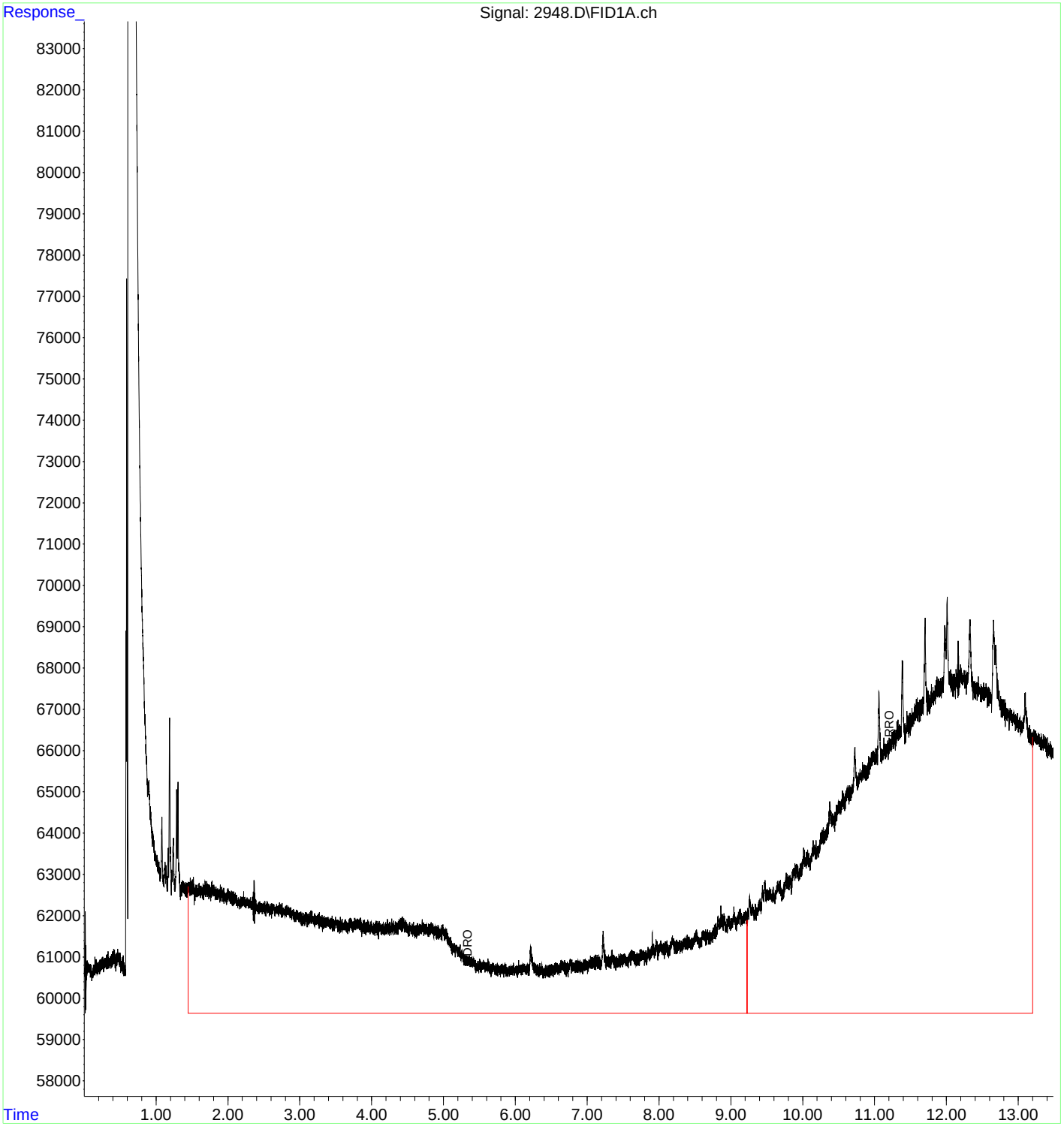
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	8642593	39.649	µg/mL
3) H	RRO	11.212	14176730	105.157	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2948.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 3:23 am
Operator : EAB
Sample : RRO 125
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:02 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2950.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 3:44 am
Operator : EAB
Sample : RRO 250
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:09 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

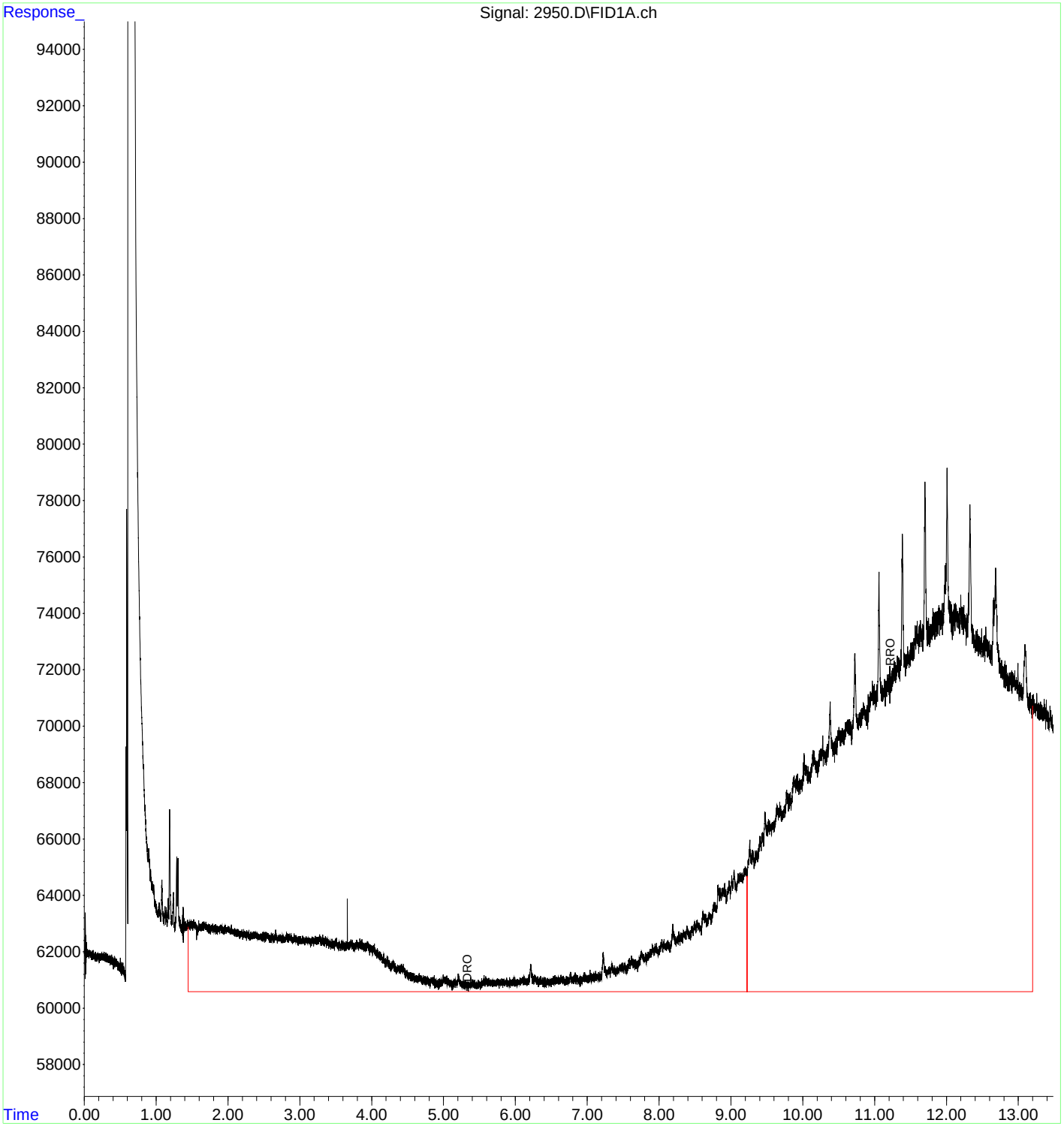
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	6334015	20.329	µg/mL
3) H	RRO	11.212	24398169	285.084	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2950.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 3:44 am
Operator : EAB
Sample : RRO 250
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:09 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2952.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 4:04 am
Operator : EAB
Sample : RRO 500
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:23 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

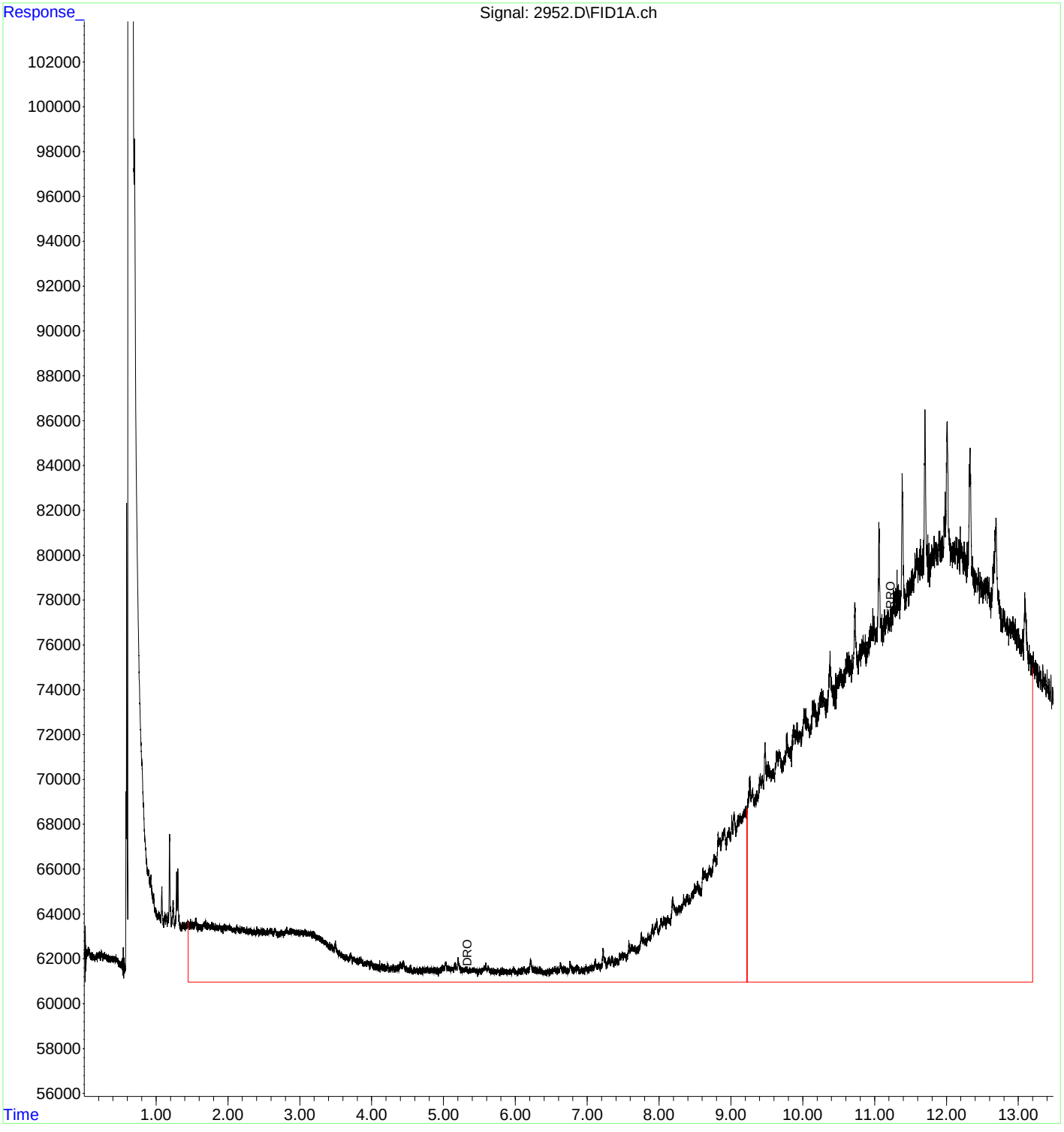
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	8349946	37.199	µg/mL
3) H	RRO	11.212	35914838	487.812	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2952.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 4:04 am
Operator : EAB
Sample : RRO 500
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:23 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2954.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 4:25 am
Operator : EAB
Sample : RRO 1000
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:33 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

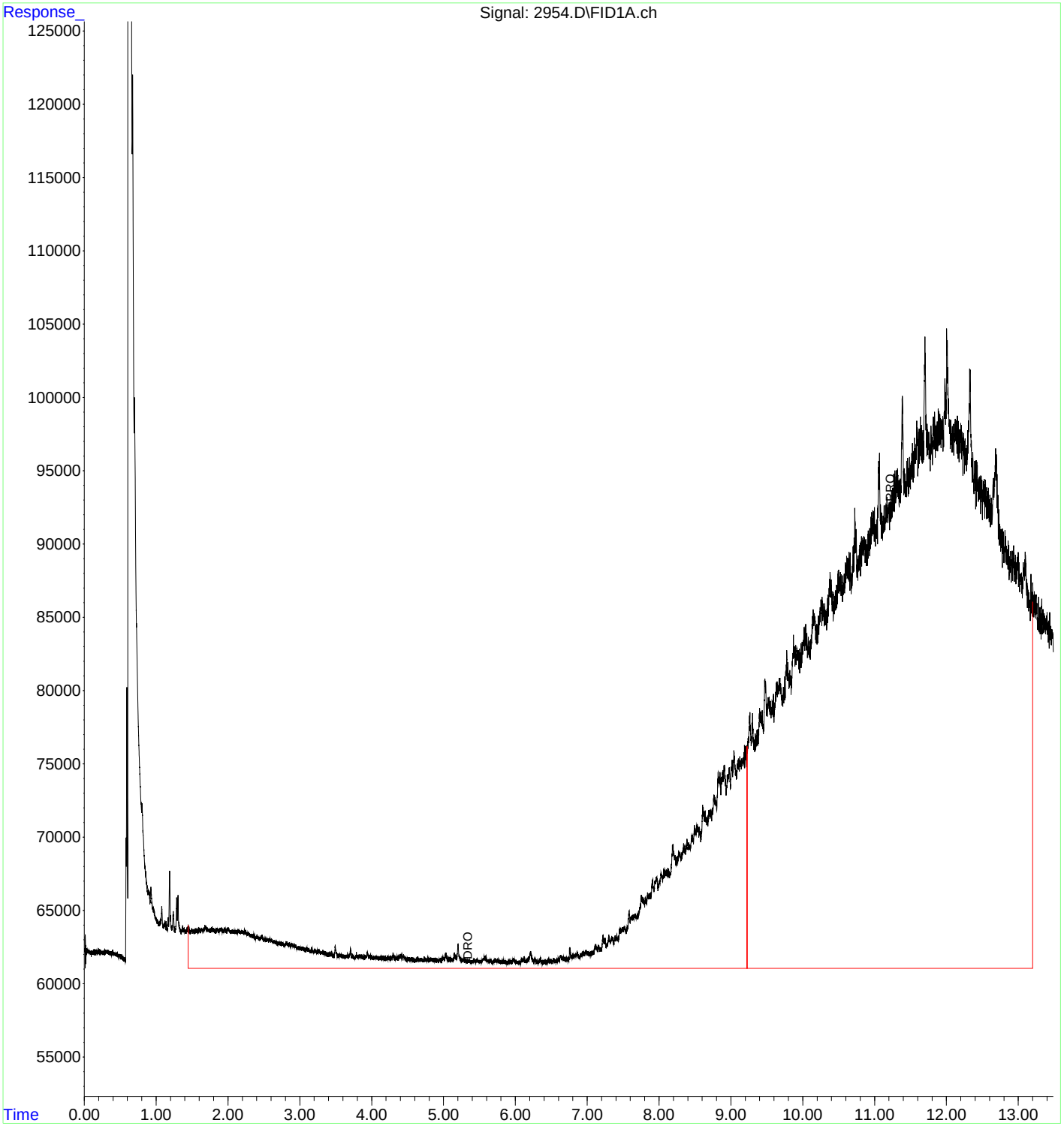
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	13078291	76.770	µg/mL
3) H	RRO	11.212	67435891	1042.676	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2954.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 4:25 am
Operator : EAB
Sample : RRO 1000
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:33 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2956.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 4:45 am
Operator : EAB
Sample : RRO 5000
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:40 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

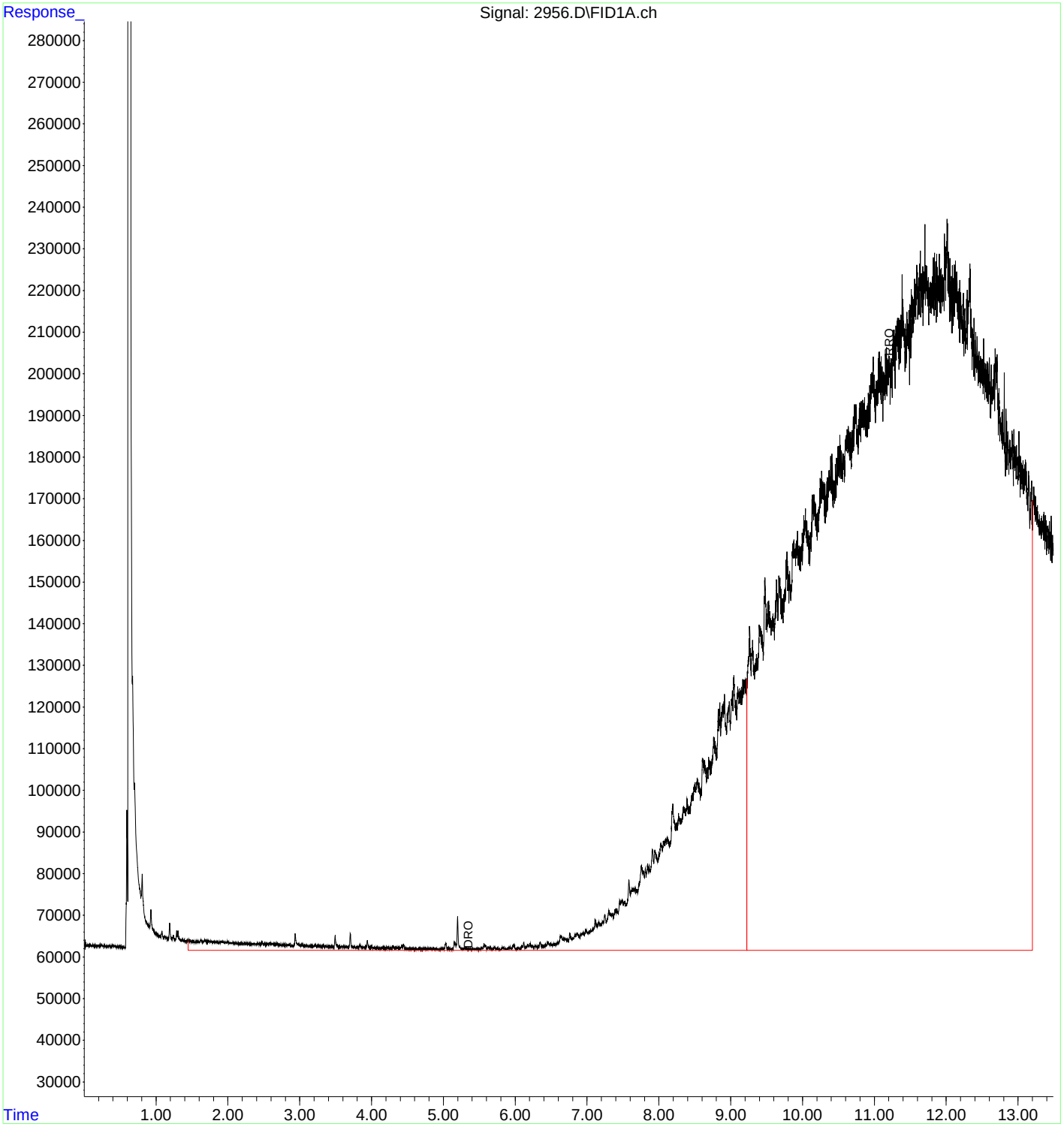
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	43295292	329.649	µg/mL
3) H	RRO	11.212	294906518	5046.832	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2956.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 4:45 am
Operator : EAB
Sample : RRO 5000
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:40 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2958.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 5:06 am
Operator : EAB
Sample : RRO 10000
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:52 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mLd
Target Compounds					
1) H	DRO	5.336	82743682	659.783	µg/mL
3) H	RRO	11.212	571030953	9907.440	µg/mL

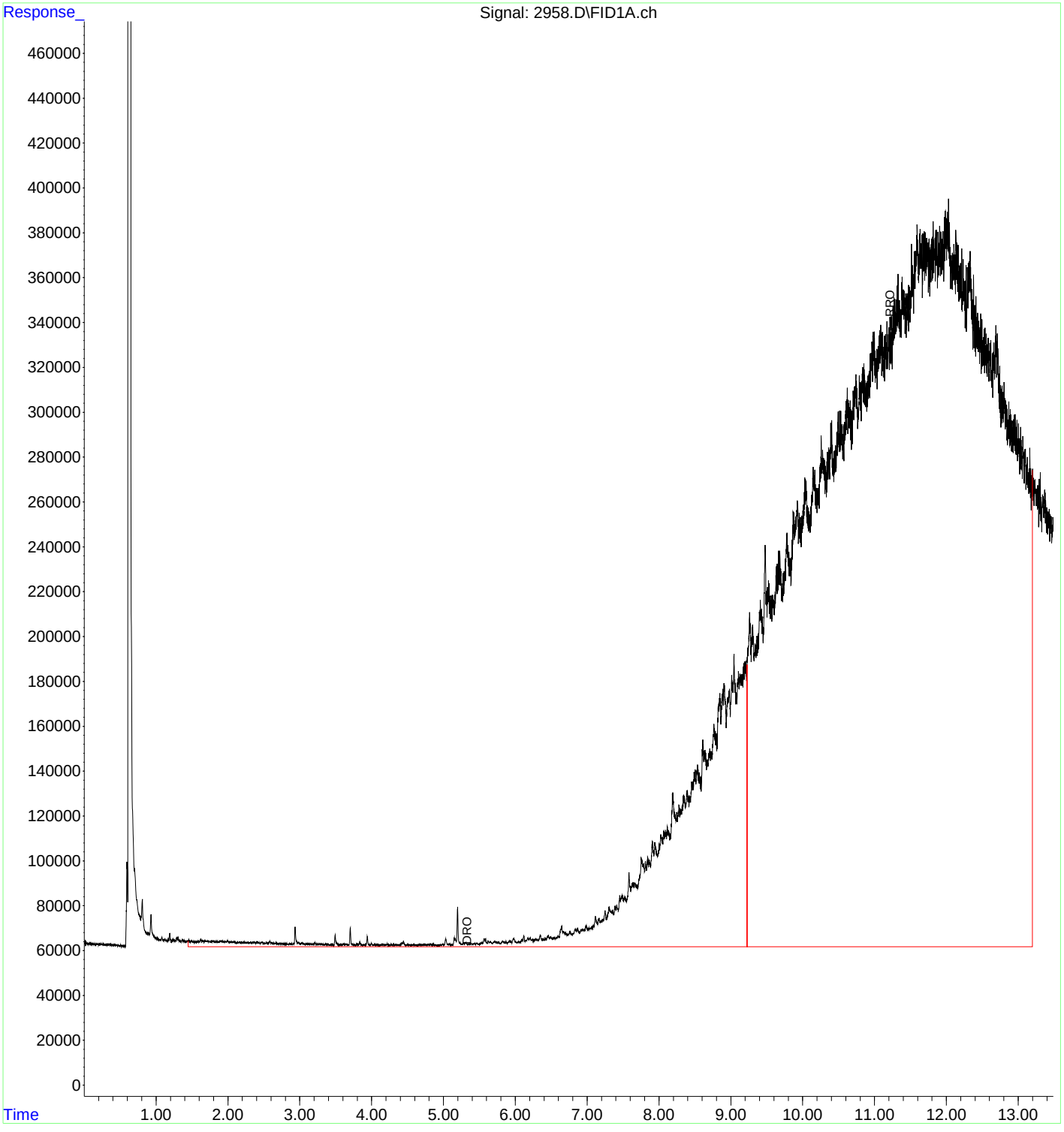
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2958.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 5:06 am
Operator : EAB
Sample : RRO 10000
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:41:52 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2960.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 5:26 am
Operator : EAB
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:33:10 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

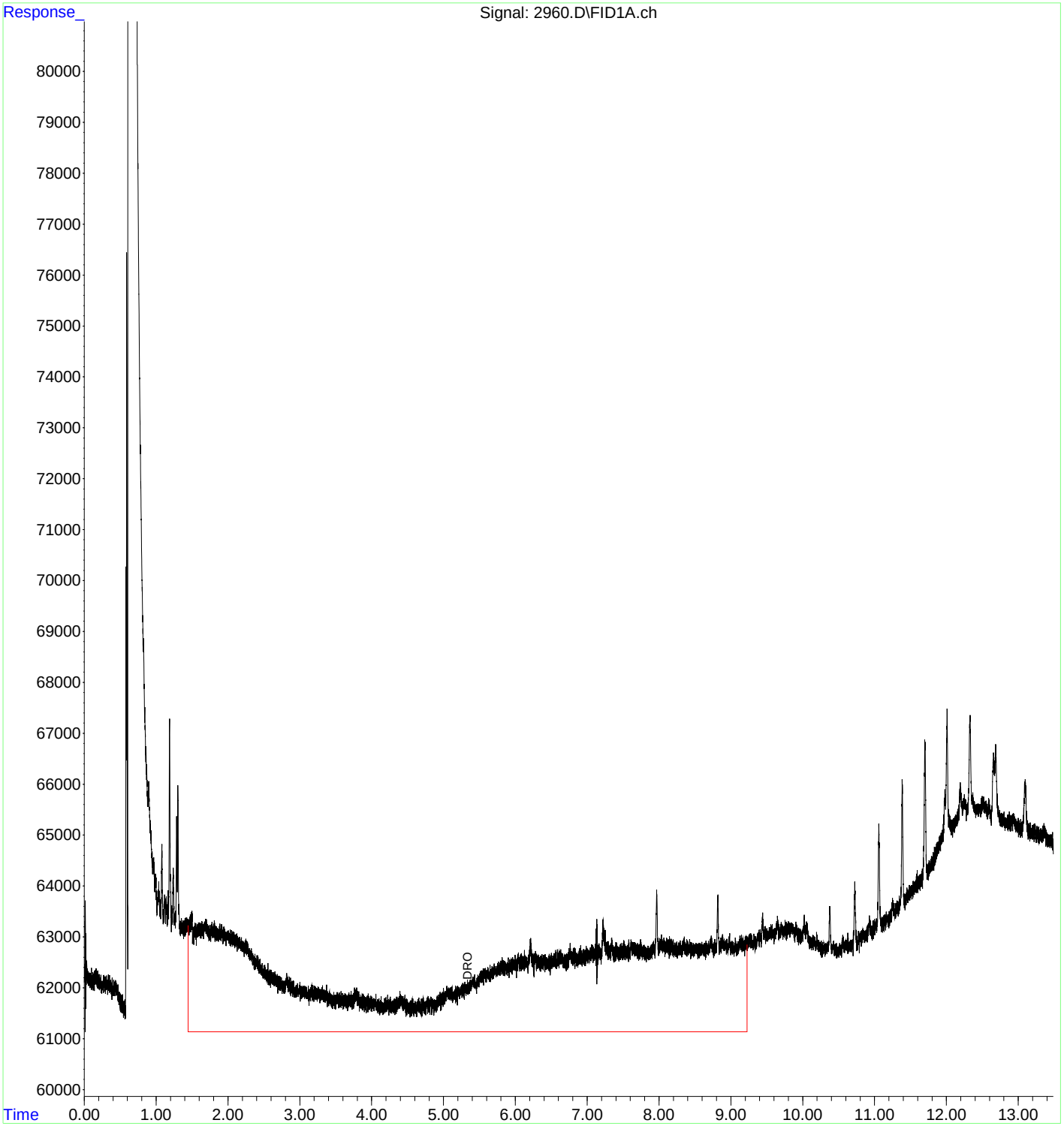
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	5771275	15.789	µg/mL
3) H	RRO	11.212	6884677	N.D.	µg/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2960.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 5:26 am
Operator : EAB
Sample : R
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:33:10 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:15:40 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2962.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 5:47 am
Operator : EAB
Sample : ICVR
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:36:58 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mL
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
Target Compounds					
1) H	DRO	5.336	65175853	512.762	µg/mL
3) H	RRO	11.212	347127144	5966.070	µg/mL

TV = 5000 ug/mL
= 119%

(f)=RT Delta > 1/2 Window (m)=manual int.

Elizabeth Brandemuhl

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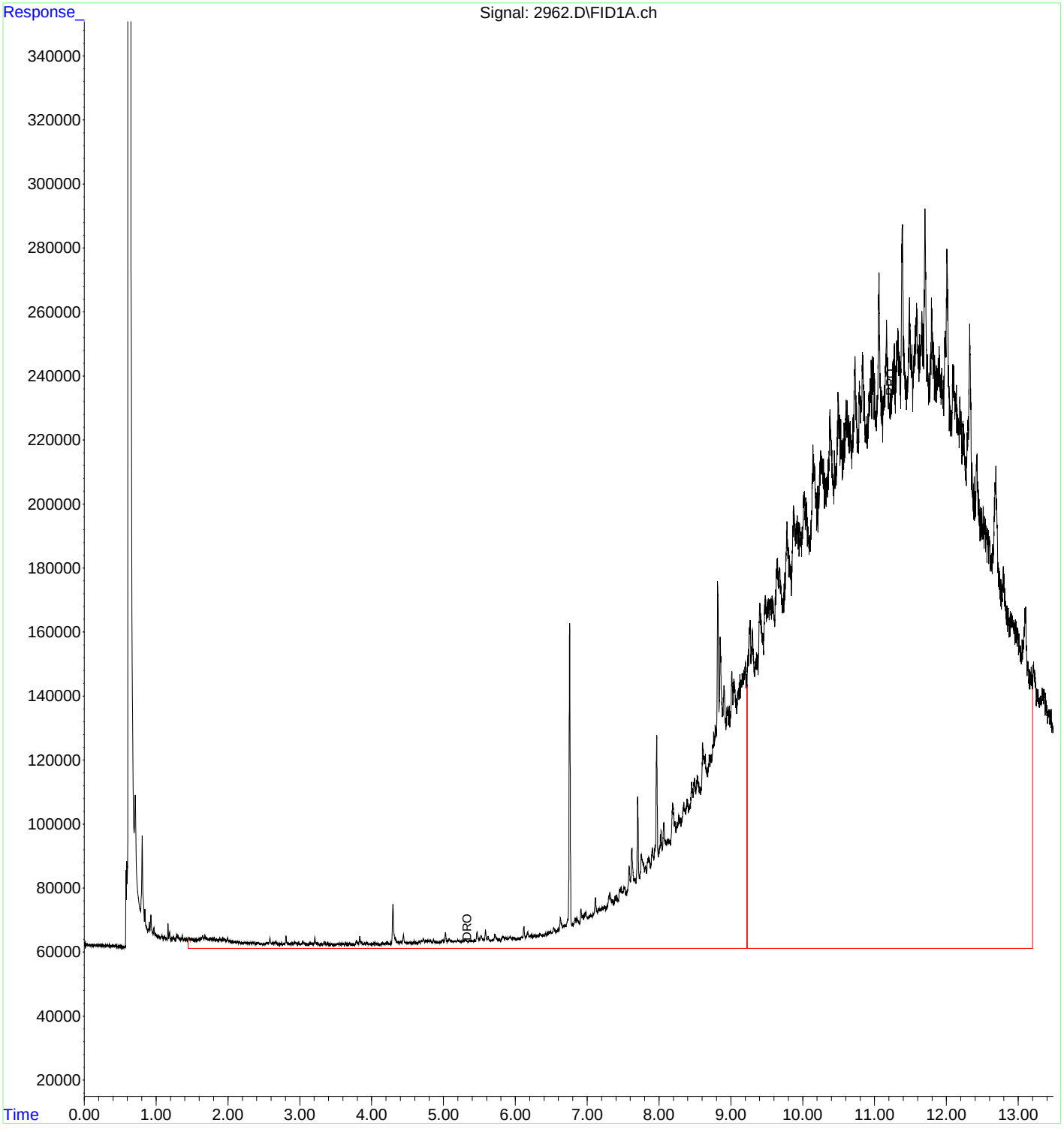
7-30-2014

Quantitation Report (Not Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2962.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 5:47 am
Operator : EAB
Sample : ICVR
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:36:58 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2964.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 6:08 am
Operator : EAB
Sample : ICVB
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:37:29 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
2) S	5-ALPHA <Surr>	0.000	0	N.D.	µg/mLd
4) S	DTC<Surr>	0.000	0	N.D.	µg/mL
	Target Compounds				
1) H	DRO	5.336	699187007	5818.654	µg/mL
3) H	RRO	11.212	16259143	141.813	µg/mL

TV = 5000 ug/mL
= 116%

(f)=RT Delta > 1/2 Window (m)=manual int.

Elizabeth Brandemuhl

Elizabeth Brandemuhl

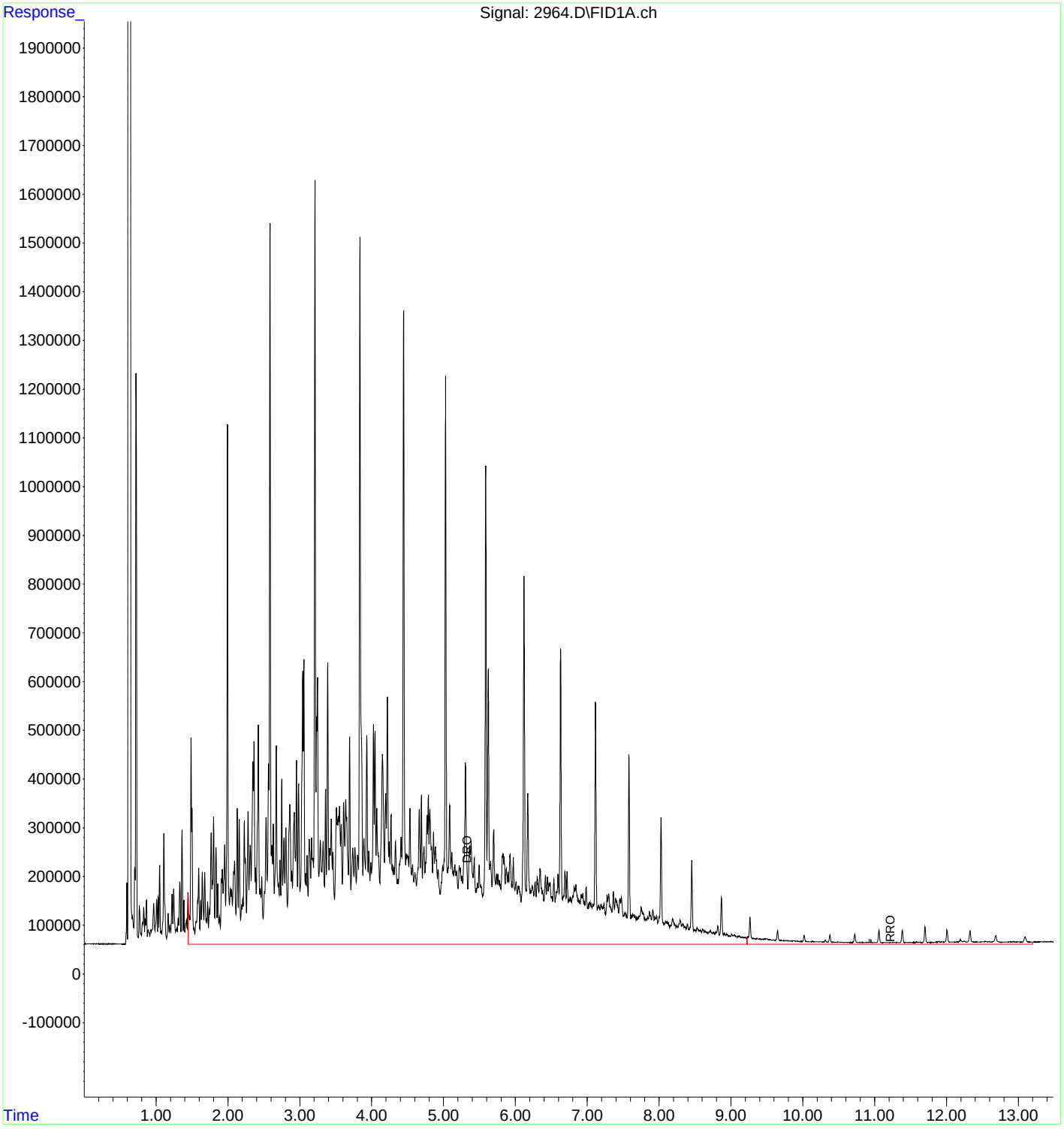
7-30-2014

Quantitation Report (QT Reviewed)

Data Path : Z:\07\SE\DATA\SE072914\
Data File : 2964.D
Signal(s) : FID1A.ch
Acq On : 30 Jul 2014 6:08 am
Operator : EAB
Sample : ICVB
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jul 30 08:37:29 2014
Quant Method : Z:\07\SE\METHOD\SEF-LV-2014-0729.M
Quant Title : DRO/RRO by Method AK 102/103
QLast Update : Wed Jul 30 08:34:18 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Workorder No. 1143647

Volatile Gas Chromatography/Mass Spectroscopy

Method: SW8260B

Method Batch Id: VXX26244

Analysis Batch Id: VMS14353

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225836		8/8/2014 4:51:00PM
Instrument Blank	1225840		8/8/2014 4:51:00PM
Lab Control Sample	1225837		8/8/2014 5:08:00PM
Continuing Calib Verification	1225839		8/8/2014 5:08:00PM
Lab Control Sample Duplicate	1225838		8/8/2014 5:48:00PM
Trip Blank	1143647005	TB-2-ST009	8/8/2014 8:01:00PM
Paying sample	1143647001	MW-9-073014	8/8/2014 9:24:00PM
Paying sample	1143647003	MW-7-073014	8/8/2014 9:57:00PM

Analysis Batch Id: VMS14356

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226243		8/11/2014 10:19:00AM
Continuing Calib Verification	1226242		8/11/2014 10:52:00AM
Paying sample	1143647002	MW-4-073014	8/11/2014 1:05:00PM

SGS Ref.#	1225840	Instrument Blank	**Printed Date/Time**	09/03/2014 17:11
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof LTM ST009			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:
1143647001, 1143647003, 1143647005

Parameter	Results		RL/CL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
Benzene	0.200U		0.400	ug/L	08/08/14
Toluene	0.500U		1.00	ug/L	08/08/14
Ethylbenzene	0.620J		1.00	ug/L	08/08/14
P & M -Xylene	1.00U		2.00	ug/L	08/08/14
o-Xylene	0.500U		1.00	ug/L	08/08/14
Xylenes (total)	1.50U		3.00	ug/L	08/08/14
Surrogates					
1,2-Dichloroethane-D4 <surr>	131	*	70-120	%	08/08/14
Toluene-d8 <surr>	91		85-120	%	08/08/14
4-Bromofluorobenzene <surr>	89.7		75-120	%	08/08/14

Batch VMS14353
Method SW8260B
Instrument VPA 780/5975 GC/MS

SGS Ref.#	1225839 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:11
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647001, 1143647003, 1143647005

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy						
Benzene	CCV	31.7	106	(80-120)	30 ug/L	08/08/2014
Toluene	CCV	30.1	100	(80-120)	30 ug/L	08/08/2014
Ethylbenzene	CCV	29.4	98	(80-120)	30 ug/L	08/08/2014
P & M -Xylene	CCV	64.6	108	(80-120)	60 ug/L	08/08/2014
o-Xylene	CCV	32.1	107	(80-120)	30 ug/L	08/08/2014
Xylenes (total)	CCV	96.7	107	(80-120)	90 ug/L	08/08/2014
Surrogates						
1,2-Dichloroethane-D4 <surr>	CCV		108	(80-120)		08/08/2014
Toluene-d8 <surr>	CCV		92	(80-120)		08/08/2014
4-Bromofluorobenzene <surr>	CCV		100	(80-120)		08/08/2014

Batch VMS14353
Method SW8260B
Instrument VPA 780/5975 GC/MS

Workorder No. 1143647

Volatile Gas Chromatography/Mass Spectroscopy

Method: SW8260B

Method Batch Id: VXX26244

Analysis Batch Id: VMS14353

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225836		8/8/2014 4:51:00PM
Instrument Blank	1225840		8/8/2014 4:51:00PM
Lab Control Sample	1225837		8/8/2014 5:08:00PM
Continuing Calib Verification	1225839		8/8/2014 5:08:00PM
Lab Control Sample Duplicate	1225838		8/8/2014 5:48:00PM
Trip Blank	1143647005	TB-2-ST009	8/8/2014 8:01:00PM
Paying sample	1143647001	MW-9-073014	8/8/2014 9:24:00PM
Paying sample	1143647003	MW-7-073014	8/8/2014 9:57:00PM

Analysis Batch Id: VMS14356

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226243		8/11/2014 10:19:00AM
Continuing Calib Verification	1226242		8/11/2014 10:52:00AM
Paying sample	1143647002	MW-4-073014	8/11/2014 1:05:00PM

SGS Ref.#	1225836 Method Blank	**Printed Date/Time**	09/03/2014 17:11
Client Name	EA Engineering, Science and Tech.	**Prep Batch**	VXX26244
Project Name/#	Cape Romanzof LTM ST009	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	08/08/2014

QC results affect the following production samples:
1143647001, 1143647002, 1143647003, 1143647005

Parameter	Results		LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy						
Benzene	0.200U		0.400	0.120	ug/L	08/08/14
Ethylbenzene	0.620J		1.00	0.310	ug/L	08/08/14
o-Xylene	0.500U		1.00	0.310	ug/L	08/08/14
P & M -Xylene	1.00U		2.00	0.620	ug/L	08/08/14
Toluene	0.500U		1.00	0.310	ug/L	08/08/14
Xylenes (total)	1.50U		3.00	1.00	ug/L	08/08/14
Surrogates						
1,2-Dichloroethane-D4 <surr>	131	*	70-120		%	08/08/14
4-Bromofluorobenzene <surr>	89.7		75-120		%	08/08/14
Toluene-d8 <surr>	91		85-120		%	08/08/14

Batch VMS14353
Method SW8260B
Instrument VPA 780/5975 GC/MS

SGS Ref.#	1225837 Lab Control Sample		**Printed Date/Time**	09/03/2014	17:11
	1225838 Lab Control Sample Duplicate		**Prep Batch**	VXX26244	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5030B	
Project Name/#	Cape Romanzof LTM ST009		**Date**	08/08/2014	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143647001, 1143647002, 1143647003, 1143647005

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Benzene	LCS	31.7	106	(80-120)			30 ug/L	08/08/2014
	LCSD	29.9	100		6	(< 20)	30 ug/L	08/08/2014
Ethylbenzene	LCS	29.4	98	(75-125)			30 ug/L	08/08/2014
	LCSD	28.8	96		2	(< 20)	30 ug/L	08/08/2014
o-Xylene	LCS	32.1	107	(80-120)			30 ug/L	08/08/2014
	LCSD	27.8	93		15	(< 20)	30 ug/L	08/08/2014
P & M -Xylene	LCS	64.6	108	(75-130)			60 ug/L	08/08/2014
	LCSD	54.2	90		18	(< 20)	60 ug/L	08/08/2014
Toluene	LCS	30.1	100	(75-120)			30 ug/L	08/08/2014
	LCSD	30.8	103		3	(< 20)	30 ug/L	08/08/2014
Xylenes (total)	LCS	96.7	107	(80-120)			90 ug/L	08/08/2014
	LCSD	82.0	91		17	(< 20)	90 ug/L	08/08/2014
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		108	(70-120)				08/08/2014
	LCSD		106		2			08/08/2014
4-Bromofluorobenzene <surr>	LCS		100	(75-120)				08/08/2014
	LCSD		96		4			08/08/2014
Toluene-d8 <surr>	LCS		92	(85-120)				08/08/2014
	LCSD		98		6			08/08/2014

Batch	VMS14353
Method	SW8260B
Instrument	VPA 780/5975 GC/MS

Workorder No. 1143647

Volatile Gas Chromatography/Mass Spectroscopy

Method: SW8260B

Method Batch Id: VXX26244

Analysis Batch Id: VMS14353

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225836		8/8/2014 4:51:00PM
Instrument Blank	1225840		8/8/2014 4:51:00PM
Lab Control Sample	1225837		8/8/2014 5:08:00PM
Continuing Calib Verification	1225839		8/8/2014 5:08:00PM
Lab Control Sample Duplicate	1225838		8/8/2014 5:48:00PM
Trip Blank	1143647005	TB-2-ST009	8/8/2014 8:01:00PM
Paying sample	1143647001	MW-9-073014	8/8/2014 9:24:00PM
Paying sample	1143647003	MW-7-073014	8/8/2014 9:57:00PM

Analysis Batch Id: VMS14356

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226243		8/11/2014 10:19:00AM
Continuing Calib Verification	1226242		8/11/2014 10:52:00AM
Paying sample	1143647002	MW-4-073014	8/11/2014 1:05:00PM

SGS Ref.#	1226243 Instrument Blank	**Printed Date/Time**	09/03/2014 17:11
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647002

Parameter	Results	RL/CL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy				
Benzene	0.200U	0.400	ug/L	08/11/14
Toluene	0.500U	1.00	ug/L	08/11/14
Ethylbenzene	0.500U	1.00	ug/L	08/11/14
P & M -Xylene	1.00U	2.00	ug/L	08/11/14
o-Xylene	0.500U	1.00	ug/L	08/11/14
Xylenes (total)	1.50U	3.00	ug/L	08/11/14
Surrogates				
1,2-Dichloroethane-D4 <surr>	101	70-120	%	08/11/14
Toluene-d8 <surr>	99	85-120	%	08/11/14
4-Bromofluorobenzene <surr>	104	75-120	%	08/11/14

Batch VMS14356
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	1226242 Continuing Calib Verification	**Printed Date/Time**	09/03/2014 17:11
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof LTM ST009		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143647002

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy						
Benzene	CCV	31.5	105	(80-120)	30 ug/L	08/11/2014
Toluene	CCV	33.2	111	(80-120)	30 ug/L	08/11/2014
Ethylbenzene	CCV	32.8	109	(80-120)	30 ug/L	08/11/2014
P & M -Xylene	CCV	64.8	108	(80-120)	60 ug/L	08/11/2014
o-Xylene	CCV	32.6	109	(80-120)	30 ug/L	08/11/2014
Xylenes (total)	CCV	97.4	108	(80-120)	90 ug/L	08/11/2014
Surrogates						
1,2-Dichloroethane-D4 <surr>	CCV		99	(80-120)		08/11/2014
Toluene-d8 <surr>	CCV		99	(80-120)		08/11/2014
4-Bromofluorobenzene <surr>	CCV		95	(80-120)		08/11/2014

Batch VMS14356
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143453, 1143642, 1143645, 1143646, 1143647

Queue: **VMS** Batch: **14353**

Method: EPA 602/624, SW8260B

Run Date: 08/08/14 16:51 - 08/08/14 23:03

Extraction Batch(es): VXX26244

Notes:
Batch previously released - reposted sample 1143453001 with TAH included.

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: Nicholas Bryant
Date: 08/12/14

Reviewer's Signature
Printed Name: Phyllis Woods
Date: 8/12/2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\080814\
Data File : A03.D
Acq On : 8 Aug 2014 5:08 pm
Operator : KCT
Sample : CCV/LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 19:27:42 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	30.000	30.000	0.0	77	0.00
2		dichlorodifluoromethane	30.000	25.663	14.5	66	0.00
3		chloromethane	30.000	20.983	30.1#	59	0.00
4		vinyl chloride	30.000	27.816	7.3	71	0.00
5		bromomethane	30.000	21.936	26.9#	63	0.00
6		chloroethane	30.000	26.337	12.2	73	0.00
7		trichlorofluoromethane	30.000	31.232	-4.1	79	0.00
8		1,1,2-trichloro-1,2,2-trifl	45.000	42.180	6.3	67	0.00
9		1,1-dichloroethene	30.000	27.300	9.0	66	0.00
10		Acetone	90.000	64.993	27.8#	60	0.00
11		Acrylonitrile	45.000	34.603	23.1#	58	0.00
12		Methyliodide	45.000	37.279	17.2	61	0.00
13		Carbon disulfide	45.000	40.866	9.2	66	0.00
14		methylene chloride	30.000	23.842	20.5#	59	0.00
15		methyl-t-butyl ether	45.000	40.535	9.9	62	0.00
16		trans-1,2-dichloroethene	30.000	24.852	17.2	59	0.00
17		Vinylacetate	30.000	31.078	-3.6	73	0.00
18		n-hexane	30.000	27.328	8.9	61	0.00
19		1,1-dichloroethane	30.000	25.697	14.3	64	0.00
20		2-Butanone(MEK)	90.000	95.012	-5.6	77	0.00
21		2,2-dichloropropane	30.000	39.121	-30.4#	96	0.00
22		cis-1,2-dichloroethene	30.000	30.210	-0.7	77	0.00
23		bromochloromethane	30.000	30.531	-1.8	76	0.00
24		cyclohexane	30.000	31.652	-5.5	77	0.00
25		chloroform	30.000	32.333	-7.8	84	0.00
26	S	Dibromofluoromethane <SURR>	30.000	30.054	-0.2	78	0.00
27		1,1,1-trichloroethane	30.000	35.500	-18.3	87	0.00
28		carbon tetrachloride	30.000	36.129	-20.4#	87	0.00
29		1,1-dichloropropene	30.000	33.774	-12.6	81	0.00
30	S	1,2-Dichloroethane-D4 <surr	30.000	32.282	-7.6	85	0.00
31		benzene	30.000	31.668	-5.6	78	0.00
32		1,2-dichloroethane	30.000	35.530	-18.4	88	0.00
33		trichloroethene	30.000	33.549	-11.8	81	0.00
34		1,2-dichloropropane	30.000	32.258	-7.5	78	0.00
35		dibromomethane	30.000	31.630	-5.4	79	0.00
36		2-chloroethylvinyl ether	30.000	0.000	100.0#	0	-13.14#
37		bromodichloromethane	30.000	34.596	-15.3	84	0.00
38		cis-1,3-dichloropropene	30.000	32.824	-9.4	77	0.00
39		4-Methyl-2-pentanone	90.000	90.416	-0.5	72	0.00
40		1-chloro-3-fluorobenzene<IS	30.000	30.000	0.0	78	0.00
41	S	Toluene-d8 <surr>	30.000	27.482	8.4	70	0.00
42		toluene	30.000	30.068	-0.2	75	0.00
43		trans-1,3-dichloropropene	30.000	32.893	-9.6	80	0.00
44		1,1,2-trichloroethane	30.000	31.854	-6.2	78	0.00
45		tetrachloroethene	30.000	30.831	-2.8	75	0.00
46		1,3-dichloropropane	30.000	32.700	-9.0	78	0.00
47		2-Hexanone	90.000	94.149	-4.6	79	0.00
48		dibromochloromethane	30.000	34.049	-13.5	81	0.00
49		1,2-dibromoethane	30.000	32.175	-7.2	78	0.00
50		1-chlorohexane	45.000	53.340	-18.5	86	0.00
51		chlorobenzene	30.000	31.466	-4.9	79	0.00
52		1,1,1,2-tetrachloroethane	30.000	33.269	-10.9	80	0.00
53		ethylbenzene	30.000	29.361	2.1	79	0.00

Data Path : Z:\08\VPA\DATA\080814\
Data File : A03.D
Acq On : 8 Aug 2014 5:08 pm
Operator : KCT
Sample : CCV/LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 19:27:42 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
54		P & M -Xylene	60.000	64.638	-7.7	78	0.00
55		o-xylene	30.000	32.100	-7.0	78	0.00
56		styrene	30.000	31.494	-5.0	77	0.00
57		bromoform	30.000	33.947	-13.2	81	0.00
58		Isopropylbenzene (Cumene)	30.000	34.872	-16.2	82	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	30.000	30.000	0.0	79	0.00
60	S	4-Bromofluorobenzene <Surr>	30.000	29.840	0.5	79	0.00
61		trans 1,4-dichloro-2-butene	45.000	52.659	-17.0	89	0.00
62		bromobenzene	30.000	30.747	-2.5	78	0.00
63		1,1,2,2-tetrachloroethane	30.000	31.586	-5.3	79	0.00
64		1,2,3-trichloropropane	30.000	32.573	-8.6	82	0.00
65		n-propylbenzene	30.000	35.328	-17.8	86	0.00
66		2-chlorotoluene	30.000	33.872	-12.9	85	0.00
67		4-chlorotoluene	30.000	34.427	-14.8	84	0.00
68		1,3,5-trimethylbenzene	30.000	34.667	-15.6	86	0.00
69		tert-butylbenzene	30.000	35.438	-18.1	88	0.00
70		1,2,4-trimethylbenzene	30.000	34.948	-16.5	86	0.00
71		sec-butylbenzene	30.000	38.167	-27.2#	95	0.00
72		1,3-dichlorobenzene	30.000	32.434	-8.1	81	0.00
73		4-isopropyltoluene	30.000	38.704	-29.0#	95	0.00
74		1,4-dichlorobenzene	30.000	32.393	-8.0	80	0.00
75		1,2-dichlorobenzene	30.000	31.432	-4.8	80	0.00
76		n-butylbenzene	30.000	41.527	-38.4#	101	0.00
77		1,2-dibromo-3-chloropropane	30.000	31.955	-6.5	83	0.00
78		1,2,4-trichlorobenzene	30.000	33.261	-10.9	83	0.00
79		hexachlorobutadiene	30.000	38.400	-28.0#	92	0.00
80		naphthalene	30.000	27.633	7.9	69	0.00
81		1,2,3-trichlorobenzene	30.000	35.922	-19.7	89	0.00

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\080814\
Data File : A03.D
Acq On : 8 Aug 2014 5:08 pm
Operator : KCT
Sample : CCV/LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 19:27:42 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	77	0.00
2		dichlorodifluoromethane	1.744	1.492	14.4	66	0.00
3		chloromethane	1.039	0.727	30.0#	59	0.00
4		vinyl chloride	1.391	1.290	7.3	71	0.00
5		bromomethane	0.597	0.436	27.0#	63	0.00
6		chloroethane	0.687	0.603	12.2	73	0.00
7		trichlorofluoromethane	1.833	1.908	-4.1	79	0.00
8		1,1,2-trichloro-1,2,2-trifl	0.984	0.923	6.2	67	0.00
9		1,1-dichloroethene	0.881	0.802	9.0	66	0.00
10		Acetone	0.420	0.303	27.9#	60	0.00
11		Acrylonitrile	0.552	0.424	23.2#	58	0.00
12		Methyliodide	0.832	0.741	10.9	61	0.00
13		Carbon disulfide	2.764	2.510	9.2	66	0.00
14		methylene chloride	1.226	0.974	20.6#	59	0.00
15		methyl-t-butyl ether	2.729	2.458	9.9	62	0.00
16		trans-1,2-dichloroethene	1.160	0.961	17.2	59	0.00
17		Vinylacetate	1.569	1.625	-3.6	73	0.00
18		n-hexane	0.568	0.674	-18.7	61	0.00
19		1,1-dichloroethane	2.262	1.937	14.4	64	0.00
20		2-Butanone(MEK)	0.708	0.748	-5.6	77	0.00
21		2,2-dichloropropane	1.518	1.980	-30.4#	96	0.00
22		cis-1,2-dichloroethene	1.353	1.362	-0.7	77	0.00
23		bromochloromethane	0.651	0.663	-1.8	76	0.00
24		cyclohexane	1.817	1.917	-5.5	77	0.00
25		chloroform	2.372	2.556	-7.8	84	0.00
26	S	Dibromofluoromethane <SURR>	1.562	1.565	-0.2	78	0.00
27		1,1,1-trichloroethane	1.904	2.253	-18.3	87	0.00
28		carbon tetrachloride	1.535	1.849	-20.5#	87	0.00
29		1,1-dichloropropene	1.620	1.824	-12.6	81	0.00
30	S	1,2-Dichloroethane-D4 <surr	1.475	1.587	-7.6	85	0.00
31		benzene	4.844	5.113	-5.6	78	0.00
32		1,2-dichloroethane	1.491	1.766	-18.4	88	0.00
33		trichloroethene	1.240	1.387	-11.9	81	0.00
34		1,2-dichloropropane	1.257	1.352	-7.6	78	0.00
35		dibromomethane	0.851	0.898	-5.5	79	0.00
36		2-chloroethylvinyl ether	0.000	0.000	0.0	0#	-13.14#
37		bromodichloromethane	1.574	1.815	-15.3	84	0.00
38		cis-1,3-dichloropropene	1.714	1.876	-9.5	77	0.00
39		4-Methyl-2-pentanone	0.507	0.510	-0.6	72	0.00
40		1-chloro-3-fluorobenzene<IS	1.000	1.000	0.0	78	0.00
41	S	Toluene-d8 <surr>	2.671	2.446	8.4	70	0.00
42		toluene	1.716	1.720	-0.2	75	0.00
43		trans-1,3-dichloropropene	0.976	1.070	-9.6	80	0.00
44		1,1,2-trichloroethane	0.579	0.615	-6.2	78	0.00
45		tetrachloroethene	0.859	0.883	-2.8	75	0.00
46		1,3-dichloropropane	1.089	1.187	-9.0	78	0.00
47		2-Hexanone	0.647	0.677	-4.6	79	0.00
48		dibromochloromethane	0.727	0.826	-13.6	81	0.00
49		1,2-dibromoethane	0.708	0.759	-7.2	78	0.00
50		1-chlorohexane	0.563	0.667	-18.5	86	0.00
51		chlorobenzene	1.918	2.012	-4.9	79	0.00
52		1,1,1,2-tetrachloroethane	0.646	0.717	-11.0	80	0.00
53		ethylbenzene	1.040	1.017	2.2	79	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\080814\
Data File : A03.D
Acq On : 8 Aug 2014 5:08 pm
Operator : KCT
Sample : CCV/LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 19:27:42 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

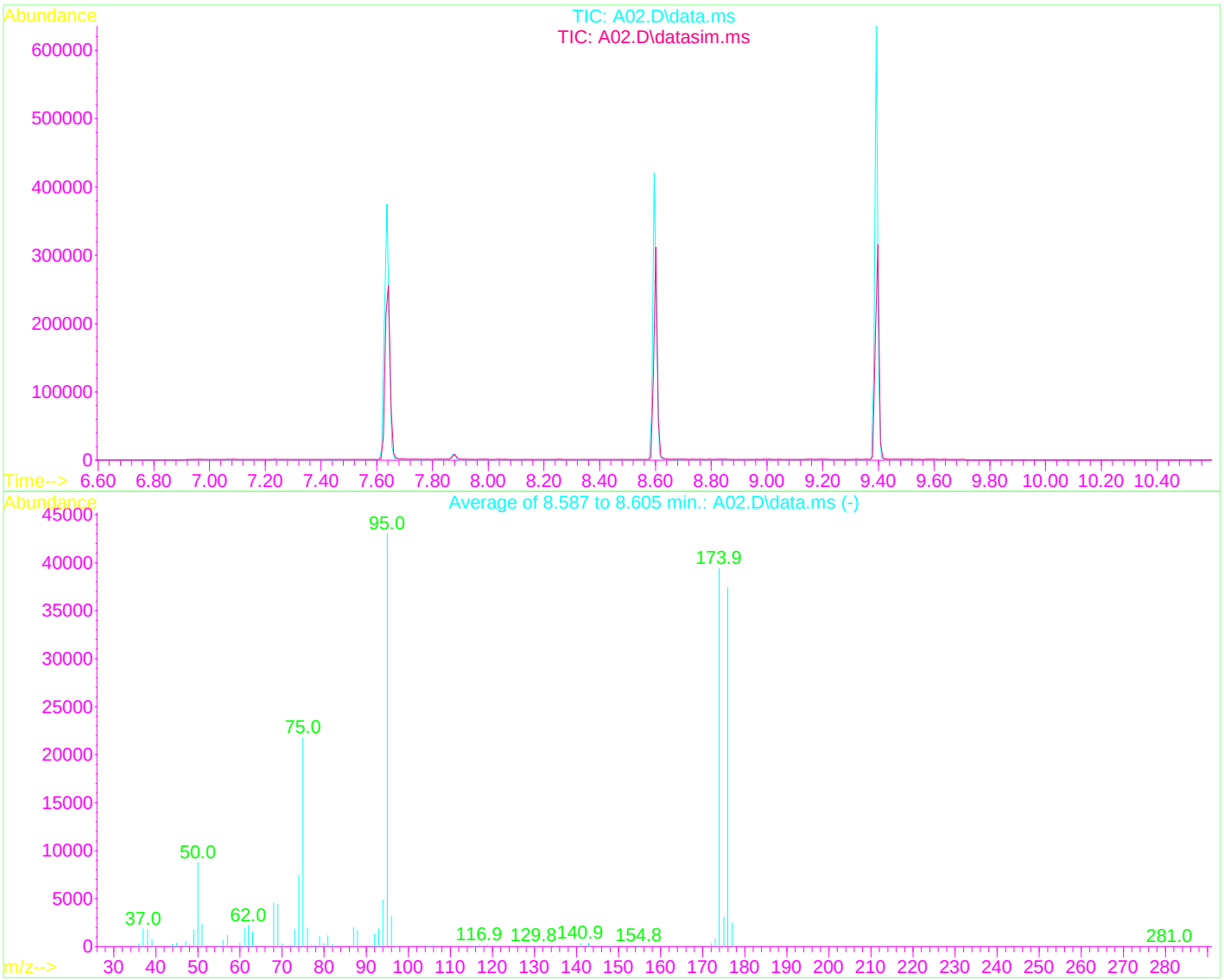
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54		P & M -Xylene	1.118	1.205	-7.8	78	0.00
55		o-xylene	1.059	1.133	-7.0	78	0.00
56		styrene	1.849	1.941	-5.0	77	0.00
57		bromoform	0.551	0.623	-13.1	81	0.00
58		Isopropylbenzene (Cumene)	2.548	2.962	-16.2	82	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	1.000	1.000	0.0	79	0.00
60	S	4-Bromofluorobenzene <Surr>	0.971	0.966	0.5	79	0.00
61		trans 1,4-dichloro-2-butene	0.250	0.292	-16.8	89	0.00
62		bromobenzene	0.688	0.705	-2.5	78	0.00
63		1,1,2,2-tetrachloroethane	0.848	0.893	-5.3	79	0.00
64		1,2,3-trichloropropane	0.235	0.255	-8.5	82	0.00
65		n-propylbenzene	2.626	3.092	-17.7	86	0.00
66		2-chlorotoluene	1.582	1.786	-12.9	85	0.00
67		4-chlorotoluene	1.669	1.915	-14.7	84	0.00
68		1,3,5-trimethylbenzene	1.664	1.923	-15.6	86	0.00
69		tert-butylbenzene	1.266	1.496	-18.2	88	0.00
70		1,2,4-trimethylbenzene	1.655	1.928	-16.5	86	0.00
71		sec-butylbenzene	1.784	2.270	-27.2#	95	0.00
72		1,3-dichlorobenzene	1.090	1.178	-8.1	81	0.00
73		4-isopropyltoluene	1.315	1.697	-29.0#	95	0.00
74		1,4-dichlorobenzene	1.117	1.206	-8.0	80	0.00
75		1,2-dichlorobenzene	1.105	1.158	-4.8	80	0.00
76		n-butylbenzene	1.178	1.630	-38.4#	101	0.00
77		1,2-dibromo-3-chloropropane	0.160	0.170	-6.3	83	0.00
78		1,2,4-trichlorobenzene	0.495	0.549	-10.9	83	0.00
79		hexachlorobutadiene	0.170	0.218	-28.2#	92	0.00
80		naphthalene	1.539	1.417	7.9	69	0.00
81		1,2,3-trichlorobenzene	0.452	0.541	-19.7	89	0.00

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

Data Path : Z:\08\VPA\DATA\080814\
Data File : A02.D
Acq On : 8 Aug 2014 4:51 pm
Operator : KCT
Sample : IB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: test.P
Integration File signal 2: rteint2.p

Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 03 21:29:33 2014



Spectrum Information: Average of 8.587 to 8.605 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.3	8750	PASS
75	95	30	80	50.6	21766	PASS
95	95	100	100	100.0	43047	PASS
96	95	5	9	7.4	3207	PASS
173	174	0.00	2	2.0	806	~~FAIL*~~ PASS 8/11/2014 PLW
174	95	50	100	91.5	39393	PASS
175	174	5	9	7.9	3111	PASS
176	174	95	101	95.0	37409	~~FAIL*~~ PASS 8/11/2014 PLW
177	176	5	9	6.6	2465	PASS

GC/MS QA-QC Check Report

Tune File : Z:\08\VPA\DATA\080814\A02.D
Tune Time : 8 Aug 2014 4:51 pm

Daily Calibration File : Z:\08\VPA\DATA\080114A\A11.D

						74763	117205	132462	
File	Sample	Surrogate Recovery %				Internal Standard Responses			
A02.D									
	IB	112	131*	91	90	39948	69777	89717	
A03.D									
	CCV/LCS	100	108	92	99	57517	91242	105085	
A04.D									
	CCV/LCSD	102	106	98	96	61638	85854	105405	
A05.D									
	1143645002	102	114	96	96	43002	69668	82226	
A06.D									
	1143645003	100	110	96	101	47943	79816	92568	
A07.D									
	R	104	93	85	353*	56001	92813	22232*	
A08.D									
	R	109	125*	86	99	44220	92921	107529	
A09.D									
	R	109	117	95	92	52960	80337	105839	
A10.D									
	1143645007	112	125*	83*	97	41164	81536	97778	
A11.D									
	1143646006	111	115	93	100	51453	88602	91654	
A12.D									
	1143647005	112	128*	73*	99	38938	88323	102852	
A13.D									
	1143645001	113	122*	85	106	50639	82057	91857	
A14.D									
	1143645004	115	129*	86	94	38109	72021	103547	
A15.D									
	1143645005	106	116	99	97	54434	78234	95646	
A16.D									
	1143645006	121*	131*	110	96	49079	68728	97257	
A17.D									
	1143647001	111	120	94	102	52330	92308	91769	
A18.D									
	1143647002	112	125*	78*	99	40990	91066	105838	
A19.D									
	1143647003	120*	127*	95	93	47331	83470	105716	
A20.D									
	1143647004	113	119	92	88	52907	73737	98641	
A21.D									
	1143646007	125*	123*	91	91	48597	72271	109300	
A22.D									
	1143642001	105	113	114	106	57638	78704	88866	

A23.D

1143453001	103	109	112	89	58222	69343	107162

(fails) - fails 12hr time check * - fails criteria

Created: Sun Aug 10 16:15:36 2014 VPA

Instrument Runlog

Instrument: VPA **Calibration Date:** 8/1/2014 **Method:** 8260/524.2
Operator: SP **Processed By:** KCT **Posted By:** KCT **Analytical Batch:** 524:14351
8260: 14353

Data Path: Z:\08\VPA\DATA\080814\

Daily:		As Needed:			
Verify System Date/Time	✓	Refill Water Tank		Adjust Tune	
General System Inspection	✓	Refill Standards		Clean Ion Source	
				Check Rough Pump Oil	
				Check Vacuum Pressure	

Standards:				
	IS/Surr	VW8-33-3	**CCV**	VW8-67-1
	MeOH	P1121	**EG**	VW8-64-4
			ICV	
			2nd EG	

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A01.D	1	R	1		8 Aug 2014 4:35 pm	N/A	
A02.D	2	IB	1		8 Aug 2014 4:51 pm	N/A	
A03.D	3	CCV/LCS	1		8 Aug 2014 5:08 pm	N/A	
A04.D	4	CCV/LCSD	1		8 Aug 2014 5:48 pm	N/A	
A05.D	5	1143645002F BMS	1		8 Aug 2014 6:04 pm	<2	
A06.D	6	1143645003F BMSD	1		8 Aug 2014 6:21 pm	<2	
A07.D	7	R	1		8 Aug 2014 6:39 pm	N/A	
A08.D	8	R	1		8 Aug 2014 6:56 pm	N/A	
A09.D	9	R	1	8260	8 Aug 2014 7:12 pm	N/A	
A10.D	10	1143645007D	1	NP Toluene-d8 ↓ RP	8 Aug 2014 7:29 pm	<2	
A11.D	11	1143646006B	1	NP	8 Aug 2014 7:45 pm	<2	
A12.D	12	1143647005A	1	NP Toluene-d8 ↓ RP	8 Aug 2014 8:01 pm	<2	
A13.D	13	1143645001F	1		8 Aug 2014 8:18 pm	<2	
A14.D	14	1143645004F	1		8 Aug 2014 8:34 pm	<2	
A15.D	15	1143645005F	1		8 Aug 2014 8:51 pm	<2	
A16.D	16	1143645006F	1		8 Aug 2014 9:07 pm	<2	
A17.D	17	1143647001A	1		8 Aug 2014 9:24 pm	<2	
A18.D	18	1143647002A	1	NP Toluene-d8 ↓ RP	8 Aug 2014 9:40 pm	<2	
A19.D	19	1143647003A	1		8 Aug 2014 9:57 pm	<2	
A20.D	20	1143647004A	1	NP	8 Aug 2014 10:13 pm	<2	
A21.D	21	1143646007A	1		8 Aug 2014 10:30 pm	<2	
A22.D	22	1143642001C	1		8 Aug 2014 10:46 pm	>2	
A23.D	23	1143453001B 100X	1		8 Aug 2014 11:03 pm	<2	
A24.D	24	R	1		8 Aug 2014 11:19 pm	N/A	
A25.D	25	R	1		8 Aug 2014 11:36 pm	N/A	
A26.D	26	R	1		8 Aug 2014 11:52 pm	N/A	
A27.D	27	1143412001B	1	524	9 Aug 2014 12:09 am	<2	
A28.D	28	1143545001B	1		9 Aug 2014 12:25 am	<2	
A29.D	29	1143550001B	1		9 Aug 2014 12:42 am	<2	
A30.D	30	1143591001B	1		9 Aug 2014 12:58 am	<2	
A31.D	31	R	1		9 Aug 2014 1:14 am	N/A	
A32.D	32	R	1		9 Aug 2014 1:31 am	N/A	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A02.D
Acq On : 8 Aug 2014 4:51 pm
Operator : KCT
Sample : IB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 09 19:27:27 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

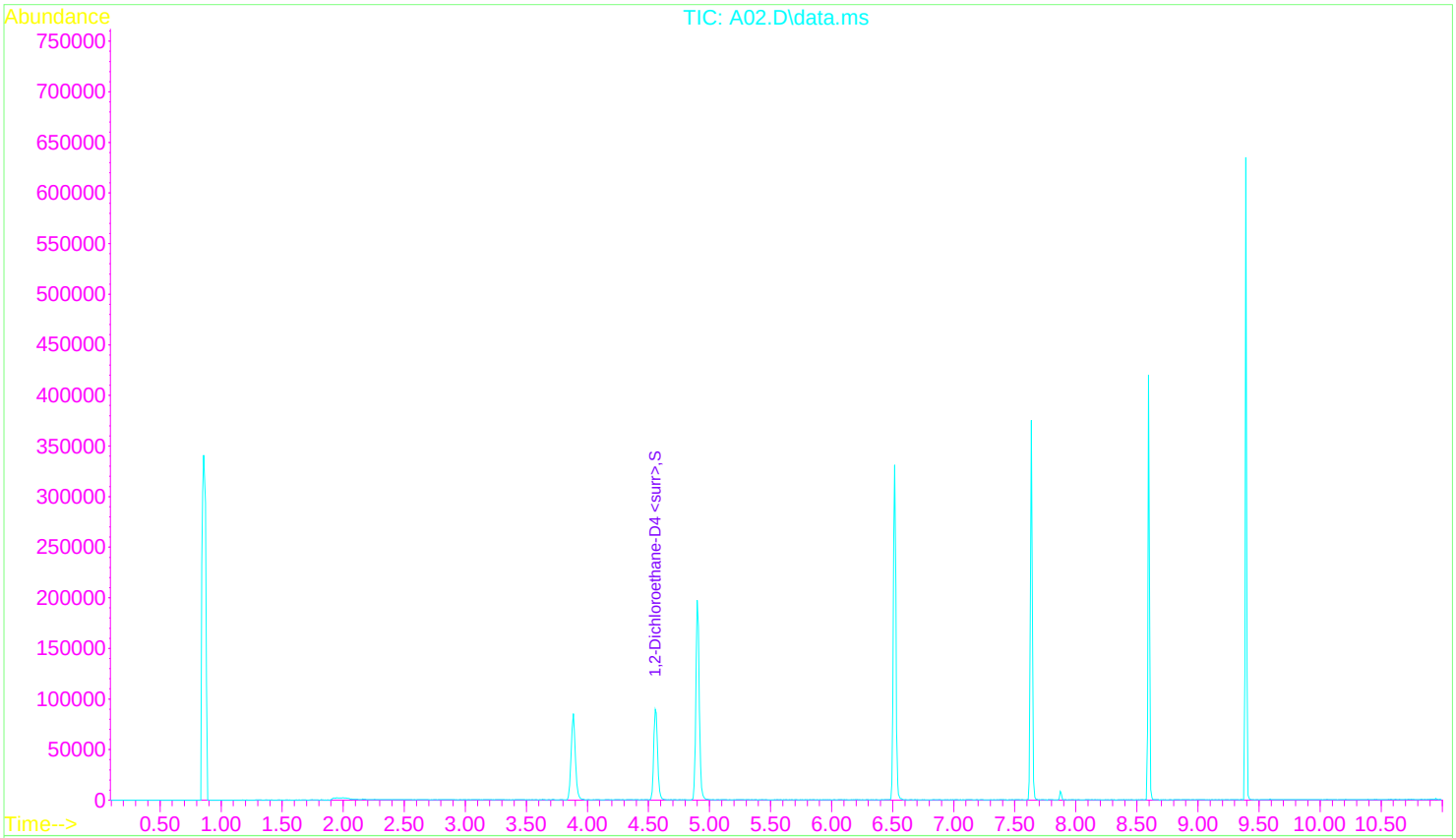
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	39948	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	69777	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	89717	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	69802	33.55	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 111.83%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	77035	39.22	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 130.73%#			
41) Toluene-d8 <surr>	6.523	98	169517	27.29	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 90.97%			
60) 4-Bromofluorobenzene <...	8.602	95	78163	26.92	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 89.73%			
Target Compounds						Qvalue
53] ethylbenzene	7.878	106	1498	0.62	µg/l #	49

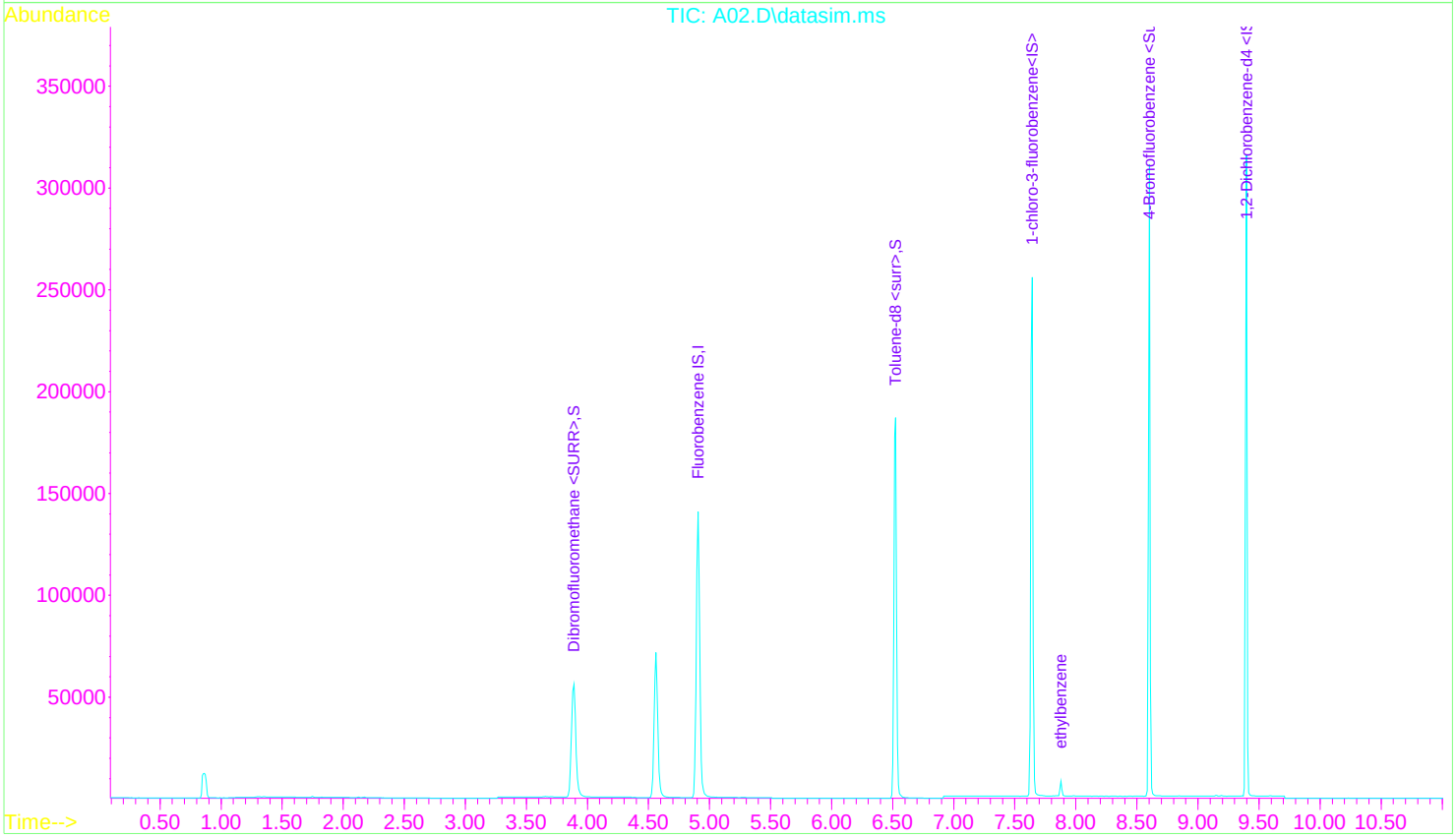
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A02.D
Acq On : 8 Aug 2014 4:51 pm
Operator : KCT
Sample : IB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 09 19:27:27 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A03.D
Acq On : 8 Aug 2014 5:08 pm
Operator : KCT
Sample : CCV/LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 19:27:42 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.906	70	57517	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.642	95	91242	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	105085	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.890	111	90031	30.05	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.17%				
30) 1,2-Dichloroethane-D4 ...	4.555	65	91292	32.28	µg/l		0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 107.60%				
41) Toluene-d8 <surr>	6.523	98	223209	27.48	µg/l		0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 91.60%				
60) 4-Bromofluorobenzene <...	8.602	95	101483	29.84	µg/l		0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 99.47%				
Target Compounds							Qvalue
2] dichlorodifluoromethane	0.959	85	85822	25.66	µg/l		100
3] chloromethane	1.063	50	41811	20.98	µg/l		99
4] vinyl chloride	1.103	62	74199	27.82	µg/l		100
5] bromomethane	1.279	96	25095	21.94	µg/l		99
6] chloroethane	1.351	64	34676	26.34	µg/l		99
7] trichlorofluoromethane	1.431	101	109734	31.23	µg/l		100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	79596	42.18	µg/L		99
9] 1,1-dichloroethene	1.733	96	46125	27.30	µg/l		90
10] Acetone	2.173	43	52290	64.99	µg/L		93
11] Acrylonitrile	2.814	53	36618	34.60	µg/L		98
12] Methyliodide	1.825	142	63954	37.28	µg/L		92
13] Carbon disulfide	1.741	76	216568	40.87	µg/L		99
14] methylene chloride	2.125	84	56026	23.84	µg/l		98
15] methyl-t-butyl ether	2.343	73	212064	40.54	µg/L	#	96
16] trans-1,2-dichloroethene	2.246	96	55253	24.85	µg/l		96
17] Vinylacetate	3.041	43	93481	31.08	µg/L		99
18) n-hexane	2.305	56	38777	27.33	µg/L		95
19] 1,1-dichloroethane	2.761	63	111424	25.70	µg/l		100
20] 2-Butanone(MEK)	4.075	43	129045	95.01	µg/L		99
21] 2,2-dichloropropane	3.423	77	113871	39.12	µg/l		98
22] cis-1,2-dichloroethene	3.316	96	78349	30.21	µg/l		95
23] bromochloromethane	3.540	128	38107	30.53	µg/l		96
24) cyclohexane	3.514	56	110277	31.65	µg/L		98
25] chloroform	3.656	83	147022	32.33	µg/l		100
27] 1,1,1-trichloroethane	3.880	97	129586	35.50	µg/l		99
28] carbon tetrachloride	3.792	117	106330	36.13	µg/l		100
29] 1,1-dichloropropene	4.055	75	104929	33.77	µg/l		98
31] benzene	4.384	78	294107	31.67	µg/l		100
32] 1,2-dichloroethane	4.640	62	101569	35.53	µg/l		96
33] trichloroethene	5.091	95	79751	33.55	µg/l		96
34] 1,2-dichloropropane	5.637	63	77735	32.26	µg/l		100
35] dibromomethane	5.531	93	51633	31.63	µg/l		98
37] bromodichloromethane	5.735	83	104390	34.60	µg/l		100
38] cis-1,3-dichloropropene	6.352	75	107882	32.82	µg/l		98
39] 4-Methyl-2-pentanone	6.945	58	87952	90.42	µg/L		96
42] toluene	6.561	92	156942	30.07	µg/l		100
43] trans-1,3-dichloropropene	6.963	75	97654	32.89	µg/l		98
44] 1,1,2-trichloroethane	7.090	83	56124	31.85	µg/l		99
45] tetrachloroethene	6.903	166	80584	30.83	µg/l		99
46] 1,3-dichloropropane	7.316	76	108311	32.70	µg/l		100
47] 2-Hexanone	7.660	43	185354	94.15	µg/L		97
48] dibromochloromethane	7.235	129	75328	34.05	µg/l		100

Data Path : Z:\08\VPA\DATA\080814\
Data File : A03.D
Acq On : 8 Aug 2014 5:08 pm
Operator : KCT
Sample : CCV/LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 19:27:42 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

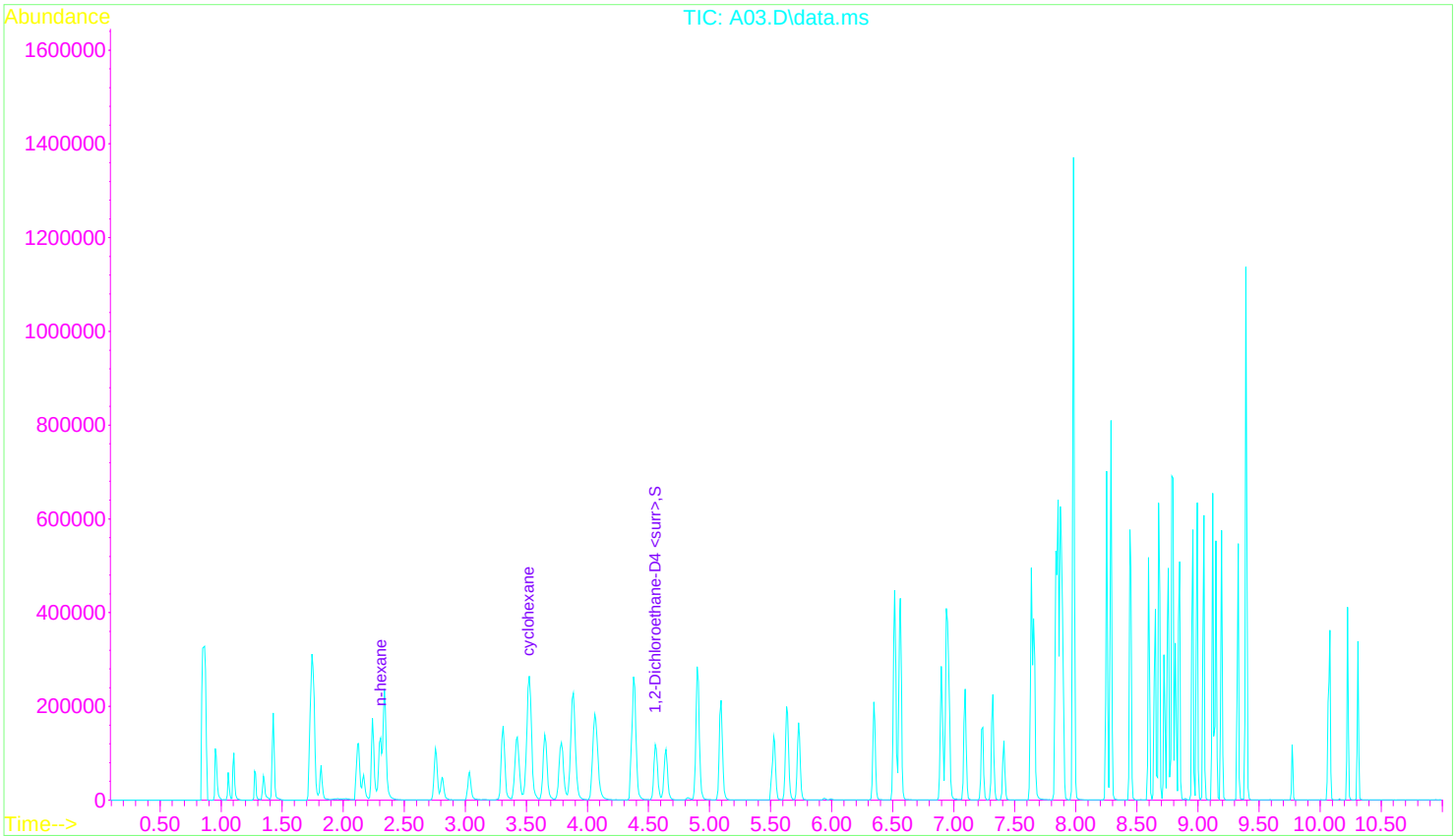
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49] 1,2-dibromoethane	7.416	107	69251	32.17	µg/l		99
50] 1-chlorohexane	7.860	55	91315	53.34	µg/L		91
51] chlorobenzene	7.841	112	183579	31.47	µg/l		98
52] 1,1,1,2-tetrachloroethane	7.896	133	65380	33.27	µg/l		98
53] ethylbenzene	7.878	106	92826	29.36	µg/l		95
54] P & M -Xylene	7.986	106	219848	64.64	µg/l		94
55] o-xylene	8.258	106	103349	32.10	µg/l		96
56] styrene	8.285	104	177084	31.49	µg/l		94
57] bromoform	8.294	173	56864	33.95	µg/l		99
58] Isopropylbenzene (Cumene)	8.448	105	270294	34.87	µg/l		99
61] trans 1,4-dichloro-2-b...	8.819	53	46032	52.66	µg/L		97
62] bromobenzene	8.647	156	74052	30.75	µg/l		95
63] 1,1,2,2-tetrachloroethane	8.728	83	93845	31.59	µg/l		100
64] 1,2,3-trichloropropane	8.792	110	26807	32.57	µg/l	#	66
65] n-propylbenzene	8.683	91	324926	35.33	µg/l		99
66] 2-chlorotoluene	8.755	91	187645	33.87	µg/l		97
67] 4-chlorotoluene	8.846	91	201277	34.43	µg/l		97
68] 1,3,5-trimethylbenzene	8.792	105	202051	34.67	µg/l		98
69] tert-butylbenzene	8.955	119	157183	35.44	µg/l		94
70] 1,2,4-trimethylbenzene	8.991	105	202635	34.95	µg/l		98
71] sec-butylbenzene	9.045	105	238570	38.17	µg/l		99
72] 1,3-dichlorobenzene	9.154	146	123836	32.43	µg/l		99
73] 4-isopropyltoluene	9.126	119	178336	38.70	µg/l		98
74] 1,4-dichlorobenzene	9.199	146	126756	32.39	µg/l		99
75] 1,2-dichlorobenzene	9.398	146	121703	31.43	µg/l		99
76] n-butylbenzene	9.326	91	171326	41.53	µg/l		97
77] 1,2-dibromo-3-chloropr...	9.775	75	17903	31.96	µg/l		86
78] 1,2,4-trichlorobenzene	10.079	180	57713	33.26	µg/l		99
79] hexachlorobutadiene	10.072	225	22861	38.40	µg/l		99
80] naphthalene	10.232	128	148951	27.63	µg/l		97
81] 1,2,3-trichlorobenzene	10.315	180	56834	35.92	µg/l		100

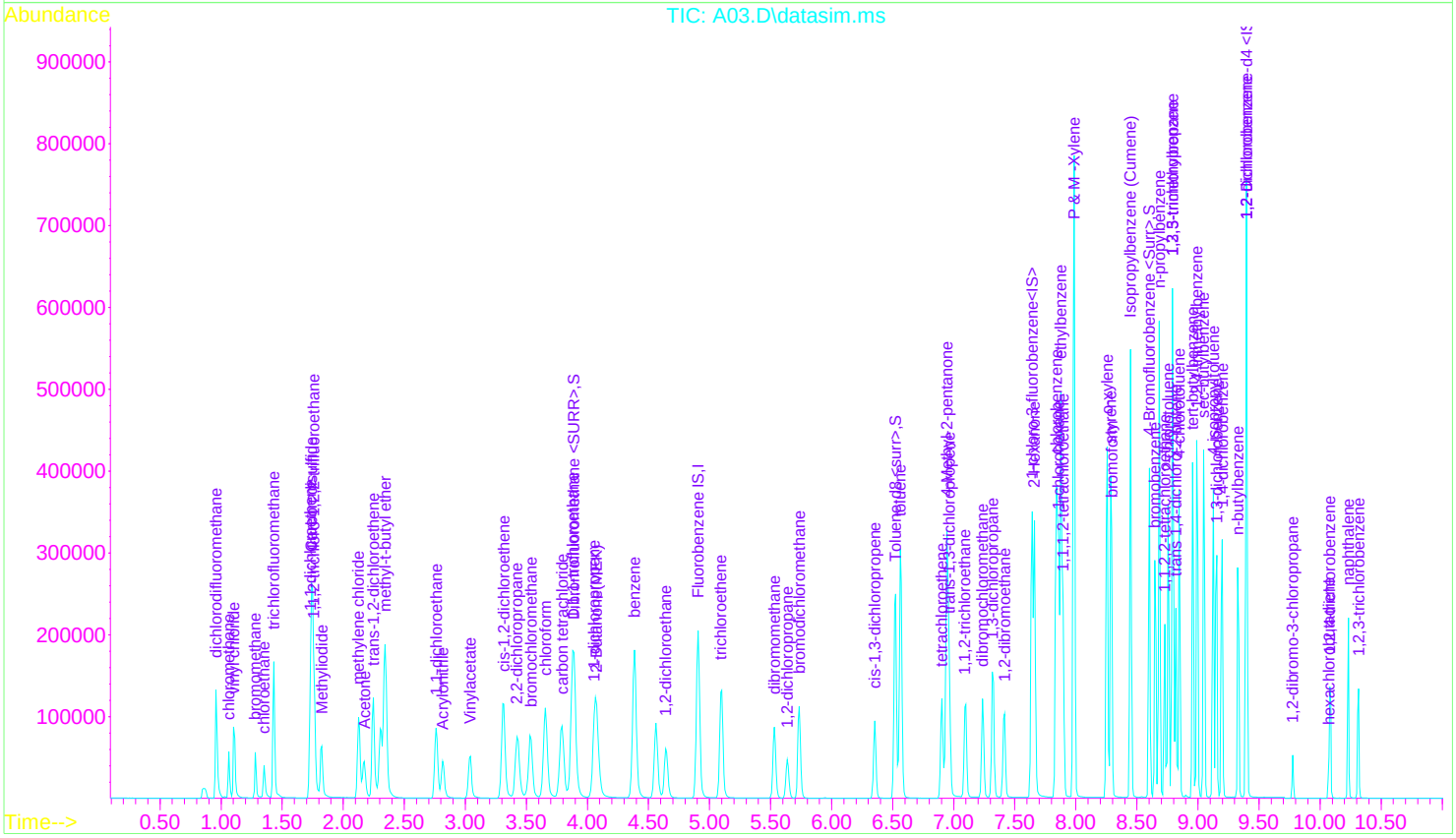
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A03.D
Acq On : 8 Aug 2014 5:08 pm
Operator : KCT
Sample : CCV/LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 19:27:42 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A04.D
Acq On : 8 Aug 2014 5:48 pm
Operator : KCT
Sample : CCV/LCSD
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 09 19:27:51 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.906	70	61638	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.633	95	85854	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	105405	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.880	111	98072	30.55	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.83%				
30) 1,2-Dichloroethane-D4 ...	4.555	65	96101	31.71	µg/l		0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 105.70%				
41) Toluene-d8 <surr>	6.515	98	223584	29.26	µg/l		0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 97.53%				
60) 4-Bromofluorobenzene <...	8.602	95	97992	28.73	µg/l		0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 95.77%				
Target Compounds							Qvalue
2] dichlorodifluoromethane	0.959	85	88101	24.58	µg/l		100
3] chloromethane	1.063	50	47710	22.34	µg/l		99
4] vinyl chloride	1.103	62	76836	26.88	µg/l		100
5] bromomethane	1.279	96	30094	24.55	µg/l		99
6] chloroethane	1.351	64	38270	27.12	µg/l		99
7] trichlorofluoromethane	1.432	101	116338	30.90	µg/l		100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	86976	43.01	µg/L		99
9] 1,1-dichloroethene	1.733	96	50520	27.90	µg/l		91
10] Acetone	2.165	43	60421	70.08	µg/L		96
11] Acrylonitrile	2.814	53	49546	43.69	µg/L		99
12] Methyliodide	1.817	142	72932	39.46	µg/L		93
13] Carbon disulfide	1.742	76	240001	42.26	µg/L		99
14] methylene chloride	2.125	84	67130	26.66	µg/l		98
15] methyl-t-butyl ether	2.335	73	279680	49.89	µg/L	#	96
16] trans-1,2-dichloroethene	2.246	96	72966	30.63	µg/l		96
17] Vinylacetate	3.033	43	104460	32.41	µg/L		99
18) n-hexane	2.297	56	53552	36.93	µg/L		95
19] 1,1-dichloroethane	2.761	63	145944	31.41	µg/l		100
20] 2-Butanone(MEK)	4.075	43	124781	85.73	µg/L		99
21] 2,2-dichloropropane	3.423	77	114478	36.70	µg/l		97
22] cis-1,2-dichloroethene	3.306	96	81026	29.15	µg/l		97
23] bromochloromethane	3.530	128	39907	29.84	µg/l		97
24) cyclohexane	3.514	56	112194	30.05	µg/L		97
25] chloroform	3.647	83	149742	30.73	µg/l		99
27] 1,1,1-trichloroethane	3.880	97	131019	33.49	µg/l		99
28] carbon tetrachloride	3.783	117	106522	33.77	µg/l		99
29] 1,1-dichloropropene	4.055	75	105285	31.62	µg/l		98
31] benzene	4.384	78	297158	29.86	µg/l		100
32] 1,2-dichloroethane	4.641	62	103660	33.84	µg/l		96
33] trichloroethene	5.091	95	80272	31.51	µg/l		96
34] 1,2-dichloropropane	5.637	63	80020	30.99	µg/l		100
35] dibromomethane	5.531	93	53991	30.86	µg/l		98
37] bromodichloromethane	5.728	83	103197	31.91	µg/l		100
38] cis-1,3-dichloropropene	6.352	75	102702	29.16	µg/l		98
39] 4-Methyl-2-pentanone	6.936	58	81177	77.87	µg/L		96
42] toluene	6.562	92	151491	30.84	µg/l		99
43] trans-1,3-dichloropropene	6.963	75	92724	33.19	µg/l		98
44] 1,1,2-trichloroethane	7.090	83	49994	30.16	µg/l		100
45] tetrachloroethene	6.903	166	75082	30.53	µg/l		99
46] 1,3-dichloropropane	7.316	76	96137	30.85	µg/l		99
47] 2-Hexanone	7.660	43	162108	87.51	µg/L		98
48] dibromochloromethane	7.235	129	66601	31.99	µg/l		99

Data Path : Z:\08\VPA\DATA\080814\
Data File : A04.D
Acq On : 8 Aug 2014 5:48 pm
Operator : KCT
Sample : CCV/LCSD
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 09 19:27:51 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

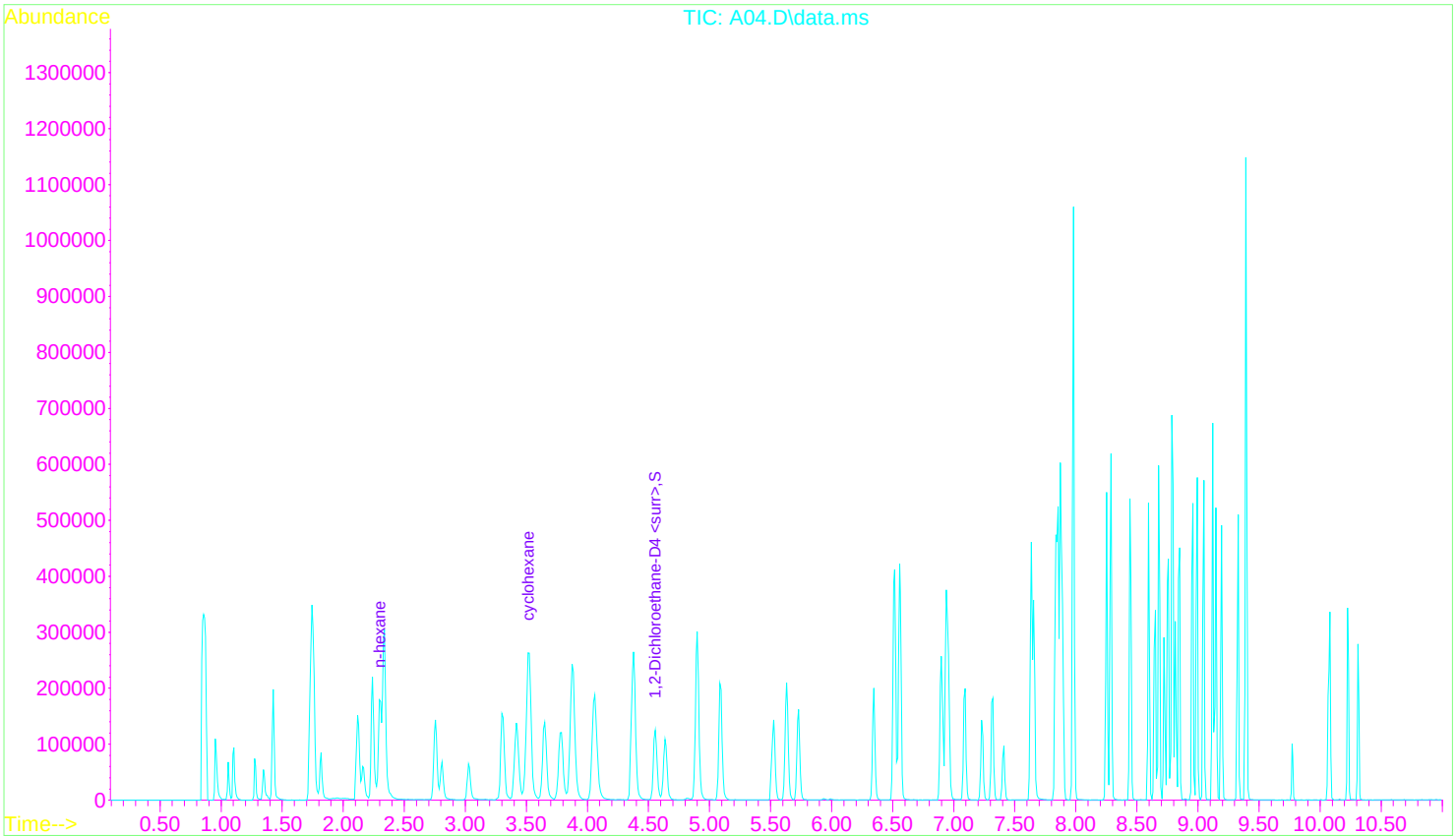
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49] 1,2-dibromoethane	7.407	107	54712	27.02	µg/l		100
50] 1-chlorohexane	7.851	55	80043	49.69	µg/L		96
51] chlorobenzene	7.842	112	165168	30.09	µg/l		97
52] 1,1,1,2-tetrachloroethane	7.896	133	59816	32.35	µg/l		98
53] ethylbenzene	7.878	106	85727	28.82	µg/l		98
54] P & M -Xylene	7.986	106	173520	54.22	µg/l		95
55] o-xylene	8.258	106	84130	27.77	µg/l		94
56] styrene	8.285	104	146095	27.61	µg/l		91
57] bromoform	8.285	173	47325	30.03	µg/l		99
58] Isopropylbenzene (Cumene)	8.448	105	237056	32.50	µg/l		99
61] trans 1,4-dichloro-2-b...	8.819	53	41969	47.87	µg/L		95
62] bromobenzene	8.647	156	69933	28.95	µg/l		97
63] 1,1,2,2-tetrachloroethane	8.728	83	83479	28.01	µg/l		99
64] 1,2,3-trichloropropane	8.792	110	24440	29.61	µg/l	#	69
65] n-propylbenzene	8.683	91	297754	32.28	µg/l		99
66] 2-chlorotoluene	8.756	91	176403	31.75	µg/l		98
67] 4-chlorotoluene	8.846	91	188431	32.13	µg/l		98
68] 1,3,5-trimethylbenzene	8.792	105	192196	32.88	µg/l		98
69] tert-butylbenzene	8.955	119	156740	35.23	µg/l		95
70] 1,2,4-trimethylbenzene	8.991	105	197170	33.90	µg/l		98
71] sec-butylbenzene	9.045	105	235915	37.63	µg/l		99
72] 1,3-dichlorobenzene	9.154	146	120652	31.50	µg/l		99
73] 4-isopropyltoluene	9.127	119	175996	38.08	µg/l		97
74] 1,4-dichlorobenzene	9.199	146	113398	28.89	µg/l		99
75] 1,2-dichlorobenzene	9.398	146	116118	29.90	µg/l		99
76] n-butylbenzene	9.326	91	163890	39.60	µg/l		98
77] 1,2-dibromo-3-chloropr...	9.776	75	15448	27.49	µg/l		89
78] 1,2,4-trichlorobenzene	10.087	180	52866	30.38	µg/l		99
79] hexachlorobutadiene	10.072	225	22299	37.34	µg/l		99
80] naphthalene	10.232	128	148677	27.50	µg/l		97
81] 1,2,3-trichlorobenzene	10.315	180	51536	32.47	µg/l		100

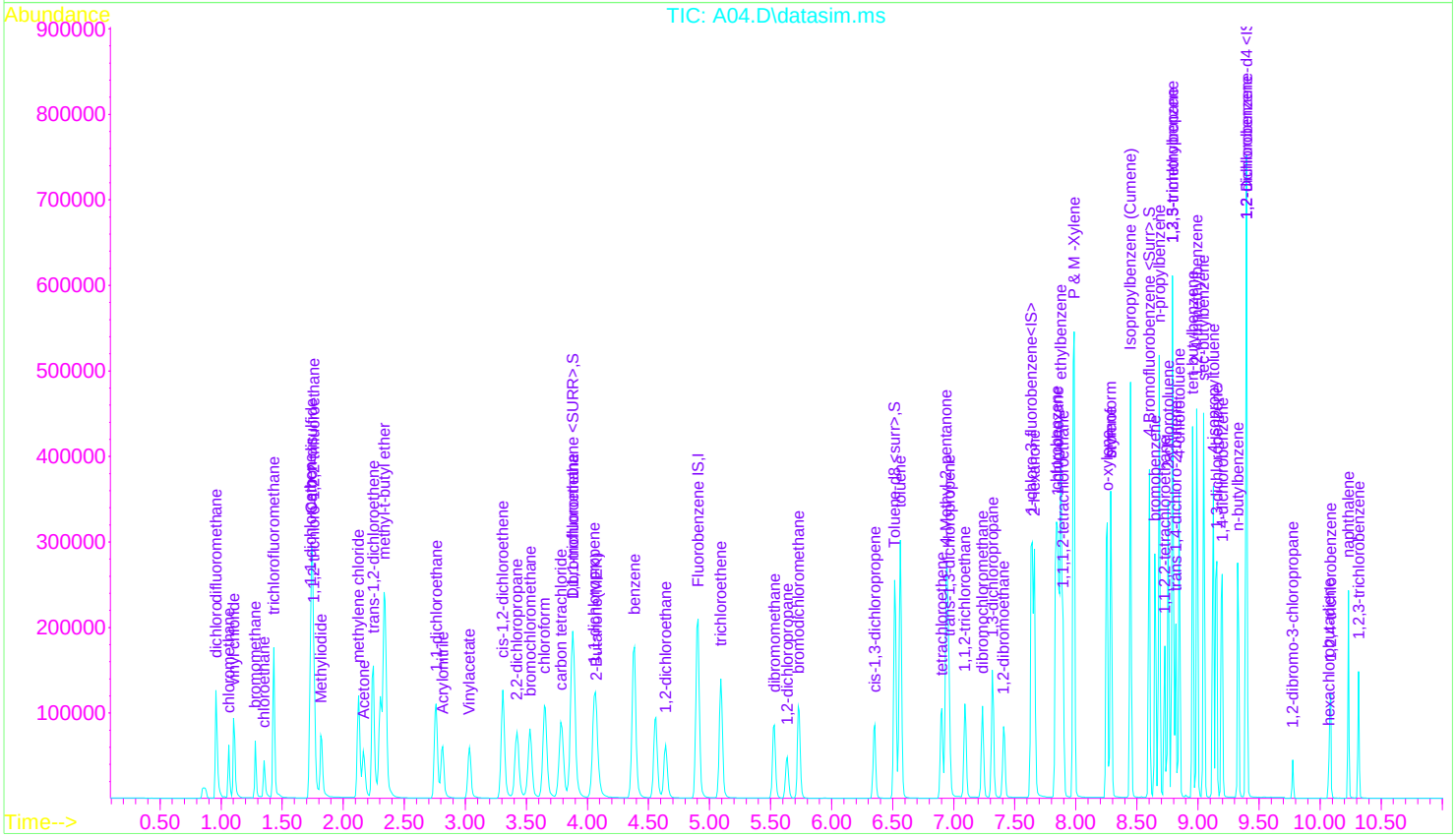
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A04.D
Acq On : 8 Aug 2014 5:48 pm
Operator : KCT
Sample : CCV/LCSD
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 09 19:27:51 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A17.D
Acq On : 8 Aug 2014 9:24 pm
Operator : KCT
Sample : 1143647001A
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 09 19:47:03 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

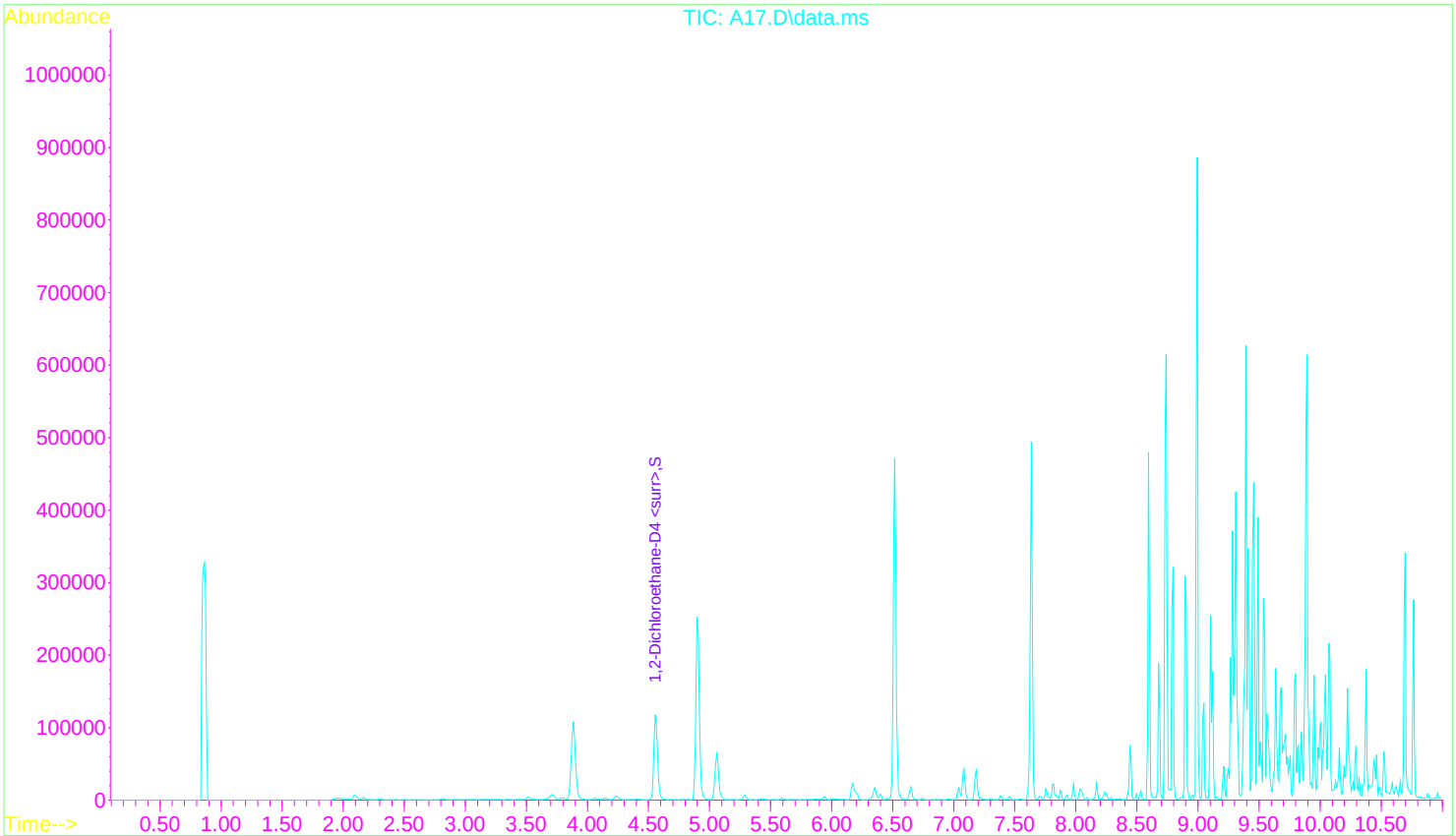
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	52330	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	92308	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	91769	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	90752	33.30	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 111.00%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	92602	35.99	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 119.97%			
41) Toluene-d8 <surr>	6.523	98	231013	28.11	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 93.70%			
60) 4-Bromofluorobenzene <...	8.602	95	91207	30.71	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 102.37%			
Target Compounds						Qvalue
10] Acetone	2.173	43	2991	4.09	µg/L	96
53] ethylbenzene	7.878	106	2056	0.64	µg/l #	48
54] P & M -Xylene	7.986	106	3652	1.06	µg/l	93
58] Isopropylbenzene (Cumene)	8.448	105	32068	4.09	µg/l	98
65] n-propylbenzene	8.683	91	91793	11.43	µg/l	98
68] 1,3,5-trimethylbenzene	8.792	105	121430	23.86	µg/l	98
69] tert-butylbenzene	8.955	119	1677	0.43	µg/l	95
70] 1,2,4-trimethylbenzene	8.991	105	284921	56.27	µg/l	98
71] sec-butylbenzene	9.045	105	49180	9.01	µg/l	89
73] 4-isopropyltoluene	9.108	119	119703	29.75	µg/l	98
76] n-butylbenzene	9.326	91	74800	20.76	µg/l #	1
80] naphthalene	10.232	128	31543	6.70	µg/l	94

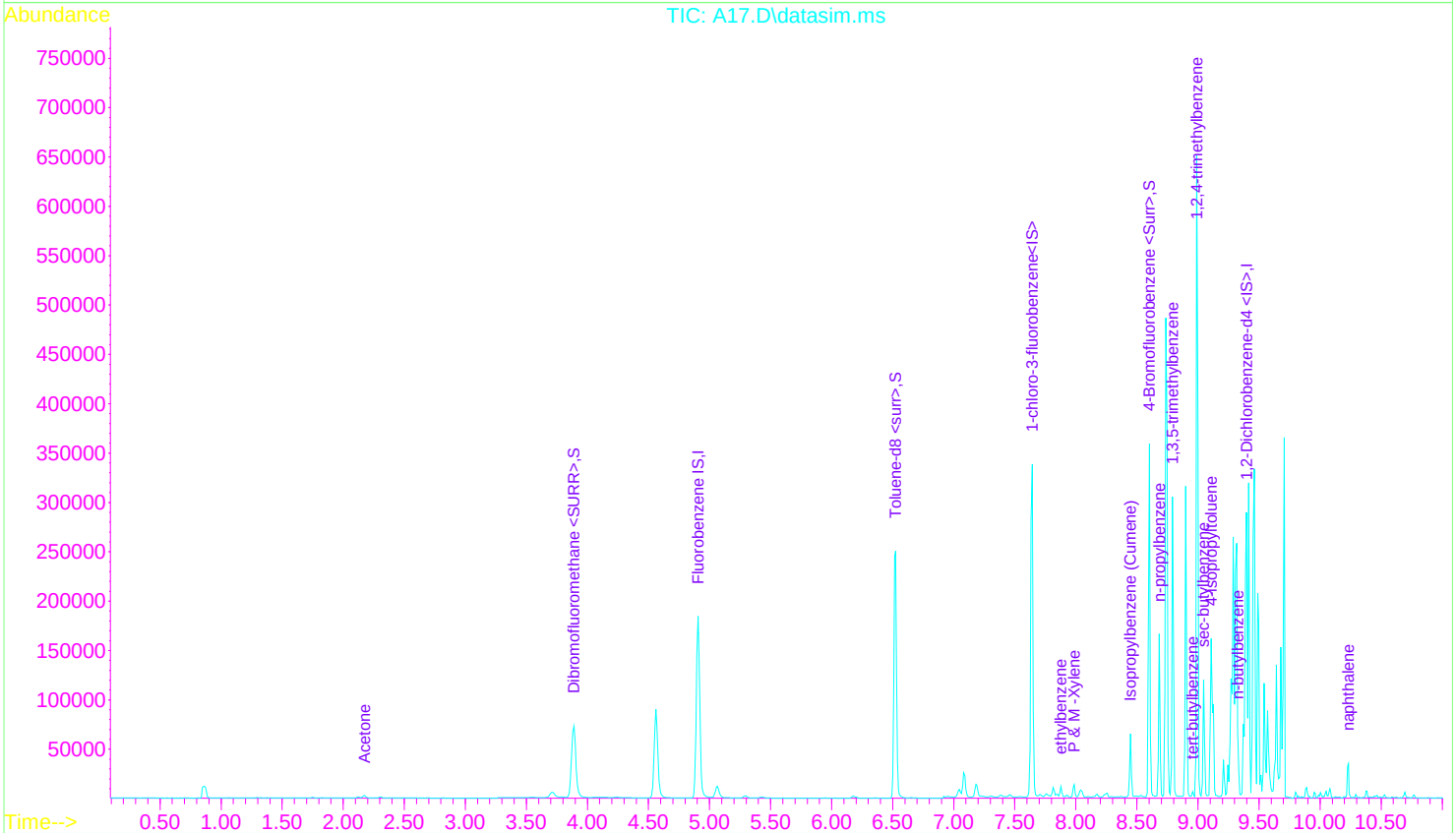
(#) = qualifier out of range (m) = manual integration (+) = signals summed

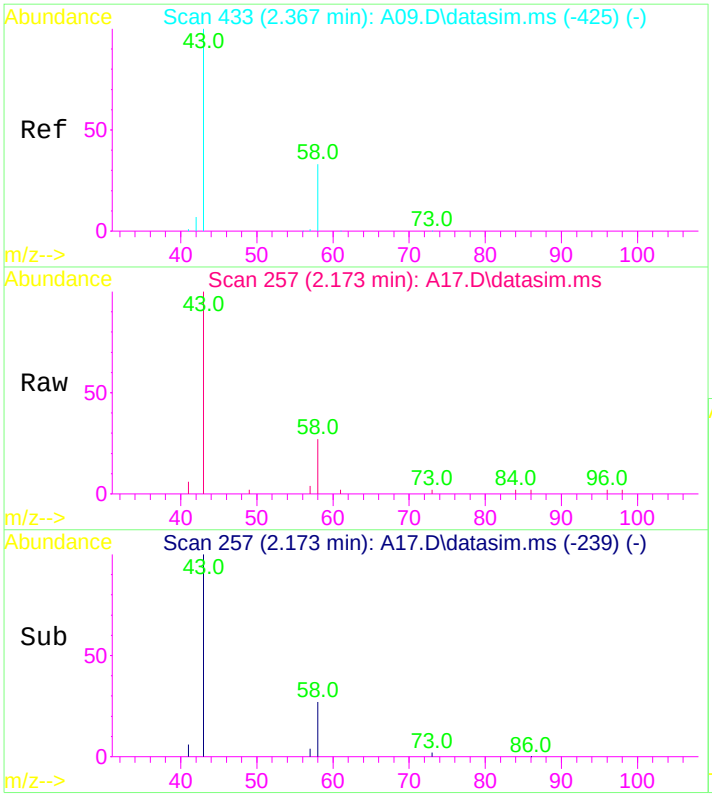
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A17.D
Acq On : 8 Aug 2014 9:24 pm
Operator : KCT
Sample : 1143647001A
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 09 19:47:03 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration



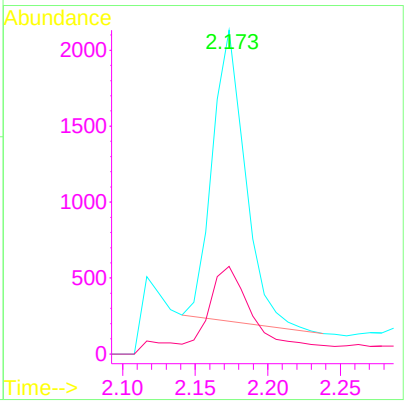


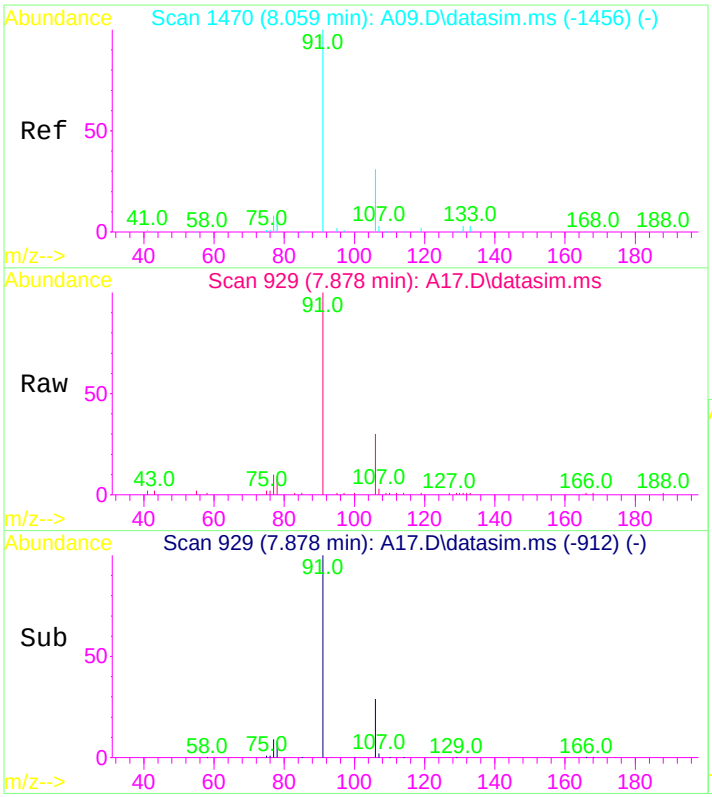


#10
Acetone
Concen: 4.09 µg/L
RT: 2.173 min Scan# 257
Delta R.T. 0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion: 43 Resp: 2991

Ion	Ratio	Lower	Upper
43	100		
58	31.0	23.4	43.4

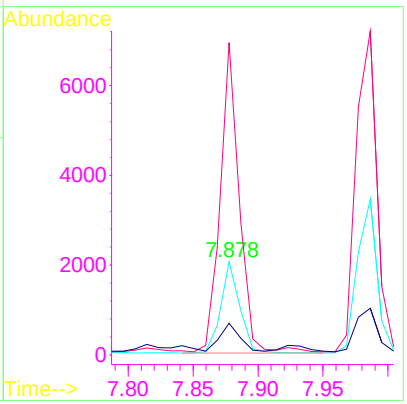


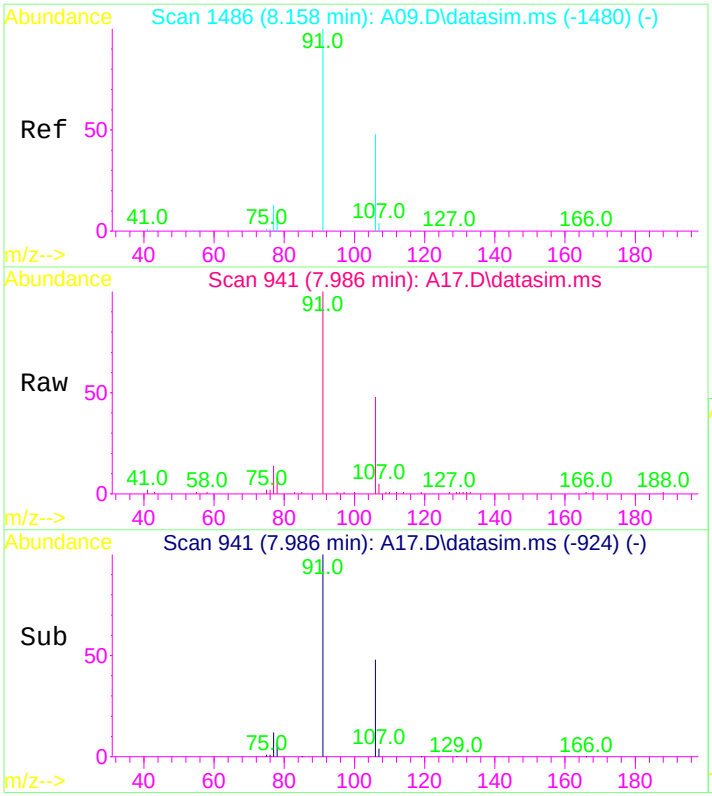


#53
ethylbenzene
Concen: 0.64 µg/l
RT: 7.878 min Scan# 929
Delta R.T. -0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:106 Resp: 2056

Ion	Ratio	Lower	Upper
106	100		
91	328.6	329.1	611.3#
77	31.0	16.2	30.0#

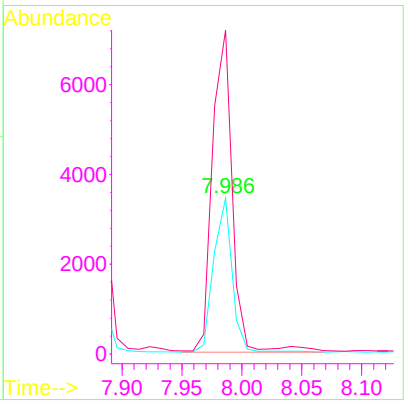


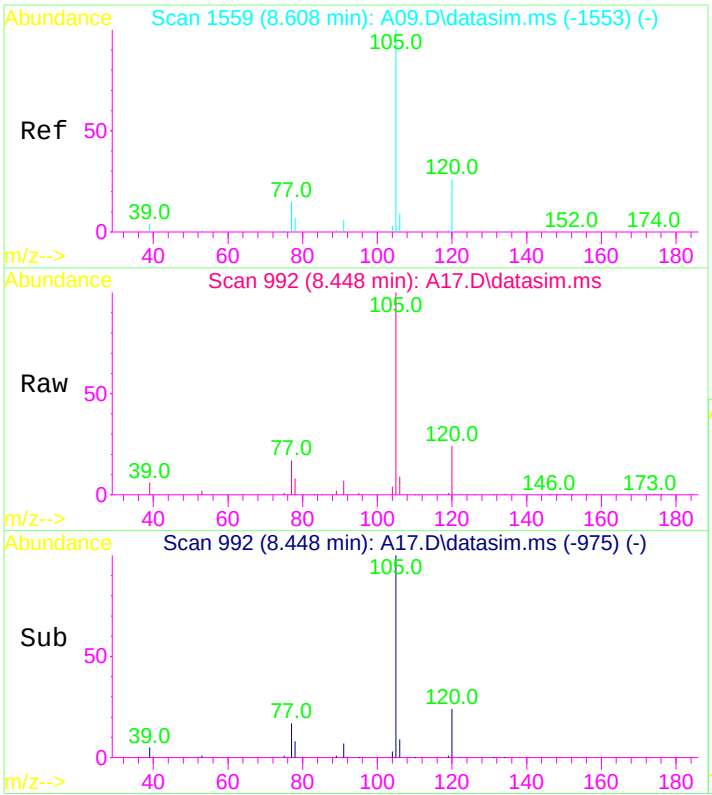


#54
P & M -Xylene
Concen: 1.06 µg/l
RT: 7.986 min Scan# 941
Delta R.T. 0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:106 Resp: 3652

Ion	Ratio	Lower	Upper
106	100		
91	217.9	145.3	269.9

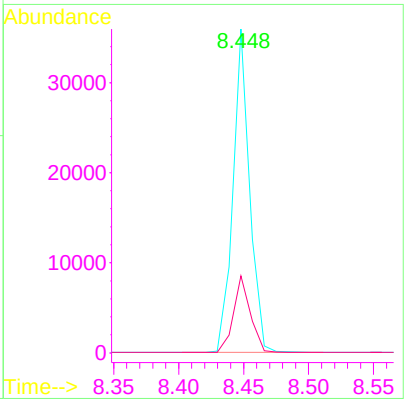


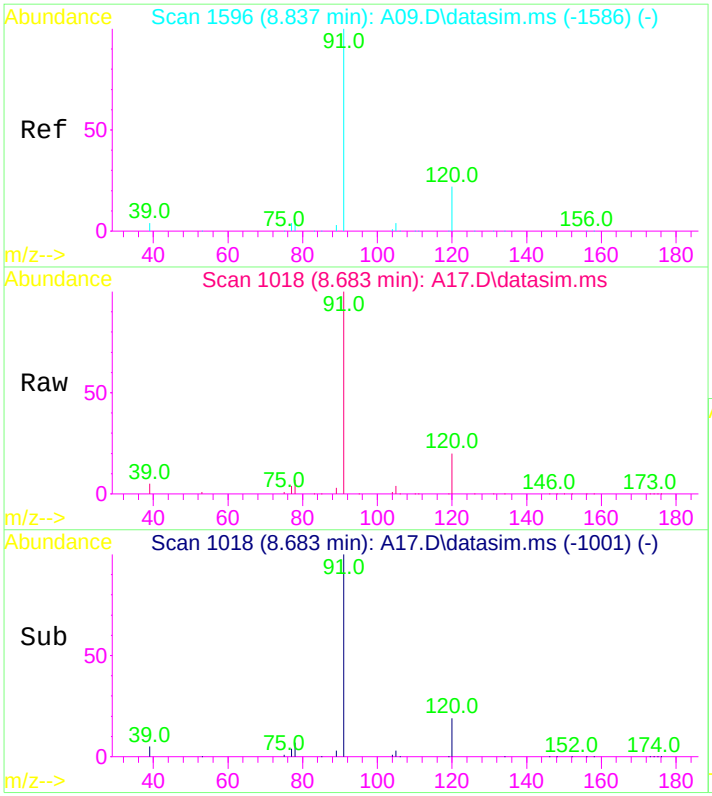


#58
Isopropylbenzene (Cumene)
Concen: 4.09 µg/l
RT: 8.448 min Scan# 992
Delta R.T. -0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:105 Resp: 32068

Ion	Ratio	Lower	Upper
105	100		
120	24.0	17.4	32.2

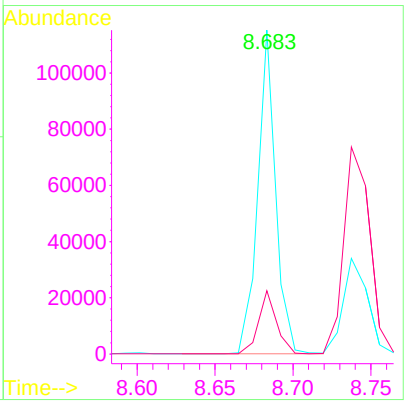


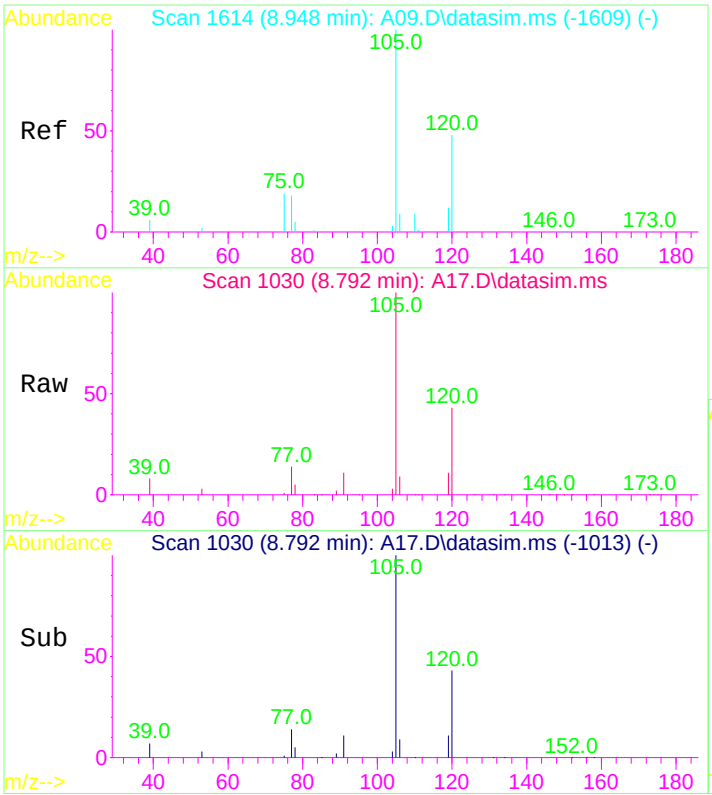


#65
n-propylbenzene
Concen: 11.43 µg/l
RT: 8.683 min Scan# 1018
Delta R.T. 0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion: 91 Resp: 91793

Ion	Ratio	Lower	Upper
91	100		
120	19.7	14.4	26.8

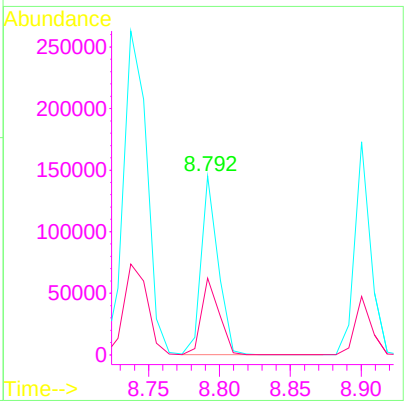


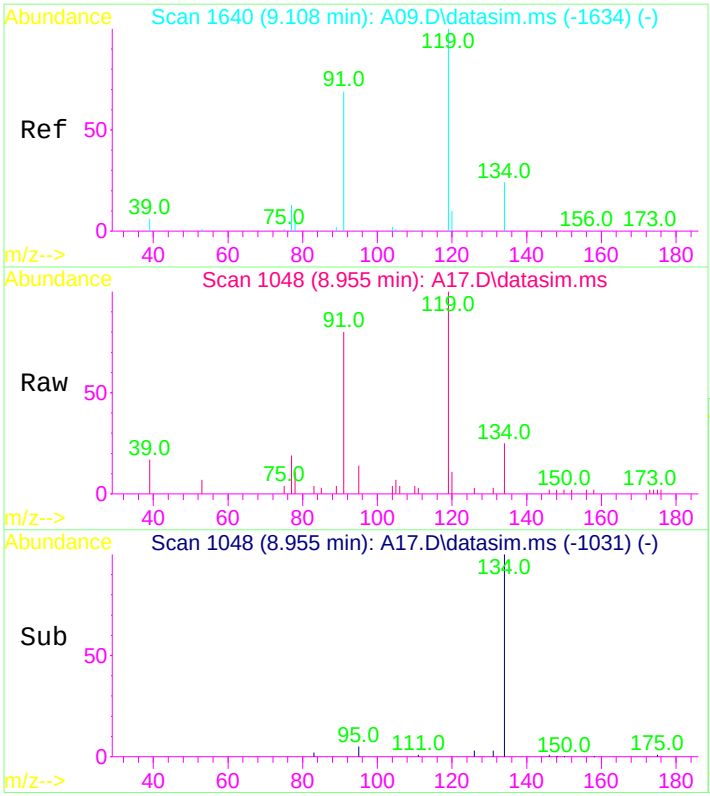


#68
1,3,5-trimethylbenzene
Concen: 23.86 µg/l
RT: 8.792 min Scan# 1030
Delta R.T. -0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:105 Resp: 121430

Ion	Ratio	Lower	Upper
105	100		
120	44.8	32.4	60.2

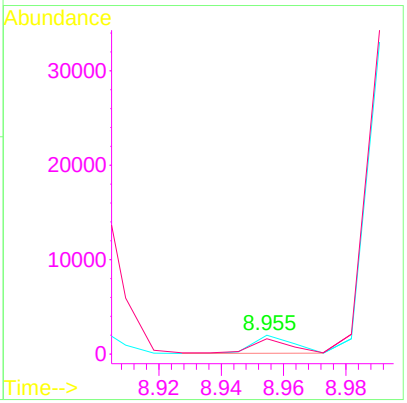


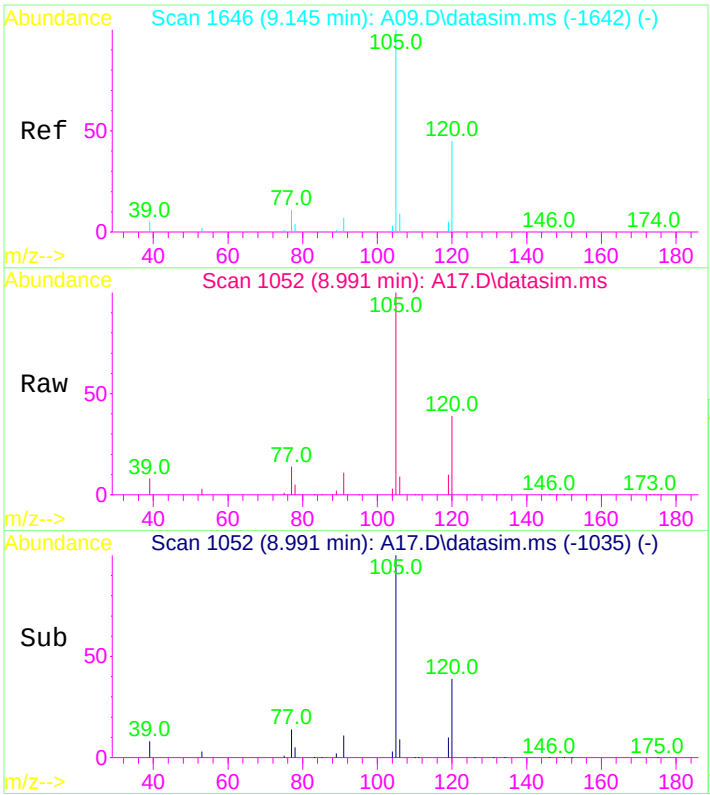


#69
tert-butylbenzene
Concen: 0.43 µg/l
RT: 8.955 min Scan# 1048
Delta R.T. -0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:119 Resp: 1677

Ion	Ratio	Lower	Upper
119	100		
91	71.9	47.5	88.3

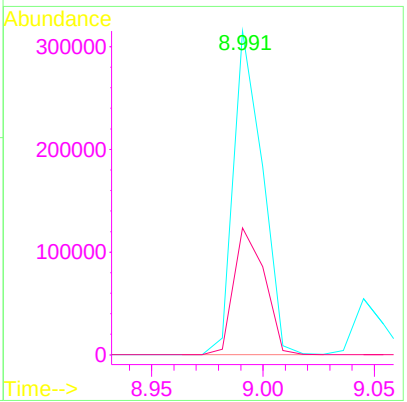


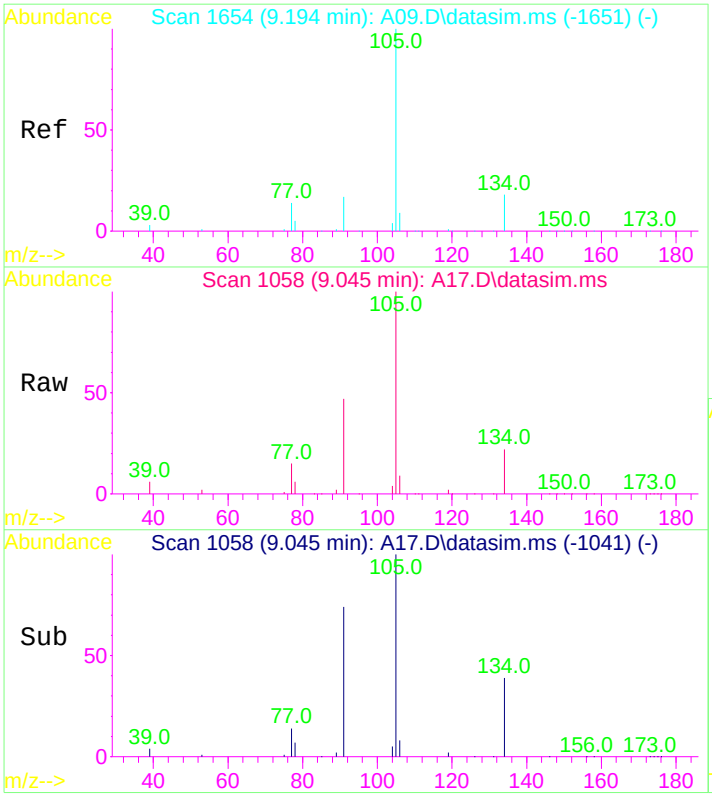


#70
1,2,4-trimethylbenzene
Concen: 56.27 µg/l
RT: 8.991 min Scan# 1052
Delta R.T. -0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:105 Resp: 284921

Ion	Ratio	Lower	Upper
105	100		
120	42.0	30.4	56.4

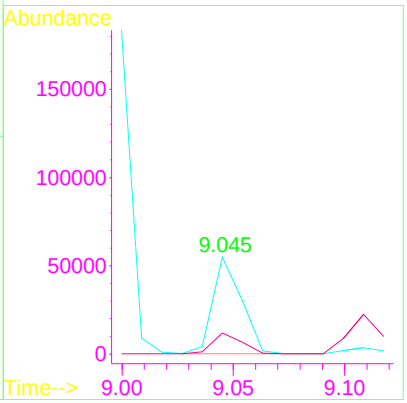


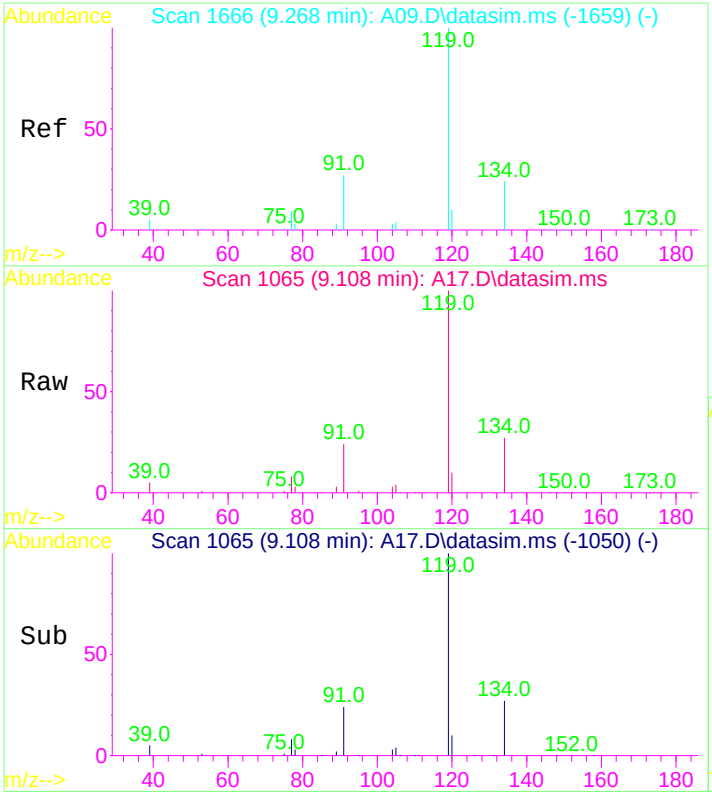


#71
sec-butylbenzene
Concen: 9.01 µg/l
RT: 9.045 min Scan# 1058
Delta R.T. 0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:105 Resp: 49180

Ion	Ratio	Lower	Upper
105	100		
134	22.2	12.0	22.4

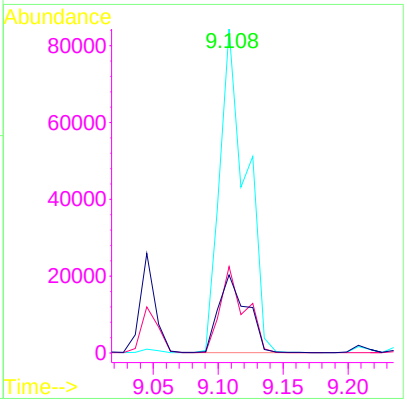


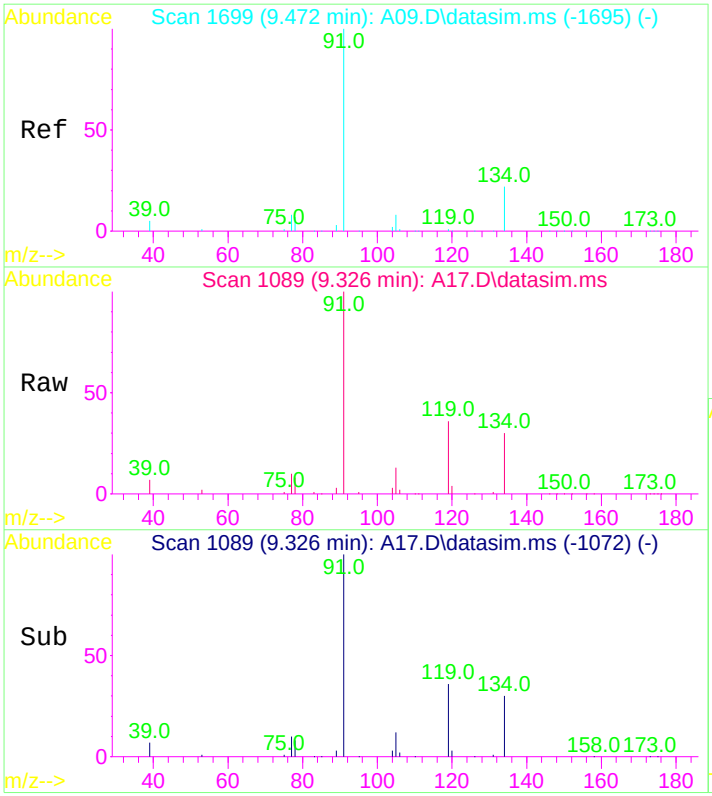


#73
4-isopropyltoluene
Concen: 29.75 µg/l
RT: 9.108 min Scan# 1065
Delta R.T. -0.018 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:119 Resp: 119703

Ion	Ratio	Lower	Upper
119	100		
134	25.0	17.6	32.6
91	25.5	16.6	30.8

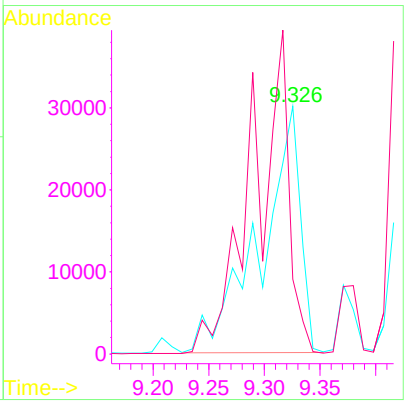


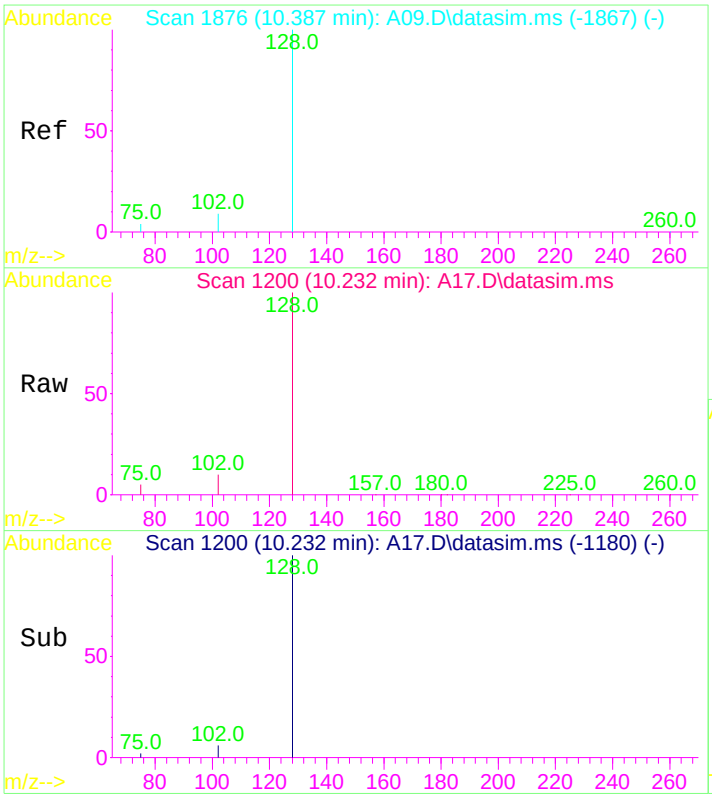


#76
n-butylbenzene
Concen: 20.76 µg/l
RT: 9.326 min Scan# 1089
Delta R.T. -0.000 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion: 91 Resp: 74800

Ion	Ratio	Lower	Upper
91	100		
134	118.5	15.5	28.7#

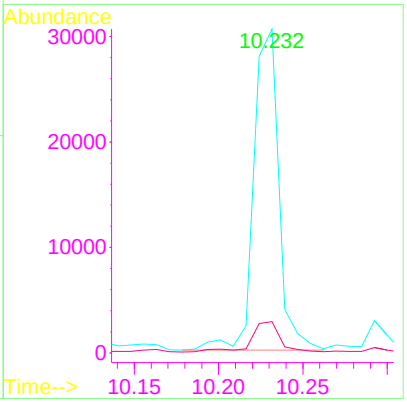




#80
naphthalene
Concen: 6.70 µg/l
RT: 10.232 min Scan# 1200
Delta R.T. 0.001 min
Lab File: A17.D
Acq: 8 Aug 2014 9:24 pm

Tgt Ion:128 Resp: 31543

Ion	Ratio	Lower	Upper
128	100		
102	10.6	5.8	10.8



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A18.D
Acq On : 8 Aug 2014 9:40 pm
Operator : KCT
Sample : 1143647002A
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 09 19:48:27 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

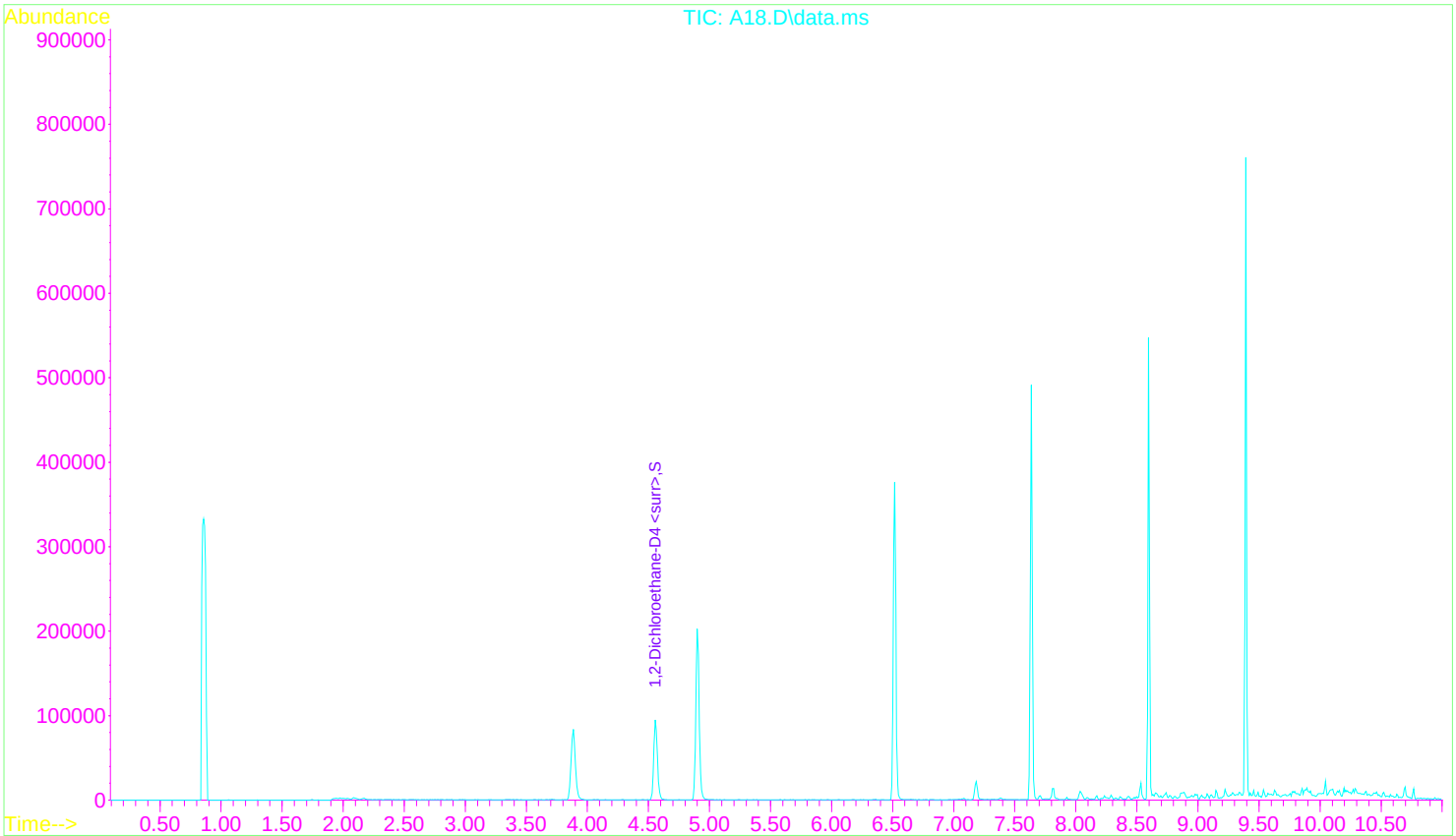
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	40990	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.643	95	91066	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	105838	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	71920	33.69	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 112.30%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	75578	37.50	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 125.00%#			
41) Toluene-d8 <surr>	6.515	98	189664	23.40	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 78.00%#			
60) 4-Bromofluorobenzene <...	8.602	95	101479	29.63	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 98.77%			
Target Compounds						Qvalue
10] Acetone	2.173	43	1821	3.18	µg/L	86

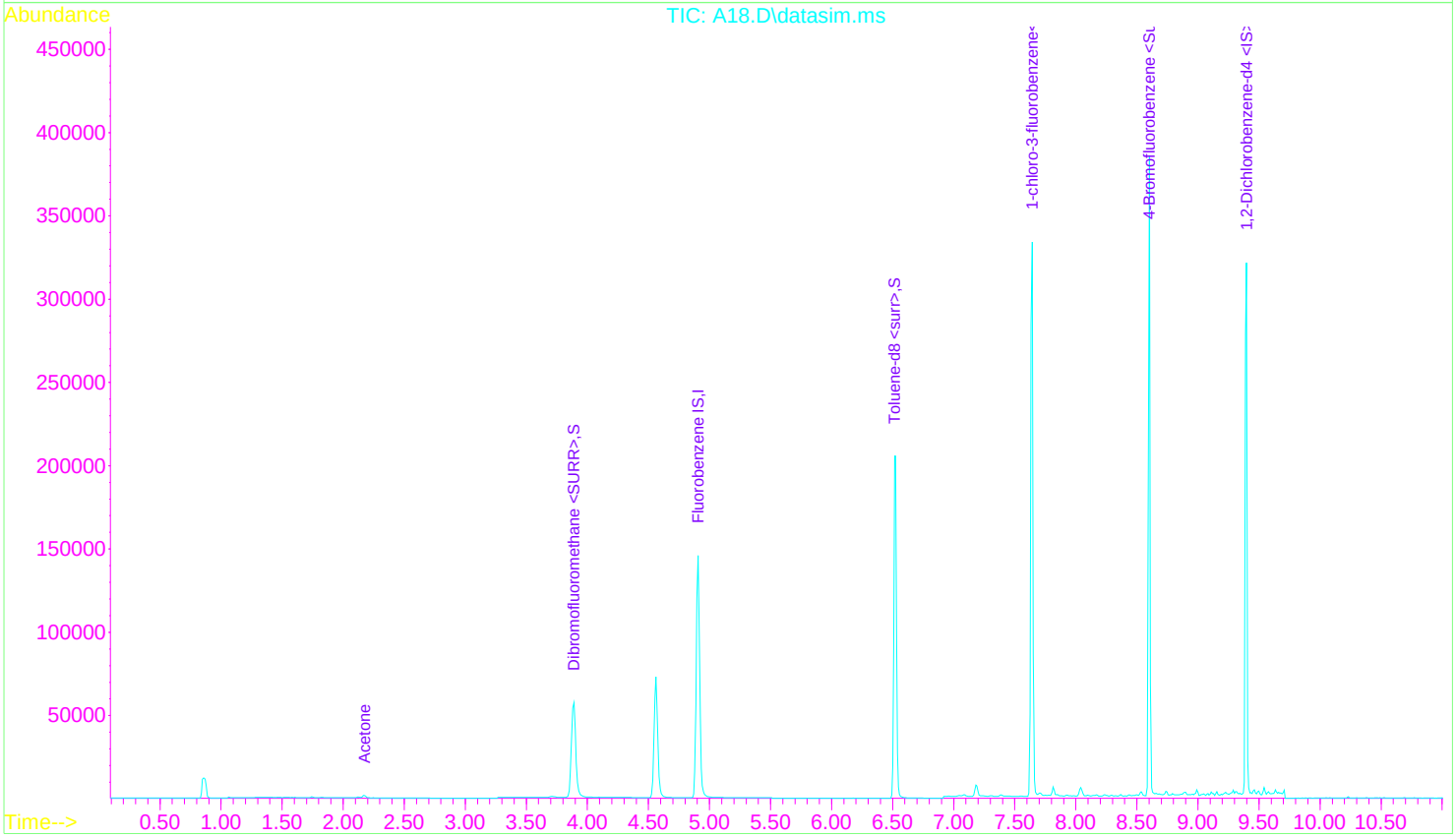
(#) = qualifier out of range (m) = manual integration (+) = signals summed

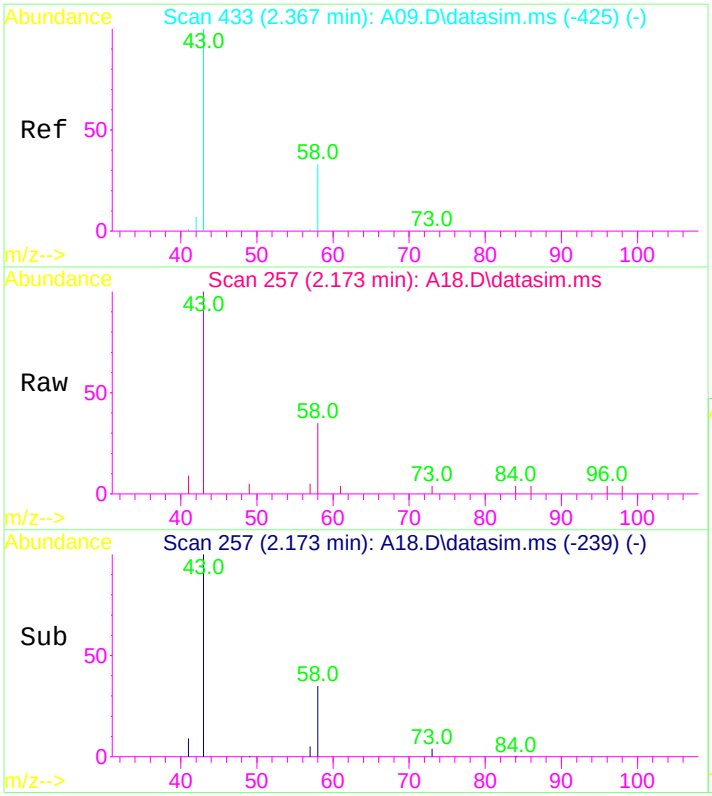
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080814\
Data File : A18.D
Acq On : 8 Aug 2014 9:40 pm
Operator : KCT
Sample : 1143647002A
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 09 19:48:27 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration



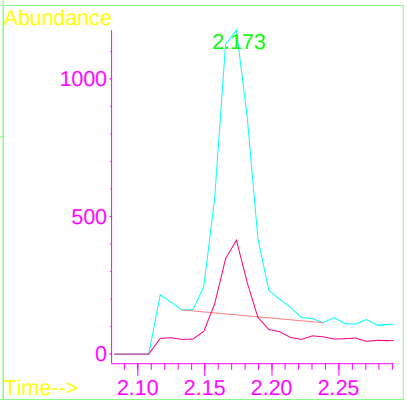




#10
Acetone
Concen: 3.18 µg/L
RT: 2.173 min Scan# 257
Delta R.T. 0.000 min
Lab File: A18.D
Acq: 8 Aug 2014 9:40 pm

Tgt Ion: 43 Resp: 1821

Ion	Ratio	Lower	Upper
43	100		
58	41.6	23.4	43.4



SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):

1143495, 1143565, 1143645, 1143647, 1143659, 1143668, 1143669, 1148340, 1148346, 1148348

Queue: **VMS** Batch: **14356**

Method: EPA 602/624, SW1312/8260B, SW8260B

Run Date: 08/11/14 10:19 - 08/11/14 20:45

Extraction Batch(es): VXX26253

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: Subha

Printed Name: Subha Pandey

Date: 08/12/14

Reviewer's Signature Phyllis Woods

Printed Name: Phyllis Woods

Date: 8/12/2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081114\
Data File : A04.D
Acq On : 11 Aug 2014 10:52 am
Operator : SP
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 11:11:02 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	80	0.00
2		dichlorodifluoromethane	2.774	2.956	-6.6	80	0.00
3		chloromethane	2.705	2.879	-6.4	83	0.00
4		vinyl chloride	2.494	2.622	-5.1	84	0.00
5		bromomethane	0.709	0.854	-20.5#	94	0.00
6		chloroethane	0.660	1.027	-55.6#	109	0.00
7		trichlorofluoromethane	2.757	2.917	-5.8	84	0.00
8		1,1,2-trichloro-1,2,2-trifl	1.334	1.424	-6.7	80	0.00
9		1,1-dichloroethene	1.153	1.294	-12.2	88	0.00
10		Acetone	0.594	0.547	7.9	79	0.00
11		Acrylonitrile	0.569	0.672	-18.1	77	0.00
12		Methyliodide	1.405	1.624	-15.6	79	0.00
13		Carbon disulfide	3.577	4.099	-14.6	85	0.00
14		methylene chloride	1.555	1.758	-13.1	83	0.00
15		methyl-t-butyl ether	2.846	3.117	-9.5	84	0.00
16		trans-1,2-dichloroethene	1.285	1.386	-7.9	89	0.00
17		Vinylacetate	1.526	2.085	-36.6#	96	0.00
18		n-hexane	0.801	0.981	-22.5#	90	0.00
19		1,1-dichloroethane	2.306	2.634	-14.2	85	0.00
20		2-Butanone(MEK)	0.865	0.976	-12.8	77	0.00
21		2,2-dichloropropane	1.047	1.447	-38.2#	103	0.00
22		cis-1,2-dichloroethene	1.359	1.541	-13.4	85	0.00
23		bromochloromethane	0.572	0.697	-21.9#	80	0.00
24		cyclohexane	2.316	2.547	-10.0	80	0.00
25		chloroform	2.061	2.462	-19.5	87	0.00
26	S	Dibromofluoromethane <SURR>	1.572	1.638	-4.2	79	0.00
27		1,1,1-trichloroethane	1.517	2.030	-33.8#	92	0.00
28		carbon tetrachloride	1.200	1.593	-32.8#	97	0.00
29		1,1-dichloropropene	1.600	1.706	-6.6	82	0.00
30	S	1,2-Dichloroethane-D4 <surr	1.550	1.531	1.2	79	0.00
31		benzene	4.852	5.696	-17.4	83	0.00
32		1,2-dichloroethane	1.418	1.767	-24.6#	86	0.00
33		trichloroethene	1.253	1.429	-14.0	84	0.00
34		1,2-dichloropropane	1.324	1.492	-12.7	83	0.00
35		dibromomethane	0.802	0.952	-18.7	87	0.00
36		2-chloroethylvinyl ether	0.000	0.000	0.0	0#	-12.78#
37		bromodichloromethane	1.141	1.594	-39.7#	92	0.00
38		cis-1,3-dichloropropene	1.181	1.752	-48.3#	92	0.00
39		4-Methyl-2-pentanone	0.703	0.816	-16.1	82	0.00
40		1-chloro-3-fluorobenzene<IS	1.000	1.000	0.0	82	0.00
41	S	Toluene-d8 <surr>	2.906	2.868	1.3	80	0.00
42		toluene	1.789	1.977	-10.5	83	0.00
43		trans-1,3-dichloropropene	0.544	0.779	-43.2#	99	0.00
44		1,1,2-trichloroethane	0.539	0.592	-9.8	86	0.00
45		tetrachloroethene	0.659	0.746	-13.2	85	0.00
46		1,3-dichloropropane	0.906	1.073	-18.4	88	0.00
47		2-Hexanone	0.827	0.858	-3.7	76	0.00
48		dibromochloromethane	0.450	0.662	-47.1#	93	0.00
49		1,2-dibromoethane	0.638	0.713	-11.8	85	0.00
50		1-chlorohexane	0.761	0.820	-7.8	81	0.00
51		chlorobenzene	1.968	2.175	-10.5	82	0.00
52		1,1,1,2-tetrachloroethane	0.429	0.601	-40.1#	92	0.00
53		ethylbenzene	1.151	1.259	-9.4	84	0.00

Data Path : Z:\08\VNA\DATA\081114\
Data File : A04.D
Acq On : 11 Aug 2014 10:52 am
Operator : SP
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 11:11:02 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54		P & M -Xylene	1.414	1.527	-8.0	84	0.00
55		o-xylene	1.328	1.444	-8.7	83	0.00
56		styrene	2.106	2.354	-11.8	83	0.00
57		bromoform	0.332	0.470	-41.6#	98	0.00
58		Isopropylbenzene (Cumene)	3.322	3.546	-6.7	82	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	1.000	1.000	0.0	80	0.00
60	S	4-Bromofluorobenzene <Surr>	0.950	0.906	4.6	77	0.00
61		trans 1,4-dichloro-2-butene	0.203	0.255	-25.6#	92	0.00
62		bromobenzene	0.626	0.679	-8.5	84	0.00
63		1,1,2,2-tetrachloroethane	0.756	0.875	-15.7	82	0.00
64		1,2,3-trichloropropane	0.203	0.234	-15.3	90	0.00
65		n-propylbenzene	3.194	3.536	-10.7	82	0.00
66		2-chlorotoluene	1.785	1.937	-8.5	80	0.00
67		4-chlorotoluene	2.010	2.150	-7.0	82	0.00
68		1,3,5-trimethylbenzene	2.051	2.201	-7.3	80	0.00
69		tert-butylbenzene	1.765	1.781	-0.9	78	0.00
70		1,2,4-trimethylbenzene	2.022	2.189	-8.3	81	0.00
71		sec-butylbenzene	2.491	2.680	-7.6	78	0.00
72		1,3-dichlorobenzene	1.153	1.279	-10.9	83	0.00
73		4-isopropyltoluene	1.923	2.062	-7.2	79	0.00
74		1,4-dichlorobenzene	1.112	1.325	-19.2	83	0.00
75		1,2-dichlorobenzene	1.174	1.270	-8.2	83	0.00
76		n-butylbenzene	1.714	1.887	-10.1	80	0.00
77		1,2-dibromo-3-chloropropane	0.129	0.163	-26.4#	86	0.00
78		1,2,4-trichlorobenzene	0.516	0.605	-17.2	88	0.00
79		hexachlorobutadiene	0.217	0.229	-5.5	79	0.00
80		naphthalene	1.825	2.034	-11.5	81	0.00
81		1,2,3-trichlorobenzene	0.526	0.594	-12.9	85	0.00

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\081114\
Data File : A04.D
Acq On : 11 Aug 2014 10:52 am
Operator : SP
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 11:11:02 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	30.000	30.000	0.0	80	0.00
2		dichlorodifluoromethane	30.000	31.966	-6.6	80	0.00
3		chloromethane	30.000	31.921	-6.4	83	0.00
4		vinyl chloride	30.000	31.544	-5.1	84	0.00
5		bromomethane	30.000	32.123	-7.1	94	0.00
6		chloroethane	30.000	42.911	-43.0#	109	0.00
7		trichlorofluoromethane	30.000	31.743	-5.8	84	0.00
8		1,1,2-trichloro-1,2,2-trifl	45.000	48.014	-6.7	80	0.00
9		1,1-dichloroethene	30.000	33.659	-12.2	88	0.00
10		Acetone	90.000	82.956	7.8	79	0.00
11		Acrylonitrile	45.000	44.065	2.1	77	0.00
12		Methyliodide	45.000	45.563	-1.3	79	0.00
13		Carbon disulfide	45.000	51.567	-14.6	85	0.00
14		methylene chloride	30.000	33.910	-13.0	83	0.00
15		methyl-t-butyl ether	45.000	49.285	-9.5	84	0.00
16		trans-1,2-dichloroethene	30.000	32.365	-7.9	89	0.00
17		Vinylacetate	30.000	35.276	-17.6	96	0.00
18		n-hexane	30.000	36.712	-22.4#	90	0.00
19		1,1-dichloroethane	30.000	34.260	-14.2	85	0.00
20		2-Butanone(MEK)	90.000	84.518	6.1	77	0.00
21		2,2-dichloropropane	30.000	37.033	-23.4#	103	0.00
22		cis-1,2-dichloroethene	30.000	34.014	-13.4	85	0.00
23		bromochloromethane	30.000	29.530	1.6	80	0.00
24		cyclohexane	30.000	32.986	-10.0	80	0.00
25		chloroform	30.000	35.834	-19.4	87	0.00
26	S	Dibromofluoromethane <SURR>	30.000	31.251	-4.2	79	0.00
27		1,1,1-trichloroethane	30.000	33.895	-13.0	92	0.00
28		carbon tetrachloride	30.000	35.877	-19.6	97	0.00
29		1,1-dichloropropene	30.000	31.974	-6.6	82	0.00
30	S	1,2-Dichloroethane-D4 <surr	30.000	29.635	1.2	79	0.00
31		benzene	30.000	31.474	-4.9	83	0.00
32		1,2-dichloroethane	30.000	32.171	-7.2	86	0.00
33		trichloroethene	30.000	29.974	0.1	84	0.00
34		1,2-dichloropropane	30.000	30.164	-0.5	83	0.00
35		dibromomethane	30.000	32.392	-8.0	87	0.00
36		2-chloroethylvinyl ether	45.000	0.000	100.0#	0	-12.78#
37		bromodichloromethane	30.000	33.797	-12.7	92	0.00
38		cis-1,3-dichloropropene	30.000	34.289	-14.3	92	0.00
39		4-Methyl-2-pentanone	90.000	91.436	-1.6	82	0.00
40		1-chloro-3-fluorobenzene<IS	30.000	30.000	0.0	82	0.00
41	S	Toluene-d8 <surr>	30.000	29.607	1.3	80	0.00
42		toluene	30.000	33.166	-10.6	83	0.00
43		trans-1,3-dichloropropene	30.000	35.493	-18.3	99	0.00
44		1,1,2-trichloroethane	30.000	32.963	-9.9	86	0.00
45		tetrachloroethene	30.000	33.931	-13.1	85	0.00
46		1,3-dichloropropane	30.000	31.660	-5.5	88	0.00
47		2-Hexanone	90.000	82.724	8.1	76	0.00
48		dibromochloromethane	30.000	34.408	-14.7	93	0.00
49		1,2-dibromoethane	30.000	33.537	-11.8	85	0.00
50		1-chlorohexane	45.000	48.477	-7.7	81	0.00
51		chlorobenzene	30.000	33.170	-10.6	82	0.00
52		1,1,1,2-tetrachloroethane	30.000	33.737	-12.5	92	0.00
53		ethylbenzene	30.000	32.805	-9.3	84	0.00

Data Path : Z:\08\VNA\DATA\081114\
Data File : A04.D
Acq On : 11 Aug 2014 10:52 am
Operator : SP
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 11:11:02 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

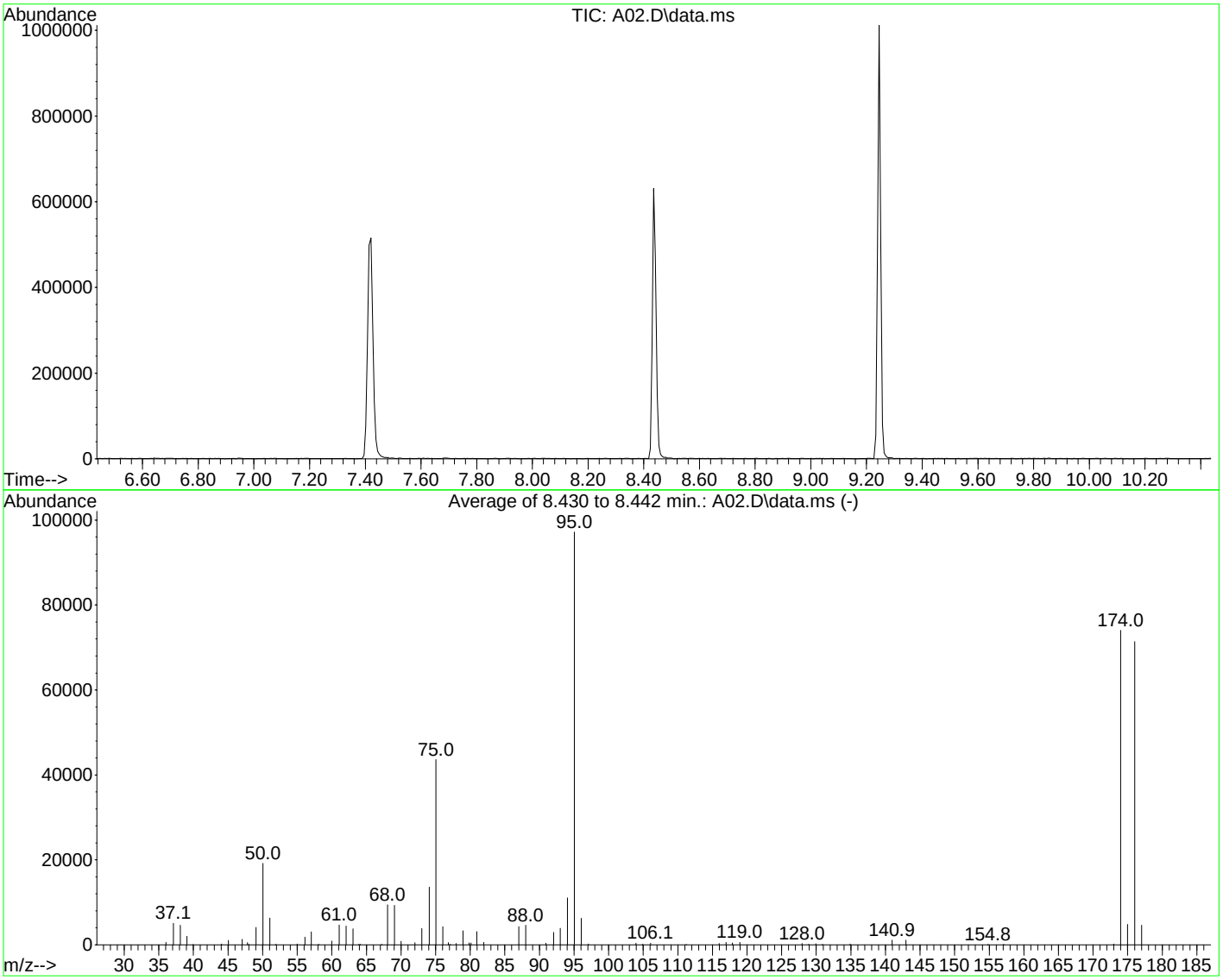
		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
54		P & M -Xylene	60.000	64.792	-8.0	84	0.00
55		o-xylene	30.000	32.638	-8.8	83	0.00
56		styrene	30.000	30.202	-0.7	83	0.00
57		bromoform	30.000	35.855	-19.5	98	0.00
58		Isopropylbenzene (Cumene)	30.000	32.020	-6.7	82	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	30.000	30.000	0.0	80	0.00
60	S	4-Bromofluorobenzene <Surr>	30.000	28.611	4.6	77	0.00
61		trans 1,4-dichloro-2-butene	45.000	52.510	-16.7	92	0.00
62		bromobenzene	30.000	32.557	-8.5	84	0.00
63		1,1,2,2-tetrachloroethane	30.000	31.082	-3.6	82	0.00
64		1,2,3-trichloropropane	30.000	33.028	-10.1	90	0.00
65		n-propylbenzene	30.000	33.219	-10.7	82	0.00
66		2-chlorotoluene	30.000	32.550	-8.5	80	0.00
67		4-chlorotoluene	30.000	32.095	-7.0	82	0.00
68		1,3,5-trimethylbenzene	30.000	32.192	-7.3	80	0.00
69		tert-butylbenzene	30.000	30.267	-0.9	78	0.00
70		1,2,4-trimethylbenzene	30.000	32.483	-8.3	81	0.00
71		sec-butylbenzene	30.000	32.274	-7.6	78	0.00
72		1,3-dichlorobenzene	30.000	33.265	-10.9	83	0.00
73		4-isopropyltoluene	30.000	32.173	-7.2	79	0.00
74		1,4-dichlorobenzene	30.000	31.114	-3.7	83	0.00
75		1,2-dichlorobenzene	30.000	32.470	-8.2	83	0.00
76		n-butylbenzene	30.000	29.813	0.6	80	0.00
77		1,2-dibromo-3-chloropropane	30.000	31.891	-6.3	86	0.00
78		1,2,4-trichlorobenzene	30.000	32.543	-8.5	88	0.00
79		hexachlorobutadiene	30.000	31.724	-5.7	79	0.00
80		naphthalene	30.000	30.801	-2.7	81	0.00
81		1,2,3-trichlorobenzene	30.000	33.863	-12.9	85	0.00

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

Data Path : Z:\08\VNA\DATA\081114\
Data File : A02.D
Acq On : 11 Aug 2014 10:19 am
Operator : SP
Sample : IB
Misc : [VNA]
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 03 21:03:11 2014



AutoFind: Scans 1386, 1387, 1388; Background Corrected with Scan 1382

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.7	19187	PASS
75	95	30	80	44.8	43592	PASS
95	95	100	100	100.0	97200	PASS
96	95	5	9	6.4	6234	PASS
173	174	0.00	2	0.2	168	PASS
174	95	50	100	76.1	74016	PASS
175	174	5	9	6.5	4784	PASS
176	174	95	101	96.4	71381	PASS
177	176	5	9	6.5	4622	PASS

GC/MS QA-QC Check Report

Tune File : Z:\08\VNA\DATA\081114\A02.D
Tune Time : 11 Aug 2014 10:19 am

Daily Calibration File : Z:\08\VNA\DATA\080114\A11.D

						61225	120180	157416
File	Sample	Surrogate Recovery %				Internal Standard Responses		
A02.D								
	IB	102	101	99	104	54712	107438	124716
A03.D								
	CCV/LCS	100	100	99	96	53141	102772	136251
A04.D								
	CCV/LCS	104	99	99	95	49261	98031	125432
A05.D								
	LCSD	102	97	96	96	52671	101321	144409
A06.D								
	R	100	101	97	104	49640	101387	116568
A07.D								
	R	93	98	97	103	50507	96766	109009
A08.D								
	R	98	100	100	105	46766	91321	104914
A09.D								
	1143647005	100	102	98	104	45759	93402	107100
A10.D								
	1143645007	97	100	99	108	45768	91161	104378
A11.D								
	1143647002	99	99	97	102	45099	88024	109131
A12.D								
	1148346008	92	97	98	103	46529	87750	104049
A13.D								
	1148346006	97	99	99	102	43812	84416	100145
A14.D								
	1148346007	94	100	100	103	43622	86420	101760
A15.D								
	1143668001	98	103	100	102	42065	81624	99679
A16.D								
	1143659001	96	102	98	105	41739	84025	96245
A17.D								
	1143658001	103	105	101	109	40428	80872	95212
A18.D								
	1143658002	95	100	100	106	41996	80526	91373
A19.D								
	1143565035	91	95	101	100	45725	82728	101352
A20.D								
	1143565035	92	91	96	101	46580	91570	109934
A21.D								
	R	95	103	99	108	40862	85667	97502
A22.D								
	R	101	101	96	101	40324	82848	96356

A23.D								
	LB 50X	90	96	96	109	42152	84831	92884
A24.D								
	Anti-foam	97	104	99	98	39679	78941	94006
A25.D								
	1143495005	96	100	100	101	40083	77772	91046
A26.D								
	1143669001	95	103	96	101	40449	81124	95203
A27.D								
	1143669002	101	104	98	103	39225	78309	92224
A28.D								
	1148340001	101	106	98	92	38488	77150	102279
A29.D								
	1148340002	102	102	96	94	40267	82117	103941
A30.D								
	1148340003	96	99	100	97	44399	82060	102711
A31.D								
	R	100	108	92	103	39246	89156	98420
A32.D								
	1148348003	93	99	99	101	44286	84692	98018
A33.D								
	1148348004	96	101	99	104	42678	86132	99272
A34.D								
	1148348005	100	104	97	103	40497	84060	96367
A35.D								
	1148348006	96	99	97	102	41881	82635	100728
A36.D								
	1148348003	92	94	91	106	45901	92972	103316
A37.D								
	1148348004	92	90	96	105	47931	95458	109543
A38.D								
	1148348005	92	89	98	103	49498	94873	115629
A39.D								
	1148348006	96	96	92	107	48540	103768	124003
A40.D								
	R	102	104	98	111	47977	107782	124389
A41.D								
	R	97	100	97	106	51361	103652	122622
A42.D								
	R	94	106	97	107	47857	97344	113160

No Quant Results for Z:\08\VNA\DATA\081114\A43.D

(fails) - fails 12hr time check * - fails criteria

Created: Tue Aug 12 11:07:39 2014 VNA

Instrument Runlog

Instrument: VNA **Calibration Date:** 8/1/2014 **Method:** 8260
Operator: SP **Processed By:** SP **Posted By:** SP **Analytical Batch:** 14356

Data Path: Z:\08\VNA\DATA\081114\

Daily:		As Needed:			
Verify System Date/Time	✓	Refill Water Tank		Adjust Tune	
General System Inspection	✓	Refill Standards		Clean Ion Source	
				Check Rough Pump Oil	
				Check Vacuum Pressure	

Standards:				
	IS/Surr	VW8-33-3	**CCV**	VW8-67-1
	MeOH	P1121	**EG**	VW8-64-4

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A01.D	1	R	1		8/11/14 10:03 AM	N/A	
A02.D	2	IB	1		8/11/14 10:19 AM	N/A	
A03.D	3	CCV/LCS	1		8/11/14 10:36 AM	N/A	
A04.D	4	CCV/LCS	1		8/11/14 10:52 AM	N/A	
A05.D	5	LCSD	1		8/11/14 11:26 AM	N/A	
A06.D	6	R	1		8/11/14 11:42 AM	N/A	
A07.D	7	R	1		8/11/14 11:59 AM	N/A	
A08.D	8	R	1		8/11/14 12:15 PM	<2	
A09.D	9	1143647005B	1		8/11/14 12:32 PM	<2	
A10.D	10	1143645007B	1		8/11/14 12:48 PM	<2	
A11.D	11	1143647002B	1		8/11/14 1:05 PM	<2	
A12.D	12	1148346008A	1		8/11/14 1:21 PM	<2	
A13.D	13	1148346006A	1		8/11/14 1:37 PM	<2	
A14.D	14	1148346007A	1		8/11/14 1:54 PM	<2	
A15.D	15	1143668001A	1		8/11/14 2:10 PM	<2	
A16.D	16	1143659001A	1		8/11/14 2:27 PM	<2	
A17.D	17	1143658001A	1	NU, WRONG INSTRUMENT	8/11/14 2:43 PM	<2	
A18.D	18	1143658002A	1	NU, WRONG INSTRUMENT	8/11/14 3:00 PM	<2	
A19.D	19	1143565035B 10X	10	NU	8/11/14 3:16 PM	<2	
A20.D	20	1143565035B 5X	5		8/11/14 3:32 PM	<2	
A21.D	21	R	1		8/11/14 3:49 PM	N/A	
A22.D	22	R	1		8/11/14 4:05 PM	N/A	
A23.D	23	LB 50X	50		8/11/14 4:22 PM	N/A	
A24.D	24	Anti-foam Blank	1		8/11/14 4:38 PM	N/A	
A25.D	25	1143495005B	1		8/11/14 4:55 PM	<2	
A26.D	26	1143669001B 50X	50		8/11/14 5:11 PM	<2	
A27.D	27	1143669002B 50X	50		8/11/14 5:28 PM	<2	
A28.D	28	1148340001A 25X	25		8/11/14 5:44 PM	<2	
A29.D	29	1148340002A 20X	20		8/11/14 6:00 PM	<2	
A30.D	30	1148340003A 20X	20		8/11/14 6:17 PM	<2	
A31.D	31	R	1		8/11/14 6:33 PM	N/A	
A32.D	32	1148348003A 100X	100		8/11/14 6:50 PM	<2	
A33.D	33	1148348004A 100X	100		8/11/14 7:06 PM	<2	
A34.D	34	1148348005A 100X	100		8/11/14 7:23 PM	<2	
A35.D	35	1148348006A 100X	100		8/11/14 7:39 PM	<2	
A36.D	36	1148348003A 10X	10	RR for ↑ compounds, RP chloromethane	8/11/14 7:56 PM	>2	10,100
A37.D	37	1148348004A 10X	10	RR for ↑ compounds, RP chloromethane	8/11/14 8:12 PM	>2	10,100
A38.D	38	1148348005A 10X	10	RR for ↑ compounds, RP chloromethane	8/11/14 8:29 PM	>2	10,100
A39.D	39	1148348006A 10X	10	RR for ↑ compounds, RP chloromethane	8/11/14 8:45 PM	>2	10,100

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A40.D	40	R	1		8/11/14 9:01 PM	N/A	
A41.D	41	R	1		8/11/14 9:18 PM	N/A	
A42.D	42	R	1		8/11/14 9:34 PM	N/A	
A43.D	43	R	1		8/11/14 9:51 PM	N/A	
A44.D	44	R	1		8/11/14 10:07 PM	N/A	
A45.D	45	R	1		8/11/14 10:24 PM	N/A	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A02.D
Acq On : 11 Aug 2014 10:19 am
Operator : SP
Sample : IB
Misc : [VNA]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 12 09:22:10 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

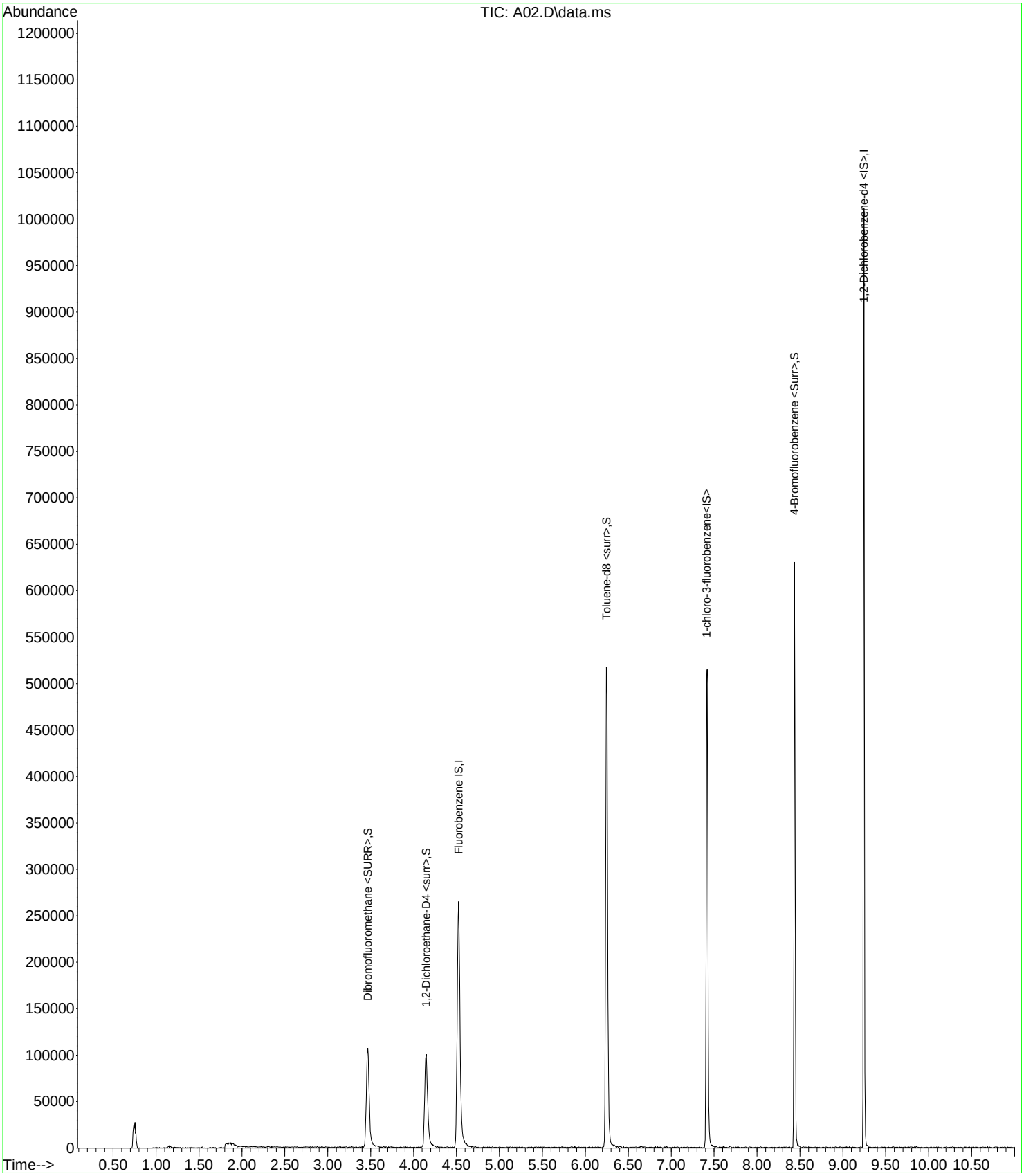
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	54712	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	107438	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	124716	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	87985	30.69	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 102.30%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	85686	30.32	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 101.07%			
41) Toluene-d8 <surr>	6.246	98	309123	29.71	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 99.03%			
60) 4-Bromofluorobenzene <...	8.436	95	123645	31.32	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.40%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A02.D
Acq On : 11 Aug 2014 10:19 am
Operator : SP
Sample : IB
Misc : [VNA]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 12 09:22:10 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A04.D
Acq On : 11 Aug 2014 10:52 am
Operator : SP
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 11:11:02 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	49261	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	98031	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	125432	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	80671	31.25	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.17%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	75416	29.63	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 98.77%			
41) Toluene-d8 <surr>	6.246	98	281123	29.61	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 98.70%			
60) 4-Bromofluorobenzene <...	8.436	95	113583	28.61	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.37%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	145595	31.97	µg/l	95
3) chloromethane	0.928	50	141803	31.92	µg/l	99
4) vinyl chloride	0.969	62	129161	31.54	µg/l	100
5) bromomethane	1.125	96	42071	32.12	µg/l	93
6) chloroethane	1.189	64	50577	42.91	µg/l	95
7) trichlorofluoromethane	1.253	101	143711	31.74	µg/l	100
8) 1,1,2-trichloro-1,2,2-...	1.549	101	105200	48.01	µg/L	96
9) 1,1-dichloroethene	1.526	96	63722	33.66	µg/l	90
10) Acetone	1.926	43	80889	82.96	µg/L	98
11) Acrylonitrile	2.510	53	49690	44.07	µg/L	95
12) Methyliodide	1.613	142	120029	45.56	µg/L	100
13) Carbon disulfide	1.538	76	302897	51.57	µg/L	94
14) methylene chloride	1.884	84	86586	33.91	µg/l	96
15) methyl-t-butyl ether	2.079	73	230356	49.29	µg/L	97
16) trans-1,2-dichloroethene	1.987	96	68269	32.36	µg/l	100
17) Vinylacetate	2.705	43	102696	35.28	µg/L	96
18) n-hexane	2.036	56	48303	36.71	µg/L	91
19) 1,1-dichloroethane	2.450	63	129736	34.26	µg/l	96
20) 2-Butanone(MEK)	3.648	43	144171	84.52	µg/L	99
21) 2,2-dichloropropane	3.046	77	71259	37.03	µg/l	96
22) cis-1,2-dichloroethene	2.948	96	75924	34.01	µg/l	95
23) bromochloromethane	3.149	128	34344	29.53	µg/l	90
24) cyclohexane	3.125	56	125448	32.99	µg/L	94
25) chloroform	3.259	83	121276	35.83	µg/l	100
27) 1,1,1-trichloroethane	3.460	97	99980	33.90	µg/l	94
28) carbon tetrachloride	3.368	117	78471	35.88	µg/l	96
29) 1,1-dichloropropene	3.618	75	84023	31.97	µg/l	99
31) benzene	3.940	78	280574	31.47	µg/l	98
32) 1,2-dichloroethane	4.238	62	87021	32.17	µg/l #	95
33) trichloroethene	4.731	95	70417	29.97	µg/l	95
34) 1,2-dichloropropane	5.315	63	73489	30.16	µg/l #	98
35) dibromomethane	5.205	93	46900	32.39	µg/l	95
37) bromodichloromethane	5.431	83	78504	33.80	µg/l #	93
38) cis-1,3-dichloropropene	6.082	75	86310	34.29	µg/l	99
39) 4-Methyl-2-pentanone	6.702	58	120596	91.44	µg/L	95
42) toluene	6.294	92	193840	33.17	µg/l	89
43) trans-1,3-dichloropropene	6.714	75	76388	35.49	µg/l	99
44) 1,1,2-trichloroethane	6.854	83	58031	32.96	µg/l	96
45) tetrachloroethene	6.641	166	73083	33.93	µg/l	91
46) 1,3-dichloropropane	7.079	76	105206	31.66	µg/l	91
47) 2-Hexanone	7.450	43	252198	82.72	µg/L	98
48) dibromochloromethane	6.994	129	64872	34.41	µg/l	92

Data Path : Z:\08\VNA\DATA\081114\
Data File : A04.D
Acq On : 11 Aug 2014 10:52 am
Operator : SP
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 11:11:02 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

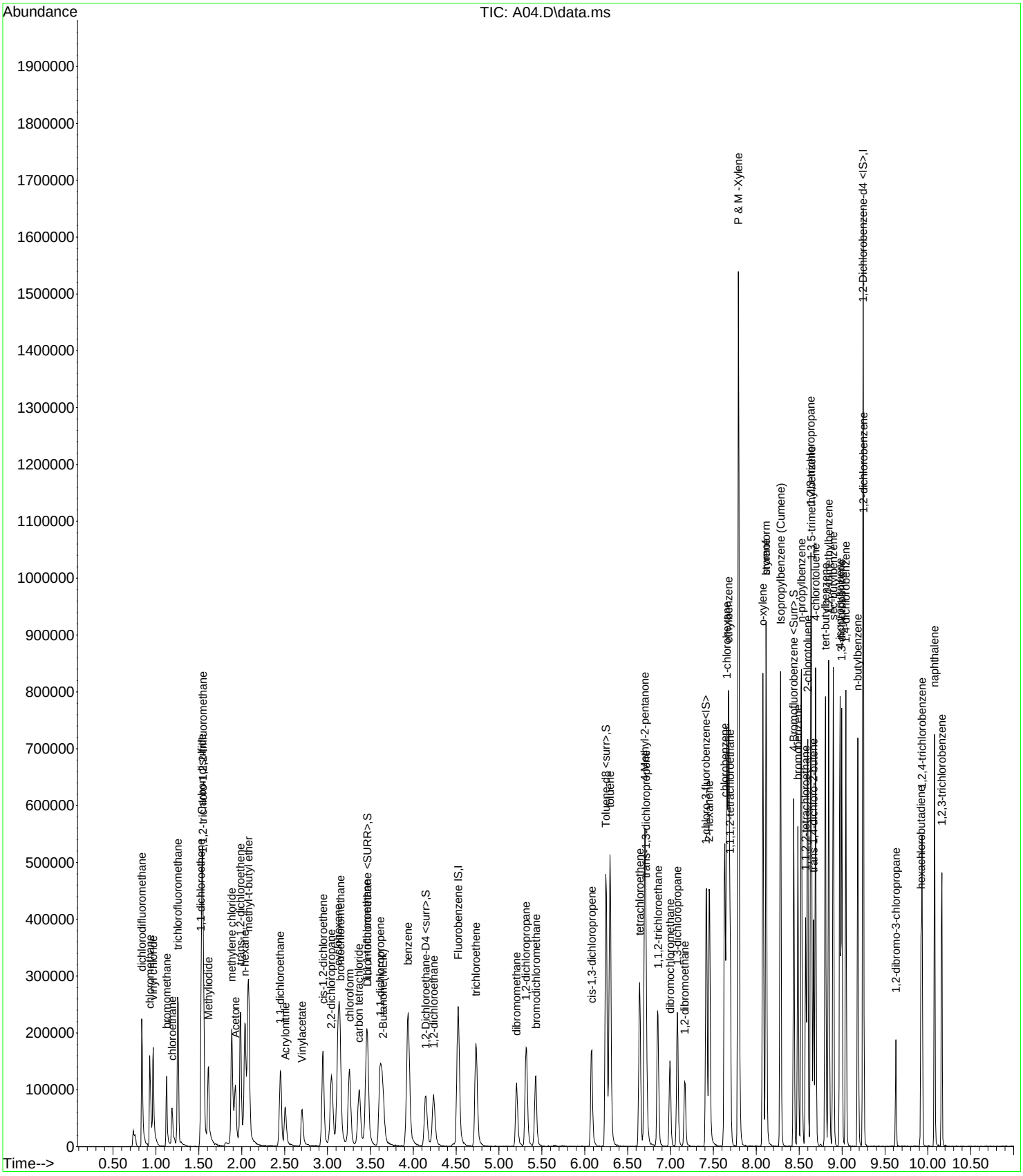
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,2-dibromoethane	7.164	107	69942	33.54	µg/l	96
50) 1-chlorohexane	7.657	55	120624	48.48	µg/L	93
51) chlorobenzene	7.633	112	213260	33.17	µg/l	98
52) 1,1,1,2-tetrachloroethane	7.694	133	58961	33.74	µg/l	96
53) ethylbenzene	7.675	106	123418	32.81	µg/l	92
54) P & M -Xylene	7.791	106	299478	64.79	µg/l	99
55) o-xylene	8.077	106	141588	32.64	µg/l	98
56) styrene	8.113	104	230807	30.20	µg/l	100
57) bromoform	8.113	173	46122	35.86	µg/l	97
58) Isopropylbenzene (Cumene)	8.284	105	347611	32.02	µg/l	98
61) trans 1,4-dichloro-2-b...	8.667	53	47917	52.51	µg/L	92
62) bromobenzene	8.485	156	85145	32.56	µg/l	94
63) 1,1,2,2-tetrachloroethane	8.576	83	109744	31.08	µg/l	99
64) 1,2,3-trichloropropane	8.637	110	29387	33.03	µg/l	95
65) n-propylbenzene	8.527	91	443557	33.22	µg/l	97
66) 2-chlorotoluene	8.600	91	242941	32.55	µg/l	99
67) 4-chlorotoluene	8.691	91	269732	32.09	µg/l	97
68) 1,3,5-trimethylbenzene	8.643	105	276088	32.19	µg/l	99
69) tert-butylbenzene	8.807	119	223334	30.27	µg/l	97
70) 1,2,4-trimethylbenzene	8.843	105	274612	32.48	µg/l	97
71) sec-butylbenzene	8.898	105	336140	32.27	µg/l	98
72) 1,3-dichlorobenzene	8.996	146	160381	33.27	µg/l	99
73) 4-isopropyltoluene	8.977	119	258658	32.17	µg/l	97
74) 1,4-dichlorobenzene	9.044	146	166200	31.11	µg/l	97
75) 1,2-dichlorobenzene	9.251	146	159324	32.47	µg/l	98
76) n-butylbenzene	9.184	91	236697	29.81	µg/l	98
77) 1,2-dibromo-3-chloropr...	9.628	75	20433	31.89	µg/l	84
78) 1,2,4-trichlorobenzene	9.932	180	75852	32.54	µg/l	87
79) hexachlorobutadiene	9.920	225	28771	31.72	µg/l	92
80) naphthalene	10.078	128	255153	30.80	µg/l	98
81) 1,2,3-trichlorobenzene	10.164	180	74529	33.86	µg/l	93

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A04.D
Acq On : 11 Aug 2014 10:52 am
Operator : SP
Sample : CCV/LCS
Misc : [VNA]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 11 11:11:02 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A05.D
Acq On : 11 Aug 2014 11:26 am
Operator : SP
Sample : LCSD
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 11:44:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	52671	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.420	95	101321	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	144409	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	84609	30.65	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 102.17%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	79232	29.12	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 97.07%			
41) Toluene-d8 <surr>	6.252	98	283858	28.92	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 96.40%			
60) 4-Bromofluorobenzene <...	8.436	95	131399	28.75	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.83%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	145261	29.83	µg/l	92
3) chloromethane	0.928	50	150803	31.75	µg/l	100
4) vinyl chloride	0.969	62	132773	30.33	µg/l	99
5) bromomethane	1.125	96	45504	32.49	µg/l	100
6) chloroethane	1.189	64	54713	43.44	µg/l	96
7) trichlorofluoromethane	1.253	101	144965	29.95	µg/l	96
8) 1,1,2-trichloro-1,2,2-...	1.549	101	110570	47.20	µg/L	97
9) 1,1-dichloroethene	1.526	96	65003	32.11	µg/l	93
10) Acetone	1.920	43	84430	80.98	µg/L	95
11) Acrylonitrile	2.504	53	55069	45.57	µg/L	93
12) Methyliodide	1.607	142	129000	45.76	µg/L	98
13) Carbon disulfide	1.538	76	300606	47.86	µg/L	96
14) methylene chloride	1.884	84	91391	33.47	µg/l	95
15) methyl-t-butyl ether	2.072	73	237601	47.54	µg/L	97
16) trans-1,2-dichloroethene	1.987	96	65945	29.24	µg/l	95
17) Vinylacetate	2.699	43	105966	34.20	µg/L	100
18) n-hexane	2.036	56	44886	31.91	µg/L	93
19) 1,1-dichloroethane	2.450	63	129268	31.93	µg/l	97
20) 2-Butanone(MEK)	3.642	43	163633	89.58	µg/L	96
21) 2,2-dichloropropane	3.052	77	74744	36.44	µg/l	97
22) cis-1,2-dichloroethene	2.948	96	78291	32.80	µg/l	94
23) bromochloromethane	3.149	128	36373	29.26	µg/l	96
24) cyclohexane	3.125	56	124600	30.64	µg/L	98
25) chloroform	3.253	83	119617	33.06	µg/l	97
27) 1,1,1-trichloroethane	3.453	97	95875	30.64	µg/l	98
28) carbon tetrachloride	3.368	117	78458	33.83	µg/l	97
29) 1,1-dichloropropene	3.618	75	87980	31.31	µg/l	99
31) benzene	3.934	78	277357	29.15	µg/l	99
32) 1,2-dichloroethane	4.238	62	86935	30.08	µg/l	96
33) trichloroethene	4.731	95	73261	29.18	µg/l	93
34) 1,2-dichloropropane	5.315	63	75793	29.11	µg/l #	94
35) dibromomethane	5.205	93	47298	30.58	µg/l	97
37) bromodichloromethane	5.424	83	81343	32.85	µg/l #	94
38) cis-1,3-dichloropropene	6.082	75	85857	32.19	µg/l	97
39) 4-Methyl-2-pentanone	6.702	58	122096	86.83	µg/L	97
42) toluene	6.294	92	188438	31.20	µg/l	92
43) trans-1,3-dichloropropene	6.720	75	78923	35.48	µg/l	100
44) 1,1,2-trichloroethane	6.854	83	56735	31.18	µg/l	93
45) tetrachloroethene	6.641	166	73712	33.11	µg/l	93
46) 1,3-dichloropropane	7.079	76	105165	30.66	µg/l	98
47) 2-Hexanone	7.450	43	272939	86.55	µg/L	99
48) dibromochloromethane	6.994	129	65886	33.90	µg/l	97

Data Path : Z:\08\VNA\DATA\081114\
Data File : A05.D
Acq On : 11 Aug 2014 11:26 am
Operator : SP
Sample : LCSD
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 11:44:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

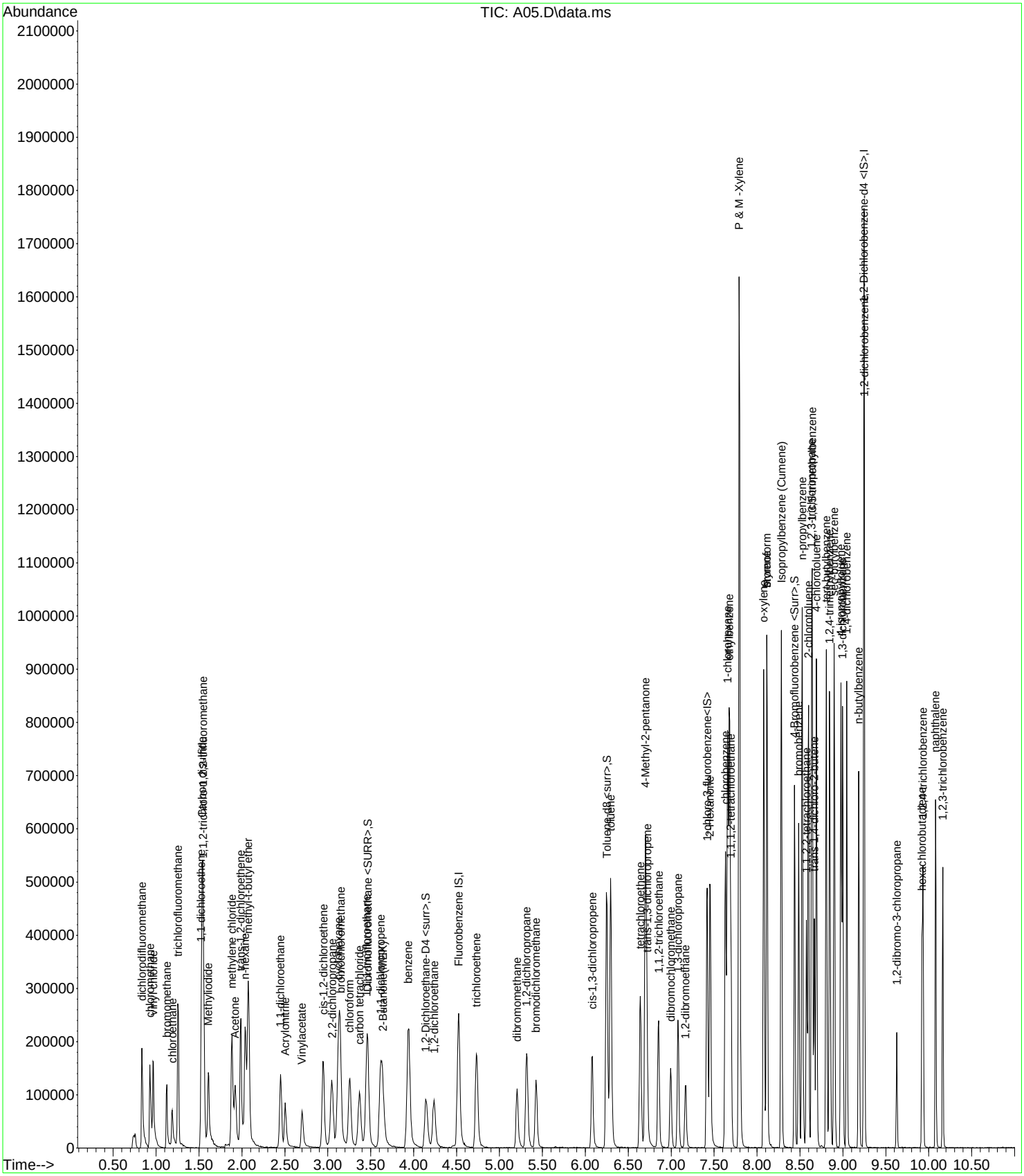
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,2-dibromoethane	7.164	107	71550	33.19	µg/l #	94
50) 1-chlorohexane	7.657	55	129984	50.54	µg/L	97
51) chlorobenzene	7.633	112	214621	32.30	µg/l	96
52) 1,1,1,2-tetrachloroethane	7.694	133	57730	32.17	µg/l	97
53) ethylbenzene	7.675	106	130450	33.55	µg/l	99
54) P & M -Xylene	7.791	106	332088	69.51	µg/l	98
55) o-xylene	8.077	106	158825	35.42	µg/l	97
56) styrene	8.113	104	251312	31.79	µg/l	97
57) bromoform	8.113	173	46618	35.22	µg/l	93
58) Isopropylbenzene (Cumene)	8.284	105	394247	35.14	µg/l	99
61) trans 1,4-dichloro-2-b...	8.667	53	50992	48.94	µg/L	94
62) bromobenzene	8.485	156	94564	31.41	µg/l	97
63) 1,1,2,2-tetrachloroethane	8.576	83	116621	28.70	µg/l	98
64) 1,2,3-trichloropropane	8.637	110	29280	28.87	µg/l	86
65) n-propylbenzene	8.527	91	507549	33.02	µg/l	97
66) 2-chlorotoluene	8.600	91	275698	32.08	µg/l	99
67) 4-chlorotoluene	8.691	91	293230	30.31	µg/l	98
68) 1,3,5-trimethylbenzene	8.643	105	308019	31.20	µg/l	96
69) tert-butylbenzene	8.807	119	258397	30.42	µg/l	96
70) 1,2,4-trimethylbenzene	8.843	105	302697	31.10	µg/l	99
71) sec-butylbenzene	8.898	105	391923	32.68	µg/l	96
72) 1,3-dichlorobenzene	8.996	146	182037	32.80	µg/l	99
73) 4-isopropyltoluene	8.977	119	295128	31.89	µg/l	96
74) 1,4-dichlorobenzene	9.044	146	183033	29.77	µg/l	98
75) 1,2-dichlorobenzene	9.251	146	177464	31.41	µg/l	98
76) n-butylbenzene	9.184	91	249813	27.37	µg/l	99
77) 1,2-dibromo-3-chloropr...	9.628	75	24062	32.55	µg/l	100
78) 1,2,4-trichlorobenzene	9.932	180	76295	28.70	µg/l	96
79) hexachlorobutadiene	9.920	225	33274	31.87	µg/l	97
80) naphthalene	10.078	128	258555	27.36	µg/l	97
81) 1,2,3-trichlorobenzene	10.164	180	76119	30.04	µg/l	97

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A05.D
Acq On : 11 Aug 2014 11:26 am
Operator : SP
Sample : LCSD
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 11:44:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A09.D
Acq On : 11 Aug 2014 12:32 pm
Operator : SP
Sample : 1143647005B
Misc : [VNA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 09:24:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

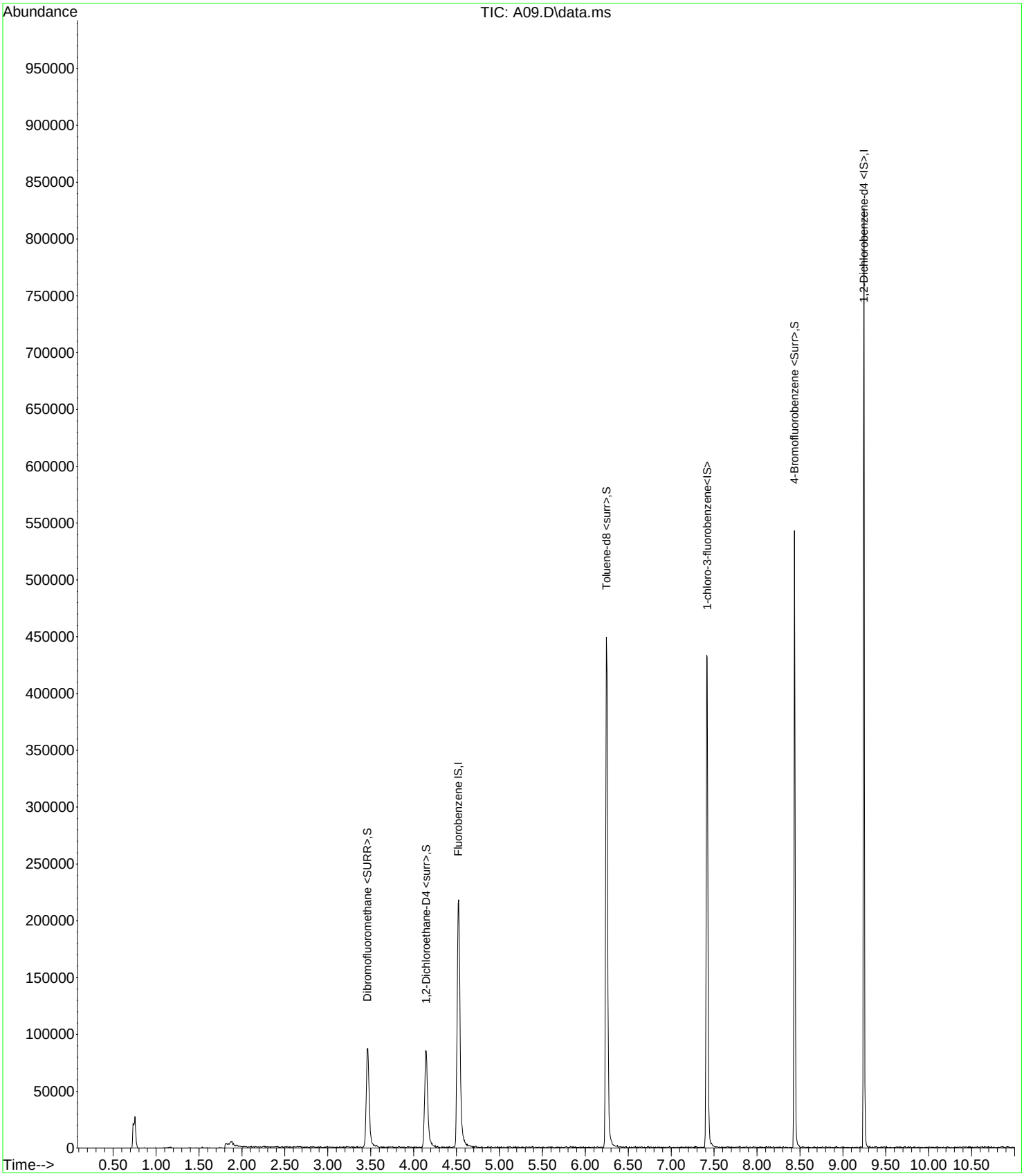
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	45759	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.420	95	93402	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	107100	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	72257	30.13	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.43%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	72073	30.49	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 101.63%			
41) Toluene-d8 <surr>	6.246	98	266221	29.43	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 98.10%			
60) 4-Bromofluorobenzene <...	8.436	95	105943	31.25	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.17%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A09.D
Acq On : 11 Aug 2014 12:32 pm
Operator : SP
Sample : 1143647005B
Misc : [VNA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 09:24:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A11.D
Acq On : 11 Aug 2014 1:05 pm
Operator : SP
Sample : 1143647002B
Misc : [VNA]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 12 09:26:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	45099	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	88024	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	109131	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	69864	29.56	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.53%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	69018	29.62	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 98.73%			
41) Toluene-d8 <surr>	6.246	98	249134	29.22	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 97.40%			
60) 4-Bromofluorobenzene <...	8.436	95	105526	30.55	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.83%			

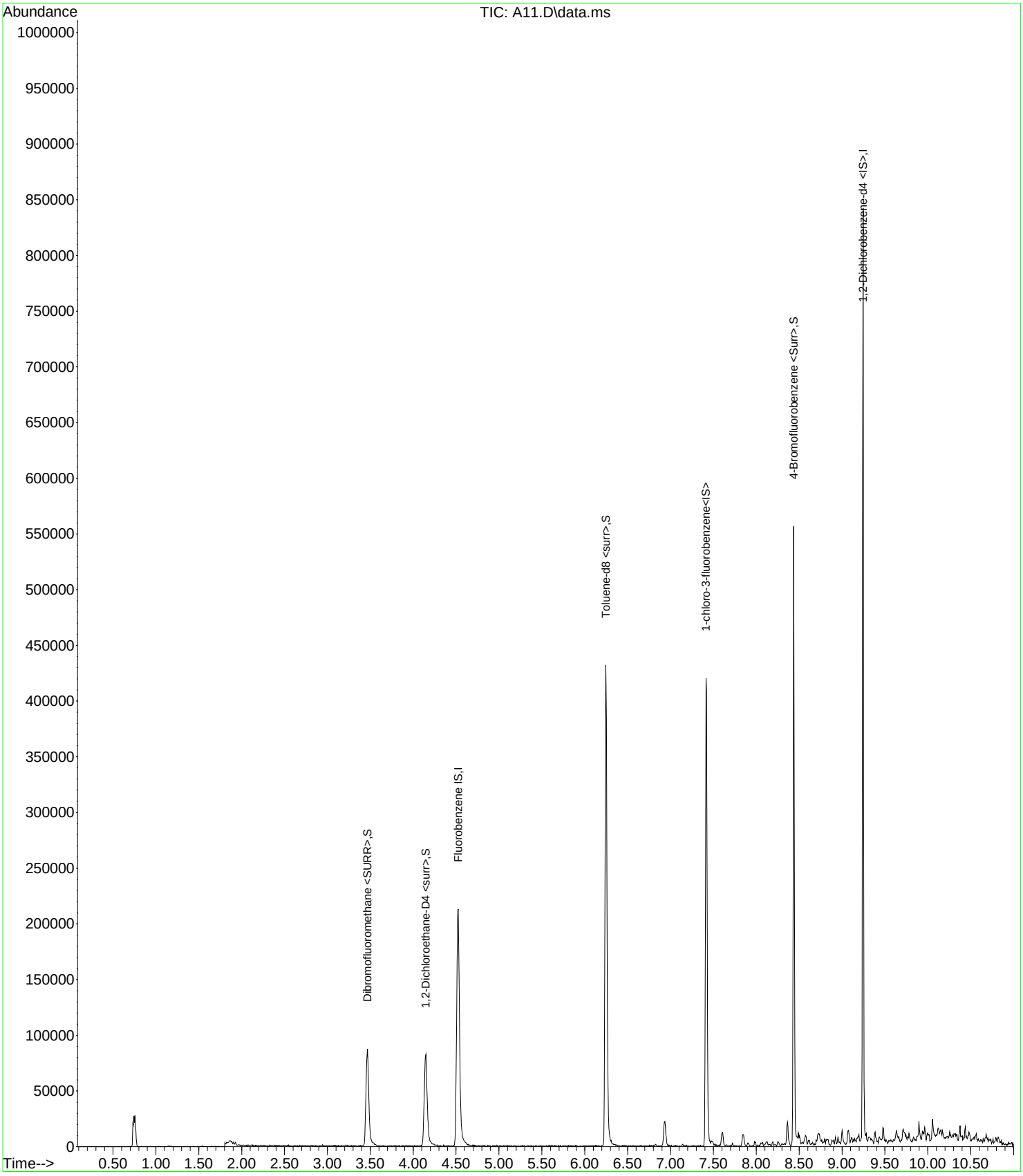
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\081114\
Data File : A11.D
Acq On : 11 Aug 2014 1:05 pm
Operator : SP
Sample : 1143647002B
Misc : [VNA]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 12 09:26:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



SGS North America Inc.
Calibration Review and Validation for:
Volatile Mass Spec: SW 8260B / SW 8260Modified / EPA 624

Instrument/Date Code in YYYY-MMDD format (e.g., VNA2007-0507): VPA2014-0801

Contents:	Analyst's Review OK	Analyst's Review N/A	Peer Review OK	Peer Review N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Tune Report/Chrom for IB	☑		☑	
Instrument runlog	☑		☑	
Chromatograms for calibration points	☑		☑	
Chromatograms for ICV	☑		☑	
Validation:				
Dates are correct	☑		☑	
The retention time window set correctly GRO beginning of C6 --> beginning of C10	☐	☑	☑	☐
CCC percent relative standard deviation is ≤ 30%	☑		☑	
SPCC average response factor of 0.1 or 0.3	☑		☑	
Cal Table Report Avg RF values are equal to the ICV Avg RF values	☑		☑	
The percent relative standard deviation of the response factor is ≤ 15%	☑	☐	☑	☐
If RSD is >15%, use 1 st (linear) or 2 nd (quadratic) order regression and $r^2 \geq 0.990$.	☑	☐	☑	☐
Minimum of 5 points (or 6 points for 2nd order regression)	☑		☑	
8260B / 624 ICV is 80-120 % recovery	☑	☐	☑	☐
8260B Modified ICV is 50-150 % recovery	☑	☐	☑	☐
Correct calibration levels for LOQ	☑		☑	
Relative retention time shifts meet criteria?	☑		☑	
IS Areas updated/CC ISTD Areas printout	☑		☑	
If any compounds are not calibrated, are they clearly documented?	☑	☐	☑	☐
Manual Integrations - explanations, before and after printouts	☐	☑	☑	☐
Check Critical Pair List				
o-xylene and p&m-xylene	☑		☑	
1,2,4-trimethylbenzene and sec-butylbenzene	☑		☑	
1,3-dichlorobenzene and 1,4-dichlorobenzene	☑		☑	
Hand calculated Response Factor verified:	☑		☑	
Initials: / Date:	NRB 8/3/2014		SCL 8/5/2014	

RF = (As X Cis)/(Ais X Cs)

Shown= 1.220 methylene chloride @ 1 pt

Calculated= $\frac{2747*30}{67523}$ = 1.22047

Note:
Not calibrated for n-hexane.

Calibration Table Report
Method: VPA2014-0801.M
Title: Purgable Organics By GCMS
Last Calibration: Sun Aug 03 21:29:33 2014

Calibration Files

	0.4	1	3	10	30	50	70		
	A07.D	A08.D	A09.D	A10.D	A11.D	A12.D	A13.D		
Compound								Avg	%RSD
Fluorobenzene IS	ISTD								
dichlorodifluoromethane	1.499	1.806	1.845	1.814	1.729	1.811	1.707	1.744	6.8
chloromethane	0.984	1.081	1.080	0.947	0.950	1.087	1.146	1.039	7.5
vinyl chloride	1.242	1.473	1.483	1.346	1.405	1.398	1.393	1.391	5.8
bromomethane	0.736	0.669	0.595	0.553	0.534	0.539	0.551	0.597	12.9
chloroethane	0.829	0.735	0.706	0.672	0.639	0.616	0.610	0.687	11.3
trichlorofluoromethane	1.596	1.900	1.941	1.917	1.848	1.840	1.787	1.833	6.4
1,1,2-trichloro-1,2,2-trifluoroet	0.816	0.934	1.020	1.066	1.055	1.015	0.984	0.984	8.8
1,1-dichloroethene	0.733	0.869	0.920	0.947	0.928	0.901	0.871	0.881	8.1
Acetone		0.518	0.447	0.401	0.390	0.390	0.373	0.420	13.0
Acrylonitrile	0.532	0.506	0.591	0.572	0.559	0.543	0.560	0.552	5.0
Methyliodide		0.622	0.657	0.776	0.937	0.983	1.017	0.832	20.5
Carbon disulfide	2.362	2.666	2.849	2.922	2.914	2.856	2.780	2.764	7.2
methylene chloride	1.126	1.220	1.319	1.285	1.266	1.194	1.169	1.226	5.6
methyl-t-butyl ether	2.103	2.289	2.762	2.983	3.032	2.883	3.048	2.729	13.9
trans-1,2-dichloroethene	0.946	1.121	1.220	1.255	1.258	1.149	1.168	1.160	9.3
Vinylacetate	1.137	1.447	1.562	1.607	1.721	1.706	1.804	1.569	14.3
n-hexane	0.352	0.379	0.543	0.663	0.856	0.617		0.568	33.2
1,1-dichloroethane	2.024	2.175	2.463	2.409	2.336	2.153	2.273	2.262	6.8
2-Butanone(MEK)	0.611	0.580	0.695	0.717	0.746	0.833	0.778	0.708	12.6
2,2-dichloropropane	1.214	1.444	1.565	1.619	1.588	1.619	1.577	1.518	9.6
cis-1,2-dichloroethene	1.267	1.337	1.399	1.402	1.363	1.367	1.335	1.353	3.4
bromochloromethane	0.543	0.642	0.684	0.685	0.669	0.674	0.659	0.651	7.7
cyclohexane		1.499	1.774	1.895	1.927	1.934	1.875	1.817	9.2
chloroform	2.394	2.376	2.476	2.419	2.330	2.334	2.273	2.372	2.8
Dibromofluoromethane <SURR>	1.558	1.645	1.608	1.573	1.540	1.507	1.505	1.562	3.3
1,1,1-trichloroethane	1.519	1.841	1.965	2.024	1.992	2.022	1.965	1.904	9.5
carbon tetrachloride	1.155	1.465	1.579	1.628	1.640	1.659	1.619	1.535	11.7
1,1-dichloropropene	1.303	1.465	1.618	1.702	1.737	1.782	1.736	1.620	10.8
1,2-Dichloroethane-D4 <surr>	1.552	1.573	1.565	1.467	1.437	1.375	1.357	1.475	6.1
benzene	4.006	4.599	4.968	5.062	5.027	5.173	5.073	4.844	8.5
1,2-dichloroethane	1.267	1.444	1.575	1.570	1.539	1.545	1.498	1.491	7.3
trichloroethene	0.944	1.189	1.253	1.287	1.324	1.352	1.330	1.240	11.4
1,2-dichloropropane	1.036	1.125	1.292	1.318	1.332	1.368	1.327	1.257	10.0
dibromomethane	0.778	0.844	0.875	0.880	0.872	0.867	0.844	0.851	4.2
2-chloroethylvinyl ether								0.000	0.0
bromodichloromethane	1.275	1.466	1.638	1.646	1.653	1.690	1.649	1.574	9.6
cis-1,3-dichloropropene	1.341	1.494	1.657	1.752	1.864	1.954	1.937	1.714	13.5
4-Methyl-2-pentanone	0.389	0.421	0.499	0.524	0.548	0.603	0.568	0.507	15.3
1-chloro-3-fluorobenzene<IS>	ISTD								
Toluene-d8 <surr>	2.628	2.587	2.637	2.673	2.702	2.738	2.728	2.671	2.1
toluene	1.404	1.643	1.731	1.789	1.774	1.857	1.815	1.716	8.9
trans-1,3-dichloropropene		0.765	0.894	0.974	1.048	1.09	1.086	0.976	13.1

1,1,2-trichloroethane	0.475	0.499	0.591	0.604	0.613	0.645	0.628	0.579	11.3
tetrachloroethene	0.638	0.789	0.853	0.912	0.916	0.964	0.944	0.859	13.3
1,3-dichloropropane	0.836	0.95	1.098	1.144	1.177	1.22	1.199	1.089	13.2
2-Hexanone		0.522	0.611	0.652	0.669	0.736	0.693	0.647	11.4
dibromochloromethane	0.544	0.62	0.719	0.76	0.794	0.833	0.822	0.727	15.0
1,2-dibromoethane	0.573	0.596	0.692	0.741	0.759	0.807	0.786	0.708	13.0
1-chlorohexane	0.446	0.498	0.572	0.591	0.601	0.627	0.605	0.563	11.7
chlorobenzene	1.597	1.775	1.938	2.012	1.986	2.082	2.038	1.918	9.0
1,1,1,2-tetrachloroethane	0.509	0.551	0.633	0.666	0.696	0.736	0.732	0.646	13.6
ethylbenzene	0.902	1.245	1.069	1.018	0.997	1.038	1.008	1.04	10.0
P & M -Xylene	0.892	0.968	1.148	1.193	1.201	1.234	1.194	1.118	11.9
o-xylene	0.827	0.948	1.063	1.126	1.127	1.174	1.145	1.059	12.0
styrene		1.448	1.762	1.894	1.963	2.03	1.995	1.849	11.8
bromoform	0.44	0.456	0.527	0.568	0.599	0.639	0.628	0.551	14.5
Isopropylbenzene (Cumene)	1.828	2.215	2.591	2.712	2.81	2.89	2.795	2.548	15.2
1,2-Dichlorobenzene-d4 <IS>	ISTD								
4-Bromofluorobenzene <Surr>	0.972	0.97	0.966	0.98	0.97	0.981	0.957	0.971	0.8
trans 1,4-dichloro-2-butene		0.207	0.225	0.25	0.261	0.282	0.272	0.25	11.5
bromobenzene	0.554	0.632	0.7	0.727	0.721	0.749	0.73	0.688	10.2
1,1,2,2-tetrachloroethane	0.688	0.742	0.835	0.885	0.899	0.958	0.93	0.848	11.8
1,2,3-trichloropropane	0.192	0.197	0.233	0.25	0.248	0.268	0.258	0.235	12.6
n-propylbenzene	1.988	2.339	2.6	2.844	2.868	2.904	2.837	2.626	13.2
2-chlorotoluene	1.259	1.421	1.609	1.678	1.676	1.742	1.686	1.582	11.1
4-chlorotoluene	1.267	1.504	1.677	1.806	1.803	1.83	1.797	1.669	12.7
1,3,5-trimethylbenzene		1.348	1.554	1.722	1.77	1.824	1.766	1.664	10.8
tert-butylbenzene		1.048	1.196	1.308	1.344	1.381	1.32	1.266	9.8
1,2,4-trimethylbenzene		1.285	1.534	1.736	1.773	1.817	1.786	1.655	12.5
sec-butylbenzene		1.457	1.668	1.848	1.898	1.95	1.885	1.784	10.5
1,3-dichlorobenzene	0.91	1.008	1.086	1.15	1.149	1.182	1.145	1.09	9.0
4-isopropyltoluene		1.038	1.21	1.374	1.417	1.451	1.403	1.315	12.2
1,4-dichlorobenzene	0.842	1.045	1.112	1.207	1.199	1.219	1.197	1.117	12.3
1,2-dichlorobenzene	0.974	1.024	1.12	1.168	1.147	1.161	1.144	1.105	6.8
n-butylbenzene		0.958	1.047	1.204	1.282	1.301	1.275	1.178	12.1
1,2-dibromo-3-chloropropane	0.137	0.143	0.16	0.165	0.164	0.181	0.171	0.16	9.7
1,2,4-trichlorobenzene	0.393	0.435	0.488	0.513	0.528	0.563	0.549	0.495	12.5
hexachlorobutadiene	0.129	0.154	0.167	0.181	0.188	0.187	0.184	0.17	12.8
naphthalene	1.218	1.32	1.495	1.583	1.632	1.798	1.726	1.539	13.7
1,2,3-trichlorobenzene	0.38	0.395	0.423	0.473	0.481	0.513	0.497	0.452	11.5

Sun Aug 03 21:34:04 2014

Calibration Report VPA

Method Path : Z:\08\VPA\METHOD\
Method File : VPA2014-0801.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 03 21:29:33 2014
Response Via : Initial Calibration

Calibration Files
.4 =A07 1 =A08 3.0 =A09 10 =A10 30 =A11 50 =A12
70 =A13

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	Fluorobenzene IS		----------ISTD----------			
2)		dichlorodifluoro...	Avg	-----	1.7442	-----	0.0681
3)		chloromethane	Avg	-----	1.0393	-----	0.0751
4)		vinyl chloride	Avg	-----	1.3913	-----	0.0585
5)		bromomethane	Avg	-----	0.5967	-----	0.1295
6)		chloroethane	Avg	-----	0.6867	-----	0.1133
7)		trichlorofluorom...	Avg	-----	1.8326	-----	0.0637
8)		1,1,2-trichloro-...	Avg	-----	0.9843	-----	0.0877
9)		1,1-dichloroethene	Avg	-----	0.8812	-----	0.0813
10)		Acetone	Avg	-----	0.4196	-----	0.1296
11)		Acrylonitrile	Avg	-----	0.5520	-----	0.0498
12)		Methyliodide	Quad	-0.0166	0.8403	0.0546	0.9993
13)		Carbon disulfide	Avg	-----	2.7641	-----	0.0716
14)		methylene chloride	Avg	-----	1.2257	-----	0.0560
15)		methyl-t-butyl e...	Avg	-----	2.7287	-----	0.1394
16)		trans-1,2-dichlo...	Avg	-----	1.1596	-----	0.0930
17)		Vinylacetate	Avg	-----	1.5689	-----	0.1426
18)		n-hexane	Quad	-0.0115	0.8599	-0.1176	0.9798
19)		1,1-dichloroethane	Avg	-----	2.2616	-----	0.0684
20)		2-Butanone(MEK)	Avg	-----	0.7084	-----	0.1263
21)		2,2-dichloropropane	Avg	-----	1.5182	-----	0.0964
22)		cis-1,2-dichloro...	Avg	-----	1.3527	-----	0.0342
23)		bromochloromethane	Avg	-----	0.6510	-----	0.0766
24)		cyclohexane	Avg	-----	1.8173	-----	0.0916
25)		chloroform	Avg	-----	2.3717	-----	0.0281
26)	S	Dibromofluoromet...	Avg	-----	1.5625	-----	0.0330
27)		1,1,1-trichloroe...	Avg	-----	1.9039	-----	0.0949
28)		carbon tetrachlo...	Avg	-----	1.5351	-----	0.1169
29)		1,1-dichloropropene	Avg	-----	1.6204	-----	0.1082
30)	S	1,2-Dichloroetha...	Avg	-----	1.4750	-----	0.0613
31)		benzene	Avg	-----	4.8440	-----	0.0851
32)		1,2-dichloroethane	Avg	-----	1.4910	-----	0.0729
33)		trichloroethene	Avg	-----	1.2399	-----	0.1142
34)		1,2-dichloropropane	Avg	-----	1.2569	-----	0.0997
35)		dibromomethane	Avg	-----	0.8514	-----	0.0418
36)		2-chloroethylvin...	Avg	-----	-----	-----	0.0000
37)		bromodichloromet...	Avg	-----	1.5738	-----	0.0956
38)		cis-1,3-dichloro...	Avg	-----	1.7143	-----	0.1351
39)		4-Methyl-2-penta...	Avg	-----	0.5074	-----	0.1532
40)		1-chloro-3-fluor...		----------ISTD----------			
41)	S	Toluene-d8 <surr>	Avg	-----	2.6705	-----	0.0210
42)		toluene	Avg	-----	1.7162	-----	0.0894
43)		trans-1,3-dichlo...	Avg	-----	0.9762	-----	0.1309
44)		1,1,2-trichloroe...	Avg	-----	0.5793	-----	0.1130
45)		tetrachloroethene	Avg	-----	0.8594	-----	0.1329
46)		1,3-dichloropropane	Avg	-----	1.0891	-----	0.1318
47)		2-Hexanone	Avg	-----	0.6473	-----	0.1144
48)		dibromochloromet...	Avg	-----	0.7274	-----	0.1495
49)		1,2-dibromoethane	Avg	-----	0.7077	-----	0.1301
50)		1-chlorohexane	Avg	-----	0.5629	-----	0.1169
51)		chlorobenzene	Avg	-----	1.9183	-----	0.0900
52)		1,1,1,2-tetrachl...	Avg	-----	0.6462	-----	0.1356
53)		ethylbenzene	Avg	-----	1.0395	-----	0.1002
54)		P & M -Xylene	Avg	-----	1.1183	-----	0.1190

55)		o-xylene	Avg	-----	1.0586	-----	0.1196
56)		styrene	Avg	-----	1.8487	-----	0.1179
57)		bromoform	Avg	-----	0.5508	-----	0.1447
58)		Isopropylbenzene...	Avg	-----	2.5485	-----	0.1523
59)	I	1,2-Dichlorobenz...		----------ISTD----------			
60)	S	4-Bromofluoroben...	Avg	-----	0.9709	-----	0.0084
61)		trans 1,4-dichlo...	Avg	-----	0.2496	-----	0.1151
62)		bromobenzene	Avg	-----	0.6876	-----	0.1019
63)		1,1,2,2-tetrachl...	Avg	-----	0.8482	-----	0.1176
64)		1,2,3-trichlorop...	Avg	-----	0.2350	-----	0.1263
65)		n-propylbenzene	Avg	-----	2.6257	-----	0.1317
66)		2-chlorotoluene	Avg	-----	1.5815	-----	0.1112
67)		4-chlorotoluene	Avg	-----	1.6691	-----	0.1265
68)		1,3,5-trimethylb...	Avg	-----	1.6639	-----	0.1083
69)		tert-butylbenzene	Avg	-----	1.2662	-----	0.0977
70)		1,2,4-trimethylb...	Avg	-----	1.6553	-----	0.1253
71)		sec-butylbenzene	Avg	-----	1.7845	-----	0.1050
72)		1,3-dichlorobenzene	Avg	-----	1.0900	-----	0.0898
73)		4-isopropyltoluene	Avg	-----	1.3154	-----	0.1216
74)		1,4-dichlorobenzene	Avg	-----	1.1171	-----	0.1227
75)		1,2-dichlorobenzene	Avg	-----	1.1054	-----	0.0684
76)		n-butylbenzene	Avg	-----	1.1778	-----	0.1211
77)		1,2-dibromo-3-ch...	Avg	-----	0.1599	-----	0.0965
78)		1,2,4-trichlorob...	Avg	-----	0.4954	-----	0.1254
79)		hexachlorobutadiene	Avg	-----	0.1700	-----	0.1280
80)		naphthalene	Avg	-----	1.5388	-----	0.1366
81)		1,2,3-trichlorob...	Avg	-----	0.4517	-----	0.1151

VPA2014-0801.M Sun Aug 03 21:33:28 2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A15.D
Acq On : 1 Aug 2014 3:51 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:29:53 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	30.000	30.000	0.0	99	0.00
2		dichlorodifluoromethane	30.000	29.896	0.3	100	0.00
3		chloromethane	30.000	30.490	-1.6	110	0.00
4		vinyl chloride	30.000	29.684	1.1	97	0.00
5		bromomethane	30.000	29.077	3.1	107	0.00
6		chloroethane	30.000	28.024	6.6	100	0.00
7		trichlorofluoromethane	30.000	30.210	-0.7	99	0.00
8		1,1,2-trichloro-1,2,2-trifl	45.000	46.954	-4.3	96	0.00
9		1,1-dichloroethene	30.000	31.091	-3.6	98	0.00
10		Acetone	90.000	80.333	10.7	95	0.00
11		Acrylonitrile	45.000	46.120	-2.5	100	0.00
12		Methyliodide	45.000	42.695	5.1	91	0.00
13		Carbon disulfide	45.000	46.841	-4.1	98	0.00
14		methylene chloride	30.000	30.630	-2.1	98	0.00
15		methyl-t-butyl ether	45.000	50.740	-12.8	101	0.00
16		trans-1,2-dichloroethene	30.000	33.131	-10.4	101	0.00
17		Vinylacetate	30.000	33.454	-11.5	101	0.00
18		n-hexane	30.000	35.576	-18.6	98	0.00
19		1,1-dichloroethane	30.000	31.340	-4.5	100	0.00
20		2-Butanone(MEK)	90.000	95.921	-6.6	100	0.00
21		2,2-dichloropropane	30.000	31.518	-5.1	100	0.00
22		cis-1,2-dichloroethene	30.000	30.562	-1.9	100	0.00
23		bromochloromethane	30.000	31.089	-3.6	100	0.00
24		cyclohexane	30.000	31.629	-5.4	99	0.00
25		chloroform	30.000	29.908	0.3	101	0.00
26	S	Dibromofluoromethane <SURR>	30.000	29.664	1.1	99	0.00
27		1,1,1-trichloroethane	30.000	31.768	-5.9	100	0.00
28		carbon tetrachloride	30.000	32.171	-7.2	100	0.00
29		1,1-dichloropropene	30.000	32.596	-8.7	101	0.00
30	S	1,2-Dichloroethane-D4 <surr	30.000	28.576	4.7	97	0.00
31		benzene	30.000	31.645	-5.5	101	0.00
32		1,2-dichloroethane	30.000	31.227	-4.1	100	0.00
33		trichloroethene	30.000	32.500	-8.3	101	0.00
34		1,2-dichloropropane	30.000	31.548	-5.2	98	0.00
35		dibromomethane	30.000	30.627	-2.1	99	0.00
36		2-chloroethylvinyl ether	30.000	0.000	100.0#	0	-13.14#
37		bromodichloromethane	30.000	32.071	-6.9	101	0.00
38		cis-1,3-dichloropropene	30.000	33.013	-10.0	100	0.00
39		4-Methyl-2-pentanone	90.000	98.035	-8.9	100	0.00
40		1-chloro-3-fluorobenzene<IS	30.000	30.000	0.0	99	0.00
41	S	Toluene-d8 <surr>	30.000	30.560	-1.9	100	0.00
42		toluene	30.000	31.764	-5.9	101	0.00
43		trans-1,3-dichloropropene	30.000	32.133	-7.1	99	0.00
44		1,1,2-trichloroethane	30.000	32.137	-7.1	100	0.00
45		tetrachloroethene	30.000	32.434	-8.1	100	0.00
46		1,3-dichloropropane	30.000	32.737	-9.1	100	0.00
47		2-Hexanone	90.000	94.389	-4.9	100	0.00
48		dibromochloromethane	30.000	33.244	-10.8	100	0.00
49		1,2-dibromoethane	30.000	32.846	-9.5	101	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A15.D
Acq On : 1 Aug 2014 3:51 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:29:53 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
50		1-chlorohexane	45.000	48.720	-8.3	100	0.00
51		chlorobenzene	30.000	31.733	-5.8	101	0.00
52		1,1,1,2-tetrachloroethane	30.000	32.955	-9.8	101	0.00
53		ethylbenzene	30.000	29.281	2.4	101	0.00
54		P & M -Xylene	60.000	65.156	-8.6	100	0.00
55		o-xylene	30.000	32.309	-7.7	100	0.00
56		styrene	30.000	32.053	-6.8	100	0.00
57		bromoform	30.000	32.921	-9.7	100	0.00
58		Isopropylbenzene (Cumene)	30.000	33.093	-10.3	99	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	30.000	30.000	0.0	100	0.00
60	S	4-Bromofluorobenzene <Surr>	30.000	29.983	0.1	100	0.00
61		trans 1,4-dichloro-2-butene	45.000	46.884	-4.2	100	0.00
62		bromobenzene	30.000	31.864	-6.2	101	0.00
63		1,1,2,2-tetrachloroethane	30.000	32.049	-6.8	101	0.00
64		1,2,3-trichloropropane	30.000	32.355	-7.8	102	0.00
65		n-propylbenzene	30.000	32.449	-8.2	99	0.00
66		2-chlorotoluene	30.000	31.819	-6.1	100	0.00
67		4-chlorotoluene	30.000	31.993	-6.6	99	0.00
68		1,3,5-trimethylbenzene	30.000	31.872	-6.2	100	0.00
69		tert-butylbenzene	30.000	31.535	-5.1	99	0.00
70		1,2,4-trimethylbenzene	30.000	32.053	-6.8	100	0.00
71		sec-butylbenzene	30.000	31.371	-4.6	98	0.00
72		1,3-dichlorobenzene	30.000	31.488	-5.0	100	0.00
73		4-isopropyltoluene	30.000	31.832	-6.1	99	0.00
74		1,4-dichlorobenzene	30.000	32.181	-7.3	100	0.00
75		1,2-dichlorobenzene	30.000	31.279	-4.3	101	0.00
76		n-butylbenzene	30.000	31.600	-5.3	97	0.00
77		1,2-dibromo-3-chloropropane	30.000	31.538	-5.1	103	0.00
78		1,2,4-trichlorobenzene	30.000	32.868	-9.6	103	0.00
79		hexachlorobutadiene	30.000	32.423	-8.1	98	0.00
80		naphthalene	30.000	32.976	-9.9	104	0.00
81		1,2,3-trichlorobenzene	30.000	33.269	-10.9	104	0.00

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A15.D
Acq On : 1 Aug 2014 3:51 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:29:53 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	99	0.00
2		dichlorodifluoromethane	1.744	1.738	0.3	100	0.00
3		chloromethane	1.039	1.056	-1.6	110	0.00
4		vinyl chloride	1.391	1.377	1.0	97	0.00
5		bromomethane	0.597	0.578	3.2	107	0.00
6		chloroethane	0.687	0.641	6.7	100	0.00
7		trichlorofluoromethane	1.833	1.845	-0.7	99	0.00
8		1,1,2-trichloro-1,2,2-trifl	0.984	1.027	-4.4	96	0.00
9		1,1-dichloroethene	0.881	0.913	-3.6	98	0.00
10		Acetone	0.420	0.375	10.7	95	0.00
11		Acrylonitrile	0.552	0.566	-2.5	100	0.00
12		Methyliodide	0.832	0.860	-3.4	91	0.00
13		Carbon disulfide	2.764	2.877	-4.1	98	0.00
14		methylene chloride	1.226	1.251	-2.0	98	0.00
15		methyl-t-butyl ether	2.729	3.077	-12.8	101	0.00
16		trans-1,2-dichloroethene	1.160	1.281	-10.4	101	0.00
17		Vinylacetate	1.569	1.750	-11.5	101	0.00
18		n-hexane	0.568	0.843	-48.4#	98	0.00
19		1,1-dichloroethane	2.262	2.363	-4.5	100	0.00
20		2-Butanone(MEK)	0.708	0.755	-6.6	100	0.00
21		2,2-dichloropropane	1.518	1.595	-5.1	100	0.00
22		cis-1,2-dichloroethene	1.353	1.378	-1.8	100	0.00
23		bromochloromethane	0.651	0.675	-3.7	100	0.00
24		cyclohexane	1.817	1.916	-5.4	99	0.00
25		chloroform	2.372	2.364	0.3	101	0.00
26	S	Dibromofluoromethane <SURR>	1.562	1.545	1.1	99	0.00
27		1,1,1-trichloroethane	1.904	2.016	-5.9	100	0.00
28		carbon tetrachloride	1.535	1.646	-7.2	100	0.00
29		1,1-dichloropropene	1.620	1.761	-8.7	101	0.00
30	S	1,2-Dichloroethane-D4 <surr	1.475	1.405	4.7	97	0.00
31		benzene	4.844	5.110	-5.5	101	0.00
32		1,2-dichloroethane	1.491	1.552	-4.1	100	0.00
33		trichloroethene	1.240	1.343	-8.3	101	0.00
34		1,2-dichloropropane	1.257	1.322	-5.2	98	0.00
35		dibromomethane	0.851	0.869	-2.1	99	0.00
36		2-chloroethylvinyl ether	0.000	0.000	0.0	0#	-13.14#
37		bromodichloromethane	1.574	1.682	-6.9	101	0.00
38		cis-1,3-dichloropropene	1.714	1.886	-10.0	100	0.00
39		4-Methyl-2-pentanone	0.507	0.553	-9.1	100	0.00
40		1-chloro-3-fluorobenzene<IS	1.000	1.000	0.0	99	0.00
41	S	Toluene-d8 <surr>	2.671	2.720	-1.8	100	0.00
42		toluene	1.716	1.817	-5.9	101	0.00
43		trans-1,3-dichloropropene	0.976	1.046	-7.2	99	0.00
44		1,1,2-trichloroethane	0.579	0.621	-7.3	100	0.00
45		tetrachloroethene	0.859	0.929	-8.1	100	0.00
46		1,3-dichloropropane	1.089	1.188	-9.1	100	0.00
47		2-Hexanone	0.647	0.679	-4.9	100	0.00
48		dibromochloromethane	0.727	0.806	-10.9	100	0.00
49		1,2-dibromoethane	0.708	0.775	-9.5	101	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A15.D
Acq On : 1 Aug 2014 3:51 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:29:53 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50		1-chlorohexane	0.563	0.609	-8.2	100	0.00
51		chlorobenzene	1.918	2.029	-5.8	101	0.00
52		1,1,1,2-tetrachloroethane	0.646	0.710	-9.9	101	0.00
53		ethylbenzene	1.040	1.015	2.4	101	0.00
54		P & M -Xylene	1.118	1.214	-8.6	100	0.00
55		o-xylene	1.059	1.140	-7.6	100	0.00
56		styrene	1.849	1.975	-6.8	100	0.00
57		bromoform	0.551	0.604	-9.6	100	0.00
58		Isopropylbenzene (Cumene)	2.548	2.811	-10.3	99	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	1.000	1.000	0.0	100	0.00
60	S	4-Bromofluorobenzene <Surr>	0.971	0.970	0.1	100	0.00
61		trans 1,4-dichloro-2-butene	0.250	0.260	-4.0	100	0.00
62		bromobenzene	0.688	0.730	-6.1	101	0.00
63		1,1,2,2-tetrachloroethane	0.848	0.906	-6.8	101	0.00
64		1,2,3-trichloropropane	0.235	0.253	-7.7	102	0.00
65		n-propylbenzene	2.626	2.840	-8.1	99	0.00
66		2-chlorotoluene	1.582	1.677	-6.0	100	0.00
67		4-chlorotoluene	1.669	1.780	-6.7	99	0.00
68		1,3,5-trimethylbenzene	1.664	1.768	-6.3	100	0.00
69		tert-butylbenzene	1.266	1.331	-5.1	99	0.00
70		1,2,4-trimethylbenzene	1.655	1.769	-6.9	100	0.00
71		sec-butylbenzene	1.784	1.866	-4.6	98	0.00
72		1,3-dichlorobenzene	1.090	1.144	-5.0	100	0.00
73		4-isopropyltoluene	1.315	1.396	-6.2	99	0.00
74		1,4-dichlorobenzene	1.117	1.198	-7.3	100	0.00
75		1,2-dichlorobenzene	1.105	1.153	-4.3	101	0.00
76		n-butylbenzene	1.178	1.241	-5.3	97	0.00
77		1,2-dibromo-3-chloropropane	0.160	0.168	-5.0	103	0.00
78		1,2,4-trichlorobenzene	0.495	0.543	-9.7	103	0.00
79		hexachlorobutadiene	0.170	0.184	-8.2	98	0.00
80		naphthalene	1.539	1.691	-9.9	104	0.00
81		1,2,3-trichlorobenzene	0.452	0.501	-10.8	104	0.00

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

GC/MS QA-QC Check Report

Tune File : Z:\08\VPA\DATA\080114A\A06.D
Tune Time : 1 Aug 2014 1:22 pm

Daily Calibration File : Z:\08\VPA\DATA\080114A\A11.D

						74763	117205	132462	
File	Sample	Surrogate Recovery %				Internal Standard Responses			
A06.D									
	IB	106	107	99	99	68481	110408	129677	
A07.D									
	0.4	101	104	99	100	68487	108700	124769	
A08.D									
	1	104	103	98	100	67523	109759	125651	
A09.D									
	3	101	102	100	100	69282	111175	129276	
A10.D									
	10	99	97	101	101	71083	112781	127615	
A11.D									
	30	100	100	100	100	74763	117205	132462	
A12.D									
	50	96	92	103	101	75650	117617	132098	
A13.D									
	70	96	92	102	99	76661	118860	134127	
A14.D									
	R	105	105	98	99	68117	111885	129898	
A15.D									
	ICV	99	95	102	100	74115	115911	132487	

(fails) - fails 12hr time check * - fails criteria

Created: Sun Aug 03 21:33:12 2014 VPA

Calibration RRT Evaluation RRT shifts relative to Cal. 5 RRT = analyte retention time / IS retention time

Initals/Date: NRB 08/03/14 Max RRT shift 0.06

Compound	Cal. 5 RT	Cal. 5 RRT	Cal. 1 RT	RRT shift	Cal 2 RT	RRT shift	Cal 3 RT	RRT shift	Cal 4 RT	RRT shift	Cal 6 RT	RRT shift	Cal 7 RT	RRT shift
Fluorobenzene IS	4.906		4.906		4.906		4.906		4.906		4.906		4.906	
dichlorodifluoromethane	0.959	0.195	0.959	0.000	0.959	0.000	0.959	0.000	0.959	0.000	0.959	0.000	0.959	0.000
chloromethane	1.063	0.217	1.063	0.000	1.063	0.000	1.063	0.000	1.063	0.000	1.063	0.000	1.063	0.000
vinyl chloride	1.103	0.225	1.103	0.000	1.103	0.000	1.103	0.000	1.103	0.000	1.103	0.000	1.103	0.000
bromomethane	1.279	0.261	1.279	0.000	1.279	0.000	1.279	0.000	1.279	0.000	1.279	0.000	1.279	0.000
chloroethane	1.343	0.274	1.343	0.000	1.343	0.000	1.343	0.000	1.343	0.000	1.343	0.000	1.343	0.000
trichlorofluoromethane	1.423	0.290	1.423	0.000	1.424	0.000	1.424	0.000	1.424	0.000	1.424	0.000	1.424	0.000
1,1,2-trichloro-1,2,2-trifluoromethane	1.758	0.358	1.758	0.000	1.758	0.000	1.758	0.000	1.758	0.000	1.758	0.000	1.758	0.000
1,1-dichloroethene	1.733	0.353	1.725	-0.002	1.733	0.000	1.733	0.000	1.733	0.000	1.733	0.000	1.733	0.000
Acetone	2.173	0.443	2.173	0.000	2.173	0.000	2.173	0.000	2.173	0.000	2.173	0.000	2.173	0.000
Acrylonitrile	2.814	0.574	2.814	0.000	2.814	0.000	2.814	0.000	2.814	0.000	2.814	0.000	2.814	0.000
Methyliodide	1.817	0.370	1.817	0.000	1.817	0.000	1.817	0.000	1.817	0.000	1.817	0.000	1.825	0.002
Carbon disulfide	1.741	0.355	1.741	0.000	1.742	0.000	1.741	0.000	1.741	0.000	1.741	0.000	1.741	0.000
methylene chloride	2.125	0.433	2.125	0.000	2.125	0.000	2.125	0.000	2.125	0.000	2.125	0.000	2.125	0.000
methyl-t-butyl ether	2.343	0.478	2.343	0.000	2.343	0.000	2.343	0.000	2.343	0.000	2.343	0.000	2.343	0.000
n-hexane	2.246	0.458	2.246	0.000	2.246	0.000	2.246	0.000	2.246	0.000	2.246	0.000	2.246	0.000
trans-1,2-dichloroethene	3.033	0.618	3.041	0.002	3.033	0.000	3.033	0.000	3.033	0.000	3.041	0.002	3.041	0.002
Vinylacetate	2.297	0.468	2.297	0.000	2.297	0.000	2.297	0.000	2.297	0.000	2.297	0.000	2.305	0.002
1,1-dichloroethane	2.761	0.563	2.761	0.000	2.761	0.000	2.761	0.000	2.761	0.000	2.761	0.000	2.761	0.000
2-Butanone(MEK)	4.075	0.831	4.084	0.002	4.084	0.002	4.084	0.002	4.084	0.002	4.084	0.002	4.075	0.000
2,2-dichloropropane	3.423	0.698	3.423	0.000	3.423	0.000	3.423	0.000	3.423	0.000	3.423	0.000	3.423	0.000
cis-1,2-dichloroethene	3.306	0.674	3.306	0.000	3.306	0.000	3.306	0.000	3.306	0.000	3.306	0.000	3.306	0.000
cyclohexane	3.53	0.720	3.53	0.000	3.54	0.002	3.53	0.000	3.53	0.000	3.54	0.002	3.54	0.002
bromochloromethane	3.514	0.716	3.514	0.000	3.514	0.000	3.514	0.000	3.514	0.000	3.514	0.000	3.514	0.000
chloroform	3.656	0.745	3.656	0.000	3.656	0.000	3.656	0.000	3.656	0.000	3.656	0.000	3.656	0.000
Dibromofluoromethane <SURR>	3.89	0.793	3.88	-0.002	3.89	0.000	3.89	0.000	3.89	0.000	3.89	0.000	3.89	0.000
1,1,1-trichloroethane	3.88	0.791	3.88	0.000	3.88	0.000	3.88	0.000	3.88	0.000	3.88	0.000	3.88	0.000
carbon tetrachloride	3.792	0.773	3.783	-0.002	3.793	0.000	3.783	-0.002	3.783	-0.002	3.792	0.000	3.793	0.000
1,1-dichloropropene	4.055	0.827	4.055	0.000	4.055	0.000	4.055	0.000	4.055	0.000	4.055	0.000	4.055	0.000
1,2-Dichloroethane-D4 <surr>	4.555	0.928	4.555	0.000	4.555	0.000	4.555	0.000	4.555	0.000	4.555	0.000	4.555	0.000
benzene	4.384	0.894	4.384	0.000	4.384	0.000	4.384	0.000	4.384	0.000	4.384	0.000	4.384	0.000
1,2-dichloroethane	4.64	0.946	4.641	0.000	4.641	0.000	4.641	0.000	4.641	0.000	4.641	0.000	4.641	0.000
trichloroethene	5.091	1.038	5.091	0.000	5.091	0.000	5.091	0.000	5.091	0.000	5.091	0.000	5.091	0.000
1,2-dichloropropane	5.637	1.149	5.637	0.000	5.637	0.000	5.637	0.000	5.637	0.000	5.637	0.000	5.637	0.000
dibromomethane	5.531	1.127	5.531	0.000	5.531	0.000	5.531	0.000	5.531	0.000	5.531	0.000	5.531	0.000
2-chloroethylvinyl ether	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
bromodichloromethane	5.735	1.169	5.735	0.000	5.735	0.000	5.735	0.000	5.735	0.000	5.735	0.000	5.735	0.000
cis-1,3-dichloropropene	6.352	1.295	6.352	0.000	6.352	0.000	6.352	0.000	6.352	0.000	6.352	0.000	6.352	0.000
4-Methyl-2-pentanone	6.945	1.416	6.945	0.000	6.945	0.000	6.945	0.000	6.945	0.000	6.945	0.000	6.945	0.000
1-chloro-3-fluorobenzene<IS>	7.642		7.642		7.642		7.642		7.642		7.642		7.642	
Toluene-d8 <surr>	6.523	0.854	6.515	-0.001	6.515	-0.001	6.515	-0.001	6.515	-0.001	6.523	0.000	6.523	0.000
toluene	6.561	0.859	6.561	0.000	6.562	0.000	6.562	0.000	6.562	0.000	6.561	0.000	6.562	0.000

trans-1,3-dichloropropene	6.963	0.911	6.963	0.000	6.963	0.000	6.963	0.000	6.963	0.000	6.963	0.000	6.963	0.000
1,1,2-trichloroethane	7.09	0.928	7.09	0.000	7.099	0.001	7.09	0.000	7.09	0.000	7.09	0.000	7.09	0.000
tetrachloroethene	6.903	0.903	6.903	0.000	6.903	0.000	6.903	0.000	6.903	0.000	6.903	0.000	6.903	0.000
1,3-dichloropropane	7.316	0.957	7.316	0.000	7.316	0.000	7.316	0.000	7.316	0.000	7.316	0.000	7.316	0.000
2-Hexanone	7.66	1.002	7.66	0.000	7.66	0.000	7.66	0.000	7.66	0.000	7.66	0.000	7.66	0.000
dibromochloromethane	7.235	0.947	7.235	0.000	7.235	0.000	7.235	0.000	7.235	0.000	7.235	0.000	7.235	0.000
1,2-dibromoethane	7.416	0.970	7.416	0.000	7.416	0.000	7.416	0.000	7.416	0.000	7.416	0.000	7.416	0.000
1-chlorohexane	7.85	1.027	7.86	0.001	7.851	0.000	7.851	0.000	7.851	0.000	7.86	0.001	7.86	0.001
chlorobenzene	7.841	1.026	7.841	0.000	7.842	0.000	7.841	0.000	7.841	0.000	7.841	0.000	7.841	0.000
1,1,1,2-tetrachloroethane	7.896	1.033	7.896	0.000	7.896	0.000	7.896	0.000	7.896	0.000	7.896	0.000	7.896	0.000
ethylbenzene	7.878	1.031	7.878	0.000	7.878	0.000	7.878	0.000	7.878	0.000	7.878	0.000	7.878	0.000
P & M -Xylene	7.986	1.045	7.986	0.000	7.986	0.000	7.986	0.000	7.986	0.000	7.986	0.000	7.986	0.000
o-xylene	8.258	1.081	8.258	0.000	8.258	0.000	8.258	0.000	8.258	0.000	8.258	0.000	8.258	0.000
styrene	8.285	1.084	8.285	0.000	8.285	0.000	8.285	0.000	8.285	0.000	8.285	0.000	8.285	0.000
bromoform	8.294	1.085	8.294	0.000	8.294	0.000	8.294	0.000	8.294	0.000	8.294	0.000	8.294	0.000
Isopropylbenzene (Cumene)	8.448	1.105	8.448	0.000	8.448	0.000	8.448	0.000	8.448	0.000	8.448	0.000	8.448	0.000
1,2-Dichlorobenzene-d4 <IS>	9.398		9.398		9.398		9.398		9.398		9.398		9.398	
4-Bromofluorobenzene <Surr>	8.602	0.915	8.602	0.000	8.602	0.000	8.602	0.000	8.602	0.000	8.602	0.000	8.602	0.000
trans 1,4-dichloro-2-butene	8.819	0.938	8.819	0.000	8.819	0.000	8.819	0.000	8.819	0.000	8.819	0.000	8.819	0.000
bromobenzene	8.647	0.920	8.647	0.000	8.647	0.000	8.647	0.000	8.647	0.000	8.647	0.000	8.647	0.000
1,1,2,2-tetrachloroethane	8.728	0.929	8.728	0.000	8.728	0.000	8.728	0.000	8.728	0.000	8.728	0.000	8.728	0.000
1,2,3-trichloropropane	8.792	0.936	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000
n-propylbenzene	8.683	0.924	8.683	0.000	8.683	0.000	8.683	0.000	8.683	0.000	8.683	0.000	8.683	0.000
2-chlorotoluene	8.755	0.932	8.755	0.000	8.756	0.000	8.756	0.000	8.755	0.000	8.755	0.000	8.755	0.000
4-chlorotoluene	8.846	0.941	8.846	0.000	8.846	0.000	8.846	0.000	8.846	0.000	8.846	0.000	8.846	0.000
1,3,5-trimethylbenzene	8.792	0.936	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000	8.792	0.000
tert-butylbenzene	8.955	0.953	8.955	0.000	8.955	0.000	8.955	0.000	8.955	0.000	8.955	0.000	8.955	0.000
1,2,4-trimethylbenzene	8.991	0.957	8.991	0.000	8.991	0.000	8.991	0.000	8.991	0.000	8.991	0.000	8.991	0.000
sec-butylbenzene	9.045	0.962	9.045	0.000	9.045	0.000	9.045	0.000	9.045	0.000	9.045	0.000	9.045	0.000
1,3-dichlorobenzene	9.154	0.974	9.154	0.000	9.154	0.000	9.154	0.000	9.154	0.000	9.154	0.000	9.154	0.000
4-isopropyltoluene	9.126	0.971	9.126	0.000	9.127	0.000	9.127	0.000	9.127	0.000	9.126	0.000	9.127	0.000
1,4-dichlorobenzene	9.199	0.979	9.199	0.000	9.199	0.000	9.199	0.000	9.199	0.000	9.199	0.000	9.199	0.000
1,2-dichlorobenzene	9.398	1.000	9.398	0.000	9.398	0.000	9.398	0.000	9.398	0.000	9.398	0.000	9.398	0.000
n-butylbenzene	9.326	0.992	9.326	0.000	9.326	0.000	9.326	0.000	9.326	0.000	9.326	0.000	9.326	0.000
1,2-dibromo-3-chloropropane	9.775	1.040	9.775	0.000	9.776	0.000	9.776	0.000	9.776	0.000	9.775	0.000	9.776	0.000
1,2,4-trichlorobenzene	10.079	1.072	10.079	0.000	10.08	0.000	10.08	0.000	10.08	0.000	10.08	0.000	10.08	0.000
hexachlorobutadiene	10.072	1.072	10.072	0.000	10.072	0.000	10.072	0.000	10.072	0.000	10.072	0.000	10.072	0.000
naphthalene	10.231	1.089	10.232	0.000	10.232	0.000	10.232	0.000	10.232	0.000	10.232	0.000	10.232	0.000
1,2,3-trichlorobenzene	10.315	1.098	10.315	0.000	10.315	0.000	10.315	0.000	10.315	0.000	10.315	0.000	10.315	0.000

CC ISTD Areas

CC Data File : Z:\08\VPA\DATA\080114A\A11.D
Date Acquired: 1 Aug 2014 2:45 pm

ISTD Name	Response
Fluorobenzene IS	74763
1-chloro-3-fluorobenzene<IS>	117205
1,2-Dichlorobenzene-d4 <IS>	132462

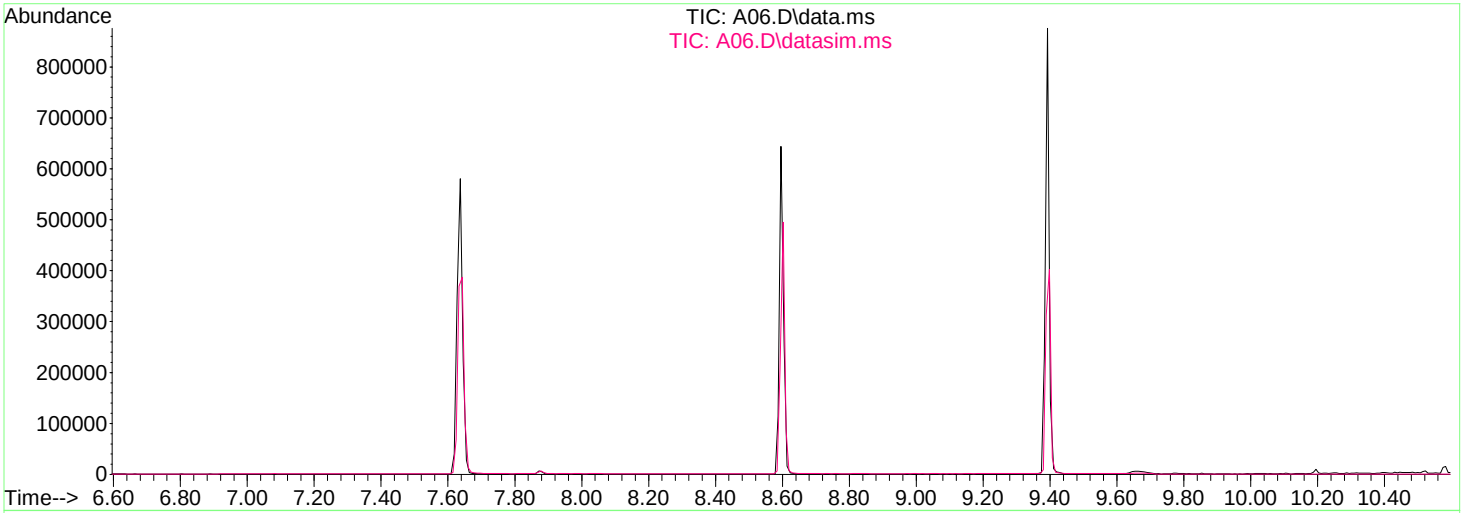
Surrogates

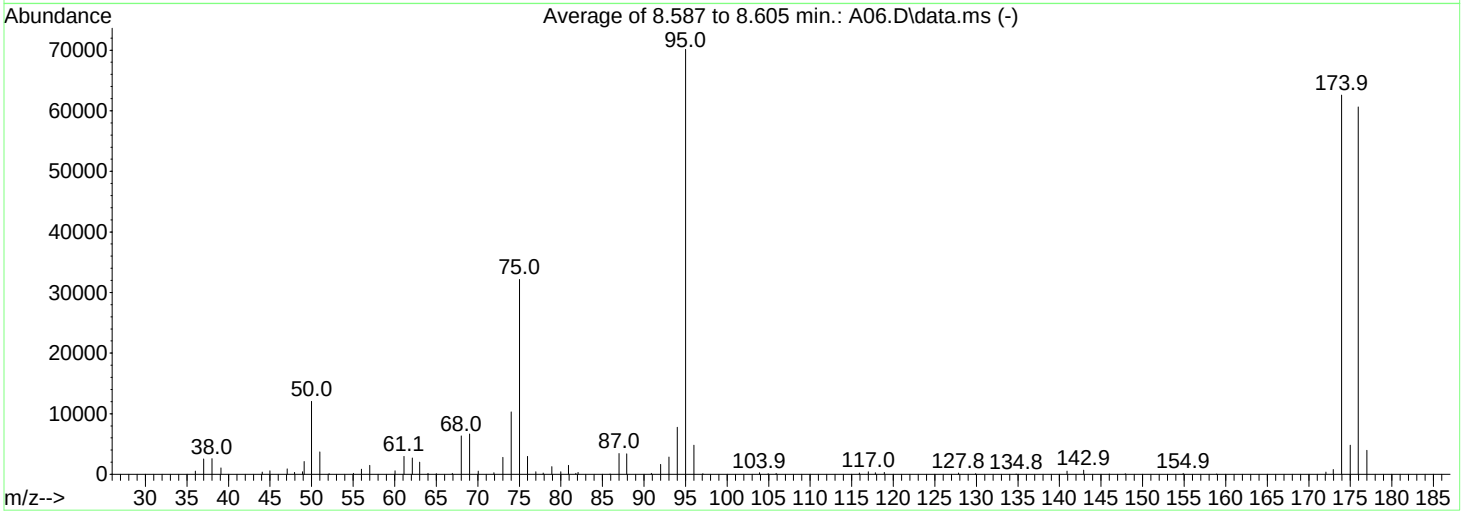
Dibromofluoromethane <SURR>
1,2-Dichloroethane-D4 <surr>
Toluene-d8 <surr>
4-Bromofluorobenzene <Surr>

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A06.D
Acq On : 1 Aug 2014 1:22 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: test.P
Integration File signal 2: rteint2.p

Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 03 21:29:33 2014





AutoFind: Scans 987, 988, 989; Background Corrected with Scan 983

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.2	12058	PASS
75	95	30	80	45.9	32172	PASS
95	95	100	100	100.0	70117	PASS
96	95	5	9	6.9	4832	PASS
173	174	0.00	2	1.2	778	PASS
174	95	50	100	89.3	62588	PASS
175	174	5	9	7.7	4811	PASS
176	174	95	101	96.9	60631	PASS
177	176	5	9	6.6	3984	PASS

SGS North America Inc.

Instrument Runlog

Instrument: VPA **Calibration Date:** 8/1/2014 **Method:** 8260/524.2
Operator: NRB **Processed By:** NRB **Posted By:** N/A **Analytical Batch:** N/A

Data Path: Z:\08\VPA\DATA\080114A\

Daily:		As Needed:			
Verify System Date/Time	☑	Refill Water Tank	☐	Adjust Tune	☐
General System Inspection	☑	Refill Standards	☐	Clean Ion Source	☐
				Check Rough Pump Oil	☐
				Check Vacuum Pressure	☐

Standards:				
	IS/Surr	VW8-33-3	**CCV**	VW8-67-1
	MeOH	P1121	**EG**	VW8-64-4
			ICV	VW8-65-2
			2nd EG	VW8-66-2

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A01.D	1	R	1		1 Aug 2014 11:50 am	N/A	
A02.D	2	R	1		1 Aug 2014 12:06 pm	N/A	
A03.D	3	R	1		1 Aug 2014 12:23 pm	N/A	
A04.D	4	R	1		1 Aug 2014 12:39 pm	N/A	
A05.D	5	R	1		1 Aug 2014 12:56 pm	N/A	
A06.D	6	IB	1		1 Aug 2014 1:22 pm	N/A	
A07.D	7	0.4	1		1 Aug 2014 1:39 pm	N/A	
A08.D	8	1	1		1 Aug 2014 1:55 pm	N/A	
A09.D	9	3	1		1 Aug 2014 2:12 pm	N/A	
A10.D	10	10	1		1 Aug 2014 2:28 pm	N/A	
A11.D	11	30	1		1 Aug 2014 2:45 pm	N/A	
A12.D	12	50	1		1 Aug 2014 3:01 pm	N/A	
A13.D	13	70	1		1 Aug 2014 3:18 pm	N/A	
A14.D	14	R	1		1 Aug 2014 3:34 pm	N/A	
A15.D	15	ICV	1		1 Aug 2014 3:51 pm	N/A	
A16.D	16	R	1		1 Aug 2014 4:07 pm		
A17.D	17	R	1		1 Aug 2014 4:24 pm		
A18.D	18	R	1		1 Aug 2014 4:40 pm		

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A06.D
Acq On : 1 Aug 2014 1:22 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 6 Sample Multiplier: 1

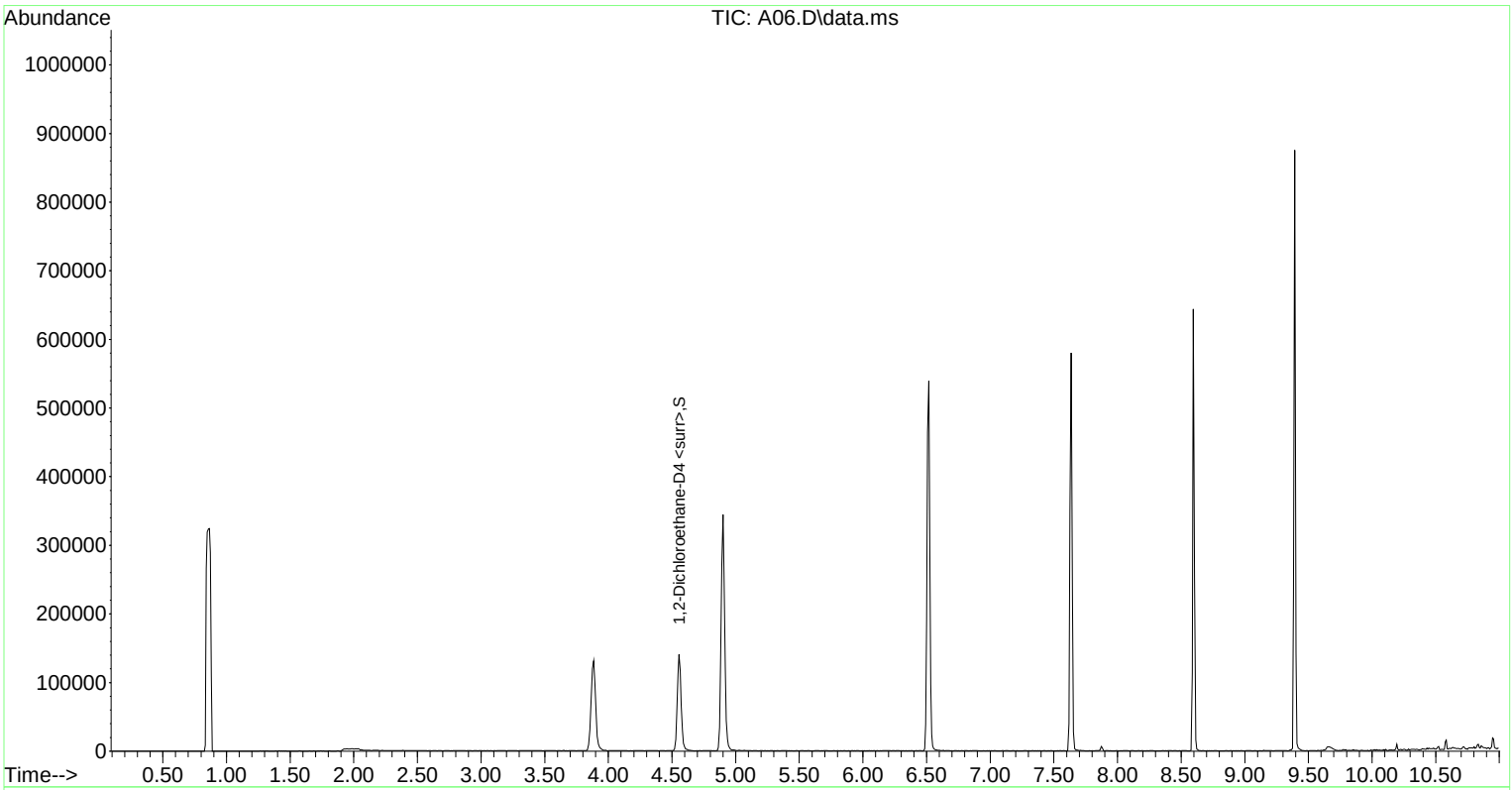
Quant Time: Aug 03 21:31:16 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

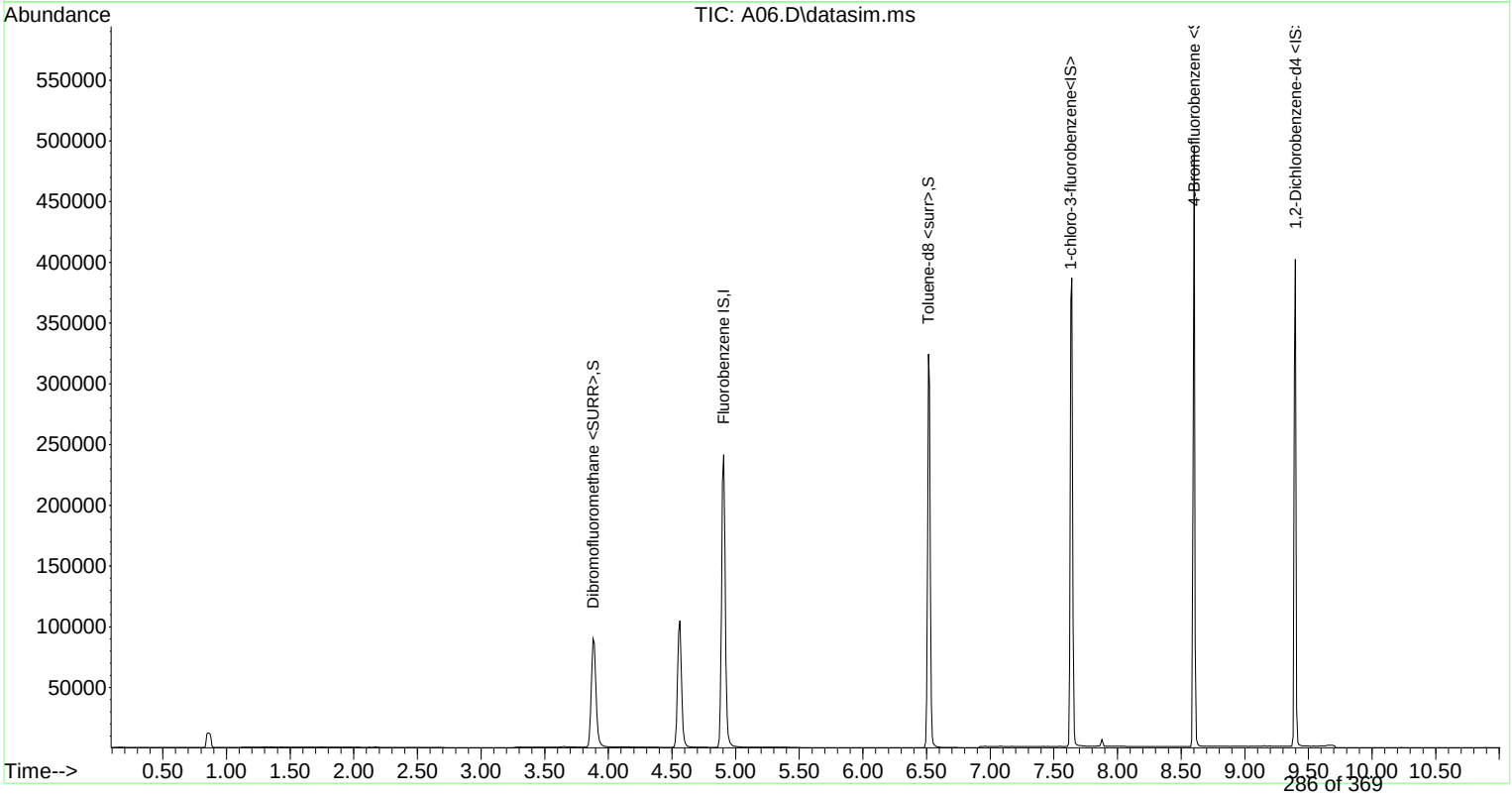
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	68481	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.633	95	110408	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	129677	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.880	111	113348	31.78	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.93%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	107945	32.06	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 106.87%			
41) Toluene-d8 <surr>	6.515	98	290434	29.55	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 98.50%			
60) 4-Bromofluorobenzene <...	8.602	95	124964	29.78	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 99.27%			
Target Compounds						Qvalue

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

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A06.D
Acq On : 1 Aug 2014 1:22 pm
Operator : NRB
Sample : IB (Sig #1); R (Sig #2)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 03 21:31:16 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A07.D
Acq On : 1 Aug 2014 1:39 pm
Operator : NRB
Sample : 0.4
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 03 21:24:09 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	68487	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	108700	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	124769	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.880	111	106709	30.17	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.57%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	106303	31.16	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 103.87%			
41) Toluene-d8 <surr>	6.515	98	285633	29.58	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 98.60%			
60) 4-Bromofluorobenzene <...	8.602	95	121219	30.02	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 100.07%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	1369	0.37	µg/l	98
3] chloromethane	1.063	50	899	0.41	µg/l	96
4] vinyl chloride	1.103	62	1134	0.38	µg/l #	74
5] bromomethane	1.279	96	672	0.46	µg/l #	1
6] chloroethane	1.343	64	757	0.45	µg/l #	1
7] trichlorofluoromethane	1.423	101	1457	0.37	µg/l	96
8] 1,1,2-trichloro-1,2,2-...	1.758	101	1118	0.52	µg/L	99
9] 1,1-dichloroethene	1.725	96	669	0.35	µg/l	98
10] Acetone	2.173	43	2202	1.62	µg/L	94
11] Acrylonitrile	2.814	53	729	0.59	µg/L	84
12] Methyliodide	1.817	142	822	0.47	µg/L	100
13] Carbon disulfide	1.741	76	3235	0.54	µg/L	99
14] methylene chloride	2.125	84	1028	0.38	µg/l	99
15] methyl-t-butyl ether	2.343	73	2881	0.49	µg/L #	80
16] trans-1,2-dichloroethene	2.246	96	864	0.34	µg/l	98
17] Vinylacetate	3.041	43	1038	0.32	µg/L	99
18) n-hexane	2.297	56	321	0.23	µg/L #	52
19] 1,1-dichloroethane	2.761	63	1848	0.37	µg/l #	81
20] 2-Butanone(MEK)	4.084	43	1673	1.08	µg/L	94
21] 2,2-dichloropropane	3.423	77	1109	0.35	µg/l	99
22] cis-1,2-dichloroethene	3.306	96	1157	0.39	µg/l	91
23] bromochloromethane	3.530	128	496	0.36	µg/l	95
24) cyclohexane	3.514	56	895	0.27	µg/L #	79
25] chloroform	3.656	83	2186	0.41	µg/l	99
27] 1,1,1-trichloroethane	3.880	97	1387	0.35	µg/l	97
28] carbon tetrachloride	3.783	117	1055	0.33	µg/l	96
29] 1,1-dichloropropene	4.055	75	1190	0.34	µg/l	98
31] benzene	4.384	78	3658	0.35	µg/l	99
32] 1,2-dichloroethane	4.641	62	1157	0.36	µg/l	99
33] trichloroethene	5.091	95	862	0.33	µg/l	92
34] 1,2-dichloropropane	5.637	63	946	0.35	µg/l #	88
35] dibromomethane	5.531	93	710	0.38	µg/l	98
37] bromodichloromethane	5.735	83	1164	0.35	µg/l	97
38] cis-1,3-dichloropropene	6.352	75	1225	0.33	µg/l	98
39] 4-Methyl-2-pentanone	6.945	58	1066	1.00	µg/L	96
42] toluene	6.561	92	2035	0.35	µg/l	98
43] trans-1,3-dichloropropene	6.963	75	1018	0.32	µg/l	100
44] 1,1,2-trichloroethane	7.090	83	689	0.35	µg/l	93

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A07.D
Acq On : 1 Aug 2014 1:39 pm
Operator : NRB
Sample : 0.4
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 03 21:24:09 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

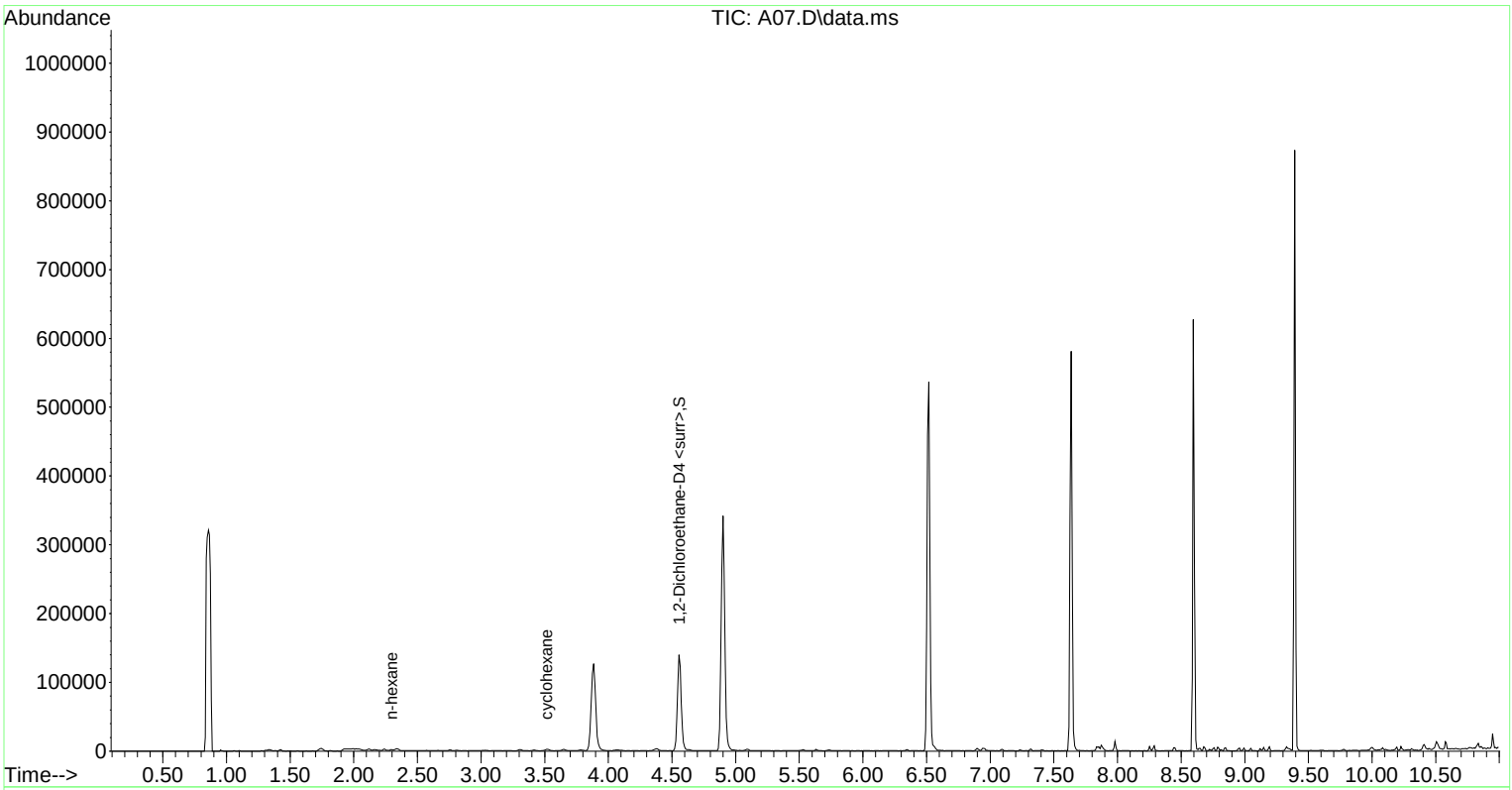
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45] tetrachloroethene	6.903	166	924	0.33	µg/l		95
46] 1,3-dichloropropane	7.316	76	1211	0.33	µg/l		92
47] 2-Hexanone	7.660	43	1838	0.93	µg/L		85
48] dibromochloromethane	7.235	129	788	0.33	µg/l		93
49] 1,2-dibromoethane	7.416	107	830	0.34	µg/l	#	98
50] 1-chlorohexane	7.860	55	970	0.51	µg/L		75
51] chlorobenzene	7.841	112	2314	0.36	µg/l		98
52] 1,1,1,2-tetrachloroethane	7.896	133	738	0.34	µg/l		99
53] ethylbenzene	7.878	106	1308	0.38	µg/l		90
54] P & M -Xylene	7.986	106	2585	0.68	µg/l		93
55] o-xylene	8.258	106	1198	0.34	µg/l		97
56] styrene	8.285	104	1814	0.31	µg/l		88
57] bromoform	8.294	173	637	0.34	µg/l		98
58] Isopropylbenzene (Cumene)	8.448	105	2649	0.32	µg/l		95
61] trans 1,4-dichloro-2-b...	8.819	53	417	0.47	µg/L		90
62] bromobenzene	8.647	156	921	0.35	µg/l		99
63] 1,1,2,2-tetrachloroethane	8.728	83	1145	0.35	µg/l		95
64] 1,2,3-trichloropropane	8.792	110	319	0.35	µg/l	#	68
65] n-propylbenzene	8.683	91	3308	0.33	µg/l		99
66] 2-chlorotoluene	8.755	91	2094	0.34	µg/l		100
67] 4-chlorotoluene	8.846	91	2108	0.33	µg/l		97
68] 1,3,5-trimethylbenzene	8.792	105	1937	0.32	µg/l		95
69] tert-butylbenzene	8.955	119	1389	0.31	µg/l		97
70] 1,2,4-trimethylbenzene	8.991	105	1798	0.30	µg/l		96
71] sec-butylbenzene	9.045	105	1940	0.30	µg/l		97
72] 1,3-dichlorobenzene	9.154	146	1514	0.35	µg/l		97
73] 4-isopropyltoluene	9.126	119	1443	0.30	µg/l		96
74] 1,4-dichlorobenzene	9.199	146	1400	0.33	µg/l		100
75] 1,2-dichlorobenzene	9.398	146	1621	0.37	µg/l	#	25
76] n-butylbenzene	9.326	91	1336	0.31	µg/l		99
77] 1,2-dibromo-3-chloropr...	9.775	75	228	0.36	µg/l		95
78] 1,2,4-trichlorobenzene	10.079	180	653	0.34	µg/l		99
79] hexachlorobutadiene	10.072	225	215	0.33	µg/l	#	41
80] naphthalene	10.232	128	2027	0.34	µg/l		99
81] 1,2,3-trichlorobenzene	10.315	180	632	0.35	µg/l		96

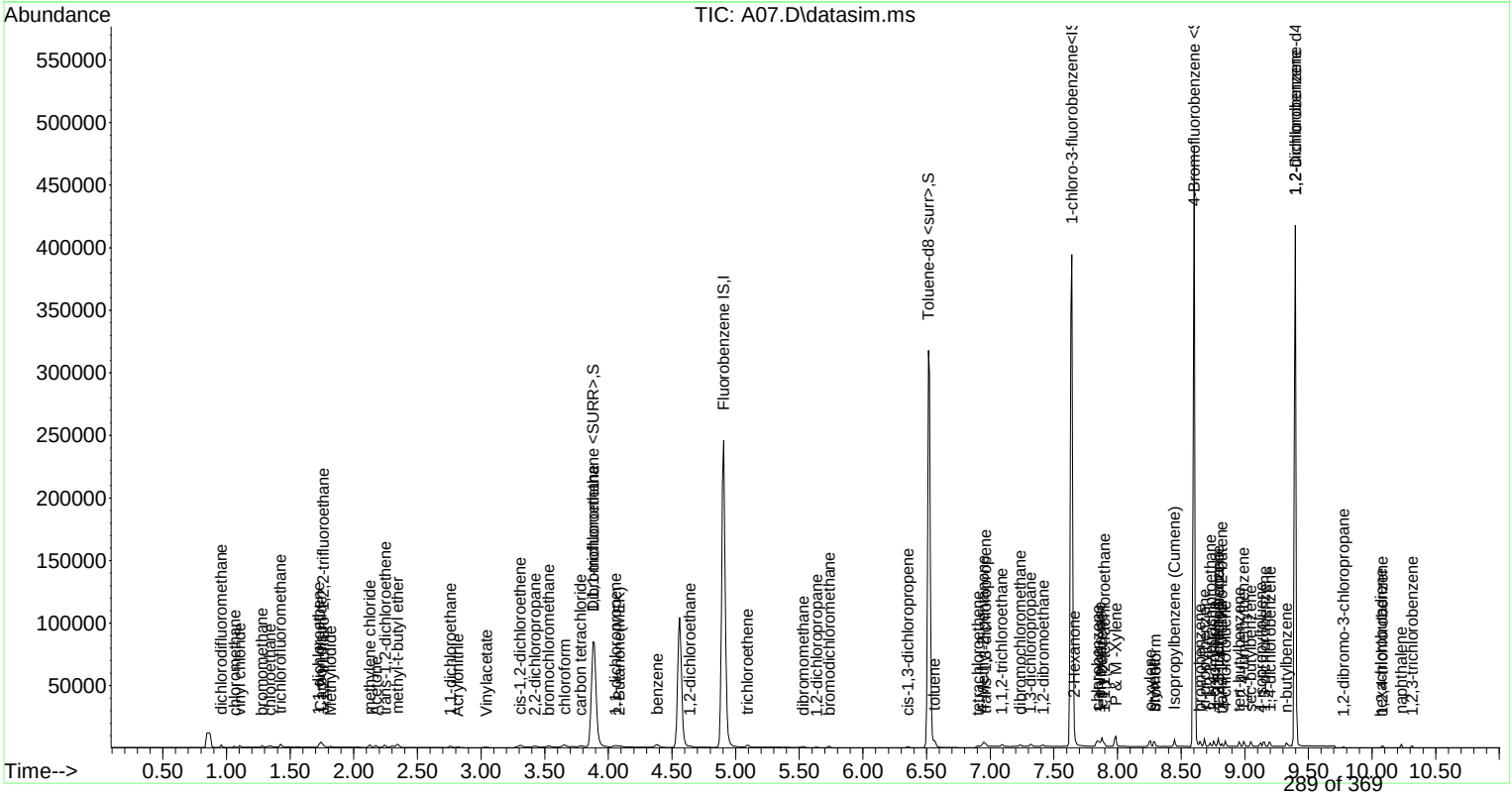
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A07.D
Acq On : 1 Aug 2014 1:39 pm
Operator : NRB
Sample : 0.4
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 03 21:24:09 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A08.D
Acq On : 1 Aug 2014 1:55 pm
Operator : NRB
Sample : 1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 03 21:24:36 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	67523	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	109759	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	125651	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	111108	31.22	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.07%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	106197	31.03	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 103.43%			
41) Toluene-d8 <surr>	6.515	98	283961	29.41	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 98.03%			
60) 4-Bromofluorobenzene <...	8.602	95	121829	29.97	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 99.90%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	4064	1.08	µg/l	100
3] chloromethane	1.063	50	2432	1.08	µg/l	98
4] vinyl chloride	1.103	62	3315	1.07	µg/l	96
5] bromomethane	1.279	96	1505	1.03	µg/l #	52
6] chloroethane	1.343	64	1655	1.00	µg/l #	1
7] trichlorofluoromethane	1.424	101	4276	1.07	µg/l	99
8] 1,1,2-trichloro-1,2,2-...	1.758	101	3152	1.50	µg/L	99
9] 1,1-dichloroethene	1.733	96	1956	1.03	µg/l	95
10] Acetone	2.173	43	3497	2.72	µg/L	95
11] Acrylonitrile	2.814	53	1710	1.43	µg/L	93
12] Methyliodide	1.817	142	2099	1.30	µg/L	98
13] Carbon disulfide	1.742	76	9001	1.51	µg/L	100
14] methylene chloride	2.125	84	2747	1.01	µg/l	98
15] methyl-t-butyl ether	2.343	73	7729	1.39	µg/L #	74
16] trans-1,2-dichloroethene	2.246	96	2522	1.01	µg/l	98
17] Vinylacetate	3.033	43	3256	1.01	µg/L	99
18) n-hexane	2.297	56	852	0.72	µg/L #	67
19] 1,1-dichloroethane	2.761	63	4895	1.00	µg/l	96
20] 2-Butanone(MEK)	4.084	43	3914	2.69	µg/L	98
21] 2,2-dichloropropane	3.423	77	3251	1.02	µg/l	99
22] cis-1,2-dichloroethene	3.306	96	3009	1.01	µg/l	99
23] bromochloromethane	3.540	128	1445	1.04	µg/l	98
24) cyclohexane	3.514	56	3373	1.02	µg/L	97
25] chloroform	3.656	83	5348	1.00	µg/l	99
27] 1,1,1-trichloroethane	3.880	97	4144	1.03	µg/l	99
28] carbon tetrachloride	3.793	117	3297	1.03	µg/l	97
29] 1,1-dichloropropene	4.055	75	3298	0.98	µg/l	98
31] benzene	4.384	78	10351	1.01	µg/l	100
32] 1,2-dichloroethane	4.641	62	3249	1.02	µg/l	98
33] trichloroethene	5.091	95	2676	1.03	µg/l	97
34] 1,2-dichloropropane	5.637	63	2532	0.97	µg/l	98
35] dibromomethane	5.531	93	1900	1.02	µg/l	98
37] bromodichloromethane	5.735	83	3300	1.00	µg/l	99
38] cis-1,3-dichloropropene	6.352	75	3363	0.95	µg/l	99
39] 4-Methyl-2-pentanone	6.945	58	2840	2.79	µg/L	99
42] toluene	6.562	92	6010	1.02	µg/l	96
43] trans-1,3-dichloropropene	6.963	75	2798	0.91	µg/l	100
44] 1,1,2-trichloroethane	7.099	83	1827	0.94	µg/l	97

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A08.D
Acq On : 1 Aug 2014 1:55 pm
Operator : NRB
Sample : 1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 03 21:24:36 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

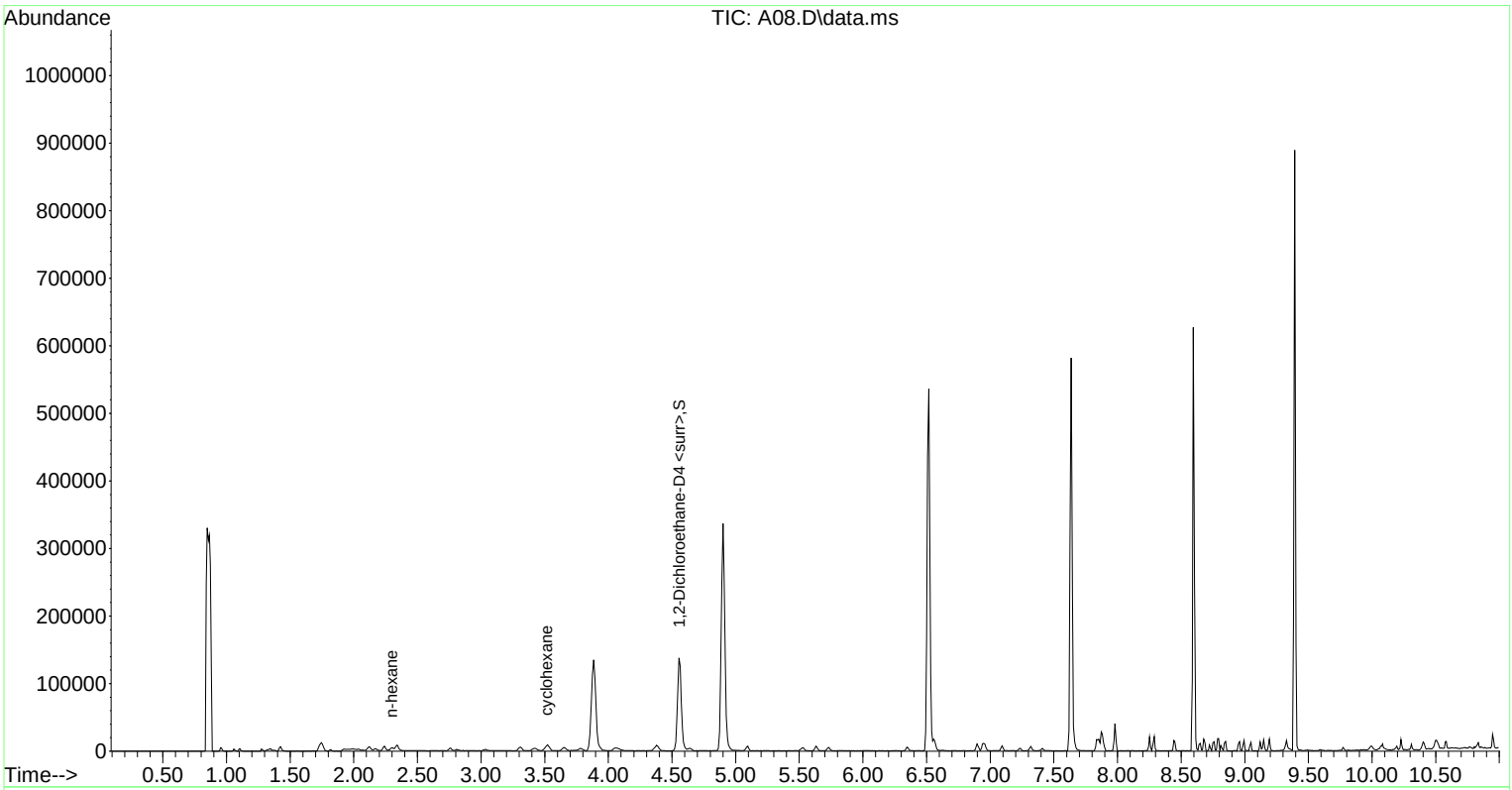
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45] tetrachloroethene	6.903	166	2887	1.01	µg/l		99
46] 1,3-dichloropropane	7.316	76	3476	0.96	µg/l		96
47] 2-Hexanone	7.660	43	5734	2.91	µg/L		98
48] dibromochloromethane	7.235	129	2267	0.95	µg/l		100
49] 1,2-dibromoethane	7.416	107	2180	0.93	µg/l		95
50] 1-chlorohexane	7.851	55	2735	1.45	µg/L	#	43
51] chlorobenzene	7.842	112	6494	0.99	µg/l		98
52] 1,1,1,2-tetrachloroethane	7.896	133	2017	0.94	µg/l		97
53] ethylbenzene	7.878	106	4554	1.19	µg/l		83
54] P & M -Xylene	7.986	106	7080	1.90	µg/l		99
55] o-xylene	8.258	106	3467	0.98	µg/l		93
56] styrene	8.285	104	5298	0.93	µg/l		97
57] bromoform	8.294	173	1669	0.92	µg/l		96
58] Isopropylbenzene (Cumene)	8.448	105	8105	0.97	µg/l		99
61] trans 1,4-dichloro-2-b...	8.819	53	1300	1.47	µg/L	#	69
62] bromobenzene	8.647	156	2648	0.99	µg/l		99
63] 1,1,2,2-tetrachloroethane	8.728	83	3108	0.96	µg/l		99
64] 1,2,3-trichloropropane	8.792	110	826	0.93	µg/l	#	75
65] n-propylbenzene	8.683	91	9797	0.98	µg/l		99
66] 2-chlorotoluene	8.756	91	5953	0.98	µg/l		99
67] 4-chlorotoluene	8.846	91	6300	0.99	µg/l		94
68] 1,3,5-trimethylbenzene	8.792	105	5646	0.94	µg/l		100
69] tert-butylbenzene	8.955	119	4388	0.97	µg/l		97
70] 1,2,4-trimethylbenzene	8.991	105	5384	0.93	µg/l		99
71] sec-butylbenzene	9.045	105	6101	0.97	µg/l		99
72] 1,3-dichlorobenzene	9.154	146	4223	0.99	µg/l		98
73] 4-isopropyltoluene	9.127	119	4346	0.94	µg/l		100
74] 1,4-dichlorobenzene	9.199	146	4375	1.02	µg/l		99
75] 1,2-dichlorobenzene	9.398	146	4288	0.98	µg/l	#	68
76] n-butylbenzene	9.326	91	4011	0.94	µg/l		97
77] 1,2-dibromo-3-chloropr...	9.776	75	597	0.96	µg/l		82
78] 1,2,4-trichlorobenzene	10.080	180	1820	0.96	µg/l		98
79] hexachlorobutadiene	10.072	225	646	0.98	µg/l		96
80] naphthalene	10.232	128	5530	0.95	µg/l		99
81] 1,2,3-trichlorobenzene	10.315	180	1655	0.94	µg/l		99

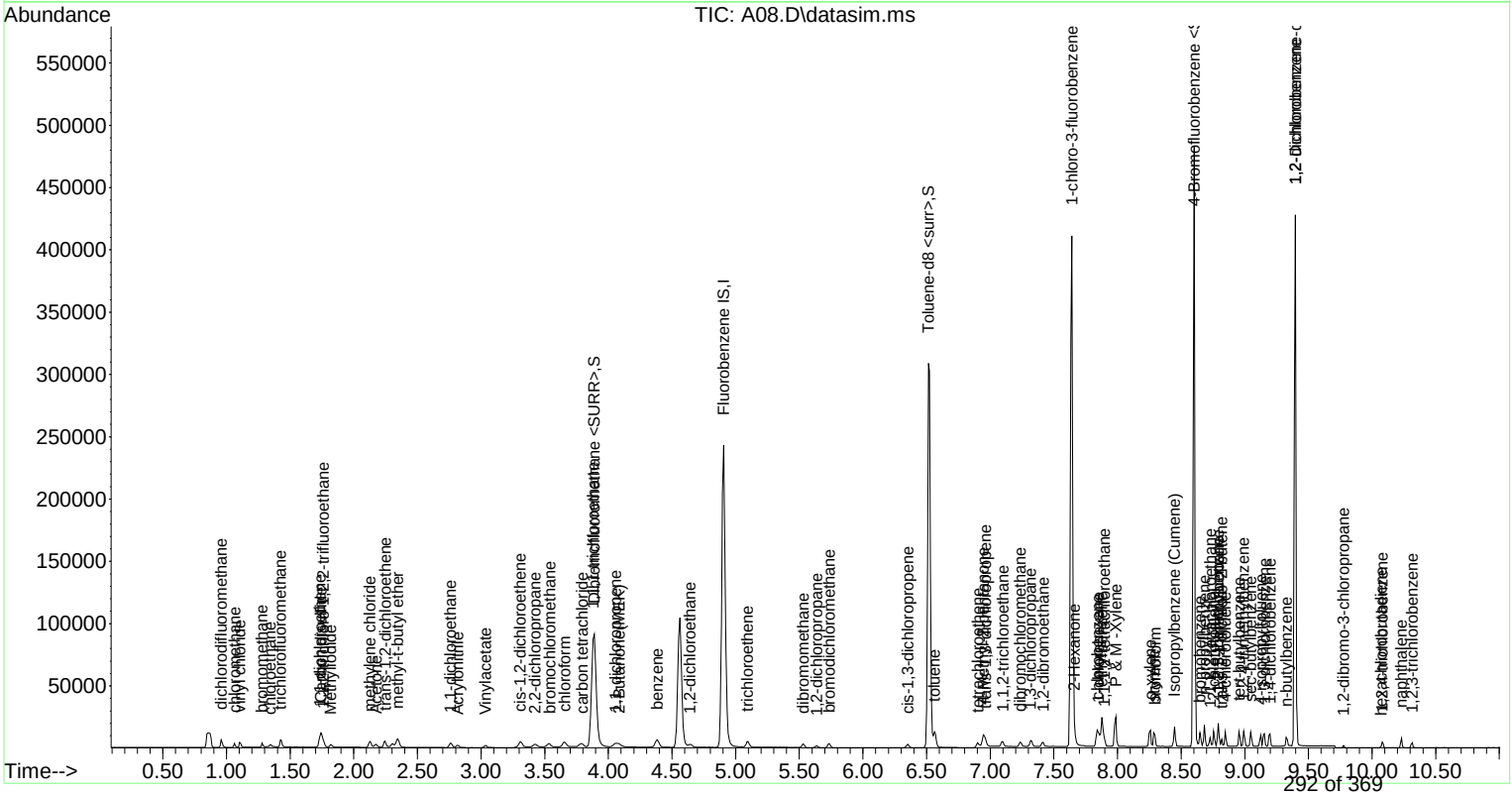
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A08.D
Acq On : 1 Aug 2014 1:55 pm
Operator : NRB
Sample : 1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 03 21:24:36 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A09.D
Acq On : 1 Aug 2014 2:12 pm
Operator : NRB
Sample : 3
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 03 21:25:05 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	69282	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	111175	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	129276	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	111434	30.39	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.30%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	108402	30.65	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 102.17%			
41) Toluene-d8 <surr>	6.515	98	293160	29.98	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 99.93%			
60) 4-Bromofluorobenzene <...	8.602	95	124926	29.91	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 99.70%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	12781	3.22	µg/l	99
3] chloromethane	1.063	50	7482	3.16	µg/l	100
4] vinyl chloride	1.103	62	10275	3.18	µg/l	99
5] bromomethane	1.279	96	4125	2.82	µg/l	83
6] chloroethane	1.343	64	4888	2.91	µg/l	96
7] trichlorofluoromethane	1.424	101	13445	3.20	µg/l	99
8] 1,1,2-trichloro-1,2,2-...	1.758	101	10605	4.80	µg/L	99
9] 1,1-dichloroethene	1.733	96	6377	3.20	µg/l	97
10] Acetone	2.173	43	9299	7.46	µg/L	98
11] Acrylonitrile	2.814	53	6139	4.86	µg/L	99
12] Methyliodide	1.817	142	6824	4.20	µg/L	97
13] Carbon disulfide	1.741	76	29606	4.75	µg/L	100
14] methylene chloride	2.125	84	9141	3.21	µg/l	99
15] methyl-t-butyl ether	2.343	73	28699	4.88	µg/L #	80
16] trans-1,2-dichloroethene	2.246	96	8454	3.22	µg/l	99
17] Vinylacetate	3.033	43	10821	3.20	µg/L	99
18) n-hexane	2.297	56	3764	3.06	µg/L	90
19] 1,1-dichloroethane	2.761	63	17062	3.28	µg/l	99
20] 2-Butanone(MEK)	4.084	43	14442	9.51	µg/L	100
21] 2,2-dichloropropane	3.423	77	10845	3.23	µg/l	99
22] cis-1,2-dichloroethene	3.306	96	9692	3.13	µg/l	99
23] bromochloromethane	3.530	128	4739	3.23	µg/l	100
24) cyclohexane	3.514	56	12288	3.44	µg/L	98
25] chloroform	3.656	83	17156	3.10	µg/l	98
27] 1,1,1-trichloroethane	3.880	97	13614	3.22	µg/l	99
28] carbon tetrachloride	3.783	117	10940	3.25	µg/l	99
29] 1,1-dichloropropene	4.055	75	11207	3.17	µg/l	99
31] benzene	4.384	78	34422	3.21	µg/l	99
32] 1,2-dichloroethane	4.641	62	10910	3.24	µg/l	100
33] trichloroethene	5.091	95	8684	3.19	µg/l	100
34] 1,2-dichloropropane	5.637	63	8952	3.24	µg/l	100
35] dibromomethane	5.531	93	6065	3.12	µg/l	98
37] bromodichloromethane	5.735	83	11351	3.26	µg/l	99
38] cis-1,3-dichloropropene	6.352	75	11479	3.13	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	10376	9.68	µg/L	98
42] toluene	6.562	92	19247	3.17	µg/l	100
43] trans-1,3-dichloropropene	6.963	75	9942	3.15	µg/l	97
44] 1,1,2-trichloroethane	7.090	83	6569	3.25	µg/l	96

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A09.D
Acq On : 1 Aug 2014 2:12 pm
Operator : NRB
Sample : 3
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 03 21:25:05 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

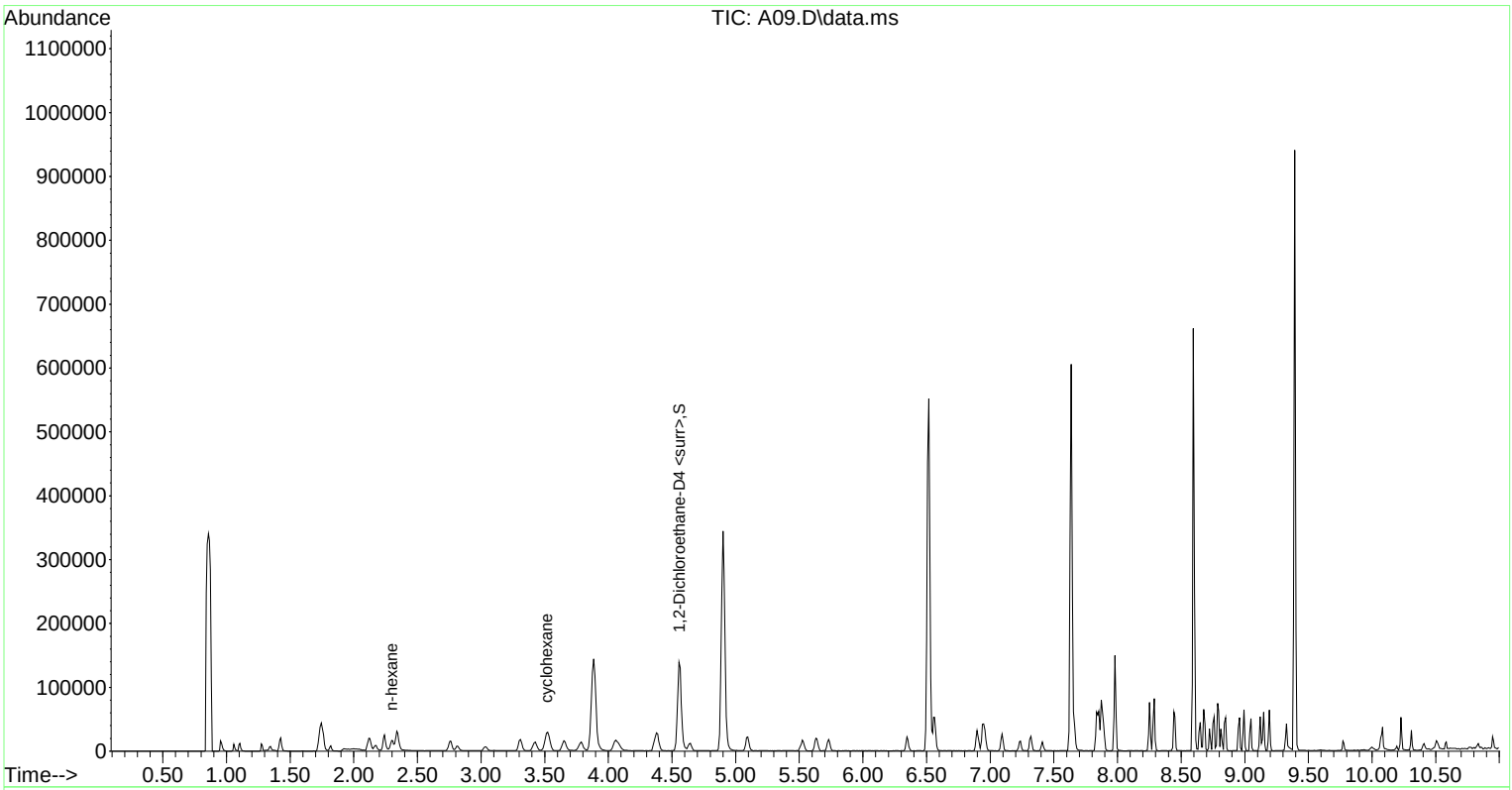
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45] tetrachloroethene	6.903	166	9483	3.20	µg/l		97
46] 1,3-dichloropropane	7.316	76	12202	3.24	µg/l		100
47] 2-Hexanone	7.660	43	20364	9.88	µg/L		99
48] dibromochloromethane	7.235	129	7999	3.23	µg/l		98
49] 1,2-dibromoethane	7.416	107	7690	3.17	µg/l		99
50] 1-chlorohexane	7.851	55	9534	4.86	µg/L		89
51] chlorobenzene	7.841	112	21543	3.19	µg/l		100
52] 1,1,1,2-tetrachloroethane	7.896	133	7041	3.18	µg/l		99
53] ethylbenzene	7.878	106	11884	3.04	µg/l		91
54] P & M -Xylene	7.986	106	25522	6.55	µg/l		99
55] o-xylene	8.258	106	11821	3.22	µg/l		99
56] styrene	8.285	104	19589	3.29	µg/l		85
57] bromoform	8.294	173	5858	3.13	µg/l		98
58] Isopropylbenzene (Cumene)	8.448	105	28800	3.29	µg/l		99
61] trans 1,4-dichloro-2-b...	8.819	53	4365	4.71	µg/L		94
62] bromobenzene	8.647	156	9049	3.22	µg/l		100
63] 1,1,2,2-tetrachloroethane	8.728	83	10796	3.17	µg/l		99
64] 1,2,3-trichloropropane	8.792	110	3006	3.21	µg/l	#	74
65] n-propylbenzene	8.683	91	33608	3.18	µg/l		99
66] 2-chlorotoluene	8.756	91	20803	3.24	µg/l		100
67] 4-chlorotoluene	8.846	91	21675	3.22	µg/l		99
68] 1,3,5-trimethylbenzene	8.792	105	20087	3.19	µg/l		98
69] tert-butylbenzene	8.955	119	15466	3.25	µg/l		99
70] 1,2,4-trimethylbenzene	8.991	105	19828	3.24	µg/l		99
71] sec-butylbenzene	9.045	105	21567	3.23	µg/l		100
72] 1,3-dichlorobenzene	9.154	146	14044	3.14	µg/l		99
73] 4-isopropyltoluene	9.127	119	15644	3.20	µg/l		98
74] 1,4-dichlorobenzene	9.199	146	14372	3.18	µg/l		99
75] 1,2-dichlorobenzene	9.398	146	14473	3.15	µg/l		91
76] n-butylbenzene	9.326	91	13540	3.07	µg/l		100
77] 1,2-dibromo-3-chloropr...	9.776	75	2065	3.18	µg/l		95
78] 1,2,4-trichlorobenzene	10.080	180	6305	3.18	µg/l		100
79] hexachlorobutadiene	10.072	225	2153	3.13	µg/l		95
80] naphthalene	10.232	128	19321	3.17	µg/l		99
81] 1,2,3-trichlorobenzene	10.315	180	5473	3.02	µg/l		98

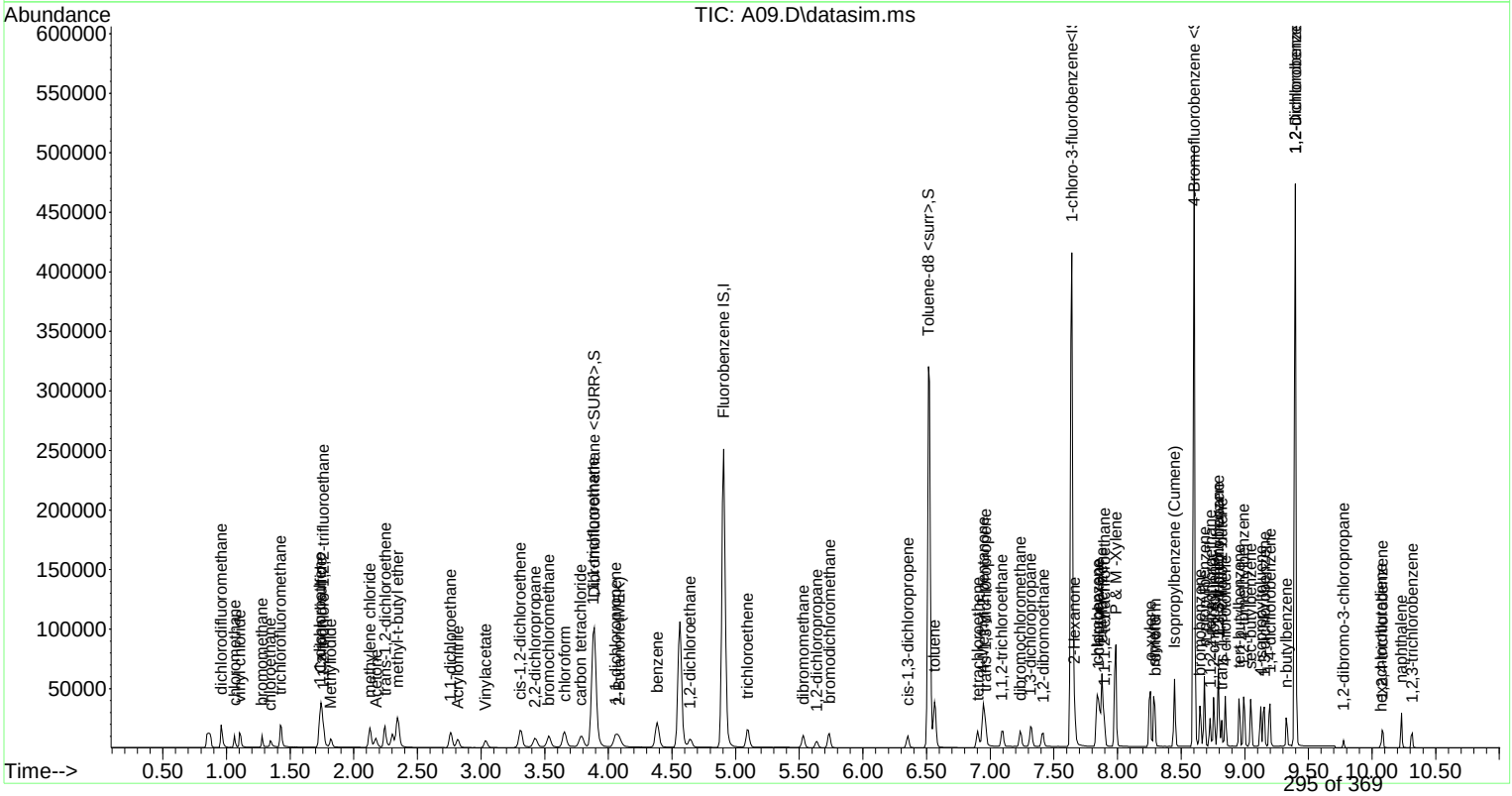
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A09.D
Acq On : 1 Aug 2014 2:12 pm
Operator : NRB
Sample : 3
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 03 21:25:05 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A10.D
Acq On : 1 Aug 2014 2:28 pm
Operator : NRB
Sample : 10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 03 21:25:31 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.906	70	71083	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.642	95	112781	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	127615	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.890	111	111818	29.77	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.23%				
30) 1,2-Dichloroethane-D4 ...	4.555	65	104264	28.98	µg/l		0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 96.60%				
41) Toluene-d8 <surr>	6.515	98	301491	30.31	µg/l		0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 101.03%				
60) 4-Bromofluorobenzene <...	8.602	95	125059	30.26	µg/l		0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 100.87%				
Target Compounds							Qvalue
2] dichlorodifluoromethane	0.959	85	42971	10.43	µg/l		99
3] chloromethane	1.063	50	22434	9.39	µg/l		100
4] vinyl chloride	1.103	62	31884	9.68	µg/l		99
5] bromomethane	1.279	96	13107	8.96	µg/l		94
6] chloroethane	1.343	64	15932	9.39	µg/l		98
7] trichlorofluoromethane	1.424	101	45420	10.42	µg/l		100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	37873	16.34	µg/L		100
9] 1,1-dichloroethene	1.733	96	22441	10.77	µg/l		99
10] Acetone	2.173	43	28469	23.47	µg/L		100
11] Acrylonitrile	2.814	53	20324	15.54	µg/L		99
12] Methyliodide	1.817	142	27577	16.20	µg/L		100
13] Carbon disulfide	1.741	76	103854	15.98	µg/L		100
14] methylene chloride	2.125	84	30458	10.34	µg/l		99
15] methyl-t-butyl ether	2.343	73	106036	16.99	µg/L		99
16] trans-1,2-dichloroethene	2.246	96	29740	10.82	µg/l		100
17] Vinylacetate	3.033	43	38072	10.75	µg/L		100
18) n-hexane	2.297	56	15705	11.87	µg/L	#	78
19] 1,1-dichloroethane	2.761	63	57073	10.56	µg/l		99
20] 2-Butanone(MEK)	4.084	43	50968	32.12	µg/L		100
21] 2,2-dichloropropane	3.423	77	38356	10.89	µg/l		99
22] cis-1,2-dichloroethene	3.306	96	33227	10.36	µg/l		100
23] bromochloromethane	3.530	128	16235	10.63	µg/l		99
24) cyclohexane	3.514	56	44909	11.74	µg/L		98
25] chloroform	3.656	83	57312	10.08	µg/l		100
27] 1,1,1-trichloroethane	3.880	97	47956	10.83	µg/l		99
28] carbon tetrachloride	3.783	117	38571	10.90	µg/l		99
29] 1,1-dichloropropene	4.055	75	40330	10.88	µg/l		99
31] benzene	4.384	78	119929	10.70	µg/l		99
32] 1,2-dichloroethane	4.641	62	37200	10.62	µg/l		100
33] trichloroethene	5.091	95	30488	10.73	µg/l		99
34] 1,2-dichloropropane	5.637	63	31224	10.80	µg/l		100
35] dibromomethane	5.531	93	20853	10.36	µg/l		100
37] bromodichloromethane	5.735	83	38993	10.72	µg/l		100
38] cis-1,3-dichloropropene	6.352	75	41509	10.80	µg/l		100
39] 4-Methyl-2-pentanone	6.945	58	37263	33.02	µg/L		100
42] toluene	6.562	92	67257	10.72	µg/l		99
43] trans-1,3-dichloropropene	6.963	75	36611	11.11	µg/l		99
44] 1,1,2-trichloroethane	7.090	83	22695	10.85	µg/l		99

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A10.D
Acq On : 1 Aug 2014 2:28 pm
Operator : NRB
Sample : 10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 03 21:25:31 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

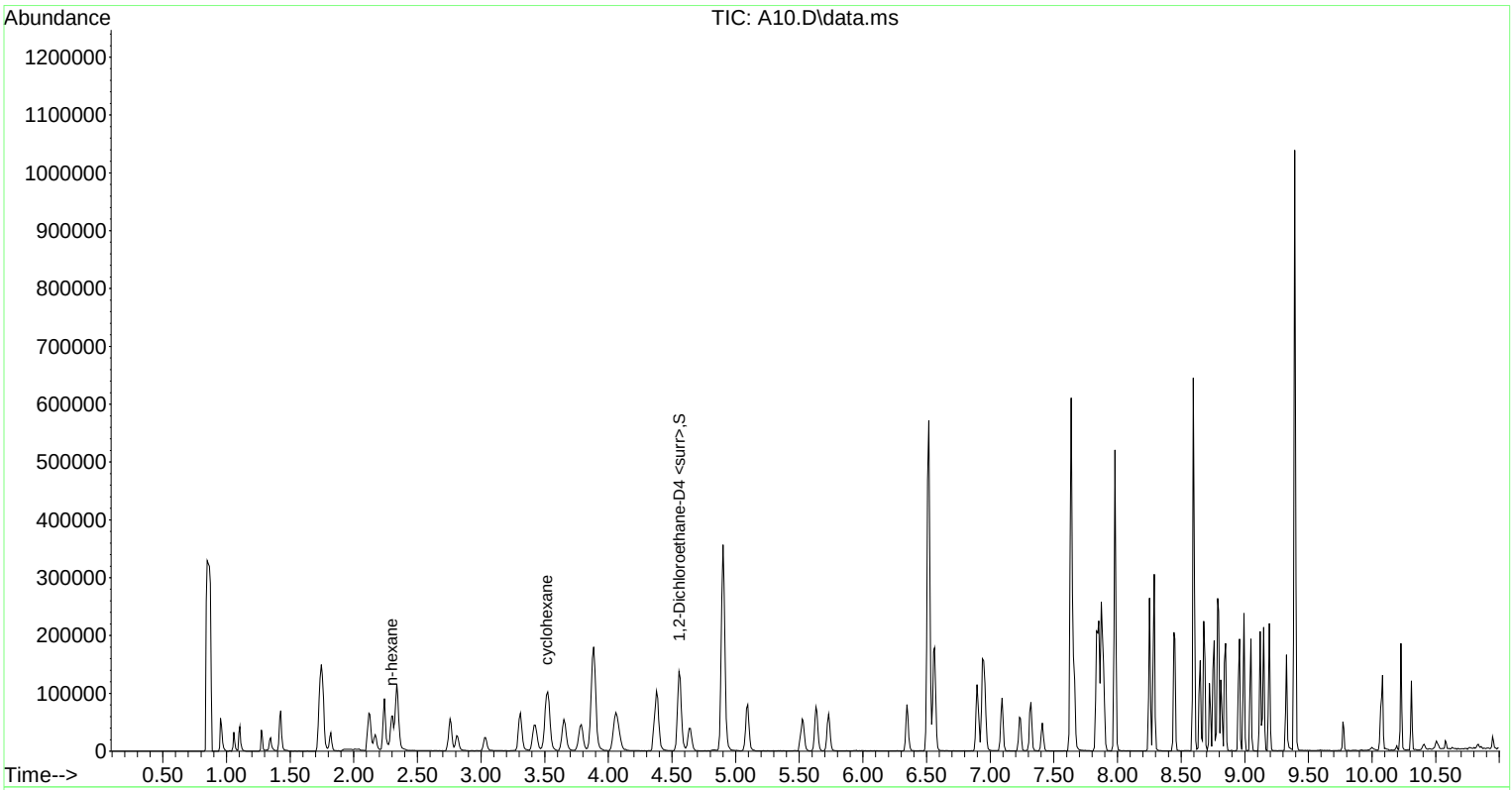
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45] tetrachloroethene	6.903	166	34286	11.10	µg/l		99
46] 1,3-dichloropropane	7.316	76	43023	10.99	µg/l		100
47] 2-Hexanone	7.660	43	73574	34.01	µg/L		99
48] dibromochloromethane	7.235	129	28586	11.06	µg/l		100
49] 1,2-dibromoethane	7.416	107	27845	11.02	µg/l		99
50] 1-chlorohexane	7.851	55	33319	16.36	µg/L		96
51] chlorobenzene	7.841	112	75645	10.81	µg/l		100
52] 1,1,1,2-tetrachloroethane	7.896	133	25053	10.90	µg/l		99
53] ethylbenzene	7.878	106	38259	9.73	µg/l		98
54] P & M -Xylene	7.986	106	89665	22.08	µg/l		99
55] o-xylene	8.258	106	42337	11.06	µg/l		99
56] styrene	8.285	104	71221	11.39	µg/l		98
57] bromoform	8.294	173	21336	10.96	µg/l		99
58] Isopropylbenzene (Cumene)	8.448	105	101945	11.16	µg/l		100
61] trans 1,4-dichloro-2-b...	8.819	53	15940	16.88	µg/L		96
62] bromobenzene	8.647	156	30934	10.91	µg/l		100
63] 1,1,2,2-tetrachloroethane	8.728	83	37659	10.93	µg/l		100
64] 1,2,3-trichloropropane	8.792	110	10622	11.16	µg/l	#	71
65] n-propylbenzene	8.683	91	120969	11.25	µg/l		100
66] 2-chlorotoluene	8.755	91	71388	10.98	µg/l		100
67] 4-chlorotoluene	8.846	91	76828	11.21	µg/l		99
68] 1,3,5-trimethylbenzene	8.792	105	73243	11.39	µg/l		100
69] tert-butylbenzene	8.955	119	55650	11.41	µg/l		99
70] 1,2,4-trimethylbenzene	8.991	105	73854	11.72	µg/l		99
71] sec-butylbenzene	9.045	105	78630	11.50	µg/l		100
72] 1,3-dichlorobenzene	9.154	146	48926	10.84	µg/l		100
73] 4-isopropyltoluene	9.127	119	58457	11.63	µg/l		99
74] 1,4-dichlorobenzene	9.199	146	51361	11.17	µg/l		99
75] 1,2-dichlorobenzene	9.398	146	49704	10.75	µg/l		98
76] n-butylbenzene	9.326	91	51208	11.37	µg/l		100
77] 1,2-dibromo-3-chloropr...	9.776	75	7004	10.73	µg/l		96
78] 1,2,4-trichlorobenzene	10.080	180	21827	10.89	µg/l		99
79] hexachlorobutadiene	10.072	225	7696	11.05	µg/l		100
80] naphthalene	10.232	128	67326	10.92	µg/l		100
81] 1,2,3-trichlorobenzene	10.315	180	20110	10.98	µg/l		100

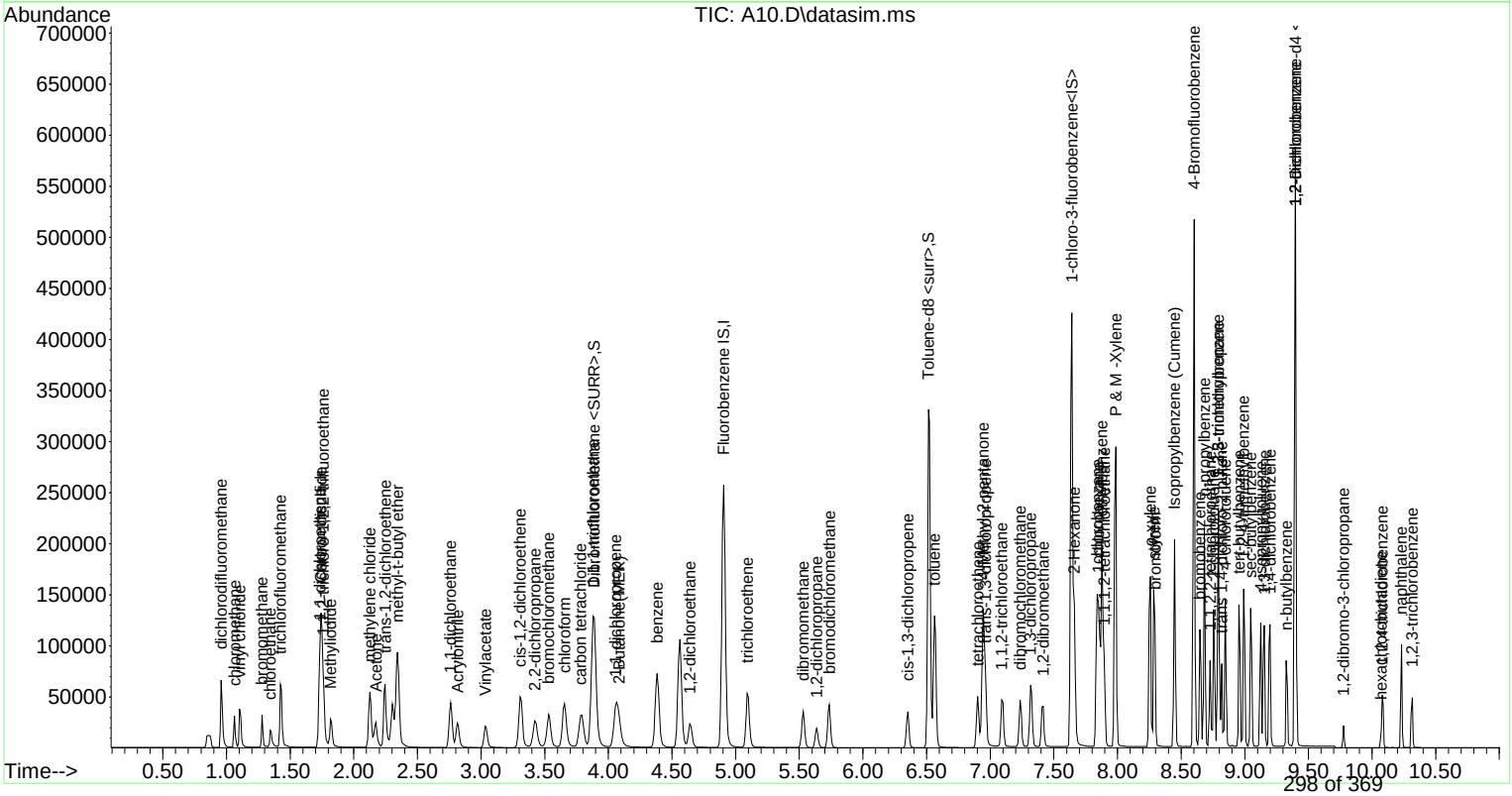
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A10.D
Acq On : 1 Aug 2014 2:28 pm
Operator : NRB
Sample : 10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 03 21:25:31 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A11.D
Acq On : 1 Aug 2014 2:45 pm
Operator : NRB
Sample : 30
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 03 21:23:29 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	74763	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	117205	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	132462	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	115138	30.00	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.00%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	107409	30.00	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 100.00%			
41) Toluene-d8 <surr>	6.523	98	316730	30.00	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 100.00%			
60) 4-Bromofluorobenzene <...	8.602	95	128514	30.00	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	129292	30.00	µg/l	100
3] chloromethane	1.063	50	71043	30.00	µg/l	100
4] vinyl chloride	1.103	62	105060	30.00	µg/l	100
5] bromomethane	1.279	96	39910	30.00	µg/l	100
6] chloroethane	1.343	64	47741	30.00	µg/l	100
7] trichlorofluoromethane	1.423	101	138157	30.00	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	118351	45.00	µg/L	100
9] 1,1-dichloroethene	1.733	96	69385	30.00	µg/l	100
10] Acetone	2.173	43	87377	90.00	µg/L	100
11] Acrylonitrile	2.814	53	62688	45.00	µg/L	100
12] Methyliodide	1.817	142	105113	45.00	µg/L	100
13] Carbon disulfide	1.741	76	326775	45.00	µg/L	100
14] methylene chloride	2.125	84	94664	30.00	µg/l	100
15] methyl-t-butyl ether	2.343	73	340054	45.00	µg/L	100
16] trans-1,2-dichloroethene	2.246	96	94078	30.00	µg/l	100
17] Vinylacetate	3.033	43	128655	30.00	µg/L	100
18) n-hexane	2.297	56	64026	30.00	µg/L	100
19] 1,1-dichloroethane	2.761	63	174634	30.00	µg/l	100
20] 2-Butanone(MEK)	4.075	43	167424	90.00	µg/L	100
21] 2,2-dichloropropane	3.423	77	118750	30.00	µg/l	100
22] cis-1,2-dichloroethene	3.306	96	101873	30.00	µg/l	100
23] bromochloromethane	3.530	128	50015	30.00	µg/l	100
24) cyclohexane	3.514	56	144074	30.00	µg/L	100
25] chloroform	3.656	83	174210	30.00	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	148907	30.00	µg/l	100
28] carbon tetrachloride	3.792	117	122585	30.00	µg/l	100
29] 1,1-dichloropropene	4.055	75	129833	30.00	µg/l	100
31] benzene	4.384	78	375865	30.00	µg/l	100
32] 1,2-dichloroethane	4.640	62	115048	30.00	µg/l	100
33] trichloroethene	5.091	95	99001	30.00	µg/l	100
34] 1,2-dichloropropane	5.637	63	99619	30.00	µg/l	100
35] dibromomethane	5.531	93	65179	30.00	µg/l	100
37] bromodichloromethane	5.735	83	123561	30.00	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	139386	30.00	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	122883	90.00	µg/L	100
42] toluene	6.561	92	207961	30.00	µg/l	100
43] trans-1,3-dichloropropene	6.963	75	122800	30.00	µg/l	100
44] 1,1,2-trichloroethane	7.090	83	71858	30.00	µg/l	100

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A11.D
Acq On : 1 Aug 2014 2:45 pm
Operator : NRB
Sample : 30
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 03 21:23:29 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

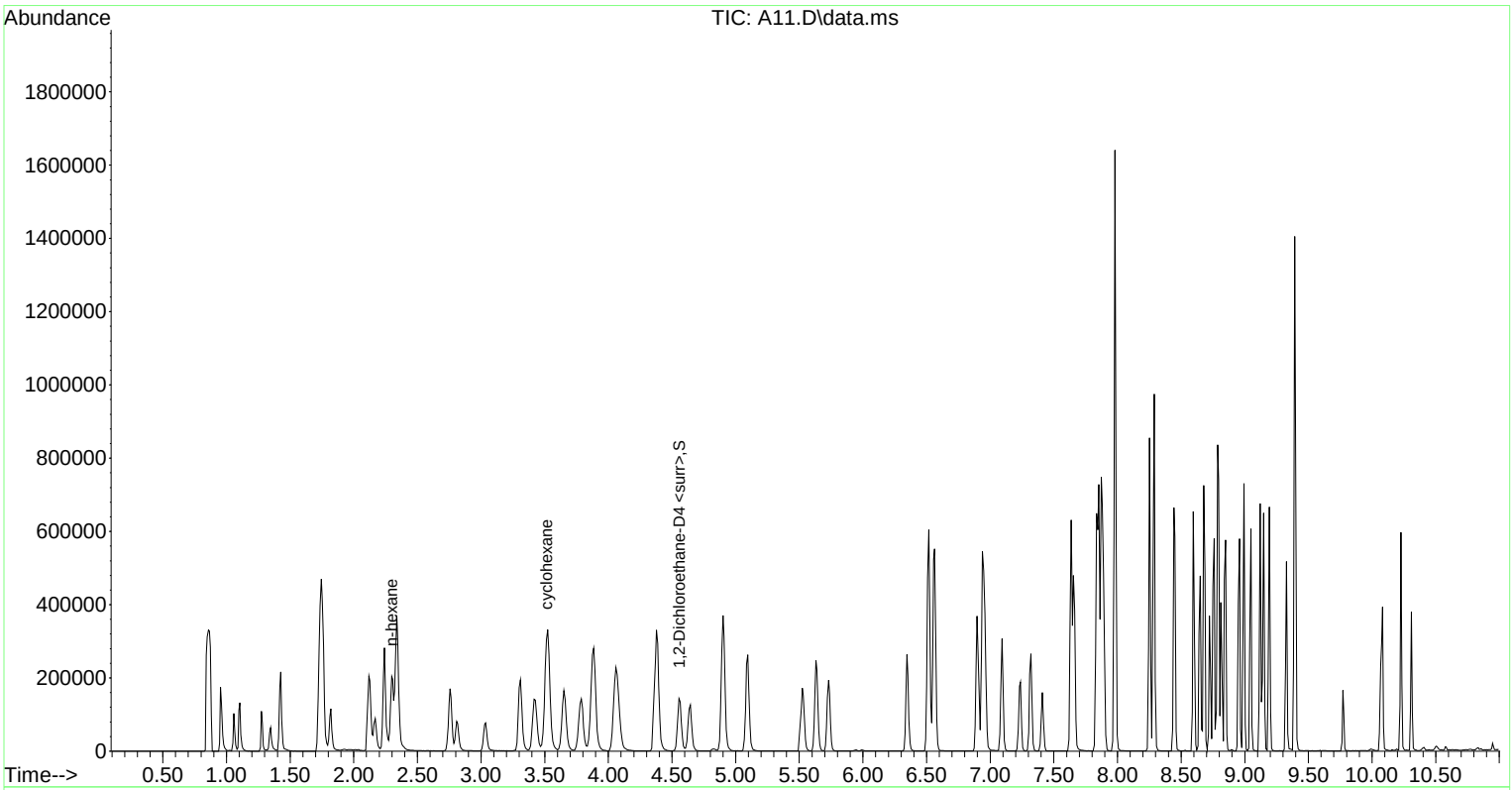
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	107384	30.00	µg/l	100
46] 1,3-dichloropropane	7.316	76	137988	30.00	µg/l	100
47] 2-Hexanone	7.660	43	235404	90.00	µg/L	100
48] dibromochloromethane	7.235	129	93052	30.00	µg/l	100
49] 1,2-dibromoethane	7.416	107	89015	30.00	µg/l	100
50] 1-chlorohexane	7.850	55	105694	45.00	µg/L	100
51] chlorobenzene	7.841	112	232762	30.00	µg/l	100
52] 1,1,1,2-tetrachloroethane	7.896	133	81533	30.00	µg/l	100
53] ethylbenzene	7.878	106	116840	30.00	µg/l	100
54] P & M -Xylene	7.986	106	281488	60.00	µg/l	100
55] o-xylene	8.258	106	132144	30.00	µg/l	100
56] styrene	8.285	104	230015	30.00	µg/l	100
57] bromoform	8.294	173	70171	30.00	µg/l	100
58] Isopropylbenzene (Cumene)	8.448	105	329292	30.00	µg/l	100
61] trans 1,4-dichloro-2-b...	8.819	53	51860	45.00	µg/L	100
62] bromobenzene	8.647	156	95509	30.00	µg/l	100
63] 1,1,2,2-tetrachloroethane	8.728	83	119057	30.00	µg/l	100
64] 1,2,3-trichloropropane	8.792	110	32832	30.00	µg/l	100
65] n-propylbenzene	8.683	91	379915	30.00	µg/l	100
66] 2-chlorotoluene	8.755	91	221947	30.00	µg/l	100
67] 4-chlorotoluene	8.846	91	238765	30.00	µg/l	100
68] 1,3,5-trimethylbenzene	8.792	105	234476	30.00	µg/l	100
69] tert-butylbenzene	8.955	119	178059	30.00	µg/l	100
70] 1,2,4-trimethylbenzene	8.991	105	234842	30.00	µg/l	100
71] sec-butylbenzene	9.045	105	251420	30.00	µg/l	100
72] 1,3-dichlorobenzene	9.154	146	152190	30.00	µg/l	100
73] 4-isopropyltoluene	9.126	119	187635	30.00	µg/l	100
74] 1,4-dichlorobenzene	9.199	146	158800	30.00	µg/l	100
75] 1,2-dichlorobenzene	9.398	146	151901	30.00	µg/l	100
76] n-butylbenzene	9.326	91	169855	30.00	µg/l	100
77] 1,2-dibromo-3-chloropr...	9.775	75	21663	30.00	µg/l	100
78] 1,2,4-trichlorobenzene	10.079	180	69880	30.00	µg/l	100
79] hexachlorobutadiene	10.072	225	24878	30.00	µg/l	100
80] naphthalene	10.231	128	216126	30.00	µg/l	100
81] 1,2,3-trichlorobenzene	10.315	180	63720	30.00	µg/l	100

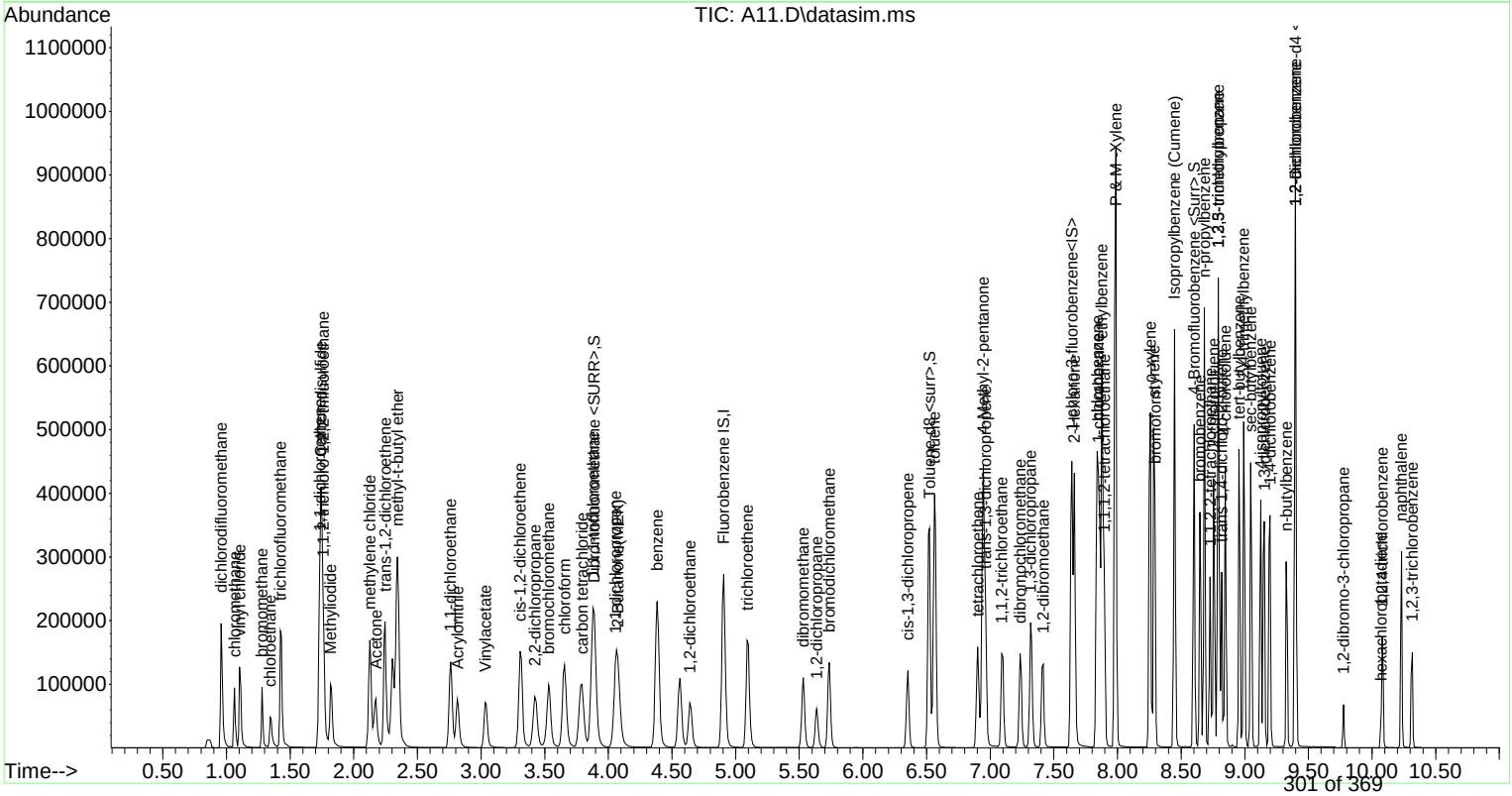
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A11.D
Acq On : 1 Aug 2014 2:45 pm
Operator : NRB
Sample : 30
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 03 21:23:29 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A12.D
Acq On : 1 Aug 2014 3:01 pm
Operator : NRB
Sample : 50
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 21:25:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	75650	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	117617	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	132098	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	113997	28.76	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.87%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	104039	27.60	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 92.00%			
41) Toluene-d8 <surr>	6.523	98	322027	30.87	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 102.90%			
60) 4-Bromofluorobenzene <...	8.602	95	129629	30.25	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 100.83%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	228287	51.72	µg/l	100
3] chloromethane	1.063	50	137068	53.21	µg/l	100
4] vinyl chloride	1.103	62	176259	50.25	µg/l	100
5] bromomethane	1.279	96	67993	44.61	µg/l	99
6] chloroethane	1.343	64	77695	44.05	µg/l	100
7] trichlorofluoromethane	1.424	101	232000	50.00	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	191934	77.32	µg/L	100
9] 1,1-dichloroethene	1.733	96	113541	50.99	µg/l	100
10] Acetone	2.173	43	147497	119.00	µg/L	98
11] Acrylonitrile	2.814	53	102783	74.03	µg/L	99
12] Methyliodide	1.817	142	185821	96.66	µg/L	100
13] Carbon disulfide	1.741	76	540158	77.57	µg/L	100
14] methylene chloride	2.125	84	150544	48.33	µg/l	99
15] methyl-t-butyl ether	2.343	73	545208	80.81	µg/L	99
16] trans-1,2-dichloroethene	2.246	96	144874	49.60	µg/l	100
17] Vinylacetate	3.041	43	215075	55.75	µg/L	100
18) n-hexane	2.297	56	77841	54.32	µg/L #	75
19] 1,1-dichloroethane	2.761	63	271449	47.64	µg/l	100
20] 2-Butanone(MEK)	4.084	43	314920	179.21	µg/L	99
21] 2,2-dichloropropane	3.423	77	204087	53.66	µg/l	100
22] cis-1,2-dichloroethene	3.306	96	172334	50.41	µg/l	100
23] bromochloromethane	3.540	128	85010	51.90	µg/l	100
24) cyclohexane	3.514	56	243806	57.96	µg/L	100
25] chloroform	3.656	83	294266	48.86	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	254958	53.39	µg/l	99
28] carbon tetrachloride	3.792	117	209219	54.55	µg/l	99
29] 1,1-dichloropropene	4.055	75	224666	55.65	µg/l	100
31] benzene	4.384	78	652254	53.82	µg/l	100
32] 1,2-dichloroethane	4.641	62	194804	51.85	µg/l	100
33] trichloroethene	5.091	95	170441	55.18	µg/l	100
34] 1,2-dichloropropane	5.637	63	172455	54.92	µg/l	100
35] dibromomethane	5.531	93	109284	50.83	µg/l	99
37] bromodichloromethane	5.735	83	213063	54.12	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	246379	58.26	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	228001	181.81	µg/L	100
42] toluene	6.561	92	363972	54.62	µg/l	99
43] trans-1,3-dichloropropene	6.963	75	213646	59.74	µg/l	98
44] 1,1,2-trichloroethane	7.090	83	126437	56.46	µg/l	100

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A12.D
Acq On : 1 Aug 2014 3:01 pm
Operator : NRB
Sample : 50
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 21:25:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

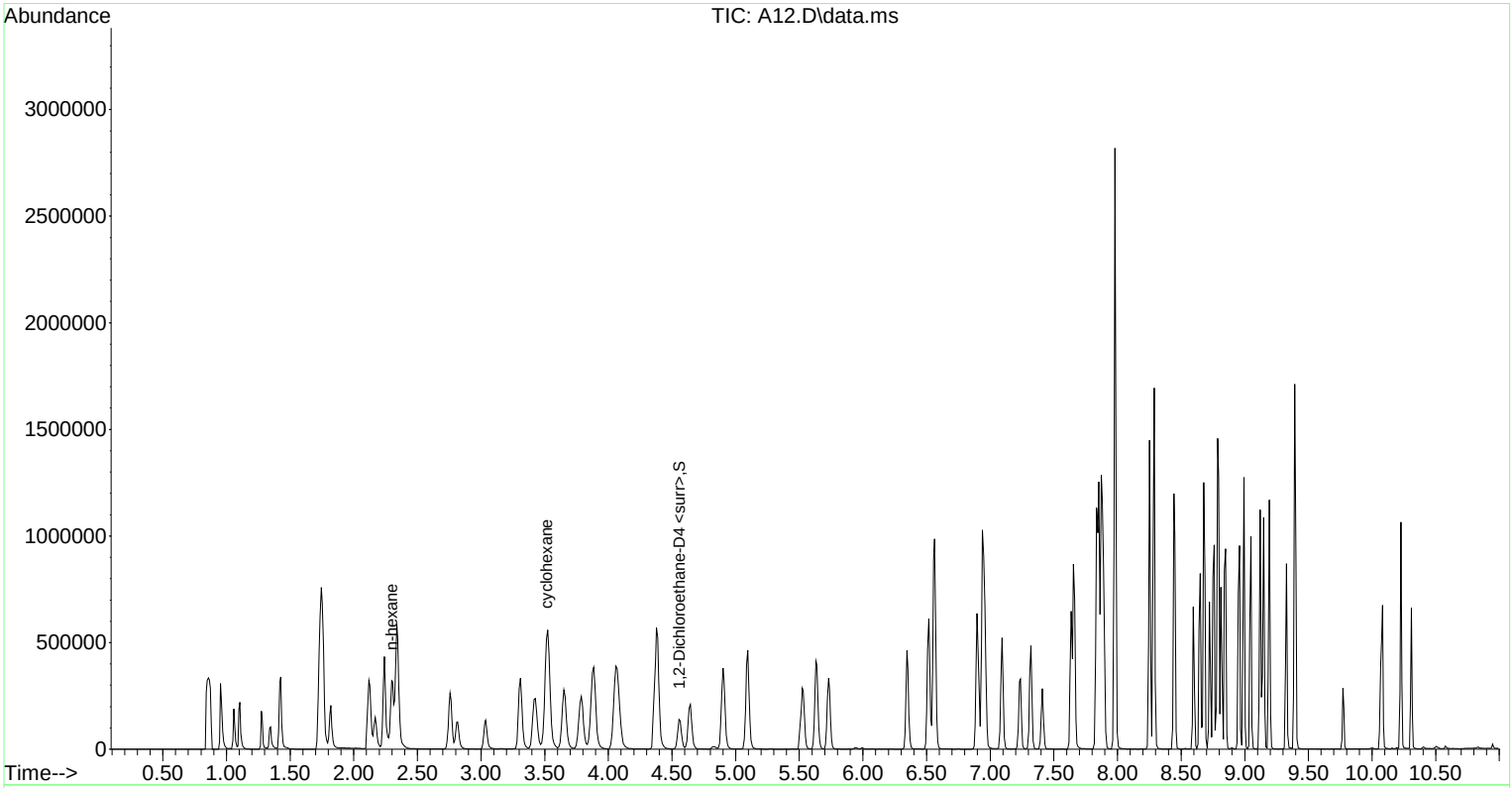
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	188896	57.00	µg/l	99
46] 1,3-dichloropropane	7.316	76	239123	56.96	µg/l	100
47] 2-Hexanone	7.660	43	432686	183.26	µg/L	99
48] dibromochloromethane	7.235	129	163322	58.53	µg/l	100
49] 1,2-dibromoethane	7.416	107	158267	58.12	µg/l	99
50] 1-chlorohexane	7.860	55	184454	84.63	µg/L	100
51] chlorobenzene	7.841	112	408108	54.84	µg/l	100
52] 1,1,1,2-tetrachloroethane	7.896	133	144193	58.20	µg/l	99
53] ethylbenzene	7.878	106	203475	49.67	µg/l	99
54] P & M -Xylene	7.986	106	483702	111.58	µg/l	99
55] o-xylene	8.258	106	230065	56.20	µg/l	100
56] styrene	8.285	104	397969	58.85	µg/l	100
57] bromoform	8.294	173	125197	59.36	µg/l	99
58] Isopropylbenzene (Cumene)	8.448	105	566515	57.63	µg/l	100
61] trans 1,4-dichloro-2-b...	8.819	53	93167	91.20	µg/L	97
62] bromobenzene	8.647	156	165002	55.06	µg/l	100
63] 1,1,2,2-tetrachloroethane	8.728	83	210941	57.40	µg/l	100
64] 1,2,3-trichloropropane	8.792	110	58936	57.91	µg/l	97
65] n-propylbenzene	8.683	91	639284	56.05	µg/l	100
66] 2-chlorotoluene	8.755	91	383583	55.69	µg/l	100
67] 4-chlorotoluene	8.846	91	402933	55.53	µg/l	100
68] 1,3,5-trimethylbenzene	8.792	105	401515	58.32	µg/l	100
69] tert-butylbenzene	8.955	119	304004	58.24	µg/l	99
70] 1,2,4-trimethylbenzene	8.991	105	400046	59.08	µg/l	100
71] sec-butylbenzene	9.045	105	429285	58.57	µg/l	100
72] 1,3-dichlorobenzene	9.154	146	260141	54.66	µg/l	100
73] 4-isopropyltoluene	9.126	119	319476	59.17	µg/l	99
74] 1,4-dichlorobenzene	9.199	146	268279	55.20	µg/l	99
75] 1,2-dichlorobenzene	9.398	146	255661	52.83	µg/l	99
76] n-butylbenzene	9.326	91	286410	59.18	µg/l	100
77] 1,2-dibromo-3-chloropr...	9.775	75	39863	57.26	µg/l	97
78] 1,2,4-trichlorobenzene	10.080	180	124043	57.91	µg/l	100
79] hexachlorobutadiene	10.072	225	41071	55.67	µg/l	100
80] naphthalene	10.232	128	395849	59.63	µg/l	100
81] 1,2,3-trichlorobenzene	10.315	180	112864	57.71	µg/l	100

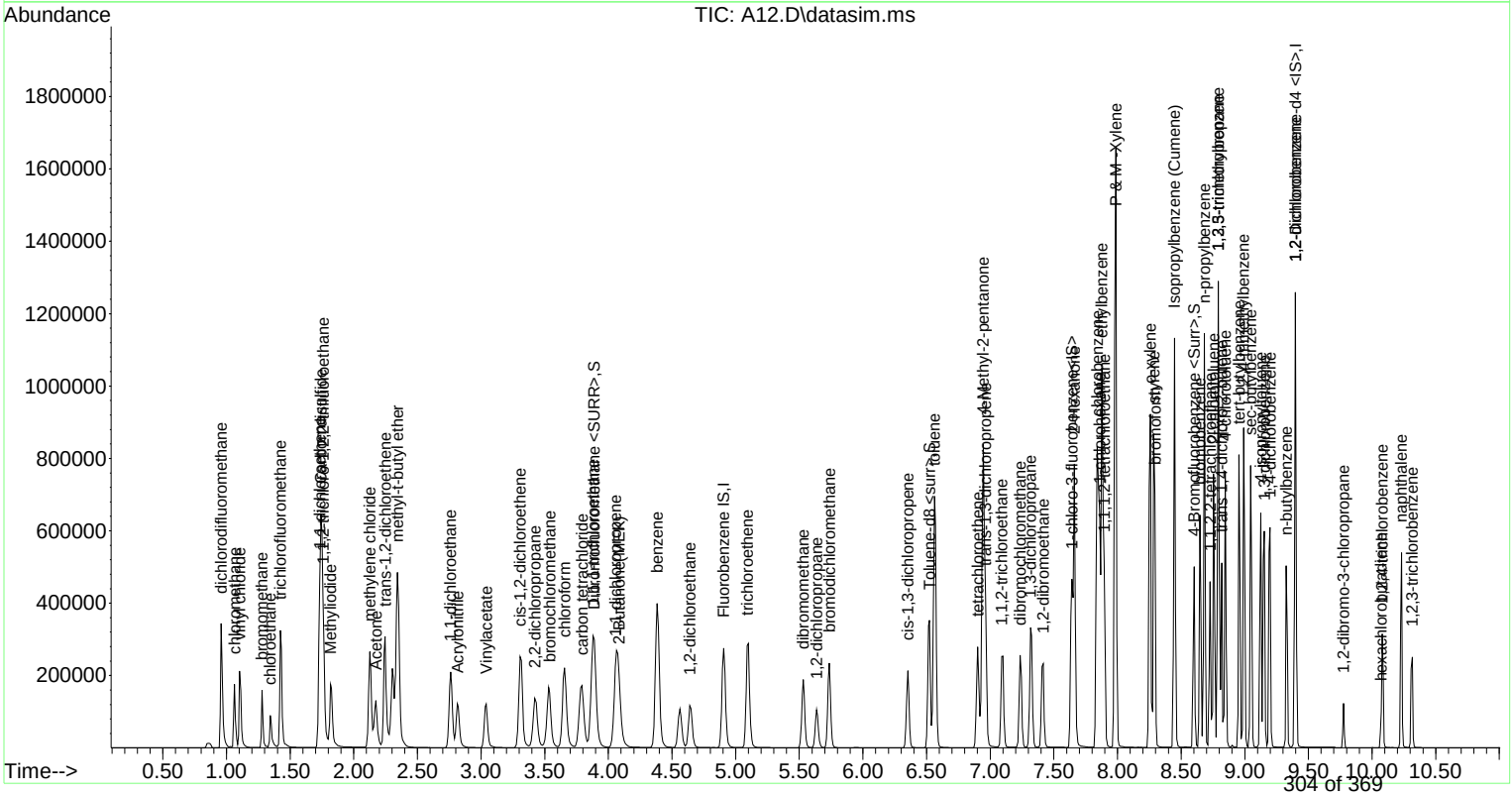
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A12.D
Acq On : 1 Aug 2014 3:01 pm
Operator : NRB
Sample : 50
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 21:25:58 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A13.D
Acq On : 1 Aug 2014 3:18 pm
Operator : NRB
Sample : 70
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 03 21:26:24 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	76661	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	118860	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	134127	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	115395	28.90	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.33%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	104019	27.60	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 92.00%			
41) Toluene-d8 <surr>	6.523	98	324286	30.65	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 102.17%			
60) 4-Bromofluorobenzene <...	8.602	95	128395	29.58	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 98.60%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	305277	68.49	µg/l	100
3] chloromethane	1.063	50	205023	77.20	µg/l	100
4] vinyl chloride	1.103	62	249097	70.06	µg/l	100
5] bromomethane	1.279	96	98513	64.61	µg/l	99
6] chloroethane	1.343	64	109128	62.19	µg/l	98
7] trichlorofluoromethane	1.424	101	319682	68.27	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	263957	104.95	µg/L	100
9] 1,1-dichloroethene	1.733	96	155789	69.18	µg/l	99
10] Acetone	2.173	43	199896	164.85	µg/L	98
11] Acrylonitrile	2.814	53	150243	106.52	µg/L	99
12] Methyliodide	1.825	142	272846	133.68	µg/L	100
13] Carbon disulfide	1.741	76	745898	105.60	µg/L	100
14] methylene chloride	2.125	84	209022	66.74	µg/l	99
15] methyl-t-butyl ether	2.343	73	817932	117.30	µg/L	99
16] trans-1,2-dichloroethene	2.246	96	208897	70.50	µg/l	100
17] Vinylacetate	3.041	43	322610	80.47	µg/L	100
18) n-hexane	2.305	56	149293	96.35	µg/L	97
19] 1,1-dichloroethane	2.761	63	406548	70.35	µg/l	100
20] 2-Butanone(MEK)	4.075	43	417307	230.52	µg/L	100
21] 2,2-dichloropropane	3.423	77	282140	72.73	µg/l	100
22] cis-1,2-dichloroethene	3.306	96	238714	69.06	µg/l	100
23] bromochloromethane	3.540	128	117960	70.91	µg/l	100
24) cyclohexane	3.514	56	335423	77.32	µg/L	98
25] chloroform	3.656	83	406530	67.08	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	351427	72.23	µg/l	100
28] carbon tetrachloride	3.793	117	289673	73.85	µg/l	99
29] 1,1-dichloropropene	4.055	75	310610	75.01	µg/l	100
31] benzene	4.384	78	907386	73.31	µg/l	99
32] 1,2-dichloroethane	4.641	62	267984	70.33	µg/l	100
33] trichloroethene	5.091	95	237938	75.10	µg/l	100
34] 1,2-dichloropropane	5.637	63	237438	73.92	µg/l	100
35] dibromomethane	5.531	93	151037	69.42	µg/l	99
37] bromodichloromethane	5.735	83	295003	73.35	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	346527	79.10	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	304696	235.01	µg/L	99
42] toluene	6.562	92	503443	74.04	µg/l	99
43] trans-1,3-dichloropropene	6.963	75	301306	81.16	µg/l	99
44] 1,1,2-trichloroethane	7.090	83	174119	75.86	µg/l	100

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A13.D
Acq On : 1 Aug 2014 3:18 pm
Operator : NRB
Sample : 70
Misc :
ALS Vial : 13 Sample Multiplier: 1

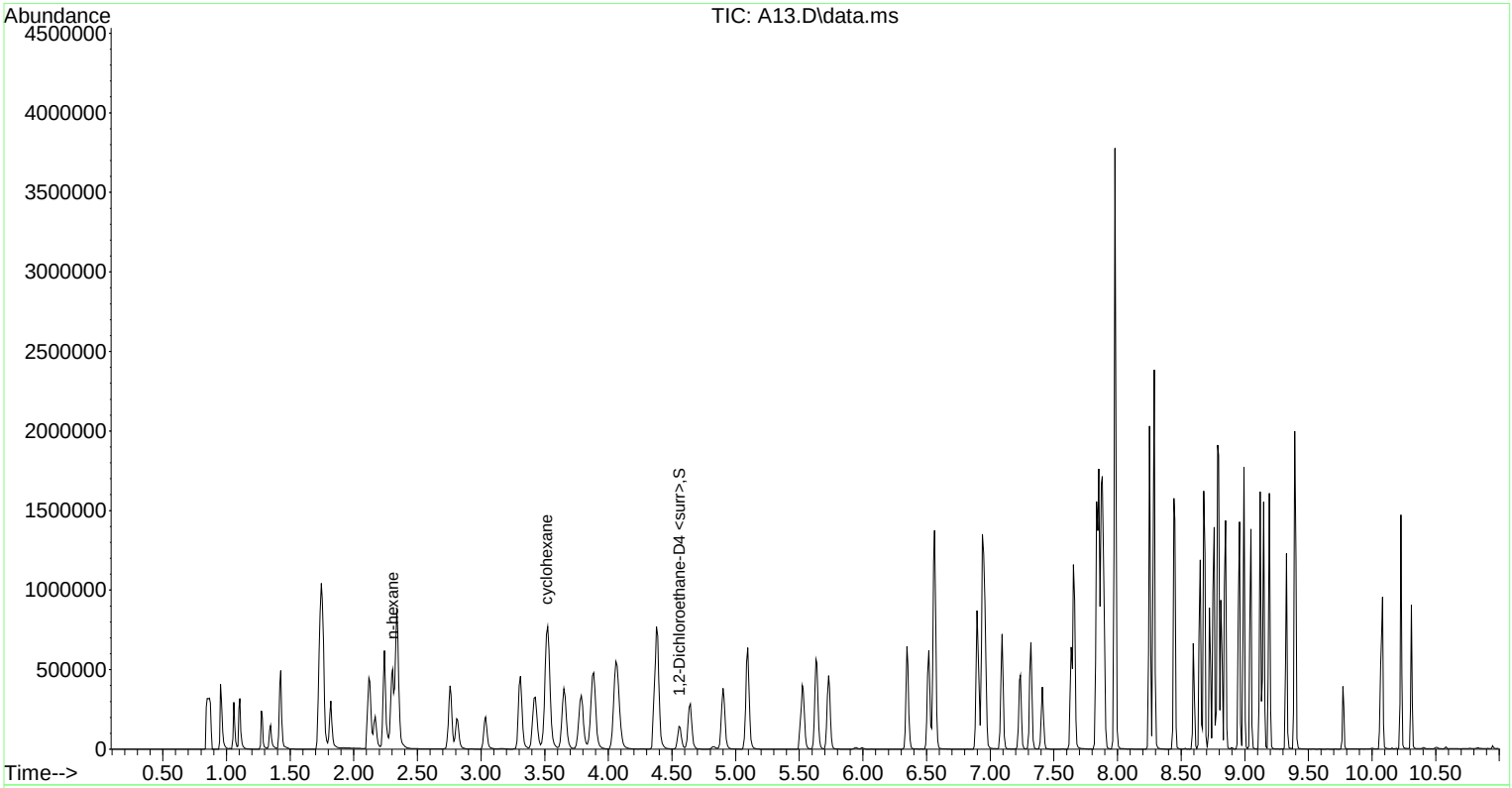
Quant Time: Aug 03 21:26:24 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration

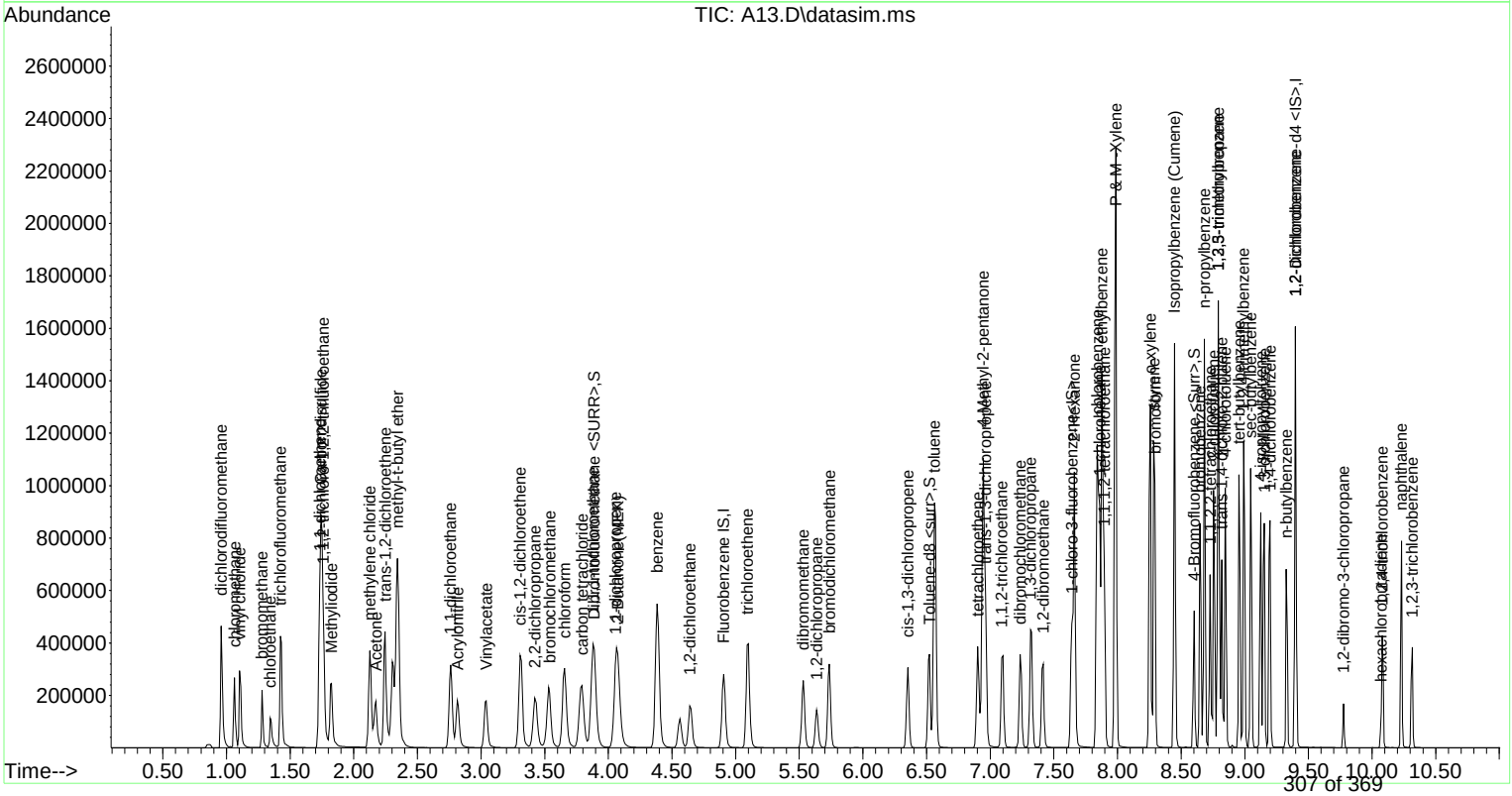
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45] tetrachloroethene	6.903	166	261884	76.91	µg/l		99
46] 1,3-dichloropropane	7.316	76	332429	77.04	µg/l		99
47] 2-Hexanone	7.660	43	576819	236.64	µg/L		99
48] dibromochloromethane	7.235	129	227846	79.06	µg/l		100
49] 1,2-dibromoethane	7.416	107	217992	77.75	µg/l		100
50] 1-chlorohexane	7.860	55	251499	112.77	µg/L		99
51] chlorobenzene	7.841	112	565350	74.39	µg/l		100
52] 1,1,1,2-tetrachloroethane	7.896	133	202901	79.26	µg/l		99
53] ethylbenzene	7.878	106	279498	67.86	µg/l		99
54] P & M -Xylene	7.986	106	662184	149.45	µg/l		99
55] o-xylene	8.258	106	317656	75.74	µg/l		100
56] styrene	8.285	104	553342	79.20	µg/l		100
57] bromoform	8.294	173	174107	79.79	µg/l		99
58] Isopropylbenzene (Cumene)	8.448	105	775061	76.76	µg/l		100
61] trans 1,4-dichloro-2-b...	8.819	53	127865	120.28	µg/L	#	74
62] bromobenzene	8.647	156	228311	74.27	µg/l		100
63] 1,1,2,2-tetrachloroethane	8.728	83	290994	76.73	µg/l		100
64] 1,2,3-trichloropropane	8.792	110	80716	76.84	µg/l		96
65] n-propylbenzene	8.683	91	887958	75.64	µg/l		100
66] 2-chlorotoluene	8.755	91	527521	74.60	µg/l		100
67] 4-chlorotoluene	8.846	91	562321	75.36	µg/l		100
68] 1,3,5-trimethylbenzene	8.792	105	552691	77.62	µg/l		100
69] tert-butylbenzene	8.955	119	413174	76.72	µg/l		100
70] 1,2,4-trimethylbenzene	8.991	105	559050	79.48	µg/l		100
71] sec-butylbenzene	9.045	105	590069	77.81	µg/l		100
72] 1,3-dichlorobenzene	9.154	146	358190	73.50	µg/l		100
73] 4-isopropyltoluene	9.127	119	439094	78.48	µg/l		99
74] 1,4-dichlorobenzene	9.199	146	374708	75.02	µg/l		99
75] 1,2-dichlorobenzene	9.398	146	357886	72.42	µg/l		99
76] n-butylbenzene	9.326	91	398969	79.37	µg/l		100
77] 1,2-dibromo-3-chloropr...	9.776	75	53524	74.85	µg/l		98
78] 1,2,4-trichlorobenzene	10.080	180	171701	77.53	µg/l		99
79] hexachlorobutadiene	10.072	225	57717	75.96	µg/l		99
80] naphthalene	10.232	128	540256	78.53	µg/l		100
81] 1,2,3-trichlorobenzene	10.315	180	155520	77.01	µg/l		100

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

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A13.D
Acq On : 1 Aug 2014 3:18 pm
Operator : NRB
Sample : 70
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 03 21:26:24 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:22:59 2014
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A14.D
Acq On : 1 Aug 2014 3:34 pm
Operator : NRB
Sample : R
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 21:29:44 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.906	70	68117	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.642	95	111885	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	129898	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.890	111	111920	31.55	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.17%				
30) 1,2-Dichloroethane-D4 ...	4.555	65	105141	31.39	µg/l		0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 104.63%				
41) Toluene-d8 <surr>	6.515	98	292511	29.37	µg/l		0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 97.90%				
60) 4-Bromofluorobenzene <...	8.602	95	124724	29.67	µg/l		0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 98.90%				
Target Compounds							Qvalue
2] dichlorodifluoromethane	0.871	85	2385	0.60	µg/l	#	1
3] chloromethane	1.063	50	2491	1.06	µg/l		97
4] vinyl chloride	1.103	62	540	0.17	µg/l	#	42
5] bromomethane	1.287	96	996	0.74	µg/l	#	13
8] 1,1,2-trichloro-1,2,2-...	1.758	101	268	0.12	µg/L		93
10] Acetone	2.173	43	2920	3.06	µg/L		99
11] Acrylonitrile	2.814	53	588	0.47	µg/L		94
12] Methyliodide	1.825	142	2002	1.64	µg/L		97
13] Carbon disulfide	1.742	76	7372	1.17	µg/L		98
14] methylene chloride	2.125	84	687	0.25	µg/l		95
16] trans-1,2-dichloroethene	2.246	96	740	0.28	µg/l		98
20] 2-Butanone(MEK)	4.084	43	1628	1.01	µg/L		96
22] cis-1,2-dichloroethene	3.316	96	634	0.21	µg/l		91
23] bromochloromethane	3.540	128	451	0.31	µg/l		95
25] chloroform	3.656	83	629	0.12	µg/l		93
32] 1,2-dichloroethane	4.641	62	397	0.12	µg/l	#	74
33] trichloroethene	5.091	95	308	0.11	µg/l		92
35] dibromomethane	5.531	93	691	0.36	µg/l		97
38] cis-1,3-dichloropropene	6.352	75	530	0.14	µg/l		98
39] 4-Methyl-2-pentanone	6.945	58	457	0.40	µg/L		95
42] toluene	6.562	92	697	0.11	µg/l		79
43] trans-1,3-dichloropropene	6.963	75	873	0.24	µg/l		93
44] 1,1,2-trichloroethane	7.090	83	349	0.16	µg/l	#	23
45] tetrachloroethene	6.903	166	334	0.10	µg/l		89
47] 2-Hexanone	7.660	43	1479	0.61	µg/L		97
49] 1,2-dibromoethane	7.416	107	382	0.14	µg/l	#	94
50] 1-chlorohexane	7.851	55	599	0.29	µg/L	#	1
51] chlorobenzene	7.842	112	942	0.13	µg/l		97
53] ethylbenzene	7.878	106	3850	0.99	µg/l		52
54] P & M -Xylene	7.986	106	1128	0.27	µg/l		97
55] o-xylene	8.258	106	567	0.14	µg/l		96
56] styrene	8.285	104	1055	0.15	µg/l		93
57] bromoform	8.285	173	208	0.10	µg/l		95
58] Isopropylbenzene (Cumene)	8.448	105	2102	0.22	µg/l		100
61] trans 1,4-dichloro-2-b...	8.819	53	381	0.35	µg/L	#	79
62] bromobenzene	8.647	156	746	0.25	µg/l		98
63] 1,1,2,2-tetrachloroethane	8.728	83	436	0.12	µg/l	#	87
64] 1,2,3-trichloropropane	8.792	110	157	0.15	µg/l	#	1

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A14.D
Acq On : 1 Aug 2014 3:34 pm
Operator : NRB
Sample : R
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 21:29:44 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

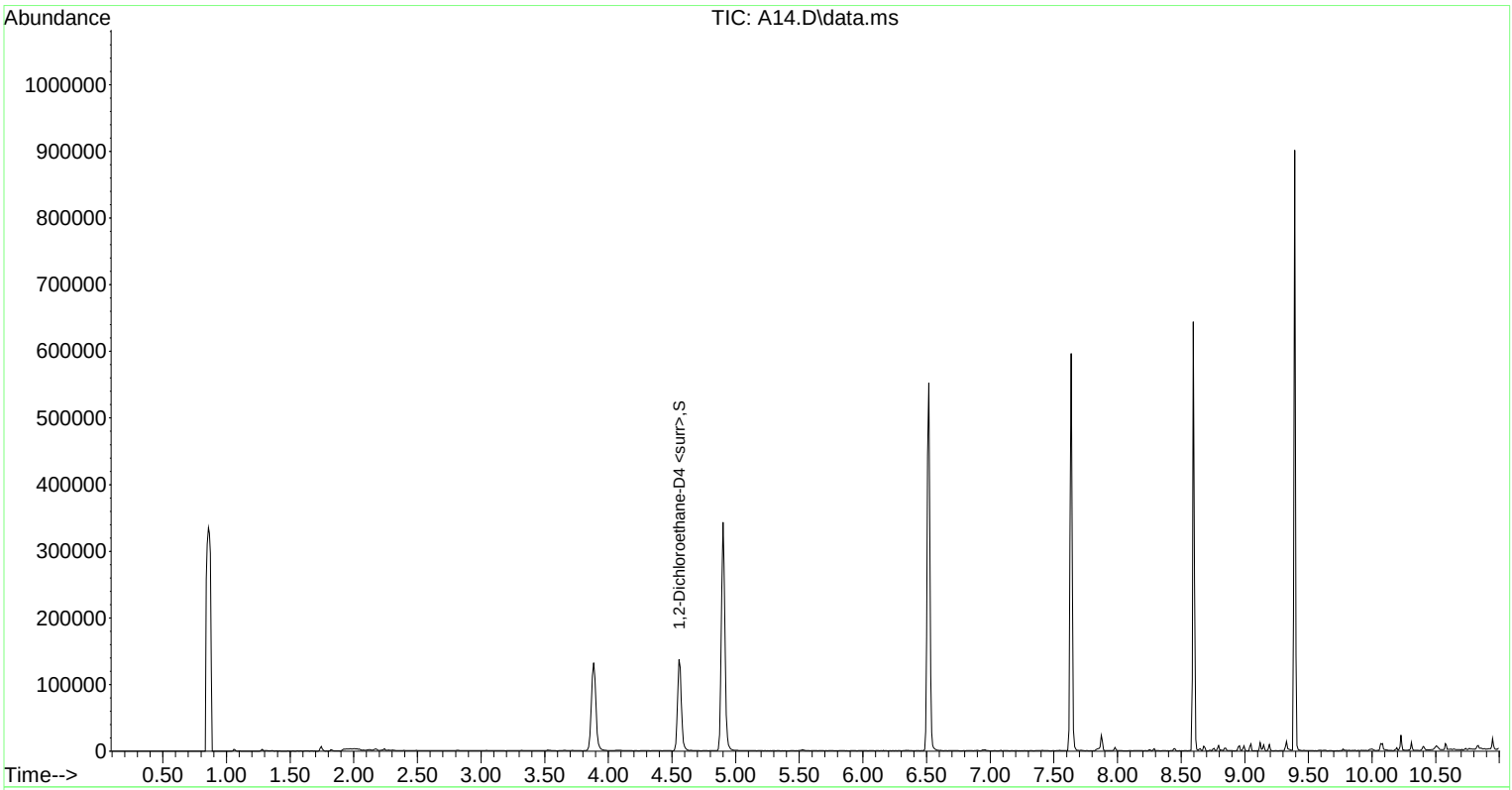
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
65] n-propylbenzene	8.683	91	3886	0.34	µg/l		97
66] 2-chlorotoluene	8.756	91	1887	0.28	µg/l		100
67] 4-chlorotoluene	8.846	91	2491	0.34	µg/l		99
68] 1,3,5-trimethylbenzene	8.792	105	2929	0.41	µg/l		96
69] tert-butylbenzene	8.955	119	2685	0.49	µg/l		94
70] 1,2,4-trimethylbenzene	8.991	105	2812	0.39	µg/l		99
71] sec-butylbenzene	9.045	105	5118	0.66	µg/l		99
72] 1,3-dichlorobenzene	9.154	146	2384	0.51	µg/l		99
73] 4-isopropyltoluene	9.127	119	3910	0.69	µg/l		99
74] 1,4-dichlorobenzene	9.199	146	2306	0.48	µg/l		96
75] 1,2-dichlorobenzene	9.398	146	1891	0.40	µg/l	#	27
76] n-butylbenzene	9.326	91	4595	0.90	µg/l		99
77] 1,2-dibromo-3-chloropr...	9.776	75	414	0.60	µg/l		69
78] 1,2,4-trichlorobenzene	10.080	180	1994	0.93	µg/l		96
79] hexachlorobutadiene	10.072	225	1336	1.82	µg/l		93
80] naphthalene	10.232	128	9425	1.41	µg/l		99
81] 1,2,3-trichlorobenzene	10.315	180	2485	1.27	µg/l		98

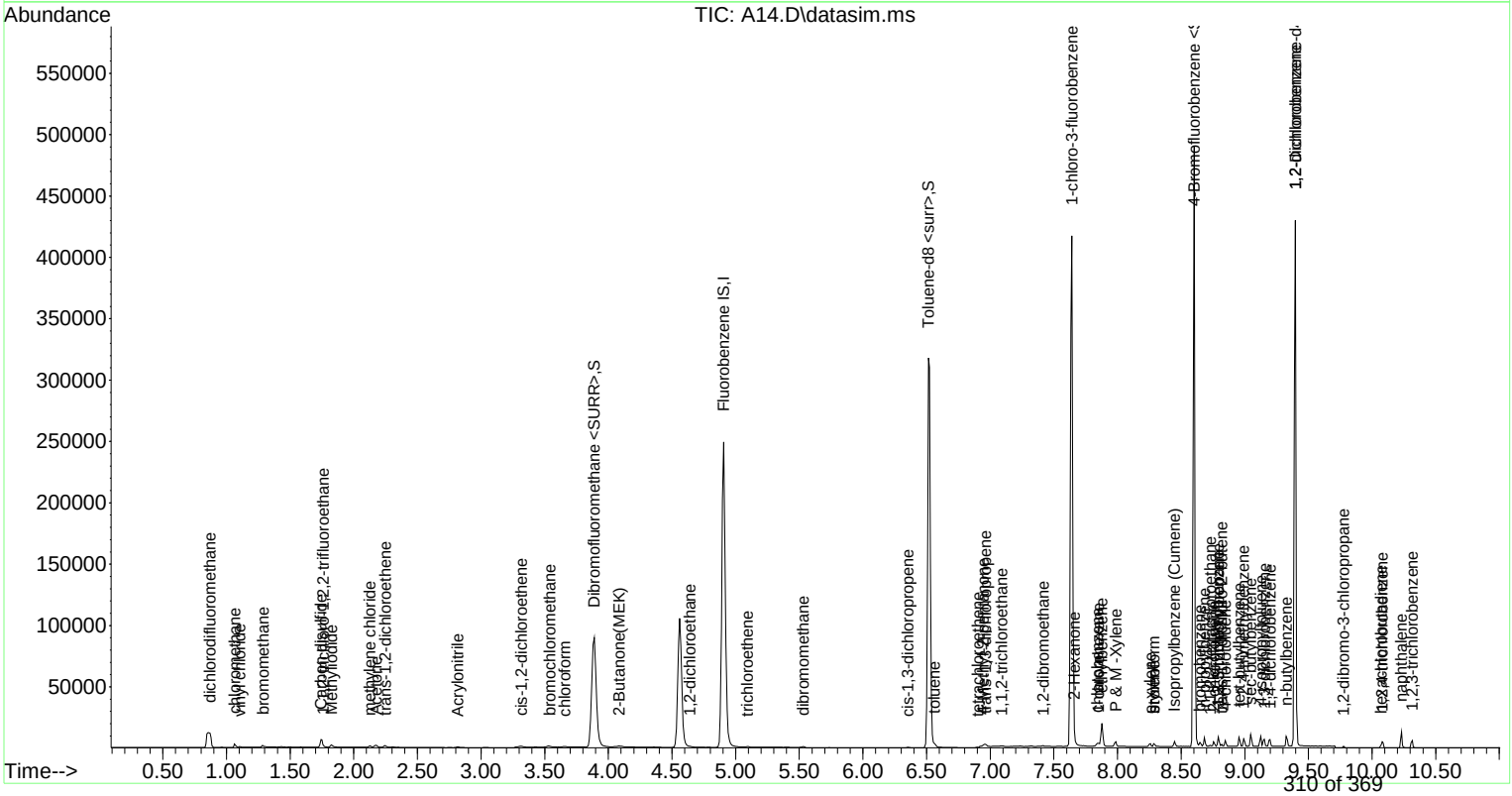
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A14.D
Acq On : 1 Aug 2014 3:34 pm
Operator : NRB
Sample : R
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 21:29:44 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A15.D
Acq On : 1 Aug 2014 3:51 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:29:53 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.906	70	74115	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.642	95	115911	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.398	152	132487	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.890	111	114507	29.66	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.87%			
30) 1,2-Dichloroethane-D4 ...	4.555	65	104131	28.58	µg/l	0.00
Spiked Amount 30.000	Range 70 - 120		Recovery = 95.27%			
41) Toluene-d8 <surr>	6.523	98	315325	30.56	µg/l	0.00
Spiked Amount 30.000	Range 85 - 120		Recovery = 101.87%			
60) 4-Bromofluorobenzene <...	8.602	95	128557	29.98	µg/l	0.00
Spiked Amount 30.000	Range 75 - 120		Recovery = 99.93%			
Target Compounds						Qvalue
2] dichlorodifluoromethane	0.959	85	128825	29.90	µg/l	100
3] chloromethane	1.063	50	78287	30.49	µg/l	100
4] vinyl chloride	1.103	62	102032	29.68	µg/l	100
5] bromomethane	1.279	96	42865	29.08	µg/l	100
6] chloroethane	1.351	64	47544	28.02	µg/l	98
7] trichlorofluoromethane	1.423	101	136773	30.21	µg/l	100
8] 1,1,2-trichloro-1,2,2-...	1.758	101	114175	46.95	µg/L	100
9] 1,1-dichloroethene	1.733	96	67688	31.09	µg/l	100
10] Acetone	2.173	43	83282	80.33	µg/L	100
11] Acrylonitrile	2.814	53	62890	46.12	µg/L	99
12] Methyliodide	1.817	142	95599	42.69	µg/L	100
13] Carbon disulfide	1.741	76	319865	46.84	µg/L	100
14] methylene chloride	2.125	84	92749	30.63	µg/l	99
15] methyl-t-butyl ether	2.343	73	342053	50.74	µg/L	99
16] trans-1,2-dichloroethene	2.246	96	94915	33.13	µg/l	99
17] Vinylacetate	3.033	43	129667	33.45	µg/L	100
18) n-hexane	2.297	56	62465	35.58	µg/L	96
19] 1,1-dichloroethane	2.761	63	175110	31.34	µg/l	100
20] 2-Butanone(MEK)	4.075	43	167875	95.92	µg/L	100
21] 2,2-dichloropropane	3.423	77	118215	31.52	µg/l	100
22] cis-1,2-dichloroethene	3.306	96	102136	30.56	µg/l	100
23] bromochloromethane	3.530	128	50000	31.09	µg/l	100
24) cyclohexane	3.514	56	141999	31.63	µg/L	98
25] chloroform	3.656	83	175239	29.91	µg/l	100
27] 1,1,1-trichloroethane	3.880	97	149424	31.77	µg/l	100
28] carbon tetrachloride	3.783	117	122006	32.17	µg/l	99
29] 1,1-dichloropropene	4.055	75	130491	32.60	µg/l	100
31] benzene	4.384	78	378704	31.65	µg/l	100
32] 1,2-dichloroethane	4.640	62	115027	31.23	µg/l	100
33] trichloroethene	5.091	95	99554	32.50	µg/l	100
34] 1,2-dichloropropane	5.637	63	97964	31.55	µg/l	100
35] dibromomethane	5.531	93	64424	30.63	µg/l	100
37] bromodichloromethane	5.735	83	124694	32.07	µg/l	100
38] cis-1,3-dichloropropene	6.352	75	139814	33.01	µg/l	100
39] 4-Methyl-2-pentanone	6.945	58	122884	98.04	µg/L	99
42] toluene	6.561	92	210623	31.76	µg/l	100
43] trans-1,3-dichloropropene	6.963	75	121190	32.13	µg/l	98
44] 1,1,2-trichloroethane	7.090	83	71932	32.14	µg/l	99

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A15.D
Acq On : 1 Aug 2014 3:51 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:29:53 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration

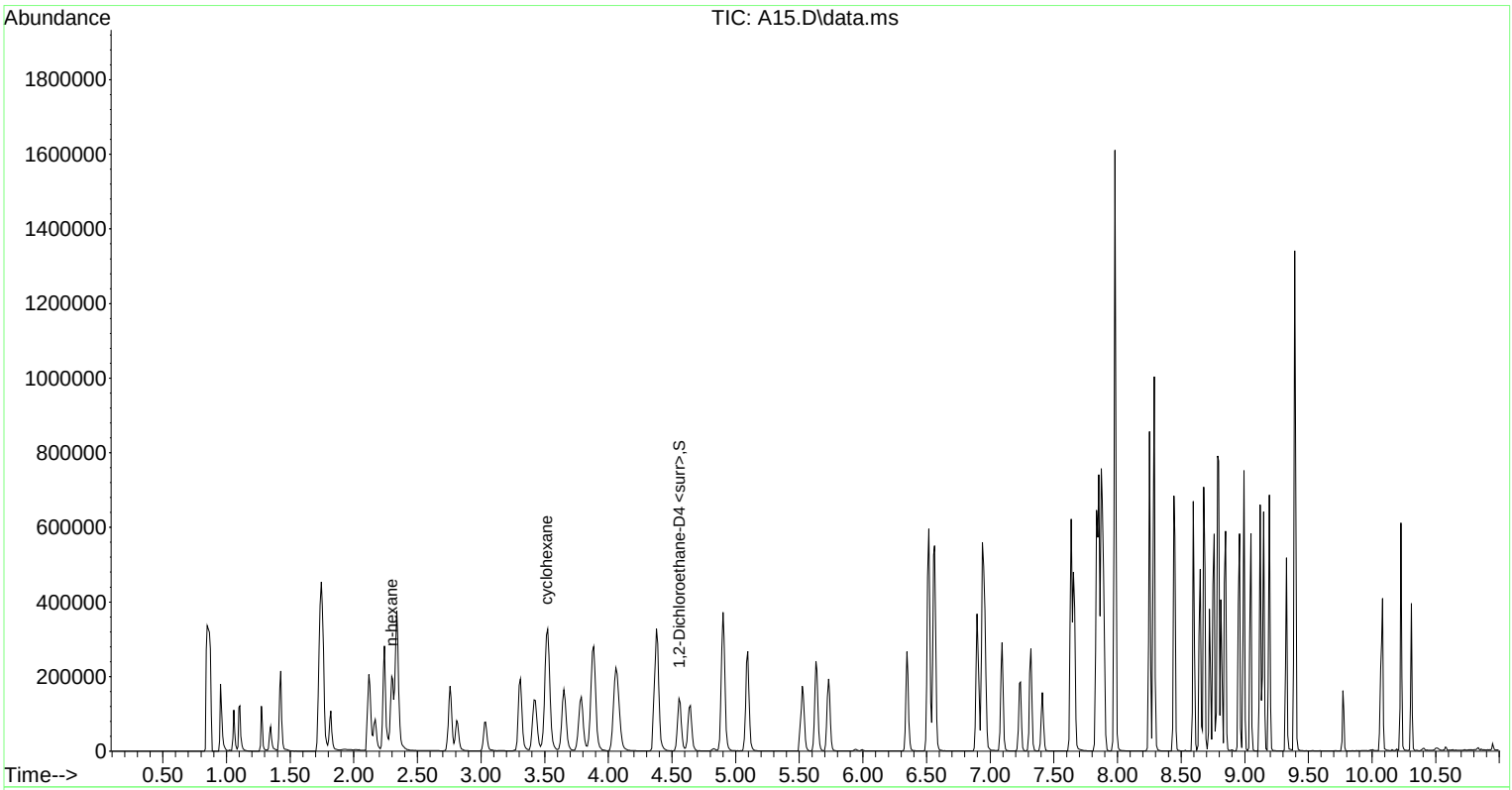
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45] tetrachloroethene	6.903	166	107694	32.43	µg/l	100
46] 1,3-dichloropropane	7.316	76	137749	32.74	µg/l	100
47] 2-Hexanone	7.660	43	236069	94.39	µg/L	100
48] dibromochloromethane	7.235	129	93431	33.24	µg/l	100
49] 1,2-dibromoethane	7.416	107	89811	32.85	µg/l	100
50] 1-chlorohexane	7.860	55	105956	48.72	µg/L	99
51] chlorobenzene	7.841	112	235191	31.73	µg/l	99
52] 1,1,1,2-tetrachloroethane	7.896	133	82273	32.95	µg/l	99
53] ethylbenzene	7.878	106	117600	29.28	µg/l	99
54] P & M -Xylene	7.986	106	281527	65.16	µg/l	100
55] o-xylene	8.258	106	132145	32.31	µg/l	99
56] styrene	8.285	104	228954	32.05	µg/l	86
57] bromoform	8.294	173	70054	32.92	µg/l	99
58] Isopropylbenzene (Cumene)	8.448	105	325852	33.09	µg/l	100
61] trans 1,4-dichloro-2-b...	8.819	53	51671	46.88	µg/L	96
62] bromobenzene	8.647	156	96755	31.86	µg/l	100
63] 1,1,2,2-tetrachloroethane	8.728	83	120052	32.05	µg/l	100
64] 1,2,3-trichloropropane	8.792	110	33572	32.36	µg/l	91
65] n-propylbenzene	8.683	91	376269	32.45	µg/l	100
66] 2-chlorotoluene	8.755	91	222241	31.82	µg/l	100
67] 4-chlorotoluene	8.846	91	235819	31.99	µg/l	100
68] 1,3,5-trimethylbenzene	8.792	105	234200	31.87	µg/l	99
69] tert-butylbenzene	8.955	119	176345	31.53	µg/l	100
70] 1,2,4-trimethylbenzene	8.991	105	234312	32.05	µg/l	100
71] sec-butylbenzene	9.045	105	247220	31.37	µg/l	100
72] 1,3-dichlorobenzene	9.154	146	151574	31.49	µg/l	100
73] 4-isopropyltoluene	9.126	119	184923	31.83	µg/l	99
74] 1,4-dichlorobenzene	9.199	146	158765	32.18	µg/l	99
75] 1,2-dichlorobenzene	9.398	146	152693	31.28	µg/l	99
76] n-butylbenzene	9.326	91	164367	31.60	µg/l	100
77] 1,2-dibromo-3-chloropr...	9.775	75	22277	31.54	µg/l	99
78] 1,2,4-trichlorobenzene	10.079	180	71903	32.87	µg/l	100
79] hexachlorobutadiene	10.072	225	24336	32.42	µg/l	100
80] naphthalene	10.231	128	224100	32.98	µg/l	100
81] 1,2,3-trichlorobenzene	10.315	180	66363	33.27	µg/l	99

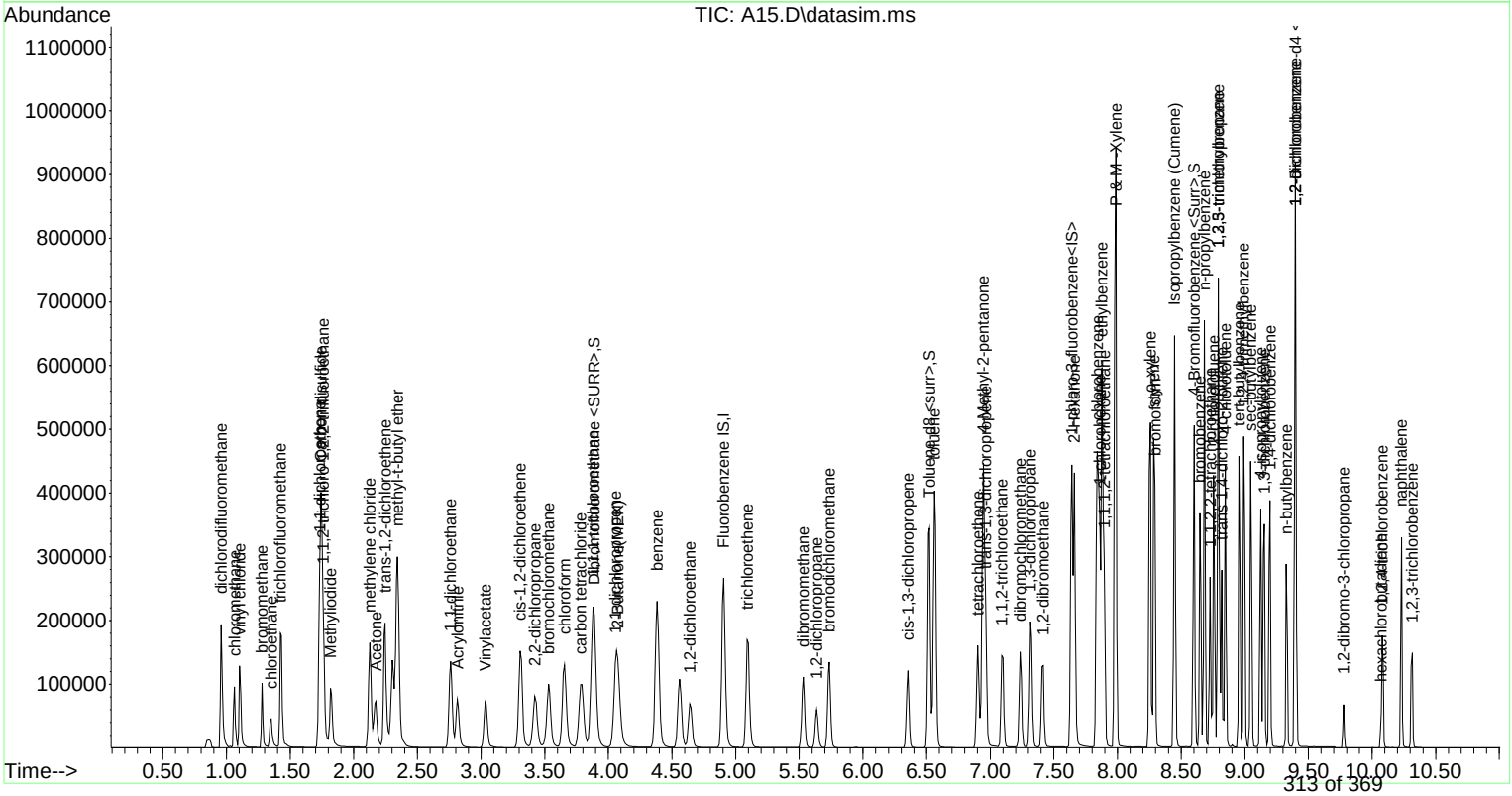
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VPA\DATA\080114A\
Data File : A15.D
Acq On : 1 Aug 2014 3:51 pm
Operator : NRB
Sample : ICV
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:29:53 2014
Quant Method : Z:\08\VPA\METHOD\VPA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:29:33 2014
Response via : Initial Calibration





SGS North America Inc.
Calibration Review and Validation for:
Volatile Mass Spec: SW 8260B / SW 8260Modified / EPA 624

Instrument/Date Code in YYYY-MMDD format (e.g., VNA2007-0507): VNA2014-0801

Contents:	Analyst's Review OK	Analyst's Review N/A	Peer Review OK	Peer Review N/A
Response Factor Report	☑		☑	
Calibration Report	☑		☑	
Tune Report/Chrom for IB	☑		☑	
Instrument runlog	☑		☑	
Chromatograms for calibration points	☑		☑	
Chromatograms for ICV	☑		☑	
Validation:				
Dates are correct	☑		☑	
The retention time window set correctly GRO beginning of C6 --> beginning of C10	☐	☑	☑	☐
CCC percent relative standard deviation is ≤ 30%	☑		☑	
SPCC average response factor of 0.1 or 0.3	☑		☑	
Cal Table Report Avg RF values are equal to the ICV Avg RF values	☑		☑	
The percent relative standard deviation of the response factor is ≤ 15%	☑	☐	☑	☐
If RSD is >15%, use 1 st (linear) or 2 nd (quadratic) order regression and $r^2 \geq 0.990$.	☑	☐	☑	☐
Minimum of 5 points (or 6 points for 2nd order regression)	☑		☑	
8260B / 624 ICV is 80-120 % recovery	☑	☐	☑	☐
8260B Modified ICV is 50-150 % recovery	☑	☐	☑	☐
Correct calibration levels for LOQ	☑		☑	
Relative retention time shifts meet criteria?	☑		☑	
IS Areas updated/CC ISTD Areas printout	☑		☑	
If any compounds are not calibrated, are they clearly documented?	☐	☑	☑	☐
Manual Integrations - explanations, before and after printouts	☐	☑	☑	☐
Check Critical Pair List				
o-xylene and p&m-xylene	☑		☑	
1,2,4-trimethylbenzene and sec-butylbenzene	☑		☑	
1,3-dichlorobenzene and 1,4-dichlorobenzene	☑		☑	
Hand calculated Response Factor verified:	☑		☑	
Initials:	NRB		SCL	
Date:	8/3/2014		8/5/2014	

RF = (As X Cis)/(Ais X Cs)

Shown= 2.739 trichlorofluoromethane @ 1 pt

Calculated= $\frac{5387*30}{59006}$ = 2.7389

Note:

Calibration Table Report
Method: VNA2014-0801.M
Title: Purgable Organics By GCMS
Last Calibration: Sun Aug 03 21:03:11 2014

Calibration Files

	0.4	1	3	10	30	50	70		
	A07.D	A08.D	A09.D	A10.D	A11.D	A12.D	A13.D		
Compound								Avg	%RSD
Fluorobenzene IS	ISTD								
dichlorodifluoromethane	2.126	2.420	3.082	2.949	2.969	2.964	2.908	2.774	12.8
chloromethane	2.400	2.394	2.908	2.837	2.775	2.810	2.812	2.705	7.9
vinyl chloride		2.079	2.830	2.475	2.525	2.559	2.494	2.494	9.7
bromomethane		0.540	0.676	0.663	0.729	0.791	0.855	0.709	15.5
chloroethane	0.676	0.384	0.748	0.664	0.757	0.699	0.693	0.660	19.2
trichlorofluoromethane	2.422	2.739	2.914	2.805	2.797	2.765	2.858	2.757	5.8
1,1,2-trichloro-1,2,2-trifluorome		1.058	1.396	1.365	1.428	1.400	1.359	1.334	10.3
1,1-dichloroethene		0.932	1.180	1.186	1.179	1.253	1.187	1.153	9.7
Acetone		0.720	0.615	0.535	0.557	0.575	0.561	0.594	11.3
Acrylonitrile		0.181	0.480	0.598	0.703	0.719	0.735	0.569	37.5
Methyliodide		0.753	1.085	1.229	1.650	1.807	1.904	1.405	32.3
Carbon disulfide	3.039	3.046	3.412	3.632	3.875	4.038	3.998	3.577	11.9
methylene chloride	1.222	1.426	1.643	1.675	1.699	1.642	1.578	1.555	11.1
methyl-t-butyl ether		2.546	2.703	2.822	2.976	3.007	3.025	2.846	6.8
trans-1,2-dichloroethene		1.223	1.243	1.334	1.254	1.341	1.312	1.285	4.0
Vinylacetate		0.794	1.239	1.461	1.749	1.911	2.005	1.526	30.0
n-hexane		0.656	0.751	0.825	0.874	0.850	0.852	0.801	10.4
1,1-dichloroethane		1.812	2.261	2.342	2.496	2.483	2.442	2.306	11.2
2-Butanone(MEK)		0.384	0.738	0.910	1.021	1.076	1.058	0.865	30.8
2,2-dichloropropane		0.809	0.745	0.953	1.130	1.286	1.359	1.047	24.1
cis-1,2-dichloroethene		1.064	1.313	1.349	1.459	1.504	1.467	1.359	11.9
bromochloromethane		0.096	0.587	0.593	0.704	0.736	0.717	0.572	42.3
cyclohexane		1.805	2.124	2.201	2.576	2.567	2.624	2.316	14.1
chloroform	1.651	1.601	2.117	2.207	2.279	2.273	2.300	2.061	14.8
Dibromofluoromethane <SURR>	1.616	1.486	1.556	1.519	1.658	1.566	1.603	1.572	3.7
1,1,1-trichloroethane		0.510	1.405	1.613	1.776	1.868	1.929	1.517	34.8
carbon tetrachloride		0.864	0.983	1.101	1.326	1.423	1.501	1.200	21.3
1,1-dichloropropene		1.401	1.415	1.575	1.673	1.773	1.767	1.600	10.4
1,2-Dichloroethane-D4 <surr>	1.611	1.505	1.600	1.522	1.556	1.565	1.491	1.550	3.0
benzene	3.189	4.112	4.897	5.228	5.502	5.474	5.560	4.852	18.4
1,2-dichloroethane	0.543	1.309	1.504	1.602	1.662	1.657	1.647	1.418	28.6
trichloroethene		0.586	1.360	1.278	1.368	1.452	1.473	1.253	26.7
1,2-dichloropropane		0.897	1.242	1.329	1.451	1.519	1.507	1.324	17.8
dibromomethane		0.530	0.782	0.850	0.879	0.878	0.894	0.802	17.3
2-chloroethylvinyl ether								0.000	0.0
bromodichloromethane	0.185	0.918	1.139	1.288	1.388	1.496	1.573	1.141	41.7
cis-1,3-dichloropropene	0.255	0.737	1.053	1.293	1.538	1.653	1.739	1.181	45.6
4-Methyl-2-pentanone		0.360	0.634	0.740	0.803	0.836	0.847	0.703	26.4
1-chloro-3-fluorobenzene<IS>	ISTD								
Toluene-d8 <surr>	2.807	2.933	2.996	2.887	2.929	2.866	2.922	2.906	2.1
toluene	1.406	1.651	1.863	1.768	1.944	1.935	1.953	1.789	11.3
trans-1,3-dichloropropene		0.22	0.374	0.511	0.644	0.727	0.787	0.544	40.0

1,1,2-trichloroethane		0.442	0.541	0.552	0.559	0.563	0.576	0.539	9.1
tetrachloroethene		0.575	0.552	0.664	0.713	0.729	0.723	0.659	11.8
1,3-dichloropropane	0.527	0.739	0.995	0.975	0.997	1.055	1.053	0.906	21.9
2-Hexanone		0.579	0.717	0.842	0.918	0.946	0.957	0.827	18.2
dibromochloromethane	0.08	0.335	0.399	0.459	0.579	0.631	0.668	0.45	45.3
1,2-dibromoethane		0.515	0.571	0.635	0.682	0.698	0.728	0.638	12.7
1-chlorohexane		0.61	0.717	0.806	0.822	0.812	0.802	0.761	11.0
chlorobenzene	1.519	1.554	2.127	2.048	2.169	2.179	2.177	1.968	15.2
1,1,1,2-tetrachloroethane	0.148	0.307	0.371	0.456	0.534	0.581	0.605	0.429	38.5
ethylbenzene	0.905	1.021	1.274	1.194	1.224	1.23	1.211	1.151	11.7
P & M -Xylene		1.121	1.376	1.459	1.485	1.547	1.499	1.414	10.9
o-xylene		1.12	1.097	1.414	1.413	1.471	1.451	1.328	12.9
styrene		1.323	2.114	2.144	2.315	2.373	2.368	2.106	19.0
bromoform		0.172	0.219	0.292	0.392	0.431	0.487	0.332	37.5
Isopropylbenzene (Cumene)		2.693	3.142	3.384	3.547	3.657	3.511	3.322	10.7
1,2-Dichlorobenzene-d4 <IS>	ISTD								
4-Bromofluorobenzene <Surr>	1.043	0.963	0.978	0.924	0.932	0.908	0.899	0.95	5.3
trans 1,4-dichloro-2-butene		0.156	0.17	0.205	0.22	0.221	0.247	0.203	16.9
bromobenzene	0.534	0.577	0.655	0.651	0.641	0.667	0.654	0.626	8.0
1,1,2,2-tetrachloroethane	0.5	0.658	0.741	0.861	0.845	0.839	0.851	0.756	17.9
1,2,3-trichloropropane		0.132	0.221	0.204	0.207	0.22	0.232	0.203	17.7
n-propylbenzene	2.508	2.759	3.319	3.479	3.439	3.483	3.368	3.194	12.3
2-chlorotoluene	1.448	1.589	1.794	1.913	1.929	1.931	1.892	1.785	10.8
4-chlorotoluene		1.867	1.928	2.097	2.08	2.076	2.013	2.01	4.7
1,3,5-trimethylbenzene		1.664	1.896	2.149	2.183	2.218	2.198	2.051	10.9
tert-butylbenzene		1.614	1.73	1.795	1.816	1.824	1.81	1.765	4.6
1,2,4-trimethylbenzene		1.54	1.993	2.09	2.154	2.191	2.165	2.022	12.2
sec-butylbenzene	1.796	2.164	2.664	2.718	2.732	2.714	2.649	2.491	14.7
1,3-dichlorobenzene		0.909	1.065	1.207	1.234	1.246	1.258	1.153	12.0
4-isopropyltoluene		1.464	1.807	2.007	2.087	2.091	2.081	1.923	13.0
1,4-dichlorobenzene	0.587	0.982	1.155	1.212	1.274	1.298	1.28	1.112	23.0
1,2-dichlorobenzene	1.075	1.072	1.175	1.228	1.216	1.243	1.207	1.174	6.1
n-butylbenzene		1.174	1.585	1.802	1.89	1.898	1.935	1.714	17.1
1,2-dibromo-3-chloropropane		0.048	0.108	0.131	0.151	0.167	0.169	0.129	35.6
1,2,4-trichlorobenzene		0.348	0.475	0.541	0.547	0.577	0.608	0.516	18.1
hexachlorobutadiene		0.158	0.209	0.221	0.231	0.239	0.243	0.217	14.3
naphthalene		1.306	1.586	1.824	2.006	2.062	2.167	1.825	17.9
1,2,3-trichlorobenzene		0.452	0.451	0.523	0.555	0.581	0.597	0.526	12.0

Sun Aug 03 21:09:52 2014

Calibration Report VNA

Method Path : Z:\08\VNA\METHOD\
Method File : VNA2014-0801.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 03 21:03:11 2014
Response Via : Initial Calibration

Calibration Files
.4 =A07 1 =A08 3 =A09 10 =A10 30 =A11 50 =A12
70 =A13

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	Fluorobenzene IS		----------ISTD----------			
2)		dichlorodifluoro...	Avg	-----	2.7738	-----	0.1285
3)		chloromethane	Avg	-----	2.7054	-----	0.0793
4)		vinyl chloride	Avg	-----	2.4936	-----	0.0967
5)		bromomethane	Lin	-0.0135	0.8102	-----	0.9951
6)		chloroethane	Quad	-0.0087	0.7703	-0.0325	0.9993
7)		trichlorofluorom...	Avg	-----	2.7572	-----	0.0576
8)		1,1,2-trichloro-...	Avg	-----	1.3343	-----	0.1034
9)		1,1-dichloroethene	Avg	-----	1.1529	-----	0.0970
10)		Acetone	Avg	-----	0.5938	-----	0.1132
11)		Acrylonitrile	Quad	-0.0267	0.6746	0.0207	0.9997
12)		Methyliodide	Quad	-0.0404	1.3935	0.1563	0.9990
13)		Carbon disulfide	Avg	-----	3.5772	-----	0.1186
14)		methylene chloride	Avg	-----	1.5550	-----	0.1110
15)		methyl-t-butyl e...	Avg	-----	2.8464	-----	0.0677
16)		trans-1,2-dichlo...	Avg	-----	1.2846	-----	0.0397
17)		Vinylacetate	Quad	-0.0289	1.5573	0.2043	0.9997
18)		n-hexane	Avg	-----	0.8013	-----	0.1035
19)		1,1-dichloroethane	Avg	-----	2.3062	-----	0.1120
20)		2-Butanone(MEK)	Lin	-0.0811	1.0676	-----	0.9992
21)		2,2-dichloropropane	Quad	-0.0099	0.9554	0.1818	0.9993
22)		cis-1,2-dichloro...	Avg	-----	1.3594	-----	0.1195
23)		bromochloromethane	Lin	-0.0210	0.7296	-----	0.9988
24)		cyclohexane	Avg	-----	2.3161	-----	0.1413
25)		chloroform	Avg	-----	2.0611	-----	0.1475
26)	S	Dibromofluoromet...	Avg	-----	1.5721	-----	0.0374
27)		1,1,1-trichloroe...	Quad	-0.0390	1.7201	0.0980	1.0000
28)		carbon tetrachlo...	Quad	-0.0133	1.1595	0.1536	0.9996
29)		1,1-dichloropropene	Avg	-----	1.6003	-----	0.1037
30)	S	1,2-Dichloroetha...	Avg	-----	1.5498	-----	0.0297
31)		benzene	Quad	-0.0342	5.3678	0.0893	0.9999
32)		1,2-dichloroethane	Lin	-0.0142	1.6605	-----	0.9999
33)		trichloroethene	Lin	-0.0274	1.4581	-----	0.9988
34)		1,2-dichloropropane	Lin	-0.0245	1.5081	-----	0.9994
35)		dibromomethane	Lin	-0.0121	0.8929	-----	0.9999
36)		2-chloroethylvin...	Avg	-----	-----	-----	0.0000
37)		bromodichloromet...	Quad	-0.0141	1.2830	0.1279	1.0000
38)		cis-1,3-dichloro...	Quad	-0.0177	1.3438	0.1790	0.9996
39)		4-Methyl-2-penta...	Quad	-0.0445	0.7876	0.0099	0.9999
40)		1-chloro-3-fluor...		----------ISTD----------			
41)	S	Toluene-d8 <surr>	Avg	-----	2.9058	-----	0.0205
42)		toluene	Avg	-----	1.7886	-----	0.1127
43)		trans-1,3-dichlo...	Quad	-0.0126	0.5364	0.1123	0.9997
44)		1,1,2-trichloroe...	Avg	-----	0.5388	-----	0.0909
45)		tetrachloroethene	Avg	-----	0.6591	-----	0.1184
46)		1,3-dichloropropane	Quad	-0.0064	0.9914	0.0299	0.9997
47)		2-Hexanone	Lin	-0.0498	0.9510	-----	0.9993
48)		dibromochloromet...	Quad	-0.0060	0.4893	0.0809	0.9994
49)		1,2-dibromoethane	Avg	-----	0.6382	-----	0.1273
50)		1-chlorohexane	Avg	-----	0.7615	-----	0.1097
51)		chlorobenzene	Avg	-----	1.9675	-----	0.1516
52)		1,1,1,2-tetrachl...	Quad	-0.0052	0.4704	0.0615	0.9995
53)		ethylbenzene	Avg	-----	1.1513	-----	0.1174
54)		P & M -Xylene	Avg	-----	1.4145	-----	0.1093

55)		o-xylene	Avg	-----	1.3276	-----	0.1292
56)		styrene	Lin	-0.0357	2.3742	-----	0.9997
57)		bromoform	Quad	-0.0058	0.3017	0.0810	0.9995
58)		Isopropylbenzene...	Avg	-----	3.3222	-----	0.1069
59)	I	1,2-Dichlorobenz...	----------	ISTD	----------		
60)	S	4-Bromofluoroben...	Avg	-----	0.9495	-----	0.0525
61)		trans 1,4-dichlo...	Quad	-0.0022	0.1946	0.0143	0.9992
62)		bromobenzene	Avg	-----	0.6255	-----	0.0802
63)		1,1,2,2-tetrachl...	Lin	-0.0054	0.8497	-----	0.9998
64)		1,2,3-trichlorop...	Quad	-0.0011	0.1983	0.0141	0.9993
65)		n-propylbenzene	Avg	-----	3.1936	-----	0.1233
66)		2-chlorotoluene	Avg	-----	1.7851	-----	0.1077
67)		4-chlorotoluene	Avg	-----	2.0101	-----	0.0466
68)		1,3,5-trimethylb...	Avg	-----	2.0513	-----	0.1091
69)		tert-butylbenzene	Avg	-----	1.7648	-----	0.0461
70)		1,2,4-trimethylb...	Avg	-----	2.0220	-----	0.1220
71)		sec-butylbenzene	Avg	-----	2.4910	-----	0.1469
72)		1,3-dichlorobenzene	Avg	-----	1.1531	-----	0.1204
73)		4-isopropyltoluene	Avg	-----	1.9229	-----	0.1298
74)		1,4-dichlorobenzene	Lin	-0.0102	1.2874	-----	0.9998
75)		1,2-dichlorobenzene	Avg	-----	1.1736	-----	0.0610
76)		n-butylbenzene	Lin	-0.0284	1.9275	-----	0.9999
77)		1,2-dibromo-3-ch...	Quad	-0.0034	0.1431	0.0126	0.9995
78)		1,2,4-trichlorob...	Quad	-0.0054	0.5234	0.0360	0.9998
79)		hexachlorobutadiene	Avg	-----	0.2169	-----	0.1433
80)		naphthalene	Quad	-0.0215	1.8665	0.1322	0.9999
81)		1,2,3-trichlorob...	Avg	-----	0.5264	-----	0.1199

VNA2014-0801.M Sun Aug 03 21:09:30 2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\080114\
Data File : A15.D
Acq On : 1 Aug 2014 3:48 pm
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:03:15 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	30.000	30.000	0.0	99	0.00
2		dichlorodifluoromethane	30.000	32.304	-7.7	100	0.00
3		chloromethane	30.000	35.438	-18.1	114	0.00
4		vinyl chloride	30.000	31.615	-5.4	103	0.00
5		bromomethane	30.000	34.278	-14.3	124	0.00
6		chloroethane	30.000	36.229	-20.8#	114	0.00
7		trichlorofluoromethane	30.000	31.836	-6.1	104	0.00
8		1,1,2-trichloro-1,2,2-trifl	45.000	49.033	-9.0	101	0.00
9		1,1-dichloroethene	30.000	32.765	-9.2	106	0.00
10		Acetone	90.000	82.420	8.4	97	0.00
11		Acrylonitrile	45.000	45.728	-1.6	99	0.00
12		Methyliodide	45.000	44.177	1.8	94	0.00
13		Carbon disulfide	45.000	49.856	-10.8	101	0.00
14		methylene chloride	30.000	33.289	-11.0	101	0.00
15		methyl-t-butyl ether	45.000	49.016	-8.9	103	0.00
16		trans-1,2-dichloroethene	30.000	31.431	-4.8	106	0.00
17		Vinylacetate	30.000	31.681	-5.6	104	0.00
18		n-hexane	30.000	33.393	-11.3	101	0.00
19		1,1-dichloroethane	30.000	33.504	-11.7	102	0.00
20		2-Butanone(MEK)	90.000	85.226	5.3	96	0.00
21		2,2-dichloropropane	30.000	30.990	-3.3	103	0.00
22		cis-1,2-dichloroethene	30.000	33.521	-11.7	103	0.00
23		bromochloromethane	30.000	30.894	-3.0	103	0.00
24		cyclohexane	30.000	33.187	-10.6	99	0.00
25		chloroform	30.000	35.071	-16.9	105	0.00
26	S	Dibromofluoromethane <SURR>	30.000	30.135	-0.5	94	0.00
27		1,1,1-trichloroethane	30.000	30.885	-3.0	102	0.00
28		carbon tetrachloride	30.000	32.127	-7.1	105	0.00
29		1,1-dichloropropene	30.000	32.697	-9.0	103	0.00
30	S	1,2-Dichloroethane-D4 <surr	30.000	30.812	-2.7	101	0.00
31		benzene	30.000	31.655	-5.5	103	0.00
32		1,2-dichloroethane	30.000	31.282	-4.3	102	0.00
33		trichloroethene	30.000	31.227	-4.1	108	0.00
34		1,2-dichloropropane	30.000	29.748	0.8	100	0.00
35		dibromomethane	30.000	31.405	-4.7	104	0.00
36		2-chloroethylvinyl ether	45.000	0.000	100.0#	0	-12.78#
37		bromodichloromethane	30.000	32.669	-8.9	110	0.00
38		cis-1,3-dichloropropene	30.000	31.884	-6.3	104	0.00
39		4-Methyl-2-pentanone	90.000	90.965	-1.1	100	0.00
40		1-chloro-3-fluorobenzene<IS	30.000	30.000	0.0	95	0.00
41	S	Toluene-d8 <surr>	30.000	30.841	-2.8	97	0.00
42		toluene	30.000	34.329	-14.4	100	0.00
43		trans-1,3-dichloropropene	30.000	33.158	-10.5	106	0.00
44		1,1,2-trichloroethane	30.000	33.240	-10.8	102	0.00
45		tetrachloroethene	30.000	34.498	-15.0	102	0.00
46		1,3-dichloropropane	30.000	31.885	-6.3	103	0.00
47		2-Hexanone	90.000	86.454	3.9	93	0.00
48		dibromochloromethane	30.000	33.814	-12.7	107	0.00
49		1,2-dibromoethane	30.000	33.887	-13.0	101	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\080114\
Data File : A15.D
Acq On : 1 Aug 2014 3:48 pm
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:03:15 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
50		1-chlorohexane	45.000	48.212	-7.1	95	0.00
51		chlorobenzene	30.000	33.033	-10.1	95	0.00
52		1,1,1,2-tetrachloroethane	30.000	31.878	-6.3	101	0.00
53		ethylbenzene	30.000	31.355	-4.5	94	0.00
54		P & M -Xylene	60.000	64.445	-7.4	98	0.00
55		o-xylene	30.000	32.355	-7.8	97	0.00
56		styrene	30.000	30.106	-0.4	97	0.00
57		bromoform	30.000	34.120	-13.7	108	0.00
58		Isopropylbenzene (Cumene)	30.000	32.231	-7.4	96	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	30.000	30.000	0.0	95	0.00
60	S	4-Bromofluorobenzene <Surr>	30.000	29.412	2.0	95	0.00
61		trans 1,4-dichloro-2-butene	45.000	48.096	-6.9	100	0.00
62		bromobenzene	30.000	30.643	-2.1	95	0.00
63		1,1,2,2-tetrachloroethane	30.000	30.799	-2.7	98	0.00
64		1,2,3-trichloropropane	30.000	30.995	-3.3	101	0.00
65		n-propylbenzene	30.000	33.082	-10.3	98	0.00
66		2-chlorotoluene	30.000	33.380	-11.3	98	0.00
67		4-chlorotoluene	30.000	30.983	-3.3	95	0.00
68		1,3,5-trimethylbenzene	30.000	32.348	-7.8	97	0.00
69		tert-butylbenzene	30.000	31.220	-4.1	96	0.00
70		1,2,4-trimethylbenzene	30.000	32.136	-7.1	96	0.00
71		sec-butylbenzene	30.000	33.034	-10.1	96	0.00
72		1,3-dichlorobenzene	30.000	32.601	-8.7	97	0.00
73		4-isopropyltoluene	30.000	32.957	-9.9	97	0.00
74		1,4-dichlorobenzene	30.000	29.678	1.1	95	0.00
75		1,2-dichlorobenzene	30.000	31.348	-4.5	96	0.00
76		n-butylbenzene	30.000	30.484	-1.6	97	0.00
77		1,2-dibromo-3-chloropropane	30.000	30.927	-3.1	100	0.00
78		1,2,4-trichlorobenzene	30.000	30.463	-1.5	98	0.00
79		hexachlorobutadiene	30.000	32.467	-8.2	97	0.00
80		naphthalene	30.000	31.049	-3.5	98	0.00
81		1,2,3-trichlorobenzene	30.000	32.160	-7.2	97	0.00

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

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\080114\
Data File : A15.D
Acq On : 1 Aug 2014 3:48 pm
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:03:15 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	99	0.00
2		dichlorodifluoromethane	2.774	2.987	-7.7	100	0.00
3		chloromethane	2.705	3.196	-18.2	114	0.00
4		vinyl chloride	2.494	2.628	-5.4	103	0.00
5		bromomethane	0.709	0.912	-28.6#	124	0.00
6		chloroethane	0.660	0.874	-32.4#	114	0.00
7		trichlorofluoromethane	2.757	2.926	-6.1	104	0.00
8		1,1,2-trichloro-1,2,2-trifl	1.334	1.454	-9.0	101	0.00
9		1,1-dichloroethene	1.153	1.259	-9.2	106	0.00
10		Acetone	0.594	0.544	8.4	97	0.00
11		Acrylonitrile	0.569	0.700	-23.0#	99	0.00
12		Methyliodide	1.405	1.567	-11.5	94	0.00
13		Carbon disulfide	3.577	3.963	-10.8	101	0.00
14		methylene chloride	1.555	1.726	-11.0	101	0.00
15		methyl-t-butyl ether	2.846	3.100	-8.9	103	0.00
16		trans-1,2-dichloroethene	1.285	1.346	-4.7	106	0.00
17		Vinylacetate	1.526	1.843	-20.8#	104	0.00
18		n-hexane	0.801	0.892	-11.4	101	0.00
19		1,1-dichloroethane	2.306	2.576	-11.7	102	0.00
20		2-Butanone(MEK)	0.865	0.984	-13.8	96	0.00
21		2,2-dichloropropane	1.047	1.171	-11.8	103	0.00
22		cis-1,2-dichloroethene	1.359	1.519	-11.8	103	0.00
23		bromochloromethane	0.572	0.730	-27.6#	103	0.00
24		cyclohexane	2.316	2.562	-10.6	99	0.00
25		chloroform	2.061	2.410	-16.9	105	0.00
26	S	Dibromofluoromethane <SURR>	1.572	1.579	-0.4	94	0.00
27		1,1,1-trichloroethane	1.517	1.836	-21.0#	102	0.00
28		carbon tetrachloride	1.200	1.405	-17.1	105	0.00
29		1,1-dichloropropene	1.600	1.744	-9.0	103	0.00
30	S	1,2-Dichloroethane-D4 <surr	1.550	1.592	-2.7	101	0.00
31		benzene	4.852	5.729	-18.1	103	0.00
32		1,2-dichloroethane	1.418	1.717	-21.1#	102	0.00
33		trichloroethene	1.253	1.490	-18.9	108	0.00
34		1,2-dichloropropane	1.324	1.471	-11.1	100	0.00
35		dibromomethane	0.802	0.923	-15.1	104	0.00
36		2-chloroethylvinyl ether	0.000	0.000	0.0	0#	-12.78#
37		bromodichloromethane	1.141	1.535	-34.5#	110	0.00
38		cis-1,3-dichloropropene	1.181	1.613	-36.6#	104	0.00
39		4-Methyl-2-pentanone	0.703	0.812	-15.5	100	0.00
40		1-chloro-3-fluorobenzene<IS	1.000	1.000	0.0	95	0.00
41	S	Toluene-d8 <surr>	2.906	2.987	-2.8	97	0.00
42		toluene	1.789	2.047	-14.4	100	0.00
43		trans-1,3-dichloropropene	0.544	0.717	-31.8#	106	0.00
44		1,1,2-trichloroethane	0.539	0.597	-10.8	102	0.00
45		tetrachloroethene	0.659	0.758	-15.0	102	0.00
46		1,3-dichloropropane	0.906	1.081	-19.3	103	0.00
47		2-Hexanone	0.827	0.897	-8.5	93	0.00
48		dibromochloromethane	0.450	0.648	-44.0#	107	0.00
49		1,2-dibromoethane	0.638	0.721	-13.0	101	0.00

Evaluate Continuing Calibration Report

Data Path : Z:\08\VNA\DATA\080114\
Data File : A15.D
Acq On : 1 Aug 2014 3:48 pm
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:03:15 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50		1-chlorohexane	0.761	0.816	-7.2	95	0.00
51		chlorobenzene	1.968	2.166	-10.1	95	0.00
52		1,1,1,2-tetrachloroethane	0.429	0.564	-31.5#	101	0.00
53		ethylbenzene	1.151	1.203	-4.5	94	0.00
54		P & M -Xylene	1.414	1.519	-7.4	98	0.00
55		o-xylene	1.328	1.432	-7.8	97	0.00
56		styrene	2.106	2.347	-11.4	97	0.00
57		bromoform	0.332	0.442	-33.1#	108	0.00
58		Isopropylbenzene (Cumene)	3.322	3.569	-7.4	96	0.00
59	I	1,2-Dichlorobenzene-d4 <IS>	1.000	1.000	0.0	95	0.00
60	S	4-Bromofluorobenzene <Surr>	0.950	0.931	2.0	95	0.00
61		trans 1,4-dichloro-2-butene	0.203	0.231	-13.8	100	0.00
62		bromobenzene	0.626	0.639	-2.1	95	0.00
63		1,1,2,2-tetrachloroethane	0.756	0.867	-14.7	98	0.00
64		1,2,3-trichloropropane	0.203	0.219	-7.9	101	0.00
65		n-propylbenzene	3.194	3.522	-10.3	98	0.00
66		2-chlorotoluene	1.785	1.986	-11.3	98	0.00
67		4-chlorotoluene	2.010	2.076	-3.3	95	0.00
68		1,3,5-trimethylbenzene	2.051	2.212	-7.8	97	0.00
69		tert-butylbenzene	1.765	1.837	-4.1	96	0.00
70		1,2,4-trimethylbenzene	2.022	2.166	-7.1	96	0.00
71		sec-butylbenzene	2.491	2.743	-10.1	96	0.00
72		1,3-dichlorobenzene	1.153	1.253	-8.7	97	0.00
73		4-isopropyltoluene	1.923	2.112	-9.8	97	0.00
74		1,4-dichlorobenzene	1.112	1.263	-13.6	95	0.00
75		1,2-dichlorobenzene	1.174	1.226	-4.4	96	0.00
76		n-butylbenzene	1.714	1.930	-12.6	97	0.00
77		1,2-dibromo-3-chloropropane	0.129	0.157	-21.7#	100	0.00
78		1,2,4-trichlorobenzene	0.516	0.563	-9.1	98	0.00
79		hexachlorobutadiene	0.217	0.235	-8.3	97	0.00
80		naphthalene	1.825	2.052	-12.4	98	0.00
81		1,2,3-trichlorobenzene	0.526	0.564	-7.2	97	0.00

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

GC/MS QA-QC Check Report

Tune File : Z:\08\VNA\DATA\080114\A05.D
Tune Time : 1 Aug 2014 12:53 pm

Daily Calibration File : Z:\08\VNA\DATA\080114\A11.D

						61225	120180	157416
File	Sample	Surrogate Recovery %				Internal Standard Responses		
A05.D								
	IB	97	98	98	104	60389	117923	134173
A06.D								
	R	94	100	98	102	59463	119839	137937
A07.D								
	0.4	99	102	98	106	57564	122719	137287
A08.D								
	1	94	97	101	98	59006	113452	132929
A09.D								
	3	99	102	103	100	57452	109520	137270
A10.D								
	10	97	98	99	95	60246	115909	144844
A11.D								
	30	100	100	100	100	61225	120180	157416
A12.D								
	50	100	100	99	95	63597	122285	163733
A13.D								
	70	102	96	101	95	64849	124109	163620
A14.D								
	R	98	102	99	100	61186	120552	142948
A15.D								
	ICV	100	103	103	98	60656	114689	150217

(fails) - fails 12hr time check * - fails criteria

Created: Sun Aug 03 21:05:54 2014 VNA

Calibration RRT Evaluation RRT shifts relative to Cal. 5 RRT = analyte retention time / IS retention time

Initals/Date: NRB 08/03/14 Max RRT shift 0.06

Compound	Cal. 5 RT	Cal. 5 RRT	Cal. 1 RT	RRT shift	Cal 2 RT	RRT shift	Cal 3 RT	RRT shift	Cal 4 RT	RRT shift	Cal 6 RT	RRT shift	Cal 7 RT	RRT shift
Fluorobenzene IS	4.524		4.524		4.518		4.524		4.518		4.524		4.518	
dichlorodifluoromethane	0.835	0.185	0.835	0.000	0.835	0.000	0.835	0.000	0.835	0.000	0.835	0.000	0.835	0.000
chloromethane	0.928	0.205	0.928	0.000	0.934	0.002	0.928	0.000	0.928	0.000	0.928	0.000	0.928	0.000
vinyl chloride	0.963	0.213	0.963	0.000	0.963	0.000	0.963	0.000	0.963	0.000	0.969	0.001	0.963	0.000
bromomethane	1.12	0.248	1.12	0.000	1.12	0.000	1.12	0.000	1.12	0.000	1.125	0.001	1.12	0.000
chloroethane	1.184	0.262	1.178	-0.001	1.184	0.000	1.178	-0.001	1.184	0.000	1.183	0.000	1.184	0.000
trichlorofluoromethane	1.253	0.277	1.253	0.000	1.253	0.000	1.253	0.000	1.247	-0.001	1.253	0.000	1.247	-0.001
1,1,2-trichloro-1,2,2-trifluoromethane	1.544	0.341	1.549	0.001	1.544	0.000	1.549	0.001	1.549	0.002	1.549	0.001	1.549	0.002
1,1-dichloroethene	1.526	0.337	1.52	-0.001	1.526	0.000	1.526	0.000	1.526	0.000	1.526	0.000	1.526	0.000
Acetone	1.926	0.426	1.921	-0.001	1.933	0.002	1.92	-0.001	1.927	0.001	1.926	0.000	1.927	0.001
Acrylonitrile	2.504	0.553	2.517	0.003	2.511	0.002	2.51	0.001	2.504	0.001	2.504	0.000	2.505	0.001
Methyliodide	1.607	0.355	1.602	-0.001	1.607	0.000	1.607	0.000	1.607	0.000	1.607	0.000	1.607	0.000
Carbon disulfide	1.538	0.340	1.532	-0.001	1.538	0.000	1.538	0.000	1.538	0.000	1.538	0.000	1.538	0.000
methylene chloride	1.884	0.416	1.884	0.000	1.878	-0.001	1.878	-0.001	1.884	0.001	1.884	0.000	1.884	0.001
methyl-t-butyl ether	2.072	0.458	2.079	0.002	2.079	0.002	2.072	0.000	2.079	0.002	2.079	0.002	2.073	0.001
n-hexane	1.981	0.438	1.987	0.001	1.987	0.002	1.981	0.000	1.981	0.001	1.981	0.000	1.981	0.001
trans-1,2-dichloroethene	2.699	0.597	2.699	0.000	2.717	0.005	2.711	0.003	2.705	0.002	2.699	0.000	2.699	0.001
Vinylacetate	2.036	0.450	2.036	0.000	2.036	0.001	2.03	-0.001	2.036	0.001	2.036	0.000	2.036	0.001
1,1-dichloroethane	2.444	0.540	2.444	0.000	2.45	0.002	2.443	0.000	2.45	0.002	2.45	0.001	2.45	0.002
2-Butanone(MEK)	3.642	0.805	3.697	0.012	3.66	0.005	3.654	0.003	3.648	0.002	3.642	0.000	3.642	0.001
2,2-dichloropropane	3.04	0.672	3.046	0.001	3.046	0.002	3.046	0.001	3.046	0.002	3.046	0.001	3.046	0.002
cis-1,2-dichloroethene	2.942	0.650	2.943	0.000	2.942	0.001	2.942	0.000	2.949	0.002	2.948	0.001	2.943	0.001
cyclohexane	3.143	0.695	3.162	0.004	3.143	0.001	3.143	0.000	3.149	0.002	3.149	0.001	3.143	0.001
bromochloromethane	3.125	0.691	3.113	-0.003	3.119	0.000	3.119	-0.001	3.125	0.001	3.125	0.000	3.125	0.001
chloroform	3.253	0.719	3.259	0.001	3.265	0.004	3.253	0.000	3.253	0.001	3.253	0.000	3.253	0.001
Dibromofluoromethane <SURR>	3.466	0.766	3.46	-0.001	3.46	0.000	3.459	-0.002	3.46	0.000	3.466	0.000	3.46	0.000
1,1,1-trichloroethane	3.453	0.763	3.453	0.000	3.441	-0.002	3.447	-0.001	3.454	0.001	3.453	0.000	3.454	0.001
carbon tetrachloride	3.368	0.744	3.362	-0.001	3.374	0.002	3.374	0.001	3.362	0.000	3.368	0.000	3.368	0.001
1,1-dichloropropene	3.612	0.798	3.612	0.000	3.612	0.001	3.618	0.001	3.618	0.002	3.612	0.000	3.612	0.001
1,2-Dichloroethane-D4 <surr>	4.141	0.915	4.141	0.000	4.141	0.001	4.141	0.000	4.135	0.000	4.147	0.001	4.141	0.001
benzene	3.934	0.870	3.94	0.001	3.94	0.002	3.934	0.000	3.94	0.002	3.94	0.001	3.934	0.001
1,2-dichloroethane	4.232	0.935	4.238	0.001	4.244	0.004	4.238	0.001	4.232	0.001	4.232	0.000	4.232	0.001
trichloroethene	4.731	1.046	4.731	0.000	4.725	0.000	4.725	-0.001	4.731	0.001	4.731	0.000	4.731	0.001
1,2-dichloropropane	5.309	1.174	5.315	0.001	5.321	0.004	5.315	0.001	5.321	0.004	5.315	0.001	5.315	0.003
dibromomethane	5.199	1.149	5.218	0.004	5.218	0.006	5.199	0.000	5.206	0.003	5.199	0.000	5.2	0.002
2-chloroethylvinyl ether	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
bromodichloromethane	5.425	1.199	5.425	0.000	5.431	0.003	5.424	0.000	5.425	0.002	5.424	0.000	5.425	0.002
cis-1,3-dichloropropene	6.075	1.343	6.094	0.004	6.076	0.002	6.081	0.001	6.076	0.002	6.075	0.000	6.076	0.002
4-Methyl-2-pentanone	6.702	1.481	6.72	0.004	6.708	0.003	6.702	0.000	6.702	0.002	6.702	0.000	6.696	0.001
1-chloro-3-fluorobenzene<IS>	7.414		7.414		7.414		7.414		7.414		7.414		7.414	
Toluene-d8 <surr>	6.246	0.842	6.246	0.000	6.246	0.000	6.246	0.000	6.246	0.000	6.246	0.000	6.246	0.000
toluene	6.294	0.849	6.295	0.000	6.295	0.000	6.294	0.000	6.295	0.000	6.294	0.000	6.295	0.000

trans-1,3-dichloropropene	6.714	0.906	6.714	0.000	6.714	0.000	6.714	0.000	6.714	0.000	6.714	0.000	6.714	0.000
1,1,2-trichloroethane	6.848	0.924	6.854	0.001	6.86	0.002	6.854	0.001	6.848	0.000	6.848	0.000	6.848	0.000
tetrachloroethene	6.641	0.896	6.641	0.000	6.641	0.000	6.641	0.000	6.641	0.000	6.641	0.000	6.641	0.000
1,3-dichloropropane	7.079	0.955	7.092	0.002	7.079	0.000	7.085	0.001	7.079	0.000	7.079	0.000	7.079	0.000
2-Hexanone	7.45	1.005	7.487	0.005	7.469	0.003	7.456	0.001	7.457	0.001	7.45	0.000	7.45	0.000
dibromochloromethane	6.994	0.943	6.994	0.000	6.994	0.000	6.994	0.000	6.994	0.000	6.994	0.000	6.994	0.000
1,2-dibromoethane	7.164	0.966	7.177	0.002	7.171	0.001	7.17	0.001	7.164	0.000	7.164	0.000	7.165	0.000
1-chlorohexane	7.657	1.033	7.657	0.000	7.663	0.001	7.657	0.000	7.657	0.000	7.657	0.000	7.657	0.000
chlorobenzene	7.633	1.030	7.639	0.001	7.633	0.000	7.633	0.000	7.633	0.000	7.633	0.000	7.633	0.000
1,1,1,2-tetrachloroethane	7.694	1.038	7.706	0.002	7.7	0.001	7.694	0.000	7.694	0.000	7.694	0.000	7.694	0.000
ethylbenzene	7.675	1.035	7.682	0.001	7.682	0.001	7.681	0.001	7.676	0.000	7.675	0.000	7.676	0.000
P & M -Xylene	7.791	1.051	7.797	0.001	7.791	0.000	7.791	0.000	7.791	0.000	7.791	0.000	7.791	0.000
o-xylene	8.077	1.089	8.083	0.001	8.083	0.001	8.077	0.000	8.077	0.000	8.077	0.000	8.077	0.000
styrene	8.113	1.094	8.126	0.002	8.12	0.001	8.119	0.001	8.114	0.000	8.113	0.000	8.114	0.000
bromoform	8.113	1.094	8.114	0.000	8.12	0.001	8.113	0.000	8.114	0.000	8.113	0.000	8.114	0.000
Isopropylbenzene (Cumene)	8.284	1.117	8.284	0.000	8.284	0.000	8.284	0.000	8.284	0.000	8.284	0.000	8.284	0.000
1,2-Dichlorobenzene-d4 <IS>	9.245		9.245		9.245		9.245		9.245		9.245		9.245	
4-Bromofluorobenzene <Surr>	8.436	0.912	8.436	0.000	8.436	0.000	8.436	0.000	8.436	0.000	8.436	0.000	8.436	0.000
trans 1,4-dichloro-2-butene	8.667	0.937	8.673	0.001	8.673	0.001	8.667	0.000	8.667	0.000	8.667	0.000	8.667	0.000
bromobenzene	8.485	0.918	8.485	0.000	8.485	0.000	8.484	0.000	8.485	0.000	8.485	0.000	8.485	0.000
1,1,2,2-tetrachloroethane	8.576	0.928	8.576	0.000	8.576	0.000	8.576	0.000	8.576	0.000	8.576	0.000	8.576	0.000
1,2,3-trichloropropane	8.637	0.934	8.637	0.000	8.637	0.000	8.637	0.000	8.637	0.000	8.637	0.000	8.637	0.000
n-propylbenzene	8.521	0.922	8.527	0.001	8.527	0.001	8.527	0.001	8.527	0.001	8.527	0.001	8.521	0.000
2-chlorotoluene	8.6	0.930	8.6	0.000	8.6	0.000	8.6	0.000	8.6	0.000	8.6	0.000	8.6	0.000
4-chlorotoluene	8.691	0.940	8.698	0.001	8.698	0.001	8.691	0.000	8.691	0.000	8.691	0.000	8.691	0.000
1,3,5-trimethylbenzene	8.643	0.935	8.643	0.000	8.643	0.000	8.643	0.000	8.643	0.000	8.643	0.000	8.643	0.000
tert-butylbenzene	8.807	0.953	8.807	0.000	8.807	0.000	8.807	0.000	8.807	0.000	8.807	0.000	8.807	0.000
1,2,4-trimethylbenzene	8.843	0.957	8.85	0.001	8.85	0.001	8.843	0.000	8.844	0.000	8.843	0.000	8.844	0.000
sec-butylbenzene	8.898	0.962	8.898	0.000	8.898	0.000	8.898	0.000	8.898	0.000	8.898	0.000	8.898	0.000
1,3-dichlorobenzene	8.996	0.973	9.008	0.001	9.002	0.001	8.995	0.000	8.996	0.000	8.996	0.000	8.996	0.000
4-isopropyltoluene	8.977	0.971	8.977	0.000	8.977	0.000	8.977	0.000	8.977	0.000	8.977	0.000	8.977	0.000
1,4-dichlorobenzene	9.044	0.978	9.044	0.000	9.05	0.001	9.044	0.000	9.044	0.000	9.044	0.000	9.044	0.000
1,2-dichlorobenzene	9.251	1.001	9.251	0.000	9.251	0.000	9.251	0.000	9.251	0.000	9.251	0.000	9.251	0.000
n-butylbenzene	9.184	0.993	9.19	0.001	9.184	0.000	9.184	0.000	9.184	0.000	9.184	0.000	9.184	0.000
1,2-dibromo-3-chloropropane	9.628	1.041	9.628	0.000	9.628	0.000	9.628	0.000	9.628	0.000	9.628	0.000	9.628	0.000
1,2,4-trichlorobenzene	9.932	1.074	9.939	0.001	9.939	0.001	9.932	0.000	9.932	0.000	9.932	0.000	9.933	0.000
hexachlorobutadiene	9.92	1.073	9.927	0.001	9.92	0.000	9.92	0.000	9.92	0.000	9.92	0.000	9.92	0.000
naphthalene	10.078	1.090	10.085	0.001	10.079	0.000	10.078	0.000	10.079	0.000	10.078	0.000	10.079	0.000
1,2,3-trichlorobenzene	10.158	1.099	10.164	0.001	10.164	0.001	10.164	0.001	10.164	0.001	10.164	0.001	10.164	0.001

CC ISTD Areas

CC Data File : Z:\08\VNA\DATA\080114\A11.D
Date Acquired: 1 Aug 2014 2:42 pm

ISTD Name	Response
Fluorobenzene IS	61225
1-chloro-3-fluorobenzene<IS>	120180
1,2-Dichlorobenzene-d4 <IS>	157416

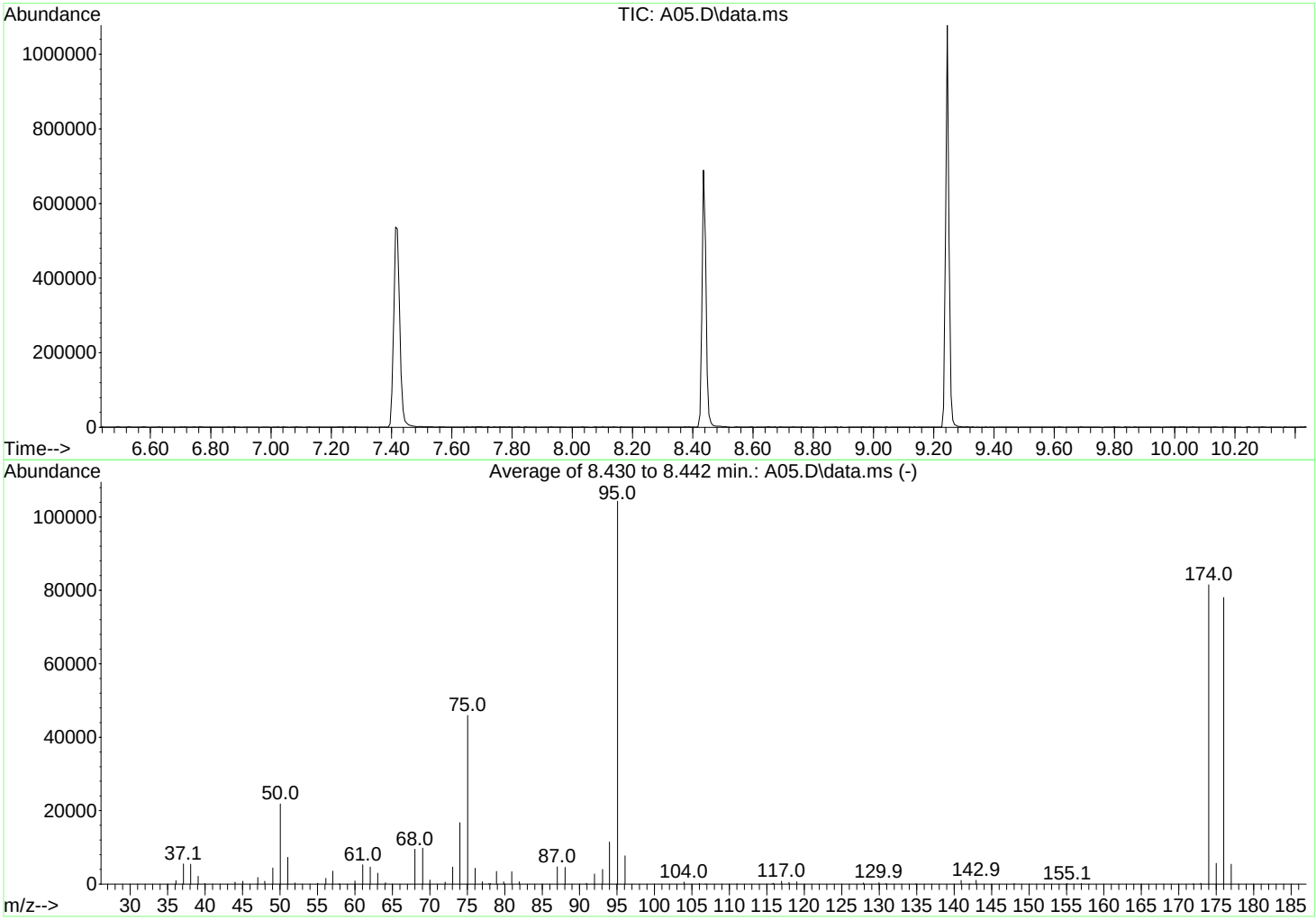
Surrogates

Dibromofluoromethane <SURR>
1,2-Dichloroethane-D4 <surr>
Toluene-d8 <surr>
4-Bromofluorobenzene <Surr>

Data Path : Z:\08\VNA\DATA\080114\
Data File : A05.D
Acq On : 1 Aug 2014 12:53 pm
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Integration File: RTEINT.P

Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Title : Purgable Organics By GCMS
Last Update : Sun Aug 03 21:03:11 2014



AutoFind: Scans 1386, 1387, 1388; Background Corrected with Scan 1382

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.9	21821	PASS
75	95	30	80	44.1	45952	PASS
95	95	100	100	100.0	104251	PASS
96	95	5	9	7.4	7728	PASS
173	174	0.00	2	0.2	200	PASS
174	95	50	100	78.2	81517	PASS
175	174	5	9	6.9	5663	PASS
176	174	95	101	95.8	78069	PASS
177	176	5	9	6.9	5407	PASS

SGS North America Inc.

Instrument Runlog

Instrument: VNA **Calibration Date:** 8/1/2014 **Method:** 8260
Operator: NRB **Processed By:** NRB **Posted By:** N/A **Analytical Batch:** N/A

Data Path: Z:\08\VNA\DATA\080114\

Daily:		As Needed:			
Verify System Date/Time	☑	Refill Water Tank	☐	Adjust Tune	☐
General System Inspection	☑	Refill Standards	☐	Clean Ion Source	☐
				Check Rough Pump Oil	☐
				Check Vacuum Pressure	☐

Standards:

IS/Surr	VW8-33-3	**CCV**	VW8-67-1
MeOH	P1121	**EG**	VW8-64-4
		ICV	VW8-65-2
		2nd EG	VW8-66-2

Data File	Vial	Sample ID	Dilution	Notes	Acquisition Time	pH	Rerun
A01.D	1	R	1		1 Aug 2014 11:47 am	N/A	
A02.D	2	R	1		1 Aug 2014 12:03 pm	N/A	
A03.D	3	R	1		1 Aug 2014 12:20 pm	N/A	
A04.D	4	R	1		1 Aug 2014 12:36 pm	N/A	
A05.D	5	IB	1		1 Aug 2014 12:53 pm	N/A	
A06.D	6	R	1		1 Aug 2014 1:19 pm	N/A	
A07.D	7	0.4	1		1 Aug 2014 1:36 pm	N/A	
A08.D	8	1	1		1 Aug 2014 1:52 pm	N/A	
A09.D	9	3	1		1 Aug 2014 2:09 pm	N/A	
A10.D	10	10	1		1 Aug 2014 2:26 pm	N/A	
A11.D	11	30	1		1 Aug 2014 2:42 pm	N/A	
A12.D	12	50	1		1 Aug 2014 2:59 pm	N/A	
A13.D	13	70	1		1 Aug 2014 3:15 pm	N/A	
A14.D	14	R	1		1 Aug 2014 3:31 pm	N/A	
A15.D	15	ICV	1		1 Aug 2014 3:48 pm	N/A	
A16.D	16	R	1		1 Aug 2014 4:04 pm		
A17.D	17	R	1		1 Aug 2014 4:21 pm		
A18.D	18	R	1		1 Aug 2014 4:37 pm		

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A05.D
Acq On : 1 Aug 2014 12:53 pm
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

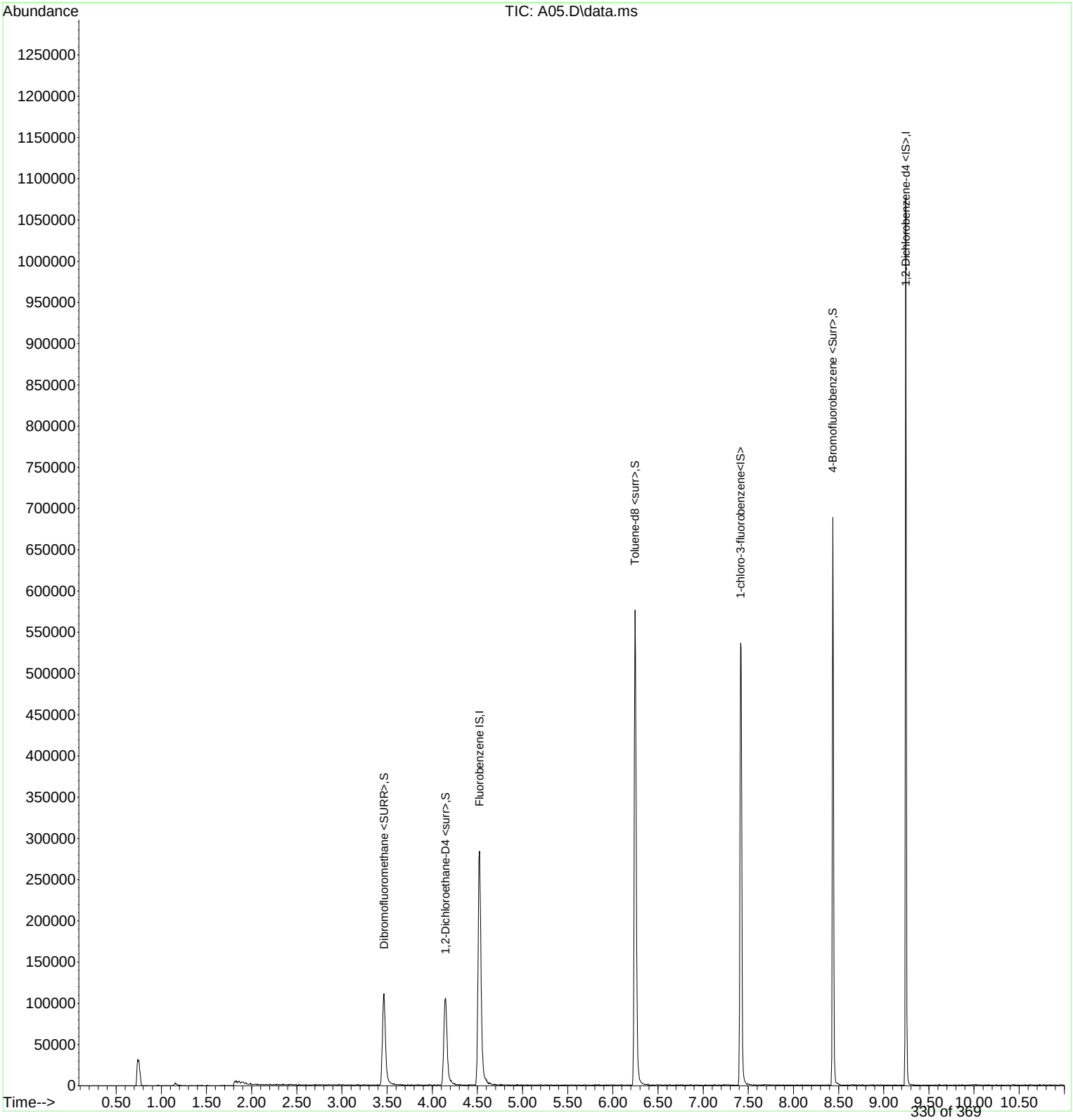
Quant Time: Aug 03 21:04:53 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	60389	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	117923	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	134173	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	91814	29.01	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.70%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	91711	29.40	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 98.00%			
41) Toluene-d8 <surr>	6.246	98	336542	29.46	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 98.20%			
60) 4-Bromofluorobenzene <...	8.436	95	132337	31.16	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 103.87%			
Target Compounds						Qvalue

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

Data Path : Z:\08\VNA\DATA\080114\
Data File : A05.D
Acq On : 1 Aug 2014 12:53 pm
Operator : NRB
Sample : IB
Misc : [VNA]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 03 21:04:53 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A06.D
Acq On : 1 Aug 2014 1:19 pm
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 03 21:05:18 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

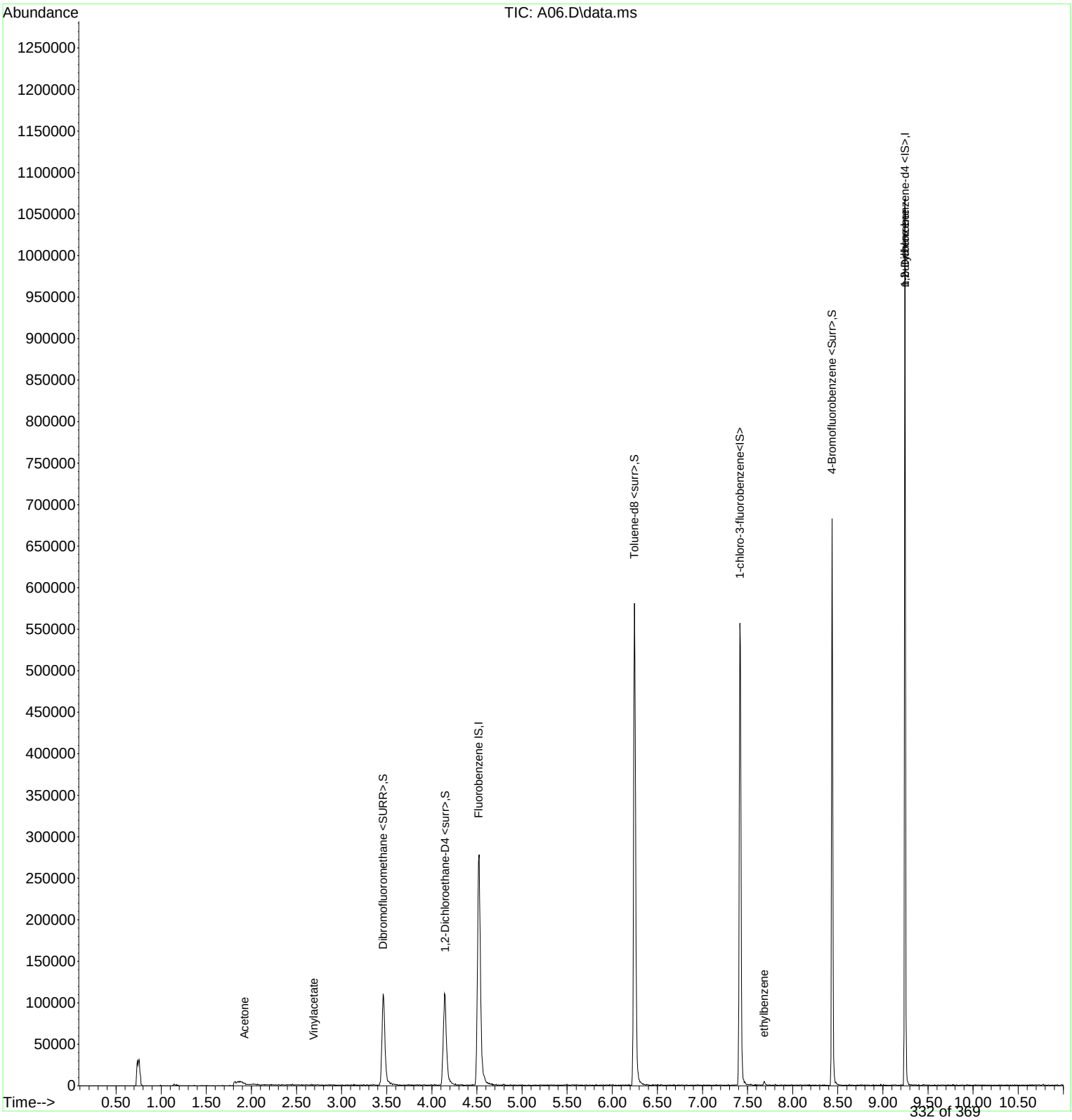
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	59463	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	119839	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	137937	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	87961	28.23	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.10%			
30) 1,2-Dichloroethane-D4 ...	4.147	65	92202	30.01	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.03%			
41) Toluene-d8 <surr>	6.246	98	340955	29.37	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 97.90%			
60) 4-Bromofluorobenzene <...	8.436	95	133544	30.59	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.97%			
Target Compounds						Qvalue
10) Acetone	1.920	43	665	0.56	µg/L #	44
17) Vinylacetate	2.693	43	127	0.60	µg/L #	79
53) ethylbenzene	7.682	106	553	0.12	µg/l #	70
76) n-butylbenzene	9.245	91	185	0.46	µg/l #	51

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A06.D
Acq On : 1 Aug 2014 1:19 pm
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 03 21:05:18 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A07.D
Acq On : 1 Aug 2014 1:36 pm
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 03 20:50:22 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	57564	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	122719	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	137287	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.460	111	92999	29.61	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.70%				
30) 1,2-Dichloroethane-D4 ...	4.141	65	92709	30.51	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 101.70%				
41) Toluene-d8 <surr>	6.246	98	344463	29.36	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 97.87%				
60) 4-Bromofluorobenzene <...	8.436	95	143150	31.69	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.63%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	1632	0.33	µg/l	#	83
3) chloromethane	0.928	50	1842	0.37	µg/l	#	65
4) vinyl chloride	0.963	62	1238	0.31	µg/l		89
5) bromomethane	1.120	96	342	0.30	µg/l		82
6) chloroethane	1.178	64	519	0.38	µg/l	#	44
7) trichlorofluoromethane	1.253	101	1859	0.37	µg/l	#	58
8) 1,1,2-trichloro-1,2,2-...	1.549	101	1050	0.47	µg/L	#	58
9) 1,1-dichloroethene	1.520	96	583	0.31	µg/l	#	82
10) Acetone	1.921	43	3084	1.70	µg/L	#	44
11) Acrylonitrile	2.517	53	149	0.19	µg/L	#	14
12) Methyliodide	1.602	142	609	0.29	µg/L		89
13) Carbon disulfide	1.532	76	3499	0.53	µg/L	#	72
14) methylene chloride	1.884	84	938	0.33	µg/l	#	82
15) methyl-t-butyl ether	2.079	73	2093	0.46	µg/L	#	74
16) trans-1,2-dichloroethene	1.987	96	364	0.22	µg/l	#	76
19) 1,1-dichloroethane	2.444	63	1015	0.28	µg/l	#	38
20) 2-Butanone(MEK)	3.697	43	207	0.19	µg/L	#	54
22) cis-1,2-dichloroethene	2.943	96	494	0.24	µg/l	#	74
23) bromochloromethane	3.162	128	110	0.14	µg/l	#	4
24) cyclohexane	3.113	56	1037	0.28	µg/L	#	16
25) chloroform	3.259	83	1267	0.34	µg/l		96
28) carbon tetrachloride	3.362	117	178	0.12	µg/l	#	73
29) 1,1-dichloropropene	3.612	75	692	0.28	µg/l	#	40
31) benzene	3.940	78	2448	0.29	µg/l	#	54
32) 1,2-dichloroethane	4.238	62	417	0.20	µg/l	#	79
35) dibromomethane	5.218	93	115	0.12	µg/l	#	6
38) cis-1,3-dichloropropene	6.094	75	196	0.11	µg/l	#	52
39) 4-Methyl-2-pentanone	6.720	58	452	0.47	µg/L	#	82
42) toluene	6.295	92	2301	0.34	µg/l	#	70
44) 1,1,2-trichloroethane	6.854	83	471	0.27	µg/l	#	59
45) tetrachloroethene	6.641	166	371	0.19	µg/l	#	62
46) 1,3-dichloropropane	7.092	76	863	0.28	µg/l	#	42
47) 2-Hexanone	7.487	43	1025	0.44	µg/L	#	28
49) 1,2-dibromoethane	7.177	107	347	0.19	µg/l	#	7
50) 1-chlorohexane	7.657	55	930	0.38	µg/L	#	67
51) chlorobenzene	7.639	112	2485	0.33	µg/l	#	89
52) 1,1,1,2-tetrachloroethane	7.706	133	242	0.17	µg/l	#	4
53) ethylbenzene	7.682	106	1481	0.34	µg/l		75

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A07.D
Acq On : 1 Aug 2014 1:36 pm
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 03 20:50:22 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

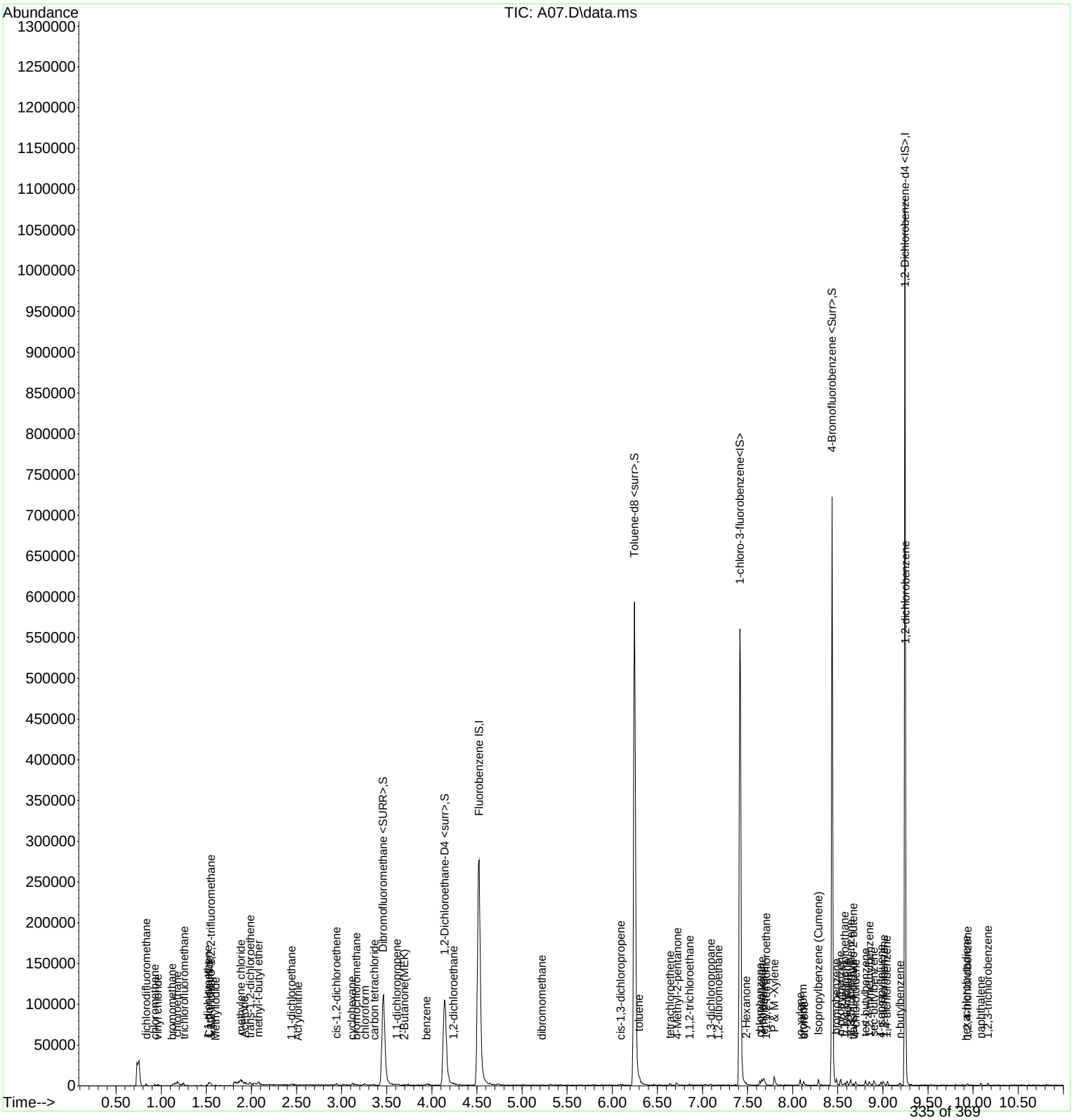
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
54) P & M -Xylene	7.797	106	2728	0.58	µg/l		82
55) o-xylene	8.083	106	998	0.24	µg/l	#	63
56) styrene	8.126	104	1561	0.23	µg/l	#	82
57) bromoform	8.114	173	141	0.14	µg/l	#	31
58) Isopropylbenzene (Cumene)	8.284	105	3610	0.31	µg/l	#	79
61) trans 1,4-dichloro-2-b...	8.673	53	129	0.21	µg/L	#	23
62) bromobenzene	8.485	156	977	0.36	µg/l		90
63) 1,1,2,2-tetrachloroethane	8.576	83	915	0.30	µg/l	#	94
65) n-propylbenzene	8.527	91	4591	0.34	µg/l	#	90
66) 2-chlorotoluene	8.600	91	2650	0.34	µg/l	#	78
67) 4-chlorotoluene	8.698	91	2236	0.30	µg/l	#	86
68) 1,3,5-trimethylbenzene	8.643	105	2255	0.29	µg/l	#	84
69) tert-butylbenzene	8.807	119	1993	0.30	µg/l	#	82
70) 1,2,4-trimethylbenzene	8.850	105	2333	0.30	µg/l		88
71) sec-butylbenzene	8.898	105	3288	0.32	µg/l		98
72) 1,3-dichlorobenzene	9.008	146	1488	0.32	µg/l	#	64
73) 4-isopropyltoluene	8.977	119	2194	0.29	µg/l	#	87
74) 1,4-dichlorobenzene	9.044	146	1074	0.25	µg/l	#	92
75) 1,2-dichlorobenzene	9.251	146	1967	0.38	µg/l	#	56
76) n-butylbenzene	9.190	91	1696	0.26	µg/l		95
78) 1,2,4-trichlorobenzene	9.939	180	744	0.34	µg/l	#	52
79) hexachlorobutadiene	9.927	225	112	0.17	µg/l	#	43
80) naphthalene	10.085	128	1655	0.25	µg/l	#	78
81) 1,2,3-trichlorobenzene	10.164	180	408	0.23	µg/l	#	76

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A07.D
Acq On : 1 Aug 2014 1:36 pm
Operator : NRB
Sample : 0.4
Misc : [VNA]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 03 20:50:22 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A08.D
Acq On : 1 Aug 2014 1:52 pm
Operator : NRB
Sample : 1
Misc : [VNA]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 03 20:50:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.518	70	59006	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	113452	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	132929	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.460	111	87690	28.10	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 93.67%				
30) 1,2-Dichloroethane-D4 ...	4.141	65	88780	28.99	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 96.63%				
41) Toluene-d8 <surr>	6.246	98	332749	30.45	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 101.50%				
60) 4-Bromofluorobenzene <...	8.436	95	127958	29.50	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.33%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	4759	0.97	µg/l	#	83
3) chloromethane	0.934	50	4708	0.95	µg/l		94
4) vinyl chloride	0.963	62	4089	1.00	µg/l	#	82
5) bromomethane	1.120	96	1062	0.94	µg/l		80
6) chloroethane	1.184	64	755	0.63	µg/l	#	31
7) trichlorofluoromethane	1.253	101	5387	1.03	µg/l		88
8) 1,1,2-trichloro-1,2,2-...	1.544	101	3120	1.40	µg/L	#	78
9) 1,1-dichloroethene	1.526	96	1833	0.97	µg/l		87
10) Acetone	1.933	43	4247	2.48	µg/L		96
11) Acrylonitrile	2.511	53	533	0.80	µg/L	#	70
12) Methyliodide	1.607	142	2223	1.16	µg/L	#	82
13) Carbon disulfide	1.538	76	8987	1.38	µg/L		98
14) methylene chloride	1.878	84	2804	0.98	µg/l		91
15) methyl-t-butyl ether	2.079	73	7512	1.56	µg/L	#	85
16) trans-1,2-dichloroethene	1.987	96	2405	1.24	µg/l	#	79
17) Vinylacetate	2.717	43	1561	0.88	µg/L	#	79
18) n-hexane	2.036	56	1290	0.86	µg/L	#	74
19) 1,1-dichloroethane	2.450	63	3564	0.97	µg/l	#	93
20) 2-Butanone(MEK)	3.660	43	2267	2.31	µg/L	#	84
21) 2,2-dichloropropane	3.046	77	1591	0.83	µg/l	#	56
22) cis-1,2-dichloroethene	2.942	96	2093	1.01	µg/l	#	86
23) bromochloromethane	3.143	128	189	0.31	µg/l		91
24) cyclohexane	3.119	56	3551	0.94	µg/L		91
25) chloroform	3.265	83	3148	0.87	µg/l	#	78
27) 1,1,1-trichloroethane	3.441	97	1003	0.62	µg/l	#	86
28) carbon tetrachloride	3.374	117	1699	1.07	µg/l	#	45
29) 1,1-dichloropropene	3.612	75	2755	1.06	µg/l	#	58
31) benzene	3.940	78	8088	0.96	µg/l		94
32) 1,2-dichloroethane	4.244	62	2574	1.12	µg/l	#	79
33) trichloroethene	4.725	95	1152	0.82	µg/l	#	44
34) 1,2-dichloropropane	5.321	63	1765	1.07	µg/l	#	94
35) dibromomethane	5.218	93	1043	1.02	µg/l	#	39
37) bromodichloromethane	5.431	83	1806	1.11	µg/l	#	84
38) cis-1,3-dichloropropene	6.076	75	1449	0.87	µg/l	#	52
39) 4-Methyl-2-pentanone	6.708	58	2123	2.38	µg/L		79
42) toluene	6.295	92	6244	0.99	µg/l	#	72
43) trans-1,3-dichloropropene	6.714	75	832	0.70	µg/l	#	52
44) 1,1,2-trichloroethane	6.860	83	1670	1.03	µg/l	#	88

Data Path : Z:\08\VNA\DATA\080114\
Data File : A08.D
Acq On : 1 Aug 2014 1:52 pm
Operator : NRB
Sample : 1
Misc : [VNA]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 03 20:50:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

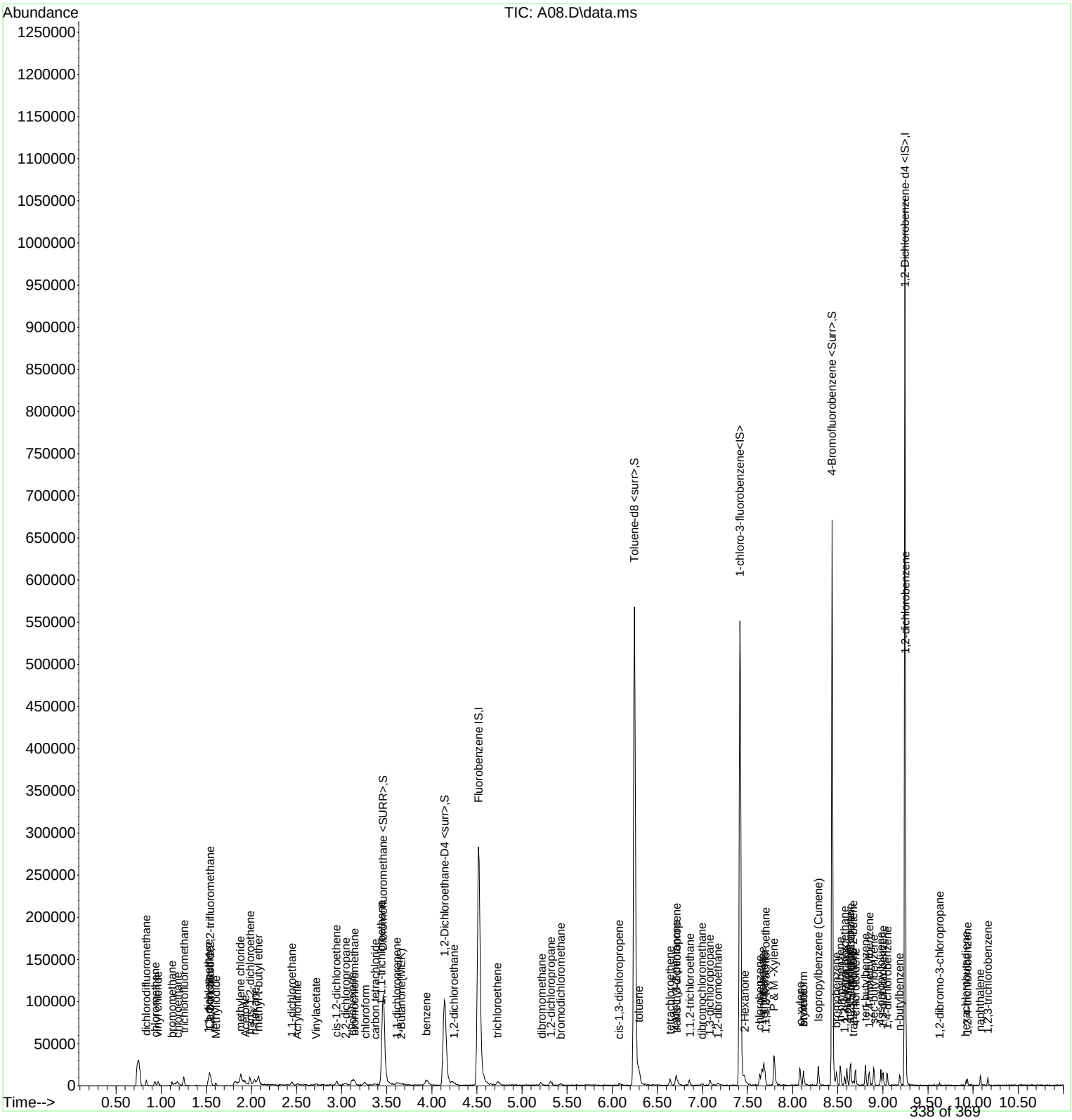
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	2174	1.14	µg/l	#	92
46) 1,3-dichloropropane	7.079	76	2795	0.98	µg/l	#	52
47) 2-Hexanone	7.469	43	6568	3.05	µg/L	#	73
48) dibromochloromethane	6.994	129	1268	1.01	µg/l	#	78
49) 1,2-dibromoethane	7.171	107	1949	1.10	µg/l	#	88
50) 1-chlorohexane	7.663	55	3458	1.51	µg/L		92
51) chlorobenzene	7.633	112	5875	0.89	µg/l	#	81
52) 1,1,1,2-tetrachloroethane	7.700	133	1161	0.93	µg/l	#	88
53) ethylbenzene	7.682	106	3860	0.97	µg/l	#	84
54) P & M -Xylene	7.791	106	8478	1.96	µg/l		82
55) o-xylene	8.083	106	4235	1.07	µg/l	#	63
56) styrene	8.120	104	5002	0.86	µg/l		94
57) bromoform	8.120	173	650	0.79	µg/l	#	65
58) Isopropylbenzene (Cumene)	8.284	105	10184	0.96	µg/l		96
61) trans 1,4-dichloro-2-b...	8.673	53	1037	1.66	µg/L	#	30
62) bromobenzene	8.485	156	2555	0.99	µg/l	#	79
63) 1,1,2,2-tetrachloroethane	8.576	83	2914	0.99	µg/l	#	92
64) 1,2,3-trichloropropane	8.637	110	587	0.78	µg/l	#	1
65) n-propylbenzene	8.527	91	12225	0.95	µg/l	#	76
66) 2-chlorotoluene	8.600	91	7043	0.96	µg/l	#	88
67) 4-chlorotoluene	8.698	91	8272	1.08	µg/l		88
68) 1,3,5-trimethylbenzene	8.643	105	7374	0.98	µg/l	#	85
69) tert-butylbenzene	8.807	119	7150	1.07	µg/l		91
70) 1,2,4-trimethylbenzene	8.850	105	6822	0.93	µg/l	#	75
71) sec-butylbenzene	8.898	105	9590	0.97	µg/l		97
72) 1,3-dichlorobenzene	9.002	146	4027	0.92	µg/l	#	88
73) 4-isopropyltoluene	8.977	119	6486	0.92	µg/l	#	87
74) 1,4-dichlorobenzene	9.050	146	4350	1.04	µg/l		96
75) 1,2-dichlorobenzene	9.251	146	4750	0.96	µg/l	#	69
76) n-butylbenzene	9.184	91	5200	0.88	µg/l		94
77) 1,2-dibromo-3-chloropr...	9.628	75	211	0.48	µg/l		88
78) 1,2,4-trichlorobenzene	9.939	180	1544	0.80	µg/l		81
79) hexachlorobutadiene	9.920	225	702	1.05	µg/l	#	58
80) naphthalene	10.079	128	5786	0.93	µg/l	#	94
81) 1,2,3-trichlorobenzene	10.164	180	2003	1.10	µg/l		94

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A08.D
Acq On : 1 Aug 2014 1:52 pm
Operator : NRB
Sample : 1
Misc : [VNA]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 03 20:50:45 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A09.D
Acq On : 1 Aug 2014 2:09 pm
Operator : NRB
Sample : 3
Misc : [VNA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 03 20:51:12 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	57452	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	109520	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	137270	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.459	111	89402	29.56	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.53%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	91898	30.61	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 102.03%			
41) Toluene-d8 <surr>	6.246	98	328082	30.82	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 102.73%			
60) 4-Bromofluorobenzene <...	8.436	95	134294	29.99	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.97%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	17705	3.49	µg/l	95
3) chloromethane	0.928	50	16709	3.33	µg/l	98
4) vinyl chloride	0.963	62	16257	3.75	µg/l	97
5) bromomethane	1.120	96	3883	3.39	µg/l	99
6) chloroethane	1.178	64	4298	3.50	µg/l #	86
7) trichlorofluoromethane	1.253	101	16743	3.22	µg/l	96
8) 1,1,2-trichloro-1,2,2-...	1.549	101	12029	5.24	µg/L	96
9) 1,1-dichloroethene	1.526	96	6780	3.50	µg/l #	75
10) Acetone	1.920	43	10608	6.86	µg/L #	86
11) Acrylonitrile	2.510	53	4136	5.79	µg/L #	82
12) Methyliodide	1.607	142	9353	4.86	µg/L	91
13) Carbon disulfide	1.538	76	29400	4.59	µg/L	98
14) methylene chloride	1.878	84	9441	3.29	µg/l #	82
15) methyl-t-butyl ether	2.072	73	23292	4.84	µg/L #	92
16) trans-1,2-dichloroethene	1.981	96	7139	3.56	µg/l	95
17) Vinylacetate	2.711	43	7120	3.76	µg/L #	79
18) n-hexane	2.030	56	4315	2.96	µg/L	92
19) 1,1-dichloroethane	2.443	63	12990	3.44	µg/l	99
20) 2-Butanone(MEK)	3.654	43	12723	11.90	µg/L	95
21) 2,2-dichloropropane	3.046	77	4280	2.50	µg/l #	55
22) cis-1,2-dichloroethene	2.942	96	7542	3.52	µg/l	94
23) bromochloromethane	3.143	128	3370	4.60	µg/l	91
24) cyclohexane	3.119	56	12203	3.24	µg/L	90
25) chloroform	3.253	83	12161	3.32	µg/l	99
27) 1,1,1-trichloroethane	3.447	97	8073	4.37	µg/l	90
28) carbon tetrachloride	3.374	117	5650	3.47	µg/l	92
29) 1,1-dichloropropene	3.618	75	8128	3.15	µg/l #	86
31) benzene	3.934	78	28136	3.32	µg/l #	90
32) 1,2-dichloroethane	4.238	62	8638	3.60	µg/l #	79
33) trichloroethene	4.725	95	7814	4.65	µg/l	95
34) 1,2-dichloropropane	5.315	63	7138	3.98	µg/l #	94
35) dibromomethane	5.199	93	4494	4.01	µg/l #	73
37) bromodichloromethane	5.424	83	6543	3.77	µg/l #	84
38) cis-1,3-dichloropropene	6.081	75	6048	3.53	µg/l #	77
39) 4-Methyl-2-pentanone	6.702	58	10931	11.45	µg/L	91
42) toluene	6.294	92	20404	3.26	µg/l	85
43) trans-1,3-dichloropropene	6.714	75	4101	3.41	µg/l	94
44) 1,1,2-trichloroethane	6.854	83	5929	3.55	µg/l	87

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A09.D
Acq On : 1 Aug 2014 2:09 pm
Operator : NRB
Sample : 3
Misc : [VNA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 03 20:51:12 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

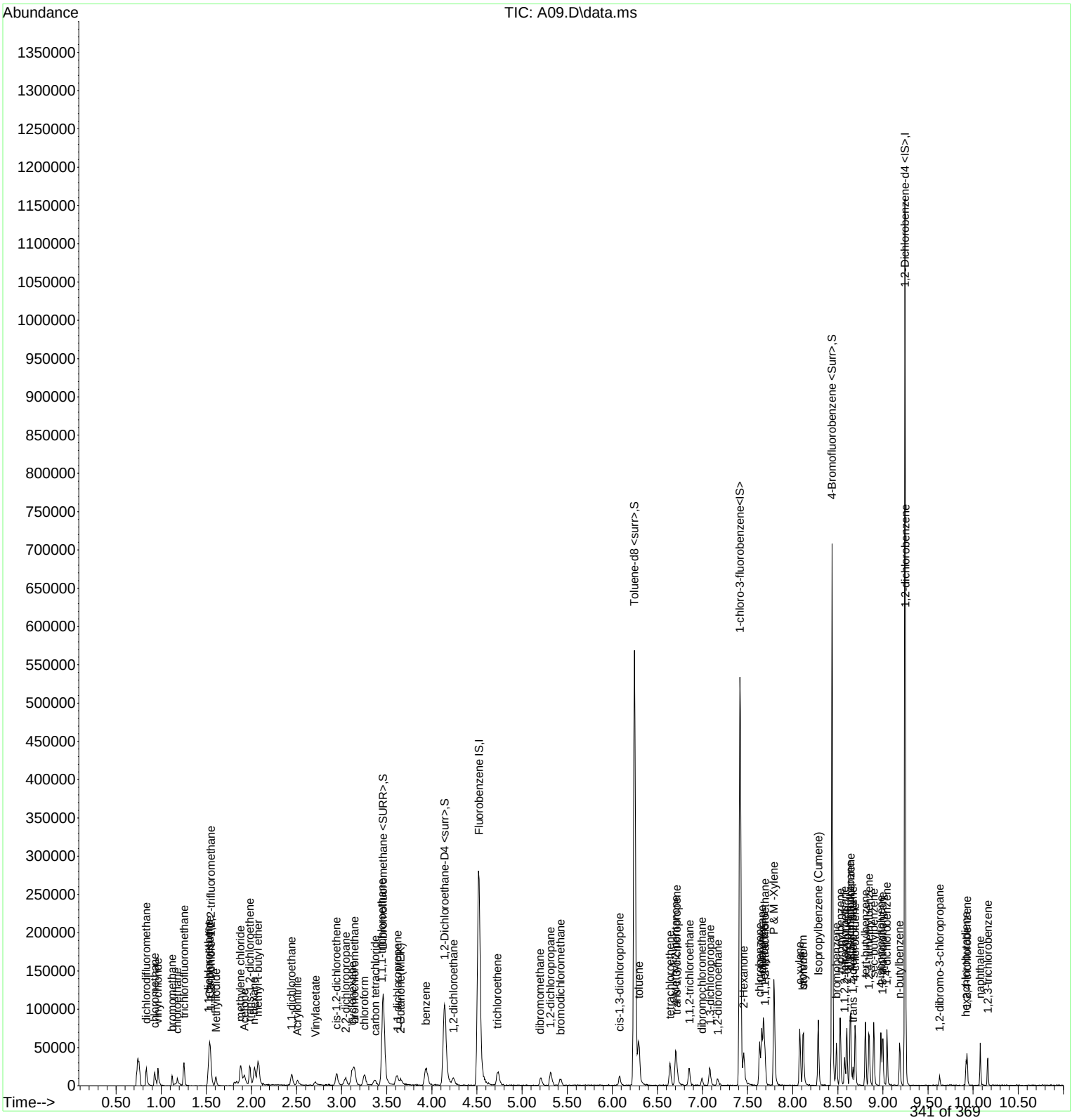
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) tetrachloroethene	6.641	166	6041	3.20	µg/l #	67
46) 1,3-dichloropropane	7.085	76	10892	3.66	µg/l	92
47) 2-Hexanone	7.456	43	23574	10.66	µg/L	98
48) dibromochloromethane	6.994	129	4368	3.43	µg/l	89
49) 1,2-dibromoethane	7.170	107	6259	3.46	µg/l #	84
50) 1-chlorohexane	7.657	55	11782	5.11	µg/L	93
51) chlorobenzene	7.633	112	23290	3.46	µg/l	97
52) 1,1,1,2-tetrachloroethane	7.694	133	4059	3.27	µg/l	91
53) ethylbenzene	7.681	106	13952	3.46	µg/l	87
54) P & M -Xylene	7.791	106	30131	6.86	µg/l	99
55) o-xylene	8.077	106	12011	3.10	µg/l	88
56) styrene	8.119	104	23149	3.78	µg/l	92
57) bromoform	8.113	173	2394	3.02	µg/l #	62
58) Isopropylbenzene (Cumene)	8.284	105	34411	3.25	µg/l	90
61) trans 1,4-dichloro-2-b...	8.667	53	3492	5.15	µg/L #	65
62) bromobenzene	8.484	156	8989	3.27	µg/l	91
63) 1,1,2,2-tetrachloroethane	8.576	83	10171	3.24	µg/l	94
64) 1,2,3-trichloropropane	8.637	110	3027	3.55	µg/l #	71
65) n-propylbenzene	8.527	91	45565	3.31	µg/l	99
66) 2-chlorotoluene	8.600	91	24629	3.18	µg/l	94
67) 4-chlorotoluene	8.691	91	26470	3.26	µg/l	98
68) 1,3,5-trimethylbenzene	8.643	105	26022	3.26	µg/l	99
69) tert-butylbenzene	8.807	119	23754	3.32	µg/l	100
70) 1,2,4-trimethylbenzene	8.843	105	27361	3.44	µg/l	95
71) sec-butylbenzene	8.898	105	36568	3.42	µg/l	95
72) 1,3-dichlorobenzene	8.995	146	14624	3.18	µg/l	97
73) 4-isopropyltoluene	8.977	119	24804	3.31	µg/l	97
74) 1,4-dichlorobenzene	9.044	146	15852	3.47	µg/l	98
75) 1,2-dichlorobenzene	9.251	146	16133	3.11	µg/l #	91
76) n-butylbenzene	9.184	91	21761	3.41	µg/l	93
77) 1,2-dibromo-3-chloropr...	9.628	75	1486	3.18	µg/l #	52
78) 1,2,4-trichlorobenzene	9.932	180	6521	3.21	µg/l	92
79) hexachlorobutadiene	9.920	225	2874	3.80	µg/l	100
80) naphthalene	10.078	128	21777	3.28	µg/l #	89
81) 1,2,3-trichlorobenzene	10.164	180	6192	3.22	µg/l #	64

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A09.D
Acq On : 1 Aug 2014 2:09 pm
Operator : NRB
Sample : 3
Misc : [VNA]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 03 20:51:12 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A10.D
Acq On : 1 Aug 2014 2:26 pm
Operator : NRB
Sample : 10
Misc : [VNA]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 03 20:51:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	60246	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	115909	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	144844	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	91524	29.08	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.93%			
30) 1,2-Dichloroethane-D4 ...	4.135	65	91702	29.30	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 97.67%			
41) Toluene-d8 <surr>	6.246	98	334650	29.76	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 99.20%			
60) 4-Bromofluorobenzene <...	8.436	95	133847	28.64	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.47%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	59222	10.89	µg/l	95
3) chloromethane	0.928	50	56981	10.66	µg/l	98
4) vinyl chloride	0.963	62	49700	10.74	µg/l	100
5) bromomethane	1.120	96	13310	10.85	µg/l	95
6) chloroethane	1.184	64	13340	10.29	µg/l	99
7) trichlorofluoromethane	1.247	101	56323	10.25	µg/l	96
8) 1,1,2-trichloro-1,2,2-...	1.549	101	41109	16.62	µg/L	87
9) 1,1-dichloroethene	1.526	96	23825	11.33	µg/l	96
10) Acetone	1.927	43	32224	21.30	µg/L	97
11) Acrylonitrile	2.504	53	18001	21.44	µg/L	99
12) Methyliodide	1.607	142	37036	17.57	µg/L	100
13) Carbon disulfide	1.538	76	109407	16.02	µg/L	96
14) methylene chloride	1.884	84	33646	10.93	µg/l	94
15) methyl-t-butyl ether	2.079	73	84995	16.45	µg/L	96
16) trans-1,2-dichloroethene	1.981	96	26798	12.07	µg/l	91
17) Vinylacetate	2.705	43	29345	13.49	µg/L	96
18) n-hexane	2.036	56	16573	10.63	µg/L	99
19) 1,1-dichloroethane	2.450	63	47042	11.44	µg/l	95
20) 2-Butanone(MEK)	3.648	43	54841	43.44	µg/L	95
21) 2,2-dichloropropane	3.046	77	19129	10.48	µg/l #	87
22) cis-1,2-dichloroethene	2.949	96	27097	11.58	µg/l	88
23) bromochloromethane	3.149	128	11903	13.96	µg/l #	85
24) cyclohexane	3.125	56	44196	10.94	µg/L	96
25) chloroform	3.253	83	44314	11.20	µg/l	95
27) 1,1,1-trichloroethane	3.454	97	32397	14.73	µg/l	93
28) carbon tetrachloride	3.362	117	22101	12.21	µg/l	89
29) 1,1-dichloropropene	3.618	75	31620	11.30	µg/l	99
31) benzene	3.940	78	104993	11.40	µg/l	98
32) 1,2-dichloroethane	4.232	62	32176	12.10	µg/l	98
33) trichloroethene	4.731	95	25660	13.35	µg/l #	83
34) 1,2-dichloropropane	5.321	63	26686	13.09	µg/l #	94
35) dibromomethane	5.206	93	17075	13.32	µg/l	97
37) bromodichloromethane	5.425	83	25874	13.10	µg/l #	87
38) cis-1,3-dichloropropene	6.076	75	25970	13.26	µg/l	93
39) 4-Methyl-2-pentanone	6.702	58	44570	40.60	µg/L	94
42) toluene	6.295	92	68299	10.24	µg/l	92
43) trans-1,3-dichloropropene	6.714	75	19758	13.98	µg/l #	88
44) 1,1,2-trichloroethane	6.848	83	21316	11.58	µg/l	97

Data Path : Z:\08\VNA\DATA\080114\
Data File : A10.D
Acq On : 1 Aug 2014 2:26 pm
Operator : NRB
Sample : 10
Misc : [VNA]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 03 20:51:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

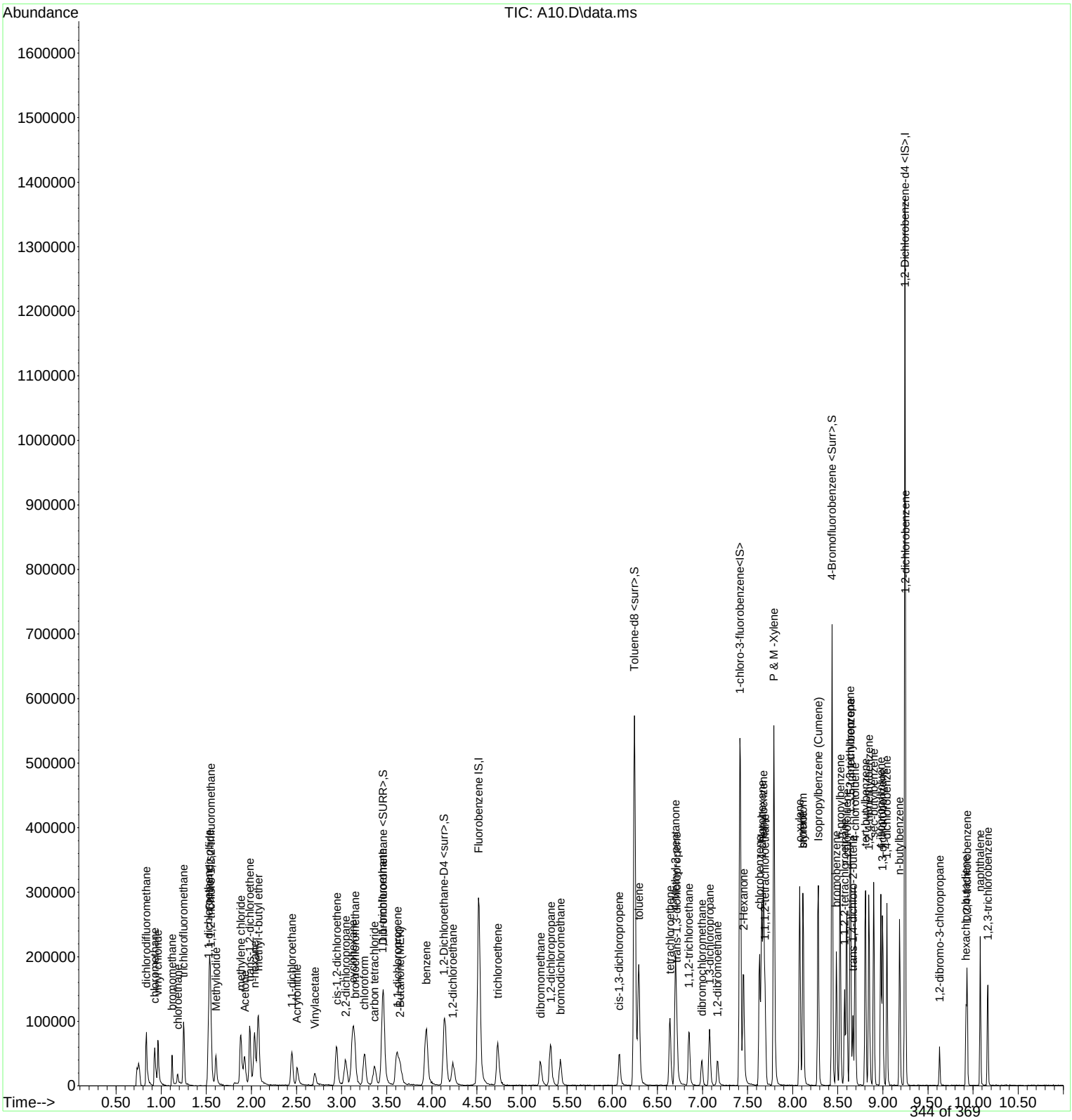
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	25671	12.17	µg/l		95
46) 1,3-dichloropropane	7.079	76	37671	11.52	µg/l		96
47) 2-Hexanone	7.457	43	97541	38.66	µg/L		96
48) dibromochloromethane	6.994	129	17735	12.39	µg/l		94
49) 1,2-dibromoethane	7.164	107	24532	12.14	µg/l	#	94
50) 1-chlorohexane	7.657	55	46693	18.13	µg/L		90
51) chlorobenzene	7.633	112	79141	10.88	µg/l		95
52) 1,1,1,2-tetrachloroethane	7.694	133	17635	12.57	µg/l		95
53) ethylbenzene	7.676	106	46150	10.63	µg/l		97
54) P & M -Xylene	7.791	106	112777	23.26	µg/l		98
55) o-xylene	8.077	106	54646	12.51	µg/l		95
56) styrene	8.114	104	82831	12.11	µg/l		99
57) bromoform	8.114	173	11276	12.58	µg/l		94
58) Isopropylbenzene (Cumene)	8.284	105	130730	11.30	µg/l		94
61) trans 1,4-dichloro-2-b...	8.667	53	14822	19.26	µg/L	#	86
62) bromobenzene	8.485	156	31418	10.64	µg/l		99
63) 1,1,2,2-tetrachloroethane	8.576	83	41554	11.94	µg/l		97
64) 1,2,3-trichloropropane	8.637	110	9856	10.69	µg/l		87
65) n-propylbenzene	8.527	91	167954	11.22	µg/l		97
66) 2-chlorotoluene	8.600	91	92374	11.03	µg/l		99
67) 4-chlorotoluene	8.691	91	101226	11.40	µg/l		99
68) 1,3,5-trimethylbenzene	8.643	105	103734	11.77	µg/l		93
69) tert-butylbenzene	8.807	119	86643	11.15	µg/l		92
70) 1,2,4-trimethylbenzene	8.844	105	100890	11.54	µg/l		97
71) sec-butylbenzene	8.898	105	131226	11.26	µg/l		93
72) 1,3-dichlorobenzene	8.996	146	58270	11.54	µg/l		99
73) 4-isopropyltoluene	8.977	119	96900	11.72	µg/l		98
74) 1,4-dichlorobenzene	9.044	146	58515	11.63	µg/l		96
75) 1,2-dichlorobenzene	9.251	146	59283	10.65	µg/l		94
76) n-butylbenzene	9.184	91	87011	12.21	µg/l		94
77) 1,2-dibromo-3-chloropr...	9.628	75	6347	12.00	µg/l		100
78) 1,2,4-trichlorobenzene	9.932	180	26115	11.67	µg/l		87
79) hexachlorobutadiene	9.920	225	10677	12.54	µg/l		99
80) naphthalene	10.079	128	88058	11.96	µg/l		100
81) 1,2,3-trichlorobenzene	10.164	180	25257	11.87	µg/l		94

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A10.D
Acq On : 1 Aug 2014 2:26 pm
Operator : NRB
Sample : 10
Misc : [VNA]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 03 20:51:37 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration


Abundance
TIC: A10.D\data.ms
Time-->
Toluene-d8 <surr>,S
Fluorobenzene IS,I
1-chloro-3-fluorobenzene<IS>
4-Bromofluorobenzene <Surr>,S
1,2-Dichlorobenzene-d4 <IS>,I
P & M -Xylene
Isopropylbenzene (Cumene)
1,2-Dichloroethane-D4 <surr>,S
1,2-dichlorobenzene
n-butylbenzene
naphthalene
1,2,3-trichlorobenzene
hexachlorobutadiene
1,2-dibromo-3-chloropropane
2-Hexanone
cis-1,3-dichloropropene
toluene
trichloroethene
benzene
1,2-Dichloroethane
1,2-dichloropropane
dibromomethane
bromodichloromethane
dichlorodifluoromethane
chloromethane
bromomethane
chloroethane
trichlorofluoromethane
Methylacetate
Methylene chloride
trans-1,2-dichloroethene
n-Hexane
Methyl-t-butyl ether
1,1-dichloroethane
Acrylonitrile
Vinylacetate
cis-1,2-dichloroethene
2,2-dichloropropane
chloroform
carbon tetrachloride
1,1,1-trichloroethane
1,1-dichloropropene
2-Butanone (MEK)
bromochloromethane
tetrahydrofuran
1,1,2-trichloroethane
dibromochloromethane
1,3-dichloropropane
1,2-dibromoethane
1,1,1,2-tetrachloroethane
Chlorobenzene
Ethylbenzene
bromoform
Styrene
o-Xylene
1,1,2,2-tetrachloroethane
1,2,3-trichloropropane
Bromobenzene
n-propylbenzene
2-chlorotoluene
4-chlorotoluene
1,3,5-trimethylbenzene
tert-butylbenzene
1,2,4-trimethylbenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
sec-butylbenzene
p-isopropyltoluene
1,4-Dichlorobenzene-d4 <IS>,I</IS></surr></surr>

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A11.D
Acq On : 1 Aug 2014 2:42 pm
Operator : NRB
Sample : 30
Misc : [VNA]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 03 20:49:51 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.524	70	61225	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	120180	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	157416	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	101534	30.00	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.00%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	95288	30.00	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.00%			
41) Toluene-d8 <surr>	6.246	98	352035	30.00	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.00%			
60) 4-Bromofluorobenzene <...	8.436	95	146644	30.00	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	181750	30.00	µg/l	100
3) chloromethane	0.928	50	169923	30.00	µg/l	100
4) vinyl chloride	0.963	62	154613	30.00	µg/l	100
5) bromomethane	1.120	96	44641	30.00	µg/l	100
6) chloroethane	1.184	64	46320	30.00	µg/l	100
7) trichlorofluoromethane	1.253	101	171266	30.00	µg/l	100
8) 1,1,2-trichloro-1,2,2-...	1.544	101	131187	45.00	µg/L	100
9) 1,1-dichloroethene	1.526	96	72210	30.00	µg/l	100
10) Acetone	1.926	43	102279	90.00	µg/L	100
11) Acrylonitrile	2.504	53	64535	45.00	µg/L	100
12) Methyliodide	1.607	142	151568	45.00	µg/L	100
13) Carbon disulfide	1.538	76	355854	45.00	µg/L	100
14) methylene chloride	1.884	84	104007	30.00	µg/l	100
15) methyl-t-butyl ether	2.072	73	273302	45.00	µg/L	100
16) trans-1,2-dichloroethene	1.981	96	76789	30.00	µg/l	100
17) Vinylacetate	2.699	43	107058	30.00	µg/L	100
18) n-hexane	2.036	56	53484	30.00	µg/L	100
19) 1,1-dichloroethane	2.444	63	152831	30.00	µg/l	100
20) 2-Butanone(MEK)	3.642	43	187480	90.00	µg/L	100
21) 2,2-dichloropropane	3.040	77	69191	30.00	µg/l	100
22) cis-1,2-dichloroethene	2.942	96	89308	30.00	µg/l	100
23) bromochloromethane	3.143	128	43093	30.00	µg/l	100
24) cyclohexane	3.125	56	157687	30.00	µg/L	100
25) chloroform	3.253	83	139561	30.00	µg/l	100
27) 1,1,1-trichloroethane	3.453	97	108713	30.00	µg/l	100
28) carbon tetrachloride	3.368	117	81184	30.00	µg/l	100
29) 1,1-dichloropropene	3.612	75	102399	30.00	µg/l	100
31) benzene	3.934	78	336868	30.00	µg/l	100
32) 1,2-dichloroethane	4.232	62	101733	30.00	µg/l	100
33) trichloroethene	4.731	95	83737	30.00	µg/l	100
34) 1,2-dichloropropane	5.309	63	88815	30.00	µg/l	100
35) dibromomethane	5.199	93	53837	30.00	µg/l	100
37) bromodichloromethane	5.425	83	84953	30.00	µg/l	100
38) cis-1,3-dichloropropene	6.075	75	94150	30.00	µg/l	100
39) 4-Methyl-2-pentanone	6.702	58	147502	90.00	µg/L	100
42) toluene	6.294	92	233652	30.00	µg/l	100
43) trans-1,3-dichloropropene	6.714	75	77345	30.00	µg/l	100
44) 1,1,2-trichloroethane	6.848	83	67158	30.00	µg/l	100

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A11.D
Acq On : 1 Aug 2014 2:42 pm
Operator : NRB
Sample : 30
Misc : [VNA]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 03 20:49:51 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

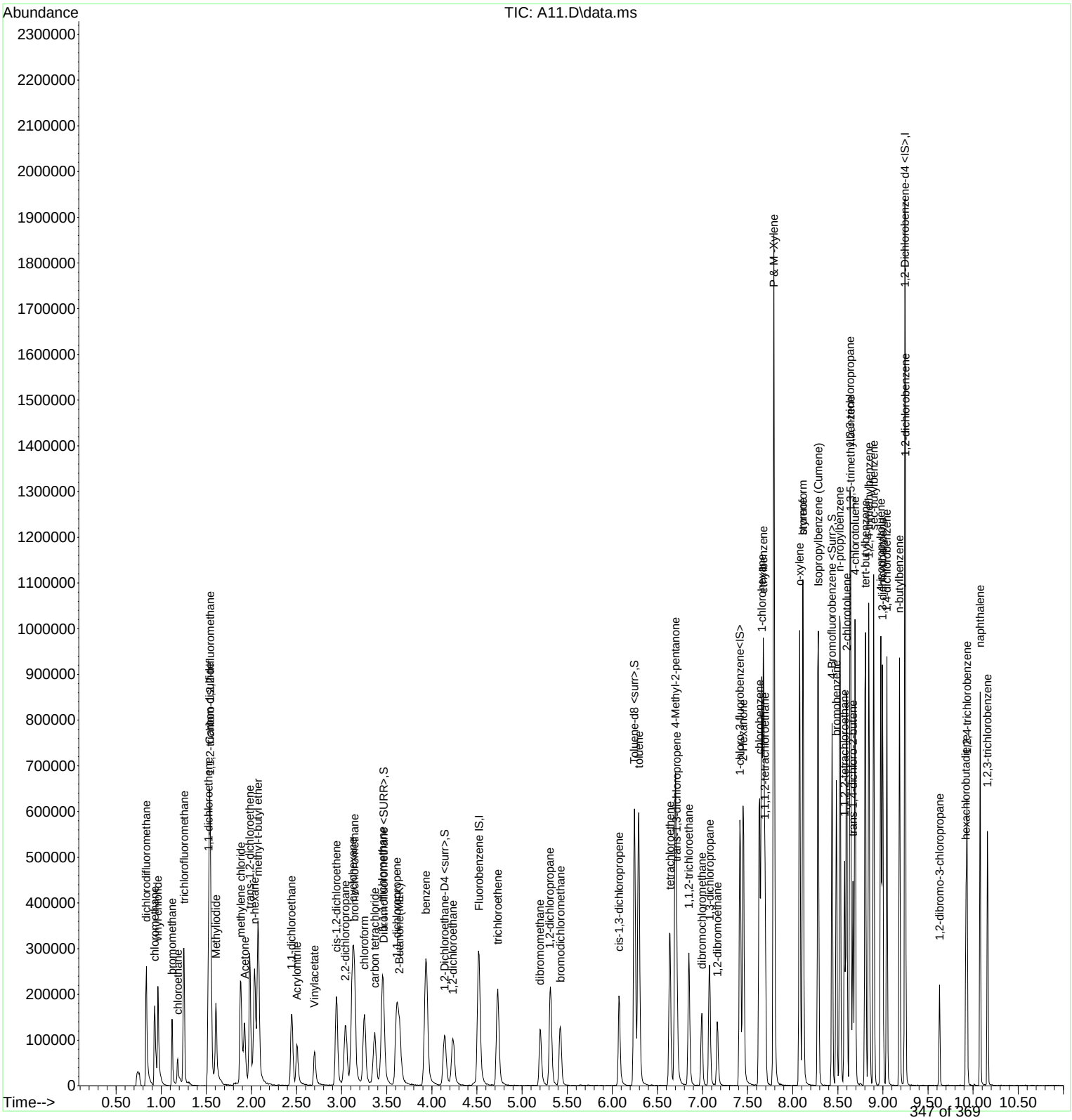
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) tetrachloroethene	6.641	166	85645	30.00	µg/l	100
46) 1,3-dichloropropane	7.079	76	119818	30.00	µg/l	100
47) 2-Hexanone	7.450	43	331149	90.00	µg/L	100
48) dibromochloromethane	6.994	129	69641	30.00	µg/l	100
49) 1,2-dibromoethane	7.164	107	81992	30.00	µg/l	100
50) 1-chlorohexane	7.657	55	148218	45.00	µg/L	100
51) chlorobenzene	7.633	112	260683	30.00	µg/l	100
52) 1,1,1,2-tetrachloroethane	7.694	133	64202	30.00	µg/l	100
53) ethylbenzene	7.675	106	147095	30.00	µg/l	100
54) P & M -Xylene	7.791	106	356915	60.00	µg/l	100
55) o-xylene	8.077	106	169760	30.00	µg/l	100
56) styrene	8.113	104	278191	30.00	µg/l	100
57) bromoform	8.113	173	47081	30.00	µg/l	100
58) Isopropylbenzene (Cumene)	8.284	105	426265	30.00	µg/l	100
61) trans 1,4-dichloro-2-b...	8.667	53	51903	45.00	µg/L	100
62) bromobenzene	8.485	156	100961	30.00	µg/l	100
63) 1,1,2,2-tetrachloroethane	8.576	83	133070	30.00	µg/l	100
64) 1,2,3-trichloropropane	8.637	110	32539	30.00	µg/l	100
65) n-propylbenzene	8.521	91	541341	30.00	µg/l	100
66) 2-chlorotoluene	8.600	91	303609	30.00	µg/l	100
67) 4-chlorotoluene	8.691	91	327374	30.00	µg/l	100
68) 1,3,5-trimethylbenzene	8.643	105	343635	30.00	µg/l	100
69) tert-butylbenzene	8.807	119	285941	30.00	µg/l	100
70) 1,2,4-trimethylbenzene	8.843	105	339048	30.00	µg/l	100
71) sec-butylbenzene	8.898	105	430042	30.00	µg/l	100
72) 1,3-dichlorobenzene	8.996	146	194193	30.00	µg/l	100
73) 4-isopropyltoluene	8.977	119	328540	30.00	µg/l	100
74) 1,4-dichlorobenzene	9.044	146	200524	30.00	µg/l	100
75) 1,2-dichlorobenzene	9.251	146	191369	30.00	µg/l	100
76) n-butylbenzene	9.184	91	297547	30.00	µg/l	100
77) 1,2-dibromo-3-chloropr...	9.628	75	23749	30.00	µg/l	100
78) 1,2,4-trichlorobenzene	9.932	180	86035	30.00	µg/l	100
79) hexachlorobutadiene	9.920	225	36416	30.00	µg/l	100
80) naphthalene	10.078	128	315824	30.00	µg/l	100
81) 1,2,3-trichlorobenzene	10.158	180	87304	30.00	µg/l	100

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A11.D
Acq On : 1 Aug 2014 2:42 pm
Operator : NRB
Sample : 30
Misc : [VNA]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 03 20:49:51 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A12.D
Acq On : 1 Aug 2014 2:59 pm
Operator : NRB
Sample : 50
Misc : [VNA]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 20:52:05 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	63597	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	122285	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	163733	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.466	111	99619	29.99	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.97%				
30) 1,2-Dichloroethane-D4 ...	4.147	65	99511	30.10	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 100.33%				
41) Toluene-d8 <surr>	6.246	98	350515	29.62	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 98.73%				
60) 4-Bromofluorobenzene <...	8.436	95	148699	28.44	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.80%				
Target Compounds							Qvalue
2) dichlorodifluoromethane	0.835	85	314130	53.86	µg/l		94
3) chloromethane	0.928	50	297878	52.28	µg/l		99
4) vinyl chloride	0.969	62	271256	54.52	µg/l		96
5) bromomethane	1.125	96	83855	61.74	µg/l		99
6) chloroethane	1.183	64	74067	53.37	µg/l		99
7) trichlorofluoromethane	1.253	101	293110	50.45	µg/l		99
8) 1,1,2-trichloro-1,2,2-...	1.549	101	222607	83.35	µg/L		92
9) 1,1-dichloroethene	1.526	96	132825	57.92	µg/l		96
10) Acetone	1.926	43	182815	119.19	µg/L		100
11) Acrylonitrile	2.504	53	114352	115.20	µg/L		95
12) Methyliodide	1.607	142	287330	115.27	µg/L		94
13) Carbon disulfide	1.538	76	641998	86.36	µg/L		96
14) methylene chloride	1.884	84	174048	52.93	µg/l		97
15) methyl-t-butyl ether	2.079	73	478039	85.25	µg/L		98
16) trans-1,2-dichloroethene	1.981	96	142191	58.58	µg/l		99
17) Vinylacetate	2.699	43	202552	78.26	µg/L		100
18) n-hexane	2.036	56	90142	53.74	µg/L		98
19) 1,1-dichloroethane	2.450	63	263199	58.58	µg/l		99
20) 2-Butanone(MEK)	3.642	43	342225	229.55	µg/L		99
21) 2,2-dichloropropane	3.046	77	136267	65.30	µg/l		92
22) cis-1,2-dichloroethene	2.948	96	159467	61.55	µg/l		97
23) bromochloromethane	3.149	128	78059	77.28	µg/l		94
24) cyclohexane	3.125	56	272078	61.00	µg/L		97
25) chloroform	3.253	83	240965	56.24	µg/l		98
27) 1,1,1-trichloroethane	3.453	97	197975	76.30	µg/l		95
28) carbon tetrachloride	3.368	117	150843	72.01	µg/l		86
29) 1,1-dichloropropene	3.612	75	187917	60.88	µg/l		100
31) benzene	3.940	78	580261	57.82	µg/l		99
32) 1,2-dichloroethane	4.232	62	175604	60.05	µg/l		98
33) trichloroethene	4.731	95	153878	69.83	µg/l		99
34) 1,2-dichloropropane	5.315	63	161052	69.12	µg/l	#	98
35) dibromomethane	5.199	93	93106	64.74	µg/l		98
37) bromodichloromethane	5.424	83	158596	69.98	µg/l	#	97
38) cis-1,3-dichloropropene	6.075	75	175168	75.94	µg/l		100
39) 4-Methyl-2-pentanone	6.702	58	265830	210.80	µg/L		94
42) toluene	6.294	92	394360	54.93	µg/l		91
43) trans-1,3-dichloropropene	6.714	75	148195	85.34	µg/l		96
44) 1,1,2-trichloroethane	6.848	83	114761	57.37	µg/l		93

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A12.D
Acq On : 1 Aug 2014 2:59 pm
Operator : NRB
Sample : 50
Misc : [VNA]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 20:52:05 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

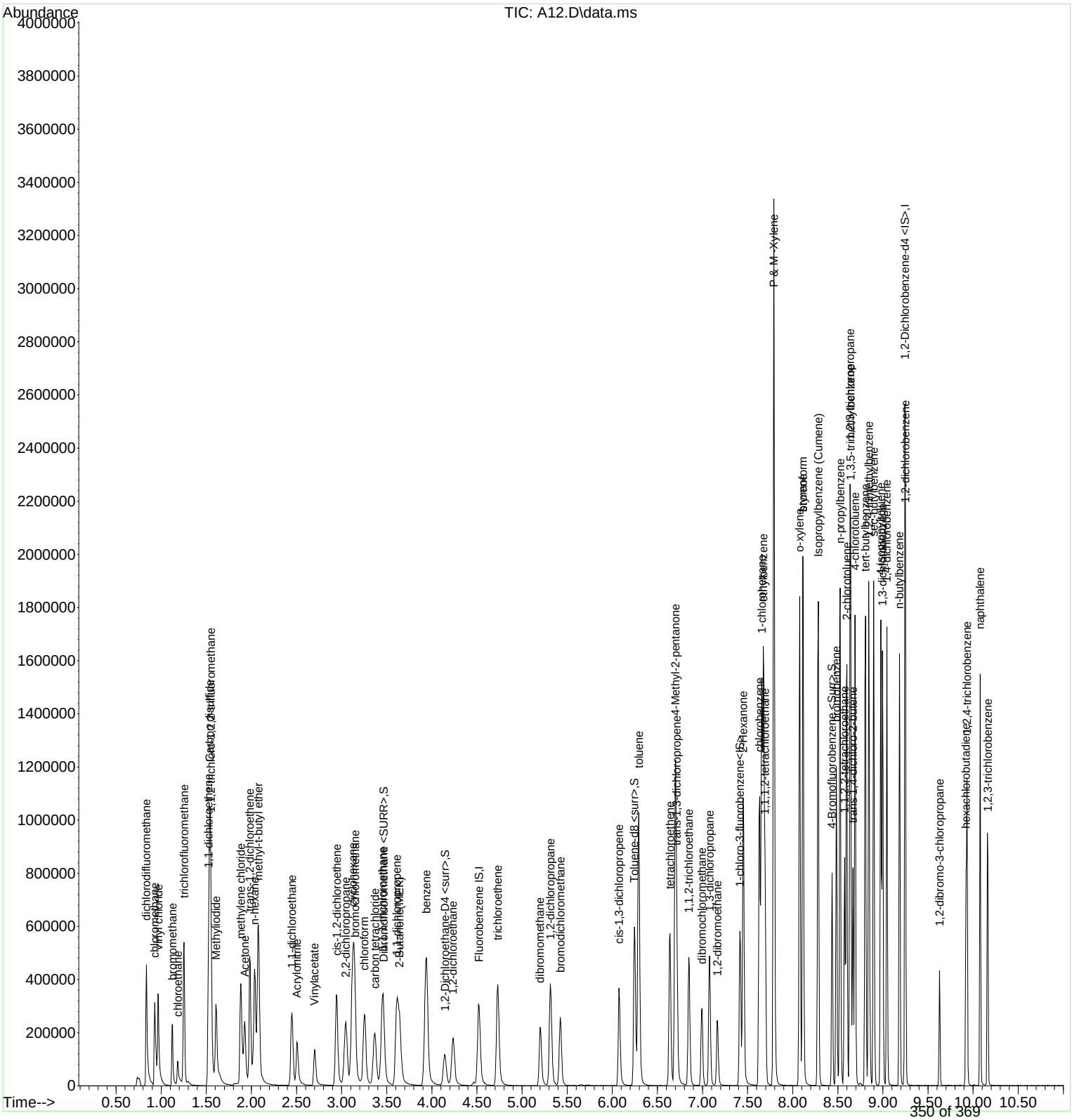
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) tetrachloroethene	6.641	166	148533	63.21	µg/l	93
46) 1,3-dichloropropane	7.079	76	214916	59.83	µg/l	98
47) 2-Hexanone	7.450	43	578252	202.13	µg/L	99
48) dibromochloromethane	6.994	129	128668	76.25	µg/l	98
49) 1,2-dibromoethane	7.164	107	142205	63.17	µg/l #	96
50) 1-chlorohexane	7.657	55	248253	88.15	µg/L	94
51) chlorobenzene	7.633	112	444098	56.38	µg/l	98
52) 1,1,1,2-tetrachloroethane	7.694	133	118460	72.73	µg/l	98
53) ethylbenzene	7.675	106	250773	53.90	µg/l	96
54) P & M -Xylene	7.791	106	630774	118.70	µg/l	97
55) o-xylene	8.077	106	299786	61.94	µg/l	99
56) styrene	8.113	104	483670	63.44	µg/l	100
57) bromoform	8.113	173	87822	81.24	µg/l	98
58) Isopropylbenzene (Cumene)	8.284	105	745376	58.90	µg/l	99
61) trans 1,4-dichloro-2-b...	8.667	53	90306	97.55	µg/L	96
62) bromobenzene	8.485	156	182003	53.73	µg/l	95
63) 1,1,2,2-tetrachloroethane	8.576	83	228918	56.64	µg/l	100
64) 1,2,3-trichloropropane	8.637	110	59941	55.84	µg/l	94
65) n-propylbenzene	8.527	91	950363	55.03	µg/l	93
66) 2-chlorotoluene	8.600	91	526892	54.62	µg/l	98
67) 4-chlorotoluene	8.691	91	566537	55.27	µg/l	98
68) 1,3,5-trimethylbenzene	8.643	105	605270	58.67	µg/l	98
69) tert-butylbenzene	8.807	119	497620	55.44	µg/l	99
70) 1,2,4-trimethylbenzene	8.843	105	597816	58.46	µg/l	99
71) sec-butylbenzene	8.898	105	740713	55.06	µg/l	98
72) 1,3-dichlorobenzene	8.996	146	340137	57.76	µg/l	99
73) 4-isopropyltoluene	8.977	119	570607	58.88	µg/l	99
74) 1,4-dichlorobenzene	9.044	146	354146	59.83	µg/l	98
75) 1,2-dichlorobenzene	9.251	146	339225	53.21	µg/l	98
76) n-butylbenzene	9.184	91	518031	61.39	µg/l	99
77) 1,2-dibromo-3-chloropr...	9.628	75	45572	68.99	µg/l	95
78) 1,2,4-trichlorobenzene	9.932	180	157411	59.79	µg/l	94
79) hexachlorobutadiene	9.920	225	65124	63.92	µg/l	99
80) naphthalene	10.078	128	562779	63.86	µg/l	100
81) 1,2,3-trichlorobenzene	10.164	180	158512	62.58	µg/l	93

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A12.D
Acq On : 1 Aug 2014 2:59 pm
Operator : NRB
Sample : 50
Misc : [VNA]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 20:52:05 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A13.D
Acq On : 1 Aug 2014 3:15 pm
Operator : NRB
Sample : 70
Misc : [VNA]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 03 20:52:36 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	64849	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	124109	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	163620	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.460	111	103928	30.58	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.93%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	96681	28.86	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 96.20%			
41) Toluene-d8 <surr>	6.246	98	362656	30.17	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 100.57%			
60) 4-Bromofluorobenzene <...	8.436	95	147103	28.41	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.70%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	439996	73.38	µg/l	93
3) chloromethane	0.928	50	425561	72.77	µg/l	99
4) vinyl chloride	0.963	62	377352	73.73	µg/l	100
5) bromomethane	1.120	96	129307	89.11	µg/l	97
6) chloroethane	1.184	64	104911	73.52	µg/l	97
7) trichlorofluoromethane	1.247	101	432402	72.55	µg/l	97
8) 1,1,2-trichloro-1,2,2-...	1.549	101	308543	112.04	µg/L	88
9) 1,1-dichloroethene	1.526	96	179561	75.74	µg/l	99
10) Acetone	1.927	43	254695	168.24	µg/L	93
11) Acrylonitrile	2.505	53	166901	152.47	µg/L	96
12) Methyliodide	1.607	142	432056	156.18	µg/L	96
13) Carbon disulfide	1.538	76	907545	117.37	µg/L	98
14) methylene chloride	1.884	84	238760	71.03	µg/l	99
15) methyl-t-butyl ether	2.073	73	686692	117.68	µg/L	99
16) trans-1,2-dichloroethene	1.981	96	198547	78.58	µg/l	100
17) Vinylacetate	2.699	43	303345	105.28	µg/L	98
18) n-hexane	2.036	56	128850	74.39	µg/L	97
19) 1,1-dichloroethane	2.450	63	369535	78.94	µg/l #	95
20) 2-Butanone(MEK)	3.642	43	480467	294.79	µg/L	97
21) 2,2-dichloropropane	3.046	77	205632	90.87	µg/l	96
22) cis-1,2-dichloroethene	2.943	96	221958	81.68	µg/l	98
23) bromochloromethane	3.143	128	108424	98.20	µg/l	98
24) cyclohexane	3.125	56	397007	84.32	µg/L	99
25) chloroform	3.253	83	348055	78.12	µg/l	99
27) 1,1,1-trichloroethane	3.454	97	291911	101.94	µg/l	97
28) carbon tetrachloride	3.368	117	227105	98.99	µg/l	92
29) 1,1-dichloropropene	3.612	75	267324	82.42	µg/l	99
31) benzene	3.934	78	841276	80.21	µg/l	99
32) 1,2-dichloroethane	4.232	62	249181	81.32	µg/l #	94
33) trichloroethene	4.731	95	222949	93.63	µg/l	98
34) 1,2-dichloropropane	5.315	63	228078	91.16	µg/l #	95
35) dibromomethane	5.200	93	135295	88.25	µg/l	95
37) bromodichloromethane	5.425	83	237962	96.48	µg/l #	92
38) cis-1,3-dichloropropene	6.076	75	263081	103.05	µg/l	99
39) 4-Methyl-2-pentanone	6.696	58	384481	281.93	µg/L	99
42) toluene	6.295	92	565453	76.42	µg/l	92
43) trans-1,3-dichloropropene	6.714	75	227807	115.32	µg/l	97
44) 1,1,2-trichloroethane	6.848	83	166792	80.17	µg/l	93

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A13.D
Acq On : 1 Aug 2014 3:15 pm
Operator : NRB
Sample : 70
Misc : [VNA]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 03 20:52:36 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration

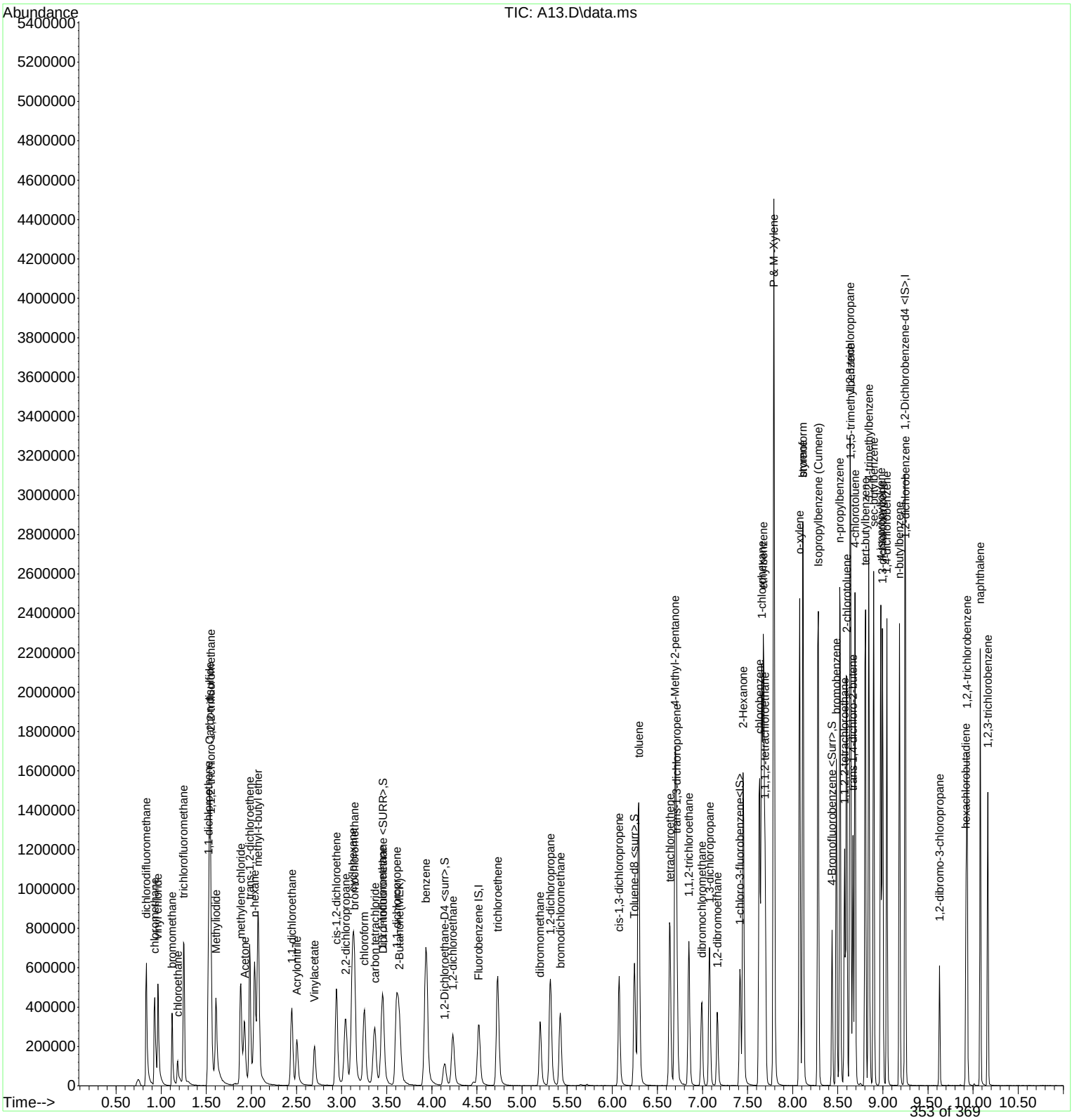
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	209239	84.67	µg/l		91
46) 1,3-dichloropropane	7.079	76	304955	81.38	µg/l		100
47) 2-Hexanone	7.450	43	831436	272.22	µg/L		97
48) dibromochloromethane	6.994	129	193529	103.88	µg/l		98
49) 1,2-dibromoethane	7.165	107	210683	88.21	µg/l	#	92
50) 1-chlorohexane	7.657	55	348447	119.16	µg/L		97
51) chlorobenzene	7.633	112	630533	77.47	µg/l		99
52) 1,1,1,2-tetrachloroethane	7.694	133	175120	98.70	µg/l		95
53) ethylbenzene	7.676	106	350561	73.60	µg/l		96
54) P & M -Xylene	7.791	106	867932	157.57	µg/l		94
55) o-xylene	8.077	106	420238	82.92	µg/l		95
56) styrene	8.114	104	685601	85.36	µg/l		99
57) bromoform	8.114	173	141053	114.84	µg/l		94
58) Isopropylbenzene (Cumene)	8.284	105	1016639	77.70	µg/l		98
61) trans 1,4-dichloro-2-b...	8.667	53	141542	143.62	µg/L		90
62) bromobenzene	8.485	156	249809	73.22	µg/l		95
63) 1,1,2,2-tetrachloroethane	8.576	83	324833	78.75	µg/l		95
64) 1,2,3-trichloropropane	8.637	110	88650	80.22	µg/l		94
65) n-propylbenzene	8.521	91	1286001	73.83	µg/l		99
66) 2-chlorotoluene	8.600	91	722177	74.18	µg/l		99
67) 4-chlorotoluene	8.691	91	768504	74.26	µg/l		100
68) 1,3,5-trimethylbenzene	8.643	105	839194	79.55	µg/l		99
69) tert-butylbenzene	8.807	119	691110	75.96	µg/l		99
70) 1,2,4-trimethylbenzene	8.844	105	826506	79.13	µg/l		96
71) sec-butylbenzene	8.898	105	1011167	74.43	µg/l		100
72) 1,3-dichlorobenzene	8.996	146	480145	79.70	µg/l		98
73) 4-isopropyltoluene	8.977	119	794643	80.08	µg/l		99
74) 1,4-dichlorobenzene	9.044	146	488697	80.55	µg/l		98
75) 1,2-dichlorobenzene	9.251	146	460627	71.97	µg/l		96
76) n-butylbenzene	9.184	91	738575	84.56	µg/l		99
77) 1,2-dibromo-3-chloropr...	9.628	75	64449	91.60	µg/l	#	78
78) 1,2,4-trichlorobenzene	9.933	180	231985	85.02	µg/l		93
79) hexachlorobutadiene	9.920	225	92598	87.22	µg/l		100
80) naphthalene	10.079	128	827298	89.56	µg/l		98
81) 1,2,3-trichlorobenzene	10.164	180	227808	86.47	µg/l		95

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A13.D
Acq On : 1 Aug 2014 3:15 pm
Operator : NRB
Sample : 70
Misc : [VNA]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 03 20:52:36 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 20:49:15 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A14.D
Acq On : 1 Aug 2014 3:31 pm
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 21:02:22 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:02:10 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene IS	4.524	70	61186	30.00	µg/l		0.00
40) 1-chloro-3-fluorobenze...	7.414	95	120552	30.00	µg/L		0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	142948	30.00	µg/l		0.00
System Monitoring Compounds							
26) Dibromofluoromethane <...	3.459	111	93869	29.28	µg/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 97.60%				
30) 1,2-Dichloroethane-D4 ...	4.147	65	96819	30.63	µg/l		0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 102.10%				
41) Toluene-d8 <surr>	6.246	98	348261	29.83	µg/l		0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 99.43%				
60) 4-Bromofluorobenzene <...	8.436	95	135648	29.98	µg/l		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.93%				
Target Compounds							Qvalue
3) chloromethane	0.928	50	1471	0.27	µg/l		98
5) bromomethane	1.120	96	414	0.75	µg/l	#	1
10) Acetone	1.920	43	6710	5.54	µg/L	#	78
11) Acrylonitrile	2.510	53	176	1.31	µg/L	#	14
12) Methyliodide	1.613	142	1180	1.28	µg/L	#	34
13) Carbon disulfide	1.538	76	7546	1.03	µg/L		98
14) methylene chloride	1.884	84	715	0.23	µg/l	#	51
17) Vinylacetate	2.632	43	125	0.59	µg/L	#	79
20) 2-Butanone(MEK)	3.666	43	1978	3.19	µg/L	#	54
31) benzene	3.970	78	123	0.20	µg/l	#	54
32) 1,2-dichloroethane	4.244	62	175	0.31	µg/l	#	79
33) trichloroethene	4.737	95	124	0.60	µg/l	#	3
35) dibromomethane	5.212	93	241	0.54	µg/l	#	52
43) trans-1,3-dichloropropene	6.726	75	127	0.76	µg/l	#	52
47) 2-Hexanone	7.469	43	2256	2.16	µg/L	#	81
50) 1-chlorohexane	7.663	55	320	0.10	µg/L	#	49
53) ethylbenzene	7.688	106	3620	0.78	µg/l	#	70
54) P & M -Xylene	7.803	106	898	0.16	µg/l	#	31
56) styrene	8.126	104	276	0.48	µg/l	#	15
62) bromobenzene	8.491	156	362	0.12	µg/l		88
63) 1,1,2,2-tetrachloroethane	8.582	83	314	0.27	µg/l	#	78
65) n-propylbenzene	8.539	91	1576	0.10	µg/l	#	55
66) 2-chlorotoluene	8.600	91	1283	0.15	µg/l		94
67) 4-chlorotoluene	8.697	91	1458	0.15	µg/l	#	88
68) 1,3,5-trimethylbenzene	8.649	105	1143	0.12	µg/l		90
69) tert-butylbenzene	8.807	119	1569	0.19	µg/l		98
70) 1,2,4-trimethylbenzene	8.850	105	992	0.10	µg/l		96
71) sec-butylbenzene	8.898	105	4481	0.38	µg/l		100
72) 1,3-dichlorobenzene	9.002	146	1648	0.30	µg/l	#	77
73) 4-isopropyltoluene	8.977	119	2538	0.28	µg/l	#	89
74) 1,4-dichlorobenzene	9.050	146	1703	0.52	µg/l		90
75) 1,2-dichlorobenzene	9.251	146	963	0.17	µg/l	#	1
76) n-butylbenzene	9.184	91	4788	0.96	µg/l	#	87
77) 1,2-dibromo-3-chloropr...	9.634	75	111	0.87	µg/l	#	1
78) 1,2,4-trichlorobenzene	9.938	180	982	0.70	µg/l		91
79) hexachlorobutadiene	9.920	225	3496	3.38	µg/l	#	79
80) naphthalene	10.078	128	5115	0.92	µg/l	#	94
81) 1,2,3-trichlorobenzene	10.164	180	1084	0.43	µg/l	#	80

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A14.D
Acq On : 1 Aug 2014 3:31 pm
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 21:02:22 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:02:10 2014
Response via : Initial Calibration

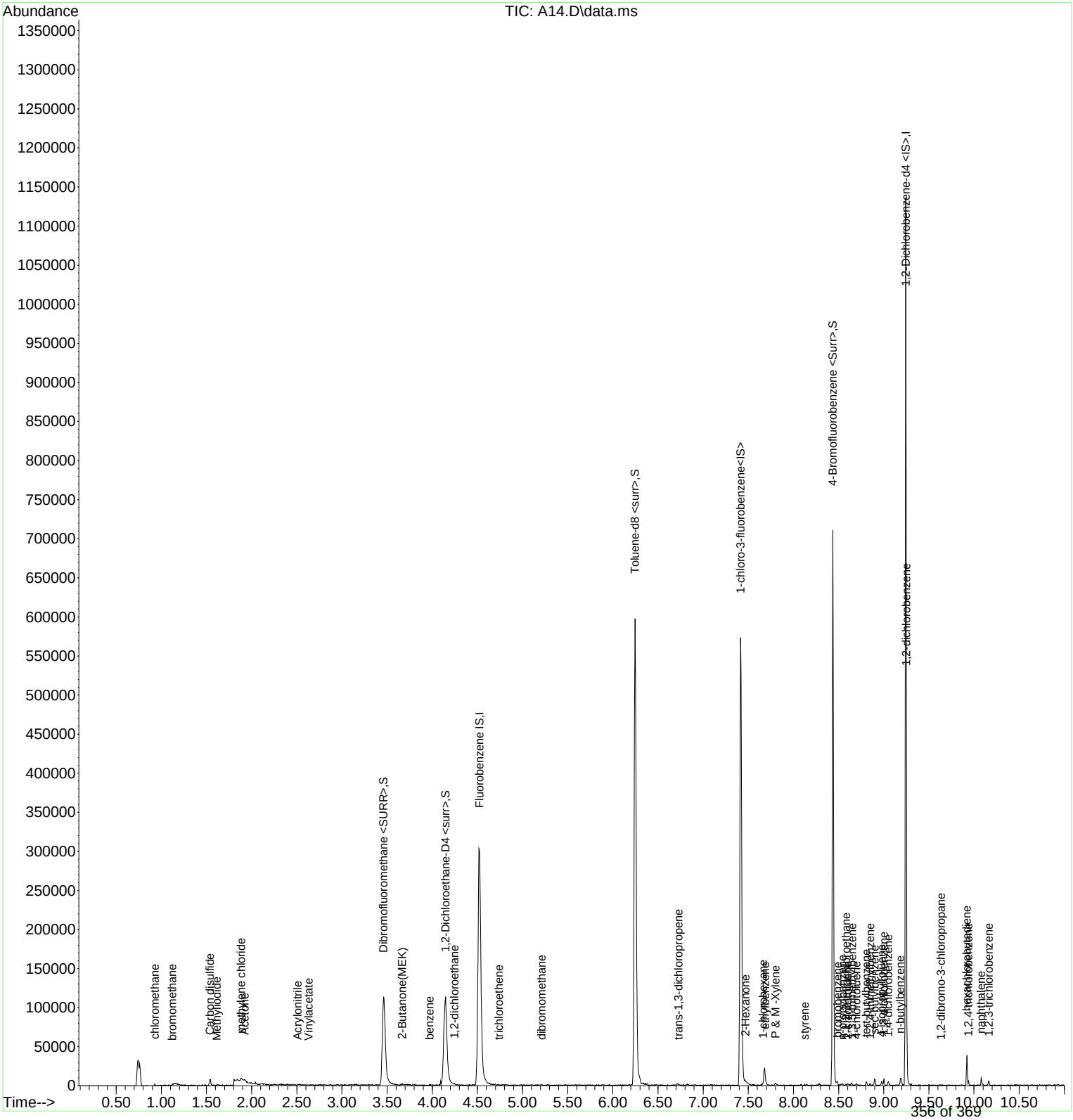
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A14.D
Acq On : 1 Aug 2014 3:31 pm
Operator : NRB
Sample : R
Misc : [VNA]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 21:02:22 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:02:10 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A15.D
Acq On : 1 Aug 2014 3:48 pm
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:03:15 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	4.518	70	60656	30.00	µg/l	0.00
40) 1-chloro-3-fluorobenze...	7.414	95	114689	30.00	µg/L	0.00
59) 1,2-Dichlorobenzene-d4...	9.245	152	150217	30.00	µg/l	0.00
System Monitoring Compounds						
26) Dibromofluoromethane <...	3.466	111	95784	30.14	µg/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.47%			
30) 1,2-Dichloroethane-D4 ...	4.141	65	96550	30.81	µg/l	0.00
Spiked Amount 30.000	Range 80 - 137		Recovery = 102.70%			
41) Toluene-d8 <surr>	6.246	98	342600	30.84	µg/l	0.00
Spiked Amount 30.000	Range 80 - 122		Recovery = 102.80%			
60) 4-Bromofluorobenzene <...	8.436	95	139835	29.41	µg/l	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.03%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.835	85	181170	32.30	µg/l	94
3) chloromethane	0.928	50	193840	35.44	µg/l	99
4) vinyl chloride	0.963	62	159394	31.61	µg/l	96
5) bromomethane	1.120	96	55334	34.28	µg/l	94
6) chloroethane	1.183	64	53027	36.23	µg/l	96
7) trichlorofluoromethane	1.253	101	177472	31.84	µg/l	99
8) 1,1,2-trichloro-1,2,2-...	1.549	101	132285	49.03	µg/L	94
9) 1,1-dichloroethene	1.526	96	76378	32.76	µg/l	94
10) Acetone	1.926	43	98956	82.42	µg/L	97
11) Acrylonitrile	2.504	53	63660	45.73	µg/L	95
12) Methyliodide	1.607	142	142579	44.18	µg/L	100
13) Carbon disulfide	1.538	76	360589	49.86	µg/L	97
14) methylene chloride	1.884	84	104663	33.29	µg/l	94
15) methyl-t-butyl ether	2.072	73	282090	49.02	µg/L	96
16) trans-1,2-dichloroethene	1.981	96	81636	31.43	µg/l	94
17) Vinylacetate	2.699	43	111817	31.68	µg/L #	95
18) n-hexane	2.036	56	54100	33.39	µg/L	99
19) 1,1-dichloroethane	2.450	63	156223	33.50	µg/l	93
20) 2-Butanone(MEK)	3.642	43	179050	85.23	µg/L	96
21) 2,2-dichloropropane	3.046	77	71033	30.99	µg/l	95
22) cis-1,2-dichloroethene	2.948	96	92131	33.52	µg/l	96
23) bromochloromethane	3.143	128	44302	30.89	µg/l	94
24) cyclohexane	3.125	56	155409	33.19	µg/L	94
25) chloroform	3.253	83	146151	35.07	µg/l	97
27) 1,1,1-trichloroethane	3.447	97	111348	30.88	µg/l	96
28) carbon tetrachloride	3.362	117	85193	32.13	µg/l	94
29) 1,1-dichloropropene	3.612	75	105796	32.70	µg/l	99
31) benzene	3.934	78	347505	31.65	µg/l	99
32) 1,2-dichloroethane	4.232	62	104166	31.28	µg/l	99
33) trichloroethene	4.731	95	90400	31.23	µg/l	94
34) 1,2-dichloropropane	5.315	63	89220	29.75	µg/l	99
35) dibromomethane	5.199	93	55966	31.40	µg/l	96
37) bromodichloromethane	5.424	83	93090	32.67	µg/l #	90
38) cis-1,3-dichloropropene	6.075	75	97821	31.88	µg/l	96
39) 4-Methyl-2-pentanone	6.696	58	147685	90.97	µg/L	97
42) toluene	6.294	92	234730	34.33	µg/l	95
43) trans-1,3-dichloropropene	6.714	75	82286	33.16	µg/l	97
44) 1,1,2-trichloroethane	6.848	83	68463	33.24	µg/l	92

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A15.D
Acq On : 1 Aug 2014 3:48 pm
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:03:15 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration

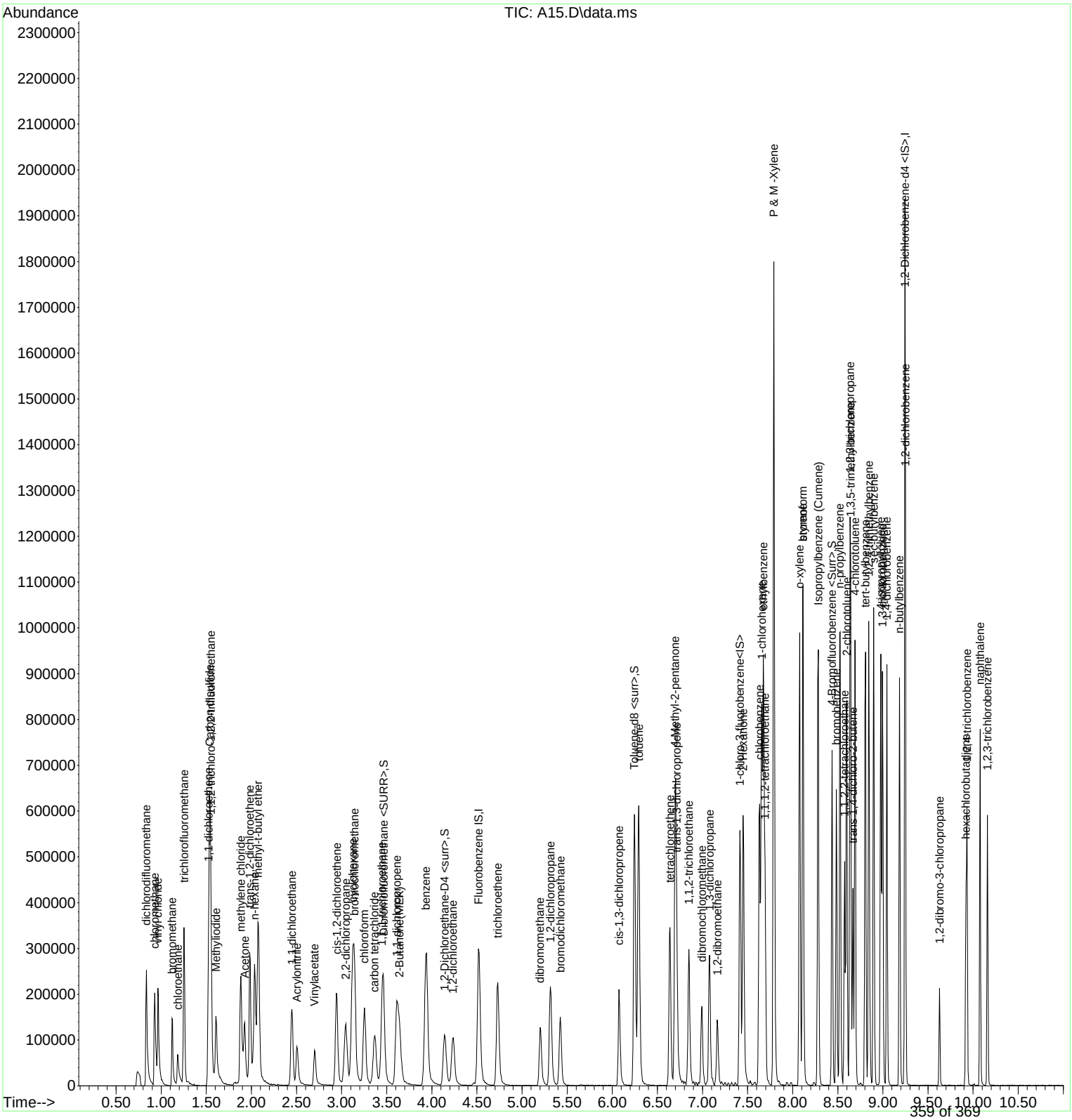
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tetrachloroethene	6.641	166	86932	34.50	µg/l		90
46) 1,3-dichloropropane	7.079	76	123992	31.89	µg/l		97
47) 2-Hexanone	7.450	43	308612	86.45	µg/L		94
48) dibromochloromethane	6.994	129	74365	33.81	µg/l		93
49) 1,2-dibromoethane	7.164	107	82681	33.89	µg/l		92
50) 1-chlorohexane	7.657	55	140352	48.21	µg/L		96
51) chlorobenzene	7.633	112	248468	33.03	µg/l		98
52) 1,1,1,2-tetrachloroethane	7.694	133	64682	31.88	µg/l		96
53) ethylbenzene	7.675	106	138008	31.36	µg/l		96
54) P & M -Xylene	7.791	106	348487	64.44	µg/l		100
55) o-xylene	8.077	106	164214	32.36	µg/l		97
56) styrene	8.113	104	269154	30.11	µg/l		99
57) bromoform	8.113	173	50704	34.12	µg/l		98
58) Isopropylbenzene (Cumene)	8.284	105	409358	32.23	µg/l		99
61) trans 1,4-dichloro-2-b...	8.667	53	52029	48.10	µg/L		97
62) bromobenzene	8.485	156	95976	30.64	µg/l		97
63) 1,1,2,2-tetrachloroethane	8.576	83	130224	30.80	µg/l		98
64) 1,2,3-trichloropropane	8.637	110	32869	31.00	µg/l		93
65) n-propylbenzene	8.521	91	529008	33.08	µg/l		100
66) 2-chlorotoluene	8.600	91	298362	33.38	µg/l		100
67) 4-chlorotoluene	8.691	91	311842	30.98	µg/l		96
68) 1,3,5-trimethylbenzene	8.643	105	332249	32.35	µg/l		97
69) tert-butylbenzene	8.807	119	275888	31.22	µg/l		99
70) 1,2,4-trimethylbenzene	8.843	105	325357	32.14	µg/l		99
71) sec-butylbenzene	8.898	105	412045	33.03	µg/l		99
72) 1,3-dichlorobenzene	8.996	146	188236	32.60	µg/l		97
73) 4-isopropyltoluene	8.977	119	317322	32.96	µg/l		99
74) 1,4-dichlorobenzene	9.044	146	189783	29.68	µg/l		99
75) 1,2-dichlorobenzene	9.251	146	184210	31.35	µg/l		97
76) n-butylbenzene	9.184	91	289940	30.48	µg/l		99
77) 1,2-dibromo-3-chloropr...	9.628	75	23653	30.93	µg/l		89
78) 1,2,4-trichlorobenzene	9.932	180	84602	30.46	µg/l		94
79) hexachlorobutadiene	9.920	225	35263	32.47	µg/l	#	87
80) naphthalene	10.078	128	308227	31.05	µg/l		98
81) 1,2,3-trichlorobenzene	10.157	180	84767	32.16	µg/l		94

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

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VNA\DATA\080114\
Data File : A15.D
Acq On : 1 Aug 2014 3:48 pm
Operator : NRB
Sample : ICV
Misc : [VNA]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 21:03:15 2014
Quant Method : Z:\08\VNA\METHOD\VNA2014-0801.M
Quant Title : Purgable Organics By GCMS
QLast Update : Sun Aug 03 21:03:11 2014
Response via : Initial Calibration



Workorder No. 1143647

Volatile Gas Chromatography/Mass Spectroscopy

Method: SW8260B

Method Batch Id: VXX26244

Analysis Batch Id: VMS14353

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225836		8/8/2014 4:51:00PM
Instrument Blank	1225840		8/8/2014 4:51:00PM
Lab Control Sample	1225837		8/8/2014 5:08:00PM
Continuing Calib Verification	1225839		8/8/2014 5:08:00PM
Lab Control Sample Duplicate	1225838		8/8/2014 5:48:00PM
Trip Blank	1143647005	TB-2-ST009	8/8/2014 8:01:00PM
Paying sample	1143647001	MW-9-073014	8/8/2014 9:24:00PM
Paying sample	1143647003	MW-7-073014	8/8/2014 9:57:00PM

Analysis Batch Id: VMS14356

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Instrument Blank	1226243		8/11/2014 10:19:00AM
Continuing Calib Verification	1226242		8/11/2014 10:52:00AM
Paying sample	1143647002	MW-4-073014	8/11/2014 1:05:00PM



Long, Alesha (Anchorage)

From: Nelson, Justin (Anchorage)
Sent: Monday, August 25, 2014 12:06 PM
To: Long, Alesha (Anchorage)
Subject: FW: Alaska 611 sites

From: Moss, Pamela [mailto:pmoss@eaest.com]
Sent: Monday, August 25, 2014 12:01 PM
To: Nelson, Justin (Anchorage)
Subject: Alaska 611 sites

Justin per our phone conversation, EA does require and EQUIS EDD in addition to the ERPIMS 6.0 electronic deliverable. I hope this is something the lab is able to provide. thank you.

Pam

Pamela J. Moss
Senior Scientist
EA Engineering, Science, and Technology, Inc.
5655 S. Yosemite St., Suite 320
Greenwood Village, CO 80111
303-590-9143 (office)
303-810-6903 (cell)
pmoss@eaest.com

EA Engineering, Science, and Technology, Inc.

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECO

1143647

Locations Nationwide
Alaska, Maryland, New Jersey, New York, North Carolina, Indiana, West Virgina, Kentucky
www.us.sgs.com

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Page 1 of 1

Section 1

CLIENT: EA Engineering

CONTACT: Kyle Waldron PHONE NO: 907-646-0201

PROJECT NAME: ST009 - Cape Romanzof LTM PROJECT/ PWSID/ PERMIT#: 62421101 p.3

REPORTS TO: Pam Moss E-MAIL: PMoss@EAest.com

INVOICE TO: EA Engineering QUOTE #: P.O. #: 12540

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incremental Soils	Preservative: HCl	HCl	HCl	HCl					REMARKS/ LOC ID
							AK102 DRO	AK101 GRO	8260B BTEX	AK102/103 DRO/RRO					
	ST009-EBT														
(1) A-H	MW-9-073014	07/30/14	0940	water	8	G	X	X	X						potential sheen
(2) A-H	MW-4-073014	07/30/14	EBT OC 1420	water	8	G	X	X	X						HEAVY SHEEN
(3) A-H	MW-7-073014	07/30/14	1720	water	8	G	X	X	X						Heavy SHEEN
(5) A-F	TB-2-ST009	07/30/14	0800	water	6	G/QC		X	X						Trip Blank
	EBT														
(4) A-E	SS010-SB-EB1	07/30/14	1545	water	5	G/QC		X		X					Equip. Blank

Section 5

	Date	Time	
Relinquished By: (1) Evana Burt-Toland	8/6/14	1030	Received By: Goldstreak BET/ANC
Relinquished By: (2) Goldstreak BET/ANC	8/7/14		Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	8/7/14	11:21	Received For Laboratory By:

Section 4

DOD Project? ~~Yes~~ No

Cooler ID: 1 of 5

Data Deliverable Requirements: See Contact

Requested Turnaround Time and/or Special Instructions: Per Contract & Holding time requirements (ADEC)

Temp Blank °C: 0.5 #202 or Ambient [ ]
(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
(See attached Sample Receipt Form)

362 of 369

[ ] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
[ ] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

http://www.sgs.com/terms-and-conditions

SGS

1143647

SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	(Yes) No N/A (Yes) No	☐ *Exemption permitted if sampler hand carries/delivers.* 1F
Temperature blank compliant* (i.e., 0-6°C after CF)? *If >6°C, were samples collected <8 hours ago?* *If <0°C, were all sample containers ice free?* Cooler ID: 1 @ 0.5 w/ Therm.ID: 200 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note ~~"ambient" or "chilled."~~	(Yes) No Yes No (N/A) Yes No (N/A)	☐ *Exemption permitted if chilled & collected <8 hrs ago.* *Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.*
Delivery method (specify all that apply): ~~Client (hand carried)~~ USPS Lynden AK Air Alert Courier UPS FedEx RAVN C&D Delivery Carlile Pen Air Warp Speed Other: _____ → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	Tracking/AB # or see attached or (N/A) Yes No (N/A)	
→ For samples received with payment, note amount ($) and whether cash / check / CC (**circle one**) was received.		
→ For samples **received in FBKS**, ANCH staff will verify all criteria are reviewed. SRF initiated in FBKS by:		
Were samples received within hold time? Do samples **match COC*** (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	(Yes) No N/A (Yes) No N/A (Yes) No N/A	*Note: Refer to form F-083 "Sample Guide" for hold times.* *Note: If times differ <1hr, record details and login per COC.*
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other:	(Yes) No	
Were **proper containers** (type/mass/volume/preservative*) used? Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	(Yes) No N/A (Yes) No N/A Yes (No) N/A Yes No (N/A)	☐ *Exemption permitted for metals (e.g., 200.8/6020A).* Sample 1 C and 1 F have bubbles >6mm.
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	(Yes) No N/A Yes No (N/A)	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved..., lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	Yes No (N/A)	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	Yes No (N/A)	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	Yes No (N/A)	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	(Yes) No N/A	SRF Completed by: KMC PM notified: CGM N/A
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	(Yes) No (N/A)	Peer Reviewed by: N/A
Additional notes (if applicable):	KMC 8/7/14	

Note to Client: *Any "no" circled above indicates non-compliance with standard procedures and may impact data quality.*

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1143647001-A	HCL to pH < 2	OK			
1143647001-B	HCL to pH < 2	OK			
1143647001-C	HCL to pH < 2	BU			
1143647001-D	HCL to pH < 2	OK			
1143647001-E	HCL to pH < 2	OK			
1143647001-F	HCL to pH < 2	BU			
1143647001-G	HCL to pH < 2	OK			
1143647001-H	HCL to pH < 2	OK			
1143647002-A	HCL to pH < 2	OK			
1143647002-B	HCL to pH < 2	OK			
1143647002-C	HCL to pH < 2	OK			
1143647002-D	HCL to pH < 2	OK			
1143647002-E	HCL to pH < 2	OK			
1143647002-F	HCL to pH < 2	OK			
1143647002-G	HCL to pH < 2	OK			
1143647002-H	HCL to pH < 2	OK			
1143647003-A	HCL to pH < 2	OK			
1143647003-B	HCL to pH < 2	OK			
1143647003-C	HCL to pH < 2	OK			
1143647003-D	HCL to pH < 2	OK			
1143647003-E	HCL to pH < 2	OK			
1143647003-F	HCL to pH < 2	OK			
1143647003-G	HCL to pH < 2	OK			
1143647003-H	HCL to pH < 2	OK			
1143647004-A	HCL to pH < 2	OK			
1143647004-B	HCL to pH < 2	OK			
1143647004-C	HCL to pH < 2	OK			
1143647004-D	HCL to pH < 2	OK			
1143647004-E	HCL to pH < 2	OK			
1143647005-A	HCL to pH < 2	OK			
1143647005-B	HCL to pH < 2	OK			
1143647005-C	HCL to pH < 2	OK			
1143647005-D	HCL to pH < 2	OK			
1143647005-E	HCL to pH < 2	OK			
1143647005-F	HCL to pH < 2	OK			

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

OK - The container was received at an acceptable pH for the analysis requested.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

BU - The container was received with headspace greater than 6mm.

RunLog

METHODS: AK101, AK101 8021B, AK101/8021B

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1226157	MB	8/11/2014 8:30:00 AM	VHA	1	12037VFC	26250VXX	1
	1226163	IB	8/11/2014 8:30:00 AM	VHA	1	12037VFC		2
	1226158	LCS	8/11/2014 9:35:00 AM	VHA	1	12037VFC	26250VXX	3
	1226164	CCV	8/11/2014 9:35:00 AM	VHA	1	12037VFC		4
1143645	1143645007	TB	8/11/2014 10:13:00 AM	VHA	1	12037VFC	26250VXX	5
1143645	1143645001	PS	8/11/2014 10:32:00 AM	VHA	1	12037VFC	26250VXX	6
1143645	1143645002	BMS	8/11/2014 10:51:00 AM	VHA	1	12037VFC	26250VXX	7
1143645	1143645003	BMSD	8/11/2014 11:11:00 AM	VHA	1	12037VFC	26250VXX	8
1143645	1143645004	PS	8/11/2014 11:49:00 AM	VHA	1	12037VFC	26250VXX	9
1143645	1143645005	PS	8/11/2014 12:08:00 PM	VHA	1	12037VFC	26250VXX	10
1143645	1143645006	PS	8/11/2014 12:27:00 PM	VHA	1	12037VFC	26250VXX	11
1143647	1143647005	TB	8/11/2014 1:05:00 PM	VHA	1	12037VFC	26250VXX	12
1143647	1143647001	PS	8/11/2014 1:25:00 PM	VHA	1	12037VFC	26250VXX	13
1143647	1143647002	PS	8/11/2014 1:44:00 PM	VHA	1	12037VFC	26250VXX	14
1143647	1143647003	PS	8/11/2014 2:03:00 PM	VHA	1	12037VFC	26250VXX	15
1143647	1143647004	PS	8/11/2014 2:22:00 PM	VHA	1	12037VFC	26250VXX	16
1143646	1143646001	PS	8/11/2014 3:00:00 PM	VHA	1	12037VFC	26250VXX	17
1143646	1143646002	BMS	8/11/2014 3:20:00 PM	VHA	1	12037VFC	26250VXX	18
1143646	1143646003	BMSD	8/11/2014 3:39:00 PM	VHA	1	12037VFC	26250VXX	19
	1226159	LCSD	8/11/2014 4:17:00 PM	VHA	1	12037VFC	26250VXX	20
	1226165	CCV	8/11/2014 4:17:00 PM	VHA	1	12037VFC		21
1143646	1143646006	TB	8/11/2014 4:36:00 PM	VHA	1	12037VFC	26250VXX	22
1143646	1143646004	PS	8/11/2014 4:56:00 PM	VHA	1	12037VFC	26250VXX	23
1143646	1143646005	PS	8/11/2014 5:15:00 PM	VHA	1	12037VFC	26250VXX	24
1143646	1143646007	PS	8/11/2014 5:34:00 PM	VHA	1	12037VFC	26250VXX	25
1143646	1143646008	PS	8/11/2014 5:53:00 PM	VHA	1	12037VFC	26250VXX	26
1143699	1143699006	TB	8/11/2014 6:32:00 PM	VHA	1	12037VFC	26250VXX	27
1148349	1148349012	TB	8/11/2014 6:51:00 PM	VHA	1	12037VFC	26250VXX	28
1148349	1148349001	PS	8/11/2014 7:10:00 PM	VHA	1	12037VFC	26250VXX	29
1148349	1148349002	PS	8/11/2014 7:29:00 PM	VHA	1	12037VFC	26250VXX	30
	1226166	CCV	8/11/2014 8:08:00 PM	VHA	1	12037VFC		31

Calibration: VHA2014-0731

RunLog

METHODS: AK102 LV, AK102/103 LV

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1227217	IB	8/14/2014 4:31:00 PM	SEF	1	11497XFC		1
	1227218	CCVB	8/14/2014 5:12:00 PM	SEF	1	11497XFC		2
	1227219	CCVR	8/14/2014 5:33:00 PM	SEF	1	11497XFC		3
1143646	1143646001	PS	8/14/2014 6:35:00 PM	SEF	1	11497XFC	31685XXX	4
1143646	1143646002	BMS	8/14/2014 6:56:00 PM	SEF	1	11497XFC	31685XXX	5
1143646	1143646003	BMSD	8/14/2014 7:16:00 PM	SEF	1	11497XFC	31685XXX	6
1143646	1143646004	PS	8/14/2014 7:37:00 PM	SEF	1	11497XFC	31685XXX	7
1143646	1143646005	PS	8/14/2014 7:57:00 PM	SEF	1	11497XFC	31685XXX	8
1143646	1143646007	PS	8/14/2014 8:18:00 PM	SEF	1	11497XFC	31685XXX	9
1143646	1143646008	PS	8/14/2014 8:38:00 PM	SEF	1	11497XFC	31685XXX	10
1143699	1143699001	PS	8/14/2014 8:59:00 PM	SEF	1	11497XFC	31685XXX	11
1143699	1143699002	PS	8/14/2014 9:20:00 PM	SEF	1	11497XFC	31685XXX	12
1143699	1143699004	PS	8/14/2014 9:40:00 PM	SEF	1	11497XFC	31685XXX	13
1148359	1148359001	PS	8/14/2014 10:01:00 PM	SEF	1	11497XFC	31685XXX	14
1148359	1148359003	PS	8/14/2014 10:22:00 PM	SEF	1	11497XFC	31685XXX	15
1148359	1148359004	PS	8/14/2014 10:42:00 PM	SEF	1	11497XFC	31685XXX	16
1148359	1148359005	PS	8/14/2014 11:03:00 PM	SEF	1	11497XFC	31685XXX	17
1148359	1148359006	PS	8/14/2014 11:24:00 PM	SEF	1	11497XFC	31685XXX	18
	1227220	CCVB	8/14/2014 11:45:00 PM	SEF	1	11497XFC		19
	1227221	CCVR	8/15/2014 12:06:00 AM	SEF	1	11497XFC		20
1148359	1148359002	PS	8/15/2014 12:26:00 AM	SEF	1	11497XFC	31685XXX	21
1143699	1143699003	PS	8/15/2014 12:47:00 AM	SEF	1	11497XFC	31685XXX	22
1143699	1143699005	PS	8/15/2014 1:07:00 AM	SEF	1	11497XFC	31685XXX	23
	1226490	MB	8/15/2014 2:10:00 AM	SEF	1	11497XFC	31687XXX	24
	1226491	LCS	8/15/2014 2:30:00 AM	SEF	1	11497XFC	31687XXX	25
	1226492	LCSD	8/15/2014 2:51:00 AM	SEF	1	11497XFC	31687XXX	26
1143647	1143647001	PS	8/15/2014 3:12:00 AM	SEF	1	11497XFC	31687XXX	27
1143647	1143647002	PS	8/15/2014 3:32:00 AM	SEF	1	11497XFC	31687XXX	28
1143647	1143647003	PS	8/15/2014 3:53:00 AM	SEF	1	11497XFC	31687XXX	29
1143647	1143647004	PS	8/15/2014 4:13:00 AM	SEF	1	11497XFC	31687XXX	30
	1227222	CCVB	8/15/2014 4:34:00 AM	SEF	1	11497XFC		31
	1227223	CCVR	8/15/2014 4:54:00 AM	SEF	1	11497XFC		32

Calibration: SEF-LV-2014-0729C

RunLog

METHODS: EPA 602/624, SW8260B

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1225836	MB	8/8/2014 4:51:00 PM	VPA	1	14353VMS	26244VXX	1
	1225840	IB	8/8/2014 4:51:00 PM	VPA	1	14353VMS		2
	1225837	LCS	8/8/2014 5:08:00 PM	VPA	1	14353VMS	26244VXX	3
	1225839	CCV	8/8/2014 5:08:00 PM	VPA	1	14353VMS		4
	1225838	LCSD	8/8/2014 5:48:00 PM	VPA	1	14353VMS	26244VXX	5
1143645	1143645002	BMS	8/8/2014 6:04:00 PM	VPA	1	14353VMS	26244VXX	6
1143645	1143645003	BMSD	8/8/2014 6:21:00 PM	VPA	1	14353VMS	26244VXX	7
1143645	1143645001	PS	8/8/2014 8:18:00 PM	VPA	1	14353VMS	26244VXX	8
1143645	1143645004	PS	8/8/2014 8:34:00 PM	VPA	1	14353VMS	26244VXX	9
1143645	1143645005	PS	8/8/2014 8:51:00 PM	VPA	1	14353VMS	26244VXX	10
1143645	1143645006	PS	8/8/2014 9:07:00 PM	VPA	1	14353VMS	26244VXX	11
1143647	1143647001	PS	8/8/2014 9:24:00 PM	VPA	1	14353VMS	26244VXX	12
1143647	1143647003	PS	8/8/2014 9:57:00 PM	VPA	1	14353VMS	26244VXX	13
1143646	1143646007	PS	8/8/2014 10:30:00 PM	VPA	1	14353VMS	26244VXX	14
1143642	1143642001	PS	8/8/2014 10:46:00 PM	VPA	1	14353VMS	26244VXX	15
1143453	1143453001	PS	8/8/2014 11:03:00 PM	VPA	100	14353VMS	26244VXX	16

Calibration: VPA2044-0801

RunLog

METHODS: EPA 602/624, SW1312/8260B, SW8260B

PROJECT	HSN	SAMPLE TYPE	RUN DATE/TIME	RUN INST	DIL	ANAL BATCH	PREP BATCH	SEQ
	1226231	MB	8/11/2014 10:19:00 AM	VNA	1	14356VMS	26253VXX	1
	1226243	IB	8/11/2014 10:19:00 AM	VNA	1	14356VMS		2
	1226232	LCS	8/11/2014 10:52:00 AM	VNA	1	14356VMS	26253VXX	3
	1226242	CCV	8/11/2014 10:52:00 AM	VNA	1	14356VMS		4
	1226233	LCSD	8/11/2014 11:26:00 AM	VNA	1	14356VMS	26253VXX	5
1143647	1143647005	TB	8/11/2014 12:32:00 PM	VNA	1	14356VMS	26253VXX	6
1143645	1143645007	TB	8/11/2014 12:48:00 PM	VNA	1	14356VMS	26253VXX	7
1143647	1143647002	PS	8/11/2014 1:05:00 PM	VNA	1	14356VMS	26253VXX	8
1148346	1148346008	TB	8/11/2014 1:21:00 PM	VNA	1	14356VMS	26253VXX	9
1148346	1148346006	PS	8/11/2014 1:37:00 PM	VNA	1	14356VMS	26253VXX	10
1148346	1148346007	PS	8/11/2014 1:54:00 PM	VNA	1	14356VMS	26253VXX	11
1143668	1143668001	PS	8/11/2014 2:10:00 PM	VNA	1	14356VMS	26253VXX	12
1143659	1143659001	PS	8/11/2014 2:27:00 PM	VNA	1	14356VMS	26253VXX	13
1143565	1143565035	PS	8/11/2014 3:32:00 PM	VNA	5	14356VMS	26253VXX	14
	1225932	SPW	8/11/2014 4:22:00 PM	VNA	50	14356VMS	26253VXX	15
	1226238	AFB	8/11/2014 4:38:00 PM	VNA	1	14356VMS	26253VXX	16
1143495	1143495005	PS	8/11/2014 4:55:00 PM	VNA	1	14356VMS	26253VXX	17
1143669	1143669001	PS	8/11/2014 5:11:00 PM	VNA	50	14356VMS	26253VXX	18
1143669	1143669002	PS	8/11/2014 5:28:00 PM	VNA	50	14356VMS	26253VXX	19
1148340	1148340001	PS	8/11/2014 5:44:00 PM	VNA	25	14356VMS	26253VXX	20
1148340	1148340002	PS	8/11/2014 6:00:00 PM	VNA	20	14356VMS	26253VXX	21
1148340	1148340003	PS	8/11/2014 6:17:00 PM	VNA	20	14356VMS	26253VXX	22
1148348	1148348003	PS	8/11/2014 6:50:00 PM	VNA	100	14356VMS	26253VXX	23
1148348	1148348008	PS	8/11/2014 6:50:00 PM	VNA	100	14356VMS	26253VXX	27
1148348	1148348004	PS	8/11/2014 7:06:00 PM	VNA	100	14356VMS	26253VXX	24
1148348	1148348005	PS	8/11/2014 7:23:00 PM	VNA	100	14356VMS	26253VXX	25
1148348	1148348006	PS	8/11/2014 7:39:00 PM	VNA	100	14356VMS	26253VXX	26
1148348	1148348003	PS	8/11/2014 7:56:00 PM	VNA	10	14356VMS	26253VXX	28
1148348	1148348008	PS	8/11/2014 7:56:00 PM	VNA	10	14356VMS	26253VXX	32
1148348	1148348004	PS	8/11/2014 8:12:00 PM	VNA	10	14356VMS	26253VXX	29
1148348	1148348005	PS	8/11/2014 8:29:00 PM	VNA	10	14356VMS	26253VXX	30
1148348	1148348006	PS	8/11/2014 8:45:00 PM	VNA	10	14356VMS	26253VXX	31

Calibration: VNA2014-0801

Laboratory Analytical Report

Client: **EA Engineering, Science and Tech**
3 Washington Center
Newburgh, NY 12550

Attn: **Pam Moss**
T: 907-646-0201 F:
PMoss@eaest.com

Project: **Cape Romanzof**

Workorder No.: **1143646**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Chuck Homestead

Charles.Homestead@sgs.com
General Manager Alaska

Contents (Bookmarked in PDF):

Cover Page
Glossary
Sample Summary Forms
Case Narrative
Sample Results Forms
Batch Summary Forms (by method)
Quality Control Summary Forms (by method)
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)

Samantha Matsuoka

SGS North America
Environmental Services – Alaska Division
QA/QC Officer

Samantha Matsuoka 2014.08.20 15:41:01 -08'00'

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO 17025 (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6020, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RL	Reporting Limit
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

Client Name: EA Engineering, Science and Tech.
Project Name: Cape Romanzof
Workorder No.: 1143646

Analytical Methods

Method Description	Analytical Method
Alkalinity as CaCO3 QC	SM21 2320B
Dissolved Metals by ICP-MS	SW6020A
DRO/RRO Low Volume Water	AK102
DRO/RRO Low Volume Water	AK103
Gasoline Range Organics (W)	AK101
Ion Chrom Analysis Preserved Water	SW9056A
Ion Chromatographic Analysis Water	SW9056A
Volatile Organic Compounds (W)	SW8260B

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1143646001	SS010-MW03-080214
1143646002	SS010-MW03-080214 -MS
1143646003	SS010-MW03-080214 -MSD
1143646004	SS010-MW01-080414
1143646005	SS010-MW99-080414
1143646006	TB-3-SS010
1143646007	Water-EB-073114
1143646008	SS010-MW02-080514

Client Name: EA Engineering, Science and Tech.
Project Name: Cape Romanzof
Workorder No.: 1143646

Sample Comments

Refer to the sample receipt form for information on sample condition.

Lab Sample ID	Sample Type	Client Sample ID
1143646001	PS	SS010-MW03-080214
	AK103 - Unknown hydrocarbon with several peaks is present.	
1143646007	PS	Water-EB-073114
	8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ. 9056A - Anions - Sample ran at 10X dilution due to sample being preserved with sulfuric acid.	
1225836	* MB	MB for HBN 1625357 [VXX/26244]
	8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.	
1225840	* IB	IB for HBN 1625358 [VMS/14353]
	8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.	
1226447	* MB	MB for HBN 1625495 [XXX/31685]
	AK102 - MB result is greater than one-half the LOQ, however less than the LOQ.	

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Client Sample ID: **SS010-MW03-080214**
SGS Ref. #: 1143646001
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/02/14 14:15
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0326J	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	98.7	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 15:00
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143646001-C
Analyst: ST

Client Sample ID: **SS010-MW03-080214**
SGS Ref. #: 1143646001
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/02/14 14:15
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.301J	0.600	0.180	mg/L	1	XFC11497	XXX31685	
Residual Range Organics	0.705	0.500	0.150	mg/L	1	XFC11497	XXX31685	
5a Androstane <surr>	87.8	50-150		%	1	XFC11497	XXX31685	
n-Triacontane-d62 <surr>	97.3	50-150		%	1	XFC11497	XXX31685	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/14/14 18:35
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646001-A
Analyst: EAB

Analytical Batch: XFC11497
Analytical Method: AK103
Analysis Date/Time: 08/14/14 18:35
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646001-A
Analyst: EAB

Client Sample ID: **SS010-MW01-080414**
SGS Ref. #: 1143646004
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/04/14 10:40
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0356J	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	94.5	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 16:56
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143646004-C
Analyst: ST

Client Sample ID: **SS010-MW01-080414**
SGS Ref. #: 1143646004
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/04/14 10:40
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.315J	0.600	0.180	mg/L	1	XFC11497	XXX31685	
Residual Range Organics	0.393J	0.500	0.150	mg/L	1	XFC11497	XXX31685	
5a Androstane <surr>	89.1	50-150		%	1	XFC11497	XXX31685	
n-Triacontane-d62 <surr>	99	50-150		%	1	XFC11497	XXX31685	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/14/14 19:37
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646004-A
Analyst: EAB

Analytical Batch: XFC11497
Analytical Method: AK103
Analysis Date/Time: 08/14/14 19:37
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646004-A
Analyst: EAB

Client Sample ID: **SS010-MW99-080414**
SGS Ref. #: 1143646005
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/04/14 10:00
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	95.3	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 17:15
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143646005-C
Analyst: ST

Client Sample ID: **SS010-MW99-080414**
SGS Ref. #: 1143646005
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/04/14 10:00
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.374J	0.600	0.180	mg/L	1	XFC11497	XXX31685	
Residual Range Organics	0.250U	0.500	0.150	mg/L	1	XFC11497	XXX31685	
5a Androstane <surr>	92.4	50-150		%	1	XFC11497	XXX31685	
n-Triacontane-d62 <surr>	103	50-150		%	1	XFC11497	XXX31685	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/14/14 19:57
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646005-A
Analyst: EAB

Analytical Batch: XFC11497
Analytical Method: AK103
Analysis Date/Time: 08/14/14 19:57
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646005-A
Analyst: EAB

Client Sample ID: **TB-3-SS010**
SGS Ref. #: 1143646006
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/31/14 09:10
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	91.9	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 16:36
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143646006-A
Analyst: ST

Client Sample ID: **Water-EB-073114**
SGS Ref. #: 1143646007
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/31/14 09:10
Receipt Date/Time: 08/07/14 11:20

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Nitrate/Nitrite-N	0.350J	1.00	0.310	mg/L	10	WIC5252	WXX10639	

Batch Information

Analytical Batch:
Analytical Method:
Analysis Date/Time:

Container ID:
Analyst:

Client Sample ID: **Water-EB-073114**
SGS Ref. #: 1143646007
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/31/14 09:10
Receipt Date/Time: 08/07/14 11:20

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Iron	250U	500	150	ug/L	5	MMS8639	MXX27962	

Batch Information

Analytical Batch: MMS8639
Analytical Method: SW6020A
Analysis Date/Time: 08/14/14 13:58
Dilution Factor: 5

Prep Batch: MXX27962
Prep Method: SW3010A
Prep Date/Time: 08/13/14 09:40

Initial Prep Wt./Vol.: 25 mL
Prep Extract Vol.: 25 mL
Container ID:1143646007-J
Analyst: ACF

Client Sample ID: **Water-EB-073114**
SGS Ref. #: 1143646007
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/31/14 09:10
Receipt Date/Time: 08/07/14 11:20

Waters Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Alkalinity	5.00U	10.0	3.10	mg/L	1	WTI3998		
Sulfate	0.0500U	0.100	0.0310	mg/L	1	WIC5251	WXX10640	

Batch Information

Analytical Batch: WIC5251
Analytical Method: SW9056A
Analysis Date/Time: 08/08/14 22:55
Dilution Factor: 1
Prep Batch: WXX10640
Prep Method: METHOD
Prep Date/Time: 08/08/14 12:07
Initial Prep Wt./Vol.: 10 mL
Prep Extract Vol.: 10 mL
Container ID:1143646007-J
Analyst: SLC

Analytical Batch: WTI3998
Analytical Method: SM21 2320B
Analysis Date/Time: 08/08/14 14:59
Dilution Factor: 1
Initial Prep Wt./Vol.: 50 mL
Container ID:1143646007-J
Analyst: NLL

Client Sample ID: **Water-EB-073114**
SGS Ref. #: 1143646007
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/31/14 09:10
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	98	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 17:34
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143646007-C
Analyst: ST

Client Sample ID: **Water-EB-073114**
SGS Ref. #: 1143646007
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/31/14 09:10
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.340J	0.600	0.180	mg/L	1	XFC11497	XXX31685	
Residual Range Organics	0.250U	0.500	0.150	mg/L	1	XFC11497	XXX31685	
5a Androstane <surr>	88.5	50-150		%	1	XFC11497	XXX31685	
n-Triacontane-d62 <surr>	96.7	50-150		%	1	XFC11497	XXX31685	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/14/14 20:18
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646007-A
Analyst: EAB

Analytical Batch: XFC11497
Analytical Method: AK103
Analysis Date/Time: 08/14/14 20:18
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646007-A
Analyst: EAB

Client Sample ID: **Water-EB-073114**
SGS Ref. #: 1143646007
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/31/14 09:10
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result		LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U		0.400	0.120	ug/L	1	VMS14353	VXX26244	
Ethylbenzene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
o-Xylene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
P & M -Xylene	1.00U		2.00	0.620	ug/L	1	VMS14353	VXX26244	
Toluene	2.88		1.00	0.310	ug/L	1	VMS14353	VXX26244	
1,2-Dichloroethane-D4 <surr>	123	*	70-120		%	1	VMS14353	VXX26244	
4-Bromofluorobenzene <surr>	90.8		75-120		%	1	VMS14353	VXX26244	
Toluene-d8 <surr>	91.3		85-120		%	1	VMS14353	VXX26244	

Batch Information

Analytical Batch: VMS14353
Analytical Method: SW8260B
Analysis Date/Time: 08/08/14 22:30
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143646007-F
Analyst: KCT

Client Sample ID: **SS010-MW02-080514**
SGS Ref. #: 1143646008
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 11:35
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	94.4	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 17:53
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143646008-C
Analyst: ST

Client Sample ID: **SS010-MW02-080514**
SGS Ref. #: 1143646008
Project ID: Cape Romanzof
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/05/14 11:35
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.363J	0.600	0.180	mg/L	1	XFC11497	XXX31685	
Residual Range Organics	0.250U	0.500	0.150	mg/L	1	XFC11497	XXX31685	
5a Androstane <surr>	86.7	50-150		%	1	XFC11497	XXX31685	
n-Triacontane-d62 <surr>	97.1	50-150		%	1	XFC11497	XXX31685	

Batch Information

Analytical Batch: XFC11497
Analytical Method: AK102
Analysis Date/Time: 08/14/14 20:38
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646008-A
Analyst: EAB

Analytical Batch: XFC11497
Analytical Method: AK103
Analysis Date/Time: 08/14/14 20:38
Dilution Factor: 1
Prep Batch: XXX31685
Prep Method: SW3520C
Prep Date/Time: 08/13/14 10:00
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143646008-A
Analyst: EAB

Workorder No. 1143646

Metals by ICP/MS

Method: SW6020A

Method Batch Id: MXX27962

Analysis Batch Id: MMS8639

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Initial Calib Verification	1226987		8/14/2014 10:34:52AM
Second Source Calib Check	1226988		8/14/2014 10:37:14AM
Continuing Calib Verification	1226998		8/14/2014 1:13:55PM
Calibration Blank	1226999		8/14/2014 1:16:18PM
Method Blank	1226435		8/14/2014 1:21:29PM
Lab Control Sample	1226436		8/14/2014 1:23:51PM
Matrix Spike	1226437		8/14/2014 1:28:34PM
Matrix Spike Duplicate	1226438		8/14/2014 1:30:55PM
Continuing Calib Verification	1227000		8/14/2014 1:45:05PM
Calibration Blank	1227001		8/14/2014 1:47:27PM
Continuing Calib Verification	1227002		8/14/2014 2:12:55PM
Calibration Blank	1227003		8/14/2014 2:15:17PM

SGS Ref.#	1226999	Calibration Blank	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1226437, 1226438

Parameter	Results	RL/CL	Units	Analysis Date
Metals by ICP/MS				
Iron	50.0U	100	ug/L	08/14/14
Batch	MMS8639			
Method	SW6020A			
Instrument	Perkin Elmer Sciex ICP-MS P3			

SGS Ref.#	1227001	Calibration Blank	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1226437, 1226438, 1143646007

Parameter	Results	RL/CL	Units	Analysis Date
Metals by ICP/MS				
Iron	50.0U	100	ug/L	08/14/14

Batch MMS8639
Method SW6020A
Instrument Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1227003	Calibration Blank	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter	Results	RL/CL	Units	Analysis Date
Metals by ICP/MS				
Iron	50.0U	100	ug/L	08/14/14

Batch MMS8639
Method SW6020A
Instrument Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1226987 Initial Calib Verification	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1226437, 1226438, 1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	ICV	4030	101	(90-110)	4000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1226988 Second Source Calib Check	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1226437, 1226438, 1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	QCS	5250	105	(90-110)	5000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1226998 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1226437, 1226438

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	CCV	4190	105	(90-110)	4000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1227000 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1226437, 1226438, 1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	CCV	4170	104	(90-110)	4000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1227002 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	CCV	4060	101	(90-110)	4000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

Workorder No. 1143646

Metals by ICP/MS

Method: SW6020A

Method Batch Id: MXX27962

Analysis Batch Id: MMS8639

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Initial Calib Verification	1226987		8/14/2014 10:34:52AM
Second Source Calib Check	1226988		8/14/2014 10:37:14AM
Continuing Calib Verification	1226998		8/14/2014 1:13:55PM
Calibration Blank	1226999		8/14/2014 1:16:18PM
Method Blank	1226435		8/14/2014 1:21:29PM
Lab Control Sample	1226436		8/14/2014 1:23:51PM
Matrix Spike	1226437		8/14/2014 1:28:34PM
Matrix Spike Duplicate	1226438		8/14/2014 1:30:55PM
Continuing Calib Verification	1227000		8/14/2014 1:45:05PM
Calibration Blank	1227001		8/14/2014 1:47:27PM
Continuing Calib Verification	1227002		8/14/2014 2:12:55PM
Calibration Blank	1227003		8/14/2014 2:15:17PM

SGS Ref.#	1226435	Method Blank	**Printed Date/Time**		08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	MXX27962
Project Name/#	Cape Romanzof			**Method**	SW3010A
Matrix	Water (Surface, Eff., Ground)			**Date**	08/13/2014

QC results affect the following production samples:

1143646007

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Metals by ICP/MS					
Iron	250U	500	150	ug/L	08/14/14
Batch	MMS8639				
Method	SW6020A				
Instrument	Perkin Elmer Sciex ICP-MS P3				

SGS Ref.#	1226436 Lab Control Sample	**Printed Date/Time**	08/19/2014	16:51
		Prep Batch	MXX27962	
Client Name	EA Engineering, Science and Tech.	**Method**	SW3010A	
Project Name/#	Cape Romanzof	**Date**	08/13/2014	
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Metals by ICP/MS								
Iron	LCS	5790	116	(80-120)			5000 ug/L	08/14/2014

Batch MMS8639
Method SW6020A
Instrument Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1226437	Matrix Spike	**Printed Date/Time**	08/19/2014 16:51
	1226438	Matrix Spike Duplicate	**Prep Batch**	MXX27962
			Method	3010 H20 Digest for Metals ICI
			Date	08/13/2014
Original	1143645001			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter	Qualifiers		Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount		Analysis Date
Metals by ICP/MS											
Iron		MS	250U	5470	109	(80-120)			5000	ug/L	08/14/2014
		MSD		5550	111		1	(< 15)	5000	ug/L	08/14/2014

Batch	MMS8639
Method	SW6020A
Instrument	Perkin Elmer Sciex ICP-MS P3

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143642, 1143645, 1143646, 1143656, 1143721, 1143745, 1143753, 1143761, 1148347, 1148353

Queue: **MMS** Batch: **8639**

Method: SW6020A, SW6020A Diss.

Run Date: 08/14/14 10:34 - 08/14/14 18:48

Extraction Batch(es): MXX27953, MXX27961, MXX27962, MXX27965, MXX27967

Notes:

RUSH 8/19

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: ADLAI FLORES
Date: 8/14/14

Reviewer's Signature
Printed Name: Elizabeth Brandenhl
Date: 8-16-14

SGS DAILY PERFORMANCE REPORT

ELAN 6100 ICP-MS P3

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, August 14, 2014 07:52:22
Method File: C:\Elandata\Method\SGS Daily Performance Check.mth
Dataset File: C:\Elandata\DataSet\default3\Daily Performance Check.1973
Tuning File: C:\elandata\Tuning\Default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Dual Detector Mode: Dual
Acq. Dead Time(ns): 60
Current Dead Time (ns): 60

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	55596.9	55596.865	658.332	1.2
	Rh	102.9	257668.4	257668.413	3241.849	1.3
	Pb	208.0	154138.7	154138.697	2243.992	1.5
⌈>	Ba	137.9	257055.3	257055.287	3658.411	1.4
⌊	Ba++	69.0	6885.6	0.027	0.001	2.6
⌈>	Ce	139.9	328915.8	328915.770	3812.258	1.2
⌊	CeO	155.9	6163.9	0.019	0.000	0.9
	Bkgd	220.0	20.0	20.000	3.841	19.2

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
7.00	Lens Voltage
1250.00	ICP RF Power
-2068.00	Analog Stage Voltage
1500.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset
-15.00	Differential Aperture

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	33	6.0	4210.1
Co	59	33	6.5	142654.7
In	115	33	7.5	285545.8
Pb	208	33	9.8	157198.8

Instrument Tuning Report

File Name: Default.tun
File Path: C:\elandata\Tuning\Default.tun
Sample Date/Time: Thursday, August 14, 2014 07:48:00

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	3.025	596	2053	0.663	
Mg	23.985	23.975	5734	1988	0.679	
Co	58.933	58.925	14325	1895	0.691	
Rh	102.905	102.875	25090	1829	0.680	
Ce	139.905	139.875	34088	1863	0.687	
Pb	207.977	207.975	50519	2105	0.678	

SGS ALASKA
ICP-MS SUMMARY P3

USER: Nicholas Bryant us_anchorage_metals
Computer Name: US0003228
Dataset File Path: C:\Elandata\DataSet\08.14.2014.p3b\
Report Date/Time: Thursday, August 14, 2014 18:54:50

The Dataset

Sample ID	Date and Time	Description	Read Type	Diluted Vol.
Blank	10:17:52 Thu 14-Aug-14		Blank	
Blank	10:20:38 Thu 14-Aug-14		Blank	
Standard 1	10:23:01 Thu 14-Aug-14		Standard #1	
Standard 2	10:25:23 Thu 14-Aug-14		Standard #2	
Standard 3	10:27:45 Thu 14-Aug-14		Standard #3	
Standard 4	10:30:08 Thu 14-Aug-14		Standard #4	
Standard 5	10:32:30 Thu 14-Aug-14		Standard #5	
ICV	10:34:52 Thu 14-Aug-14		QC Std #1	
QCS	10:37:14 Thu 14-Aug-14		QC Std #2	
ICSAB	10:39:35 Thu 14-Aug-14		QC Std #6	
ICSA	10:41:57 Thu 14-Aug-14		QC Std #7	
LLQC	10:46:00 Thu 14-Aug-14		QC Std #9	
CB	10:48:41 Thu 14-Aug-14		QC Std #8	
1226193	10:54:27 Thu 14-Aug-14	MB MXX 27953	Sample	5.000
1226194	10:56:49 Thu 14-Aug-14	LCS	Spike - 2 of 14	5.000
1143656047	10:59:10 Thu 14-Aug-14		Sample	5.000
1143656048	11:01:32 Thu 14-Aug-14	BMS	Spike - 2 of 16	5.000
1143656049	11:03:54 Thu 14-Aug-14	BMSD	Spike - 2 of 16	5.000
1226197	11:06:15 Thu 14-Aug-14	BND	Spike - 4 of 16	5.000
DT	11:08:38 Thu 14-Aug-14	DT	Sample	25.000
1143656050	11:11:00 Thu 14-Aug-14		Sample	5.000
1143656051	11:13:22 Thu 14-Aug-14		Sample	5.000
1143656052	11:15:43 Thu 14-Aug-14		Sample	5.000
CCV	11:18:06 Thu 14-Aug-14		QC Std #5	
CB	11:20:28 Thu 14-Aug-14		QC Std #8	
LLQC	11:22:50 Thu 14-Aug-14		QC Std #9	
1143656053	11:25:13 Thu 14-Aug-14		Sample	5.000
1143656054	11:27:34 Thu 14-Aug-14		Sample	5.000
1143642001	11:29:56 Thu 14-Aug-14		Sample	5.000
1143642002	11:32:18 Thu 14-Aug-14		Sample	5.000
1148353001	11:34:39 Thu 14-Aug-14		Sample	5.000
1148347010	11:37:01 Thu 14-Aug-14		Sample	5.000
1143721001	11:39:23 Thu 14-Aug-14		Sample	5.000
1143656050	11:42:08 Thu 14-Aug-14		Sample	25.000
1143656051	11:44:29 Thu 14-Aug-14		Sample	25.000
1143656052	11:46:51 Thu 14-Aug-14		Sample	25.000

CCV	11:49:13 Thu 14-Aug-14		QC Std #5	
CB	11:51:35 Thu 14-Aug-14		QC Std #8	
LLQC	11:53:57 Thu 14-Aug-14		QC Std #9	
1143656047	11:59:21 Thu 14-Aug-14		Sample	25.000
1143656048	12:01:42 Thu 14-Aug-14	BMS	Spike - 2 of 40	25.000
1143656049	12:04:04 Thu 14-Aug-14	BMSD	Spike - 2 of 40	25.000
1226197	12:06:25 Thu 14-Aug-14	BND	Spike - 4 of 40	25.000
1143656053	12:08:47 Thu 14-Aug-14		Sample	25.000
CCV	12:11:10 Thu 14-Aug-14		QC Std #5	
CB	12:13:33 Thu 14-Aug-14		QC Std #8	
LLQC	12:15:54 Thu 14-Aug-14		QC Std #9	
1226397	12:23:36 Thu 14-Aug-14	MB MXX 27961	Sample	5.000
1226398	12:25:58 Thu 14-Aug-14	LCS	Spike - 2 of 48	5.000
1143642004	12:28:19 Thu 14-Aug-14		Sample	5.000
1226399	12:30:41 Thu 14-Aug-14	MS	Spike - 2 of 48	5.000
1226400	12:33:08 Thu 14-Aug-14	MSD	Spike - 2 of 48	5.000
1226401	12:35:29 Thu 14-Aug-14	BND	Spike - 4 of 48	5.000
DT	12:37:51 Thu 14-Aug-14		Sample	25.000
1143642005	12:40:12 Thu 14-Aug-14		Sample	5.000
CCV	12:42:35 Thu 14-Aug-14		QC Std #5	
CB	12:44:57 Thu 14-Aug-14		QC Std #8	
LLQC	12:47:18 Thu 14-Aug-14		QC Std #9	
1143642004	12:55:02 Thu 14-Aug-14		Sample	50.000
1226399	12:57:24 Thu 14-Aug-14	MS	Spike - 2 of 59	50.000
1226400	12:59:45 Thu 14-Aug-14	MSD	Spike - 2 of 59	50.000
1226401	13:02:07 Thu 14-Aug-14	BND	Spike - 4 of 59	50.000
R	13:04:28 Thu 14-Aug-14		Sample	1.000
R	13:06:50 Thu 14-Aug-14		Sample	1.000
R	13:09:11 Thu 14-Aug-14		Sample	1.000
R	13:11:32 Thu 14-Aug-14		Sample	1.000
CCV	13:13:55 Thu 14-Aug-14		QC Std #5	
CB	13:16:18 Thu 14-Aug-14		QC Std #8	
LLQC	13:18:40 Thu 14-Aug-14		QC Std #9	
1226435	13:21:29 Thu 14-Aug-14	MB MXX 27962	Sample	5.000
1226436	13:23:51 Thu 14-Aug-14	LCS	Spike - 2 of 70	5.000
1143645001	13:26:12 Thu 14-Aug-14		Sample	5.000
1143645002	13:28:34 Thu 14-Aug-14	BMS	Spike - 2 of 72	5.000
1143645003	13:30:55 Thu 14-Aug-14	BMSD	Spike - 2 of 72	5.000
1226439	13:33:17 Thu 14-Aug-14	BND	Spike - 4 of 72	5.000
DT	13:35:38 Thu 14-Aug-14	DT	Sample	25.000
1143645004	13:37:59 Thu 14-Aug-14		Sample	5.000
1143645005	13:40:21 Thu 14-Aug-14		Sample	5.000
1143645006	13:42:42 Thu 14-Aug-14		Sample	5.000
CCV	13:45:05 Thu 14-Aug-14		QC Std #5	
CB	13:47:27 Thu 14-Aug-14		QC Std #8	
LLQC	13:49:49 Thu 14-Aug-14		QC Std #9	
1226397	13:53:30 Thu 14-Aug-14	MB MXX 27961	Sample	5.000
1226398	13:55:51 Thu 14-Aug-14	LCS	Spike - 2 of 83	5.000

1143646007	13:58:14 Thu 14-Aug-14		Sample	5.000
R	14:01:05 Thu 14-Aug-14		Sample	1.000
R	14:03:27 Thu 14-Aug-14		Sample	1.000
R	14:05:49 Thu 14-Aug-14		Sample	1.000
R	14:08:11 Thu 14-Aug-14		Sample	1.000
R	14:10:32 Thu 14-Aug-14		Sample	1.000
CCV	14:12:55 Thu 14-Aug-14		QC Std #5	
CB	14:15:17 Thu 14-Aug-14		QC Std #8	
LLQC	14:17:38 Thu 14-Aug-14		QC Std #9	
1143642004	14:24:45 Thu 14-Aug-14		Sample	5.000
1226399	14:27:07 Thu 14-Aug-14	MS	Spike - 2 of 94	5.000
1226400	14:29:28 Thu 14-Aug-14	MSD	Spike - 2 of 94	5.000
1226401	14:31:50 Thu 14-Aug-14	BND	Spike - 4 of 94	5.000
1143642005	14:34:12 Thu 14-Aug-14		Sample	5.000
R	14:36:34 Thu 14-Aug-14		Sample	1.000
R	14:38:55 Thu 14-Aug-14		Sample	1.000
R	14:41:17 Thu 14-Aug-14		Sample	1.000
R	14:43:38 Thu 14-Aug-14		Sample	1.000
R	14:46:00 Thu 14-Aug-14		Sample	1.000
CCV	14:48:23 Thu 14-Aug-14		QC Std #5	
CB	14:50:46 Thu 14-Aug-14		QC Std #8	
LLQC	14:53:07 Thu 14-Aug-14		QC Std #9	
1226578	14:58:08 Thu 14-Aug-14	MB MXX 27965	Sample	5.000
1226579	15:00:30 Thu 14-Aug-14	LCS	Spike - 2 of 107	5.000
1143745001	15:02:51 Thu 14-Aug-14		Sample	5.000
1143745002	15:05:13 Thu 14-Aug-14	BMS	Spike - 2 of 109	5.000
1143745003	15:07:34 Thu 14-Aug-14	BMSD	Spike - 2 of 109	5.000
1226580	15:09:56 Thu 14-Aug-14	BND	Spike - 4 of 109	5.000
DT	15:12:17 Thu 14-Aug-14	DT	Sample	25.000
1143745004	15:14:39 Thu 14-Aug-14		Sample	5.000
1143745005	15:17:00 Thu 14-Aug-14		Sample	5.000
1143745006	15:19:22 Thu 14-Aug-14		Sample	5.000
CCV	15:21:44 Thu 14-Aug-14		QC Std #5	
CB	15:24:06 Thu 14-Aug-14		QC Std #8	
LLQC	15:26:28 Thu 14-Aug-14		QC Std #9	
1143745007	15:28:50 Thu 14-Aug-14		Sample	5.000
1143745008	15:31:12 Thu 14-Aug-14		Sample	5.000
1143745009	15:33:33 Thu 14-Aug-14		Sample	5.000
1143745010	15:35:54 Thu 14-Aug-14		Sample	5.000
1143745012	15:38:16 Thu 14-Aug-14		Sample	5.000
1143745013	15:40:38 Thu 14-Aug-14	BMS	Spike - 2 of 124	5.000
1143745014	15:43:00 Thu 14-Aug-14	BMSD	Spike - 2 of 124	5.000
1226581	15:45:22 Thu 14-Aug-14	BND	Spike - 4 of 124	5.000
1143745016	15:47:43 Thu 14-Aug-14		Sample	5.000
1143745017	15:50:05 Thu 14-Aug-14		Sample	5.000
CCV	15:52:27 Thu 14-Aug-14		QC Std #5	
CB	15:54:49 Thu 14-Aug-14		QC Std #8	
LLQC	15:57:11 Thu 14-Aug-14		QC Std #9	

1143745018	15:59:33 Thu 14-Aug-14		Sample	5.000
1143745019	16:01:54 Thu 14-Aug-14		Sample	5.000
1143761020	16:04:16 Thu 14-Aug-14		Sample	5.000
1143761021	16:06:38 Thu 14-Aug-14		Sample	5.000
1143761022	16:09:00 Thu 14-Aug-14	BMS	Spike - 2 of 136	5.000
1143761023	16:11:22 Thu 14-Aug-14	BMSD	Spike - 2 of 136	5.000
1226582	16:13:44 Thu 14-Aug-14	BND	Spike - 4 of 136	5.000
1143761024	16:16:05 Thu 14-Aug-14		Sample	5.000
1143761025	16:18:27 Thu 14-Aug-14		Sample	5.000
1143761026	16:20:48 Thu 14-Aug-14		Sample	5.000
CCV	16:23:11 Thu 14-Aug-14		QC Std #5	
CB	16:25:33 Thu 14-Aug-14		QC Std #8	
LLQC	16:27:55 Thu 14-Aug-14		QC Std #9	
1226591	17:23:22 Thu 14-Aug-14	MB MXX 27967	Sample	5.000
1226592	17:25:43 Thu 14-Aug-14	LCS	Spike - 2 of 146	5.000
1143761006	17:28:05 Thu 14-Aug-14		Sample	5.000
1143761007	17:30:27 Thu 14-Aug-14	BMS	Spike - 2 of 148	5.000
1143761008	17:32:54 Thu 14-Aug-14	BMSD	Spike - 2 of 148	5.000
1226595	17:35:16 Thu 14-Aug-14	BND	Spike - 4 of 148	5.000
DT	17:37:37 Thu 14-Aug-14		Sample	25.000
1143761001	17:39:59 Thu 14-Aug-14		Sample	5.000
1143761002	17:42:20 Thu 14-Aug-14		Sample	5.000
1143761003	17:44:42 Thu 14-Aug-14		Sample	5.000
CCV	17:47:05 Thu 14-Aug-14		QC Std #5	
CCV	17:49:58 Thu 14-Aug-14		QC Std #5	
CB	17:52:20 Thu 14-Aug-14		QC Std #8	
LLQC	17:54:42 Thu 14-Aug-14		QC Std #9	
1143761004	17:57:06 Thu 14-Aug-14		Sample	5.000
1143761005	17:59:27 Thu 14-Aug-14		Sample	5.000
1143761010	18:01:49 Thu 14-Aug-14		Sample	5.000
1143761011	18:04:10 Thu 14-Aug-14		Sample	5.000
1143761012	18:06:32 Thu 14-Aug-14		Sample	5.000
1143761013	18:08:54 Thu 14-Aug-14		Sample	5.000
1143761014	18:11:15 Thu 14-Aug-14		Sample	5.000
1143761015	18:13:37 Thu 14-Aug-14		Sample	5.000
1143761016	18:15:58 Thu 14-Aug-14		Sample	5.000
1143761017	18:18:20 Thu 14-Aug-14		Sample	5.000
CCV	18:20:42 Thu 14-Aug-14		QC Std #5	
CB	18:23:04 Thu 14-Aug-14		QC Std #8	
LLQC	18:25:26 Thu 14-Aug-14		QC Std #9	
1143761018	18:27:48 Thu 14-Aug-14		Sample	5.000
1143761019	18:30:10 Thu 14-Aug-14		Sample	5.000
1143753001	18:32:31 Thu 14-Aug-14		Sample	5.000
1143753002	18:34:53 Thu 14-Aug-14		Sample	5.000
1143753003	18:37:14 Thu 14-Aug-14		Sample	5.000
1143753004	18:39:36 Thu 14-Aug-14		Sample	5.000
CCV	18:41:58 Thu 14-Aug-14		QC Std #5	
CB	18:48:45 Thu 14-Aug-14		QC Std #8	

SGS North America Inc.

4 ZnT KF 8/14/14

ICP MS Run Log

Method: 6020A/3010
Run Date: 8/14/14

Analyst: KF/CPE
File ID: 08.14.2014.P3.B
Queue/Batch: MMS 8639

#	Sample ID	Bench	Dilution	Comments	Status
1	Blank				
2	Blank				
3	Std 1				
4	2				
5	3				
6	4				
7	5				
8	ICV				
9	QCS				
10	ICSAB				
11	ICSA				
12	LLQC				
13	CB				
14	1226193 MB		5	MXX 27953	
15	6194 LCS		5		
16	36556-47		5	Stand in: 1226260	
17	48 BMS		5	RR Na MS 6261	
18	49 BMSD		5	@25X MSD 6262	
19	6197 BND		5	Post Ca, Mg BND 6263	
20	DT		25		
21	36556-50		5	Na > ULR	
22	51		5	Na > ULR RR @ 25X	
23	52		5	Na > ULR	
24	CCV		1		
25	CB		1		
26	LLQC		1		
27	3656-53		5	Na > ULR RR @ 25X	
28	54		5		
29	3642-1		5	(Na Pk ca ↑) N/A	
30	2		5	Na Pk ↑	
31	8353-1		5		
32	8347-10		5		
33	3721-1		5		
34	3656-50		25		
35	51		25	POST Na	
36	52		25		
37	CCV		1		
38	CB		1		
39	LLQC		1		
40	3656-47		25	POST Na STAND IN: 1226260	

Clean Cones	
Windings	✓
Optimization	✓
Tuning	✓
Sample Flow	✓
Detector Calibration	✓
Waste	✓

Standards

ICV/CCV: MMS 14 - 45 → 48, 53	**ICSA:** P 517
QCS/BND: MMS 14 - 29 → 32, 12	**ICSAB:** P 517; MMS 14 - 41, 42
Internal: MMS 14 - 65	**BBND:**
LLQC: MMS 14 - 44 ACDE, C3	

SGS North America Inc.

FST ACF 8/14/14

ICP MS Run Log

Method: 6020A/3010
Run Date: 8/14/14

Analyst: ACF/CDE
File ID: 08.14.2014.P3B
Queue/Batch: MMS 8639

#	Sample ID		Bench Dilution	Comments	Status
1	3656-48	BMS	25	POST Na 1226261	
2	49	BMSD	25	POST Na 6262	
3	1226197	BND	25	POST Na 6263	
4	3656-53		25	POST Na	
5	CCV		1		
6	CB		1		
7	LLQC		1		
8	1226397	MB	5	MXX 27961 RR Be	NO
9	398	LCS	5	RR Be	NO
10	3642-4		5	RR Be Fe Na K Ca >curve	
11	399	MS	5	RR Be Fe Na K Ca >curve	
12	400	MSD	5	RR Be Fe	
13	401	BND	25	ACF 8/14/14 ~~Fe ↑ (1% @ 50X) RR Be~~	
14	DT		25		
15	3642-5		5	RR Be. Na K >curve	
16	CCV		1	Be ↓	
17	CB		1		
18	LLQC		1		
19	3642-4		50	Fe POST Fe	NO
20	6399	MS	50		NO
21	6400	MSD	50		NO
22	6401	BND	50		NO
23	RX4		1		
24	CCV		1		
25	CB		1		
26	LLQC		1		
27	1226435	MB	5	MXX 27962 (Fe)	
28	6436	LCS	5		
29	3645-1		5		
30	2	BMS	5	MS: 1226437	
31	3	BMSD	5	MSD: 6438	
32	6439	BND	5		
33	DT		25		
34	3645-4		5		
35	5		5		
36	6		5		
37	CCV		1		
38	CB		1		
39	LLQC		1		
40	1226397	MB	5	MXX 27961	

Clean Cones
Windings
Optimization
Tuning
Sample Flow
Detector Calibration
Waste

Standards

ICV/CCV:	ICSA:
QCS/BND:	ICSAB:
Internal:	BBND:
LLQC:	

SGS North America Inc.

3 27 ACF 8/14/14

ICP MS Run Log

Method: 6020A/3010
Run Date: 8/14/14

Analyst: ACF/CDE
File ID: 08-14-2014-P3B
Queue/Batch: MMS 8639

#	Sample ID	Bench Dilution	Comments	Status
1	1226398 LCS	5		
2	3646-7	5		
3	RxS	1		
4	CCV	1		
5	CB	1		
6	LLQC	1		
7	3642-4	5	RR Be	
8	6399 MS	5		
9	6400 MSD	5		
10	6401 BND	5		
11	3642-5	5		
12	RxS	1	Due to high Na, K, Ca	
13	CCV	1	Be, Ag ↓	
14	CB	1		
15	LLQC	1		
16	1226578 MB	5	MXX 27965 (Pb Only)	
17	6579 LCS	5		
18	3745-1	5		
19	2 BMS	5		
20	3 BMSD	5		
21	6580 BND	5		
22	DT	25		
23	3745-4	5		
24	5	5		
25	6	5		
26	CCV	1		
27	CB	1		
28	LLQC	1		
29	3745-7	5		
30	8	5		
31	9	5		
32	10	5		
33	12	5		
34	13 BMS	5		
35	14 BMSD	5		
36	6581 BND	5		
37	3745-16	5		
38	-17	5		
39	CCV	1		
40	CB	1		

Clean Cones	
Windings	
Optimization	
Tuning	
Sample Flow	
Detector Calibration	
Waste	

Standards

ICV/CCV:	ICSA:
QCS/BND:	ICSAB:
Internal:	BBND:
LLQC:	

T-1
ACF 8/14/14

SGS North America Inc.

ICP MS Run Log

Method: 6020A/3010
Run Date: 8/14/14

Analyst: ACF
File ID: 08.14.2014.P3B
Queue/Batch: MMS 8639

#	Sample ID		Bench Dilution	Comments	Status
1	LLQC		1		
2	3745-18		5		
3	19		5		
4	20		5		
5	21		5		
6	22	BMS	5		
7	23	BMSD	5		
8	582	BND	5		
9	3761-24		5		
10	25		5		
11	26		5		
12	CCV		1		
13	CB		1		
14	LLQC		1		
15	1226591	MB	5	MXX 27967	
16	592	LCS	5		
17	3761-6		5		
18	7	BMS	5	• 1226593	
19	8	BMSD	5	6594	
20	595	BND	5		
21	DT		25		
22	3761-1		5		
23	-2		5		
24	-3		5		
25	CCV		1	A9 ↓	
26	CCV		1		
27	CB		1	> LLQC (INSERT)	
28	3761-4		5		
29	5		5		
30	10		5		
31	11		5		
32	12		5		
33	13		5		
34	14		5		
35	15		5		
36	16		5		
37	17		5		
38	CCV		1		
39	CB		1		
40	LLQC		1		

Clean Cones
Windings
Optimization
Tuning
Sample Flow
Detector Calibration
Waste

Standards

ICV/CCV:	ICSA:
QCS/BND:	ICSAB:
Internal:	BBND:
LLQC:	

SGS North America Inc.

ICP MS Run Log

Method: 6020K / 3010
Run Date: 08·14/14

Analyst: ACF
File ID: 08·14·2014-P3 B
Queue/Batch: MMS 8C39

#	Sample ID	Bench Dilution	Comments	Status
1	3761-18	5		
2	19	5		
3	3753-1	5		
4	2	5		
5	3	5		
6	4	5		
7	CCV	1		
8	CB	1		
9	LLQC	1		
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
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34				
35				
36				
37				
38				
39				
40				

ACF 8/14/14

Clean Cones
Windings
Optimization
Tuning
Sample Flow
Detector Calibration
Waste

Standards

ICV/CCV:	ICSA:
QCS/BND:	ICSAB:
Internal:	BBND:
LLQC:	

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: ICV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 10:34:52
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\ICV.008
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	30.000	26.667	0.000
	W	183		mg/L	20.000	10.000	86.603
	W	184		mg/L	63.301	13.317	36.495
	W	186		mg/L	34.041	12.021	13.502
	Cl	37		mg/L	12684958.862	12493933.949	0.320
	C	13		mg/L	11307.671	11788.334	2.812
⌜	Li	7	39.9991	ug/L	34627.147	56.667	2.080
|	Be	9	39.5114	ug/L	12616.212	24.000	2.047
|	B	11	197.4044	ug/L	97627.322	292.005	1.789
|	Al	27	204.5974	ug/L	1174254.879	3514.074	0.907
\>	Sc-2	45		ug/L	6663965.172	6420063.688	1.307
⌜	V	51	199.3505	ug/L	2137644.658	-723.840	0.705
|	Cr	52	198.3496	ug/L	1841149.790	21602.632	0.408
|	Cr	53		ug/L	349102.251	119637.679	3.796
|	Mn	55	196.7935	ug/L	2618308.784	3277.978	1.586
|	Co	59	199.9493	ug/L	1994832.629	62.667	0.451
|	Ni	58		ug/L	1051592.754	-2898.994	1.683
|	Ni	60	198.9988	ug/L	420422.277	48.000	2.228
|	Cu	63	205.1320	ug/L	920703.037	282.671	0.063
|	Cu	65	206.0248	ug/L	444590.466	145.335	0.640
|	Zn	66	196.4723	ug/L	213341.866	1229.424	0.962
|	Zn	67		ug/L	51143.172	10059.417	2.144
|	Zn	68	196.3842	ug/L	161564.539	2313.655	0.743
\>	Ge	74		ug/L	1021283.841	1028348.409	1.521
|	As	75	19.1658	ug/L	25158.458	-345.218	2.544
|	Se	77		ug/L	5395.085	4231.742	7.253
|	Se	78	19.0493	ug/L	15796.093	10451.343	0.785
|	Se	82	19.1370	ug/L	2188.410	-23.664	1.834
|	Kr	84		ug/L	-1814.666	202.319	14.886
|	Sr	88	192.3030	ug/L	3243731.658	150.001	0.494
|	Mo	95	38.0822	ug/L	112997.086	36.000	1.697
|	Mo	97		mg/L	71673.612	106.667	1.374
⌊	Mo	98	38.8228	ug/L	186251.873	53.470	1.061
⌜	Ag	107	3.6609	ug/L	25321.131	144.001	4.572
|	Ag	109	3.6854	ug/L	23971.817	125.334	4.850

Data derived from 3 replicate readings.

Sample ID: ICV

|	Cd	106		mg/L	28812.686	3.776	2.618
|	Cd	108		mg/L	20073.119	-26.009	0.996
|	Cd	111	**193.0415**	ug/L	305421.918	-9.975	1.490
|	Cd	114	**199.1267**	ug/L	709847.746	27.517	1.182
|>	In	115		ug/L	768028.256	780872.478	1.247
|	Sn	118	**202.6462**	ug/L	1007013.782	66.667	2.580
|	Sb	121	**99.1410**	ug/L	532609.338	84.000	1.155
|	Sb	123	**97.9598**	ug/L	410622.727	51.319	0.246
|	Ba	135	**383.8343**	ug/L	654815.825	29.333	2.095
L	Ba	137	**385.9376**	ug/L	1148335.488	20.000	2.903
⌈>	Ir	193		ug/L	686224.350	684125.297	2.014
|	Au	197		ug/L	8489923.060	8204064.402	1.220
|	Hg	199		ug/L	3360.678	36.667	1.031
|	Hg	200		ug/L	4387.822	16.667	3.385
|	Hg	201	**3.8571**	ug/L	2479.036	26.667	2.670
|	Hg	202	**3.9813**	ug/L	5753.986	20.000	1.922
|	Tl	203	**3.9375**	ug/L	22650.747	22.667	1.598
|	Tl	205	**3.8845**	ug/L	56421.149	30.667	3.165
|	204	204		ug/L	54136.117	18.065	1.376
|	206	206		ug/L	982776.431	102.667	1.469
|	207	207		ug/L	901503.173	230.670	1.579
|	Pb	208	**204.7983**	ug/L	3989574.023	538.673	1.242
|	208	208		ug/L	2105294.419	205.336	1.163
|	Bi	209	**199.3591**	ug/L	3194334.278	265.338	1.783
|	Th	232	**19.8898**	ug/L	620128.522	92.001	0.083
L	U	238	**20.2029**	ug/L	629444.662	16.000	1.764
⌈	Na	23	**3988.3466**	ug/L	21372568.043	5271.001	2.660
|	Mg	24	**3983.1084**	ug/L	14566111.637	273.338	0.451
|	Mg	25	**4011.9638**	ug/L	2075929.059	32.000	1.453
|	Si	28	**2040.8598**	ug/L	5726311.193	847148.225	0.296
|	Si	29		ug/L	685652.161	366788.075	0.745
|	P	31	**202.1113**	ug/L	123534.253	56102.952	0.478
|	K	39	**4037.0317**	ug/L	34897634.104	782542.335	1.320
|>	Sc-1	45		ug/L	6663965.172	6420063.688	1.307
|	Ca	43	**3959.7464**	ug/L	70542.666	669.360	0.868
|	Ti	47	**201.0660**	ug/L	165848.153	7491.373	0.850
L	Ti	48		ug/L	1721176.042	-4736.827	0.480
⌈	Fe	54	**4034.4872**	ug/L	3048554.346	438924.668	0.757
|	Fe	56		ug/L	46580975.085	3031176.051	1.992
|	Fe	57	**3908.8410**	ug/L	1069085.339	9494.742	1.430
L>	Ge-1	74		ug/L	1021283.841	1028348.409	1.521

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: ICV

Li	7	99.998	
Be	9	98.779	
B	11	98.702	
Al	27	102.299	
Sc-2	45		103.799
V	51	99.675	
Cr	52	99.175	
Cr	53		
Mn	55	98.397	
Co	59	99.975	
Ni	58		
Ni	60	99.499	
Cu	63	102.566	
Cu	65	103.012	
Zn	66	98.236	
Zn	67		
Zn	68	98.192	
Ge	74		99.313
As	75	95.829	
Se	77		
Se	78	95.247	
Se	82	95.685	
Kr	84		
Sr	88	96.152	
Mo	95	95.205	
Mo	97		
Mo	98	97.057	
Ag	107	91.524	
Ag	109	92.136	
Cd	106		
Cd	108		
Cd	111	96.521	
Cd	114	99.563	
In	115		98.355
Sn	118	101.323	
Sb	121	99.141	
Sb	123	97.960	
Ba	135	95.959	
Ba	137	96.484	
Ir	193		100.307
Au	197		
Hg	199		
Hg	200		
Hg	201	96.427	
Hg	202	99.533	
Tl	203	98.437	
Tl	205	97.112	
204	204		
206	206		
207	207		
Pb	208	102.399	
208	208		
Bi	209	99.680	
Th	232	99.449	

Data derived from 3 replicate readings.

Sample ID: ICV

U	238	101.015	
Na	23	99.709	
Mg	24	99.578	
Mg	25	100.299	
Si	28	102.043	
Si	29		
P	31	101.056	
K	39	100.926	
Sc-1	45		103.799
Ca	43	98.994	
Ti	47	100.533	
Ti	48		
Fe	54	100.862	
Fe	56		
Fe	57	97.721	
Ge-1	74		99.313

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: ICV

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: QCS
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 10:37:14
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\QCS.009
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 8

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	73.334	26.667	64.443
	W	183		mg/L	43.333	10.000	48.039
	W	184		mg/L	76.630	13.317	15.027
	W	186		mg/L	80.380	12.021	76.357
	Cl	37		mg/L	12619806.096	12493933.949	1.109
	C	13		mg/L	11401.129	11788.334	1.876
⌜	Li	7	**50.7637**	ug/L	43948.265	56.667	1.455
|	Be	9	**49.6820**	ug/L	15866.426	24.000	1.611
|	B	11	**249.8178**	ug/L	123522.136	292.005	1.118
|	Al	27	**251.5435**	ug/L	1443717.294	3514.074	0.367
⌊>	Sc-2	45		ug/L	6670294.649	6420063.688	2.523
⌜	V	51	**262.8064**	ug/L	2770865.162	-723.840	0.692
|	Cr	52	**251.4218**	ug/L	2288758.005	21602.632	2.076
|	Cr	53		ug/L	401598.031	119637.679	3.841
|	Mn	55	**250.9351**	ug/L	3282112.895	3277.978	1.532
|	Co	59	**257.6209**	ug/L	2527036.156	62.667	2.082
|	Ni	58		ug/L	1300271.889	-2898.994	2.438
|	Ni	60	**251.3052**	ug/L	521976.510	48.000	1.652
|	Cu	63	**266.4972**	ug/L	1175954.295	282.671	1.436
|	Cu	65	**265.6809**	ug/L	563811.232	145.335	2.348
|	Zn	66	**258.3274**	ug/L	275468.798	1229.424	1.329
|	Zn	67		ug/L	63383.577	10059.417	2.613
|	Zn	68	**264.7571**	ug/L	213388.239	2313.655	0.460
|>	Ge	74		ug/L	1004243.205	1028348.409	1.712
|	As	75	**25.5292**	ug/L	33069.447	-345.218	1.245
|	Se	77		ug/L	5970.146	4231.742	7.616
|	Se	78	**26.6467**	ug/L	17654.346	10451.343	1.096
|	Se	82	**25.8678**	ug/L	2916.110	-23.664	1.876
|	Kr	84		ug/L	-3375.605	202.319	22.495
|	Sr	88	**492.8930**	ug/L	8174962.693	150.001	1.053
|	Mo	95	**50.3230**	ug/L	146808.744	36.000	1.546
|	Mo	97		mg/L	89551.937	106.667	0.278
⌊	Mo	98	**50.1257**	ug/L	236376.878	53.470	1.625
⌜	Ag	107	**4.7494**	ug/L	33033.543	144.001	6.787
|	Ag	109	**4.7984**	ug/L	31395.143	125.334	5.420

Data derived from 3 replicate readings.

Sample ID: QCS

|	Cd	106		mg/L	35261.679	3.776	2.693
|	Cd	108		mg/L	25495.715	-26.009	2.534
|	Cd	111	245.3042	ug/L	390761.108	-9.975	1.223
|	Cd	114	252.6075	ug/L	906575.620	27.517	0.071
|>	In	115		ug/L	773285.870	780872.478	1.715
|	Sn	118	248.4186	ug/L	1242863.976	66.667	0.881
|	Sb	121	255.5120	ug/L	1382014.036	84.000	1.518
|	Sb	123	253.4891	ug/L	1069772.321	51.319	0.795
|	Ba	135	482.6292	ug/L	828944.549	29.333	0.661
L	Ba	137	482.0048	ug/L	1443676.812	20.000	0.777
⌈>	Ir	193		ug/L	693046.170	684125.297	2.572
|	Au	197		ug/L	8617986.157	8204064.402	1.162
|	Hg	199		ug/L	3864.230	36.667	4.706
|	Hg	200		ug/L	5038.192	16.667	5.447
|	Hg	201	4.7276	ug/L	3062.563	26.667	1.148
|	Hg	202	4.8625	ug/L	7093.687	20.000	3.303
|	Tl	203	5.0459	ug/L	29327.583	22.667	4.428
|	Tl	205	4.9583	ug/L	72726.833	30.667	3.045
|	204	204		ug/L	66380.364	18.065	1.084
|	206	206		ug/L	1280075.298	102.667	0.742
|	207	207		ug/L	1093389.644	230.670	1.388
|	Pb	208	254.4136	ug/L	5005690.123	538.673	1.730
|	208	208		ug/L	2632225.181	205.336	2.802
|	Bi	209	246.4552	ug/L	3988257.843	265.338	2.021
|	Th	232	50.1849	ug/L	1579915.512	92.001	0.327
L	U	238	25.3914	ug/L	798737.313	16.000	0.680
⌈	Na	23	5093.2069	ug/L	27314501.707	5271.001	2.390
|	Mg	24	5073.4598	ug/L	18568133.992	273.338	1.257
|	Mg	25	5086.4800	ug/L	2633979.652	32.000	1.905
|	Si	28	2609.6525	ug/L	7081891.481	847148.225	0.839
|	Si	29		ug/L	780056.693	366788.075	1.066
|	P	31	252.1732	ug/L	139844.000	56102.952	2.240
|	K	39	5077.5884	ug/L	43734582.132	782542.335	2.787
|>	Sc-1	45		ug/L	6670294.649	6420063.688	2.523
|	Ca	43	5103.7553	ug/L	90806.795	669.360	1.323
|	Ti	47	246.6073	ug/L	201790.656	7491.373	0.552
L	Ti	48		ug/L	2047711.592	-4736.827	1.048
⌈	Fe	54	5249.3744	ug/L	3771640.036	438924.668	2.692
|	Fe	56		ug/L	59573332.647	3031176.051	2.242
|	Fe	57	5133.2531	ug/L	1377479.766	9494.742	1.479
L>	Ge-1	74		ug/L	1004243.205	1028348.409	1.712

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: QCS

Li	7	101.527	
Be	9	99.364	
B	11	99.927	
Al	27	100.617	
Sc-2	45		103.898
V	51	105.123	
Cr	52	100.569	
Cr	53		
Mn	55	100.374	
Co	59	103.048	
Ni	58		
Ni	60	100.522	
Cu	63	106.599	
Cu	65	106.272	
Zn	66	103.331	
Zn	67		
Zn	68	105.903	
Ge	74		97.656
As	75	102.117	
Se	77		
Se	78	106.587	
Se	82	103.471	
Kr	84		
Sr	88	98.579	
Mo	95	100.646	
Mo	97		
Mo	98	100.251	
Ag	107	94.988	
Ag	109	95.968	
Cd	106		
Cd	108		
Cd	111	98.122	
Cd	114	101.043	
In	115		99.028
Sn	118	99.367	
Sb	121	102.205	
Sb	123	101.396	
Ba	135	96.526	
Ba	137	96.401	
Ir	193		101.304
Au	197		
Hg	199		
Hg	200		
Hg	201	94.552	
Hg	202	97.250	
Tl	203	100.919	
Tl	205	99.166	
204	204		
206	206		
207	207		
Pb	208	101.765	
208	208		
Bi	209	98.582	
Th	232	100.370	

Data derived from 3 replicate readings.

Sample ID: QCS

U	238	101.566	
Na	23	101.864	
Mg	24	101.469	
Mg	25	101.730	
Si	28	104.386	
Si	29		
P	31	100.869	
K	39	101.552	
Sc-1	45		103.898
Ca	43	102.075	
Ti	47	98.643	
Ti	48		
Fe	54	104.987	
Fe	56		
Fe	57	102.665	
Ge-1	74		97.656

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: QCS

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CCV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:13:55
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CCV.067
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	26.667	26.667	43.301
	W	183		mg/L	43.333	10.000	35.251
	W	184		mg/L	36.634	13.317	15.829
	W	186		mg/L	64.042	12.021	50.624
	Cl	37		mg/L	12803641.738	12493933.949	0.826
	C	13		mg/L	11300.992	11788.334	1.143
⌜	Li	7	31.6091	ug/L	27714.015	56.667	1.550
|	Be	9	36.7158	ug/L	11872.452	24.000	1.093
|	B	11	179.1364	ug/L	89704.386	292.005	2.238
|	Al	27	204.3759	ug/L	1187697.241	3514.074	0.654
⌊>	Sc-2	45		ug/L	6747367.470	6420063.688	1.440
⌜	V	51	207.5350	ug/L	2148079.318	-723.840	2.425
|	Cr	52	202.1311	ug/L	1810560.498	21602.632	0.582
|	Cr	53		ug/L	341366.914	119637.679	4.453
|	Mn	55	202.8537	ug/L	2605232.318	3277.978	2.343
|	Co	59	201.5089	ug/L	1940383.053	62.667	1.748
|	Ni	58		ug/L	1021766.315	-2898.994	1.012
|	Ni	60	199.3987	ug/L	406555.836	48.000	2.107
|	Cu	63	205.3493	ug/L	889611.347	282.671	0.601
|	Cu	65	204.8406	ug/L	426631.611	145.335	0.979
|	Zn	66	195.6482	ug/L	205063.342	1229.424	1.320
|	Zn	67		ug/L	52035.377	10059.417	2.867
|	Zn	68	197.0522	ug/L	156465.927	2313.655	0.528
|>	Ge	74		ug/L	985631.791	1028348.409	0.468
|	As	75	19.6969	ug/L	24968.608	-345.218	1.734
|	Se	77		ug/L	5089.561	4231.742	8.368
|	Se	78	19.5884	ug/L	15394.760	10451.343	0.991
|	Se	82	18.7943	ug/L	2073.899	-23.664	1.565
|	Kr	84		ug/L	-1751.183	202.319	8.942
|	Sr	88	198.0158	ug/L	3224022.305	150.001	1.337
|	Mo	95	38.8698	ug/L	111317.521	36.000	2.449
|	Mo	97		mg/L	67535.963	106.667	1.933
⌊	Mo	98	38.5871	ug/L	178669.807	53.470	0.837
⌜	Ag	107	3.6399	ug/L	24632.445	144.001	6.228
|	Ag	109	3.6107	ug/L	22982.434	125.334	7.543

Data derived from 3 replicate readings.

Sample ID: CCV

|	Cd	106		mg/L	27185.265	3.776	2.958
|	Cd	108		mg/L	19469.539	-26.009	1.992
|	Cd	111	191.2322	ug/L	295905.928	-9.975	1.578
|	Cd	114	197.3748	ug/L	688140.458	27.517	0.205
|>	In	115		ug/L	751132.122	780872.478	1.280
|	Sn	118	199.3801	ug/L	968953.645	66.667	1.183
|	Sb	121	98.6953	ug/L	518522.265	84.000	1.571
|	Sb	123	96.2478	ug/L	394606.218	51.319	0.908
|	Ba	135	393.0266	ug/L	655800.627	29.333	1.820
L	Ba	137	389.1787	ug/L	1132428.080	20.000	1.677
⌜>	Ir	193		ug/L	683638.826	684125.297	1.795
|	Au	197		ug/L	8624668.054	8204064.402	2.237
|	Hg	199		ug/L	3047.225	36.667	5.894
|	Hg	200		ug/L	4194.392	16.667	6.769
|	Hg	201	3.8429	ug/L	2462.365	26.667	5.638
|	Hg	202	3.9878	ug/L	5743.312	20.000	2.233
|	Tl	203	3.9179	ug/L	22462.255	22.667	3.314
|	Tl	205	3.9244	ug/L	56774.109	30.667	1.642
|	204	204		ug/L	54800.322	18.065	1.572
|	206	206		ug/L	990230.534	102.667	1.487
|	207	207		ug/L	897587.812	230.670	0.591
|	Pb	208	207.6202	ug/L	4029066.342	538.673	0.763
|	208	208		ug/L	2141247.996	205.336	1.683
|	Bi	209	205.5650	ug/L	3280872.521	265.338	0.847
|	Th	232	20.1266	ug/L	625158.073	92.001	1.502
L	U	238	20.6676	ug/L	641216.178	16.000	3.227
⌜	Na	23	3982.2214	ug/L	21603834.836	5271.001	2.268
|	Mg	24	3967.1384	ug/L	14690260.806	273.338	1.950
|	Mg	25	3989.2787	ug/L	2090037.304	32.000	1.065
|	Si	28	1996.8345	ug/L	5692593.779	847148.225	1.686
|	Si	29		ug/L	684322.568	366788.075	1.939
|	P	31	213.6550	ug/L	128859.622	56102.952	2.190
|	K	39	4034.9393	ug/L	35317781.581	782542.335	0.874
|>	Sc-1	45		ug/L	6747367.470	6420063.688	1.440
|	Ca	43	4012.3217	ug/L	72385.147	669.360	2.510
|	Ti	47	195.8170	ug/L	163777.400	7491.373	1.821
L	Ti	48		ug/L	1697621.704	-4736.827	2.308
⌜	Fe	54	4187.7247	ug/L	3038463.823	438924.668	1.967
|	Fe	56		ug/L	46147896.500	3031176.051	2.257
|	Fe	57	4006.2276	ug/L	1057293.421	9494.742	0.520
L>	Ge-1	74		ug/L	985631.791	1028348.409	0.468

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CCV

Li	7	79.023	
Be	9	91.789	
B	11	89.568	
Al	27	102.188	
Sc-2	45		105.098
V	51	103.767	
Cr	52	101.066	
Cr	53		
Mn	55	101.427	
Co	59	100.754	
Ni	58		
Ni	60	99.699	
Cu	63	102.675	
Cu	65	102.420	
Zn	66	97.824	
Zn	67		
Zn	68	98.526	
Ge	74		95.846
As	75	98.484	
Se	77		
Se	78	97.942	
Se	82	93.972	
Kr	84		
Sr	88	99.008	
Mo	95	97.175	
Mo	97		
Mo	98	96.468	
Ag	107	90.998	
Ag	109	90.268	
Cd	106		
Cd	108		
Cd	111	95.616	
Cd	114	98.687	
In	115		96.191
Sn	118	99.690	
Sb	121	98.695	
Sb	123	96.248	
Ba	135	98.257	
Ba	137	97.295	
Ir	193		99.929
Au	197		
Hg	199		
Hg	200		
Hg	201	96.071	
Hg	202	99.695	
Tl	203	97.947	
Tl	205	98.110	
204	204		
206	206		
207	207		
Pb	208	103.810	
208	208		
Bi	209	102.783	
Th	232	100.633	

Data derived from 3 replicate readings.

Sample ID: CCV

U	238	103.338	
Na	23	99.556	
Mg	24	99.178	
Mg	25	99.732	
Si	28	99.842	
Si	29		
P	31	106.627	
K	39	100.873	
Sc-1	45		105.098
Ca	43	100.308	
Ti	47	97.909	
Ti	48		
Fe	54	104.693	
Fe	56		
Fe	57	100.156	
Ge-1	74		95.846

QC Out Of Limits

MassAnalyte	Out of Limits Message
7Li	CCV is out (+/- 10%)
11B	CCV is out (+/- 10%)

Data derived from 3 replicate readings.

Sample ID: CCV

SGS ALASKA
ELAN 6100 ICP-MS P3

Sample ID: CB
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:16:18
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CB.068
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 1

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	26.667	26.667	21.651
	W	183		mg/L	23.333	10.000	65.465
	W	184		mg/L	33.317	13.317	45.804
	W	186		mg/L	28.687	12.021	5.242
	Cl	37		mg/L	12606026.661	12493933.949	0.826
	C	13		mg/L	10903.799	11788.334	2.855
⌈	Li	7	-0.0340	ug/L	30.000	56.667	20.000
|	Be	9	-0.0105	ug/L	22.000	24.000	18.182
|	B	11	0.0405	ug/L	329.340	292.005	2.528
|	Al	27	0.1639	ug/L	4674.648	3514.074	6.532
\>	Sc-2	45		ug/L	6795380.047	6420063.688	1.262
⌈	V	51	0.8158	ug/L	7688.835	-723.840	68.397
|	Cr	52	-0.3066	ug/L	17722.164	21602.632	2.199
|	Cr	53		ug/L	135901.372	119637.679	12.999
|	Mn	55	0.0126	ug/L	3253.969	3277.978	3.599
|	Co	59	0.0011	ug/L	69.334	62.667	23.316
|	Ni	58		ug/L	-3713.485	-2898.994	8.500
|	Ni	60	0.0079	ug/L	61.334	48.000	41.419
|	Cu	63	0.0100	ug/L	309.339	282.671	8.414
|	Cu	65	0.0040	ug/L	145.335	145.335	23.408
|	Zn	66	0.1502	ug/L	1314.772	1229.424	13.181
|	Zn	67		ug/L	14429.224	10059.417	9.555
|	Zn	68	0.5530	ug/L	2609.743	2313.655	5.254
\>	Ge	74		ug/L	971495.759	1028348.409	2.138
|	As	75	-0.0609	ug/L	-404.062	-345.218	24.925
|	Se	77		ug/L	3315.330	4231.742	9.232
|	Se	78	-0.2932	ug/L	9792.787	10451.343	1.121
|	Se	82	0.1501	ug/L	-5.601	-23.664	322.449
|	Kr	84		ug/L	231.935	202.319	13.818
|	Sr	88	0.0041	ug/L	206.669	150.001	19.556
|	Mo	95	0.0701	ug/L	232.003	36.000	9.600
|	Mo	97		mg/L	163.335	106.667	18.705
⌊	Mo	98	0.0589	ug/L	318.225	53.470	23.126
⌈	Ag	107	-0.0089	ug/L	77.334	144.001	24.444
|	Ag	109	-0.0049	ug/L	88.000	125.334	20.830

Data derived from 3 replicate readings.

Sample ID: CB

|	Cd	106		mg/L	39.400	3.776	251.242
|	Cd	108		mg/L	54.725	-26.009	123.409
|	Cd	111	-0.0269	ug/L	-50.596	-9.975	55.052
|	Cd	114	0.0042	ug/L	40.152	27.517	37.649
|>	In	115		ug/L	735588.570	780872.478	2.421
|	Sn	118	0.0472	ug/L	288.005	66.667	14.699
|	Sb	121	0.2931	ug/L	1586.818	84.000	4.099
|	Sb	123	0.3069	ug/L	1279.921	51.319	0.525
|	Ba	135	0.0175	ug/L	56.000	29.333	24.744
L	Ba	137	0.0272	ug/L	96.001	20.000	23.199
⌈>	Ir	193		ug/L	671631.504	684125.297	1.098
|	Au	197		ug/L	8399618.610	8204064.402	1.470
|	Hg	199		ug/L	30.000	36.667	57.735
|	Hg	200		ug/L	16.667	16.667	34.641
|	Hg	201	0.0083	ug/L	31.333	26.667	32.755
|	Hg	202	0.0097	ug/L	33.333	20.000	13.856
|	Tl	203	0.0151	ug/L	106.667	22.667	40.447
|	Tl	205	0.0114	ug/L	192.002	30.667	23.662
|	204	204		ug/L	36.331	18.065	36.764
|	206	206		ug/L	440.012	102.667	25.601
|	207	207		ug/L	541.351	230.670	4.070
|	Pb	208	0.0702	ug/L	1865.413	538.673	16.895
|	208	208		ug/L	884.050	205.336	29.497
|	Bi	209	0.0050	ug/L	338.674	265.338	3.797
|	Th	232	0.0037	ug/L	204.003	92.001	19.312
L	U	238	0.0007	ug/L	36.000	16.000	19.245
⌈	Na	23	0.2506	ug/L	6946.894	5271.001	0.450
|	Mg	24	0.0400	ug/L	438.678	273.338	15.186
|	Mg	25	0.1003	ug/L	86.667	32.000	30.731
|	Si	28	-52.8883	ug/L	768415.170	847148.225	1.307
|	Si	29		ug/L	353275.633	366788.075	1.795
|	P	31	11.3519	ug/L	63122.182	56102.952	1.118
|	K	39	-2.9500	ug/L	802772.094	782542.335	0.676
|>	Sc-1	45		ug/L	6795380.047	6420063.688	1.262
|	Ca	43	-2.5543	ug/L	662.693	669.360	5.204
|	Ti	47	-0.3997	ug/L	7612.157	7491.373	8.054
L	Ti	48		ug/L	-3907.469	-4736.827	1.807
⌈	Fe	54	22.3406	ug/L	428321.199	438924.668	1.161
|	Fe	56		ug/L	3065010.315	3031176.051	1.789
|	Fe	57	-3.6150	ug/L	8034.540	9494.742	2.959
L>	Ge-1	74		ug/L	971495.759	1028348.409	2.138

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CB

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	105.846
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	94.471
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	94.201
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	98.174
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: CB

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	105.846
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	94.471

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: CB

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: LLQC
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:18:40
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\LLQC.069
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 2

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	46.667	26.667	12.372
	W	183		mg/L	20.000	10.000	0.000
	W	184		mg/L	29.971	13.317	33.386
	W	186		mg/L	24.370	12.021	60.938
	Cl	37		mg/L	12702542.619	12493933.949	0.278
	C	13		mg/L	10947.210	11788.334	7.167
⌜	Li	7	0.8001	ug/L	752.701	56.667	4.917
|	Be	9	0.1301	ug/L	66.667	24.000	19.975
|	B	11	35.9852	ug/L	18106.317	292.005	0.913
|	Al	27	42.8945	ug/L	249997.760	3514.074	1.554
⌞>	Sc-2	45		ug/L	6689740.345	6420063.688	2.047
⌜	V	51	4.9555	ug/L	49694.404	-723.840	9.936
|	Cr	52	0.5993	ug/L	25529.724	21602.632	2.112
|	Cr	53		ug/L	136751.900	119637.679	11.086
|	Mn	55	0.4429	ug/L	8661.833	3277.978	1.071
|	Co	59	0.2092	ug/L	2034.916	62.667	8.616
|	Ni	58		ug/L	-1211.241	-2898.994	50.221
|	Ni	60	0.4289	ug/L	904.049	48.000	6.869
|	Cu	63	1.2610	ug/L	5627.233	282.671	1.458
|	Cu	65	1.2634	ug/L	2720.445	145.335	7.078
|	Zn	66	5.2137	ug/L	6489.193	1229.424	2.578
|	Zn	67		ug/L	15224.052	10059.417	13.087
|	Zn	68	5.2936	ug/L	6242.339	2313.655	3.220
|>	Ge	74		ug/L	967755.717	1028348.409	1.754
|	As	75	1.0134	ug/L	945.947	-345.218	71.271
|	Se	77		ug/L	3998.295	4231.742	6.019
|	Se	78	3.5662	ug/L	10795.012	10451.343	0.596
|	Se	82	3.6011	ug/L	371.657	-23.664	10.368
|	Kr	84		ug/L	172.700	202.319	47.074
|	Sr	88	1.0119	ug/L	16315.966	150.001	2.860
|	Mo	95	1.0292	ug/L	2925.847	36.000	1.293
|	Mo	97		mg/L	1863.542	106.667	5.295
⌞	Mo	98	1.0434	ug/L	4792.182	53.470	1.591
⌜	Ag	107	0.2638	ug/L	1885.555	144.001	23.746
|	Ag	109	0.2661	ug/L	1778.865	125.334	25.360

Data derived from 3 replicate readings.

Sample ID: LLQC

|	Cd	106		mg/L	11.537	3.776	545.616
|	Cd	108		mg/L	38.811	-26.009	237.410
|	Cd	111	0.3549	ug/L	531.063	-9.975	15.532
|	Cd	114	0.4032	ug/L	1405.671	27.517	5.031
|>	In	115		ug/L	737961.783	780872.478	2.214
|	Sn	118	1.0506	ug/L	5081.551	66.667	4.851
|	Sb	121	0.7378	ug/L	3886.240	84.000	2.474
|	Sb	123	0.7458	ug/L	3050.713	51.319	1.147
|	Ba	135	0.5843	ug/L	985.392	29.333	1.537
L	Ba	137	0.6262	ug/L	1809.530	20.000	4.603
⌈>	Ir	193		ug/L	678100.314	684125.297	0.488
|	Au	197		ug/L	8471814.725	8204064.402	1.396
|	Hg	199		ug/L	30.000	36.667	33.333
|	Hg	200		ug/L	73.334	16.667	7.873
|	Hg	201	0.0185	ug/L	38.000	26.667	36.842
|	Hg	202	0.0413	ug/L	78.667	20.000	5.871
|	Tl	203	0.3634	ug/L	2086.928	22.667	5.234
|	Tl	205	0.3840	ug/L	5539.178	30.667	5.714
|	204	204		ug/L	81.901	18.065	29.243
|	206	206		ug/L	1272.097	102.667	6.187
|	207	207		ug/L	1249.427	230.670	7.205
|	Pb	208	0.2442	ug/L	5233.966	538.673	1.952
|	208	208		ug/L	2712.442	205.336	3.174
|	Bi	209	0.4398	ug/L	7227.133	265.338	1.011
|	Th	232	1.0336	ug/L	31938.430	92.001	1.600
L	U	238	0.2084	ug/L	6431.815	16.000	2.275
⌈	Na	23	202.9117	ug/L	1096377.450	5271.001	0.523
|	Mg	24	102.7648	ug/L	377500.369	273.338	2.509
|	Mg	25	101.4484	ug/L	52716.885	32.000	0.128
|	Si	28	54.6136	ug/L	1012701.199	847148.225	0.902
|	Si	29		ug/L	367594.795	366788.075	1.307
|	P	31	113.2549	ug/L	95195.492	56102.952	2.265
|	K	39	203.2377	ug/L	2537573.411	782542.335	0.509
|>	Sc-1	45		ug/L	6689740.345	6420063.688	2.047
|	Ca	43	98.5309	ug/L	2443.025	669.360	3.413
|	Ti	47	10.2273	ug/L	15871.778	7491.373	3.298
L	Ti	48		ug/L	79390.727	-4736.827	0.797
⌈	Fe	54	138.3113	ug/L	497891.648	438924.668	0.881
|	Fe	56		ug/L	4146618.641	3031176.051	1.044
|	Fe	57	98.8240	ug/L	34318.534	9494.742	1.728
L>	Ge-1	74		ug/L	967755.717	1028348.409	1.754

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: LLQC

Li	7	80.012	
Be	9	65.060	
B	11	89.963	
Al	27	107.236	
Sc-2	45		104.201
V	51	123.887	
Cr	52	74.907	
Cr	53		
Mn	55	110.720	
Co	59	104.611	
Ni	58		
Ni	60	107.236	
Cu	63	105.086	
Cu	65	105.280	
Zn	66	104.273	
Zn	67		
Zn	68	105.873	
Ge	74		94.108
As	75	101.342	
Se	77		
Se	78	89.154	
Se	82	90.027	
Kr	84		
Sr	88	101.189	
Mo	95	102.921	
Mo	97		
Mo	98	104.337	
Ag	107	65.954	
Ag	109	66.517	
Cd	106		
Cd	108		
Cd	111	88.734	
Cd	114	100.800	
In	115		94.505
Sn	118	105.065	
Sb	121	122.973	
Sb	123	124.297	
Ba	135	97.380	
Ba	137	104.369	
Ir	193		99.119
Au	197		
Hg	199		
Hg	200		
Hg	201	46.158	
Hg	202	103.370	
Tl	203	90.846	
Tl	205	95.995	
204	204		
206	206		
207	207		
Pb	208	122.075	
208	208		
Bi	209	109.954	
Th	232	103.363	

Data derived from 3 replicate readings.

Sample ID: LLQC

U	238	104.179	
Na	23	101.456	
Mg	24	102.765	
Mg	25	101.448	
Si	28	68.267	
Si	29		
P	31	113.255	
K	39	101.619	
Sc-1	45		104.201
Ca	43	98.531	
Ti	47	102.273	
Ti	48		
Fe	54	138.311	
Fe	56		
Fe	57	98.824	
Ge-1	74		94.108

QC Out Of Limits

MassAnalyte	Out of Limits Message
9Be	LLQC is out (+/- 30%)
107Ag	LLQC is out (+/- 30%)
109Ag	LLQC is out (+/- 30%)
201Hg	LLQC is out (+/- 30%)
28Si	LLQC is out (+/- 30%)
54Fe	LLQC is out (+/- 30%)

Data derived from 3 replicate readings.

Sample ID: LLQC

SGS ALASKA
ELAN 6100 ICP-MS P3

Sample ID: 1226435
Sample Type: Sample
Sample Description: MB MXX 27962
Sample Date/Time: Thursday, August 14, 2014 13:21:29
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1226435.070
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 142

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	56.667	26.667	50.943
	W	183		mg/L	13.333	10.000	114.564
	W	184		mg/L	29.984	13.317	66.662
	W	186		mg/L	45.354	12.021	10.223
	Cl	37		mg/L	12874755.607	12493933.949	0.282
	C	13		mg/L	11114.079	11788.334	3.412
⌜	Li	7	-0.1918	ug/L	26.000	56.667	13.323
|	Be	9	-0.2252	ug/L	10.667	24.000	28.641
|	B	11	0.9887	ug/L	405.343	292.005	7.139
|	Al	27	2.3186	ug/L	6375.776	3514.074	5.104
\>	Sc-2	45		ug/L	6745779.084	6420063.688	1.022
⌜	V	51	2.8685	ug/L	5228.212	-723.840	16.960
|	Cr	52	-1.6307	ug/L	17708.797	21602.632	0.943
|	Cr	53		ug/L	119551.453	119637.679	7.728
|	Mn	55	0.0214	ug/L	3177.939	3277.978	1.737
|	Co	59	0.0029	ug/L	65.334	62.667	7.070
|	Ni	58		ug/L	-3768.160	-2898.994	4.269
|	Ni	60	0.0316	ug/L	58.667	48.000	15.746
|	Cu	63	-0.1116	ug/L	173.335	282.671	6.662
|	Cu	65	-0.1212	ug/L	88.000	145.335	23.619
|	Zn	66	3.8589	ug/L	1969.566	1229.424	4.910
|	Zn	67		ug/L	12629.583	10059.417	5.625
|	Zn	68	4.6562	ug/L	2929.849	2313.655	3.849
| \>	Ge	74		ug/L	979981.093	1028348.409	2.499
|	As	75	0.8157	ug/L	-124.151	-345.218	321.081
|	Se	77		ug/L	3237.964	4231.742	6.820
|	Se	78	-3.6668	ug/L	9758.767	10451.343	2.546
|	Se	82	-0.4988	ug/L	-33.102	-23.664	99.604
|	Kr	84		ug/L	241.303	202.319	6.239
|	Sr	88	0.0485	ug/L	300.005	150.001	12.019
|	Mo	95	0.0570	ug/L	66.667	36.000	21.071
|	Mo	97		mg/L	76.667	106.667	15.061
⌊	Mo	98	0.0243	ug/L	73.499	53.470	30.343
⌜	Ag	107	-0.0785	ug/L	32.000	144.001	50.000
|	Ag	109	-0.0661	ug/L	36.000	125.334	19.245

Data derived from 3 replicate readings.

Sample ID: 1226435

|	Cd	106		mg/L	-20.797	3.776	67.954
|	Cd	108		mg/L	-6.165	-26.009	326.253
|	Cd	111	0.0173	ug/L	-4.487	-9.975	631.012
|	Cd	114	0.0248	ug/L	42.681	27.517	23.989
|>	In	115		ug/L	735632.222	780872.478	2.448
|	Sn	118	0.0364	ug/L	97.334	66.667	20.685
|	Sb	121	0.2861	ug/L	373.342	84.000	15.686
|	Sb	123	0.2866	ug/L	277.655	51.319	19.873
|	Ba	135	0.0750	ug/L	52.000	29.333	39.970
L	Ba	137	0.1658	ug/L	113.334	20.000	12.395
[>	Ir	193		ug/L	682769.746	684125.297	3.047
|	Au	197		ug/L	21066.684	8204064.402	7.090
|	Hg	199		ug/L	33.333	36.667	75.498
|	Hg	200		ug/L	50.000	16.667	52.915
|	Hg	201	-0.0418	ug/L	21.333	26.667	32.924
|	Hg	202	-0.0184	ug/L	14.667	20.000	15.746
|	Tl	203	0.0059	ug/L	29.333	22.667	7.873
|	Tl	205	0.0223	ug/L	94.667	30.667	28.134
|	204	204		ug/L	29.959	18.065	65.156
|	206	206		ug/L	142.668	102.667	9.846
|	207	207		ug/L	268.004	230.670	3.949
|	Pb	208	0.0435	ug/L	705.344	538.673	6.011
|	208	208		ug/L	294.672	205.336	10.189
|	Bi	209	0.0051	ug/L	281.338	265.338	17.549
|	Th	232	0.0021	ug/L	105.334	92.001	17.946
L	U	238	0.0005	ug/L	18.667	16.000	24.744
[	Na	23	6.8163	ug/L	12928.690	5271.001	1.707
|	Mg	24	2.5463	ug/L	2172.283	273.338	1.439
|	Mg	25	2.7709	ug/L	324.006	32.000	5.658
|	Si	28	-227.8298	ug/L	780564.801	847148.225	0.991
|	Si	29		ug/L	358754.208	366788.075	1.654
|	P	31	90.9015	ug/L	64894.477	56102.952	2.597
|	K	39	-5.8112	ug/L	812235.167	782542.335	0.401
|>	Sc-1	45		ug/L	6745779.084	6420063.688	1.022
|	Ca	43	-9.1346	ug/L	670.694	669.360	1.722
|	Ti	47	-4.0612	ug/L	7223.801	7491.373	4.885
L	Ti	48		ug/L	-3820.496	-4736.827	0.803
[	Fe	54	104.7701	ug/L	431069.626	438924.668	0.771
|	Fe	56		ug/L	3099082.610	3031176.051	0.589
|	Fe	57	-15.3045	ug/L	8246.746	9494.742	2.041
L>	Ge-1	74		ug/L	979981.093	1028348.409	2.499

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1226435

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	105.073
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	95.297
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	94.206
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	99.802
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: 1226435

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	105.073
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	95.297

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1226435

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1226436
Sample Type: Spike - 2 of 42
Sample Description: LCS
Sample Date/Time: Thursday, August 14, 2014 13:23:51
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1226436.071
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 143

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	60.000	26.667	33.333
	W	183		mg/L	13.333	10.000	114.564
	W	184		mg/L	49.963	13.317	34.645
	W	186		mg/L	47.047	12.021	20.290
	Cl	37		mg/L	15394175.604	12493933.949	1.080
	C	13		mg/L	11354.405	11788.334	3.882
⌜	Li	7	168.6542	ug/L	29324.174	56.667	1.067
|	Be	9	97.0957	ug/L	6237.001	24.000	3.252
|	B	11	951.3534	ug/L	94421.612	292.005	3.228
|	Al	27	1063.0575	ug/L	1225145.719	3514.074	2.296
\>	Sc-2	45		ug/L	6691629.561	6420063.688	2.273
⌜	V	51	214.7479	ug/L	438413.162	-723.840	0.453
|	Cr	52	426.2695	ug/L	765913.935	21602.632	0.667
|	Cr	53		ug/L	237094.585	119637.679	5.156
|	Mn	55	539.2933	ug/L	1369343.423	3277.978	0.988
|	Co	59	525.1207	ug/L	998834.218	62.667	1.665
|	Ni	58		ug/L	1033136.217	-2898.994	0.786
|	Ni	60	1033.9025	ug/L	416418.916	48.000	1.567
|	Cu	63	1064.3481	ug/L	910735.159	282.671	1.291
|	Cu	65	1070.8511	ug/L	440576.444	145.335	2.131
|	Zn	66	1033.1189	ug/L	213799.900	1229.424	0.275
|	Zn	67		ug/L	50244.410	10059.417	2.494
|	Zn	68	999.3173	ug/L	156696.933	2313.655	0.951
| \>	Ge	74		ug/L	973417.745	1028348.409	1.186
|	As	75	1017.5962	ug/L	257818.203	-345.218	1.167
|	Se	77		ug/L	21880.689	4231.742	0.465
|	Se	78	1026.8379	ug/L	65566.532	10451.343	0.992
|	Se	82	1030.4963	ug/L	22682.093	-23.664	2.193
|	Kr	84		ug/L	-1832.284	202.319	34.199
|	Sr	88	1018.1677	ug/L	3274417.928	150.001	1.913
|	Mo	95	396.6487	ug/L	224305.373	36.000	0.322
|	Mo	97		mg/L	140898.143	106.667	2.046
⌊	Mo	98	400.4718	ug/L	366184.425	53.470	0.563
⌜	Ag	107	102.6314	ug/L	137396.897	144.001	4.487
|	Ag	109	103.2913	ug/L	130092.921	125.334	4.493

Data derived from 3 replicate readings.

Sample ID: 1226436

|	Cd	106		mg/L	2663.095	3.776	2.796
|	Cd	108		mg/L	2298.470	-26.009	5.889
|	Cd	111	98.8859	ug/L	30407.937	-9.975	0.153
|	Cd	114	104.8447	ug/L	72700.358	27.517	2.442
|>	In	115		ug/L	746580.105	780872.478	1.137
|	Sn	118	106.1446	ug/L	102613.325	66.667	1.460
|	Sb	121	1058.2813	ug/L	1105271.930	84.000	0.939
|	Sb	123	1038.3965	ug/L	846255.483	51.319	0.847
|	Ba	135	1014.4869	ug/L	336531.701	29.333	2.643
L	Ba	137	1014.6851	ug/L	586956.623	20.000	2.214
⌈>	Ir	193		ug/L	684454.713	684125.297	1.926
|	Au	197		ug/L	48708.865	8204064.402	5.253
|	Hg	199		ug/L	1566.815	36.667	10.858
|	Hg	200		ug/L	2043.585	16.667	7.099
|	Hg	201	9.8535	ug/L	1276.098	26.667	3.084
|	Hg	202	9.9673	ug/L	2881.834	20.000	8.969
|	Tl	203	10.6273	ug/L	12207.606	22.667	2.627
|	Tl	205	10.3862	ug/L	30107.646	30.667	2.481
|	204	204		ug/L	56723.308	18.065	2.722
|	206	206		ug/L	1021982.530	102.667	1.410
|	207	207		ug/L	921349.906	230.670	2.773
|	Pb	208	1083.0485	ug/L	4209441.575	538.673	1.694
|	208	208		ug/L	2266109.139	205.336	1.412
|	Bi	209	112.0406	ug/L	358315.048	265.338	0.980
|	Th	232	104.1343	ug/L	647605.849	92.001	3.071
L	U	238	107.0547	ug/L	665236.544	16.000	1.947
⌈	Na	23	10301.7335	ug/L	11086489.263	5271.001	1.576
|	Mg	24	10405.2527	ug/L	7640544.589	273.338	0.978
|	Mg	25	10422.3217	ug/L	1082778.987	32.000	0.280
|	Si	28	10582.0680	ug/L	5929958.843	847148.225	1.815
|	Si	29		ug/L	697683.365	366788.075	0.501
|	P	31	587.3973	ug/L	96560.220	56102.952	0.523
|	K	39	10491.8194	ug/L	18608839.618	782542.335	2.167
|>	Sc-1	45		ug/L	6691629.561	6420063.688	2.273
|	Ca	43	10984.5049	ug/L	39617.995	669.360	2.637
|	Ti	47	108.0264	ug/L	24853.679	7491.373	1.473
L	Ti	48		ug/L	182634.458	-4736.827	0.927
⌈	Fe	54	5791.1118	ug/L	1130376.453	438924.668	0.158
|	Fe	56		ug/L	14337975.164	3031176.051	0.867
|	Fe	57	5240.2707	ug/L	279788.024	9494.742	1.522
L>	Ge-1	74		ug/L	973417.745	1028348.409	1.186

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1226436

Li	7	84.423	
Be	9	97.321	
B	11	95.036	
Al	27	106.074	
Sc-2	45		104.230
V	51	105.940	
Cr	52	106.975	
Cr	53		
Mn	55	107.854	
Co	59	105.024	
Ni	58		
Ni	60	103.387	
Cu	63	106.446	
Cu	65	107.097	
Zn	66	102.926	
Zn	67		
Zn	68	99.466	
Ge	74		94.658
As	75	101.678	
Se	77		
Se	78	103.050	
Se	82	103.100	
Kr	84		
Sr	88	101.812	
Mo	95	99.148	
Mo	97		
Mo	98	100.112	
Ag	107	102.710	
Ag	109	103.357	
Cd	106		
Cd	108		
Cd	111	98.869	
Cd	114	104.820	
In	115		95.608
Sn	118	106.108	
Sb	121	105.800	
Sb	123	103.811	
Ba	135	101.441	
Ba	137	101.452	
Ir	193		100.048
Au	197		
Hg	199		
Hg	200		
Hg	201	98.954	
Hg	202	99.857	
Tl	203	106.214	
Tl	205	103.639	
204	204		
206	206		
207	207		
Pb	208	108.301	
208	208		
Bi	209	112.035	
Th	232	104.132	

Data derived from 3 replicate readings.

Sample ID: 1226436

U	238		
Na	23	102.949	
Mg	24	104.027	
Mg	25	104.196	
Si	28		
Si	29		
P	31	99.299	
K	39	104.976	
Sc-1	45		104.230
Ca	43	109.936	
Ti	47	112.088	
Ti	48		
Fe	54	113.727	
Fe	56		
Fe	57	105.112	
Ge-1	74		94.658

QC Out Of Limits

MassAnalyte Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1226436

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1143645002
Sample Type: Spike - 2 of 44
Sample Description: BMS
Sample Date/Time: Thursday, August 14, 2014 13:28:34
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143645002.073
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 145

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	56.667	26.667	44.411
	W	183		mg/L	33.333	10.000	17.321
	W	184		mg/L	59.963	13.317	72.729
	W	186		mg/L	53.713	12.021	46.596
	Cl	37		mg/L	15210070.364	12493933.949	0.314
	C	13		mg/L	11527.970	11788.334	1.711
⌜	Li	7	161.2730	ug/L	28279.908	56.667	1.171
|	Be	9	92.0257	ug/L	5962.800	24.000	1.904
|	B	11	918.5867	ug/L	91974.730	292.005	4.319
|	Al	27	1105.8040	ug/L	1284648.083	3514.074	1.031
⌊>	Sc-2	45		ug/L	6745574.519	6420063.688	0.585
⌜	V	51	206.3016	ug/L	424940.799	-723.840	0.891
|	Cr	52	404.1504	ug/L	733792.584	21602.632	1.004
|	Cr	53		ug/L	235047.738	119637.679	5.167
|	Mn	55	1032.0982	ug/L	2641259.316	3277.978	0.745
|	Co	59	504.9729	ug/L	969100.199	62.667	1.890
|	Ni	58		ug/L	1018500.463	-2898.994	0.792
|	Ni	60	995.2940	ug/L	404415.831	48.000	0.914
|	Cu	63	1021.6056	ug/L	881991.935	282.671	0.449
|	Cu	65	1018.8641	ug/L	422873.915	145.335	1.052
|	Zn	66	974.1321	ug/L	203463.325	1229.424	0.825
|	Zn	67		ug/L	48293.050	10059.417	4.504
|	Zn	68	964.9716	ug/L	152736.354	2313.655	0.550
|>	Ge	74		ug/L	982074.042	1028348.409	0.465
|	As	75	981.9067	ug/L	250993.054	-345.218	0.387
|	Se	77		ug/L	21498.370	4231.742	2.063
|	Se	78	973.6502	ug/L	63247.070	10451.343	1.505
|	Se	82	992.5541	ug/L	22042.974	-23.664	1.180
|	Kr	84		ug/L	-2476.862	202.319	21.172
|	Sr	88	1148.6722	ug/L	3726786.157	150.001	0.474
|	Mo	95	381.1831	ug/L	217491.151	36.000	1.132
|	Mo	97		mg/L	137197.444	106.667	2.881
⌊	Mo	98	386.1273	ug/L	356250.115	53.470	2.200
⌜	Ag	107	98.6851	ug/L	131420.755	144.001	5.321
|	Ag	109	98.5975	ug/L	123518.666	125.334	5.771

Data derived from 3 replicate readings.

Sample ID: 1143645002

|	Cd	106		mg/L	2598.135	3.776	11.790
|	Cd	108		mg/L	1983.861	-26.009	6.555
|	Cd	111	**97.8284**	ug/L	29923.327	-9.975	0.197
|	Cd	114	**100.1951**	ug/L	69102.182	27.517	1.338
|>	In	115		ug/L	742602.539	780872.478	0.922
|	Sn	118	**101.4672**	ug/L	97572.063	66.667	2.127
|	Sb	121	**1029.2083**	ug/L	1069238.133	84.000	1.678
|	Sb	123	**1002.3766**	ug/L	812560.574	51.319	1.769
|	Ba	135	**1045.2989**	ug/L	344880.856	29.333	1.472
L	Ba	137	**1049.0519**	ug/L	603563.397	20.000	1.582
⌈>	Ir	193		ug/L	668092.822	684125.297	0.948
|	Au	197		ug/L	45517.423	8204064.402	3.789
|	Hg	199		ug/L	1563.480	36.667	7.047
|	Hg	200		ug/L	2193.623	16.667	6.722
|	Hg	201	**9.6450**	ug/L	1220.089	26.667	3.036
|	Hg	202	**9.8302**	ug/L	2776.463	20.000	1.505
|	Tl	203	**10.1922**	ug/L	11430.504	22.667	2.632
|	Tl	205	**10.1029**	ug/L	28582.280	30.667	2.023
|	204	204		ug/L	53853.478	18.065	1.295
|	206	206		ug/L	981221.568	102.667	2.247
|	207	207		ug/L	891093.727	230.670	3.022
|	Pb	208	**1062.7013**	ug/L	4032106.212	538.673	1.679
|	208	208		ug/L	2159790.917	205.336	1.532
|	Bi	209	**107.6895**	ug/L	336271.775	265.338	1.703
|	Th	232	**103.0593**	ug/L	625806.801	92.001	0.579
L	U	238	**106.1451**	ug/L	644123.432	16.000	3.422
⌈	Na	23	**15676.7605**	ug/L	17006223.936	5271.001	0.887
|	Mg	24	**13861.8162**	ug/L	10263354.576	273.338	0.767
|	Mg	25	**13853.1721**	ug/L	1451195.950	32.000	0.647
|	Si	28	**14965.1758**	ug/L	8085947.480	847148.225	1.032
|	Si	29		ug/L	843115.352	366788.075	0.664
|	P	31	**570.8058**	ug/L	96283.781	56102.952	1.438
|	K	39	**10607.5419**	ug/L	18956654.013	782542.335	0.244
|>	Sc-1	45		ug/L	6745574.519	6420063.688	0.585
|	Ca	43	**22939.9111**	ug/L	82635.713	669.360	0.728
|	Ti	47	**102.9939**	ug/L	24267.288	7491.373	1.559
L	Ti	48		ug/L	190887.634	-4736.827	4.413
⌈	Fe	54	**5467.0608**	ug/L	1100194.902	438924.668	1.361
|	Fe	56		ug/L	14037309.268	3031176.051	0.732
|	Fe	57	**5046.8790**	ug/L	272210.809	9494.742	1.085
L>	Ge-1	74		ug/L	982074.042	1028348.409	0.465

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143645002

Li	7	80.691	
Be	9	92.134	
B	11	90.573	
Al	27	109.757	
Sc-2	45		105.070
V	51	100.845	
Cr	52	101.278	
Cr	53		
Mn	55	98.915	
Co	59	100.986	
Ni	58		
Ni	60	99.469	
Cu	63	102.133	
Cu	65	101.860	
Zn	66	96.185	
Zn	67		
Zn	68	95.010	
Ge	74		95.500
As	75	98.185	
Se	77		
Se	78	97.353	
Se	82	99.313	
Kr	84		
Sr	88	99.605	
Mo	95	95.141	
Mo	97		
Mo	98	96.394	
Ag	107	98.763	
Ag	109	98.653	
Cd	106		
Cd	108		
Cd	111	97.609	
Cd	114	100.029	
In	115		95.099
Sn	118	101.442	
Sb	121	102.895	
Sb	123	100.205	
Ba	135	97.402	
Ba	137	97.901	
Ir	193		97.657
Au	197		
Hg	199		
Hg	200		
Hg	201	97.363	
Hg	202	97.703	
Tl	203	101.701	
Tl	205	100.943	
204	204		
206	206		
207	207		
Pb	208	106.220	
208	208		
Bi	209	107.677	
Th	232	103.040	

Data derived from 3 replicate readings.

Sample ID: 1143645002

U	238		
Na	23	99.855	
Mg	24	99.820	
Mg	25	100.497	
Si	28		
Si	29		
P	31	101.041	
K	39	101.908	
Sc-1	45		105.070
Ca	43	105.279	
Ti	47	101.493	
Ti	48		
Fe	54	107.481	
Fe	56		
Fe	57	100.676	
Ge-1	74		95.500

QC Out Of Limits

MassAnalyte Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143645002

SGS ALASKA
ELAN 6100 ICP-MS P3

Sample ID: 1143645003
Sample Type: Spike - 2 of 44
Sample Description: BMSD
Sample Date/Time: Thursday, August 14, 2014 13:30:55
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143645003.074
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 146

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	53.334	26.667	54.127
	W	183		mg/L	33.333	10.000	69.282
	W	184		mg/L	46.626	13.317	32.715
	W	186		mg/L	60.052	12.021	65.750
	Cl	37		mg/L	15495813.918	12493933.949	1.211
	C	13		mg/L	11958.582	11788.334	3.609
⌜	Li	7	163.7608	ug/L	28893.340	56.667	1.097
|	Be	9	90.6923	ug/L	5915.433	24.000	2.348
|	B	11	930.2609	ug/L	93775.738	292.005	3.359
|	Al	27	1020.0333	ug/L	1192875.727	3514.074	1.179
⌊>	Sc-2	45		ug/L	6789519.865	6420063.688	1.631
⌜	V	51	206.9779	ug/L	427222.403	-723.840	0.882
|	Cr	52	411.2879	ug/L	747915.378	21602.632	0.295
|	Cr	53		ug/L	239646.486	119637.679	6.571
|	Mn	55	1045.5938	ug/L	2681329.344	3277.978	0.269
|	Co	59	506.3810	ug/L	973787.775	62.667	0.492
|	Ni	58		ug/L	1010207.731	-2898.994	2.642
|	Ni	60	1004.2385	ug/L	408873.443	48.000	2.633
|	Cu	63	1030.9518	ug/L	892031.176	282.671	1.730
|	Cu	65	1022.2095	ug/L	425183.667	145.335	1.980
|	Zn	66	993.2686	ug/L	207876.934	1229.424	0.794
|	Zn	67		ug/L	49074.082	10059.417	1.035
|	Zn	68	958.1563	ug/L	152012.923	2313.655	1.862
|>	Ge	74		ug/L	984304.760	1028348.409	1.730
|	As	75	978.1356	ug/L	250585.339	-345.218	1.456
|	Se	77		ug/L	21875.342	4231.742	0.598
|	Se	78	977.1380	ug/L	63562.254	10451.343	1.348
|	Se	82	984.8668	ug/L	21921.461	-23.664	1.816
|	Kr	84		ug/L	-1557.315	202.319	16.092
|	Sr	88	1136.4647	ug/L	3695188.067	150.001	0.950
|	Mo	95	382.4779	ug/L	218718.792	36.000	1.405
|	Mo	97		mg/L	136381.123	106.667	3.439
⌊	Mo	98	383.5124	ug/L	354519.178	53.470	0.903
⌜	Ag	107	101.6168	ug/L	133420.402	144.001	3.442
|	Ag	109	101.1796	ug/L	124948.976	125.334	2.988

Data derived from 3 replicate readings.

Sample ID: 1143645003

|	Cd	106		mg/L	2469.971	3.776	6.948
|	Cd	108		mg/L	1958.163	-26.009	8.969
|	Cd	111	**99.7807**	ug/L	30095.016	-9.975	0.938
|	Cd	114	**102.5120**	ug/L	69707.801	27.517	1.013
|>	In	115		ug/L	732279.774	780872.478	1.767
|	Sn	118	**102.6994**	ug/L	97358.755	66.667	0.168
|	Sb	121	**1037.8963**	ug/L	1063191.864	84.000	1.996
|	Sb	123	**1017.4196**	ug/L	813315.878	51.319	2.100
|	Ba	135	**1058.4946**	ug/L	344354.095	29.333	1.224
L	Ba	137	**1058.8343**	ug/L	600721.175	20.000	2.453
⌜>	Ir	193		ug/L	666049.821	684125.297	2.597
|	Au	197		ug/L	45976.585	8204064.402	3.507
|	Hg	199		ug/L	1553.478	36.667	4.383
|	Hg	200		ug/L	2166.951	16.667	10.730
|	Hg	201	**10.0288**	ug/L	1264.096	26.667	4.354
|	Hg	202	**9.7748**	ug/L	2752.455	20.000	2.471
|	Tl	203	**10.2537**	ug/L	11455.871	22.667	1.871
|	Tl	205	**10.2306**	ug/L	28852.535	30.667	1.432
|	204	204		ug/L	53577.156	18.065	0.469
|	206	206		ug/L	981367.124	102.667	1.523
|	207	207		ug/L	887383.562	230.670	0.607
|	Pb	208	**1073.1691**	ug/L	4057783.627	538.673	0.821
|	208	208		ug/L	2189032.941	205.336	1.709
|	Bi	209	**110.8315**	ug/L	344847.399	265.338	1.383
|	Th	232	**104.6405**	ug/L	633214.180	92.001	0.888
L	U	238	**106.2051**	ug/L	642322.309	16.000	2.061
⌜	Na	23	**15628.3462**	ug/L	17064378.743	5271.001	1.306
|	Mg	24	**13881.4066**	ug/L	10344761.310	273.338	1.447
|	Mg	25	**13807.1173**	ug/L	1455640.282	32.000	0.457
|	Si	28	**14598.5524**	ug/L	7960756.519	847148.225	0.678
|	Si	29		ug/L	829780.871	366788.075	1.049
|	P	31	**547.0613**	ug/L	95342.346	56102.952	1.032
|	K	39	**10540.3274**	ug/L	18965888.024	782542.335	2.048
|>	Sc-1	45		ug/L	6789519.865	6420063.688	1.631
|	Ca	43	**22444.5649**	ug/L	81390.296	669.360	1.936
|	Ti	47	**104.1919**	ug/L	24609.622	7491.373	1.380
L	Ti	48		ug/L	191923.176	-4736.827	2.945
⌜	Fe	54	**5546.7686**	ug/L	1112417.272	438924.668	0.186
|	Fe	56		ug/L	14204236.308	3031176.051	0.943
|	Fe	57	**5118.6389**	ug/L	276549.405	9494.742	1.721
L>	Ge-1	74		ug/L	984304.760	1028348.409	1.730

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143645003

Li	7	81.935	
Be	9	90.801	
B	11	91.741	
Al	27	101.180	
Sc-2	45		105.755
V	51	101.184	
Cr	52	103.063	
Cr	53		
Mn	55	101.614	
Co	59	101.268	
Ni	58		
Ni	60	100.364	
Cu	63	103.068	
Cu	65	102.195	
Zn	66	98.099	
Zn	67		
Zn	68	94.329	
Ge	74		95.717
As	75	97.807	
Se	77		
Se	78	97.701	
Se	82	98.545	
Kr	84		
Sr	88	98.384	
Mo	95	95.465	
Mo	97		
Mo	98	95.740	
Ag	107	101.694	
Ag	109	101.235	
Cd	106		
Cd	108		
Cd	111	99.561	
Cd	114	102.346	
In	115		93.777
Sn	118	102.674	
Sb	121	103.764	
Sb	123	101.709	
Ba	135	98.722	
Ba	137	98.879	
Ir	193		97.358
Au	197		
Hg	199		
Hg	200		
Hg	201	101.201	
Hg	202	97.149	
Tl	203	102.316	
Tl	205	102.221	
204	204		
206	206		
207	207		
Pb	208	107.267	
208	208		
Bi	209	110.819	
Th	232	104.622	

Data derived from 3 replicate readings.

Sample ID: 1143645003

U	238		
Na	23	99.371	
Mg	24	100.016	
Mg	25	100.037	
Si	28		
Si	29		
P	31	96.292	
K	39	101.235	
Sc-1	45		105.755
Ca	43	100.326	
Ti	47	102.691	
Ti	48		
Fe	54	109.075	
Fe	56		
Fe	57	102.111	
Ge-1	74		95.717

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143645003

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CCV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:45:05
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CCV.080
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	50.000	26.667	52.915
	W	183		mg/L	36.667	10.000	41.660
	W	184		mg/L	53.296	13.317	43.352
	W	186		mg/L	50.380	12.021	9.816
	Cl	37		mg/L	12701494.184	12493933.949	1.317
	C	13		mg/L	11491.251	11788.334	0.741
⌜	Li	7	32.2094	ug/L	28247.158	56.667	3.139
|	Be	9	36.3798	ug/L	11762.296	24.000	0.840
|	B	11	181.7929	ug/L	91029.181	292.005	1.057
|	Al	27	203.3161	ug/L	1181293.738	3514.074	0.775
|>	Sc-2	45		ug/L	6746296.513	6420063.688	1.280
⌜	V	51	207.7611	ug/L	2145782.322	-723.840	1.613
|	Cr	52	202.6853	ug/L	1811562.817	21602.632	0.701
|	Cr	53		ug/L	345681.522	119637.679	4.903
|	Mn	55	203.0347	ug/L	2601909.829	3277.978	1.582
|	Co	59	202.2498	ug/L	1943367.319	62.667	2.082
|	Ni	58		ug/L	1010991.139	-2898.994	3.154
|	Ni	60	198.5897	ug/L	404042.459	48.000	1.002
|	Cu	63	205.3740	ug/L	887825.328	282.671	0.835
|	Cu	65	205.3898	ug/L	426885.482	145.335	1.720
|	Zn	66	193.5351	ug/L	202414.138	1229.424	0.291
|	Zn	67		ug/L	52323.770	10059.417	1.260
|	Zn	68	196.6267	ug/L	155789.438	2313.655	0.620
|>	Ge	74		ug/L	983528.542	1028348.409	0.825
|	As	75	19.5732	ug/L	24756.580	-345.218	1.097
|	Se	77		ug/L	5184.285	4231.742	7.794
|	Se	78	19.7730	ug/L	15412.003	10451.343	1.026
|	Se	82	19.3710	ug/L	2133.885	-23.664	2.517
|	Kr	84		ug/L	-1558.106	202.319	21.411
|	Sr	88	195.4395	ug/L	3174854.132	150.001	1.256
|	Mo	95	38.1853	ug/L	109126.093	36.000	2.224
|	Mo	97		mg/L	67616.653	106.667	2.433
L	Mo	98	38.7563	ug/L	179065.571	53.470	1.423
⌜	Ag	107	3.6096	ug/L	24064.189	144.001	8.345
|	Ag	109	3.5894	ug/L	22502.434	125.334	6.822

Data derived from 3 replicate readings.

Sample ID: CCV

|	Cd	106		mg/L	27563.687	3.776	0.928
|	Cd	108		mg/L	19864.162	-26.009	2.335
|	Cd	111	191.9006	ug/L	292411.455	-9.975	1.165
|	Cd	114	198.2238	ug/L	680579.139	27.517	1.171
|>	In	115		ug/L	739710.664	780872.478	1.956
|	Sn	118	202.1443	ug/L	967426.091	66.667	1.592
|	Sb	121	98.9003	ug/L	511681.098	84.000	1.163
|	Sb	123	97.0069	ug/L	391617.380	51.319	0.762
|	Ba	135	389.1304	ug/L	639297.982	29.333	1.090
L	Ba	137	387.3073	ug/L	1109583.242	20.000	1.967
⌈>	Ir	193		ug/L	667931.895	684125.297	2.510
|	Au	197		ug/L	8542943.317	8204064.402	2.249
|	Hg	199		ug/L	3133.925	36.667	8.289
|	Hg	200		ug/L	4020.970	16.667	2.037
|	Hg	201	3.9326	ug/L	2459.697	26.667	3.875
|	Hg	202	4.0535	ug/L	5701.951	20.000	3.161
|	Tl	203	3.9515	ug/L	22122.672	22.667	2.531
|	Tl	205	3.9230	ug/L	55441.154	30.667	0.835
|	204	204		ug/L	53077.068	18.065	1.514
|	206	206		ug/L	968760.718	102.667	0.679
|	207	207		ug/L	883310.983	230.670	0.582
|	Pb	208	210.5511	ug/L	3991465.404	538.673	0.489
|	208	208		ug/L	2139393.704	205.336	0.512
|	Bi	209	209.5929	ug/L	3266433.072	265.338	2.655
|	Th	232	20.3446	ug/L	617069.543	92.001	2.623
L	U	238	21.1178	ug/L	640109.136	16.000	1.517
⌈	Na	23	3987.0522	ug/L	21623445.179	5271.001	1.651
|	Mg	24	3989.7954	ug/L	14768436.230	273.338	1.579
|	Mg	25	4033.0768	ug/L	2112305.083	32.000	1.757
|	Si	28	2001.1071	ug/L	5700771.289	847148.225	1.518
|	Si	29		ug/L	677380.179	366788.075	0.686
|	P	31	206.4452	ug/L	126456.614	56102.952	2.409
|	K	39	4035.0152	ug/L	35314703.577	782542.335	0.757
|>	Sc-1	45		ug/L	6746296.513	6420063.688	1.280
|	Ca	43	3972.7023	ug/L	71658.812	669.360	1.252
|	Ti	47	195.8094	ug/L	163737.747	7491.373	1.104
L	Ti	48		ug/L	1680456.149	-4736.827	0.340
⌈	Fe	54	4169.6768	ug/L	3020568.791	438924.668	1.454
|	Fe	56		ug/L	46154425.322	3031176.051	0.580
|	Fe	57	3965.2084	ug/L	1044256.045	9494.742	0.648
L>	Ge-1	74		ug/L	983528.542	1028348.409	0.825

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CCV

Li	7	80.523	
Be	9	90.949	
B	11	90.896	
Al	27	101.658	
Sc-2	45		105.081
V	51	103.881	
Cr	52	101.343	
Cr	53		
Mn	55	101.517	
Co	59	101.125	
Ni	58		
Ni	60	99.295	
Cu	63	102.687	
Cu	65	102.695	
Zn	66	96.768	
Zn	67		
Zn	68	98.313	
Ge	74		95.642
As	75	97.866	
Se	77		
Se	78	98.865	
Se	82	96.855	
Kr	84		
Sr	88	97.720	
Mo	95	95.463	
Mo	97		
Mo	98	96.891	
Ag	107	90.240	
Ag	109	89.735	
Cd	106		
Cd	108		
Cd	111	95.950	
Cd	114	99.112	
In	115		94.729
Sn	118	101.072	
Sb	121	98.900	
Sb	123	97.007	
Ba	135	97.283	
Ba	137	96.827	
Ir	193		97.633
Au	197		
Hg	199		
Hg	200		
Hg	201	98.314	
Hg	202	101.337	
Tl	203	98.788	
Tl	205	98.074	
204	204		
206	206		
207	207		
Pb	208	105.276	
208	208		
Bi	209	104.796	
Th	232	101.723	

Data derived from 3 replicate readings.

Sample ID: CCV

U	238	105.589	
Na	23	99.676	
Mg	24	99.745	
Mg	25	100.827	
Si	28	100.055	
Si	29		
P	31	103.223	
K	39	100.875	
Sc-1	45		105.081
Ca	43	99.318	
Ti	47	97.905	
Ti	48		
Fe	54	104.242	
Fe	56		
Fe	57	99.130	
Ge-1	74		95.642

QC Out Of Limits

MassAnalyte	Out of Limits Message
7Li	CCV is out (+/- 10%)

Data derived from 3 replicate readings.

Sample ID: CCV

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CB
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:47:27
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CB.081
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 1

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	43.333	26.667	48.039
	W	183		mg/L	16.667	10.000	69.282
	W	184		mg/L	19.988	13.317	86.656
	W	186		mg/L	19.016	12.021	102.687
	Cl	37		mg/L	12579066.896	12493933.949	0.372
	C	13		mg/L	11671.513	11788.334	4.587
⌈	Li	7	-0.0390	ug/L	25.333	56.667	16.434
|	Be	9	-0.0448	ug/L	10.667	24.000	47.186
|	B	11	0.0989	ug/L	354.674	292.005	10.171
|	Al	27	0.4314	ug/L	6171.618	3514.074	2.088
\>	Sc-2	45		ug/L	6727885.675	6420063.688	1.894
⌈	V	51	0.5042	ug/L	4490.770	-723.840	51.154
|	Cr	52	-0.2900	ug/L	17952.008	21602.632	4.479
|	Cr	53		ug/L	136658.463	119637.679	9.831
|	Mn	55	0.0194	ug/L	3359.346	3277.978	6.903
|	Co	59	0.0029	ug/L	86.667	62.667	7.050
|	Ni	58		ug/L	-3311.631	-2898.994	2.367
|	Ni	60	0.0124	ug/L	70.667	48.000	3.268
|	Cu	63	0.0086	ug/L	305.339	282.671	17.098
|	Cu	65	0.0016	ug/L	141.335	145.335	16.093
|	Zn	66	0.1258	ug/L	1296.101	1229.424	4.547
|	Zn	67		ug/L	14826.604	10059.417	10.270
|	Zn	68	0.4869	ug/L	2572.397	2313.655	3.678
\>	Ge	74		ug/L	976204.033	1028348.409	1.606
|	As	75	0.3036	ug/L	55.758	-345.218	474.676
|	Se	77		ug/L	3627.460	4231.742	8.538
|	Se	78	-0.5418	ug/L	9772.781	10451.343	0.508
|	Se	82	-0.0950	ug/L	-33.102	-23.664	47.511
|	Kr	84		ug/L	242.229	202.319	6.319
|	Sr	88	0.0013	ug/L	163.335	150.001	3.535
|	Mo	95	0.0662	ug/L	221.336	36.000	19.493
|	Mo	97		mg/L	233.337	106.667	25.833
⌊	Mo	98	0.0678	ug/L	361.837	53.470	8.374
⌈	Ag	107	-0.0086	ug/L	78.667	144.001	22.928
|	Ag	109	-0.0054	ug/L	84.000	125.334	28.572

Data derived from 3 replicate readings.

Sample ID: CB

|	Cd	106		mg/L	22.284	3.776	283.222
|	Cd	108		mg/L	-23.908	-26.009	319.935
|	Cd	111	0.0106	ug/L	6.335	-9.975	1252.754
|	Cd	114	0.0005	ug/L	27.509	27.517	46.619
|>	In	115		ug/L	731058.003	780872.478	0.636
|	Sn	118	0.0424	ug/L	262.671	66.667	10.804
|	Sb	121	0.2743	ug/L	1481.465	84.000	3.153
|	Sb	123	0.2851	ug/L	1185.577	51.319	8.578
|	Ba	135	0.0175	ug/L	56.000	29.333	28.572
L	Ba	137	0.0212	ug/L	78.667	20.000	5.871
⌜>	Ir	193		ug/L	673280.362	684125.297	3.349
|	Au	197		ug/L	8401358.275	8204064.402	1.923
|	Hg	199		ug/L	23.333	36.667	65.465
|	Hg	200		ug/L	20.000	16.667	50.000
|	Hg	201	0.0028	ug/L	28.000	26.667	18.898
|	Hg	202	0.0153	ug/L	41.333	20.000	11.175
|	Tl	203	0.0091	ug/L	73.334	22.667	31.492
|	Tl	205	0.0085	ug/L	150.668	30.667	11.053
|	204	204		ug/L	43.824	18.065	52.569
|	206	206		ug/L	478.681	102.667	18.429
|	207	207		ug/L	526.683	230.670	2.875
|	Pb	208	0.0755	ug/L	1969.421	538.673	11.041
|	208	208		ug/L	964.057	205.336	14.736
|	Bi	209	0.0020	ug/L	292.005	265.338	8.555
|	Th	232	0.0019	ug/L	149.335	92.001	12.078
L	U	238	0.0003	ug/L	25.333	16.000	32.868
⌜	Na	23	0.1770	ug/L	6478.517	5271.001	0.951
|	Mg	24	0.0512	ug/L	474.680	273.338	11.222
|	Mg	25	0.0707	ug/L	70.667	32.000	26.144
|	Si	28	-52.7807	ug/L	761104.835	847148.225	1.263
|	Si	29		ug/L	348395.427	366788.075	0.994
|	P	31	10.9763	ug/L	62356.441	56102.952	0.833
|	K	39	-2.6888	ug/L	796984.560	782542.335	0.974
|>	Sc-1	45		ug/L	6727885.675	6420063.688	1.894
|	Ca	43	-0.4613	ug/L	693.362	669.360	5.544
|	Ti	47	-0.2883	ug/L	7616.158	7491.373	7.228
L	Ti	48		ug/L	-3932.617	-4736.827	2.546
⌜	Fe	54	9.6697	ug/L	422601.549	438924.668	1.203
|	Fe	56		ug/L	2965717.800	3031176.051	1.038
|	Fe	57	-4.9762	ug/L	7723.578	9494.742	1.577
L>	Ge-1	74		ug/L	976204.033	1028348.409	1.606

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CB

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	104.795
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	94.929
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	93.621
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	98.415
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: CB

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	104.795
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	94.929

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: CB

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1143646007
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:58:14
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143646007.085
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 154

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	40.000	26.667	25.000
	W	183		mg/L	26.667	10.000	57.282
	W	184		mg/L	23.280	13.317	49.448
	W	186		mg/L	29.067	12.021	75.041
	Cl	37		mg/L	12694574.511	12493933.949	0.934
	C	13		mg/L	11971.928	11788.334	1.709
⌜	Li	7	-0.1935	ug/L	25.333	56.667	18.232
|	Be	9	-0.1717	ug/L	14.000	24.000	14.286
|	B	11	2.2181	ug/L	521.350	292.005	9.985
|	Al	27	32.9608	ug/L	41402.603	3514.074	1.055
⌊>	Sc-2	45		ug/L	6672352.331	6420063.688	2.545
⌜	V	51	4.4312	ug/L	8478.441	-723.840	55.869
|	Cr	52	-0.8173	ug/L	19226.836	21602.632	3.142
|	Cr	53		ug/L	134587.615	119637.679	9.332
|	Mn	55	0.2596	ug/L	3802.201	3277.978	3.634
|	Co	59	0.0228	ug/L	104.001	62.667	13.868
|	Ni	58		ug/L	-3102.298	-2898.994	13.006
|	Ni	60	0.3385	ug/L	184.002	48.000	15.218
|	Cu	63	0.1048	ug/L	361.341	282.671	15.030
|	Cu	65	0.0445	ug/L	157.335	145.335	21.920
|	Zn	66	6.9671	ug/L	2625.747	1229.424	4.423
|	Zn	67		ug/L	13884.987	10059.417	11.153
|	Zn	68	7.7763	ug/L	3430.039	2313.655	0.750
|>	Ge	74		ug/L	984268.228	1028348.409	1.353
|	As	75	0.3111	ug/L	-247.959	-345.218	117.086
|	Se	77		ug/L	3776.862	4231.742	10.128
|	Se	78	-6.3349	ug/L	9653.773	10451.343	1.583
|	Se	82	-1.2446	ug/L	-50.488	-23.664	28.086
|	Kr	84		ug/L	233.596	202.319	17.798
|	Sr	88	0.0952	ug/L	453.346	150.001	10.882
|	Mo	95	0.5602	ug/L	354.674	36.000	11.297
|	Mo	97		mg/L	330.007	106.667	9.091
⌊	Mo	98	0.5936	ug/L	599.379	53.470	13.169
⌜	Ag	107	-0.0864	ug/L	21.333	144.001	28.641
|	Ag	109	-0.0633	ug/L	38.667	125.334	51.030

Data derived from 3 replicate readings.

Sample ID: 1143646007

|	Cd	106		mg/L	-16.370	3.776	295.973
|	Cd	108		mg/L	-8.015	-26.009	283.668
|	Cd	111	0.0479	ug/L	5.516	-9.975	371.990
|	Cd	114	0.0299	ug/L	45.773	27.517	17.495
|>	In	115		ug/L	724740.629	780872.478	3.449
|	Sn	118	0.0733	ug/L	130.668	66.667	11.590
|	Sb	121	0.2274	ug/L	309.339	84.000	17.220
|	Sb	123	0.2667	ug/L	258.988	51.319	15.900
|	Ba	135	0.6617	ug/L	240.004	29.333	14.814
L	Ba	137	0.5949	ug/L	352.007	20.000	5.905
⌈>	Ir	193		ug/L	670944.390	684125.297	1.513
|	Au	197		ug/L	21551.442	8204064.402	12.225
|	Hg	199		ug/L	36.667	36.667	15.746
|	Hg	200		ug/L	30.000	16.667	57.735
|	Hg	201	-0.0331	ug/L	22.000	26.667	31.492
|	Hg	202	0.0344	ug/L	29.333	20.000	7.873
|	Tl	203	0.0074	ug/L	30.667	22.667	52.715
|	Tl	205	0.0086	ug/L	54.667	30.667	16.898
|	204	204		ug/L	34.585	18.065	14.891
|	206	206		ug/L	370.675	102.667	25.499
|	207	207		ug/L	517.350	230.670	10.999
|	Pb	208	0.3308	ug/L	1786.741	538.673	12.996
|	208	208		ug/L	898.716	205.336	14.330
|	Bi	209	0.0272	ug/L	345.341	265.338	6.688
|	Th	232	0.0175	ug/L	197.336	92.001	24.771
L	U	238	0.0023	ug/L	29.333	16.000	28.386
⌈	Na	23	24.4599	ug/L	31709.554	5271.001	1.149
|	Mg	24	3.4263	ug/L	2792.468	273.338	2.393
|	Mg	25	3.1599	ug/L	360.008	32.000	8.819
|	Si	28	-237.2684	ug/L	767235.370	847148.225	0.109
|	Si	29		ug/L	353113.896	366788.075	1.520
|	P	31	87.0946	ug/L	63924.305	56102.952	1.975
|	K	39	-8.1878	ug/L	799143.621	782542.335	1.165
|>	Sc-1	45		ug/L	6672352.331	6420063.688	2.545
|	Ca	43	7.0158	ug/L	720.031	669.360	4.006
|	Ti	47	-2.4225	ug/L	7401.959	7491.373	5.507
L	Ti	48		ug/L	-3880.141	-4736.827	1.818
⌈	Fe	54	62.0670	ug/L	427815.458	438924.668	0.929
|	Fe	56		ug/L	2977925.339	3031176.051	0.446
|	Fe	57	-15.7658	ug/L	8262.761	9494.742	0.284
L>	Ge-1	74		ug/L	984268.228	1028348.409	1.353

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143646007

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	103.930
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	95.713
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	92.812
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	98.073
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: 1143646007

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	103.930
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	95.713

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143646007

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CCV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 14:12:55
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CCV.091
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	50.000	26.667	60.000
	W	183		mg/L	43.333	10.000	48.039
	W	184		mg/L	53.276	13.317	28.670
	W	186		mg/L	35.406	12.021	52.794
	Cl	37		mg/L	12577569.131	12493933.949	0.889
	C	13		mg/L	11955.238	11788.334	1.577
⌜	Li	7	33.7903	ug/L	29066.640	56.667	3.261
|	Be	9	37.0157	ug/L	11760.295	24.000	2.193
|	B	11	186.6132	ug/L	91842.481	292.005	3.824
|	Al	27	204.4650	ug/L	1167272.790	3514.074	1.231
⌊>	Sc-2	45		ug/L	6634339.366	6420063.688	4.507
⌜	V	51	201.9790	ug/L	2104830.736	-723.840	1.790
|	Cr	52	199.7517	ug/L	1801852.958	21602.632	1.810
|	Cr	53		ug/L	343027.536	119637.679	4.715
|	Mn	55	201.0102	ug/L	2599321.222	3277.978	2.623
|	Co	59	198.6032	ug/L	1925720.133	62.667	0.294
|	Ni	58		ug/L	1005492.035	-2898.994	0.586
|	Ni	60	197.5585	ug/L	405599.834	48.000	1.278
|	Cu	63	202.3759	ug/L	882800.419	282.671	0.812
|	Cu	65	201.1710	ug/L	421897.587	145.335	0.333
|	Zn	66	191.7828	ug/L	202435.091	1229.424	1.717
|	Zn	67		ug/L	52347.316	10059.417	2.766
|	Zn	68	193.7372	ug/L	154929.720	2313.655	1.157
|>	Ge	74		ug/L	992472.580	1028348.409	0.646
|	As	75	19.5370	ug/L	24934.217	-345.218	0.387
|	Se	77		ug/L	5204.294	4231.742	4.615
|	Se	78	18.1819	ug/L	15112.060	10451.343	0.584
|	Se	82	18.9871	ug/L	2109.863	-23.664	2.209
|	Kr	84		ug/L	-1322.669	202.319	4.104
|	Sr	88	193.9272	ug/L	3179062.535	150.001	3.342
|	Mo	95	37.7934	ug/L	108966.844	36.000	2.850
|	Mo	97		mg/L	68940.832	106.667	3.006
⌊	Mo	98	38.8645	ug/L	181182.139	53.470	2.099
⌜	Ag	107	3.6808	ug/L	24308.883	144.001	7.880
|	Ag	109	3.6414	ug/L	22617.436	125.334	7.626

Data derived from 3 replicate readings.

Sample ID: CCV

|	Cd	106		mg/L	27185.306	3.776	0.664
|	Cd	108		mg/L	20008.762	-26.009	5.743
|	Cd	111	**194.7184**	ug/L	294095.644	-9.975	1.657
|	Cd	114	**200.7277**	ug/L	683067.966	27.517	0.987
|>	In	115		ug/L	733088.222	780872.478	1.215
|	Sn	118	**199.9209**	ug/L	948219.543	66.667	1.364
|	Sb	121	**99.4380**	ug/L	509941.239	84.000	1.466
|	Sb	123	**98.5837**	ug/L	394459.984	51.319	0.881
|	Ba	135	**399.6029**	ug/L	650741.645	29.333	1.109
L	Ba	137	**404.4599**	ug/L	1148529.978	20.000	1.104
⌈>	Ir	193		ug/L	666521.386	684125.297	2.052
|	Au	197		ug/L	8455801.895	8204064.402	1.592
|	Hg	199		ug/L	2977.201	36.667	8.073
|	Hg	200		ug/L	4117.684	16.667	1.424
|	Hg	201	**3.8894**	ug/L	2427.020	26.667	2.105
|	Hg	202	**3.8869**	ug/L	5457.787	20.000	1.780
|	Tl	203	**3.8940**	ug/L	21763.056	22.667	2.132
|	Tl	205	**3.8903**	ug/L	54870.766	30.667	1.914
|	204	204		ug/L	53447.271	18.065	0.834
|	206	206		ug/L	963417.919	102.667	0.672
|	207	207		ug/L	879393.851	230.670	0.876
|	Pb	208	**208.2098**	ug/L	3939688.032	538.673	1.420
|	208	208		ug/L	2096876.261	205.336	2.737
|	Bi	209	**210.5636**	ug/L	3277114.982	265.338	2.410
|	Th	232	**20.3909**	ug/L	617319.831	92.001	2.117
L	U	238	**21.2244**	ug/L	641939.150	16.000	3.716
⌈	Na	23	**4009.3008**	ug/L	21365129.637	5271.001	1.043
|	Mg	24	**4008.6705**	ug/L	14584998.088	273.338	2.487
|	Mg	25	**3992.2857**	ug/L	2055279.512	32.000	3.147
|	Si	28	**2003.1517**	ug/L	5604883.072	847148.225	2.404
|	Si	29		ug/L	675953.245	366788.075	1.361
|	P	31	**216.7504**	ug/L	127563.840	56102.952	1.932
|	K	39	**4040.3073**	ug/L	34749889.936	782542.335	1.990
|>	Sc-1	45		ug/L	6634339.366	6420063.688	4.507
|	Ca	43	**3987.1095**	ug/L	70652.949	669.360	1.348
|	Ti	47	**196.9953**	ug/L	161804.724	7491.373	1.759
L	Ti	48		ug/L	1670164.842	-4736.827	2.120
⌈	Fe	54	**4056.9461**	ug/L	2977209.034	438924.668	2.110
|	Fe	56		ug/L	45664763.605	3031176.051	2.933
|	Fe	57	**3917.3387**	ug/L	1041127.459	9494.742	2.180
L>	Ge-1	74		ug/L	992472.580	1028348.409	0.646

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CCV

Li	7	84.476	
Be	9	92.539	
B	11	93.307	
Al	27	102.233	
Sc-2	45		103.338
V	51	100.989	
Cr	52	99.876	
Cr	53		
Mn	55	100.505	
Co	59	99.302	
Ni	58		
Ni	60	98.779	
Cu	63	101.188	
Cu	65	100.586	
Zn	66	95.891	
Zn	67		
Zn	68	96.869	
Ge	74		96.511
As	75	97.685	
Se	77		
Se	78	90.910	
Se	82	94.936	
Kr	84		
Sr	88	96.964	
Mo	95	94.484	
Mo	97		
Mo	98	97.161	
Ag	107	92.020	
Ag	109	91.035	
Cd	106		
Cd	108		
Cd	111	97.359	
Cd	114	100.364	
In	115		93.881
Sn	118	99.960	
Sb	121	99.438	
Sb	123	98.584	
Ba	135	99.901	
Ba	137	101.115	
Ir	193		97.427
Au	197		
Hg	199		
Hg	200		
Hg	201	97.234	
Hg	202	97.173	
Tl	203	97.349	
Tl	205	97.257	
204	204		
206	206		
207	207		
Pb	208	104.105	
208	208		
Bi	209	105.282	
Th	232	101.955	

Data derived from 3 replicate readings.

Sample ID: CCV

U	238	106.122	
Na	23	100.233	
Mg	24	100.217	
Mg	25	99.807	
Si	28	100.158	
Si	29		
P	31	108.375	
K	39	101.008	
Sc-1	45		103.338
Ca	43	99.678	
Ti	47	98.498	
Ti	48		
Fe	54	101.424	
Fe	56		
Fe	57	97.933	
Ge-1	74		96.511

QC Out Of Limits

MassAnalyte	Out of Limits Message
7Li	CCV is out (+/- 10%)

Data derived from 3 replicate readings.

Sample ID: CCV

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CB
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 14:15:17
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CB.092
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 1

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	46.667	26.667	53.927
	W	183		mg/L	16.667	10.000	34.641
	W	184		mg/L	29.979	13.317	88.291
	W	186		mg/L	45.026	12.021	9.728
	Cl	37		mg/L	12418836.026	12493933.949	1.502
	C	13		mg/L	11948.569	11788.334	3.992
⌈	Li	7	-0.0332	ug/L	30.000	56.667	41.633
|	Be	9	-0.0275	ug/L	16.000	24.000	12.500
|	B	11	0.0325	ug/L	316.006	292.005	19.156
|	Al	27	0.6301	ug/L	7195.107	3514.074	2.955
\>	Sc-2	45		ug/L	6612198.228	6420063.688	1.573
⌈	V	51	0.4520	ug/L	3912.765	-723.840	103.630
|	Cr	52	-0.3200	ug/L	17544.457	21602.632	2.557
|	Cr	53		ug/L	133943.412	119637.679	11.257
|	Mn	55	0.0172	ug/L	3300.654	3277.978	4.451
|	Co	59	0.0038	ug/L	94.667	62.667	31.714
|	Ni	58		ug/L	-3243.387	-2898.994	2.724
|	Ni	60	0.0074	ug/L	60.000	48.000	37.119
|	Cu	63	0.0042	ug/L	284.005	282.671	12.034
|	Cu	65	0.0101	ug/L	157.335	145.335	12.541
|	Zn	66	0.0293	ug/L	1186.751	1229.424	4.242
|	Zn	67		ug/L	14506.094	10059.417	13.190
|	Zn	68	0.4369	ug/L	2512.379	2313.655	5.655
\>	Ge	74		ug/L	967633.728	1028348.409	0.407
|	As	75	-0.0158	ug/L	-343.838	-345.218	118.750
|	Se	77		ug/L	3535.418	4231.742	5.075
|	Se	78	-1.1065	ug/L	9536.043	10451.343	0.977
|	Se	82	-0.2082	ug/L	-45.050	-23.664	32.275
|	Kr	84		ug/L	211.867	202.319	31.543
|	Sr	88	0.0047	ug/L	216.670	150.001	29.312
|	Mo	95	0.0520	ug/L	180.002	36.000	8.889
|	Mo	97		mg/L	190.002	106.667	37.953
⌊	Mo	98	0.0529	ug/L	290.779	53.470	7.809
⌈	Ag	107	-0.0108	ug/L	64.000	144.001	22.535
|	Ag	109	-0.0058	ug/L	81.334	125.334	19.876

Data derived from 3 replicate readings.

Sample ID: CB

|	Cd	106		mg/L	19.747	3.776	313.519
|	Cd	108		mg/L	38.925	-26.009	159.687
|	Cd	111	-0.0278	ug/L	-51.809	-9.975	138.261
|	Cd	114	0.0075	ug/L	51.084	27.517	9.165
|>	In	115		ug/L	729809.044	780872.478	1.343
|	Sn	118	0.0354	ug/L	229.336	66.667	1.007
|	Sb	121	0.2495	ug/L	1352.110	84.000	5.480
|	Sb	123	0.2546	ug/L	1061.886	51.319	4.014
|	Ba	135	0.0275	ug/L	72.000	29.333	20.031
L	Ba	137	0.0231	ug/L	84.000	20.000	26.513
⌜>	Ir	193		ug/L	666915.451	684125.297	1.652
|	Au	197		ug/L	8332799.643	8204064.402	1.061
|	Hg	199		ug/L	16.667	36.667	91.652
|	Hg	200		ug/L	30.000	16.667	33.333
|	Hg	201	-0.0042	ug/L	23.333	26.667	26.186
|	Hg	202	0.0107	ug/L	34.667	20.000	48.039
|	Tl	203	0.0111	ug/L	84.000	22.667	21.822
|	Tl	205	0.0097	ug/L	166.668	30.667	4.996
|	204	204		ug/L	42.691	18.065	28.480
|	206	206		ug/L	438.679	102.667	21.392
|	207	207		ug/L	474.680	230.670	17.724
|	Pb	208	0.0647	ug/L	1746.735	538.673	18.844
|	208	208		ug/L	833.376	205.336	18.606
|	Bi	209	0.0053	ug/L	340.007	265.338	17.331
|	Th	232	0.0025	ug/L	166.668	92.001	3.666
L	U	238	0.0008	ug/L	40.000	16.000	30.000
⌜	Na	23	0.1584	ug/L	6269.029	5271.001	5.998
|	Mg	24	0.0465	ug/L	450.679	273.338	10.402
|	Mg	25	0.0633	ug/L	65.334	32.000	34.814
|	Si	28	-46.7231	ug/L	762053.098	847148.225	2.785
|	Si	29		ug/L	348152.414	366788.075	1.164
|	P	31	16.4879	ug/L	63059.068	56102.952	1.736
|	K	39	-0.9393	ug/L	797841.624	782542.335	1.554
|>	Sc-1	45		ug/L	6612198.228	6420063.688	1.573
|	Ca	43	-5.3657	ug/L	596.022	669.360	13.771
|	Ti	47	-0.2911	ug/L	7493.384	7491.373	8.637
L	Ti	48		ug/L	-3940.678	-4736.827	0.688
⌜	Fe	54	5.7459	ug/L	416541.815	438924.668	0.943
|	Fe	56		ug/L	2901177.666	3031176.051	2.072
|	Fe	57	-4.2636	ug/L	7839.689	9494.742	3.729
L>	Ge-1	74		ug/L	967633.728	1028348.409	0.407

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CB

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	102.993
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	94.096
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	93.461
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	97.484
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: CB

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	102.993
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	94.096

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: CB

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CCV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 18:41:58
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CCV.179
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	20.000	26.667	50.000
	W	183		mg/L	40.000	10.000	43.301
	W	184		mg/L	36.617	13.317	41.683
	W	186		mg/L	19.395	12.021	65.494
	Cl	37		mg/L	12322919.173	12493933.949	1.125
	C	13		mg/L	10259.652	11788.334	3.928
⌜	Li	7	29.6342	ug/L	24374.290	56.667	3.491
|	Be	9	35.4358	ug/L	10748.929	24.000	1.807
|	B	11	176.3934	ug/L	82872.889	292.005	2.623
|	Al	27	204.2647	ug/L	1113756.751	3514.074	1.684
⌊>	Sc-2	45		ug/L	6330007.015	6420063.688	1.504
⌜	V	51	209.8260	ug/L	2036611.553	-723.840	0.701
|	Cr	52	200.6737	ug/L	1685680.263	21602.632	0.436
|	Cr	53		ug/L	337646.581	119637.679	5.308
|	Mn	55	207.2074	ug/L	2495563.468	3277.978	1.987
|	Co	59	201.2070	ug/L	1816847.335	62.667	2.530
|	Ni	58		ug/L	943377.328	-2898.994	1.460
|	Ni	60	197.5985	ug/L	377786.419	48.000	1.276
|	Cu	63	200.0557	ug/L	812704.513	282.671	1.586
|	Cu	65	200.7403	ug/L	392109.805	145.335	2.473
|	Zn	66	192.8651	ug/L	189583.459	1229.424	1.959
|	Zn	67		ug/L	50834.635	10059.417	2.359
|	Zn	68	195.3723	ug/L	145506.409	2313.655	2.228
|>	Ge	74		ug/L	924425.505	1028348.409	1.576
|	As	75	19.6160	ug/L	23315.668	-345.218	1.064
|	Se	77		ug/L	5242.989	4231.742	8.120
|	Se	78	18.1541	ug/L	14070.731	10451.343	2.838
|	Se	82	19.2275	ug/L	1989.953	-23.664	2.307
|	Kr	84		ug/L	-2458.073	202.319	21.889
|	Sr	88	202.5750	ug/L	3093246.188	150.001	1.343
|	Mo	95	38.1699	ug/L	102517.493	36.000	1.486
|	Mo	97		mg/L	64592.856	106.667	3.068
⌊	Mo	98	38.9828	ug/L	169292.653	53.470	2.404
⌜	Ag	107	3.4661	ug/L	21656.301	144.001	10.281
|	Ag	109	3.5145	ug/L	20640.322	125.334	8.608

Data derived from 3 replicate readings.

Sample ID: CCV

|	Cd	106		mg/L	25503.106	3.776	1.823
|	Cd	108		mg/L	18619.699	-26.009	4.629
|	Cd	111	193.9468	ug/L	276557.516	-9.975	0.974
|	Cd	114	199.6480	ug/L	641601.234	27.517	1.759
|>	In	115		ug/L	692549.370	780872.478	3.094
|	Sn	118	203.2734	ug/L	910639.974	66.667	1.730
|	Sb	121	99.2943	ug/L	480859.218	84.000	1.283
|	Sb	123	98.4868	ug/L	372179.291	51.319	1.563
|	Ba	135	399.0090	ug/L	613615.714	29.333	1.353
L	Ba	137	395.6061	ug/L	1060958.872	20.000	2.323
⌈>	Ir	193		ug/L	647158.271	684125.297	1.503
|	Au	197		ug/L	8364548.537	8204064.402	0.744
|	Hg	199		ug/L	3150.596	36.667	4.960
|	Hg	200		ug/L	4014.303	16.667	6.671
|	Hg	201	3.9150	ug/L	2373.005	26.667	2.750
|	Hg	202	3.8494	ug/L	5246.985	20.000	2.010
|	Tl	203	3.9757	ug/L	21573.228	22.667	1.931
|	Tl	205	3.9244	ug/L	53739.410	30.667	1.478
|	204	204		ug/L	52733.486	18.065	0.347
|	206	206		ug/L	954349.926	102.667	1.601
|	207	207		ug/L	843729.517	230.670	2.671
|	Pb	208	214.2377	ug/L	3935700.903	538.673	1.216
|	208	208		ug/L	2137621.460	205.336	1.260
|	Bi	209	215.3931	ug/L	3254766.653	265.338	0.344
|	Th	232	20.3027	ug/L	597000.356	92.001	0.701
L	U	238	20.8392	ug/L	612270.260	16.000	1.036
⌈	Na	23	4007.9071	ug/L	20400165.561	5271.001	2.083
|	Mg	24	4007.9205	ug/L	13923927.717	273.338	2.006
|	Mg	25	4000.3244	ug/L	1966013.878	32.000	0.246
|	Si	28	2047.2034	ug/L	5454892.923	847148.225	2.684
|	Si	29		ug/L	648210.571	366788.075	2.463
|	P	31	238.8912	ug/L	128649.654	56102.952	1.830
|	K	39	4079.6204	ug/L	33497912.015	782542.335	1.945
|>	Sc-1	45		ug/L	6330007.015	6420063.688	1.504
|	Ca	43	4033.0781	ug/L	68250.430	669.360	2.124
|	Ti	47	196.9762	ug/L	154491.117	7491.373	1.536
L	Ti	48		ug/L	1588471.881	-4736.827	1.128
⌈	Fe	54	4198.4230	ug/L	2855706.810	438924.668	1.609
|	Fe	56		ug/L	44387290.592	3031176.051	3.041
|	Fe	57	3980.3881	ug/L	985143.437	9494.742	3.890
L>	Ge-1	74		ug/L	924425.505	1028348.409	1.576

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CCV

Li	7	74.085	
Be	9	88.589	
B	11	88.197	
Al	27	102.132	
Sc-2	45		98.597
V	51	104.913	
Cr	52	100.337	
Cr	53		
Mn	55	103.604	
Co	59	100.604	
Ni	58		
Ni	60	98.799	
Cu	63	100.028	
Cu	65	100.370	
Zn	66	96.433	
Zn	67		
Zn	68	97.686	
Ge	74		89.894
As	75	98.080	
Se	77		
Se	78	90.770	
Se	82	96.138	
Kr	84		
Sr	88	101.287	
Mo	95	95.425	
Mo	97		
Mo	98	97.457	
Ag	107	86.653	
Ag	109	87.861	
Cd	106		
Cd	108		
Cd	111	96.973	
Cd	114	99.824	
In	115		88.689
Sn	118	101.637	
Sb	121	99.294	
Sb	123	98.487	
Ba	135	99.752	
Ba	137	98.902	
Ir	193		94.596
Au	197		
Hg	199		
Hg	200		
Hg	201	97.874	
Hg	202	96.235	
Tl	203	99.393	
Tl	205	98.110	
204	204		
206	206		
207	207		
Pb	208	107.119	
208	208		
Bi	209	107.697	
Th	232	101.513	

Data derived from 3 replicate readings.

Sample ID: CCV

U	238	104.196	
Na	23	100.198	
Mg	24	100.198	
Mg	25	100.008	
Si	28	102.360	
Si	29		
P	31	119.446	
K	39	101.991	
Sc-1	45		98.597
Ca	43	100.827	
Ti	47	98.488	
Ti	48		
Fe	54	104.961	
Fe	56		
Fe	57	99.510	
Ge-1	74		89.894

QC Out Of Limits

MassAnalyte	Out of Limits Message
7Li	CCV is out (+/- 10%)
9Be	CCV is out (+/- 10%)
11B	CCV is out (+/- 10%)
107Ag	CCV is out (+/- 10%)
109Ag	CCV is out (+/- 10%)
31P	CCV is out (+/- 10%)

Data derived from 3 replicate readings.

Sample ID: CCV

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CB
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 18:48:45
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CB.180
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 1

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	33.333	26.667	34.641
	W	183		mg/L	23.333	10.000	89.214
	W	184		mg/L	43.309	13.317	81.061
	W	186		mg/L	14.698	12.021	39.849
	Cl	37		mg/L	12300872.076	12493933.949	1.134
	C	13		mg/L	11033.970	11788.334	2.502
⌜	Li	7	-0.0411	ug/L	22.667	56.667	20.377
|	Be	9	-0.0264	ug/L	16.000	24.000	50.000
|	B	11	0.0212	ug/L	305.339	292.005	4.211
|	Al	27	0.2508	ug/L	4949.469	3514.074	0.821
⌞>	Sc-2	45		ug/L	6489976.738	6420063.688	0.992
⌜	V	51	0.1991	ug/L	1257.769	-723.840	334.489
|	Cr	52	-0.5795	ug/L	14803.809	21602.632	2.233
|	Cr	53		ug/L	67109.250	119637.679	2.540
|	Mn	55	0.0126	ug/L	3139.258	3277.978	0.747
|	Co	59	0.0012	ug/L	68.000	62.667	0.000
|	Ni	58		ug/L	-3325.728	-2898.994	8.915
|	Ni	60	0.0044	ug/L	52.000	48.000	26.647
|	Cu	63	0.0111	ug/L	304.006	282.671	11.842
|	Cu	65	-0.0042	ug/L	124.001	145.335	11.175
|	Zn	66	-0.2612	ug/L	861.378	1229.424	13.171
|	Zn	67		ug/L	6766.085	10059.417	5.862
|	Zn	68	-0.2145	ug/L	1950.896	2313.655	8.331
|>	Ge	74		ug/L	937275.513	1028348.409	2.374
|	As	75	0.0702	ug/L	-228.244	-345.218	81.422
|	Se	77		ug/L	2411.016	4231.742	6.827
|	Se	78	-0.4452	ug/L	9407.273	10451.343	1.036
|	Se	82	0.0109	ug/L	-20.200	-23.664	99.800
|	Kr	84		ug/L	202.409	202.319	22.655
|	Sr	88	-0.0000	ug/L	136.668	150.001	40.300
|	Mo	95	0.0086	ug/L	56.000	36.000	25.754
|	Mo	97		mg/L	96.667	106.667	5.973
⌞	Mo	98	0.0089	ug/L	87.718	53.470	12.958
⌜	Ag	107	0.1607	ug/L	1145.415	144.001	23.854
|	Ag	109	0.1708	ug/L	1129.412	125.334	19.824

Data derived from 3 replicate readings.

Sample ID: CB

|	Cd	106		mg/L	25.320	3.776	321.607
|	Cd	108		mg/L	30.774	-26.009	185.168
|	Cd	111	-0.0256	ug/L	-47.442	-9.975	104.850
|	Cd	114	0.0030	ug/L	34.754	27.517	7.182
|>	In	115		ug/L	709150.912	780872.478	3.054
|	Sn	118	0.0074	ug/L	94.667	66.667	15.997
|	Sb	121	0.1148	ug/L	648.026	84.000	25.683
|	Sb	123	0.1156	ug/L	494.169	51.319	6.614
|	Ba	135	0.0033	ug/L	32.000	29.333	21.651
L	Ba	137	0.0085	ug/L	41.333	20.000	22.349
[>	Ir	193		ug/L	641606.891	684125.297	3.460
|	Au	197		ug/L	8360001.684	8204064.402	1.325
|	Hg	199		ug/L	36.667	36.667	41.660
|	Hg	200		ug/L	23.333	16.667	89.214
|	Hg	201	-0.0141	ug/L	16.667	26.667	24.980
|	Hg	202	-0.0010	ug/L	17.333	20.000	35.251
|	Tl	203	0.0020	ug/L	32.000	22.667	12.500
|	Tl	205	0.0031	ug/L	70.667	30.667	8.646
|	204	204		ug/L	20.012	18.065	33.105
|	206	206		ug/L	114.667	102.667	14.098
|	207	207		ug/L	237.337	230.670	5.919
|	Pb	208	0.0052	ug/L	600.008	538.673	4.163
|	208	208		ug/L	248.004	205.336	10.577
|	Bi	209	0.0047	ug/L	317.339	265.338	17.160
|	Th	232	0.0009	ug/L	113.334	92.001	37.739
L	U	238	0.0000	ug/L	16.000	16.000	25.000
[	Na	23	0.2357	ug/L	6558.582	5271.001	3.598
|	Mg	24	0.0463	ug/L	441.345	273.338	6.035
|	Mg	25	0.0840	ug/L	74.667	32.000	6.186
|	Si	28	-33.7118	ug/L	778317.401	847148.225	0.406
|	Si	29		ug/L	349866.744	366788.075	0.149
|	P	31	33.4951	ug/L	67247.591	56102.952	0.866
|	K	39	-0.1462	ug/L	789793.577	782542.335	0.456
|>	Sc-1	45		ug/L	6489976.738	6420063.688	0.992
|	Ca	43	-13.5503	ug/L	444.012	669.360	7.374
|	Ti	47	-3.5360	ug/L	4864.753	7491.373	0.777
L	Ti	48		ug/L	-3372.920	-4736.827	0.918
[	Fe	54	7.1935	ug/L	404166.613	438924.668	1.429
|	Fe	56		ug/L	2778184.163	3031176.051	1.459
|	Fe	57	-5.1368	ug/L	7375.264	9494.742	3.103
L>	Ge-1	74		ug/L	937275.513	1028348.409	2.374

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CB

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	101.089
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	91.144
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	90.815
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	93.785
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: CB

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	101.089
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	91.144

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: CB

SGS ALASKA

Calibration Type: External Calibration
File Name 08.14.2014.p3b.cal

P-E ELAN 6100 ICP-MS P3
CALIBRATION SUMMARY

Analyte	Mass	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6
W	181.948						
W	182.950						
W	183.951						
W	185.954						
Cl	36.966						
C	13.003						
Li	7.016		0.200	2.000	20.000	200.000	
Be	9.012		0.200	2.000	20.000	200.000	
B	11.009			10.000	100.000	1000.000	
Al	26.982		1.000	10.000	100.000	1000.000	
Sc-2	44.956						
V	50.944		1.000	10.000	100.000	1000.000	
Cr	51.941		1.000	10.000	100.000	1000.000	
Cr	52.941						
Mn	54.938	0.200	1.000	10.000	100.000	1000.000	
Co	58.933	0.200	1.000	10.000	100.000	1000.000	
Ni	57.935						
Ni	59.933	0.200	1.000	10.000	100.000	1000.000	
Cu	62.930		1.000	10.000	100.000	1000.000	
Cu	64.928		1.000	10.000	100.000	1000.000	
Zn	65.926		1.000	10.000	100.000	1000.000	
Zn	66.927						
Zn	67.925		1.000	10.000	100.000	1000.000	
Ge	73.922						
As	74.922			1.000	10.000	100.000	
Se	76.920						
Se	77.917			1.000	10.000	100.000	
Se	81.917			1.000	10.000	100.000	
Kr	83.912						
Sr	87.906		1.000	10.000	100.000	1000.000	
Mo	94.906		0.200	2.000	20.000	200.000	
Mo	96.906						
Mo	97.906		0.200	2.000	20.000	200.000	
Ag	106.905			0.200	2.000	20.000	
Ag	108.905			0.200	2.000	20.000	
Cd	105.907						
Cd	107.904						
Cd	110.904	0.200	1.000	10.000	100.000	1000.000	
Cd	113.904	0.200	1.000	10.000	100.000	1000.000	
In	114.904						
Sn	117.902	0.200	1.000	10.000	100.000	1000.000	
Sb	120.904	0.100	0.500	5.000	50.000	500.000	
Sb	122.904	0.100	0.500	5.000	50.000	500.000	
Ba	134.906	0.400	2.000	20.000	200.000	2000.000	
Ba	136.905	0.400	2.000	20.000	200.000	2000.000	
Ir	192.963						
Au	196.967						

Hg	198.968					
Hg	199.968					
Hg	200.970		0.020	0.200	2.000	20.000
Hg	201.971		0.020	0.200	2.000	20.000
Tl	202.972		0.020	0.200	2.000	20.000
Tl	204.975		0.020	0.200	2.000	20.000
204	203.973					
206	205.975					
207	206.976					
Pb	207.977	0.200	1.000	10.000	100.000	1000.000
208	207.977					
Bi	208.980	0.200	1.000	10.000	100.000	1000.000
Th	232.038		0.100	1.000	10.000	100.000
U	238.050		0.100	1.000	10.000	100.000
Na	22.990		20.000	200.000	2000.000	20000.000
Mg	23.985		20.000	200.000	2000.000	20000.000
Mg	24.986		20.000	200.000	2000.000	20000.000
Si	27.977			100.000	1000.000	10000.000
Si	28.977					
P	30.994			10.000	100.000	1000.000
K	38.964		20.000	200.000	2000.000	20000.000
Sc-1	44.956					
Ca	42.959		20.000	200.000	2000.000	20000.000
Ti	46.952			10.000	100.000	1000.000
Ti	47.948					
Fe	53.940		20.000	200.000	2000.000	20000.000
Fe	55.935					
Fe	56.935		20.000	200.000	2000.000	20000.000
Ge-1	73.922					

Analyte	Mass	Curve T	Slope	Corr. Coeff.	Intercept
W	181.948	Linear Thru Zero	0.0000000	0.0000000	0.000000
W	182.950	Linear Thru Zero	0.0000000	0.0000000	0.000000
W	183.951	Linear Thru Zero	0.0000000	0.0000000	0.000000
W	185.954	Linear Thru Zero	0.0000000	0.0000000	0.000000
Cl	36.966	Linear Thru Zero	0.0000000	0.0000000	0.000000
C	13.003	Linear Thru Zero	0.0000000	0.0000000	0.000000
Li	7.016	Linear Thru Zero	0.0001297	0.9999620	0.000000
Be	9.012	Linear Thru Zero	0.0000478	0.9999824	0.000000
B	11.009	Linear Thru Zero	0.0000740	0.9999906	0.000000
Al	26.982	Linear Thru Zero	0.0008587	0.9999906	0.000000
Sc-2	44.956	Linear Thru Zero	0.0000000	0.0000000	0.000000
V	50.944	Linear Thru Zero	0.0105041	0.9999981	0.000000
Cr	51.941	Linear Thru Zero	0.0089841	0.9999992	0.000000
Cr	52.941	Linear Thru Zero	0.0000000	0.0000000	0.000000
Mn	54.938	Linear Thru Zero	0.0130138	0.9999971	0.000000
Co	58.933	Linear Thru Zero	0.0097697	0.9999981	0.000000
Ni	57.935	Linear Thru Zero	0.0000000	0.0000000	0.000000
Ni	59.933	Linear Thru Zero	0.0020685	0.9999972	0.000000
Cu	62.930	Linear Thru Zero	0.0043941	0.9999780	0.000000
Cu	64.928	Linear Thru Zero	0.0021125	0.9999822	0.000000
Zn	65.926	Linear Thru Zero	0.0010573	0.9999999	0.000000
Zn	66.927	Linear Thru Zero	0.0000000	0.0000000	0.000000
Zn	67.925	Linear Thru Zero	0.0007942	0.9999995	0.000000
Ge	73.922	Linear Thru Zero	0.0000000	0.0000000	0.000000
As	74.922	Linear Thru Zero	0.0013031	0.9999990	0.000000
Se	76.920	Linear Thru Zero	0.0000000	0.0000000	0.000000

Se	77.917	Linear Thru Zero	0.0002785	0.9999216	0.000000
Se	81.917	Linear Thru Zero	0.0001132	0.9999771	0.000000
Kr	83.912	Linear Thru Zero	0.0000000	0.0000000	0.000000
Sr	87.906	Linear Thru Zero	0.0165178	0.9999987	0.000000
Mo	94.906	Linear Thru Zero	0.0029045	0.9999957	0.000000
Mo	96.906	Linear Thru Zero	0.0000000	0.0000000	0.000000
Mo	97.906	Linear Thru Zero	0.0046964	0.9999965	0.000000
Ag	106.905	Linear Thru Zero	0.0089550	0.9999728	0.000000
Ag	108.905	Linear Thru Zero	0.0084252	0.9999734	0.000000
Cd	105.907	Linear Thru Zero	0.0000000	0.0000000	0.000000
Cd	107.904	Linear Thru Zero	0.0000000	0.0000000	0.000000
Cd	110.904	Linear Thru Zero	0.0020603	0.9999990	0.000000
Cd	113.904	Linear Thru Zero	0.0046419	0.9999995	0.000000
In	114.904	Linear Thru Zero	0.0000000	0.0000000	0.000000
Sn	117.902	Linear Thru Zero	0.0064702	0.9999955	0.000000
Sb	120.904	Linear Thru Zero	0.0069943	0.9999995	0.000000
Sb	122.904	Linear Thru Zero	0.0054578	0.9999979	0.000000
Ba	134.906	Linear Thru Zero	0.0022213	0.9999997	0.000000
Ba	136.905	Linear Thru Zero	0.0038737	0.9999981	0.000000
Ir	192.963	Linear Thru Zero	0.0000000	0.0000000	0.000000
Au	196.967	Linear Thru Zero	0.0000000	0.0000000	0.000000
Hg	198.968	Linear Thru Zero	0.0000000	0.0000000	0.000000
Hg	199.968	Linear Thru Zero	0.0000000	0.0000000	0.000000
Hg	200.970	Linear Thru Zero	0.0009267	0.9999973	0.000000
Hg	201.971	Linear Thru Zero	0.0020992	0.9999996	0.000000
Tl	202.972	Linear Thru Zero	0.0083771	0.9999997	0.000000
Tl	204.975	Linear Thru Zero	0.0211536	0.9999989	0.000000
204	203.973	Linear Thru Zero	0.0000000	0.0000000	0.000000
206	205.975	Linear Thru Zero	0.0000000	0.0000000	0.000000
207	206.976	Linear Thru Zero	0.0000000	0.0000000	0.000000
Pb	207.977	Linear Thru Zero	0.0283908	0.9999710	0.000000
208	207.977	Linear Thru Zero	0.0000000	0.0000000	0.000000
Bi	208.980	Linear Thru Zero	0.0233505	0.9999662	0.000000
Th	232.038	Linear Thru Zero	0.0454405	0.9999955	0.000000
U	238.050	Linear Thru Zero	0.0454083	0.9999861	0.000000
Na	22.990	Linear Thru Zero	0.0008039	0.9999994	0.000000
Mg	23.985	Linear Thru Zero	0.0005488	0.9999995	0.000000
Mg	24.986	Linear Thru Zero	0.0000776	0.9999976	0.000000
Si	27.977	Linear Thru Zero	0.0003564	0.9999976	0.000000
Si	28.977	Linear Thru Zero	0.0000000	0.0000000	0.000000
P	30.994	Linear Thru Zero	0.0000485	0.9999647	0.000000
K	38.964	Linear Thru Zero	0.0012672	0.9999998	0.000000
Sc-1	44.956	Linear Thru Zero	0.0000000	0.0000000	0.000000
Ca	42.959	Linear Thru Zero	0.0000026	0.9999975	0.000000
Ti	46.952	Linear Thru Zero	0.0001180	0.9999963	0.000000
Ti	47.948	Linear Thru Zero	0.0000000	0.0000000	0.000000
Fe	53.940	Linear Thru Zero	0.0006342	0.9999884	0.000000
Fe	55.935	Linear Thru Zero	0.0000000	0.0000000	0.000000
Fe	56.935	Linear Thru Zero	0.0002655	0.9999985	0.000000
Ge-1	73.922	Linear Thru Zero	0.0000000	0.0000000	0.000000

SGS Alaska Division Peer Review Report - Prep

Batch: **27962** Queue: **MXX**

13-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1226435	MB	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	09/10/14 10:20		
1226436	LCS	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	09/10/14 10:20		
1143645001	PS	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 12:15		1143645001-K
1226437	MS	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 12:15	1143645001	
1226438	MSD	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 12:15	1143645001	
1226439	BND	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 12:15	1143645001	
1143645002	BMS	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 12:15	1143645001	1143645002-K
1143645003	BMSD	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 12:15	1143645001	1143645003-K
1143645004	PS	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 15:45		1143645004-K
1143645005	PS	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 18:05		1143645005-K
1143645006	PS	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/26/14 12:00		1143645006-K
1143646007	PS	3010/6020	KAN	25	mL	25	mL	1	1	08/13/14 09:40	08/28/14 09:10		1143646007-J

POSTED BY KAN

Analyst's Signature: KAN **Peer Reviewer's Signature:** CDE

1

MXX 27962 Waters 3010/6020

Prep Method: 3010/6020
Analyst: KAN
Start Date/Time: 8/13/2014 9:40:44AM
End Date/Time: 8/13/2014 2:30:44PM

Temp C/HD ID/Grid ID: 96C/5/1E
Thermometer ID: 24
Spike Soln Lot #: MXX-14-16/P776
Spike Amount (mL): 0.5/0.25

HNO3 Lot #: P924
HCl Lot #: P774
Vessel Lot #: P1026
Filter Lot#:
Comments: LAB FILTERS

Lab Sample ID	Sample Type	Lab Filtered ?	Initial Vol (mL)	Final Vol (mL)	Original HSN	Paired HSN	Container_Id	Comments
1226435	MB	Y	25	25				
1226436	LCS	Y	25	25				
1143645001	PS	Y	25	25			1143645001-K	
1226437	MS	Y	25	25	1143645001			
1226438	MSD	Y	25	25	1143645001	1226437		
1226439	BND	Y	25	25	1143645001			
1143645002	BMS	Y	25	25	1143645001		1143645002-K	
1143645003	BMSD	Y	25	25	1143645001	1143645002	1143645003-K	
1143645004	PS	Y	25	25			1143645004-K	
1143645005	PS	Y	25	25			1143645005-K	
1143645006	PS	Y	25	25			1143645006-K	
1143646007	PS	Y	25	25			1143646007-J	

HNO3 samples were verified to be pH <2 at Sample Receiving.

Workorder No. 1143646

Dissolved Metals by ICP/MS

Method: SW6020A

Method Batch Id: MXX27962

Analysis Batch Id: MMS8639

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
QC Required Sample	1143645001		8/14/2014 1:26:12PM
Paying sample	1143646007	Water-EB-073114	8/14/2014 1:58:14PM

Workorder No. 1143646

Dissolved Metals by ICP/MS

Method: SW6020A

Method Batch Id: MXX27962

Analysis Batch Id: MMS8639

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
QC Required Sample	1143645001		8/14/2014 1:26:12PM
Paying sample	1143646007	Water-EB-073114	8/14/2014 1:58:14PM

Workorder No. 1143646

Waters Department

Method: SM21 2320B

Method Batch Id: WTI3998

Analysis Batch Id: WTI3998

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225772		8/8/2014 11:05:15AM
Lab Control Sample	1225773		8/8/2014 11:14:10AM
QC Required Sample	1148349001		8/8/2014 12:48:33PM
Duplicate	1225774		8/8/2014 12:56:27PM
Paying sample	1143646007	Water-EB-073114	8/8/2014 2:59:33PM

Workorder No. 1143646

Waters Department

Method: SM21 2320B

Method Batch Id: WTI3998

Analysis Batch Id: WTI3998

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225772		8/8/2014 11:05:15AM
Lab Control Sample	1225773		8/8/2014 11:14:10AM
QC Required Sample	1148349001		8/8/2014 12:48:33PM
Duplicate	1225774		8/8/2014 12:56:27PM
Paying sample	1143646007	Water-EB-073114	8/8/2014 2:59:33PM

SGS Ref.#	1225772	Method Blank	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	
Project Name/#	Cape Romanzof		**Method**	
Matrix	Water (Surface, Eff., Ground)		**Date**	

QC results affect the following production samples:

1143646007

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Waters Department					
Alkalinity	5.00U	10.0	3.10	mg/L	08/08/14
Batch WTI3998					
Method SM21 2320B					
Instrument Titration					

SGS Ref.#	1225774 Duplicate	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.	**Prep Batch**	
Project Name/#	Cape Romanzof	**Method**	
Original	1148349001	**Date**	
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Waters Department						
Alkalinity	97.0	97.5	mg/L	1	(< 25)	08/08/2014

Batch WTI3998
Method SM21 2320B
Instrument Titration

SGS Ref.#	1225773 Lab Control Sample	**Printed Date/Time**	08/19/2014	16:51
		Prep Batch		
Client Name	EA Engineering, Science and Tech.	**Method**		
Project Name/#	Cape Romanzof	**Date**		
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Waters Department								
Alkalinity	LCS	250	100	(85-115)			250 mg/L	08/08/2014

Batch WTI3998
Method SM21 2320B
Instrument Titration

SGS North America Inc.

WTI3998

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646, 1148349

Queue: **WTI** Batch: **3998**

Method: SM21 2320B

Run Date: 08/08/14 11:05 - 08/08/14 16:02

Extraction Batch(es):

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: Ngoc Le
Printed Name: Ngoc Le
Date: 8/8/14

Reviewer's Signature
Printed Name: Stephanie Charley
Date: 8-8-14

rmination overview

Time	Method	HSN	Conductivity (us/cm)	pH	Low Level Alk (mg/L)	Total Alkalinity	HC03 Alk	CO3 Alk	OH Alk	Acidity (mg/L)	Resistance (o...	Temperature
8-08 09:43:12 UTC-8	pH CAL- 3buffers SGS	pH Cal							6.89		100.20	
8-08 09:56:21 UTC-8	pH SGS	pH 7		6.96								
8-08 10:02:31 UTC-8	pH SGS	pH 4		3.97								
8-08 10:08:38 UTC-8	pH SGS	pH 10		10.01								
8-08 10:13:51 UTC-8	Conductivity Cal SGS	Cond Cal 998	0.99	22.71								
8-08 10:26:53 UTC-8	Conductivity Cal SGS	Cond Cal 998	0.98	22.70								
8-08 10:30:37 UTC-8	Conductivity STD Check SGS	Cond Cal 1.04	1.40	22.65							7142.86	
8-08 10:35:02 UTC-8	Conductivity STD Check SGS	Cond Cal 9.32	9.50	22.58							1052.63	
8-08 10:38:47 UTC-8	Conductivity STD Check SGS	Cond Cal 99.6	99.20	22.72							100.81	
8-08 10:42:32 UTC-8	Conductivity STD Check SGS	Cond Cal 998	1016.50	22.68							9.84	
8-08 10:46:16 UTC-8	Conductivity STD Check SGS	Cond Cal 9989	9897.20	22.74							1.01	
8-08 10:54:28 UTC-8	Cond-pH-Alkalinity SGS	Rinse	0.90	6.01	2.65	3.61	invalid	0.00	0.00		11111.11	22.61
8-08 11:05:15 UTC-8	Cond-pH-Alkalinity SGS	MB	0.50	6.11	0.72	1.24	invalid	0.00	0.00		20000.00	22.52
8-08 11:14:10 UTC-8	Cond-pH-Alkalinity SGS	LCS Alkalinity	553.20	10.02		250.20	18.12	232.08	0.00		18.08	116.04
8-08 11:30:53 UTC-8	pH-Alkalinity SGS	DL 1		7.48	3.67	4.04	3.67	0.00	0.00			
8-08 11:39:06 UTC-8	pH-Alkalinity SGS	DL 2		6.52	2.76	3.20	2.76	0.00	0.00			
8-08 11:45:56 UTC-8	pH-Alkalinity SGS	DL 3		6.19	2.55	2.96	2.55	0.00	0.00			
8-08 11:52:44 UTC-8	pH-Alkalinity SGS	DL 4		6.10	2.46	2.87	2.46	0.00	0.00			
8-08 11:59:41 UTC-8	pH-Alkalinity SGS	DL 5		5.99	2.38	2.82	2.38	0.00	0.00			
8-08 12:06:31 UTC-8	pH-Alkalinity SGS	DL 6		5.85	2.28	2.76	2.28	0.00	0.00			
8-08 12:13:15 UTC-8	pH-Alkalinity SGS	DL 7		5.81	2.25	2.65	2.25	0.00	0.00			
8-08 12:20:17 UTC-8	pH-Alkalinity SGS	DL 8		5.73	2.23	2.63	2.23	0.00	0.00			
8-08 12:27:20 UTC-8	pH-Alkalinity SGS	DL 9		5.68	2.12	2.53	2.12	0.00	0.00			
8-08 12:34:24 UTC-8	pH-Alkalinity SGS	DL 11		5.63	2.24	2.68	2.24	0.00	0.00			
8-08 12:41:31 UTC-8	pH-Alkalinity SGS	DL 1 rerun		5.33	1.73	2.21	1.73	0.00	0.00			
8-08 12:48:33 UTC-8	pH-Alkalinity SGS	8349-1D		6.13		96.96	96.96	0.00	0.00			
8-08 12:56:27 UTC-8	pH-Alkalinity SGS	8349-1D DUP		6.28		97.48	97.48	0.00	0.00			
8-08 13:04:15 UTC-8	pH-Alkalinity SGS	8349-1D		6.30		invalid	invalid	0.00	0.00			
8-08 13:12:00 UTC-8	pH-Alkalinity SGS	8349-1D DUP		6.31		90.29	90.29	0.00	0.00			
8-08 13:24:15 UTC-8	pH-Alkalinity SGS	8349-1D		6.35		88.12	88.12	0.00	0.00			
8-08 13:33:36 UTC-8	pH-Alkalinity SGS	8349-3C		7.19		161.96	161.96	0.00	0.00			
8-08 13:41:50 UTC-8	pH-Alkalinity SGS	8349-3C DUP		7.20		162.24	162.24	0.00	0.00			
8-08 13:50:00 UTC-8	pH-Alkalinity SGS	8349-4C		6.80		279.86	279.86	0.00	0.00			
8-08 13:59:31 UTC-8	pH-Alkalinity SGS	8349-5C		7.07		371.76	371.76	0.00	0.00			
8-08 14:09:45 UTC-8	pH-Alkalinity SGS	8349-6C		7.34		194.53	194.53	0.00	0.00			
8-08 14:18:14 UTC-8	pH-Alkalinity SGS	8349-7C		7.35		194.25	194.25	0.00	0.00			
8-08 14:26:48 UTC-8	pH-Alkalinity SGS	8349-8C		6.74		305.91	305.91	0.00	0.00			
8-08 14:36:46 UTC-8	pH-Alkalinity SGS	3645-4J		5.72		27.16	27.16	0.00	0.00			
8-08 14:43:59 UTC-8	pH-Alkalinity SGS	3645-5J		6.69		144.22	144.22	0.00	0.00			
8-08 14:52:15 UTC-8	pH-Alkalinity SGS	3645-6J		5.84		49.56	49.56	0.00	0.00			
8-08 14:59:33 UTC-8	pH-Alkalinity SGS	3646-7J		4.47		0.00	0.00	0.00	0.00			
8-08 15:04:52 UTC-8	pH SGS	8343-1F		8.12								
8-08 15:09:43 UTC-8	Cond-pH-Alkalinity SGS	8348-2C 20x	1078.80	5.95		invalid	invalid	0.00	0.00		9.27	20.01
8-08 15:[illegible]:17 UTC-8	Cond-pH-Alkalinity SGS	8348-2C 20x DUP	1106.50	5.93		309.66	309.66	0.00	0.00		9.04	19.98

rmination overview

Time	Method	HSN	Conductivity (us/cm)	pH	Low Level Alk (mg/L)	Total Alkalinity	HC03 Alk	CO3 Alk	OH Alk	Acidity (mg/L)	Resistance (o...	Temperature
3-08 15:55:19 UTC-8	pH-Alkalinity SGS	3645-1J		5.91		49.75	49.75	0.00	0.00			
3-08 16:02:42 UTC-8	pH-Alkalinity SGS	3645-8A		5.95		49.60	49.60	0.00	0.00			
3-08 16:10:06 UTC-8	pH SGS	8348-2C 20x		5.97								
3-08 16:14:50 UTC-8	pH SGS	8348-2C 20x DUP		5.96								
3-08 16:19:39 UTC-8	pH-Alkalinity SGS	3645-8A rerun		5.04	invalid	1.15	invalid	0.00	0.00			

SGS North America Inc.

Weekly calibration required for conductivity and pH

Conductivity last calibrated on: 08.08.14
pH last calibrated on: 08.08.14

Analyst: NLL
Date: 08/08/14

Auto-Titrator

File: 08.08.14

Method	Queue/Batch:
pH: SM4500H-B	WPH 3996
Conductivity: SM2510B	WAT 3997
Resistivity: SM2510A	WAT 2
Alkalinity: SM2320B	WTI 3998
Acidity: SM2310B	WTI 2

Sample ID	Post	Reporting (circle)	Comments
pH Cal	N	pH/ Cond/ Alk/ Acid/ Resist	
pH 7	Y	pH/ Cond/ Alk/ Acid/ Resist	1225762
pH 4	Y	pH/ Cond/ Alk/ Acid/ Resist	763
pH 10	Y	pH/ Cond/ Alk/ Acid/ Resist	764
Cond Cal 998	N	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 998	Y	pH/ Cond/ Alk/ Acid/ Resist	1225767
Cond Cal 1.04	N	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 9.32	Y	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 99.6	N	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 998	N	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 9989	Y	pH/ Cond/ Alk/ Acid/ Resist	1225768
Rinse	N	pH/ Cond/ Alk/ Acid/ Resist	
Rinse	N	pH/ Cond/ Alk/ Acid/ Resist	
MB	Y	pH/ Cond/ Alk/ Acid/ Resist	1225766 / 1225772
LCS Alkalinity	Y	pH/ Cond/ Alk/ Acid/ Resist	1225773
DL1	N	pH/ Cond/ Alk/ Acid/ Resist	
2	Y	pH/ Cond/ Alk/ Acid/ Resist	
3	Y	pH/ Cond/ Alk/ Acid/ Resist	
4	Y	pH/ Cond/ Alk/ Acid/ Resist	
5	Y	pH/ Cond/ Alk/ Acid/ Resist	
6	Y	pH/ Cond/ Alk/ Acid/ Resist	
7	Y	pH/ Cond/ Alk/ Acid/ Resist	
8	Y	pH/ Cond/ Alk/ Acid/ Resist	
9	N	pH/ Cond/ Alk/ Acid/ Resist	
11	Y	pH/ Cond/ Alk/ Acid/ Resist	
DL1 Rerun	N	pH/ Cond/ Alk/ Acid/ Resist	
8349 - 1D	Y	pH/ Cond/ Alk/ Acid/ Resist	
- 1D DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	1225774
- 1D	Y	pH/ Cond/ Alk/ Acid/ Resist	
- 1D DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	
- 1D	N	pH/ Cond/ Alk/ Acid/ Resist	
8349 - 3C	Y	pH/ Cond/ Alk/ Acid/ Resist	
- 3C DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	1225765 / 1225775
- 4C		pH/ Cond/ Alk/ Acid/ Resist	
- 5C		pH/ Cond/ Alk/ Acid/ Resist	

Titrant Lot #s: NaOH: P537
H_2SO_4: P345

pH/Alkalinity/Acidity Standards

Low Cal Std - pH 4.0 Lot# P-1047
Cal Std - pH 7.0 Lot# P-1044
High Cal Std - pH 10.0 Lot# P-1052

Alkalinity LCS Lot# LW13-39-6B
Acidity LCS Lot# LW13-39-33B

P = Alk to pH 8.3
T = Alk to pH 4.5

Conductivity Standards

				P & T Relationship	OH Alkalinity	CO_3 Alkalinity	HCO_3 Alkalinity
Low Cal Std True Value 1	1.04	Lot #	P-953	P = 0	0	0	T
Low Cal Std True Value 2	9.32	Lot #	P-961	P< 1/2 T	0	2P	T - 2P
Mid Cal Std True Value 1	99.6	Lot #	P-952	P = 1/2 T	0	2P	0
Mid Cal Std True Value 2	998	Lot #	P-849	P> 1/2 T	2P - T	2(T - P)	0
High Cal Std True Value	9989	Lot #	P-896	P = T	T	0	0

Refer to pg 167

SGS North America Inc.

Weekly calibration required for conductivity and pH

Auto-Titrator

Conductivity last calibrated on: _____

pH last calibrated on: _____

Analyst: _____

Date: _____

File: _____

Method	Queue/Batch:
pH: SM4500H-B	WPH _____
Conductivity: SM2510B	WAT _____
Resistivity: SM2510A	WAT _____
Alkalinity: SM2320B	WTI _____
Acidity: SM2310B	~~WTI~~ _____

Sample ID	Post	Reporting (circle)	Comments
8349-6C	Y	pH/ Cond/ Alk/ Acid/ Resist	
-7C	Y	pH/ Cond/ Alk/ Acid/ Resist	
-8C	Y	pH/ Cond/ Alk/ Acid/ Resist	
3645-4J		pH/ Cond/ Alk/ Acid/ Resist	
-5J		pH/ Cond/ Alk/ Acid/ Resist	
-6J		pH/ Cond/ Alk/ Acid/ Resist	
-7J		pH/ Cond/ Alk/ Acid/ Resist	
8343-1F		pH/ Cond/ Alk/ Acid/ Resist	
8348-2C 20x	Y	pH/ Cond/ Alk/ Acid/ Resist	
8348-2C 20x DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	1225769
3645-1J	Y	pH/ Cond/ Alk/ Acid/ Resist	
-8A	Y	pH/ Cond/ Alk/ Acid/ Resist	
8348-2C 20x	Y	pH/ Cond/ Alk/ Acid/ Resist	
-2C 20x DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	
3645-8A rerun	N	pH/ Cond/ Alk/ Acid/ Resist	
3683-2B	Y	pH/ Cond/ Alk/ Acid/ Resist	
		~~pH/ Cond/ Alk/ Acid/ Resist~~	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	8183MNU
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	

Titrant Lot #s: NaOH: _____

H_2SO_4: _____

pH/Alkalinity/Acidity Standards

Low Cal Std - pH 4.0 Lot# _____

Cal Std - pH 7.0 Lot# _____

High Cal Std - pH 10.0 Lot# _____

Alkalinity LCS Lot# _____

Acidity LCS Lot# _____

P = Alk to pH 8.3

T = Alk to pH 4.5

Conductivity Standards

Low Cal Std True Value 1		Lot #
Low Cal Std True Value 2		Lot #
Mid Cal Std True Value 1		Lot #
Mid Cal Std True Value 2		Lot #
High Cal Std True Value		Lot #

P & T Relationship	OH Alkalinity	CO_3 Alkalinity	HCO_3 Alkalinity
P = 0	0	0	T
P< 1/2 T	0	2P	T - 2P
P = 1/2 T	0	2P	0
P> 1/2 T	2P - T	2(T - P)	0
P = T	T	0	0

Workorder No. 1143646

Waters Department

Method: SW9056A

Method Batch Id: WXX10639

Analysis Batch Id: WIC5252

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Second Source Calib Check	1226173		8/8/2014 1:07:09PM
Initial Calib Verification	1226174		8/8/2014 1:27:27PM
Initial Calibration Blank	1226175		8/8/2014 1:47:45PM
Continuing Calib Verification	1226178		8/8/2014 7:12:31PM
Calibration Blank	1226179		8/8/2014 7:32:49PM
Method Blank	1226167		8/8/2014 7:53:07PM
Lab Control Sample	1226168		8/8/2014 8:13:25PM
Continuing Calib Verification	1226180		8/8/2014 11:16:12PM
Calibration Blank	1226181		8/8/2014 11:36:31PM
Undigested Duplicate	1226169		8/9/2014 12:17:07AM
Continuing Calib Verification	1226182		8/9/2014 2:39:15AM
Calibration Blank	1226183		8/9/2014 2:59:34AM

SGS Ref.#	1226175	Initial Calibration Blank	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Nitrate-N	0.0500U	0.100	mg/L	08/08/14
Nitrite-N	0.0360J	0.100	mg/L	08/08/14
Total Nitrate/Nitrite-N	0.0360J	0.100	mg/L	08/08/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226179	Calibration Blank	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Nitrate-N	0.0500U	0.100	mg/L	08/08/14
Nitrite-N	0.0350J	0.100	mg/L	08/08/14
Total Nitrate/Nitrite-N	0.0350J	0.100	mg/L	08/08/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226181	Calibration Blank	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Nitrate-N	0.0500U	0.100	mg/L	08/08/14
Nitrite-N	0.0350J	0.100	mg/L	08/08/14
Total Nitrate/Nitrite-N	0.0350J	0.100	mg/L	08/08/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226183	Calibration Blank	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Nitrate-N	0.0500U	0.100	mg/L	08/09/14
Nitrite-N	0.0380J	0.100	mg/L	08/09/14
Total Nitrate/Nitrite-N	0.0380J	0.100	mg/L	08/09/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226173 Second Source Calib Check	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	QCS	24.5	98	(90-110)	25 mg/L	08/08/2014
Nitrite-N	QCS	25.7	103	(90-110)	25 mg/L	08/08/2014
Total Nitrate/Nitrite-N	QCS	50.2	100	(90-110)	50 mg/L	08/08/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226174 Initial Calib Verification	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	ICV	19.8	99	(90-110)	20 mg/L	08/08/2014
Nitrite-N	ICV	20.7	104	(90-110)	20 mg/L	08/08/2014
Total Nitrate/Nitrite-N	ICV	40.6	101	(90-110)	40 mg/L	08/08/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226178 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	CCV	20.1	101	(90-110)	20 mg/L	08/08/2014
Nitrite-N	CCV	20.4	102	(90-110)	20 mg/L	08/08/2014
Total Nitrate/Nitrite-N	CCV	40.5	101	(90-110)	40 mg/L	08/08/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226180 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	CCV	20.6	103	(90-110)	20 mg/L	08/08/2014
Nitrite-N	CCV	20.7	104	(90-110)	20 mg/L	08/08/2014
Total Nitrate/Nitrite-N	CCV	41.3	103	(90-110)	40 mg/L	08/08/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226182 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	CCV	20.5	102	(90-110)	20 mg/L	08/09/2014
Nitrite-N	CCV	20.8	104	(90-110)	20 mg/L	08/09/2014
Total Nitrate/Nitrite-N	CCV	41.3	103	(90-110)	40 mg/L	08/09/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

Workorder No. 1143646

Waters Department

Method: SW9056A

Method Batch Id: WXX10639

Analysis Batch Id: WIC5252

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Second Source Calib Check	1226173		8/8/2014 1:07:09PM
Initial Calib Verification	1226174		8/8/2014 1:27:27PM
Initial Calibration Blank	1226175		8/8/2014 1:47:45PM
Continuing Calib Verification	1226178		8/8/2014 7:12:31PM
Calibration Blank	1226179		8/8/2014 7:32:49PM
Method Blank	1226167		8/8/2014 7:53:07PM
Lab Control Sample	1226168		8/8/2014 8:13:25PM
Continuing Calib Verification	1226180		8/8/2014 11:16:12PM
Calibration Blank	1226181		8/8/2014 11:36:31PM
Undigested Duplicate	1226169		8/9/2014 12:17:07AM
Continuing Calib Verification	1226182		8/9/2014 2:39:15AM
Calibration Blank	1226183		8/9/2014 2:59:34AM

SGS Ref.#	1226167	Method Blank	**Printed Date/Time**		08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	WXX10639
Project Name/#	Cape Romanzof			**Method**	METHOD
Matrix	Water (Surface, Eff., Ground)			**Date**	08/08/2014

QC results affect the following production samples:

1143646007

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Waters Department					
Nitrate-N	0.0500U	0.100	0.0310	mg/L	08/08/14
Nitrite-N	0.0500U	0.100	0.0310	mg/L	08/08/14
Total Nitrate/Nitrite-N	0.0500U	0.100	0.0310	mg/L	08/08/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226169	Undigested Duplicate	**Printed Date/Time**		08/19/2014 16:51
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	WXX10639
Project Name/#	Cape Romanzof			**Method**	METHOD
Original	1143645001			**Date**	8/8/2014 12:07:00PM
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143646007

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Waters Department						
Total Nitrate/Nitrite-N	0.520J	0.540	mg/L	4	(< 20)	08/09/2014

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226168 Lab Control Sample	**Printed Date/Time**		08/19/2014	16:51
		Prep	**Batch**	WXX10639	
Client Name	EA Engineering, Science and Tech.		**Method**	METHOD	
Project Name/#	Cape Romanzof		**Date**	08/08/2014	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Waters Department								
Nitrate-N	LCS	9.61	96	(90-110)			10 mg/L	08/08/2014
Nitrite-N	LCS	9.97	100	(90-110)			10 mg/L	08/08/2014
Total Nitrate/Nitrite-N	LCS	19.6	98	(90-110)			20 mg/L	08/08/2014

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

Workorder No. 1143646

Waters Department

Method: SW9056A

Method Batch Id: WXX10640

Analysis Batch Id: WIC5251

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Second Source Calib Check	1226020		8/8/2014 1:07:09PM
Initial Calib Verification	1226021		8/8/2014 1:27:27PM
Initial Calibration Blank	1226022		8/8/2014 1:47:45PM
Continuing Calib Verification	1226025		8/8/2014 7:12:31PM
Calibration Blank	1226026		8/8/2014 7:32:49PM
Method Blank	1226212		8/8/2014 7:53:07PM
Lab Control Sample	1226213		8/8/2014 8:13:25PM
QC Required Sample	1143645001		8/8/2014 8:33:43PM
Undigested Duplicate	1226214		8/8/2014 8:54:01PM
Paying sample	1143646007	Water-EB-073114	8/8/2014 10:55:54PM
Continuing Calib Verification	1226027		8/8/2014 11:16:12PM
Calibration Blank	1226028		8/8/2014 11:36:31PM

SGS Ref.#	1226022	Initial Calibration Blank	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Sulfate	0.0500U	0.100	mg/L	08/08/14
Batch WIC5251				
Method SW9056A				
Instrument Metrohm 733 DX2				

SGS Ref.#	1226026	Calibration Blank	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Sulfate	0.0500U	0.100	mg/L	08/08/14
Batch WIC5251				
Method SW9056A				
Instrument Metrohm 733 DX2				

SGS Ref.#	1226028	Calibration Blank	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Sulfate	0.0500U	0.100	mg/L	08/08/14
Batch WIC5251				
Method SW9056A				
Instrument Metrohm 733 DX2				

SGS Ref.#	1226020 Second Source Calib Check	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Sulfate	QCS	23.6	94	(90-110)	25 mg/L	08/08/2014

I atcs WIC5251
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226021 Initial Calib Verification	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Sulfate	ICV	19.2	96	(90-110)	20 mg/L	08/08/2014

I atcs WIC5251
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226025 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Sulfate	CCV	19.4	97	(90-110)	20 mg/L	08/08/2014

I atcs WIC5251
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226027 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Sulfate	CCV	20.0	100	(90-110)	20 mg/L	08/08/2014

I atcs WIC5251
Mets od SW9056A
unhtrBment Metrohm 733 DX2

Workorder No. 1143646

Waters Department

Method: SW9056A

Method Batch Id: WXX10640

Analysis Batch Id: WIC5251

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Second Source Calib Check	1226020		8/8/2014 1:07:09PM
Initial Calib Verification	1226021		8/8/2014 1:27:27PM
Initial Calibration Blank	1226022		8/8/2014 1:47:45PM
Continuing Calib Verification	1226025		8/8/2014 7:12:31PM
Calibration Blank	1226026		8/8/2014 7:32:49PM
Method Blank	1226212		8/8/2014 7:53:07PM
Lab Control Sample	1226213		8/8/2014 8:13:25PM
QC Required Sample	1143645001		8/8/2014 8:33:43PM
Undigested Duplicate	1226214		8/8/2014 8:54:01PM
Paying sample	1143646007	Water-EB-073114	8/8/2014 10:55:54PM
Continuing Calib Verification	1226027		8/8/2014 11:16:12PM
Calibration Blank	1226028		8/8/2014 11:36:31PM

SGS Ref.#	1226212	Method Blank	**Printed Date/Time**	08/19/2014	16:52
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	WXX10640	
Project Name/#	Cape Romanzof		**Method**	METHOD	
Matrix	Water (Surface, Eff., Ground)		**Date**	08/08/2014	

QC results affect the following production samples:

1143646007

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Waters Department					
Sulfate	0.0500U	0.100	0.0310	mg/L	08/08/14
Batch WIC5251					
Method SW9056A					
Instrument Metrohm 733 DX2					

SGS Ref.#	1226214	Undigested Duplicate	**Printed Date/Time**		08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	WXX10640
Project Name/#	Cape Romanzof			**Method**	METHOD
Original	1143645001			**Date**	8/8/2014 12:07:00PM
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143646007

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Waters Department						
Sulfate	4.03	4.19	mg/L	4	(< 20)	08/08/2014

Batch WIC5251
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226213 Lab Control Sample	**Printed Date/Time**	08/19/2014	16:52
		Prep Batch	WXX10640	
Client Name	EA Engineering, Science and Tech.	**Method**	METHOD	
Project Name/#	Cape Romanzof	**Date**	08/08/2014	
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143646007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Waters Department								
Sulfate	LCS	9.47	95	(90-110)			10 mg/L	08/08/2014

Batch WIC5251
Method SW9056A
Instrument Metrohm 733 DX2

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646

Queue: **WIC** Batch: **5252**

Method: EPA 300.0, SW9056A

Run Date: 08/08/14 13:07 - 08/09/14 02:59

Extraction Batch(es): WXX10639

Notes:
Changed Sample ID on chrom y8090220.chw From 3645-7I to 3646-7I

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: Stephanie Chacy
Date: 8-20-14

Reviewer's Signature
Printed Name: Whitney Federenko
Date: 8/20/14

Controlled Document Number: FS-0038 (Revised 03/22/2011)

SGS North America Inc.

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: IC30808 14.que
Data Files: 30812 06.chw - 30809 259.chw
Method: IC3An ions 061314A.mtw
Cal. Date: 6/13/14

Run Date: 8-8-14 SLC 8-12-14
Queue/Batch: WXX: 10635 + 10636 WIC: 5251
Analyst: SLC 10640
WXX: 10689 WIC 5252

#	Sample ID	Comments	Post (Y/N)
1	CO		N
2	CO		N
3	CO		N
4	QCS /		Y N
5	ICV /		Y N
6	ICB /		Y N
7	MB /	1226012	Y N
8	LCS /	1226013	Y N
9	8349-5C 5X /		Y N
10	-5C DUP 5X /	1226014	Y N
11	-5C MS 5X	1226015	Y N
12	8349-1D 25X /	NP - used 1X SLC 8-11-14	Y N
13	8349-3C 5X /		Y N
14	8349-4C 5X /		Y N
15	8349-6C /		Y N
16	8349-1D /		Y N
17	CCV /		Y N
18	CB /		Y N
19	8349-7C /		Y N
20	-7C 5X /	NP - used 1X	N
21	8349-8C /		Y N
22	CCV /		Y N
23	CB /	SLC 8-12-14	Y N
24	MB /	1226016 1226212 / 1226167	Y N
25	LCS /	1226017 1226213 / 1226168	Y N
26	3645-1S /		Y N
27	SLC ~~-8215~~ DUP /	~~1226018~~ 1226214	Y N
28	8349 -3S BMS /		Y N
29	-3S BMSD /		Y N
30	3645 -4S /		Y N
31	-5S /		Y N
32	-6S /		Y N
33	-7S /		Y N
34	CCV /		Y N
35	CB /		Y N
36	3645-1I 10X /	SLC 8-12-14	Y N
37	SLC -8215 DUP 10X /	~~1226019~~ 1226169	Y N
38	8349 -2I BMS 10X /		Y N
39	-3I BMSD 10X /		Y N
40	-4I 10X /		Y N

Daily Checks:
- [X] Eluent Full
- [X] Regenerate Full
- [X] Water Full
- 13.86 Baseline (µS/cm)
- 9.2 Backpressure (Mpa)

Standard 1x dilution unless noted by sample ID.

Standards	Prep Date	Lot #
CCV/LFB:	8-8-14	P 759 / P847
QCS:		P 624 / P852
H2SO4:		P443
Eluent:		LW9-463-4R
Filter Lot#:		P1084

SGS North America Inc.

see pg 94 SLC 8-11-14

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: _____ Run Date: _____
Data Files: _____ Queue/Batch: _____
Method: _____ Analyst: _____
Cal. Date: _____

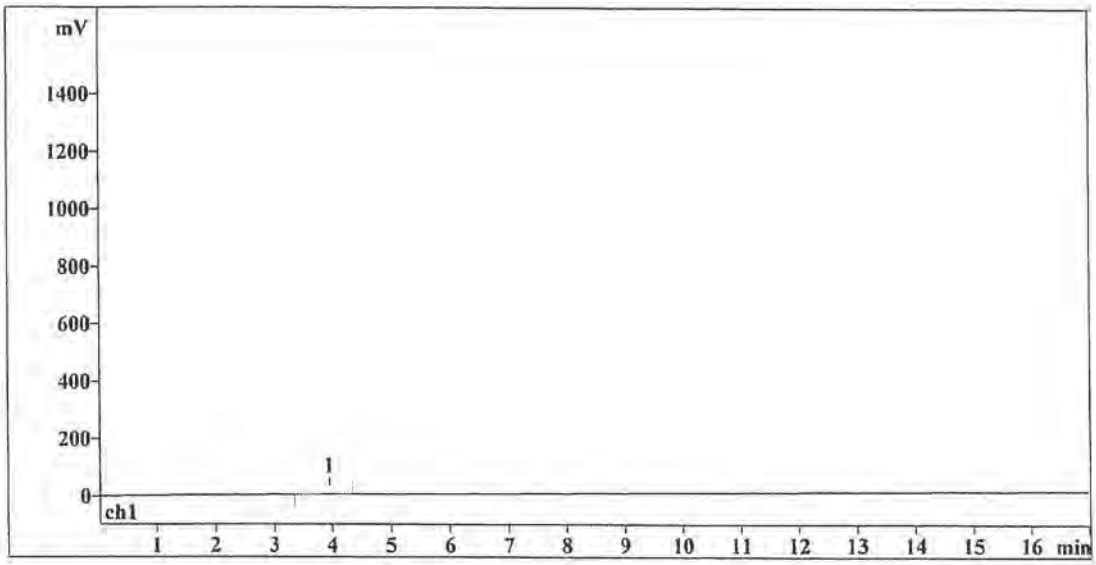
#	Sample ID	Comments	Post (Y/N)
41	3645-5I 10X	✓	☒ Y ☐ N
42	-6I 10X	✓	☒ Y ☐ N
43	-7I 10X	✓	☒ Y ☐ N
44	CCV	✓	☒ Y ☐ N
45	CB	✓	☒ Y ☐ N
			☐ Y ☐ N
			☐ Y ☐ N
			☐

Report date: 8/11/2014 1:48:33 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:06:14 PM
File: y8081206.chw Last save: 8/8/2014 12:23:15 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1898

SAMPLE:
:
Vial number: 1
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.95	1.61	23.199	0.000	

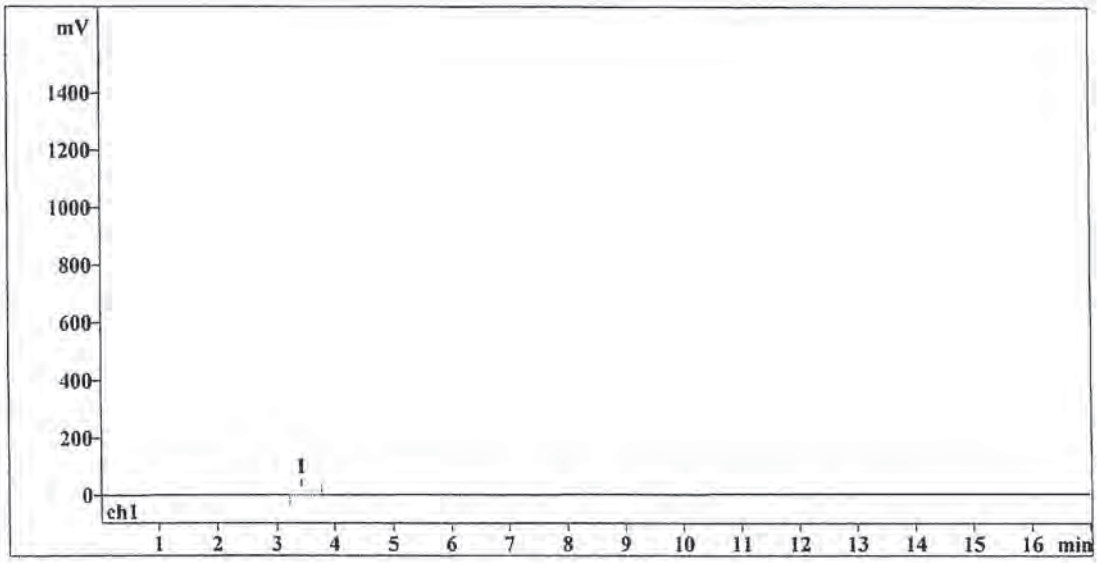
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:37 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:26:32 PM
File: y8081226.chw Last save: 8/8/2014 12:43:33 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1900

SAMPLE:
:
Vial number: 2
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.42	0.16	2.174	0.000	

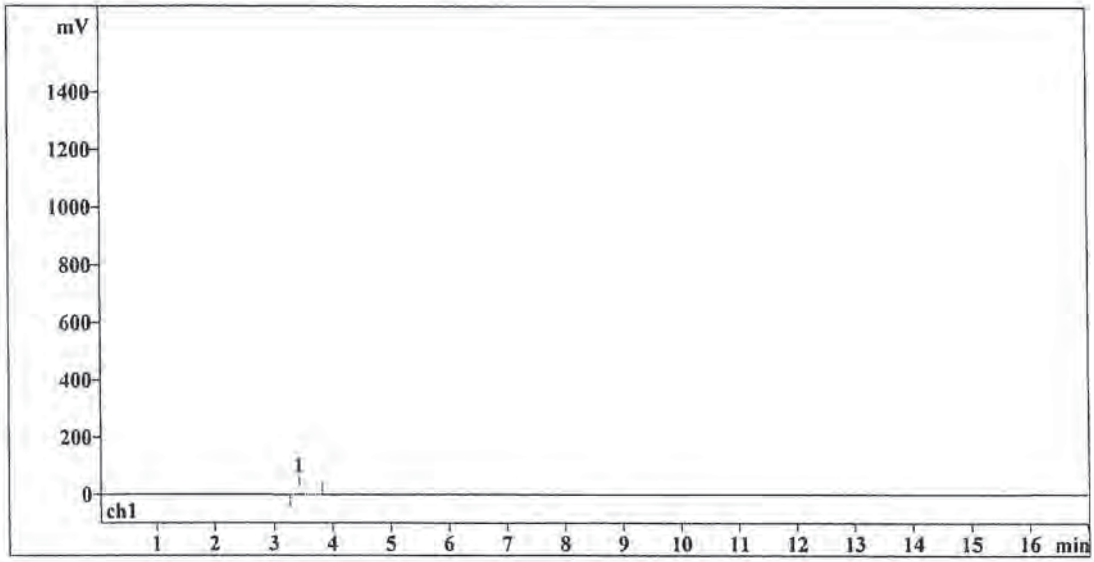
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:41 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:46:51 PM
File: y8081246.chw Last save: 8/8/2014 1:03:52 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1902

SAMPLE:
:
Vial number: 3
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.42	0.15	1.898	0.000	

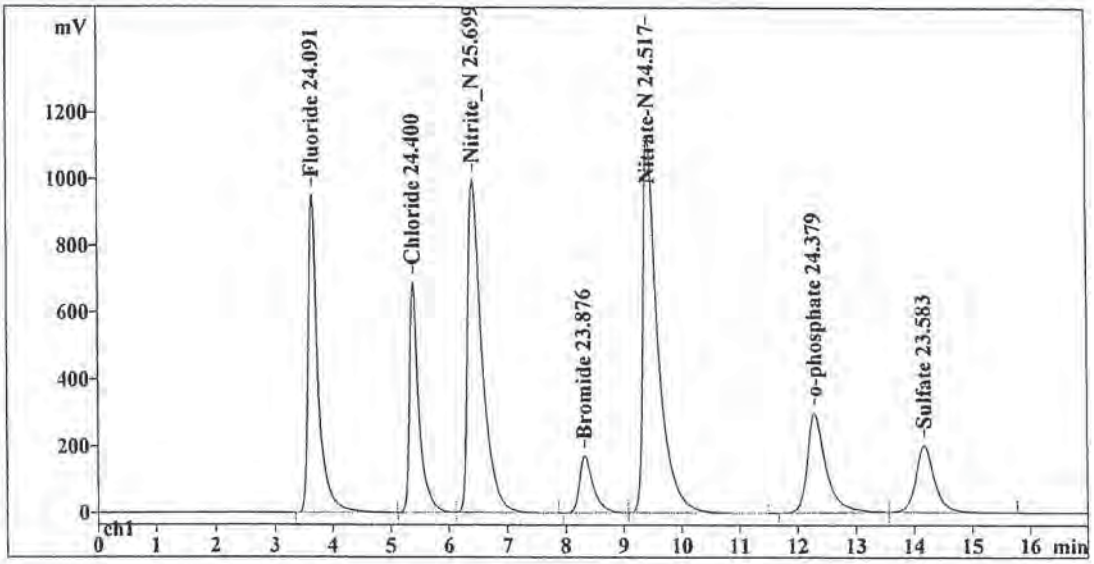
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:46 PM
Printed by: Stephanie L. Charley

Ident: QCS
Analysis from: 8/8/2014 1:07:09 PM
File: y8081307.chw Last save: 8/8/2014 1:24:09 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1904

SAMPLE:
:
Vial number: 4
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	952.29	11191.694	24.091	Fluoride
2	5.41	690.15	7472.977	24.400	Chloride
3	6.43	996.10	16891.334	25.699	Nitrite_N
4	8.34	170.37	2832.763	23.876	Bromide
5	9.45	1127.28	20080.104	24.517	Nitrate-N
6	12.30	298.12	6655.113	24.379	o-phosphate
7	14.18	201.40	4493.377	23.583	Sulfate
7	17.00	4435.71	69617.361	170.546	

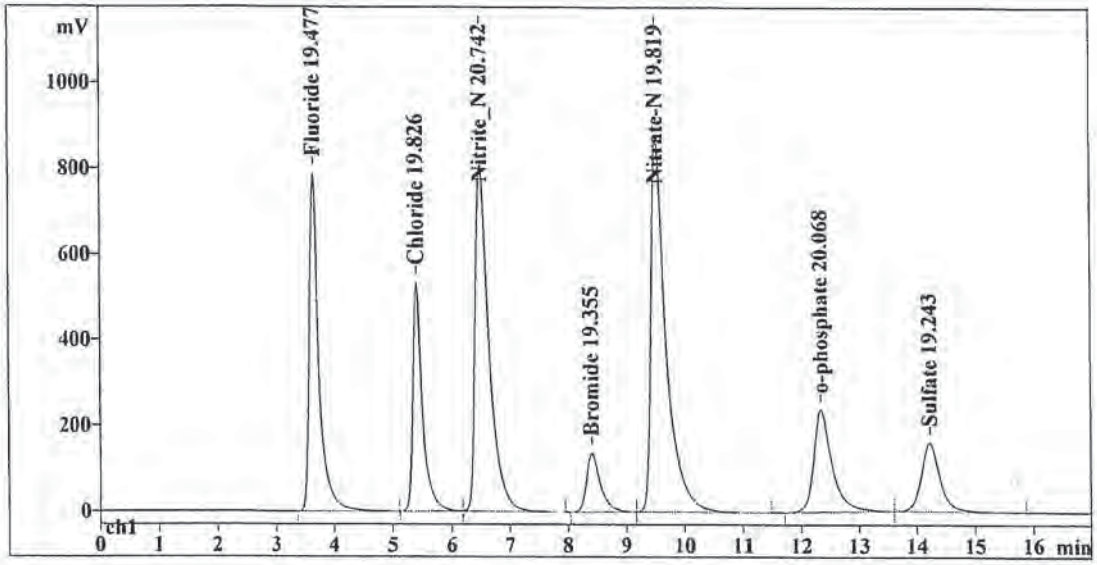
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:51 PM
Printed by: Stephanie L. Charley

Ident: ICV
Analysis from: 8/8/2014 1:27:27 PM
File: y8081327.chw Last save: 8/8/2014 1:44:27 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1906

SAMPLE:
:
Vial number: 5
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	787.84	8951.523	19.477	Fluoride
2	5.41	535.29	5915.618	19.826	Chloride
3	6.51	808.46	13494.281	20.742	Nitrite_N
4	8.41	137.18	2261.727	19.355	Bromide
5	9.53	876.05	15774.337	19.819	Nitrate-N
6	12.35	238.72	5352.051	20.068	o-phosphate
7	14.23	159.89	3591.885	19.243	Sulfate
7	17.00	3543.43	55341.422	138.530	

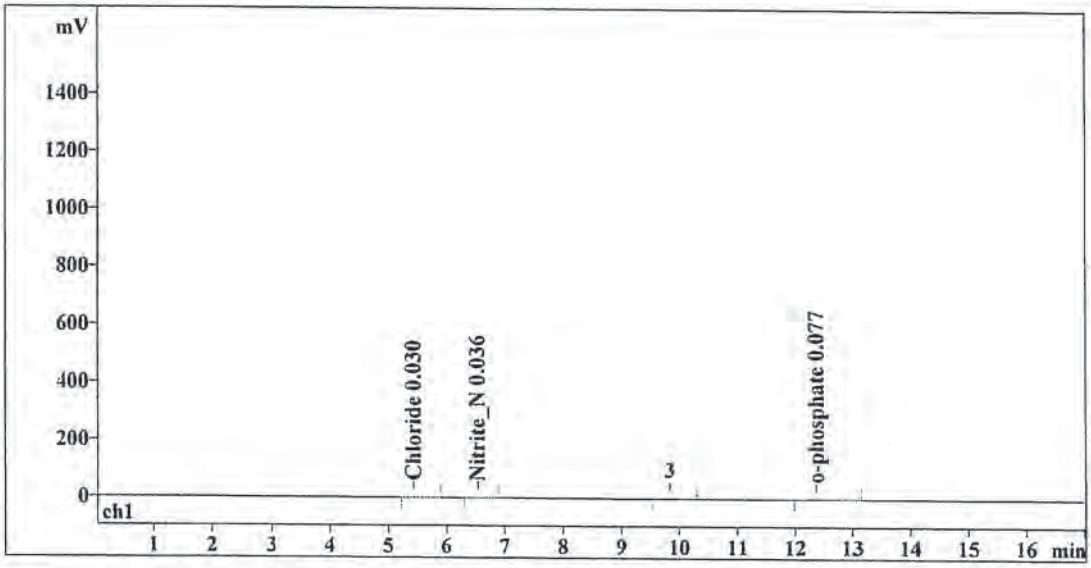
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:49:02 PM
Printed by: Stephanie L. Charley

Ident: ICB
Analysis from: 8/8/2014 1:47:45 PM
File: y8081347.chw Last save: 8/8/2014 2:04:45 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1908

SAMPLE:
:
Vial number: 6
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.44	0.40	4.694	0.030	Chloride
2	6.54	0.18	2.313	0.036	Nitrite_N
3	9.82	0.21	3.804	0.000	
4	12.37	0.33	9.779	0.077	o-phosphate
4	17.00	1.11	20.590	0.143	

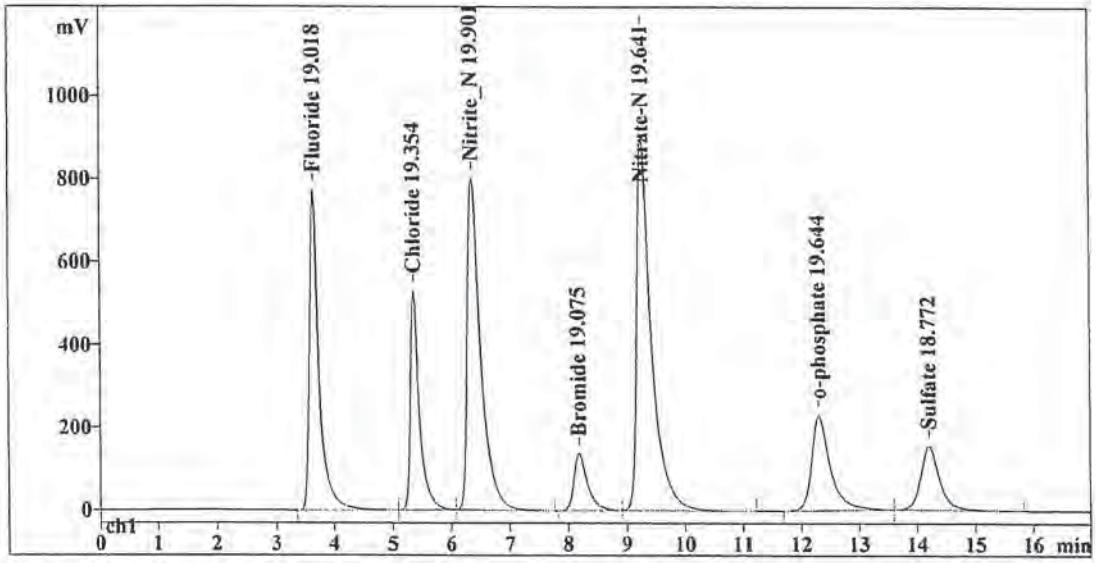
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:50:52 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 5:31:01 PM
File: y8081733.chw Last save: 8/9/2014 8:31:02 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1930

SAMPLE:
:
Vial number: 17
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	772.88	8731.231	19.018	Fluoride
2	5.38	530.56	5760.056	19.354	Chloride
3	6.38	802.59	12925.303	19.901	Nitrite_N
4	8.19	138.77	2226.887	19.075	Bromide
5	9.28	905.37	15615.881	19.641	Nitrate-N
6	12.32	231.41	5227.460	19.644	o-phosphate
7	14.21	155.62	3496.389	18.772	Sulfate
7	17.00	3537.19	53983.207	135.404	

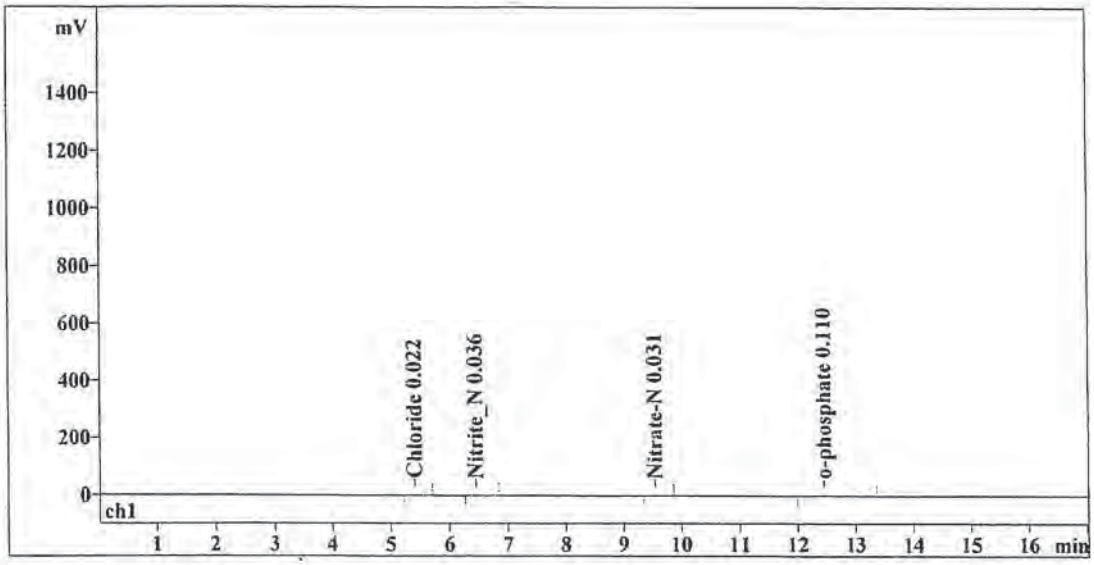
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:01 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 5:51:19 PM
File: y8081751.chw Last save: 8/8/2014 6:08:19 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1932

SAMPLE:
:
Vial number: 18
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.40	0.25	2.651	0.022	Chloride
2	6.45	0.18	2.244	0.036	Nitrite_N
3	9.55	0.10	1.567	0.031	Nitrate-N
4	12.45	0.52	17.788	0.110	o-phosphate
4	17.00	1.05	24.250	0.199	

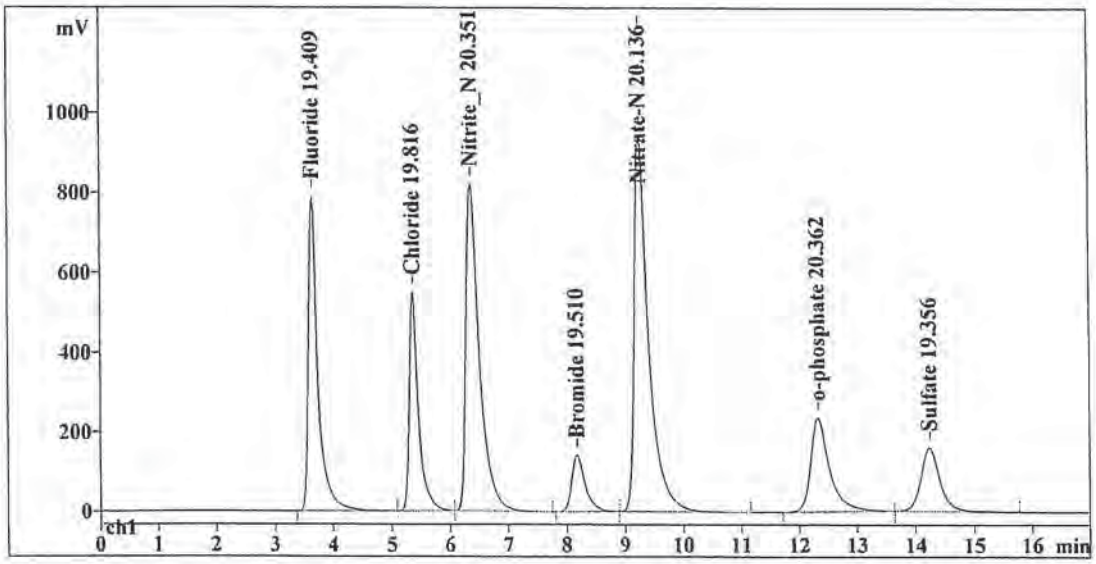
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:44 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 7:12:31 PM
File: y8081914.chw Last save: 8/9/2014 8:31:24 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1940

SAMPLE:
:
Vial number: 22
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	788.78	8918.947	19.409	Fluoride
2	5.37	549.56	5912.543	19.816	Chloride
3	6.38	821.05	13229.721	20.351	Nitrite_N
4	8.18	143.34	2280.991	19.510	Bromide
5	9.26	941.12	16055.884	20.136	Nitrate-N
6	12.33	238.61	5438.853	20.362	o-phosphate
7	14.24	161.24	3614.732	19.356	Sulfate
7	17.00	3643.69	55451.671	138.940	

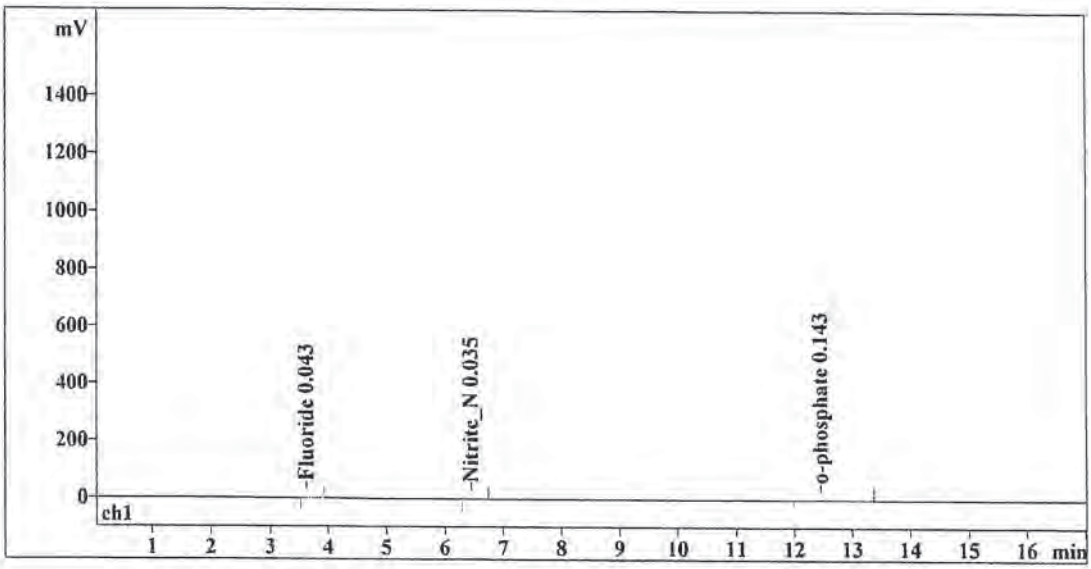
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:47 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 7:32:49 PM
File: y8081932.chw Last save: 8/8/2014 7:49:50 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1942

SAMPLE:
:
Vial number: 23
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.62	0.14	1.184	0.043	Fluoride
2	6.45	0.14	1.622	0.035	Nitrite_N
3	12.47	0.75	25.856	0.143	o-phosphate
3	17.00	1.02	28.662	0.221	

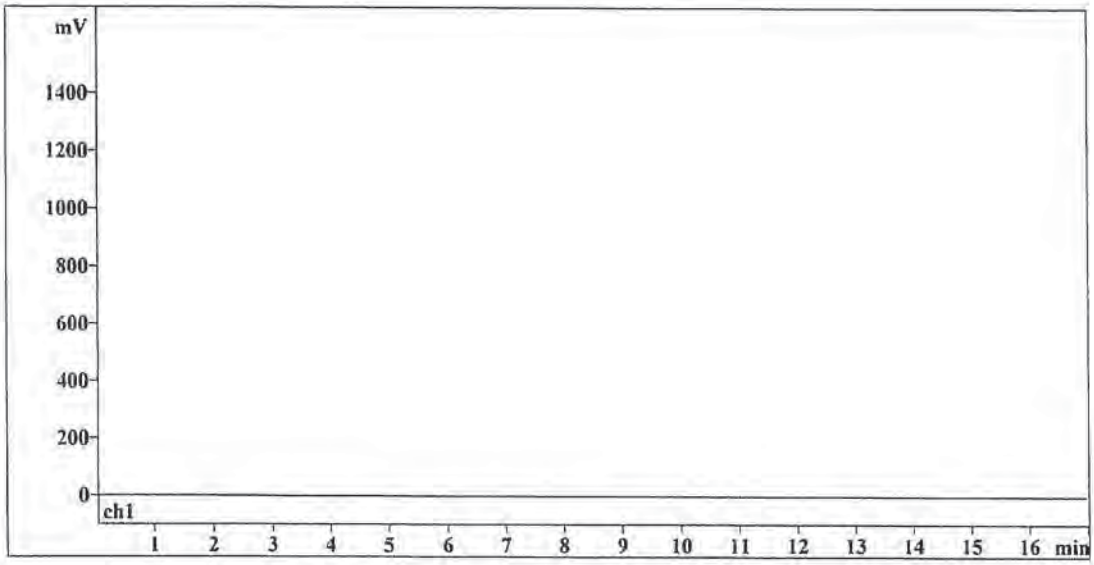
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METROHM LTD

Report date: 8/11/2014 1:51:51 PM
Printed by: Stephanie L. Charley

Ident: MB
Analysis from: 8/8/2014 7:53:07 PM
File: y8081953.chw Last save: 8/8/2014 8:10:07 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1944

SAMPLE:
:
Vial number: 24
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No peaks

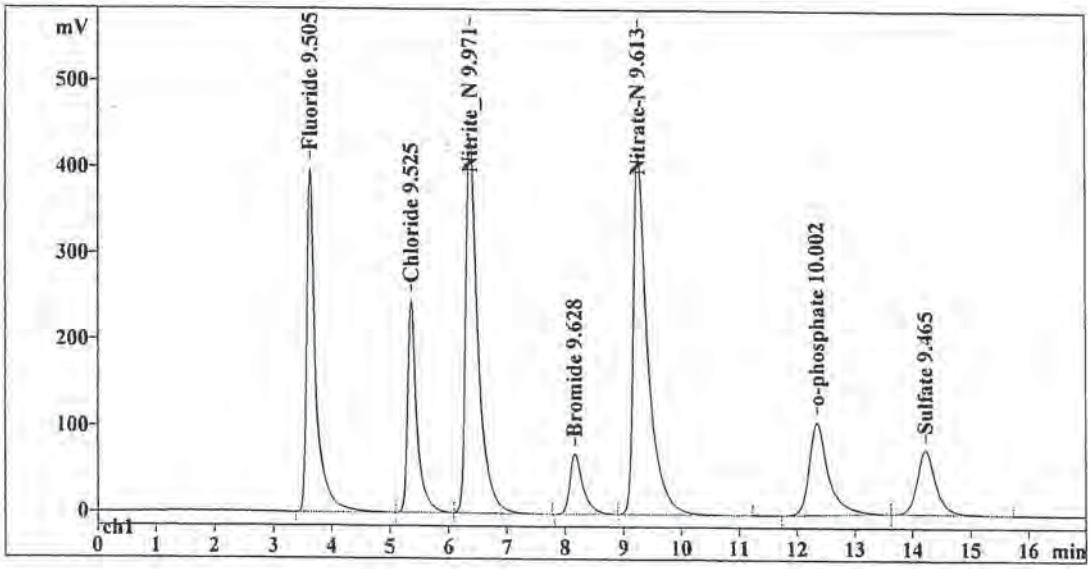
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:01 PM
Printed by: Stephanie L. Charley

Ident: LCS
Analysis from: 8/8/2014 8:13:25 PM
File: y8082015.chw Last save: 8/9/2014 8:31:35 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1946

SAMPLE:
:
Vial number: 25
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	398.99	4267.354	9.505	Fluoride
2	5.37	246.87	2697.357	9.525	Chloride
3	6.39	434.91	6343.857	9.971	Nitrite_N
4	8.17	70.19	1090.815	9.628	Bromide
5	9.27	420.84	7238.661	9.613	Nitrate-N
6	12.35	108.16	2538.170	10.002	o-phosphate
7	14.24	74.93	1693.627	9.465	Sulfate
7	17.00	1754.89	25869.842	67.710	

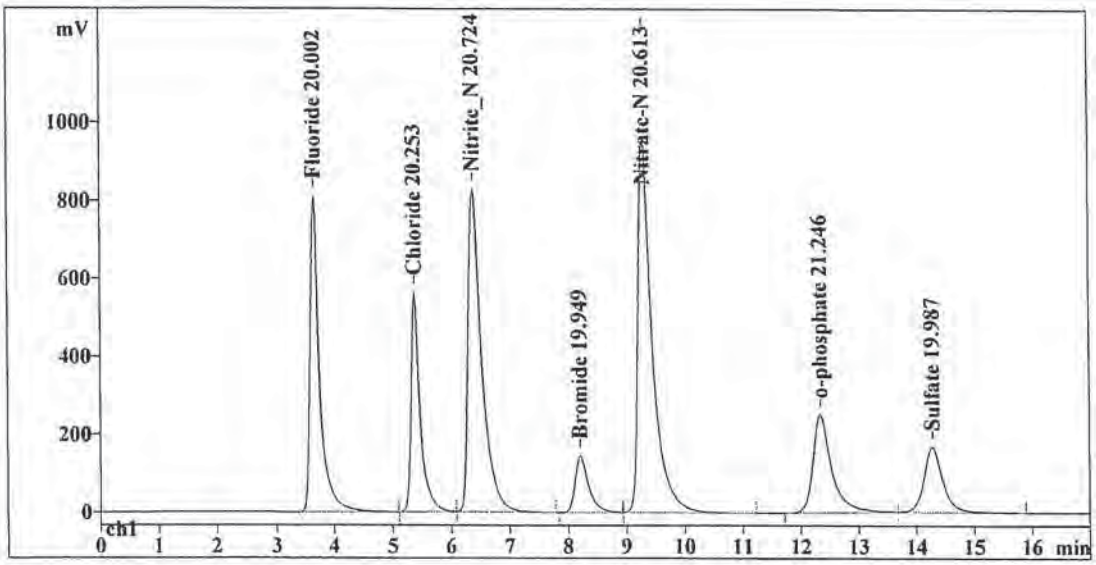
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:41 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 11:16:12 PM
File: y8082318.chw Last save: 8/9/2014 8:32:11 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1964

SAMPLE:
:
Vial number: 34
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

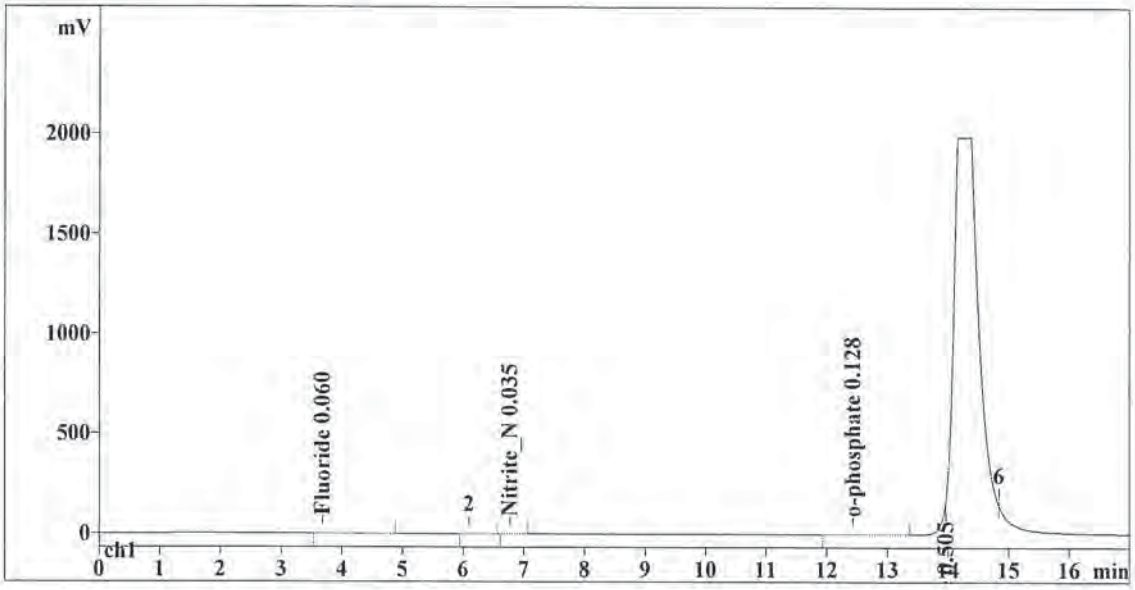
No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	809.98	9204.138	20.002	Fluoride
2	5.39	563.60	6057.528	20.253	Chloride
3	6.39	829.14	13482.500	20.724	Nitrite_N
4	8.21	145.25	2335.697	19.949	Bromide
5	9.31	960.83	16482.381	20.613	Nitrate-N
6	12.34	251.48	5701.496	21.246	o-phosphate
7	14.28	166.62	3743.489	19.987	Sulfate
7	17.00	3726.91	57007.229	142.774	

This report has been created by IC Net
METROHM LTD

Report date: 8/20/2014 10:54:29 AM
Printed by: Stephanie L. Charley

Ident: 3646-07I-X10
Analysis from: 8/9/2014 2:18:56 AM
File: y8090220.chw Last save: 8/11/2014 2:25:00 PM
Modified!
Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1982

SAMPLE:
:
Vial number: 43
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.69	0.23	8.466	0.060	Fluoride
2	6.09	0.14	3.736	0.000	
3	6.78	0.15	2.138	0.035	Nitrite_N
4	12.44	0.80	22.226	0.128	o-phosphate
5	13.96	-2.80	-85.670	0.505	Sulfate
6	14.84	-0.00	-0.000	0.000	
6	17.00	4.12	122.236	0.728	

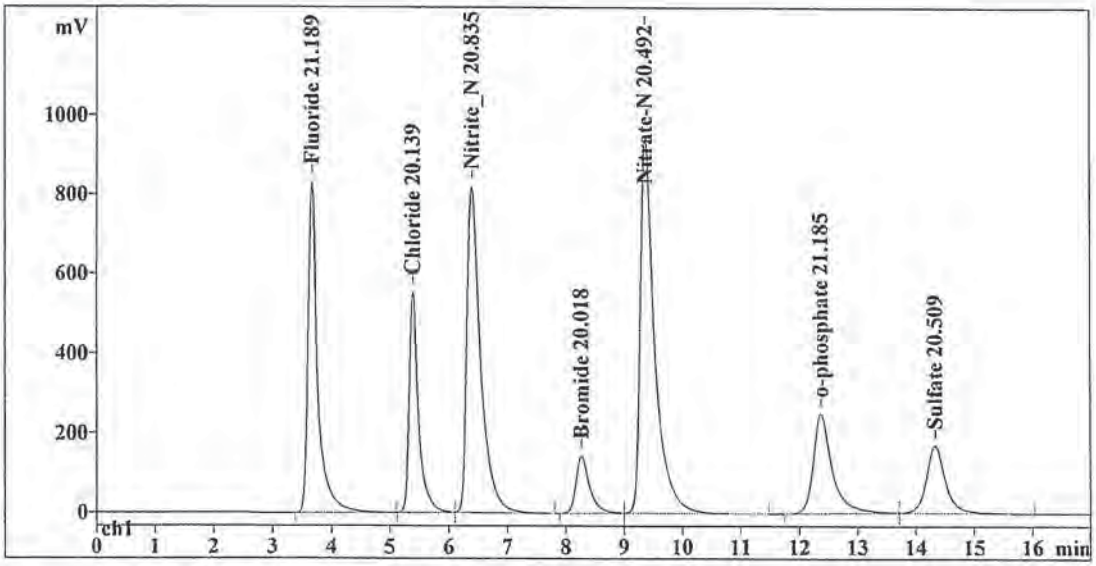
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 2:02:26 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/9/2014 2:39:15 AM
File: y8090239.chw Last save: 8/9/2014 2:56:15 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1984

SAMPLE:
:
Vial number: 44
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	832.21	9777.161	21.189	Fluoride
2	5.39	553.95	6019.373	20.139	Chloride
3	6.40	820.77	13557.297	20.835	Nitrite_N
4	8.27	144.34	2344.236	20.018	Bromide
5	9.37	947.79	16374.194	20.492	Nitrate-N
6	12.37	250.80	5683.386	21.185	o-phosphate
7	14.33	169.59	3850.662	20.509	Sulfate
7	17.00	3719.44	57606.308	144.366	

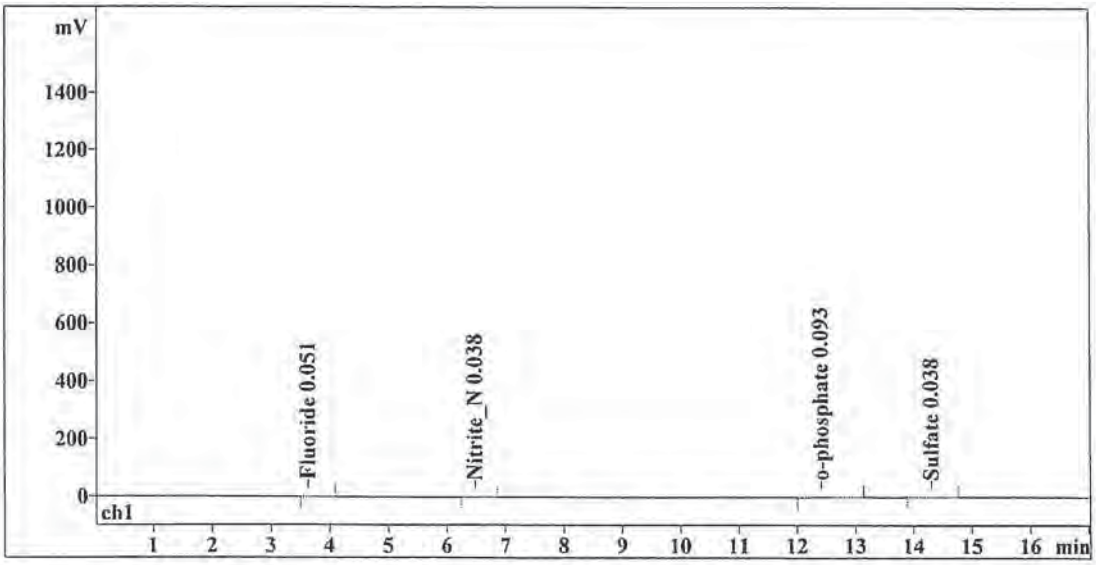
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 2:02:31 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/9/2014 2:59:34 AM
File: y8090259.chw Last save: 8/9/2014 3:16:34 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1986

SAMPLE:
:
Vial number: 45
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	0.41	4.387	0.051	Fluoride
2	6.48	0.30	3.906	0.038	Nitrite_N
3	12.42	0.49	13.660	0.093	o-phosphate
4	14.31	0.22	4.906	0.038	Sulfate
4	17.00	1.43	26.859	0.220	

This report has been created by IC Net
METROHM LTD

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646, 1148349

Queue: **WIC** Batch: **5251**

Method: EPA 300.0, SW9056A

Run Date: 08/08/14 13:07 - 08/09/14 02:59

Extraction Batch(es): WXX10635, WXX10640

Notes:
Changed Sample ID on chrom y8082255.chu from 3645-TS to 3646-TS.

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: SA
Printed Name: Stephanie Chaby
Date: 8-20-14

Reviewer's Signature: Whitney Federenko
Printed Name: Whitney Federenko
Date: 8/20/14

Controlled Document Number: FS-0038 (Revised 03/22/2011)

SGS North America Inc.

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: IC3080814.qve
Data Files: 3081206.chw - 3080259.chw
Method: IC3AN-ms0613I4A.mtw
Cal. Date: 6/13/14

Run Date: 8-8-14 SLC 8-12-14
Queue/Batch: WXX: 10635 + [illegible] WIC: 5251
Analyst: SLC 10640
WXX: 10639 WIC 5252

#	Sample ID	Comments	Post (Y/N)
1	CO /		☐ Y ☒ N
2	CO /		☐ Y ☒ N
3	CO /		☐ Y ☒ N
4	QCS /		☒ Y ☐ N
5	ICV /		☒ Y ☐ N
6	ICB /		☒ Y ☐ N
7	MB /	1226012	☒ Y ☐ N
8	LCS /	1226013	☒ Y ☐ N
9	8349-5C 5X		☒ Y ☐ N
10	-5C DUP 5X /	1226014	☒ Y ☐ N
11	-5C MS 5X /	1226015	☒ Y ☐ N
12	8349-1D 25X /	NP - used 1X	☒ Y ☐ N
13	8349-3C 5X /	SLC 8-11-14	☒ Y ☒ N
14	8349-4C 5X /		☒ Y ☐ N
15	8349-6C /		☒ Y ☐ N
16	8349-1D /		☒ Y ☐ N
17	CCV /		☒ Y ☐ N
18	CB /		☒ Y ☐ N
19	8349-7C /		☒ Y ☐ N
20	-7C 5X /	NP - used 1X	☐ Y ☒ N
21	8349-8C /		☒ Y ☐ N
22	CCV /		☒ Y ☐ N
23	CB /	SLC 8-12-14	☒ Y ☐ N
24	MB /	1226016 1226212 / 1226167	☒ Y ☐ N
25	LCS /	1226017 1226213 / 1226168	☒ Y ☐ N
26	3645-1S /		☒ Y ☐ N
27	SC -8A IS DUP /	1226018 1226214	☒ Y ☐ N
28	8-12-14 -2S BMS /		☒ Y ☐ N
29	-3S BMSD /		☒ Y ☐ N
30	3645-4S /		☒ Y ☐ N
31	-5S /		☒ Y ☐ N
32	-6S /		☒ Y ☐ N
33	3646-7S /		☒ Y ☐ N
34	CCV /		☒ Y ☐ N
35	CB /		☒ Y ☐ N
36	3645-1I 10X /	SLC 8-12-14	☒ Y ☐ N
37	SC -8 I DUP 10X /	1226019 1226169	☒ Y ☐ N
38	8-12-14 -2I BMS 10X /		☒ Y ☐ N
39	-3I BMSD 10X /		☒ Y ☐ N
40	-4I 10X /		☒ Y ☐ N

Daily Checks:
- ☒ Eluent Full
- ☒ Regenerate Full
- ☒ Water Full
- 13.86 Baseline (µS/cm)
- 9.2 Backpressure (Mpa)

Standard 1x dilution unless noted by sample ID.

Standards	Prep Date	Lot #
CCV/LFB:	8-8-14	P 759 / P847
QCS:		P 624 / P852
H2SO4:		P443
Eluent:		LW9-463.4R
Filter Lot#:		P1084

SGS North America Inc.

see pg 94 SLC 8-11-14

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: _____ Run Date: _____
Data Files: _____ Queue/Batch: _____
Method: _____ Analyst: _____
Cal. Date: _____

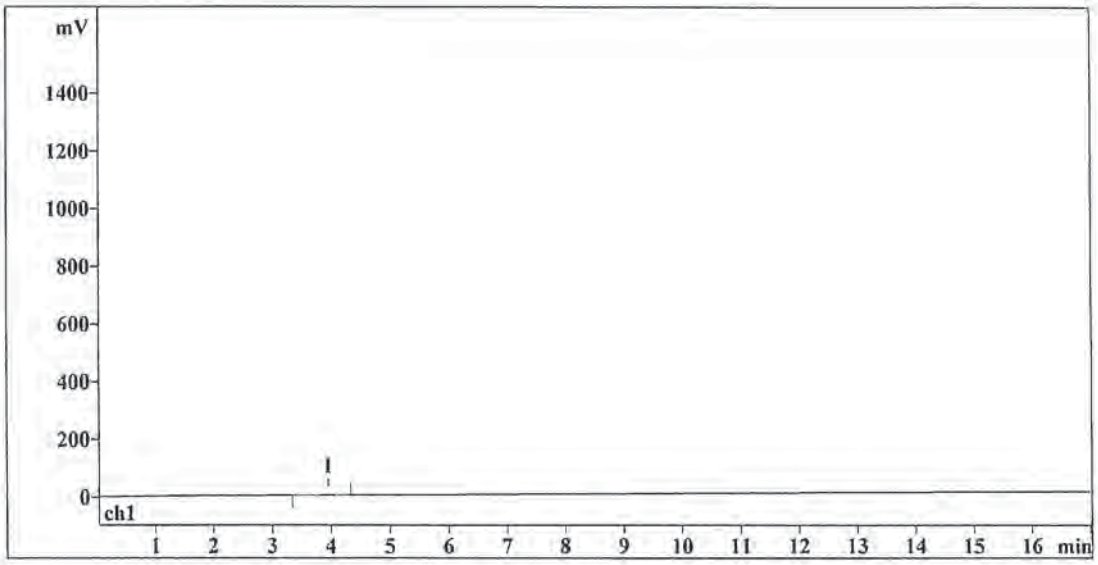
#	Sample ID	Comments	Post (Y/N)
41	3645-5I 10X	/	☒ Y ☐ N
42	-6I 10X	/	☒ Y ☐ N
43	3646-7I 10X	/	☒ Y ☐ N
44	CCV	/	☒ Y ☐ N
45	CB	/	☒ Y ☐ N
			☐ Y ☐ N
			☐ Y ☐ N
			☐

Report date: 8/11/2014 1:48:33 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:06:14 PM
File: y8081206.chw Last save: 8/8/2014 12:23:15 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1898

SAMPLE:
:
Vial number: 1
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.95	1.61	23.199	0.000	

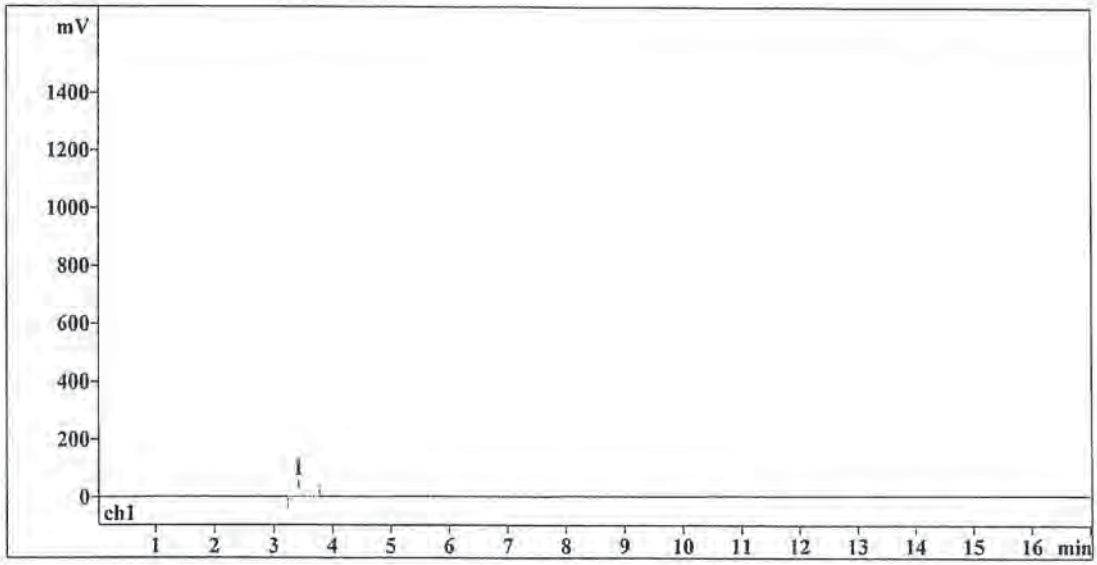
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:37 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:26:32 PM
File: y8081226.chw Last save: 8/8/2014 12:43:33 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1900

SAMPLE:
:
Vial number: 2
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.42	0.16	2.174	0.000	

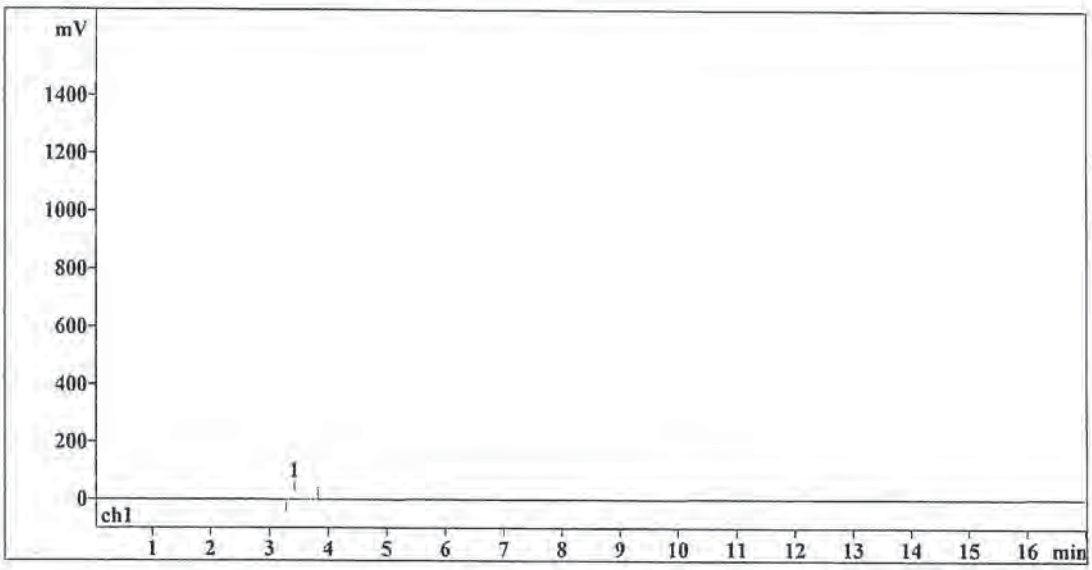
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:41 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:46:51 PM
File: y8081246.chw Last save: 8/8/2014 1:03:52 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1902

SAMPLE:
:
Vial number: 3
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.42	0.15	1.898	0.000	

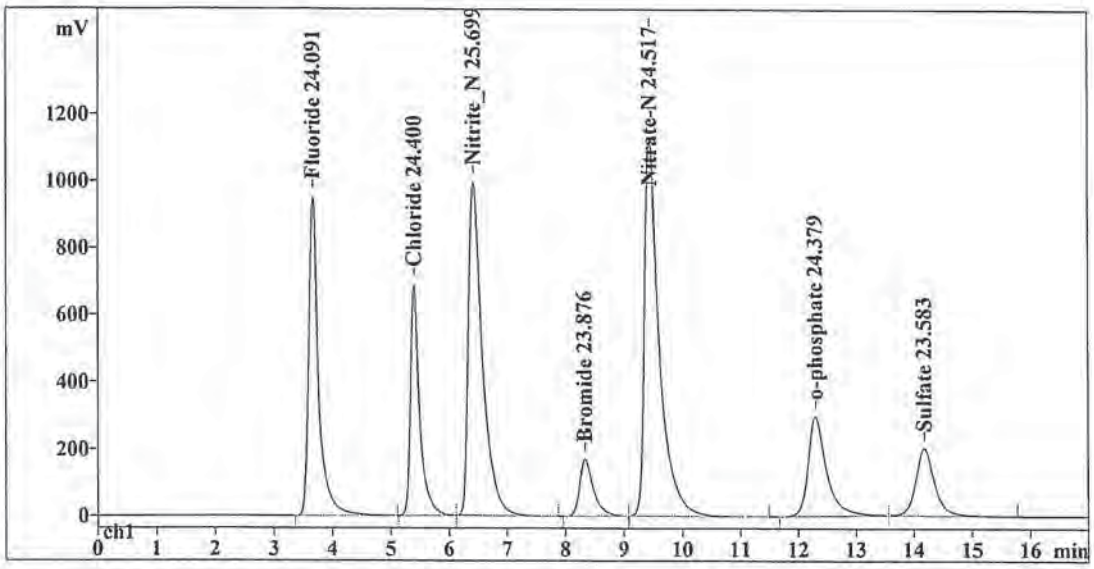
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:46 PM
Printed by: Stephanie L. Charley

Ident: QCS
Analysis from: 8/8/2014 1:07:09 PM
File: y8081307.chw Last save: 8/8/2014 1:24:09 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1904

SAMPLE:
:
Vial number: 4
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	952.29	11191.694	24.091	Fluoride
2	5.41	690.15	7472.977	24.400	Chloride
3	6.43	996.10	16891.334	25.699	Nitrite_N
4	8.34	170.37	2832.763	23.876	Bromide
5	9.45	1127.28	20080.104	24.517	Nitrate-N
6	12.30	298.12	6655.113	24.379	o-phosphate
7	14.18	201.40	4493.377	23.583	Sulfate
7	17.00	4435.71	69617.361	170.546	

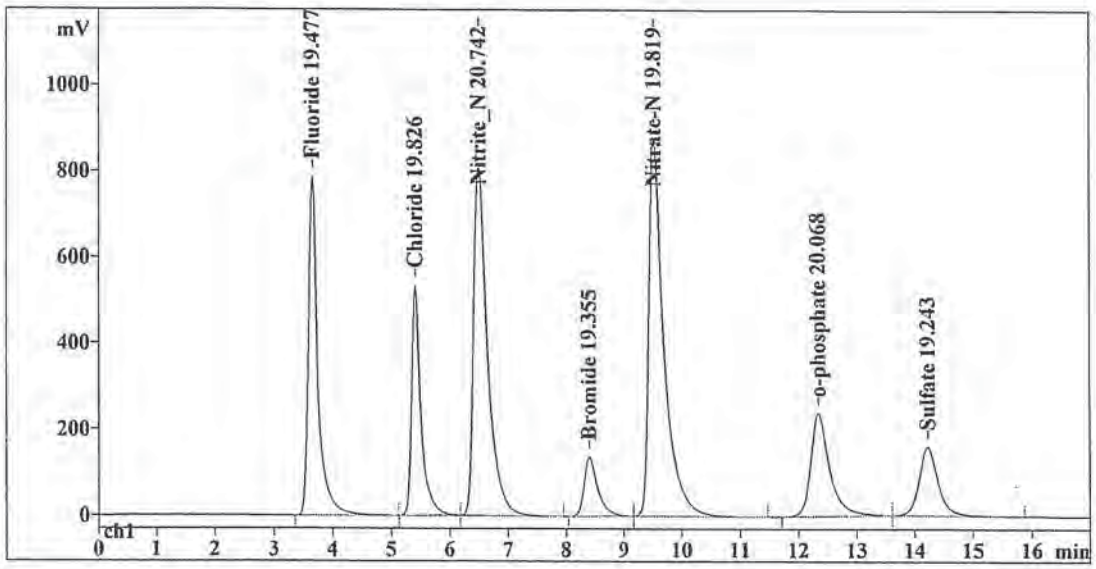
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:51 PM
Printed by: Stephanie L. Charley

Ident: ICV
Analysis from: 8/8/2014 1:27:27 PM
File: y8081327.chw Last save: 8/8/2014 1:44:27 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1906

SAMPLE:
:
Vial number: 5
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	787.84	8951.523	19.477	Fluoride
2	5.41	535.29	5915.618	19.826	Chloride
3	6.51	808.46	13494.281	20.742	Nitrite_N
4	8.41	137.18	2261.727	19.355	Bromide
5	9.53	876.05	15774.337	19.819	Nitrate-N
6	12.35	238.72	5352.051	20.068	o-phosphate
7	14.23	159.89	3591.885	19.243	Sulfate
7	17.00	3543.43	55341.422	138.530	

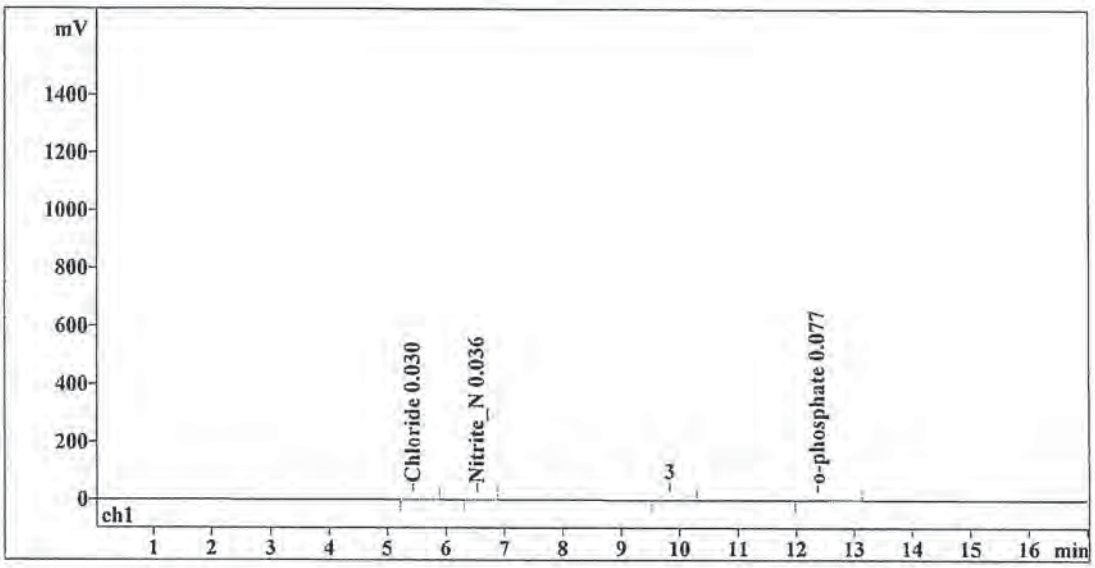
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:49:02 PM
Printed by: Stephanie L. Charley

Ident: ICB
Analysis from: 8/8/2014 1:47:45 PM
File: y8081347.chw Last save: 8/8/2014 2:04:45 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1908

SAMPLE:
:
Vial number: 6
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.44	0.40	4.694	0.030	Chloride
2	6.54	0.18	2.313	0.036	Nitrite_N
3	9.82	0.21	3.804	0.000	
4	12.37	0.33	9.779	0.077	o-phosphate
4	17.00	1.11	20.590	0.143	

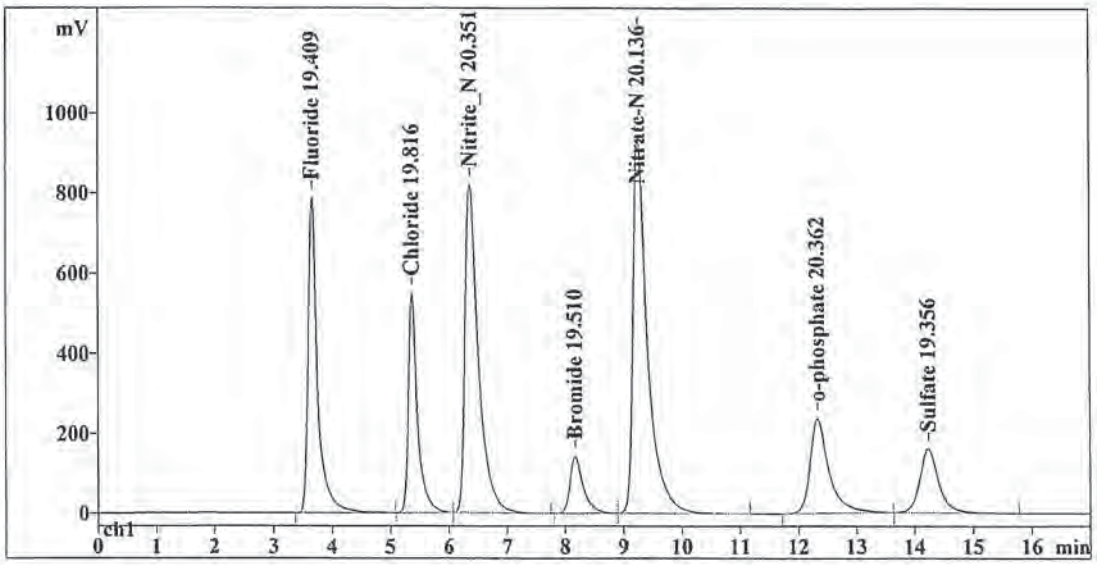
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METROHM LTD

Report date: 8/11/2014 1:51:44 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 7:12:31 PM
File: y8081914.chw Last save: 8/9/2014 8:31:24 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1940

SAMPLE:
:
Vial number: 22
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	788.78	8918.947	19.409	Fluoride
2	5.37	549.56	5912.543	19.816	Chloride
3	6.38	821.05	13229.721	20.351	Nitrite_N
4	8.18	143.34	2280.991	19.510	Bromide
5	9.26	941.12	16055.884	20.136	Nitrate-N
6	12.33	238.61	5438.853	20.362	o-phosphate
7	14.24	161.24	3614.732	19.356	Sulfate
7	17.00	3643.69	55451.671	138.940	

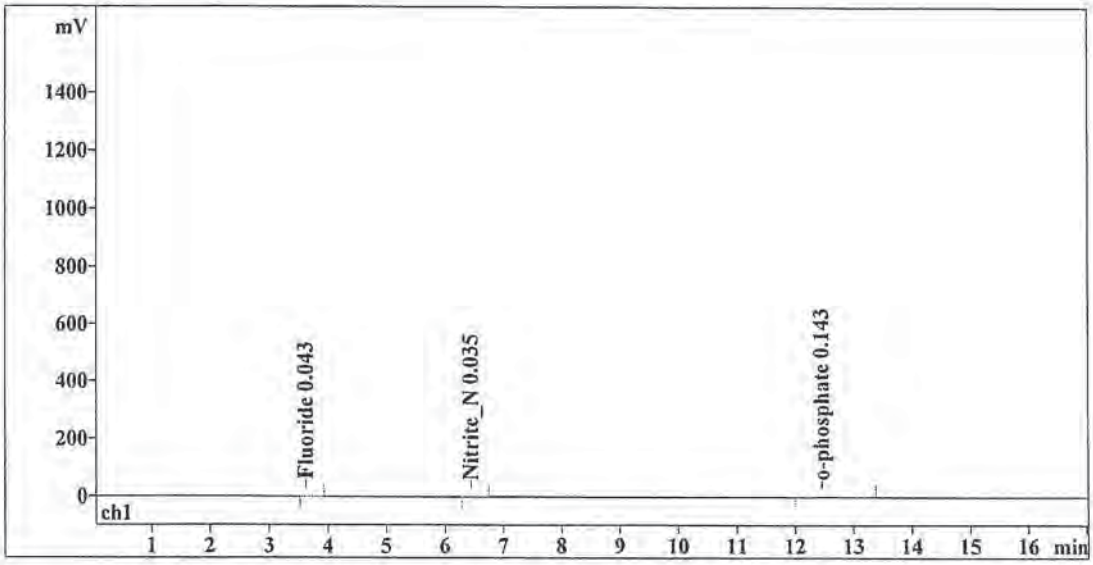
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:47 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 7:32:49 PM
File: y8081932.chw Last save: 8/8/2014 7:49:50 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1942

SAMPLE:
:
Vial number: 23
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.62	0.14	1.184	0.043	Fluoride
2	6.45	0.14	1.622	0.035	Nitrite_N
3	12.47	0.75	25.856	0.143	o-phosphate
3	17.00	1.02	28.662	0.221	

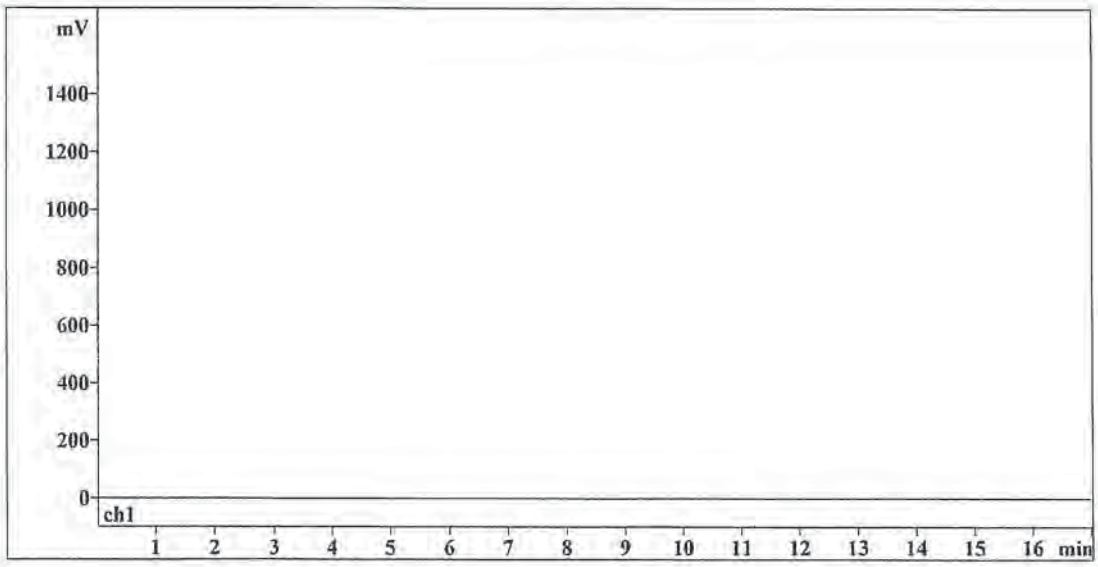
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METROHM LTD

Report date: 8/11/2014 1:51:51 PM
Printed by: Stephanie L. Charley

Ident: MB
Analysis from: 8/8/2014 7:53:07 PM
File: y8081953.chw Last save: 8/8/2014 8:10:07 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1944

SAMPLE:
:
Vial number: 24
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No peaks

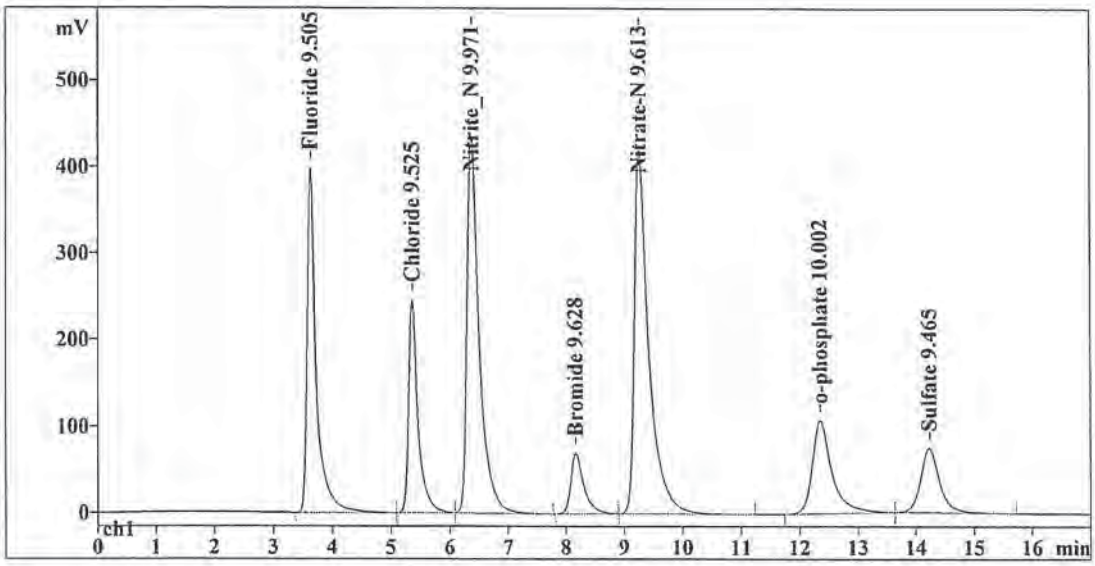
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METROHM LTD

Report date: 8/11/2014 1:52:01 PM
Printed by: Stephanie L. Charley

Ident: LCS
Analysis from: 8/8/2014 8:13:25 PM
File: y8082015.chw Last save: 8/9/2014 8:31:35 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1946

SAMPLE:
:
Vial number: 25
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

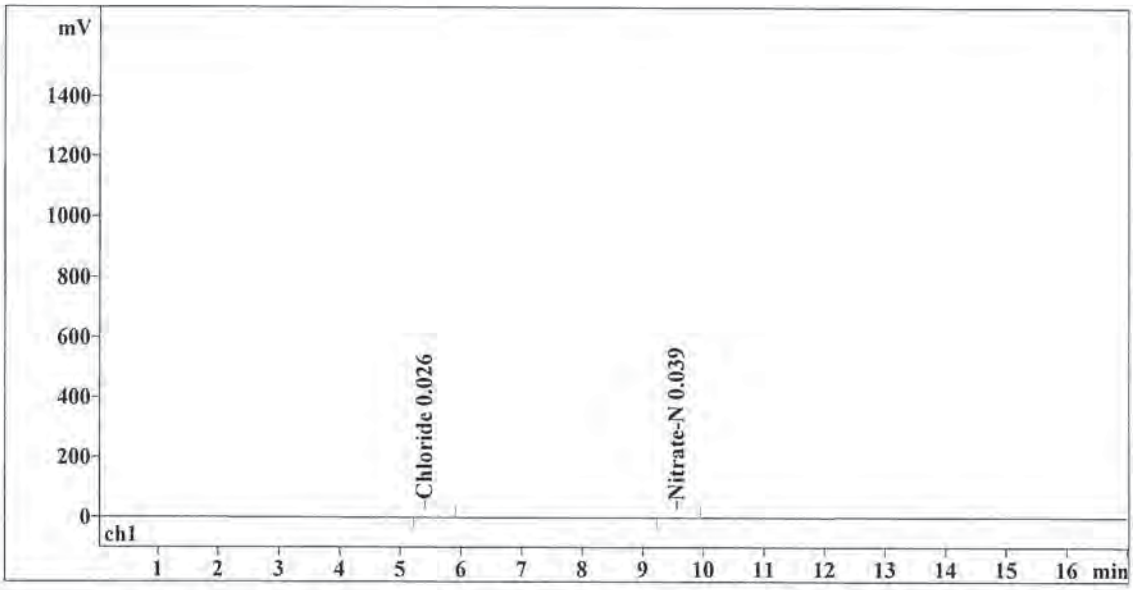
No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	398.99	4267.354	9.505	Fluoride
2	5.37	246.87	2697.357	9.525	Chloride
3	6.39	434.91	6343.857	9.971	Nitrite_N
4	8.17	70.19	1090.815	9.628	Bromide
5	9.27	420.84	7238.661	9.613	Nitrate-N
6	12.35	108.16	2538.170	10.002	o-phosphate
7	14.24	74.93	1693.627	9.465	Sulfate
7	17.00	1754.89	25869.842	67.710	

This report has been created by IC Net
METROHM LTD

Report date: 8/20/2014 10:54:10 AM
Printed by: Stephanie L. Charley

Ident: 3646-07J
Analysis from: 8/8/2014 10:55:54 PM
File: y8082255.chw Last save: 8/11/2014 2:24:59 PM
Modified!
Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1962

SAMPLE:
:
Vial number: 33
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.40	0.31	3.530	0.026	Chloride
2	9.55	0.44	7.429	0.039	Nitrate-N
2	17.00	0.75	10.959	0.065	

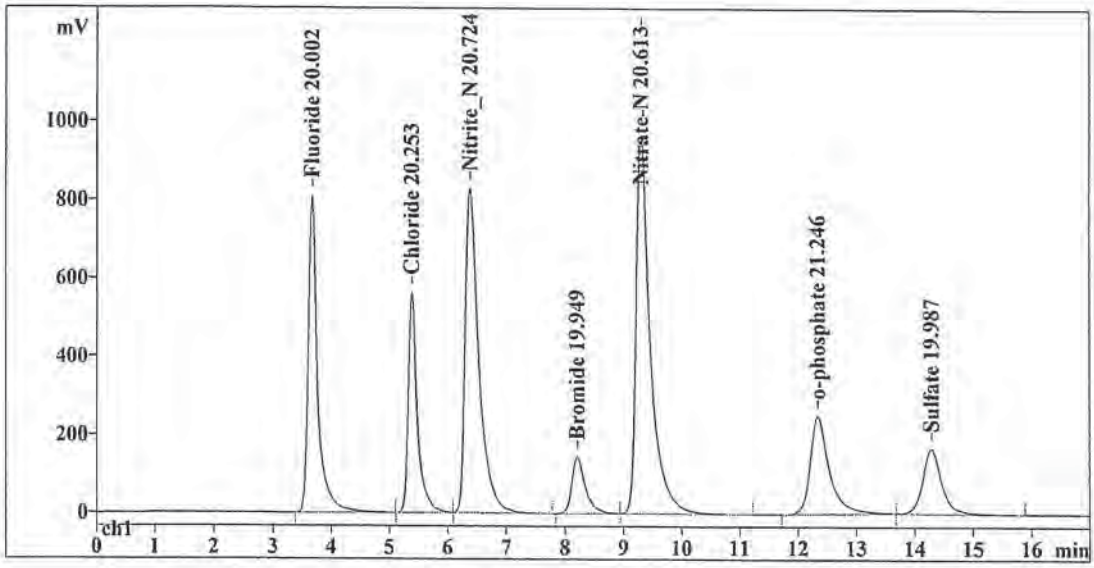
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:41 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 11:16:12 PM
File: y8082318.chw Last save: 8/9/2014 8:32:11 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1964

SAMPLE:
:
Vial number: 34
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	809.98	9204.138	20.002	Fluoride
2	5.39	563.60	6057.528	20.253	Chloride
3	6.39	829.14	13482.500	20.724	Nitrite_N
4	8.21	145.25	2335.697	19.949	Bromide
5	9.31	960.83	16482.381	20.613	Nitrate-N
6	12.34	251.48	5701.496	21.246	o-phosphate
7	14.28	166.62	3743.489	19.987	Sulfate
7	17.00	3726.91	57007.229	142.774	

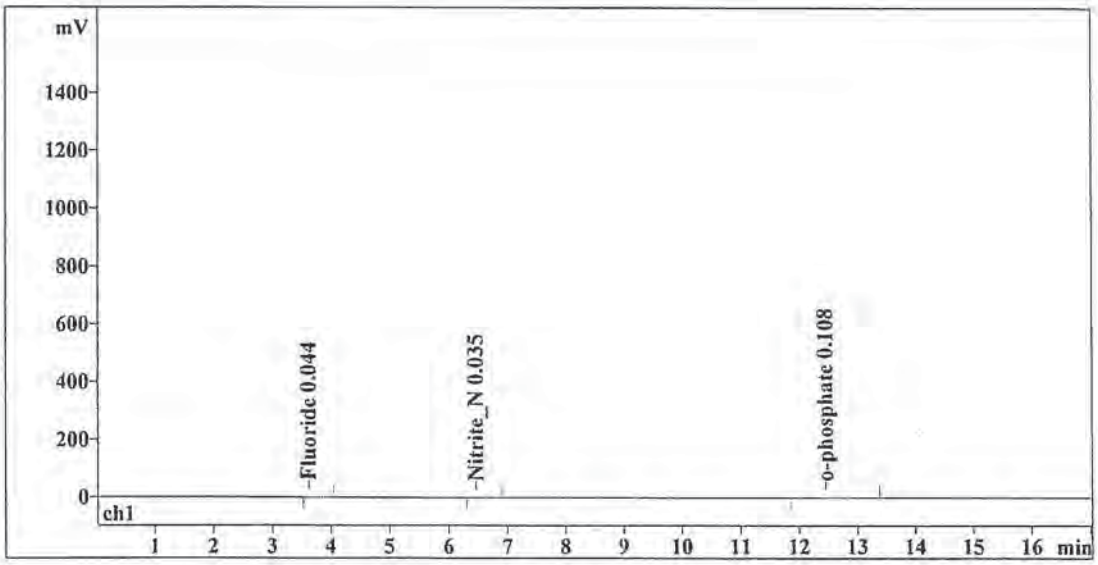
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:45 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 11:36:31 PM
File: y8082336.chw Last save: 8/8/2014 11:53:31 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1966

SAMPLE:
:
Vial number: 35
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.63	0.13	1.248	0.044	Fluoride
2	6.47	0.15	1.848	0.035	Nitrite_N
3	12.45	0.50	17.361	0.108	o-phosphate
3	17.00	0.78	20.457	0.187	

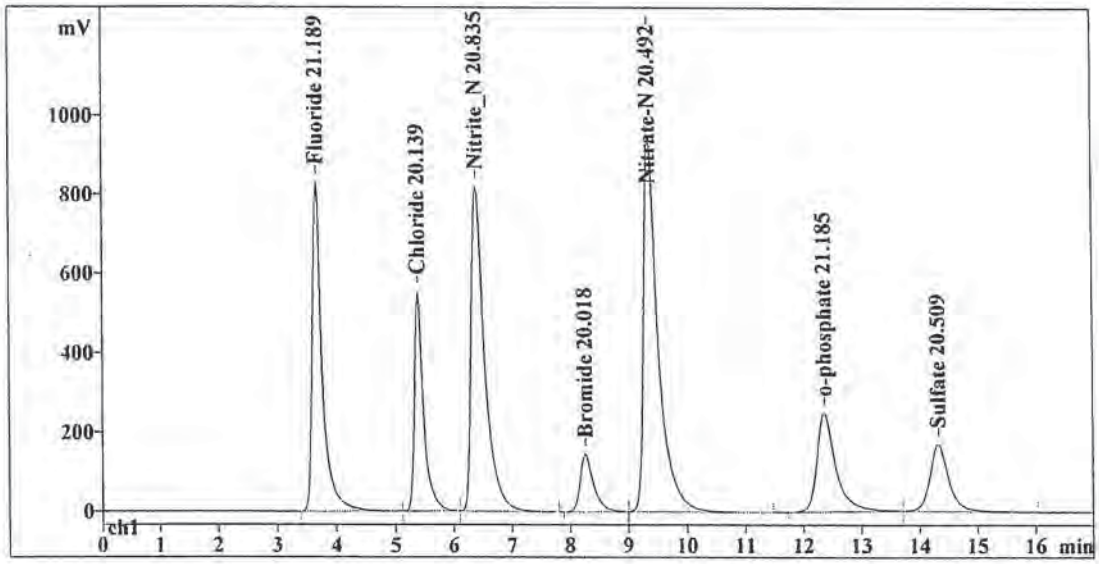
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 2:02:26 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/9/2014 2:39:15 AM
File: y8090239.chw Last save: 8/9/2014 2:56:15 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1984

SAMPLE:
:
Vial number: 44
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	832.21	9777.161	21.189	Fluoride
2	5.39	553.95	6019.373	20.139	Chloride
3	6.40	820.77	13557.297	20.835	Nitrite_N
4	8.27	144.34	2344.236	20.018	Bromide
5	9.37	947.79	16374.194	20.492	Nitrate-N
6	12.37	250.80	5683.386	21.185	o-phosphate
7	14.33	169.59	3850.662	20.509	Sulfate
7	17.00	3719.44	57606.308	144.366	

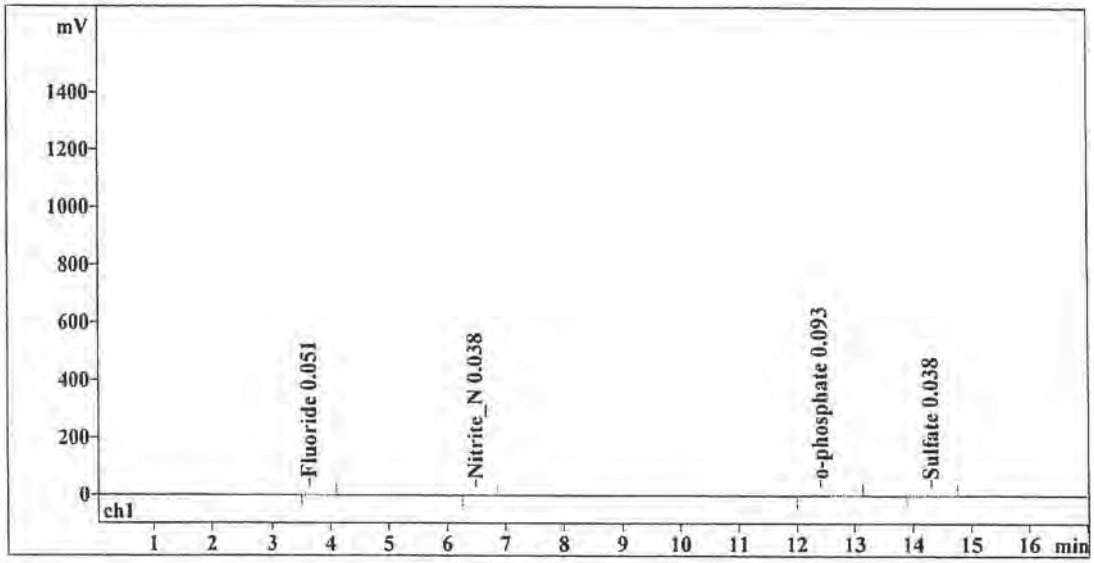
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 2:02:31 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/9/2014 2:59:34 AM
File: y8090259.chw Last save: 8/9/2014 3:16:34 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1986

SAMPLE:
:
Vial number: 45
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	0.41	4.387	0.051	Fluoride
2	6.48	0.30	3.906	0.038	Nitrite_N
3	12.42	0.49	13.660	0.093	o-phosphate
4	14.31	0.22	4.906	0.038	Sulfate
4	17.00	1.43	26.859	0.220	

This report has been created by IC Net
METROHM LTD

SGS Alaska Division Peer Review Report - Prep

Batch: 10640 Queue: WXX

12-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1226212	MB	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1226213	LCS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1143645001	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645001-J
1226214	UDUP	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	
1143645002	BMS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	1143645002-J
1143645003	BMSD	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	1143645003-J
1143645004	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645004-J
1143645005	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645005-J
1143645006	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645006-J
1143646007	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143646007-J

Analyst's Signature: _____ **Peer Reviewer's Signature:** Donald J. Stonell

SGS Alaska Division Peer Review Report - Prep

Batch: 10635 Queue: WXX

12-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1226012	MB	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1226013	LCS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1148349005	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349005-C
1226014	UDUP	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1148349005	
1226015	MS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1148349005	
1148349001	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349001-D
1148349003	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349003-C
1148349004	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349004-C
1148349006	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349006-C
1148349007	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349007-C
1148349008	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349008-C

Analyst's Signature: _____

Peer Reviewer's Signature: Donald L. Stonell

SGS North America Inc.
Calibration Review and Validation for:
Anions by IC - EPA 300.0 / SW 9056A

CDS Instrument/Date Code in YYYY-MMDD format (e.g., IC32012-0507): IC32014-0613

	Analyst's Review		Peer Review	
	OK	N/A	OK	N/A
Contents:				
IC Calibration and Standard Prep Sheet	☑		☑	
Calibration Graphs	☑		☑	
Instrument and handwritten runlogs	☑		☐	
Chromatograms	☑		☒	
Validation:				
Same day retention time check	☑		☑	
Minimum of 7 points (including blank)	☐		☒	
R-Value ≥ 0.995 for Quadratic	☒		☒	
(Fluoride, Chloride, Nitrite, Bromide, Nitrate, Sulfate)				
Manual Integrations - explanations, before and after printouts	☐	☑	☒	☐
Initials:	SLC		Initials:	
Date:	6/17/2014		Date:	6/17/14

Notes:

EP300 Test
IC3Anions061314.mtw
IC Calibration and Standard Prep.

QCS Source : SPEX CertiPrep Multi-Analyte Standard Lot # :P#852
SPEX CertiPrep NO2-N Standard Lot # :P#624

	Analyte	Fluoride	Chloride	Nitrite	Bromide	Nitrate	O-phos	Sulfate
QCS	Source Conc (mg/L)	1000	1000	1000	1000	1000	1000	1000
	Vol Initial (ml)	0.250	0.250	0.250	0.250	0.250	0.250	0.250
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	25	25	25	25	25	25	25

Source : AccuStandard Multi-Analyte Standard Lot # :P#847
AccuStandard NO2-N Standard Lot # :P#759

40	Source Conc (mg/L)	1000	1000	1000	1000	1000	1000	1000
	Vol Initial (ml)	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Vol Final (mL)	25	25	25	25	25	25	25
	Final Conc.(mg/L)	40	40	40	40	40	40	40
25	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	6.250	6.250	6.250	6.250	6.250	6.250	6.250
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	25	25	25	25	25	25	25
5	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	1.250	1.250	1.250	1.250	1.250	1.250	1.250
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	5	5	5	5	5	5	5
1	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	0.625	0.625	0.625	0.625	0.625	0.625	0.625
	Vol Final (mL)	25	25	25	25	25	25	25
	Final Conc.(mg/L)	1	1	1	1	1	1	1
0.4	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	0.100	0.100	0.100	0.100	0.100	0.100	0.100
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	0.4	0.4	0.4	0.4	0.4	0.4	0.4
0.2	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	0.050	0.050	0.050	0.050	0.050	0.050	0.050
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.1	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	0.025	0.025	0.025	0.025	0.025	0.025	0.025
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CCV	Source Conc (mg/L)	1000	1000	1000	1000	1000	1000	1000
	Vol Initial (ml)	2.000	2.000	2.000	2.000	2.000	2.000	2.000
	Vol Final (mL)	100	100	100	100	100	100	100
	Final Conc.(mg/L)	20	20	20	20	20	20	20

System	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Level	Injections	Done	Sample Info 1	Sample Info 2
IC3ANIONS.smt	bomb test	1	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CO	2	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CO	3	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CO	4	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LOQ	5	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	QCS	6	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	ICV	7	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	ICB	8	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	0.1 LOQ	53	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	MB	9	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	1.0 RT CHECK	54	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	40	55	10.0	1.0	10.0	100.0	8	1	1		
IC3ANIONS.smt	25	56	10.0	1.0	10.0	100.0	7	1	1		
IC3ANIONS.smt	5	57	10.0	1.0	10.0	100.0	6	1	1		
IC3ANIONS.smt	1.0	58	10.0	1.0	10.0	100.0	5	1	1		
IC3ANIONS.smt	0.4	59	10.0	1.0	10.0	100.0	4	1	1		
IC3ANIONS.smt	0.2	60	10.0	1.0	10.0	100.0	3	1	1		
IC3ANIONS.smt	0.1	61	10.0	1.0	10.0	100.0	2	1	1		
IC3ANIONS.smt	0	62	10.0	1.0	10.0	100.0	1	1	1		

System	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Level	Injections	Done	Sample Info 1	Sample Info 2
IC3ANIONS.smt	0.1 LOQ	5	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	QCS	6	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	0.1ppm	63	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	ICV	7	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	ICB	8	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	MB	9	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCS	10	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCSD	11	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL1-0.05	12	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL2-.05	13	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL3-.05	14	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL4-.05	15	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL5-.05	16	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL6-.05	17	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL7-.05	18	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CCV	19	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CB	20	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL8-.05	21	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL9-.05	22	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	MB	23	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCS	24	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCSD	25	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL1-.1	26	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL2-.1	27	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL3-.1	28	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL4-.1	29	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL5-.1	30	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CCV	31	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CB	32	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL6-.1	33	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL7-.1	34	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL8-.1	35	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL9-.1	36	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	MB	37	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCS	38	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCSD	39	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL1-.15	40	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL2-.15	41	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CCV	42	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CB	43	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL3-.15	44	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL4-.15	45	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL5-.15	46	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL6-.15	47	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL7-.15	48	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL8-.15	49	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL9-.15	50	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CCV	51	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CB	52	10.0	1.0	10.0	100.0	0	1	1		

SGS North America Inc.

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: IC3061314-que
Data Files: Y613013.cmd-Y613083.cmd
Method: IC3Anions 061314.mtd
Cal. Date: 6/13/14

Run Date: 6-13-14
Queue/Batch: cal only
Analyst: SC

#	Sample ID	Comments	Post (Y/N)
1	Bombtest		Y N
2	CO		Y N
3	CO		Y N
4	CO		Y N
5	LOQ check	high	Y N
6	QCS		Y N
7	ICV		Y N
8	ICB		Y N
59	0.1 LOQ	high - recal	Y N
9	MB		Y N
54	LOR check		Y N
55	40		Y N
56	25		Y N
57	5		Y N
58	1.0		Y N
59	0.4		Y N
60	0.2		Y N
61	0.1		Y N
62	0		Y N
			Y N
			Y N

SGS North America Inc.

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: IC30613L4A.gwe
Data Files: y6131717.gwe
Method: IC3Anions061314.mth
Cal. Date: 6/13/14

Run Date: 6/13/14
Queue/Batch:
Analyst: SLC

#	Sample ID	Comments	Post (Y/N)
5	0.1 LOQ	high - rerun	☐ Y ☑ N
6	QCS		☑ Y ☐ N
63	0.1 ppm		☐ Y ☑ N
7	ICV		☑ Y ☐ N
8	ICB	SO4 high - can't use	☑ Y ☐ N
9	MB		☑ Y ☐ N
10	LCS		☐ Y ☑ N
11	LCSD		☐ Y ☑ N
12	DL1 - .05	Don't need - N.P.	☐ Y ☑ N
13	DL2 - .05		☐ Y ☑ N
14	DL3 - .05		☐ Y ☑ N
15	DL4 - .05		☐ Y ☑ N
16	DL5 - .05		☐ Y ☑ N
17	DL6 - .05		☐ Y ☑ N
18	DL7 - .05		☐ Y ☑ N
19	CCV		☐ Y ☑ N
20	CB		☑ Y ☐ N
21	DL8 - .05		☑ Y ☐ N
22	DL9 - .05		☐ Y ☑ N
23	MB		☐ Y ☑ N
24	LCS		☑ Y ☐ N
25	LCSD		☑ Y ☐ N
26	DL1 - .1	Post for F, Cl, Br, NO3	☑ Y ☐ N
27	DL2 - .1		☑ Y ☐ N
28	DL3 - .1		☑ Y ☐ N
29	DL4 - .1		☑ Y ☐ N
30	DL5 - .1		☑ Y ☐ N
31	CCV		☑ Y ☐ N
32	CB		☑ Y ☐ N
33	DL6 - .1		☑ Y ☐ N
34	DL7 - .1		☑ Y ☐ N
35	DL8 - .1		☑ Y ☐ N
36	DL9 - .1	check only - N.P.	☐ Y ☑ N
37	MB		☐ Y ☑ N
38	LCS		☐ Y ☑ N
39	LCSD		☐ Y ☑ N
40	DL1 - .15	Don't need - N.P.	☐ Y ☑ N
41	DL2 - .15		☐ Y ☑ N
42	CCV		☐ Y ☑ N
43	CB		☑ Y ☐ N

Daily Checks:
- ☑ Eluent Full
- ☑ Regenerate Full
- ☑ Water Full
- 15.6 Baseline (µS/cm)
- 3.3 Backpressure (Mpa)

Standards	Prep Date	Lot #
CCV/LFB:	6/13/14	P759 / P847
QCS:		P624 / P852
H2SO4:		P443
Eluent:		LW9-463-4B
Filter Lot#:	P911	

Standard 1x dilution unless noted by sample ID.

SGS North America Inc.

See PJ 61 SLC 6-17-14

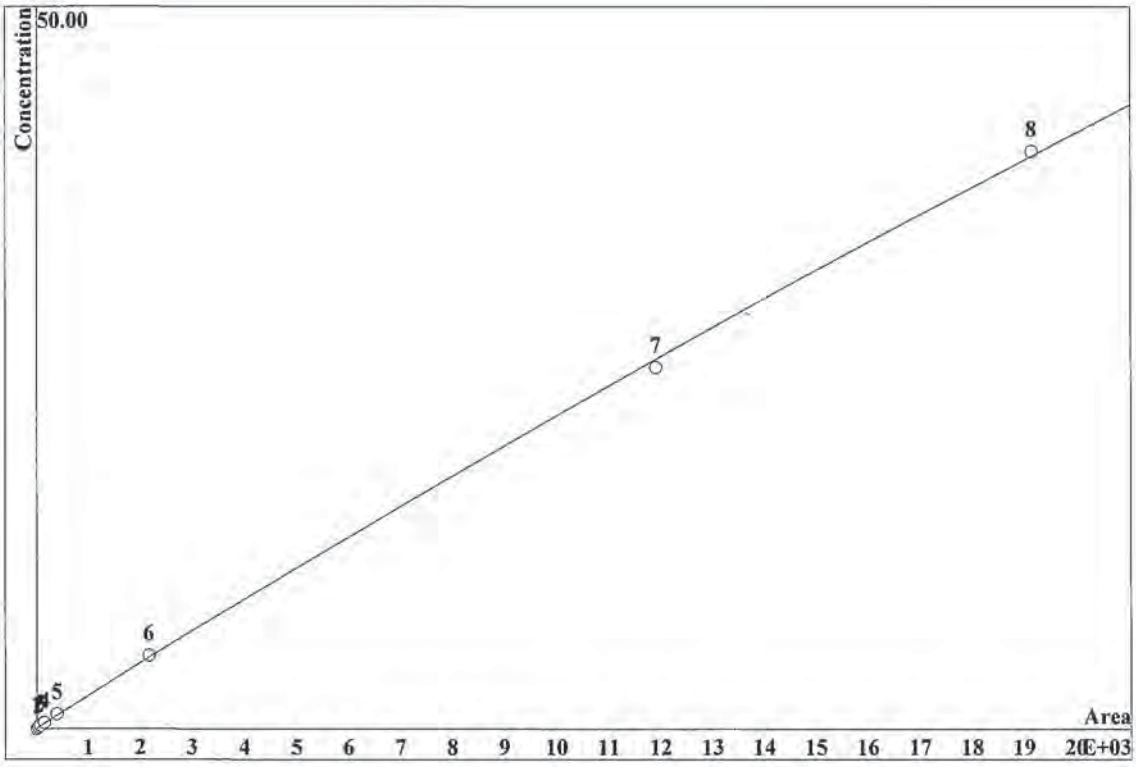
EPA300.0 - Ion Chromatography Run Log

Instrument Queue: _____ Run Date: _____
Data Files: _____ Queue/Batch: _____
Method: _____ Analyst: _____
Cal. Date: _____

#	Sample ID	Comments	Post (Y/N)
44	DL3-.15		☐ Y ☑ N
45	DL4-.15		☐ Y ☑ N
46	DL5-.15		☐ Y ☑ N
47	DL6-.15		☐ Y ☑ N
48	DL7-.15		☐ Y ☑ N
49	DL8-.15		☐ Y ☑ N
50	DL9-.15		☐ Y ☑ N
51	CCV		☐ Y ☑ N
52	CB		☐ Y ☐ N
			☐ Y ☐ N
			☐ Y ☐ N

CALIBRATION OF COMPONENT Fluoride

Method: IC3Anions061314.mtw
Equation: Q = - 9.95498e-07·A^2 + 0.226039·A + 4.07816
RSD: 3.149 %
Correlation coefficient: 0.999952

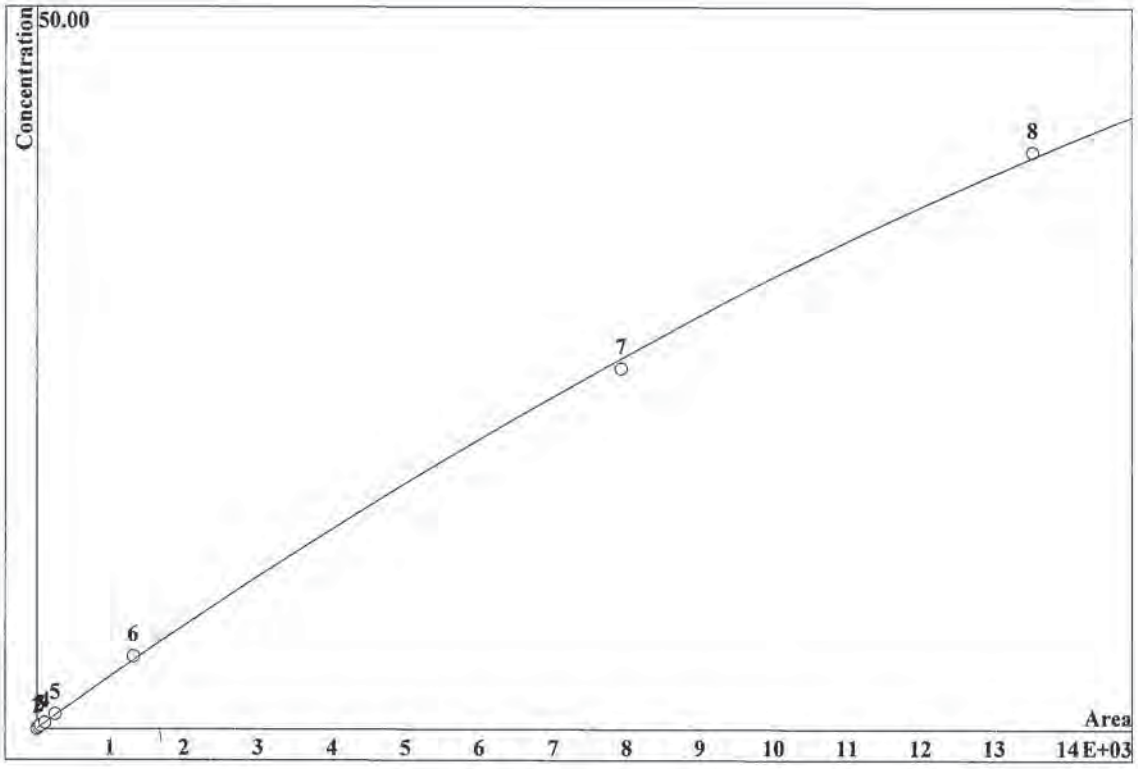


K3 = 0 K2 = -9.95498e-07 K1 = 0.226039 K0 = 4.07816
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	3.007	35.46	0.1	100	3.61	Yes	y6131612.chw
3	6.037	68.68	0.2	100	3.61	Yes	y6131551.chw
4	11.28	140.6	0.4	100	3.61	Yes	y6131530.chw
5	34.51	388.5	1	100	3.61	Yes	y6131509.chw
6	209.2	2165	5	100	3.61	Yes	y6131449.chw
7	1025	1.191e+04	25	100	3.61	Yes	y6131428.chw
8	1459	1.915e+04	40	100	3.61	Yes	y6131407.chw

CALIBRATION OF COMPONENT Chloride

Method: IC3Anions061314.mtw
Equation: Q = - 5.51465e-06·A^2 + 0.367549·A + 1.26041
RSD: 3.527 %
Correlation coefficient: 0.999232

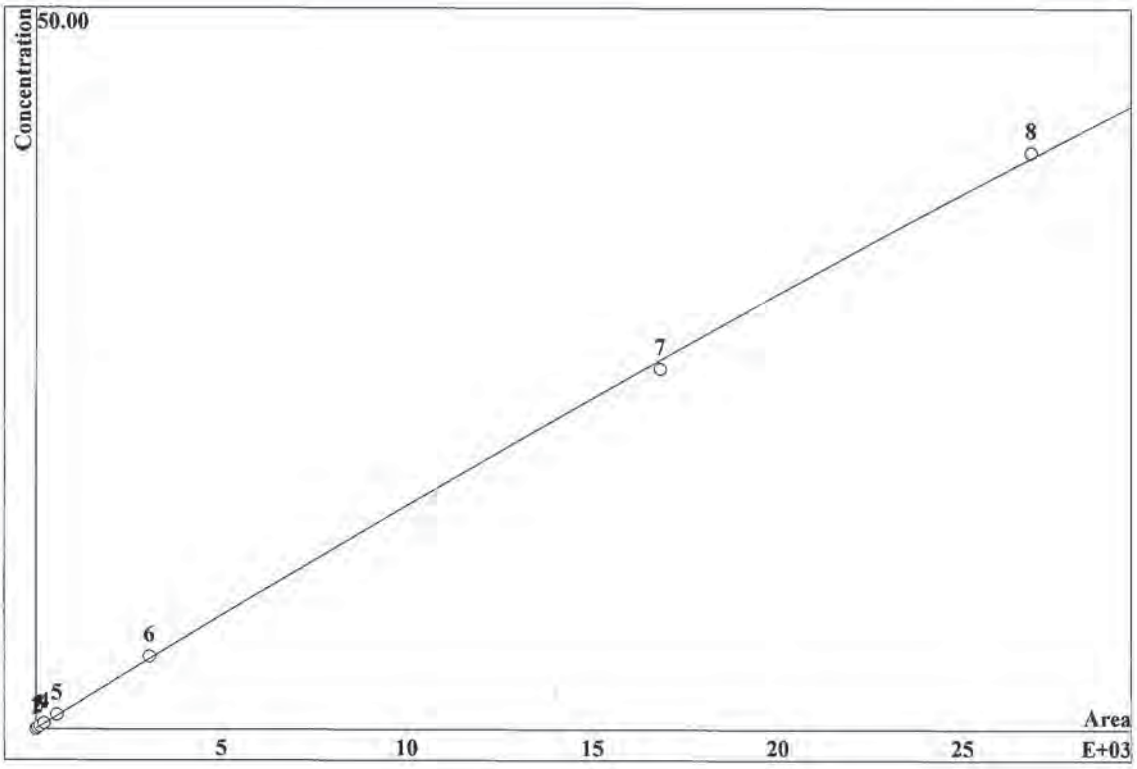


K3 = 0 K2 = -5.51465e-06 K1 = 0.367549 K0 = 1.26041
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	2.385	27.05	0.1	100	5.4	Yes	y6131612.chw
3	4.311	48.87	0.2	100	5.4	Yes	y6131551.chw
4	9.724	109.6	0.4	100	5.4	Yes	y6131530.chw
5	21.95	250.3	1	100	5.4	Yes	y6131509.chw
6	121	1315	5	100	5.4	Yes	y6131449.chw
7	774.3	7922	25	100	5.4	Yes	y6131428.chw
8	1284	1.352e+04	40	100	5.4	Yes	y6131407.chw

CALIBRATION OF COMPONENT Nitrite_N

Method: IC3Anions061314.mtw
Equation: Q = - 4.46934e-07·A^2 + 0.159502·A + 3.19305
RSD: 3.051 %
Correlation coefficient: 0.999947

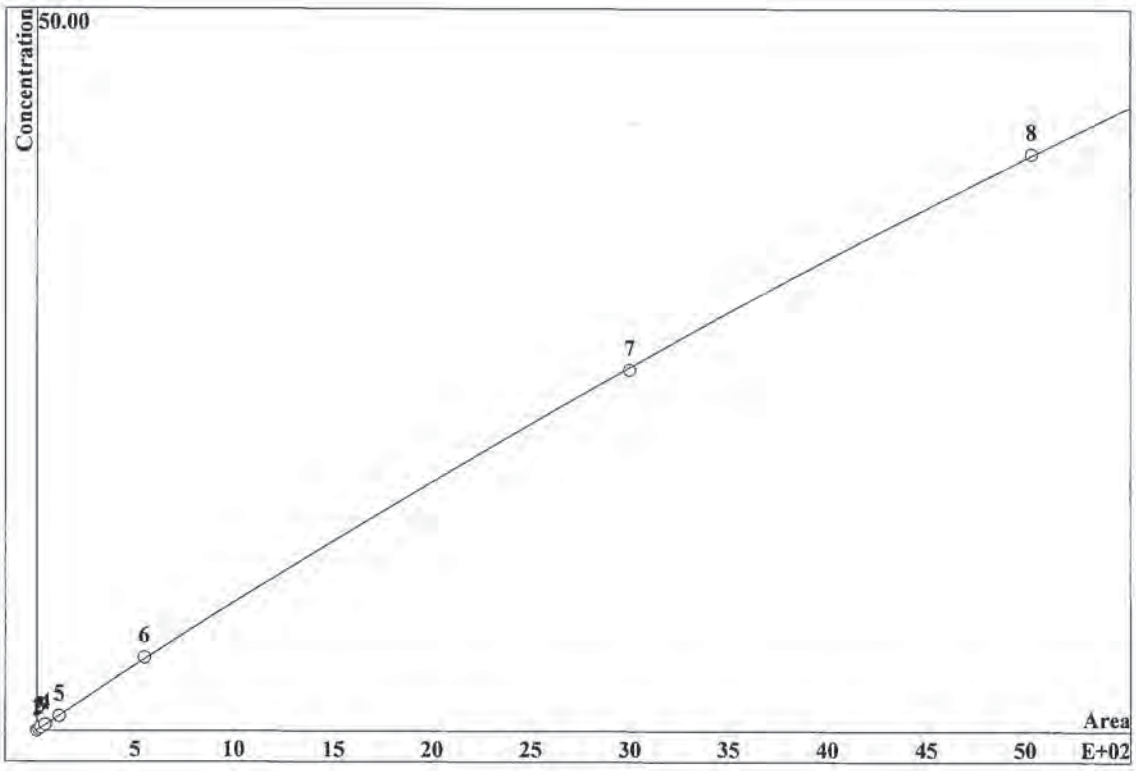


K3 = 0 K2 = -4.46934e-07 K1 = 0.159502 K0 = 3.19305
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	3.846	51.2	0.1	100	6.48	Yes	y6131612.chw
3	8.004	106.6	0.2	100	6.48	Yes	y6131551.chw
4	16.23	215.5	0.4	100	6.48	Yes	y6131530.chw
5	41.46	558.9	1	100	6.48	Yes	y6131509.chw
6	224.1	3041	5	100	6.48	Yes	y6131449.chw
7	1050	1.683e+04	25	100	6.48	Yes	y6131428.chw
8	1537	2.685e+04	40	100	6.48	Yes	y6131407.chw

CALIBRATION OF COMPONENT Bromide

Method: IC3Anions061314.mtw
Equation: Q = - 2.2459e-05·A^2 + 0.906053·A + 1.18474
RSD: 1.083 %
Correlation coefficient: 0.999631

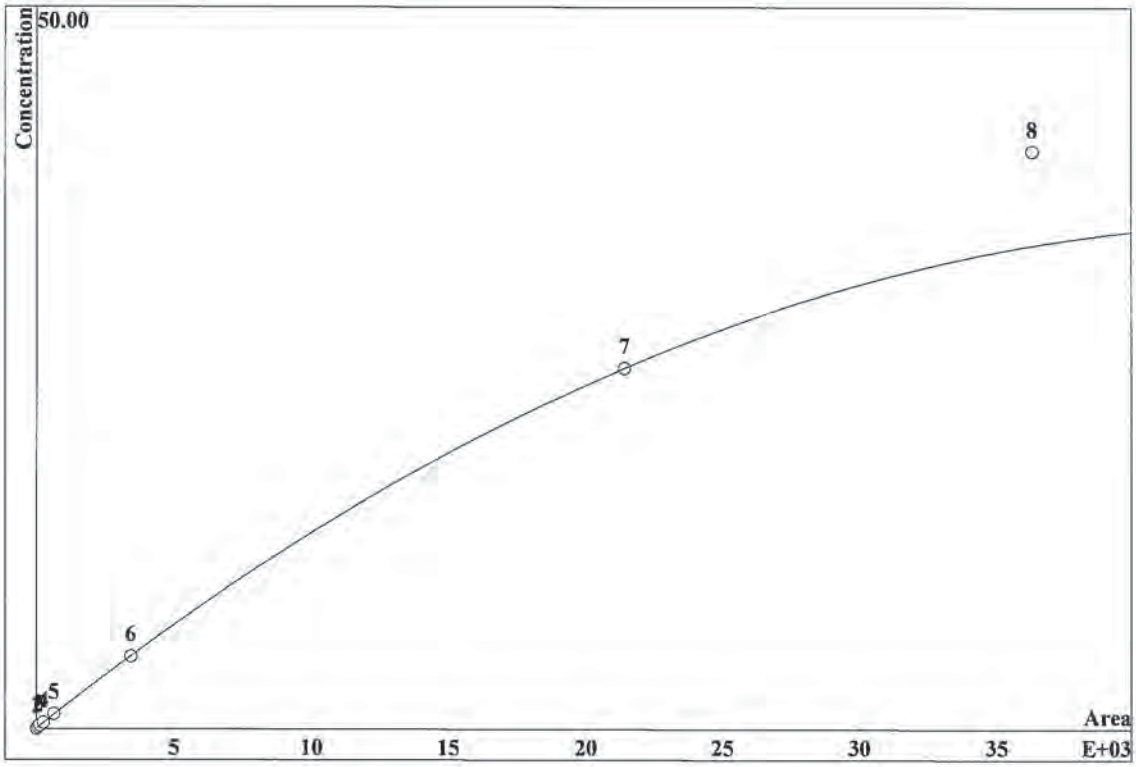


K3 = 0 K2 = -2.2459e-05 K1 = 0.906053 K0 = 1.18474
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	0.6226	9.841	0.1	100	8.34	Yes	y6131612.chw
3	1.278	20.36	0.2	100	8.34	Yes	y6131551.chw
4	2.624	42.85	0.4	100	8.34	Yes	y6131530.chw
5	6.743	112.3	1	100	8.34	Yes	y6131509.chw
6	35.26	546.9	5	100	8.34	Yes	y6131449.chw
7	195.6	2999	25	100	8.34	Yes	y6131428.chw
8	295.3	5031	40	100	8.34	Yes	y6131407.chw

CALIBRATION OF COMPONENT Nitrate-N

Method: IC3Anions061314.mtw
Equation: Q = - 1.64527e-06·A^2 + 0.151927·A + 0.792638
RSD: 1.358 %
Correlation coefficient: 0.999280

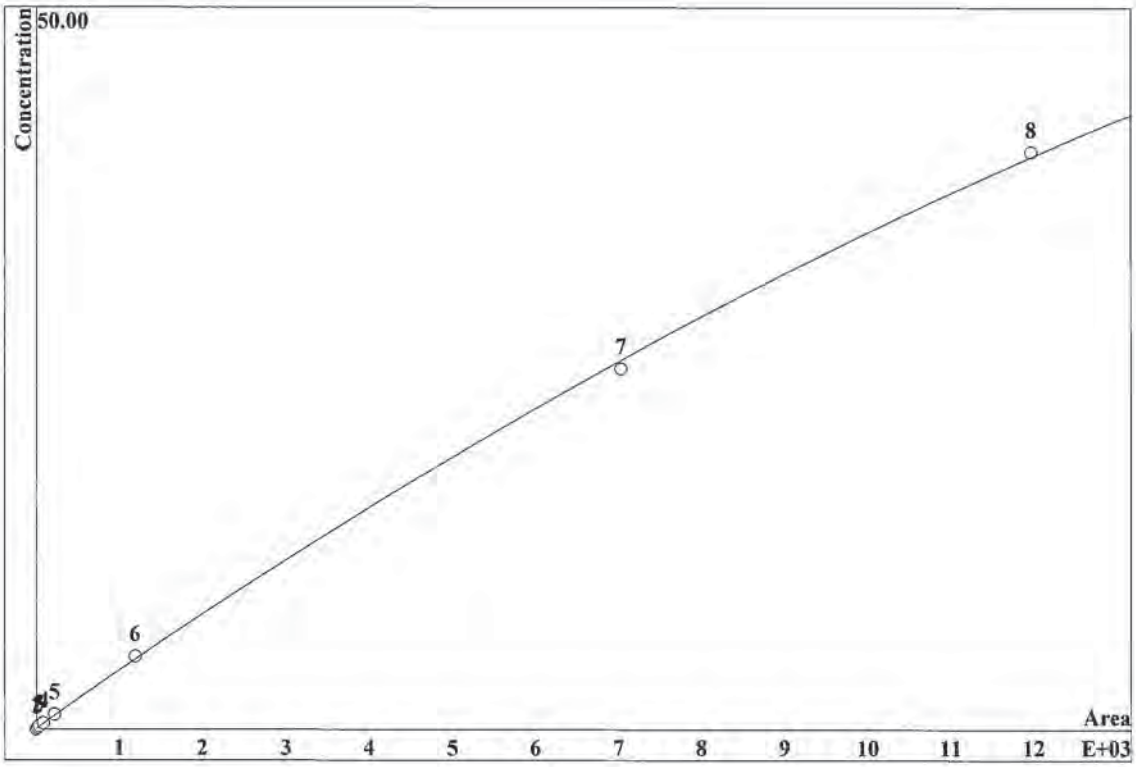


K3 = 0 K2 = -1.64527e-06 K1 = 0.151927 K0 = 0.792638
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	3.525	64.75	0.1	100	9.55	Yes	y6131612.chw
3	6.637	121.8	0.2	100	9.55	Yes	y6131551.chw
4	14.15	259.1	0.4	100	9.55	Yes	y6131530.chw
5	34.72	637.3	1	100	9.55	Yes	y6131509.chw
6	194.3	3438	5	100	9.55	Yes	y6131449.chw
7	1283	2.141e+04	25	100	9.55	Yes	y6131428.chw
8	1985	3.629e+04	40	100	9.55	No	y6131407.chw

CALIBRATION OF COMPONENT o-phosphate

Method: IC3Anions061314.mtw
Equation: Q = - 6.51426e-06·A^2 + 0.409115·A + 3.74598
RSD: 2.953 %
Correlation coefficient: 0.999321

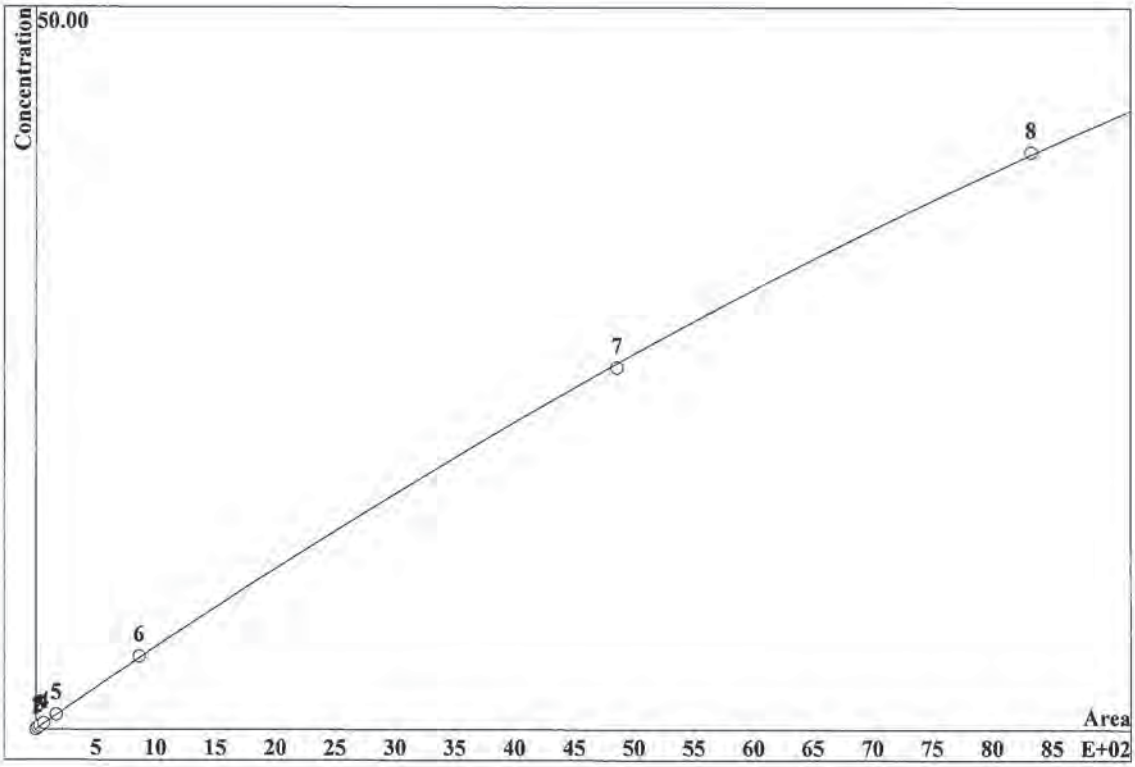


K3 = 0 K2 = -6.51426e-06 K1 = 0.409115 K0 = 3.74598
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1143	1.981	0	100	12.5	No	y6131633.chw
2	0.8174	18.6	0.1	100	12.5	Yes	y6131612.chw
3	1.656	37.63	0.2	100	12.5	Yes	y6131551.chw
4	3.423	87.04	0.4	100	12.5	Yes	y6131530.chw
5	8.813	219.1	1	100	12.5	Yes	y6131509.chw
6	49.62	1190	5	100	12.5	Yes	y6131449.chw
7	315.9	7029	25	100	12.5	Yes	y6131428.chw
8	541.2	1.197e+04	40	100	12.5	Yes	y6131407.chw

CALIBRATION OF COMPONENT Sulfate

Method: IC3Anions061314.mtw
Equation: Q = - 1.20234e-05·A^2 + 0.578654·A + 0.98975
RSD: 1.449 %
Correlation coefficient: 0.999262



K3 = 0 K2 = -1.20234e-05 K1 = 0.578654 K0 = 0.98975
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

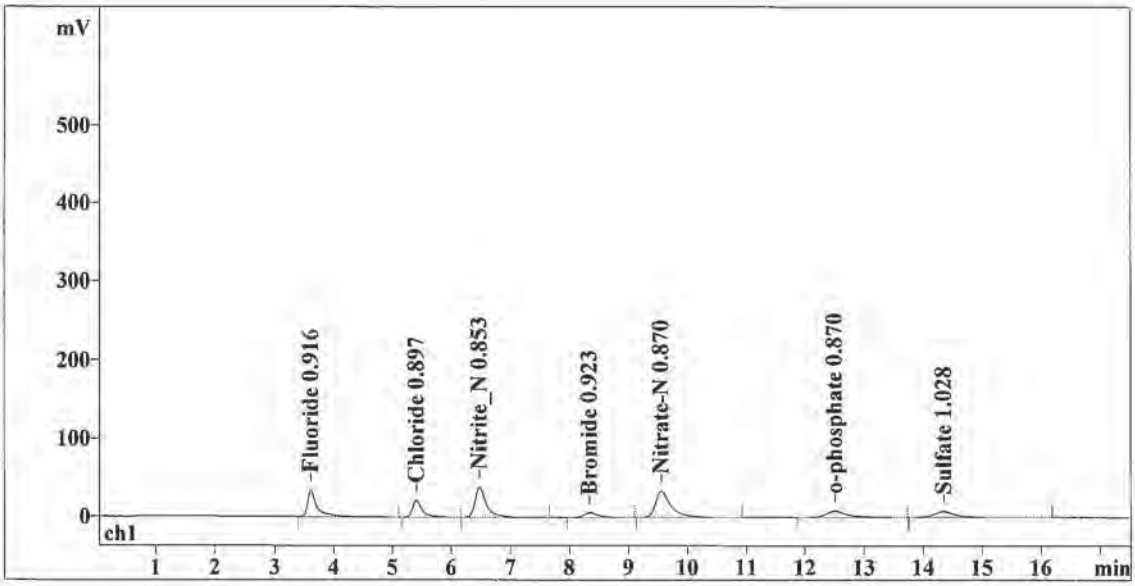
Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	0.7245	16.89	0.1	100	14.35	Yes	y6131612.chw
3	1.41	32.57	0.2	100	14.35	Yes	y6131551.chw
4	2.871	65.56	0.4	100	14.35	Yes	y6131530.chw
5	7.111	167.3	1	100	14.35	Yes	y6131509.chw
6	36.79	861.2	5	100	14.35	Yes	y6131449.chw
7	217.3	4857	25	100	14.35	Yes	y6131428.chw
8	376.3	8324	40	100	14.35	Yes	y6131407.chw

Report date: 6/17/2014 9:32:06 AM
Printed by: Stephanie Charley

Ident: 1.0 RT CHECK
Analysis from: 6/13/2014 1:46:38 PM
File: y6131346.CHW Last save: 6/17/2014 9:32:04 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:32:0
Run operator: Stephanie Charley
Analysis number: 6365

SAMPLE:
:
Vial number: 54
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	33.89	391.901	0.916	Fluoride
2	5.40	21.70	247.293	0.897	Chloride
3	6.48	39.19	527.077	0.853	Nitrite_N
4	8.34	6.43	104.551	0.923	Bromide
5	9.55	34.07	631.763	0.870	Nitrate-N
6	12.50	8.24	211.176	0.870	o-phosphate
7	14.35	7.34	180.433	1.028	Sulfate
7	17.50	150.86	2294.194	6.356	

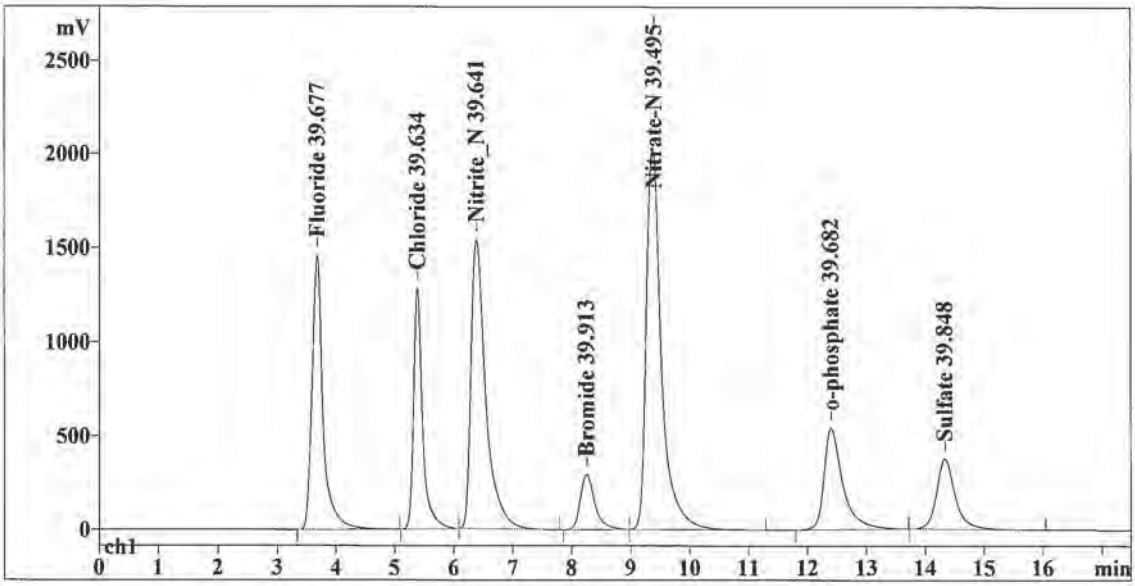
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METROHM LTD

Report date: 6/17/2014 9:14:34 AM
Printed by: Stephanie Charley

Ident: 40
Analysis from: 6/13/2014 2:07:25 PM
File: y6131407.CHW Last save: 6/17/2014 9:14:30 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:14:2
Run operator: Stephanie Charley
Analysis number: 6367

SAMPLE:
:
Vial number: 55
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.69	1459.40	19150.089	39.677	Fluoride
2	5.39	1284.02	13524.049	39.634	Chloride
3	6.39	1537.11	26853.510	39.641	Nitrite_N
4	8.25	295.28	5031.281	39.913	Bromide
5	9.39	1987.55	36286.723	39.495	Nitrate-N
6	12.40	541.24	11972.884	39.682	o-phosphate
7	14.34	376.26	8324.377	39.848	Sulfate
7	17.50	7480.86	121142.913	277.889	

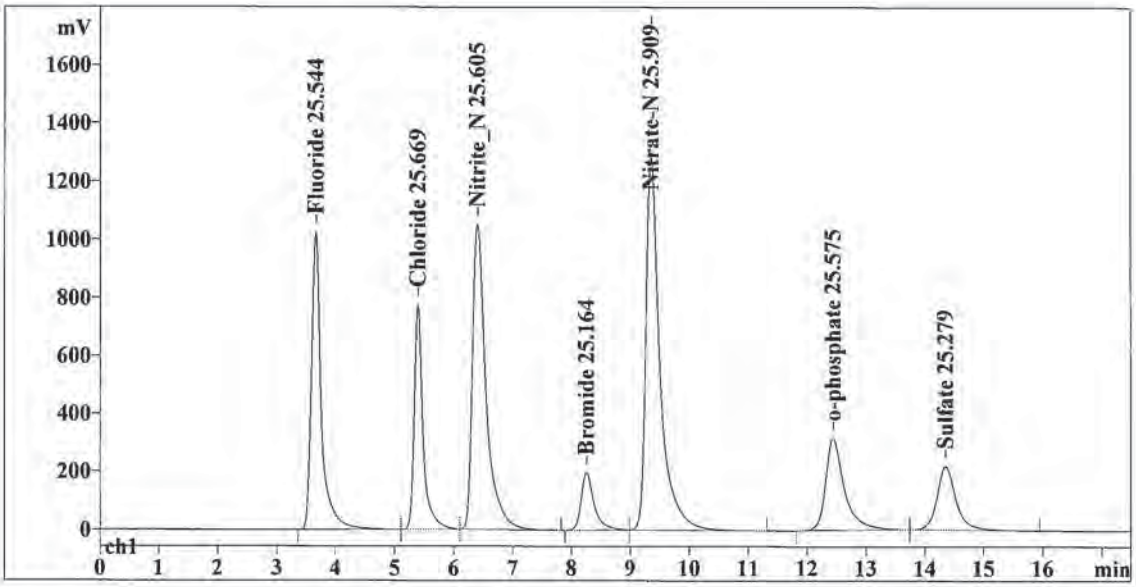
This report has been created by IC Net
METROHM LTD

Report date: 6/17/2014 9:15:16 AM
Printed by: Stephanie Charley

Ident: 25
Analysis from: 6/13/2014 2:28:13 PM
File: y6131428.CHW Last save: 6/17/2014 9:15:13 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:15:0
Run operator: Stephanie Charley
Analysis number: 6369

SAMPLE:
:
Vial number: 56
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	1025.06	11906.994	25.544	Fluoride
2	5.40	774.28	7921.879	25.669	Chloride
3	6.41	1049.73	16826.228	25.605	Nitrite_N
4	8.25	195.61	2998.916	25.164	Bromide
5	9.36	1282.84	21411.637	25.909	Nitrate-N
6	12.44	315.95	7028.839	25.575	o-phosphate
7	14.36	217.28	4857.094	25.279	Sulfate
7	17.50	4860.76	72951.586	178.745	

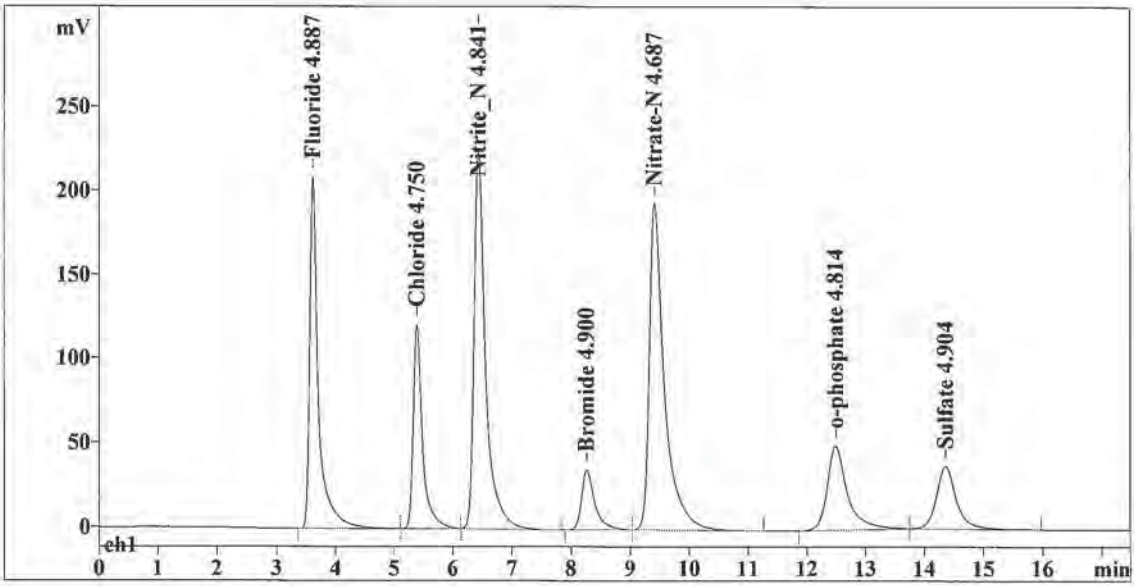
This report has been created by IC Net
METROHM LTD

Report date: 6/17/2014 9:15:37 AM
Printed by: Stephanie Charley

Ident: 5
Analysis from: 6/13/2014 2:49:02 PM
File: y6131449.CHW Last save: 6/17/2014 9:15:34 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:15:2
Run operator: Stephanie Charley
Analysis number: 6371

SAMPLE:
:
Vial number: 57
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.62	209.22	2164.542	4.887	Fluoride
2	5.39	121.01	1314.714	4.750	Chloride
3	6.44	224.05	3041.284	4.841	Nitrite_N
4	8.27	35.26	546.919	4.900	Bromide
5	9.41	194.33	3437.505	4.687	Nitrate-N
6	12.49	49.62	1190.126	4.814	o-phosphate
7	14.36	36.79	861.171	4.904	Sulfate
7	17.50	870.28	12556.262	33.783	

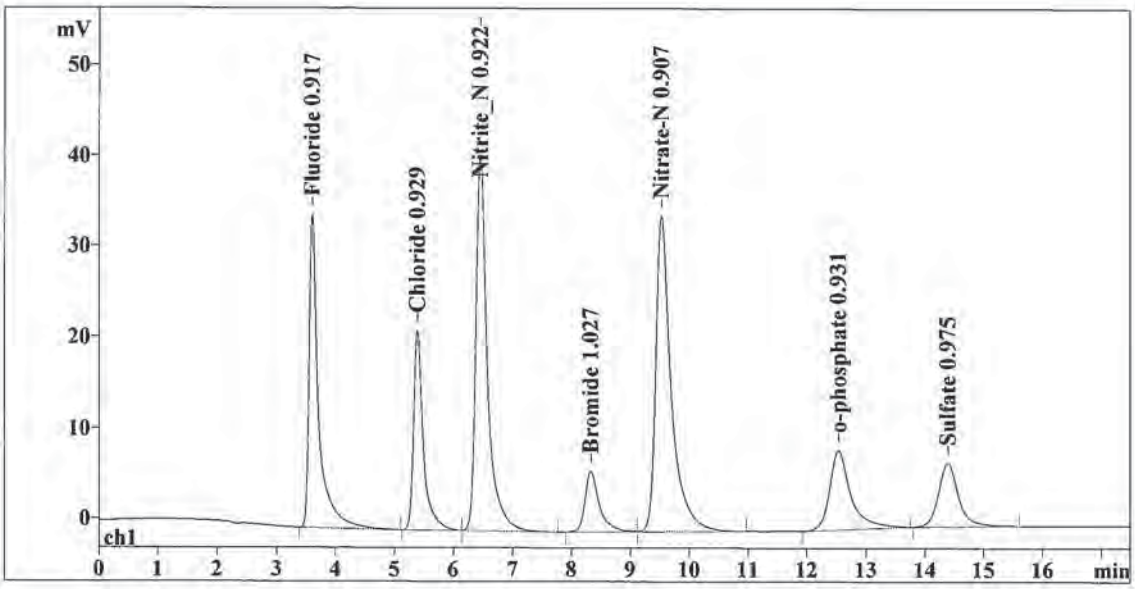
This report has been created by IC Net
METROHM LTD

Report date: 6/17/2014 9:15:54 AM
Printed by: Stephanie Charley

Ident: 1.0
Analysis from: 6/13/2014 3:09:49 PM
File: y6131509.CHW Last save: 6/17/2014 9:15:49 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:15:4
Run operator: Stephanie Charley
Analysis number: 6373

SAMPLE:
:
Vial number: 58
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	34.51	388.470	0.917	Fluoride
2	5.40	21.96	250.268	0.929	Chloride
3	6.46	41.47	558.950	0.922	Nitrite_N
4	8.33	6.74	112.310	1.027	Bromide
5	9.53	34.72	637.334	0.907	Nitrate-N
6	12.54	8.81	219.077	0.931	o-phosphate
7	14.39	7.11	167.308	0.975	Sulfate
7	17.50	155.31	2333.717	6.607	

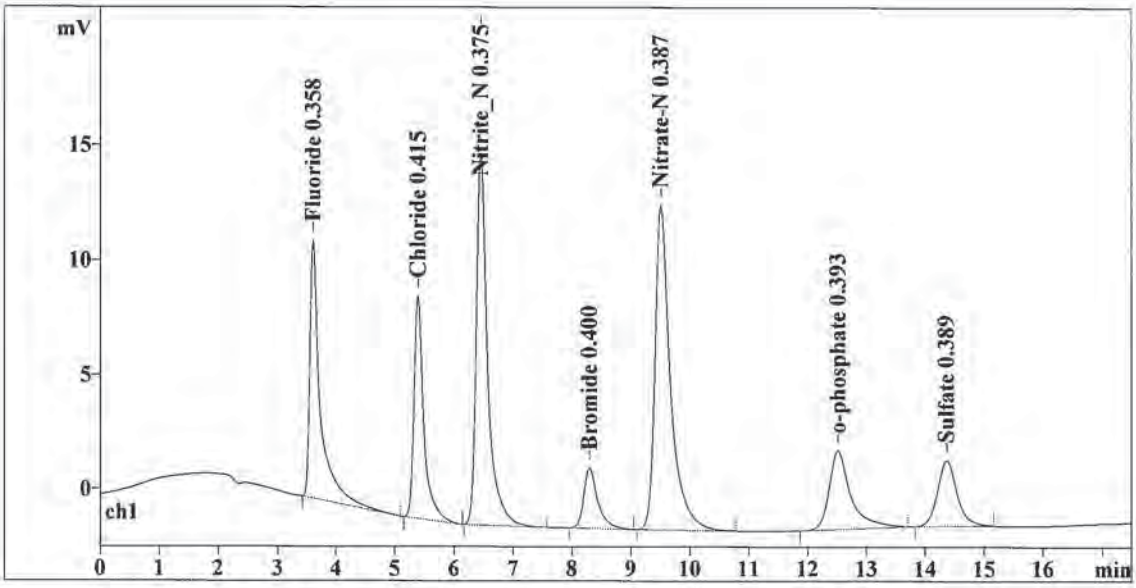
This report has been created by IC Net
METROHM LTD

Report date: 6/17/2014 9:16:05 AM
Printed by: Stephanie Charley

Ident: 0.4
Analysis from: 6/13/2014 3:30:36 PM
File: y6131530.CHW Last save: 6/17/2014 9:16:04 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:16:0
Run operator: Stephanie Charley
Analysis number: 6375

SAMPLE:
:
Vial number: 59
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	11.28	140.626	0.358	Fluoride
2	5.39	9.72	109.631	0.415	Chloride
3	6.46	16.23	215.503	0.375	Nitrite_N
4	8.30	2.63	42.851	0.400	Bromide
5	9.51	14.15	259.073	0.387	Nitrate-N
6	12.52	3.42	87.037	0.393	o-phosphate
7	14.37	2.87	65.559	0.389	Sulfate
7	17.50	60.30	920.280	2.717	

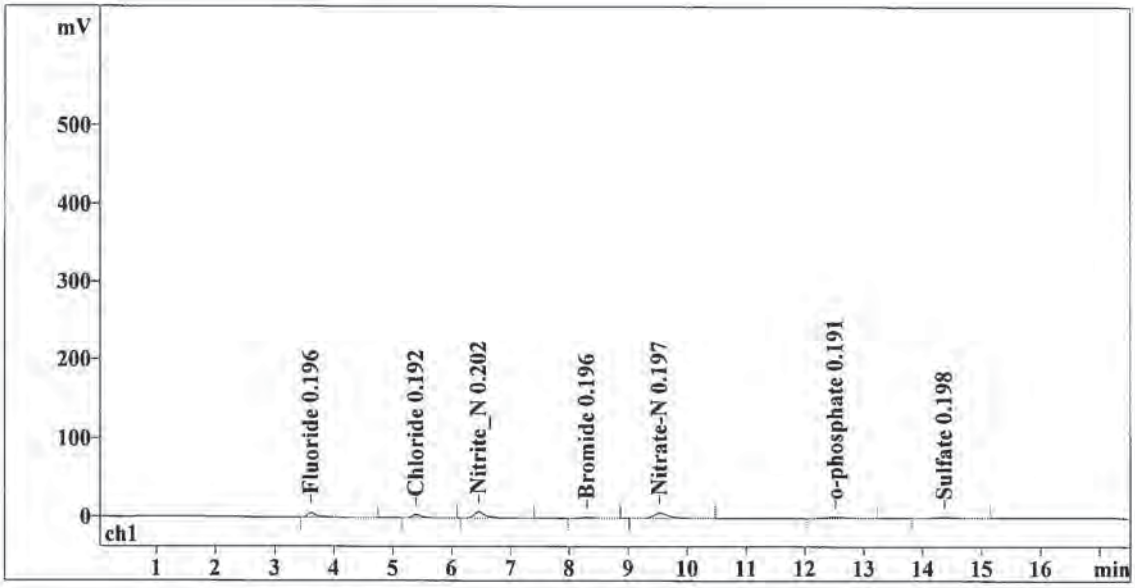
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METROHM LTD

Report date: 6/17/2014 9:16:17 AM
Printed by: Stephanie Charley

Ident: 0.2
Analysis from: 6/13/2014 3:51:24 PM
File: y6131551.CHW Last save: 6/17/2014 9:16:16 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:16:1
Run operator: Stephanie Charley
Analysis number: 6377

SAMPLE:
:
Vial number: 60
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	6.04	68.678	0.196	Fluoride
2	5.39	4.31	48.868	0.192	Chloride
3	6.46	8.00	106.574	0.202	Nitrite_N
4	8.30	1.28	20.361	0.196	Bromide
5	9.53	6.64	121.752	0.197	Nitrate-N
6	12.52	1.66	37.629	0.191	o-phosphate
7	14.37	1.41	32.571	0.198	Sulfate
7	17.50	29.33	436.434	1.373	

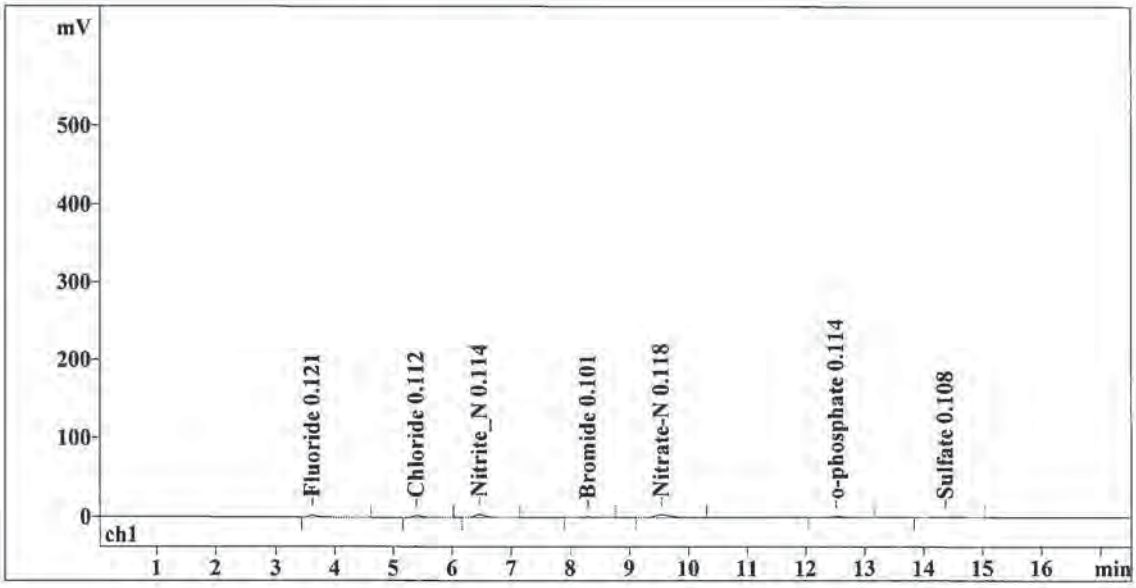
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METROHM LTD

Report date: 6/17/2014 9:16:29 AM
Printed by: Stephanie Charley

Ident: 0.1
Analysis from: 6/13/2014 4:12:12 PM
File: y6131612.CHW Last save: 6/17/2014 9:16:28 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:16:2
Run operator: Stephanie Charley
Analysis number: 6379

SAMPLE:
:
Vial number: 61
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	3.01	35.465	0.121	Fluoride
2	5.39	2.39	27.049	0.112	Chloride
3	6.46	3.85	51.202	0.114	Nitrite_N
4	8.30	0.62	9.841	0.101	Bromide
5	9.54	3.52	64.751	0.118	Nitrate-N
6	12.53	0.82	18.604	0.114	o-phosphate
7	14.37	0.72	16.888	0.108	Sulfate
7	17.50	14.92	223.801	0.787	

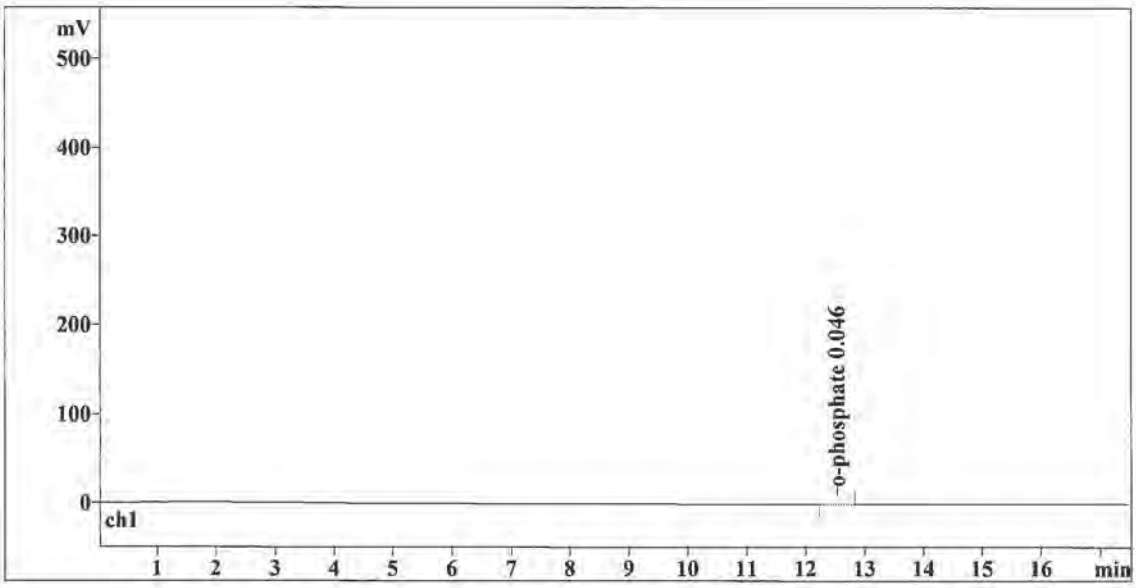
This report has been created by IC Net
METROHM LTD

Report date: 6/17/2014 9:16:56 AM
Printed by: Stephanie Charley

Ident: 0
Analysis from: 6/13/2014 4:33:00 PM
File: y6131633.CHW Last save: 6/17/2014 9:16:54 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:16:5
Run operator: Stephanie Charley
Analysis number: 6381

SAMPLE:
:
Vial number: 62
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	12.54	0.11	1.981	0.046	o-phosphate

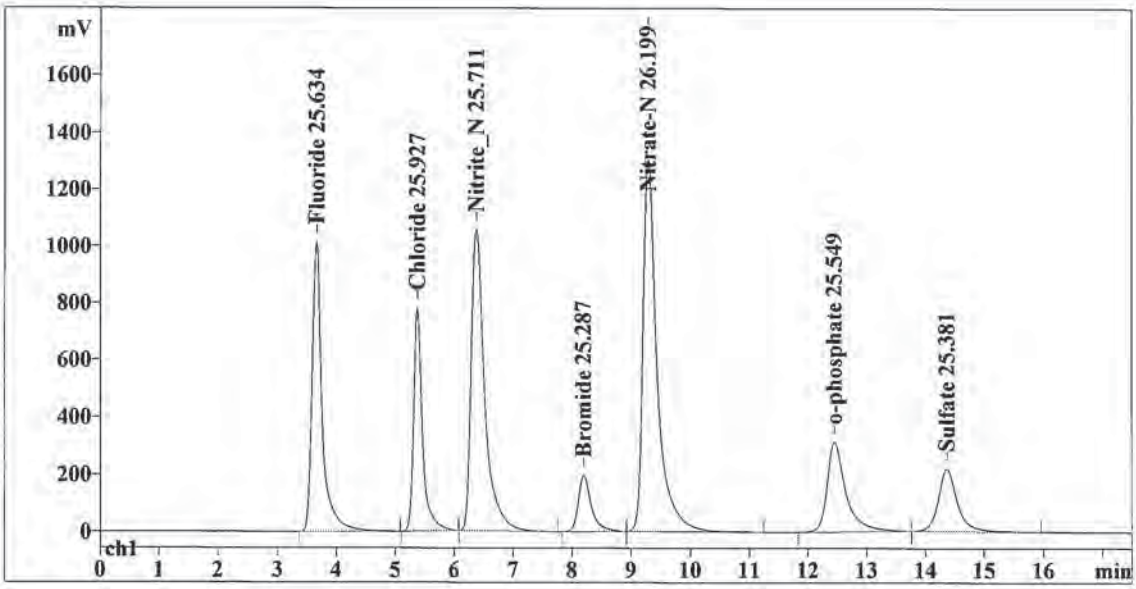
This report has been created by IC Net
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Report date: 6/17/2014 9:17:35 AM
Printed by: Stephanie Charley

Ident: QCS
Analysis from: 6/13/2014 5:37:49 PM
File: y6131737.CHW Last save: 6/17/2014 9:17:34 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:17:3
Run operator: Stephanie Charley
Analysis number: 6391

SAMPLE:
:
Vial number: 6
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	1015.04	11951.433	25.634	Fluoride
2	5.38	779.68	8014.142	25.927	Chloride
3	6.38	1056.00	16899.806	25.711	Nitrite_N
4	8.20	196.58	3014.915	25.287	Bromide
5	9.29	1305.62	21691.990	26.199	Nitrate-N
6	12.45	313.31	7020.605	25.549	o-phosphate
7	14.37	217.45	4879.121	25.381	Sulfate
7	17.50	4883.69	73472.012	179.687	

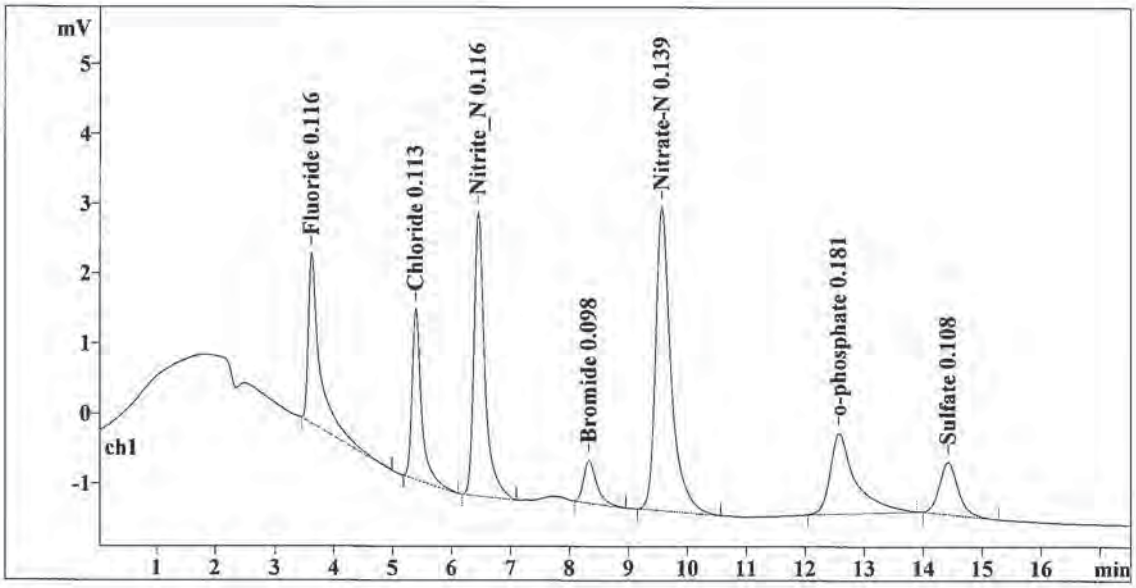
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Report date: 6/17/2014 9:18:18 AM
Printed by: Stephanie Charley

Ident: 0.1ppm
Analysis from: 6/13/2014 5:58:37 PM
File: y6131758.CHW Last save: 6/17/2014 9:18:16 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:18:1
Run operator: Stephanie Charley
Analysis number: 6393

SAMPLE:
:
Vial number: 63
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.62	2.42	33.204	0.116	Fluoride
2	5.39	2.44	27.243	0.113	Chloride
3	6.45	4.06	52.453	0.116	Nitrite_N
4	8.32	0.61	9.504	0.098	Bromide
5	9.56	4.34	79.437	0.139	Nitrate-N
6	12.57	1.16	35.032	0.181	o-phosphate
7	14.42	0.76	16.889	0.108	Sulfate
7	17.50	15.77	253.763	0.869	

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Workorder No. 1143646

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26250

Analysis Batch Id: VFC12037

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1226157		8/11/2014 8:30:00AM
Instrument Blank	1226163		8/11/2014 8:30:00AM
Lab Control Sample	1226158		8/11/2014 9:35:00AM
Continuing Calib Verification	1226164		8/11/2014 9:35:00AM
Paying sample	1143646001	SS010-MW03-080214	8/11/2014 3:00:00PM
Billable Matrix Spike	1143646002	SS010-MW03-080214 -MS	8/11/2014 3:20:00PM
Billable Matrix Spike Dup.	1143646003	SS010-MW03-080214 -MSD	8/11/2014 3:39:00PM
Lab Control Sample Duplicate	1226159		8/11/2014 4:17:00PM
Continuing Calib Verification	1226165		8/11/2014 4:17:00PM
Trip Blank	1143646006	TB-3-SS010	8/11/2014 4:36:00PM
Paying sample	1143646004	SS010-MW01-080414	8/11/2014 4:56:00PM
Paying sample	1143646005	SS010-MW99-080414	8/11/2014 5:15:00PM
Paying sample	1143646007	Water-EB-073114	8/11/2014 5:34:00PM
Paying sample	1143646008	SS010-MW02-080514	8/11/2014 5:53:00PM
Continuing Calib Verification	1226166		8/11/2014 8:08:00PM

SGS Ref.#	1226163 Instrument Blank	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646001, 1143646004, 1143646005, 1143646006, 1143646007, 1143646008

Parameter	Results	RL/CL	Units	Analysis Date
Volatile Fuels Department				
Gasoline Range Organics	0.0500U	0.100	mg/L	08/11/14
Surrogates				
4-Bromofluorobenzene <surr>	96	50-150	%	08/11/14

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226164 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646001, 1143646004, 1143646005, 1143646006, 1143646007, 1143646008

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.856	86	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		99	(75-125)		08/11/2014

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226165 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646001, 1143646004, 1143646005, 1143646006, 1143646007, 1143646008

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.963	96	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		103	(75-125)		08/11/2014

I atch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226166 Continuing Calib Verification	**Printed Date/Time**	08/19/2014 16:52
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143646001, 1143646004, 1143646005, 1143646006, 1143646007, 1143646008

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.955	96	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		100	(75-125)		08/11/2014

I atch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

Workorder No. 1143646

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26250

Analysis Batch Id: VFC12037

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1226157		8/11/2014 8:30:00AM
Instrument Blank	1226163		8/11/2014 8:30:00AM
Lab Control Sample	1226158		8/11/2014 9:35:00AM
Continuing Calib Verification	1226164		8/11/2014 9:35:00AM
Paying sample	1143646001	SS010-MW03-080214	8/11/2014 3:00:00PM
Billable Matrix Spike	1143646002	SS010-MW03-080214 -MS	8/11/2014 3:20:00PM
Billable Matrix Spike Dup.	1143646003	SS010-MW03-080214 -MSD	8/11/2014 3:39:00PM
Lab Control Sample Duplicate	1226159		8/11/2014 4:17:00PM
Continuing Calib Verification	1226165		8/11/2014 4:17:00PM
Trip Blank	1143646006	TB-3-SS010	8/11/2014 4:36:00PM
Paying sample	1143646004	SS010-MW01-080414	8/11/2014 4:56:00PM
Paying sample	1143646005	SS010-MW99-080414	8/11/2014 5:15:00PM
Paying sample	1143646007	Water-EB-073114	8/11/2014 5:34:00PM
Paying sample	1143646008	SS010-MW02-080514	8/11/2014 5:53:00PM
Continuing Calib Verification	1226166		8/11/2014 8:08:00PM

SGS Ref.#	1226157	Method Blank	**Printed Date/Time**	08/19/2014	16:52
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	VXX26250	
Project Name/#	Cape Romanzof		**Method**	SW5030B	
Matrix	Water (Surface, Eff., Ground)		**Date**	08/11/2014	

QC results affect the following production samples:

1143646001, 1143646004, 1143646005, 1143646006, 1143646007, 1143646008

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	08/11/14
Surrogates					
4-Bromofluorobenzene <surr>	96	50-150		%	08/11/14
Batch VFC12037					
Method AK101					
Instrument Agilent 7890A PID/FID					

SGS Ref.#	1226158	Lab Control Sample	**Printed Date/Time**	08/19/2014	16:52
	1226159	Lab Control Sample Duplicate	**Prep Batch**	VXX26250	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5030B	
Project Name/#	Cape Romanzof		**Date**	08/11/2014	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143646001, 1143646004, 1143646005, 1143646006, 1143646007, 1143646008

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	0.856	86	(60-120)			1.00 mg/L	08/11/2014
	LCSD	0.963	96		12	(< 20)	1.00 mg/L	08/11/2014
Surrogates								
4-Bromofluorobenzene <surr>	LCS		99	(50-150)				08/11/2014
	LCSD		103		4			08/11/2014

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1143646002	Billable Matrix Spike	**Printed Date/Time**	08/19/2014 16:52
	1143646003	Billable Matrix Spike Dup.	**Prep Batch**	VXX26250
			Method	Volatile Fuels Extraction (W)
			Date	08/11/2014
Original	1143646001			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount		Analysis Date
Volatile Fuels Department										
Gasoline Range Organics	BMS	0.0326J	0.933	90	(60-120)			1.00	mg/L	08/11/2014
	BMSD		0.921	89		1	(< 20)	1.00	mg/L	08/11/2014
Surrogates										
4-Bromofluorobenzene <surr>	BMS		0.0492	98	(50-150)					08/11/2014
	BMSD		0.0486	97		1				08/11/2014

Batch	VFC12037
Method	AK101
Instrument	Agilent 7890A PID/FID

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646, 1143647, 1143699, 1148349

Queue: **VFC** Batch: **12037**

Method: AK101, AK101 8021B, AK101/8021B

Run Date: 08/11/14 08:30 - 08/11/14 20:08

Extraction Batch(es): VXX26250

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: SHERAB TENZIN
Date: 8/12/14

Reviewer's Signature Elizabeth Brandemuhl
Printed Name: Elizabeth Brandemuhl
Date: 8-12-2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On   : 11 Aug 2014   9:35 am
Operator : ST
Sample   : CCV
Misc   :
ALS Vial : 8   Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj.   :
Signal #1 Phase :   Signal #2 Phase:
Signal #1 Info :   Signal #2 Info :

Min. RRF   :   0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25%   Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	PID-aaa -TFT	1.000	1.000	0.0	0#	0.00
2		PID-benzene	0.000	1.145	0.0	0#	0.00
3	S	PID-1,4-DFB<Surr>	0.000	1.383	0.0	0#	0.00
4		PID-toluene	0.000	13.734	0.0	0#	0.00
5		PID-ethylbenzene	0.000	1.671	0.0	0#	0.00
6		PID-p&m-xylene	0.000	7.453	0.0	0#	0.00
7		PID-o-xylene	0.000	2.344	0.0	0#	0.00
8		PID-BFB<Surr>	0.000	2.949	0.0	0#	0.00
Signal #2							
10	S	FID-1,4-DFB #2	341.197	0.000 E3	100.0#	0#	0.00
11	S	FID-TRI-ALPHA #2	245.113	0.000 E3	100.0#	0#	0.00
12	H	FID-GRO #2	296.994	254.192 E3	14.4	86	0.00
13	S	FID-4-BFB<Surr> #2	243.990	0.000 E3	100.0#	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

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

GC QA-QC Check Report

Daily Calibration File : Z:\07\VHA\DATA\073114\3112.d
Time Acquired : 31 Jul 2014 11:15 am

30364300

File	Sample	Surrogate Recovery %				Internal Standard Responses
1105.d (fails)	IB	109	98	96	96	33514988
1106.d (fails)	NAS	108	98	98	96	33529954
1107.d (fails)	CCV2	118	102	95	102	33535872
1108.d (fails)	CCV	109	111	96	99	34410799
1109.d (fails)	CCV2	119	101	94	97	33062446
1110.d (fails)	1143645007	111	98	94	92	32934588
1111.d (fails)	1143645001	111	99	93	94	32553799
1112.d (fails)	1143645002	117	112	92	98	32091523
1113.d (fails)	1143645003	115	111	94	99	32944645
1114.d (fails)	R	112	101	93	96	33326537
1115.d (fails)	1143645004	110	100	96	93	33054838
1116.d (fails)	1143645005	115	104	96	100	32356954
1117.d (fails)	1143645006	110	103	101	95	33600231
1118.d (fails)	R	111	99	100	93	33021473
1119.d (fails)	1143647005	111	99	95	95	33117937
1120.d (fails)	1143647001	113	86	98	121	33777558
1121.d (fails)	1143647002	108	98	95	99	33559458
1122.d (fails)	1143647003	105	104	107	152*	34811576
1123.d (fails)	1143647004	111	99	94	101	33267911
1124.d (fails)	R	108	99	100	110	33921909
1125.d (fails)	1143646001	111	100	95	99	33537357
1126.d (fails)	1143646002	113	112	96	98	33548835

1127.d						
(fails)	1143646003	113	112	96	97	33505481
1128.d						
(fails)	R	110	99	97	97	33485391
1129.d						
(fails)	CCV	116	111	93	103	32574014
1130.d						
(fails)	1143646006	110	98	94	92	33606933
1131.d						
(fails)	1143646004	111	100	95	95	33028367
1132.d						
(fails)	1143646005	110	99	96	95	33600498
1133.d						
(fails)	1143646007	107	100	98	98	34170668
1134.d						
(fails)	1143646008	109	99	97	94	33822918
1135.d						
(fails)	R	110	99	95	95	33601426
1136.d						
(fails)	1143699006	111	100	95	93	32929459
1137.d						
(fails)	1148349012	111	99	95	96	33094816
1138.d						
(fails)	1148349001	111	99	95	95	33241876
1139.d						
(fails)	1148349002	110	98	94	98	33351934
1140.d						
(fails)	R	111	100	96	97	33428064
1141.d						
(fails)	CCV	114	114	96	100	33491778

(fails) - fails 24hr time check * - fails criteria

Created: Tue Aug 12 12:11:12 2014 VHA

Instrument Runlog

Instrument: VHA **Calibration Date:** 7/31/2014 **Method:** AK101/BTEX
Operator: ST **Processed By:** ST **Posted By:** ST **Analytical Batch:** 12037

Data Path: **Z:\08\VHA\DATA\08112014**

Daily:		As Needed:	
Verify System Date/Time	✓	Refill Water Tank	
General System Inspection	✓	Refill Standards	

Standards:						
	IS	VW8-83-3	**CCV2**	VW8-104-6		
	Cent. DFB	VW8-84-6	**CCV**	VW8-101-1		
	BFB	VW8-62-3	**MeOH**	P-968		
	NAS	VW8-105-2				

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1101.d	1	R	1			8/11/14 7:14 AM	N/A	
1102.d	2	R	1			8/11/14 7:33 AM	N/A	
1103.d	3	R	1			8/11/14 7:52 AM	N/A	
1104.d	4	R	1			8/11/14 8:11 AM	N/A	
1105.d	5	IB	1			8/11/14 8:30 AM	N/A	
1106.d	6	NAS	1			8/11/14 8:57 AM	N/A	
1107.d	7	CCV2	1	NU		8/11/14 9:16 AM	N/A	
1108.d	8	CCV	1			8/11/14 9:35 AM	N/A	
1109.d	9	CCV2	1	NU		8/11/14 9:54 AM	N/A	
1110.d	10	1143645007-A	1		WATER	8/11/14 10:13 AM	<2	
1111.d	11	1143645001-C PS	1		WATER	8/11/14 10:32 AM	<2	
1112.d	12	1143645002-C BMS	1		WATER	8/11/14 10:51 AM	<2	
1113.d	13	1143645003-C BMSD	1		WATER	8/11/14 11:11 AM	<2	
1114.d	14	R	1			8/11/14 11:30 AM	N/A	
1115.d	15	1143645004-C	1		WATER	8/11/14 11:49 AM	<2	
1116.d	16	1143645005-C	1		WATER	8/11/14 12:08 PM	<2	
1117.d	17	1143645006-C	1		WATER	8/11/14 12:27 PM	<2	
1118.d	18	R	1			8/11/14 12:46 PM	N/A	
1119.d	19	1143647005-D	1		WATER	8/11/14 1:05 PM	<2	
1120.d	20	1143647001-D	1		WATER	8/11/14 1:25 PM	<2	
1121.d	21	1143647002-D	1		WATER	8/11/14 1:44 PM	<2	
1122.d	22	1143647003-D	1		WATER	8/11/14 2:03 PM	<2	
1123.d	23	1143647004-B	1		WATER	8/11/14 2:22 PM	<2	
1124.d	24	R	1			8/11/14 2:41 PM	N/A	
1125.d	25	1143646001-C PS	1		WATER	8/11/14 3:00 PM	<2	
1126.d	26	1143646002-C BMS	1		WATER	8/11/14 3:20 PM	<2	
1127.d	27	1143646003-C BMSD	1		WATER	8/11/14 3:39 PM	<2	
1128.d	28	R	1			8/11/14 3:58 PM	N/A	
1129.d	29	CCV	1			8/11/14 4:17 PM	N/A	
1130.d	30	1143646006-A	1		WATER	8/11/14 4:36 PM	<2	
1131.d	31	1143646004-C	1		WATER	8/11/14 4:56 PM	<2	
1132.d	32	1143646005-C	1		WATER	8/11/14 5:15 PM	<2	
1133.d	33	1143646007-C	1		WATER	8/11/14 5:34 PM	<2	
1134.d	34	1143646008-C	1		WATER	8/11/14 5:53 PM	<2	
1135.d	35	R	1			8/11/14 6:13 PM	N/A	
1136.d	36	1143699006-A	1		WATER	8/11/14 6:32 PM	<2	
1137.d	37	1148349012-A	1		WATER	8/11/14 6:51 PM	<2	
1138.d	38	1148349001-E	1		WATER	8/11/14 7:10 PM	<2	
1139.d	39	1148349002-A	1		WATER	8/11/14 7:29 PM	<2	
1140.d	40	R	1			8/11/14 7:48 PM	N/A	
1141.d	41	CCV	1			8/11/14 8:08 PM	N/A	

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1142.d	42	R	1			8/11/14 8:27 PM	N/A	
1143.d	43	R	1			8/11/14 8:46 PM	N/A	
1144.d	44	R	1			8/11/14 9:05 PM	N/A	
1145.d	45	R	1			8/11/14 9:24 PM	N/A	
1146.d	46	IB	1			8/11/14 9:43 PM	N/A	
1147.d	47	NAS	1			8/11/14 10:02 PM	N/A	
1148.d	48	CCV	1			8/11/14 10:21 PM	N/A	
1149.d	49	R	1			8/11/14 10:40 PM	N/A	
1150.d	50	MB	1			8/11/14 11:00 PM	N/A	
1151.d	51	LCS GRO	1			8/11/14 11:19 PM	N/A	
1152.d	52	LCSD GRO	1			8/11/14 11:38 PM	N/A	
1153.d	53	1143566011-A TB	1		SOIL	8/11/14 11:57 PM	N/A	
1154.d	54	1143656001-A TB	1		SOIL	8/12/14 12:16 AM	N/A	
1155.d	55	1143656002-A TB	1		SOIL	8/12/14 12:35 AM	N/A	
1156.d	56	1143579060-B	1		SOIL	8/12/14 12:54 AM	N/A	
1157.d	57	1143579061-B	1		SOIL	8/12/14 1:14 AM	N/A	
1158.d	58	1143579062-B	1		SOIL	8/12/14 1:33 AM	N/A	
1159.d	59	1143579063-B	1		SOIL	8/12/14 1:52 AM	N/A	
1160.d	60	1143579067-B	1		SOIL	8/12/14 2:11 AM	N/A	
1161.d	61	1143579068-B	1		SOIL	8/12/14 2:30 AM	N/A	
1162.d	62	1143579072-B	1		SOIL	8/12/14 2:49 AM	N/A	
1163.d	63	1143579073-B	1		SOIL	8/12/14 3:09 AM	N/A	
1164.d	64	1143566001-C	1		SOIL	8/12/14 3:28 AM	N/A	
1165.d	65	1143566002-C	1		SOIL	8/12/14 3:47 AM	N/A	
1166.d	66	1143566003-C	1		SOIL	8/12/14 4:06 AM	N/A	
1167.d	67	1143566004-C	1		SOIL	8/12/14 4:25 AM	N/A	
1168.d	68	R	1			8/12/14 4:44 AM	N/A	
1169.d	69	CCV	1			8/12/14 5:03 AM	N/A	
1170.d	70	1143566005-C	1		SOIL	8/12/14 5:22 AM	N/A	
1171.d	71	1143554001-C	1		SOIL	8/12/14 5:41 AM	N/A	
1172.d	72	1143554002-C	1		SOIL	8/12/14 6:01 AM	N/A	
1173.d	73	1143554003-C	1		SOIL	8/12/14 6:20 AM	N/A	
1174.d	74	1143656003-B	1		SOIL	8/12/14 6:39 AM	N/A	
1175.d	75	R	1			8/12/14 6:58 AM	N/A	
1176.d	76	CCV	1			8/12/14 7:17 AM	N/A	
1177.d	77	R	1			8/12/14 7:36 AM	N/A	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:30 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 08:48:15 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33514988	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46399663	54.732 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.46%
10) S	FID-1,4-DFB #2	3.747	16788734	49.205 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.41%
11) S	FID-TRI-ALPHA #2	4.680	11770893	48.022 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.04%
13) S	FID-4-BFB<Surr> #2	8.671	10564092	47.999 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.00%
	Target Compounds			
2)	PID-benzene	3.318	14975	0.007 ppb
4)	PID-toluene	5.905	22589	0.011 ppb
5)	PID-ethylbenzene	7.664	40829	0.022 ppb
6)	PID-p&m-xylene	7.915	63791	0.029 ppb
7)	PID-o-xylene	8.298	10381	0.006 ppb
8)	PID-BFB<Surr>	8.670	98758041	51.881 ppb
12) H	FID-GRO #2	5.717	5959936	20.068 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

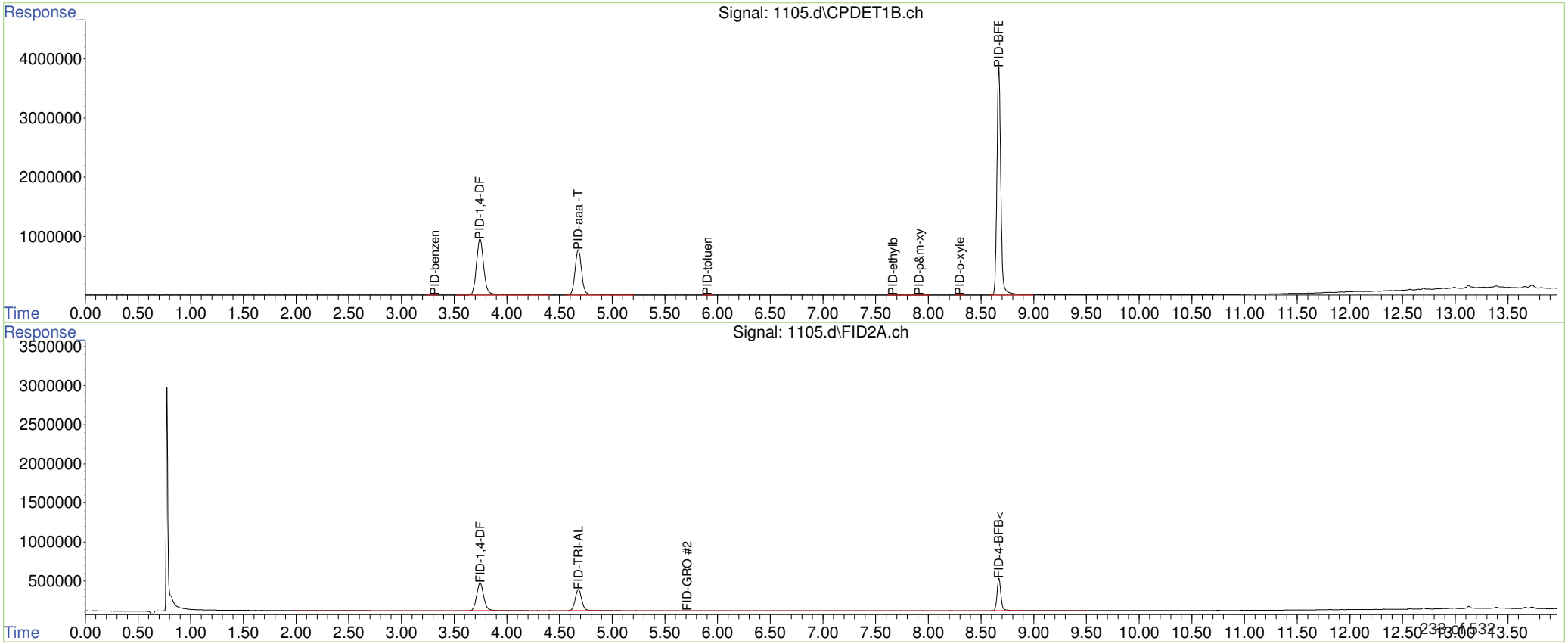
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:30 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 08:48:15 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 9:35 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	34410799	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47598891	54.685 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.37%
10) S	FID-1,4-DFB #2	3.747	18923728	55.463 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.93%
11) S	FID-TRI-ALPHA #2	4.681	11744112	47.913 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.83%
13) S	FID-4-BFB<Surr> #2	8.670	10925332	49.654 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.31%
	Target Compounds			
2)	PID-benzene	3.324	39404485	17.115 ppb
4)	PID-toluene	5.900	472583362	217.838 ppb
5)	PID-ethylbenzene	7.656	57485200	29.833 ppb
6)	PID-p&m-xylene	7.904	256478376	115.350 ppb
7)	PID-o-xylene	8.300	80643416	42.362 ppb
8)	PID-BFB<Surr>	8.669	101464433	51.915 ppb
12) H	FID-GRO #2	5.717	254191788	855.882 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

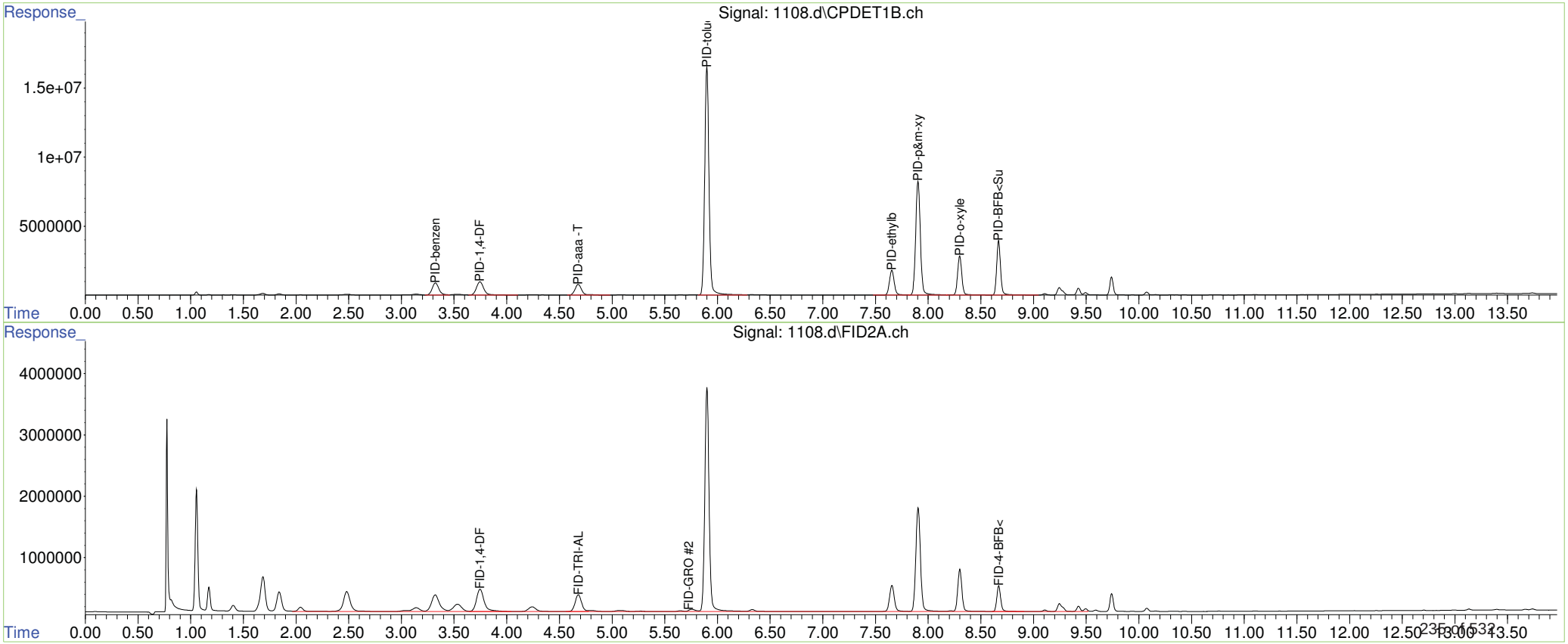
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 9:35 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1125.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 3:00 pm
Operator : ST
Sample : 1143646001-C PS
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 15:44:48 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33537357	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	46993284	55.395 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.79%
10) S	FID-1,4-DFB #2	3.748	16975166	49.752 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	99.50%
11) S	FID-TRI-ALPHA #2	4.681	11649250	47.526 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.05%
13) S	FID-4-BFB<Surr> #2	8.671	10857862	49.345 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.69%
	Target Compounds			
2)	PID-benzene	0.000	0	N.D. ppb
4)	PID-toluene	5.905	73572	0.035 ppb
5)	PID-ethylbenzene	7.663	37525	0.020 ppb
6)	PID-p&m-xylene	7.911	222563	0.103 ppb
7)	PID-o-xylene	8.304	40357	0.022 ppb
8)	PID-BFB<Surr>	8.670	100539290	52.782 ppb
12) H	FID-GRO #2	5.717	9673279	32.571 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

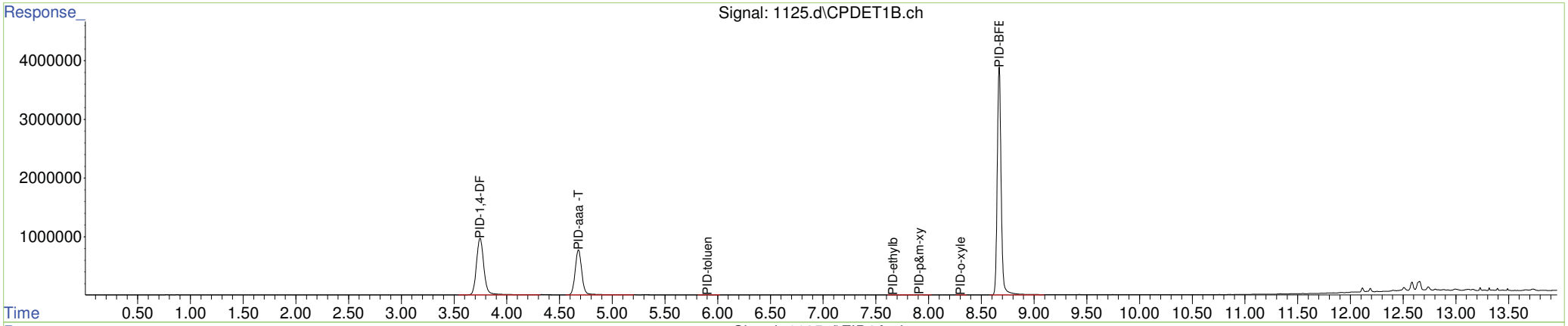
(f)=RT Delta > 1/2 Window (m)=manual int.

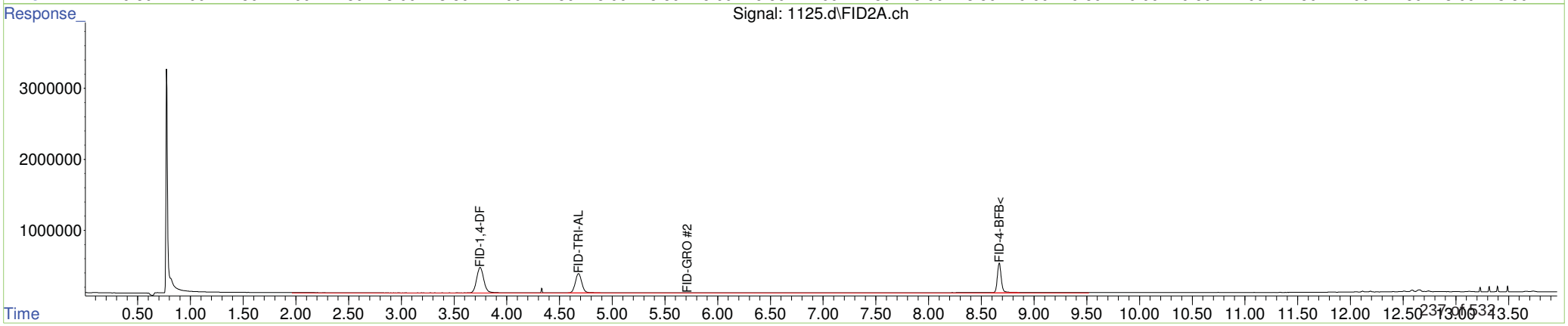
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1125.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 3:00 pm
Operator : ST
Sample : 1143646001-C PS
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 15:44:48 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1126.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 3:20 pm
Operator : ST
Sample : 1143646002-C BMS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 15:45:42 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33548835	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47974441	56.532 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	113.06%
10) S	FID-1,4-DFB #2	3.748	19155551	56.142 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	112.28%
11) S	FID-TRI-ALPHA #2	4.681	11809066	48.178 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.36%
13) S	FID-4-BFB<Surr> #2	8.671	10825076	49.195 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.39%
	Target Compounds			
2)	PID-benzene	3.325	41377324	18.434 ppb
4)	PID-toluene	5.901	487630734	230.549 ppb
5)	PID-ethylbenzene	7.656	59227781	31.527 ppb
6)	PID-p&m-xylene	7.905	267716659	123.498 ppb
7)	PID-o-xylene	8.300	83364025	44.917 ppb
8)	PID-BFB<Surr>	8.670	102382075	53.731 ppb
12) H	FID-GRO #2	5.717	277158465	933.212 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

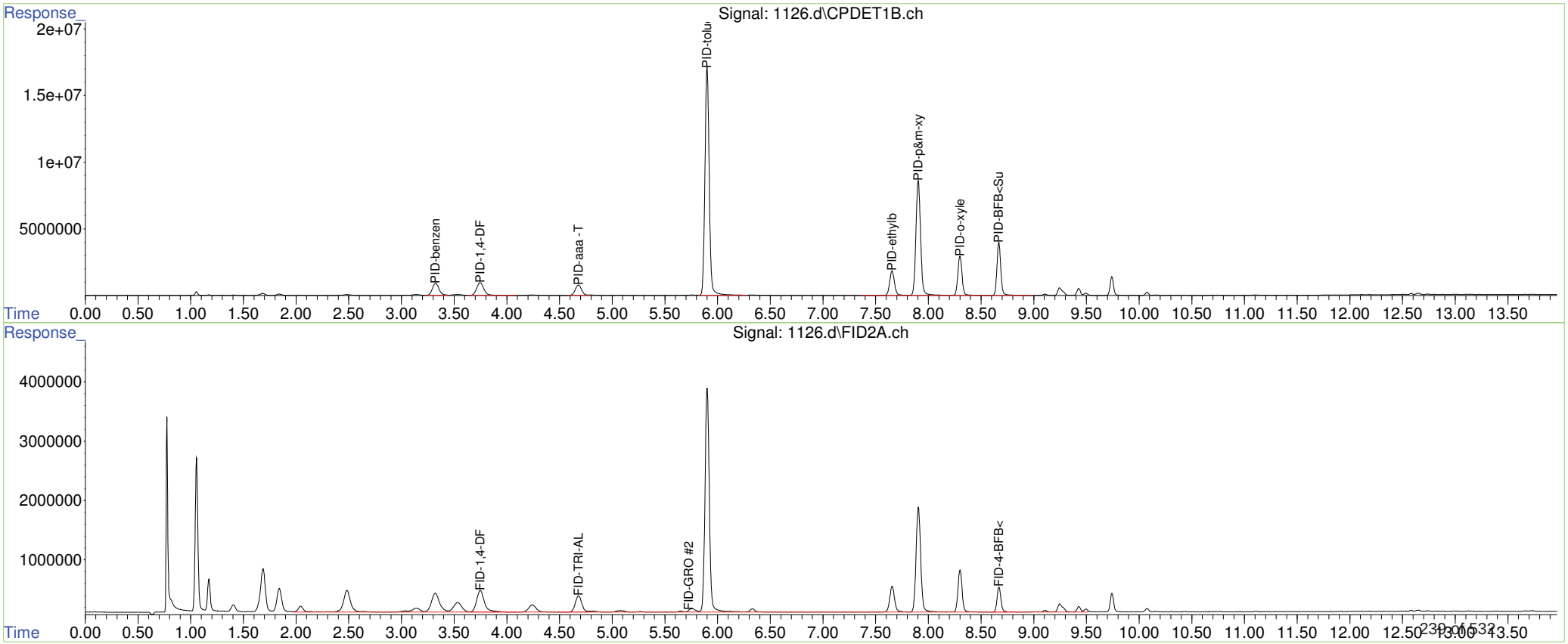
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1126.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 3:20 pm
Operator : ST
Sample : 1143646002-C BMS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 15:45:42 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1127.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 3:39 pm
Operator : ST
Sample : 1143646003-C BMSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 15:57:31 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33505481	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47808157	56.409 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	112.82%
10) S	FID-1,4-DFB #2	3.748	19064956	55.877 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	111.75%
11) S	FID-TRI-ALPHA #2	4.681	11723082	47.827 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.65%
13) S	FID-4-BFB<Surr> #2	8.671	10701178	48.627 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.25%
	Target Compounds			
2)	PID-benzene	3.324	40930046	18.258 ppb
4)	PID-toluene	5.900	480674014	227.554 ppb
5)	PID-ethylbenzene	7.656	58161820	31.000 ppb
6)	PID-p&m-xylene	7.905	262363847	121.186 ppb
7)	PID-o-xylene	8.300	81987562	44.232 ppb
8)	PID-BFB<Surr>	8.669	100312574	52.713 ppb
12) H	FID-GRO #2	5.717	273417763	920.617 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

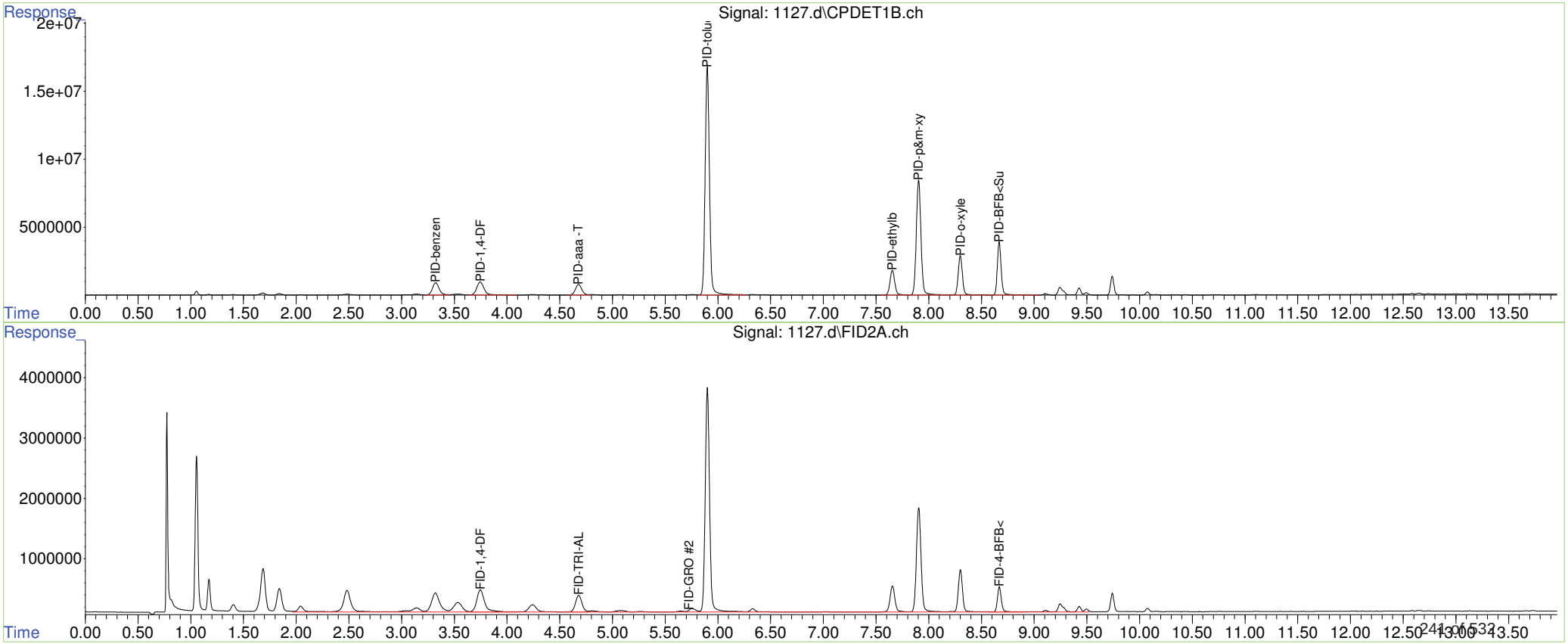
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1127.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 3:39 pm
Operator : ST
Sample : 1143646003-C BMSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 15:57:31 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1129.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:17 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 16:32:03 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	32574014	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47732265	57.930 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	115.86%
10) S	FID-1,4-DFB #2	3.748	18892184	55.370 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.74%
11) S	FID-TRI-ALPHA #2	4.681	11386370	46.454 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.91%
13) S	FID-4-BFB<Surr> #2	8.671	11307816	51.407 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	102.81%
	Target Compounds			
2)	PID-benzene	3.325	42212667	19.369 ppb
4)	PID-toluene	5.901	495566808	241.313 ppb
5)	PID-ethylbenzene	7.656	59804555	32.787 ppb
6)	PID-p&m-xylene	7.905	271047920	128.777 ppb
7)	PID-o-xylene	8.300	84340248	46.803 ppb
8)	PID-BFB<Surr>	8.670	105300605	56.916 ppb
12) H	FID-GRO #2	5.717	286031357	963.088 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

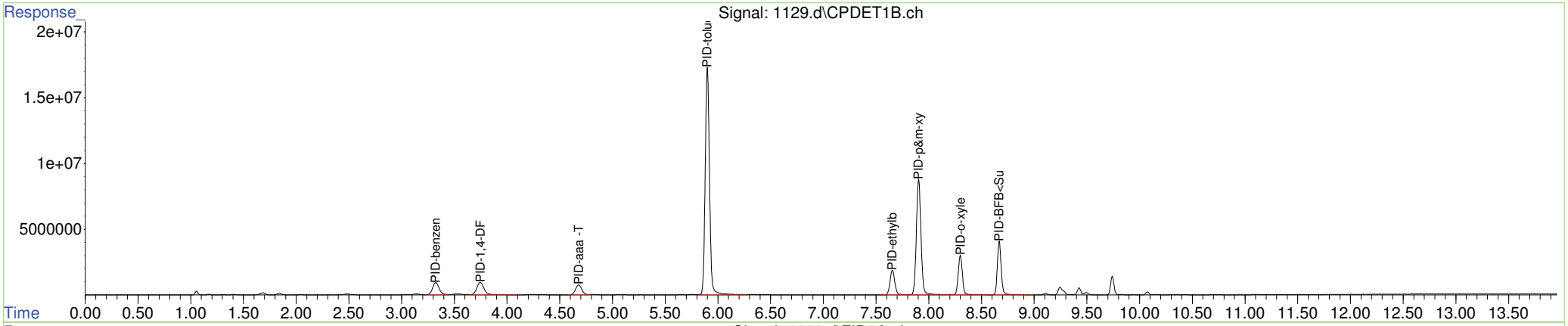
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1129.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:17 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 16:32:03 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1130.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:36 pm
Operator : ST
Sample : 1143646006-A
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:18 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33606933	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46761783	55.008 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.02%
10) S	FID-1,4-DFB #2	3.747	16716993	48.995 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	97.99%
11) S	FID-TRI-ALPHA #2	4.680	11567166	47.191 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.38%
13) S	FID-4-BFB<Surr> #2	8.671	10120243	45.965 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	91.93%
	Target Compounds			
2)	PID-benzene	3.323	62800	0.028 ppb
4)	PID-toluene	5.904	392536	0.185 ppb
5)	PID-ethylbenzene	7.662	86396	0.046 ppb
6)	PID-p&m-xylene	7.910	367523	0.169 ppb
7)	PID-o-xylene	8.304	127778	0.069 ppb
8)	PID-BFB<Surr>	8.670	95690598	50.132 ppb
12) H	FID-GRO #2	5.717	6433254	21.661 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

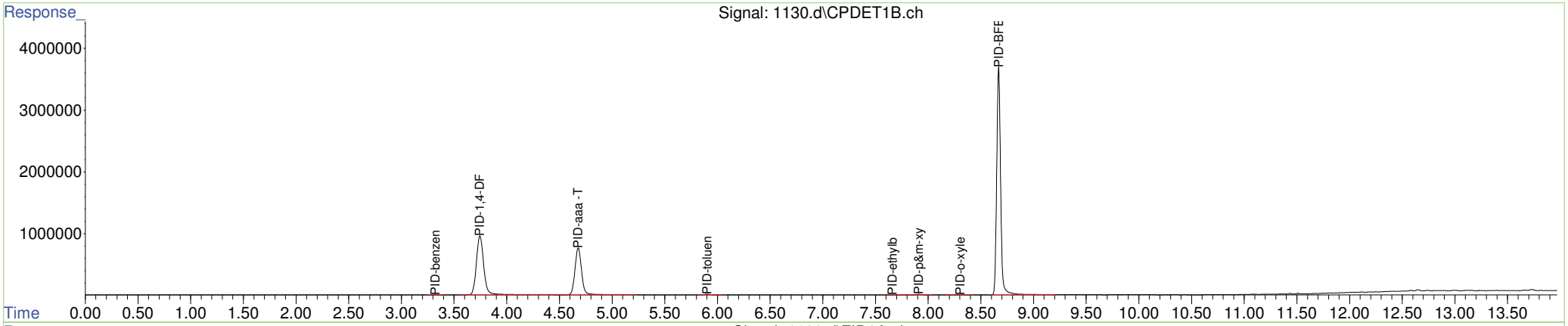
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1130.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:36 pm
Operator : ST
Sample : 1143646006-A
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:18 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1131.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:56 pm
Operator : ST
Sample : 1143646004-C
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:28 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33028367	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.745	46558470	55.728 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	111.46%
10) S	FID-1,4-DFB #2	3.746	17130293	50.206 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	100.41%
11) S	FID-TRI-ALPHA #2	4.680	11598250	47.318 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.64%
13) S	FID-4-BFB<Surr> #2	8.671	10403873	47.265 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.53%
	Target Compounds			
2)	PID-benzene	3.324	38302	0.017 ppb
4)	PID-toluene	5.904	152508	0.073 ppb
5)	PID-ethylbenzene	7.663	48829	0.026 ppb
6)	PID-p&m-xylene	7.911	237349	0.111 ppb
7)	PID-o-xylene	8.304	75634	0.041 ppb
8)	PID-BFB<Surr>	8.670	97602014	52.029 ppb
12) H	FID-GRO #2	5.717	10565779	35.576 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

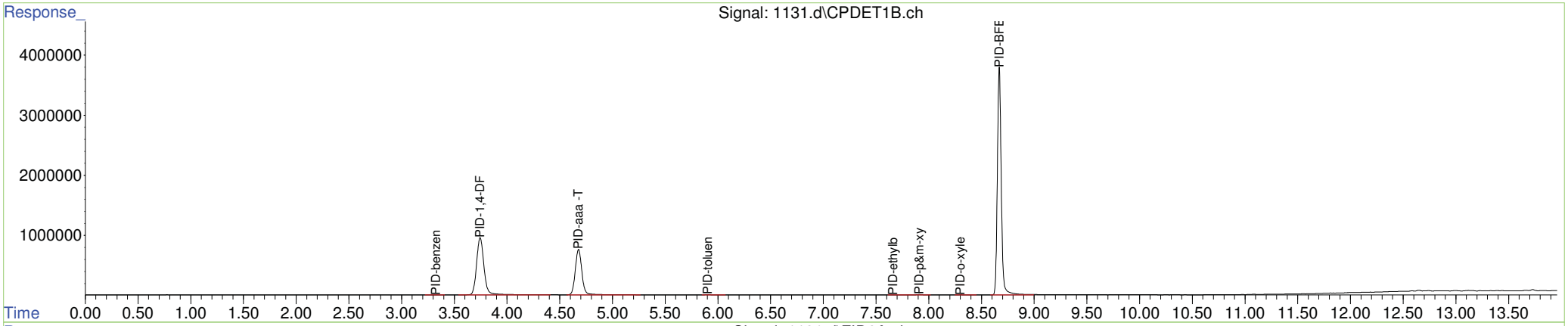
(f)=RT Delta > 1/2 Window (m)=manual int.

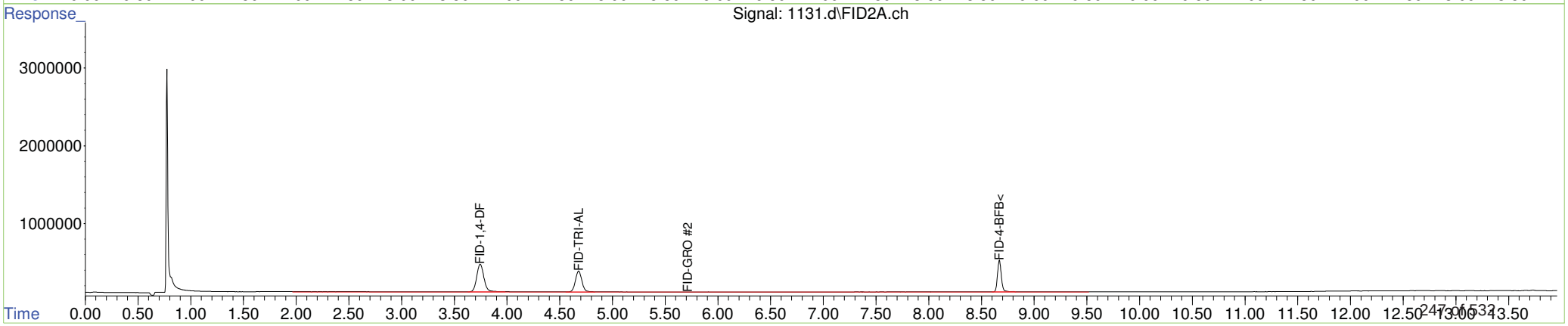
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1131.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:56 pm
Operator : ST
Sample : 1143646004-C
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:28 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1132.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 5:15 pm
Operator : ST
Sample : 1143646005-C
Misc :
ALS Vial : 32 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:38 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33600498	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.745	46547166	54.766 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.53%
10) S	FID-1,4-DFB #2	3.746	16953713	49.689 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	99.38%
11) S	FID-TRI-ALPHA #2	4.680	11769559	48.017 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.03%
13) S	FID-4-BFB<Surr> #2	8.671	10488331	47.652 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.30%
	Target Compounds			
2)	PID-benzene	3.323	27634	0.012 ppb
4)	PID-toluene	5.904	120052	0.057 ppb
5)	PID-ethylbenzene	7.662	37776	0.020 ppb
6)	PID-p&m-xylene	7.912	221286	0.102 ppb
7)	PID-o-xylene	8.304	73105	0.039 ppb
8)	PID-BFB<Surr>	8.670	98834154	51.789 ppb
12) H	FID-GRO #2	5.717	7240636	24.380 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

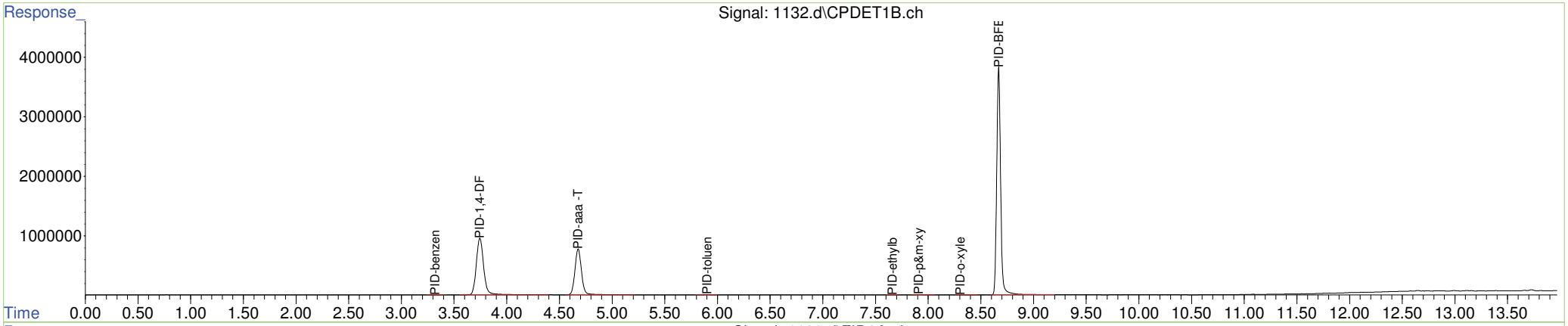
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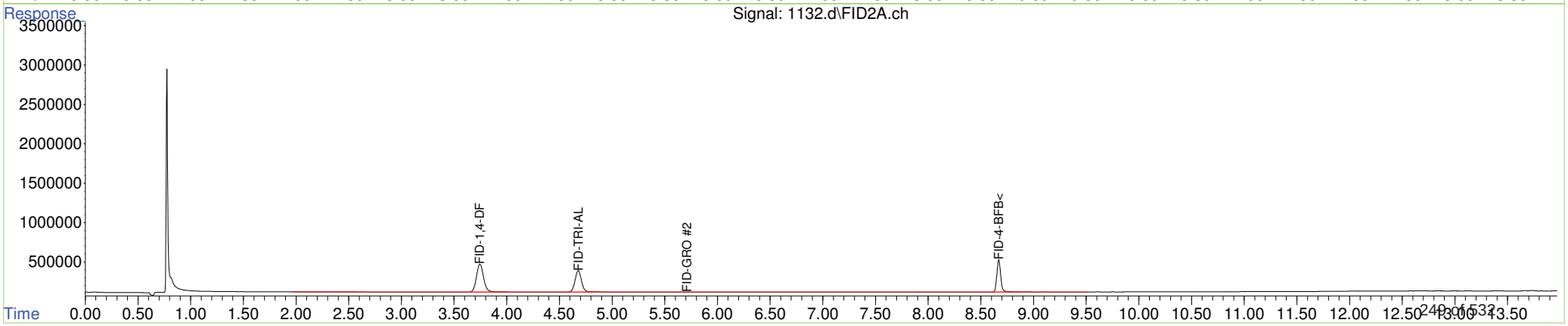
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1132.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 5:15 pm
Operator : ST
Sample : 1143646005-C
Misc :
ALS Vial : 32 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:38 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1133.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 5:34 pm
Operator : ST
Sample : 1143646007-C
Misc :
ALS Vial : 33 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:49 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	34170668	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.745	46436423	53.724 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	107.45%
10) S	FID-1,4-DFB #2	3.746	17035195	49.928 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	99.86%
11) S	FID-TRI-ALPHA #2	4.680	11965313	48.816 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.63%
13) S	FID-4-BFB<Surr> #2	8.670	10781767	48.996 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.99%
	Target Compounds			
2)	PID-benzene	3.327	40471	0.018 ppb
4)	PID-toluene	5.901	8010220	3.718 ppb
5)	PID-ethylbenzene	7.660	213353	0.112 ppb
6)	PID-p&m-xylene	7.908	679501	0.308 ppb
7)	PID-o-xylene	8.302	286231	0.151 ppb
8)	PID-BFB<Surr>	8.669	101165436	52.126 ppb
12) H	FID-GRO #2	5.717	8897094	29.957 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

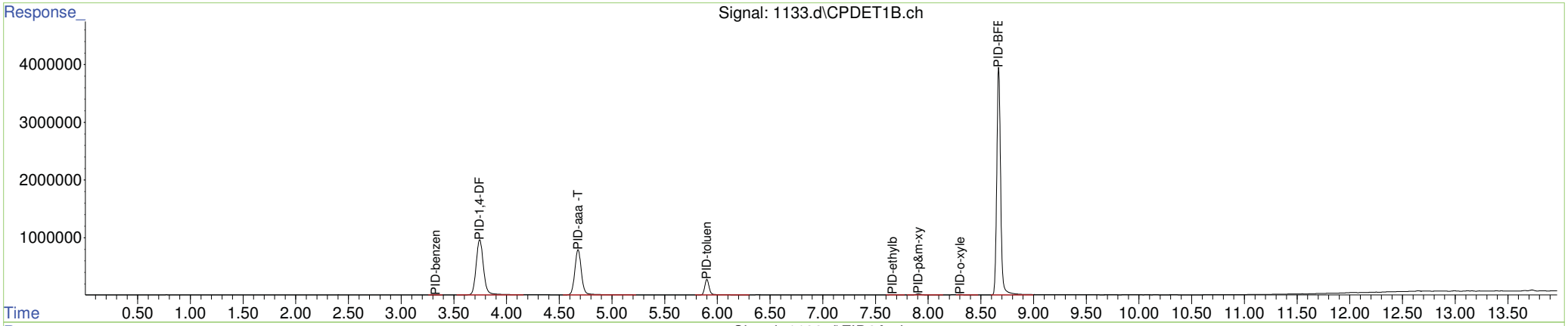
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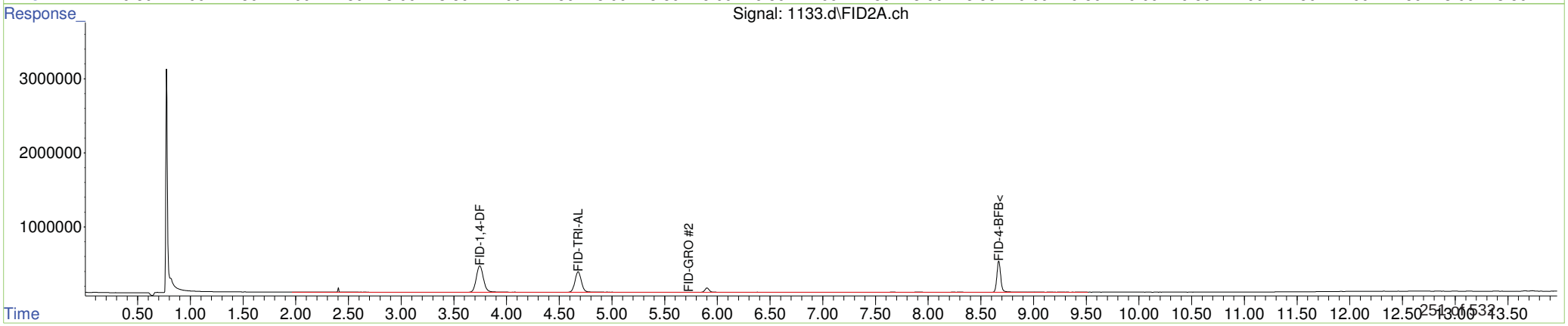
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1133.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 5:34 pm
Operator : ST
Sample : 1143646007-C
Misc :
ALS Vial : 33 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:49 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1134.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 5:53 pm
Operator : ST
Sample : 1143646008-C
Misc :
ALS Vial : 34 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:10:59 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33822918	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46644548	54.520 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.04%
10) S	FID-1,4-DFB #2	3.746	16882380	49.480 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.96%
11) S	FID-TRI-ALPHA #2	4.680	11830603	48.266 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.53%
13) S	FID-4-BFB<Surr> #2	8.670	10391692	47.209 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.42%
	Target Compounds			
2)	PID-benzene	3.322	18480	0.008 ppb
4)	PID-toluene	5.904	81665	0.038 ppb
5)	PID-ethylbenzene	7.656	27845	0.015 ppb
6)	PID-p&m-xylene	7.911	170756	0.078 ppb
7)	PID-o-xylene	8.304	52615	0.028 ppb
8)	PID-BFB<Surr>	8.669	98045377	51.038 ppb
12) H	FID-GRO #2	5.717	6238233	21.005 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Laboratory Analytical Report

Client: **EA Engineering, Science and Tech**
3 Washington Center
Newburgh, NY 12550

Attn: **Pam Moss**
T: 907-646-0201 F:
PMoss@eaest.com

Project: **Cape Romanzof SS015**

Workorder No.: **1143645**

Certification:

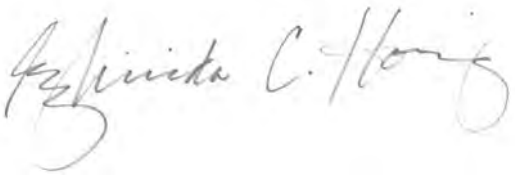
This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Chuck Homestead

Charles.Homestead@sgs.com
General Manager Alaska

Contents (Bookmarked in PDF):

Cover Page
Glossary
Sample Summary Forms
Case Narrative
Sample Results Forms
Batch Summary Forms (by method)
Quality Control Summary Forms (by method)
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)



Luzviminda Hornig
2014.10.01 17:33:30 -08'00'

SGS North America
Environmental Services - Alaska Division
Data Services Supervisor

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO 17025 (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6020, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RL	Reporting Limit
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

Client Name: EA Engineering, Science and Tech.
Project Name: Cape Romanzof SS015
Workorder No.: 1143645

Analytical Methods

Method Description	Analytical Method
Alkalinity as CaCO3 QC	SM21 2320B
Dissolved Metals by ICP-MS	SW6020A
DRO/RRO Low Volume Water	AK102
DRO/RRO Low Volume Water	AK103
Gasoline Range Organics (W)	AK101
Ion Chrom Analysis Preserved Water	SW9056A
Ion Chromatographic Analysis Water	SW9056A
Volatile Organic Compounds (W)	SW8260B

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1143645001	WW-05-072914
1143645002	WW-05-072914 -MS
1143645003	WW-05-072914 -MSD
1143645004	WW-06-072914
1143645005	WW-01-072914
1143645006	WW-99-072914
1143645007	TB-1-SS015
1143645008	WW-05-072914-DUP

Client Name: EA Engineering, Science and Tech.
Project Name: Cape Romanzof SS015
Workorder No.: 1143645

Sample Comments

Refer to the sample receipt form for information on sample condition.

Lab Sample ID	Sample Type	Client Sample ID
1143645001	PS	WW-05-072914

8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.
9056A - Anions - Sample ran at 10X dilution due to sample being preserved with sulfuric acid.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

1143645002	* BMS	WW-05-072914 -MS

9056A - Anions - Sample ran at 10X dilution due to sample being preserved with sulfuric acid.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

1143645003	* BMSD	WW-05-072914 -MSD

9056A - Anions - Sample ran at 10X dilution due to sample being preserved with sulfuric acid.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

1143645004	PS	WW-06-072914

AK102 - The pattern is consistent with a weathered middle distillate.
8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.
9056A - Anions - Sample ran at 10X dilution due to sample being preserved with sulfuric acid.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

1143645005	PS	WW-01-072914

AK102 - The pattern is consistent with a weathered middle distillate.
9056A - Anions - Sample ran at 10X dilution due to sample being preserved with sulfuric acid.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

1143645006	PS	WW-99-072914

8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.
9056A - Anions - Sample ran at 10X dilution due to sample being preserved with sulfuric acid.
Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

1143645007	* TB	TB-1-SS015

Revised Report - Revision 1 - This report has been reissued to include a Total Xylene calculation for this sample, per client request.

1225675	* LCSD	LCSD for HBN 1625311 [XXX/3164

AK102/103 - LCS/LCSD RPD does not meet QC criteria. Associated samples are either ND or associated with a BMS/BMSD. See the BMS/BMSD for precision.

1225836	* MB	MB for HBN 1625357 [VXX/26244]

8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.

1225840	* IB	IB for HBN 1625358 [VMS/14353]

8260B - 1,2-dichloroethane-D4 (surrogate) recovery does not meet QC criteria (biased high). The analytes associated with this surrogate were not detected above the LOQ.

1226232	* LCS	LCS for HBN 1625446 [VXX/26253

8260B - LCS recovery for chloroethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

1226233	* LCSD	LCSD for HBN 1625446 [VXX/2625

8260B - LCSD recovery for chloroethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

1226238	* AFB	AFB for HBN 1625446 [VXX/26253

8260B - Antifoam blank recoverry for hexachlorobutadiene does not meet QC criteria. This compound was not detected in the associated samples that used antifoam.

1226242	* CCV	CCV for HBN 1625448 [VMS/14356

8260B - CCV recoveries for chloromethane and 2,2,-dichloropropane do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Client Sample ID: **WW-05-072914**
SGS Ref. #: 1143645001
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:15
Receipt Date/Time: 08/07/14 11:20

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Nitrate/Nitrite-N	0.520J	1.00	0.310	mg/L	10	WIC5252	WXX10639	

Batch Information

Analytical Batch:
Analytical Method:
Analysis Date/Time:

Container ID:
Analyst:

Client Sample ID: **WW-05-072914**
SGS Ref. #: 1143645001
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:15
Receipt Date/Time: 08/07/14 11:20

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Iron	250U	500	150	ug/L	5	MMS8639	MXX27962	

Batch Information

Analytical Batch: MMS8639
Analytical Method: SW6020A
Analysis Date/Time: 08/14/14 13:26
Dilution Factor: 5

Prep Batch: MXX27962
Prep Method: SW3010A
Prep Date/Time: 08/13/14 09:40

Initial Prep Wt./Vol.: 25 mL
Prep Extract Vol.: 25 mL
Container ID:1143645001-K
Analyst: ACF

Client Sample ID: **WW-05-072914**
SGS Ref. #: 1143645001
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:15
Receipt Date/Time: 08/07/14 11:20

Waters Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Alkalinity	49.8	10.0	3.10	mg/L	1	WTI3998		
Sulfate	4.03	0.100	0.0310	mg/L	1	WIC5251	WXX10640	

Batch Information

Analytical Batch: WIC5251
Analytical Method: SW9056A
Analysis Date/Time: 08/08/14 20:33
Dilution Factor: 1
Prep Batch: WXX10640
Prep Method: METHOD
Prep Date/Time: 08/08/14 12:07
Initial Prep Wt./Vol.: 10 mL
Prep Extract Vol.: 10 mL
Container ID:1143645001-J
Analyst: SLC

Analytical Batch: WTI3998
Analytical Method: SM21 2320B
Analysis Date/Time: 08/08/14 15:55
Dilution Factor: 1
Initial Prep Wt./Vol.: 50 mL
Container ID:1143645001-J
Analyst: NLL

Client Sample ID: **WW-05-072914**
SGS Ref. #: 1143645001
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:15
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	94.4	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 10:32
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645001-C
Analyst: ST

Client Sample ID: **WW-05-072914**
SGS Ref. #: 1143645001
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:15
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.418J	0.600	0.180	mg/L	1	XFC11477	XXX31644	
5a Androstane <surr>	86.1	50-150		%	1	XFC11477	XXX31644	
n-Triacontane-d62 <surr>	90.2	50-150		%	1	XFC11477	XXX31644	

Batch Information

Analytical Batch: XFC11477
Analytical Method: AK102
Analysis Date/Time: 08/09/14 11:28
Dilution Factor: 1
Prep Batch: XXX31644
Prep Method: SW3520C
Prep Date/Time: 08/08/14 09:50
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143645001-A
Analyst: EAB

Analytical Batch: XFC11477
Analytical Method: AK103
Analysis Date/Time: 08/09/14 11:28
Dilution Factor: 1
Prep Batch: XXX31644
Prep Method: SW3520C
Prep Date/Time: 08/08/14 09:50
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143645001-A
Analyst: EAB

Client Sample ID: **WW-05-072914**
SGS Ref. #: 1143645001
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:15
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectrometry

Parameter	Result		LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U		0.400	0.120	ug/L	1	VMS14353	VXX26244	
Ethylbenzene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
o-Xylene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
P & M -Xylene	1.00U		2.00	0.620	ug/L	1	VMS14353	VXX26244	
Toluene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
Xylenes (total)	1.50U		3.00	1.00	ug/L	1	VMS14353	VXX26244	
1,2-Dichloroethane-D4 <surr>	122	*	70-120		%	1	VMS14353	VXX26244	
4-Bromofluorobenzene <surr>	106		75-120		%	1	VMS14353	VXX26244	
Toluene-d8 <surr>	85.3		85-120		%	1	VMS14353	VXX26244	

Batch Information

Analytical Batch: VMS14353
Analytical Method: SW8260B
Analysis Date/Time: 08/08/14 20:18
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645001-F
Analyst: NRB

Client Sample ID: **WW-06-072914**
SGS Ref. #: 1143645004
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 15:45
Receipt Date/Time: 08/07/14 11:20

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Nitrate/Nitrite-N	0.770J	1.00	0.310	mg/L	10	WIC5252	WXX10639	

Batch Information

Analytical Batch:
Analytical Method:
Analysis Date/Time:

Container ID:
Analyst:

Client Sample ID: **WW-06-072914**
SGS Ref. #: 1143645004
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 15:45
Receipt Date/Time: 08/07/14 11:20

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Iron	250U	500	150	ug/L	5	MMS8639	MXX27962	

Batch Information

Analytical Batch: MMS8639
Analytical Method: SW6020A
Analysis Date/Time: 08/14/14 13:37
Dilution Factor: 5

Prep Batch: MXX27962
Prep Method: SW3010A
Prep Date/Time: 08/13/14 09:40

Initial Prep Wt./Vol.: 25 mL
Prep Extract Vol.: 25 mL
Container ID:1143645004-K
Analyst: ACF

Client Sample ID: **WW-06-072914**
SGS Ref. #: 1143645004
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 15:45
Receipt Date/Time: 08/07/14 11:20

Waters Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Alkalinity	27.2	10.0	3.10	mg/L	1	WTI3998		
Sulfate	2.23	0.100	0.0310	mg/L	1	WIC5251	WXX10640	

Batch Information

Analytical Batch: WIC5251
Analytical Method: SW9056A
Analysis Date/Time: 08/08/14 21:54
Dilution Factor: 1
Prep Batch: WXX10640
Prep Method: METHOD
Prep Date/Time: 08/08/14 12:07
Initial Prep Wt./Vol.: 10 mL
Prep Extract Vol.: 10 mL
Container ID:1143645004-J
Analyst: SLC

Analytical Batch: WTI3998
Analytical Method: SM21 2320B
Analysis Date/Time: 08/08/14 14:36
Dilution Factor: 1
Initial Prep Wt./Vol.: 50 mL
Container ID:1143645004-J
Analyst: NLL

Client Sample ID: **WW-06-072914**
SGS Ref. #: 1143645004
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 15:45
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0378J	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	93.3	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 11:49
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645004-C
Analyst: ST

Client Sample ID: **WW-06-072914**
SGS Ref. #: 1143645004
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 15:45
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	1.56	0.600	0.180	mg/L	1	XFC11477	XXX31644	
5a Androstane <surr>	102	50-150		%	1	XFC11477	XXX31644	
n-Triacontane-d62 <surr>	101	50-150		%	1	XFC11477	XXX31644	

Batch Information

Analytical Batch: XFC11477
Analytical Method: AK102
Analysis Date/Time: 08/09/14 12:30
Dilution Factor: 1
Prep Batch: XXX31644
Prep Method: SW3520C
Prep Date/Time: 08/08/14 09:50
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143645004-A
Analyst: EAB

Analytical Batch: XFC11477
Analytical Method: AK103
Analysis Date/Time: 08/09/14 12:30
Dilution Factor: 1
Prep Batch: XXX31644
Prep Method: SW3520C
Prep Date/Time: 08/08/14 09:50
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143645004-A
Analyst: EAB

Client Sample ID: **WW-06-072914**
SGS Ref. #: 1143645004
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 15:45
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectrometry

Parameter	Result		LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U		0.400	0.120	ug/L	1	VMS14353	VXX26244	
Ethylbenzene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
o-Xylene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
P & M -Xylene	1.00U		2.00	0.620	ug/L	1	VMS14353	VXX26244	
Toluene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
Xylenes (total)	1.50U		3.00	1.00	ug/L	1	VMS14353	VXX26244	
1,2-Dichloroethane-D4 <surr>	129	*	70-120		%	1	VMS14353	VXX26244	
4-Bromofluorobenzene <surr>	93.6		75-120		%	1	VMS14353	VXX26244	
Toluene-d8 <surr>	85.6		85-120		%	1	VMS14353	VXX26244	

Batch Information

Analytical Batch: VMS14353
Analytical Method: SW8260B
Analysis Date/Time: 08/08/14 20:34
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645004-F
Analyst: NRB

Client Sample ID: **WW-01-072914**
SGS Ref. #: 1143645005
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 18:05
Receipt Date/Time: 08/07/14 11:20

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Nitrate/Nitrite-N	0.350J	1.00	0.310	mg/L	10	WIC5252	WXX10639	

Batch Information

Analytical Batch:
Analytical Method:
Analysis Date/Time:

Container ID:
Analyst:

Client Sample ID: **WW-01-072914**
SGS Ref. #: 1143645005
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 18:05
Receipt Date/Time: 08/07/14 11:20

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Iron	262J	500	150	ug/L	5	MMS8639	MXX27962	

Batch Information

Analytical Batch: MMS8639
Analytical Method: SW6020A
Analysis Date/Time: 08/14/14 13:40
Dilution Factor: 5

Prep Batch: MXX27962
Prep Method: SW3010A
Prep Date/Time: 08/13/14 09:40

Initial Prep Wt./Vol.: 25 mL
Prep Extract Vol.: 25 mL
Container ID:1143645005-K
Analyst: ACF

Client Sample ID: **WW-01-072914**
SGS Ref. #: 1143645005
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 18:05
Receipt Date/Time: 08/07/14 11:20

Waters Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Alkalinity	144	10.0	3.10	mg/L	1	WTI3998		
Sulfate	5.16	0.100	0.0310	mg/L	1	WIC5251	WXX10640	

Batch Information

Analytical Batch: WIC5251
Analytical Method: SW9056A
Analysis Date/Time: 08/08/14 22:15
Dilution Factor: 1
Prep Batch: WXX10640
Prep Method: METHOD
Prep Date/Time: 08/08/14 12:07
Initial Prep Wt./Vol.: 10 mL
Prep Extract Vol.: 10 mL
Container ID:1143645005-J
Analyst: SLC

Analytical Batch: WTI3998
Analytical Method: SM21 2320B
Analysis Date/Time: 08/08/14 14:43
Dilution Factor: 1
Initial Prep Wt./Vol.: 50 mL
Container ID:1143645005-J
Analyst: NLL

Client Sample ID: **WW-01-072914**
SGS Ref. #: 1143645005
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 18:05
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.191	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	99.8	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 12:08
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645005-C
Analyst: ST

Client Sample ID: **WW-01-072914**
SGS Ref. #: 1143645005
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 18:05
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	3.16	0.600	0.180	mg/L	1	XFC11477	XXX31644	
5a Androstane <surr>	96	50-150		%	1	XFC11477	XXX31644	
n-Triacontane-d62 <surr>	105	50-150		%	1	XFC11477	XXX31644	

Batch Information

Analytical Batch: XFC11477
Analytical Method: AK102
Analysis Date/Time: 08/09/14 12:50
Dilution Factor: 1
Prep Batch: XXX31644
Prep Method: SW3520C
Prep Date/Time: 08/08/14 09:50
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143645005-A
Analyst: EAB

Analytical Batch: XFC11477
Analytical Method: AK103
Analysis Date/Time: 08/09/14 12:50
Dilution Factor: 1
Prep Batch: XXX31644
Prep Method: SW3520C
Prep Date/Time: 08/08/14 09:50
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143645005-A
Analyst: EAB

Client Sample ID: **WW-01-072914**
SGS Ref. #: 1143645005
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 18:05
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectrometry

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	2.21	0.400	0.120	ug/L	1	VMS14353	VXX26244	
Ethylbenzene	3.63	1.00	0.310	ug/L	1	VMS14353	VXX26244	
o-Xylene	2.39	1.00	0.310	ug/L	1	VMS14353	VXX26244	
P & M -Xylene	4.36	2.00	0.620	ug/L	1	VMS14353	VXX26244	
Toluene	0.500U	1.00	0.310	ug/L	1	VMS14353	VXX26244	
Xylenes (total)	6.75	3.00	1.00	ug/L	1	VMS14353	VXX26244	
1,2-Dichloroethane-D4 <surr>	116	70-120		%	1	VMS14353	VXX26244	
4-Bromofluorobenzene <surr>	97.1	75-120		%	1	VMS14353	VXX26244	
Toluene-d8 <surr>	98.8	85-120		%	1	VMS14353	VXX26244	

Batch Information

Analytical Batch: VMS14353
Analytical Method: SW8260B
Analysis Date/Time: 08/08/14 20:51
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645005-F
Analyst: NRB

Client Sample ID: **WW-99-072914**
SGS Ref. #: 1143645006
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Nitrate/Nitrite-N	0.920J	1.00	0.310	mg/L	10	WIC5252	WXX10639	

Batch Information

Analytical Batch:
Analytical Method:
Analysis Date/Time:

Container ID:
Analyst:

Client Sample ID: **WW-99-072914**
SGS Ref. #: 1143645006
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Iron	250U	500	150	ug/L	5	MMS8639	MXX27962	

Batch Information

Analytical Batch: MMS8639
Analytical Method: SW6020A
Analysis Date/Time: 08/14/14 13:42
Dilution Factor: 5

Prep Batch: MXX27962
Prep Method: SW3010A
Prep Date/Time: 08/13/14 09:40

Initial Prep Wt./Vol.: 25 mL
Prep Extract Vol.: 25 mL
Container ID:1143645006-K
Analyst: ACF

Client Sample ID: **WW-99-072914**
SGS Ref. #: 1143645006
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Waters Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Alkalinity	49.6	10.0	3.10	mg/L	1	WTI3998		
Sulfate	4.22	0.100	0.0310	mg/L	1	WIC5251	WXX10640	

Batch Information

Analytical Batch: WIC5251
Analytical Method: SW9056A
Analysis Date/Time: 08/08/14 22:35
Dilution Factor: 1
Prep Batch: WXX10640
Prep Method: METHOD
Prep Date/Time: 08/08/14 12:07
Initial Prep Wt./Vol.: 10 mL
Prep Extract Vol.: 10 mL
Container ID:1143645006-J
Analyst: SLC

Analytical Batch: WTI3998
Analytical Method: SM21 2320B
Analysis Date/Time: 08/08/14 14:52
Dilution Factor: 1
Initial Prep Wt./Vol.: 50 mL
Container ID:1143645006-J
Analyst: NLL

Client Sample ID: **WW-99-072914**
SGS Ref. #: 1143645006
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0461J	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	94.5	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 12:27
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645006-C
Analyst: ST

Client Sample ID: **WW-99-072914**
SGS Ref. #: 1143645006
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.600	0.600	0.180	mg/L	1	XFC11477	XXX31644	
5a Androstane <surr>	97.7	50-150		%	1	XFC11477	XXX31644	
n-Triacontane-d62 <surr>	102	50-150		%	1	XFC11477	XXX31644	

Batch Information

Analytical Batch: XFC11477
Analytical Method: AK102
Analysis Date/Time: 08/09/14 13:11
Dilution Factor: 1
Prep Batch: XXX31644
Prep Method: SW3520C
Prep Date/Time: 08/08/14 09:50
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143645006-A
Analyst: EAB

Analytical Batch: XFC11477
Analytical Method: AK103
Analysis Date/Time: 08/09/14 13:11
Dilution Factor: 1
Prep Batch: XXX31644
Prep Method: SW3520C
Prep Date/Time: 08/08/14 09:50
Initial Prep Wt./Vol.: 250 mL
Prep Extract Vol.: 1 mL
Container ID:1143645006-A
Analyst: EAB

Client Sample ID: **WW-99-072914**
SGS Ref. #: 1143645006
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 12:00
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectrometry

Parameter	Result		LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U		0.400	0.120	ug/L	1	VMS14353	VXX26244	
Ethylbenzene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
o-Xylene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
P & M -Xylene	1.00U		2.00	0.620	ug/L	1	VMS14353	VXX26244	
Toluene	0.500U		1.00	0.310	ug/L	1	VMS14353	VXX26244	
Xylenes (total)	1.50U		3.00	1.00	ug/L	1	VMS14353	VXX26244	
1,2-Dichloroethane-D4 <surr>	131	*	70-120		%	1	VMS14353	VXX26244	
4-Bromofluorobenzene <surr>	96.4		75-120		%	1	VMS14353	VXX26244	
Toluene-d8 <surr>	110		85-120		%	1	VMS14353	VXX26244	

Batch Information

Analytical Batch: VMS14353
Analytical Method: SW8260B
Analysis Date/Time: 08/08/14 21:07
Dilution Factor: 1

Prep Batch: VXX26244
Prep Method: SW5030B
Prep Date/Time: 08/08/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645006-F
Analyst: NRB

Client Sample ID: **TB-1-SS015**
SGS Ref. #: 1143645007
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 08:00
Receipt Date/Time: 08/07/14 11:20

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	1	VFC12037	VXX26250	
4-Bromofluorobenzene <surr>	92.1	50-150		%	1	VFC12037	VXX26250	

Batch Information

Analytical Batch: VFC12037
Analytical Method: AK101
Analysis Date/Time: 08/11/14 10:13
Dilution Factor: 1

Prep Batch: VXX26250
Prep Method: SW5030B
Prep Date/Time: 08/11/14 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1143645007-A
Analyst: ST

Client Sample ID: **TB-1-SS015**
SGS Ref. #: 1143645007
Project ID: Cape Romanzof SS015
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/14 08:00
Receipt Date/Time: 08/07/14 11:20

Volatile Gas Chromatography/Mass Spectrometry

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.200U	0.400	0.120	ug/L	1	VMS14356	VXX26253	
Ethylbenzene	0.500U	1.00	0.310	ug/L	1	VMS14356	VXX26253	
o-Xylene	0.500U	1.00	0.310	ug/L	1	VMS14356	VXX26253	
P & M -Xylene	1.00U	2.00	0.620	ug/L	1	VMS14356	VXX26253	
Toluene	0.500U	1.00	0.310	ug/L	1	VMS14356	VXX26253	
Xylenes (total)	1.50U	3.00	1.00	ug/L	1	VMS14356	VXX26253	
1,2-Dichloroethane-D4 <surr>	99.7	70-120		%	1	VMS14356	VXX26253	
4-Bromofluorobenzene <surr>	108	75-120		%	1	VMS14356	VXX26253	
Toluene-d8 <surr>	99.1	85-120		%	1	VMS14356	VXX26253	

Batch Information

Analytical Batch: VMS14356
Analytical Method: SW8260B
Analysis Date/Time: 08/11/14 12:48
Dilution Factor: 1

Prep Batch: VXX26253
Prep Method: SW5030B
Prep Date/Time: 08/11/14 00:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:
Analyst: SP

Workorder No. 1143645

Metals by ICP/MS

Method: SW6020A

Method Batch Id: MXX27962

Analysis Batch Id: MMS8639

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Initial Calib Verification	1226987		8/14/2014 10:34:52AM
Second Source Calib Check	1226988		8/14/2014 10:37:14AM
Continuing Calib Verification	1226998		8/14/2014 1:13:55PM
Calibration Blank	1226999		8/14/2014 1:16:18PM
Method Blank	1226435		8/14/2014 1:21:29PM
Lab Control Sample	1226436		8/14/2014 1:23:51PM
Continuing Calib Verification	1227000		8/14/2014 1:45:05PM
Calibration Blank	1227001		8/14/2014 1:47:27PM

SGS Ref.#	1226999	Calibration Blank	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1226437, 1226438, 1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	RL/CL	Units	Analysis Date
Metals by ICP/MS				
Iron	50.0U	100	ug/L	08/14/14

Batch MMS8639
Method SW6020A
Instrument Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1227001	Calibration Blank	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1226437, 1226438, 1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	RL/CL	Units	Analysis Date
Metals by ICP/MS				
Iron	50.0U	100	ug/L	08/14/14

Batch MMS8639
Method SW6020A
Instrument Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1226987 Initial Calib Verification	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1226437, 1226438, 1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	ICV	4030	101	(90-110)	4000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1226988 Second Source Calib Check	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1226437, 1226438, 1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	QCS	5250	105	(90-110)	5000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1226998 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1226437, 1226438, 1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	CCV	4190	105	(90-110)	4000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	1227000 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1226437, 1226438, 1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Metals by ICP/MS						
Iron	CCV	4170	104	(90-110)	4000 ug/L	08/14/2014

I atcs MMS8639
Mets od SW6020A
unhtrBment Perkin Elmer Sciex ICP-MS P3

Workorder No. 1143645

Metals by ICP/MS

Method: SW6020A

Method Batch Id: MXX27962

Analysis Batch Id: MMS8639

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Initial Calib Verification	1226987		8/14/2014 10:34:52AM
Second Source Calib Check	1226988		8/14/2014 10:37:14AM
Continuing Calib Verification	1226998		8/14/2014 1:13:55PM
Calibration Blank	1226999		8/14/2014 1:16:18PM
Method Blank	1226435		8/14/2014 1:21:29PM
Lab Control Sample	1226436		8/14/2014 1:23:51PM
Continuing Calib Verification	1227000		8/14/2014 1:45:05PM
Calibration Blank	1227001		8/14/2014 1:47:27PM

SGS Ref.#	1226435	Method Blank	**Printed Date/Time**		10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	MXX27962
Project Name/#	Cape Romanzof SS015			**Method**	SW3010A
Matrix	Water (Surface, Eff., Ground)			**Date**	08/13/2014

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Metals by ICP/MS					
Iron	250U	500	150	ug/L	08/14/14
Batch	MMS8639				
Method	SW6020A				
Instrument	Perkin Elmer Sciex ICP-MS P3				

SGS Ref.#	1226436 Lab Control Sample	**Printed Date/Time**	10/01/2014 15:35
		Prep Batch	MXX27962
Client Name	EA Engineering, Science and Tech.	**Method**	SW3010A
Project Name/#	Cape Romanzof SS015	**Date**	08/13/2014
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Metals by ICP/MS								
Iron	LCS	5790	116	(80-120)			5000 ug/L	08/14/2014

Batch MMS8639
Method SW6020A
Instrument Perkin Elmer Sciex ICP-MS P3

Workorder No. 1143645

Dissolved Metals by ICP/MS

Method: SW6020A

Method Batch Id: MXX27962

Analysis Batch Id: MMS8639

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Paying sample	1143645001	WW-05-072914	8/14/2014 1:26:12PM
Billable Matrix Spike	1143645002	WW-05-072914 -MS	8/14/2014 1:28:34PM
Billable Matrix Spike Dup.	1143645003	WW-05-072914 -MSD	8/14/2014 1:30:55PM
Paying sample	1143645004	WW-06-072914	8/14/2014 1:37:59PM
Paying sample	1143645005	WW-01-072914	8/14/2014 1:40:21PM
Paying sample	1143645006	WW-99-072914	8/14/2014 1:42:42PM

SGS Ref.#	1143645002	Billable Matrix Spike	**Printed Date/Time**	10/01/2014 15:35
	1143645003	Billable Matrix Spike Dup.	**Prep Batch**	MXX27962
			Method	3010 H20 Digest for Metals ICI
			Date	08/13/2014
Original	1143645001			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Dissolved Metals by ICP/MS									
Iron	BMS	250U	5470	109	(80-120)			5000 ug/L	08/14/2014
	BMSD		5550	111		1	(< 15)	5000 ug/L	08/14/2014

Batch MMS8639
Method SW6020A
Instrument Perkin Elmer Sciex ICP-MS P3

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143642, 1143645, 1143646, 1143656, 1143721, 1143745, 1143753, 1143761, 1148347, 1148353

Queue: **MMS** Batch: **8639**

Method: SW6020A, SW6020A Diss.

Run Date: 08/14/14 10:34 - 08/14/14 18:48

Extraction Batch(es): MXX27953, MXX27961, MXX27962, MXX27965, MXX27967

Notes:

RUSH 8/19

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: ADLAI FLORES
Date: 8/14/14

Reviewer's Signature
Printed Name: Elizabeth Brandenhl
Date: 8-16-14

SGS DAILY PERFORMANCE REPORT

ELAN 6100 ICP-MS P3

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, August 14, 2014 07:52:22
Method File: C:\Elandata\Method\SGS Daily Performance Check.mth
Dataset File: C:\Elandata\DataSet\default3\Daily Performance Check.1973
Tuning File: C:\elandata\Tuning\Default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Dual Detector Mode: Dual
Acq. Dead Time(ns): 60
Current Dead Time (ns): 60

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	55596.9	55596.865	658.332	1.2
	Rh	102.9	257668.4	257668.413	3241.849	1.3
	Pb	208.0	154138.7	154138.697	2243.992	1.5
⌈>	Ba	137.9	257055.3	257055.287	3658.411	1.4
⌊	Ba++	69.0	6885.6	0.027	0.001	2.6
⌈>	Ce	139.9	328915.8	328915.770	3812.258	1.2
⌊	CeO	155.9	6163.9	0.019	0.000	0.9
	Bkgd	220.0	20.0	20.000	3.841	19.2

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
7.00	Lens Voltage
1250.00	ICP RF Power
-2068.00	Analog Stage Voltage
1500.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset
-15.00	Differential Aperture

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	33	6.0	4210.1
Co	59	33	6.5	142654.7
In	115	33	7.5	285545.8
Pb	208	33	9.8	157198.8

Instrument Tuning Report

File Name: Default.tun
File Path: C:\elandata\Tuning\Default.tun
Sample Date/Time: Thursday, August 14, 2014 07:48:00

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	3.025	596	2053	0.663	
Mg	23.985	23.975	5734	1988	0.679	
Co	58.933	58.925	14325	1895	0.691	
Rh	102.905	102.875	25090	1829	0.680	
Ce	139.905	139.875	34088	1863	0.687	
Pb	207.977	207.975	50519	2105	0.678	

SGS ALASKA
ICP-MS SUMMARY P3

USER: Nicholas Bryant us_anchorage_metals
Computer Name: US0003228
Dataset File Path: C:\Elandata\DataSet\08.14.2014.p3b\
Report Date/Time: Thursday, August 14, 2014 18:54:50

The Dataset

Sample ID	Date and Time	Description	Read Type	Diluted Vol.
Blank	10:17:52 Thu 14-Aug-14		Blank	
Blank	10:20:38 Thu 14-Aug-14		Blank	
Standard 1	10:23:01 Thu 14-Aug-14		Standard #1	
Standard 2	10:25:23 Thu 14-Aug-14		Standard #2	
Standard 3	10:27:45 Thu 14-Aug-14		Standard #3	
Standard 4	10:30:08 Thu 14-Aug-14		Standard #4	
Standard 5	10:32:30 Thu 14-Aug-14		Standard #5	
ICV	10:34:52 Thu 14-Aug-14		QC Std #1	
QCS	10:37:14 Thu 14-Aug-14		QC Std #2	
ICSAB	10:39:35 Thu 14-Aug-14		QC Std #6	
ICSA	10:41:57 Thu 14-Aug-14		QC Std #7	
LLQC	10:46:00 Thu 14-Aug-14		QC Std #9	
CB	10:48:41 Thu 14-Aug-14		QC Std #8	
1226193	10:54:27 Thu 14-Aug-14	MB MXX 27953	Sample	5.000
1226194	10:56:49 Thu 14-Aug-14	LCS	Spike - 2 of 14	5.000
1143656047	10:59:10 Thu 14-Aug-14		Sample	5.000
1143656048	11:01:32 Thu 14-Aug-14	BMS	Spike - 2 of 16	5.000
1143656049	11:03:54 Thu 14-Aug-14	BMSD	Spike - 2 of 16	5.000
1226197	11:06:15 Thu 14-Aug-14	BND	Spike - 4 of 16	5.000
DT	11:08:38 Thu 14-Aug-14	DT	Sample	25.000
1143656050	11:11:00 Thu 14-Aug-14		Sample	5.000
1143656051	11:13:22 Thu 14-Aug-14		Sample	5.000
1143656052	11:15:43 Thu 14-Aug-14		Sample	5.000
CCV	11:18:06 Thu 14-Aug-14		QC Std #5	
CB	11:20:28 Thu 14-Aug-14		QC Std #8	
LLQC	11:22:50 Thu 14-Aug-14		QC Std #9	
1143656053	11:25:13 Thu 14-Aug-14		Sample	5.000
1143656054	11:27:34 Thu 14-Aug-14		Sample	5.000
1143642001	11:29:56 Thu 14-Aug-14		Sample	5.000
1143642002	11:32:18 Thu 14-Aug-14		Sample	5.000
1148353001	11:34:39 Thu 14-Aug-14		Sample	5.000
1148347010	11:37:01 Thu 14-Aug-14		Sample	5.000
1143721001	11:39:23 Thu 14-Aug-14		Sample	5.000
1143656050	11:42:08 Thu 14-Aug-14		Sample	25.000
1143656051	11:44:29 Thu 14-Aug-14		Sample	25.000
1143656052	11:46:51 Thu 14-Aug-14		Sample	25.000

CCV	11:49:13 Thu 14-Aug-14		QC Std #5	
CB	11:51:35 Thu 14-Aug-14		QC Std #8	
LLQC	11:53:57 Thu 14-Aug-14		QC Std #9	
1143656047	11:59:21 Thu 14-Aug-14		Sample	25.000
1143656048	12:01:42 Thu 14-Aug-14	BMS	Spike - 2 of 40	25.000
1143656049	12:04:04 Thu 14-Aug-14	BMSD	Spike - 2 of 40	25.000
1226197	12:06:25 Thu 14-Aug-14	BND	Spike - 4 of 40	25.000
1143656053	12:08:47 Thu 14-Aug-14		Sample	25.000
CCV	12:11:10 Thu 14-Aug-14		QC Std #5	
CB	12:13:33 Thu 14-Aug-14		QC Std #8	
LLQC	12:15:54 Thu 14-Aug-14		QC Std #9	
1226397	12:23:36 Thu 14-Aug-14	MB MXX 27961	Sample	5.000
1226398	12:25:58 Thu 14-Aug-14	LCS	Spike - 2 of 48	5.000
1143642004	12:28:19 Thu 14-Aug-14		Sample	5.000
1226399	12:30:41 Thu 14-Aug-14	MS	Spike - 2 of 48	5.000
1226400	12:33:08 Thu 14-Aug-14	MSD	Spike - 2 of 48	5.000
1226401	12:35:29 Thu 14-Aug-14	BND	Spike - 4 of 48	5.000
DT	12:37:51 Thu 14-Aug-14		Sample	25.000
1143642005	12:40:12 Thu 14-Aug-14		Sample	5.000
CCV	12:42:35 Thu 14-Aug-14		QC Std #5	
CB	12:44:57 Thu 14-Aug-14		QC Std #8	
LLQC	12:47:18 Thu 14-Aug-14		QC Std #9	
1143642004	12:55:02 Thu 14-Aug-14		Sample	50.000
1226399	12:57:24 Thu 14-Aug-14	MS	Spike - 2 of 59	50.000
1226400	12:59:45 Thu 14-Aug-14	MSD	Spike - 2 of 59	50.000
1226401	13:02:07 Thu 14-Aug-14	BND	Spike - 4 of 59	50.000
R	13:04:28 Thu 14-Aug-14		Sample	1.000
R	13:06:50 Thu 14-Aug-14		Sample	1.000
R	13:09:11 Thu 14-Aug-14		Sample	1.000
R	13:11:32 Thu 14-Aug-14		Sample	1.000
CCV	13:13:55 Thu 14-Aug-14		QC Std #5	
CB	13:16:18 Thu 14-Aug-14		QC Std #8	
LLQC	13:18:40 Thu 14-Aug-14		QC Std #9	
1226435	13:21:29 Thu 14-Aug-14	MB MXX 27962	Sample	5.000
1226436	13:23:51 Thu 14-Aug-14	LCS	Spike - 2 of 70	5.000
1143645001	13:26:12 Thu 14-Aug-14		Sample	5.000
1143645002	13:28:34 Thu 14-Aug-14	BMS	Spike - 2 of 72	5.000
1143645003	13:30:55 Thu 14-Aug-14	BMSD	Spike - 2 of 72	5.000
1226439	13:33:17 Thu 14-Aug-14	BND	Spike - 4 of 72	5.000
DT	13:35:38 Thu 14-Aug-14	DT	Sample	25.000
1143645004	13:37:59 Thu 14-Aug-14		Sample	5.000
1143645005	13:40:21 Thu 14-Aug-14		Sample	5.000
1143645006	13:42:42 Thu 14-Aug-14		Sample	5.000
CCV	13:45:05 Thu 14-Aug-14		QC Std #5	
CB	13:47:27 Thu 14-Aug-14		QC Std #8	
LLQC	13:49:49 Thu 14-Aug-14		QC Std #9	
1226397	13:53:30 Thu 14-Aug-14	MB MXX 27961	Sample	5.000
1226398	13:55:51 Thu 14-Aug-14	LCS	Spike - 2 of 83	5.000

1143646007	13:58:14 Thu 14-Aug-14		Sample	5.000
R	14:01:05 Thu 14-Aug-14		Sample	1.000
R	14:03:27 Thu 14-Aug-14		Sample	1.000
R	14:05:49 Thu 14-Aug-14		Sample	1.000
R	14:08:11 Thu 14-Aug-14		Sample	1.000
R	14:10:32 Thu 14-Aug-14		Sample	1.000
CCV	14:12:55 Thu 14-Aug-14		QC Std #5	
CB	14:15:17 Thu 14-Aug-14		QC Std #8	
LLQC	14:17:38 Thu 14-Aug-14		QC Std #9	
1143642004	14:24:45 Thu 14-Aug-14		Sample	5.000
1226399	14:27:07 Thu 14-Aug-14	MS	Spike - 2 of 94	5.000
1226400	14:29:28 Thu 14-Aug-14	MSD	Spike - 2 of 94	5.000
1226401	14:31:50 Thu 14-Aug-14	BND	Spike - 4 of 94	5.000
1143642005	14:34:12 Thu 14-Aug-14		Sample	5.000
R	14:36:34 Thu 14-Aug-14		Sample	1.000
R	14:38:55 Thu 14-Aug-14		Sample	1.000
R	14:41:17 Thu 14-Aug-14		Sample	1.000
R	14:43:38 Thu 14-Aug-14		Sample	1.000
R	14:46:00 Thu 14-Aug-14		Sample	1.000
CCV	14:48:23 Thu 14-Aug-14		QC Std #5	
CB	14:50:46 Thu 14-Aug-14		QC Std #8	
LLQC	14:53:07 Thu 14-Aug-14		QC Std #9	
1226578	14:58:08 Thu 14-Aug-14	MB MXX 27965	Sample	5.000
1226579	15:00:30 Thu 14-Aug-14	LCS	Spike - 2 of 107	5.000
1143745001	15:02:51 Thu 14-Aug-14		Sample	5.000
1143745002	15:05:13 Thu 14-Aug-14	BMS	Spike - 2 of 109	5.000
1143745003	15:07:34 Thu 14-Aug-14	BMSD	Spike - 2 of 109	5.000
1226580	15:09:56 Thu 14-Aug-14	BND	Spike - 4 of 109	5.000
DT	15:12:17 Thu 14-Aug-14	DT	Sample	25.000
1143745004	15:14:39 Thu 14-Aug-14		Sample	5.000
1143745005	15:17:00 Thu 14-Aug-14		Sample	5.000
1143745006	15:19:22 Thu 14-Aug-14		Sample	5.000
CCV	15:21:44 Thu 14-Aug-14		QC Std #5	
CB	15:24:06 Thu 14-Aug-14		QC Std #8	
LLQC	15:26:28 Thu 14-Aug-14		QC Std #9	
1143745007	15:28:50 Thu 14-Aug-14		Sample	5.000
1143745008	15:31:12 Thu 14-Aug-14		Sample	5.000
1143745009	15:33:33 Thu 14-Aug-14		Sample	5.000
1143745010	15:35:54 Thu 14-Aug-14		Sample	5.000
1143745012	15:38:16 Thu 14-Aug-14		Sample	5.000
1143745013	15:40:38 Thu 14-Aug-14	BMS	Spike - 2 of 124	5.000
1143745014	15:43:00 Thu 14-Aug-14	BMSD	Spike - 2 of 124	5.000
1226581	15:45:22 Thu 14-Aug-14	BND	Spike - 4 of 124	5.000
1143745016	15:47:43 Thu 14-Aug-14		Sample	5.000
1143745017	15:50:05 Thu 14-Aug-14		Sample	5.000
CCV	15:52:27 Thu 14-Aug-14		QC Std #5	
CB	15:54:49 Thu 14-Aug-14		QC Std #8	
LLQC	15:57:11 Thu 14-Aug-14		QC Std #9	

1143745018	15:59:33 Thu 14-Aug-14		Sample	5.000
1143745019	16:01:54 Thu 14-Aug-14		Sample	5.000
1143761020	16:04:16 Thu 14-Aug-14		Sample	5.000
1143761021	16:06:38 Thu 14-Aug-14		Sample	5.000
1143761022	16:09:00 Thu 14-Aug-14	BMS	Spike - 2 of 136	5.000
1143761023	16:11:22 Thu 14-Aug-14	BMSD	Spike - 2 of 136	5.000
1226582	16:13:44 Thu 14-Aug-14	BND	Spike - 4 of 136	5.000
1143761024	16:16:05 Thu 14-Aug-14		Sample	5.000
1143761025	16:18:27 Thu 14-Aug-14		Sample	5.000
1143761026	16:20:48 Thu 14-Aug-14		Sample	5.000
CCV	16:23:11 Thu 14-Aug-14		QC Std #5	
CB	16:25:33 Thu 14-Aug-14		QC Std #8	
LLQC	16:27:55 Thu 14-Aug-14		QC Std #9	
1226591	17:23:22 Thu 14-Aug-14	MB MXX 27967	Sample	5.000
1226592	17:25:43 Thu 14-Aug-14	LCS	Spike - 2 of 146	5.000
1143761006	17:28:05 Thu 14-Aug-14		Sample	5.000
1143761007	17:30:27 Thu 14-Aug-14	BMS	Spike - 2 of 148	5.000
1143761008	17:32:54 Thu 14-Aug-14	BMSD	Spike - 2 of 148	5.000
1226595	17:35:16 Thu 14-Aug-14	BND	Spike - 4 of 148	5.000
DT	17:37:37 Thu 14-Aug-14		Sample	25.000
1143761001	17:39:59 Thu 14-Aug-14		Sample	5.000
1143761002	17:42:20 Thu 14-Aug-14		Sample	5.000
1143761003	17:44:42 Thu 14-Aug-14		Sample	5.000
CCV	17:47:05 Thu 14-Aug-14		QC Std #5	
CCV	17:49:58 Thu 14-Aug-14		QC Std #5	
CB	17:52:20 Thu 14-Aug-14		QC Std #8	
LLQC	17:54:42 Thu 14-Aug-14		QC Std #9	
1143761004	17:57:06 Thu 14-Aug-14		Sample	5.000
1143761005	17:59:27 Thu 14-Aug-14		Sample	5.000
1143761010	18:01:49 Thu 14-Aug-14		Sample	5.000
1143761011	18:04:10 Thu 14-Aug-14		Sample	5.000
1143761012	18:06:32 Thu 14-Aug-14		Sample	5.000
1143761013	18:08:54 Thu 14-Aug-14		Sample	5.000
1143761014	18:11:15 Thu 14-Aug-14		Sample	5.000
1143761015	18:13:37 Thu 14-Aug-14		Sample	5.000
1143761016	18:15:58 Thu 14-Aug-14		Sample	5.000
1143761017	18:18:20 Thu 14-Aug-14		Sample	5.000
CCV	18:20:42 Thu 14-Aug-14		QC Std #5	
CB	18:23:04 Thu 14-Aug-14		QC Std #8	
LLQC	18:25:26 Thu 14-Aug-14		QC Std #9	
1143761018	18:27:48 Thu 14-Aug-14		Sample	5.000
1143761019	18:30:10 Thu 14-Aug-14		Sample	5.000
1143753001	18:32:31 Thu 14-Aug-14		Sample	5.000
1143753002	18:34:53 Thu 14-Aug-14		Sample	5.000
1143753003	18:37:14 Thu 14-Aug-14		Sample	5.000
1143753004	18:39:36 Thu 14-Aug-14		Sample	5.000
CCV	18:41:58 Thu 14-Aug-14		QC Std #5	
CB	18:48:45 Thu 14-Aug-14		QC Std #8	

SGS North America Inc.

4 ZnT KCF 8/14/14

ICP MS Run Log

Method: 6020A/3010
Run Date: 8/14/14

Analyst: KCF/CPE
File ID: 08.14.2014.P3.B
Queue/Batch: MMS 8639

#	Sample ID	Bench	Dilution	Comments	Status
1	Blank				
2	Blank				
3	Std 1				
4	2				
5	3				
6	4				
7	5				
8	ICV				
9	QCS				
10	ICSAB				
11	ICSA				
12	LLQC				
13	CB				
14	1226193 MB		5	MXX 27953	
15	6194 LCS		5		
16	36556-47		5	Stand in: 1226260	
17	48 BMS		5	RR Na MS 6261	
18	49 BMSD		5	@25X MSD 6262	
19	6197 BND		5	Post Ca, Mg BND 6263	
20	DT		25		
21	36556-50		5	Na > ULR	
22	51		5	Na > ULR RR @ 25X	
23	52		5	Na > ULR	
24	CCV		1		
25	CB		1		
26	LLQC		1		
27	3656-53		5	Na > ULR RR @ 25X	
28	54		5		
29	3642-1		5	(Na Pk Ca ↑) N/A	
30	2		5	Na Pk ↑	
31	8353-1		5		
32	8347-10		5		
33	3721-1		5		
34	3656-50		25		
35	51		25	POST Na	
36	52		25		
37	CCV		1		
38	CB		1		
39	LLQC		1		
40	3656-47		25	POST Na STAND IN: 1226260	

Clean Cones	
Windings	✓
Optimization	✓
Tuning	✓
Sample Flow	✓
Detector Calibration	✓
Waste	✓

Standards

ICV/CCV: MMS 14 - 45 → 48, 53	**ICSA:** P 517
QCS/BND: MMS 14 - 29 → 32, 12	**ICSAB:** P 517; MMS 14 - 41, 42
Internal: MMS 14 - 65	**BBND:**
LLQC: MMS 14 - 44 ACDE, C3	

SGS North America Inc.

FST ACF 8/14/14

ICP MS Run Log

Method: 6020A/3010
Run Date: 8/14/14

Analyst: ACF/CDE
File ID: 08.14.2014.P3B
Queue/Batch: MMS 8639

#	Sample ID		Bench Dilution	Comments	Status
1	3656-48	BMS	25	POST Na 1226261	
2	49	BMSD	25	POST Na 6262	
3	1226197	BND	25	POST Na 6263	
4	3656-53		25	POST Na	
5	CCV		1		
6	CB		1		
7	LLQC		1		
8	1226397	MB	5	MXX 27961 RR Be	NO
9	398	LCS	5	RR Be	NO
10	3642-4		5	RR Be Fe Na K Ca >curve	
11	399	MS	5	RR Be Fe Na K Ca >curve	
12	400	MSD	5	RR Be Fe	
13	401	BND	25	ACF 8/14/14 ~~Fe ↑ (1+1 @ 5%) RR Be~~	
14	DT		25		
15	3642-5		5	RR Be. Na K >curve	
16	CCV		1	Be ↓	
17	CB		1		
18	LLQC		1		
19	3642-4		50	Fe POST Fe	NO
20	6399	MS	50		NO
21	6400	MSD	50		NO
22	6401	BND	50		NO
23	RX4		1		
24	CCV		1		
25	CB		1		
26	LLQC		1		
27	1226435	MB	5	MXX 27962 (Fe)	
28	6436	LCS	5		
29	3645-1		5		
30	2	BMS	5	MS: 1226437	
31	3	BMSD	5	MSD: 6438	
32	6439	BND	5		
33	DT		25		
34	3645-4		5		
35	5		5		
36	6		5		
37	CCV		1		
38	CB		1		
39	LLQC		1		
40	1226397	MB	5	MXX 27961	

Clean Cones
Windings
Optimization
Tuning
Sample Flow
Detector Calibration
Waste

Standards

ICV/CCV:	ICSA:
QCS/BND:	ICSAB:
Internal:	BBND:
LLQC:	

SGS North America Inc.

3 27 ACF 8/14/14

ICP MS Run Log

Method: 6020A/3010
Run Date: 8/14/14

Analyst: ACF/CDE
File ID: 08-14-2014-P3B
Queue/Batch: MMS 8639

#	Sample ID	Bench Dilution	Comments	Status
1	1226398 LCS	5		
2	3646-7	5		
3	RxS	1		
4	CCV	1		
5	CB	1		
6	LLQC	1		
7	3642-4	5	RR Be	
8	6399 MS	5		
9	6400 MSD	5		
10	6401 BND	5		
11	3642-5	5		
12	RxS	1	Due to high Na, K, Ca	
13	CCV	1	Be, Ag ↓	
14	CB	1		
15	LLQC	1		
16	1226578 MB	5	MXX 27965 (Pb Only)	
17	6579 LCS	5		
18	3745-1	5		
19	2 BMS	5		
20	3 BMSD	5		
21	6580 BND	5		
22	DT	25		
23	3745-4	5		
24	5	5		
25	6	5		
26	CCV	1		
27	CB	1		
28	LLQC	1		
29	3745-7	5		
30	8	5		
31	9	5		
32	10	5		
33	12	5		
34	13 BMS	5		
35	14 BMSD	5		
36	6581 BND	5		
37	3745-16	5		
38	-17	5		
39	CCV	1		
40	CB	1		

Clean Cones	
Windings	
Optimization	
Tuning	
Sample Flow	
Detector Calibration	
Waste	

Standards

ICV/CCV:	ICSA:
QCS/BND:	ICSAB:
Internal:	BBND:
LLQC:	

T-1
ACF 8/14/14

SGS North America Inc.

ICP MS Run Log

Method: 6020A/3010
Run Date: 8/14/14

Analyst: ACF
File ID: 08.14.2014.P3B
Queue/Batch: MMS 8639

#	Sample ID		Bench Dilution	Comments	Status
1	LLQC		1		
2	3745-18		5		
3	19		5		
4	20		5		
5	21		5		
6	22	BMS	5		
7	23	BMSD	5		
8	582	BND	5		
9	3761-24		5		
10	25		5		
11	26		5		
12	CCV		1		
13	CB		1		
14	LLQC		1		
15	1226591	MB	5	MXX 27967	
16	592	LCS	5		
17	3761-6		5		
18	7	BMS	5	• 1226593	
19	8	BMSD	5	6594	
20	595	BND	5		
21	DT		25		
22	3761-1		5		
23	-2		5		
24	-3		5		
25	CCV		1	A9 ↓	
26	CCV		1		
27	CB		1	> LLQC (INSERT)	
28	3761-4		5		
29	5		5		
30	10		5		
31	11		5		
32	12		5		
33	13		5		
34	14		5		
35	15		5		
36	16		5		
37	17		5		
38	CCV		1		
39	CB		1		
40	LLQC		1		

Clean Cones
Windings
Optimization
Tuning
Sample Flow
Detector Calibration
Waste

Standards

ICV/CCV:	ICSA:
QCS/BND:	ICSAB:
Internal:	BBND:
LLQC:	

SGS North America Inc.

ICP MS Run Log

Method: 6020K / 3010
Run Date: 08.14.14

Analyst: ACF
File ID: 08.14.2014-P3 B
Queue/Batch: MMS 8C39

#	Sample ID	Bench Dilution	Comments	Status
1	3761-18	5		
2	19	5		
3	3753-1	5		
4	2	5		
5	3	5		
6	4	5		
7	CCV	1		
8	CB	1		
9	LLQC	1		
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

ACF 8/14/14

Clean Cones
Windings
Optimization
Tuning
Sample Flow
Detector Calibration
Waste

Standards

ICV/CCV:	ICSA:
QCS/BND:	ICSAB:
Internal:	BBND:
LLQC:	

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: ICV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 10:34:52
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\ICV.008
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	30.000	26.667	0.000
	W	183		mg/L	20.000	10.000	86.603
	W	184		mg/L	63.301	13.317	36.495
	W	186		mg/L	34.041	12.021	13.502
	Cl	37		mg/L	12684958.862	12493933.949	0.320
	C	13		mg/L	11307.671	11788.334	2.812
⌜	Li	7	39.9991	ug/L	34627.147	56.667	2.080
|	Be	9	39.5114	ug/L	12616.212	24.000	2.047
|	B	11	197.4044	ug/L	97627.322	292.005	1.789
|	Al	27	204.5974	ug/L	1174254.879	3514.074	0.907
\>	Sc-2	45		ug/L	6663965.172	6420063.688	1.307
⌜	V	51	199.3505	ug/L	2137644.658	-723.840	0.705
|	Cr	52	198.3496	ug/L	1841149.790	21602.632	0.408
|	Cr	53		ug/L	349102.251	119637.679	3.796
|	Mn	55	196.7935	ug/L	2618308.784	3277.978	1.586
|	Co	59	199.9493	ug/L	1994832.629	62.667	0.451
|	Ni	58		ug/L	1051592.754	-2898.994	1.683
|	Ni	60	198.9988	ug/L	420422.277	48.000	2.228
|	Cu	63	205.1320	ug/L	920703.037	282.671	0.063
|	Cu	65	206.0248	ug/L	444590.466	145.335	0.640
|	Zn	66	196.4723	ug/L	213341.866	1229.424	0.962
|	Zn	67		ug/L	51143.172	10059.417	2.144
|	Zn	68	196.3842	ug/L	161564.539	2313.655	0.743
\>	Ge	74		ug/L	1021283.841	1028348.409	1.521
|	As	75	19.1658	ug/L	25158.458	-345.218	2.544
|	Se	77		ug/L	5395.085	4231.742	7.253
|	Se	78	19.0493	ug/L	15796.093	10451.343	0.785
|	Se	82	19.1370	ug/L	2188.410	-23.664	1.834
|	Kr	84		ug/L	-1814.666	202.319	14.886
|	Sr	88	192.3030	ug/L	3243731.658	150.001	0.494
|	Mo	95	38.0822	ug/L	112997.086	36.000	1.697
|	Mo	97		mg/L	71673.612	106.667	1.374
⌊	Mo	98	38.8228	ug/L	186251.873	53.470	1.061
⌜	Ag	107	3.6609	ug/L	25321.131	144.001	4.572
|	Ag	109	3.6854	ug/L	23971.817	125.334	4.850

Data derived from 3 replicate readings.

Sample ID: ICV

|	Cd	106		mg/L	28812.686	3.776	2.618
|	Cd	108		mg/L	20073.119	-26.009	0.996
|	Cd	111	193.0415	ug/L	305421.918	-9.975	1.490
|	Cd	114	199.1267	ug/L	709847.746	27.517	1.182
|>	In	115		ug/L	768028.256	780872.478	1.247
|	Sn	118	202.6462	ug/L	1007013.782	66.667	2.580
|	Sb	121	99.1410	ug/L	532609.338	84.000	1.155
|	Sb	123	97.9598	ug/L	410622.727	51.319	0.246
|	Ba	135	383.8343	ug/L	654815.825	29.333	2.095
L	Ba	137	385.9376	ug/L	1148335.488	20.000	2.903
⌜>	Ir	193		ug/L	686224.350	684125.297	2.014
|	Au	197		ug/L	8489923.060	8204064.402	1.220
|	Hg	199		ug/L	3360.678	36.667	1.031
|	Hg	200		ug/L	4387.822	16.667	3.385
|	Hg	201	3.8571	ug/L	2479.036	26.667	2.670
|	Hg	202	3.9813	ug/L	5753.986	20.000	1.922
|	Tl	203	3.9375	ug/L	22650.747	22.667	1.598
|	Tl	205	3.8845	ug/L	56421.149	30.667	3.165
|	204	204		ug/L	54136.117	18.065	1.376
|	206	206		ug/L	982776.431	102.667	1.469
|	207	207		ug/L	901503.173	230.670	1.579
|	Pb	208	204.7983	ug/L	3989574.023	538.673	1.242
|	208	208		ug/L	2105294.419	205.336	1.163
|	Bi	209	199.3591	ug/L	3194334.278	265.338	1.783
|	Th	232	19.8898	ug/L	620128.522	92.001	0.083
L	U	238	20.2029	ug/L	629444.662	16.000	1.764
⌜	Na	23	3988.3466	ug/L	21372568.043	5271.001	2.660
|	Mg	24	3983.1084	ug/L	14566111.637	273.338	0.451
|	Mg	25	4011.9638	ug/L	2075929.059	32.000	1.453
|	Si	28	2040.8598	ug/L	5726311.193	847148.225	0.296
|	Si	29		ug/L	685652.161	366788.075	0.745
|	P	31	202.1113	ug/L	123534.253	56102.952	0.478
|	K	39	4037.0317	ug/L	34897634.104	782542.335	1.320
|>	Sc-1	45		ug/L	6663965.172	6420063.688	1.307
|	Ca	43	3959.7464	ug/L	70542.666	669.360	0.868
|	Ti	47	201.0660	ug/L	165848.153	7491.373	0.850
L	Ti	48		ug/L	1721176.042	-4736.827	0.480
⌜	Fe	54	4034.4872	ug/L	3048554.346	438924.668	0.757
|	Fe	56		ug/L	46580975.085	3031176.051	1.992
|	Fe	57	3908.8410	ug/L	1069085.339	9494.742	1.430
L>	Ge-1	74		ug/L	1021283.841	1028348.409	1.521

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: ICV

Li	7	99.998	
Be	9	98.779	
B	11	98.702	
Al	27	102.299	
Sc-2	45		103.799
V	51	99.675	
Cr	52	99.175	
Cr	53		
Mn	55	98.397	
Co	59	99.975	
Ni	58		
Ni	60	99.499	
Cu	63	102.566	
Cu	65	103.012	
Zn	66	98.236	
Zn	67		
Zn	68	98.192	
Ge	74		99.313
As	75	95.829	
Se	77		
Se	78	95.247	
Se	82	95.685	
Kr	84		
Sr	88	96.152	
Mo	95	95.205	
Mo	97		
Mo	98	97.057	
Ag	107	91.524	
Ag	109	92.136	
Cd	106		
Cd	108		
Cd	111	96.521	
Cd	114	99.563	
In	115		98.355
Sn	118	101.323	
Sb	121	99.141	
Sb	123	97.960	
Ba	135	95.959	
Ba	137	96.484	
Ir	193		100.307
Au	197		
Hg	199		
Hg	200		
Hg	201	96.427	
Hg	202	99.533	
Tl	203	98.437	
Tl	205	97.112	
204	204		
206	206		
207	207		
Pb	208	102.399	
208	208		
Bi	209	99.680	
Th	232	99.449	

Data derived from 3 replicate readings.

Sample ID: ICV

U	238	101.015	
Na	23	99.709	
Mg	24	99.578	
Mg	25	100.299	
Si	28	102.043	
Si	29		
P	31	101.056	
K	39	100.926	
Sc-1	45		103.799
Ca	43	98.994	
Ti	47	100.533	
Ti	48		
Fe	54	100.862	
Fe	56		
Fe	57	97.721	
Ge-1	74		99.313

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: ICV

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: QCS
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 10:37:14
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\QCS.009
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 8

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	73.334	26.667	64.443
	W	183		mg/L	43.333	10.000	48.039
	W	184		mg/L	76.630	13.317	15.027
	W	186		mg/L	80.380	12.021	76.357
	Cl	37		mg/L	12619806.096	12493933.949	1.109
	C	13		mg/L	11401.129	11788.334	1.876
⌜	Li	7	**50.7637**	ug/L	43948.265	56.667	1.455
|	Be	9	**49.6820**	ug/L	15866.426	24.000	1.611
|	B	11	**249.8178**	ug/L	123522.136	292.005	1.118
|	Al	27	**251.5435**	ug/L	1443717.294	3514.074	0.367
⌊>	Sc-2	45		ug/L	6670294.649	6420063.688	2.523
⌜	V	51	**262.8064**	ug/L	2770865.162	-723.840	0.692
|	Cr	52	**251.4218**	ug/L	2288758.005	21602.632	2.076
|	Cr	53		ug/L	401598.031	119637.679	3.841
|	Mn	55	**250.9351**	ug/L	3282112.895	3277.978	1.532
|	Co	59	**257.6209**	ug/L	2527036.156	62.667	2.082
|	Ni	58		ug/L	1300271.889	-2898.994	2.438
|	Ni	60	**251.3052**	ug/L	521976.510	48.000	1.652
|	Cu	63	**266.4972**	ug/L	1175954.295	282.671	1.436
|	Cu	65	**265.6809**	ug/L	563811.232	145.335	2.348
|	Zn	66	**258.3274**	ug/L	275468.798	1229.424	1.329
|	Zn	67		ug/L	63383.577	10059.417	2.613
|	Zn	68	**264.7571**	ug/L	213388.239	2313.655	0.460
|>	Ge	74		ug/L	1004243.205	1028348.409	1.712
|	As	75	**25.5292**	ug/L	33069.447	-345.218	1.245
|	Se	77		ug/L	5970.146	4231.742	7.616
|	Se	78	**26.6467**	ug/L	17654.346	10451.343	1.096
|	Se	82	**25.8678**	ug/L	2916.110	-23.664	1.876
|	Kr	84		ug/L	-3375.605	202.319	22.495
|	Sr	88	**492.8930**	ug/L	8174962.693	150.001	1.053
|	Mo	95	**50.3230**	ug/L	146808.744	36.000	1.546
|	Mo	97		mg/L	89551.937	106.667	0.278
⌊	Mo	98	**50.1257**	ug/L	236376.878	53.470	1.625
⌜	Ag	107	**4.7494**	ug/L	33033.543	144.001	6.787
|	Ag	109	**4.7984**	ug/L	31395.143	125.334	5.420

Data derived from 3 replicate readings.

Sample ID: QCS

|	Cd	106		mg/L	35261.679	3.776	2.693
|	Cd	108		mg/L	25495.715	-26.009	2.534
|	Cd	111	245.3042	ug/L	390761.108	-9.975	1.223
|	Cd	114	252.6075	ug/L	906575.620	27.517	0.071
|>	In	115		ug/L	773285.870	780872.478	1.715
|	Sn	118	248.4186	ug/L	1242863.976	66.667	0.881
|	Sb	121	255.5120	ug/L	1382014.036	84.000	1.518
|	Sb	123	253.4891	ug/L	1069772.321	51.319	0.795
|	Ba	135	482.6292	ug/L	828944.549	29.333	0.661
L	Ba	137	482.0048	ug/L	1443676.812	20.000	0.777
⌈>	Ir	193		ug/L	693046.170	684125.297	2.572
|	Au	197		ug/L	8617986.157	8204064.402	1.162
|	Hg	199		ug/L	3864.230	36.667	4.706
|	Hg	200		ug/L	5038.192	16.667	5.447
|	Hg	201	4.7276	ug/L	3062.563	26.667	1.148
|	Hg	202	4.8625	ug/L	7093.687	20.000	3.303
|	Tl	203	5.0459	ug/L	29327.583	22.667	4.428
|	Tl	205	4.9583	ug/L	72726.833	30.667	3.045
|	204	204		ug/L	66380.364	18.065	1.084
|	206	206		ug/L	1280075.298	102.667	0.742
|	207	207		ug/L	1093389.644	230.670	1.388
|	Pb	208	254.4136	ug/L	5005690.123	538.673	1.730
|	208	208		ug/L	2632225.181	205.336	2.802
|	Bi	209	246.4552	ug/L	3988257.843	265.338	2.021
|	Th	232	50.1849	ug/L	1579915.512	92.001	0.327
L	U	238	25.3914	ug/L	798737.313	16.000	0.680
⌈	Na	23	5093.2069	ug/L	27314501.707	5271.001	2.390
|	Mg	24	5073.4598	ug/L	18568133.992	273.338	1.257
|	Mg	25	5086.4800	ug/L	2633979.652	32.000	1.905
|	Si	28	2609.6525	ug/L	7081891.481	847148.225	0.839
|	Si	29		ug/L	780056.693	366788.075	1.066
|	P	31	252.1732	ug/L	139844.000	56102.952	2.240
|	K	39	5077.5884	ug/L	43734582.132	782542.335	2.787
|>	Sc-1	45		ug/L	6670294.649	6420063.688	2.523
|	Ca	43	5103.7553	ug/L	90806.795	669.360	1.323
|	Ti	47	246.6073	ug/L	201790.656	7491.373	0.552
L	Ti	48		ug/L	2047711.592	-4736.827	1.048
⌈	Fe	54	5249.3744	ug/L	3771640.036	438924.668	2.692
|	Fe	56		ug/L	59573332.647	3031176.051	2.242
|	Fe	57	5133.2531	ug/L	1377479.766	9494.742	1.479
L>	Ge-1	74		ug/L	1004243.205	1028348.409	1.712

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: QCS

Li	7	101.527	
Be	9	99.364	
B	11	99.927	
Al	27	100.617	
Sc-2	45		103.898
V	51	105.123	
Cr	52	100.569	
Cr	53		
Mn	55	100.374	
Co	59	103.048	
Ni	58		
Ni	60	100.522	
Cu	63	106.599	
Cu	65	106.272	
Zn	66	103.331	
Zn	67		
Zn	68	105.903	
Ge	74		97.656
As	75	102.117	
Se	77		
Se	78	106.587	
Se	82	103.471	
Kr	84		
Sr	88	98.579	
Mo	95	100.646	
Mo	97		
Mo	98	100.251	
Ag	107	94.988	
Ag	109	95.968	
Cd	106		
Cd	108		
Cd	111	98.122	
Cd	114	101.043	
In	115		99.028
Sn	118	99.367	
Sb	121	102.205	
Sb	123	101.396	
Ba	135	96.526	
Ba	137	96.401	
Ir	193		101.304
Au	197		
Hg	199		
Hg	200		
Hg	201	94.552	
Hg	202	97.250	
Tl	203	100.919	
Tl	205	99.166	
204	204		
206	206		
207	207		
Pb	208	101.765	
208	208		
Bi	209	98.582	
Th	232	100.370	

Data derived from 3 replicate readings.

Sample ID: QCS

U	238	101.566	
Na	23	101.864	
Mg	24	101.469	
Mg	25	101.730	
Si	28	104.386	
Si	29		
P	31	100.869	
K	39	101.552	
Sc-1	45		103.898
Ca	43	102.075	
Ti	47	98.643	
Ti	48		
Fe	54	104.987	
Fe	56		
Fe	57	102.665	
Ge-1	74		97.656

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: QCS

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: ICSAB
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 10:39:35
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\ICSAB.010
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 9

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	130.001	26.667	15.385
	W	183		mg/L	76.667	10.000	19.924
	W	184		mg/L	153.318	13.317	18.826
	W	186		mg/L	128.688	12.021	38.487
	Cl	37		mg/L	13934244.417	12493933.949	1.130
	C	13		mg/L	26645.892	11788.334	3.056
⌜	Li	7	11.2943	ug/L	9965.288	56.667	0.638
|	Be	9	10.5226	ug/L	3428.705	24.000	0.817
|	B	11	2.5308	ug/L	1572.149	292.005	6.176
|	Al	27	21151.4435	ug/L	122826930.529	3514.074	0.100
⌞>	Sc-2	45		ug/L	6765032.248	6420063.688	2.377
⌜	V	51	11.6868	ug/L	119385.958	-723.840	5.132
|	Cr	52	11.6311	ug/L	122700.223	21602.632	1.702
|	Cr	53		ug/L	145366.557	119637.679	10.816
|	Mn	55	11.1587	ug/L	145065.106	3277.978	0.652
|	Co	59	11.5062	ug/L	109982.624	62.667	2.419
|	Ni	58		ug/L	108759.055	-2898.994	17.732
|	Ni	60	11.6778	ug/L	23666.905	48.000	2.356
|	Cu	63	12.1940	ug/L	52653.848	282.671	1.532
|	Cu	65	12.2953	ug/L	25532.398	145.335	2.012
|	Zn	66	13.8451	ug/L	15485.051	1229.424	3.382
|	Zn	67		ug/L	15304.265	10059.417	15.510
|	Zn	68	12.2511	ug/L	11706.886	2313.655	2.141
|>	Ge	74		ug/L	977847.918	1028348.409	2.200
|	As	75	11.0588	ug/L	13763.249	-345.218	2.124
|	Se	77		ug/L	4913.453	4231.742	7.413
|	Se	78	13.5747	ug/L	13631.572	10451.343	1.711
|	Se	82	11.5106	ug/L	1251.024	-23.664	2.380
|	Kr	84		ug/L	205.364	202.319	20.234
|	Sr	88	0.1553	ug/L	2650.422	150.001	1.887
|	Mo	95	438.5223	ug/L	1245145.019	36.000	1.296
|	Mo	97		mg/L	778312.201	106.667	0.665
⌞	Mo	98	439.1628	ug/L	2016239.093	53.470	0.131
⌜	Ag	107	10.3579	ug/L	69342.634	144.001	5.888
|	Ag	109	10.1852	ug/L	64144.960	125.334	4.741

Data derived from 3 replicate readings.

Sample ID: ICSAB

|	Cd	106		mg/L	1699.035	3.776	13.992
|	Cd	108		mg/L	3010.187	-26.009	3.262
|	Cd	111	**10.5006**	ug/L	16135.611	-9.975	2.011
|	Cd	114	**11.9632**	ug/L	41467.301	27.517	2.354
|>	In	115		ug/L	746561.922	780872.478	1.778
|	Sn	118	**10.8906**	ug/L	52656.528	66.667	1.426
|	Sb	121	**12.3071**	ug/L	64335.405	84.000	1.016
|	Sb	123	**12.1519**	ug/L	49550.548	51.319	0.757
|	Ba	135	**10.6409**	ug/L	17668.047	29.333	1.666
L	Ba	137	**10.6528**	ug/L	30824.925	20.000	2.256
⌈>	Ir	193		ug/L	662716.296	684125.297	2.136
|	Au	197		ug/L	31663.506	8204064.402	5.758
|	Hg	199		ug/L	43.333	36.667	35.251
|	Hg	200		ug/L	43.333	16.667	74.182
|	Hg	201	**0.0125**	ug/L	33.333	26.667	36.166
|	Hg	202	**0.0226**	ug/L	50.667	20.000	16.434
|	Tl	203	**10.8918**	ug/L	60484.105	22.667	2.128
|	Tl	205	**10.7707**	ug/L	151016.547	30.667	2.311
|	204	204		ug/L	2819.491	18.065	4.194
|	206	206		ug/L	54478.833	102.667	0.563
|	207	207		ug/L	46997.495	230.670	1.010
|	Pb	208	**11.5695**	ug/L	218161.002	538.673	1.061
|	208	208		ug/L	116684.673	205.336	1.375
|	Bi	209	**11.2333**	ug/L	174088.123	265.338	2.103
|	Th	232	**0.0095**	ug/L	376.009	92.001	8.708
L	U	238	**11.3379**	ug/L	341162.144	16.000	1.786
⌈	Na	23	**20970.5710**	ug/L	114044282.746	5271.001	2.444
|	Mg	24	**20850.7382**	ug/L	77403831.628	273.338	2.515
|	Mg	25	**20776.0517**	ug/L	10910288.516	32.000	0.717
|	Si	28	**-2.1864**	ug/L	887199.558	847148.225	1.076
|	Si	29		ug/L	367439.336	366788.075	1.648
|	P	31	**21637.9241**	ug/L	7156201.935	56102.952	1.409
|	K	39	**21291.0401**	ug/L	183342047.567	782542.335	2.261
|>	Sc-1	45		ug/L	6765032.248	6420063.688	2.377
|	Ca	43	**20667.8856**	ug/L	370898.900	669.360	2.996
|	Ti	47	**460.3070**	ug/L	375200.734	7491.373	0.552
L	Ti	48		ug/L	3718499.403	-4736.827	0.864
⌈	Fe	54	**22126.1052**	ug/L	14131947.914	438924.668	2.533
|	Fe	56		ug/L	239192131.873	3031176.051	1.233
|	Fe	57	**21922.5064**	ug/L	5698567.513	9494.742	1.209
L>	Ge-1	74		ug/L	977847.918	1028348.409	2.200

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: ICSAB

Li	7		
Be	9	105.226	
B	11		
Al	27	105.757	
Sc-2	45		105.373
V	51	116.868	
Cr	52	116.311	
Cr	53		
Mn	55	111.587	
Co	59	115.062	
Ni	58		
Ni	60	116.778	
Cu	63	121.940	
Cu	65	122.953	
Zn	66	138.451	
Zn	67		
Zn	68	122.511	
Ge	74		95.089
As	75	110.588	
Se	77		
Se	78	135.747	
Se	82	115.106	
Kr	84		
Sr	88		
Mo	95	109.631	
Mo	97		
Mo	98	109.791	
Ag	107	103.579	
Ag	109	101.852	
Cd	106		
Cd	108		
Cd	111	105.006	
Cd	114	119.632	
In	115		95.606
Sn	118	108.906	
Sb	121	123.071	
Sb	123	121.519	
Ba	135	106.409	
Ba	137	106.528	
Ir	193		96.871
Au	197		
Hg	199		
Hg	200		
Hg	201		
Hg	202		
Tl	203	108.918	
Tl	205	107.707	
204	204		
206	206		
207	207		
Pb	208	115.695	
208	208		
Bi	209	112.333	
Th	232		

Data derived from 3 replicate readings.

Sample ID: ICSAB

U	238		
Na	23	104.853	
Mg	24	104.254	
Mg	25	103.880	
Si	28		
Si	29		
P	31	108.190	
K	39	106.455	
Sc-1	45		105.373
Ca	43	103.339	
Ti	47	115.077	
Ti	48		
Fe	54	110.631	
Fe	56		
Fe	57	109.613	
Ge-1	74		95.089

QC Out Of Limits

MassAnalyte	Out of Limits Message
63Cu	
65Cu	
66Zn	
68Zn	
78Se	
121Sb	
123Sb	

Data derived from 3 replicate readings.

Sample ID: ICSAB

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: ICSA
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 10:41:57
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\ICSA.011
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 10

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	133.334	26.667	30.311
	W	183		mg/L	83.334	10.000	30.199
	W	184		mg/L	159.964	13.317	16.549
	W	186		mg/L	167.048	12.021	37.681
	Cl	37		mg/L	13853994.184	12493933.949	0.753
	C	13		mg/L	27545.454	11788.334	1.137
⌜	Li	7	0.0966	ug/L	144.001	56.667	12.729
|	Be	9	-0.0019	ug/L	24.667	24.000	16.878
|	B	11	3.1912	ug/L	1901.551	292.005	5.923
|	Al	27	21976.8104	ug/L	127498971.866	3514.074	1.255
|>	Sc-2	45		ug/L	6757258.783	6420063.688	1.894
⌜	V	51	-0.2140	ug/L	-2899.797	-723.840	113.754
|	Cr	52	0.4323	ug/L	24667.159	21602.632	3.962
|	Cr	53		ug/L	137191.034	119637.679	12.223
|	Mn	55	0.1428	ug/L	5001.501	3277.978	1.634
|	Co	59	0.0535	ug/L	578.687	62.667	3.931
|	Ni	58		ug/L	35339.753	-2898.994	16.586
|	Ni	60	0.6543	ug/L	1388.116	48.000	2.176
|	Cu	63	0.7202	ug/L	3410.031	282.671	2.702
|	Cu	65	0.8372	ug/L	1894.884	145.335	10.060
|	Zn	66	1.9624	ug/L	3243.299	1229.424	6.056
|	Zn	67		ug/L	13531.099	10059.417	12.970
|	Zn	68	0.8080	ug/L	2867.160	2313.655	4.363
|>	Ge	74		ug/L	991381.630	1028348.409	1.326
|	As	75	0.1519	ug/L	-137.738	-345.218	172.094
|	Se	77		ug/L	3896.919	4231.742	11.800
|	Se	78	2.1713	ug/L	10673.886	10451.343	0.589
|	Se	82	0.0152	ug/L	-21.102	-23.664	110.173
|	Kr	84		ug/L	230.516	202.319	19.858
|	Sr	88	0.1667	ug/L	2873.829	150.001	0.532
|	Mo	95	437.5259	ug/L	1259795.686	36.000	0.713
|	Mo	97		mg/L	772229.762	106.667	1.361
⌊	Mo	98	429.6525	ug/L	2000450.491	53.470	1.155
⌜	Ag	107	0.0011	ug/L	146.668	144.001	20.103
|	Ag	109	-0.0054	ug/L	86.667	125.334	17.474

Data derived from 3 replicate readings.

Sample ID: ICSA

|	Cd	106		mg/L	-18.957	3.776	148.700
|	Cd	108		mg/L	1866.156	-26.009	9.208
|	Cd	111	0.0728	ug/L	103.283	-9.975	309.925
|	Cd	114	0.9881	ug/L	3491.240	27.517	7.762
|>	In	115		ug/L	755640.624	780872.478	0.653
|	Sn	118	0.0381	ug/L	250.670	66.667	13.758
|	Sb	121	0.2682	ug/L	1498.802	84.000	5.702
|	Sb	123	0.2575	ug/L	1111.552	51.319	7.027
|	Ba	135	0.0450	ug/L	104.001	29.333	16.765
L	Ba	137	0.0462	ug/L	154.668	20.000	7.466
⌈>	Ir	193		ug/L	668909.733	684125.297	3.160
|	Au	197		ug/L	29358.488	8204064.402	7.585
|	Hg	199		ug/L	30.000	36.667	33.333
|	Hg	200		ug/L	53.334	16.667	28.641
|	Hg	201	0.0033	ug/L	28.000	26.667	24.744
|	Hg	202	0.0117	ug/L	36.000	20.000	22.222
|	Tl	203	0.0208	ug/L	138.668	22.667	10.131
|	Tl	205	0.0207	ug/L	321.340	30.667	32.707
|	204	204		ug/L	54.384	18.065	24.576
|	206	206		ug/L	529.350	102.667	6.857
|	207	207		ug/L	536.017	230.670	12.555
|	Pb	208	0.0852	ug/L	2140.104	538.673	8.129
|	208	208		ug/L	1074.737	205.336	10.931
|	Bi	209	0.0013	ug/L	280.005	265.338	8.572
|	Th	232	0.0024	ug/L	161.335	92.001	5.161
L	U	238	0.0005	ug/L	29.333	16.000	15.746
⌈	Na	23	21898.8667	ug/L	118944839.621	5271.001	2.323
|	Mg	24	21554.6989	ug/L	79934682.981	273.338	2.142
|	Mg	25	21679.4674	ug/L	11374003.043	32.000	1.147
|	Si	28	-14.5691	ug/L	856514.576	847148.225	2.153
|	Si	29		ug/L	357676.342	366788.075	0.836
|	P	31	22054.9477	ug/L	7284423.095	56102.952	0.324
|	K	39	22241.6535	ug/L	191257903.050	782542.335	1.762
|>	Sc-1	45		ug/L	6757258.783	6420063.688	1.894
|	Ca	43	21058.3613	ug/L	377386.041	669.360	1.147
|	Ti	47	472.3287	ug/L	384467.081	7491.373	1.644
L	Ti	48		ug/L	3801982.076	-4736.827	0.730
⌈	Fe	54	22454.5607	ug/L	14540946.196	438924.668	1.469
|	Fe	56		ug/L	247557730.276	3031176.051	2.224
|	Fe	57	22205.4089	ug/L	5853444.770	9494.742	2.410
L>	Ge-1	74		ug/L	991381.630	1028348.409	1.326

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: ICSA

Li	7		
Be	9		
B	11		
Al	27	109.884	
Sc-2	45		105.252
V	51		
Cr	52		
Cr	53		
Mn	55		
Co	59		
Ni	58		
Ni	60		
Cu	63		
Cu	65		
Zn	66		
Zn	67		
Zn	68		
Ge	74		96.405
As	75		
Se	77		
Se	78		
Se	82		
Kr	84		
Sr	88		
Mo	95	109.381	
Mo	97		
Mo	98	107.413	
Ag	107		
Ag	109		
Cd	106		
Cd	108		
Cd	111		
Cd	114		
In	115		96.769
Sn	118		
Sb	121		
Sb	123		
Ba	135		
Ba	137		
Ir	193		97.776
Au	197		
Hg	199		
Hg	200		
Hg	201		
Hg	202		
Tl	203		
Tl	205		
204	204		
206	206		
207	207		
Pb	208		
208	208		
Bi	209		
Th	232		

Data derived from 3 replicate readings.

Sample ID: ICSA

U	238		
Na	23	109.494	
Mg	24	107.773	
Mg	25	108.397	
Si	28		
Si	29		
P	31	110.275	
K	39	111.208	
Sc-1	45		105.252
Ca	43	105.292	
Ti	47	118.082	
Ti	48		
Fe	54	112.273	
Fe	56		
Fe	57	111.027	
Ge-1	74		96.405

QC Out Of Limits

MassAnalyte	Out of Limits Message
60Ni	
63Cu	
65Cu	
78Se	
114Cd	
121Sb	
123Sb	

Data derived from 3 replicate readings.

Sample ID: ICSA

SGS ALASKA
ELAN 6100 ICP-MS P3

Sample ID: LLQC
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 10:46:00
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\LLQC.012
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 2

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	30.000	26.667	57.735
	W	183		mg/L	20.000	10.000	50.000
	W	184		mg/L	43.300	13.317	35.274
	W	186		mg/L	37.375	12.021	44.822
	Cl	37		mg/L	12314052.406	12493933.949	0.998
	C	13		mg/L	10783.646	11788.334	3.670
⌜	Li	7	1.0697	ug/L	976.724	56.667	4.103
|	Be	9	0.1703	ug/L	78.667	24.000	15.534
|	B	11	41.4925	ug/L	20616.151	292.005	2.932
|	Al	27	42.5232	ug/L	245218.905	3514.074	2.908
|>	Sc-2	45		ug/L	6619502.397	6420063.688	1.510
⌜	V	51	4.0082	ug/L	43060.765	-723.840	5.690
|	Cr	52	0.4898	ug/L	26411.122	21602.632	0.867
|	Cr	53		ug/L	99908.672	119637.679	0.253
|	Mn	55	0.4261	ug/L	9076.941	3277.978	0.309
|	Co	59	0.1989	ug/L	2084.261	62.667	5.046
|	Ni	58		ug/L	-1206.276	-2898.994	27.195
|	Ni	60	0.4365	ug/L	986.725	48.000	2.233
|	Cu	63	1.2816	ug/L	6138.260	282.671	1.338
|	Cu	65	1.2457	ug/L	2884.500	145.335	6.130
|	Zn	66	4.9405	ug/L	6672.004	1229.424	1.657
|	Zn	67		ug/L	9712.324	10059.417	1.530
|	Zn	68	4.3194	ug/L	5903.424	2313.655	1.102
|>	Ge	74		ug/L	1039688.777	1028348.409	2.002
|	As	75	1.1698	ug/L	1230.301	-345.218	34.891
|	Se	77		ug/L	3443.378	4231.742	2.354
|	Se	78	4.9134	ug/L	11984.740	10451.343	1.471
|	Se	82	4.1352	ug/L	462.356	-23.664	6.988
|	Kr	84		ug/L	237.565	202.319	24.390
|	Sr	88	1.0139	ug/L	17565.167	150.001	2.545
|	Mo	95	1.2220	ug/L	3724.832	36.000	1.583
|	Mo	97		mg/L	2346.997	106.667	2.604
⌊	Mo	98	1.2158	ug/L	5991.236	53.470	2.670
⌜	Ag	107	0.3152	ug/L	2353.669	144.001	12.727
|	Ag	109	0.3358	ug/L	2338.996	125.334	6.932

Data derived from 3 replicate readings.

Sample ID: LLQC

|	Cd	106		mg/L	64.524	3.776	107.086
|	Cd	108		mg/L	41.276	-26.009	113.590
|	Cd	111	0.4050	ug/L	642.722	-9.975	6.737
|	Cd	114	0.4027	ug/L	1488.551	27.517	1.846
|>	In	115		ug/L	781858.406	780872.478	1.827
|	Sn	118	1.0671	ug/L	5465.793	66.667	3.382
|	Sb	121	0.7359	ug/L	4109.014	84.000	3.666
|	Sb	123	0.7597	ug/L	3292.969	51.319	2.994
|	Ba	135	0.6006	ug/L	1072.069	29.333	7.657
L	Ba	137	0.6151	ug/L	1881.546	20.000	5.184
⌜>	Ir	193		ug/L	690171.563	684125.297	1.365
|	Au	197		ug/L	8314849.459	8204064.402	0.437
|	Hg	199		ug/L	70.000	36.667	28.572
|	Hg	200		ug/L	86.667	16.667	46.632
|	Hg	201	0.0416	ug/L	53.334	26.667	30.311
|	Hg	202	0.0468	ug/L	88.000	20.000	12.026
|	Tl	203	0.3664	ug/L	2141.609	22.667	5.631
|	Tl	205	0.3570	ug/L	5244.320	30.667	5.614
|	204	204		ug/L	73.087	18.065	13.935
|	206	206		ug/L	1185.418	102.667	5.945
|	207	207		ug/L	1272.097	230.670	6.589
|	Pb	208	0.2339	ug/L	5125.943	538.673	1.600
|	208	208		ug/L	2668.427	205.336	2.777
|	Bi	209	0.4330	ug/L	7243.147	265.338	1.925
|	Th	232	0.9921	ug/L	31202.308	92.001	0.794
L	U	238	0.2103	ug/L	6606.618	16.000	0.321
⌜	Na	23	208.4085	ug/L	1114234.965	5271.001	0.517
|	Mg	24	104.7965	ug/L	380852.029	273.338	2.027
|	Mg	25	104.5124	ug/L	53742.096	32.000	1.530
|	Si	28	96.2764	ug/L	1100416.876	847148.225	0.334
|	Si	29		ug/L	380537.235	366788.075	0.070
|	P	31	86.3723	ug/L	85559.678	56102.952	0.966
|	K	39	199.2882	ug/L	2477949.117	782542.335	0.985
|>	Sc-1	45		ug/L	6619502.397	6420063.688	1.510
|	Ca	43	97.4715	ug/L	2397.678	669.360	1.296
|	Ti	47	9.1893	ug/L	14900.644	7491.373	1.077
L	Ti	48		ug/L	81178.874	-4736.827	1.973
⌜	Fe	54	104.1655	ug/L	512367.438	438924.668	1.949
|	Fe	56		ug/L	4211260.789	3031176.051	0.472
|	Fe	57	98.2441	ug/L	36707.343	9494.742	1.205
L>	Ge-1	74		ug/L	1039688.777	1028348.409	2.002

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: LLQC

Li	7	106.970	
Be	9	85.154	
B	11	103.731	
Al	27	106.308	
Sc-2	45		103.106
V	51	100.204	
Cr	52	61.223	
Cr	53		
Mn	55	106.521	
Co	59	99.454	
Ni	58		
Ni	60	109.118	
Cu	63	106.797	
Cu	65	103.809	
Zn	66	98.809	
Zn	67		
Zn	68	86.389	
Ge	74		101.103
As	75	116.985	
Se	77		
Se	78	122.835	
Se	82	103.379	
Kr	84		
Sr	88	101.392	
Mo	95	122.199	
Mo	97		
Mo	98	121.583	
Ag	107	78.788	
Ag	109	83.951	
Cd	106		
Cd	108		
Cd	111	101.242	
Cd	114	100.665	
In	115		100.126
Sn	118	106.705	
Sb	121	122.647	
Sb	123	126.611	
Ba	135	100.099	
Ba	137	102.523	
Ir	193		100.884
Au	197		
Hg	199		
Hg	200		
Hg	201	103.887	
Hg	202	117.115	
Tl	203	91.598	
Tl	205	89.238	
204	204		
206	206		
207	207		
Pb	208	116.931	
208	208		
Bi	209	108.240	
Th	232	99.206	

Data derived from 3 replicate readings.

Sample ID: LLQC

U	238	105.162	
Na	23	104.204	
Mg	24	104.796	
Mg	25	104.512	
Si	28	120.345	
Si	29		
P	31	86.372	
K	39	99.644	
Sc-1	45		103.106
Ca	43	97.472	
Ti	47	91.893	
Ti	48		
Fe	54	104.166	
Fe	56		
Fe	57	98.244	
Ge-1	74		101.103

QC Out Of Limits

MassAnalyte	Out of Limits Message
52Cr	LLQC is out (+/- 30%)

Data derived from 3 replicate readings.

Sample ID: LLQC

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CB
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 10:48:41
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CB.013
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 1

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	20.000	26.667	50.000
	W	183		mg/L	43.333	10.000	13.324
	W	184		mg/L	26.642	13.317	43.382
	W	186		mg/L	24.698	12.021	116.952
	Cl	37		mg/L	12679327.266	12493933.949	0.646
	C	13		mg/L	11901.828	11788.334	1.750
⌜	Li	7	-0.0143	ug/L	46.000	56.667	13.044
|	Be	9	0.0022	ug/L	25.333	24.000	12.059
|	B	11	0.1283	ug/L	362.675	292.005	6.075
|	Al	27	0.0331	ug/L	3798.202	3514.074	7.338
|>	Sc-2	45		ug/L	6598937.612	6420063.688	0.835
⌜	V	51	0.0263	ug/L	-407.060	-723.840	981.946
|	Cr	52	-0.1811	ug/L	19892.386	21602.632	1.810
|	Cr	53		ug/L	123039.418	119637.679	8.638
|	Mn	55	-0.0010	ug/L	3259.304	3277.978	1.059
|	Co	59	0.0007	ug/L	69.334	62.667	20.261
|	Ni	58		ug/L	-3383.939	-2898.994	5.127
|	Ni	60	0.0056	ug/L	60.000	48.000	24.037
|	Cu	63	0.0010	ug/L	286.672	282.671	9.291
|	Cu	65	0.0049	ug/L	156.001	145.335	11.750
|	Zn	66	0.0535	ug/L	1284.100	1229.424	13.803
|	Zn	67		ug/L	11034.003	10059.417	8.652
|	Zn	68	-0.0904	ug/L	2234.967	2313.655	4.943
|>	Ge	74		ug/L	1026824.821	1028348.409	1.599
|	As	75	-0.0257	ug/L	-377.524	-345.218	69.664
|	Se	77		ug/L	3687.483	4231.742	1.731
|	Se	78	0.7980	ug/L	10663.249	10451.343	0.888
|	Se	82	0.2186	ug/L	1.748	-23.664	171.265
|	Kr	84		ug/L	222.138	202.319	15.730
|	Sr	88	0.0016	ug/L	176.669	150.001	16.340
|	Mo	95	0.1391	ug/L	450.679	36.000	4.002
|	Mo	97		mg/L	316.673	106.667	33.171
L	Mo	98	0.1381	ug/L	719.389	53.470	2.761
⌜	Ag	107	-0.0019	ug/L	128.001	144.001	28.641
|	Ag	109	-0.0029	ug/L	104.001	125.334	16.765

Data derived from 3 replicate readings.

Sample ID: CB

|	Cd	106		mg/L	-44.037	3.776	198.935
|	Cd	108		mg/L	-33.041	-26.009	126.689
|	Cd	111	-0.0117	ug/L	-28.352	-9.975	109.646
|	Cd	114	0.0057	ug/L	47.226	27.517	39.015
|>	In	115		ug/L	766868.913	780872.478	0.609
|	Sn	118	0.0024	ug/L	77.334	66.667	26.543
|	Sb	121	0.0893	ug/L	561.352	84.000	5.716
|	Sb	123	0.0937	ug/L	442.157	51.319	21.781
|	Ba	135	0.0019	ug/L	32.000	29.333	21.651
L	Ba	137	0.0122	ug/L	56.000	20.000	18.898
⌈>	Ir	193		ug/L	668306.714	684125.297	1.408
|	Au	197		ug/L	8190779.685	8204064.402	1.064
|	Hg	199		ug/L	23.333	36.667	65.465
|	Hg	200		ug/L	26.667	16.667	43.301
|	Hg	201	0.0075	ug/L	30.667	26.667	9.962
|	Hg	202	0.0069	ug/L	29.333	20.000	28.386
|	Tl	203	0.0030	ug/L	38.667	22.667	62.356
|	Tl	205	0.0052	ug/L	104.001	30.667	11.539
|	204	204		ug/L	19.918	18.065	57.981
|	206	206		ug/L	144.001	102.667	19.445
|	207	207		ug/L	229.337	230.670	15.038
|	Pb	208	0.0101	ug/L	717.345	538.673	9.403
|	208	208		ug/L	344.007	205.336	10.335
|	Bi	209	-0.0006	ug/L	249.337	265.338	11.382
|	Th	232	0.0008	ug/L	114.667	92.001	24.749
L	U	238	0.0001	ug/L	20.000	16.000	40.000
⌈	Na	23	0.1328	ug/L	6122.248	5271.001	1.591
|	Mg	24	0.0454	ug/L	445.345	273.338	2.074
|	Mg	25	0.0450	ug/L	56.000	32.000	25.754
|	Si	28	-11.1903	ug/L	844399.590	847148.225	0.468
|	Si	29		ug/L	362084.547	366788.075	1.745
|	P	31	-13.7365	ug/L	53267.046	56102.952	1.047
|	K	39	-3.4716	ug/L	775294.705	782542.335	0.647
|>	Sc-1	45		ug/L	6598937.612	6420063.688	0.835
|	Ca	43	0.2317	ug/L	692.029	669.360	11.149
|	Ti	47	0.0198	ug/L	7713.574	7491.373	4.800
L	Ti	48		ug/L	-4667.471	-4736.827	0.665
⌈	Fe	54	-7.6137	ug/L	433247.591	438924.668	0.377
|	Fe	56		ug/L	3030495.965	3031176.051	0.950
|	Fe	57	0.5710	ug/L	9632.233	9494.742	2.623
L>	Ge-1	74		ug/L	1026824.821	1028348.409	1.599

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CB

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	102.786
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	99.852
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	98.207
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	97.688
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: CB

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	102.786
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	99.852

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: CB

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CCV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:13:55
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CCV.067
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	26.667	26.667	43.301
	W	183		mg/L	43.333	10.000	35.251
	W	184		mg/L	36.634	13.317	15.829
	W	186		mg/L	64.042	12.021	50.624
	Cl	37		mg/L	12803641.738	12493933.949	0.826
	C	13		mg/L	11300.992	11788.334	1.143
⌜	Li	7	31.6091	ug/L	27714.015	56.667	1.550
|	Be	9	36.7158	ug/L	11872.452	24.000	1.093
|	B	11	179.1364	ug/L	89704.386	292.005	2.238
|	Al	27	204.3759	ug/L	1187697.241	3514.074	0.654
\>	Sc-2	45		ug/L	6747367.470	6420063.688	1.440
⌜	V	51	207.5350	ug/L	2148079.318	-723.840	2.425
|	Cr	52	202.1311	ug/L	1810560.498	21602.632	0.582
|	Cr	53		ug/L	341366.914	119637.679	4.453
|	Mn	55	202.8537	ug/L	2605232.318	3277.978	2.343
|	Co	59	201.5089	ug/L	1940383.053	62.667	1.748
|	Ni	58		ug/L	1021766.315	-2898.994	1.012
|	Ni	60	199.3987	ug/L	406555.836	48.000	2.107
|	Cu	63	205.3493	ug/L	889611.347	282.671	0.601
|	Cu	65	204.8406	ug/L	426631.611	145.335	0.979
|	Zn	66	195.6482	ug/L	205063.342	1229.424	1.320
|	Zn	67		ug/L	52035.377	10059.417	2.867
|	Zn	68	197.0522	ug/L	156465.927	2313.655	0.528
\>	Ge	74		ug/L	985631.791	1028348.409	0.468
|	As	75	19.6969	ug/L	24968.608	-345.218	1.734
|	Se	77		ug/L	5089.561	4231.742	8.368
|	Se	78	19.5884	ug/L	15394.760	10451.343	0.991
|	Se	82	18.7943	ug/L	2073.899	-23.664	1.565
|	Kr	84		ug/L	-1751.183	202.319	8.942
|	Sr	88	198.0158	ug/L	3224022.305	150.001	1.337
|	Mo	95	38.8698	ug/L	111317.521	36.000	2.449
|	Mo	97		mg/L	67535.963	106.667	1.933
⌊	Mo	98	38.5871	ug/L	178669.807	53.470	0.837
⌜	Ag	107	3.6399	ug/L	24632.445	144.001	6.228
|	Ag	109	3.6107	ug/L	22982.434	125.334	7.543

Data derived from 3 replicate readings.

Sample ID: CCV

|	Cd	106		mg/L	27185.265	3.776	2.958
|	Cd	108		mg/L	19469.539	-26.009	1.992
|	Cd	111	191.2322	ug/L	295905.928	-9.975	1.578
|	Cd	114	197.3748	ug/L	688140.458	27.517	0.205
|>	In	115		ug/L	751132.122	780872.478	1.280
|	Sn	118	199.3801	ug/L	968953.645	66.667	1.183
|	Sb	121	98.6953	ug/L	518522.265	84.000	1.571
|	Sb	123	96.2478	ug/L	394606.218	51.319	0.908
|	Ba	135	393.0266	ug/L	655800.627	29.333	1.820
L	Ba	137	389.1787	ug/L	1132428.080	20.000	1.677
⌜>	Ir	193		ug/L	683638.826	684125.297	1.795
|	Au	197		ug/L	8624668.054	8204064.402	2.237
|	Hg	199		ug/L	3047.225	36.667	5.894
|	Hg	200		ug/L	4194.392	16.667	6.769
|	Hg	201	3.8429	ug/L	2462.365	26.667	5.638
|	Hg	202	3.9878	ug/L	5743.312	20.000	2.233
|	Tl	203	3.9179	ug/L	22462.255	22.667	3.314
|	Tl	205	3.9244	ug/L	56774.109	30.667	1.642
|	204	204		ug/L	54800.322	18.065	1.572
|	206	206		ug/L	990230.534	102.667	1.487
|	207	207		ug/L	897587.812	230.670	0.591
|	Pb	208	207.6202	ug/L	4029066.342	538.673	0.763
|	208	208		ug/L	2141247.996	205.336	1.683
|	Bi	209	205.5650	ug/L	3280872.521	265.338	0.847
|	Th	232	20.1266	ug/L	625158.073	92.001	1.502
L	U	238	20.6676	ug/L	641216.178	16.000	3.227
⌜	Na	23	3982.2214	ug/L	21603834.836	5271.001	2.268
|	Mg	24	3967.1384	ug/L	14690260.806	273.338	1.950
|	Mg	25	3989.2787	ug/L	2090037.304	32.000	1.065
|	Si	28	1996.8345	ug/L	5692593.779	847148.225	1.686
|	Si	29		ug/L	684322.568	366788.075	1.939
|	P	31	213.6550	ug/L	128859.622	56102.952	2.190
|	K	39	4034.9393	ug/L	35317781.581	782542.335	0.874
|>	Sc-1	45		ug/L	6747367.470	6420063.688	1.440
|	Ca	43	4012.3217	ug/L	72385.147	669.360	2.510
|	Ti	47	195.8170	ug/L	163777.400	7491.373	1.821
L	Ti	48		ug/L	1697621.704	-4736.827	2.308
⌜	Fe	54	4187.7247	ug/L	3038463.823	438924.668	1.967
|	Fe	56		ug/L	46147896.500	3031176.051	2.257
|	Fe	57	4006.2276	ug/L	1057293.421	9494.742	0.520
L>	Ge-1	74		ug/L	985631.791	1028348.409	0.468

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CCV

Li	7	79.023	
Be	9	91.789	
B	11	89.568	
Al	27	102.188	
Sc-2	45		105.098
V	51	103.767	
Cr	52	101.066	
Cr	53		
Mn	55	101.427	
Co	59	100.754	
Ni	58		
Ni	60	99.699	
Cu	63	102.675	
Cu	65	102.420	
Zn	66	97.824	
Zn	67		
Zn	68	98.526	
Ge	74		95.846
As	75	98.484	
Se	77		
Se	78	97.942	
Se	82	93.972	
Kr	84		
Sr	88	99.008	
Mo	95	97.175	
Mo	97		
Mo	98	96.468	
Ag	107	90.998	
Ag	109	90.268	
Cd	106		
Cd	108		
Cd	111	95.616	
Cd	114	98.687	
In	115		96.191
Sn	118	99.690	
Sb	121	98.695	
Sb	123	96.248	
Ba	135	98.257	
Ba	137	97.295	
Ir	193		99.929
Au	197		
Hg	199		
Hg	200		
Hg	201	96.071	
Hg	202	99.695	
Tl	203	97.947	
Tl	205	98.110	
204	204		
206	206		
207	207		
Pb	208	103.810	
208	208		
Bi	209	102.783	
Th	232	100.633	

Data derived from 3 replicate readings.

Sample ID: CCV

U	238	103.338	
Na	23	99.556	
Mg	24	99.178	
Mg	25	99.732	
Si	28	99.842	
Si	29		
P	31	106.627	
K	39	100.873	
Sc-1	45		105.098
Ca	43	100.308	
Ti	47	97.909	
Ti	48		
Fe	54	104.693	
Fe	56		
Fe	57	100.156	
Ge-1	74		95.846

QC Out Of Limits

MassAnalyte	Out of Limits Message
7Li	CCV is out (+/- 10%)
11B	CCV is out (+/- 10%)

Data derived from 3 replicate readings.

Sample ID: CCV

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CB
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:16:18
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CB.068
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 1

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	26.667	26.667	21.651
	W	183		mg/L	23.333	10.000	65.465
	W	184		mg/L	33.317	13.317	45.804
	W	186		mg/L	28.687	12.021	5.242
	Cl	37		mg/L	12606026.661	12493933.949	0.826
	C	13		mg/L	10903.799	11788.334	2.855
⌈	Li	7	-0.0340	ug/L	30.000	56.667	20.000
|	Be	9	-0.0105	ug/L	22.000	24.000	18.182
|	B	11	0.0405	ug/L	329.340	292.005	2.528
|	Al	27	0.1639	ug/L	4674.648	3514.074	6.532
L>	Sc-2	45		ug/L	6795380.047	6420063.688	1.262
⌈	V	51	0.8158	ug/L	7688.835	-723.840	68.397
|	Cr	52	-0.3066	ug/L	17722.164	21602.632	2.199
|	Cr	53		ug/L	135901.372	119637.679	12.999
|	Mn	55	0.0126	ug/L	3253.969	3277.978	3.599
|	Co	59	0.0011	ug/L	69.334	62.667	23.316
|	Ni	58		ug/L	-3713.485	-2898.994	8.500
|	Ni	60	0.0079	ug/L	61.334	48.000	41.419
|	Cu	63	0.0100	ug/L	309.339	282.671	8.414
|	Cu	65	0.0040	ug/L	145.335	145.335	23.408
|	Zn	66	0.1502	ug/L	1314.772	1229.424	13.181
|	Zn	67		ug/L	14429.224	10059.417	9.555
|	Zn	68	0.5530	ug/L	2609.743	2313.655	5.254
\>	Ge	74		ug/L	971495.759	1028348.409	2.138
|	As	75	-0.0609	ug/L	-404.062	-345.218	24.925
|	Se	77		ug/L	3315.330	4231.742	9.232
|	Se	78	-0.2932	ug/L	9792.787	10451.343	1.121
|	Se	82	0.1501	ug/L	-5.601	-23.664	322.449
|	Kr	84		ug/L	231.935	202.319	13.818
|	Sr	88	0.0041	ug/L	206.669	150.001	19.556
|	Mo	95	0.0701	ug/L	232.003	36.000	9.600
|	Mo	97		mg/L	163.335	106.667	18.705
L	Mo	98	0.0589	ug/L	318.225	53.470	23.126
⌈	Ag	107	-0.0089	ug/L	77.334	144.001	24.444
|	Ag	109	-0.0049	ug/L	88.000	125.334	20.830

Data derived from 3 replicate readings.

Sample ID: CB

|	Cd	106		mg/L	39.400	3.776	251.242
|	Cd	108		mg/L	54.725	-26.009	123.409
|	Cd	111	-0.0269	ug/L	-50.596	-9.975	55.052
|	Cd	114	0.0042	ug/L	40.152	27.517	37.649
|>	In	115		ug/L	735588.570	780872.478	2.421
|	Sn	118	0.0472	ug/L	288.005	66.667	14.699
|	Sb	121	0.2931	ug/L	1586.818	84.000	4.099
|	Sb	123	0.3069	ug/L	1279.921	51.319	0.525
|	Ba	135	0.0175	ug/L	56.000	29.333	24.744
L	Ba	137	0.0272	ug/L	96.001	20.000	23.199
⌈>	Ir	193		ug/L	671631.504	684125.297	1.098
|	Au	197		ug/L	8399618.610	8204064.402	1.470
|	Hg	199		ug/L	30.000	36.667	57.735
|	Hg	200		ug/L	16.667	16.667	34.641
|	Hg	201	0.0083	ug/L	31.333	26.667	32.755
|	Hg	202	0.0097	ug/L	33.333	20.000	13.856
|	Tl	203	0.0151	ug/L	106.667	22.667	40.447
|	Tl	205	0.0114	ug/L	192.002	30.667	23.662
|	204	204		ug/L	36.331	18.065	36.764
|	206	206		ug/L	440.012	102.667	25.601
|	207	207		ug/L	541.351	230.670	4.070
|	Pb	208	0.0702	ug/L	1865.413	538.673	16.895
|	208	208		ug/L	884.050	205.336	29.497
|	Bi	209	0.0050	ug/L	338.674	265.338	3.797
|	Th	232	0.0037	ug/L	204.003	92.001	19.312
L	U	238	0.0007	ug/L	36.000	16.000	19.245
⌈	Na	23	0.2506	ug/L	6946.894	5271.001	0.450
|	Mg	24	0.0400	ug/L	438.678	273.338	15.186
|	Mg	25	0.1003	ug/L	86.667	32.000	30.731
|	Si	28	-52.8883	ug/L	768415.170	847148.225	1.307
|	Si	29		ug/L	353275.633	366788.075	1.795
|	P	31	11.3519	ug/L	63122.182	56102.952	1.118
|	K	39	-2.9500	ug/L	802772.094	782542.335	0.676
|>	Sc-1	45		ug/L	6795380.047	6420063.688	1.262
|	Ca	43	-2.5543	ug/L	662.693	669.360	5.204
|	Ti	47	-0.3997	ug/L	7612.157	7491.373	8.054
L	Ti	48		ug/L	-3907.469	-4736.827	1.807
⌈	Fe	54	22.3406	ug/L	428321.199	438924.668	1.161
|	Fe	56		ug/L	3065010.315	3031176.051	1.789
|	Fe	57	-3.6150	ug/L	8034.540	9494.742	2.959
L>	Ge-1	74		ug/L	971495.759	1028348.409	2.138

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CB

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	105.846
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	94.471
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	94.201
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	98.174
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: CB

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	105.846
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	94.471

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: CB

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: LLQC
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:18:40
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\LLQC.069
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 2

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	46.667	26.667	12.372
	W	183		mg/L	20.000	10.000	0.000
	W	184		mg/L	29.971	13.317	33.386
	W	186		mg/L	24.370	12.021	60.938
	Cl	37		mg/L	12702542.619	12493933.949	0.278
	C	13		mg/L	10947.210	11788.334	7.167
⌜	Li	7	0.8001	ug/L	752.701	56.667	4.917
|	Be	9	0.1301	ug/L	66.667	24.000	19.975
|	B	11	35.9852	ug/L	18106.317	292.005	0.913
|	Al	27	42.8945	ug/L	249997.760	3514.074	1.554
⌞>	Sc-2	45		ug/L	6689740.345	6420063.688	2.047
⌜	V	51	4.9555	ug/L	49694.404	-723.840	9.936
|	Cr	52	0.5993	ug/L	25529.724	21602.632	2.112
|	Cr	53		ug/L	136751.900	119637.679	11.086
|	Mn	55	0.4429	ug/L	8661.833	3277.978	1.071
|	Co	59	0.2092	ug/L	2034.916	62.667	8.616
|	Ni	58		ug/L	-1211.241	-2898.994	50.221
|	Ni	60	0.4289	ug/L	904.049	48.000	6.869
|	Cu	63	1.2610	ug/L	5627.233	282.671	1.458
|	Cu	65	1.2634	ug/L	2720.445	145.335	7.078
|	Zn	66	5.2137	ug/L	6489.193	1229.424	2.578
|	Zn	67		ug/L	15224.052	10059.417	13.087
|	Zn	68	5.2936	ug/L	6242.339	2313.655	3.220
|>	Ge	74		ug/L	967755.717	1028348.409	1.754
|	As	75	1.0134	ug/L	945.947	-345.218	71.271
|	Se	77		ug/L	3998.295	4231.742	6.019
|	Se	78	3.5662	ug/L	10795.012	10451.343	0.596
|	Se	82	3.6011	ug/L	371.657	-23.664	10.368
|	Kr	84		ug/L	172.700	202.319	47.074
|	Sr	88	1.0119	ug/L	16315.966	150.001	2.860
|	Mo	95	1.0292	ug/L	2925.847	36.000	1.293
|	Mo	97		mg/L	1863.542	106.667	5.295
⌞	Mo	98	1.0434	ug/L	4792.182	53.470	1.591
⌜	Ag	107	0.2638	ug/L	1885.555	144.001	23.746
|	Ag	109	0.2661	ug/L	1778.865	125.334	25.360

Data derived from 3 replicate readings.

Sample ID: LLQC

|	Cd	106		mg/L	11.537	3.776	545.616
|	Cd	108		mg/L	38.811	-26.009	237.410
|	Cd	111	0.3549	ug/L	531.063	-9.975	15.532
|	Cd	114	0.4032	ug/L	1405.671	27.517	5.031
|>	In	115		ug/L	737961.783	780872.478	2.214
|	Sn	118	1.0506	ug/L	5081.551	66.667	4.851
|	Sb	121	0.7378	ug/L	3886.240	84.000	2.474
|	Sb	123	0.7458	ug/L	3050.713	51.319	1.147
|	Ba	135	0.5843	ug/L	985.392	29.333	1.537
L	Ba	137	0.6262	ug/L	1809.530	20.000	4.603
⌈>	Ir	193		ug/L	678100.314	684125.297	0.488
|	Au	197		ug/L	8471814.725	8204064.402	1.396
|	Hg	199		ug/L	30.000	36.667	33.333
|	Hg	200		ug/L	73.334	16.667	7.873
|	Hg	201	0.0185	ug/L	38.000	26.667	36.842
|	Hg	202	0.0413	ug/L	78.667	20.000	5.871
|	Tl	203	0.3634	ug/L	2086.928	22.667	5.234
|	Tl	205	0.3840	ug/L	5539.178	30.667	5.714
|	204	204		ug/L	81.901	18.065	29.243
|	206	206		ug/L	1272.097	102.667	6.187
|	207	207		ug/L	1249.427	230.670	7.205
|	Pb	208	0.2442	ug/L	5233.966	538.673	1.952
|	208	208		ug/L	2712.442	205.336	3.174
|	Bi	209	0.4398	ug/L	7227.133	265.338	1.011
|	Th	232	1.0336	ug/L	31938.430	92.001	1.600
L	U	238	0.2084	ug/L	6431.815	16.000	2.275
⌈	Na	23	202.9117	ug/L	1096377.450	5271.001	0.523
|	Mg	24	102.7648	ug/L	377500.369	273.338	2.509
|	Mg	25	101.4484	ug/L	52716.885	32.000	0.128
|	Si	28	54.6136	ug/L	1012701.199	847148.225	0.902
|	Si	29		ug/L	367594.795	366788.075	1.307
|	P	31	113.2549	ug/L	95195.492	56102.952	2.265
|	K	39	203.2377	ug/L	2537573.411	782542.335	0.509
|>	Sc-1	45		ug/L	6689740.345	6420063.688	2.047
|	Ca	43	98.5309	ug/L	2443.025	669.360	3.413
|	Ti	47	10.2273	ug/L	15871.778	7491.373	3.298
L	Ti	48		ug/L	79390.727	-4736.827	0.797
⌈	Fe	54	138.3113	ug/L	497891.648	438924.668	0.881
|	Fe	56		ug/L	4146618.641	3031176.051	1.044
|	Fe	57	98.8240	ug/L	34318.534	9494.742	1.728
L>	Ge-1	74		ug/L	967755.717	1028348.409	1.754

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: LLQC

Li	7	80.012	
Be	9	65.060	
B	11	89.963	
Al	27	107.236	
Sc-2	45		104.201
V	51	123.887	
Cr	52	74.907	
Cr	53		
Mn	55	110.720	
Co	59	104.611	
Ni	58		
Ni	60	107.236	
Cu	63	105.086	
Cu	65	105.280	
Zn	66	104.273	
Zn	67		
Zn	68	105.873	
Ge	74		94.108
As	75	101.342	
Se	77		
Se	78	89.154	
Se	82	90.027	
Kr	84		
Sr	88	101.189	
Mo	95	102.921	
Mo	97		
Mo	98	104.337	
Ag	107	65.954	
Ag	109	66.517	
Cd	106		
Cd	108		
Cd	111	88.734	
Cd	114	100.800	
In	115		94.505
Sn	118	105.065	
Sb	121	122.973	
Sb	123	124.297	
Ba	135	97.380	
Ba	137	104.369	
Ir	193		99.119
Au	197		
Hg	199		
Hg	200		
Hg	201	46.158	
Hg	202	103.370	
Tl	203	90.846	
Tl	205	95.995	
204	204		
206	206		
207	207		
Pb	208	122.075	
208	208		
Bi	209	109.954	
Th	232	103.363	

Data derived from 3 replicate readings.

Sample ID: LLQC

U	238	104.179	
Na	23	101.456	
Mg	24	102.765	
Mg	25	101.448	
Si	28	68.267	
Si	29		
P	31	113.255	
K	39	101.619	
Sc-1	45		104.201
Ca	43	98.531	
Ti	47	102.273	
Ti	48		
Fe	54	138.311	
Fe	56		
Fe	57	98.824	
Ge-1	74		94.108

QC Out Of Limits

MassAnalyte	Out of Limits Message
9Be	LLQC is out (+/- 30%)
107Ag	LLQC is out (+/- 30%)
109Ag	LLQC is out (+/- 30%)
201Hg	LLQC is out (+/- 30%)
28Si	LLQC is out (+/- 30%)
54Fe	LLQC is out (+/- 30%)

Data derived from 3 replicate readings.

Sample ID: LLQC

SGS ALASKA
ELAN 6100 ICP-MS P3

Sample ID: 1226435
Sample Type: Sample
Sample Description: MB MXX 27962
Sample Date/Time: Thursday, August 14, 2014 13:21:29
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1226435.070
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 142

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	56.667	26.667	50.943
	W	183		mg/L	13.333	10.000	114.564
	W	184		mg/L	29.984	13.317	66.662
	W	186		mg/L	45.354	12.021	10.223
	Cl	37		mg/L	12874755.607	12493933.949	0.282
	C	13		mg/L	11114.079	11788.334	3.412
⌜	Li	7	-0.1918	ug/L	26.000	56.667	13.323
|	Be	9	-0.2252	ug/L	10.667	24.000	28.641
|	B	11	0.9887	ug/L	405.343	292.005	7.139
|	Al	27	2.3186	ug/L	6375.776	3514.074	5.104
\>	Sc-2	45		ug/L	6745779.084	6420063.688	1.022
⌜	V	51	2.8685	ug/L	5228.212	-723.840	16.960
|	Cr	52	-1.6307	ug/L	17708.797	21602.632	0.943
|	Cr	53		ug/L	119551.453	119637.679	7.728
|	Mn	55	0.0214	ug/L	3177.939	3277.978	1.737
|	Co	59	0.0029	ug/L	65.334	62.667	7.070
|	Ni	58		ug/L	-3768.160	-2898.994	4.269
|	Ni	60	0.0316	ug/L	58.667	48.000	15.746
|	Cu	63	-0.1116	ug/L	173.335	282.671	6.662
|	Cu	65	-0.1212	ug/L	88.000	145.335	23.619
|	Zn	66	3.8589	ug/L	1969.566	1229.424	4.910
|	Zn	67		ug/L	12629.583	10059.417	5.625
|	Zn	68	4.6562	ug/L	2929.849	2313.655	3.849
| \>	Ge	74		ug/L	979981.093	1028348.409	2.499
|	As	75	0.8157	ug/L	-124.151	-345.218	321.081
|	Se	77		ug/L	3237.964	4231.742	6.820
|	Se	78	-3.6668	ug/L	9758.767	10451.343	2.546
|	Se	82	-0.4988	ug/L	-33.102	-23.664	99.604
|	Kr	84		ug/L	241.303	202.319	6.239
|	Sr	88	0.0485	ug/L	300.005	150.001	12.019
|	Mo	95	0.0570	ug/L	66.667	36.000	21.071
|	Mo	97		mg/L	76.667	106.667	15.061
⌊	Mo	98	0.0243	ug/L	73.499	53.470	30.343
⌜	Ag	107	-0.0785	ug/L	32.000	144.001	50.000
|	Ag	109	-0.0661	ug/L	36.000	125.334	19.245

Data derived from 3 replicate readings.

Sample ID: 1226435

	Cd	106		mg/L	-20.797	3.776	67.954
	Cd	108		mg/L	-6.165	-26.009	326.253
	Cd	111	0.0173	ug/L	-4.487	-9.975	631.012
	Cd	114	0.0248	ug/L	42.681	27.517	23.989
>	In	115		ug/L	735632.222	780872.478	2.448
	Sn	118	0.0364	ug/L	97.334	66.667	20.685
	Sb	121	0.2861	ug/L	373.342	84.000	15.686
	Sb	123	0.2866	ug/L	277.655	51.319	19.873
	Ba	135	0.0750	ug/L	52.000	29.333	39.970
	Ba	137	0.1658	ug/L	113.334	20.000	12.395
>	Ir	193		ug/L	682769.746	684125.297	3.047
	Au	197		ug/L	21066.684	8204064.402	7.090
	Hg	199		ug/L	33.333	36.667	75.498
	Hg	200		ug/L	50.000	16.667	52.915
	Hg	201	-0.0418	ug/L	21.333	26.667	32.924
	Hg	202	-0.0184	ug/L	14.667	20.000	15.746
	Tl	203	0.0059	ug/L	29.333	22.667	7.873
	Tl	205	0.0223	ug/L	94.667	30.667	28.134
	204	204		ug/L	29.959	18.065	65.156
	206	206		ug/L	142.668	102.667	9.846
	207	207		ug/L	268.004	230.670	3.949
	Pb	208	0.0435	ug/L	705.344	538.673	6.011
	208	208		ug/L	294.672	205.336	10.189
	Bi	209	0.0051	ug/L	281.338	265.338	17.549
	Th	232	0.0021	ug/L	105.334	92.001	17.946
	U	238	0.0005	ug/L	18.667	16.000	24.744
	Na	23	6.8163	ug/L	12928.690	5271.001	1.707
	Mg	24	2.5463	ug/L	2172.283	273.338	1.439
	Mg	25	2.7709	ug/L	324.006	32.000	5.658
	Si	28	-227.8298	ug/L	780564.801	847148.225	0.991
	Si	29		ug/L	358754.208	366788.075	1.654
	P	31	90.9015	ug/L	64894.477	56102.952	2.597
	K	39	-5.8112	ug/L	812235.167	782542.335	0.401
>	Sc-1	45		ug/L	6745779.084	6420063.688	1.022
	Ca	43	-9.1346	ug/L	670.694	669.360	1.722
	Ti	47	-4.0612	ug/L	7223.801	7491.373	4.885
	Ti	48		ug/L	-3820.496	-4736.827	0.803
	Fe	54	104.7701	ug/L	431069.626	438924.668	0.771
	Fe	56		ug/L	3099082.610	3031176.051	0.589
	Fe	57	-15.3045	ug/L	8246.746	9494.742	2.041
>	Ge-1	74		ug/L	979981.093	1028348.409	2.499

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1226435

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	105.073
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	95.297
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	94.206
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	99.802
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: 1226435

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	105.073
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	95.297

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1226435

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1226436
Sample Type: Spike - 2 of 42
Sample Description: LCS
Sample Date/Time: Thursday, August 14, 2014 13:23:51
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1226436.071
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 143

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	60.000	26.667	33.333
	W	183		mg/L	13.333	10.000	114.564
	W	184		mg/L	49.963	13.317	34.645
	W	186		mg/L	47.047	12.021	20.290
	Cl	37		mg/L	15394175.604	12493933.949	1.080
	C	13		mg/L	11354.405	11788.334	3.882
⌜	Li	7	168.6542	ug/L	29324.174	56.667	1.067
|	Be	9	97.0957	ug/L	6237.001	24.000	3.252
|	B	11	951.3534	ug/L	94421.612	292.005	3.228
|	Al	27	1063.0575	ug/L	1225145.719	3514.074	2.296
\>	Sc-2	45		ug/L	6691629.561	6420063.688	2.273
⌜	V	51	214.7479	ug/L	438413.162	-723.840	0.453
|	Cr	52	426.2695	ug/L	765913.935	21602.632	0.667
|	Cr	53		ug/L	237094.585	119637.679	5.156
|	Mn	55	539.2933	ug/L	1369343.423	3277.978	0.988
|	Co	59	525.1207	ug/L	998834.218	62.667	1.665
|	Ni	58		ug/L	1033136.217	-2898.994	0.786
|	Ni	60	1033.9025	ug/L	416418.916	48.000	1.567
|	Cu	63	1064.3481	ug/L	910735.159	282.671	1.291
|	Cu	65	1070.8511	ug/L	440576.444	145.335	2.131
|	Zn	66	1033.1189	ug/L	213799.900	1229.424	0.275
|	Zn	67		ug/L	50244.410	10059.417	2.494
|	Zn	68	999.3173	ug/L	156696.933	2313.655	0.951
| \>	Ge	74		ug/L	973417.745	1028348.409	1.186
|	As	75	1017.5962	ug/L	257818.203	-345.218	1.167
|	Se	77		ug/L	21880.689	4231.742	0.465
|	Se	78	1026.8379	ug/L	65566.532	10451.343	0.992
|	Se	82	1030.4963	ug/L	22682.093	-23.664	2.193
|	Kr	84		ug/L	-1832.284	202.319	34.199
|	Sr	88	1018.1677	ug/L	3274417.928	150.001	1.913
|	Mo	95	396.6487	ug/L	224305.373	36.000	0.322
|	Mo	97		mg/L	140898.143	106.667	2.046
⌊	Mo	98	400.4718	ug/L	366184.425	53.470	0.563
⌜	Ag	107	102.6314	ug/L	137396.897	144.001	4.487
|	Ag	109	103.2913	ug/L	130092.921	125.334	4.493

Data derived from 3 replicate readings.

Sample ID: 1226436

|	Cd	106		mg/L	2663.095	3.776	2.796
|	Cd	108		mg/L	2298.470	-26.009	5.889
|	Cd	111	98.8859	ug/L	30407.937	-9.975	0.153
|	Cd	114	104.8447	ug/L	72700.358	27.517	2.442
\>	In	115		ug/L	746580.105	780872.478	1.137
|	Sn	118	106.1446	ug/L	102613.325	66.667	1.460
|	Sb	121	1058.2813	ug/L	1105271.930	84.000	0.939
|	Sb	123	1038.3965	ug/L	846255.483	51.319	0.847
|	Ba	135	1014.4869	ug/L	336531.701	29.333	2.643
L	Ba	137	1014.6851	ug/L	586956.623	20.000	2.214
⌈>	Ir	193		ug/L	684454.713	684125.297	1.926
|	Au	197		ug/L	48708.865	8204064.402	5.253
|	Hg	199		ug/L	1566.815	36.667	10.858
|	Hg	200		ug/L	2043.585	16.667	7.099
|	Hg	201	9.8535	ug/L	1276.098	26.667	3.084
|	Hg	202	9.9673	ug/L	2881.834	20.000	8.969
|	Tl	203	10.6273	ug/L	12207.606	22.667	2.627
|	Tl	205	10.3862	ug/L	30107.646	30.667	2.481
|	204	204		ug/L	56723.308	18.065	2.722
|	206	206		ug/L	1021982.530	102.667	1.410
|	207	207		ug/L	921349.906	230.670	2.773
|	Pb	208	1083.0485	ug/L	4209441.575	538.673	1.694
|	208	208		ug/L	2266109.139	205.336	1.412
|	Bi	209	112.0406	ug/L	358315.048	265.338	0.980
|	Th	232	104.1343	ug/L	647605.849	92.001	3.071
L	U	238	107.0547	ug/L	665236.544	16.000	1.947
⌈	Na	23	10301.7335	ug/L	11086489.263	5271.001	1.576
|	Mg	24	10405.2527	ug/L	7640544.589	273.338	0.978
|	Mg	25	10422.3217	ug/L	1082778.987	32.000	0.280
|	Si	28	10582.0680	ug/L	5929958.843	847148.225	1.815
|	Si	29		ug/L	697683.365	366788.075	0.501
|	P	31	587.3973	ug/L	96560.220	56102.952	0.523
|	K	39	10491.8194	ug/L	18608839.618	782542.335	2.167
\>	Sc-1	45		ug/L	6691629.561	6420063.688	2.273
|	Ca	43	10984.5049	ug/L	39617.995	669.360	2.637
|	Ti	47	108.0264	ug/L	24853.679	7491.373	1.473
L	Ti	48		ug/L	182634.458	-4736.827	0.927
⌈	Fe	54	5791.1118	ug/L	1130376.453	438924.668	0.158
|	Fe	56		ug/L	14337975.164	3031176.051	0.867
|	Fe	57	5240.2707	ug/L	279788.024	9494.742	1.522
L>	Ge-1	74		ug/L	973417.745	1028348.409	1.186

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1226436

Li	7	84.423	
Be	9	97.321	
B	11	95.036	
Al	27	106.074	
Sc-2	45		104.230
V	51	105.940	
Cr	52	106.975	
Cr	53		
Mn	55	107.854	
Co	59	105.024	
Ni	58		
Ni	60	103.387	
Cu	63	106.446	
Cu	65	107.097	
Zn	66	102.926	
Zn	67		
Zn	68	99.466	
Ge	74		94.658
As	75	101.678	
Se	77		
Se	78	103.050	
Se	82	103.100	
Kr	84		
Sr	88	101.812	
Mo	95	99.148	
Mo	97		
Mo	98	100.112	
Ag	107	102.710	
Ag	109	103.357	
Cd	106		
Cd	108		
Cd	111	98.869	
Cd	114	104.820	
In	115		95.608
Sn	118	106.108	
Sb	121	105.800	
Sb	123	103.811	
Ba	135	101.441	
Ba	137	101.452	
Ir	193		100.048
Au	197		
Hg	199		
Hg	200		
Hg	201	98.954	
Hg	202	99.857	
Tl	203	106.214	
Tl	205	103.639	
204	204		
206	206		
207	207		
Pb	208	108.301	
208	208		
Bi	209	112.035	
Th	232	104.132	

Data derived from 3 replicate readings.

Sample ID: 1226436

U	238		
Na	23	102.949	
Mg	24	104.027	
Mg	25	104.196	
Si	28		
Si	29		
P	31	99.299	
K	39	104.976	
Sc-1	45		104.230
Ca	43	109.936	
Ti	47	112.088	
Ti	48		
Fe	54	113.727	
Fe	56		
Fe	57	105.112	
Ge-1	74		94.658

QC Out Of Limits

MassAnalyte Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1226436

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1143645001
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:26:12
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143645001.072
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 144

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	16.667	26.667	69.282
	W	183		mg/L	30.000	10.000	33.333
	W	184		mg/L	36.621	13.317	31.521
	W	186		mg/L	26.390	12.021	36.044
	Cl	37		mg/L	12637449.765	12493933.949	1.180
	C	13		mg/L	11507.960	11788.334	6.145
⌜	Li	7	-0.1085	ug/L	40.000	56.667	13.229
|	Be	9	-0.1085	ug/L	18.000	24.000	33.333
|	B	11	12.8518	ug/L	1565.480	292.005	2.756
|	Al	27	8.2355	ug/L	13035.527	3514.074	2.973
|>	Sc-2	45		ug/L	6644098.314	6420063.688	1.883
⌜	V	51	4.6106	ug/L	8660.088	-723.840	84.998
|	Cr	52	-0.9622	ug/L	18759.105	21602.632	3.266
|	Cr	53		ug/L	138687.194	119637.679	11.155
|	Mn	55	537.5226	ug/L	1364823.286	3277.978	1.036
|	Co	59	0.0425	ug/L	140.001	62.667	4.949
|	Ni	58		ug/L	-2931.439	-2898.994	5.362
|	Ni	60	0.6030	ug/L	288.005	48.000	7.733
|	Cu	63	0.2734	ug/L	501.348	282.671	1.661
|	Cu	65	0.2622	ug/L	245.337	145.335	0.941
|	Zn	66	12.2792	ug/L	3691.485	1229.424	3.832
|	Zn	67		ug/L	15200.637	10059.417	11.364
|	Zn	68	14.8684	ug/L	4489.209	2313.655	2.162
|>	Ge	74		ug/L	973428.167	1028348.409	1.770
|	As	75	0.0615	ug/L	-313.081	-345.218	70.734
|	Se	77		ug/L	3747.512	4231.742	7.383
|	Se	78	0.1241	ug/L	9897.796	10451.343	1.846
|	Se	82	-0.5785	ug/L	-35.223	-23.664	20.095
|	Kr	84		ug/L	-274.926	202.319	66.856
|	Sr	88	152.6213	ug/L	490903.992	150.001	1.436
|	Mo	95	0.6199	ug/L	384.009	36.000	17.337
|	Mo	97		mg/L	283.338	106.667	14.264
L	Mo	98	0.5507	ug/L	553.459	53.470	13.704
⌜	Ag	107	-0.0777	ug/L	33.333	144.001	27.713
|	Ag	109	-0.0556	ug/L	49.333	125.334	39.996

Data derived from 3 replicate readings.

Sample ID: 1143645001

|	Cd	106		mg/L	-68.660	3.776	23.570
|	Cd	108		mg/L	-58.746	-26.009	12.064
|	Cd	111	0.2198	ug/L	57.213	-9.975	31.095
|	Cd	114	0.1664	ug/L	138.973	27.517	20.314
|>	In	115		ug/L	734267.352	780872.478	1.767
|	Sn	118	0.0253	ug/L	86.667	66.667	11.615
|	Sb	121	0.2577	ug/L	344.007	84.000	23.343
|	Sb	123	0.3297	ug/L	311.661	51.319	25.909
|	Ba	135	71.2768	ug/L	23277.808	29.333	2.013
L	Ba	137	70.0399	ug/L	39859.105	20.000	1.102
⌈>	Ir	193		ug/L	665721.342	684125.297	3.758
|	Au	197		ug/L	22771.309	8204064.402	10.779
|	Hg	199		ug/L	16.667	36.667	91.652
|	Hg	200		ug/L	20.000	16.667	50.000
|	Hg	201	-0.0912	ug/L	14.667	26.667	55.111
|	Hg	202	0.0599	ug/L	36.000	20.000	50.918
|	Tl	203	0.0222	ug/L	46.667	22.667	17.843
|	Tl	205	0.0085	ug/L	53.334	30.667	34.641
|	204	204		ug/L	38.384	18.065	17.762
|	206	206		ug/L	564.019	102.667	9.302
|	207	207		ug/L	596.021	230.670	11.291
|	Pb	208	0.4999	ug/L	2406.801	538.673	10.354
|	208	208		ug/L	1246.761	205.336	10.654
|	Bi	209	0.0125	ug/L	296.005	265.338	13.032
|	Th	232	0.0188	ug/L	202.669	92.001	13.142
L	U	238	0.0363	ug/L	234.670	16.000	0.984
⌈	Na	23	5691.2738	ug/L	6083601.481	5271.001	0.278
|	Mg	24	3879.7711	ug/L	2829390.996	273.338	1.632
|	Mg	25	3803.4285	ug/L	392455.300	32.000	1.503
|	Si	28	4640.0211	ug/L	3073736.353	847148.225	0.796
|	Si	29		ug/L	497949.566	366788.075	1.180
|	P	31	65.6027	ug/L	62297.622	56102.952	4.392
|	K	39	416.7879	ug/L	1511486.213	782542.335	1.525
|>	Sc-1	45		ug/L	6644098.314	6420063.688	1.883
|	Ca	43	12411.9817	ug/L	44355.075	669.360	1.269
|	Ti	47	1.5009	ug/L	7980.499	7491.373	7.177
L	Ti	48		ug/L	14037.259	-4736.827	3.038
⌈	Fe	54	93.0250	ug/L	426884.638	438924.668	0.914
|	Fe	56		ug/L	2976599.172	3031176.051	2.167
|	Fe	57	13.0831	ug/L	9661.598	9494.742	0.231
L>	Ge-1	74		ug/L	973428.167	1028348.409	1.770

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143645001

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	103.490
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	94.659
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	94.032
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	97.310
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: 1143645001

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	103.490
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	94.659

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143645001

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1143645002
Sample Type: Spike - 2 of 44
Sample Description: BMS
Sample Date/Time: Thursday, August 14, 2014 13:28:34
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143645002.073
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 145

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	56.667	26.667	44.411
	W	183		mg/L	33.333	10.000	17.321
	W	184		mg/L	59.963	13.317	72.729
	W	186		mg/L	53.713	12.021	46.596
	Cl	37		mg/L	15210070.364	12493933.949	0.314
	C	13		mg/L	11527.970	11788.334	1.711
⌜	Li	7	161.2730	ug/L	28279.908	56.667	1.171
|	Be	9	92.0257	ug/L	5962.800	24.000	1.904
|	B	11	918.5867	ug/L	91974.730	292.005	4.319
|	Al	27	1105.8040	ug/L	1284648.083	3514.074	1.031
\>	Sc-2	45		ug/L	6745574.519	6420063.688	0.585
⌜	V	51	206.3016	ug/L	424940.799	-723.840	0.891
|	Cr	52	404.1504	ug/L	733792.584	21602.632	1.004
|	Cr	53		ug/L	235047.738	119637.679	5.167
|	Mn	55	1032.0982	ug/L	2641259.316	3277.978	0.745
|	Co	59	504.9729	ug/L	969100.199	62.667	1.890
|	Ni	58		ug/L	1018500.463	-2898.994	0.792
|	Ni	60	995.2940	ug/L	404415.831	48.000	0.914
|	Cu	63	1021.6056	ug/L	881991.935	282.671	0.449
|	Cu	65	1018.8641	ug/L	422873.915	145.335	1.052
|	Zn	66	974.1321	ug/L	203463.325	1229.424	0.825
|	Zn	67		ug/L	48293.050	10059.417	4.504
|	Zn	68	964.9716	ug/L	152736.354	2313.655	0.550
\>	Ge	74		ug/L	982074.042	1028348.409	0.465
|	As	75	981.9067	ug/L	250993.054	-345.218	0.387
|	Se	77		ug/L	21498.370	4231.742	2.063
|	Se	78	973.6502	ug/L	63247.070	10451.343	1.505
|	Se	82	992.5541	ug/L	22042.974	-23.664	1.180
|	Kr	84		ug/L	-2476.862	202.319	21.172
|	Sr	88	1148.6722	ug/L	3726786.157	150.001	0.474
|	Mo	95	381.1831	ug/L	217491.151	36.000	1.132
|	Mo	97		mg/L	137197.444	106.667	2.881
⌊	Mo	98	386.1273	ug/L	356250.115	53.470	2.200
⌜	Ag	107	98.6851	ug/L	131420.755	144.001	5.321
|	Ag	109	98.5975	ug/L	123518.666	125.334	5.771

Data derived from 3 replicate readings.

Sample ID: 1143645002

|	Cd	106		mg/L	2598.135	3.776	11.790
|	Cd	108		mg/L	1983.861	-26.009	6.555
|	Cd	111	**97.8284**	ug/L	29923.327	-9.975	0.197
|	Cd	114	**100.1951**	ug/L	69102.182	27.517	1.338
|>	In	115		ug/L	742602.539	780872.478	0.922
|	Sn	118	**101.4672**	ug/L	97572.063	66.667	2.127
|	Sb	121	**1029.2083**	ug/L	1069238.133	84.000	1.678
|	Sb	123	**1002.3766**	ug/L	812560.574	51.319	1.769
|	Ba	135	**1045.2989**	ug/L	344880.856	29.333	1.472
L	Ba	137	**1049.0519**	ug/L	603563.397	20.000	1.582
⌈>	Ir	193		ug/L	668092.822	684125.297	0.948
|	Au	197		ug/L	45517.423	8204064.402	3.789
|	Hg	199		ug/L	1563.480	36.667	7.047
|	Hg	200		ug/L	2193.623	16.667	6.722
|	Hg	201	**9.6450**	ug/L	1220.089	26.667	3.036
|	Hg	202	**9.8302**	ug/L	2776.463	20.000	1.505
|	Tl	203	**10.1922**	ug/L	11430.504	22.667	2.632
|	Tl	205	**10.1029**	ug/L	28582.280	30.667	2.023
|	204	204		ug/L	53853.478	18.065	1.295
|	206	206		ug/L	981221.568	102.667	2.247
|	207	207		ug/L	891093.727	230.670	3.022
|	Pb	208	**1062.7013**	ug/L	4032106.212	538.673	1.679
|	208	208		ug/L	2159790.917	205.336	1.532
|	Bi	209	**107.6895**	ug/L	336271.775	265.338	1.703
|	Th	232	**103.0593**	ug/L	625806.801	92.001	0.579
L	U	238	**106.1451**	ug/L	644123.432	16.000	3.422
⌈	Na	23	**15676.7605**	ug/L	17006223.936	5271.001	0.887
|	Mg	24	**13861.8162**	ug/L	10263354.576	273.338	0.767
|	Mg	25	**13853.1721**	ug/L	1451195.950	32.000	0.647
|	Si	28	**14965.1758**	ug/L	8085947.480	847148.225	1.032
|	Si	29		ug/L	843115.352	366788.075	0.664
|	P	31	**570.8058**	ug/L	96283.781	56102.952	1.438
|	K	39	**10607.5419**	ug/L	18956654.013	782542.335	0.244
|>	Sc-1	45		ug/L	6745574.519	6420063.688	0.585
|	Ca	43	**22939.9111**	ug/L	82635.713	669.360	0.728
|	Ti	47	**102.9939**	ug/L	24267.288	7491.373	1.559
L	Ti	48		ug/L	190887.634	-4736.827	4.413
⌈	Fe	54	**5467.0608**	ug/L	1100194.902	438924.668	1.361
|	Fe	56		ug/L	14037309.268	3031176.051	0.732
|	Fe	57	**5046.8790**	ug/L	272210.809	9494.742	1.085
L>	Ge-1	74		ug/L	982074.042	1028348.409	0.465

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143645002

Li	7	80.691	
Be	9	92.134	
B	11	90.573	
Al	27	109.757	
Sc-2	45		105.070
V	51	100.845	
Cr	52	101.278	
Cr	53		
Mn	55	98.915	
Co	59	100.986	
Ni	58		
Ni	60	99.469	
Cu	63	102.133	
Cu	65	101.860	
Zn	66	96.185	
Zn	67		
Zn	68	95.010	
Ge	74		95.500
As	75	98.185	
Se	77		
Se	78	97.353	
Se	82	99.313	
Kr	84		
Sr	88	99.605	
Mo	95	95.141	
Mo	97		
Mo	98	96.394	
Ag	107	98.763	
Ag	109	98.653	
Cd	106		
Cd	108		
Cd	111	97.609	
Cd	114	100.029	
In	115		95.099
Sn	118	101.442	
Sb	121	102.895	
Sb	123	100.205	
Ba	135	97.402	
Ba	137	97.901	
Ir	193		97.657
Au	197		
Hg	199		
Hg	200		
Hg	201	97.363	
Hg	202	97.703	
Tl	203	101.701	
Tl	205	100.943	
204	204		
206	206		
207	207		
Pb	208	106.220	
208	208		
Bi	209	107.677	
Th	232	103.040	

Data derived from 3 replicate readings.

Sample ID: 1143645002

U	238		
Na	23	99.855	
Mg	24	99.820	
Mg	25	100.497	
Si	28		
Si	29		
P	31	101.041	
K	39	101.908	
Sc-1	45		105.070
Ca	43	105.279	
Ti	47	101.493	
Ti	48		
Fe	54	107.481	
Fe	56		
Fe	57	100.676	
Ge-1	74		95.500

QC Out Of Limits

MassAnalyte Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143645002

SGS ALASKA
ELAN 6100 ICP-MS P3

Sample ID: 1143645003
Sample Type: Spike - 2 of 44
Sample Description: BMSD
Sample Date/Time: Thursday, August 14, 2014 13:30:55
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143645003.074
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 146

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	53.334	26.667	54.127
	W	183		mg/L	33.333	10.000	69.282
	W	184		mg/L	46.626	13.317	32.715
	W	186		mg/L	60.052	12.021	65.750
	Cl	37		mg/L	15495813.918	12493933.949	1.211
	C	13		mg/L	11958.582	11788.334	3.609
⌜	Li	7	**163.7608**	ug/L	28893.340	56.667	1.097
|	Be	9	**90.6923**	ug/L	5915.433	24.000	2.348
|	B	11	**930.2609**	ug/L	93775.738	292.005	3.359
|	Al	27	**1020.0333**	ug/L	1192875.727	3514.074	1.179
\>	Sc-2	45		ug/L	6789519.865	6420063.688	1.631
⌜	V	51	**206.9779**	ug/L	427222.403	-723.840	0.882
|	Cr	52	**411.2879**	ug/L	747915.378	21602.632	0.295
|	Cr	53		ug/L	239646.486	119637.679	6.571
|	Mn	55	**1045.5938**	ug/L	2681329.344	3277.978	0.269
|	Co	59	**506.3810**	ug/L	973787.775	62.667	0.492
|	Ni	58		ug/L	1010207.731	-2898.994	2.642
|	Ni	60	**1004.2385**	ug/L	408873.443	48.000	2.633
|	Cu	63	**1030.9518**	ug/L	892031.176	282.671	1.730
|	Cu	65	**1022.2095**	ug/L	425183.667	145.335	1.980
|	Zn	66	**993.2686**	ug/L	207876.934	1229.424	0.794
|	Zn	67		ug/L	49074.082	10059.417	1.035
|	Zn	68	**958.1563**	ug/L	152012.923	2313.655	1.862
\>	Ge	74		ug/L	984304.760	1028348.409	1.730
|	As	75	**978.1356**	ug/L	250585.339	-345.218	1.456
|	Se	77		ug/L	21875.342	4231.742	0.598
|	Se	78	**977.1380**	ug/L	63562.254	10451.343	1.348
|	Se	82	**984.8668**	ug/L	21921.461	-23.664	1.816
|	Kr	84		ug/L	-1557.315	202.319	16.092
|	Sr	88	**1136.4647**	ug/L	3695188.067	150.001	0.950
|	Mo	95	**382.4779**	ug/L	218718.792	36.000	1.405
|	Mo	97		mg/L	136381.123	106.667	3.439
⌊	Mo	98	**383.5124**	ug/L	354519.178	53.470	0.903
⌜	Ag	107	**101.6168**	ug/L	133420.402	144.001	3.442
|	Ag	109	**101.1796**	ug/L	124948.976	125.334	2.988

Data derived from 3 replicate readings.

Sample ID: 1143645003

|	Cd	106		mg/L	2469.971	3.776	6.948
|	Cd	108		mg/L	1958.163	-26.009	8.969
|	Cd	111	**99.7807**	ug/L	30095.016	-9.975	0.938
|	Cd	114	**102.5120**	ug/L	69707.801	27.517	1.013
|>	In	115		ug/L	732279.774	780872.478	1.767
|	Sn	118	**102.6994**	ug/L	97358.755	66.667	0.168
|	Sb	121	**1037.8963**	ug/L	1063191.864	84.000	1.996
|	Sb	123	**1017.4196**	ug/L	813315.878	51.319	2.100
|	Ba	135	**1058.4946**	ug/L	344354.095	29.333	1.224
L	Ba	137	**1058.8343**	ug/L	600721.175	20.000	2.453
⌜>	Ir	193		ug/L	666049.821	684125.297	2.597
|	Au	197		ug/L	45976.585	8204064.402	3.507
|	Hg	199		ug/L	1553.478	36.667	4.383
|	Hg	200		ug/L	2166.951	16.667	10.730
|	Hg	201	**10.0288**	ug/L	1264.096	26.667	4.354
|	Hg	202	**9.7748**	ug/L	2752.455	20.000	2.471
|	Tl	203	**10.2537**	ug/L	11455.871	22.667	1.871
|	Tl	205	**10.2306**	ug/L	28852.535	30.667	1.432
|	204	204		ug/L	53577.156	18.065	0.469
|	206	206		ug/L	981367.124	102.667	1.523
|	207	207		ug/L	887383.562	230.670	0.607
|	Pb	208	**1073.1691**	ug/L	4057783.627	538.673	0.821
|	208	208		ug/L	2189032.941	205.336	1.709
|	Bi	209	**110.8315**	ug/L	344847.399	265.338	1.383
|	Th	232	**104.6405**	ug/L	633214.180	92.001	0.888
L	U	238	**106.2051**	ug/L	642322.309	16.000	2.061
⌜	Na	23	**15628.3462**	ug/L	17064378.743	5271.001	1.306
|	Mg	24	**13881.4066**	ug/L	10344761.310	273.338	1.447
|	Mg	25	**13807.1173**	ug/L	1455640.282	32.000	0.457
|	Si	28	**14598.5524**	ug/L	7960756.519	847148.225	0.678
|	Si	29		ug/L	829780.871	366788.075	1.049
|	P	31	**547.0613**	ug/L	95342.346	56102.952	1.032
|	K	39	**10540.3274**	ug/L	18965888.024	782542.335	2.048
|>	Sc-1	45		ug/L	6789519.865	6420063.688	1.631
|	Ca	43	**22444.5649**	ug/L	81390.296	669.360	1.936
|	Ti	47	**104.1919**	ug/L	24609.622	7491.373	1.380
L	Ti	48		ug/L	191923.176	-4736.827	2.945
⌜	Fe	54	**5546.7686**	ug/L	1112417.272	438924.668	0.186
|	Fe	56		ug/L	14204236.308	3031176.051	0.943
|	Fe	57	**5118.6389**	ug/L	276549.405	9494.742	1.721
L>	Ge-1	74		ug/L	984304.760	1028348.409	1.730

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143645003

Li	7	81.935	
Be	9	90.801	
B	11	91.741	
Al	27	101.180	
Sc-2	45		105.755
V	51	101.184	
Cr	52	103.063	
Cr	53		
Mn	55	101.614	
Co	59	101.268	
Ni	58		
Ni	60	100.364	
Cu	63	103.068	
Cu	65	102.195	
Zn	66	98.099	
Zn	67		
Zn	68	94.329	
Ge	74		95.717
As	75	97.807	
Se	77		
Se	78	97.701	
Se	82	98.545	
Kr	84		
Sr	88	98.384	
Mo	95	95.465	
Mo	97		
Mo	98	95.740	
Ag	107	101.694	
Ag	109	101.235	
Cd	106		
Cd	108		
Cd	111	99.561	
Cd	114	102.346	
In	115		93.777
Sn	118	102.674	
Sb	121	103.764	
Sb	123	101.709	
Ba	135	98.722	
Ba	137	98.879	
Ir	193		97.358
Au	197		
Hg	199		
Hg	200		
Hg	201	101.201	
Hg	202	97.149	
Tl	203	102.316	
Tl	205	102.221	
204	204		
206	206		
207	207		
Pb	208	107.267	
208	208		
Bi	209	110.819	
Th	232	104.622	

Data derived from 3 replicate readings.

Sample ID: 1143645003

U	238		
Na	23	99.371	
Mg	24	100.016	
Mg	25	100.037	
Si	28		
Si	29		
P	31	96.292	
K	39	101.235	
Sc-1	45		105.755
Ca	43	100.326	
Ti	47	102.691	
Ti	48		
Fe	54	109.075	
Fe	56		
Fe	57	102.111	
Ge-1	74		95.717

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143645003

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1226439
Sample Type: Spike - 4 of 44
Sample Description: BND
Sample Date/Time: Thursday, August 14, 2014 13:33:17
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1226439.075
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 147

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	60.000	26.667	50.000
	W	183		mg/L	23.333	10.000	65.465
	W	184		mg/L	79.934	13.317	21.646
	W	186		mg/L	68.083	12.021	25.436
	Cl	37		mg/L	12856992.118	12493933.949	0.786
	C	13		mg/L	12546.108	11788.334	2.435
⌜	Li	7	200.5531	ug/L	35759.915	56.667	1.946
|	Be	9	220.0289	ug/L	14468.552	24.000	1.657
|	B	11	1134.1937	ug/L	115446.305	292.005	1.611
|	Al	27	1232.0935	ug/L	1455699.638	3514.074	1.072
\>	Sc-2	45		ug/L	6862344.957	6420063.688	1.269
⌜	V	51	1354.4932	ug/L	2792648.986	-723.840	1.314
|	Cr	52	1274.9250	ug/L	2269469.873	21602.632	1.902
|	Cr	53		ug/L	394347.462	119637.679	3.984
|	Mn	55	1787.7593	ug/L	4571025.452	3277.978	2.213
|	Co	59	1271.9809	ug/L	2439782.494	62.667	1.480
|	Ni	58		ug/L	1242691.368	-2898.994	0.677
|	Ni	60	1228.4356	ug/L	498961.049	48.000	0.457
|	Cu	63	1279.9773	ug/L	1104597.552	282.671	1.125
|	Cu	65	1286.6230	ug/L	533791.740	145.335	1.481
|	Zn	66	1254.3580	ug/L	261559.590	1229.424	1.831
|	Zn	67		ug/L	65210.966	10059.417	2.947
|	Zn	68	1273.8954	ug/L	200823.387	2313.655	1.594
|>	Ge	74		ug/L	981809.438	1028348.409	1.435
|	As	75	123.1467	ug/L	31173.413	-345.218	3.194
|	Se	77		ug/L	5684.607	4231.742	4.432
|	Se	78	119.4506	ug/L	16507.734	10451.343	0.900
|	Se	82	118.2796	ug/L	2605.270	-23.664	5.986
|	Kr	84		ug/L	-5654.216	202.319	15.335
|	Sr	88	2594.1245	ug/L	8413544.060	150.001	0.736
|	Mo	95	241.4317	ug/L	137701.924	36.000	1.661
|	Mo	97		mg/L	87065.810	106.667	0.662
_	Mo	98	246.1913	ug/L	227041.960	53.470	1.841
⌜	Ag	107	23.1769	ug/L	31123.538	144.001	7.075
|	Ag	109	22.7877	ug/L	28791.222	125.334	8.500

Data derived from 3 replicate readings.

Sample ID: 1226439

|	Cd	106		mg/L	33481.226	3.776	1.047
|	Cd	108		mg/L	24044.859	-26.009	3.060
|	Cd	111	**1199.5275**	ug/L	368649.209	-9.975	2.288
|	Cd	114	**1238.0602**	ug/L	857024.955	27.517	0.568
|>	In	115		ug/L	745918.316	780872.478	2.652
|	Sn	118	**1218.7007**	ug/L	1175899.538	66.667	0.204
|	Sb	121	**1263.6638**	ug/L	1317909.005	84.000	1.043
|	Sb	123	**1235.7158**	ug/L	1006023.616	51.319	1.787
|	Ba	135	**2530.6104**	ug/L	838261.868	29.333	1.947
L	Ba	137	**2509.5011**	ug/L	1449991.708	20.000	1.788
⌈>	Ir	193		ug/L	683328.089	684125.297	2.095
⌈	Au	197		ug/L	23353.158	8204064.402	14.897
|	Hg	199		ug/L	3637.465	36.667	9.497
|	Hg	200		ug/L	5011.507	16.667	2.026
|	Hg	201	**22.4629**	ug/L	2870.494	26.667	0.922
|	Hg	202	**23.1737**	ug/L	6668.004	20.000	4.980
|	Tl	203	**23.6507**	ug/L	27100.012	22.667	2.553
|	Tl	205	**23.8822**	ug/L	69070.470	30.667	1.990
|	204	204		ug/L	63381.764	18.065	1.411
|	206	206		ug/L	1231737.702	102.667	1.247
|	207	207		ug/L	1055587.779	230.670	1.941
|	Pb	208	**1271.5736**	ug/L	4934483.458	538.673	2.449
|	208	208		ug/L	2647157.977	205.336	3.423
|	Bi	209	**1266.3033**	ug/L	4041749.438	265.338	2.912
|	Th	232	**251.1607**	ug/L	1559748.709	92.001	2.256
L	U	238	**128.0824**	ug/L	794909.409	16.000	3.001
⌈	Na	23	**30347.3719**	ug/L	33485673.509	5271.001	0.684
|	Mg	24	**28545.8746**	ug/L	21502609.427	273.338	1.965
|	Mg	25	**28715.4801**	ug/L	3059973.428	32.000	1.087
|	Si	28	**17407.4528**	ug/L	9421340.775	847148.225	1.472
|	Si	29		ug/L	930956.992	366788.075	1.401
|	P	31	**1307.9356**	ug/L	147017.670	56102.952	1.367
|	K	39	**25402.8243**	ug/L	45021957.093	782542.335	2.497
|>	Sc-1	45		ug/L	6862344.957	6420063.688	1.269
|	Ca	43	**37029.6543**	ug/L	135273.409	669.360	2.098
|	Ti	47	**1168.7736**	ug/L	197265.623	7491.373	0.858
L	Ti	48		ug/L	2049202.660	-4736.827	1.346
⌈	Fe	54	**26529.4732**	ug/L	3722612.379	438924.668	1.111
|	Fe	56		ug/L	59072789.558	3031176.051	1.548
|	Fe	57	**25335.8739**	ug/L	1329488.637	9494.742	0.543
L>	Ge-1	74		ug/L	981809.438	1028348.409	1.435

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1226439

Li	7	80.265	
Be	9	88.055	
B	11	89.707	
Al	27	97.909	
Sc-2	45		106.889
V	51	107.991	
Cr	52	102.071	
Cr	53		
Mn	55	100.019	
Co	59	101.755	
Ni	58		
Ni	60	98.227	
Cu	63	102.376	
Cu	65	102.909	
Zn	66	99.366	
Zn	67		
Zn	68	100.722	
Ge	74		95.474
As	75	98.468	
Se	77		
Se	78	95.461	
Se	82	95.086	
Kr	84		
Sr	88	97.660	
Mo	95	96.325	
Mo	97		
Mo	98	98.256	
Ag	107	93.018	
Ag	109	91.373	
Cd	106		
Cd	108		
Cd	111	95.945	
Cd	114	99.032	
In	115		95.524
Sn	118	97.494	
Sb	121	101.072	
Sb	123	98.831	
Ba	135	98.373	
Ba	137	97.578	
Ir	193		99.883
Au	197		
Hg	199		
Hg	200		
Hg	201	90.217	
Hg	202	92.455	
Tl	203	94.514	
Tl	205	95.495	
204	204		
206	206		
207	207		
Pb	208	101.686	
208	208		
Bi	209	101.303	
Th	232	100.457	

Data derived from 3 replicate readings.

Sample ID: 1226439

U	238	102.437	
Na	23	98.624	
Mg	24	98.664	
Mg	25	99.648	
Si	28	102.139	
Si	29		
P	31	99.387	
K	39	99.944	
Sc-1	45		106.889
Ca	43	98.471	
Ti	47	93.382	
Ti	48		
Fe	54	105.746	
Fe	56		
Fe	57	101.291	
Ge-1	74		95.474

QC Out Of Limits

MassAnalyte Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1226439

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: DT
Sample Type: Sample
Sample Description: DT
Sample Date/Time: Thursday, August 14, 2014 13:35:38
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\DT.076
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 25.0000
Autosampler Position: 148

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	43.333	26.667	58.076
	W	183		mg/L	3.333	10.000	173.205
	W	184		mg/L	46.634	13.317	24.731
	W	186		mg/L	20.708	12.021	22.391
	Cl	37		mg/L	4757230.270	12493933.949	1.159
	C	13		mg/L	11614.757	11788.334	2.004
⌜	Li	7	-1.1593	ug/L	18.667	56.667	24.744
|	Be	9	-0.6442	ug/L	16.667	24.000	38.575
|	B	11	5.9666	ug/L	420.011	292.005	11.934
|	Al	27	10.4299	ug/L	6020.841	3514.074	0.443
|>	Sc-2	45		ug/L	6649200.402	6420063.688	1.111
⌜	V	51	28.3295	ug/L	11008.270	-723.840	27.594
|	Cr	52	-14.1456	ug/L	15638.005	21602.632	3.600
|	Cr	53		ug/L	117945.990	119637.679	13.892
|	Mn	55	0.1508	ug/L	3208.618	3277.978	3.942
|	Co	59	0.0740	ug/L	88.000	62.667	31.818
|	Ni	58		ug/L	-3396.308	-2898.994	9.105
|	Ni	60	0.0402	ug/L	49.334	48.000	48.873
|	Cu	63	-0.5974	ug/L	166.668	282.671	13.647
|	Cu	65	-0.6949	ug/L	81.334	145.335	22.716
|	Zn	66	9.4205	ug/L	1565.481	1229.424	6.617
|	Zn	67		ug/L	13521.158	10059.417	16.439
|	Zn	68	13.6740	ug/L	2636.417	2313.655	2.811
|>	Ge	74		ug/L	982538.746	1028348.409	1.475
|	As	75	7.3072	ug/L	45.667	-345.218	309.032
|	Se	77		ug/L	2012.246	4231.742	14.758
|	Se	78	-27.4052	ug/L	9684.618	10451.343	2.030
|	Se	82	-5.1045	ug/L	-45.118	-23.664	43.713
|	Kr	84		ug/L	261.461	202.319	15.621
|	Sr	88	0.2063	ug/L	276.672	150.001	30.313
|	Mo	95	2.5855	ug/L	329.340	36.000	9.892
|	Mo	97		mg/L	303.339	106.667	24.744
L	Mo	98	2.3763	ug/L	489.484	53.470	3.329
⌜	Ag	107	-0.4236	ug/L	24.000	144.001	28.868
|	Ag	109	-0.3517	ug/L	30.667	125.334	19.924

Data derived from 3 replicate readings.

Sample ID: DT

|	Cd	106		mg/L	-16.717	3.776	59.818
|	Cd	108		mg/L	-8.882	-26.009	65.003
|	Cd	111	**0.4634**	ug/L	18.666	-9.975	33.569
|	Cd	114	**0.1543**	ug/L	46.684	27.517	36.919
|>	In	115		ug/L	732853.475	780872.478	2.388
|	Sn	118	**0.9529**	ug/L	244.004	66.667	22.055
|	Sb	121	**13.0745**	ug/L	2759.124	84.000	3.352
|	Sb	123	**12.9426**	ug/L	2117.752	51.319	2.377
|	Ba	135	**0.5170**	ug/L	61.334	29.333	19.924
L	Ba	137	**0.7164**	ug/L	100.001	20.000	17.436
[>	Ir	193		ug/L	657432.655	684125.297	2.038
|	Au	197		ug/L	21721.972	8204064.402	13.940
|	Hg	199		ug/L	40.000	36.667	0.000
|	Hg	200		ug/L	33.333	16.667	17.321
|	Hg	201	**0.2074**	ug/L	30.667	26.667	7.531
|	Hg	202	**0.3533**	ug/L	38.667	20.000	15.802
|	Tl	203	**0.2089**	ug/L	68.000	22.667	23.530
|	Tl	205	**0.2352**	ug/L	160.002	30.667	28.832
|	204	204		ug/L	35.104	18.065	26.191
|	206	206		ug/L	394.676	102.667	8.192
|	207	207		ug/L	434.678	230.670	6.127
|	Pb	208	**1.6412**	ug/L	1742.738	538.673	6.826
|	208	208		ug/L	913.384	205.336	8.598
|	Bi	209	**0.1728**	ug/L	361.341	265.338	15.111
|	Th	232	**0.1089**	ug/L	218.670	92.001	14.672
L	U	238	**0.0072**	ug/L	24.000	16.000	16.667
[	Na	23	**3.9535**	ug/L	6303.717	5271.001	0.468
|	Mg	24	**5.5201**	ug/L	1088.071	273.338	9.280
|	Mg	25	**7.3056**	ug/L	184.002	32.000	3.765
|	Si	28	**-1079.9814**	ug/L	774997.023	847148.225	1.070
|	Si	29		ug/L	342758.743	366788.075	2.350
|	P	31	**212.5616**	ug/L	60841.297	56102.952	0.606
|	K	39	**-36.2055**	ug/L	798282.391	782542.335	1.358
|>	Sc-1	45		ug/L	6649200.402	6420063.688	1.111
|	Ca	43	**-86.6332**	ug/L	632.024	669.360	6.962
|	Ti	47	**0.3343**	ug/L	7764.296	7491.373	7.489
L	Ti	48		ug/L	-3931.767	-4736.827	5.854
[	Fe	54	**-472.7934**	ug/L	407518.137	438924.668	0.656
|	Fe	56		ug/L	2998701.958	3031176.051	1.087
|	Fe	57	**-123.4289**	ug/L	7782.302	9494.742	3.600
L>	Ge-1	74		ug/L	982538.746	1028348.409	1.475

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: DT

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	103.569
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	95.545
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	93.851
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	96.098
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: DT

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	103.569
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	95.545

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: DT

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1143645004
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:37:59
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143645004.077
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 149

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	26.667	26.667	78.063
	W	183		mg/L	30.000	10.000	33.333
	W	184		mg/L	16.638	13.317	34.615
	W	186		mg/L	44.370	12.021	54.378
	Cl	37		mg/L	12982145.338	12493933.949	0.412
	C	13		mg/L	11704.882	11788.334	1.056
⌜	Li	7	0.2319	ug/L	99.334	56.667	16.149
|	Be	9	-0.0893	ug/L	19.333	24.000	31.604
|	B	11	11.9221	ug/L	1482.799	292.005	2.295
|	Al	27	27.3183	ug/L	35008.070	3514.074	2.193
⌊>	Sc-2	45		ug/L	6682773.106	6420063.688	1.582
⌜	V	51	3.2008	ug/L	5900.422	-723.840	66.920
|	Cr	52	-0.8886	ug/L	18996.309	21602.632	3.292
|	Cr	53		ug/L	142720.849	119637.679	8.500
|	Mn	55	4.5242	ug/L	14642.189	3277.978	2.042
|	Co	59	0.0393	ug/L	134.668	62.667	14.037
|	Ni	58		ug/L	-2760.252	-2898.994	17.532
|	Ni	60	0.5760	ug/L	278.671	48.000	14.940
|	Cu	63	0.5259	ug/L	721.365	282.671	8.081
|	Cu	65	0.3903	ug/L	300.006	145.335	18.524
|	Zn	66	11.0034	ug/L	3447.380	1229.424	1.546
|	Zn	67		ug/L	15160.588	10059.417	12.489
|	Zn	68	12.3552	ug/L	4122.354	2313.655	4.564
|>	Ge	74		ug/L	978719.198	1028348.409	0.855
|	As	75	-0.4237	ug/L	-435.378	-345.218	53.534
|	Se	77		ug/L	3890.243	4231.742	4.832
|	Se	78	-3.4263	ug/L	9760.324	10451.343	1.722
|	Se	82	-0.5055	ug/L	-33.712	-23.664	20.765
|	Kr	84		ug/L	234.095	202.319	22.475
|	Sr	88	42.4966	ug/L	137539.171	150.001	1.199
|	Mo	95	0.3429	ug/L	229.337	36.000	11.614
|	Mo	97		mg/L	140.001	106.667	7.143
⌊	Mo	98	0.3246	ug/L	349.448	53.470	8.836
⌜	Ag	107	-0.0788	ug/L	32.000	144.001	12.500
|	Ag	109	-0.0761	ug/L	24.000	125.334	60.093

Data derived from 3 replicate readings.

Sample ID: 1143645004

|	Cd	106		mg/L	-30.102	3.776	46.219
|	Cd	108		mg/L	-47.764	-26.009	12.693
|	Cd	111	**0.1885**	ug/L	48.069	-9.975	24.612
|	Cd	114	**0.0561**	ug/L	64.658	27.517	17.380
|>	In	115		ug/L	738720.946	780872.478	2.396
|	Sn	118	**0.0619**	ug/L	122.668	66.667	22.904
|	Sb	121	**1.1240**	ug/L	1241.426	84.000	7.689
|	Sb	123	**1.2144**	ug/L	1027.038	51.319	12.809
|	Ba	135	**16.0958**	ug/L	5309.691	29.333	1.960
L	Ba	137	**16.1949**	ug/L	9282.501	20.000	1.023
⌈>	Ir	193		ug/L	674016.752	684125.297	1.638
|	Au	197		ug/L	21668.376	8204064.402	11.352
|	Hg	199		ug/L	23.333	36.667	49.487
|	Hg	200		ug/L	40.000	16.667	25.000
|	Hg	201	**-0.0555**	ug/L	19.333	26.667	36.330
|	Hg	202	**0.0342**	ug/L	29.333	20.000	31.492
|	Tl	203	**0.0404**	ug/L	68.000	22.667	5.882
|	Tl	205	**0.0185**	ug/L	82.667	30.667	24.830
|	204	204		ug/L	33.251	18.065	34.453
|	206	206		ug/L	374.675	102.667	19.375
|	207	207		ug/L	433.345	230.670	18.120
|	Pb	208	**0.2791**	ug/L	1598.725	538.673	13.642
|	208	208		ug/L	790.704	205.336	9.893
|	Bi	209	**-0.0009**	ug/L	258.671	265.338	7.936
|	Th	232	**0.0355**	ug/L	308.006	92.001	2.597
L	U	238	**0.0325**	ug/L	214.670	16.000	33.816
⌈	Na	23	**7688.9400**	ug/L	8264470.164	5271.001	0.869
|	Mg	24	**1642.4395**	ug/L	1204843.820	273.338	0.425
|	Mg	25	**1608.2312**	ug/L	166907.016	32.000	1.015
|	Si	28	**6463.7275**	ug/L	3960492.491	847148.225	1.300
|	Si	29		ug/L	558785.732	366788.075	1.623
|	P	31	**108.8065**	ug/L	65441.283	56102.952	0.226
|	K	39	**1438.7366**	ug/L	3251081.072	782542.335	1.164
|>	Sc-1	45		ug/L	6682773.106	6420063.688	1.582
|	Ca	43	**4112.6850**	ug/L	15247.269	669.360	0.350
|	Ti	47	**2.0818**	ug/L	8127.299	7491.373	4.175
L	Ti	48		ug/L	2782.872	-4736.827	17.652
⌈	Fe	54	**61.6279**	ug/L	425372.560	438924.668	0.293
|	Fe	56		ug/L	3003394.549	3031176.051	2.678
|	Fe	57	**-0.8436**	ug/L	8991.516	9494.742	1.582
L>	Ge-1	74		ug/L	978719.198	1028348.409	0.855

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143645004

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	104.092
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	95.174
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	94.602
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	98.522
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: 1143645004

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	104.092
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	95.174

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143645004

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: 1143645005
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:40:21
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143645005.078
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 150

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	33.333	26.667	62.450
	W	183		mg/L	50.000	10.000	60.000
	W	184		mg/L	39.963	13.317	66.153
	W	186		mg/L	33.713	12.021	88.265
	Cl	37		mg/L	12392445.411	12493933.949	0.104
	C	13		mg/L	11925.203	11788.334	4.129
⌈	Li	7	0.0517	ug/L	67.334	56.667	3.430
|	Be	9	-0.1167	ug/L	17.333	24.000	17.625
|	B	11	8.6198	ug/L	1145.412	292.005	7.591
|	Al	27	66.3124	ug/L	79055.935	3514.074	1.395
L>	Sc-2	45		ug/L	6623834.359	6420063.688	1.741
⌈	V	51	5.1256	ug/L	9953.182	-723.840	66.755
|	Cr	52	-0.2450	ug/L	20261.292	21602.632	3.828
|	Cr	53		ug/L	136230.995	119637.679	11.645
|	Mn	55	3053.4959	ug/L	7832883.168	3277.978	1.915
|	Co	59	2.6544	ug/L	5169.603	62.667	1.771
|	Ni	58		ug/L	-2515.469	-2898.994	22.815
|	Ni	60	1.4927	ug/L	654.693	48.000	9.070
|	Cu	63	0.4179	ug/L	632.024	282.671	13.881
|	Cu	65	0.3342	ug/L	278.671	145.335	19.594
|	Zn	66	12.3893	ug/L	3758.181	1229.424	3.683
|	Zn	67		ug/L	15237.448	10059.417	14.580
|	Zn	68	15.8606	ug/L	4698.658	2313.655	1.065
|>	Ge	74		ug/L	985215.366	1028348.409	0.935
|	As	75	0.8524	ug/L	-110.860	-345.218	190.394
|	Se	77		ug/L	3807.538	4231.742	5.345
|	Se	78	-2.2895	ug/L	9886.453	10451.343	2.433
|	Se	82	0.0709	ug/L	-21.050	-23.664	81.519
|	Kr	84		ug/L	-817.926	202.319	61.795
|	Sr	88	435.3481	ug/L	1417082.794	150.001	1.647
|	Mo	95	0.5035	ug/L	322.673	36.000	16.648
|	Mo	97		mg/L	210.003	106.667	9.524
L	Mo	98	0.3385	ug/L	364.728	53.470	12.816
⌈	Ag	107	-0.0841	ug/L	25.333	144.001	63.812
|	Ag	109	-0.0699	ug/L	32.000	125.334	37.500

Data derived from 3 replicate readings.

Sample ID: 1143645005

|	Cd	106		mg/L	-110.204	3.776	67.524
|	Cd	108		mg/L	-108.862	-26.009	23.476
|	Cd	111	**0.1686**	ug/L	42.913	-9.975	159.678
|	Cd	114	**0.0613**	ug/L	69.046	27.517	30.352
|>	In	115		ug/L	747334.502	780872.478	1.669
|	Sn	118	**0.0966**	ug/L	157.335	66.667	29.247
|	Sb	121	**0.8172**	ug/L	934.719	84.000	2.508
|	Sb	123	**0.8439**	ug/L	737.180	51.319	7.466
|	Ba	135	**55.3907**	ug/L	18411.007	29.333	4.267
L	Ba	137	**54.5914**	ug/L	31614.544	20.000	2.381
⌈>	Ir	193		ug/L	666866.003	684125.297	1.578
|	Au	197		ug/L	21417.953	8204064.402	15.951
|	Hg	199		ug/L	30.000	36.667	33.333
|	Hg	200		ug/L	36.667	16.667	83.320
|	Hg	201	**0.0062**	ug/L	26.667	26.667	35.444
|	Hg	202	**-0.0077**	ug/L	17.333	20.000	35.251
|	Tl	203	**0.0208**	ug/L	45.333	22.667	10.189
|	Tl	205	**0.0107**	ug/L	60.000	30.667	29.059
|	204	204		ug/L	40.012	18.065	28.756
|	206	206		ug/L	522.683	102.667	8.534
|	207	207		ug/L	556.019	230.670	2.594
|	Pb	208	**0.4357**	ug/L	2174.774	538.673	2.712
|	208	208		ug/L	1096.072	205.336	2.920
|	Bi	209	**0.0197**	ug/L	320.006	265.338	5.728
|	Th	232	**0.1684**	ug/L	1109.407	92.001	7.567
L	U	238	**0.9783**	ug/L	5940.784	16.000	2.433
⌈	Na	23	**9550.9446**	ug/L	10175369.100	5271.001	0.820
|	Mg	24	**10908.8913**	ug/L	7931719.073	273.338	2.582
|	Mg	25	**11093.1722**	ug/L	1141135.998	32.000	1.715
|	Si	28	**4475.1383**	ug/L	2986489.828	847148.225	1.079
|	Si	29		ug/L	494638.780	366788.075	0.759
|	P	31	**66.2775**	ug/L	62124.054	56102.952	1.043
|	K	39	**1291.5698**	ug/L	2975022.634	782542.335	0.459
|>	Sc-1	45		ug/L	6623834.359	6420063.688	1.741
|	Ca	43	**32526.4442**	ug/L	114752.863	669.360	1.828
|	Ti	47	**0.9252**	ug/L	7870.387	7491.373	4.543
L	Ti	48		ug/L	42617.363	-4736.827	12.972
⌈	Fe	54	**261.5099**	ug/L	453159.799	438924.668	0.248
|	Fe	56		ug/L	3424231.592	3031176.051	0.620
|	Fe	57	**269.9191**	ug/L	23213.627	9494.742	1.656
L>	Ge-1	74		ug/L	985215.366	1028348.409	0.935

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143645005

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	103.174
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	95.806
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	95.705
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	97.477
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: 1143645005

U	238		
Na	23		
Mg	24		
Mg	25		
Si	28		
Si	29		
P	31		
K	39		
Sc-1	45		103.174
Ca	43		
Ti	47		
Ti	48		
Fe	54		
Fe	56		
Fe	57		
Ge-1	74		95.806

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143645005

SGS ALASKA
ELAN 6100 ICP-MS P3

Sample ID: 1143645006
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:42:42
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\1143645006.079
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL): 5.0000
Autosampler Position: 151

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	13.333	26.667	43.301
	W	183		mg/L	13.333	10.000	86.603
	W	184		mg/L	6.638	13.317	87.088
	W	186		mg/L	34.370	12.021	96.206
	Cl	37		mg/L	12676960.798	12493933.949	0.393
	C	13		mg/L	11537.983	11788.334	1.052
⌈	Li	7	-0.0893	ug/L	43.333	56.667	5.329
|	Be	9	-0.1602	ug/L	14.667	24.000	31.492
|	B	11	12.4092	ug/L	1525.473	292.005	4.992
|	Al	27	14.1359	ug/L	19811.527	3514.074	1.756
\>	Sc-2	45		ug/L	6659909.974	6420063.688	1.364
⌈	V	51	4.4998	ug/L	8525.202	-723.840	143.941
|	Cr	52	-0.8331	ug/L	18994.297	21602.632	2.384
|	Cr	53		ug/L	141634.277	119637.679	11.753
|	Mn	55	526.6121	ug/L	1337349.417	3277.978	1.052
|	Co	59	0.0452	ug/L	145.335	62.667	11.459
|	Ni	58		ug/L	-3028.739	-2898.994	7.143
|	Ni	60	0.4996	ug/L	246.670	48.000	3.376
|	Cu	63	0.3703	ug/L	584.021	282.671	8.305
|	Cu	65	0.3927	ug/L	298.672	145.335	20.326
|	Zn	66	7.5964	ug/L	2727.113	1229.424	2.777
|	Zn	67		ug/L	14589.549	10059.417	11.988
|	Zn	68	10.2465	ug/L	3775.522	2313.655	3.529
\>	Ge	74		ug/L	973550.898	1028348.409	1.132
|	As	75	0.9928	ug/L	-74.465	-345.218	81.068
|	Se	77		ug/L	4047.651	4231.742	4.348
|	Se	78	-4.2752	ug/L	9661.883	10451.343	0.301
|	Se	82	-1.0889	ug/L	-46.462	-23.664	21.613
|	Kr	84		ug/L	-44.755	202.319	605.215
|	Sr	88	148.2003	ug/L	476631.262	150.001	3.389
|	Mo	95	0.1876	ug/L	140.001	36.000	17.143
|	Mo	97		mg/L	146.668	106.667	38.770
⌊	Mo	98	0.1140	ug/L	154.775	53.470	9.326
⌈	Ag	107	-0.0848	ug/L	24.000	144.001	44.096
|	Ag	109	-0.0674	ug/L	34.667	125.334	29.038

Data derived from 3 replicate readings.

Sample ID: 1143645006

|	Cd	106		mg/L	-65.327	3.776	36.382
|	Cd	108		mg/L	-68.746	-26.009	32.844
|	Cd	111	**0.2057**	ug/L	53.156	-9.975	66.287
|	Cd	114	**0.1453**	ug/L	124.913	27.517	30.429
|>	In	115		ug/L	736982.819	780872.478	1.822
|	Sn	118	**0.0529**	ug/L	113.334	66.667	7.347
|	Sb	121	**0.3369**	ug/L	426.678	84.000	5.331
|	Sb	123	**0.4059**	ug/L	375.328	51.319	11.232
|	Ba	135	**68.9866**	ug/L	22602.626	29.333	2.658
L	Ba	137	**69.3410**	ug/L	39593.857	20.000	1.778
⌈>	Ir	193		ug/L	665314.041	684125.297	0.783
|	Au	197		ug/L	21685.281	8204064.402	15.245
|	Hg	199		ug/L	26.667	36.667	43.301
|	Hg	200		ug/L	20.000	16.667	0.000
|	Hg	201	**-0.0589**	ug/L	18.667	26.667	12.372
|	Hg	202	**0.0405**	ug/L	30.667	20.000	64.342
|	Tl	203	**0.0161**	ug/L	40.000	22.667	36.056
|	Tl	205	**0.0079**	ug/L	52.000	30.667	7.692
|	204	204		ug/L	27.611	18.065	62.018
|	206	206		ug/L	329.340	102.667	14.182
|	207	207		ug/L	394.676	230.670	11.703
|	Pb	208	**0.2217**	ug/L	1361.374	538.673	5.437
|	208	208		ug/L	637.358	205.336	13.525
|	Bi	209	**0.0058**	ug/L	276.005	265.338	12.383
|	Th	232	**0.0064**	ug/L	128.001	92.001	25.000
L	U	238	**0.0400**	ug/L	257.337	16.000	10.918
⌈	Na	23	**5676.9310**	ug/L	6083950.156	5271.001	1.653
|	Mg	24	**3851.8863**	ug/L	2815786.066	273.338	0.584
|	Mg	25	**3839.6185**	ug/L	397119.692	32.000	0.746
|	Si	28	**4603.5116**	ug/L	3064176.172	847148.225	0.920
|	Si	29		ug/L	502262.569	366788.075	1.187
|	P	31	**65.2076**	ug/L	62411.542	56102.952	1.508
|	K	39	**413.7717**	ug/L	1510076.025	782542.335	0.989
|>	Sc-1	45		ug/L	6659909.974	6420063.688	1.364
|	Ca	43	**12491.5808**	ug/L	44733.098	669.360	1.690
|	Ti	47	**0.0666**	ug/L	7780.303	7491.373	4.808
L	Ti	48		ug/L	13460.788	-4736.827	2.002
⌈	Fe	54	**80.2852**	ug/L	425414.860	438924.668	0.576
|	Fe	56		ug/L	2968098.100	3031176.051	1.454
|	Fe	57	**7.6344**	ug/L	9382.613	9494.742	0.683
L>	Ge-1	74		ug/L	973550.898	1028348.409	1.132

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: 1143645006

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	103.736
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	94.671
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	94.379
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	97.250
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: 1143645006

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	103.736
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	94.671

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: 1143645006

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CCV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 13:45:05
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CCV.080
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	50.000	26.667	52.915
	W	183		mg/L	36.667	10.000	41.660
	W	184		mg/L	53.296	13.317	43.352
	W	186		mg/L	50.380	12.021	9.816
	Cl	37		mg/L	12701494.184	12493933.949	1.317
	C	13		mg/L	11491.251	11788.334	0.741
⌈	Li	7	32.2094	ug/L	28247.158	56.667	3.139
|	Be	9	36.3798	ug/L	11762.296	24.000	0.840
|	B	11	181.7929	ug/L	91029.181	292.005	1.057
|	Al	27	203.3161	ug/L	1181293.738	3514.074	0.775
|>	Sc-2	45		ug/L	6746296.513	6420063.688	1.280
⌈	V	51	207.7611	ug/L	2145782.322	-723.840	1.613
|	Cr	52	202.6853	ug/L	1811562.817	21602.632	0.701
|	Cr	53		ug/L	345681.522	119637.679	4.903
|	Mn	55	203.0347	ug/L	2601909.829	3277.978	1.582
|	Co	59	202.2498	ug/L	1943367.319	62.667	2.082
|	Ni	58		ug/L	1010991.139	-2898.994	3.154
|	Ni	60	198.5897	ug/L	404042.459	48.000	1.002
|	Cu	63	205.3740	ug/L	887825.328	282.671	0.835
|	Cu	65	205.3898	ug/L	426885.482	145.335	1.720
|	Zn	66	193.5351	ug/L	202414.138	1229.424	0.291
|	Zn	67		ug/L	52323.770	10059.417	1.260
|	Zn	68	196.6267	ug/L	155789.438	2313.655	0.620
|>	Ge	74		ug/L	983528.542	1028348.409	0.825
|	As	75	19.5732	ug/L	24756.580	-345.218	1.097
|	Se	77		ug/L	5184.285	4231.742	7.794
|	Se	78	19.7730	ug/L	15412.003	10451.343	1.026
|	Se	82	19.3710	ug/L	2133.885	-23.664	2.517
|	Kr	84		ug/L	-1558.106	202.319	21.411
|	Sr	88	195.4395	ug/L	3174854.132	150.001	1.256
|	Mo	95	38.1853	ug/L	109126.093	36.000	2.224
|	Mo	97		mg/L	67616.653	106.667	2.433
L	Mo	98	38.7563	ug/L	179065.571	53.470	1.423
⌈	Ag	107	3.6096	ug/L	24064.189	144.001	8.345
|	Ag	109	3.5894	ug/L	22502.434	125.334	6.822

Data derived from 3 replicate readings.

Sample ID: CCV

|	Cd	106		mg/L	27563.687	3.776	0.928
|	Cd	108		mg/L	19864.162	-26.009	2.335
|	Cd	111	191.9006	ug/L	292411.455	-9.975	1.165
|	Cd	114	198.2238	ug/L	680579.139	27.517	1.171
|>	In	115		ug/L	739710.664	780872.478	1.956
|	Sn	118	202.1443	ug/L	967426.091	66.667	1.592
|	Sb	121	98.9003	ug/L	511681.098	84.000	1.163
|	Sb	123	97.0069	ug/L	391617.380	51.319	0.762
|	Ba	135	389.1304	ug/L	639297.982	29.333	1.090
L	Ba	137	387.3073	ug/L	1109583.242	20.000	1.967
⌈>	Ir	193		ug/L	667931.895	684125.297	2.510
|	Au	197		ug/L	8542943.317	8204064.402	2.249
|	Hg	199		ug/L	3133.925	36.667	8.289
|	Hg	200		ug/L	4020.970	16.667	2.037
|	Hg	201	3.9326	ug/L	2459.697	26.667	3.875
|	Hg	202	4.0535	ug/L	5701.951	20.000	3.161
|	Tl	203	3.9515	ug/L	22122.672	22.667	2.531
|	Tl	205	3.9230	ug/L	55441.154	30.667	0.835
|	204	204		ug/L	53077.068	18.065	1.514
|	206	206		ug/L	968760.718	102.667	0.679
|	207	207		ug/L	883310.983	230.670	0.582
|	Pb	208	210.5511	ug/L	3991465.404	538.673	0.489
|	208	208		ug/L	2139393.704	205.336	0.512
|	Bi	209	209.5929	ug/L	3266433.072	265.338	2.655
|	Th	232	20.3446	ug/L	617069.543	92.001	2.623
L	U	238	21.1178	ug/L	640109.136	16.000	1.517
⌈	Na	23	3987.0522	ug/L	21623445.179	5271.001	1.651
|	Mg	24	3989.7954	ug/L	14768436.230	273.338	1.579
|	Mg	25	4033.0768	ug/L	2112305.083	32.000	1.757
|	Si	28	2001.1071	ug/L	5700771.289	847148.225	1.518
|	Si	29		ug/L	677380.179	366788.075	0.686
|	P	31	206.4452	ug/L	126456.614	56102.952	2.409
|	K	39	4035.0152	ug/L	35314703.577	782542.335	0.757
|>	Sc-1	45		ug/L	6746296.513	6420063.688	1.280
|	Ca	43	3972.7023	ug/L	71658.812	669.360	1.252
|	Ti	47	195.8094	ug/L	163737.747	7491.373	1.104
L	Ti	48		ug/L	1680456.149	-4736.827	0.340
⌈	Fe	54	4169.6768	ug/L	3020568.791	438924.668	1.454
|	Fe	56		ug/L	46154425.322	3031176.051	0.580
|	Fe	57	3965.2084	ug/L	1044256.045	9494.742	0.648
L>	Ge-1	74		ug/L	983528.542	1028348.409	0.825

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CCV

Li	7	80.523	
Be	9	90.949	
B	11	90.896	
Al	27	101.658	
Sc-2	45		105.081
V	51	103.881	
Cr	52	101.343	
Cr	53		
Mn	55	101.517	
Co	59	101.125	
Ni	58		
Ni	60	99.295	
Cu	63	102.687	
Cu	65	102.695	
Zn	66	96.768	
Zn	67		
Zn	68	98.313	
Ge	74		95.642
As	75	97.866	
Se	77		
Se	78	98.865	
Se	82	96.855	
Kr	84		
Sr	88	97.720	
Mo	95	95.463	
Mo	97		
Mo	98	96.891	
Ag	107	90.240	
Ag	109	89.735	
Cd	106		
Cd	108		
Cd	111	95.950	
Cd	114	99.112	
In	115		94.729
Sn	118	101.072	
Sb	121	98.900	
Sb	123	97.007	
Ba	135	97.283	
Ba	137	96.827	
Ir	193		97.633
Au	197		
Hg	199		
Hg	200		
Hg	201	98.314	
Hg	202	101.337	
Tl	203	98.788	
Tl	205	98.074	
204	204		
206	206		
207	207		
Pb	208	105.276	
208	208		
Bi	209	104.796	
Th	232	101.723	

Data derived from 3 replicate readings.

Sample ID: CCV

U	238	105.589	
Na	23	99.676	
Mg	24	99.745	
Mg	25	100.827	
Si	28	100.055	
Si	29		
P	31	103.223	
K	39	100.875	
Sc-1	45		105.081
Ca	43	99.318	
Ti	47	97.905	
Ti	48		
Fe	54	104.242	
Fe	56		
Fe	57	99.130	
Ge-1	74		95.642

QC Out Of Limits

MassAnalyte	Out of Limits Message
7Li	CCV is out (+/- 10%)

Data derived from 3 replicate readings.

Sample ID: CCV

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CCV
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 18:41:58
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CCV.179
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 7

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	20.000	26.667	50.000
	W	183		mg/L	40.000	10.000	43.301
	W	184		mg/L	36.617	13.317	41.683
	W	186		mg/L	19.395	12.021	65.494
	Cl	37		mg/L	12322919.173	12493933.949	1.125
	C	13		mg/L	10259.652	11788.334	3.928
⌜	Li	7	29.6342	ug/L	24374.290	56.667	3.491
|	Be	9	35.4358	ug/L	10748.929	24.000	1.807
|	B	11	176.3934	ug/L	82872.889	292.005	2.623
|	Al	27	204.2647	ug/L	1113756.751	3514.074	1.684
⌊>	Sc-2	45		ug/L	6330007.015	6420063.688	1.504
⌜	V	51	209.8260	ug/L	2036611.553	-723.840	0.701
|	Cr	52	200.6737	ug/L	1685680.263	21602.632	0.436
|	Cr	53		ug/L	337646.581	119637.679	5.308
|	Mn	55	207.2074	ug/L	2495563.468	3277.978	1.987
|	Co	59	201.2070	ug/L	1816847.335	62.667	2.530
|	Ni	58		ug/L	943377.328	-2898.994	1.460
|	Ni	60	197.5985	ug/L	377786.419	48.000	1.276
|	Cu	63	200.0557	ug/L	812704.513	282.671	1.586
|	Cu	65	200.7403	ug/L	392109.805	145.335	2.473
|	Zn	66	192.8651	ug/L	189583.459	1229.424	1.959
|	Zn	67		ug/L	50834.635	10059.417	2.359
|	Zn	68	195.3723	ug/L	145506.409	2313.655	2.228
|>	Ge	74		ug/L	924425.505	1028348.409	1.576
|	As	75	19.6160	ug/L	23315.668	-345.218	1.064
|	Se	77		ug/L	5242.989	4231.742	8.120
|	Se	78	18.1541	ug/L	14070.731	10451.343	2.838
|	Se	82	19.2275	ug/L	1989.953	-23.664	2.307
|	Kr	84		ug/L	-2458.073	202.319	21.889
|	Sr	88	202.5750	ug/L	3093246.188	150.001	1.343
|	Mo	95	38.1699	ug/L	102517.493	36.000	1.486
|	Mo	97		mg/L	64592.856	106.667	3.068
⌊	Mo	98	38.9828	ug/L	169292.653	53.470	2.404
⌜	Ag	107	3.4661	ug/L	21656.301	144.001	10.281
|	Ag	109	3.5145	ug/L	20640.322	125.334	8.608

Data derived from 3 replicate readings.

Sample ID: CCV

|	Cd	106		mg/L	25503.106	3.776	1.823
|	Cd	108		mg/L	18619.699	-26.009	4.629
|	Cd	111	193.9468	ug/L	276557.516	-9.975	0.974
|	Cd	114	199.6480	ug/L	641601.234	27.517	1.759
|>	In	115		ug/L	692549.370	780872.478	3.094
|	Sn	118	203.2734	ug/L	910639.974	66.667	1.730
|	Sb	121	99.2943	ug/L	480859.218	84.000	1.283
|	Sb	123	98.4868	ug/L	372179.291	51.319	1.563
|	Ba	135	399.0090	ug/L	613615.714	29.333	1.353
L	Ba	137	395.6061	ug/L	1060958.872	20.000	2.323
⌈>	Ir	193		ug/L	647158.271	684125.297	1.503
|	Au	197		ug/L	8364548.537	8204064.402	0.744
|	Hg	199		ug/L	3150.596	36.667	4.960
|	Hg	200		ug/L	4014.303	16.667	6.671
|	Hg	201	3.9150	ug/L	2373.005	26.667	2.750
|	Hg	202	3.8494	ug/L	5246.985	20.000	2.010
|	Tl	203	3.9757	ug/L	21573.228	22.667	1.931
|	Tl	205	3.9244	ug/L	53739.410	30.667	1.478
|	204	204		ug/L	52733.486	18.065	0.347
|	206	206		ug/L	954349.926	102.667	1.601
|	207	207		ug/L	843729.517	230.670	2.671
|	Pb	208	214.2377	ug/L	3935700.903	538.673	1.216
|	208	208		ug/L	2137621.460	205.336	1.260
|	Bi	209	215.3931	ug/L	3254766.653	265.338	0.344
|	Th	232	20.3027	ug/L	597000.356	92.001	0.701
L	U	238	20.8392	ug/L	612270.260	16.000	1.036
⌈	Na	23	4007.9071	ug/L	20400165.561	5271.001	2.083
|	Mg	24	4007.9205	ug/L	13923927.717	273.338	2.006
|	Mg	25	4000.3244	ug/L	1966013.878	32.000	0.246
|	Si	28	2047.2034	ug/L	5454892.923	847148.225	2.684
|	Si	29		ug/L	648210.571	366788.075	2.463
|	P	31	238.8912	ug/L	128649.654	56102.952	1.830
|	K	39	4079.6204	ug/L	33497912.015	782542.335	1.945
|>	Sc-1	45		ug/L	6330007.015	6420063.688	1.504
|	Ca	43	4033.0781	ug/L	68250.430	669.360	2.124
|	Ti	47	196.9762	ug/L	154491.117	7491.373	1.536
L	Ti	48		ug/L	1588471.881	-4736.827	1.128
⌈	Fe	54	4198.4230	ug/L	2855706.810	438924.668	1.609
|	Fe	56		ug/L	44387290.592	3031176.051	3.041
|	Fe	57	3980.3881	ug/L	985143.437	9494.742	3.890
L>	Ge-1	74		ug/L	924425.505	1028348.409	1.576

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CCV

Li	7	74.085	
Be	9	88.589	
B	11	88.197	
Al	27	102.132	
Sc-2	45		98.597
V	51	104.913	
Cr	52	100.337	
Cr	53		
Mn	55	103.604	
Co	59	100.604	
Ni	58		
Ni	60	98.799	
Cu	63	100.028	
Cu	65	100.370	
Zn	66	96.433	
Zn	67		
Zn	68	97.686	
Ge	74		89.894
As	75	98.080	
Se	77		
Se	78	90.770	
Se	82	96.138	
Kr	84		
Sr	88	101.287	
Mo	95	95.425	
Mo	97		
Mo	98	97.457	
Ag	107	86.653	
Ag	109	87.861	
Cd	106		
Cd	108		
Cd	111	96.973	
Cd	114	99.824	
In	115		88.689
Sn	118	101.637	
Sb	121	99.294	
Sb	123	98.487	
Ba	135	99.752	
Ba	137	98.902	
Ir	193		94.596
Au	197		
Hg	199		
Hg	200		
Hg	201	97.874	
Hg	202	96.235	
Tl	203	99.393	
Tl	205	98.110	
204	204		
206	206		
207	207		
Pb	208	107.119	
208	208		
Bi	209	107.697	
Th	232	101.513	

Data derived from 3 replicate readings.

Sample ID: CCV

U	238	104.196	
Na	23	100.198	
Mg	24	100.198	
Mg	25	100.008	
Si	28	102.360	
Si	29		
P	31	119.446	
K	39	101.991	
Sc-1	45		98.597
Ca	43	100.827	
Ti	47	98.488	
Ti	48		
Fe	54	104.961	
Fe	56		
Fe	57	99.510	
Ge-1	74		89.894

QC Out Of Limits

MassAnalyte	Out of Limits Message
7Li	CCV is out (+/- 10%)
9Be	CCV is out (+/- 10%)
11B	CCV is out (+/- 10%)
107Ag	CCV is out (+/- 10%)
109Ag	CCV is out (+/- 10%)
31P	CCV is out (+/- 10%)

Data derived from 3 replicate readings.

Sample ID: CCV

SGS ALASKA

ELAN 6100 ICP-MS P3

Sample ID: CB
Sample Type: Sample
Sample Description:
Sample Date/Time: Thursday, August 14, 2014 18:48:45
Dataset File: C:\Elandata\DataSet\08.14.2014.p3b\CB.180
Method File: C:\elandata\Method\esi fast methods\6020a_fast.mth
Dual Detector Mode: Dual
Diluted To Volume (mL):
Autosampler Position: 1

	Analyte	Mass	Conc. Mean	Report Unit	Meas. Intens. Mean	Blank Intensity	Meas. Intens. RSD
	W	182		mg/L	33.333	26.667	34.641
	W	183		mg/L	23.333	10.000	89.214
	W	184		mg/L	43.309	13.317	81.061
	W	186		mg/L	14.698	12.021	39.849
	Cl	37		mg/L	12300872.076	12493933.949	1.134
	C	13		mg/L	11033.970	11788.334	2.502
⌜	Li	7	-0.0411	ug/L	22.667	56.667	20.377
|	Be	9	-0.0264	ug/L	16.000	24.000	50.000
|	B	11	0.0212	ug/L	305.339	292.005	4.211
|	Al	27	0.2508	ug/L	4949.469	3514.074	0.821
⌞>	Sc-2	45		ug/L	6489976.738	6420063.688	0.992
⌜	V	51	0.1991	ug/L	1257.769	-723.840	334.489
|	Cr	52	-0.5795	ug/L	14803.809	21602.632	2.233
|	Cr	53		ug/L	67109.250	119637.679	2.540
|	Mn	55	0.0126	ug/L	3139.258	3277.978	0.747
|	Co	59	0.0012	ug/L	68.000	62.667	0.000
|	Ni	58		ug/L	-3325.728	-2898.994	8.915
|	Ni	60	0.0044	ug/L	52.000	48.000	26.647
|	Cu	63	0.0111	ug/L	304.006	282.671	11.842
|	Cu	65	-0.0042	ug/L	124.001	145.335	11.175
|	Zn	66	-0.2612	ug/L	861.378	1229.424	13.171
|	Zn	67		ug/L	6766.085	10059.417	5.862
|	Zn	68	-0.2145	ug/L	1950.896	2313.655	8.331
|>	Ge	74		ug/L	937275.513	1028348.409	2.374
|	As	75	0.0702	ug/L	-228.244	-345.218	81.422
|	Se	77		ug/L	2411.016	4231.742	6.827
|	Se	78	-0.4452	ug/L	9407.273	10451.343	1.036
|	Se	82	0.0109	ug/L	-20.200	-23.664	99.800
|	Kr	84		ug/L	202.409	202.319	22.655
|	Sr	88	-0.0000	ug/L	136.668	150.001	40.300
|	Mo	95	0.0086	ug/L	56.000	36.000	25.754
|	Mo	97		mg/L	96.667	106.667	5.973
⌞	Mo	98	0.0089	ug/L	87.718	53.470	12.958
⌜	Ag	107	0.1607	ug/L	1145.415	144.001	23.854
|	Ag	109	0.1708	ug/L	1129.412	125.334	19.824

Data derived from 3 replicate readings.

Sample ID: CB

|	Cd	106		mg/L	25.320	3.776	321.607
|	Cd	108		mg/L	30.774	-26.009	185.168
|	Cd	111	-0.0256	ug/L	-47.442	-9.975	104.850
|	Cd	114	0.0030	ug/L	34.754	27.517	7.182
|>	In	115		ug/L	709150.912	780872.478	3.054
|	Sn	118	0.0074	ug/L	94.667	66.667	15.997
|	Sb	121	0.1148	ug/L	648.026	84.000	25.683
|	Sb	123	0.1156	ug/L	494.169	51.319	6.614
|	Ba	135	0.0033	ug/L	32.000	29.333	21.651
L	Ba	137	0.0085	ug/L	41.333	20.000	22.349
[>	Ir	193		ug/L	641606.891	684125.297	3.460
|	Au	197		ug/L	8360001.684	8204064.402	1.325
|	Hg	199		ug/L	36.667	36.667	41.660
|	Hg	200		ug/L	23.333	16.667	89.214
|	Hg	201	-0.0141	ug/L	16.667	26.667	24.980
|	Hg	202	-0.0010	ug/L	17.333	20.000	35.251
|	Tl	203	0.0020	ug/L	32.000	22.667	12.500
|	Tl	205	0.0031	ug/L	70.667	30.667	8.646
|	204	204		ug/L	20.012	18.065	33.105
|	206	206		ug/L	114.667	102.667	14.098
|	207	207		ug/L	237.337	230.670	5.919
|	Pb	208	0.0052	ug/L	600.008	538.673	4.163
|	208	208		ug/L	248.004	205.336	10.577
|	Bi	209	0.0047	ug/L	317.339	265.338	17.160
|	Th	232	0.0009	ug/L	113.334	92.001	37.739
L	U	238	0.0000	ug/L	16.000	16.000	25.000
[	Na	23	0.2357	ug/L	6558.582	5271.001	3.598
|	Mg	24	0.0463	ug/L	441.345	273.338	6.035
|	Mg	25	0.0840	ug/L	74.667	32.000	6.186
|	Si	28	-33.7118	ug/L	778317.401	847148.225	0.406
|	Si	29		ug/L	349866.744	366788.075	0.149
|	P	31	33.4951	ug/L	67247.591	56102.952	0.866
|	K	39	-0.1462	ug/L	789793.577	782542.335	0.456
|>	Sc-1	45		ug/L	6489976.738	6420063.688	0.992
|	Ca	43	-13.5503	ug/L	444.012	669.360	7.374
|	Ti	47	-3.5360	ug/L	4864.753	7491.373	0.777
L	Ti	48		ug/L	-3372.920	-4736.827	0.918
[	Fe	54	7.1935	ug/L	404166.613	438924.668	1.429
|	Fe	56		ug/L	2778184.163	3031176.051	1.459
|	Fe	57	-5.1368	ug/L	7375.264	9494.742	3.103
L>	Ge-1	74		ug/L	937275.513	1028348.409	2.374

QC Calculated Values

Analyte	Mass	QC % rec.	Spike % rec.	RPD %	I.S. % rec.
W	182				
W	183				
W	184				
W	186				
Cl	37				
C	13				

Data derived from 3 replicate readings.

Sample ID: CB

Li	7	
Be	9	
B	11	
Al	27	
Sc-2	45	101.089
V	51	
Cr	52	
Cr	53	
Mn	55	
Co	59	
Ni	58	
Ni	60	
Cu	63	
Cu	65	
Zn	66	
Zn	67	
Zn	68	
Ge	74	91.144
As	75	
Se	77	
Se	78	
Se	82	
Kr	84	
Sr	88	
Mo	95	
Mo	97	
Mo	98	
Ag	107	
Ag	109	
Cd	106	
Cd	108	
Cd	111	
Cd	114	
In	115	90.815
Sn	118	
Sb	121	
Sb	123	
Ba	135	
Ba	137	
Ir	193	93.785
Au	197	
Hg	199	
Hg	200	
Hg	201	
Hg	202	
Tl	203	
Tl	205	
204	204	
206	206	
207	207	
Pb	208	
208	208	
Bi	209	
Th	232	

Data derived from 3 replicate readings.

Sample ID: CB

U	238	
Na	23	
Mg	24	
Mg	25	
Si	28	
Si	29	
P	31	
K	39	
Sc-1	45	101.089
Ca	43	
Ti	47	
Ti	48	
Fe	54	
Fe	56	
Fe	57	
Ge-1	74	91.144

QC Out Of Limits

MassAnalyte	Out of Limits Message

Data derived from 3 replicate readings.

Sample ID: CB

SGS ALASKA

Calibration Type: External Calibration
File Name 08.14.2014.p3b.cal

P-E ELAN 6100 ICP-MS P3
CALIBRATION SUMMARY

Analyte	Mass	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6
W	181.948						
W	182.950						
W	183.951						
W	185.954						
Cl	36.966						
C	13.003						
Li	7.016		0.200	2.000	20.000	200.000	
Be	9.012		0.200	2.000	20.000	200.000	
B	11.009			10.000	100.000	1000.000	
Al	26.982		1.000	10.000	100.000	1000.000	
Sc-2	44.956						
V	50.944		1.000	10.000	100.000	1000.000	
Cr	51.941		1.000	10.000	100.000	1000.000	
Cr	52.941						
Mn	54.938	0.200	1.000	10.000	100.000	1000.000	
Co	58.933	0.200	1.000	10.000	100.000	1000.000	
Ni	57.935						
Ni	59.933	0.200	1.000	10.000	100.000	1000.000	
Cu	62.930		1.000	10.000	100.000	1000.000	
Cu	64.928		1.000	10.000	100.000	1000.000	
Zn	65.926		1.000	10.000	100.000	1000.000	
Zn	66.927						
Zn	67.925		1.000	10.000	100.000	1000.000	
Ge	73.922						
As	74.922			1.000	10.000	100.000	
Se	76.920						
Se	77.917			1.000	10.000	100.000	
Se	81.917			1.000	10.000	100.000	
Kr	83.912						
Sr	87.906		1.000	10.000	100.000	1000.000	
Mo	94.906		0.200	2.000	20.000	200.000	
Mo	96.906						
Mo	97.906		0.200	2.000	20.000	200.000	
Ag	106.905			0.200	2.000	20.000	
Ag	108.905			0.200	2.000	20.000	
Cd	105.907						
Cd	107.904						
Cd	110.904	0.200	1.000	10.000	100.000	1000.000	
Cd	113.904	0.200	1.000	10.000	100.000	1000.000	
In	114.904						
Sn	117.902	0.200	1.000	10.000	100.000	1000.000	
Sb	120.904	0.100	0.500	5.000	50.000	500.000	
Sb	122.904	0.100	0.500	5.000	50.000	500.000	
Ba	134.906	0.400	2.000	20.000	200.000	2000.000	
Ba	136.905	0.400	2.000	20.000	200.000	2000.000	
Ir	192.963						
Au	196.967						

Hg	198.968					
Hg	199.968					
Hg	200.970		0.020	0.200	2.000	20.000
Hg	201.971		0.020	0.200	2.000	20.000
Tl	202.972		0.020	0.200	2.000	20.000
Tl	204.975		0.020	0.200	2.000	20.000
204	203.973					
206	205.975					
207	206.976					
Pb	207.977	0.200	1.000	10.000	100.000	1000.000
208	207.977					
Bi	208.980	0.200	1.000	10.000	100.000	1000.000
Th	232.038		0.100	1.000	10.000	100.000
U	238.050		0.100	1.000	10.000	100.000
Na	22.990		20.000	200.000	2000.000	20000.000
Mg	23.985		20.000	200.000	2000.000	20000.000
Mg	24.986		20.000	200.000	2000.000	20000.000
Si	27.977			100.000	1000.000	10000.000
Si	28.977					
P	30.994			10.000	100.000	1000.000
K	38.964		20.000	200.000	2000.000	20000.000
Sc-1	44.956					
Ca	42.959		20.000	200.000	2000.000	20000.000
Ti	46.952			10.000	100.000	1000.000
Ti	47.948					
Fe	53.940		20.000	200.000	2000.000	20000.000
Fe	55.935					
Fe	56.935		20.000	200.000	2000.000	20000.000
Ge-1	73.922					

Analyte	Mass	Curve T	Slope	Corr. Coeff.	Intercept
W	181.948	Linear Thru Zero	0.0000000	0.0000000	0.000000
W	182.950	Linear Thru Zero	0.0000000	0.0000000	0.000000
W	183.951	Linear Thru Zero	0.0000000	0.0000000	0.000000
W	185.954	Linear Thru Zero	0.0000000	0.0000000	0.000000
Cl	36.966	Linear Thru Zero	0.0000000	0.0000000	0.000000
C	13.003	Linear Thru Zero	0.0000000	0.0000000	0.000000
Li	7.016	Linear Thru Zero	0.0001297	0.9999620	0.000000
Be	9.012	Linear Thru Zero	0.0000478	0.9999824	0.000000
B	11.009	Linear Thru Zero	0.0000740	0.9999906	0.000000
Al	26.982	Linear Thru Zero	0.0008587	0.9999906	0.000000
Sc-2	44.956	Linear Thru Zero	0.0000000	0.0000000	0.000000
V	50.944	Linear Thru Zero	0.0105041	0.9999981	0.000000
Cr	51.941	Linear Thru Zero	0.0089841	0.9999992	0.000000
Cr	52.941	Linear Thru Zero	0.0000000	0.0000000	0.000000
Mn	54.938	Linear Thru Zero	0.0130138	0.9999971	0.000000
Co	58.933	Linear Thru Zero	0.0097697	0.9999981	0.000000
Ni	57.935	Linear Thru Zero	0.0000000	0.0000000	0.000000
Ni	59.933	Linear Thru Zero	0.0020685	0.9999972	0.000000
Cu	62.930	Linear Thru Zero	0.0043941	0.9999780	0.000000
Cu	64.928	Linear Thru Zero	0.0021125	0.9999822	0.000000
Zn	65.926	Linear Thru Zero	0.0010573	0.9999999	0.000000
Zn	66.927	Linear Thru Zero	0.0000000	0.0000000	0.000000
Zn	67.925	Linear Thru Zero	0.0007942	0.9999995	0.000000
Ge	73.922	Linear Thru Zero	0.0000000	0.0000000	0.000000
As	74.922	Linear Thru Zero	0.0013031	0.9999990	0.000000
Se	76.920	Linear Thru Zero	0.0000000	0.0000000	0.000000

Se	77.917	Linear Thru Zero	0.0002785	0.9999216	0.000000
Se	81.917	Linear Thru Zero	0.0001132	0.9999771	0.000000
Kr	83.912	Linear Thru Zero	0.0000000	0.0000000	0.000000
Sr	87.906	Linear Thru Zero	0.0165178	0.9999987	0.000000
Mo	94.906	Linear Thru Zero	0.0029045	0.9999957	0.000000
Mo	96.906	Linear Thru Zero	0.0000000	0.0000000	0.000000
Mo	97.906	Linear Thru Zero	0.0046964	0.9999965	0.000000
Ag	106.905	Linear Thru Zero	0.0089550	0.9999728	0.000000
Ag	108.905	Linear Thru Zero	0.0084252	0.9999734	0.000000
Cd	105.907	Linear Thru Zero	0.0000000	0.0000000	0.000000
Cd	107.904	Linear Thru Zero	0.0000000	0.0000000	0.000000
Cd	110.904	Linear Thru Zero	0.0020603	0.9999990	0.000000
Cd	113.904	Linear Thru Zero	0.0046419	0.9999995	0.000000
In	114.904	Linear Thru Zero	0.0000000	0.0000000	0.000000
Sn	117.902	Linear Thru Zero	0.0064702	0.9999955	0.000000
Sb	120.904	Linear Thru Zero	0.0069943	0.9999995	0.000000
Sb	122.904	Linear Thru Zero	0.0054578	0.9999979	0.000000
Ba	134.906	Linear Thru Zero	0.0022213	0.9999997	0.000000
Ba	136.905	Linear Thru Zero	0.0038737	0.9999981	0.000000
Ir	192.963	Linear Thru Zero	0.0000000	0.0000000	0.000000
Au	196.967	Linear Thru Zero	0.0000000	0.0000000	0.000000
Hg	198.968	Linear Thru Zero	0.0000000	0.0000000	0.000000
Hg	199.968	Linear Thru Zero	0.0000000	0.0000000	0.000000
Hg	200.970	Linear Thru Zero	0.0009267	0.9999973	0.000000
Hg	201.971	Linear Thru Zero	0.0020992	0.9999996	0.000000
Tl	202.972	Linear Thru Zero	0.0083771	0.9999997	0.000000
Tl	204.975	Linear Thru Zero	0.0211536	0.9999989	0.000000
204	203.973	Linear Thru Zero	0.0000000	0.0000000	0.000000
206	205.975	Linear Thru Zero	0.0000000	0.0000000	0.000000
207	206.976	Linear Thru Zero	0.0000000	0.0000000	0.000000
Pb	207.977	Linear Thru Zero	0.0283908	0.9999710	0.000000
208	207.977	Linear Thru Zero	0.0000000	0.0000000	0.000000
Bi	208.980	Linear Thru Zero	0.0233505	0.9999662	0.000000
Th	232.038	Linear Thru Zero	0.0454405	0.9999955	0.000000
U	238.050	Linear Thru Zero	0.0454083	0.9999861	0.000000
Na	22.990	Linear Thru Zero	0.0008039	0.9999994	0.000000
Mg	23.985	Linear Thru Zero	0.0005488	0.9999995	0.000000
Mg	24.986	Linear Thru Zero	0.0000776	0.9999976	0.000000
Si	27.977	Linear Thru Zero	0.0003564	0.9999976	0.000000
Si	28.977	Linear Thru Zero	0.0000000	0.0000000	0.000000
P	30.994	Linear Thru Zero	0.0000485	0.9999647	0.000000
K	38.964	Linear Thru Zero	0.0012672	0.9999998	0.000000
Sc-1	44.956	Linear Thru Zero	0.0000000	0.0000000	0.000000
Ca	42.959	Linear Thru Zero	0.0000026	0.9999975	0.000000
Ti	46.952	Linear Thru Zero	0.0001180	0.9999963	0.000000
Ti	47.948	Linear Thru Zero	0.0000000	0.0000000	0.000000
Fe	53.940	Linear Thru Zero	0.0006342	0.9999884	0.000000
Fe	55.935	Linear Thru Zero	0.0000000	0.0000000	0.000000
Fe	56.935	Linear Thru Zero	0.0002655	0.9999985	0.000000
Ge-1	73.922	Linear Thru Zero	0.0000000	0.0000000	0.000000

MXX 27962 Waters 3010/6020

Prep Method: 3010/6020
Analyst: KAN
Start Date/Time: 8/13/2014 9:40:44AM
End Date/Time: 8/13/2014 2:30:44PM

Temp C/HD ID/Grid ID: 96C/5/1E
Thermometer ID: 24
Spike Soln Lot #: MXX-14-16/P776
Spike Amount (mL): 0.5/0.25

HNO3 Lot #: P924
HCl Lot #: P774
Vessel Lot #: P1026
Filter Lot#:
Comments: LAB FILTERS

Lab Sample ID	Sample Type	Lab Filtered ?	Initial Vol (mL)	Final Vol (mL)	Original HSN	Paired HSN	Container_Id	Comments
1226435	MB	Y	25	25				
1226436	LCS	Y	25	25				
1143645001	PS	Y	25	25			1143645001-K	
1226437	MS	Y	25	25	1143645001			
1226438	MSD	Y	25	25	1143645001	1226437		
1226439	BND	Y	25	25	1143645001			
1143645002	BMS	Y	25	25	1143645001		1143645002-K	
1143645003	BMSD	Y	25	25	1143645001	1143645002	1143645003-K	
1143645004	PS	Y	25	25			1143645004-K	
1143645005	PS	Y	25	25			1143645005-K	
1143645006	PS	Y	25	25			1143645006-K	
1143646007	PS	Y	25	25			1143646007-J	

HNO3 samples were verified to be pH <2 at Sample Receiving.

Workorder No. 1143645

Waters Department

Method: SM21 2320B

Method Batch Id: WTI3998

Analysis Batch Id: WTI3998

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225772		8/8/2014 11:05:15AM
Lab Control Sample	1225773		8/8/2014 11:14:10AM
QC Required Sample	1148349001		8/8/2014 12:48:33PM
Duplicate	1225774		8/8/2014 12:56:27PM
Paying sample	1143645004	WW-06-072914	8/8/2014 2:36:46PM
Paying sample	1143645005	WW-01-072914	8/8/2014 2:43:59PM
Paying sample	1143645006	WW-99-072914	8/8/2014 2:52:15PM
Paying sample	1143645001	WW-05-072914	8/8/2014 3:55:19PM
Billable Duplicate	1143645008	WW-05-072914-DUP	8/8/2014 4:02:42PM

Workorder No. 1143645

Waters Department

Method: SM21 2320B

Method Batch Id: WTI3998

Analysis Batch Id: WTI3998

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Method Blank	1225772		8/8/2014 11:05:15AM
Lab Control Sample	1225773		8/8/2014 11:14:10AM
QC Required Sample	1148349001		8/8/2014 12:48:33PM
Duplicate	1225774		8/8/2014 12:56:27PM
Paying sample	1143645004	WW-06-072914	8/8/2014 2:36:46PM
Paying sample	1143645005	WW-01-072914	8/8/2014 2:43:59PM
Paying sample	1143645006	WW-99-072914	8/8/2014 2:52:15PM
Paying sample	1143645001	WW-05-072914	8/8/2014 3:55:19PM
Billable Duplicate	1143645008	WW-05-072914-DUP	8/8/2014 4:02:42PM

SGS Ref.#	1225772	Method Blank	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	
Project Name/#	Cape Romanzof SS015		**Method**	
Matrix	Water (Surface, Eff., Ground)		**Date**	

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Waters Department					
Alkalinity	5.00U	10.0	3.10	mg/L	08/08/14
Batch WTI3998					
Method SM21 2320B					
Instrument Titration					

SGS Ref.#	1225774	Duplicate	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	
Project Name/#	Cape Romanzof SS015		**Method**	
Original	1148349001		**Date**	
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Waters Department						
Alkalinity	97.0	97.5	mg/L	1	(< 25)	08/08/2014

Batch WTI3998
Method SM21 2320B
Instrument Titration

SGS Ref.#	1143645008	Billable Duplicate	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		**Prep Batch**	
Project Name/#	Cape Romanzof SS015		**Method**	
Original	1143645001		**Date**	
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Waters Department						
Alkalinity	49.8	49.6	mg/L	0	(< 25)	08/08/2014
Batch WTI3998						
Method SM21 2320B						
Instrument Titration						

SGS Ref.#	1225773 Lab Control Sample	**Printed Date/Time**	10/01/2014	15:35
		Prep Batch		
Client Name	EA Engineering, Science and Tech.	**Method**		
Project Name/#	Cape Romanzof SS015	**Date**		
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Waters Department								
Alkalinity	LCS	250	100	(85-115)			250 mg/L	08/08/2014

Batch WTI3998
Method SM21 2320B
Instrument Titration

SGS North America Inc.

WTI3998

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646, 1148349

Queue: **WTI** Batch: **3998**

Method: SM21 2320B

Run Date: 08/08/14 11:05 - 08/08/14 16:02

Extraction Batch(es):

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: Ngoc
Printed Name: Ngoc Le
Date: 8/8/14

Reviewer's Signature
Printed Name: Stephanie Charley
Date: 8-8-14

Controlled Document Number: FS-0038 (Revised 03/22/2011)

rmination overview

Time	Method	HSN	Conductivity (us/cm)	pH	Low Level Alk (mg/L)	Total Alkalinity	HC03 Alk	CO3 Alk	OH Alk	Acidity (mg/L)	Resistance (o...	Temperature
8-08 09:43:12 UTC-8	pH CAL- 3buffers SGS	pH Cal							6.89		100.20	
8-08 09:56:21 UTC-8	pH SGS	pH 7		6.96								
8-08 10:02:31 UTC-8	pH SGS	pH 4		3.97								
8-08 10:08:38 UTC-8	pH SGS	pH 10		10.01								
8-08 10:13:51 UTC-8	Conductivity Cal SGS	Cond Cal 998	0.99	22.71								
8-08 10:26:53 UTC-8	Conductivity Cal SGS	Cond Cal 998	0.98	22.70								
8-08 10:30:37 UTC-8	Conductivity STD Check SGS	Cond Cal 1.04	1.40	22.65							7142.86	
8-08 10:35:02 UTC-8	Conductivity STD Check SGS	Cond Cal 9.32	9.50	22.58							1052.63	
8-08 10:38:47 UTC-8	Conductivity STD Check SGS	Cond Cal 99.6	99.20	22.72							100.81	
8-08 10:42:32 UTC-8	Conductivity STD Check SGS	Cond Cal 998	1016.50	22.68							9.84	
8-08 10:46:16 UTC-8	Conductivity STD Check SGS	Cond Cal 9989	9897.20	22.74							1.01	
8-08 10:54:28 UTC-8	Cond-pH-Alkalinity SGS	Rinse	0.90	6.01	2.65	3.61	invalid	0.00	0.00		11111.11	22.61
8-08 11:05:15 UTC-8	Cond-pH-Alkalinity SGS	MB	0.50	6.11	0.72	1.24	invalid	0.00	0.00		20000.00	22.52
8-08 11:14:10 UTC-8	Cond-pH-Alkalinity SGS	LCS Alkalinity	553.20	10.02		250.20	18.12	232.08	0.00		18.08	116.04
8-08 11:30:53 UTC-8	pH-Alkalinity SGS	DL 1		7.48	3.67	4.04	3.67	0.00	0.00			
8-08 11:39:06 UTC-8	pH-Alkalinity SGS	DL 2		6.52	2.76	3.20	2.76	0.00	0.00			
8-08 11:45:56 UTC-8	pH-Alkalinity SGS	DL 3		6.19	2.55	2.96	2.55	0.00	0.00			
8-08 11:52:44 UTC-8	pH-Alkalinity SGS	DL 4		6.10	2.46	2.87	2.46	0.00	0.00			
8-08 11:59:41 UTC-8	pH-Alkalinity SGS	DL 5		5.99	2.38	2.82	2.38	0.00	0.00			
8-08 12:06:31 UTC-8	pH-Alkalinity SGS	DL 6		5.85	2.28	2.76	2.28	0.00	0.00			
8-08 12:13:15 UTC-8	pH-Alkalinity SGS	DL 7		5.81	2.25	2.65	2.25	0.00	0.00			
8-08 12:20:17 UTC-8	pH-Alkalinity SGS	DL 8		5.73	2.23	2.63	2.23	0.00	0.00			
8-08 12:27:20 UTC-8	pH-Alkalinity SGS	DL 9		5.68	2.12	2.53	2.12	0.00	0.00			
8-08 12:34:24 UTC-8	pH-Alkalinity SGS	DL 11		5.63	2.24	2.68	2.24	0.00	0.00			
8-08 12:41:31 UTC-8	pH-Alkalinity SGS	DL 1 rerun		5.33	1.73	2.21	1.73	0.00	0.00			
8-08 12:48:33 UTC-8	pH-Alkalinity SGS	8349-1D		6.13		96.96	96.96	0.00	0.00			
8-08 12:56:27 UTC-8	pH-Alkalinity SGS	8349-1D DUP		6.28		97.48	97.48	0.00	0.00			
8-08 13:04:15 UTC-8	pH-Alkalinity SGS	8349-1D		6.30		invalid	invalid	0.00	0.00			
8-08 13:12:00 UTC-8	pH-Alkalinity SGS	8349-1D DUP		6.31		90.29	90.29	0.00	0.00			
8-08 13:24:15 UTC-8	pH-Alkalinity SGS	8349-1D		6.35		88.12	88.12	0.00	0.00			
8-08 13:33:36 UTC-8	pH-Alkalinity SGS	8349-3C		7.19		161.96	161.96	0.00	0.00			
8-08 13:41:50 UTC-8	pH-Alkalinity SGS	8349-3C DUP		7.20		162.24	162.24	0.00	0.00			
8-08 13:50:00 UTC-8	pH-Alkalinity SGS	8349-4C		6.80		279.86	279.86	0.00	0.00			
8-08 13:59:31 UTC-8	pH-Alkalinity SGS	8349-5C		7.07		371.76	371.76	0.00	0.00			
8-08 14:09:45 UTC-8	pH-Alkalinity SGS	8349-6C		7.34		194.53	194.53	0.00	0.00			
8-08 14:18:14 UTC-8	pH-Alkalinity SGS	8349-7C		7.35		194.25	194.25	0.00	0.00			
8-08 14:26:48 UTC-8	pH-Alkalinity SGS	8349-8C		6.74		305.91	305.91	0.00	0.00			
8-08 14:36:46 UTC-8	pH-Alkalinity SGS	3645-4J		5.72		27.16	27.16	0.00	0.00			
8-08 14:43:59 UTC-8	pH-Alkalinity SGS	3645-5J		6.69		144.22	144.22	0.00	0.00			
8-08 14:52:15 UTC-8	pH-Alkalinity SGS	3645-6J		5.84		49.56	49.56	0.00	0.00			
8-08 14:59:33 UTC-8	pH-Alkalinity SGS	3646-7J		4.47		0.00	0.00	0.00	0.00			
8-08 15:04:52 UTC-8	pH SGS	8343-1F		8.12								
8-08 15:19:43 UTC-8	Cond-pH-Alkalinity SGS	8348-2C 20x	1078.80	5.95		invalid	invalid	0.00	0.00		9.27	20.01
8-08 15:32:17 UTC-8	Cond-pH-Alkalinity SGS	8348-2C 20x DUP	1106.50	5.93		309.66	309.66	0.00	0.00		9.04	19.98

rmination overview

Time	Method	HSN	Conductivity (us/cm)	pH	Low Level Alk (mg/L)	Total Alkalinity	HC03 Alk	CO3 Alk	OH Alk	Acidity (mg/L)	Resistance (o...	Temperature
3-08 15:55:19 UTC-8	pH-Alkalinity SGS	3645-1J		5.91		49.75	49.75	0.00	0.00			
3-08 16:02:42 UTC-8	pH-Alkalinity SGS	3645-8A		5.95		49.60	49.60	0.00	0.00			
3-08 16:10:06 UTC-8	pH SGS	8348-2C 20x		5.97								
3-08 16:14:50 UTC-8	pH SGS	8348-2C 20x DUP		5.96								
3-08 16:19:39 UTC-8	pH-Alkalinity SGS	3645-8A rerun		5.04	invalid	1.15	invalid	0.00	0.00			

SGS North America Inc.

Weekly calibration required for conductivity and pH

Conductivity last calibrated on: 08.08.14
pH last calibrated on: 08.08.14

Analyst: NLL
Date: 08/08/14

Auto-Titrator

File: 08.08.14

Method	Queue/Batch:
pH: SM4500H-B	WPH 3996
Conductivity: SM2510B	WAT 3997
Resistivity: SM2510A	WAT 2
Alkalinity: SM2320B	WTI 3998
Acidity: SM2310B	WTI 2

Sample ID	Post	Reporting (circle)	Comments
pH Cal	N	pH/ Cond/ Alk/ Acid/ Resist	
pH 7	Y	pH/ Cond/ Alk/ Acid/ Resist	1225762
pH 4	Y	pH/ Cond/ Alk/ Acid/ Resist	763
pH 10	Y	pH/ Cond/ Alk/ Acid/ Resist	764
Cond Cal 998	N	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 998	Y	pH/ Cond/ Alk/ Acid/ Resist	1225767
Cond Cal 1.04	N	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 9.32	Y	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 99.6	N	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 998	N	pH/ Cond/ Alk/ Acid/ Resist	
Cond Cal 9989	Y	pH/ Cond/ Alk/ Acid/ Resist	1225768
Rinse	N	pH/ Cond/ Alk/ Acid/ Resist	
Rinse	N	pH/ Cond/ Alk/ Acid/ Resist	
MB	Y	pH/ Cond/ Alk/ Acid/ Resist	1225766 / 1225772
LCS Alkalinity	Y	pH/ Cond/ Alk/ Acid/ Resist	1225773
DL1	N	pH/ Cond/ Alk/ Acid/ Resist	
2	Y	pH/ Cond/ Alk/ Acid/ Resist	
3	Y	pH/ Cond/ Alk/ Acid/ Resist	
4	Y	pH/ Cond/ Alk/ Acid/ Resist	
5	Y	pH/ Cond/ Alk/ Acid/ Resist	
6	Y	pH/ Cond/ Alk/ Acid/ Resist	
7	Y	pH/ Cond/ Alk/ Acid/ Resist	
8	Y	pH/ Cond/ Alk/ Acid/ Resist	
9	N	pH/ Cond/ Alk/ Acid/ Resist	
11	Y	pH/ Cond/ Alk/ Acid/ Resist	
DL1 Rerun	N	pH/ Cond/ Alk/ Acid/ Resist	
8349-1D	Y	pH/ Cond/ Alk/ Acid/ Resist	
-1D DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	1225774
-1D	Y	pH/ Cond/ Alk/ Acid/ Resist	
-1D DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	
-1D	N	pH/ Cond/ Alk/ Acid/ Resist	
8349-3C	Y	pH/ Cond/ Alk/ Acid/ Resist	
-3C DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	1225765 / 1225775
-4C		pH/ Cond/ Alk/ Acid/ Resist	
-5C		pH/ Cond/ Alk/ Acid/ Resist	

Titrant Lot #s: NaOH: P537
H_2SO_4: P345

pH/Alkalinity/Acidity Standards

Low Cal Std - pH 4.0 Lot# P-1047
Cal Std - pH 7.0 Lot# P-1044
High Cal Std - pH 10.0 Lot# P-1042

Alkalinity LCS Lot# LW13-39-6B
Acidity LCS Lot# LW13-39-33B

P = Alk to pH 8.3
T = Alk to pH 4.5

Conductivity Standards

Low Cal Std True Value 1	1.04	Lot #	P-953
Low Cal Std True Value 2	9.32	Lot #	P-961
Mid Cal Std True Value 1	99.6	Lot #	P-952
Mid Cal Std True Value 2	998	Lot #	P-849
High Cal Std True Value	9989	Lot #	P-896

P & T Relationship	OH Alkalinity	CO_3 Alkalinity	HCO_3 Alkalinity
P = 0	0	0	T
P< 1/2 T	0	2P	T - 2P
P = 1/2 T	0	2P	0
P> 1/2 T	2P - T	2(T - P)	0
P = T	T	0	0

Refer to pg 167

SGS North America Inc.

Weekly calibration required for conductivity and pH

Auto-Titrator

Conductivity last calibrated on: _____

pH last calibrated on: _____

Analyst: _____

Date: _____

File: _____

Method	Queue/Batch:
pH: SM4500H-B	WPH _____
Conductivity: SM2510B	WAT _____
Resistivity: SM2510A	WAT _____
Alkalinity: SM2320B	WTI _____
Acidity: SM2310B	~~WTI~~ _____

Sample ID	Post	Reporting (circle)	Comments
8349 -6C	Y	pH/ Cond/ Alk/ Acid/ Resist	
-7C	Y	pH/ Cond/ Alk/ Acid/ Resist	
-8C	Y	pH/ Cond/ Alk/ Acid/ Resist	
3645-4J		pH/ Cond/ Alk/ Acid/ Resist	
-5J		pH/ Cond/ Alk/ Acid/ Resist	
-6J		pH/ Cond/ Alk/ Acid/ Resist	
-7J		pH/ Cond/ Alk/ Acid/ Resist	
8343 - 1F		pH/ Cond/ Alk/ Acid/ Resist	
8348-2C 20x	Y	pH/ Cond/ Alk/ Acid/ Resist	
8348-2C 20x DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	1225769
3645-1J	Y	pH/ Cond/ Alk/ Acid/ Resist	
-8A	Y	pH/ Cond/ Alk/ Acid/ Resist	
8348-2C 20x	Y	pH/ Cond/ Alk/ Acid/ Resist	
-2C 20x DUP	Y	pH/ Cond/ Alk/ Acid/ Resist	
3645-8A rerun	N	pH/ Cond/ Alk/ Acid/ Resist	
3683-2B	Y	pH/ Cond/ Alk/ Acid/ Resist	
		~~pH/ Cond/ Alk/ Acid/ Resist~~	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	8183MNL
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	
		pH/ Cond/ Alk/ Acid/ Resist	

Titrant Lot #s: NaOH: _____

H_2SO_4: _____

pH/Alkalinity/Acidity Standards

Low Cal Std - pH 4.0 Lot# _____

Cal Std - pH 7.0 Lot# _____

High Cal Std - pH 10.0 Lot# _____

Alkalinity LCS Lot# _____

Acidity LCS Lot# _____

P = Alk to pH 8.3

T = Alk to pH 4.5

Conductivity Standards

Low Cal Std True Value 1 _____ Lot # _____

Low Cal Std True Value 2 _____ Lot # _____

Mid Cal Std True Value 1 _____ Lot # _____

Mid Cal Std True Value 2 _____ Lot # _____

High Cal Std True Value _____ Lot # _____

P & T Relationship	OH Alkalinity	CO_3 Alkalinity	HCO_3 Alkalinity
P = 0	0	0	T
P< 1/2 T	0	2P	T - 2P
P = 1/2 T	0	2P	0
P> 1/2 T	2P - T	2(T - P)	0
P = T	T	0	0

Workorder No. 1143645

Waters Department

Method: SW9056A

Method Batch Id: WXX10639

Analysis Batch Id: WIC5252

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Se87nd S7Vr8e Calib Cf e8c	1226193		o/o/2014 1:09:0uPM
Initial Calib heriki8ati7n	1226194		o/o/2014 1:29:29PM
Initial Calibrati7n Blanc	1226195		o/o/2014 1:49:45PM
C7ntinVing Calib heriki8ati7n	122619o		o/o/2014 9:12:31PM
Calibrati7n Blanc	122619u		o/o/2014 9:32:4uPM
Metf 7d Blanc	1226169		o/o/2014 9:53:09PM
Lab C7ntr7l Sample	122616o		o/o/2014 o:13:25PM
C7ntinVing Calib heriki8ati7n	12261o0		o/o/2014 11:16:12PM
Calibrati7n Blanc	12261o1		o/o/2014 11:36:31PM
Undigested DVpli8ate	122616u		o/u/2014 12:19:09AM
C7ntinVing Calib heriki8ati7n	12261o2		o/u/2014 2:3u:15AM
Calibrati7n Blanc	12261o3		o/u/2014 2:5u:34AM

SGS Ref.#	1226175	Initial Calibration Blank	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Nitrate-N	0.0500U	0.100	mg/L	08/08/14
Nitrite-N	0.0360J	0.100	mg/L	08/08/14
Total Nitrate/Nitrite-N	0.0360J	0.100	mg/L	08/08/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226179	Calibration Blank	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Nitrate-N	0.0500U	0.100	mg/L	08/08/14
Nitrite-N	0.0350J	0.100	mg/L	08/08/14
Total Nitrate/Nitrite-N	0.0350J	0.100	mg/L	08/08/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226181	Calibration Blank	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Nitrate-N	0.0500U	0.100	mg/L	08/08/14
Nitrite-N	0.0350J	0.100	mg/L	08/08/14
Total Nitrate/Nitrite-N	0.0350J	0.100	mg/L	08/08/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226183	Calibration Blank	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Nitrate-N	0.0500U	0.100	mg/L	08/09/14
Nitrite-N	0.0380J	0.100	mg/L	08/09/14
Total Nitrate/Nitrite-N	0.0380J	0.100	mg/L	08/09/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226173 Second Source Calib Check	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	QCS	24.5	98	(90-110)	25 mg/L	08/08/2014
Nitrite-N	QCS	25.7	103	(90-110)	25 mg/L	08/08/2014
Total Nitrate/Nitrite-N	QCS	50.2	100	(90-110)	50 mg/L	08/08/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226174 Initial Calib Verification	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	ICV	19.8	99	(90-110)	20 mg/L	08/08/2014
Nitrite-N	ICV	20.7	104	(90-110)	20 mg/L	08/08/2014
Total Nitrate/Nitrite-N	ICV	40.6	101	(90-110)	40 mg/L	08/08/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226178 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	CCV	20.1	101	(90-110)	20 mg/L	08/08/2014
Nitrite-N	CCV	20.4	102	(90-110)	20 mg/L	08/08/2014
Total Nitrate/Nitrite-N	CCV	40.5	101	(90-110)	40 mg/L	08/08/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226180 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	CCV	20.6	103	(90-110)	20 mg/L	08/08/2014
Nitrite-N	CCV	20.7	104	(90-110)	20 mg/L	08/08/2014
Total Nitrate/Nitrite-N	CCV	41.3	103	(90-110)	40 mg/L	08/08/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226182 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:35
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Nitrate-N	CCV	20.5	102	(90-110)	20 mg/L	08/09/2014
Nitrite-N	CCV	20.8	104	(90-110)	20 mg/L	08/09/2014
Total Nitrate/Nitrite-N	CCV	41.3	103	(90-110)	40 mg/L	08/09/2014

I atcs WIC5252
Mets od SW9056A
unhtrBment Metrohm 733 DX2

Workorder No. 1143645

Waters Department

Method: SW9056A

Method Batch Id: WXX10639

Analysis Batch Id: WIC5252

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Second Source Calib Check	1226173		8/8/2014 1:07:09PM
Initial Calib Verification	1226174		8/8/2014 1:27:27PM
Initial Calibration Blank	1226175		8/8/2014 1:47:45PM
Continuing Calib Verification	1226178		8/8/2014 7:12:31PM
Calibration Blank	1226179		8/8/2014 7:32:49PM
Method Blank	1226167		8/8/2014 7:53:07PM
Lab Control Sample	1226168		8/8/2014 8:13:25PM
Continuing Calib Verification	1226180		8/8/2014 11:16:12PM
Calibration Blank	1226181		8/8/2014 11:36:31PM
Undigested Duplicate	1226169		8/9/2014 12:17:07AM
Continuing Calib Verification	1226182		8/9/2014 2:39:15AM
Calibration Blank	1226183		8/9/2014 2:59:34AM

SGS Ref.#	1226167	Method Blank	**Printed Date/Time**		10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	WXX10639
Project Name/#	Cape Romanzof SS015			**Method**	METHOD
Matrix	Water (Surface, Eff., Ground)			**Date**	08/08/2014

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Waters Department					
Nitrate-N	0.0500U	0.100	0.0310	mg/L	08/08/14
Nitrite-N	0.0500U	0.100	0.0310	mg/L	08/08/14
Total Nitrate/Nitrite-N	0.0500U	0.100	0.0310	mg/L	08/08/14

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226169 Undigested Duplicate	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.	**Prep Batch**	WXX10639
Project Name/#	Cape Romanzof SS015	**Method**	METHOD
Original	1143645001	**Date**	8/8/2014 12:07:00PM
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Waters Department						
Total Nitrate/Nitrite-N	0.520J	0.540	mg/L	4	(< 20)	08/09/2014

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226168 Lab Control Sample	**Printed Date/Time**	10/01/2014 15:36
		Prep Batch	WXX10639
Client Name	EA Engineering, Science and Tech.	**Method**	METHOD
Project Name/#	Cape Romanzof SS015	**Date**	08/08/2014
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Waters Department								
Nitrate-N	LCS	9.61	96	(90-110)			10 mg/L	08/08/2014
Nitrite-N	LCS	9.97	100	(90-110)			10 mg/L	08/08/2014
Total Nitrate/Nitrite-N	LCS	19.6	98	(90-110)			20 mg/L	08/08/2014

Batch WIC5252
Method SW9056A
Instrument Metrohm 733 DX2

Workorder No. 1143645

Waters Department

Method: SW9056A

Method Batch Id: WXX10640

Analysis Batch Id: WIC5251

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Second Source Calib Check	1226020		8/8/2014 1:07:09PM
Initial Calib Verification	1226021		8/8/2014 1:27:27PM
Initial Calibration Blank	1226022		8/8/2014 1:47:45PM
Continuing Calib Verification	1226025		8/8/2014 7:12:31PM
Calibration Blank	1226026		8/8/2014 7:32:49PM
Method Blank	1226212		8/8/2014 7:53:07PM
Lab Control Sample	1226213		8/8/2014 8:13:25PM
Paying sample	1143645001	WW-05-072914	8/8/2014 8:33:43PM
Undigested Duplicate	1226214		8/8/2014 8:54:01PM
Billable Matrix Spike	1143645002	WW-05-072914 -MS	8/8/2014 9:14:20PM
Billable Matrix Spike Dup.	1143645003	WW-05-072914 -MSD	8/8/2014 9:34:39PM
Paying sample	1143645004	WW-06-072914	8/8/2014 9:54:57PM
Paying sample	1143645005	WW-01-072914	8/8/2014 10:15:16PM
Paying sample	1143645006	WW-99-072914	8/8/2014 10:35:35PM
Continuing Calib Verification	1226027		8/8/2014 11:16:12PM
Calibration Blank	1226028		8/8/2014 11:36:31PM

SGS Ref.#	1226022	Initial Calibration Blank	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Sulfate	0.0500U	0.100	mg/L	08/08/14
Batch WIC5251				
Method SW9056A				
Instrument Metrohm 733 DX2				

SGS Ref.#	1226026	Calibration Blank	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Sulfate	0.0500U	0.100	mg/L	08/08/14
Batch WIC5251				
Method SW9056A				
Instrument Metrohm 733 DX2				

SGS Ref.#	1226028	Calibration Blank	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.			
Project Name/#	Cape Romanzof SS015			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	RL/CL	Units	Analysis Date
Waters Department				
Sulfate	0.0500U	0.100	mg/L	08/08/14
Batch WIC5251				
Method SW9056A				
Instrument Metrohm 733 DX2				

SGS Ref.#	1226020 Second Source Calib Check	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Sulfate	QCS	23.6	94	(90-110)	25 mg/L	08/08/2014

I atcs WIC5251
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226021 Initial Calib Verification	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Sulfate	ICV	19.2	96	(90-110)	20 mg/L	08/08/2014

I atcs WIC5251
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226025 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Sulfate	CCV	19.4	97	(90-110)	20 mg/L	08/08/2014

I atcs WIC5251
Mets od SW9056A
unhtrBment Metrohm 733 DX2

SGS Ref.#	1226027 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Waters Department						
Sulfate	CCV	20.0	100	(90-110)	20 mg/L	08/08/2014

I atcs WIC5251
Mets od SW9056A
unhtrBment Metrohm 733 DX2

Workorder No. 1143645

Waters Department

Method: SW9056A

Method Batch Id: WXX10640

Analysis Batch Id: WIC5251

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Second Source Calib Check	1226020		8/8/2014 1:07:09PM
Initial Calib Verification	1226021		8/8/2014 1:27:27PM
Initial Calibration Blank	1226022		8/8/2014 1:47:45PM
Continuing Calib Verification	1226025		8/8/2014 7:12:31PM
Calibration Blank	1226026		8/8/2014 7:32:49PM
Method Blank	1226212		8/8/2014 7:53:07PM
Lab Control Sample	1226213		8/8/2014 8:13:25PM
Paying sample	1143645001	WW-05-072914	8/8/2014 8:33:43PM
Undigested Duplicate	1226214		8/8/2014 8:54:01PM
Billable Matrix Spike	1143645002	WW-05-072914 -MS	8/8/2014 9:14:20PM
Billable Matrix Spike Dup.	1143645003	WW-05-072914 -MSD	8/8/2014 9:34:39PM
Paying sample	1143645004	WW-06-072914	8/8/2014 9:54:57PM
Paying sample	1143645005	WW-01-072914	8/8/2014 10:15:16PM
Paying sample	1143645006	WW-99-072914	8/8/2014 10:35:35PM
Continuing Calib Verification	1226027		8/8/2014 11:16:12PM
Calibration Blank	1226028		8/8/2014 11:36:31PM

SGS Ref.#	1226212	Method Blank	**Printed Date/Time**		10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	WXX10640
Project Name/#	Cape Romanzof SS015			**Method**	METHOD
Matrix	Water (Surface, Eff., Ground)			**Date**	08/08/2014

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Waters Department					
Sulfate	0.0500U	0.100	0.0310	mg/L	08/08/14
Batch	WIC5251				
Method	SW9056A				
Instrument	Metrohm 733 DX2				

SGS Ref.#	1226214 Undigested Duplicate	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.	**Prep Batch**	WXX10640
Project Name/#	Cape Romanzof SS015	**Method**	METHOD
Original	1143645001	**Date**	8/8/2014 12:07:00PM
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Waters Department						
Sulfate	4.03	4.19	mg/L	4	(< 20)	08/08/2014

Batch WIC5251
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1226213 Lab Control Sample	**Printed Date/Time**	10/01/2014	15:36
		Prep Batch	WXX10640	
Client Name	EA Engineering, Science and Tech.	**Method**	METHOD	
Project Name/#	Cape Romanzof SS015	**Date**	08/08/2014	
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Waters Department								
Sulfate	LCS	9.47	95	(90-110)			10 mg/L	08/08/2014

Batch WIC5251
Method SW9056A
Instrument Metrohm 733 DX2

SGS Ref.#	1143645002	Billable Matrix Spike	**Printed Date/Time**	10/01/2014 15:36
	1143645003	Billable Matrix Spike Dup.	**Prep Batch**	WXX10640
			Method	SW9056 Extraction Waters/Liq
			Date	08/08/2014
Original	1143645001			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Qualifiers		Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount		Analysis Date
Waters Department											
Sulfate		BMS	4.03	13.9	99	(80-120)			10.0	mg/L	08/08/2014
		BMSD		14.0	100		1	(< 15)	10.0	mg/L	08/08/2014

Batch	WIC5251
Method	SW9056A
Instrument	Metrohm 733 DX2

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646

Queue: **WIC** Batch: **5252**

Method: EPA 300.0, SW9056A

Run Date: 08/08/14 13:07 - 08/09/14 02:59

Extraction Batch(es): WXX10639

Notes:
Samples ran at a 10X dilution due to being preserved with H_2SO_4 per Heather

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: SA
Printed Name: Stephanie Charley
Date: 8-12-14

Reviewer's Signature: Donald S. Harrell
Printed Name: Donald S. Harrell
Date: 8/16/14

Controlled Document Number: FS-0038 (Revised 03/22/2011)

SGS North America Inc.

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: IC3080514.qve
Data Files: y808206.chw-y809259.chw
Method: IC3AN:ems061314A.mtw
Cal. Date: 6/13/14

Run Date: 8-8-14 SLC 8-12-14
Queue/Batch: WXX: 10635 + 10636 WIC: 5251
Analyst: SLC 10640
WXX: 10639 WIC 5252

#	Sample ID	Comments	Post (Y/N)
1	CO		☐ Y ☒ N
2	CO		☐ Y ☒ N
3	CO		☐ Y ☒ N
4	QCS /		☒ Y ☐ N
5	ICV /		☒ Y ☐ N
6	ICB /		☒ Y ☐ N
7	MB /	1226012	☒ Y ☐ N
8	LCS /	1226013	☒ Y ☐ N
9	8349-5C 5X /		☒ Y ☐ N
10	-5C DUP 5X /	1226014	☒ Y ☐ N
11	-5C MS 5X /	1226015	☒ Y ☐ N
12	8349-1D 25X /	NP-used 1X SLC 8-11-14	☒ Y ☒ N
13	8349-3C 5X /		☒ Y ☐ N
14	8349-4C 5X /		☒ Y ☐ N
15	8349-6C /		☒ Y ☐ N
16	8349-1D /		☒ Y ☐ N
17	CCV /		☒ Y ☐ N
18	CB /		☒ Y ☐ N
19	8349-7C /		☒ Y ☐ N
20	-7C 5X /	NP-used 1X	☐ Y ☒ N
21	8349-8C /		☒ Y ☐ N
22	CCV /		☒ Y ☐ N
23	CB /	SLC 8-12-14	☒ Y ☐ N
24	MB /	1226216 1226212/1226167	☒ Y ☐ N
25	LCS /	1226217 1226213/1226168	☒ Y ☐ N
26	3645-1S /		☒ Y ☐ N
27	SLC 8349-1S DUP /	1226218 1226214	☒ Y ☐ N
28	8349-2S BMS /		☒ Y ☐ N
29	-3S BMSD /		☒ Y ☐ N
30	3645-4S /		☒ Y ☐ N
31	-5S /		☒ Y ☐ N
32	-6S /		☒ Y ☐ N
33	-7S /		☒ Y ☐ N
34	CCV /		☒ Y ☐ N
35	CB /		☒ Y ☐ N
36	3645-1I 10X /	SLC 8-12-14	☒ Y ☐ N
37	SLC 8349-1I DUP 10X /	1226219 1226169	☒ Y ☐ N
38	8349-2I BMS 10X /		☒ Y ☐ N
39	-3I BMSD 10X /		☒ Y ☐ N
40	-4I 10X /		☒ Y ☐ N

Daily Checks:
- ☒ Eluent Full
- ☒ Regenerate Full
- ☒ Water Full
- 13.86 Baseline (µS/cm)
- 9.2 Backpressure (Mpa)

Standard 1x dilution unless noted by sample ID.

Standards	Prep Date	Lot #
CCV/LFB:	8-8-14	P 759 / P847
QCS:		P 624 / P852
H2SO4:		P443
Eluent:		LW9-463-4B
Filter Lot#:		P1084

SGS North America Inc.

see pg 94 SLC 8-11-14

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: _____ Run Date: _____
Data Files: _____ Queue/Batch: _____
Method: _____ Analyst: _____
Cal. Date: _____

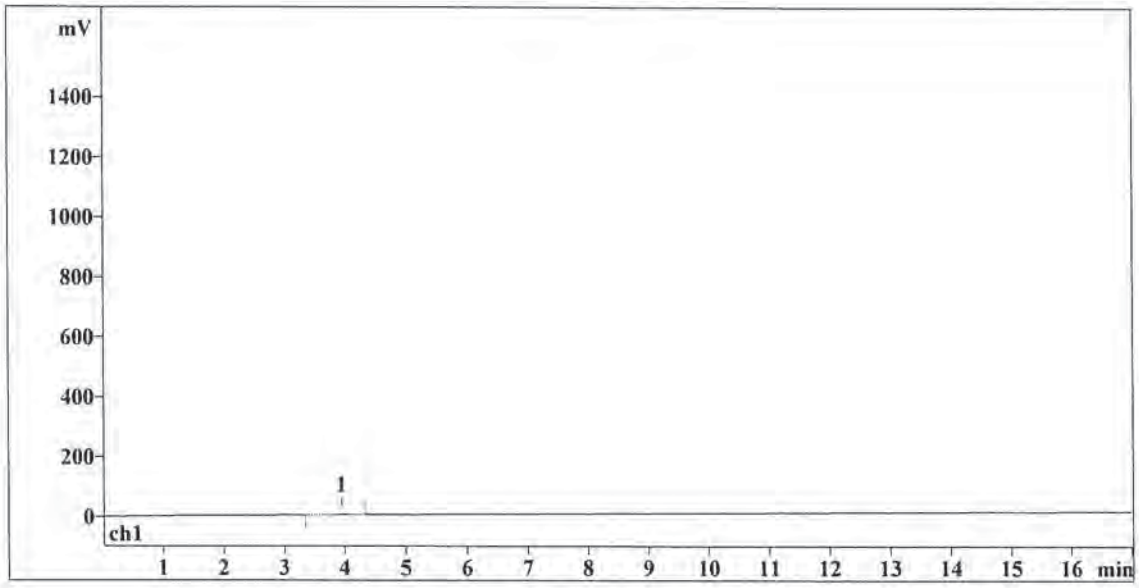
#	Sample ID	Comments	Post (Y/N)
41	3645-5I 10X	✓	☒ Y ☐ N
42	-6I 10X	✓	☒ Y ☐ N
43	-7I 10X	✓	☒ Y ☐ N
44	CCV	✓	☒ Y ☐ N
45	CB	✓	☒ Y ☐ N
			☐ Y ☐ N
			☐ Y ☐ N
			☐

Report date: 8/11/2014 1:48:33 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:06:14 PM
File: y8081206.chw Last save: 8/8/2014 12:23:15 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1898

SAMPLE:
:
Vial number: 1
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.95	1.61	23.199	0.000	

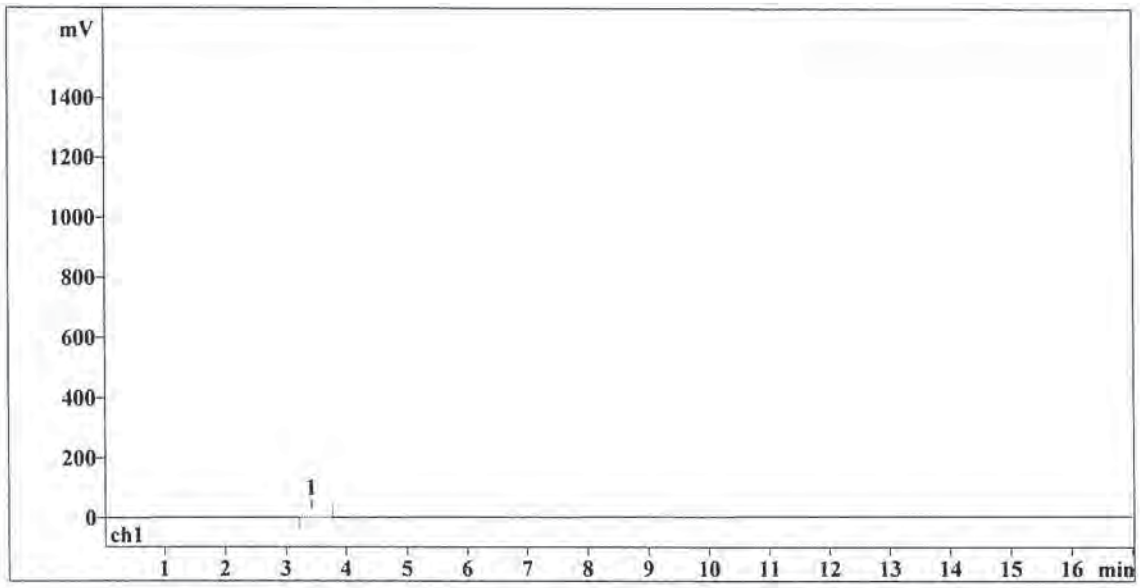
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:37 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:26:32 PM
File: y8081226.chw Last save: 8/8/2014 12:43:33 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1900

SAMPLE:
:
Vial number: 2
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.42	0.16	2.174	0.000	

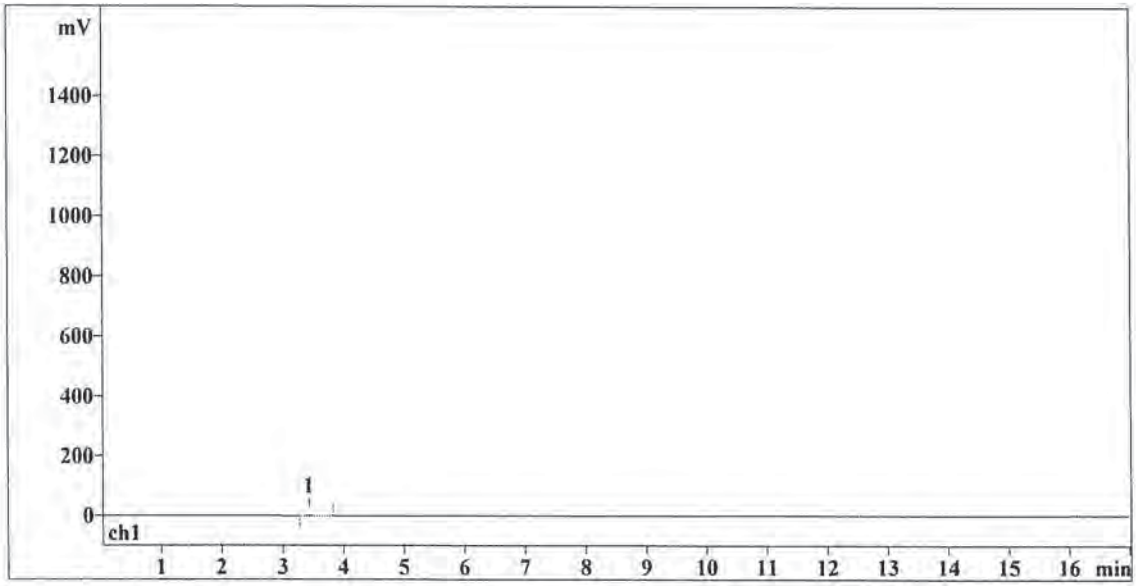
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:41 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:46:51 PM
File: y8081246.chw Last save: 8/8/2014 1:03:52 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1902

SAMPLE:
:
Vial number: 3
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.42	0.15	1.898	0.000	

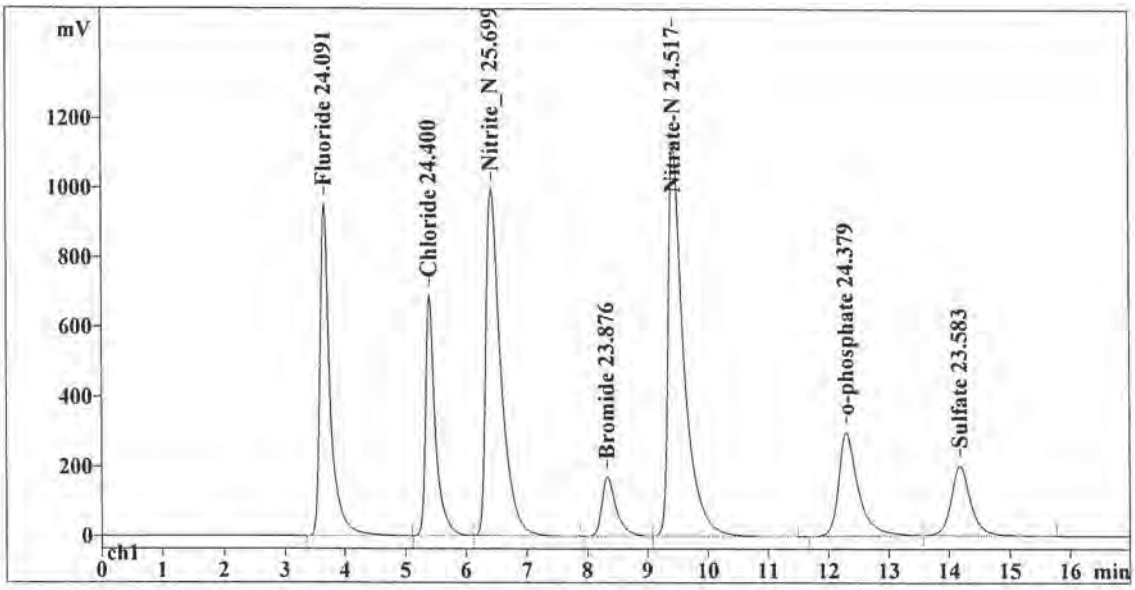
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:46 PM
Printed by: Stephanie L. Charley

Ident: QCS
Analysis from: 8/8/2014 1:07:09 PM
File: y8081307.chw Last save: 8/8/2014 1:24:09 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1904

SAMPLE:
:
Vial number: 4
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	952.29	11191.694	24.091	Fluoride
2	5.41	690.15	7472.977	24.400	Chloride
3	6.43	996.10	16891.334	25.699	Nitrite_N
4	8.34	170.37	2832.763	23.876	Bromide
5	9.45	1127.28	20080.104	24.517	Nitrate-N
6	12.30	298.12	6655.113	24.379	o-phosphate
7	14.18	201.40	4493.377	23.583	Sulfate
7	17.00	4435.71	69617.361	170.546	

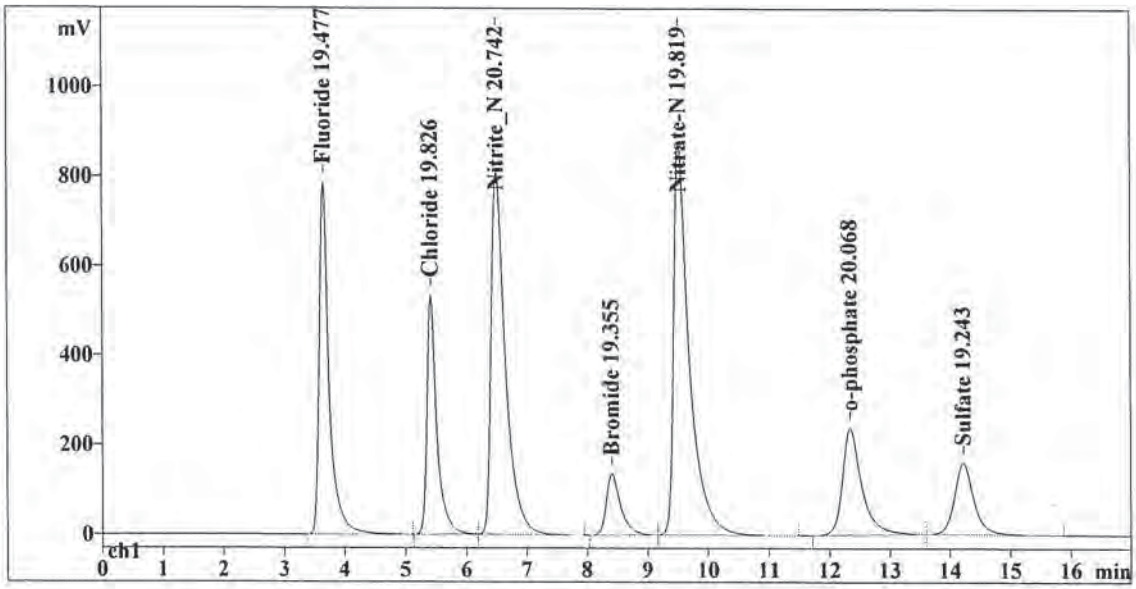
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:51 PM
Printed by: Stephanie L. Charley

Ident: ICV
Analysis from: 8/8/2014 1:27:27 PM
File: y8081327.chw Last save: 8/8/2014 1:44:27 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1906

SAMPLE:
:
Vial number: 5
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	787.84	8951.523	19.477	Fluoride
2	5.41	535.29	5915.618	19.826	Chloride
3	6.51	808.46	13494.281	20.742	Nitrite_N
4	8.41	137.18	2261.727	19.355	Bromide
5	9.53	876.05	15774.337	19.819	Nitrate-N
6	12.35	238.72	5352.051	20.068	o-phosphate
7	14.23	159.89	3591.885	19.243	Sulfate
7	17.00	3543.43	55341.422	138.530	

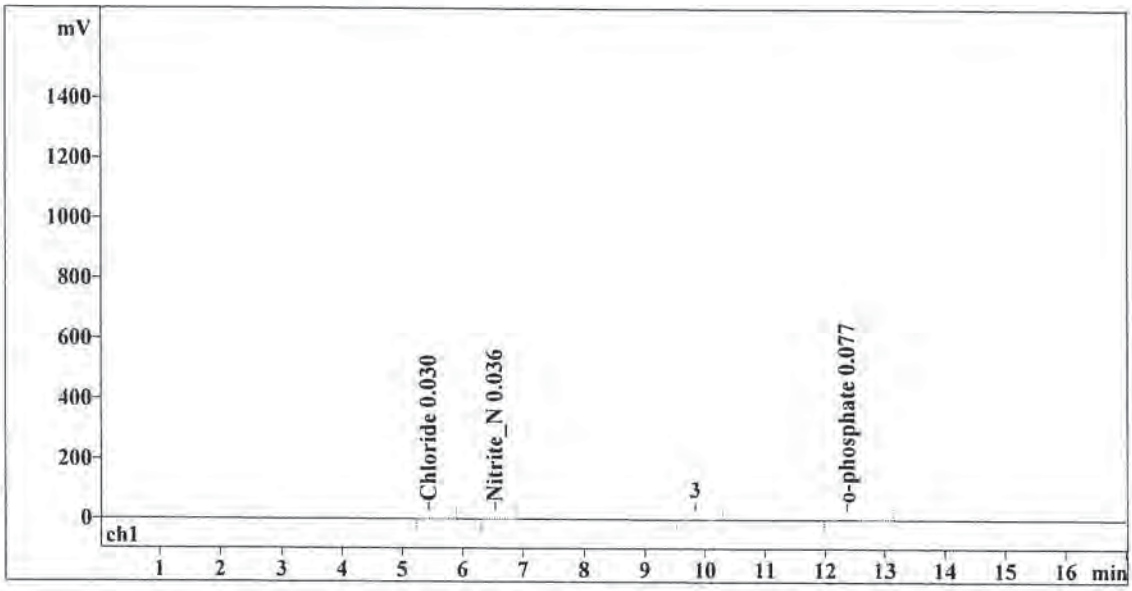
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METROHM LTD

Report date: 8/11/2014 1:49:02 PM
Printed by: Stephanie L. Charley

Ident: ICB
Analysis from: 8/8/2014 1:47:45 PM
File: y8081347.chw Last save: 8/8/2014 2:04:45 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1908

SAMPLE:
:
Vial number: 6
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.44	0.40	4.694	0.030	Chloride
2	6.54	0.18	2.313	0.036	Nitrite_N
3	9.82	0.21	3.804	0.000	
4	12.37	0.33	9.779	0.077	o-phosphate
4	17.00	1.11	20.590	0.143	

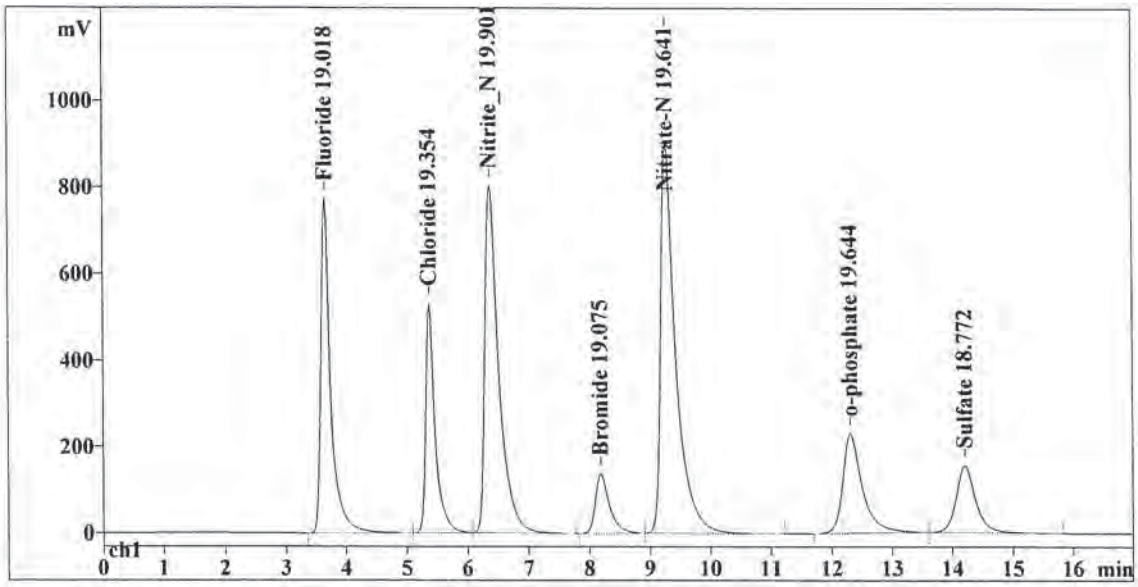
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:50:52 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 5:31:01 PM
File: y8081733.chw Last save: 8/9/2014 8:31:02 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1930

SAMPLE:
:
Vial number: 17
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	772.88	8731.231	19.018	Fluoride
2	5.38	530.56	5760.056	19.354	Chloride
3	6.38	802.59	12925.303	19.901	Nitrite_N
4	8.19	138.77	2226.887	19.075	Bromide
5	9.28	905.37	15615.881	19.641	Nitrate-N
6	12.32	231.41	5227.460	19.644	o-phosphate
7	14.21	155.62	3496.389	18.772	Sulfate
7	17.00	3537.19	53983.207	135.404	

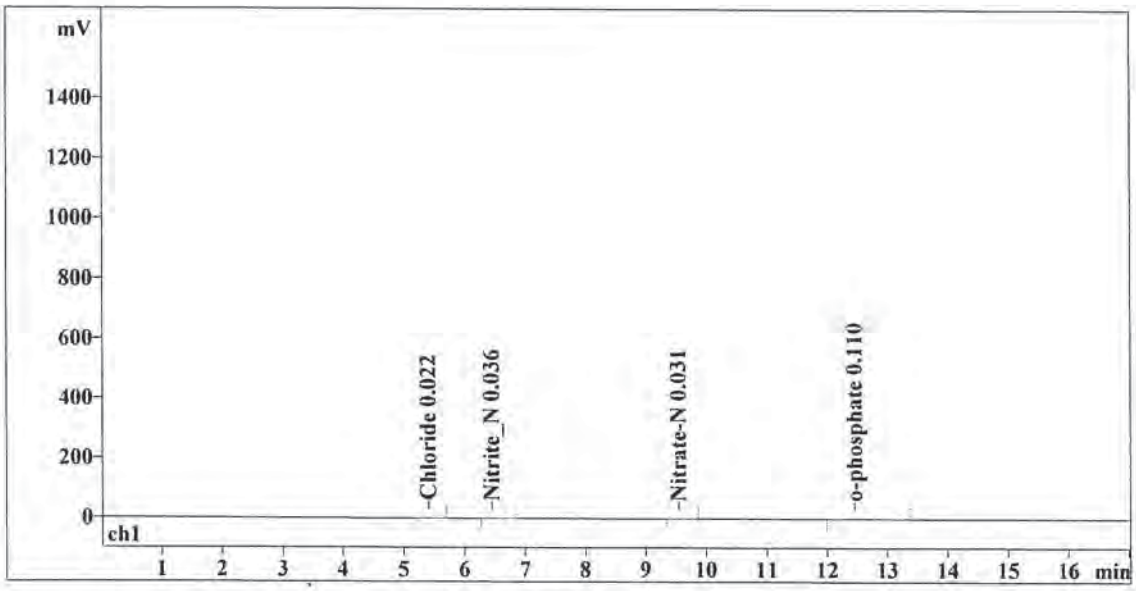
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:01 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 5:51:19 PM
File: y8081751.chw Last save: 8/8/2014 6:08:19 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1932

SAMPLE:
:
Vial number: 18
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.40	0.25	2.651	0.022	Chloride
2	6.45	0.18	2.244	0.036	Nitrite_N
3	9.55	0.10	1.567	0.031	Nitrate-N
4	12.45	0.52	17.788	0.110	o-phosphate
4	17.00	1.05	24.250	0.199	

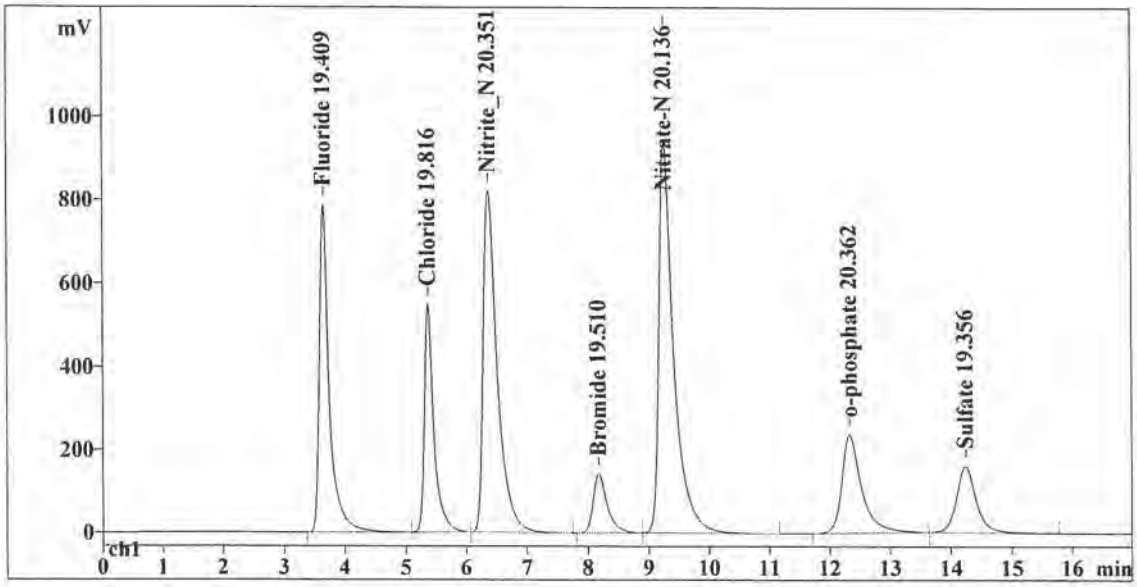
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METROHM LTD

Report date: 8/11/2014 1:51:44 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 7:12:31 PM
File: y8081914.chw Last save: 8/9/2014 8:31:24 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1940

SAMPLE:
:
Vial number: 22
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	788.78	8918.947	19.409	Fluoride
2	5.37	549.56	5912.543	19.816	Chloride
3	6.38	821.05	13229.721	20.351	Nitrite_N
4	8.18	143.34	2280.991	19.510	Bromide
5	9.26	941.12	16055.884	20.136	Nitrate-N
6	12.33	238.61	5438.853	20.362	o-phosphate
7	14.24	161.24	3614.732	19.356	Sulfate
7	17.00	3643.69	55451.671	138.940	

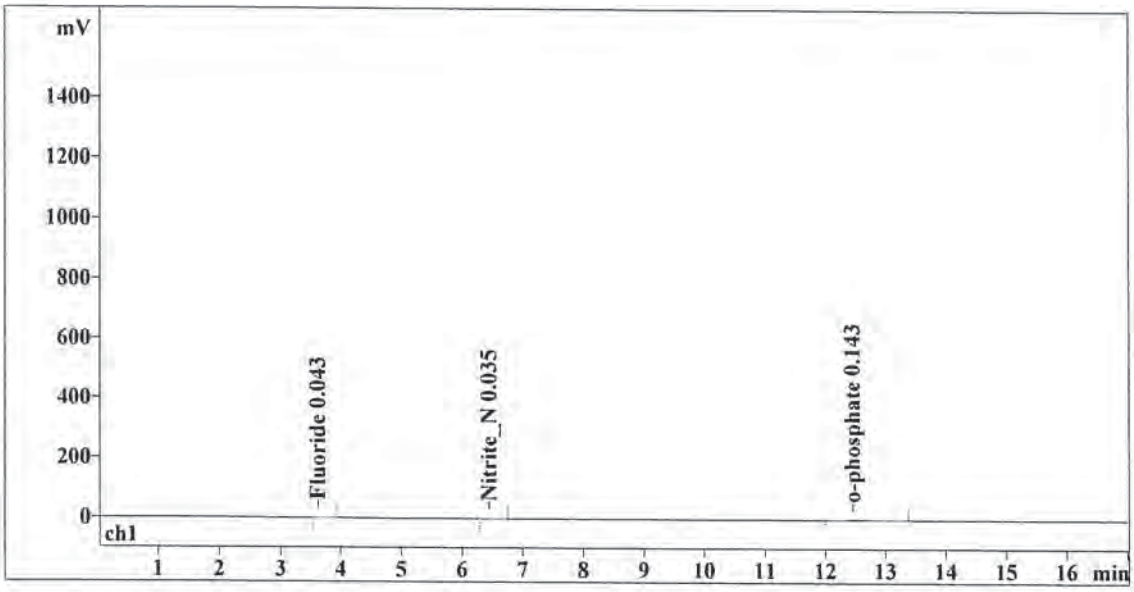
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:47 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 7:32:49 PM
File: y8081932.chw Last save: 8/8/2014 7:49:50 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1942

SAMPLE:
:
Vial number: 23
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.62	0.14	1.184	0.043	Fluoride
2	6.45	0.14	1.622	0.035	Nitrite_N
3	12.47	0.75	25.856	0.143	o-phosphate
3	17.00	1.02	28.662	0.221	

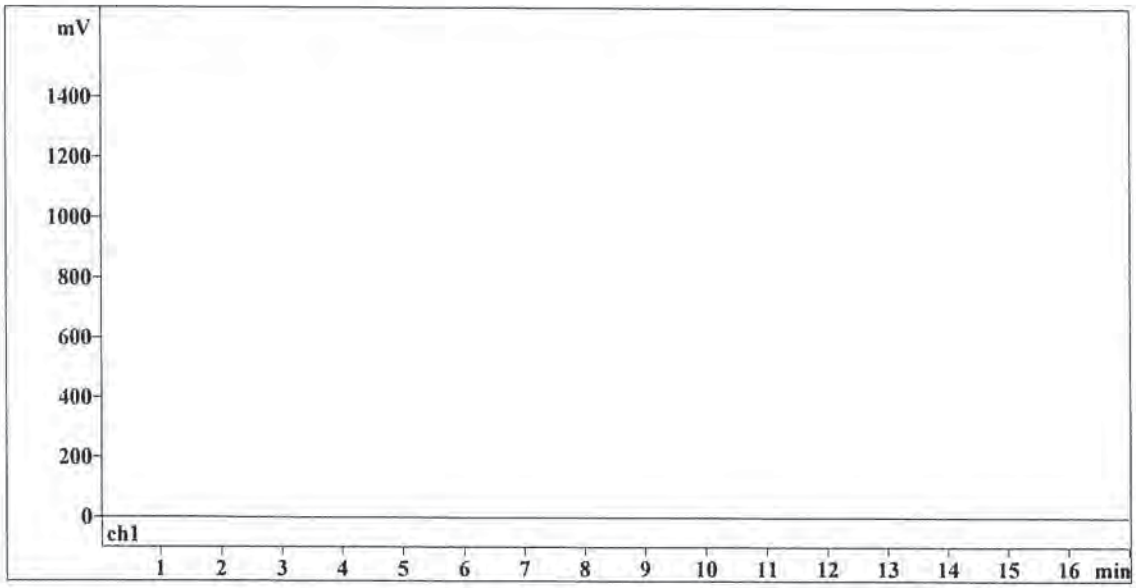
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METROHM LTD

Report date: 8/11/2014 1:51:51 PM
Printed by: Stephanie L. Charley

Ident: MB
Analysis from: 8/8/2014 7:53:07 PM
File: y8081953.chw Last save: 8/8/2014 8:10:07 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1944

SAMPLE:
:
Vial number: 24
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No peaks

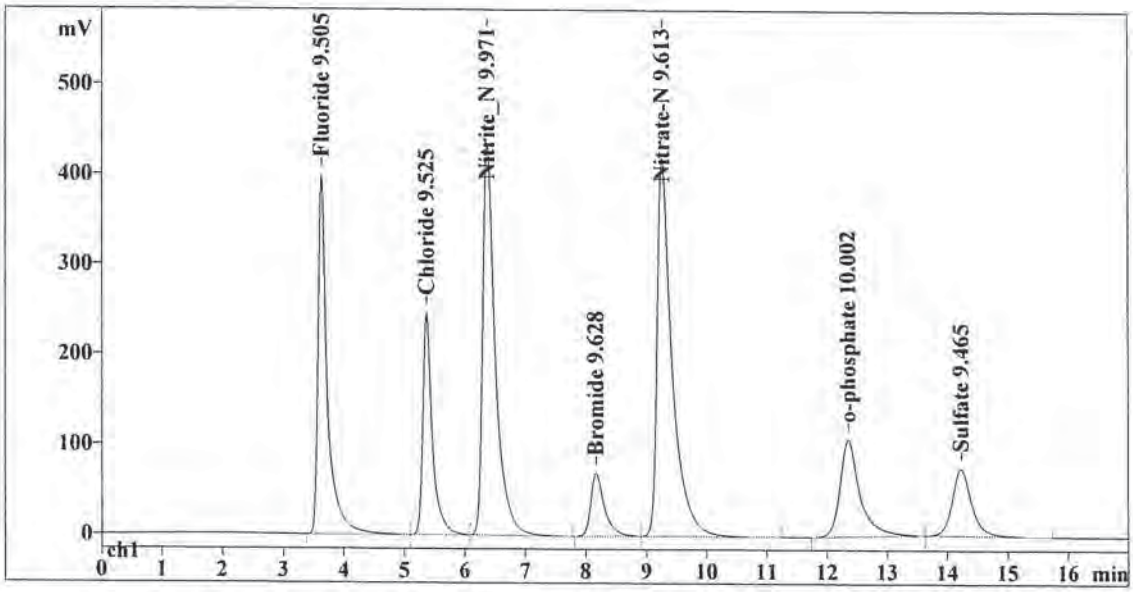
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:01 PM
Printed by: Stephanie L. Charley

Ident: LCS
Analysis from: 8/8/2014 8:13:25 PM
File: y8082015.chw Last save: 8/9/2014 8:31:35 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1946

SAMPLE:
:
Vial number: 25
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	398.99	4267.354	9.505	Fluoride
2	5.37	246.87	2697.357	9.525	Chloride
3	6.39	434.91	6343.857	9.971	Nitrite_N
4	8.17	70.19	1090.815	9.628	Bromide
5	9.27	420.84	7238.661	9.613	Nitrate-N
6	12.35	108.16	2538.170	10.002	o-phosphate
7	14.24	74.93	1693.627	9.465	Sulfate
7	17.00	1754.89	25869.842	67.710	

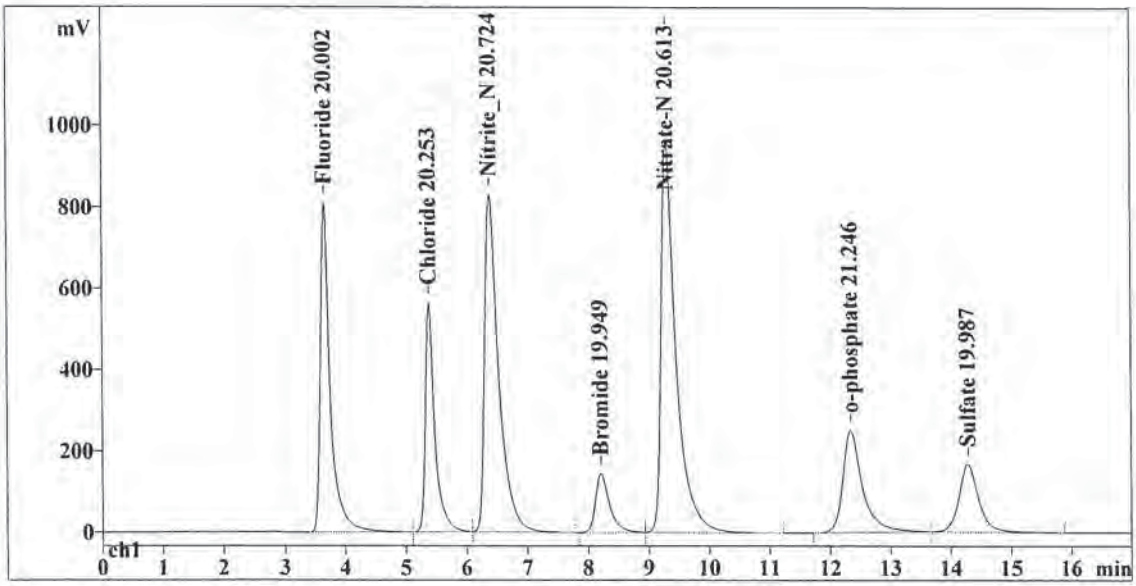
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:41 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 11:16:12 PM
File: y8082318.chw Last save: 8/9/2014 8:32:11 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1964

SAMPLE:
:
Vial number: 34
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	809.98	9204.138	20.002	Fluoride
2	5.39	563.60	6057.528	20.253	Chloride
3	6.39	829.14	13482.500	20.724	Nitrite_N
4	8.21	145.25	2335.697	19.949	Bromide
5	9.31	960.83	16482.381	20.613	Nitrate-N
6	12.34	251.48	5701.496	21.246	o-phosphate
7	14.28	166.62	3743.489	19.987	Sulfate
7	17.00	3726.91	57007.229	142.774	

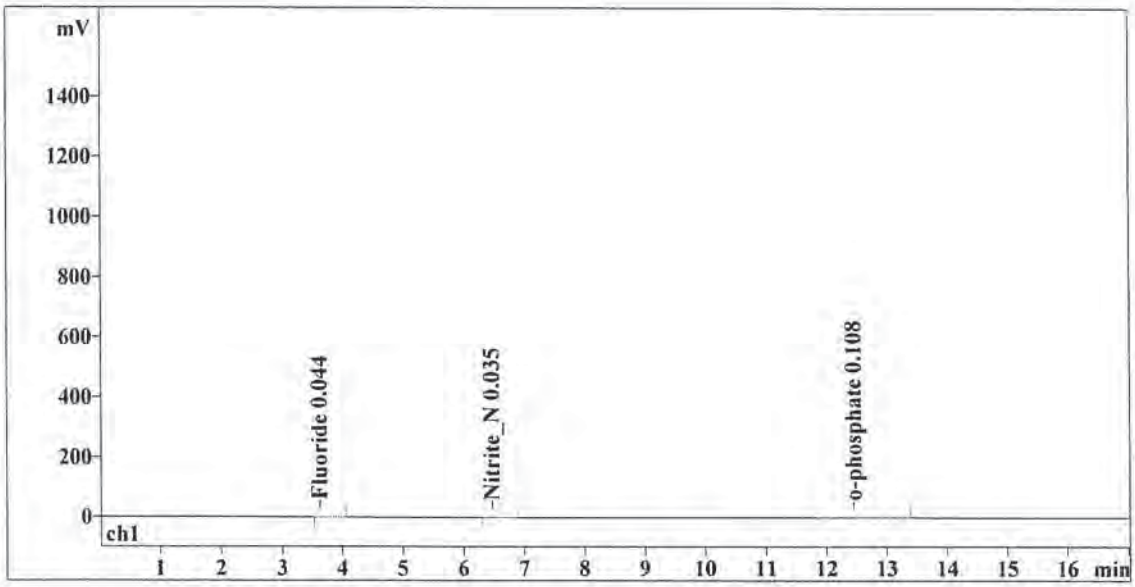
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:45 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 11:36:31 PM
File: y8082336.chw Last save: 8/8/2014 11:53:31 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1966

SAMPLE:
:
Vial number: 35
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

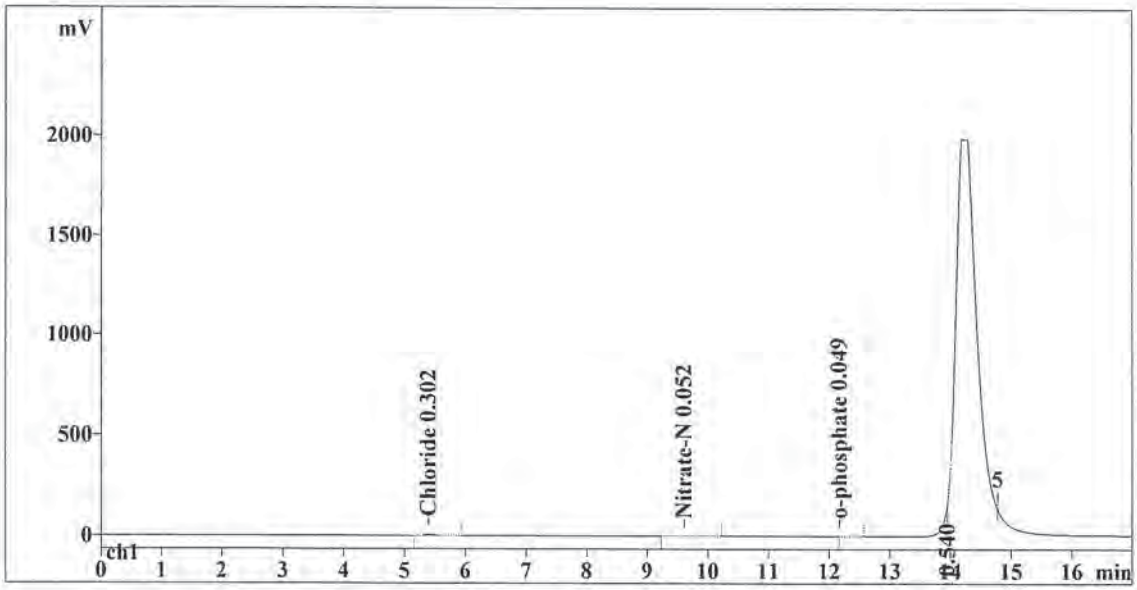
No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.63	0.13	1.248	0.044	Fluoride
2	6.47	0.15	1.848	0.035	Nitrite_N
3	12.45	0.50	17.361	0.108	o-phosphate
3	17.00	0.78	20.457	0.187	

This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:55:02 PM
Printed by: Stephanie L. Charley

Ident: 3645-01I-X10
Analysis from: 8/8/2014 11:56:48 PM
File: y8082356.chw Last save: 8/9/2014 12:13:49 AM
Modified!
Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1968

SAMPLE:
:
Vial number: 36
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

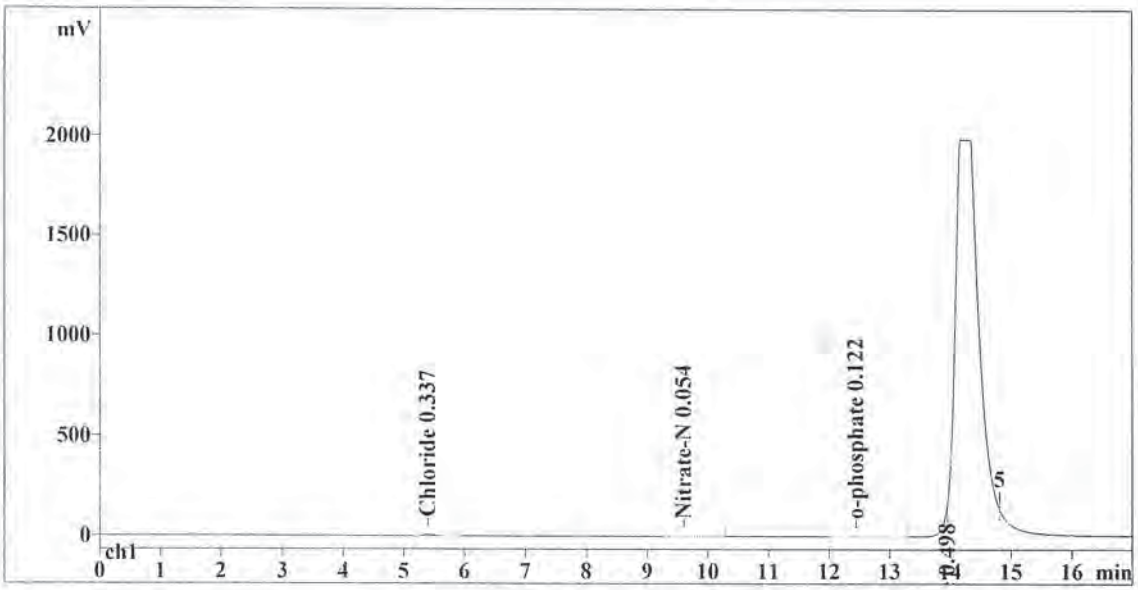
No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.39	6.40	78.861	0.302	Chloride
2	9.60	0.92	16.715	0.052	Nitrate-N
3	12.17	-0.00	2.834	0.049	o-phosphate
4	13.95	-2.78	-91.841	0.540	Sulfate
5	14.78	-0.01	-0.001	0.000	
5	17.00	10.12	190.252	0.943	

This report has been created by IC Net
METROHM LTD

Report date: 8/12/2014 11:57:43 AM
Printed by: Stephanie L. Charley

Ident: 3645-01I-BDUP-X10
Analysis from: 8/9/2014 12:17:07 AM
File: y8090017.chw Last save: 8/11/2014 2:24:59 PM
Modified!
Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1970

SAMPLE:
:
Vial number: 37
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.40	7.18	88.360	0.337	Chloride
2	9.61	1.03	18.301	0.054	Nitrate-N
3	12.44	0.68	20.621	0.122	o-phosphate
4	13.95	-2.79	-84.537	0.498	Sulfate
5	14.81	-0.01	-0.001	0.000	
5	17.00	11.68	211.820	1.011	

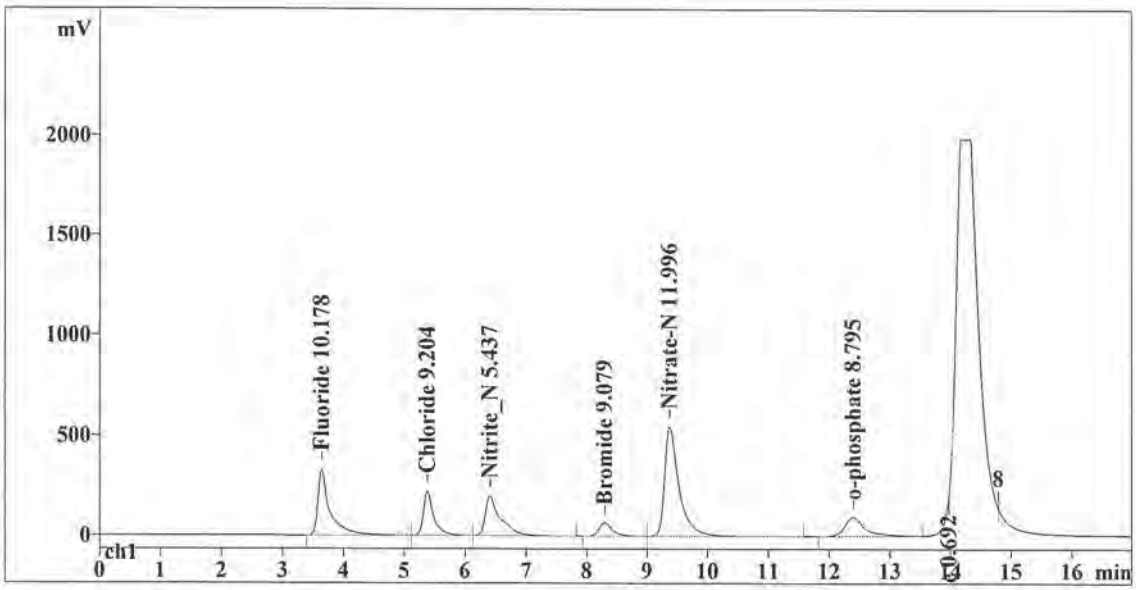
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:55:21 PM
Printed by: Stephanie L. Charley

Ident: 3645-02I-BMS-X10
Analysis from: 8/9/2014 12:37:25 AM
File: y8090037.chw Last save: 8/9/2014 12:54:25 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1972

SAMPLE:
:
Vial number: 38
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	331.94	4576.803	10.178	Fluoride
2	5.38	222.20	2602.438	9.204	Chloride
3	6.41	199.16	3421.342	5.437	Nitrite_N
4	8.30	67.39	1026.839	9.079	Bromide
5	9.38	548.53	9145.576	11.996	Nitrate-N
6	12.39	95.73	2218.999	8.795	o-phosphate
7	13.97	-3.62	-118.245	0.692	Sulfate
8	14.79	-0.01	-0.001	0.000	
8	17.00	1468.57	23110.243	55.381	

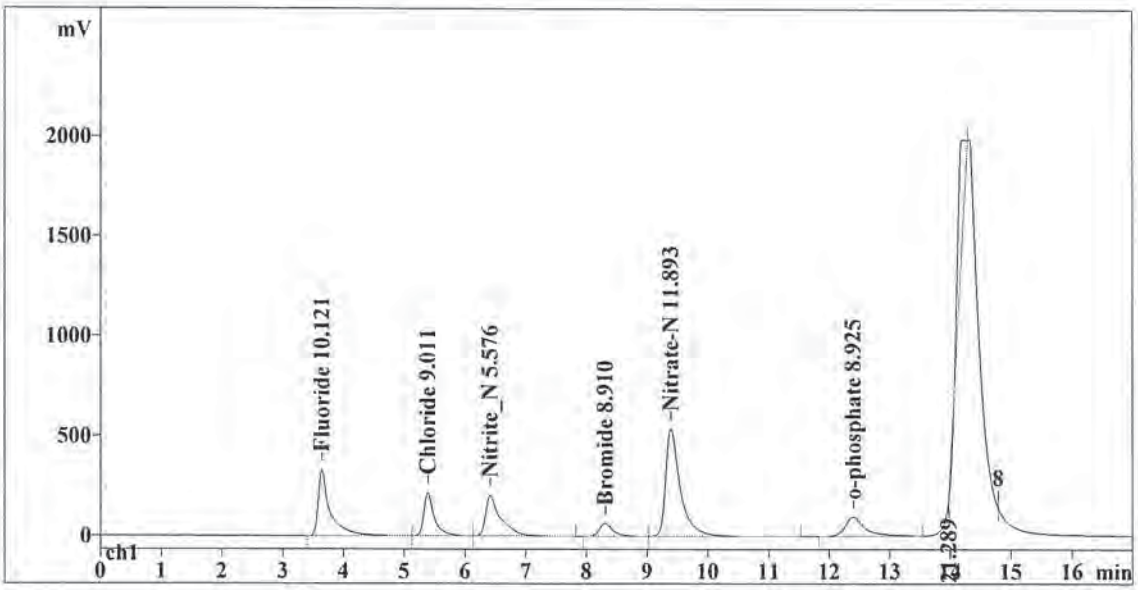
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:55:31 PM
Printed by: Stephanie L. Charley

Ident: 3645-03I-BMSD-X10
Analysis from: 8/9/2014 12:57:43 AM
File: y8090057.chw Last save: 8/9/2014 1:14:43 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1974

SAMPLE:
:
Vial number: 39
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.65	329.70	4550.673	10.121	Fluoride
2	5.39	216.51	2545.300	9.011	Chloride
3	6.42	203.76	3510.103	5.576	Nitrite_N
4	8.31	65.63	1007.245	8.910	Bromide
5	9.39	539.09	9062.116	11.893	Nitrate-N
6	12.40	96.36	2253.344	8.925	o-phosphate
7	13.97	-5.13	4011.648	21.289	Sulfate
8	14.79	-0.01	-0.001	0.000	
8	17.00	1456.18	26940.429	75.724	

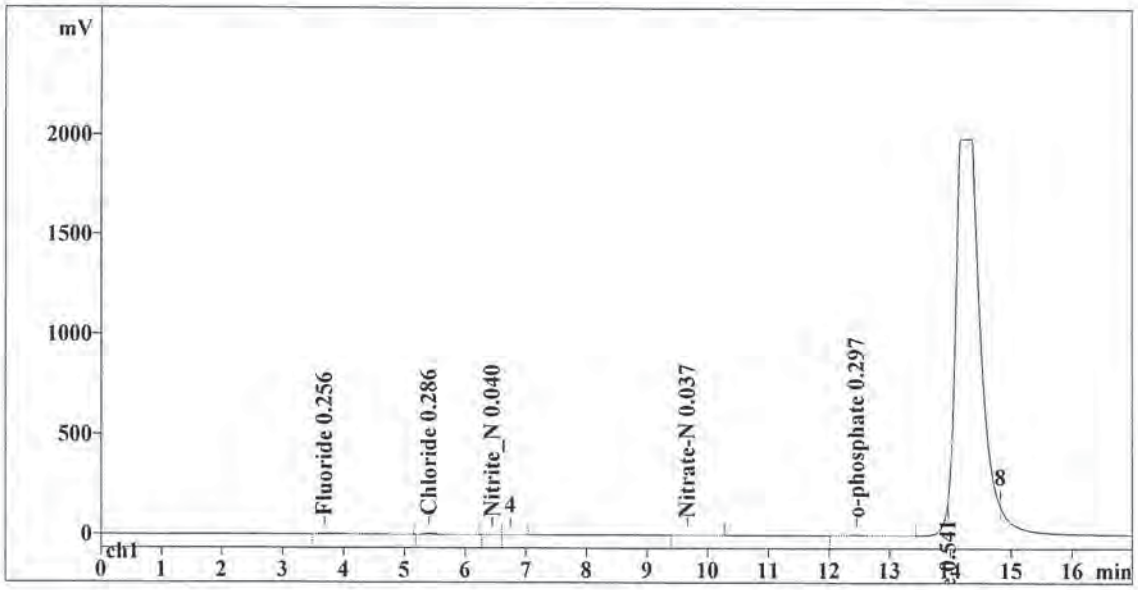
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:56:23 PM
Printed by: Stephanie L. Charley

Ident: 3645-04I-X10
Analysis from: 8/9/2014 1:18:02 AM
File: y8090118.chw Last save: 8/9/2014 1:35:02 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1976

SAMPLE:
:
Vial number: 40
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

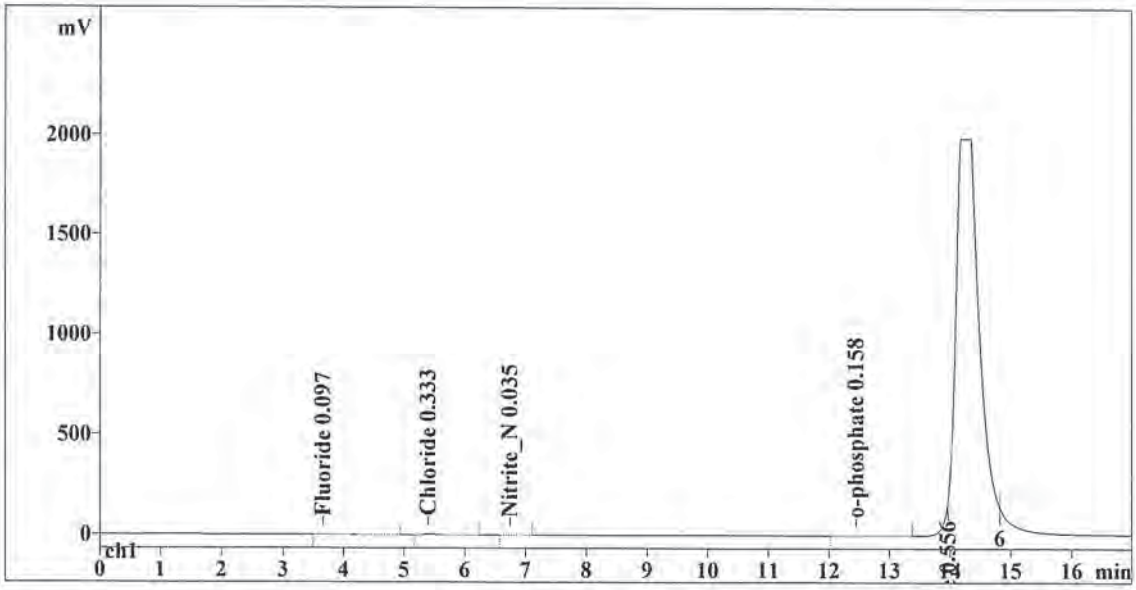
No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.69	2.46	95.048	0.256	Fluoride
2	5.40	5.97	74.494	0.286	Chloride
3	6.45	0.60	5.224	0.040	Nitrite_N
4	6.75	0.27	3.016	0.000	
5	9.66	0.33	5.674	0.037	Nitrate-N
6	12.45	1.87	63.557	0.297	o-phosphate
7	13.96	-3.06	-92.008	0.541	Sulfate
8	14.82	-0.01	-0.001	0.000	
8	17.00	14.56	339.022	1.457	

This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:56:57 PM
Printed by: Stephanie L. Charley

Ident: 3645-05I-X10
Analysis from: 8/9/2014 1:38:21 AM
File: y8090138.chw Last save: 8/9/2014 1:55:21 AM
Modified!
Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1978

SAMPLE:
:
Vial number: 41
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

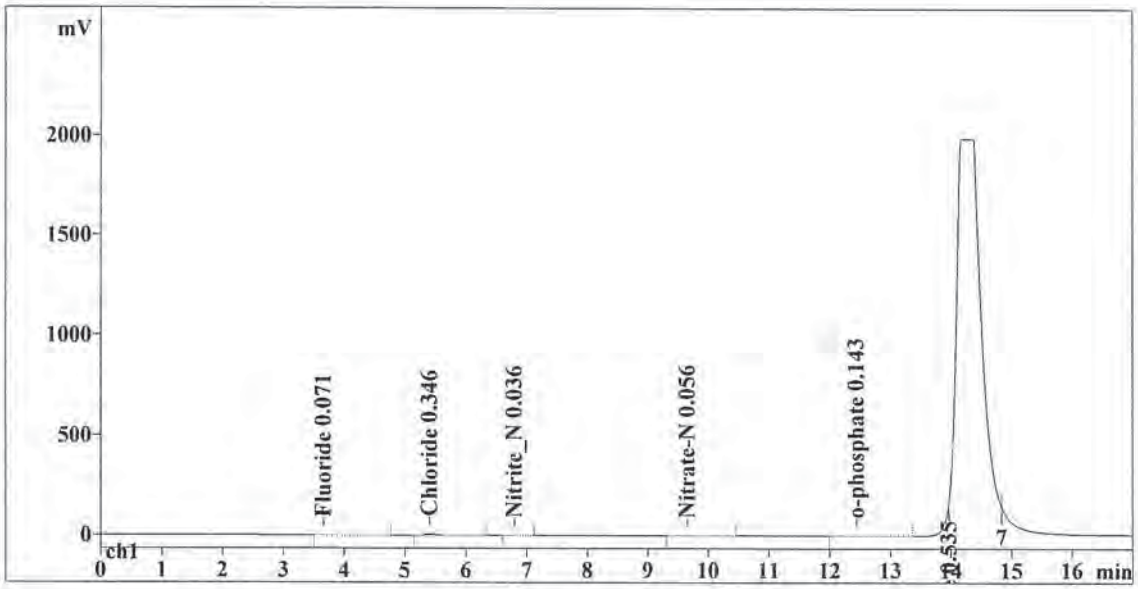
No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	0.77	24.741	0.097	Fluoride
2	5.40	6.92	87.177	0.333	Chloride
3	6.73	0.12	1.701	0.035	Nitrite_N
4	12.44	0.92	29.392	0.158	o-phosphate
5	13.96	-2.95	-94.616	0.556	Sulfate
6	14.82	-0.01	-0.001	0.000	
6	17.00	11.67	237.628	1.178	

This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:57:11 PM
Printed by: Stephanie L. Charley

Ident: 3645-06I-X10
Analysis from: 8/9/2014 1:58:38 AM
File: y8090158.chw Last save: 8/9/2014 2:15:39 AM
Modified!
Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1980

SAMPLE:
:
Vial number: 42
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	0.46	13.427	0.071	Fluoride
2	5.40	6.96	90.696	0.346	Chloride
3	6.80	0.18	2.673	0.036	Nitrite_N
4	9.65	1.06	19.297	0.056	Nitrate-N
5	12.44	0.89	25.804	0.143	o-phosphate
6	13.97	-2.96	-90.919	0.535	Sulfate
7	14.84	-0.01	-0.001	0.000	
7	17.00	12.51	242.817	1.186	

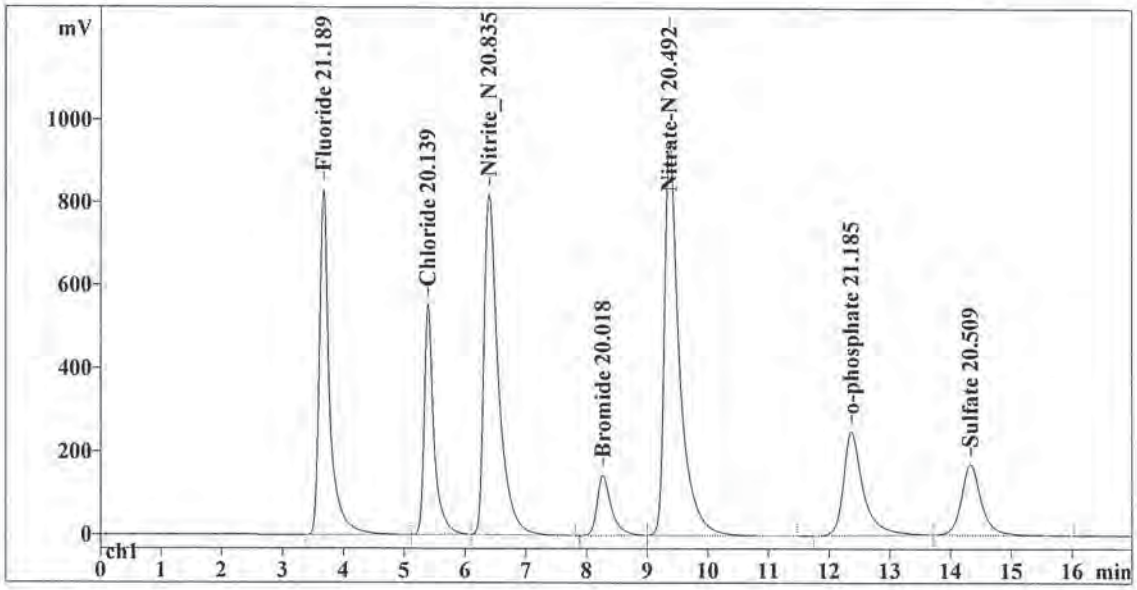
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 2:02:26 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/9/2014 2:39:15 AM
File: y8090239.chw Last save: 8/9/2014 2:56:15 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1984

SAMPLE:
:
Vial number: 44
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	832.21	9777.161	21.189	Fluoride
2	5.39	553.95	6019.373	20.139	Chloride
3	6.40	820.77	13557.297	20.835	Nitrite_N
4	8.27	144.34	2344.236	20.018	Bromide
5	9.37	947.79	16374.194	20.492	Nitrate-N
6	12.37	250.80	5683.386	21.185	o-phosphate
7	14.33	169.59	3850.662	20.509	Sulfate
7	17.00	3719.44	57606.308	144.366	

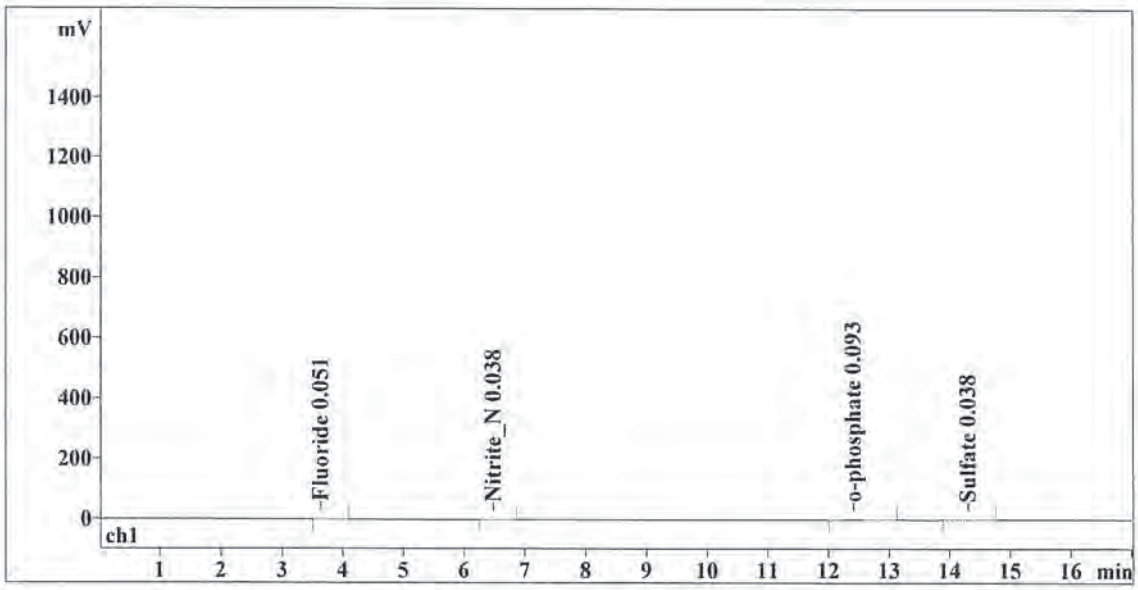
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 2:02:31 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/9/2014 2:59:34 AM
File: y8090259.chw Last save: 8/9/2014 3:16:34 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1986

SAMPLE:
:
Vial number: 45
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	0.41	4.387	0.051	Fluoride
2	6.48	0.30	3.906	0.038	Nitrite_N
3	12.42	0.49	13.660	0.093	o-phosphate
4	14.31	0.22	4.906	0.038	Sulfate
4	17.00	1.43	26.859	0.220	

This report has been created by IC Net
METROHM LTD

SGS Alaska Division Peer Review Report - Prep

Batch: **10639** Queue: **WXX**

12-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1226167	MB	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1226168	LCS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1143645001	PS	H2O/9056P	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645001-I
1226169	UDUP	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	
1143645002	BMS	H2O/9056P	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	1143645002-I
1143645003	BMSD	H2O/9056P	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	1143645003-I
1143645004	PS	H2O/9056P	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645004-I
1143645005	PS	H2O/9056P	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645005-I
1143645006	PS	H2O/9056P	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645006-I
1143646007	PS	H2O/9056P	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143646007-I

Analyst's Signature: SA

Peer Reviewer's Signature: Donald L Worrell

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646, 1148349

Queue: **WIC** Batch: **5251**

Method: EPA 300.0, SW9056A

Run Date: 08/08/14 13:07 - 08/09/14 02:59

Extraction Batch(es): WXX10635, WXX10640

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature: SC
Printed Name: Stephanie Church
Date: 8-12-14

Reviewer's Signature: Donald S. Horrell
Printed Name: Donald S. Horrell
Date: 8/14/2014

SGS North America Inc.

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: IC3080514.qve
Data Files: y8081206.chw - y8090259.chw
Method: IC3AN:ms0613I4A:mtw
Cal. Date: 6/13/14

Run Date: 8-8-14 SLC 8-12-14
Queue/Batch: WXX: 10635 + ~~10636~~ WIC 5251
Analyst: SLC 10640
WXX: 10639 WIC 5252

#	Sample ID	Comments	Post (Y/N)
1	CO /		☐ Y ☒ N
2	CO /		☐ Y ☒ N
3	CO /		☐ Y ☒ N
4	QCS /		☒ Y ☐ N
5	ICV /		☒ Y ☐ N
6	ICB /		☒ Y ☐ N
7	MB /	1226012	☒ Y ☐ N
8	LCS /	1226013	☒ Y ☐ N
9	8349-5C 5X		☒ Y ☐ N
10	-5C DUP 5X /	1226014	☒ Y ☐ N
11	-5C MS 5X /	1226015	☒ Y ☐ N
12	8349-1D 25X /	NP-used 1X SLC 8-11-14	☒ Y ☒ N
13	8349-3C 5X /		☒ Y ☐ N
14	8349-4C 5X /		☒ Y ☐ N
15	8349-6C /		☒ Y ☐ N
16	8349-1D /		☒ Y ☐ N
17	CCV /		☒ Y ☐ N
18	CB /		☒ Y ☐ N
19	8349-7C /		☒ Y ☐ N
20	-7C 5X /	NP-used 1X	☐ Y ☒ N
21	8349-8C /		☒ Y ☐ N
22	CCV /		☒ Y ☐ N
23	CB /	SLC 8-12-14	☒ Y ☐ N
24	MB /	~~1226016~~ 1226212 / 1226167	☒ Y ☐ N
25	LCS /	~~1226017~~ 1226213 / 1226168	☒ Y ☐ N
26	3645-1S /		☒ Y ☐ N
27	SLC -~~8A~~ 1S DUP /	~~1226018~~ 1226214	☒ Y ☐ N
28	8-12-14 -2S BMS /		☒ Y ☐ N
29	-3S BMSD /		☒ Y ☐ N
30	3645-4S /		☒ Y ☐ N
31	-5S /		☒ Y ☐ N
32	-6S /		☒ Y ☐ N
33	-7S /		☒ Y ☐ N
34	CCV /		☒ Y ☐ N
35	CB /		☒ Y ☐ N
36	3645-1I 10X /	SLC 8-12-14	☒ Y ☐ N
37	SLC -~~8~~1I DUP 10X /	~~1226019~~ 1226169	☒ Y ☐ N
38	8-12-14 -2I BMS 10X /		☒ Y ☐ N
39	-3I BMSD 10X /		☒ Y ☐ N
40	-4I 10X /		☒ Y ☐ N

Daily Checks:
- ☒ Eluent Full
- ☒ Regenerate Full
- ☒ Water Full
- 13.86 Baseline (µS/cm)
- 9.2 Backpressure (Mpa)

Standard 1x dilution unless noted by sample ID.

Standards	Prep Date	Lot #
CCV/LFB:	8-8-14	P759 / P847
QCS:		P624 / P852
H2SO4:		P443
Eluent:		LW9-465-4B
Filter Lot#:		P1084

SGS North America Inc.

see pg 94 SLC 8-11-14

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: _____ Run Date: _____
Data Files: _____ Queue/Batch: _____
Method: _____ Analyst: _____
Cal. Date: _____

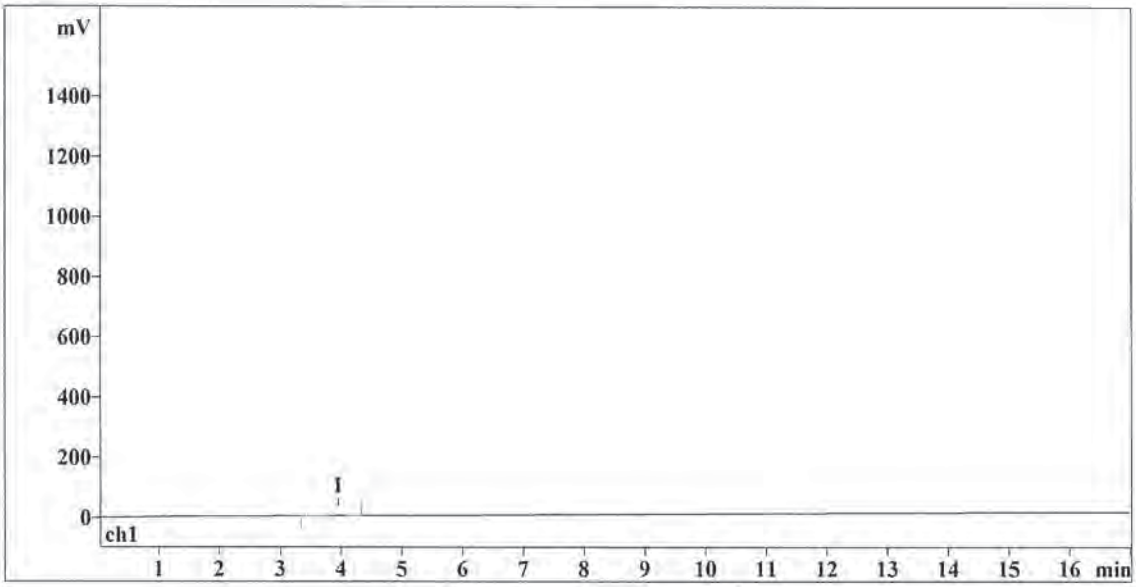
#	Sample ID	Comments	Post (Y/N)
41	3645-5I 10X	/	☒ Y ☐ N
42	-6I 10X	/	☒ Y ☐ N
43	-7I 10X	/	☒ Y ☐ N
44	CCV	/	☒ Y ☐ N
45	CB	/	☒ Y ☐ N
			☐ Y ☐ N
			☐ Y ☐ N
			☐

Report date: 8/11/2014 1:48:33 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:06:14 PM
File: y8081206.chw Last save: 8/8/2014 12:23:15 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1898

SAMPLE:
:
Vial number: 1
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.95	1.61	23.199	0.000	

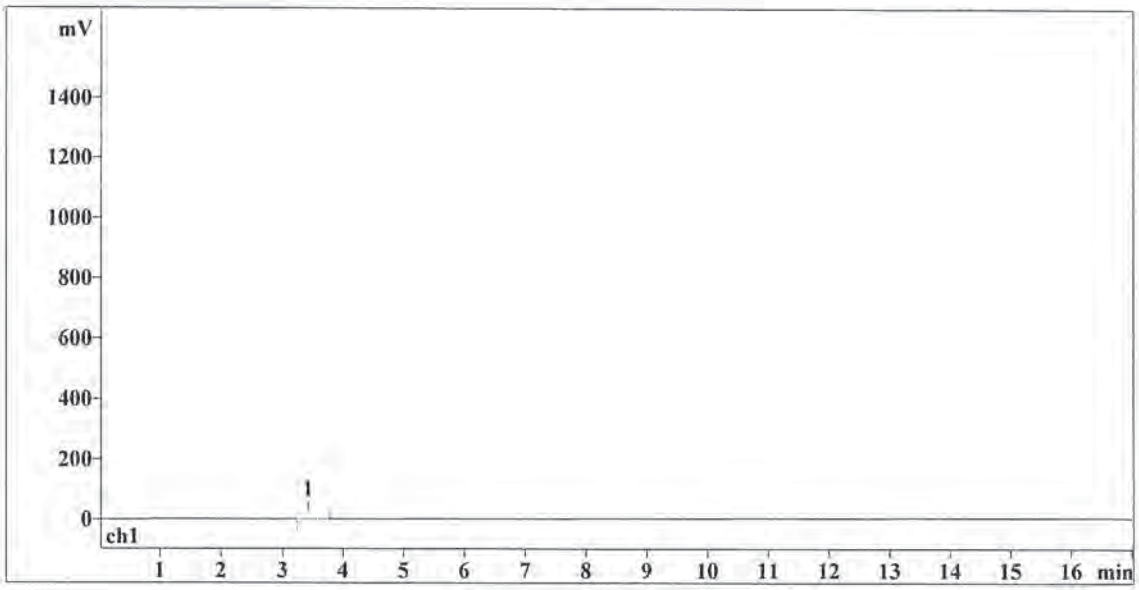
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:37 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:26:32 PM
File: y8081226.chw Last save: 8/8/2014 12:43:33 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1900

SAMPLE:
:
Vial number: 2
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.42	0.16	2.174	0.000	

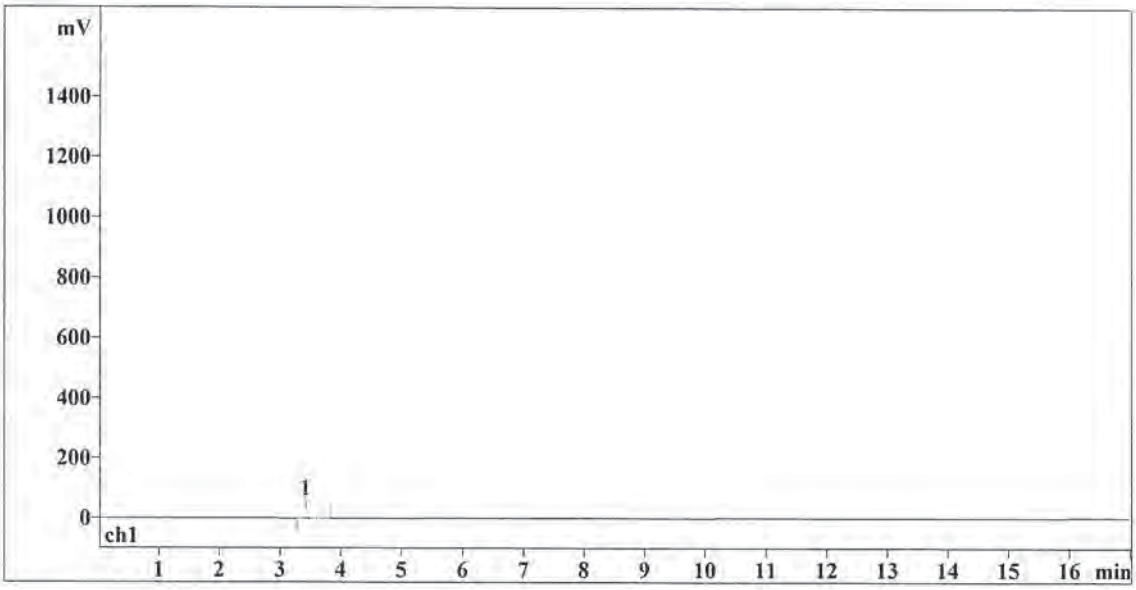
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:41 PM
Printed by: Stephanie L. Charley

Ident: CO
Analysis from: 8/8/2014 12:46:51 PM
File: y8081246.chw Last save: 8/8/2014 1:03:52 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1902

SAMPLE:
:
Vial number: 3
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.42	0.15	1.898	0.000	

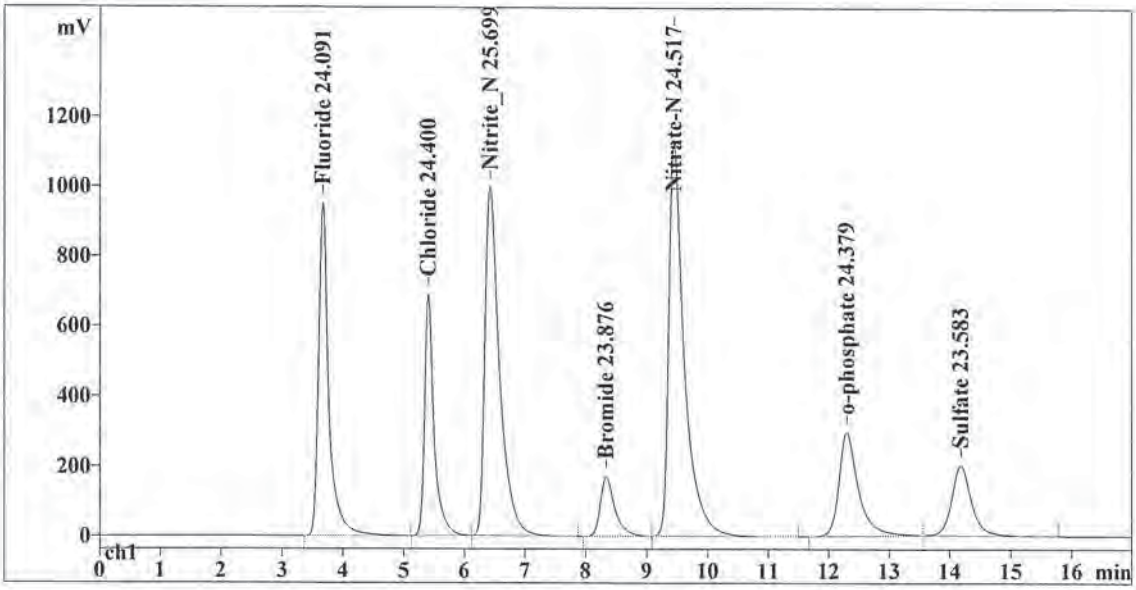
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:46 PM
Printed by: Stephanie L. Charley

Ident: QCS
Analysis from: 8/8/2014 1:07:09 PM
File: y8081307.chw Last save: 8/8/2014 1:24:09 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1904

SAMPLE:
:
Vial number: 4
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	952.29	11191.694	24.091	Fluoride
2	5.41	690.15	7472.977	24.400	Chloride
3	6.43	996.10	16891.334	25.699	Nitrite_N
4	8.34	170.37	2832.763	23.876	Bromide
5	9.45	1127.28	20080.104	24.517	Nitrate-N
6	12.30	298.12	6655.113	24.379	o-phosphate
7	14.18	201.40	4493.377	23.583	Sulfate
7	17.00	4435.71	69617.361	170.546	

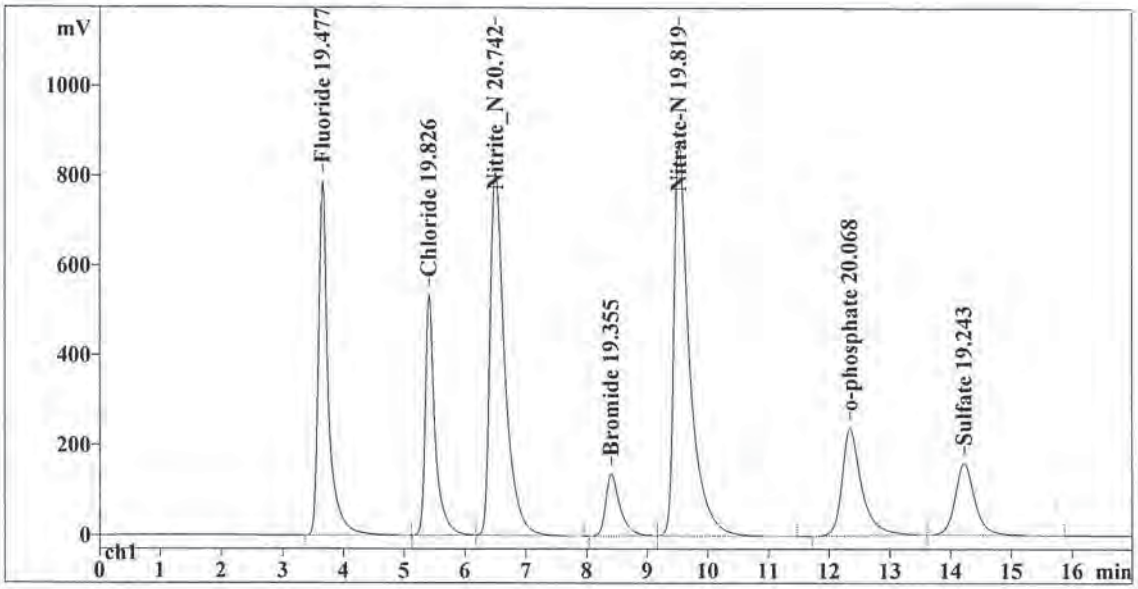
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:48:51 PM
Printed by: Stephanie L. Charley

Ident: ICV
Analysis from: 8/8/2014 1:27:27 PM
File: y8081327.chw Last save: 8/8/2014 1:44:27 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1906

SAMPLE:
:
Vial number: 5
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	787.84	8951.523	19.477	Fluoride
2	5.41	535.29	5915.618	19.826	Chloride
3	6.51	808.46	13494.281	20.742	Nitrite_N
4	8.41	137.18	2261.727	19.355	Bromide
5	9.53	876.05	15774.337	19.819	Nitrate-N
6	12.35	238.72	5352.051	20.068	o-phosphate
7	14.23	159.89	3591.885	19.243	Sulfate
7	17.00	3543.43	55341.422	138.530	

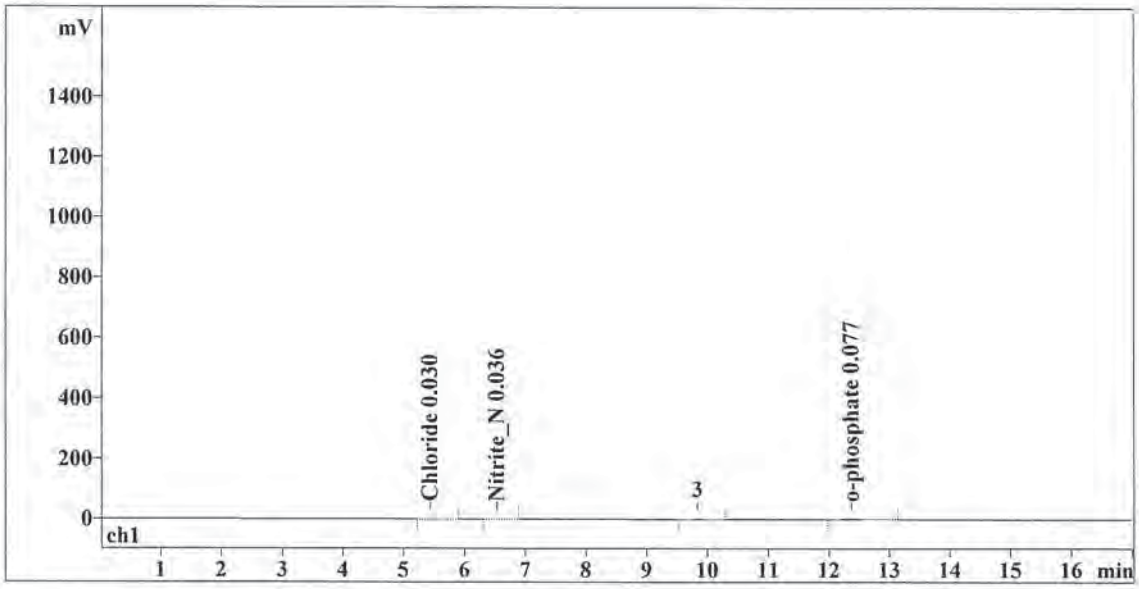
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:49:02 PM
Printed by: Stephanie L. Charley

Ident: ICB
Analysis from: 8/8/2014 1:47:45 PM
File: y8081347.chw Last save: 8/8/2014 2:04:45 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1908

SAMPLE:
:
Vial number: 6
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	5.44	0.40	4.694	0.030	Chloride
2	6.54	0.18	2.313	0.036	Nitrite_N
3	9.82	0.21	3.804	0.000	
4	12.37	0.33	9.779	0.077	o-phosphate
4	17.00	1.11	20.590	0.143	

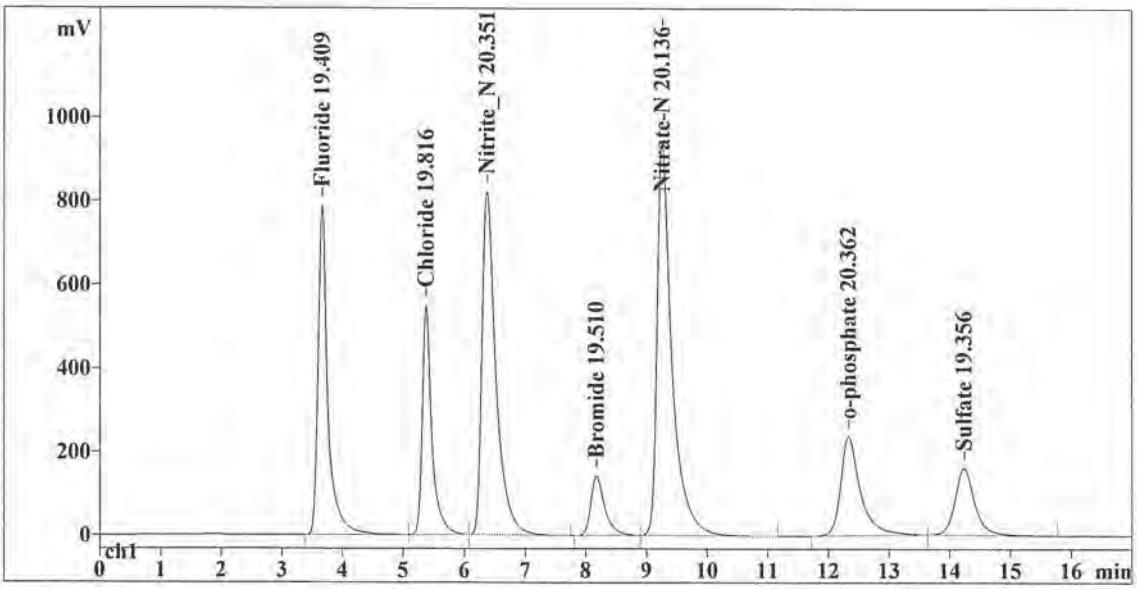
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:44 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 7:12:31 PM
File: y8081914.chw Last save: 8/9/2014 8:31:24 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1940

SAMPLE:
:
Vial number: 22
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.66	788.78	8918.947	19.409	Fluoride
2	5.37	549.56	5912.543	19.816	Chloride
3	6.38	821.05	13229.721	20.351	Nitrite_N
4	8.18	143.34	2280.991	19.510	Bromide
5	9.26	941.12	16055.884	20.136	Nitrate-N
6	12.33	238.61	5438.853	20.362	o-phosphate
7	14.24	161.24	3614.732	19.356	Sulfate
7	17.00	3643.69	55451.671	138.940	

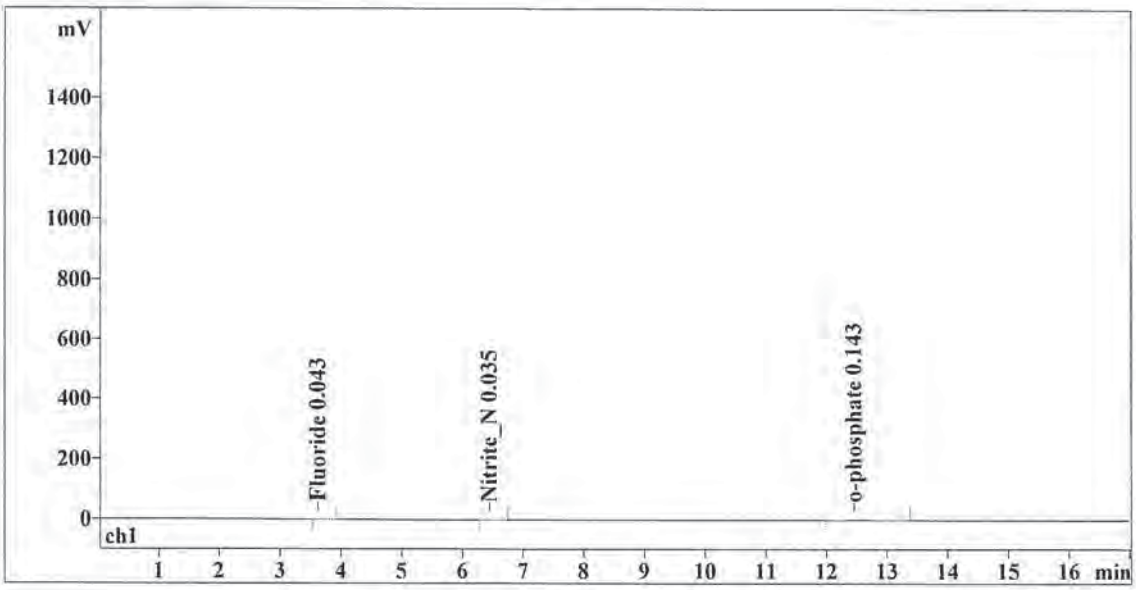
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:47 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 7:32:49 PM
File: y8081932.chw Last save: 8/8/2014 7:49:50 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1942

SAMPLE:
:
Vial number: 23
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.62	0.14	1.184	0.043	Fluoride
2	6.45	0.14	1.622	0.035	Nitrite_N
3	12.47	0.75	25.856	0.143	o-phosphate
3	17.00	1.02	28.662	0.221	

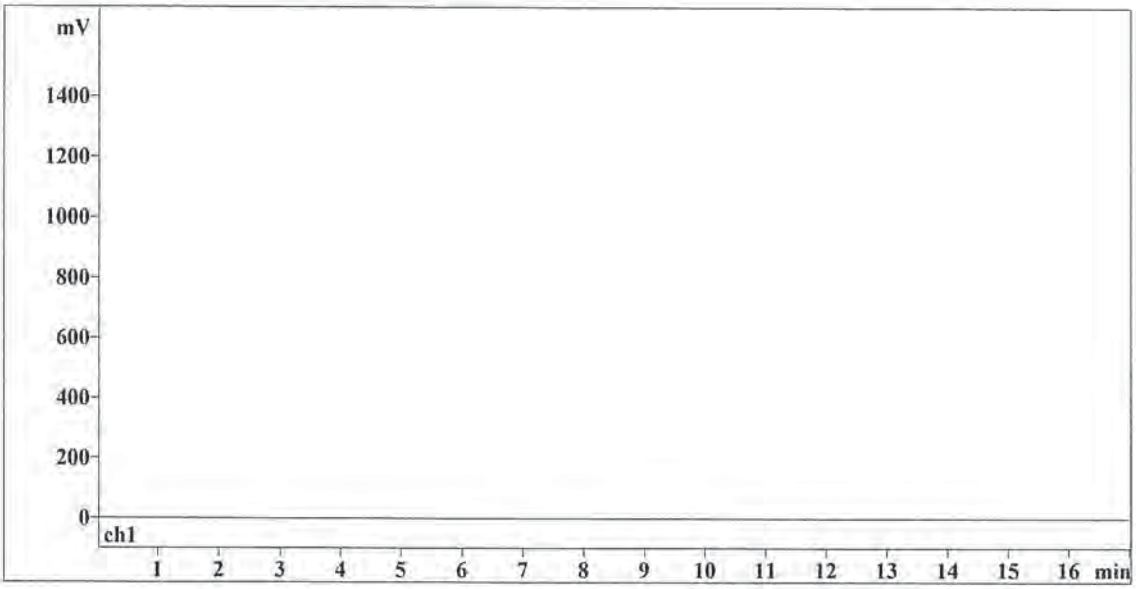
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:51:51 PM
Printed by: Stephanie L. Charley

Ident: MB
Analysis from: 8/8/2014 7:53:07 PM
File: y8081953.chw Last save: 8/8/2014 8:10:07 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1944

SAMPLE:
:
Vial number: 24
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No peaks

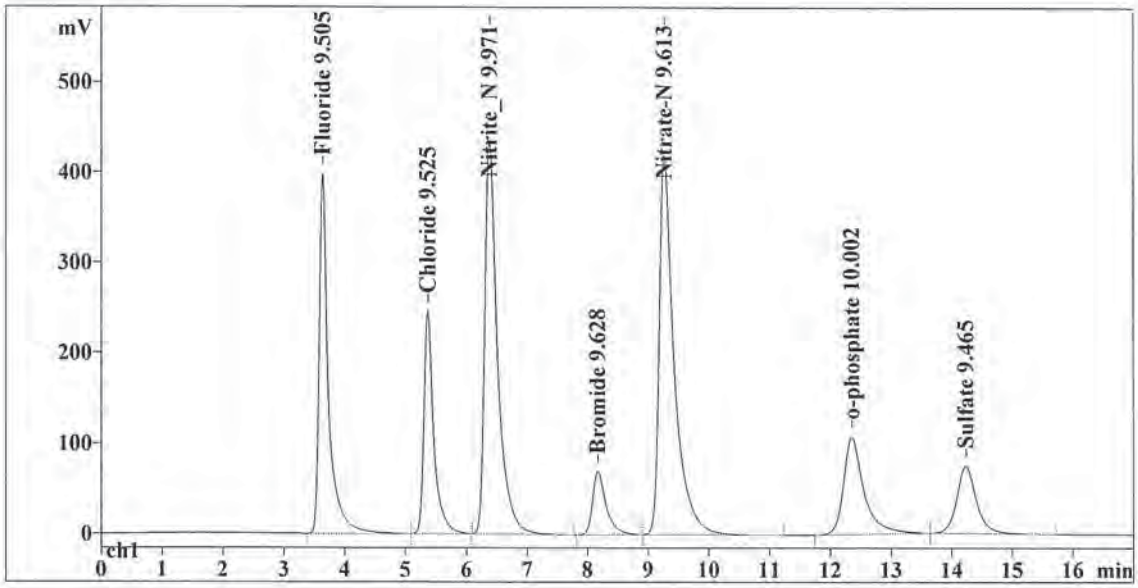
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:01 PM
Printed by: Stephanie L. Charley

Ident: LCS
Analysis from: 8/8/2014 8:13:25 PM
File: y8082015.chw Last save: 8/9/2014 8:31:35 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1946

SAMPLE:
:
Vial number: 25
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	398.99	4267.354	9.505	Fluoride
2	5.37	246.87	2697.357	9.525	Chloride
3	6.39	434.91	6343.857	9.971	Nitrite_N
4	8.17	70.19	1090.815	9.628	Bromide
5	9.27	420.84	7238.661	9.613	Nitrate-N
6	12.35	108.16	2538.170	10.002	o-phosphate
7	14.24	74.93	1693.627	9.465	Sulfate
7	17.00	1754.89	25869.842	67.710	

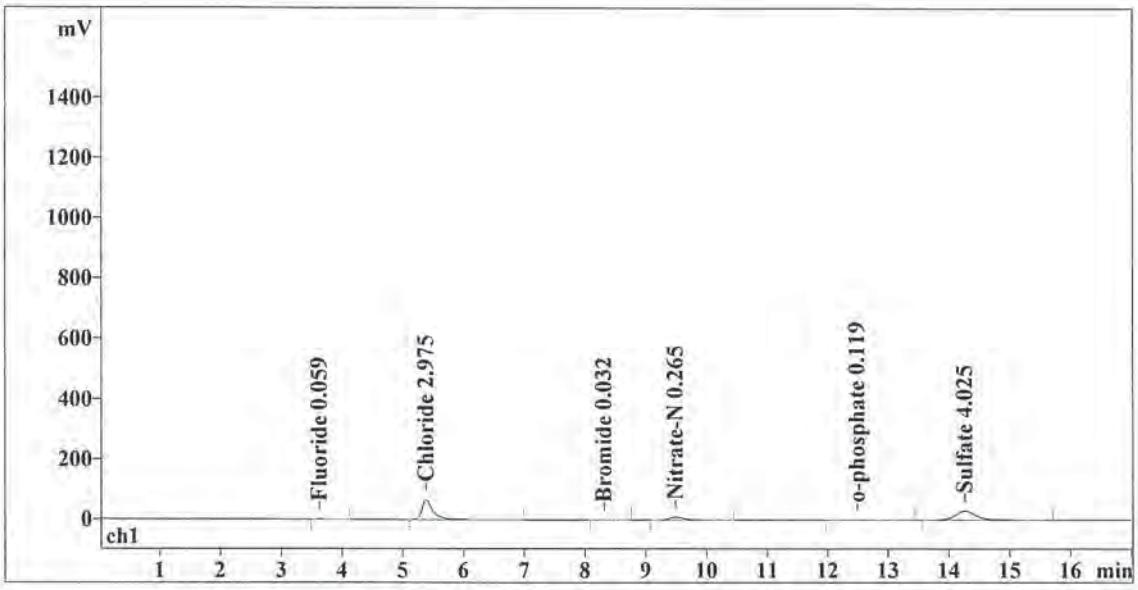
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:07 PM
Printed by: Stephanie L. Charley

Ident: 3645-01J
Analysis from: 8/8/2014 8:33:43 PM
File: y8082033.chw Last save: 8/8/2014 8:50:42 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1948

SAMPLE:
:
Vial number: 26
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

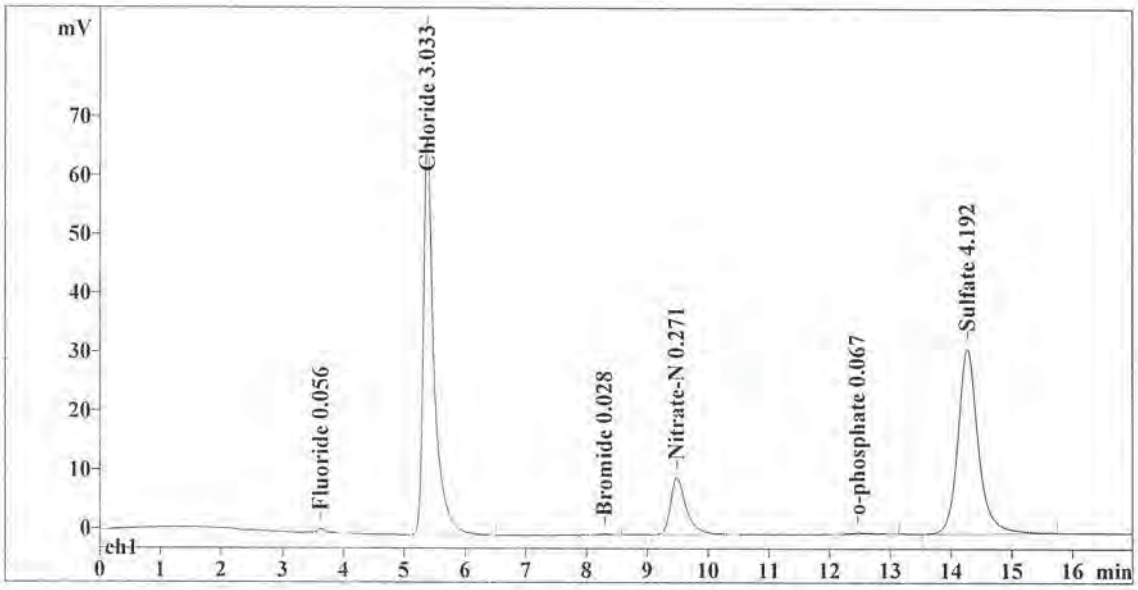
No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.63	0.77	8.273	0.059	Fluoride
2	5.38	66.34	816.114	2.975	Chloride
3	8.31	0.14	2.225	0.032	Bromide
4	9.49	9.58	171.205	0.265	Nitrate-N
5	12.50	0.51	19.931	0.119	o-phosphate
6	14.26	30.45	704.208	4.025	Sulfate
6	17.00	107.78	1721.956	7.477	

This report has been created by IC Net
METROHM LTD

Report date: 8/12/2014 11:58:12 AM
Printed by: Stephanie L. Charley

Ident: 3645-01J-BDUP
Analysis from: 8/8/2014 8:54:01 PM
File: y8082054.chw Last save: 8/11/2014 2:24:59 PM
Modified!
Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1950

SAMPLE:
:
Vial number: 27
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.63	0.65	6.840	0.056	Fluoride
2	5.38	67.61	832.144	3.033	Chloride
3	8.30	0.12	1.831	0.028	Bromide
4	9.48	9.73	175.351	0.271	Nitrate-N
5	12.47	0.23	7.170	0.067	o-phosphate
6	14.27	31.50	733.887	4.192	Sulfate
6	17.00	109.84	1757.224	7.647	

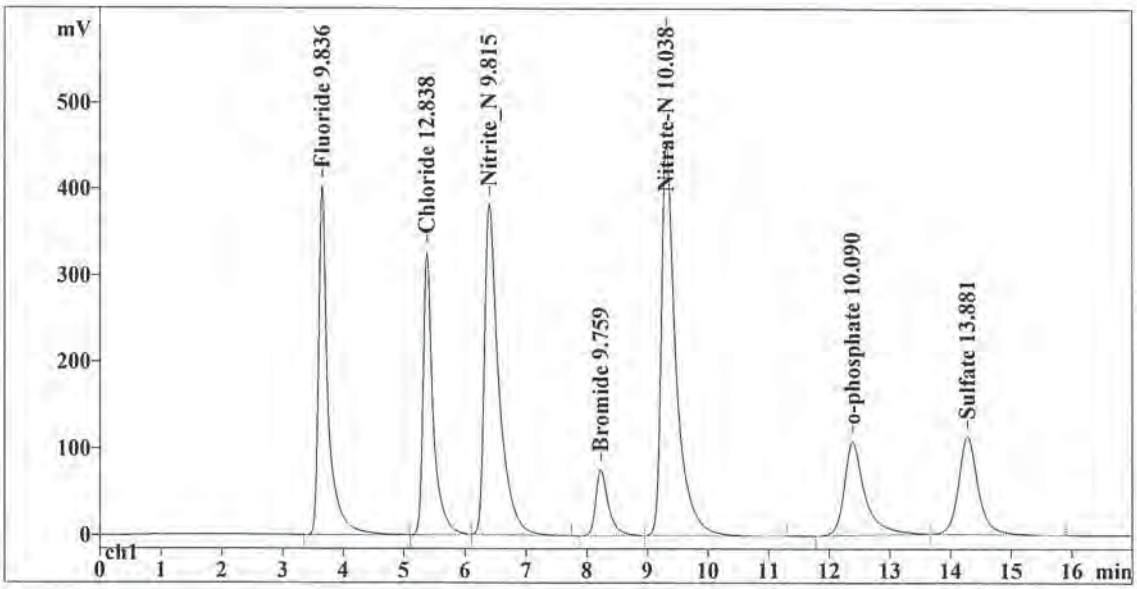
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:16 PM
Printed by: Stephanie L. Charley

Ident: 3645-02J-BMS
Analysis from: 8/8/2014 9:14:20 PM
File: y8082114.chw Last save: 8/8/2014 9:31:20 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1952

SAMPLE:
:
Vial number: 28
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.65	402.96	4419.377	9.836	Fluoride
2	5.38	327.10	3694.217	12.838	Chloride
3	6.40	382.15	6242.489	9.815	Nitrite_N
4	8.23	76.10	1106.134	9.759	Bromide
5	9.32	454.39	7575.045	10.038	Nitrate-N
6	12.39	107.94	2561.576	10.090	o-phosphate
7	14.28	112.88	2530.134	13.881	Sulfate
7	17.00	1863.53	28128.974	76.257	

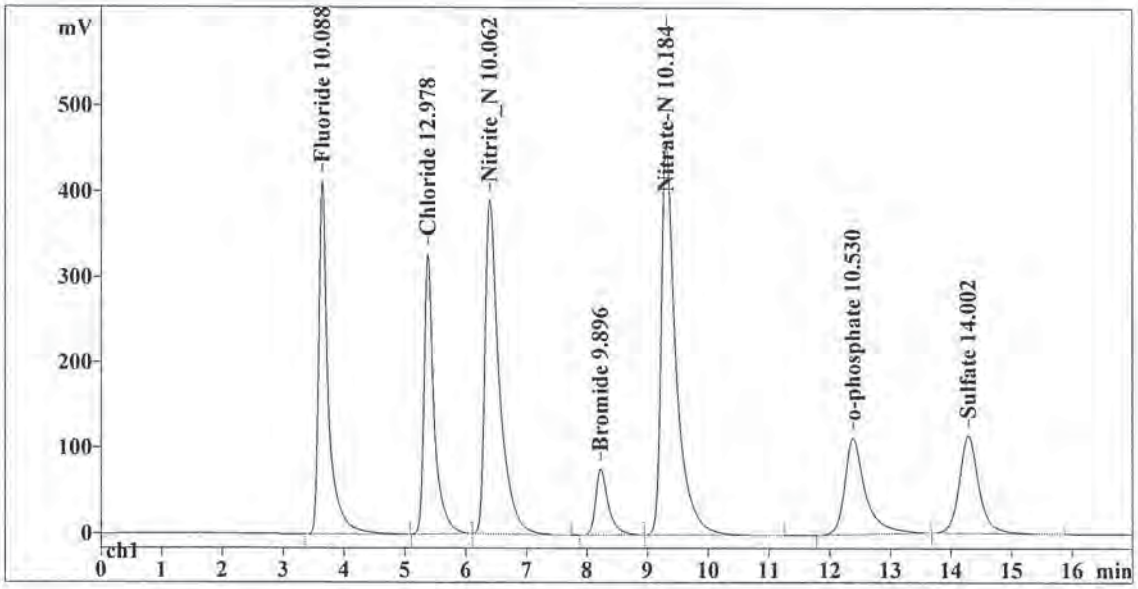
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METROHM LTD

Report date: 8/11/2014 1:52:21 PM
Printed by: Stephanie L. Charley

Ident: 3645-03J-BMSD
Analysis from: 8/8/2014 9:34:39 PM
File: y8082134.chw Last save: 8/8/2014 9:51:39 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1954

SAMPLE:
:
Vial number: 29
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.65	413.20	4535.596	10.088	Fluoride
2	5.38	328.26	3736.912	12.978	Chloride
3	6.40	391.07	6403.535	10.062	Nitrite_N
4	8.23	76.57	1122.111	9.896	Bromide
5	9.32	458.79	7691.233	10.184	Nitrate-N
6	12.39	112.68	2678.947	10.530	o-phosphate
7	14.29	113.77	2553.571	14.002	Sulfate
7	17.00	1894.35	28721.905	77.741	

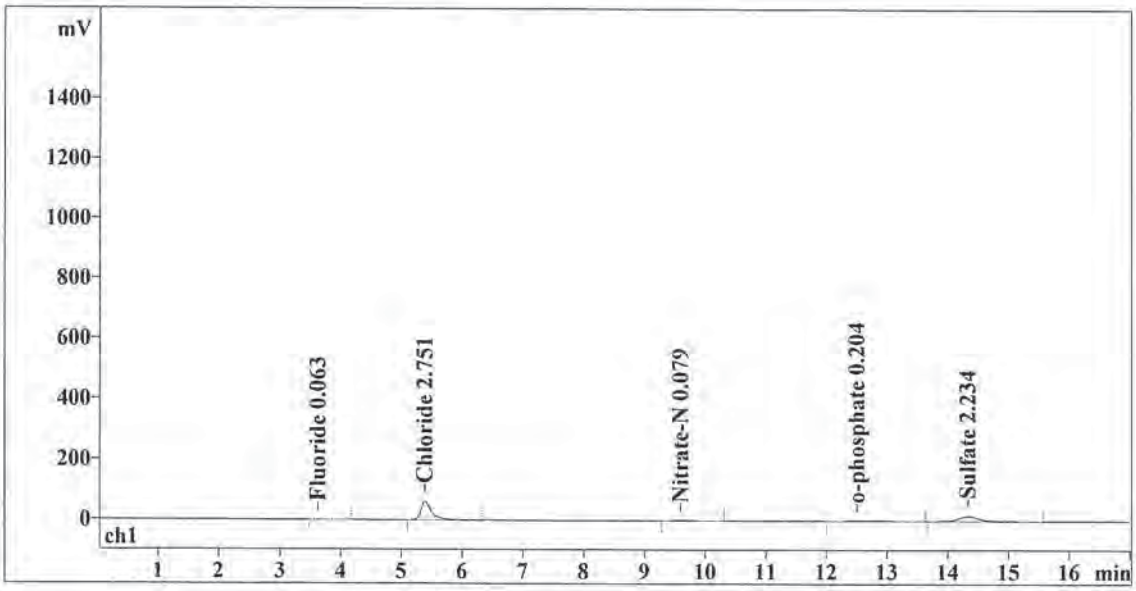
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METROHM LTD

Report date: 8/11/2014 1:52:26 PM
Printed by: Stephanie L. Charley

Ident: 3645-04J
Analysis from: 8/8/2014 9:54:57 PM
File: y8082154.chw Last save: 8/8/2014 10:11:57 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1956

SAMPLE:
:
Vial number: 30
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.63	0.90	9.862	0.063	Fluoride
2	5.39	62.50	753.660	2.751	Chloride
3	9.60	2.04	36.308	0.079	Nitrate-N
4	12.51	1.10	40.752	0.204	o-phosphate
5	14.33	16.64	387.434	2.234	Sulfate
5	17.00	83.17	1228.016	5.331	

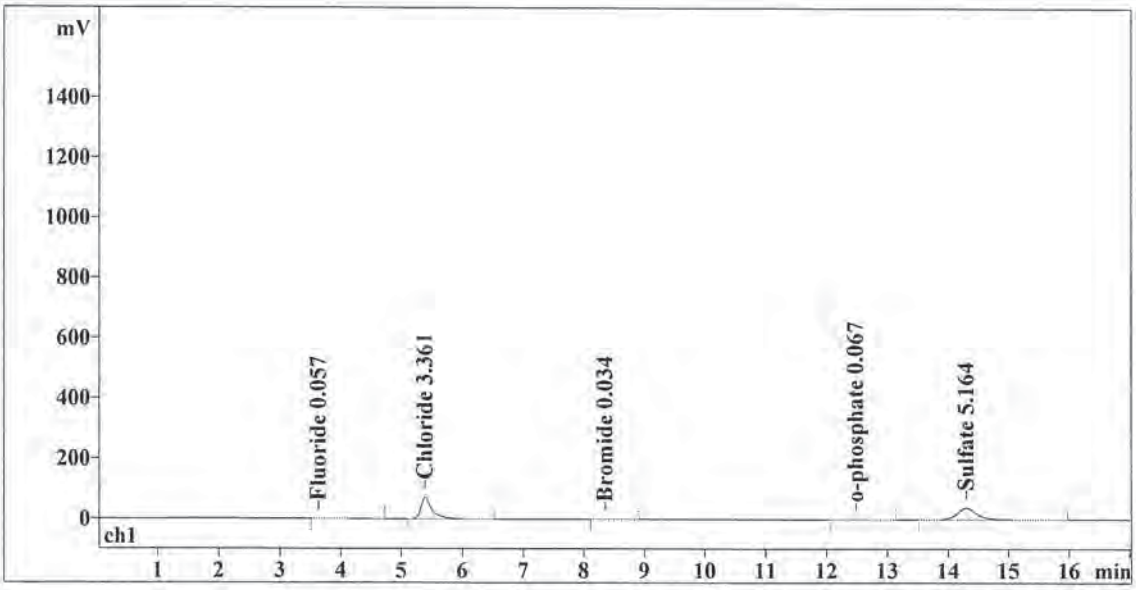
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:29 PM
Printed by: Stephanie L. Charley

Ident: 3645-05J
Analysis from: 8/8/2014 10:15:16 PM
File: y8082215.chw Last save: 8/8/2014 10:32:16 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1958

SAMPLE:
:
Vial number: 31
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.63	0.43	7.042	0.057	Fluoride
2	5.39	72.27	923.731	3.361	Chloride
3	8.35	0.16	2.443	0.034	Bromide
4	12.48	0.25	7.326	0.067	o-phosphate
5	14.30	39.13	907.797	5.164	Sulfate
5	17.00	112.23	1848.339	8.683	

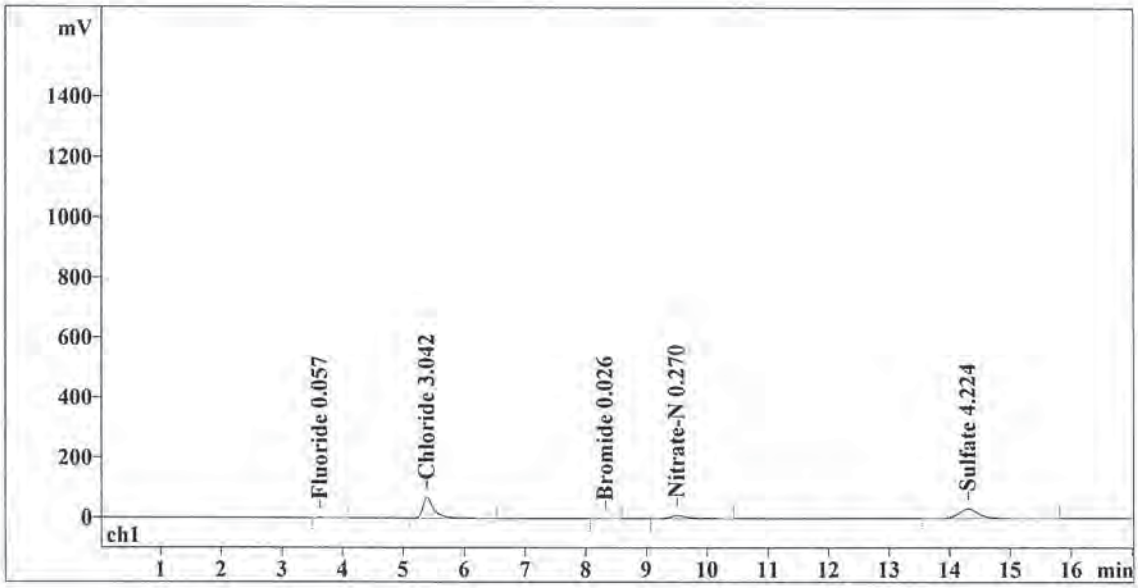
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:33 PM
Printed by: Stephanie L. Charley

Ident: 3645-06J
Analysis from: 8/8/2014 10:35:35 PM
File: y8082235.chw Last save: 8/8/2014 10:52:35 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1960

SAMPLE:
:
Vial number: 32
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.63	0.67	7.241	0.057	Fluoride
2	5.39	67.94	834.552	3.042	Chloride
3	8.32	0.11	1.582	0.026	Bromide
4	9.51	9.74	174.518	0.270	Nitrate-N
5	14.30	31.78	739.610	4.224	Sulfate
5	17.00	110.23	1757.502	7.619	

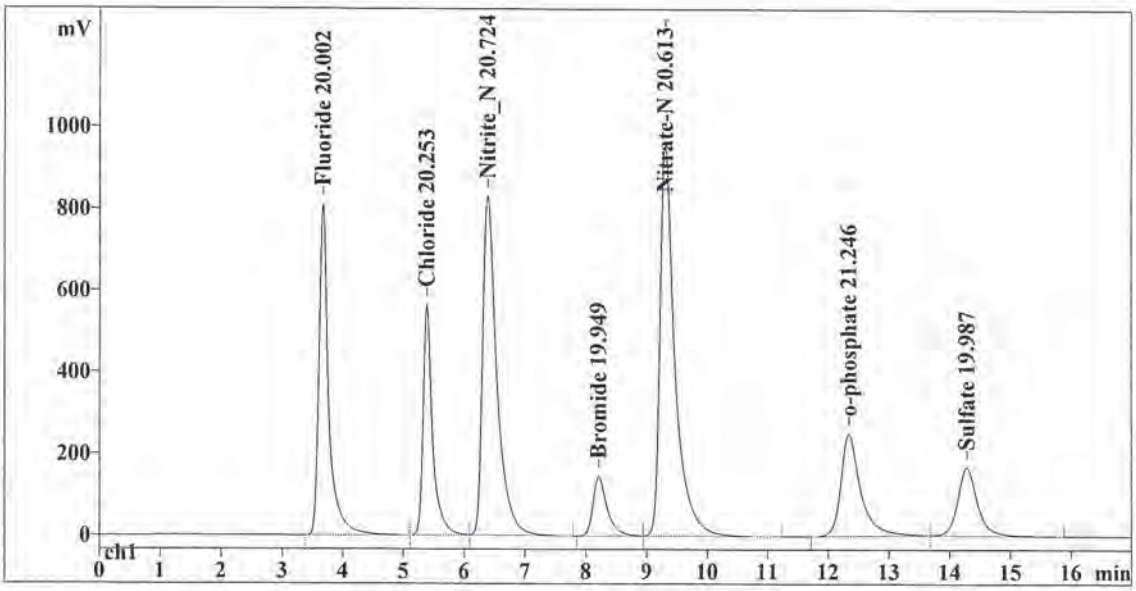
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:41 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/8/2014 11:16:12 PM
File: y8082318.chw Last save: 8/9/2014 8:32:11 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1964

SAMPLE:
:
Vial number: 34
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	809.98	9204.138	20.002	Fluoride
2	5.39	563.60	6057.528	20.253	Chloride
3	6.39	829.14	13482.500	20.724	Nitrite_N
4	8.21	145.25	2335.697	19.949	Bromide
5	9.31	960.83	16482.381	20.613	Nitrate-N
6	12.34	251.48	5701.496	21.246	o-phosphate
7	14.28	166.62	3743.489	19.987	Sulfate
7	17.00	3726.91	57007.229	142.774	

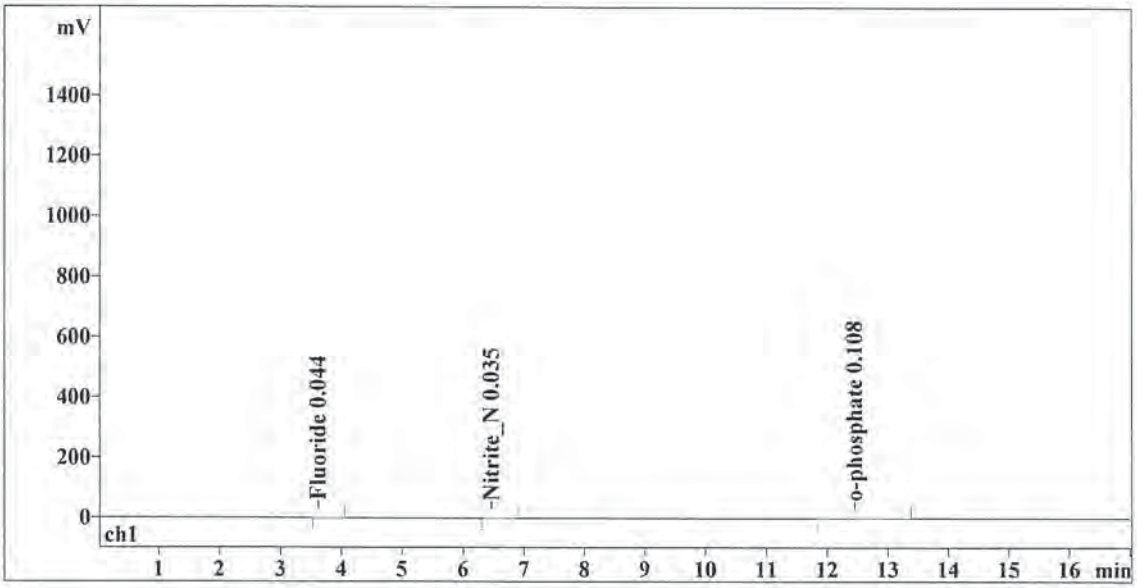
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 1:52:45 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/8/2014 11:36:31 PM
File: y8082336.chw Last save: 8/8/2014 11:53:31 PM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1966

SAMPLE:
:
Vial number: 35
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.63	0.13	1.248	0.044	Fluoride
2	6.47	0.15	1.848	0.035	Nitrite_N
3	12.45	0.50	17.361	0.108	o-phosphate
3	17.00	0.78	20.457	0.187	

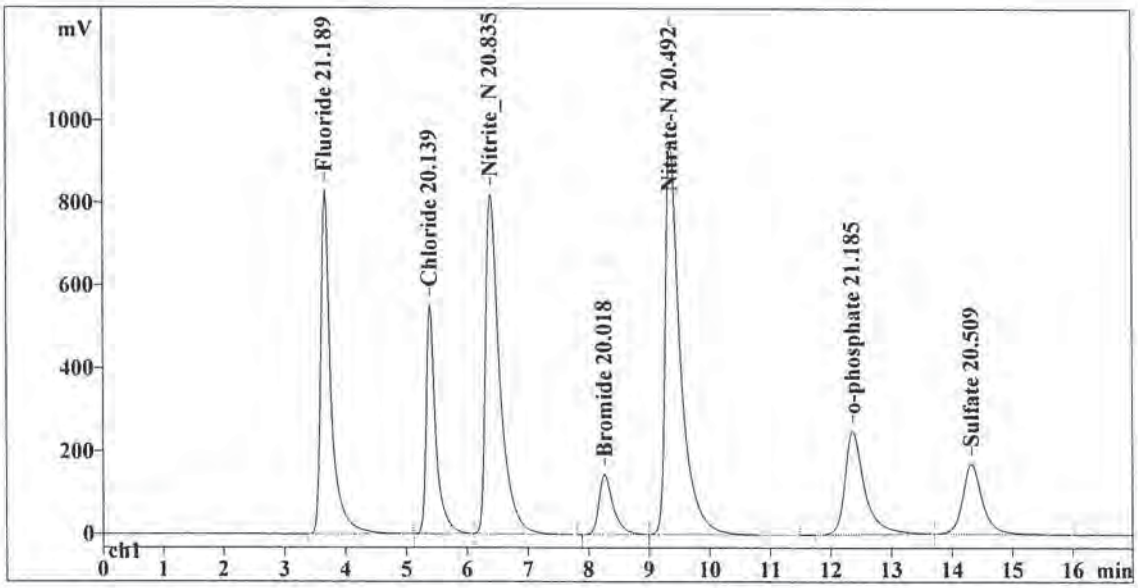
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 2:02:26 PM
Printed by: Stephanie L. Charley

Ident: CCV
Analysis from: 8/9/2014 2:39:15 AM
File: y8090239.chw Last save: 8/9/2014 2:56:15 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1984

SAMPLE:
:
Vial number: 44
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	832.21	9777.161	21.189	Fluoride
2	5.39	553.95	6019.373	20.139	Chloride
3	6.40	820.77	13557.297	20.835	Nitrite_N
4	8.27	144.34	2344.236	20.018	Bromide
5	9.37	947.79	16374.194	20.492	Nitrate-N
6	12.37	250.80	5683.386	21.185	o-phosphate
7	14.33	169.59	3850.662	20.509	Sulfate
7	17.00	3719.44	57606.308	144.366	

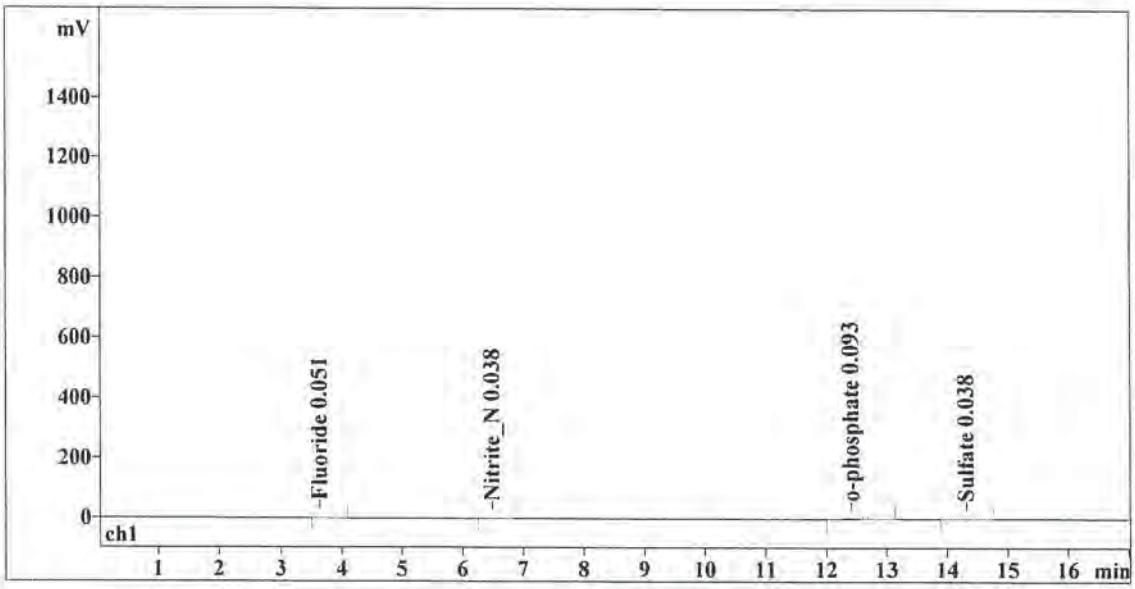
This report has been created by IC Net
METROHM LTD

Report date: 8/11/2014 2:02:31 PM
Printed by: Stephanie L. Charley

Ident: CB
Analysis from: 8/9/2014 2:59:34 AM
File: y8090259.chw Last save: 8/9/2014 3:16:34 AM

Method: IC3Anions061314A.mtw Last save: 8/8/2014 10:52:
Run operator: Stephanie L. Charley
Analysis number: 1986

SAMPLE:
:
Vial number: 45
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.64	0.41	4.387	0.051	Fluoride
2	6.48	0.30	3.906	0.038	Nitrite_N
3	12.42	0.49	13.660	0.093	o-phosphate
4	14.31	0.22	4.906	0.038	Sulfate
4	17.00	1.43	26.859	0.220	

This report has been created by IC Net
METROHM LTD

SGS Alaska Division Peer Review Report - Prep

Batch: **10640** Queue: **WXX**

12-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1226212	MB	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1226213	LCS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1143645001	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645001-J
1226214	UDUP	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	
1143645002	BMS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	1143645002-J
1143645003	BMSD	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1143645001	1143645003-J
1143645004	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645004-J
1143645005	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645005-J
1143645006	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143645006-J
1143646007	PS	H2O/SW9056	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1143646007-J

Analyst's Signature: _____ **Peer Reviewer's Signature:** Donald J. Stonell

SGS Alaska Division Peer Review Report - Prep

Batch: **10635** Queue: **WXX**

12-Aug-14

HSN	Type	Proc Code	User	Initial	Units	Final	Units	Calc'd df	Dilt	Run Date	Hold Date	Original HSN	CONTAINER
1226012	MB	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1226013	LCS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			
1148349005	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349005-C
1226014	UDUP	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1148349005	
1226015	MS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07		1148349005	
1148349001	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349001-D
1148349003	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349003-C
1148349004	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349004-C
1148349006	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349006-C
1148349007	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349007-C
1148349008	PS	H2O/EP300	SLC	10	mL	10	mL	1	1	08/08/14 12:07			1148349008-C

Analyst's Signature: BT

Peer Reviewer's Signature: Donald L. Hoxell

SGS North America Inc.
Calibration Review and Validation for:
Anions by IC - EPA 300.0 / SW 9056A

CDS Instrument/Date Code in YYYY-MMDD format (e.g., IC32012-0507): IC32014-0613

	Analyst's Review		Peer Review	
	OK	N/A	OK	N/A
Contents:				
IC Calibration and Standard Prep Sheet	☑		☑	
Calibration Graphs	☑		☑	
Instrument and handwritten runlogs	☑		☐	
Chromatograms	☑		☑	
Validation:				
Same day retention time check	☑		☑	
Minimum of 7 points (including blank)	☐		☑	
R-Value ≥ 0.995 for Quadratic	☑		☑	
(Fluoride, Chloride, Nitrite, Bromide, Nitrate, Sulfate)				
Manual Integrations - explanations, before and after printouts	☐	☑	☑	☐
Initials:	SLC		Initials:	
Date:	6/17/2014		Date:	6/17/14

Notes:

EP300 Test
IC3Anions061314.mtw
IC Calibration and Standard Prep.

QCS Source : SPEX CertiPrep Multi-Analyte Standard Lot # :P#852
SPEX CertiPrep NO2-N Standard Lot # :P#624

	Analyte	Fluoride	Chloride	Nitrite	Bromide	Nitrate	O-phos	Sulfate
QCS	Source Conc (mg/L)	1000	1000	1000	1000	1000	1000	1000
	Vol Initial (ml)	0.250	0.250	0.250	0.250	0.250	0.250	0.250
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	25	25	25	25	25	25	25

Source : AccuStandard Multi-Analyte Standard Lot # :P#847
AccuStandard NO2-N Standard Lot # :P#759

40	Source Conc (mg/L)	1000	1000	1000	1000	1000	1000	1000
	Vol Initial (ml)	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Vol Final (mL)	25	25	25	25	25	25	25
	Final Conc.(mg/L)	40	40	40	40	40	40	40
25	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	6.250	6.250	6.250	6.250	6.250	6.250	6.250
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	25	25	25	25	25	25	25
5	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	1.250	1.250	1.250	1.250	1.250	1.250	1.250
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	5	5	5	5	5	5	5
1	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	0.625	0.625	0.625	0.625	0.625	0.625	0.625
	Vol Final (mL)	25	25	25	25	25	25	25
	Final Conc.(mg/L)	1	1	1	1	1	1	1
0.4	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	0.100	0.100	0.100	0.100	0.100	0.100	0.100
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	0.4	0.4	0.4	0.4	0.4	0.4	0.4
0.2	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	0.050	0.050	0.050	0.050	0.050	0.050	0.050
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.1	Source Conc (mg/L)	40	40	40	40	40	40	40
	Vol Initial (ml)	0.025	0.025	0.025	0.025	0.025	0.025	0.025
	Vol Final (mL)	10	10	10	10	10	10	10
	Final Conc.(mg/L)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CCV	Source Conc (mg/L)	1000	1000	1000	1000	1000	1000	1000
	Vol Initial (ml)	2.000	2.000	2.000	2.000	2.000	2.000	2.000
	Vol Final (mL)	100	100	100	100	100	100	100
	Final Conc.(mg/L)	20	20	20	20	20	20	20

System	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Level	Injections	Done	Sample Info 1	Sample Info 2
IC3ANIONS.smt	bomb test	1	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CO	2	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CO	3	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CO	4	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LOQ	5	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	QCS	6	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	ICV	7	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	ICB	8	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	0.1 LOQ	53	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	MB	9	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	1.0 RT CHECK	54	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	40	55	10.0	1.0	10.0	100.0	8	1	1		
IC3ANIONS.smt	25	56	10.0	1.0	10.0	100.0	7	1	1		
IC3ANIONS.smt	5	57	10.0	1.0	10.0	100.0	6	1	1		
IC3ANIONS.smt	1.0	58	10.0	1.0	10.0	100.0	5	1	1		
IC3ANIONS.smt	0.4	59	10.0	1.0	10.0	100.0	4	1	1		
IC3ANIONS.smt	0.2	60	10.0	1.0	10.0	100.0	3	1	1		
IC3ANIONS.smt	0.1	61	10.0	1.0	10.0	100.0	2	1	1		
IC3ANIONS.smt	0	62	10.0	1.0	10.0	100.0	1	1	1		

System	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Level	Injections	Done	Sample Info 1	Sample Info 2
IC3ANIONS.smt	0.1 LOQ	5	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	QCS	6	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	0.1ppm	63	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	ICV	7	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	ICB	8	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	MB	9	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCS	10	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCSD	11	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL1-0.05	12	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL2-.05	13	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL3-.05	14	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL4-.05	15	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL5-.05	16	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL6-.05	17	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL7-.05	18	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CCV	19	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CB	20	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL8-.05	21	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL9-.05	22	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	MB	23	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCS	24	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCSD	25	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL1-.1	26	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL2-.1	27	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL3-.1	28	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL4-.1	29	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL5-.1	30	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CCV	31	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CB	32	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL6-.1	33	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL7-.1	34	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL8-.1	35	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL9-.1	36	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	MB	37	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCS	38	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	LCSD	39	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL1-.15	40	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL2-.15	41	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CCV	42	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CB	43	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL3-.15	44	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL4-.15	45	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL5-.15	46	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL6-.15	47	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL7-.15	48	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL8-.15	49	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	DL9-.15	50	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CCV	51	10.0	1.0	10.0	100.0	0	1	1		
IC3ANIONS.smt	CB	52	10.0	1.0	10.0	100.0	0	1	1		

SGS North America Inc.

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: IC3061314-que
Data Files: Y613013.CMD-Y613083.CMD
Method: IC3Anions 061314.mth
Cal. Date: 6/13/14

Run Date: 6-13-14
Queue/Batch: cal only
Analyst: SC

#	Sample ID	Comments	Post (Y/N)
1	Bombtest		Y N
2	CO		Y N
3	CO		Y N
4	CO		Y N
5	LOQ check	high	Y N
6	QCS		Y N
7	ICV		Y N
8	ICB		Y N
59	0.1 LOQ	high - recal	Y N
9	MB		Y N
54	LOR check		Y N
55	40		Y N
56	25		Y N
57	5		Y N
58	1.0		Y N
59	0.4		Y N
60	0.2		Y N
61	0.1		Y N
62	0		Y N
			Y N
			Y N

SGS North America Inc.

EPA300.0 - Ion Chromatography Run Log

Instrument Queue: IC30613L4A.gwe
Data Files: y6131717.gwe
Method: IC3Anions 061314.mth
Cal. Date: 6/13/14

Run Date: 6/13/14
Queue/Batch:
Analyst: SLC

#	Sample ID	Comments	Post (Y/N)
5	0.1 LOQ	high - rerun	☐ Y ☑ N
6	QCS		☑ Y ☐ N
63	0.1 ppm		☐ Y ☑ N
7	ICV		☑ Y ☐ N
8	ICB	SO_4^{2-} high - don't use	☑ Y ☐ N
9	MB		☑ Y ☐ N
10	LCS		☐ Y ☑ N
11	LCSD		☐ Y ☑ N
12	DL1 - .05	Don't need - N.P.	☐ Y ☑ N
13	DL2 - .05		☐ Y ☑ N
14	DL3 - .05		☐ Y ☑ N
15	DL4 - .05		☐ Y ☑ N
16	DL5 - .05		☐ Y ☑ N
17	DL6 - .05		☐ Y ☑ N
18	DL7 - .05		☐ Y ☑ N
19	CCV		☐ Y ☑ N
20	CB		☑ Y ☐ N
21	DL8 - .05		☑ Y ☐ N
22	DL9 - .05		☐ Y ☑ N
23	MB		☐ Y ☑ N
24	LCS		☑ Y ☐ N
25	LCSD		☑ Y ☐ N
26	DL1 - .1	Post for F, Cl, Br, NO_3	☑ Y ☐ N
27	DL2 - .1		☑ Y ☐ N
28	DL3 - .1		☑ Y ☐ N
29	DL4 - .1		☑ Y ☐ N
30	DL5 - .1		☑ Y ☐ N
31	CCV		☑ Y ☐ N
32	CB		☑ Y ☐ N
33	DL6 - .1		☑ Y ☐ N
34	DL7 - .1		☑ Y ☐ N
35	DL8 - .1		☑ Y ☐ N
36	DL9 - .1	check only - N.P.	☐ Y ☑ N
37	MB		☐ Y ☑ N
38	LCS		☐ Y ☑ N
39	LCSD		☐ Y ☑ N
40	DL1 - .15	Don't need - N.P.	☐ Y ☑ N
41	DL2 - .15		☐ Y ☑ N
42	CCV		☐ Y ☑ N
43	CB		☑ Y ☐ N

Daily Checks:
- ☑ Eluent Full
- ☑ Regenerate Full
- ☑ Water Full
- 15.6 Baseline (µS/cm)
- 3.3 Backpressure (Mpa)

Standards	Prep Date	Lot #
CCV/LFB:	6/13/14	P759 / P847
QCS:		P624 / P852
H2SO4:		P443
Eluent:		LW9-463-4B
Filter Lot#:	P911	

Standard 1x dilution unless noted by sample ID.

SGS North America Inc.

See PJ 61 SLC 6-17-14

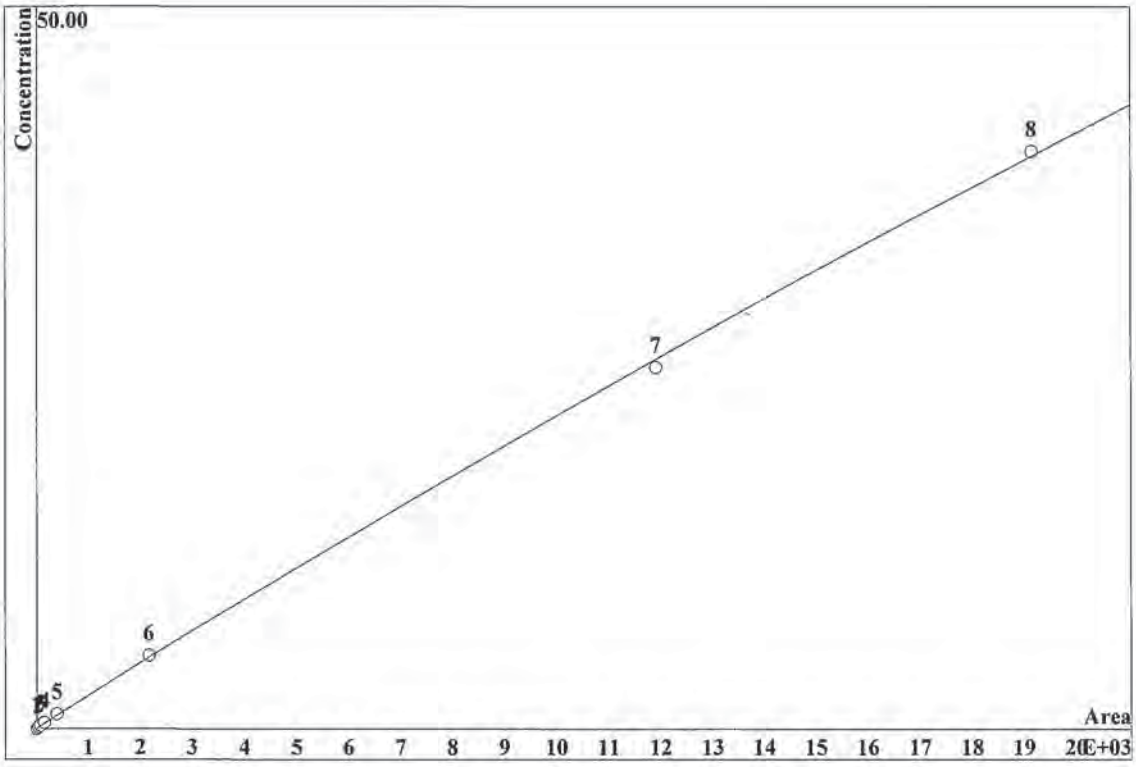
EPA300.0 - Ion Chromatography Run Log

Instrument Queue: _____ Run Date: _____
Data Files: _____ Queue/Batch: _____
Method: _____ Analyst: _____
Cal. Date: _____

#	Sample ID	Comments	Post (Y/N)
44	DL3-.15		☐ Y ☑ N
45	DL4-.15		☐ Y ☑ N
46	DL5-.15		☐ Y ☑ N
47	DL6-.15		☐ Y ☑ N
48	DL7-.15		☐ Y ☑ N
49	DL8-.15		☐ Y ☑ N
50	DL9-.15		☐ Y ☑ N
51	CCV		☐ Y ☑ N
52	CB		☐ Y ☐ N
			☐ Y ☐ N
			☐ Y ☐ N

CALIBRATION OF COMPONENT Fluoride

Method: IC3Anions061314.mtw
Equation: Q = - 9.95498e-07·A^2 + 0.226039·A + 4.07816
RSD: 3.149 %
Correlation coefficient: 0.999952

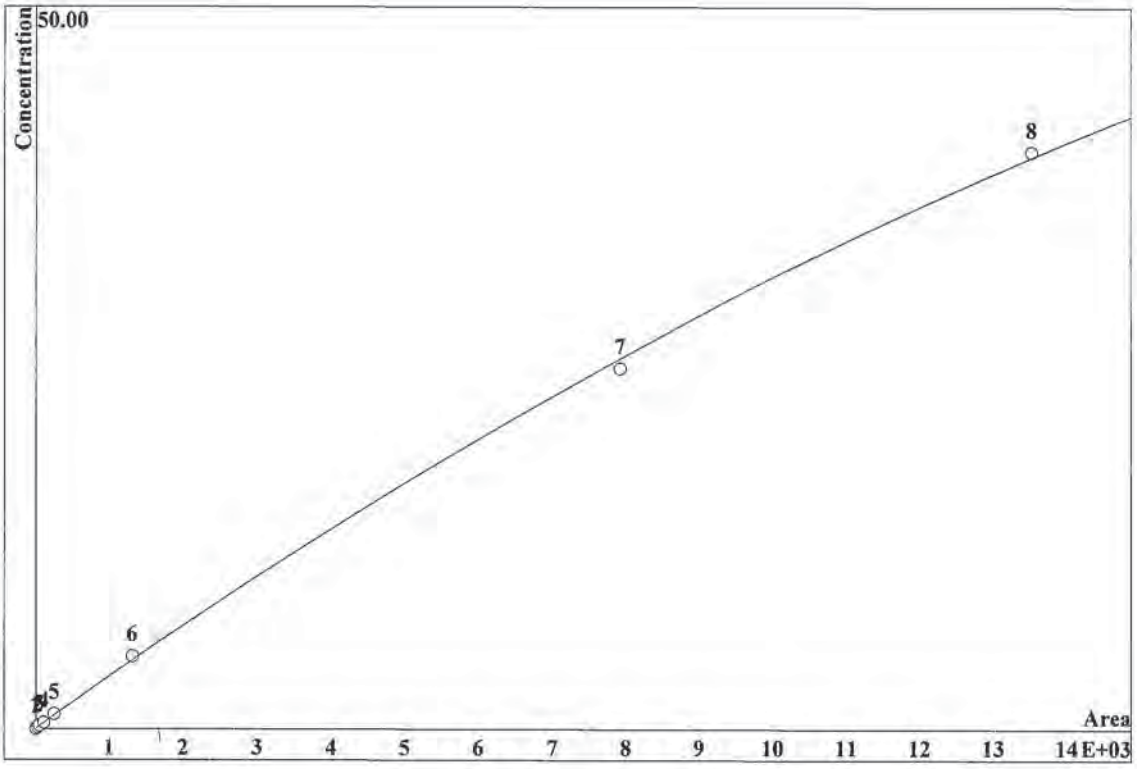


K3 = 0 K2 = -9.95498e-07 K1 = 0.226039 K0 = 4.07816
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	3.007	35.46	0.1	100	3.61	Yes	y6131612.chw
3	6.037	68.68	0.2	100	3.61	Yes	y6131551.chw
4	11.28	140.6	0.4	100	3.61	Yes	y6131530.chw
5	34.51	388.5	1	100	3.61	Yes	y6131509.chw
6	209.2	2165	5	100	3.61	Yes	y6131449.chw
7	1025	1.191e+04	25	100	3.61	Yes	y6131428.chw
8	1459	1.915e+04	40	100	3.61	Yes	y6131407.chw

CALIBRATION OF COMPONENT Chloride

Method: IC3Anions061314.mtw
Equation: Q = - 5.51465e-06·A^2 + 0.367549·A + 1.26041
RSD: 3.527 %
Correlation coefficient: 0.999232

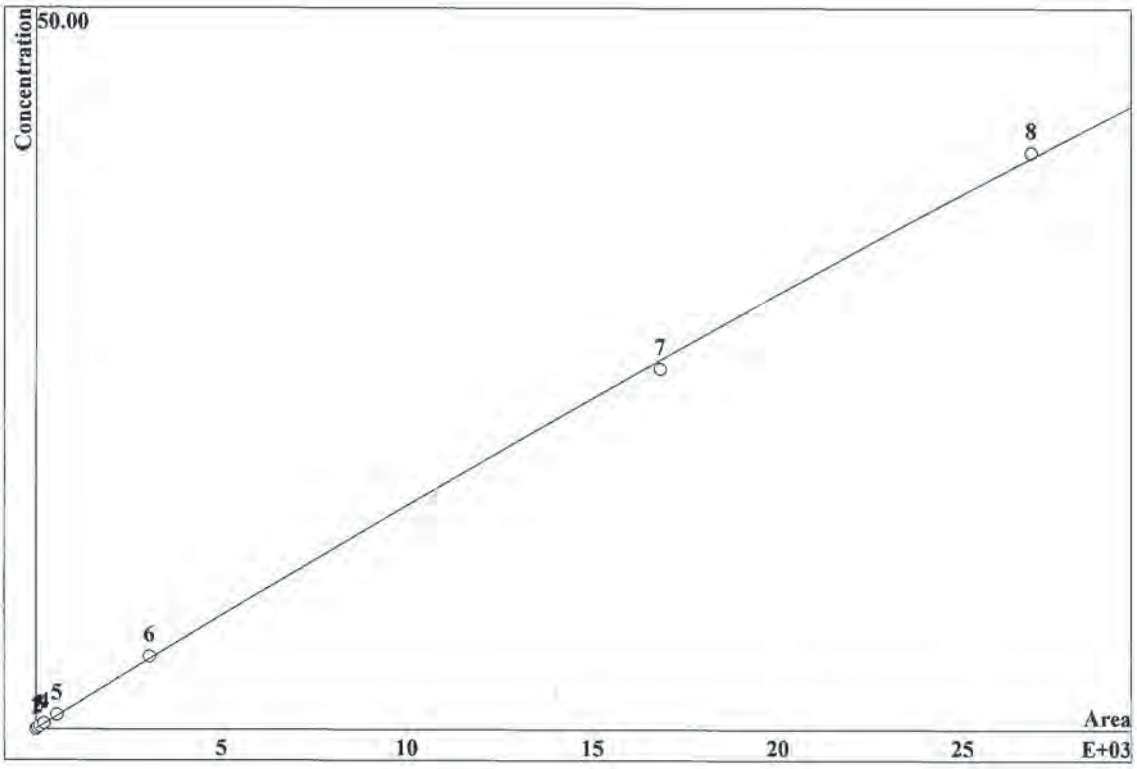


K3 = 0 K2 = -5.51465e-06 K1 = 0.367549 K0 = 1.26041
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	2.385	27.05	0.1	100	5.4	Yes	y6131612.chw
3	4.311	48.87	0.2	100	5.4	Yes	y6131551.chw
4	9.724	109.6	0.4	100	5.4	Yes	y6131530.chw
5	21.95	250.3	1	100	5.4	Yes	y6131509.chw
6	121	1315	5	100	5.4	Yes	y6131449.chw
7	774.3	7922	25	100	5.4	Yes	y6131428.chw
8	1284	1.352e+04	40	100	5.4	Yes	y6131407.chw

CALIBRATION OF COMPONENT Nitrite_N

Method: IC3Anions061314.mtw
Equation: Q = - 4.46934e-07·A^2 + 0.159502·A + 3.19305
RSD: 3.051 %
Correlation coefficient: 0.999947

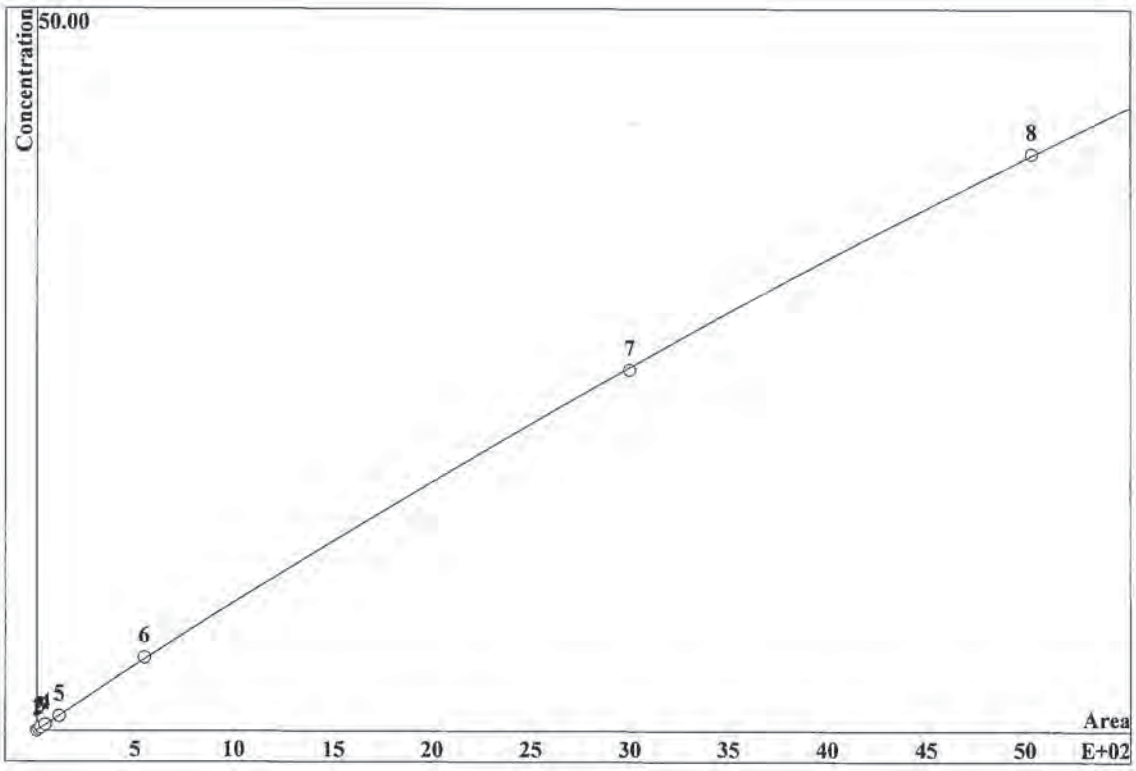


K3 = 0 K2 = -4.46934e-07 K1 = 0.159502 K0 = 3.19305
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	3.846	51.2	0.1	100	6.48	Yes	y6131612.chw
3	8.004	106.6	0.2	100	6.48	Yes	y6131551.chw
4	16.23	215.5	0.4	100	6.48	Yes	y6131530.chw
5	41.46	558.9	1	100	6.48	Yes	y6131509.chw
6	224.1	3041	5	100	6.48	Yes	y6131449.chw
7	1050	1.683e+04	25	100	6.48	Yes	y6131428.chw
8	1537	2.685e+04	40	100	6.48	Yes	y6131407.chw

CALIBRATION OF COMPONENT Bromide

Method: IC3Anions061314.mtw
Equation: Q = - 2.2459e-05·A^2 + 0.906053·A + 1.18474
RSD: 1.083 %
Correlation coefficient: 0.999631

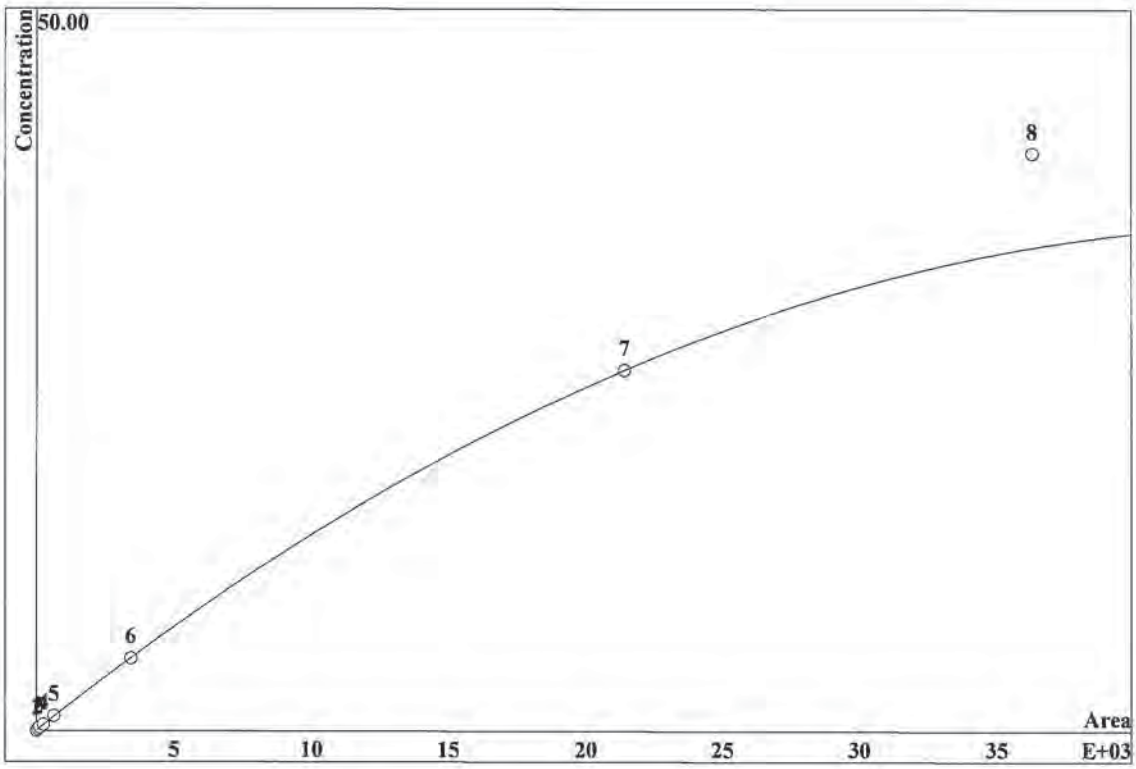


K3 = 0 K2 = -2.2459e-05 K1 = 0.906053 K0 = 1.18474
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	0.6226	9.841	0.1	100	8.34	Yes	y6131612.chw
3	1.278	20.36	0.2	100	8.34	Yes	y6131551.chw
4	2.624	42.85	0.4	100	8.34	Yes	y6131530.chw
5	6.743	112.3	1	100	8.34	Yes	y6131509.chw
6	35.26	546.9	5	100	8.34	Yes	y6131449.chw
7	195.6	2999	25	100	8.34	Yes	y6131428.chw
8	295.3	5031	40	100	8.34	Yes	y6131407.chw

CALIBRATION OF COMPONENT Nitrate-N

Method: IC3Anions061314.mtw
Equation: Q = - 1.64527e-06·A^2 + 0.151927·A + 0.792638
RSD: 1.358 %
Correlation coefficient: 0.999280

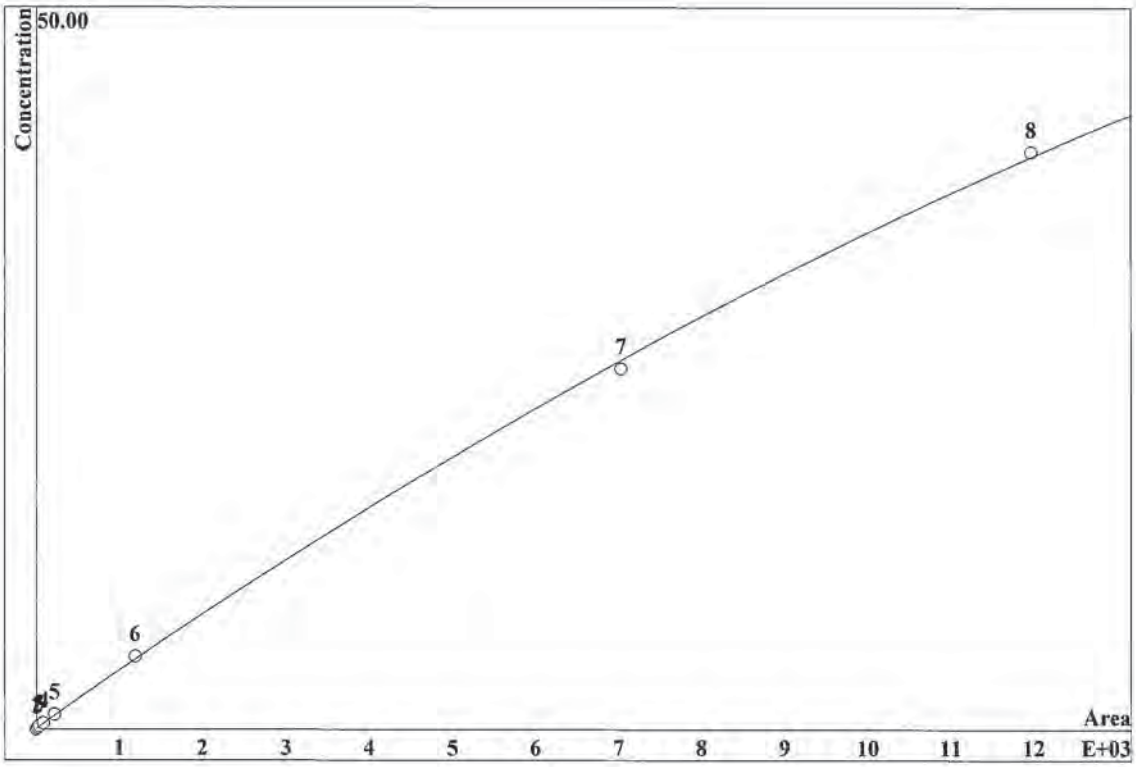


K3 = 0 K2 = -1.64527e-06 K1 = 0.151927 K0 = 0.792638
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	3.525	64.75	0.1	100	9.55	Yes	y6131612.chw
3	6.637	121.8	0.2	100	9.55	Yes	y6131551.chw
4	14.15	259.1	0.4	100	9.55	Yes	y6131530.chw
5	34.72	637.3	1	100	9.55	Yes	y6131509.chw
6	194.3	3438	5	100	9.55	Yes	y6131449.chw
7	1283	2.141e+04	25	100	9.55	Yes	y6131428.chw
8	1985	3.629e+04	40	100	9.55	No	y6131407.chw

CALIBRATION OF COMPONENT o-phosphate

Method: IC3Anions061314.mtw
Equation: Q = - 6.51426e-06·A^2 + 0.409115·A + 3.74598
RSD: 2.953 %
Correlation coefficient: 0.999321

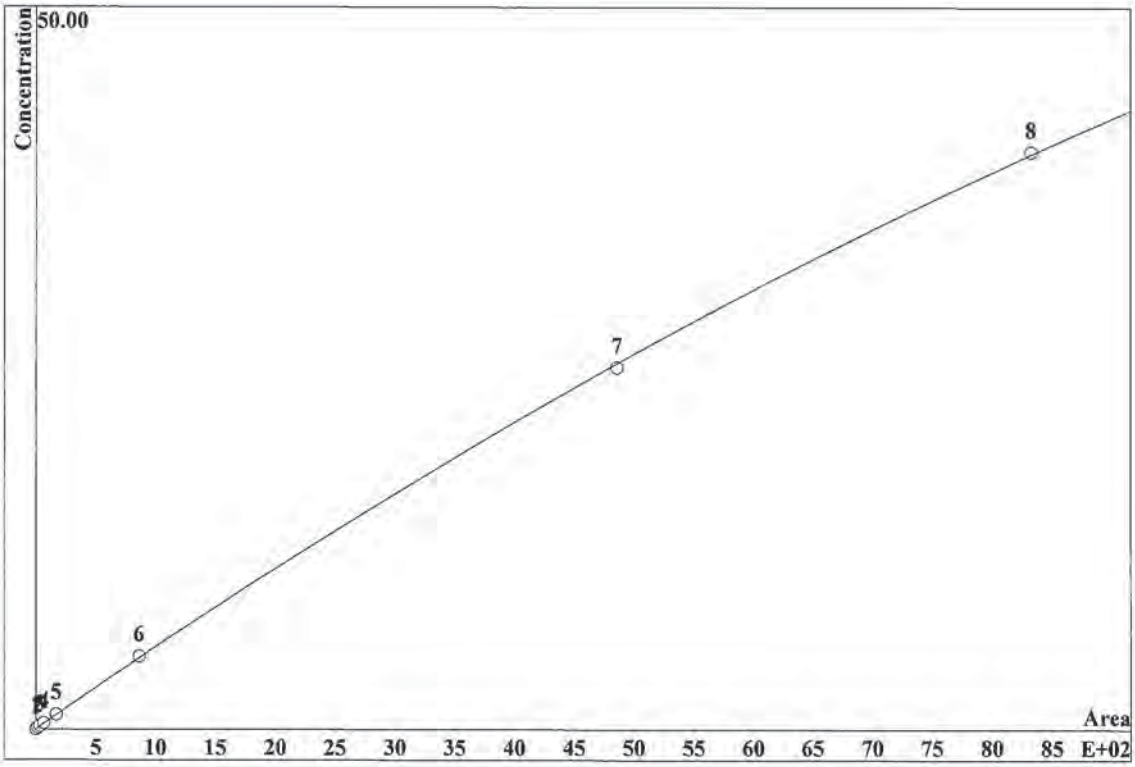


K3 = 0 K2 = -6.51426e-06 K1 = 0.409115 K0 = 3.74598
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1143	1.981	0	100	12.5	No	y6131633.chw
2	0.8174	18.6	0.1	100	12.5	Yes	y6131612.chw
3	1.656	37.63	0.2	100	12.5	Yes	y6131551.chw
4	3.423	87.04	0.4	100	12.5	Yes	y6131530.chw
5	8.813	219.1	1	100	12.5	Yes	y6131509.chw
6	49.62	1190	5	100	12.5	Yes	y6131449.chw
7	315.9	7029	25	100	12.5	Yes	y6131428.chw
8	541.2	1.197e+04	40	100	12.5	Yes	y6131407.chw

CALIBRATION OF COMPONENT Sulfate

Method: IC3Anions061314.mtw
Equation: Q = - 1.20234e-05·A^2 + 0.578654·A + 0.98975
RSD: 1.449 %
Correlation coefficient: 0.999262



K3 = 0 K2 = -1.20234e-05 K1 = 0.578654 K0 = 0.98975
Base: Area
Ref.channel: ch1
ISTD:
Formula: Quadratic
Weight: 1/X

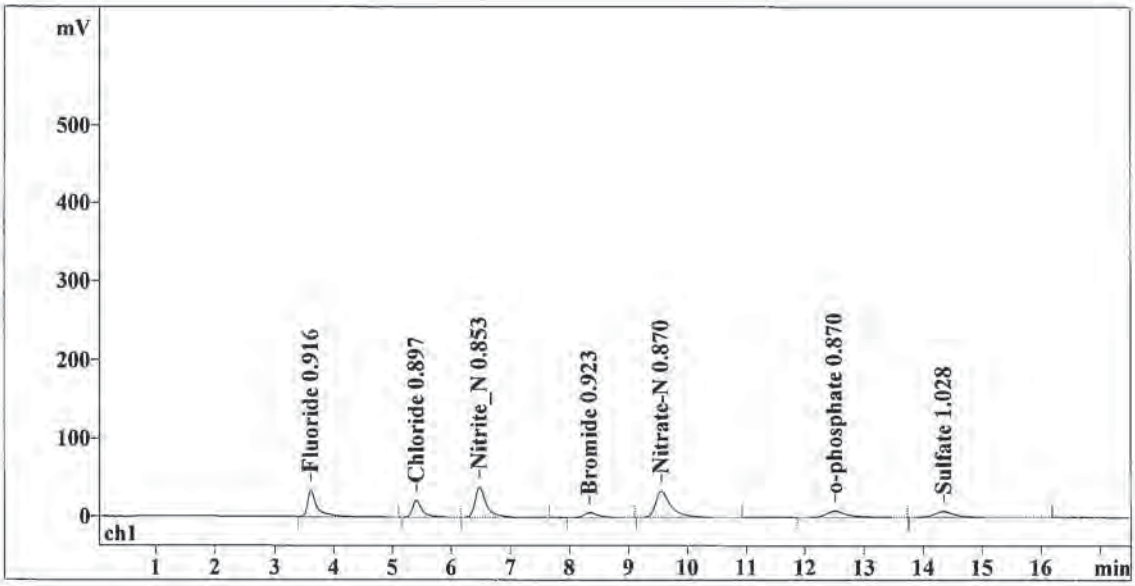
Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	y6131633.chw
2	0.7245	16.89	0.1	100	14.35	Yes	y6131612.chw
3	1.41	32.57	0.2	100	14.35	Yes	y6131551.chw
4	2.871	65.56	0.4	100	14.35	Yes	y6131530.chw
5	7.111	167.3	1	100	14.35	Yes	y6131509.chw
6	36.79	861.2	5	100	14.35	Yes	y6131449.chw
7	217.3	4857	25	100	14.35	Yes	y6131428.chw
8	376.3	8324	40	100	14.35	Yes	y6131407.chw

Report date: 6/17/2014 9:32:06 AM
Printed by: Stephanie Charley

Ident: 1.0 RT CHECK
Analysis from: 6/13/2014 1:46:38 PM
File: y6131346.CHW Last save: 6/17/2014 9:32:04 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:32:0
Run operator: Stephanie Charley
Analysis number: 6365

SAMPLE:
:
Vial number: 54
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	33.89	391.901	0.916	Fluoride
2	5.40	21.70	247.293	0.897	Chloride
3	6.48	39.19	527.077	0.853	Nitrite_N
4	8.34	6.43	104.551	0.923	Bromide
5	9.55	34.07	631.763	0.870	Nitrate-N
6	12.50	8.24	211.176	0.870	o-phosphate
7	14.35	7.34	180.433	1.028	Sulfate
7	17.50	150.86	2294.194	6.356	

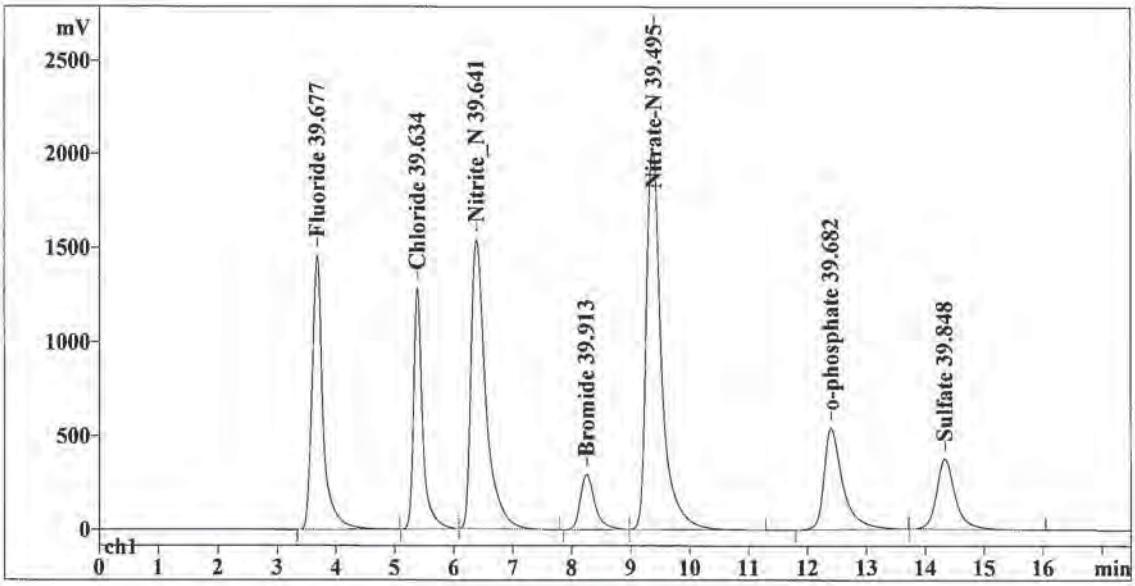
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Report date: 6/17/2014 9:14:34 AM
Printed by: Stephanie Charley

Ident: 40
Analysis from: 6/13/2014 2:07:25 PM
File: y6131407.CHW Last save: 6/17/2014 9:14:30 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:14:2
Run operator: Stephanie Charley
Analysis number: 6367

SAMPLE:
:
Vial number: 55
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.69	1459.40	19150.089	39.677	Fluoride
2	5.39	1284.02	13524.049	39.634	Chloride
3	6.39	1537.11	26853.510	39.641	Nitrite_N
4	8.25	295.28	5031.281	39.913	Bromide
5	9.39	1987.55	36286.723	39.495	Nitrate-N
6	12.40	541.24	11972.884	39.682	o-phosphate
7	14.34	376.26	8324.377	39.848	Sulfate
7	17.50	7480.86	121142.913	277.889	

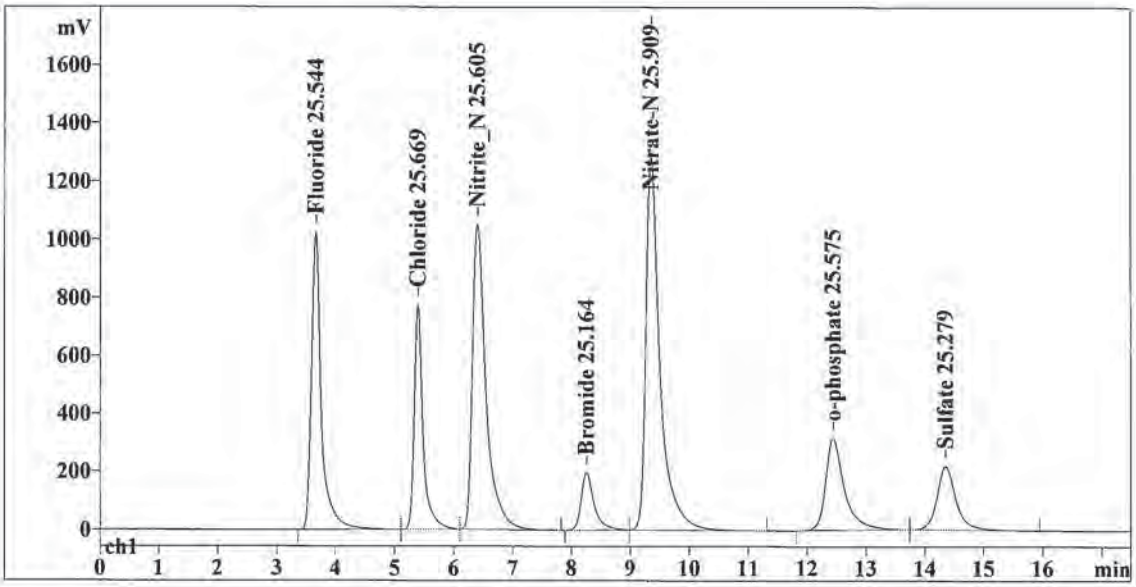
This report has been created by IC Net
METROHM LTD

Report date: 6/17/2014 9:15:16 AM
Printed by: Stephanie Charley

Ident: 25
Analysis from: 6/13/2014 2:28:13 PM
File: y6131428.CHW Last save: 6/17/2014 9:15:13 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:15:0
Run operator: Stephanie Charley
Analysis number: 6369

SAMPLE:
:
Vial number: 56
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	1025.06	11906.994	25.544	Fluoride
2	5.40	774.28	7921.879	25.669	Chloride
3	6.41	1049.73	16826.228	25.605	Nitrite_N
4	8.25	195.61	2998.916	25.164	Bromide
5	9.36	1282.84	21411.637	25.909	Nitrate-N
6	12.44	315.95	7028.839	25.575	o-phosphate
7	14.36	217.28	4857.094	25.279	Sulfate
7	17.50	4860.76	72951.586	178.745	

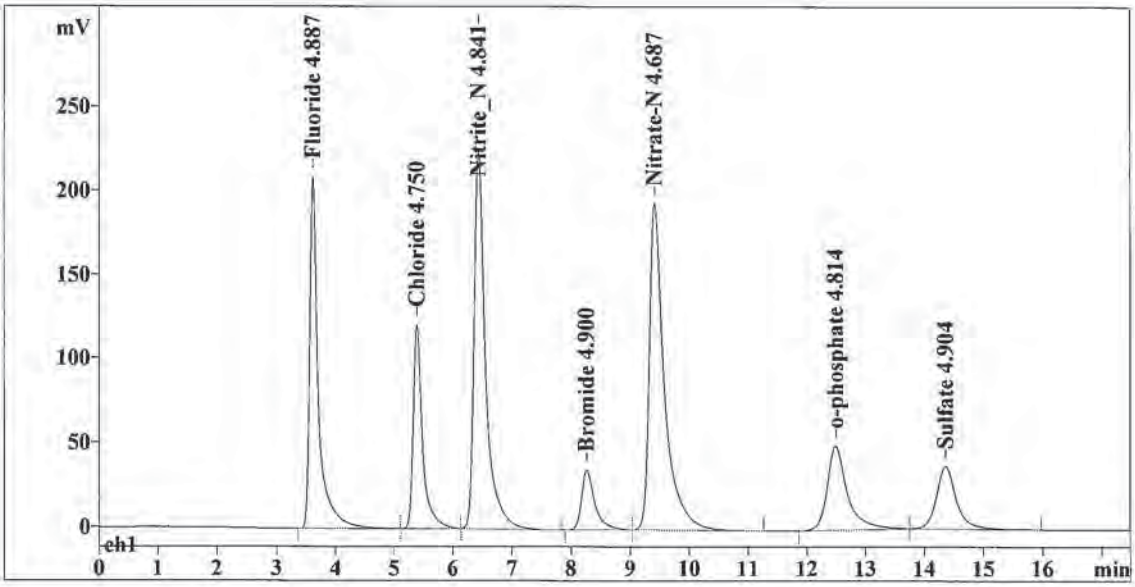
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METROHM LTD

Report date: 6/17/2014 9:15:37 AM
Printed by: Stephanie Charley

Ident: 5
Analysis from: 6/13/2014 2:49:02 PM
File: y6131449.CHW Last save: 6/17/2014 9:15:34 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:15:2
Run operator: Stephanie Charley
Analysis number: 6371

SAMPLE:
:
Vial number: 57
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.62	209.22	2164.542	4.887	Fluoride
2	5.39	121.01	1314.714	4.750	Chloride
3	6.44	224.05	3041.284	4.841	Nitrite_N
4	8.27	35.26	546.919	4.900	Bromide
5	9.41	194.33	3437.505	4.687	Nitrate-N
6	12.49	49.62	1190.126	4.814	o-phosphate
7	14.36	36.79	861.171	4.904	Sulfate
7	17.50	870.28	12556.262	33.783	

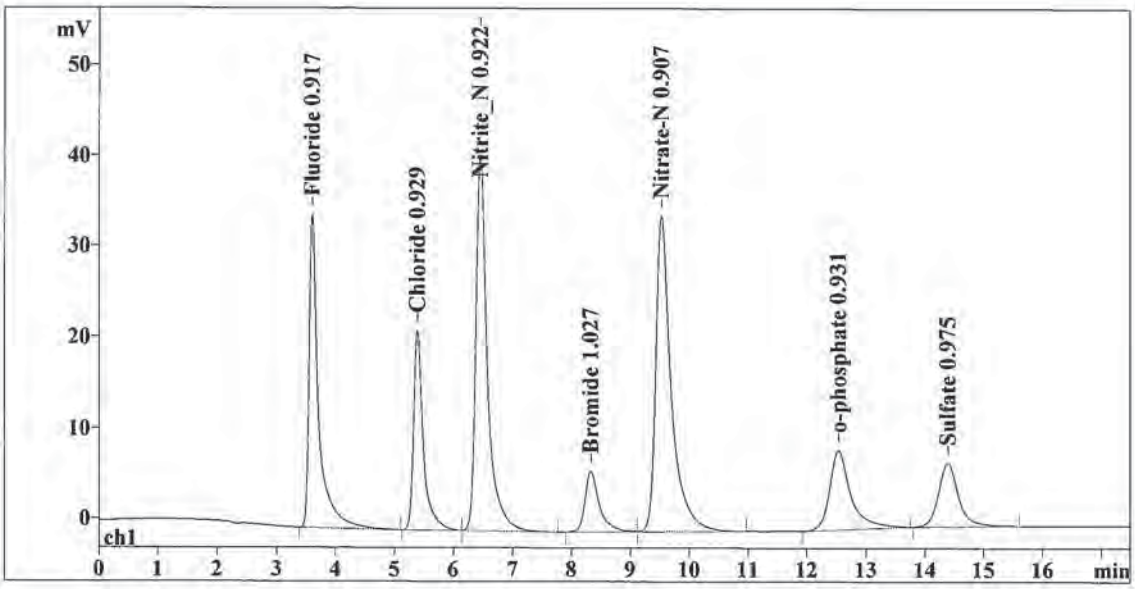
This report has been created by IC Net
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Report date: 6/17/2014 9:15:54 AM
Printed by: Stephanie Charley

Ident: 1.0
Analysis from: 6/13/2014 3:09:49 PM
File: y6131509.CHW Last save: 6/17/2014 9:15:49 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:15:4
Run operator: Stephanie Charley
Analysis number: 6373

SAMPLE:
:
Vial number: 58
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	34.51	388.470	0.917	Fluoride
2	5.40	21.96	250.268	0.929	Chloride
3	6.46	41.47	558.950	0.922	Nitrite_N
4	8.33	6.74	112.310	1.027	Bromide
5	9.53	34.72	637.334	0.907	Nitrate-N
6	12.54	8.81	219.077	0.931	o-phosphate
7	14.39	7.11	167.308	0.975	Sulfate
7	17.50	155.31	2333.717	6.607	

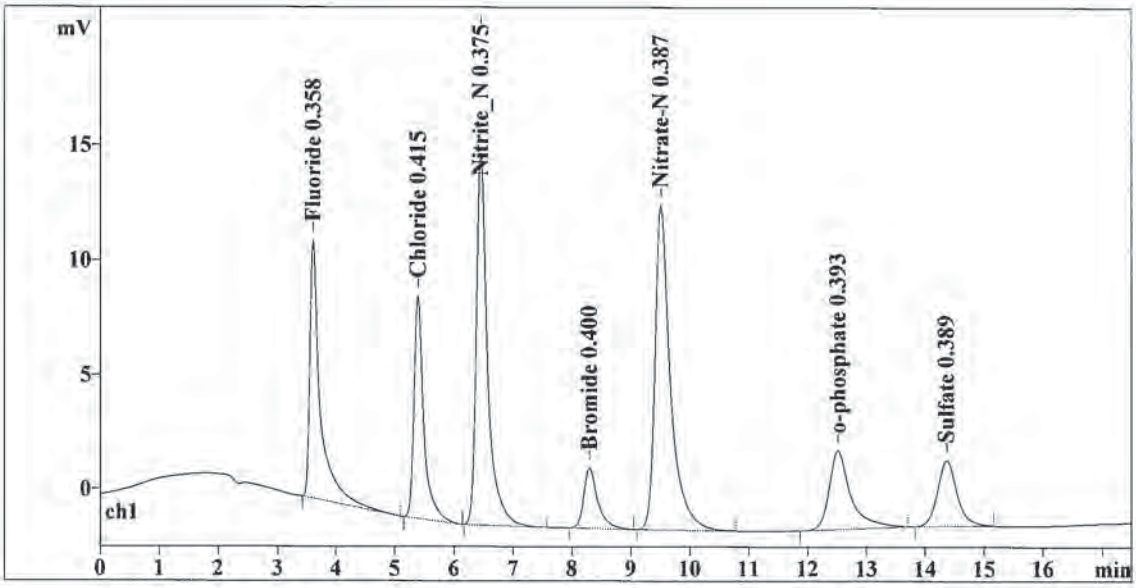
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Report date: 6/17/2014 9:16:05 AM
Printed by: Stephanie Charley

Ident: 0.4
Analysis from: 6/13/2014 3:30:36 PM
File: y6131530.CHW Last save: 6/17/2014 9:16:04 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:16:0
Run operator: Stephanie Charley
Analysis number: 6375

SAMPLE:
:
Vial number: 59
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	11.28	140.626	0.358	Fluoride
2	5.39	9.72	109.631	0.415	Chloride
3	6.46	16.23	215.503	0.375	Nitrite_N
4	8.30	2.63	42.851	0.400	Bromide
5	9.51	14.15	259.073	0.387	Nitrate-N
6	12.52	3.42	87.037	0.393	o-phosphate
7	14.37	2.87	65.559	0.389	Sulfate
7	17.50	60.30	920.280	2.717	

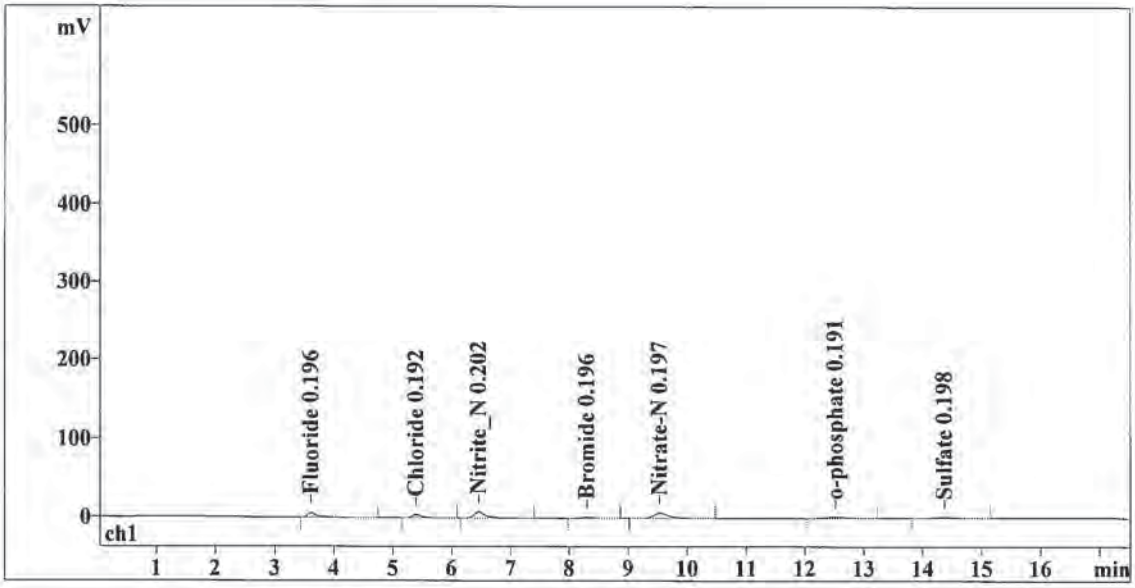
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METROHM LTD

Report date: 6/17/2014 9:16:17 AM
Printed by: Stephanie Charley

Ident: 0.2
Analysis from: 6/13/2014 3:51:24 PM
File: y6131551.CHW Last save: 6/17/2014 9:16:16 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:16:1
Run operator: Stephanie Charley
Analysis number: 6377

SAMPLE:
:
Vial number: 60
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	6.04	68.678	0.196	Fluoride
2	5.39	4.31	48.868	0.192	Chloride
3	6.46	8.00	106.574	0.202	Nitrite_N
4	8.30	1.28	20.361	0.196	Bromide
5	9.53	6.64	121.752	0.197	Nitrate-N
6	12.52	1.66	37.629	0.191	o-phosphate
7	14.37	1.41	32.571	0.198	Sulfate
7	17.50	29.33	436.434	1.373	

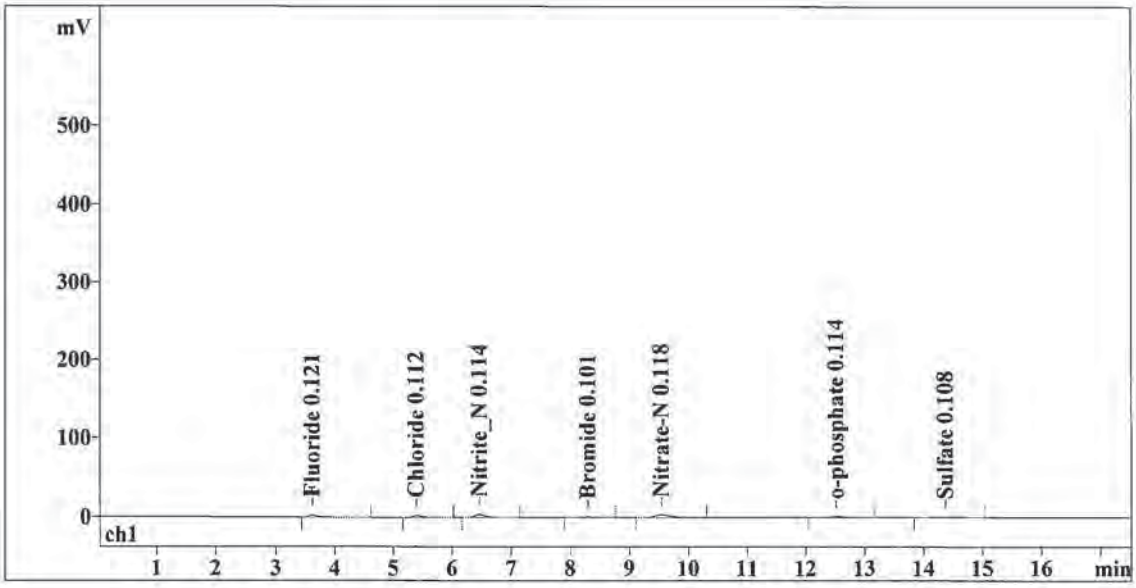
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Report date: 6/17/2014 9:16:29 AM
Printed by: Stephanie Charley

Ident: 0.1
Analysis from: 6/13/2014 4:12:12 PM
File: y6131612.CHW Last save: 6/17/2014 9:16:28 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:16:2
Run operator: Stephanie Charley
Analysis number: 6379

SAMPLE:
:
Vial number: 61
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.61	3.01	35.465	0.121	Fluoride
2	5.39	2.39	27.049	0.112	Chloride
3	6.46	3.85	51.202	0.114	Nitrite_N
4	8.30	0.62	9.841	0.101	Bromide
5	9.54	3.52	64.751	0.118	Nitrate-N
6	12.53	0.82	18.604	0.114	o-phosphate
7	14.37	0.72	16.888	0.108	Sulfate
7	17.50	14.92	223.801	0.787	

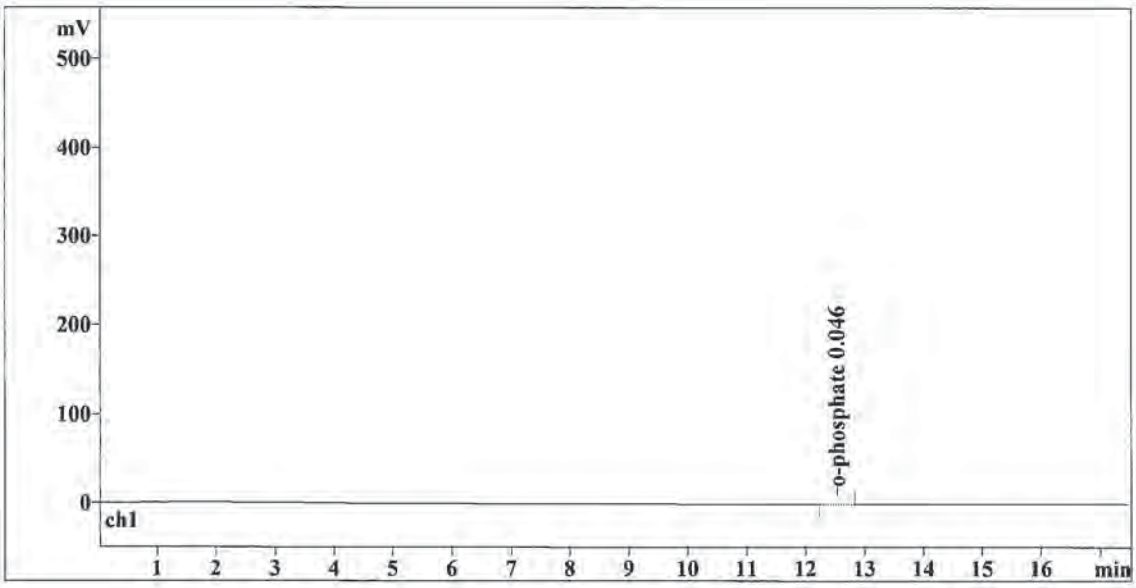
This report has been created by IC Net
METROHM LTD

Report date: 6/17/2014 9:16:56 AM
Printed by: Stephanie Charley

Ident: 0
Analysis from: 6/13/2014 4:33:00 PM
File: y6131633.CHW Last save: 6/17/2014 9:16:54 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:16:5
Run operator: Stephanie Charley
Analysis number: 6381

SAMPLE:
:
Vial number: 62
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	12.54	0.11	1.981	0.046	o-phosphate

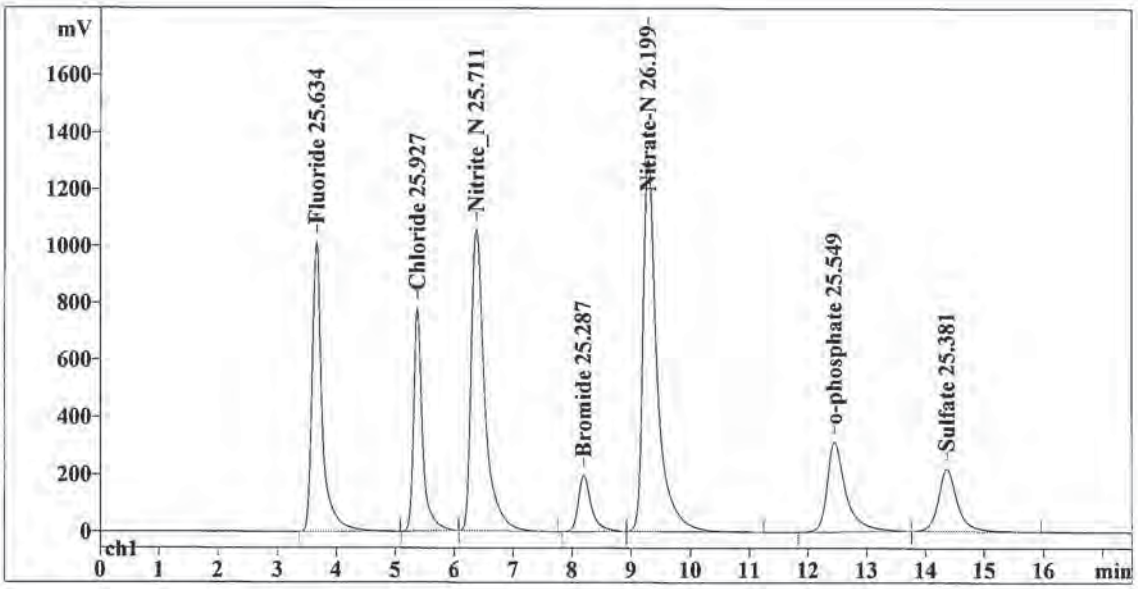
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Report date: 6/17/2014 9:17:35 AM
Printed by: Stephanie Charley

Ident: QCS
Analysis from: 6/13/2014 5:37:49 PM
File: y6131737.CHW Last save: 6/17/2014 9:17:34 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:17:3
Run operator: Stephanie Charley
Analysis number: 6391

SAMPLE:
:
Vial number: 6
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.67	1015.04	11951.433	25.634	Fluoride
2	5.38	779.68	8014.142	25.927	Chloride
3	6.38	1056.00	16899.806	25.711	Nitrite_N
4	8.20	196.58	3014.915	25.287	Bromide
5	9.29	1305.62	21691.990	26.199	Nitrate-N
6	12.45	313.31	7020.605	25.549	o-phosphate
7	14.37	217.45	4879.121	25.381	Sulfate
7	17.50	4883.69	73472.012	179.687	

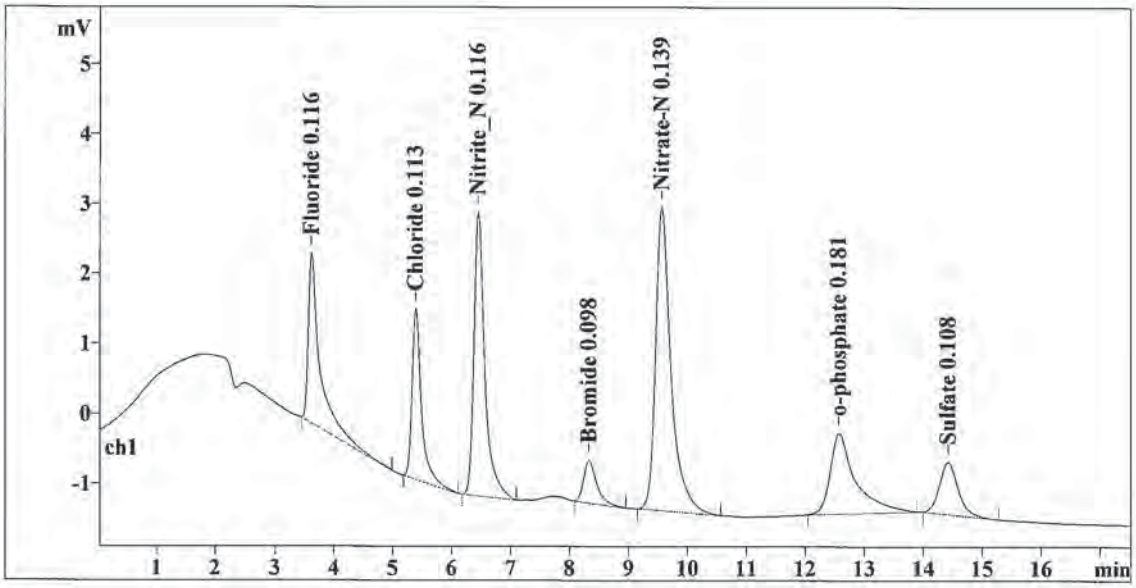
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Report date: 6/17/2014 9:18:18 AM
Printed by: Stephanie Charley

Ident: 0.1ppm
Analysis from: 6/13/2014 5:58:37 PM
File: y6131758.CHW Last save: 6/17/2014 9:18:16 AM

Method: IC3Anions061314.mtw Last save: 6/17/2014 9:18:1
Run operator: Stephanie Charley
Analysis number: 6393

SAMPLE:
:
Vial number: 63
Volume: 10.0 µL
Dilution: 1.00
Amount: 10.0000



Quantitation method: Custom

No	Retention min	Height mV	Area mV*sec	Conc. mg/L	Name
1	3.62	2.42	33.204	0.116	Fluoride
2	5.39	2.44	27.243	0.113	Chloride
3	6.45	4.06	52.453	0.116	Nitrite_N
4	8.32	0.61	9.504	0.098	Bromide
5	9.56	4.34	79.437	0.139	Nitrate-N
6	12.57	1.16	35.032	0.181	o-phosphate
7	14.42	0.76	16.889	0.108	Sulfate
7	17.50	15.77	253.763	0.869	

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Workorder No. 1143645

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26250

Analysis Batch Id: VFC12037

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Metuhd Blank	12261co		8/11/2014 8:30:00AM
Instr7ment Blank	1226163		8/11/2014 8:30:00AM
Lab Chntrhl Sample	12261c8		8/11/2014 9:3c:00AM
Chntin7inV Calib f eri5gatihn	1226164		8/11/2014 9:3c:00AM
Trip Blank	114364c00o	TBWW3S01c	8/11/2014 10:13:00AM
PayinV sample	114364c001	- - W0cW0o2914	8/11/2014 10:32:00AM
Billable Matrix Spike	114364c002	- - W0cW0o2914 WMS	8/11/2014 10:c1:00AM
Billable Matrix Spike D7p.	114364c003	- - W0cW0o2914 WMSD	8/11/2014 11:11:00AM
PayinV sample	114364c004	- - W06W0o2914	8/11/2014 11:49:00AM
PayinV sample	114364c00c	- - W01W0o2914	8/11/2014 12:08:00PM
PayinV sample	114364c006	- - W09W0o2914	8/11/2014 12:2o:00PM
Lab Chntrhl Sample D7pligate	12261c9		8/11/2014 4:1o:00PM
Chntin7inV Calib f eri5gatihn	122616c		8/11/2014 4:1o:00PM
Chntin7inV Calib f eri5gatihn	1226166		8/11/2014 8:08:00PM

SGS Ref.#	1226163 Instrument Blank	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006, 1143645007

Parameter	Results	RL/CL	Units	Analysis Date
Volatile Fuels Department				
Gasoline Range Organics	0.0500U	0.100	mg/L	08/11/14
Surrogates				
4-Bromofluorobenzene <surr>	96	50-150	%	08/11/14

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226164 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006, 1143645007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.856	86	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		99	(75-125)		08/11/2014

I atch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1226165 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006, 1143645007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.963	96	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		103	(75-125)		08/11/2014

I atch VFC12037
Method AK101
Bnstrument Agilent 7890A PID/FID

SGS Ref.#	1226166 Continuing Calib Verification	**Printed Date/Time**	10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		
Project Name/#	Cape Romanzof SS015		
Matrix	Water (Surface, Eff., Ground)		

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006, 1143645007

Parameter		QC Results	Pct Recov	CCV Limits	Spiked Amount	Analysis Date
Volatile Fuels Department						
Gasoline Range Organics	CCV	0.955	96	(75-125)	1.00 mg/L	08/11/2014
Surrogates						
4-Bromofluorobenzene <surr>	CCV		100	(75-125)		08/11/2014

I atch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

Workorder No. 1143645

Volatile Fuels Department

Method: AK101

Method Batch Id: VXX26250

Analysis Batch Id: VFC12037

Sample Type	Lab Sample Id	Client Sample Id	Analysis Date/Time
Metuhd Blank	12261co		8/11/2014 8:30:00AM
Instr7ment Blank	1226163		8/11/2014 8:30:00AM
Lab Chntrhl Sample	12261c8		8/11/2014 9:3c:00AM
Chntin7inV Calib f eri5gatihn	1226164		8/11/2014 9:3c:00AM
Trip Blank	114364c00o	TBWWSS01c	8/11/2014 10:13:00AM
PayinV sample	114364c001	- - W0cW0o2914	8/11/2014 10:32:00AM
Billable Matrix Spike	114364c002	- - W0cW0o2914 WMS	8/11/2014 10:c1:00AM
Billable Matrix Spike D7p.	114364c003	- - W0cW0o2914 WMSD	8/11/2014 11:11:00AM
PayinV sample	114364c004	- - W06W0o2914	8/11/2014 11:49:00AM
PayinV sample	114364c00c	- - W01W0o2914	8/11/2014 12:08:00PM
PayinV sample	114364c006	- - W09W0o2914	8/11/2014 12:2o:00PM
Lab Chntrhl Sample D7pligate	12261c9		8/11/2014 4:1o:00PM
Chntin7inV Calib f eri5gatihn	122616c		8/11/2014 4:1o:00PM
Chntin7inV Calib f eri5gatihn	1226166		8/11/2014 8:08:00PM

SGS Ref.#	1226157	Method Blank	**Printed Date/Time**		10/01/2014 15:36
Client Name	EA Engineering, Science and Tech.		**Prep**	**Batch**	VXX26250
Project Name/#	Cape Romanzof SS015			**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)			**Date**	08/11/2014

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006, 1143645007

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	08/11/14
Surrogates					
4-Bromofluorobenzene <surr>	96	50-150		%	08/11/14
Batch VFC12037					
Method AK101					
Instrument Agilent 7890A PID/FID					

SGS Ref.#	1226158	Lab Control Sample	**Printed Date/Time**	10/01/2014	15:36
	1226159	Lab Control Sample Duplicate	**Prep Batch**	VXX26250	
Client Name	EA Engineering, Science and Tech.		**Method**	SW5030B	
Project Name/#	Cape Romanzof SS015		**Date**	08/11/2014	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1143645001, 1143645004, 1143645005, 1143645006, 1143645007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	0.856	86	(60-120)			1.00 mg/L	08/11/2014
	LCSD	0.963	96		12	(< 20)	1.00 mg/L	08/11/2014
Surrogates								
4-Bromofluorobenzene <surr>	LCS		99	(50-150)				08/11/2014
	LCSD		103		4			08/11/2014

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS Ref.#	1143645002	Billable Matrix Spike	**Printed Date/Time**	10/01/2014 15:36
	1143645003	Billable Matrix Spike Dup.	**Prep Batch**	VXX26250
			Method	Volatile Fuels Extraction (W)
			Date	08/11/2014
Original	1143645001			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount		Analysis Date
Volatile Fuels Department										
Gasoline Range Organics	BMS	0.0500U	0.923	92	(60-120)			1.00	mg/L	08/11/2014
	BMSD		0.903	90		2	(< 20)	1.00	mg/L	08/11/2014
Surrogates										
4-Bromofluorobenzene <surr>	BMS		0.0488	98	(50-150)					08/11/2014
	BMSD		0.0494	99		1				08/11/2014

Batch VFC12037
Method AK101
Instrument Agilent 7890A PID/FID

SGS North America Inc.

Analytical Quality Control Summary Data

Work Order(s):
1143645, 1143646, 1143647, 1143699, 1148349

Queue: **VFC** Batch: **12037**

Method: AK101, AK101 8021B, AK101/8021B

Run Date: 08/11/14 08:30 - 08/11/14 20:08

Extraction Batch(es): VXX26250

Notes:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of the Quality Assurance Plan (QAP) prepared by this firm and on file with the Alaska Department of Environmental Conservation.

Analyst's Signature:
Printed Name: SHERAB TENZIN
Date: 8/12/14

Reviewer's Signature Elizabeth Brandemuhl
Printed Name: Elizabeth Brandemuhl
Date: 8-12-2014

Evaluate Continuing Calibration Report

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On   : 11 Aug 2014   9:35 am
Operator : ST
Sample   : CCV
Misc   :
ALS Vial : 8   Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj.   :
Signal #1 Phase :   Signal #2 Phase:
Signal #1 Info :   Signal #2 Info :

Min. RRF   :   0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25%   Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	PID-aaa -TFT	1.000	1.000	0.0	0#	0.00
2		PID-benzene	0.000	1.145	0.0	0#	0.00
3	S	PID-1,4-DFB<Surr>	0.000	1.383	0.0	0#	0.00
4		PID-toluene	0.000	13.734	0.0	0#	0.00
5		PID-ethylbenzene	0.000	1.671	0.0	0#	0.00
6		PID-p&m-xylene	0.000	7.453	0.0	0#	0.00
7		PID-o-xylene	0.000	2.344	0.0	0#	0.00
8		PID-BFB<Surr>	0.000	2.949	0.0	0#	0.00
		Signal #2					
10	S	FID-1,4-DFB #2	341.197	0.000 E3	100.0#	0#	0.00
11	S	FID-TRI-ALPHA #2	245.113	0.000 E3	100.0#	0#	0.00
12	H	FID-GRO #2	296.994	254.192 E3	14.4	86	0.00
13	S	FID-4-BFB<Surr> #2	243.990	0.000 E3	100.0#	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

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

GC QA-QC Check Report

Daily Calibration File : Z:\07\VHA\DATA\073114\3112.d
Time Acquired : 31 Jul 2014 11:15 am

						30364300
File	Sample	Surrogate Recovery %				Internal Standard Responses
1105.d (fails)	IB	109	98	96	96	33514988
1106.d (fails)	NAS	108	98	98	96	33529954
1107.d (fails)	CCV2	118	102	95	102	33535872
1108.d (fails)	CCV	109	111	96	99	34410799
1109.d (fails)	CCV2	119	101	94	97	33062446
1110.d (fails)	1143645007	111	98	94	92	32934588
1111.d (fails)	1143645001	111	99	93	94	32553799
1112.d (fails)	1143645002	117	112	92	98	32091523
1113.d (fails)	1143645003	115	111	94	99	32944645
1114.d (fails)	R	112	101	93	96	33326537
1115.d (fails)	1143645004	110	100	96	93	33054838
1116.d (fails)	1143645005	115	104	96	100	32356954
1117.d (fails)	1143645006	110	103	101	95	33600231
1118.d (fails)	R	111	99	100	93	33021473
1119.d (fails)	1143647005	111	99	95	95	33117937
1120.d (fails)	1143647001	113	86	98	121	33777558
1121.d (fails)	1143647002	108	98	95	99	33559458
1122.d (fails)	1143647003	105	104	107	152*	34811576
1123.d (fails)	1143647004	111	99	94	101	33267911
1124.d (fails)	R	108	99	100	110	33921909
1125.d (fails)	1143646001	111	100	95	99	33537357
1126.d (fails)	1143646002	113	112	96	98	33548835

1127.d						
(fails)	1143646003	113	112	96	97	33505481
1128.d						
(fails)	R	110	99	97	97	33485391
1129.d						
(fails)	CCV	116	111	93	103	32574014
1130.d						
(fails)	1143646006	110	98	94	92	33606933
1131.d						
(fails)	1143646004	111	100	95	95	33028367
1132.d						
(fails)	1143646005	110	99	96	95	33600498
1133.d						
(fails)	1143646007	107	100	98	98	34170668
1134.d						
(fails)	1143646008	109	99	97	94	33822918
1135.d						
(fails)	R	110	99	95	95	33601426
1136.d						
(fails)	1143699006	111	100	95	93	32929459
1137.d						
(fails)	1148349012	111	99	95	96	33094816
1138.d						
(fails)	1148349001	111	99	95	95	33241876
1139.d						
(fails)	1148349002	110	98	94	98	33351934
1140.d						
(fails)	R	111	100	96	97	33428064
1141.d						
(fails)	CCV	114	114	96	100	33491778

(fails) - fails 24hr time check * - fails criteria

Created: Tue Aug 12 12:11:12 2014 VHA

Instrument Runlog

Instrument: VHA **Calibration Date:** 7/31/2014 **Method:** AK101/BTEX
Operator: ST **Processed By:** ST **Posted By:** ST **Analytical Batch:** 12037

Data Path: **Z:\08\VHA\DATA\08112014**

Daily:		**As Needed:**	
Verify System Date/Time	✓	Refill Water Tank	
General System Inspection	✓	Refill Standards	

Standards:						
	IS	VW8-83-3	**CCV2**	VW8-104-6		
	Cent. DFB	VW8-84-6	**CCV**	VW8-101-1		
	BFB	VW8-62-3	**MeOH**	P-968		
	NAS	VW8-105-2				

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1101.d	1	R	1			8/11/14 7:14 AM	N/A	
1102.d	2	R	1			8/11/14 7:33 AM	N/A	
1103.d	3	R	1			8/11/14 7:52 AM	N/A	
1104.d	4	R	1			8/11/14 8:11 AM	N/A	
1105.d	5	IB	1			8/11/14 8:30 AM	N/A	
1106.d	6	NAS	1			8/11/14 8:57 AM	N/A	
1107.d	7	CCV2	1	NU		8/11/14 9:16 AM	N/A	
1108.d	8	CCV	1			8/11/14 9:35 AM	N/A	
1109.d	9	CCV2	1	NU		8/11/14 9:54 AM	N/A	
1110.d	10	1143645007-A	1		WATER	8/11/14 10:13 AM	<2	
1111.d	11	1143645001-C PS	1		WATER	8/11/14 10:32 AM	<2	
1112.d	12	1143645002-C BMS	1		WATER	8/11/14 10:51 AM	<2	
1113.d	13	1143645003-C BMSD	1		WATER	8/11/14 11:11 AM	<2	
1114.d	14	R	1			8/11/14 11:30 AM	N/A	
1115.d	15	1143645004-C	1		WATER	8/11/14 11:49 AM	<2	
1116.d	16	1143645005-C	1		WATER	8/11/14 12:08 PM	<2	
1117.d	17	1143645006-C	1		WATER	8/11/14 12:27 PM	<2	
1118.d	18	R	1			8/11/14 12:46 PM	N/A	
1119.d	19	1143647005-D	1		WATER	8/11/14 1:05 PM	<2	
1120.d	20	1143647001-D	1		WATER	8/11/14 1:25 PM	<2	
1121.d	21	1143647002-D	1		WATER	8/11/14 1:44 PM	<2	
1122.d	22	1143647003-D	1		WATER	8/11/14 2:03 PM	<2	
1123.d	23	1143647004-B	1		WATER	8/11/14 2:22 PM	<2	
1124.d	24	R	1			8/11/14 2:41 PM	N/A	
1125.d	25	1143646001-C PS	1		WATER	8/11/14 3:00 PM	<2	
1126.d	26	1143646002-C BMS	1		WATER	8/11/14 3:20 PM	<2	
1127.d	27	1143646003-C BMSD	1		WATER	8/11/14 3:39 PM	<2	
1128.d	28	R	1			8/11/14 3:58 PM	N/A	
1129.d	29	CCV	1			8/11/14 4:17 PM	N/A	
1130.d	30	1143646006-A	1		WATER	8/11/14 4:36 PM	<2	
1131.d	31	1143646004-C	1		WATER	8/11/14 4:56 PM	<2	
1132.d	32	1143646005-C	1		WATER	8/11/14 5:15 PM	<2	
1133.d	33	1143646007-C	1		WATER	8/11/14 5:34 PM	<2	
1134.d	34	1143646008-C	1		WATER	8/11/14 5:53 PM	<2	
1135.d	35	R	1			8/11/14 6:13 PM	N/A	
1136.d	36	1143699006-A	1		WATER	8/11/14 6:32 PM	<2	
1137.d	37	1148349012-A	1		WATER	8/11/14 6:51 PM	<2	
1138.d	38	1148349001-E	1		WATER	8/11/14 7:10 PM	<2	
1139.d	39	1148349002-A	1		WATER	8/11/14 7:29 PM	<2	
1140.d	40	R	1			8/11/14 7:48 PM	N/A	
1141.d	41	CCV	1			8/11/14 8:08 PM	N/A	

Data File	Vial	Sample ID	Dilution	Notes	Matrix	Acquisition Time	pH	Rerun
1142.d	42	R	1			8/11/14 8:27 PM	N/A	
1143.d	43	R	1			8/11/14 8:46 PM	N/A	
1144.d	44	R	1			8/11/14 9:05 PM	N/A	
1145.d	45	R	1			8/11/14 9:24 PM	N/A	
1146.d	46	IB	1			8/11/14 9:43 PM	N/A	
1147.d	47	NAS	1			8/11/14 10:02 PM	N/A	
1148.d	48	CCV	1			8/11/14 10:21 PM	N/A	
1149.d	49	R	1			8/11/14 10:40 PM	N/A	
1150.d	50	MB	1			8/11/14 11:00 PM	N/A	
1151.d	51	LCS GRO	1			8/11/14 11:19 PM	N/A	
1152.d	52	LCSD GRO	1			8/11/14 11:38 PM	N/A	
1153.d	53	1143566011-A TB	1		SOIL	8/11/14 11:57 PM	N/A	
1154.d	54	1143656001-A TB	1		SOIL	8/12/14 12:16 AM	N/A	
1155.d	55	1143656002-A TB	1		SOIL	8/12/14 12:35 AM	N/A	
1156.d	56	1143579060-B	1		SOIL	8/12/14 12:54 AM	N/A	
1157.d	57	1143579061-B	1		SOIL	8/12/14 1:14 AM	N/A	
1158.d	58	1143579062-B	1		SOIL	8/12/14 1:33 AM	N/A	
1159.d	59	1143579063-B	1		SOIL	8/12/14 1:52 AM	N/A	
1160.d	60	1143579067-B	1		SOIL	8/12/14 2:11 AM	N/A	
1161.d	61	1143579068-B	1		SOIL	8/12/14 2:30 AM	N/A	
1162.d	62	1143579072-B	1		SOIL	8/12/14 2:49 AM	N/A	
1163.d	63	1143579073-B	1		SOIL	8/12/14 3:09 AM	N/A	
1164.d	64	1143566001-C	1		SOIL	8/12/14 3:28 AM	N/A	
1165.d	65	1143566002-C	1		SOIL	8/12/14 3:47 AM	N/A	
1166.d	66	1143566003-C	1		SOIL	8/12/14 4:06 AM	N/A	
1167.d	67	1143566004-C	1		SOIL	8/12/14 4:25 AM	N/A	
1168.d	68	R	1			8/12/14 4:44 AM	N/A	
1169.d	69	CCV	1			8/12/14 5:03 AM	N/A	
1170.d	70	1143566005-C	1		SOIL	8/12/14 5:22 AM	N/A	
1171.d	71	1143554001-C	1		SOIL	8/12/14 5:41 AM	N/A	
1172.d	72	1143554002-C	1		SOIL	8/12/14 6:01 AM	N/A	
1173.d	73	1143554003-C	1		SOIL	8/12/14 6:20 AM	N/A	
1174.d	74	1143656003-B	1		SOIL	8/12/14 6:39 AM	N/A	
1175.d	75	R	1			8/12/14 6:58 AM	N/A	
1176.d	76	CCV	1			8/12/14 7:17 AM	N/A	
1177.d	77	R	1			8/12/14 7:36 AM	N/A	

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:30 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 08:48:15 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33514988	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46399663	54.732 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.46%
10) S	FID-1,4-DFB #2	3.747	16788734	49.205 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.41%
11) S	FID-TRI-ALPHA #2	4.680	11770893	48.022 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.04%
13) S	FID-4-BFB<Surr> #2	8.671	10564092	47.999 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.00%
	Target Compounds			
2)	PID-benzene	3.318	14975	0.007 ppb
4)	PID-toluene	5.905	22589	0.011 ppb
5)	PID-ethylbenzene	7.664	40829	0.022 ppb
6)	PID-p&m-xylene	7.915	63791	0.029 ppb
7)	PID-o-xylene	8.298	10381	0.006 ppb
8)	PID-BFB<Surr>	8.670	98758041	51.881 ppb
12) H	FID-GRO #2	5.717	5959936	20.068 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

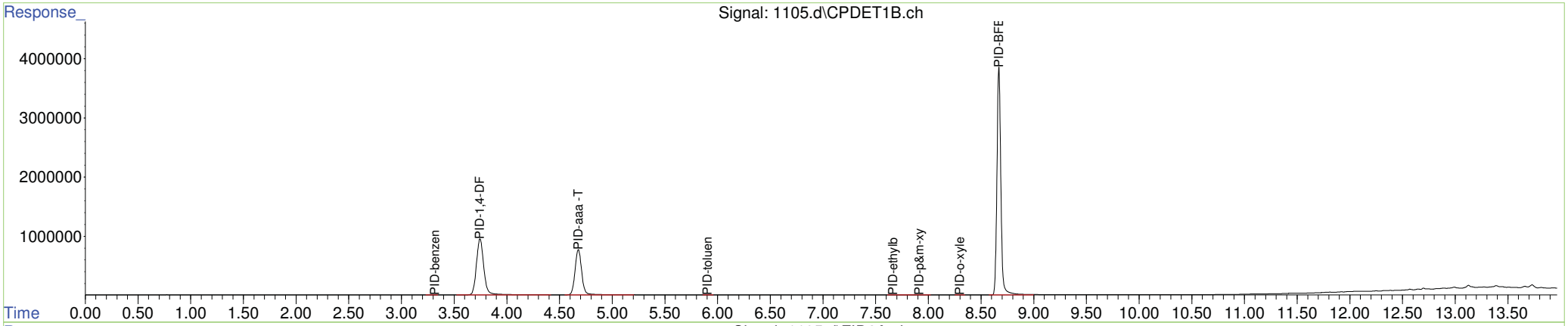
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1105.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:30 am
Operator : ST
Sample : IB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 08:48:15 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 9:35 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	34410799	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47598891	54.685 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.37%
10) S	FID-1,4-DFB #2	3.747	18923728	55.463 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.93%
11) S	FID-TRI-ALPHA #2	4.681	11744112	47.913 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.83%
13) S	FID-4-BFB<Surr> #2	8.670	10925332	49.654 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.31%
	Target Compounds			
2)	PID-benzene	3.324	39404485	17.115 ppb
4)	PID-toluene	5.900	472583362	217.838 ppb
5)	PID-ethylbenzene	7.656	57485200	29.833 ppb
6)	PID-p&m-xylene	7.904	256478376	115.350 ppb
7)	PID-o-xylene	8.300	80643416	42.362 ppb
8)	PID-BFB<Surr>	8.669	101464433	51.915 ppb
12) H	FID-GRO #2	5.717	254191788	855.882 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

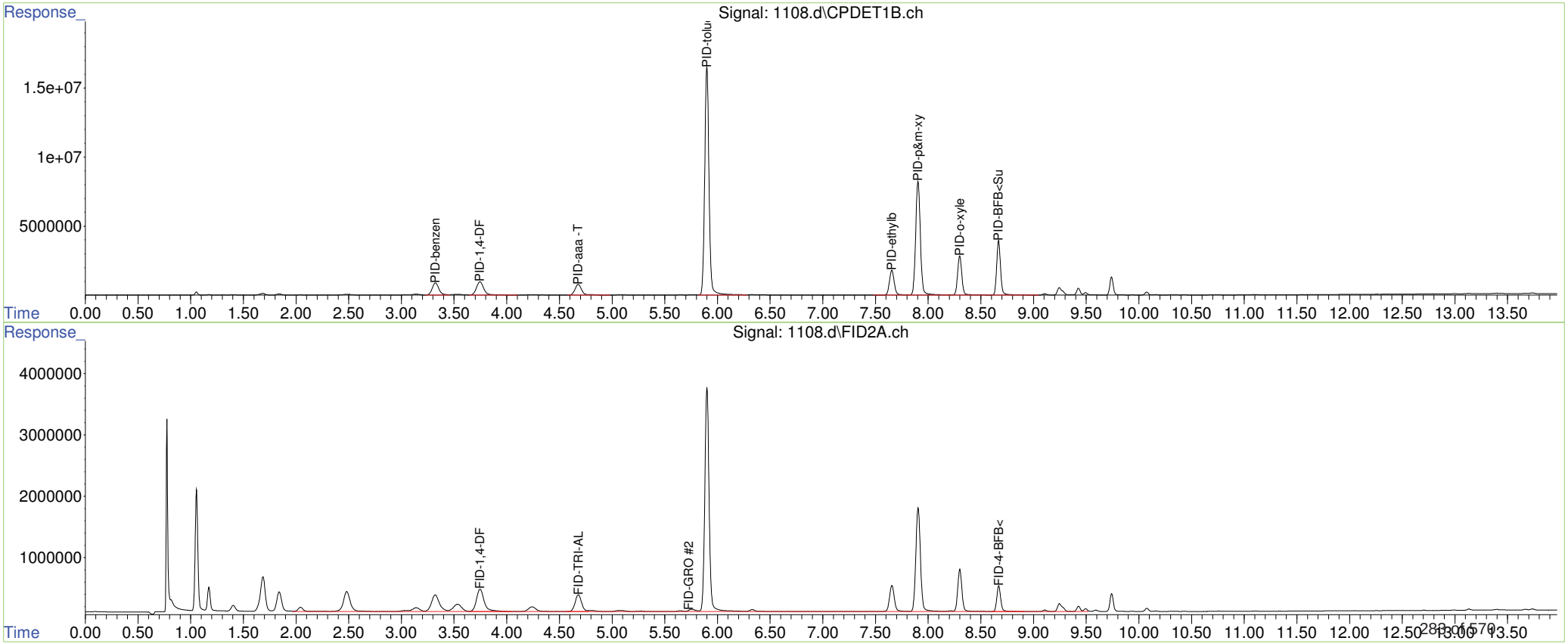
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1108.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 9:35 am
Operator : ST
Sample : CCV
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 09:51:39 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1110.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 10:13 am
Operator : ST
Sample : 1143645007-A
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 10:47:17 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	32934588	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.745	46395170	55.691 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	111.38%
10) S	FID-1,4-DFB #2	3.746	16785873	49.197 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.39%
11) S	FID-TRI-ALPHA #2	4.680	11515908	46.982 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.96%
13) S	FID-4-BFB<Surr> #2	8.670	10135184	46.033 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.07%
	Target Compounds			
2)	PID-benzene	3.327	212982	0.097 ppb
4)	PID-toluene	5.903	249883	0.120 ppb
5)	PID-ethylbenzene	7.660	215009	0.117 ppb
6)	PID-p&m-xylene	7.910	772150	0.363 ppb
7)	PID-o-xylene	8.303	298080	0.164 ppb
8)	PID-BFB<Surr>	8.669	95104227	50.842 ppb
12) H	FID-GRO #2	5.717	5086231	17.126 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

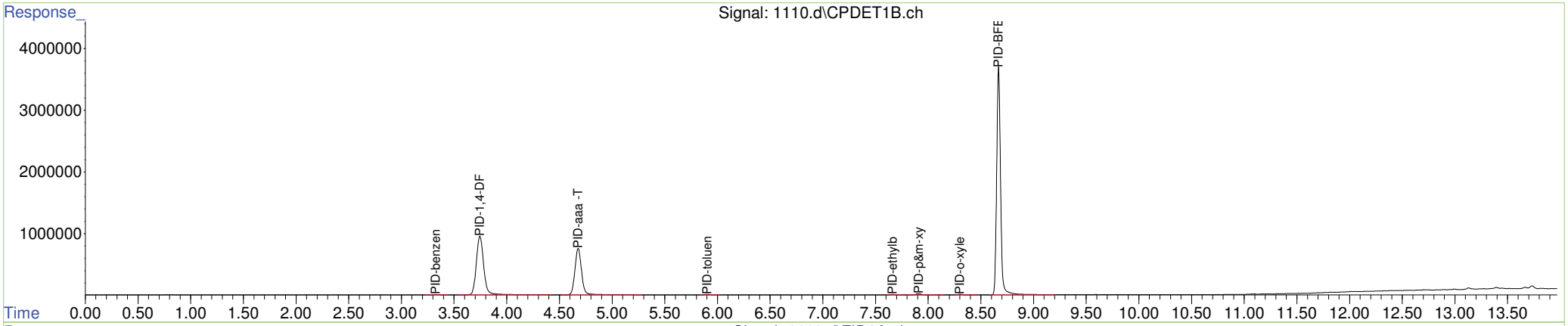
(f)=RT Delta > 1/2 Window (m)=manual int.

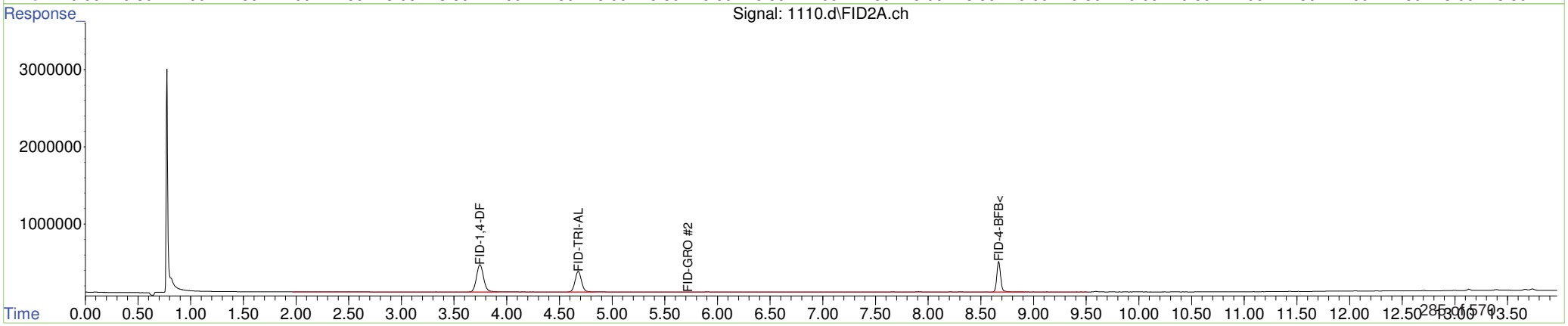
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1110.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 10:13 am
Operator : ST
Sample : 1143645007-A
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 10:47:17 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1111.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 10:32 am
Operator : ST
Sample : 1143645001-C PS
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 10:47:29 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	32553799	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	45905231	55.747 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	111.49%
10) S	FID-1,4-DFB #2	3.747	16806709	49.258 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	98.52%
11) S	FID-TRI-ALPHA #2	4.681	11429573	46.630 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.26%
13) S	FID-4-BFB<Surr> #2	8.671	10390022	47.201 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.40%
	Target Compounds			
2)	PID-benzene	3.325	66028	0.030 ppb
4)	PID-toluene	5.905	111278	0.054 ppb
5)	PID-ethylbenzene	7.661	66385	0.036 ppb
6)	PID-p&m-xylene	7.912	241912	0.115 ppb
7)	PID-o-xylene	8.304	89971	0.050 ppb
8)	PID-BFB<Surr>	8.670	97553024	52.761 ppb
12) H	FID-GRO #2	5.717	8379956	28.216 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

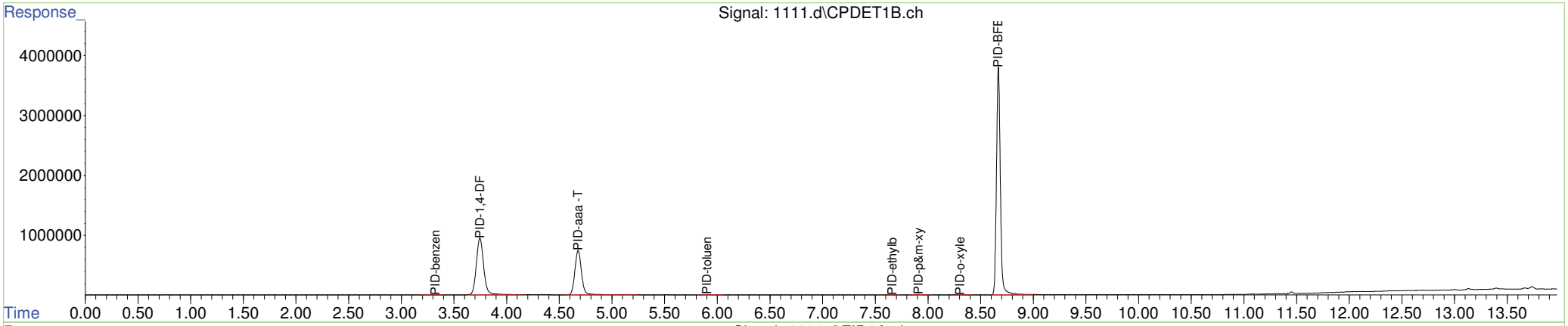
(f)=RT Delta > 1/2 Window (m)=manual int.

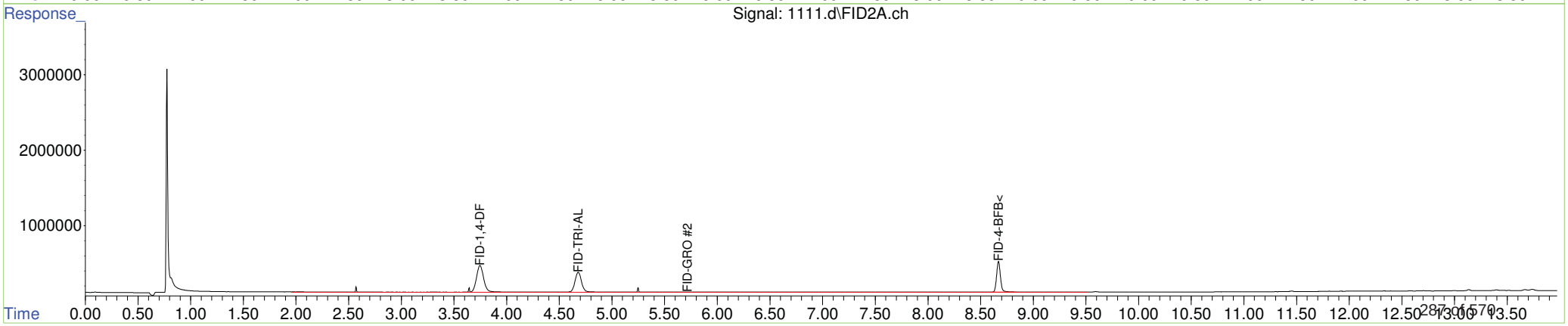
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1111.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 10:32 am
Operator : ST
Sample : 1143645001-C PS
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 10:47:29 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1112.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 10:51 am
Operator : ST
Sample : 1143645002-C BMS
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 11:17:50 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	32091523	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47464228	58.471 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	116.94%
10) S	FID-1,4-DFB #2	3.748	19077880	55.915 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	111.83%
11) S	FID-TRI-ALPHA #2	4.681	11324251	46.200 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.40%
13) S	FID-4-BFB<Surr> #2	8.671	10739784	48.804 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.61%
	Target Compounds			
2)	PID-benzene	3.324	41485585	19.322 ppb
4)	PID-toluene	5.901	485842653	240.135 ppb
5)	PID-ethylbenzene	7.656	58418708	32.509 ppb
6)	PID-p&m-xylene	7.905	264182491	127.402 ppb
7)	PID-o-xylene	8.300	81979256	46.176 ppb
8)	PID-BFB<Surr>	8.670	99427580	54.550 ppb
12) H	FID-GRO #2	5.717	274245495	923.404 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

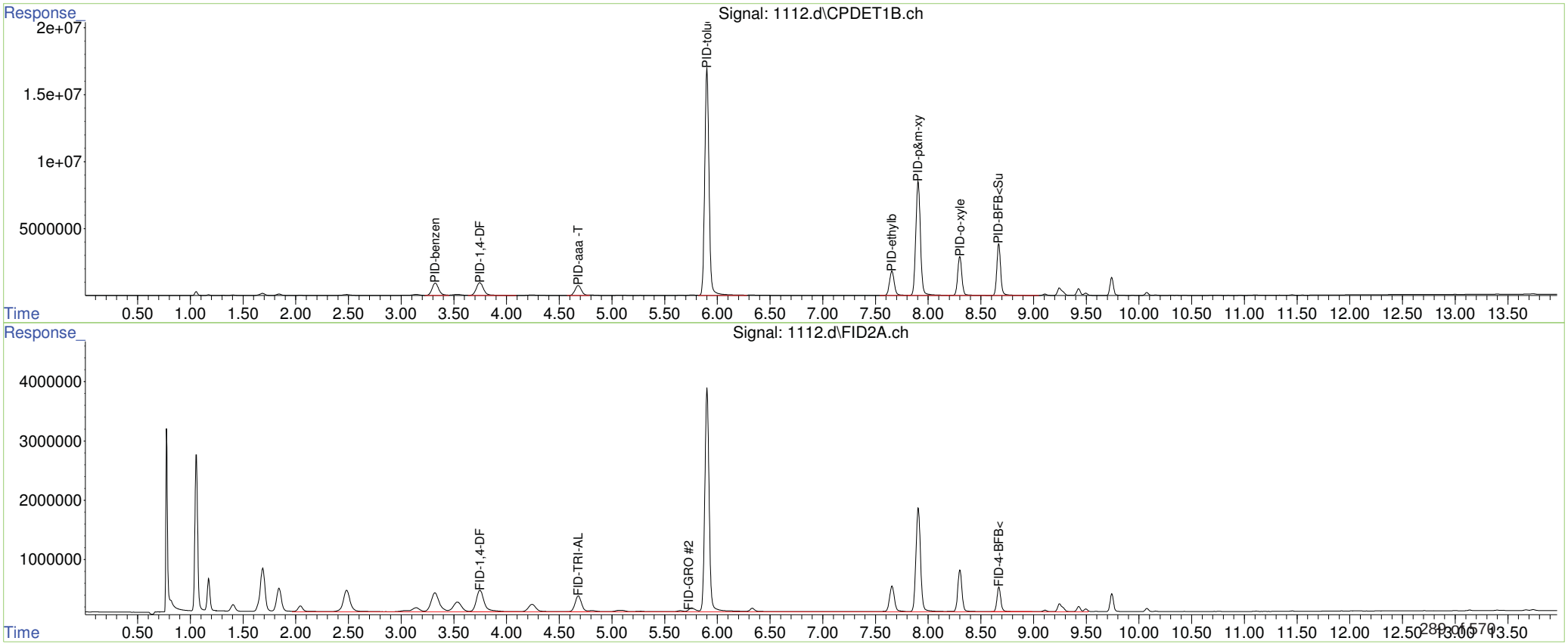
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1112.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 10:51 am
Operator : ST
Sample : 1143645002-C BMS
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 11:17:50 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1113.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 11:11 am
Operator : ST
Sample : 1143645003-C BMSD
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 11:33:14 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	32944645	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	47773952	57.328 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	114.66%
10) S	FID-1,4-DFB #2	3.747	18968772	55.595 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	111.19%
11) S	FID-TRI-ALPHA #2	4.681	11518746	46.994 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.99%
13) S	FID-4-BFB<Surr> #2	8.671	10857948	49.345 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.69%
	Target Compounds			
2)	PID-benzene	3.324	40390115	18.324 ppb
4)	PID-toluene	5.900	472273622	227.383 ppb
5)	PID-ethylbenzene	7.656	57101498	30.953 ppb
6)	PID-p&m-xylene	7.905	257060130	120.757 ppb
7)	PID-o-xylene	8.300	80133929	43.968 ppb
8)	PID-BFB<Surr>	8.670	101156992	54.062 ppb
12) H	FID-GRO #2	5.717	268192181	903.022 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

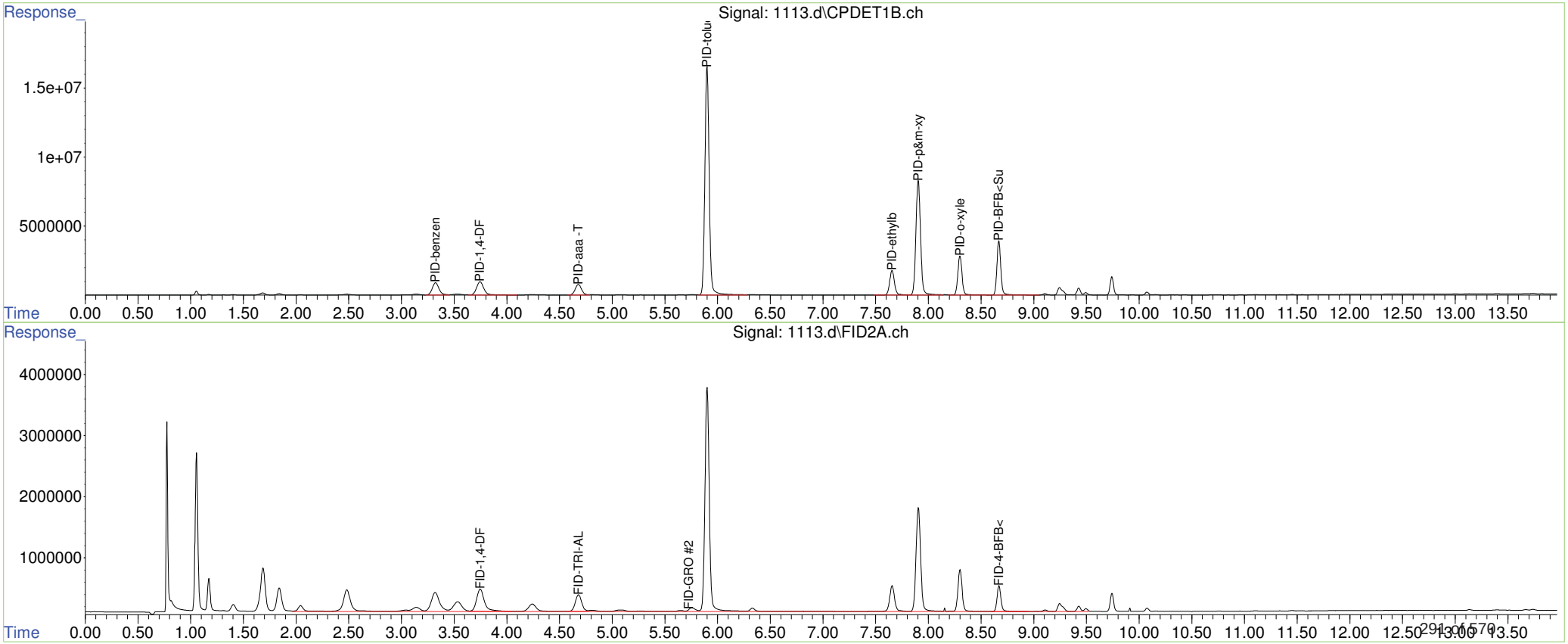
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1113.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 11:11 am
Operator : ST
Sample : 1143645003-C BMSD
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 11:33:14 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1115.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 11:49 am
Operator : ST
Sample : 1143645004-C
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 12:08:50 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33054838	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	45815185	54.795 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.59%
10) S	FID-1,4-DFB #2	3.747	17102301	50.124 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	100.25%
11) S	FID-TRI-ALPHA #2	4.680	11763296	47.991 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.98%
13) S	FID-4-BFB<Surr> #2	8.671	10272785	46.664 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.33%
	Target Compounds			
2)	PID-benzene	3.319	41163	0.019 ppb
4)	PID-toluene	5.903	148829	0.071 ppb
5)	PID-ethylbenzene	7.663	37144	0.020 ppb
6)	PID-p&m-xylene	7.911	184113	0.086 ppb
7)	PID-o-xylene	8.305	76841	0.042 ppb
8)	PID-BFB<Surr>	8.670	96492804	51.397 ppb
12) H	FID-GRO #2	5.717	11219539	37.777 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

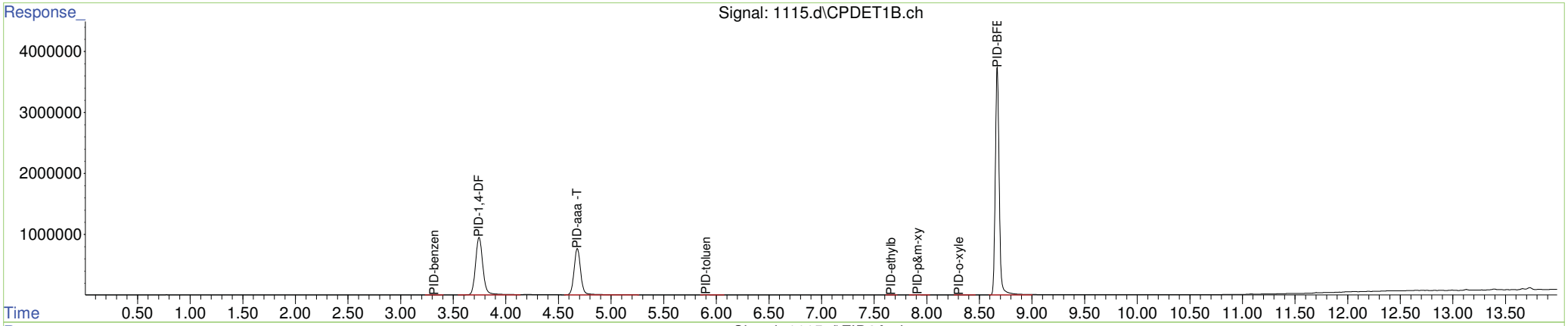
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1115.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 11:49 am
Operator : ST
Sample : 1143645004-C
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 12:08:50 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1116.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 12:08 pm
Operator : ST
Sample : 1143645005-C
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 12:34:17 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	32356954	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	46968386	57.385 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	114.77%
10) S	FID-1,4-DFB #2	3.747	17682253	51.824 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	103.65%
11) S	FID-TRI-ALPHA #2	4.680	11816111	48.207 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.41%
13) S	FID-4-BFB<Surr> #2	8.671	10980545	49.907 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.81%
	Target Compounds			
2)	PID-benzene	3.323	5697510	2.632 ppb
4)	PID-toluene	5.904	339368	0.166 ppb
5)	PID-ethylbenzene	7.657	8198932	4.525 ppb
6)	PID-p&m-xylene	7.916	14268029	6.824 ppb
7)	PID-o-xylene	8.302	7834407	4.377 ppb
8)	PID-BFB<Surr>	8.670	101148802	55.039 ppb
12) H	FID-GRO #2	5.717	56784590	191.198 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

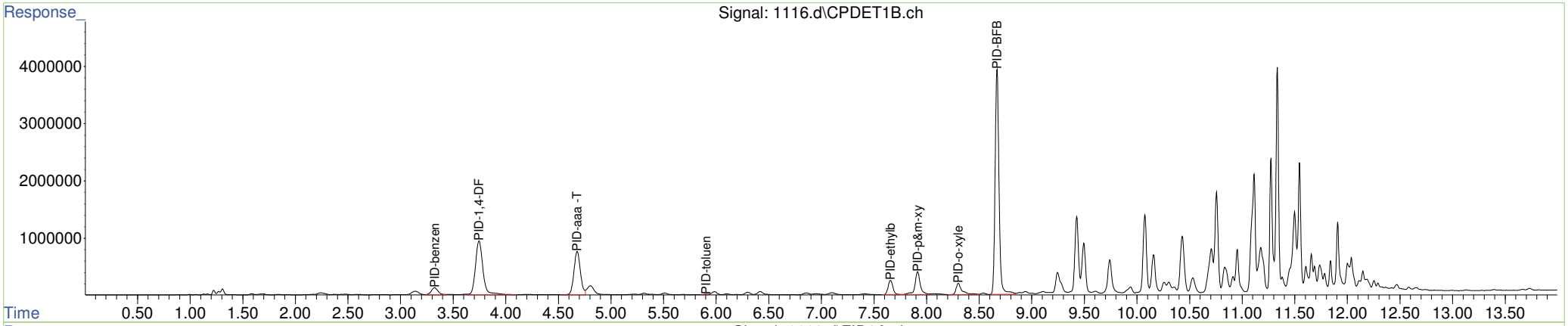
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Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1116.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 12:08 pm
Operator : ST
Sample : 1143645005-C
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 12:34:17 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1117.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 12:27 pm
Operator : ST
Sample : 1143645006-C
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 13:03:24 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.679	33600231	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.745	46640135	54.876 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	109.75%
10) S	FID-1,4-DFB #2	3.746	17585745	51.541 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	103.08%
11) S	FID-TRI-ALPHA #2	4.680	12354348	50.403 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.81%
13) S	FID-4-BFB<Surr> #2	8.671	10405483	47.272 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.54%
	Target Compounds			
2)	PID-benzene	3.319	53287	0.024 ppb
4)	PID-toluene	5.904	146332	0.069 ppb
5)	PID-ethylbenzene	7.663	31914	0.017 ppb
6)	PID-p&m-xylene	7.913	182917	0.084 ppb
7)	PID-o-xylene	8.307	56076	0.030 ppb
8)	PID-BFB<Surr>	8.670	97773944	51.234 ppb
12) H	FID-GRO #2	5.717	13690356	46.096 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

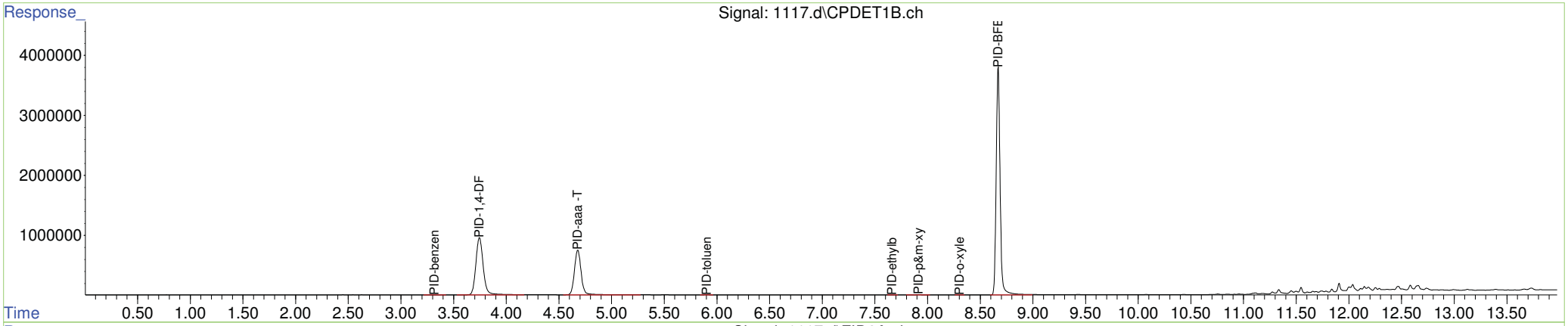
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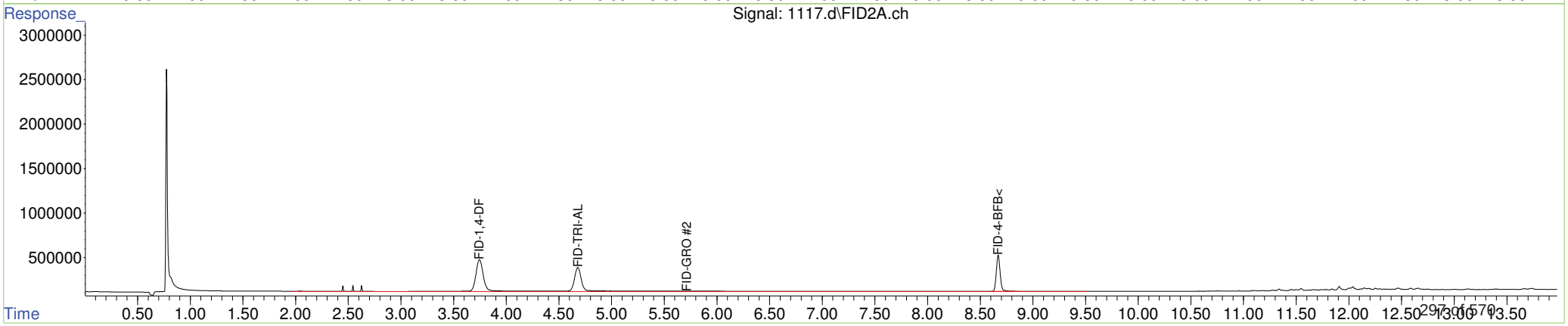
Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1117.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 12:27 pm
Operator : ST
Sample : 1143645006-C
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 13:03:24 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1129.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:17 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 16:32:03 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	32574014	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.747	47732265	57.930 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	115.86%
10) S	FID-1,4-DFB #2	3.748	18892184	55.370 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	110.74%
11) S	FID-TRI-ALPHA #2	4.681	11386370	46.454 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	92.91%
13) S	FID-4-BFB<Surr> #2	8.671	11307816	51.407 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	102.81%
	Target Compounds			
2)	PID-benzene	3.325	42212667	19.369 ppb
4)	PID-toluene	5.901	495566808	241.313 ppb
5)	PID-ethylbenzene	7.656	59804555	32.787 ppb
6)	PID-p&m-xylene	7.905	271047920	128.777 ppb
7)	PID-o-xylene	8.300	84340248	46.803 ppb
8)	PID-BFB<Surr>	8.670	105300605	56.916 ppb
12) H	FID-GRO #2	5.717	286031357	963.088 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

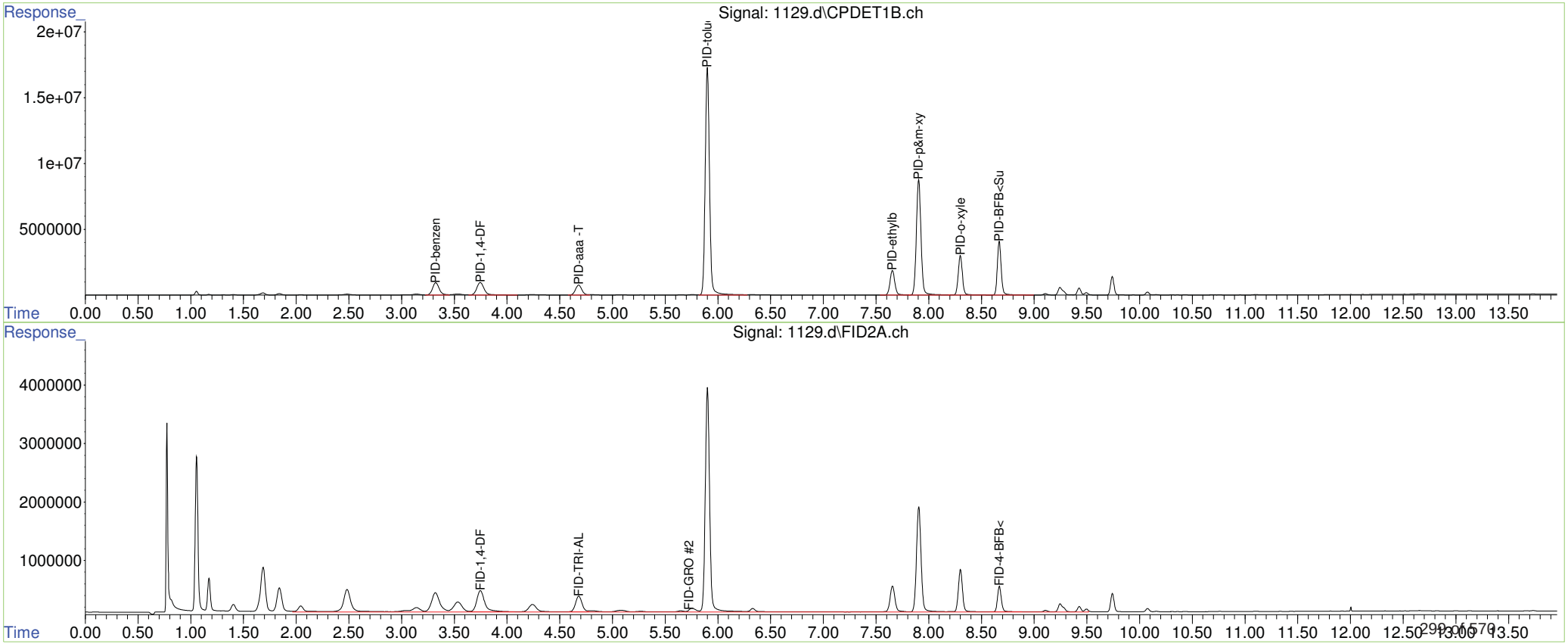
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1129.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 4:17 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 16:32:03 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data Path : Z:\08\VHA\DATA\08112014\
Data File : 1141.d
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 11 Aug 2014 8:08 pm
Operator : ST
Sample : CCV
Misc :
ALS Vial : 41 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 11 20:24:10 2014
Quant Method : Z:\08\VHA\METHOD\VHA2014-0731.M
Quant Title : GRO/BTEX by AK101/8015C and 8021B/EPA602
QLast Update : Thu Jul 31 15:00:03 2014
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	PID-aaa -TFT	4.680	33491778	50.000 ppb
	System Monitoring Compounds			
3) S	PID-1,4-DFB<Surr>	3.746	48359986	57.084 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	114.17%
10) S	FID-1,4-DFB #2	3.747	19491684	57.127 ppb
Spiked Amount	50.000	Range 80 - 120	Recovery =	114.25%
11) S	FID-TRI-ALPHA #2	4.681	11808116	48.174 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	96.35%
13) S	FID-4-BFB<Surr> #2	8.671	11008394	50.035 ppb
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.07%
	Target Compounds			
2)	PID-benzene	3.324	42798127	19.100 ppb
4)	PID-toluene	5.901	503196170	238.314 ppb
5)	PID-ethylbenzene	7.656	61151144	32.607 ppb
6)	PID-p&m-xylene	7.905	275838930	127.462 ppb
7)	PID-o-xylene	8.300	85932161	46.379 ppb
8)	PID-BFB<Surr>	8.669	104766253	55.076 ppb
12) H	FID-GRO #2	5.717	283683598	955.183 ppb
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

APPENDIX E

DATA VALIDATION REPORTS AND ADEC CHECKLISTS

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DATA VALIDATION REPORTS

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DATA VALIDATION REPORT

CONTRACT NO. FA8903-10-D-8601-0101
PROJECT NO: 62421101
PROJECT NAME: Cape Romanzof LRRS Sites
LABORATORY: SGS North America Inc., Anchorage, Alaska
REVIEWER: Alejandro B. Preciado, PhD
Chemist II
EA Engineering, Science, and Technology, Inc.
DATE: 11 September 2014

This data validation report details the findings associated with Sample Delivery Group (SDG) No. 1143658 as well as information concerning the field samples, matrix, sampling date, and discusses major deficiencies or quality assurance/quality control (QA/QC) issues, as applicable. The necessary data qualifications are addressed and the final data validation decisions as to the acceptance, rejection, or qualification of the results are presented.

The data validation report consists of the subsequent text as well as Attachment A, "Laboratory Data Review Checklist," which exhibits the completed Alaska Department of Environmental Conservation checklist used during the validation process to assess the technical merit of the laboratory's performance.

Date(s) Collected	5 August 2014		
Sample Delivery Group No.	1143658		
PARAMETERS	Water Sample(s)	Field Duplicate(s)	Trip Blank(s)
Volatile Aromatics Hydrocarbons by USEPA Method 624	1	1	1
Polycyclic Aromatic Hydrocarbons by USEPA Method 625	1	1	0

USEPA = U.S. Environmental Protection Agency

The analytical data presented in SDG No. 1143658 were reviewed with respect to QA/QC parameters specified in the in the Department of Defense Quality Systems Manual, Version 4.2 (October 2010) and the Work Plan for Environmental Long Term Monitoring for Cape Romanzof LRRS Sites (2014). In addition, the following guidance documents were used while assessing the validity of these data: U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Superfund Organic Methods Data Review, October 2013 and the USEPA Office of Solid Waste, SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, April 1998 and updates, as well as the referenced methodology.

As applicable to referenced methodology, QA/QC parameters reviewed include:

- Chain of custody/Sample receipt
- Holding times
- Instrument performance check
- Initial and continuing calibrations
- Method blanks
- Laboratory control samples

- Surrogates
- Matrix spike (MS) and matrix spike duplicate (MSD) samples
- Field QC samples
- Internal standards
- Target compound identification
- Compound quantitation
- Data qualifiers

Chain of Custody/Sample Receipt:

The sample cooler and the samples contained within were received intact at the laboratory. The samples were received at the laboratory at a temperatures of 0.5 degrees Celsius (ºC), within temperature requirements (≤6ºC).

Holding Times:

The samples were prepared and analyzed within the holding times as specified in the referenced methods of analysis. Holding times are determined on the basis of days, hours, and minutes.

Instrument Performance Check:

Instrument performance checks are performed to ensure that instrument performance is within acceptable QC criteria. The instrument performance check criteria that were associated with the samples from this SDG were within method and project-established control limits.

Initial and Continuing Calibrations:

Initial and continuing calibrations were performed at the required frequencies. The target analytes were within method-specified control limits, with the following exception. The continuing calibration verification standard percent recovery (%R) for chloroethane by USEPA Method 624 was above the project-specified QC criteria (biased high). This analyte was not detected above the limit of quantitation (LOQ) in the associated samples; therefore no qualification is necessary.

Method Blank(s):

Method blanks were prepared and analyzed as recommended by the referenced method. Contaminants for the blanks were not detected above ½ of the LOQs. No qualification of sample results is necessary.

Laboratory Control Sample(s):

Laboratory control samples (LCS) were prepared and analyzed as recommended by the referenced analytical method. The %Rs and relative percent difference (RPD) for LCSs were within the QAPP-established control limits for the analytical batches containing the samples from this SDG, with the following exception.

The RPD for anthracene in the LCS and LCS duplicate by USEPA Method 625 was outside the laboratory-specified QC criteria of <30%. This analyte was not detected above the LOQ in the associated samples; therefore no qualification is necessary.

SAMPLE DELIVERY GROUP	1143658

Surrogate Recovery:

Surrogates were added to the environmental, QC samples, and standards for analysis of organic compounds as required by the referenced methodology. The surrogate %Rs were within the project-established control limits, with the following exception.

The surrogate %R for bromofluorobenzene was above project-specified QC criteria (biased high) for sample FC-SW99-080514 by USEPA Method 624. The analytes associated with this surrogate for this sample were not detected. Note also that the other surrogate (1,2-dichloroethane-d4 and toluene-d8) %Rs for this sample were within specified QC criteria. Based on the evaluation of sample results and results of other surrogates, no qualifications were performed on the basis of the surrogate %R.

Matrix Spike(s)/Matrix Spike Duplicate(s):

The sample FC-SW01-080514 was designated for preparation of the MS samples. The MS/MSD sample results were reviewed and the %Rs and RPDs were within the project-specified QC limits.

Field Quality Control Samples:

Field Duplicate(s): Sample identified as FC-SW99-080514 is a field duplicate of FC-SW01-080514. The analytical results reported for the duplicate were compared to those for the primary sample. The RPDs for the field duplicates and original sample results were within specified QC limits. No qualification was performed on the basis of field duplicate results.

Trip Blank(s): A trip blank, identified as TB-5-ST009, was included in this SDG. The analytical results for the trip blank were reported below ½ of the LOQ; therefore no qualification is necessary.

Internal Standards:

Internal standards were added to the environmental and QC samples and standards to monitor sensitivity and response during every analytical run as appropriate. The internal standard area counts and retention times were within the method-specified QC limits.

Target Compound Identification:

Organic analysis performed by gas chromatography/mass spectrometry methods requires reporting mass spectra comparison to verify compound identification. There were no detectable analytical results reported for project samples within this SDG; therefore no qualification is necessary based on comparison of the ion ratio.

Compound Quantitation:

The reported quantitation results and reported detection limits were reviewed and found to be accurate and to generally meet project requirements.

Data Qualifiers:

Appropriate data flags were used and defined in the analytical report.

The allowable final data qualifiers for definitive data and the hierarchy of data qualifiers listed in order of the most severe through the least severe are *R*, *J*, *U*, and *UJ*. For data with multiple qualifiers, the hierarchy listed above has been implemented for applying the final qualifier.

SAMPLE DELIVERY GROUP	1143658

Summary:

The analytical data contained in this report have been reviewed for completeness, accuracy, and precision. The data as qualified meet the quality objectives for the intended use.

DATA VALIDATION REPORT

CONTRACT NO. FA8903-10-D-8601-0101
PROJECT NO: 62421101
PROJECT NAME: Cape Romanzof LRRS Sites
LABORATORY: SGS North America Inc., Anchorage, Alaska
REVIEWER: Alejandro B. Preciado, PhD
Chemist II
EA Engineering, Science, and Technology, Inc.
DATE: 11 September 2014

This data validation report details the findings associated with Sample Delivery Group (SDG) No. 1143648 as well as information concerning the field samples, matrix, sampling date, and discusses major deficiencies or quality assurance/quality control (QA/QC) issues, as applicable. The necessary data qualifications are addressed and the final data validation decisions as to the acceptance, rejection, or qualification of the results are presented.

The data validation report consists of the subsequent text as well as Attachment A, "Laboratory Data Review Checklist," which exhibits the completed Alaska Department of Environmental Conservation checklist used during the validation process to assess the technical merit of the laboratory's performance.

Date(s) Collected	29, 30 ,31 July and 2 August 2014		
Sample Delivery Group No.	1143648		
PARAMETERS	Soil Sample(s)	Field Duplicate(s)	Trip Blank(s)
Gasoline Range Organics (GRO) by Alaska Method AK101	9	1	1
Diesel Range Organics (DRO) by Alaska Method AK102	9	1	0
Residual Range Organics (RRO) by Alaska Method AK103	9	1	0

The analytical data presented in SDG No. 1143648 were reviewed with respect to QA/QC parameters specified in the in the Department of Defense Quality Systems Manual, Version 4.2 (October 2010) and the Work Plan for Environmental Long Term Monitoring for Cape Romanzof LRRS Sites (2014). In addition, the following guidance documents were used while assessing the validity of these data: U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Superfund Organic Methods Data Review, October 2013 and the USEPA Office of Solid Waste, SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, April 1998 and updates, as well as the referenced methodology.

As applicable to referenced methodology, QA/QC parameters reviewed include:

- Chain of custody/Sample receipt
- Holding times
- Initial and continuing calibrations
- Method blanks
- Laboratory control samples
- Surrogates

- Matrix spike (MS) and matrix spike duplicate (MSD) samples
- Field QC samples
- Internal standards
- Compound quantitation
- Data qualifiers

Chain of Custody/Sample Receipt:

The sample cooler and the samples contained within were received intact at the laboratory. The samples were received at the laboratory at a temperatures of 2.6 degrees Celsius (ºC), within the temperature preservation specification of ≤6°C.

Holding Times:

The samples were prepared and analyzed within the holding times as specified in the referenced methods of analysis. Holding times are determined on the basis of days, hours, and minutes.

Initial and Continuing Calibrations:

Initial and continuing calibrations were performed at the required frequencies. The target analytes were within method-specified control limits.

Method Blank(s):

Method blanks were prepared and analyzed as recommended by the referenced method(s). Contaminants for the blanks were not detected above ½ of the limits of quantitation (LOQs).

Laboratory Control Sample(s):

Laboratory control samples (LCS) were prepared and analyzed as recommended by the referenced analytical method. The percent recoveries (%Rs) and relative percent differences (RPDs) for LCSs were within the project-established control limits for the analytical batches containing the samples from this SDG.

Surrogate Recovery:

Surrogates were added to the environmental, QC samples, and standards for analysis of organic compounds as required by the referenced methodology. The surrogate %Rs were within the project-established control limits for project samples.

Matrix Spike(s)/Matrix Spike Duplicate(s):

The results of the MS and MSD samples were reviewed and the %R and RPDs were within the project-specified QC limits, unless otherwise noted below.

The %R for RRO for the MS sample prepared with project sample SS010-SB01-2 by Method AK103 was below the specified QC limits (low bias). Sample results for SS010-SB01-11, SS010-SB01-90, SS010-SB02-13, SS010-SB02-2, SS010-SB03-14, SS010-SB03-2, and SS010-SB03-80 were flagged as estimated with the “J” or “UJ” qualifiers, as appropriate.

Field Quality Control Samples:

Field Duplicate(s): Sample identified as SS010-SB03-14D is a field duplicate of SS010-SB03-14. The analytical results reported for the duplicate were compared to those for the primary sample. The RPDs for the field duplicates and original sample results over the LOQs were

within project-specified QC limits. No qualification was performed on the basis of field duplicate results.

Trip Blank(s): A trip blank, identified as TB-Soil-1, was included in this SDG. The analytical results for the trip blank were reported below ½ of the LOQ, with the following exception. GRO was reported at a concentration of 1.27 milligrams per kilogram (mg/kg) higher than ½ of the LOQ of 2.51 mg/kg. The associated detectable sample results for GRO in samples SS010-SB01-2, SS010-SB01-11, SS010-SB01-90, SS010-SB02-13, SS010-SB02-2, SS010-SB02-56, SS010-SB03-14, SS010-SB03-14D, SS010-SB03-2, and SS010-SB03-80 were less than five times the amount reported for the trip blank and were flagged with the "UJ" qualifier.

Equipment Blank(s): The equipment blank associated with samples in this SDG was included in SDG 1143647 and identified as SS010-SB-EB1. The results for this equipment blank were below ½ LOQs with the following exception. The sample results for DRO by method AK102 was detected at a concentration of 0.372 milligrams per liter (mg/L) greater than ½ the LOQ of 0.600 mg/L. The associated results for DRO, reported in milligrams per kilogram (mg/kg) that were below the LOQ were flagged with the "UJ" qualifier including samples SS010-SB01-2, SS010-SB01-11, SS010-SB01-90, SS010-SB03-14, SS010-SB03-14D, SS010-SB03-80, SS010-SB02-13, SS010-SB02-56, and SS010-SB03-2.

Internal Standards:

Internal standards were added to the environmental and QC samples and standards to monitor sensitivity and response during every analytical run as appropriate. The internal standard area counts and retention times were within the method-specified QC limits.

Compound Quantitation:

The reported quantitation results and reported detection limits were reviewed and found to be accurate and to generally meet project requirements.

Results reported below the limit of quantitation but above the detection limit are quantitatively qualified as estimated concentrations ("J" qualifier), unless otherwise qualified. No bias is inferred.

Data Qualifiers:

Appropriate data flags were used and defined in the analytical report. During data validation, additional qualifiers have been applied to data. These are defined below:

"J" indicates that the analyte was positively identified, but the quantitation is estimated.

"UJ" indicates that the analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific QC criteria.

The allowable final data qualifiers for definitive data and the hierarchy of data qualifiers listed in order of the most severe through the least severe are *R*, *J*, *U*, and *UJ*. For data with multiple qualifiers, the hierarchy listed above has been implemented for applying the final qualifier.

Summary:

The analytical data contained in this report have been reviewed for completeness, accuracy, and precision. The data as qualified meet the quality objectives for the intended use.

DATA VALIDATION REPORT

CONTRACT NO. FA8903-10-D-8601-0101
PROJECT NO: 62421101
PROJECT NAME: Cape Romanzof LRRS Sites
LABORATORY: SGS North America Inc., Anchorage, Alaska
REVIEWER: Alejandro B. Preciado, PhD
Chemist II
EA Engineering, Science, and Technology, Inc.
DATE: 11 September 2014

This data validation report details the findings associated with Sample Delivery Group (SDG) No. 1143647 as well as information concerning the field samples, matrix, sampling date, and discusses major deficiencies or quality assurance/quality control (QA/QC) issues, as applicable. The necessary data qualifications are addressed and the final data validation decisions as to the acceptance, rejection, or qualification of the results are presented.

The data validation report consists of the subsequent text as well as Attachment A, "Laboratory Data Review Checklist," which exhibits the completed Alaska Department of Environmental Conservation checklist used during the validation process to assess the technical merit of the laboratory's performance.

Date Collected	30 July 2014		
Sample Delivery Group No.	1143647		
PARAMETERS	Water Sample(s)	Equipment Blank(s)	Trip Blank(s)
Gasoline Range Organics (GRO) by Alaska Method AK101	3	1	1
Diesel Range Organics (DRO) by Alaska Method AK102	3	1	0
Residual Range Organics (RRO) by Alaska Method AK103	0	1	0
Volatile Organic Compounds (BTEX) by USEPA Method 8260B	3	0	1

BTEX = benzene, toluene, ethyl benzene, and total xylenes
USEPA = U.S. Environmental Protection Agency

The analytical data presented in SDG No. 1143647 were reviewed with respect to QA/QC parameters specified in the in the Department of Defense Quality Systems Manual, Version 4.2 (October 2010) and the Work Plan for Environmental Long Term Monitoring for Cape Romanzof LRRS Sites (2014). In addition, the following guidance documents were used while assessing the validity of these data: U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Superfund Organic Methods Data Review, October 2013 and the USEPA Office of Solid Waste, SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, April 1998 and updates, as well as the referenced methodology.

As applicable to referenced methodology, QA/QC parameters reviewed include:

- Chain of custody/Sample receipt
- Holding times
- Instrument performance check

- Initial and continuing calibrations
- Method blanks
- Laboratory control samples
- Surrogates
- Matrix spike (MS) and matrix spike duplicate (MSD) samples and laboratory duplicates
- Field QC samples
- Internal standards
- Target compound identification
- Compound quantitation
- Data qualifiers

Chain of Custody/Sample Receipt:

The sample cooler and the samples contained within were received intact at the laboratory. The samples were received at the laboratory at a temperature of 0.5 degrees Celsius (ºC) within the temperature preservation specification of ≤6°C. Note that project sample MW-9-073014 was received containing bubbles in some of the volatile organic analyte (VOA) vials larger than 6 mm. The VOA vials containing bubbles were not used for analysis; therefore no qualification is necessary.

Holding Times:

The samples were prepared and analyzed within the holding times as specified in the referenced methods of analysis. Holding times are determined on the basis of days, hours, and minutes.

Instrument Performance Check:

Instrument performance checks are performed to ensure that instrument performance is within acceptable QC criteria. The instrument performance check criteria that were associated with the samples from this SDG were within method and project-established control limits.

Initial and Continuing Calibrations:

Initial and continuing calibrations were performed at the required frequencies. The target analytes were within method-specified control limits.

Method Blank(s):

Method blanks were prepared and analyzed as recommended by the referenced method. Contaminants were not detected above ½ of the limits of quantitation (LOQs) in the method blanks, with the following exception. RRO was detected in a method blank by AK103 at a concentration of 0.270 milligrams per liter (mg/L) and greater than the LOQ of 0.125 mg/L. This method blank is associated with the equipment blank identified as SS010-SB-EB1 and the result for this sample are nondetectable; therefore, no qualification was performed on the basis of the method blank result for RRO.

Laboratory Control Sample(s):

Laboratory control samples (LCS) were prepared and analyzed as recommended by the referenced analytical method. The %Rs and the relative percent differences (RPDs) for LCSs were within the project-established control limits for the analytical batches containing the samples from this SDG.

SAMPLE DELIVERY GROUP	1143647

Surrogate Recovery:

Surrogates were added to the environmental, QC samples, and standards for analysis of organic compounds as required by the referenced methodology. The surrogate %Rs were within the project-established control limits, with the following exceptions.

The surrogate %R for 1,2-dichloroethane-d4 by Method 8260B was above project-specified QC criteria (biased high) for sample MW-7-073014. The analytes associated with this surrogate in this field sample were not detected above the LOQ. Note also that the other surrogates (4-bromofluorobenzene and toluene-d8) for sample MW-7-073014 were within specified QC criteria. Based on the evaluation of sample results and results of other surrogates, no qualification was performed on the basis of surrogate %Rs.

The surrogate %R for 4-bromofluorobenzene was above project-specified QC criteria (biased high) for sample MW-7-073014 by method AK101. The GRO result for sample MW-7-073014 was flagged as estimated with the "J"qualifier.

The surrogate %Rs for 1,2-dichloroethane-d4 and toluene-d8 in the trip blank, identified as sample TB-2-ST009, were outside the specified control limits by Method SW8260B. The surrogate 1,2-dichloroethane-d4 was above the upper control limit (high bias), while the surrogate toluene-d4 was below the lower control limit (low bias). The analytes associated with these surrogates in the trip blank were not detected above the LOQ. Note also that the other surrogate (4-bromofluorobenzene) %R for this sample was within specified QC criteria. Based on the evaluation of sample results and results of other surrogates, no qualifications were performed on the basis of surrogate %Rs.

Matrix Spike(s)/Matrix Spike Duplicate(s)/Laboratory Duplicate(s):

No samples in this SDG were designated for the preparation of MS and MSD samples because the overall frequency for project-specific MS/MSD samples has been met.

Field Quality Control Samples:

Trip Blank(s): A trip blank, identified as TB-2-ST009, was included in this SDG. The analytical results for the trip blank were reported below ½ of the LOQ, with the exception of GRO by AK 101, which was reported at a concentration of 0.0513 mg/L. The associated detectable sample result for GRO in sample MW-4-073014, reported at a concentration of less than five times the amount reported for the trip blank, was flagged with the "UJ" qualifier. No other qualification has been performed on the basis of trip blank results.

Equipment Blank(s): The equipment blank included with this SDG is associated with the soil samples in SDGs 1143648 and 1143658. The equipment blank associated with this SDG was included in SDG 1143646 and identified as Water-EB-073114. The results for this equipment blank were below ½ LOQs with the following exceptions. The sample results for toluene by Method SW8260B and DRO by Method AK102 in the equipment blank were reported above ½ of the LOQ. There are no detectable toluene results for associated samples. Because these sample results for DRO are already qualified with the "UJ" qualifier due to associated detectable method blank result, no further qualification has been performed on the basis of equipment blank results

SAMPLE DELIVERY GROUP	1143647

Internal Standards:

Internal standards were added to the environmental and QC samples and standards to monitor sensitivity and response during every analytical run as appropriate. The internal standard area counts and retention times were within the method-specified QC limits.

Target Compound Identification:

Organic analysis performed by gas chromatography/mass spectrometry methods requires reporting mass spectra comparison to verify compound identification. For project samples, mass spectra criteria were within QC limits for target analytes greater than the LOQ..

Compound Quantitation:

The reported quantitation results and reported detection limits were reviewed and found to be accurate and to generally meet project requirements.

Results reported below the limit of quantitation but above the detection limit are quantitatively qualified as estimated concentrations ("J" qualifier), unless otherwise qualified. No bias is inferred.

Data Qualifiers:

Appropriate data flags were used and defined in the analytical report. During data validation, additional qualifiers have been applied to data. These are defined below:

"J" indicates that the analyte was positively identified, but the quantitation is estimated.

"UJ" indicates that the analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific QC criteria.

The allowable final data qualifiers for definitive data and the hierarchy of data qualifiers listed in order of the most severe through the least severe are *J*, *U*, and *UJ*. For data with multiple qualifiers, the hierarchy listed above has been implemented for applying the final qualifier.

Summary:

The analytical data contained in this report have been reviewed for completeness, accuracy, and precision. The data as qualified meet the quality objectives for the intended use.

DATA VALIDATION REPORT

CONTRACT NO. FA8903-10-D-8601-0101
PROJECT NO: 62421101
PROJECT NAME: Cape Romanzof LRRS Sites
LABORATORY: SGS North America Inc., Anchorage, Alaska
REVIEWER: Alejandro B. Preciado, PhD
Chemist II
EA Engineering, Science, and Technology, Inc.
DATE: 11 September 2014

This data validation report details the findings associated with Sample Delivery Group (SDG) No. 1143646 as well as information concerning the field samples, matrix, sampling date, and discusses major deficiencies or quality assurance/quality control (QA/QC) issues, as applicable. The necessary data qualifications are addressed and the final data validation decisions as to the acceptance, rejection, or qualification of the results are presented.

The data validation report consists of the subsequent text as well as Attachment A, "Laboratory Data Review Checklist," which exhibits the completed Alaska Department of Environmental Conservation checklist used during the validation process to assess the technical merit of the laboratory's performance.

Date(s) Collected	31 July and 2, 4, 5 August 2014			
Sample Delivery Group No.	1143646			
PARAMETERS	Water Sample(s)	Field Duplicate(s)	Equipment Blank(s)	Trip Blank(s)
Total Alkalinity by SM 2320B	0	1	1	0
Dissolved Metals by USEPA Method 6020A	0	1	1	0
Nitrate/Nitrite and Sulfate by USEPA Method 9056A	0	1	1	0
Gasoline Range Organics (GRO) by Alaska Method AK101	4	1	1	1
Diesel Range Organics (DRO) by Alaska Method AK102	4	1	1	0
Residual Range Organics (RRO) by Alaska Method AK103	4	1	1	0
Volatile Organic Compounds (BTEX) by USEPA Method 8260B	0	0	1	0

BTEX = benzene, toluene, ethyl benzene, and total xylenes
SM = Standard Methods
USEPA = U.S. Environmental Protection Agency

The analytical data presented in SDG No. 1143646 were reviewed with respect to QA/QC parameters specified in the in the Department of Defense Quality Systems Manual, Version 4.2 (October 2010) and the Work Plan for Environmental Long Term Monitoring for Cape Romanzof LRRS Sites (2014). In addition, the following guidance documents were used while assessing the validity of these data: U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Superfund Organic Methods Data Review, October 2013; the National Functional Guidelines for Superfund Inorganic Methods Data Review, October 2013; and the

USEPA Office of Solid Waste, SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, April 1998 and updates, as well as the referenced methodology.

As applicable to referenced methodology, QA/QC parameters reviewed include:

- Chain of custody/Sample receipt
- Holding times
- Instrument performance check
- Initial and continuing calibrations
- Method and calibration blanks
- Serial dilutions
- Laboratory control samples
- Surrogates
- Matrix spike (MS) and matrix spike duplicate (MSD) samples and laboratory duplicates
- Field QC samples
- Internal standards
- Target compound identification
- Compound quantitation
- Data qualifiers

Chain of Custody/Sample Receipt:

The sample cooler and the samples contained within were received intact at the laboratory. The samples were received at the laboratory at a temperature of 0.7 degrees Celsius (ºC) within the temperature preservation specification of ≤6°C. No qualification of sample data is necessary on the basis of condition of samples at receipt or chain of custody.

Holding Times:

The samples were prepared and analyzed within the holding times as specified in the referenced methods of analysis. Holding times are determined on the basis of days, hours, and minutes.

Instrument Performance Check:

Instrument performance checks are performed to ensure that instrument performance is within acceptable QC criteria. The instrument performance check criteria that were associated with the samples from this SDG were within method and project-established control limits.

Initial and Continuing Calibrations:

Initial and continuing calibrations were performed at the required frequencies. The target analytes were within method-specified control limits.

Method and Calibration Blank(s):

Method and calibration blanks were prepared and analyzed as recommended by the referenced method(s). Contaminants were not detected above ½ of the limits of quantitation (LOQs) in the method blanks, with the following exception.

DRO was detected in the method blank at a concentration of 0.326 milligrams per liter (mg/L), greater than ½ of the LOQ of 0.60 mg/L. The associated sample results for samples SS010-MW01-080414, SS010-MW02-080514, SS010-MW03-080214, SS010-MW99-080414, and

Water-EB-073114 were reported at concentrations less than five times the amount reported for the method blank and were flagged with the "UJ" qualifier.

Serial Dilution(s):

The serial dilution for metals analysis determines whether significant physical or chemical interferences are present due to sample matrix. A serial dilution is prepared and analyzed with project samples if sample concentrations are greater than 50 times the LOQ. For project samples, the established criteria were met. The post-digestion spike additions showed percent recoveries (%Rs) within method-established control limits.

Laboratory Control Sample(s):

Laboratory control samples (LCS) were prepared and analyzed as recommended by the referenced analytical method. The %Rs for and the relative percent differences (RPDs) for LCSs were within the project-established control limits for the analytical batches containing the samples from this SDG. No qualification of samples results was performed on the basis of the LCS %Rs or RPD.

Surrogate Recovery:

Surrogates were added to the environmental, QC samples and standards for analysis of organic compounds as required by the referenced methodology. The surrogate %Rs were within the project and laboratory-established control limits for the project samples, with the following exceptions.

The surrogate %Rs for 1,2-dichloroethane-d4 were above project-specified QC criteria (biased high) for the equipment blank and method blank by Method 8260B. The analytes associated with this surrogate were not detected above the LOQ. Note also that the other surrogates (4-bromofluorobenzene and toluene-d8) %Rs for these samples were within specified QC criteria. Based on the evaluation of sample results and results of other surrogates, no qualification was performed on the basis of surrogate %Rs.

Matrix Spike(s)/Matrix Spike Duplicate(s)/Laboratory Duplicate(s):

The MS/MSD samples and laboratory duplicate sample results were reviewed and the %Rs and RPDs were within the project-specified QC limits. The sample SS010-MW03-080214 was designated for preparation of the MS samples and the laboratory duplicate. No data qualification was performed on the basis MS/MSD samples or duplicate QC sample results.

Field Quality Control Samples:

Field Duplicate(s): One field duplicate sample is included in this SDG. The sample identified as SS010-MW99-080414 is a field duplicate of SS010-MW01-080414. The analytical results reported for the duplicate were compared to those for the primary sample. The RPDs for the field duplicate and original sample results over the LOQs were below project-specified QC limits. No qualification was performed on the basis of field duplicate results.

Trip Blank(s): A trip blank, identified as TB-3-SS010, was included in this SDG. The analytical results for the trip blank were reported below ½ of the LOQ; therefore no qualification of sample results is necessary.

Equipment Blank(s): An equipment blank identified as sample Water-EB-073114 was included in this SDG. The analytical results for the equipment blank were below ½ of the LOQ with the exception of toluene by Method SW8260B and DRO by Method AK102. There were no

detectable concentrations for toluene in the associated samples. Several samples in this SDG reported detectable concentrations of DRO by AK102 less than five times than that found in the EB. Because these sample results for DRO are already qualified with the "UJ" qualifier due to detectable method blank results, no further qualification has been performed on the basis of equipment blank results.

Internal Standards:

Internal standards were added to the environmental and QC samples and standards to monitor sensitivity and response during every analytical run as appropriate. The internal standard area counts and retention times were within the method-specified QC limits.

Target Compound Identification:

Organic analysis performed by gas chromatography/mass spectrometry methods requires reporting mass spectra comparison to verify compound identification. For project samples, mass spectra criteria were within QC limits for target analytes greater than the LOQ.

Compound Quantitation:

The reported quantitation results and reported detection limits were reviewed and found to be accurate and to generally meet project requirements.

Results reported below the limit of quantitation but above the detection limit are quantitatively qualified as estimated concentrations ("J" qualifier), unless otherwise qualified. No bias is inferred.

Data Qualifiers:

Appropriate data flags were used and defined in the analytical report. During data validation, an additional qualifier has been applied to data. This is defined below:

> "UJ" indicates that the analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific QC criteria.

The allowable final data qualifiers for definitive data and the hierarchy of data qualifiers listed in order of the most severe through the least severe are *R, J*, *U*, and *UJ*. For data with multiple qualifiers, the hierarchy listed above has been implemented for applying the final qualifier.

Summary:

The analytical data contained in this report have been reviewed for completeness, accuracy, and precision. The data as qualified meet the quality objectives for the intended use.

DATA VALIDATION REPORT

CONTRACT NO. FA8903-10-D-8601-0101
PROJECT NO: 62421101
PROJECT NAME: Cape Romanzof LRRS Sites
LABORATORY: SGS North America Inc., Anchorage, Alaska
REVIEWER: Alejandro B. Preciado, PhD
Chemist II
EA Engineering, Science, and Technology, Inc.
DATE: 11 September 2014

This data validation report details the findings associated with Sample Delivery Group (SDG) No. 1143645 as well as information concerning the field samples, matrix, sampling date, and discusses major deficiencies or quality assurance/quality control (QA/QC) issues, as applicable. The necessary data qualifications are addressed and the final data validation decisions as to the acceptance, rejection, or qualification of the results are presented.

The data validation report consists of the subsequent text as well as Attachment A, "Laboratory Data Review Checklist," which exhibits the completed Alaska Department of Environmental Conservation checklist used during the validation process to assess the technical merit of the laboratory's performance.

Date Collected	29 July 2014		
Sample Delivery Group No.	1143645		
PARAMETERS	Water Sample(s)	Field Duplicate(s)	Trip Blank(s)
Total Alkalinity by SM 2320B	3	1	0
Dissolved Metals by USEPA Method 6020A	3	1	0
Nitrate/Nitrite and Sulfate by USEPA Method 9056A	3	1	0
Gasoline Range Organics (GRO) by Alaska Method AK101	3	1	1
Diesel Range Organics (DRO) by Alaska Method AK102	3	1	0
Residual Range Organics (RRO) by Alaska Method AK103	3	1	0
Volatile Organic Compounds (BTEX) by USEPA Method 8260B	3	1	1

BTEX = benzene, toluene, ethyl benzene, and total xylenes
SM = Standard Methods
USEPA = U.S. Environmental Protection Agency

The analytical data presented in SDG No. 1143645 were reviewed with respect to QA/QC parameters specified in the in the Department of Defense Quality Systems Manual, Version 4.2 (October 2010) and the Work Plan for Environmental Long Term Monitoring for Cape Romanzof LRRS Sites (2014). In addition, the following guidance documents were used while assessing the validity of these data: U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Superfund Organic Methods Data Review, October 2013 and the National Functional Guidelines for Superfund Inorganic Methods Data Review, October 2013; and the USEPA Office of Solid Waste, SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, April 1998 and updates, as well as the referenced methodology.

SAMPLE DELIVERY GROUP	1143645

As applicable to referenced methodology, QA/QC parameters reviewed include:

- Chain of custody/Sample receipt
- Holding times
- Instrument performance check
- Initial and continuing calibrations
- Method and calibration blanks
- Serial dilutions
- Laboratory control samples
- Surrogates
- Matrix spike (MS) and matrix spike duplicate (MSD) samples and laboratory duplicates
- Field QC samples
- Internal standards
- Target compound identification
- Compound quantitation
- Data qualifiers

Chain of Custody/Sample Receipt:

The sample cooler and the samples contained within were received intact at the laboratory. The samples were received at the laboratory at a temperature of 1.3 degrees Celsius (ºC) within the temperature preservation specification of ≤6°C. Note that project samples WW-06-072914, WW-01-072914, and WW-99-072914 were received containing bubbles in some of the volatile organic analyte (VOA) vials larger than 6 mm. Sample results associated with the analysis of VOA vials >6mm for WW-01-072914 for volatiles methods (AK101 and 8260B) were flagged as estimated with the qualifiers "J" for the detectable results and "UJ" for non-detects. No other qualification has been performed on the basis of sample condition at laboratory receipt.

Holding Times:

The samples were prepared and analyzed within the holding times as specified in the referenced methods of analysis. Holding times are determined on the basis of days, hours, and minutes.

Instrument Performance Check:

Instrument performance checks are performed to ensure that instrument performance is within acceptable QC criteria. The instrument performance check criteria that were associated with the samples from this SDG were within method and project-established control limits.

Initial and Continuing Calibrations:

Initial and continuing calibrations were performed at the required frequencies. The target analytes were within method-specified control limits.

Method and Calibration Blank(s):

Method and calibration blanks were prepared and analyzed as recommended by the referenced method(s). Contaminants were not detected above ½ of the limits of quantitation (LOQs) in the method blanks, with the following exception.

DRO was detected in the method blank at a concentration of 0.378 milligrams per liter (mg/L), greater than ½ of the LOQ of 0.60 mg/L. The associated sample result for sample WW-99-07291 was reported at concentrations less than five times the amount reported for the method blank were flagged with the "UJ" qualifier.

Serial Dilution(s):

The serial dilution for metals analysis determines whether significant physical or chemical interferences are present due to sample matrix. A serial dilution is prepared and analyzed with project samples if sample concentrations are greater than 50 times the LOQ. For project samples, the established criteria were met. The post-digestion spike additions showed percent recoveries (%Rs) within method-established control limits.

Laboratory Control Sample(s):

Laboratory control samples (LCS) were prepared and analyzed as recommended by the referenced analytical method. The %Rs and the relative percent differences (RPDs) for LCSs were within the project-established control limits for the analytical batches containing the samples from this SDG, with the following exception.

The RPD for laboratory control samples (LCS and LCS duplicate) for Methods AK102 was outside the project-specified QC criteria of <20 percent. Associated sample results were either nondetectable results or associated with a MS/MSD set for which the precision were acceptable. No qualification of samples results was performed on the basis of the LCS and LCS duplicate RPD exceedance.

Surrogate Recovery:

Surrogates were added to the environmental, QC samples, and standards for analysis of organic compounds as required by the referenced methodology. The surrogate %Rs were within the project and laboratory-established control limits for the project samples, with the following exceptions.

The surrogate %Rs for 1,2-dichloroethane-d4 were above project-specified QC criteria (biased high) for several samples by SW8260B. The analytes associated with this surrogate in samples WW-05-072914, WW-06-072914, WW-01-072914, and WW-99-072914 were not detected above the LOQs. Note also that the other surrogates (4-bromofluorobenzene and toluene-d8) %Rs for these samples were within specified QC criteria. No qualification has been performed on the basis of the elevated surrogate %Rs.

Matrix Spike(s)/Matrix Spike Duplicate(s)/Laboratory Duplicate(s):

The MS/MSD and laboratory duplicate sample results were reviewed and the %Rs and RPDs were within the project-specified QC limits. Sample WW-05-072914 was designated for preparation of the matrix spike samples and laboratory duplicate. No data qualification was performed on the basis MS/MSD or duplicate QC sample results.

Field Quality Control Samples:

Field Duplicate(s): One field duplicate sample is included in this SDG. The sample identified as WW-99-072914 is a field duplicate of WW-05-072914. The analytical results reported for the duplicate were compared to those for the primary sample. The RPDs for the field duplicate and original sample results over the LOQs were below project-specified QC limits. No qualification was performed on the basis of field duplicate results.

Trip Blank(s): A trip blank, identified as TB-1-SS015, was included in this SDG. The analytical results for the trip blank were reported below ½ of the LOQ; therefore no qualification of sample results is necessary.

Equipment Blank(s): The equipment blank (EB) associated with the samples results in this SDG was included in SDG 1143646 and identified as sample ID Water-EB-073114. The analytical results for the equipment blank were below ½ of the LOQ with the exception of toluene by Method SW8260B and DRO by Method AK102. There were no detectable concentrations for toluene in the associated samples. Samples WW-06-072914 and WW-99-072914 in this SDG reported detectable concentrations of DRO by AK102 less than five times than that found in the EB. Because the results for DRO in samples WW-99-072914 and Water-EB-073114 are already qualified with the "UJ" qualifier due to detectable method blank results, no further qualification has been performed for this sample on the basis of equipment blank results.

Internal Standards:

Internal standards were added to the environmental and QC samples and standards to monitor sensitivity and response during every analytical run as appropriate. The internal standard area counts and retention times were within the method-specified QC limits.

Target Compound Identification:

Organic analysis performed by gas chromatography/mass spectrometry methods requires reporting mass spectra comparison to verify compound identification. For project samples, mass spectra criteria were within QC limits for target analytes greater than the LOQ, with the following exception. The ion ratio was below the QC limit for ethylbenzene in sample WW-01-072914. Because the results for ethylbenzene in sample WW-99-072914 are already qualified with the "J" qualifier due to VOA vials containing bubbles >6mm used for analysis, no further qualification has been performed for this sample on the basis of target compound identification.

Compound Quantitation:

The reported quantitation results and reported detection limits were reviewed and found to be accurate and to generally meet project requirements.

Results reported below the limit of quantitation but above the detection limit are quantitatively qualified as estimated concentrations ("J" qualifier), unless otherwise qualified. No bias is inferred.

Data Qualifiers:

Appropriate data flags were used and defined in the analytical report. During data validation, additional qualifiers have been applied to data. These are defined below:

"J" indicates that the analyte was positively identified, but the quantitation is estimated.

"UJ" indicates that the analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific QC criteria.

The allowable final data qualifiers for definitive data and the hierarchy of data qualifiers listed in order of the most severe through the least severe are *R, J*, *U*, and *UJ*. For data with multiple qualifiers, the hierarchy listed above has been implemented for applying the final qualifier.

SAMPLE DELIVERY GROUP	1143645

Summary:

The analytical data contained in this report have been reviewed for completeness, accuracy, and precision. The data as qualified meet the quality objectives for the intended use.

ADEC CHECKLISTS

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Laboratory Data Review Checklist

Completed by:	Alejandro Preciado, PhD		
Title:	Chemist II	Date:	Sep 11, 2014
CS Report Name:		Report Date:	
Consultant Firm:	EA Engineering, Science and Technology, Inc.		
Laboratory Name:	SGS North America Inc., Anchorage, Alaska	Laboratory Report Number:	1143658
ADEC File Number:		ADEC RecKey Number:	

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

(●) Yes ( ) No ( ) NA (Please explain.) Comments:

The laboratory's CS approval number is UST-005 and expires on 31 October 2014.

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

( ) Yes ( ) No (●) NA (Please explain) Comments:

Samples were not transferred.

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

b. Correct analyses requested?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

( ) Yes (●) No ( ) NA (Please explain) Comments:

Cooler temperature was 0.5 °C, and below range at receipt (4° ± 2° C). Current EPA guidance as well as the project QAPP states that the temperature preservation requirement is ≤6°C so no qualification has been performed.

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Samples preservation was verified.

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

No sample discrepancies were noted.

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/ preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

( ) Yes ( ) No (•) NA (Please explain) Comments:

No discrepancies were noted.

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability is not affected.

4. Case Narrative

a. Present and understandable?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. Discrepancies, errors or QC failures identified by the lab?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Specific criteria are discussed in the appropriate section below.

c. Were all corrective actions documented?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

The impact on data quality and usability is discussed specifically in the following sections.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. All applicable holding times met?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

c. All soils reported on a dry weight basis?

( ) Yes ( ) No (•) NA (Please explain) Comments:

The samples contained in this laboratory report are aqueous.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability is not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

ii. All method blank results less than PQL?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Method blank results were below the LOQ (equivalent to PQL).

iii. If above PQL, what samples are affected? Comments:

Method blank results were below the LOQ (equivalent to PQL).

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

○ Yes ○ No ◉ NA (Please explain) Comments:

Method blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

◉ Yes ○ No ○ NA (Please explain) Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

○ Yes ○ No ◉ NA (Please explain) Comments:

Metals/inorganics analyses are not included in this report.

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

○ Yes ◉ No ○ NA (Please explain) Comments:

The RPD for the PAH compound - anthracene in the LCS/LCS duplicate was above the project-specified QC criteria of <30%.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Associated sample results were either nondetect results or associated with a MS/MSD set for which the precision was acceptable.

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

○ Yes ○ No ◉ NA (Please explain) Comments:

No sample results were affected.

vii. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

The surrogate %R for bromofluorobenzene was above project-specified QC criteria (biased high) for sample FC-SW99-080514.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

○ Yes ○ No ◉ NA (Please explain) Comments:

The analytes associated with this surrogate were not detected above the LOQ and indicated bias was high.

iv. Data quality or usability affected? (Use the comment box to explain.).

Comments:

No qualifications were performed on the basis of surrogate recovery. No samples results were affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

◉ Yes ○ No ○ NA (Please explain.) Comments:

The trip blank was identified as TB-5-ST009.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

◉ Yes ○ No ○ NA (Please explain.) Comments:

iii. All results less than PQL?

◉ Yes ○ No ○ NA (Please explain.) Comments:

Trip blank results were below the LOQ (equivalent to PQL).

iv. If above PQL, what samples are affected?

Comments:

Trip blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

Sample identified as FC-SW99-080514 is a field duplicate of FC-SW01-080514.

ii. Submitted blind to lab?

◉ Yes ○ No ○ NA (Please explain.) Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

◉ Yes ○ No ○ NA (Please explain) Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

○ Yes ◉ No ○ NA (Please explain) Comments:

Field duplicate RPDs were within limits.

f. Decontamination or Equipment Blank (if applicable)

○ Yes ○ No ◉ NA (Please explain) Comments:

An equipment blank was not included in this SDG as no reusable sampling equipment was used.

i. All results less than PQL?

○ Yes ○ No ◉ NA (Please explain) Comments:

An equipment blank was not associated with this SDG.

ii. If above PQL, what samples are affected?

Comments:

Not applicable. An equipment blank was not associated with this SDG.

iii. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

◉ Yes ○ No ○ NA (Please explain) Comments:

Reset Form

Laboratory Data Review Checklist

Completed by:	Alejandro Preciado, PhD		
Title:	Chemist II	Date:	Sep 11, 2014
CS Report Name:		Report Date:	
Consultant Firm:	EA Engineering, Science and Technology, Inc.		
Laboratory Name:	SGS North America Inc., Anchorage, Alaska	Laboratory Report Number:	1143648
ADEC File Number:		ADEC RecKey Number:	

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

(●) Yes ( ) No ( ) NA (Please explain.) Comments:

The laboratory's CS approval number is UST-005 and expires on 31 October 2014.

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

( ) Yes ( ) No (●) NA (Please explain) Comments:

Samples were not transferred.

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

b. Correct analyses requested?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

Cooler temperature was 2.6 °C.

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Samples preservation was verified at laboratory receipt.

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Sample condition documented by the laboratory and no discrepancies were noted.

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/ preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

( ) Yes ( ) No (•) NA (Please explain) Comments:

No discrepancies were noted.

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability is not affected.

4. Case Narrative

a. Present and understandable?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. Discrepancies, errors or QC failures identified by the lab?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Specific criteria are discussed in the appropriate section below.

c. Were all corrective actions documented?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

The impact on data quality and usability is discussed specifically in the following sections.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. All applicable holding times met?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

c. All soils reported on a dry weight basis?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability is not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

ii. All method blank results less than PQL?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Method blank results were below the LOQ (equivalent to PQL).

iii. If above PQL, what samples are affected? Comments:

Method blank results were below the LOQ (equivalent to PQL).

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

○ Yes ○ No ◉ NA (Please explain) Comments:

Method blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

◉ Yes ○ No ○ NA (Please explain) Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

○ Yes ○ No ◉ NA (Please explain) Comments:

Metals/inorganics analyses are not included in this SDG.

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

○ Yes ◉ No ○ NA (Please explain) Comments:

The MS %R for RRO by Method AK103 was below the specified QC limits (low bias) for the MS sample prepared using project sample SS010-SB01-2.

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Results for RRO for samples SS010-SB01-11, SS010-SB01-90, SS010-SB02-13, SS010-SB02-2, SS010-SB03-14, SS010-SB03-2, and SS010-SB03-80 are affected.

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

◉ Yes ○ No ○ NA (Please explain) Comments:

Detect sample results for RRO by Method AK103 were flagged "J" as estimated, and non-detect results were flagged with "UJ" qualifier.

vii. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

◉ Yes ○ No ○ NA (Please explain) Comments:

iv. Data quality or usability affected? (Use the comment box to explain.). Comments:

Data quality or usability is not affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

◉ Yes ○ No ○ NA (Please explain.) Comments:

The trip blank was identified as TB-Soil-1.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

◉ Yes ○ No ○ NA (Please explain.) Comments:

iii. All results less than PQL?

◉ Yes ○ No ○ NA (Please explain.) Comments:

Trip blank results were below the LOQ (equivalent to PQL).

iv. If above PQL, what samples are affected?

Comments:

Trip blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

Sample identified as SS010-SB03-14D is a field duplicate of SS010-SB03-14.

ii. Submitted blind to lab?

◉ Yes ○ No ○ NA (Please explain.) Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

◉ Yes ○ No ○ NA (Please explain) Comments:

Field duplicate RPDs were within limits.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

○ Yes ◉ No ○ NA (Please explain) Comments:

Field duplicate RPDs were within limits. Data quality or usability is not affected.

f. Decontamination or Equipment Blank (if applicable)

(•) Yes ( ) No ( ) NA (Please explain) Comments:

The equipment blank associated with samples in this lab report was included in SDG 1143647, identified as sample SS010-SB-EB1.

i. All results less than PQL?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

The results were less than the LOQ (equivalent to the PQL).

ii. If above PQL, what samples are affected?

Comments:

Sample results are not affected.

iii. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Reset Form

Laboratory Data Review Checklist

Completed by:	Alejandro Preciado, PhD		
Title:	Chemist II	Date:	Sep 11, 2014
CS Report Name:		Report Date:	
Consultant Firm:	EA Engineering, Science, and Technology, Inc.		
Laboratory Name:	SGS North America Inc., Anchorage, Alaska	Laboratory Report Number:	1143647
ADEC File Number:		ADEC RecKey Number:	

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

(●) Yes ( ) No ( ) NA (Please explain.) Comments:

The laboratory's CS approval number is UST-005 and expires on 31 October, 2014.

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

( ) Yes ( ) No (●) NA (Please explain) Comments:

Samples were not transferred.

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

b. Correct analyses requested?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

( ) Yes (●) No ( ) NA (Please explain) Comments:

Cooler temperature was 0.5 °C, and below range at receipt (4° ± 2° C). Current EPA guidance as well as the project QAPP states that the temperature preservation requirement is ≤6°C so no qualification has been performed.

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Samples preservation was verified.

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

A volatile organic analysis vial (VOA) for sample MW-9-073014 (laboratory ID 1143647001-F) contained a bubble larger than 6 mm.

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/ preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

The sample conditions are noted on the laboratory sample receipt form.

e. Data quality or usability affected? (Please explain)

Comments:

The VOA vial containing bubbles was not used for volatile analysis; no data qualification was required.

4. Case Narrative

a. Present and understandable?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. Discrepancies, errors or QC failures identified by the lab?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Specific criteria are discussed in the appropriate section below.

c. Were all corrective actions documented?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

The impact on data quality and usability is discussed specifically in the following sections.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. All applicable holding times met?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

c. All soils reported on a dry weight basis?

( ) Yes ( ) No (•) NA (Please explain) Comments:

The samples contained in this laboratory report are aqueous.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability is not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

ii. All method blank results less than PQL?

( ) Yes (•) No ( ) NA (Please explain) Comments:

RRO was detected in a method blank by AK103 at a concentration of 0.270 milligrams per liter (mg/L) and greater than the PQL (LOQ equivalent) of 0.125 mg/L.

iii. If above PQL, what samples are affected? Comments:

No sample results are affected.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

○ Yes ○ No ◉ NA (Please explain) Comments:

The RRO result >LOQ for the method blank is associated with the equipment blank SS010-SB-EB1; the result for this sample is nondetect and no qualification was required.

v. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

◉ Yes ○ No ○ NA (Please explain) Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

○ Yes ○ No ◉ NA (Please explain) Comments:

Metals/inorganics analyses are not included in this SDG.

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No sample results are affected.

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

vii. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

( ) Yes (•) No ( ) NA (Please explain) Comments:

The surrogate %Rs for 1,2-dichloroethane-d4 and/or toluene-d8 were above QC criteria (high bias) for sample MW-7-073014 and trip blank by method 8260B.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

( ) Yes ( ) No (•) NA (Please explain) Comments:

The results associated with the high surrogate %Rs in project sample and trip blank were not detected above the LOD; therefore, no qualification was required based on the surrogate %Rs.

iv. Data quality or usability affected? (Use the comment box to explain.).

Comments:

No qualifications were required on the basis of surrogate %Rs. No samples results were affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

(•) Yes ( ) No ( ) NA (Please explain.) Comments:

The trip blank was identified as TB-2-ST009.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

(•) Yes ( ) No ( ) NA (Please explain.) Comments:

iii. All results less than PQL?

◉ Yes ○ No ○ NA (Please explain.) Comments:

Trip blank results were below the LOQ (equivalent to PQL).

iv. If above PQL, what samples are affected?

Comments:

Trip blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

○ Yes ◉ No ○ NA (Please explain) Comments:

Field duplicate samples were not included with this particular SDG, but the overall frequency for the project has been met.

ii. Submitted blind to lab?

○ Yes ○ No ◉ NA (Please explain.) Comments:

Field duplicate samples were not included with this SDG.

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

○ Yes ○ No ◉ NA (Please explain) Comments:

Field duplicate samples were not included with this SDG.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

○ Yes ◉ No ○ NA (Please explain) Comments:

Data quality or usability is not affected.

f. Decontamination or Equipment Blank (if applicable)

(•) Yes ( ) No ( ) NA (Please explain) Comments:

The equipment blank associated with samples in this SDG is included in SDG 1143646 and identified as Water-EB-073114.

i. All results less than PQL?

( ) Yes (•) No ( ) NA (Please explain) Comments:

The analytical result for the equipment blank were reported above LOQ (PQL equivalent) for toluene by method SW8260B.

ii. If above PQL, what samples are affected?

Comments:

There were no associated project sample results reported with detected toluene concentrations; therefore no qualification of the sample results is required.

iii. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Reset Form

Laboratory Data Review Checklist

Completed by:	Alejandro Preciado, PhD		
Title:	Chemist II	Date:	Sep 11, 2014
CS Report Name:		Report Date:	
Consultant Firm:	EA Engineering, Science, and Technology, Inc.		
Laboratory Name:	SGS North America Inc., Anchorage, Alaska	Laboratory Report Number:	1143646
ADEC File Number:		ADEC RecKey Number:	

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

(●) Yes ( ) No ( ) NA (Please explain.) Comments:

The laboratory's CS approval number is UST-005 and expires on 31 October, 2014.

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

( ) Yes ( ) No (●) NA (Please explain) Comments:

Samples were not transferred.

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

b. Correct analyses requested?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

( ) Yes (●) No ( ) NA (Please explain) Comments:

Cooler temperature was 0.7 °C, and below range at receipt (4° ± 2° C). Current EPA guidance as well as the project QAPP states that the temperature preservation requirement is ≤6°C so no qualification has been performed.

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Samples preservation was verified.

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Noted on the laboratory sample receipt form.

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/ preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

( ) Yes ( ) No (•) NA (Please explain) Comments:

No discrepancies were noted for this SDG.

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability affected is not affected.

4. Case Narrative

a. Present and understandable?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. Discrepancies, errors or QC failures identified by the lab?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Specific criteria are discussed in the appropriate section below.

c. Were all corrective actions documented?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

The impact on data quality and usability is discussed specifically in the following sections.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. All applicable holding times met?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

c. All soils reported on a dry weight basis?

( ) Yes ( ) No (•) NA (Please explain) Comments:

The samples in this SDG are aqueous.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability is not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

ii. All method blank results less than PQL?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Method blank results were below the LOQ (equivalent to PQL).

iii. If above PQL, what samples are affected? Comments:

Method blank results were below the LOQ (equivalent to PQL).

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

○ Yes ○ No ◉ NA (Please explain) Comments:

Method blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

◉ Yes ○ No ○ NA (Please explain) Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No sample results are affected.

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

◉ Yes ○ No ○ NA (Please explain) Comments:

vii. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

○ Yes ◉ No ○ NA (Please explain) Comments:

The surrogate %Rs for 1,2-dichloroethane-d4 were above QC criteria (high bias) for the equipment (Water-EB-073114) and method blank by SW8260B.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

○ Yes ○ No ◉ NA (Please explain) Comments:

The results associated with surrogate 1,2-dichloroethane-d4 were not detected above the LOQ; therefore no qualification was required.

iv. Data quality or usability affected? (Use the comment box to explain.).

Comments:

No qualifications were performed on the basis of surrogate %Rs. No samples results were affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

◉ Yes ○ No ○ NA (Please explain.) Comments:

The trip blank was identified as TB-3-SS010.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

◉ Yes ○ No ○ NA (Please explain.) Comments:

iii. All results less than PQL?

◉ Yes ○ No ○ NA (Please explain.) Comments:

Trip blank results were below the LOQ (equivalent to PQL).

iv. If above PQL, what samples are affected?

Comments:

Trip blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

Sample identified as SS010-MW01-080414 is a field duplicate of SS010-MW99-080414.

ii. Submitted blind to lab?

◉ Yes ○ No ○ NA (Please explain.) Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

◉ Yes ○ No ○ NA (Please explain) Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

○ Yes ◉ No ○ NA (Please explain) Comments:

Field duplicate RPDs were within limits. Data quality or usability is not affected.

f. Decontamination or Equipment Blank (if applicable)

(•) Yes ( ) No ( ) NA (Please explain) Comments:

An equipment blank, identified as Water-EB-073114, was included in this SDG.

i. All results less than PQL?

( ) Yes (•) No ( ) NA (Please explain) Comments:

The analytical result for the equipment blank was reported above LOQ (equivalent to PQL) for toluene by SW8260B.

ii. If above PQL, what samples are affected?

Comments:

There were no positive toluene results identified for field samples in this SDG; no further qualification has been performed on the basis of equipment blank results.

iii. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Reset Form

Laboratory Data Review Checklist

Completed by:	Alejandro Preciado, PhD		
Title:	Chemist II	Date:	Sep 11, 2014
CS Report Name:		Report Date:	
Consultant Firm:	EA Engineering, Science, and Technology, Inc.		
Laboratory Name:	SGS North America Inc., Anchorage, Alaska	Laboratory Report Number:	1143645
ADEC File Number:		ADEC RecKey Number:	

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

(•) Yes ( ) No ( ) NA (Please explain.) Comments:

The laboratory's CS approval number is UST-005 and expires on 31 October, 2014.

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

( ) Yes ( ) No (•) NA (Please explain) Comments:

Samples were not transferred.

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. Correct analyses requested?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

( ) Yes (•) No ( ) NA (Please explain) Comments:

Cooler temperature at laboratory receipt was 1.3°C. Current EPA guidance as well as the project QAPP states that the temperature preservation requirement is ≤6°C so no qualification has been performed of associated sample results.

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

Samples preservation was verified at laboratory receipt. If insufficient preservative was noted due to sample pH outside limits, additional acid was added and documented for sample aliquots intended for nonvolatile analyses.

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

Samples WW-06-072914, WW-01-072914, and WW-99-072914 contained bubbles in VOA vials larger than 6 mm. These vials with bubbles were used for analysis of sample WW-01-072914 only.

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/ preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

Sample condition of VOA vials was documented as noted above.

e. Data quality or usability affected? (Please explain)

Comments:

Sample results for WW-01-072914 volatile methods (AK101 and 8260B) were flagged J for the positive results and UJ for non-detects.

4. Case Narrative

a. Present and understandable?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

b. Discrepancies, errors or QC failures identified by the lab?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

Specific criteria are discussed in the appropriate section below.

c. Were all corrective actions documented?

(●) Yes ( ) No ( ) NA (Please explain) Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

The impact on data quality and usability is discussed specifically in the following sections.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. All applicable holding times met?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

c. All soils reported on a dry weight basis?

( ) Yes ( ) No (•) NA (Please explain) Comments:

The samples contained in this laboratory report are aqueous.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability is not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

ii. All method blank results less than PQL?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Method blank results were below the LOQ (equivalent to PQL).

iii. If above PQL, what samples are affected? Comments:

Method blank results were below the LOQ (equivalent to PQL).

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

○ Yes ○ No ◉ NA (Please explain) Comments:

Method blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain) Comments:

Data quality or usability is not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

◉ Yes ○ No ○ NA (Please explain) Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

◉ Yes ○ No ○ NA (Please explain) Comments:

The relative percent difference (RPD) for laboratory control samples (LCS/LCSD) for method AK102 did not meet the laboratory-specified QC criteria.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No sample results are affected as the samples associated with RPD exceedances were nondetectable or associated with an MS/MSD set for which the precision was acceptable.

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

vii. Data quality or usability affected? (Please explain) Comments:

No sample results are affected. Associated sample results were either nondetectable or associated with an MS/MSD set for which the precision was acceptable.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

( ) Yes (•) No ( ) NA (Please explain) Comments:

The surrogate %Rs for 1,2-dichloroethane-d4 were above project-specified QC criteria (biased high) for several samples by SW8260B.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

( ) Yes (•) No ( ) NA (Please explain) Comments:

The results for WW-05-072914, WW-06-072914, WW-01-072914, and WW-99-072914 were not detected above the LOQs and indicated bias was high.

iv. Data quality or usability affected? (Use the comment box to explain.).

Comments:

No qualifications were performed on the basis of surrogate %Rs. Data quality or usability is not affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

(•) Yes ( ) No ( ) NA (Please explain.) Comments:

The trip blank was identified as TB-1-SS015.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

(•) Yes ( ) No ( ) NA (Please explain.) Comments:

iii. All results less than PQL?

◉ Yes ○ No ○ NA (Please explain.) Comments:

Trip blank results were below the LOQ (equivalent to PQL).

iv. If above PQL, what samples are affected?

Comments:

Trip blank results were below the LOQ (equivalent to PQL).

v. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

◉ Yes ○ No ○ NA (Please explain) Comments:

Sample identified as WW-99-072914 is a field duplicate of WW-05-072914.

ii. Submitted blind to lab?

◉ Yes ○ No ○ NA (Please explain.) Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

◉ Yes ○ No ○ NA (Please explain) Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

○ Yes ○ No ◉ NA (Please explain) Comments:

Field duplicate RPDs were within limits. Data quality or usability is not affected.

f. Decontamination or Equipment Blank (if applicable)

(•) Yes ( ) No ( ) NA (Please explain) Comments:

An equipment blank was not included in this SDG. The equipment blank associated with this SDG was included in SDG 1143646 and identified as Water-EB-073114.

i. All results less than PQL?

( ) Yes (•) No ( ) NA (Please explain) Comments:

The analytical results for the equipment blank were reported above LOQ (PQL equivalent) for toluene by method SW8260B.

ii. If above PQL, what samples are affected?

Comments:

There were no positive toluene results identified for samples in this SDG; therefore no qualification of sample results is necessary.

iii. Data quality or usability affected? (Please explain.)

Comments:

Data quality or usability is not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

Reset Form

APPENDIX F

ADEC Comments and Response to Comments on Draft Report
(FINAL ONLY)

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THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

555 Cordova St
Anchorage, AK 99501
Main: 907-269-7552
Fax: 907-269-7687
www.dec.alaska.gov

File No: 2526.38.001

January 9, 2014

Keith Barnack
AFCEC/OLAR
10471 20th St Ste 341
JBER, AK 99506-2201

Re: Draft 2014 LTM Report for LF003, ST009, SS015 and SS010 at Cape Romanzof LRRS, Alaska dated December 2014

Dear Mr. Barnack;

The Alaska Department of Environmental Conservation (ADEC) has received the above document on December 18, 2014 for review and comment. Please see attached comment form.

Sincerely,

Louis Howard
Environmental Program Specialist

Alaska Department of Environmental Conservation
Comments on the Draft 2014 LTM Report for LF003, ST009, SS015 and SS010
at Cape Romanzof LRRS, Alaska dated December 2014
Commenter: Louis Howard (ADEC), Comments Developed: January 9, 2015

Cmt. No.	Pg. & Line	Sec.	Comment/Recommendation	Response
1.	3-7	3.6.2	**Site SS015 Groundwater Sampling** Well WW-01 was found to be heavily damaged and most of the well stickup was sheared off. PVC is cracked and shattered down to ~3 ft. bgs. ADEC will require that the Air Force either repair or replace the well if it cannot be repaired with a flush mount well or such that it cannot be damaged by workers with snow plows. If it cannot be repaired, then it must be properly decommissioned and abandoned.	
2.	37 of the PDF		**Landfill Visual Inspection Checklist** ADEC concurs that more signage would be good at ST009 because the current location of the one sign is not visible from shoreline.	
3.	38 of the PDF		**Landfill Visual Inspection Checklist** Evidence of debris breaking through the surface at LF003 does not meet the substantive requirements of 18 AAC 60.390 which requires final cover of 24 inches thick or another thickness approved by ADEC. ADEC requests the Air Force place additional fill material at LF003 to adequately cover the debris breaking through the surface.	

Response to Alaska Department of Environmental Conservation Comments
on the Draft 2014 LTM Report for LF003, ST009, SS015 and SS010
at Cape Romanzof LRRS, Alaska dated December 2014
Commenter: Louis Howard (ADEC), Comments Developed: January 28, 2015

Cmt. No.	Pg. & Line	Sec.	Comment/Recommendation	Response	Location of Change
1	3-7	3.6.2	**Site SS015 Groundwater Sampling** Well WW-01 was found to be heavily damaged and most of the well stickup was sheared off. PVC is cracked and shattered down to ~3 ft. bgs. ADEC will require that the Air Force either repair or replace the well if it cannot be repaired with a flush mount well or such that it cannot be damaged by workers with snow plows. If it cannot be repaired, then it must be properly decommissioned and abandoned.	Text will be added to the Report to state the following: "While well WW-01 was found to be damaged, it was successfully sampled in 2014, and no obstructions were noted. Well WW-01 will be scheduled for repairs. If for some reason repairs are found to not be possible, it will be properly decommissioned and abandoned."	Section 8.0 Page 8-2
2	37 of the PDF		**Landfill Visual Inspection Checklist** ADEC concurs that more signage would be good at ST009 because the current location of the one sign is not visible from shoreline.	Text will be added to the Report to state the following: "An additional warning sign will be posted that is visible from the shoreline. The new sign will have the same language as the existing warning sign."	Section 8.0 Page 8-1
3	38 of the PDF		**Landfill Visual Inspection Checklist** Evidence of debris breaking through the surface at LF003 does not meet the substantive requirements of 18 AAC 60.390 which requires final cover of 24 inches thick or another thickness approved by ADEC. ADEC requests the Air Force place additional fill material at LF003 to adequately cover the debris breaking through the surface.	Landfill maintenance will be scheduled at LF003 and the required final cover of 24 inches thick or another thickness approved by ADEC will be restored. Text will be added to the Report to state the following: "In order to meet the substantive requirements of 18 AAC 60.390, additional fill material will be placed at LF003 to adequately cover the debris breaking through the surface."	Section 8.0 Page 8-1

8.0 CONCLUSIONS

This section summarizes the conclusions based on the IC inspections and environmental sampling activities performed at four LTM sites at Cape Romanzof, Alaska.

LF003 LANDFILL AND IC INSPECTION

The landfill cap and IC inspection of Site LF003 (Landfill No. 2) noted areas with surface erosion and partially-exposed debris consisting primarily of metal. In order to meet the substantive requirements of 18 AAC 60.390, additional fill material will be placed at LF003 to adequately cover the debris breaking through the surface.

Comment [EM1]: ADEC comment # 3

No warning signs or area restriction postings were found on-site or in the surrounding area. The site is used as a vehicle turn-around and pull-out area primarily by site workers.

ST009 IC INSPECTION

The IC inspection at Site ST009 noted the following: the site is accessed by site workers during non-winter months for recreational and industrial purposes; historically buried drums are exposed along a section of eroding bank and on the shoreline and below the high-tide mark; and there is a single warning sign posted along the eastern side of Fowler Creek, on the western edge of the Site ST009 boundary.

An additional warning sign will be posted that is visible from the shoreline. The new sign will have the same language as the existing warning sign.

Comment [EM2]: ADEC comment # 2

ST009 GROUNDWATER MONITORING

Results of the groundwater monitoring conducted at Site ST009 indicated the presence of DRO at a concentration exceeding the ADEC Cleanup Level at monitoring well MW-7. GRO and BTEX were not detected or detected at concentrations below ADEC Groundwater Cleanup Levels at all locations sampled at Site ST009.

ST009 SURFACE WATER SAMPLING

The ST009 surface water sample collected from Fowler Creek indicated that all values analyzed for calculating TAH and TAqH were non-detect. Therefore, the total value for TAH and TAqH when all of the analytes are non-detect was reported as the lowest LOD.

SS015 GROUNDWATER MONITORING

Results of the groundwater monitoring conducted at Site SS015 indicated the presence of DRO at concentrations exceeding the ADEC Cleanup Level at monitoring wells WW-01 and WW-06. GRO and BTEX were not detected or detected at concentrations below ADEC Groundwater Cleanup Levels at all locations sampled at Site SS015.

While well WW-01 was found to be damaged, it was successfully sampled in 2014, and no obstructions were noted. Well WW-01 will be scheduled for repairs. If for some reason repairs are found to not be possible, it will be properly decommissioned and abandoned.

Comment [EM3]: ADEC comment # 1

SS010 IC INSPECTION

The IC inspection at Site SS010 noted that there were no warning signs or other area restrictions in place since none are required, and that there was year-round access to site structures by site workers for industrial and maintenance purposes.

SS010 GROUNDWATER MONITORING AND WELL INSTALLATION

Results of the groundwater monitoring conducted at Site SS010 from the three newly-installed monitoring wells indicated that GRO, DRO, and RRO were not detected or detected at concentrations below ADEC Groundwater Cleanup Levels. Groundwater was deeper than anticipated at Site SS010, thus monitoring wells were installed deeper than planned.

SS010 SOIL SAMPLING

Results of the subsurface soil sampling conducted at Site SS010 indicated that GRO, DRO, and RRO were not detected or detected at concentrations below ADEC Groundwater Cleanup Levels. These boring locations were co-located with the monitoring well installation points at Site SS010.