DEPARTMENT OF THE AIR FORCE
27TH SPECIAL OPERATIONS MISSION SUPPORT GROUP (AFSOC)
CANNON AIR FORCE BASE NEW MEXICO

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Hazardous Waste Bureau

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Colonel Douglas W. Gilpin, USAF
Commander, 27th Special Operations Mission Support Group
110 E Alison Avenue Suite 1098
Cannon AFB NM 88103

Mr. John E. Kieling
Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East Bldg 1
Santa Fe NM 87505-6063

Dear Mr. Kieling,

Cannon AFB is pleased to submit the "*Accelerated Corrective Measure Completion Report Site FT006/SWMU 78*". If you have any questions regarding this submittal, please contact Ms. Brandy Chavez, Chief, Environmental Element at (575) 904-6747.

Sincerely

DOUGLAS W. GILPIN, Colonel, USAF

Attachment:
ACM Completion Report Site FT006/SWMU 78

cc:
NMED, Dave Cobrain
NMED, Gabriel Acevedo
NMED, Neelam Dhawan

ACCELERATED CORRECTIVE MEASURE COMPLETION REPORT

SITE FT006 – FIRE DEPARTMENT TRAINING AREA NO. 1

CANNON AIR FORCE BASE
NEW MEXICO
RCRA PERMIT No. NM7572124454

Performance Based Remediation
Contract Number: FA8903-13-C-0008

Prepared for

AIR FORCE CIVIL ENGINEER CENTER
2261 Hughes Ave., Suite 155
JBSA – Lackland, Texas 78236-9853

March 2016

Prepared by:

FPM Remediations, Inc.

584 Phoenix Drive
Rome, NY 13441

URS **Group, Inc.**
7720 N 16th Street, Suite 100
Phoenix, AZ 85020-4493

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Acronyms and Abbreviations

°C	degrees Celsius
°F	degrees Fahrenheit
ACMCR	Accelerated Corrective Measure Completion Report
AFB	Air Force Base
bgs	below ground surface
B.P.	before the present
BRA	Baseline Risk Assessment
CAC	Corrective Action Complete
CEC	cation exchange capacities
cm	centimeter
COPC	chemical of potential concern
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DRO	diesel range organics
FT006	Fire Department Training Area Number 1 (SWMU 78)
FPM	FPM Remediations, Inc.
gal/ft	gallons per foot
gpm	gallon per minute
GRO	gasoline range organics
IRP	Installation Restoration Program
L/min	liters per minute
m^3/m	cubic meters per meter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
msl	mean sea level
NMED	New Mexico Environment Department
PID	photoionization detector
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SCFS	Sample Collection Field Sheet
SSL	Soil Screening Level
SVOC	semivolatile organic compound
SWMU	Solid Waste Management Unit
TAL	target analyte list
TPH	total petroleum hydrocarbon
URS	URS Group, Inc.
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
W-C	Woodward-Clyde
XRF	x-ray fluorescence

This document presents the Accelerated Corrective Measure Completion Report (ACMCR) for Fire Department Training Area Number 1 (FT006) (Solid Waste Management Unit [SWMU] 78) at Cannon Air Force Base (AFB) near Clovis, New Mexico (**Figure 1-1**).

1.1 AUTHORITY

URS Group, Inc. (URS), as a subcontractor to FPM Remediations, Inc. (FPM), has prepared this ACMCR as part of the Performance Based Remediation at Cannon AFB. This work is being completed under Air Force Civil Engineer Center Contract Number FA8903-13-C-0008.

1.2 PURPOSE AND SCOPE

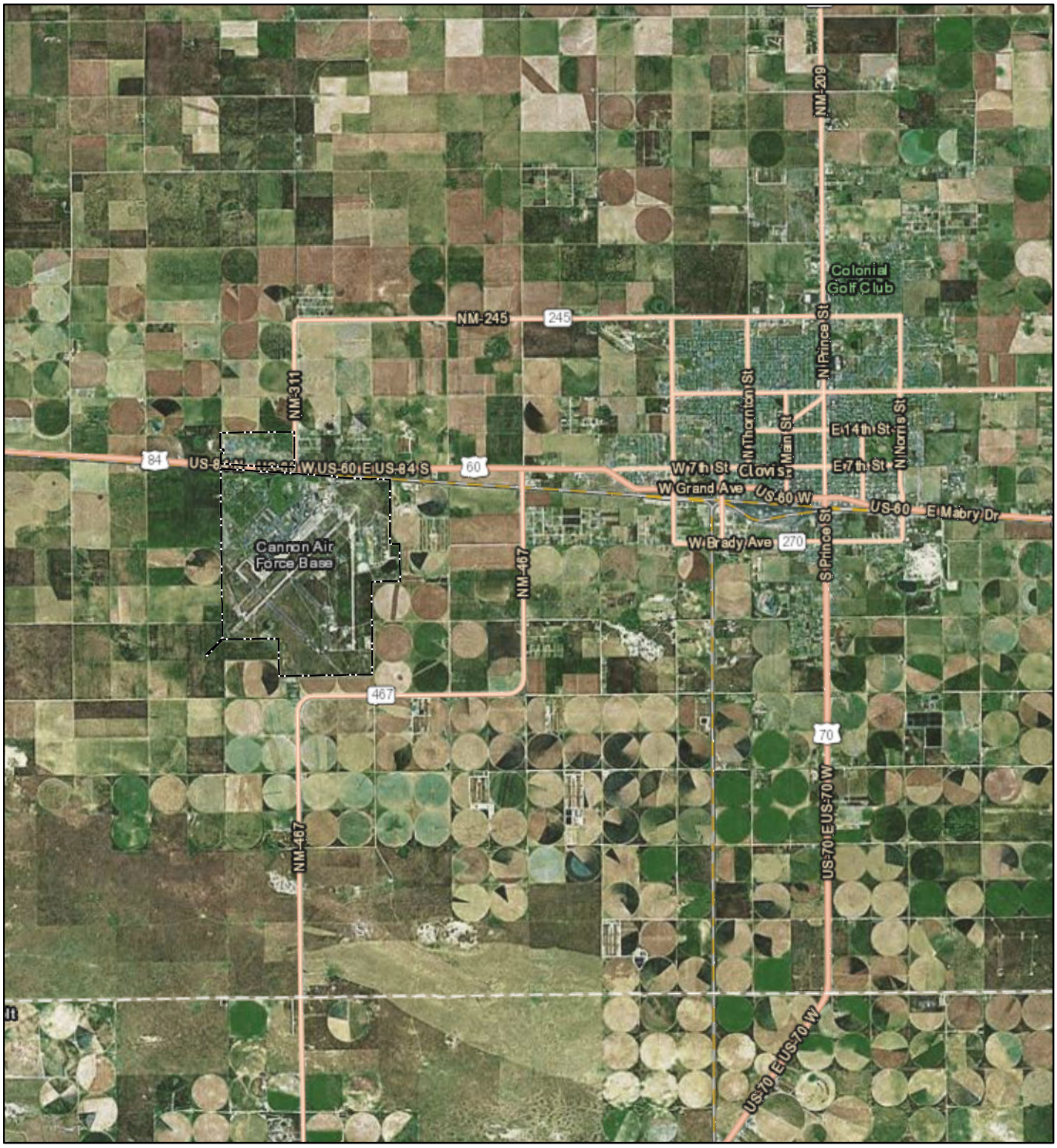
The purpose of this ACMCR is to describe the field activities and the removal of approximately 100 cubic yards of contaminated soil at FT006 to levels below the New Mexico Environment Department (NMED) residential Soil Screening Levels (SSLs). The site location map (**Figure 1-2**) shows the location of FT006 at Cannon AFB.

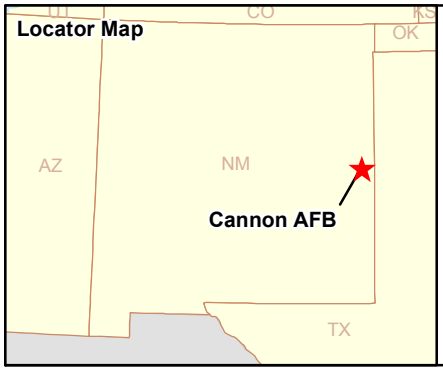
The scope of the investigation and excavation activities completed at FT006 was provided and executed in accordance with the approved work plan (FPM/URS 2014).

1.3 REPORT ORGANIZATION

This report provides the facility and site descriptions, presents the project objectives and approach, describes the field sampling and excavation activities completed, presents the site investigation and excavation results, and provides summaries and recommendations for FT006. This report is organized as follows:

- **Section 1** presents the authority along with the purpose and scope for the project.
- **Section 2** summarizes the site description and background, including previous investigations and remedial actions completed.
- **Section 3** describes the field activities completed.
- **Section 4** provides the analytical results from the excavation sampling.
- **Section 5** consists of conclusions and recommendation for FT006.
- **Section 6** lists the references used in this ACMCR.





Legend

Base Boundary

N

10,000 5,000 0 10,000 Feet

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

Installation Location Map

Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 1/8/2016	Project No. 23446539	Figure 1-1
Checked By: MS	Revision: 0		

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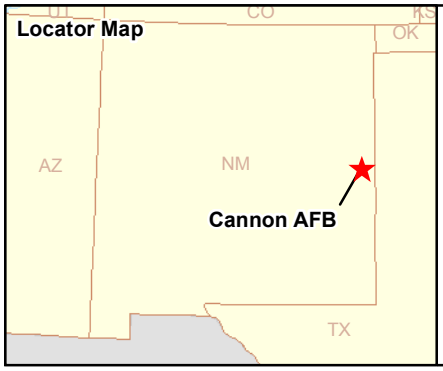

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Base Boundary

Site ID	Site Name
FT006	Fire Training Area No. 1

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

N

2,000 1,000 0 2,000 Feet

Site Location Map
Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 1/8/2016	Project No. 23446539	Figure 1-2
Checked By: MS	Revision: 0		

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2.1 FACILITY DESCRIPTION AND BACKGROUND

2.1.1 Setting – Physical Geography

Cannon AFB is situated in the Southern High Plains Physiographic Province in the Llano Estacado subprovince. The Llano Estacado is a nearly flat plain sloping gently (10 to 15 feet per mile) to the east and southeast. Elevations in the eastern New Mexico portion of the Llano Estacado exceed 4,000 feet above mean sea level (msl). In the vicinity of Cannon AFB, elevations range from 4,250 feet to 4,350 feet above msl.

The most prominent geomorphic features in the vicinity of Cannon AFB are blowouts and broad, widely spaced valleys. Less common landforms are relict sand dunes located along the northern side of the Portales Valley to the south of the Base. Relict dunes are not found on or near Cannon AFB.

Blowouts are broad shallow depressions, which form as the result of soil eroded by wind. Blowouts commonly collect surface runoff from small to moderate sized drainage areas. During periods of rainfall, runoff collects in blowouts to form ephemeral playa lakes. Playas have no external surface drainage. Water is lost by infiltration to the soil and evaporation; without recharge, playa lakes persist for only a few days or weeks. Three playas are located within the Base, and several more are found to the north and east of the Base.

Stream valleys tend to be fairly broad and widely spaced. Streams are ephemeral and drainage areas are poorly developed. No streams exist on or near Cannon AFB. Running Water Draw and Frio Draw (located about 10 and 20 miles, respectively, north of Cannon AFB) are the nearest streams. These are second-order streams. Both streams are very straight, flow southeast, and have rectilinear drainage patterns with short laterals (W-C 1991).

2.1.2 Demographics and Land Use Near Cannon AFB

Cannon AFB is located just west of the City of Clovis, New Mexico, and just south of United States Highway 60/84 in a farming and ranching area. The majority of the land surrounding Cannon AFB is productive, irrigated farmland or grassland. The major crops are wheat, sorghum, sugar beets, corn, cotton, alfalfa, barley, and peanuts. The land is also used for cattle grazing for both the beef and dairy industry. According to 2010 United States census data (US Census 2010), the population of Clovis was 37,775 while the population of Cannon AFB was 2,245.

2.1.3 Climatology

The climate of east-central New Mexico is classified as tropical semi-arid, with summer temperature and precipitation maxima. Average monthly temperatures range from a January low of -3.9 degrees Celsius (°C) (25 degrees Fahrenheit [°F]) to a July high of 32.8°C (91°F) (US Climate Data 2013). Extreme daily temperatures range from a historical low of –24°C (–11°F) to a historical high of 41°C (106°F) (My Forecast 2013). Average monthly precipitation ranges

from 1.2 centimeter (cm) (0.39 inches) in February to 8.7 cm (3.43 inches) in July (US Climate Data 2013). The maximum-recorded 24-hour rainfall is 12.2 cm (4.8 inches), which occurred in the month of August. Rainfall occurs on an average of eight days per month during the summer (My Forecast 2013). The mean annual precipitation is approximately 47 cm (18.51 inches) (US Climate Data 2013). The mean annual evapotranspiration rate is 285.9 centimeters per year (112.56 inches per year) (USEPA 2013). Prevailing winds are from the southwest. Average wind speed is highest at an average of 23.34 kilometers per hour (14.5 miles per hour) during the month of April (USDA 2013).

The atmosphere around the area of Cannon AFB is generally well mixed. The seasonal and annual average mixing heights can vary from 400 meters in the morning to 4,000 meters in the afternoon. The afternoon mixing heights are typically greater during the spring and fall seasons. The morning mixing heights are usually low, due to nighttime heat loss from the ground, producing surface-based temperature inversions. After sunrise, these inversions break up, and solar heating of the earth's surface causes vertical mixing in the atmosphere.

Dust is frequently entrained into the atmosphere in this region of the country because of gusty winds and the semiarid climate. The Texas Panhandle-eastern New Mexico area is considered the worst area in the United States for windblown dust. Occasionally, this windblown dust is of sufficient quantity to restrict visibility. Most of the seasonal dust storms occur in March and April, when the wind speeds are typically high.

2.1.4 Geology

A generalized geologic section at Cannon AFB is shown in **Figure 2-1**. The near surface stratigraphic units of interest at Cannon AFB are the Late Miocene-Late Pliocene-age Ogallala Formation and the Early Triassic Dockum Group.

The Dockum Group consists of three formations. Stratigraphically, the lowest unit is the Santa Rosa Sandstone. Overlying the Santa Rosa Sandstone are the Chinle and Redonda Formations. The Chinle and Redonda Formations are composed mainly of red shales with lesser interbedded sands, and are known locally as "redbeds". The top of the Dockum Group is marked by an erosional nonconformity having relief of up to several hundred feet (Lee Wan 1990).

Overlying the Dockum Group redbeds is the Ogallala Formation. The Ogallala Formation extends from eastern New Mexico and Colorado into Texas, Oklahoma, Kansas, Nebraska, and South Dakota. Drillers' logs from Cannon AFB indicate that the Ogallala Formation varies from 360 feet to 415 feet in thickness. The incised upper surface of Triassic redbeds strongly influences Ogallala thickness. Paleo valleys in the post Triassic nonconformity are deep and trend dominantly east to west. Ogallala thickness may vary significantly over short north to south distances (Lee Wan 1990).

The Ogallala Formation is erosionally truncated to the south along the abandoned Portales Valley, to the west along the Pecos River Valley, and to the north in a series of ephemeral stream valleys. The Ogallala Formation extends more than 125 miles to the east before terminating as

an escarpment in Briscoe County, Texas. Springs and seeps are common along the erosional margins of the Ogallala.

The Ogallala Formation dips gently and monoclinally to the southeast in the vicinity of Cannon AFB. Data suggest that some quaternary warping may have occurred; however, most of these structures are located well to the northwest and southwest of Cannon AFB. No faults or buried structural lineaments are known to exist in the vicinity of Cannon AFB (Lee Wan 1990).

The Ogallala Formation is composed of unconsolidated poorly sorted gravel, sand, silts, and clays. The base of the Ogallala is generally marked by a gravel, cobble, and boulder deposit. This basal member contains sediments derived from igneous and sedimentary rocks transported from the mountains to the west. The Ogallala Formation was laid down as stream and overbank deposits formed within coalescing alluvial fans. These fans form a broad pediment along the eastern flank of the Rocky Mountains. As is typical of alluvial deposits, Ogallala internal stratigraphy varies vertically and horizontally over short distances.

Except where strongly cemented by calcium carbonate (caliche), the sediments of the Ogallala are loose and friable. Authigenic and allogenic clays are found as a trace to abundant matrix mineral. Five zones have been distinguished within the Ogallala of east central New Mexico on the basis of clay minerals. Smectites (montmorillonites) and attapulgite (with sepeotite) are the dominant clays throughout the Ogallala. Illite is a lesser, but persistent clay, as is kaolinite. Smectite is a swelling clay, causing deep cracks to form in dry surface soils. Smectite in particular and, to a lesser extent, attapulgite and illite, are clays with moderate to high cation exchange capacities (CEC). The formation as a whole should therefore have a relatively high CEC, which should inhibit the migration of charged contaminants, and especially ionic forms of metals (Lee Wan 1990).

Caliche is a major feature of the Ogallala Formation, occurring as nearly continuous to discontinuous layers throughout. Caliche is hard, white to pale tan on fresh surfaces, weathering to gray, and has a chalky appearance. Caliche forms as calcium carbonate, leached from overlying sediments, and precipitates in the pore space of the host sediments. Precipitation is caused by the evaporation of downward percolating water. The caliche may thus mark the position of ancient vadose zones. Radiocarbon dates for the upper “climax” caliche range from approximately 27,000 years before the present (B.P.) to approximately 42,000 years B.P. (Lee Wan 1990).

Caliche is relatively soluble in acidic water (i.e., water with a pH less than 7) or in waters containing dissolved carbon dioxide. The top surface of the uppermost or “climax” caliche in a fresh outcrop typically shows solution etching.

The Ogallala has numerous continuous to discontinuous caliche layers throughout its thickness. The climax caliche is pisolitic (i.e., consisting of spherical concentrically laminated aggregates 1 to 10 millimeters in diameter) (Lee Wan 1990). The pisolites are thought to have formed as the caliche was repeatedly chemically weathered and brecciated during Pleistocene pluvials (wet climate episodes) and later recemented during drier intervals. This upper caliche crops out

around playas and the bounding escarpments of the Ogallala, and is locally termed "caprock." The climax caliche is typically 3 to 5 feet thick. Caliches that occur lower in the Ogallala are platy and harder. Caliche may be thin or absent below playas (W-C 1991).

2.1.5 Hydrogeology

The lower portion of the Ogallala Formation is the primary regional aquifer for both potable and irrigation water. No deeper aquifers are utilized in the vicinity of Cannon AFB. The Ogallala aquifer is part of the High Plains Aquifer that extends continuously from Wyoming and South Dakota into New Mexico and Texas. In east-central New Mexico, the Ogallala aquifer rests on Dockum Group redbeds, which serve as the basal confining layer. The Ogallala is a water table, or unconfined, aquifer. The Ogallala aquifer has a southeasterly regional gradient of about 17 feet per mile (0.0032 meters per meter, see **Figure 2-2**). Well yields vary from less than 1 gallon per minute (gpm) in thin silts and sands, and up to 1,600 gpm in thick sands and gravels. Water quality is generally good, with hardness and fluorides being somewhat high (Lee Wan 1990).

Based on data from the 2014 Base-wide sampling event, the depth to groundwater at Cannon AFB varies from 286 to 347 feet below ground surface (bgs) (FPM/URS 2015). Saturated thickness is influenced by the configuration of the erosional nonconformity surface marking the top of the Dockum Group. The local groundwater gradient is southeasterly at 7.5 feet per mile. Yields in tests of Cannon AFB water wells have ranged from 776 liters per minute (L/min) (205 gpm) to 4,353 L/min (1,150 gpm). Specific capacities range from 0.14 cubic meters per meter (m^3/m) (11.4 gallons per foot [gal/ft]) to 0.35 m3/m (27.9 gal/ft) (Lee Wan 1990).

Rough estimates of hydraulic conductivity were made from well pump tests in water wells 5 and 9 (**Figure 2-3**) using the Theis equation. An estimate of hydraulic conductivity for water well 8 was based on water level recovery data using the Bouwer and Rice approach (Lee Wan 1990). The data used in these calculations were obtained to evaluate pump rates, efficiency, and well yield, and were not intended for use in calculating aquifer properties. The results of these calculations should therefore be considered as first approximations.

Hydraulic conductivity values for water wells 5 and 9 were approximately 2.0×10^3 centimeters per second (cm/sec). Calculations for water well 8 resulted in a hydraulic conductivity of 2.0×10^{-2} cm/sec. In addition, slug testing of two monitoring wells (MW-O and MW-N) was completed by W-C in February 1995 (W-C 1995). The estimated hydraulic conductivities from these slug tests were both 3×10^{-3} cm/sec. These estimates appear to be low when compared to published hydraulic conductivity data for sands and gravels. As groundwater flow velocity of about 4.5×10^1 meters per year (1.5×10^2 feet per year) has been estimated (Lee Wan 1990). This calculates out to a hydraulic conductivity of approximately 1.4×10^{-4} cm/sec, which appears to be low when compared with published data (Freeze and Cherry 1979).

The presence of interstitial clays may account for both the variability and the low values of hydraulic conductivities. Boring logs from Cannon AFB projects and published reports (Lee Wan 1990) indicated that interstitial and interstratified clays are abundant in the Ogallala Formation.

Recharge to the Ogallala is primarily through precipitation. A recharge rate of 0.5 inches/year was calculated using the Theis equation; the recharge rate may be as much as 1.0 inches/year. Due to the high evapotranspiration rate and low precipitation, recharge is most likely limited to heavy rainfall events in which the infiltration capacity of the soil is exceeded and runoff occurs, or during cool months when precipitation exceeds evapotranspiration. Excess runoff flows to playas, and the presence of water in playas may allow deep percolation to the aquifer. The occurrence of this process is evidenced by the presence of clay deposits in, and thin or nonexistent caliche layers directly below, playas. Caliche is soluble in acidic rainwaters, and is leached over time to form percolation pathways (Lee Wan 1990).

Discharge from the Ogallala occurs through well pumping and springs along the eroded margins of the formation. Spring discharge does not occur on or near Cannon AFB. Domestic and irrigation water wells are common on and around the Base. However, the rate of discharge exceeds the rate of recharge. Water levels in the Ogallala have declined steadily from the 1930s to the present. A decline of 50 to 100 feet has been observed in the area around Clovis, New Mexico for the period from the 1930s to 1980. The largest area of water level decline exceeding 100 feet occurs south of the Canadian River extending from Curry County, New Mexico to Crosby County, Texas (Lee Wan 1990).

The dominant uses of groundwater in the Cannon AFB area are as potable and irrigation water. Numerous wells are found in the Cannon AFB area, most of which provide only irrigation water (**Figure 2-3**).

The Ogallala will continue to be used as the primary source of potable and irrigation water for eastern New Mexico. The New Mexico State Engineer designated Curry County as a Water Basin in 1989. This designation allows for regulation of water rights, usage, and well drilling (W-C 1991).

2.1.6 Soils

Soils in the vicinity of Cannon AFB are classified as silty sand to clayey sand under the Unified Soil Classification System, and as aridisols (calciorthids) under the Soil Conservation Service Comprehensive Soil Classification System. The following summary is based on the Soil Conservation Service Curry County Soil Survey (Lee Wan 1990).

The most common soil type on the Base is the Amarillo fine sandy loam, 0- to 2-percent slope phase (map symbol Ab on **Figure 2-4**). This soil consists of a thin sandy A horizon, well-defined clayey B1-3 horizons, with a calcic B3 horizon at depths below 40 inches. The calcic B3 horizon lies on a calcic C horizon, or on caliche. The Amarillo fine sandy loam is present on all relatively flat surfaces at the Base, but is also found on slopes associated with playas (map symbol Ac).

Clovis fine sandy loams, 0- to 2-percent slope phase (map symbol Cb) and 2- to 5-percent slope phase (map symbol Cc), are very similar to Amarillo fine sandy loams. In the Clovis soils, the

depth to the calcic C horizon ranges from 28 to 56 inches. The depth to caliche exceeds 56 inches. Clovis and Amarillo fine sandy loams occur in close association.

In a few limited areas, particularly along the steeper slopes around playas, Mausker fine sandy loam, 0- to 2-percent slope phase (map symbol Ma), and 2- to 5-percent phase (map symbol Mb) are found. Mausker fine sandy loams have no B horizons and are very calcareous. The calcic C horizon is within 2 feet of the surface.

The A and B horizons of Amarillo and Clovis fine sandy loams are rapidly to moderately permeable. Mausker fine sandy loam A and Ac horizons are rapidly permeable. Permeabilities in calcic B and C horizons are moderate (Lee Wan 1990).

2.1.7 Water Quality

The groundwater quality at Cannon AFB is generally good, with dissolved solids ranging from 250 to 500 milligrams per liter (mg/L) (Gutentag, et al. 1984) and fluorides ranging from 2.2 to 2.7 mg/L (William Matotan and Associates, Inc. 1985).

2.2 FT006 (SWMU 78) DESCRIPTION

FT006 (SWMU 78) is located in an open, grassy area in the northeast corner of the Base, south of the railroad tracks and northeast of East Perimeter Road (**Figure 1-2**). The training area is an unlined circular surface approximately 100 feet in diameter. Between 1959 and 1968, the site was used twice monthly when approximately 300 gallons of waste oils, solvents, and fuels were poured on the ground surface to create fires. There is no record of any activities taking place at FT006 past 1968. Currently FT006 remains unused, however, the circular burn area used between 1959 and 1968 is still visible. The boundaries of FT006 are readily identifiable due to the sparse vegetation located within the site. Currently, there is no construction in or around FT006.

2.3 SITE BACKGROUND

This section summarizes the site description and previous investigations completed for FT006. Available historical sample results are summarized in **Table 2-1**.

2.3.1 IRP Phase I, CH2M Hill, 1983

A Phase I Installation Restoration Program (IRP) records search was conducted for Cannon AFB and included a review of installation records and existing site conditions to identify and evaluate sites with suspected hazardous waste contamination (CH2M Hill 1983). No data was collected from FT006 as part of the Phase I IRP.

2.3.2 IRP Phase II Field Investigation, Radian, 1986

FT006 was included in a Phase II Stage 1 study because of the known disposal of hazardous wastes within the site boundaries and the close proximity to the installation boundary. Two deep soil borings (6A and 6B) were drilled at FT006 to evaluate the extent of potential environmental contamination associated with the past fire training exercises and to define subsurface conditions. Soil samples were collected at approximately 4, 10, and 50 feet bgs and analyzed for oil and grease, lead, and purgeable organics (Radian 1986). The maximum oil and grease concentration was 2,800 milligrams per kilogram (mg/kg) at 10 feet bgs. The maximum lead concentration was 28 mg/kg at 48 feet bgs. No purgeable organics were detected above the reporting limits. The IRP Phase II recommended to eliminate FT006 from further IRP studies with no further action required (Radian 1986).

No survey data was included in the report to indicate the location of the borings. The approximate location for these boring locations (as shown on **Figure 2-5**) was determined based on drawings included in the Phase II report. These data were not included in the subsequent data sets used for the subsequent Remedial Investigation (RI) and risk assessment (W-C 1992).

2.3.3 RI/BRA, Woodward Clyde, 1992

The RI of 18 SWMUs included the completion of four surface soil samples (borings 783, 784, 785, and 786) and two deep soil borings (borings 781 and 782) at FT006 (W-C 1992). Soil samples from borings 781 and 782 were collected near the surface and at depths of 4, 10, 20, 30, 40, 50, 60, 70, 75, and 100 feet bgs. All soil samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls, pesticides, and total petroleum hydrocarbons (TPH).

Due to the laboratory exceeded the holding times for VOCs and/or TPH numerous surface soil and subsurface soil samples were required to be resampled. The surface soil/borings resampled are as follows:

- The surface soil at boring 781 was resampled as boring 787. The soil samples were analyzed for VOCs.
- The surface and subsurface soils at boring 782 were resampled from 0 to 102 feet bgs as boring 788. The soil samples were analyzed for VOCs and/or TPH.
- The surface soil at boring 783 was resampled as boring 789. The soil samples were analyzed for TPH.
- The surface soil at boring 784 was resampled as boring 7810. The soil samples were analyzed for VOCs and TPH.
- The surface soil at boring 785 was resampled as boring 7811. The soil samples were analyzed for VOCs and TPH.

- The surface soil at boring 786 was resampled as boring 7812. The soil samples were analyzed for TPH.

All resample borings were located within 1 to 3 feet of the original boring location and were collected at the sample depth intervals as the original samples. The location of the borings is included on **Figure 2-5**.

The results of the analytical sampling were as follows:

- Metals – Lead was detected at concentrations exceeding the NMED residential and industrial SSL. Detections of all remaining metals were below NMED residential SSLs (or site specific background concentrations if no SSL was established).
- VOC – Acetone, 1,1,1-trichloroethane, toluene, trichloroethylene, vinyl chloride, and xylenes were detected in analytical samples collected. All detections were below NMED residential SSLs. No additional VOCs were detected above the reporting limit.
- SVOCs – With the exception of low levels of phthalates, no SVOCs were detected above the reporting limit in any of the samples. Phthalates were identified as a common laboratory contaminant and were not considered chemicals of concern.
- TPH – TPH was identified at concentrations exceeding the NMED residential SSL in the surface soils at borings 781, 782 (resample 788), 783 (resample 789), and 785 (resample 7811). All remaining TPH concentrations were below the NMED residential SSL.
- Pesticides – Alpha Chlordane, 4,4-Dichlorodiphenyldichloroethane (DDD), 4,4-Dichlorodiphenyldichloroethylene (DDE), 4,4-Dichlorodiphenyltrichloroethane (DDT), and Gamma Chlordane were detected at low concentrations in surface soils and subsurface soils. All detections were below NMED residential SSLs.

Analytical results for chemicals detected by laboratory analysis are included in **Table 2-1**. With the exception of lead and TPH, none of the analytes exceeded the 2015 NMED residential SSLs. Therefore, only the lead and TPH results are included on **Figure 2-5**.

A Baseline Risk Assessment (BRA) was completed as part of the RI. The BRA assessed potential adverse human health and ecological effects by comparing analytical data to risk-based Resource Conservation and Recovery Act (RCRA) Field Investigation (RFI) criteria and proposed RCRA action levels, and by calculating site-specific health risks, where appropriate.

A single risk assessment was completed for the combined chemicals of potential concern (COPCs) for FT006 and the Solvent Disposal Site (SWMU 81). The COPCs identified for these two SWMUs were acetone, ethylbenzene, tetrachloroethylene, 1,1,1-TCA, trichloroethylene, toluene, xylenes, DDD, DDE, DDT, cadmium, lead, and zinc. The risk assessment results for the combined COPCs (except lead) indicated that all hazard indices for subchronic and chronic exposures to site contaminants falls below the United States Environmental Protection Agency (USEPA) level of concern for noncarcinogenic effects (1.0). Carcinogenic risks were well below the target risk range (1E-06 to 1E-04). Lead was not evaluated in the risk assessment due to the

fact that the USEPA did not have published critical toxicity values for lead at the time the BRA was completed.

A single ecological risk assessment was completed for all 18 sites included in the RI. The ecological risk assessment identified six metals (copper, chromium, cadmium, cobalt, lead, and zinc) as COPECs; however, none of the COPEC metals were shown to pose a risk to small mammalian populations based on calculated toxicity values for incidental soil ingestion. None of these metals are known to bioaccumulate through the food chains to levels where they would pose a risk to predator species (kites and raptors). The BRA concluded that potential impacts to human health and to the environment were insignificant at FT006 and no further action was recommended (W-C 1992).

2.3.4 RFI, URS, 2007

The RI/BRA analytical results were reevaluated and compiled into the RFI Report, which was submitted to NMED. The results of previous investigations were reviewed as part of the RFI, and the conclusions for FT006 were presented in the RFI report (URS 2007).

The RFI compared maximum soil concentrations with 2006 NMED SSLs. The maximum TPH concentration (12,500 mg/kg at boring 785) exceeded the 2006 TPH residential and industrial screenings guideline for unknown oils (both 200 mg/kg). Samples at three other borings, 781, 782, and 783 also exceeded these guidelines. These detections were all near surface samples collected between 0 to 0.5 feet bgs. Risks due to TPH could not be evaluated quantitatively due to the unknown characteristics of the chemical mixture; however, individual organic constituents of petroleum mixtures were not detected above the SSLs in any of the samples (URS 2007).

Only the maximum soil lead concentration (529 mg/kg at soil boring 785) exceeded the 2006 NMED residential SSL (400 mg/kg) but not the 2006 industrial/construction worker SSL (800 mg/kg). The average lead concentration was 275 mg/kg. No lead concentrations exceeded the 2006 industrial SSLs, which was the appropriate scenario for this site, given the current and anticipated future land uses.

The maximum concentrations of vinyl chloride and manganese in surface soil exceeded the 2006 soil-to-groundwater SSL, but in the case of manganese, fell below the background level. Vinyl chloride, arsenic, iron, manganese, and mercury maximum concentrations in combined surface and subsurface soil also exceeded the 2006 soil-to-groundwater or construction worker SSL, but in the case of the metals, fell below the background levels. Impacts to groundwater were considered minimal because the depth to groundwater was greater than 250 feet, and in the case of vinyl chloride, the concentrations detected were very low (0.011 mg/kg maximum).

The RFI indicated that TPH and lead exceeded the 2006 NMED residential SSLs. TPH was detected above the 2006 NMED screening levels in four shallow soil samples, and lead was detected above the screening levels in one shallow soil sample collected as part of an RI previously completed at FT006 (W-C 1992).

2.3.5 RFI Addendum, URS, 2008

RFI Addendum Activities were performed in 2008 (URS 2010). Elevated lead and TPH concentrations were not detected in the subsurface during previous investigations; therefore, only surface samples were collected. The investigation consisted of collecting three soil borings (0 to 2 feet bgs), shown on **Figure 2-5**, near the previous sampling locations with TPH or lead levels above residential and industrial NMED SSLs. Head space samples measured using a photoionization detector (PID) and x-ray fluorescence (XRF) analyses for lead were collected in 6 inch intervals from the surface to 2 feet bgs at each sample location.

Samples for TPH-diesel range organics (DRO) and TPH-gasoline range organics (GRO) analysis were submitted to the laboratory based on visible staining/odor and elevated PID readings. Visible staining was present from 0 to 2 inches in all three soil borings. No odors were present and no elevated PID readings were encountered at the three soil boring locations (URS 2010). The 0- to 6-inch interval at each location was submitted to the laboratory and analyzed for TPH-DRO and TPH-GRO (URS 2010).

Lead samples were submitted to the laboratory based on XRF field screening results. All XRF field screening levels were below the 2006 NMED residential SSL (400 mg/kg) for lead with the exception of the 0- to 6-inch sample interval from SS01. The average field XRF lead analysis for the 0- to 6-inch interval for sample SS01 was 408 parts per million. The sample from each soil boring interval with the highest XRF field screening result was submitted to the laboratory for lead analysis. Based on the XRF field screening results, the 0 to 6 inch interval at each location was submitted to the laboratory for lead analysis (URS 2010).

TPH-DRO and lead were detected in all three primary samples. The maximum TPH-DRO concentration was compared with 2006 NMED SSLs. The maximum TPH-DRO concentration in near surface soil (410 mg/kg) was above the NMED residential SSL for unknown oil (200 mg/kg). The maximum lead concentration in near surface soil from soil boring SS01 (894 mg/kg) exceeded the 2006 NMED residential SSL (400 mg/kg) and the industrial and construction worker SSLs (both 800 mg/kg). TPH-GRO was nondetect in all 2008 RFI Addendum samples; therefore, results were not compared with NMED SSLs. The comparison with 2015 SSLs demonstrates that while lead is still above the residential and industrial screening levels, TPH-DRO is below the NMED residential SSL for unknown oil (1,000 mg/kg). Analytical results for lead and TPH-DRO are included in **Table 2-1** and **Figure 2-5**. The comparison with 2015 residential SSLs demonstrates that while lead is still above the residential and industrial screening levels, TPH-DRO is below the residential screening level for unknown oil.

Based on the findings of the 2008 RFI Addendum fieldwork, the elevated TPH levels that were identified by previous investigations no longer appear to be present at FT006. The decrease in the TPH levels at FT006 can likely be attributed to natural attenuation of TPH in the soil. Elevated lead was observed above the 2006 NMED residential SSL (400 mg/kg) in two soil samples (529 and 894 mg/kg) and above the industrial SSL (800 mg/kg) in one soil sample (894 mg/kg) collected during all investigations. Because the average lead concentration at the

site is 180 mg/kg, which is below the residential screening level for lead and only a single lead concentration exceeded the industrial SSL, Corrective Action Complete (CAC) with Controls was recommended for FT006.

TABLE 2-1
FT006 HISTORICAL SOIL ANALYTICAL DATA
CANNON AIR FORCE BASE, NEW MEXICO

Field Identification Sample Depth (feet bgs) Date Collected	Background Concentrations for Surface Soil	Background Concentrations for Subsurface Soils	Residential SSL Screening Guideline	Industrial SSL/TPH Screening Guideline	Screening Level Source NMED[1] or USEPA[2]	781 0.5 10/12/1991		787* 0.5 12/16/1991		781 6 10/12/1991		781 12 10/12/1991		781 22 10/12/1991		781 32 10/12/1991		781 42 10/12/1991	
						Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Metals (mg/kg)																			
Aluminum	8.95E+03	1.22E+04	7.80E+04	1.29E+06	NMED	2.60E+04	J	NS		1.32E+04	J	1.05E+04	J	6.46E+03	J	6.34E+03	J	4.86E+03	J
Arsenic	3.60E+00	4.30E+00	4.25E+00	2.15E+01	NMED	1.90E+00	J	NS		2.70E+00		2.10E+00	J	2.00E+00	J	1.00E+00	J	7.60E-01	J
Barium	6.70E+02	8.90E+02	1.56E+04	2.55E+05	NMED	1.65E+02	J	NS		1.11E+02	J	3.92E+02	J	6.03E+01	J	7.00E+01	J	5.25E+01	J
Beryllium	7.80E-01	7.30E-01	1.56E+02	2.58E+03	NMED	ND	U	NS		5.90E-01	J	5.00E-01	J	ND	U	ND	U	ND	U
Cadmium	4.35E-01	1.30E+00	7.05E+01	1.11E+03	NMED	2.16E+01		NS		ND	U	ND	U	ND	U	ND	U	ND	U
Calcium	4.48E+04	2.37E+05	NE	NE	NA	2.54E+03		NS		2.74E+04		7.35E+04		4.38E+04		1.32E+05		3.89E+04	
Chromium	1.05E+01	1.33E+01	9.66E+01	5.05E+02	NMED	3.96E+01		NS		1.13E+01		8.10E+00		5.30E+00		9.90E+00		3.70E+00	
Cobalt	6.60E+00	4.70E+00	2.30E+01	3.50E+02	USEPA	2.00E+00	J	NS		5.30E+00	J	3.60E+00	J	2.00E+00	J	1.60E+00	J	1.10E+00	J
Copper	1.83E+01	8.30E+00	3.13E+03	5.19E+04	NMED	7.10E+02		NS		1.26E+01		7.00E+00		4.30E+00	J	5.70E+00	J	3.00E+00	J
Iron	1.01E+04	1.31E+04	5.48E+04	9.08E+05	NMED	7.10E+03		NS		1.13E+04		7.88E+03		4.75E+03		3.34E+03		3.54E+03	
Lead	1.20E+01	8.70E+00	4.00E+02	8.00E+02	NMED	3.36E+02		NS		1.63E+01		6.10E+00		5.00E+00		2.60E+00		2.50E+00	
Magnesium	1.93E+03	1.93E+04	NE	NE	NA	1.17E+03		NS		2.64E+03		4.37E+03		4.22E+03		2.07E+04		5.01E+03	
Manganese	3.07E+02	3.33E+02	1.05E+04	1.60E+05	NMED	2.25E+02		NS		2.14E+02		1.53E+02		7.31E+01		4.20E+01		3.45E+01	
Mercury	5.60E-02	1.90E-02	2.38E+01	1.12E+02	NMED	ND	U	NS		ND	U	ND	U	ND	U	ND	U	ND	U
Nickel	1.10E+01	1.49E+01	1.56E+03	2.57E+04	NMED	8.80E+00	J	NS		1.16E+01		8.80E+00	J	6.20E+00	J	6.10E+00	J	3.50E+00	J
Potassium	2.69E+03	2.51E+03	NE	NE	NA	1.45E+03		NS		2.07E+03	J	1.89E+03		1.65E+03		1.02E+03	J	1.02E+03	J
Vanadium	2.33E+01	3.28E+01	3.94E+02	6.53E+03	NMED	1.44E+01		NS		2.34E+01		2.50E+01		1.81E+01		1.97E+01		1.01E+01	J
Zinc	3.22E+01	3.06E+01	2.35E+04	3.89E+05	NMED	8.29E+02		NS		3.37E+01		2.14E+01		1.24E+01		9.20E+00		9.70E+00	
VOALTILE ORGANIC COMPOUNDS (mg/kg)																			
Acetone	NE	NE	6.63E+04	9.60E+05	NMED	R		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-trichloroethane	NE	NE	1.44E+04	7.25E+04	NMED	R		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Toluene	NE	NE	5.23E+03	6.13E+04	NMED	R		ND	U	1.00E-03	J	ND	U	ND	U	2.00E-03	J	ND	U
Trichloroethene	NE	NE	6.77E+00	3.65E+01	NMED	R		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride	NE	NE	7.42E-01	2.84E+01	NMED	R		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes (total)	NE	NE	8.71E+02	4.28E+03	NMED	R		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
TOTAL PETROLEUM HYDROCARBONS/ORGANICS (mg/kg)																			
Total Petroleum Hydrocarbons (TPH)	NE	NE	1.00E+03	3.00E+03	NMED	**2.20E+03**		NS		9.46E+01		ND	U	ND	U	ND	U	ND	U
TPH-Diesel range organics (DRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS	
TPH-Gasoline range organics (GRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS	
PESTICIDES (mg/kg)																			
4,4-Dichlorodiphenyldichloroethane (DDD)	NE	NE	2.22E+01	1.07E+02	NMED	1.50E-01		NS		2.30E-02		1.40E-02		ND	U	ND	U	ND	U
4,4-Dichlorodiphenyldichloroethylene (DDE)	NE	NE	1.57E+01	7.55E+01	NMED	5.70E-02	J	NS		ND	U	ND	U	ND	U	ND	U	ND	U
4,4-Dichlorodiphenyltrichloroethane (DDT)	NE	NE	1.87E+01	9.50E+01	NMED	ND	U	NS		ND	U	ND	U	ND	U	ND	U	ND	U
Alpha Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	ND	U	NS		ND	U	ND	U	ND	U	ND	U	ND	U
Gamma Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	ND	U	NS		ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

* Sample was collected at the same location and depth as the previous sample due to exceedances in laboratory hold times of the original.

[1] NMED Risk Assessment Guidance, Table A1, July 2015

[2] USEPA Regional Screening Level Summary Table, November 2015

[3] Soil screening levels used are for Chlordane

2200 = result exceeds the residential soil screening level

2200 = result exceeds the industrial soil screening level

bgs = Below ground surface

J = Concentration reported below the method reporting limit

mg/kg = Milligram per kilogram

ND = Not detected

NE = Not established

NMED = New Mexico Environment Department

NS = not sampled

Qual = Qualifier

R = sampled rejected due to exceedance of holding time

RL = Reporting limit

SSL = Soil screening level

U = Value is below method detection limit/nondetect

USEPA = United States Environmental Protection Agency

TABLE 2-1
FT006 HISTORICAL SOIL ANALYTICAL DATA
CANNON AIR FORCE BASE, NEW MEXICO

Field Identification Sample Depth (feet bgs) Date Collected	Background Concentrations for Surface Soil	Background Concentrations for Subsurface Soils	Residential SSL Screening Guideline	Industrial SSL/TPH Screening Guideline	Screening Level Source NMED[1] or USEPA[2]	781 52 10/12/1991		781 62 10/12/1991		781 77 10/12/1991		781 102 10/12/1991		782 0.5 10/13/1991		788* 0.5 12/7/1991		782 6 10/13/1991	
						Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Metals (mg/kg)																			
Aluminum	8.95E+03	1.22E+04	7.80E+04	1.29E+06	NMED	4.79E+03	J	1.94E+03	J	1.66E+03	J	1.41E+03	J	1.07E+04	J	NS		6.24E+03	J
Arsenic	3.60E+00	4.30E+00	4.25E+00	2.15E+01	NMED	7.90E-01	J	7.70E-01	J	6.70E-01	J	6.90E-01	J	2.00E+00	J	NS		1.80E+00	J
Barium	6.70E+02	8.90E+02	1.56E+04	2.55E+05	NMED	1.91E+01	J	6.70E+00	J	1.56E+01	J	2.75E+01	J	1.42E+02	J	NS		1.58E+02	J
Beryllium	7.80E-01	7.30E-01	1.56E+02	2.58E+03	NMED	ND	U	ND	U	ND	U	ND	U	4.90E-01	J	NS		ND	U
Cadmium	4.35E-01	1.30E+00	7.05E+01	1.11E+03	NMED	ND	U	ND	U	ND	U	ND	U	1.05E+01		NS		ND	U
Calcium	4.48E+04	2.37E+05	NE	NE	NA	2.96E+04		5.92E+03		8.39E+03		3.35E+03		1.95E+03		NS		9.64E+04	
Chromium	1.05E+01	1.33E+01	9.66E+01	5.05E+02	NMED	4.20E+00		1.90E+00	J	2.10E+00		1.60E+00	J	1.67E+01		NS		5.80E+00	
Cobalt	6.60E+00	4.70E+00	2.30E+01	3.50E+02	USEPA	1.40E+00	J	ND	U	ND	U	ND	U	4.00E+00	J	NS		2.20E+00	J
Copper	1.83E+01	8.30E+00	3.13E+03	5.19E+04	NMED	5.10E+00	J	3.10E+00	J	2.70E+00	J	2.30E+00	J	1.12E+02		NS		8.90E+00	
Iron	1.01E+04	1.31E+04	5.48E+04	9.08E+05	NMED	3.65E+03		1.71E+03		1.90E+03		2.00E+03		9.23E+03		NS		5.06E+03	
Lead	1.20E+01	8.70E+00	4.00E+02	8.00E+02	NMED	4.20E+00		2.00E+00		1.80E+00		1.40E+00		2.92E+02		NS		6.80E+00	
Magnesium	1.93E+03	1.93E+04	NE	NE	NA	6.43E+03		1.64E+03		1.10E+03		8.27E+02	J	1.41E+03		NS		2.49E+03	
Manganese	3.07E+02	3.33E+02	1.05E+04	1.60E+05	NMED	5.21E+01		1.72E+01		2.03E+01		2.95E+01		1.71E+02		NS		6.60E+01	
Mercury	5.60E-02	1.90E-02	2.38E+01	1.12E+02	NMED	ND	U	ND	U	ND	U	ND	U	1.10E-01		NS		ND	U
Nickel	1.10E+01	1.49E+01	1.56E+03	2.57E+04	NMED	4.40E+00	J	2.10E+00	J	2.20E+00	J	ND	U	7.80E+00	J	NS		5.80E+00	J
Potassium	2.69E+03	2.51E+03	NE	NE	NA	9.96E+02	J	3.66E+02	J	3.13E+02	J	2.77E+02	J	1.90E+03	J	NS		1.11E+03	
Vanadium	2.33E+01	3.28E+01	3.94E+02	6.53E+03	NMED	1.58E+01		7.50E+00	J	5.10E+00	J	5.20E+00	J	1.87E+01		NS		1.64E+01	
Zinc	3.22E+01	3.06E+01	2.35E+04	3.89E+05	NMED	9.90E+00		4.80E+00		4.70E+00		5.00E+00		2.14E+02		NS		1.80E+01	
VOALTILE ORGANIC COMPOUNDS (mg/kg)																			
Acetone	NE	NE	6.63E+04	9.60E+05	NMED	ND	U	ND	U	ND	U	ND	U	R		1.40E-02	J	R	
1,1,1-trichloroethane	NE	NE	1.44E+04	7.25E+04	NMED	ND	U	ND	U	ND	U	ND	U	R		ND	U	R	
Toluene	NE	NE	5.23E+03	6.13E+04	NMED	ND	U	ND	U	ND	U	ND	U	R		ND	U	R	
Trichloroethene	NE	NE	6.77E+00	3.65E+01	NMED	ND	U	ND	U	ND	U	ND	U	R		3.00E-03	J	R	
Vinyl Chloride	NE	NE	7.42E-01	2.84E+01	NMED	ND	U	ND	U	ND	U	ND	U	R		1.10E-02	J	R	
Xylenes (total)	NE	NE	8.71E+02	4.28E+03	NMED	ND	U	ND	U	ND	U	ND	U	R		ND	U	R	
TOTAL PETROLEUM HYDROCARBONS/ORGANICS (mg/kg)																			
Total Petroleum Hydrocarbons (TPH)	NE	NE	1.00E+03	3.00E+03	NMED	ND	U	ND	U	ND	U	ND	U	R		**1.97E+03**		ND	
TPH-Diesel range organics (DRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS	
TPH-Gasoline range organics (GRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS	
PESTICIDES (mg/kg)																			
4,4-Dichlorodiphenyldichloroethane (DDD)	NE	NE	2.22E+01	1.07E+02	NMED	ND	U	ND	U	ND	U	ND	U	9.10E-02		NS		ND	U
4,4-Dichlorodiphenyldichloroethylene (DDE)	NE	NE	1.57E+01	7.55E+01	NMED	ND	U	ND	U	ND	U	ND	U	ND	U	NS		ND	U
4,4-Dichlorodiphenyltrichloroethane (DDT)	NE	NE	1.87E+01	9.50E+01	NMED	ND	U	ND	U	ND	U	ND	U	ND	U	NS		ND	U
Alpha Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	ND	U	ND	U	ND	U	ND	U	ND	U	NS		ND	U
Gamma Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	ND	U	ND	U	ND	U	ND	U	ND	U	NS		ND	U

Notes:

* Sample was collected at the same location and depth as the previous sample due to exceedances in laboratory hold times of the original.

[1] NMED Risk Assessment Guidance, Table A1, July 2015

[2] USEPA Regional Screening Level Summary Table, November 2015

[3] Soil screening levels used are for Chlordane

2200 = result exceeds the residential soil screening level

2200 = result exceeds the industrial soil screening level

bgs = Below ground surface

J = Concentration reported below the method reporting limit

mg/kg = Milligram per kilogram

ND = Not detected

NE = Not established

NMED = New Mexico Environment Department

NS = not sampled

Qual = Qualifier

R = sampled rejected due to exceedance of holding time

RL = Reporting limit

SSL = Soil screening level

U = Value is below method detection limit/nondetect

USEPA = United States Environmental Protection Agency

TABLE 2-1
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CANNON AIR FORCE BASE, NEW MEXICO

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						Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Metals (mg/kg)																					
Aluminum	8.95E+03	1.22E+04	7.80E+04	1.29E+06	NMED	NS		6.57E+03	J	NS		7.94E+03	J	NS		9.53E+03	J	NS		3.95E+03	J
Arsenic	3.60E+00	4.30E+00	4.25E+00	2.15E+01	NMED	NS		1.30E+00	J	NS		1.90E+00	J	NS		1.60E+00	J	NS		8.30E-01	J
Barium	6.70E+02	8.90E+02	1.56E+04	2.55E+05	NMED	NS		1.01E+02	J	NS		4.98E+02	J	NS		6.12E+01	J	NS		1.34E+01	J
Beryllium	7.80E-01	7.30E-01	1.56E+02	2.58E+03	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Cadmium	4.35E-01	1.30E+00	7.05E+01	1.11E+03	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Calcium	4.48E+04	2.37E+05	NE	NE	NA	NS		1.51E+05		NS		9.81E+04		NS		1.09E+05		NS		1.37E+04	
Chromium	1.05E+01	1.33E+01	9.66E+01	5.05E+02	NMED	NS		5.60E+00		NS		1.04E+01		NS		8.00E+00		NS		3.30E+00	
Cobalt	6.60E+00	4.70E+00	2.30E+01	3.50E+02	USEPA	NS		2.20E+00	J	NS		1.70E+00	J	NS		1.70E+00	J	NS		1.10E+00	J
Copper	1.83E+01	8.30E+00	3.13E+03	5.19E+04	NMED	NS		6.00E+00		NS		5.90E+00		NS		4.60E+00	J	NS		2.70E+00	J
Iron	1.01E+04	1.31E+04	5.48E+04	9.08E+05	NMED	NS		4.66E+03		NS		5.14E+03		NS		4.82E+03		NS		3.12E+03	
Lead	1.20E+01	8.70E+00	4.00E+02	8.00E+02	NMED	NS		3.80E+00		NS		2.50E+01		NS		3.10E+00		NS		2.70E+00	
Magnesium	1.93E+03	1.93E+04	NE	NE	NA	NS		4.29E+03		NS		4.90E+03		NS		1.88E+04		NS		3.61E+03	
Manganese	3.07E+02	3.33E+02	1.05E+04	1.60E+05	NMED	NS		5.55E+01		NS		5.94E+01		NS		3.36E+01		NS		5.86E+01	
Mercury	5.60E-02	1.90E-02	2.38E+01	1.12E+02	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Nickel	1.10E+01	1.49E+01	1.56E+03	2.57E+04	NMED	NS		7.40E+00	J	NS		5.90E+00	J	NS		6.10E+00	J	NS		3.50E+00	J
Potassium	2.69E+03	2.51E+03	NE	NE	NA	NS		1.42E+03		NS		1.52E+03		NS		1.60E+03		NS		8.41E+02	J
Vanadium	2.33E+01	3.28E+01	3.94E+02	6.53E+03	NMED	NS		1.52E+01		NS		1.97E+01		NS		2.71E+01		NS		9.40E+00	J
Zinc	3.22E+01	3.06E+01	2.35E+04	3.89E+05	NMED	NS		1.37E+01		NS		1.37E+01		NS		1.13E+01		NS		7.90E+00	
VOALTILE ORGANIC COMPOUNDS (mg/kg)																					
Acetone	NE	NE	6.63E+04	9.60E+05	NMED	ND	U	R		3.50E-02		ND	U	NS		ND	U	NS		ND	U
1,1,1-trichloroethane	NE	NE	1.44E+04	7.25E+04	NMED	ND	U	R		ND	U	ND	U	NS		ND	U	NS		ND	U
Toluene	NE	NE	5.23E+03	6.13E+04	NMED	ND	U	R		ND	U	ND	U	NS		ND	U	NS		ND	U
Trichloroethene	NE	NE	6.77E+00	3.65E+01	NMED	ND	U	R		ND	U	ND	U	NS		ND	U	NS		ND	U
Vinyl Chloride	NE	NE	7.42E-01	2.84E+01	NMED	ND	U	R		ND	U	ND	U	NS		ND	U	NS		ND	U
Xylenes (total)	NE	NE	8.71E+02	4.28E+03	NMED	ND	U	R		ND	U	ND	U	NS		ND	U	NS		ND	U
TOTAL PETROLEUM HYDROCARBONS/ORGANICS (mg/kg)																					
Total Petroleum Hydrocarbons (TPH)	NE	NE	1.00E+03	3.00E+03	NMED	NS		R		ND	U	R		ND	U	R		ND	U	R	
TPH-Diesel range organics (DRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS		NS	
TPH-Gasoline range organics (GRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS		NS	
PESTICIDES (mg/kg)																					
4,4-Dichlorodiphenyldichloroethane (DDD)	NE	NE	2.22E+01	1.07E+02	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
4,4-Dichlorodiphenyldichloroethylene (DDE)	NE	NE	1.57E+01	7.55E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
4,4-Dichlorodiphenyltrichloroethane (DDT)	NE	NE	1.87E+01	9.50E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Alpha Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Gamma Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U

Notes:

* Sample was collected at the same location and depth as the previous sample due to exceedances in laboratory hold times of the original.

[1] NMED Risk Assessment Guidance, Table A1, July 2015

[2] USEPA Regional Screening Level Summary Table, November 2015

[3] Soil screening levels used are for Chlordane

2200 = result exceeds the residential soil screening level

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bgs = Below ground surface

J = Concentration reported below the method reporting limit

mg/kg = Milligram per kilogram

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NMED = New Mexico Environment Department

NS = not sampled

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R = sampled rejected due to exceedance of holding time

RL = Reporting limit

SSL = Soil screening level

U = Value is below method detection limit/nondetect

USEPA = United States Environmental Protection Agency

TABLE 2-1
FT006 HISTORICAL SOIL ANALYTICAL DATA
CANNON AIR FORCE BASE, NEW MEXICO

Field Identification Sample Depth (feet bgs) Date Collected	Background Concentrations for Surface Soil	Background Concentrations for Subsurface Soils	Residential SSL Screening Guideline	Industrial SSL/TPH Screening Guideline	Screening Level Source NMED[1] or USEPA[2]	788* 42 12/7/1991		782 52 10/13/1991		788* 52 12/7/1991		782 62 10/13/1991		788* 62 12/7/1991		782 77 10/13/1991		788* 77 12/7/1991		782 102 10/13/1991	
						Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Metals (mg/kg)																					
Aluminum	8.95E+03	1.22E+04	7.80E+04	1.29E+06	NMED	NS		4.49E+03	J	NS		2.19E+03	J	NS		1.42E+03	J	NS		1.35E+03	J
Arsenic	3.60E+00	4.30E+00	4.25E+00	2.15E+01	NMED	NS		7.30E-01	J	NS		8.90E-01	J	NS		6.70E-01	J	NS		8.50E-01	J
Barium	6.70E+02	8.90E+02	1.56E+04	2.55E+05	NMED	NS		6.64E+01	J	NS		1.24E+01	J	NS		3.61E+01	J	NS		1.33E+01	J
Beryllium	7.80E-01	7.30E-01	1.56E+02	2.58E+03	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Cadmium	4.35E-01	1.30E+00	7.05E+01	1.11E+03	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Calcium	4.48E+04	2.37E+05	NE	NE	NA	NS		3.66E+04		NS		6.95E+03		NS		4.95E+04		NS		5.78E+03	
Chromium	1.05E+01	1.33E+01	9.66E+01	5.05E+02	NMED	NS		4.60E+00		NS		2.00E+00	J	NS		3.50E+00		NS		1.30E+00	J
Cobalt	6.60E+00	4.70E+00	2.30E+01	3.50E+02	USEPA	NS		1.10E+00	J	NS		ND	U	NS		ND	U	NS		ND	U
Copper	1.83E+01	8.30E+00	3.13E+03	5.19E+04	NMED	NS		3.30E+00	J	NS		3.70E+00	J	NS		2.50E+00	J	NS		3.20E+00	J
Iron	1.01E+04	1.31E+04	5.48E+04	9.08E+05	NMED	NS		3.32E+03		NS		1.80E+03		NS		1.47E+03		NS		2.00E+03	
Lead	1.20E+01	8.70E+00	4.00E+02	8.00E+02	NMED	NS		3.60E+00		NS		2.20E+00		NS		3.00E+00		NS		2.80E+00	
Magnesium	1.93E+03	1.93E+04	NE	NE	NA	NS		5.18E+03		NS		2.51E+03		NS		1.20E+03		NS		8.23E+02	J
Manganese	3.07E+02	3.33E+02	1.05E+04	1.60E+05	NMED	NS		4.30E+01		NS		1.88E+01		NS		2.25E+01		NS		3.05E+01	
Mercury	5.60E-02	1.90E-02	2.38E+01	1.12E+02	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Nickel	1.10E+01	1.49E+01	1.56E+03	2.57E+04	NMED	NS		4.00E+00	J	NS		2.30E+00	J	NS		ND	U	NS		1.80E+00	J
Potassium	2.69E+03	2.51E+03	NE	NE	NA	NS		8.64E+02	J	NS		3.69E+02	J	NS		2.53E+02	J	NS		2.61E+02	J
Vanadium	2.33E+01	3.28E+01	3.94E+02	6.53E+03	NMED	NS		1.28E+01		NS		9.20E+00	J	NS		4.70E+00	J	NS		4.90E+00	J
Zinc	3.22E+01	3.06E+01	2.35E+04	3.89E+05	NMED	NS		9.70E+00		NS		5.80E+00		NS		4.20E+00		NS		5.00E+00	
VOALTILE ORGANIC COMPOUNDS (mg/kg)																					
Acetone	NE	NE	6.63E+04	9.60E+05	NMED	NS		R		3.70E-01		R		1.00E-01		R		9.40E-02	J	R	
1,1,1-trichloroethane	NE	NE	1.44E+04	7.25E+04	NMED	NS		R		ND	U	R		ND	U	R		ND	U	R	
Toluene	NE	NE	5.23E+03	6.13E+04	NMED	NS		R		ND	U	R		ND	U	R		ND	U	R	
Trichloroethene	NE	NE	6.77E+00	3.65E+01	NMED	NS		R		ND	U	R		ND	U	R		ND	U	R	
Vinyl Chloride	NE	NE	7.42E-01	2.84E+01	NMED	NS		R		ND	U	R		ND	U	R		ND	U	R	
Xylenes (total)	NE	NE	8.71E+02	4.28E+03	NMED	NS		R		ND	U	R		ND	U	R		ND	U	R	
TOTAL PETROLEUM HYDROCARBONS/ORGANICS (mg/kg)																					
Total Petroleum Hydrocarbons (TPH)	NE	NE	1.00E+03	3.00E+03	NMED	ND	U	R		ND	U	R		ND	U	ND	U	NS	NS	ND	U
TPH-Diesel range organics (DRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS		NS	
TPH-Gasoline range organics (GRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS		NS	
PESTICIDES (mg/kg)																					
4,4-Dichlorodiphenyldichloroethane (DDD)	NE	NE	2.22E+01	1.07E+02	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
4,4-Dichlorodiphenyldichloroethylene (DDE)	NE	NE	1.57E+01	7.55E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
4,4-Dichlorodiphenyltrichloroethane (DDT)	NE	NE	1.87E+01	9.50E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Alpha Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U
Gamma Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		ND	U

Notes:

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2200 = result exceeds the residential soil screening level

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U = Value is below method detection limit/nondetect

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FT006 HISTORICAL SOIL ANALYTICAL DATA
CANNON AIR FORCE BASE, NEW MEXICO

Field Identification Sample Depth (feet bgs) Date Collected	Background Concentrations for Surface Soil	Background Concentrations for Subsurface Soils	Residential SSL Screening Guideline	Industrial SSL/TPH Screening Guideline	Screening Level Source NMED[1] or USEPA[2]	788* 102 12/7/1991		783 0.5 10/12/1991		789* 0.5 12/7/1991		784 0.5 10/12/1991		7810* 0.5 12/7/1991		785 0.5 10/12/1991		7811* 0.5 12/7/1991		786 0.5 10/13/1991	
						Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Metals (mg/kg)																					
Aluminum	8.95E+03	1.22E+04	7.80E+04	1.29E+06	NMED	NS		1.02E+04	J	NS		9.11E+03	J	NS		1.42E+04	J	NS		1.39E+04	J
Arsenic	3.60E+00	4.30E+00	4.25E+00	2.15E+01	NMED	NS		1.80E+00	J	NS		1.60E+00	J	NS		1.70E+00	J	NS		2.50E+00	J
Barium	6.70E+02	8.90E+02	1.56E+04	2.55E+05	NMED	NS		1.15E+02	J	NS		1.32E+02	J	NS		2.20E+02	J	NS		8.35E+01	J
Beryllium	7.80E-01	7.30E-01	1.56E+02	2.58E+03	NMED	NS		ND	U	NS		5.30E-01	J	NS		ND	U	NS		ND	U
Cadmium	4.35E-01	1.30E+00	7.05E+01	1.11E+03	NMED	NS		3.30E+00		NS		7.70E+00		NS		4.10E+00		NS		ND	U
Calcium	4.48E+04	2.37E+05	NE	NE	NA	NS		1.45E+03		NS		1.29E+03		NS		8.32E+02	J	NS		1.22E+04	
Chromium	1.05E+01	1.33E+01	9.66E+01	5.05E+02	NMED	NS		1.42E+01		NS		1.34E+01		NS		2.91E+01		NS		1.21E+01	
Cobalt	6.60E+00	4.70E+00	2.30E+01	3.50E+02	USEPA	NS		3.30E+00	J	NS		2.50E+00		NS		1.90E+00		NS		4.50E+00	J
Copper	1.83E+01	8.30E+00	3.13E+03	5.19E+04	NMED	NS		5.20E+01		NS		8.47E+01		NS		3.85E+02		NS		1.30E+01	
Iron	1.01E+04	1.31E+04	5.48E+04	9.08E+05	NMED	NS		8.95E+03		NS		7.50E+03		NS		6.58E+03		NS		1.14E+04	
Lead	1.20E+01	8.70E+00	4.00E+02	8.00E+02	NMED	NS		1.94E+02		NS		2.71E+02		NS		**5.29E+02**		NS		2.56E+01	
Magnesium	1.93E+03	1.93E+04	NE	NE	NA	NS		1.39E+03		NS		1.29E+03		NS		9.68E+02		NS		2.02E+03	
Manganese	3.07E+02	3.33E+02	1.05E+04	1.60E+05	NMED	NS		9.95E+01		NS		7.46E+01		NS		5.11E+01		NS		1.98E+02	
Mercury	5.60E-02	1.90E-02	2.38E+01	1.12E+02	NMED	NS		1.20E-01		NS		ND	U	NS		ND	U	NS		ND	U
Nickel	1.10E+01	1.49E+01	1.56E+03	2.57E+04	NMED	NS		6.80E+00	J	NS		5.60E+00	J	NS		5.90E+00	J	NS		8.80E+00	J
Potassium	2.69E+03	2.51E+03	NE	NE	NA	NS		1.88E+03	J	NS		1.71E+03	J	NS		1.11E+03	J	NS		2.57E+03	J
Vanadium	2.33E+01	3.28E+01	3.94E+02	6.53E+03	NMED	NS		1.92E+01		NS		1.54E+01		NS		1.41E+01		NS		2.43E+01	
Zinc	3.22E+01	3.06E+01	2.35E+04	3.89E+05	NMED	NS		1.26E+02		NS		1.54E+02		NS		6.14E+02		NS		3.33E+01	J
VOALTILE ORGANIC COMPOUNDS (mg/kg)																					
Acetone	NE	NE	6.63E+04	9.60E+05	NMED	9.30E-02	J	NS		NS		R		ND	U	R		1.00E-02	J	ND	U
1,1,1-trichloroethane	NE	NE	1.44E+04	7.25E+04	NMED	ND	U	NS		NS		R		ND	U	R		ND	U	1.00E-03	J
Toluene	NE	NE	5.23E+03	6.13E+04	NMED	ND	U	NS		NS		R		ND	U	R		ND	U	1.00E-02	J
Trichloroethene	NE	NE	6.77E+00	3.65E+01	NMED	ND	U	NS		NS		R		1.00E-03	J	R		ND	U	2.00E-03	J
Vinyl Chloride	NE	NE	7.42E-01	2.84E+01	NMED	ND	U	NS		NS		R		ND	U	R		ND	U	ND	U
Xylenes (total)	NE	NE	8.71E+02	4.28E+03	NMED	ND	U	NS		NS		R		2.00E-03	U	R		ND	U	4.00E-03	J
TOTAL PETROLEUM HYDROCARBONS/ORGANICS (mg/kg)																					
Total Petroleum Hydrocarbons (TPH)	NE	NE	1.00E+03	3.00E+03	NMED	NS	NS	R		**4.08E+03**		R		9.80E+02		R		**1.25E+04**	J	R	
TPH-Diesel range organics (DRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS		NS	
TPH-Gasoline range organics (GRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		NS		NS		NS		NS		NS		NS		NS	
PESTICIDES (mg/kg)																					
4,4-Dichlorodiphenyldichloroethane (DDD)	NE	NE	2.22E+01	1.07E+02	NMED	NS		2.00E+00		NS		6.60E-01		NS		1.60E-01		NS		ND	U
4,4-Dichlorodiphenyldichloroethylene (DDE)	NE	NE	1.57E+01	7.55E+01	NMED	NS		ND	U	NS		5.80E-02	J	NS		1.10E-01		NS		1.10E-03	J
4,4-Dichlorodiphenyltrichloroethane (DDT)	NE	NE	1.87E+01	9.50E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		2.80E-03	J
Alpha Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		1.60E-03	J
Gamma Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	NS		ND	U	NS		ND	U	NS		ND	U	NS		1.20E-03	J

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FT006 HISTORICAL SOIL ANALYTICAL DATA
CANNON AIR FORCE BASE, NEW MEXICO

Field Identification Sample Depth (feet bgs) Date Collected	Background Concentrations for Surface Soil	Background Concentrations for Subsurface Soils	Residential SSL Screening Guideline	Industrial SSL/TPH Screening Guideline	Screening Level Source NMED[1] or USEPA[2]	7812* 0.5 12/7/1991		C78-SS01 0 10/20/2008			C78-SS02 0 10/20/2008			C78-SS03 0 10/20/2008		
						Result	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Metals (mg/kg)																
Aluminum	8.95E+03	1.22E+04	7.80E+04	1.29E+06	NMED	NS		NS			NS			NS		
Arsenic	3.60E+00	4.30E+00	4.25E+00	2.15E+01	NMED	NS		NS			NS			NS		
Barium	6.70E+02	8.90E+02	1.56E+04	2.55E+05	NMED	NS		NS			NS			NS		
Beryllium	7.80E-01	7.30E-01	1.56E+02	2.58E+03	NMED	NS		NS			NS			NS		
Cadmium	4.35E-01	1.30E+00	7.05E+01	1.11E+03	NMED	NS		NS			NS			NS		
Calcium	4.48E+04	2.37E+05	NE	NE	NA	NS		NS			NS			NS		
Chromium	1.05E+01	1.33E+01	9.66E+01	5.05E+02	NMED	NS		NS			NS			NS		
Cobalt	6.60E+00	4.70E+00	2.30E+01	3.50E+02	USEPA	NS		NS			NS			NS		
Copper	1.83E+01	8.30E+00	3.13E+03	5.19E+04	NMED	NS		NS			NS			NS		
Iron	1.01E+04	1.31E+04	5.48E+04	9.08E+05	NMED	NS		NS			NS			NS		
Lead	1.20E+01	8.70E+00	4.00E+02	8.00E+02	NMED	NS		**8.94E+02**	5.00E+01		3.90E+02	2.50E+01		3.92E+02	2.50E+01	
Magnesium	1.93E+03	1.93E+04	NE	NE	NA	NS		NS			NS			NS		
Manganese	3.07E+02	3.33E+02	1.05E+04	1.60E+05	NMED	NS		NS			NS			NS		
Mercury	5.60E-02	1.90E-02	2.38E+01	1.12E+02	NMED	NS		NS			NS			NS		
Nickel	1.10E+01	1.49E+01	1.56E+03	2.57E+04	NMED	NS		NS			NS			NS		
Potassium	2.69E+03	2.51E+03	NE	NE	NA	NS		NS			NS			NS		
Vanadium	2.33E+01	3.28E+01	3.94E+02	6.53E+03	NMED	NS		NS			NS			NS		
Zinc	3.22E+01	3.06E+01	2.35E+04	3.89E+05	NMED	NS		NS			NS			NS		
VOALTILE ORGANIC COMPOUNDS (mg/kg)																
Acetone	NE	NE	6.63E+04	9.60E+05	NMED	NS		NS			NS			NS		
1,1,1-trichloroethane	NE	NE	1.44E+04	7.25E+04	NMED	NS		NS			NS			NS		
Toluene	NE	NE	5.23E+03	6.13E+04	NMED	NS		NS			NS			NS		
Trichloroethene	NE	NE	6.77E+00	3.65E+01	NMED	NS		NS			NS			NS		
Vinyl Chloride	NE	NE	7.42E-01	2.84E+01	NMED	NS		NS			NS			NS		
Xylenes (total)	NE	NE	8.71E+02	4.28E+03	NMED	NS		NS			NS			NS		
TOTAL PETROLEUM HYDROCARBONS/ORGANICS (mg/kg)																
Total Petroleum Hydrocarbons (TPH)	NE	NE	1.00E+03	3.00E+03	NMED	ND	U	NS			NS			NS		
TPH-Diesel range organics (DRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		4.10E+02	5.00E+01		2.80E+02	5.00E+01		3.40E+02	5.00E+01	
TPH-Gasoline range organics (GRO)	NE	NE	1.00E+03	3.00E+03	NMED	NS		ND	NA	U	ND	NA	U	ND	NA	U
PESTICIDES (mg/kg)																
4,4-Dichlorodiphenyldichloroethane (DDD)	NE	NE	2.22E+01	1.07E+02	NMED	NS		NS			NS			NS		
4,4-Dichlorodiphenyldichloroethylene (DDE)	NE	NE	1.57E+01	7.55E+01	NMED	NS		NS			NS			NS		
4,4-Dichlorodiphenyltrichloroethane (DDT)	NE	NE	1.87E+01	9.50E+01	NMED	NS		NS			NS			NS		
Alpha Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	NS		NS			NS			NS		
Gamma Chlordane[3]	NE	NE	1.77E+01	8.90E+01	NMED	NS		NS			NS			NS		

Notes:

* Sample was collected at the same location and depth as the previous sample due to exceedances in laboratory hold times of the original.

[1] NMED Risk Assessment Guidance, Table A1, July 2015

[2] USEPA Regional Screening Level Summary Table, November 2015

[3] Soil screening levels used are for Chlordane

2200 = result exceeds the residential soil screening level

2200 = result exceeds the industrial soil screening level

bgs = Below ground surface

J = Concentration reported below the method reporting limit

mg/kg = Milligram per kilogram

ND = Not detected

NE = Not established

NMED = New Mexico Environment Department

NS = not sampled

Qual = Qualifier

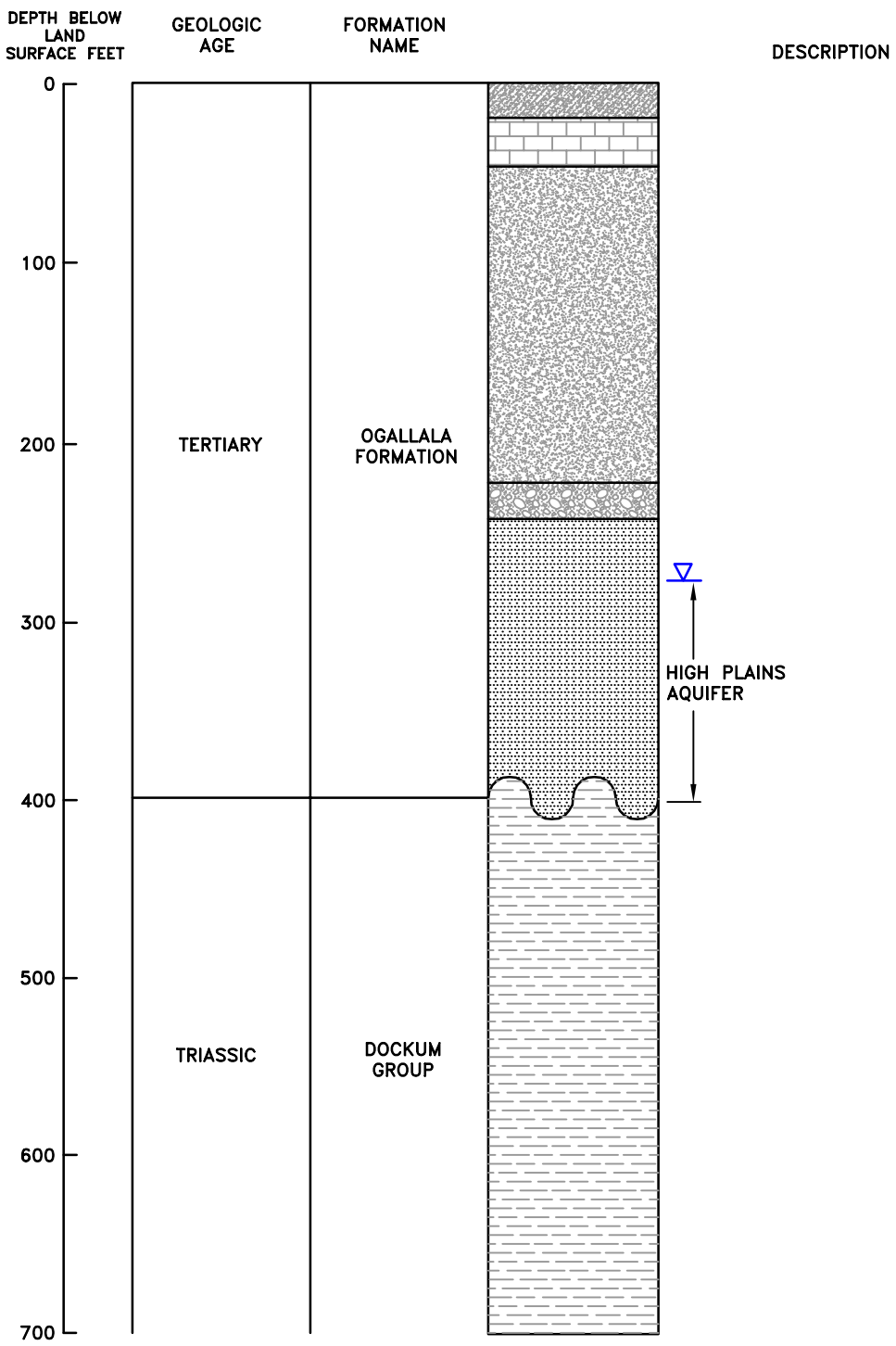
R = sampled rejected due to exceedance of holding time

RL = Reporting limit

SSL = Soil screening level

U = Value is below method detection limit/nondetect

USEPA = United States Environmental Protection Agency



LEGEND

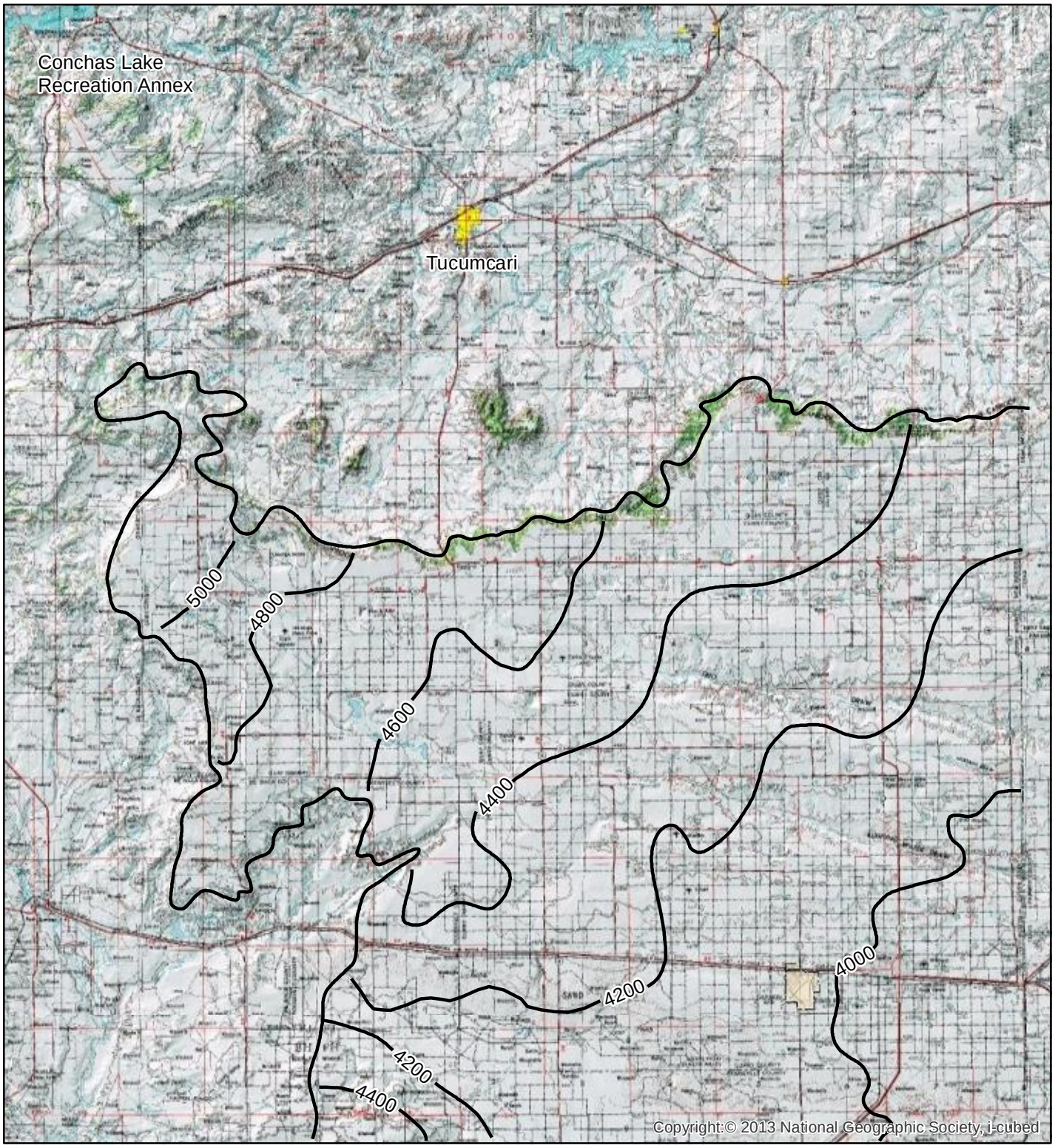
- SILTY SAND WITH CALICHE
- CALICHE
- SAND AND SILTY SAND
- SANDY GRAVEL
- SAND
- SANDSTONE (RED BEDS)
- LITHOLOGIC CONTACT
- EROSIONAL UNCONFORMITY
- WATER LEVEL

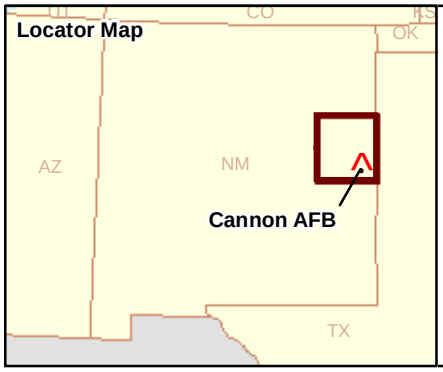
SOURCE: MODIFIED FROM GUTENTAG ET.AL., 1984

GENERALIZED GEOLOGIC STRATA AT CANNON AIR FORCE BASE
CANNON AIR FORCE BASE, NEW MEXICO

DRN. BY: DPG	DATE: 06/29/15	PROJECT NO. 23446539	FIG. NO. 2-1
CHK'D. BY: CSA	DATE: 06/29/15		

January 11, 2016 4:04:09 p.m.
Drawing: T:\CANNON\23446539\2-1.dwg





Legend

Base Boundary

Groundwater Contour
(feet above mean sea level)

10 5 0 10
Miles

Map projection: NAD83 State Plane Feet
New Mexico East (FIPS 3001)

Elevation and Configuration of the Water Table in the Region of Cannon Air Force Base

Cannon Air Force Base, New Mexico

Drawn By:	Date:	Project No.	
DPG	1/12/2016	23446539	Figure 2-2
Checked By:	Revision:		
MS	0		

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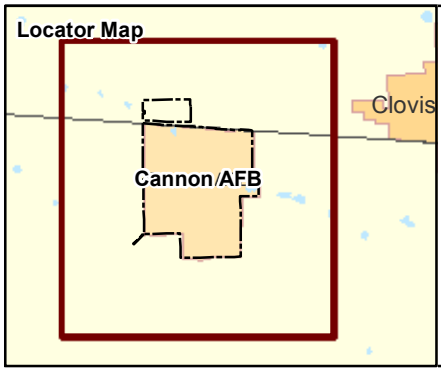

Legend

- Monitoring Well
- Private Water Well
- Base Water Well
- Base Boundary

Map projection: NAD83 State Plane Feet New Mexico, East (FIPS 3001)

N

4,000 2,000 0 4,000 Feet

Water Well Locations on and Near Cannon Air Force Base

Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 1/12/2016	Project No. 23446539	Figure 2-3
Checked By: MS	Revision: 0		

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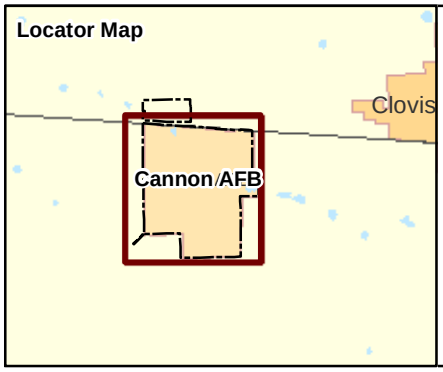
Locator Map



Legend

Base Boundary

in. = inches

2,000 1,000 0 2,000 Feet

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

Distribution of Soils by Type at Cannon Air Force Base

Cannon Air Force Base, New Mexico

Drawn By:	Date:	Project No.	
DPG	1/12/2016	23446539	Figure 2-4
Checked By:	Revision:		
MS	0		

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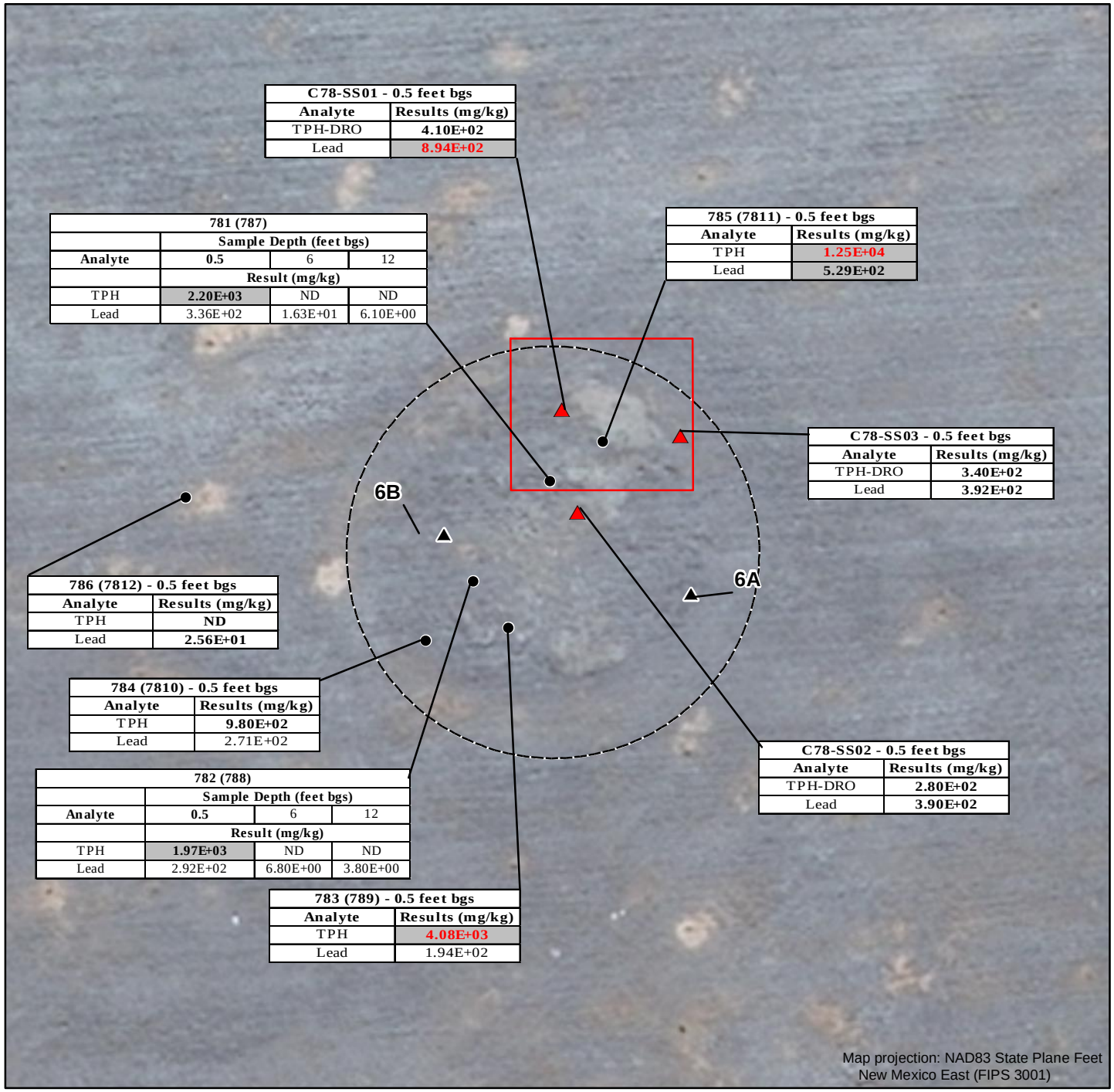


C78-SS01 - 0.5 feet bgs	
Analyte	Results (mg/kg)
TPH-DRO	4.10E+02
Lead	8.94E+02

781 (787)			
	Sample Depth (feet bgs)		
Analyte	0.5	6	12
	Result (mg/kg)		
TPH	2.20E+03	ND	ND
Lead	3.36E+02	1.63E+01	6.10E+00

785 (7811) - 0.5 feet bgs	
Analyte	Results (mg/kg)
TPH	1.25E+04
Lead	5.29E+02

C78-SS03 - 0.5 feet bgs	
Analyte	Results (mg/kg)
TPH-DRO	3.40E+02
Lead	3.92E+02

786 (7812) - 0.5 feet bgs	
Analyte	Results (mg/kg)
TPH	ND
Lead	2.56E+01

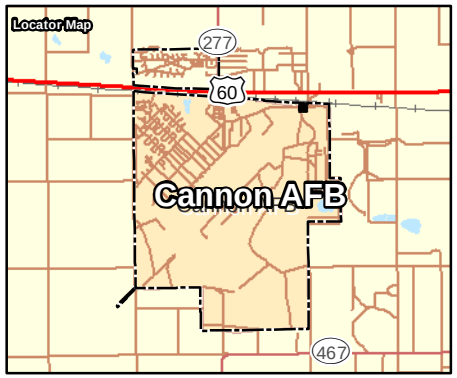
784 (7810) - 0.5 feet bgs	
Analyte	Results (mg/kg)
TPH	9.80E+02
Lead	2.71E+02

C78-SS02 - 0.5 feet bgs	
Analyte	Results (mg/kg)
TPH-DRO	2.80E+02
Lead	3.90E+02

782 (788)			
	Sample Depth (feet bgs)		
Analyte	0.5	6	12
	Result (mg/kg)		
TPH	1.97E+03	ND	ND
Lead	2.92E+02	6.80E+00	3.80E+00

783 (789) - 0.5 feet bgs	
Analyte	Results (mg/kg)
TPH	4.08E+03
Lead	1.94E+02

Map projection: NAD83 State Plane Feet
New Mexico East (FIPS 3001)



Legend

- IRP Phase II Field Investigation (Radian, 1986)
- RI Soil Boring Location (Woodward-Clyde, 1992)
- RFI Addendum Surface Soil Location (URS, 2010)
- FT006 SWMU Boundary
- Excavation Boundary

Note:
Sample Results are in mg/kg
bgs = below ground surface
mg/kg = milligrams per kilogram
TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Organics

829 = Result exceeds the residential soil screening level

829 = Result exceeds the industrial soil screening level

N 30 15 0 30 Feet

FT006 Site Plan and Previously Detected Compounds
Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 3/7/2016	Project No: 23446539	Figure 2-5
Checked By: MS	Revision: 0		

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Section three details the activities completed during pre-excavation, excavation, and post excavation phase of work conducted at FT006.

3.1 PRE-EXCAVATION ACTIVITIES

3.1.1 Total Petroleum Hydrocarbons Confirmation Sampling

TPHs have historically been identified at FT006 in excess of regulatory screening levels. Soil sampling was completed during the 2008 RFI Addendum in the area surrounding the highest concentration of TPHs in the surface soils at soil boring 785 (12,500 mg/kg TPH). The sample results from the 2008 RFI Addendum indicated a current TPH-DRO concentration in the northeast quadrant ranging from 280 to 410 mg/kg. The reduction in concentrations of surface soil contamination in this area was attributed to natural attenuation of TPH in the soil.

In order to confirm that TPHs have been naturally attenuated to concentrations below current NMED screening levels four soil samples were collected in November 2014 from historical locations exceeding TPH screening levels for surface soils. Theses samples were collected at the location of historical soil borings 781 (2,200 TPH in 1991), 782 (1,970 TPH in 1991), 783 (4,080 TPH in 1991), and 785 (12,500 TPH in 1991).

Soil samples were collected from 5-foot intervals using a Geoprobe 7822DT direct push rig and Macrocore sampler. A soil samples was collected from the interval exhibiting the historically highest TPH concentration (0-0.5 feet bgs) within each boring. A Terra Core sampler was utilized for the collection of the TPH-GRO soil sample. For TPH-DRO/ORO analysis a grab soil sample was collected. Following sample collection, samples were placed into laboratory provided containers and wrapped in protective packing material (i.e., foam liners and bubble packing) and shipped via FEDEX to EMAX Laboratories. The soil samples were analyzed for TPH-GRO, and DRO/ORO via USEPA Method 8015C and compared to the NMED residential SSLs (NMED 2015b). Sample Collection Field Sheets (SCFSs) documenting the November 2014 sample collection are provided in **Appendix A**. Soil boring logs, including detail soil description of materials encountered (using the Unified Soil Classification System) and field screening results for each sample collected are included in **Appendix B**. The analytical data report is included in **Appendix C**. The historic and November 2014 boring locations of were the soil TPH confirmation samples were collected are shown on **Figure 3-1**. The results of the November 2014 TPH confirmation soil samples are presented in **Table 3-1**.

None of the November 2014 soil sample results were above the 2015 NMED residential SSLs (NMED 2015b). Therefore, the limits of the excavation were not expanded to include TPH contaminated soils and TPH analysis for the excavation confirmation samples was not performed.

3.1.2 Excavation Waste Characterization Sampling

Prior to excavation, three waste characterization soil samples were collected in September 2015 within the planned limits of the FT006 excavation to confirm the presumed waste classification and allow for direct loading of excavated soil. Waste characterization grab soil samples were collected from 0 to 2 feet bgs using a hand auger. After sample collection, samples were placed into laboratory provided containers and wrapped in protective packing material (i.e., foam liners and bubble packing) and shipped via FEDEX to EMAX Laboratories. Soil samples were analyzed for toxicity characteristic leaching procedure: VOCs USEPA Method 8260B, SVOCs USEPA Method 8270D, pesticides USEPA Method 8081B, herbicides USEPA Method 8151A, metals USEPA Method 6020A and 7470A, and paint filter test USEPA Method 9095B in accordance with the requirements of the Clovis Regional Landfill and the RCRA values from the United States Code of Federal Regulations, Title 40, Chapter I, Subchapter I, Part 261, Subpart C, which establishes standards for generators of solid and hazardous waste. Results below the previously mentioned values would allow the excavated soil from FT006 to be disposed of in the Clovis Regional Landfill located in Clovis, New Mexico. Analytes detected by laboratory analysis of the waste characterization samples are presented in **Table 3-2**. SCFSs documenting the sample collection are provided in **Appendix A**. The analytical data report is included in **Appendix C.**

All results from the September 2015 waste characterization soil sampling at FT006 were below the RCRA values from the United States Code of Federal Regulations. In accordance and compliance with the requirements of the Clovis Regional Landfill; the soil from the FT006 excavation was disposed as non-hazardous waste at the landfill. Copies of the disposal documentation are provided in **Appendix F**.

3.1.3 Excavation Backfill Sampling

Soil used as the backfill of the excavation at FT006 was sampled in September 2015 from the excavation contractor's (Little Gator Trucking, LLC.) soil stockpile. Three soil samples (CAFB-FT006-BKF-001, CAFB-FT006-BKF-002, and CAFB-FT006-BKF-003) were collected at equally spaced intervals from the sidewall of the stockpiled soil. Soil samples for VOC analysis were collected using a Terra Core sampler, while grab soil samples were collected for SVOC and target analyte list (TAL) metals analysis. After sample collection, samples were placed into laboratory provided containers and wrapped in protective packing material (i.e., foam liners and bubble packing) and shipped via FEDEX to EMAX Laboratories. The soil samples were analyzed for VOCs USEPA Method 8260B, SVOCs USEPA Method 8270D, and TAL metals USEPA Method 6020A/7471B in accordance with the approved Final Accelerated Corrective Measures Work Plan for FT006 (FPM/URS 2014). SCFSs documenting the sample collection are provided in **Appendix A**. The analytical data report is included in **Appendix C**. Analytes detected by laboratory analysis of the backfill soil samples are presented in **Table 3-3**.

Backfill soil samples from FT006 were screened against NMED residential SSLs; or if a NMED residential SSL has not been assigned, the results were screened against the USEPA RSLs for residential soils. All results from the backfill soil sample were below the NMED residential

SSLs, or USEPA RSLs for residential soils. Therefore, the soil from the excavation contractor's soil stockpile was used to backfill the FT006 excavation.

3.1.4 Utility Locates

Utility clearances were obtained before the start of the excavation at FT006. A Base Civil Engineering Work Request Form (Air Force FORM 103vf) was signed and approved by the applicable Base utility organization and New Mexico 811. The planned excavation area was expanded upon in case of a larger excavation and cleared of utilities.

3.1.5 Initial Topography Survey

Lydick Engineering of Clovis, New Mexico (licensed surveyor in New Mexico) created the initial topography of the FT006 site. The initial FT006 excavation boundary was surveyed on 4 December 2015 along with surrounding topography to develop a Site topography map. The boundaries of the initial excavation area were marked for excavation. The survey data is provided in **Appendix D**.

3.2 EXCAVATION ACTIVITIES

3.2.1 Excavation

Little Gator Trucking, LLC, the excavation contractor, completed the excavation activities at FT006 between 7 December 2015 and 10 December 2015 in accordance with the approved work plan (FPM/URS 2014). Excavation was completed using a front end loader within the initial excavation boundaries to a depth of approximately 2.5 feet bgs. The excavation measured approximately 28 feet long and 38 feet wide by 2.5 feet deep. Approximately 100 cubic yards of soil were removed from the site and disposed of at the Clovis Regional Landfill. The boundaries of the excavation are depicted on **Figure 3-2**. Photographs of the site prior to, during, and following the completion of the excavation are included in **Appendix E**.

3.2.2 Transportation

The excavated soil at FT006 was transported by Little Gator Trucking, LLC from the site to the Clovis Regional Landfill at 2801 E. Brady Street, Clovis, NM 88101. The route used for transportation involved exiting the site at the north end of the Base, then driving south on Perimeter Road and exiting the Base through the contractor's gate. Once off-Base, the soil was transported to the Clovis Regional Landfill for disposal.

3.2.3 Disposal

Prior to the start of the excavation at FT006, a Clovis Regional Solid Waste Facility Generator Waste Profile Sheet, Form 29-1 was completed and sent to the Clovis Regional Landfill director, along with the September 2015 FT006 results of the waste characterization sampling. The director of the landfill approved, signed, and returned the Form 29-1, which was used as

approval to dispose of the excavated soil in the landfill. A copy of the Form 29-1 is included in **Appendix F**.

Form 29-1 was displayed by Little Gator Trucking, LLC to the landfill operator to demonstrate prior approval of the disposal of the materials at the landfill. The disposal vehicle was weighed before and after disposal and the difference in weight was used to calculate the cost of the deposal fees. Tickets from the landfill and associated paper work are provided in **Appendix F**.

3.2.4 XRF Field Analysis

Once the initial excavation of soil was completed, soil samples from the sidewalls and base of the excavation were collected and screened for lead using an XRF. Soil samples were screened using an Innov-X XRF machine. The machine was calibrated in accordance with manufacturer's specifications prior to screening the soil samples (Innov-X 2005). Three readings were collected from each screening sample and the average of the three readings was utilized for evaluating the lead concentrations in the soil. The results of the XRF screening were evaluated based on the following criteria:

- If XRF screening exceeded the NMED residential SSL (400 mg/kg), additional soils would be excavated.
- If screening results indicate lead was present at concentrations above 200 mg/kg but below 400 mg/kg, professional judgment and experience would be utilized by field personnel to determine if further excavation is necessary prior to submitting confirmation samples for laboratory analysis.
- If screening results indicate that lead was present at concentrations below 200 mg/kg, the confirmation samples will be submitted to an off-site laboratory for analysis.

Four floor samples and eight sidewall samples were collected from the excavation and screened using the XRF machine. The results of the screening sampling are presented in **Table 3-4**. All screening results were below 200 mg/kg. Based on the results of the field analysis, confirmation samples were submitted to EMAX for laboratory analysis.

3.2.5 Confirmation Sampling

Four confirmation samples from the base of the excavation and eight confirmation samples from the sidewalls of the excavation were collected and analyzed in accordance with the approved work plan (FPM/URS 2014) and the Approval with Modifications letter received from NMED (NMED 2015a). The purpose of the confirmation sampling was to confirm that the remaining concentrations of lead in the soil do not exceed NMED residential SSLs.

All confirmation soil samples were collected as grab samples and placed into laboratory provided containers and wrapped in protective packing material (i.e., foam liners and bubble packing) and shipped via FEDEX to EMAX Laboratories, where the samples were analyzed for lead by USEPA method 6020A/7471B. Confirmation soil samples locations were then surveyed. A summary of the confirmation samples is provided in **Table 3-5**. The confirmation sample

locations are depicted on **Figure 3-2**. SCFSs documenting the confirmation sample collections are provided in **Appendix A**.

3.3 POST EXCAVATION ACTIVITIES

3.3.1 Post Excavation Survey

Following the completion of the excavation activities and the receipt of confirmation sample results, Lydick Engineering completed the post excavation survey of the excavation limits and depths. This survey was utilized to determine the volume of soil (cubic yards) removed from the excavation. Post excavation survey data is provided in **Appendix D**.

3.3.2 Backfill and Compaction

Soil that was used as backfill was sampled as described in **Section 3.1.3** prior to being brought on site. Little Gator Trucking, LLC placed the backfill soil in loose lifts, approximately one foot in thickness. Each lift (except the top lift) was compacted with multiple passes of heavy equipment (a skidsteer) before an overlaying lift was placed.

3.3.3 Final Grading

After the backfill of the excavation was complete, the area was uniformly smooth-graded. Grading took place at FT006 until the surface was smooth, compacted, and free of irregular surface changes. The final grade provides positive drainage of surface water across the entire site with no closed drainage areas allowing surface water to pond.

3.3.4 Restoration

Following the completion of the final grading, FT006 was seeded with native buffalo grass seed and the seeds were lightly raked into the surface soils.

3.3.5 Final Topographic Survey

Following the completion of the backfill, final grading, and restoration, Lydick Engineering completed the final topographic survey of the excavation area. The final topographic survey data is provided in **Appendix D**.

TABLE 3-1
TOTAL PETROLEUM HYDROCARBONS CONFIRMATION SAMPLING ANALYTICAL DATA AT FT006 - NOVEMBER 2014
CANNON AIR FORCE BASE, NEW MEXICO

FIELD IDENTIFICATION				FT006-0781-0.5				FT006-782-0.5				FT006-783-0.5				FT006-0785-0.5			
DATE COLLECTED				November 11, 2014				November 11, 2014				November 11, 2014				November 11, 2014			
	Maximum	Frequency	[1]NMED Residential Soil (mg/kg)	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual
PETROLEUM HYDROCARBONS (mg/kg)																			
Diesel Range Organics	6.10E+01	4 / 4	1.00E+03	4.50E+01	5.30E+00	1.10E+01		1.70E+01	5.30E+00	1.10E+01		3.50E+01	5.30E+00	1.10E+01		6.10E+01	5.30E+00	1.10E+01	
Gasoline Range Organics	7.20E-01 J	3 / 4	1.00E+03	3.40E-01	2.80E-01	1.10E+00	J	<	5.40E-01	1.10E+00	U	5.00E-01	2.80E-01	1.10E+00	J	7.20E-01	2.90E-01	1.20E+00	J
Oil Range Organics	5.10E+02	4 / 4	1.00E+03[a]	4.40E+02	5.30E+00	2.10E+01		1.10E+02	5.30E+00	2.10E+01		2.50E+02	5.30E+00	2.10E+01		5.10E+02	5.30E+00	2.10E+01	

Notes:

[1]NMED value from New Mexico Environment Department's Hazardous Waste Bureau and Groundwater Quality Bureau Voluntary Remediation Program, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015.

[a]as unknown oil

*DL value is shown if the detection is less than the LOQ

< = result is less than the LOD

DL = Detection Limit

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

NMED = New Mexico Environment Department

Qual = Qualifier

U = Nondetect

TABLE 3-2
WASTE CHARACTERIZATION SAMPLING ANALYTICAL DATA AT FT006 - SEPTEMBER 2015
CANNON AIR FORCE BASE, NEW MEXICO

FIELD IDENTIFICATION				CAFB-FT006-WC1-002				CAFB-FT006-WC2-002				CAFB-FT006-WC3-002			
DATE COLLECTED				September 16, 2015				September 16, 2015				September 16, 2015			
	Maximum	Frequency	[1]RCRA Regulatory Level	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (ug/L)															
No volatile organic compounds detected.															
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)															
No semivolatile organic compounds detected.															
PESTICIDES (ORGANOCHLORINE) (ug/L)															
No pesticides detected.															
HERBICIDES (ug/L)															
No herbicides detected.															
METALS (mg/L)															
Barium	1.26E+00	3 / 3	1.00E+02	1.26E+00	1.00E-02	5.00E-02		6.16E-01	1.00E-02	5.00E-02		8.75E-01	1.00E-02	5.00E-02	
Cadmium	3.98E-02	1 / 3	1.00E+00	<	1.00E-02	5.00E-02	U	<	1.00E-02	5.00E-02	U	3.98E-02	1.00E-02	5.00E-02	J
Lead	3.45E-01	2 / 3	5.00E+00	<	1.50E-02	5.00E-02	U	1.44E-02	1.50E-02	5.00E-02	J	3.45E-01	1.50E-02	5.00E-02	
Selenium	2.19E-02	3 / 3	1.00E+00	1.54E-02	2.50E-02	5.00E-02	J	1.34E-02	2.50E-02	5.00E-02	J	2.19E-02	2.50E-02	5.00E-02	J

Notes:

[1]RCRA value is from the United States Code of Federal Regulations, Title 40, Chapter I, Subchapter I, Part 261, Subpart C.

ug/L = micrograms per liter

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/L = milligrams per liter

Qual = Qualifier

RCRA = Resource Conservation and Recovery Act

U = Nondetect

TABLE 3-3
BACKFILL SAMPLING ANALYTICAL DATA AT FT006 - SEPTEMBER 2015
CANNON AIR FORCE BASE, NEW MEXICO

FIELD IDENTIFICATION					CAFB-FT006-BKF-001				CAFB-FT006-BKF-002				CAFB-FT006-BKF-003			
DATE COLLECTED					September 16, 2015				September 16, 2015				September 16, 2015			
	Maximum	Frequency	[1]NMED Residential Soil (mg/kg)	[2]USEPA RSL (mg/kg)	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																
No volatile organic compounds detected.																
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																
No semivolatile organic compounds detected.																
METALS (mg/kg)																
Aluminum	2.90E+03	3 / 3	7.80E+04	--	2.34E+03	9.67E+00	9.67E+01	J	2.71E+03	9.94E+00	9.94E+01		2.90E+03	9.90E+00	9.90E+01	
Arsenic	9.03E-01	3 / 3	4.25E+00	--	7.91E-01	9.67E-02	4.83E-01		8.18E-01	9.94E-02	4.97E-01		9.03E-01	9.90E-02	4.95E-01	
Barium	1.57E+01	3 / 3	1.56E+04	--	1.15E+01	9.67E-02	4.83E-01		1.30E+01	9.94E-02	4.97E-01		1.57E+01	9.90E-02	4.95E-01	
Cadmium	8.60E-02	3 / 3	7.05E+01	--	6.27E-02	5.51E-02	4.83E-01	J	6.69E-02	5.67E-02	4.97E-01	J	8.60E-02	5.64E-02	4.95E-01	J
Chromium	4.10E+00	3 / 3	9.66E+01	--	3.49E+00	9.67E-02	4.83E-01		3.65E+00	9.94E-02	4.97E-01		4.10E+00	9.90E-02	4.95E-01	
Cobalt	8.76E-01	3 / 3	--	2.30E+01	6.96E-01	9.67E-02	4.83E-01		7.26E-01	9.94E-02	4.97E-01		8.76E-01	9.90E-02	4.95E-01	
Copper	1.54E+00	3 / 3	3.13E+03	--	1.21E+00	1.93E-01	4.83E-01		1.37E+00	1.99E-01	4.97E-01		1.54E+00	1.98E-01	4.95E-01	
Iron	3.84E+03	3 / 3	5.48E+04	--	3.28E+03	9.67E+00	9.67E+01		3.36E+03	9.94E+00	9.94E+01		3.84E+03	9.90E+00	9.90E+01	
Lead	3.00E+00	3 / 3	4.00E+02	--	2.29E+00	9.67E-02	4.83E-01		2.52E+00	9.94E-02	4.97E-01		3.00E+00	9.90E-02	4.95E-01	
Magnesium	4.50E+02	3 / 3	--	--	3.59E+02	1.93E+01	9.67E+01		4.06E+02	1.99E+01	9.94E+01		4.50E+02	1.98E+01	9.90E+01	
Manganese	4.46E+01	3 / 3	1.05E+04	--	3.06E+01	1.93E-01	4.83E-01		3.45E+01	1.99E-01	4.97E-01		4.46E+01	1.98E-01	4.95E-01	
Nickel	2.06E+00	3 / 3	1.56E+03	--	1.71E+00	9.67E-02	4.83E-01		1.85E+00	9.94E-02	4.97E-01		2.06E+00	9.90E-02	4.95E-01	
Potassium	6.89E+02	3 / 3	--	--	5.62E+02	1.93E+01	9.67E+01		6.61E+02	1.99E+01	9.94E+01		6.89E+02	1.98E+01	9.90E+01	
Vanadium	7.80E+00	3 / 3	3.94E+02	--	6.77E+00	2.90E-01	4.83E-01		7.06E+00	2.98E-01	4.97E-01		7.80E+00	2.97E-01	4.95E-01	
Zinc	8.06E+00	3 / 3	2.35E+04	--	5.95E+00	9.67E-01	1.93E+00		6.66E+00	9.94E-01	1.99E+00		8.06E+00	9.90E-01	1.98E+00	
PAINT FILTER LIQUID (mL)																
No paint filter liquid detected.																

Notes:

Results are screened against NMED residential soil screening levels; if a NMED residential soil screening level has not been assigned, the results were screened against the USEPA RSL.

[1]NMED value from New Mexico Environment Department's Hazardous Waste Bureau and Groundwater Quality Bureau Voluntary Remediation Program, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015.

[2]RSL value from USEPA RSLs, Residential Soils June 2015.

* DL value is shown if the detection is less than the LOQ

-- = No action limit

DL = Detection Limit

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

mL = milliliter

NMED = New Mexico Environment Department

Qual = Qualifier

RSL = Regional Screening Level

USEPA = United States Environmental Protection Agency

TABLE 3-4
SUMMARY OF CONFIRMATION SOIL SAMPLES AND XRF SAMPLE RESULTS AT FT006
CANNON AIR FORCE BASE, NEW MEXICO

Sample Location	Sample Identification	Sample Date	XRF Screening Result Number 1 (ppm)	XRF Screening Result Number 2 (ppm)	XRF Screening Result Number 3 (ppm)	Average of XRF Screening Results (ppm)	Lead (USEPA Method 6020A)	Duplicate	MS/MSD
Base	CAFT006-EB01-002.5	7-Dec-15	13	20	23	19	X	X	
Base	CAFT006-EB02-002.5	7-Dec-15	27	35	37	33	X		
Base	CAFT006-EB03-002.5	7-Dec-15	22	12	15	16	X		
Base	CAFT006-EB04-002.5	7-Dec-15	75	47	79	67	X		
Sidewall	CAFT006-SW01-002.5	7-Dec-15	124	75	123	107	X		X
Sidewall	CAFT006-SW02-002.5	7-Dec-15	47	50	42	46	X		
Sidewall	CAFT006-SW03-002.5	7-Dec-15	13	14	13	13	X		
Sidewall	CAFT006-SW04-002.5	7-Dec-15	17	18	24	20	X	X	
Sidewall	CAFT006-SW05-003.5	7-Dec-15	13	13	18	15	X		
Sidewall	CAFT006-SW06-002.5	7-Dec-15	115	38	41	65	X		
Sidewall	CAFT006-SW07-002.5	7-Dec-15	33	52	18	34	X		
Sidewall	CAFT006-SW08-002.5	7-Dec-15	13	13	13	13	X		

Notes:

MS/MSD = Matrix Spike/Matrix Spike Duplicate

ppm = parts per million (equivalent to milligrams per kilogram)

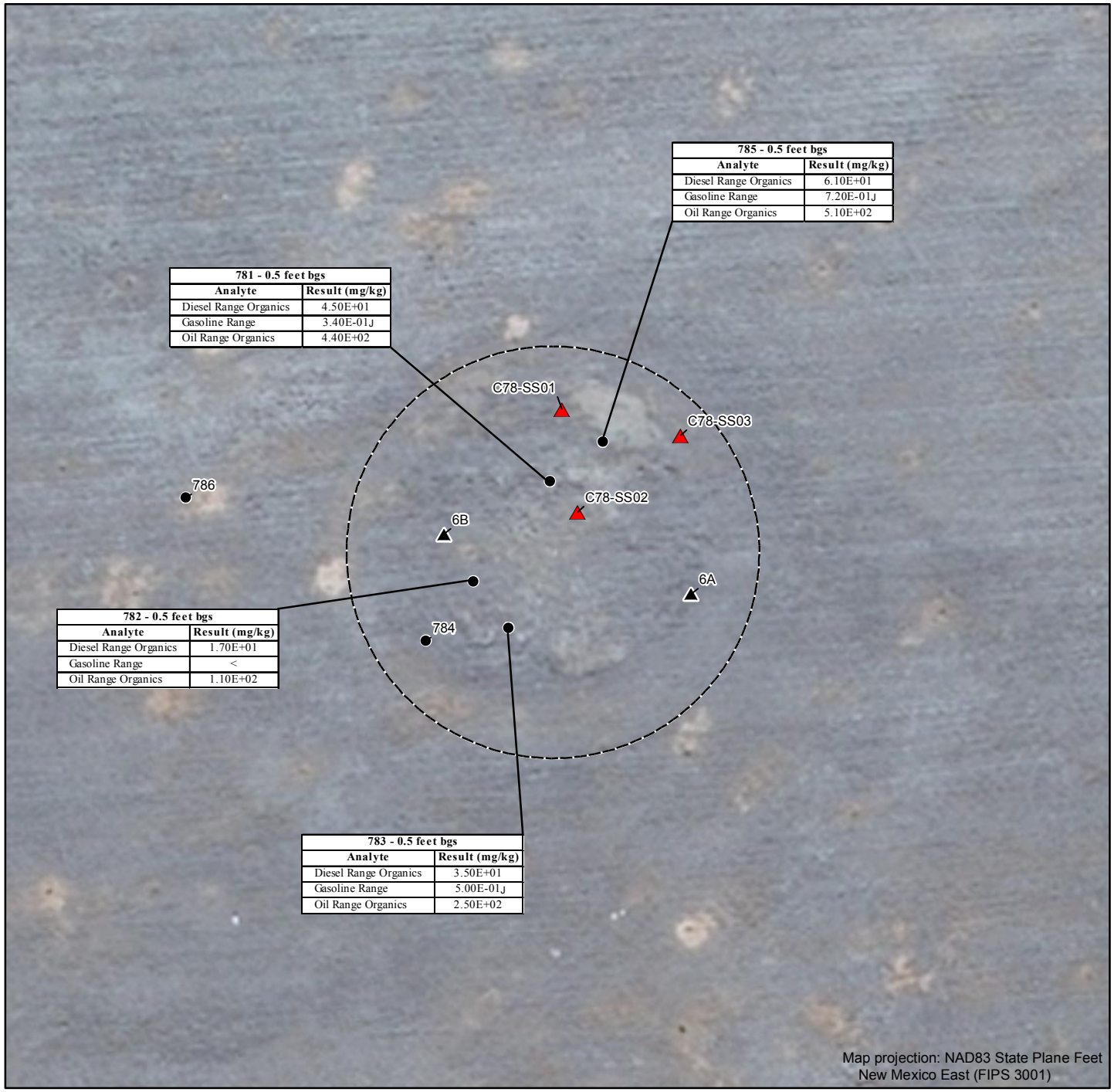
USEPA = United States Environmental Protection Agency

XRF = x-ray fluorescence

TABLE 3-5
CONFIRMATION SAMPLING RESULTS - DECEMBER 2015
CANNON AIR FORCE BASE, NEW MEXICO

FIELD IDENTIFICATION	Date Collected	[1]NMED Residential SSL for Lead (mg/kg)	Lead Result (mg/kg)	LOQ	DL[3]	LOD
CAFT006-EB01-002.5	7-Dec-15	4.00E+02	2.28E+01	5.46E-01	5.46E-02	1.09E-01
CAFT006-EB01-202.5[2]	7-Dec-15	4.00E+02	2.30E+01	5.40E-01	5.40E-02	1.08E-01
CAFT006-EB02-002.5	7-Dec-15	4.00E+02	3.85E+01	5.39E-01	5.39E-02	1.08E-01
CAFT006-EB03-002.5	7-Dec-15	4.00E+02	1.80E+01	5.66E-01	5.66E-02	1.13E-01
CAFT006-EB04-002.5	7-Dec-15	4.00E+02	3.83E+01	5.63E-01	5.63E-02	1.13E-01
CAFT006-SW01-002.5	7-Dec-15	4.00E+02	8.18E+01	5.20E-01	5.20E-02	1.04E-01
CAFT006-SW02-002.5	7-Dec-15	4.00E+02	3.25E+01	5.18E-01	5.18E-02	1.04E-01
CAFT006-SW03-002.5	7-Dec-15	4.00E+02	1.07E+01	5.59E-01	5.59E-02	1.12E-01
CAFT006-SW04-002.5	7-Dec-15	4.00E+02	1.55E+01	5.68E-01	5.68E-02	1.14E-01
CAFT006-SW04-202.5[2]	7-Dec-15	4.00E+02	1.36E+01	5.60E-01	5.60E-02	1.12E-01
CAFT006-SW05-003.5	7-Dec-15	4.00E+02	1.15E+01	5.61E-01	5.61E-02	1.12E-01
CAFT006-SW06-002.5	7-Dec-15	4.00E+02	4.32E+01	5.50E-01	5.50E-02	1.10E-01
CAFT006-SW07-002.5	7-Dec-15	4.00E+02	1.97E+01	5.26E-01	5.26E-02	1.05E-01
CAFT006-SW08-002.5	7-Dec-15	4.00E+02	1.49E+01	5.53E-01	5.53E-02	1.11E-01

Notes:
[1]NMED value from July 2015 Residential SSLs
[2]Sample is a duplicate of the previous sample result.
[3] DL value is shown if the detection is less than the LOQ
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
SSL = Soil Screening Level

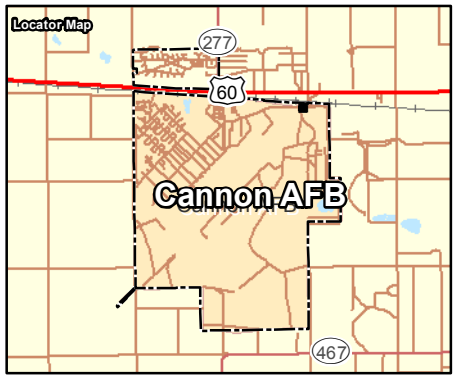


785 - 0.5 feet bgs	
Analyte	Result (mg/kg)
Diesel Range Organics	6.10E+01
Gasoline Range	7.20E-01J
Oil Range Organics	5.10E+02

781 - 0.5 feet bgs	
Analyte	Result (mg/kg)
Diesel Range Organics	4.50E+01
Gasoline Range	3.40E-01J
Oil Range Organics	4.40E+02

782 - 0.5 feet bgs	
Analyte	Result (mg/kg)
Diesel Range Organics	1.70E+01
Gasoline Range	<
Oil Range Organics	1.10E+02

783 - 0.5 feet bgs	
Analyte	Result (mg/kg)
Diesel Range Organics	3.50E+01
Gasoline Range	5.00E-01J
Oil Range Organics	2.50E+02



Legend

- IRP Phase II Field Investigation (Radian, 1986)
- RI Soil Boring Location (Woodward-Clyde, 1992)
- RFI Addendum Surface Soil Location (URS, 2009)
- FT006 SWMU Boundary

Note:
bgs = below ground surface
mg/kg = milligrams per kilogram
TPH = Total Petroleum Hydrocarbons

Sample results are from the 2014 confirmation samples collected for TPH.

N 30 15 0 30
Feet

FT006 TPH Analytical Results
Cannon Air Force Base,
New Mexico

Drawn By: DPG	Date: 1/12/2016	Project No: 23446539	Figure 3-1
Checked By: MS	Revision: 0		

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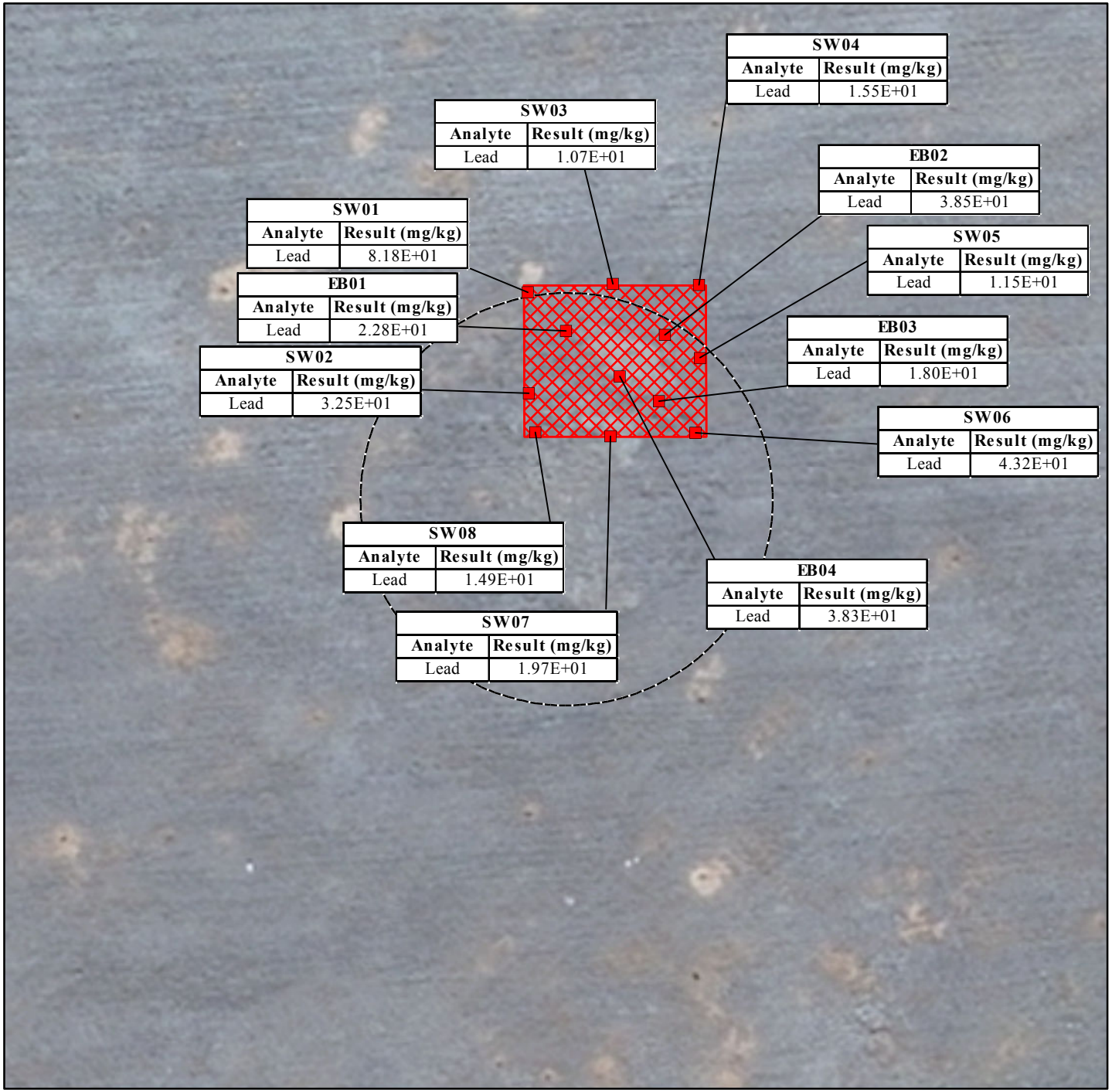

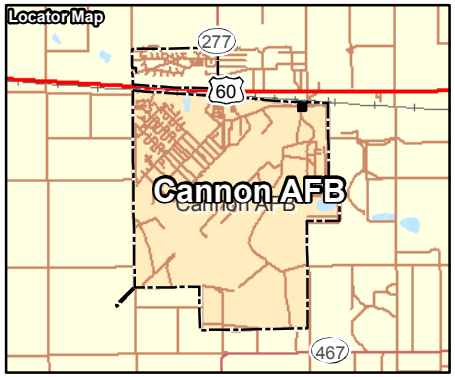

Legend

- Confirmation Sample Location
- Excavation Boundary
- FT006 Boundary

mg/kg = milligrams per kilogram

Map projection: NAD83 State Plane Feet
New Mexico East (FIPS 3001)

30 15 0 30
Feet

FT006 Confirmation Sampling Analytical Results and Excavation Boundaries

Cannon Air Force Base, New Mexico

Drawn By: JM	Date: 1/12/2016	Project No: 23446539	Figure 3-2
Checked By: KK	Revision: 0		

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4.1 TOTAL PETROLEUM HYDROCARBON SAMPLING RESULTS

In order to confirm that TPHs have been naturally attenuated to concentrations below current NMED residential SSLs, four soil samples were collected in November 2014 from historical locations exceeding TPH screening levels for surface soils. Theses samples were collected at the location of historical soil borings 781 (2,200 TPH in 1991), 782 (1,970 TPH in 1991), 783 (4,080 TPH in 1991), and 785 (12,500 TPH in 1991). ALL TPH samples were below the 2015 NMED residential SSLs for TPH-DRO, TPH-GRO, and TPH-ORO (1,000 mg/kg each) (NMED 2015b).

4.2 CONFIRMATION SAMPLING RESULTS

Four confirmation samples from the base of the excavation and eight confirmation samples from the sidewalls of the excavation were collected and analyzed in accordance with the approved work plan (FPM/URS 2014) and the Approval with Modifications letter received from NMED (NMED 2015a).

All confirmation samples were below the 2015 NMED residential SSL for lead (400 mg/kg). The confirmation samples ranged from 10.7 mg/kg to 81.8 mg/kg. Based on the results of the confirmation sampling, the lead contaminated soils have been removed from FT006 and no further remedial action is required.

4.3 DATA REVIEW AND VERIFICATION

The analytical data generated by EMAX was checked for accuracy, precision, representativeness, comparability, and completeness. The data review/verification process for this project consisted of data generation, reduction, and two levels of review. Details of the data review processes are presented in **Appendix C**.

5.1 CONCLUSIONS

Four soil samples were collected in November 2014 from historical locations exceeding TPH screening levels for surface soils. Theses samples were collected at the location of historical soil borings 781 (2,200 TPH in 1991), 782 (1,970 TPH in 1991), 783 (4,080 TPH in 1991), and 785 (12,500 TPH in 1991). The soil samples were analyzed for TPH and none of the analytical results exceeded the NMED residential SSLs. Therefore, the limits of the excavation were not expanded to include TPH contaminated soils and TPH analysis for the excavation confirmation samples was not performed.

Approximately 100 cubic yards of lead contaminated soil was excavated from FT006 during the completion of the corrective measure to remove lead contaminated soils from the site. Confirmation soil samples were collected from the sidewalls and floor of the excavation. The analytical results indicate that lead concentrations in the remaining soils at FT006 are below the NMED residential SSL for lead (400 mg/kg). The site was backfilled with clean soil from a stockpile area previously sampled to demonstrate the absence of VOCs, SVOCs, and metals above NMED residential SSLs. The soil was compacted, graded, and reseeded with native buffalo grass seed.

5.2 RECOMMENDATIONS

Based on the absence of TPH at the historical locations of exceedances and the results of the confirmation sampling for lead, no contaminants of concern remain at FT006 that exceed NMED residential SSLs. Therefore, no further corrective action is required and FT006 meets the criteria for CAC without Controls. A CAC proposal should be submitted requesting the change in status and move FT006 to Table 3 of the RCRA permit.

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SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** - FT006

PROJECT NO. **23446540**

SAMPLE NO. FT006-0781-0.5

BORING NO. 781

DATE/TIME COLLECTED: 11/11/2014 / 1035

PERSONNEL: K. Kloewer, J. Conradi

SAMPLE METHOD / DEPTH: Direct Push (macrocore) / 0.5 Feet

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES ~~NO~~

SAMPLE QC DUPLICATE: YES ~~NO~~

MS/MSD REQUESTED: YES ~~NO~~

SPLIT SAMPLE NO. -N/A-

DUPLICATE SAMPLE NO. -N/A-

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(2) 40 mL VOA vials	(2)MeOH, 4°C	TPH-GRO(8015C)
(1) 8oz glass jar	4°C	TPH-DRO/ORO (8015C)
~~(1) 8oz glass jar~~	~~4°C~~	~~TAL Metals (7471B/6010C)~~ IK

OVA MEASUREMENTS

Background	-ND-
Breathing zone	-ND-
Boring	-ND-
Headspace	1.9PPM

SAMPLE DESCRIPTION

DEPTH: 0.0-0.5 Feet

DESCRIPTION: Topsoil/Grass / Silty SAND (SM) loose, Dry, Fine grain, 20% Silt

GENERAL COMMENTS

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR - FT006** PROJECT NO. **23446540**

SAMPLE NO. FT006-782-0.5 BORING NO. 782

DATE/TIME COLLECTED: 11/11/2014/1055 PERSONNEL: K. Kloewer

SAMPLE METHOD / DEPTH: Direct Push (macrocore) / 0.5 Feet J. Conradi

SAMPLE MEDIA: **SOIL** SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES NO SPLIT SAMPLE NO. - N/A -

SAMPLE QC DUPLICATE: YES NO DUPLICATE SAMPLE NO. - N/A -

MS/MSD REQUESTED: YES NO

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(2) 40 mL VOA vials	**(2)MeOH, 4°C**	**TPH-GRO(8015C)**
(1) 8oz glass jar	**4°C**	**TPH-DRO/ORO (8015C)**
~~**(1) 8oz glass jar**~~	~~**4°C**~~	~~**TAL Metals (7471B/6010C)**~~ KK

OVA MEASUREMENTS

Background	-ND-
Breathing zone	-ND-
Boring	-ND-
Headspace	-ND-

SAMPLE DESCRIPTION

DEPTH: 0.0-0.5 Feet DESCRIPTION: Topsoil/Grass/Silty SAND (sm)- loose to medium dense, Brown, fine grain, 30% Silt.

GENERAL COMMENTS

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** – FT006

PROJECT NO. **23446540**

SAMPLE NO. FT006-783-0.5

BORING NO. 783

DATE/TIME COLLECTED: 11/11/2014 / 1100

PERSONNEL: K. Kloewer, J. Conradi

SAMPLE METHOD / DEPTH: Direct Push (macrocore) / 0.5 Feet

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO)

SAMPLE QC DUPLICATE: YES (NO)

MS/MSD REQUESTED: YES (NO)

SPLIT SAMPLE NO. – N/A –

DUPLICATE SAMPLE NO. – N/A –

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(2) 40 mL VOA vials	(2)MeOH, 4°C	TPH-GRO(8015C)
(1) 8oz glass jar	4°C	TPH-DRO/ORO (8015C)
~~(1) 8oz glass jar~~	~~4°C~~	~~TAL Metals (7471B/6010C)~~ KK

OVA MEASUREMENTS

Background	– ND –
Breathing zone	– ND –
Boring	– ND –
Headspace	1.0 PPM

SAMPLE DESCRIPTION

DEPTH: 0.0 – 0.5 Feet

DESCRIPTION: Topsoil, Grass / Silty SAND (SM) - loose to Medium dense, Brown, fine grain, 30% Silt

GENERAL COMMENTS

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** -FT006

PROJECT NO. **23446540**

SAMPLE NO. FT006-0785-0.5

BORING NO. 785

DATE/TIME COLLECTED: 11/11/2014 / 1045

PERSONNEL: K. Kloewer, J. Conradi

SAMPLE METHOD / DEPTH: Direct Push (macrocore) / 0.5 Feet

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO)

SAMPLE QC DUPLICATE: YES (NO)

MS/MSD REQUESTED: YES (NO)

SPLIT SAMPLE NO. -N/A-

DUPLICATE SAMPLE NO. -N/A-

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(2) 40 mL VOA vials	**(2)MeOH, 4°C**	**TPH-GRO(8015C)**
(1) 8oz glass jar	**4°C**	**TPH-DRO/ORO (8015C)**
~~**(1) 8oz glass jar**~~	~~**4°C**~~	~~**TAL Metals (7471B/6010C).**~~ \< K

OVA MEASUREMENTS

Background	-ND-
Breathing zone	-ND-
Boring	-ND-
Headspace	1.4ppm

SAMPLE DESCRIPTION

DEPTH: 0.0-0.5 Feet

DESCRIPTION: Top Soil/Grass/Silty SAND (SM)- loose, Dry, Brown, fine grain, 20% Silt

GENERAL COMMENTS

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** PROJECT NO. **23446540**

SAMPLE NO. CAFB- FTDOC - WC1 - 002 BORING NO. WC1

DATE/TIME COLLECTED: 9/16/15 / 1408 PERSONNEL: Paul Wilson
SAMPLE METHOD / DEPTH: Hand auger / 2' bgs Mike Sonderman

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A
SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A
MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
3 8oz glass jar	4°C	TCLP for VOC, SVOC, metals, pesticides, herbicides, and paint filter

OVA MEASUREMENTS

Background	N/A
Breathing zone	N/A
Boring	N/A
Headspace	N/A

SAMPLE DESCRIPTION

DEPTH: 2' bgs DESCRIPTION: Silty sand (SM) loose, dry, brown, fine sand

GENERAL COMMENTS

2" Thick cemented layer present approximately 10-12" bgs

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** PROJECT NO. **23446540**

SAMPLE NO. CAFB-FT006-WC2-002 BORING NO. WC2

DATE/TIME COLLECTED: 9/16/15 / 1425 PERSONNEL: Paul Wilson

SAMPLE METHOD / DEPTH: hand auger / 2' bgs Mike Sonderman

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES NO SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES NO DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES NO

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
3 8oz glass jar	4°C	TCLP for VOC, SVOC, metals, pesticides herbicides, & paint filter

OVA MEASUREMENTS

Background	N/A
Breathing zone	N/A
Boring	N/A
Headspace	N/A

SAMPLE DESCRIPTION

DEPTH: 2' bgs DESCRIPTION: Silty sand (SM) loose, dry, brown fine sand

GENERAL COMMENTS

2" Thick cemented layer approximately 10-12" bgs

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** PROJECT NO. **23446540**

SAMPLE NO. CAFB-FT006-WC3-002 BORING NO. WC3

DATE/TIME COLLECTED: 9/16/15 / 1440 PERSONNEL: Paul Wilson, Mike Sonderman

SAMPLE METHOD / DEPTH: hand auger 2' bgs

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES NO SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES NO DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES NO

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
3- 8oz glass jars	4°C	TCLP for VOC, SVOC, metals, pesticides, herbicides, + paint filter

OVA MEASUREMENTS

Background	N/A
Breathing zone	N/A
Boring	N/A
Headspace	N/A

SAMPLE DESCRIPTION

DEPTH: 2' bgs DESCRIPTION: silty sand (SM) loose, dry, brown fine sand

GENERAL COMMENTS

2" cemented layer present approximately 8-10" bgs

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR

PROJECT NO. 23446540

SAMPLE NO. CAFB-FT006-BRF-001

BORING NO. BKF-001

DATE/TIME COLLECTED: 09-16-2015 / 0915

PERSONNEL: Paul Wilson, Mike Sonderman

SAMPLE METHOD / DEPTH: Sidewall

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES [NO]

SAMPLE QC DUPLICATE: YES [NO]

MS/MSD REQUESTED: YES [NO]

SPLIT SAMPLE NO. N/A

DUPLICATE SAMPLE NO. N/A

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
3x40 mL VOAs	1-Methanol 2-Na_2SO_4, 4°C	8260B VOCs
1 x 8 oz glass jar	4°C	8270D SVOCs, TAL Metals
		6020A-7471B

OVA MEASUREMENTS

Background	NA
Breathing zone	NA
Boring	NA
Headspace	NA

SAMPLE DESCRIPTION

DEPTH: 2' bgs

DESCRIPTION: silty SAND (SM) loose, dry, reddish-brown, fine SAND, trace roots

GENERAL COMMENTS

collected ~ 2' from top of sidewall

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** PROJECT NO. **23446540**

SAMPLE NO. CAFB - FT006- BKF-002 BORING NO. BRF-002

DATE/TIME COLLECTED: 9-16-2015 / 6917 PERSONNEL: Paul Wilson
SAMPLE METHOD / DEPTH: Sidewall / 2' Mike Sonderman

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES [NO] SPLIT SAMPLE NO. N/A
SAMPLE QC DUPLICATE: YES [NO] DUPLICATE SAMPLE NO. N/A
MS/MSD REQUESTED: YES [NO]

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
3x40 ml VOA	1-Methanol 2-Na2SO4, 4°C	8260B VOCs
1x8 oz jar	4°C	8270B SVOCs
		TAL Metals (6020B/7471B

OVA MEASUREMENTS

Background	NA
Breathing zone	NA
Boring	NA
Headspace	NA

SAMPLE DESCRIPTION

DEPTH: 2' bgs DESCRIPTION: Silty SAND (SM) Loose, dry, reddish-brown, fine SAND with trace roots

GENERAL COMMENTS

collected from sidewall ~2' down from ground surface

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** PROJECT NO. **23446540**

SAMPLE NO. CAFB-FT006-BKF-003 BORING NO. FT006-BKF-003

DATE/TIME COLLECTED: 9-16-2015 / 0920 PERSONNEL: Paul Wilson
SAMPLE METHOD / DEPTH: sidewall / ~2' Mike Sonderman

SAMPLE MEDIA: [SOIL] SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES [NO] SPLIT SAMPLE NO. N/A
SAMPLE QC DUPLICATE: YES [NO] DUPLICATE SAMPLE NO. N/A
MS/MSD REQUESTED: YES [NO]

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
3 x 40 ml VOAs	1-methanol 2-Na2BSO4, 4°C	8260B VOCs
1 x 8 oz glass	4°C	8270B SVOCs
		6020B/7471B TAL Metals

OVA MEASUREMENTS

Background NA
Breathing zone NA
Boring NA
Headspace NA

SAMPLE DESCRIPTION

DEPTH: ~2' bgs DESCRIPTION: Silty SAND (SM) Loose, dry, reddish-brown, fine SAND with trace roots

GENERAL COMMENTS
collected from side wall of borrow pit

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CAFT006-SW01-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1408 PERSONNEL: K. Klower

SAMPLE METHOD / DEPTH: Grab 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: (YES) NO

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(2) 8oz glass jars	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - Stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Readings (PPM) - 124, 75, 123

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CA FT006-SW02-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1423 PERSONNEL: K. Klower

SAMPLE METHOD / DEPTH: Grab / 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring

Headspace

ND

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Readings (PPM) - 47, 50, 42

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CA FT006-SW03-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015/1436 PERSONNEL: K. Klower

SAMPLE METHOD / DEPTH: Grab 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading (PPM) - ND>13, ND>14, ND≥13

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CA FT006-SW04-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1415 PERSONNEL: K. Klocwer

SAMPLE METHOD / DEPTH: Grab 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: (YES) NO DUPLICATE SAMPLE NO. CAFT006-SW04-202.5

MS/MSD REQUESTED: YES (NO) @ 1422

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(2) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - Stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading (PPM) - 17, 18, 24

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CA FT006 - SW05 - 003.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1448 PERSONNEL: K. Klowu

SAMPLE METHOD / DEPTH: Grab / 3.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 3.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - stiff, moist, Medium plastic, Light Brown to Brown, 20 % Silt

GENERAL COMMENTS

XRF Reading (PPM) - ~~75, 47, 79~~ ND<13, ND<13, 18

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CA FT006 - SW06 - 002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1402 PERSONNEL: K. Klowus

SAMPLE METHOD / DEPTH: Grab / 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading (PPM) - 115, 38, 41

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CAFT006-SW07-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1356 PERSONNEL: K. Klower

SAMPLE METHOD / DEPTH: Grab / 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring

Headspace

ND

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - stiff moist, medium plastic, light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading (ppm) - 33, 52, 18

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR – FT006 PROJECT NO. 23446540

SAMPLE NO. CAFT006-SW08-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12-7-2015 / 1500 PERSONNEL: K. Klower

SAMPLE METHOD / DEPTH: Grab 2.5 Feet BGS

SAMPLE MEDIA: SOIL SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES NO SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES NO DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES NO

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - Stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading (PPM) - ND<13, ND<13, ND<13

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CAFT006-EB01-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1507 PERSONNEL: R. Klocwr

SAMPLE METHOD / DEPTH: Grab 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. NA

SAMPLE QC DUPLICATE: (YES) NO DUPLICATE SAMPLE NO. CAFT006-EB01-202.5

MS/MSD REQUESTED: YES (NO) @ 1509

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(2) 8oz glass jar	None	6020A Lead

PID MEASUREMENTS

Background

Breathing zone

Boring

Headspace

ND

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - Stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading - ND<13, 20, 23 (PPM)

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CA FT006-EB02-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1428 PERSONNEL: K. Klocwer

SAMPLE METHOD / DEPTH: Grab / 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - Stiff, moist, Medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading - 27, 35, 37 (PPM)

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CA FT006-EB03-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 /1442 PERSONNEL: K. K lower

SAMPLE METHOD / DEPTH: Grab 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - Stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading (PPM) - 22, ND <12, 15

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR - FT006 PROJECT NO. 23446540

SAMPLE NO. CA FT006-EB04-002.5 BORING NO. FT006 Excavation

DATE/TIME COLLECTED: 12/7/2015 / 1453 PERSONNEL: K. Klowr

SAMPLE METHOD / DEPTH: Grab 2.5 Feet BGS

SAMPLE MEDIA: (SOIL) SEDIMENT SLUDGE

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. N/A

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. N/A

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
(1) 8oz glass jar	None	Lead 6020A

PID MEASUREMENTS

Background

Breathing zone

Boring ND

Headspace

SAMPLE DESCRIPTION

DEPTH: 2.5 Feet BGS DESCRIPTION: Silty CLAY (CL) - stiff, moist, medium plastic, Light Brown to Brown, 20% Silt

GENERAL COMMENTS

XRF Reading - 75, 47, 79 (ppm)

HTRW DRILLING LOG

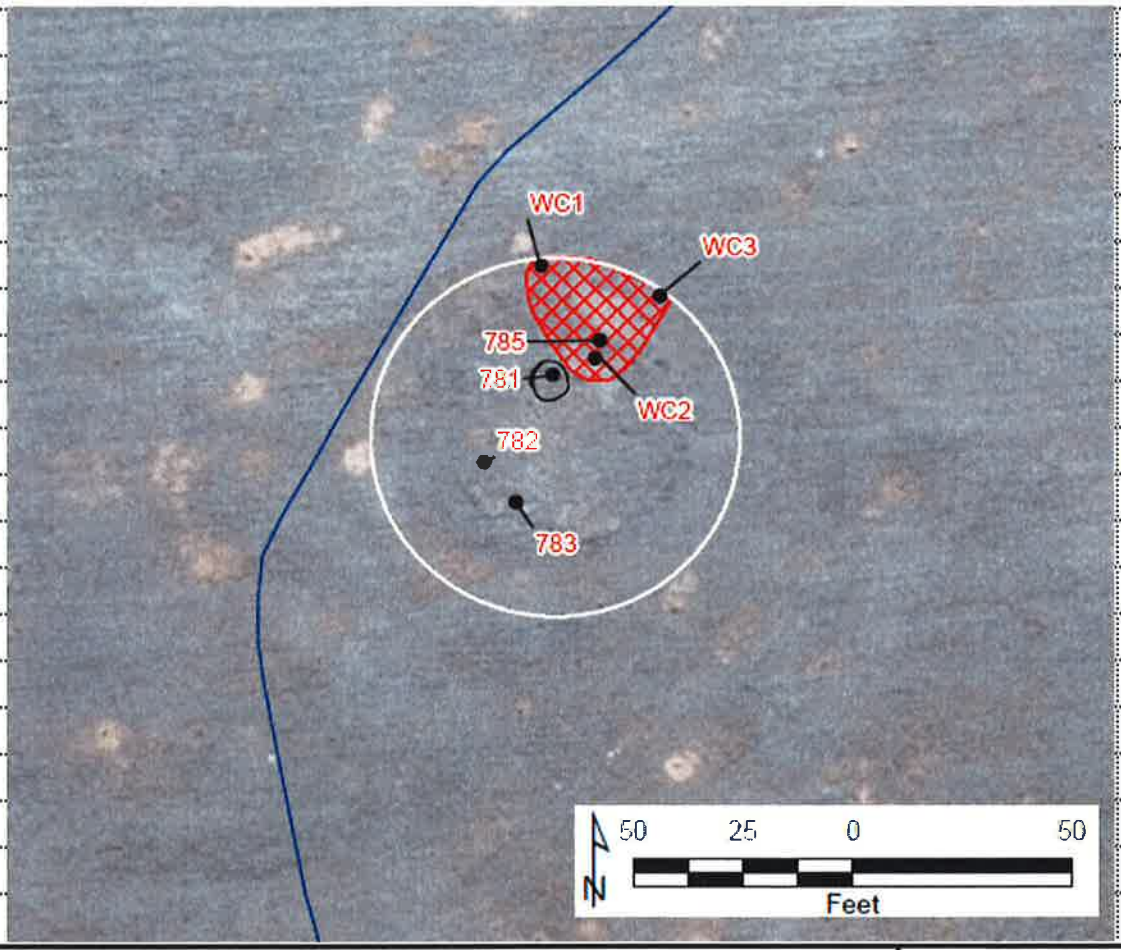
CLIENT: FPM Remediations, Inc./ 23446540.0008AA		HOLE NUMBER: 781
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF 2 SHEETS
3. PROJECT: Cannon AFB PBR - FT006	4. LOCATION: Cannon AFB, Clovis, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig	6. MANUFACTURE'S DESIGNATION OF DRILL: Geoprobe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, 2.75 inch OD Rods	8. HOLE LOCATION: FT006. See sketch below.	
	9. SURFACE ELEVATION: 4318 Feet above mean Sea level	
	10. DATE STARTED: 11/11/2014	11. DATE COMPLETED: 11/11/2014
12. OVERBURDEN THICKNESS: -N/A-	15. DEPTH GROUNDWATER ENCOUNTERED: Not Encountered	
13. DEPTH DRILLED INTO ROCK: -N/A-	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING: -N/A-	
14. TOTAL DEPTH OF HOLE: 5.0 Feet Below Ground Surface	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): -N/A-	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	-N/A-	-N/A-	-N/A-

20. SAMPLES FOR CHEMICAL ANALYSIS	TPH-GRO/DRO/ORO	VOCs	TAL METALs/SVOCS	PCBs/ PESTICIDES	ARSENIC	21. TOTAL CORE RECOVERY
	Y 8015C					100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X Bentonite Chips			[signature]

LOCATION SKETCH/COMMENTS See map Below SCALE: See map Below



PROJECT	HOLE
Cannon AFB PBR	781

HTRW DRILLING LOG

HOLE NO. 781

PROJECT: Cannon AFB PBR - FT006

INSPECTOR: Kyle Kloewer

SHEET OF 2 SHEETS 2

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS (HS = Head Space Screening; FS=Field Screening; BKG = Background; PPM=Parts Per Million; ND=Non Detect)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS (PP=Pocket Pen)	REMARKS h.
	0	Topsoil, Grass		N/A	FT006-781-0.5		Time = 1035
		Silty SAND (SM) - loose, Dry, Brown, Fine grain, 20% Silt	FS=ND				Run = 5 Feet
	1		HS = 1.4 PPM				Recovy = 5 Feet
			BKG=ND				Ogallala Formation
	2		FS=ND				
	3						
		Becoming light Brown					
	4		FS=ND				
		Bottom of Boring @ 5.0 Feet					
	5						
	6						
	7						
	8						
	9						
	10						

PROJECT: Cannon AFB PBR

HOLE: 781

HTRW DRILLING LOG

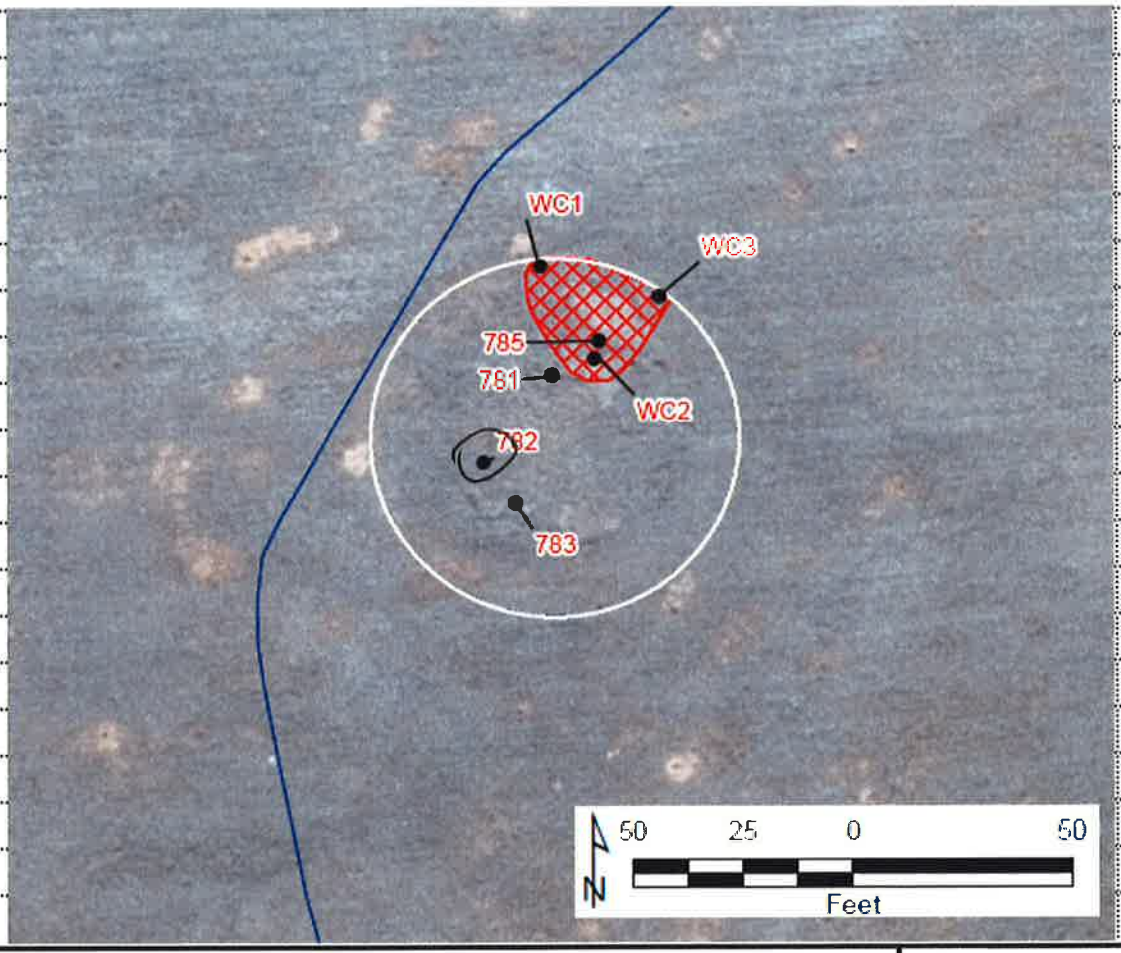
CLIENT: FPM Remediations, Inc./ 23446540.0008AA		HOLE NUMBER: 782
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF SHEETS 2
3. PROJECT: Cannon AFB PBR – FT006	4. LOCATION: Cannon AFB, Clovis, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig	6. MANUFACTURE'S DESIGNATION OF DRILL: Geoprobe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, 2.75 inch OD Rods	8. HOLE LOCATION: FT006. See sketch below.	
	9. SURFACE ELEVATION: 4318 Feet above mean Sea level	
	10. DATE STARTED: 11/11/2014	11. DATE COMPLETED: 11/11/2014
12. OVERBURDEN THICKNESS: -N/A-	15. DEPTH GROUNDWATER ENCOUNTERED: Not Encountered	
13. DEPTH DRILLED INTO ROCK: -N/A-	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING: -N/A-	
14. TOTAL DEPTH OF HOLE: 5.0 Feet Below Ground Surface	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): -N/A-	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	-N/A-	-N/A	-N/A-

20. SAMPLES FOR CHEMICAL ANALYSIS	TPH-GRO/DRO/ORO	VOCs	TAL METALs/SVOCS	PCBs/ PESTICIDES	ARSENIC	21. TOTAL CORE RECOVERY
	X 8015C					100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X Bentonite Chips			[signature]

LOCATION SKETCH/COMMENTS See map Below SCALE: See map Below



PROJECT	HOLE
Cannon AFB PBR	782

HTRW DRILLING LOG

HOLE NO 782

PROJECT Cannon AFB PBR - FT006

INSPECTOR Kyle Kloewer

SHEET 2 OF 2 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS (HS = Head Space Screening; FS=Field Screening; BKG = Background; PPM=Parts Per Million; ND=Non Detect)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS (PP=Pocket Pen)	REMARKS h.
	0	Topsoil, Grass		N/A	FT006-782-0.5		Time=1055
		Silty SAND (SM)- loose to medium dense, Brown, Fine grain, 30% Silt	FS=ND HS=ND BKG=ND				Run=5 Feet Recov=5 Feet Ogallala Formation
	1						
	2		FS=ND				
		Becoming tan, Decreasing Silt					
	3						
			FS=ND				
	4						
		Bottom of Boring @ 5.0 Feet					
	5						
	6						
	7						
	8						
	9						
	10						

PROJECT Cannon AFB PBR

HOLE 782

HTRW DRILLING LOG

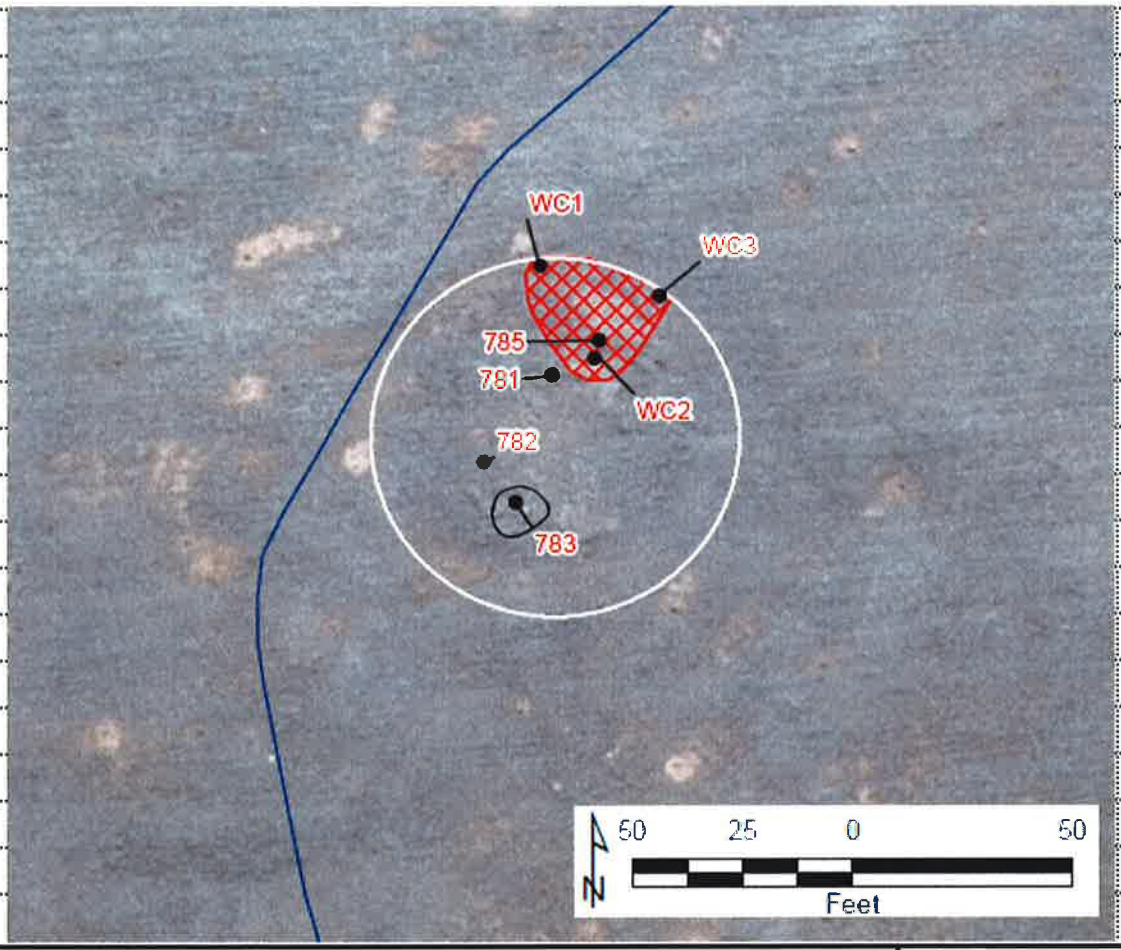
CLIENT: FPM Remediations, Inc./ 23446540.0008AA		HOLE NUMBER: 783
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF SHEETS 2
3. PROJECT: Cannon AFB PBR - FT006	4. LOCATION: Cannon AFB, Clovis, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig	6. MANUFACTURE'S DESIGNATION OF DRILL: Geoprobe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, 2.75 inch OD Rods	8. HOLE LOCATION: FT006. See sketch below.	
	9. SURFACE ELEVATION: 4318 Feet above Mean Sea level	
	10. DATE STARTED: 11/11/2014	11. DATE COMPLETED: 11/11/2014
12. OVERBURDEN THICKNESS: - N/A -	15. DEPTH GROUNDWATER ENCOUNTERED: Not Encountered	
13. DEPTH DRILLED INTO ROCK: - N/A -	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING: - N/A -	
14. TOTAL DEPTH OF HOLE: 5.0 feet below ground surface	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): - N/A -	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	- N/A -	- N/A -	- N/A -

20. SAMPLES FOR CHEMICAL ANALYSIS	TPH-GRO/DRO/ORO	VOCs	TAL METALs/SVOCS	PCBs/ PESTICIDES	ARSENIC	21. TOTAL CORE RECOVERY
	X 8015C					100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X Bentonite Chips			[signature]

LOCATION SKETCH/COMMENTS See map Below SCALE: See map Below



PROJECT	HOLE
Cannon AFB PBR	783

HTRW DRILLING LOG

HOLE NO. 783

PROJECT: Cannon AFB PBR – FT006

INSPECTOR: Kyle Kloewer

SHEET 2 OF 2 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	0	Top soil, Grass	HS = Head Space Screening FS=Field Screening BKG = Background PPM=Parts Per Million ND=Non Detect	N/A	FT006-783-0.5	PP=Pocket Pen	Time = 1100 Run = 5 Feet Recovy = 5 Feet
		Silty SAND (SM) - loose to medium dense, Brown, Fine grain, 30% silt	FS=ND HS=1.0 PPM BKG=ND				Ogallala Formation
	1						
	2		FS=ND				
	3	Becoming Tan to light Red, Caliche nodules up to 1/4 inch					
	4		FS=ND				
		Bottom of Boring @ 5.0 Feet					
	5						
	6						
	7						
	8						
	9						
	10						

PROJECT: Cannon AFB PBR

HOLE: 783

HTRW DRILLING LOG

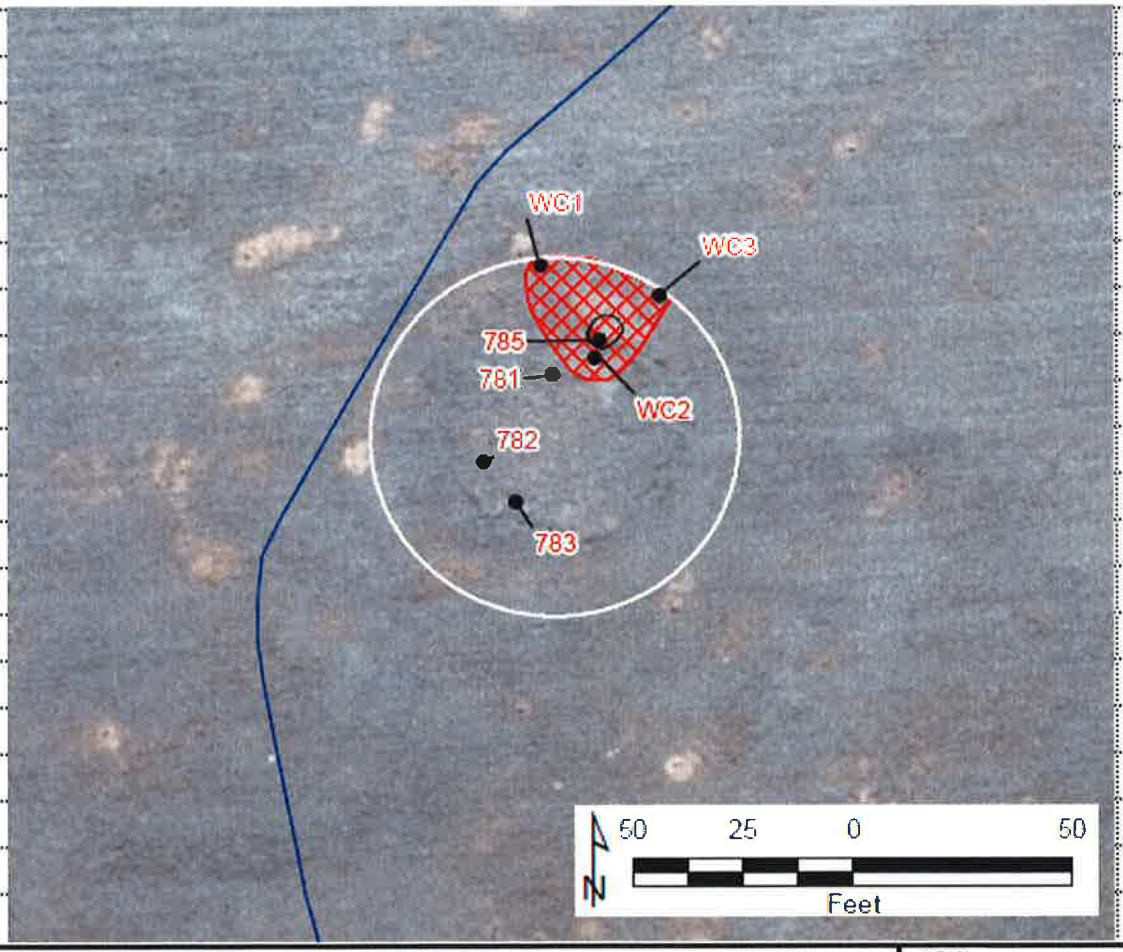
CLIENT: FPM Remediations, Inc./ 23446540.0008AA		HOLE NUMBER: 785
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF 2 SHEETS
3. PROJECT: Cannon AFB PBR – FT006	4. LOCATION: Cannon AFB, Clovis, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig	6. MANUFACTURE'S DESIGNATION OF DRILL: Geoprobe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, 2.75 inch OD Rods	8. HOLE LOCATION: FT006. See sketch below.	
	9. SURFACE ELEVATION: 4318 Feet above mean Sea level	
	10. DATE STARTED: 11/11/2014	11. DATE COMPLETED: 11/11/2014
12. OVERBURDEN THICKNESS: -N/A-	15. DEPTH GROUNDWATER ENCOUNTERED: Not Encountered	
13. DEPTH DRILLED INTO ROCK: -N/A-	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING: -N/A-	
14. TOTAL DEPTH OF HOLE: 5.0 Feet Below Ground Surface	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): -N/A-	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	-N/A-	-N/A-	-N/A-

20. SAMPLES FOR CHEMICAL ANALYSIS	TPH-GRO/DRO/ORO	VOCs	TAL METALS/SVOCS	PCBs/ PESTICIDES	ARSENIC	21. TOTAL CORE RECOVERY
	X 8015C					100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X Bentonite Chips			[signature]

LOCATION SKETCH/COMMENTS See map Below SCALE: See map Below



PROJECT	HOLE
Cannon AFB PBR	785

HTRW DRILLING LOG

HOLE NO. 785

PROJECT: Cannon AFB PBR - FT006

INSPECTOR: Kyle Kloewer

SHEET 2 OF 2 SHEETS

ELEV a	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS (HS = Head Space Screening; FS=Field Screening; BKG = Background; PPM=Parts Per Million; ND=Non Detect)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS (PP=Pocket Pen)	REMARKS h.
	0	Top soil, Grass		N/A	FT006-785-0.5		Time = 1045
		Silty SAND (sm) - loose, Dry, Brown, Fine grain, 20%					Run = 5 Feet
			FS=ND				Recovery = 5 Feet
	1	Silt	HS=1.4 PPM				
			BKG=ND				Ogallala Formation
	2						
			FS=ND				
	3						
	4	Becoming tan to very light Red	FS=ND				
		Bottom of Boring @ 5 Feet					
	5						
	6						
	7						
	8						
	9						
	10						

PROJECT: Cannon AFB PBR

HOLE: 785

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

Sample Identification #	Date Collected	Date Received	Matrix	Analysis
CAAT109-B9-1.5	11/11/2014	11/12/2014	Soil	6020A (Arsenic Only)
CAAT109-B9-009	11/11/2014	11/12/2014	Soil	6020A (Arsenic Only)
CAAT109-B9-11.5	11/11/2014	11/12/2014	Soil	6020A (Arsenic Only)
CAAT109-B9-16.5	11/11/2014	11/12/2014	Soil	6020A (Arsenic Only)
CAAT109-B9-31.5	11/11/2014	11/12/2014	Soil	6020A (Arsenic Only)
FT006-0781-0.5	11/11/2014	11/12/2014	Soil	8015C
FT006-0785-0.5	11/11/2014	11/12/2014	Soil	8015C
FT006-782-0.5	11/11/2014	11/12/2014	Soil	8015C
FT006-783-0.5	11/11/2014	11/12/2014	Soil	8015C
FT006-WC1-002	11/11/2014	11/12/2014	Soil	6020A, 7471B, 8015C
FT006-WC3-002	11/11/2014	11/12/2014	Soil	6020A, 7471B, 8015C
FT006-WC2-002	11/11/2014	11/12/2014	Soil	6020A, 7471B, 8015C

1.0 Laboratory Case Narrative \ Cooler Receipt Form

Verification Criteria	Yes	No	N/A
Were any DoD-QSM deviations noted in the laboratory case narrative?		X	
Were DoD-QSM corrective actions followed if deviations were noted?			X
Were any issues noted in the cooler receipt form?		X	

2.0 Sample Documentation

Verification Criteria	Yes	No
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X	
Were all sample identifications (IDs) documented correctly on sample labels?	X	
Did samples listed on COCs match the sample labels?	X	
Were samples relinquished properly on the COC?	X	

3.0 Holding Time

Verification Criteria	Yes	No
Were all samples extracted and/or analyzed within the appropriate holding time?	X	
Were all samples preserved appropriately?	X	

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

4.0 Instrument Performance Check (Tuning)

Method 6020A Instrument Tuning Criteria			
Instrument:	**EMAXTI98**		
Date of Tuning:	**11/26/2014**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Was the mass calibration ≤ 0.1amu from the true value?	X		
Was the resolution < 0.9 amu full width at 10% peak height?	X		
For stability, was the RSD ≤ 5% for at least 4 replicate analyses?	X		

Method 6020A Instrument Tuning Criteria			
Instrument:	**EMAXTI98**		
Date of Tuning:	**12/2/2014**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Was the mass calibration ≤ 0.1amu from the true value?	X		
Was the resolution < 0.9 amu full width at 10% peak height?	X		
For stability, was the RSD ≤ 5% for at least 4 replicate analyses?	X		

5.0 Initial Calibration

Method 7471B Initial Calibration Criteria			
Instrument:	**47**		
Date of Calibration:	**11/19/2014**		
	Yes	**No**	**N/A**
CVAA – Was a minimum of 5 standards and a calibration blank used for ICAL?	X		
CVAA – Was $r^2 \geq 0.99$?	X		

Method 6020A Initial Calibration Criteria			
Instrument:	**EMAXTI98**		
Date of Calibration:	**11/26/2014**		
	Yes	**No**	**N/A**
ICP-MS– Was a minimum one high standard and a calibration blank used for ICAL?	X		
ICP-MS– If more than one standard was used, was $r^2 \geq 0.99$?	X		

Method 6020A Initial Calibration Criteria			
Instrument:	**EMAXTI98**		
Date of Calibration:	**12/2/2014**		
	Yes	**No**	**N/A**
ICP-MS– Was a minimum one high standard and a calibration blank used for ICAL?	X		

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

Method 6020A Initial Calibration Criteria			
Instrument:	**EMAXTI98**		
Date of Calibration:	**12/2/2014**		
	Yes	**No**	**N/A**
ICP-MS– If more than one standard was used, was $r^2 \geq 0.99$?	X		

Method 8015C-GRO Initial Calibration Criteria			
Instrument:	**GCT39**		
Date of Calibration:	**5/2/2014**		
	Yes	**No**	**N/A**
Was a minimum of a 5-point calibration used for ICAL with one option below?	X		
Option 1: RSD for each analyte ≤ 20%?	X		
Option 2: If linear least squares regression was used was the r ≥ 0.995?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 8015C-DRO/ORO Initial Calibration Criteria			
Instrument:	**D5**		
Date of Calibration:	**11/5/2014**		
	Yes	**No**	**N/A**
Was a minimum of a 5-point calibration used for ICAL with one option below?	X		
Option 1: RSD for each analyte ≤ 20%?	X		
Option 2: If linear least squares regression was used was the r ≥ 0.995?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

6.0 Initial Calibration Verification [(ICV) Second Source]

6020A Verification Criteria for ICV on 11/26/2014 12:27 Instrument: EMAXTI98	**Yes**	**No**
Was the second source analyzed after once after each ICAL, prior to beginning a sample run?	X	
Was the second source % recovery between 90-110%?	X	

6020A Verification Criteria for ICV on 12/2/2014 13:06 Instrument: EMAXTI98	**Yes**	**No**
Was the second source analyzed after once after each ICAL, prior to beginning a sample run?	X	
Was the second source % recovery between 90-110%?	X	

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

7471B Verification Criteria for ICV on 11/19/2014 11:29, Instrument: 47	Yes	No
Was the second source analyzed after once after each ICAL, prior to beginning a sample run?	X	
Was the second source % recovery between 90-110%?	X	

Method 8015C-GRO ICV Criteria			
Instrument:	**GCT39**		
Date of Initial Calibration Verification:	**5/2/2014 15:33**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8015C-DRO ICV Criteria			
Instrument:	**D5**		
Date of Initial Calibration Verification:	**11/5/2014 11:49**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8015C-ORO ICV Criteria			
Instrument:	**D5**		
Date of Initial Calibration Verification:	**11/5/2014 13:47**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8015C-ORO ICV Criteria			
Instrument:	**D5**		
Date of Initial Calibration Verification:	**11/5/2014 14:04**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 20% of the expected value (initial source)?	X		

7.0 Continuing Calibration Verification (CCV)

6020A Verification Criteria for ICV on 11/26/2014 18:52 Instrument: EMAXTI98	Yes	No
Was the CCV analyzed every 10 samples and at the end of the sequence?	X	

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

6020A Verification Criteria for ICV on 11/26/2014 18:52 Instrument: EMAXTI98	**Yes**	**No**
Was the CCV % recovery between 90-110%?	X	

6020A Verification Criteria for ICV on 11/26/2014 19:46 Instrument: EMAXTI98	**Yes**	**No**
Was the CCV analyzed every 10 samples and at the end of the sequence?	X	
Was the CCV % recovery between 90-110%?	X	

6020A Verification Criteria for ICV on 12/2/2014 14:34 Instrument: EMAXTI98	**Yes**	**No**
Was the CCV analyzed every 10 samples and at the end of the sequence?	X	
Was the CCV % recovery between 90-110%?	X	

6020A Verification Criteria for ICV on 12/2/2014 15:28 Instrument: EMAXTI98	**Yes**	**No**
Was the CCV analyzed every 10 samples and at the end of the sequence?	X	
Was the CCV % recovery between 90-110%?	X	

7471B Verification Criteria for CCV: 11/19/2014 12:50, Instrument: 47	**Yes**	**No**
Was the CCV analyzed every 10 samples and at the end of the sequence?	X	
Was the CCV % recovery between 80-120%?	X	

7471B Verification Criteria for CCV: 11/19/2014 13:14, Instrument: 47	**Yes**	**No**
Was the CCV analyzed every 10 samples and at the end of the sequence?	X	
Was the CCV % recovery between 80-120%?	X	

Method 8015C-GRO CCV Criteria			
Instrument:	**GCT39**		
Date of Calibration Verification:	**11/13/2014 01:43**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

Method 8015C-GRO CCV Criteria			
Instrument:	**GCT39**		
Date of Calibration Verification:	**11/13/2014 08:53**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

Method 8015C-GRO CCV Criteria			
Instrument:	**GCT39**		
Date of Calibration Verification:	**11/13/2014 08:53**		
	Yes	**No**	**N/A**
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

Method 8015C-GRO CCV Criteria			
Instrument:	**GCT39**		
Date of Calibration Verification:	**11/13/2014 16:09**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

Method 8015C-DRO CCV Criteria			
Instrument:	**D5**		
Date of Calibration Verification:	**11/15/2014 8:23**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

Method 8015C-ORO CCV Criteria			
Instrument:	**D5**		
Date of Calibration Verification:	**11/15/2014 8:40**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

Method 8015C-DRO CCV Criteria			
Instrument:	**D5**		
Date of Calibration Verification:	**11/15/2014 12:06**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

Method 8015C-ORO CCV Criteria			
Instrument:	**D5**		
Date of Calibration Verification:	**11/15/2014 12:23**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

Method 8015C-DRO CCV Criteria			
Instrument:	**D5**		
Date of Calibration Verification:	**11/15/2014 13:31**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

Method 8015C-ORO CCV Criteria			
Instrument:	**D5**		
Date of Calibration Verification:	**11/15/2014 13:48**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 samples and at the end of the sequence?	X		
Was the CCV %difference (%D) or %drift for all target compounds ≤ 20%?	X		

8.0 Blank Samples

Blank Criteria	**Yes**	**No**	**N/A**
Was a method blank analyzed with every preparatory batch?	X		
Were analytes detected > ½ the LOQ and > 1/10 the amount measured in any sample or 1/10 the regulatory limit?		X	
Were target analytes detected in method, trip or calibration blanks?		X	

9.0 Laboratory Control Sample (LCS)

LCS Criteria	**Yes**	**No**	**N/A**
Was an LCS analyzed with every preparatory batch?	X		
Were LCS recoveries within acceptance criteria listed in the UFP-QAPP?	X		

10.0 Surrogate Recoveries

Methods 8015C Surrogate Criteria	**Yes**	**No**	**N/A**
Were surrogate spikes added to all field and QC samples?	X		

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

Methods 8015C Surrogate Criteria	Yes	No	N/A
Were surrogate recoveries within acceptance criteria listed in the UFP-QAPP?	X		

11.0 Internal Standard (IS) Recoveries

Method 6020A IS Criteria	Yes	No
Were internal standards spiked for all samples and standards?	X	
Were internal standard areas within 30% to 120% of the ICAL midpoint standard area?	X	

12.0 Matrix Spike/Matrix Spike Duplicate Recoveries/RPDs

MS/MSD Criteria	Yes	No	N/A
Were MS/MSD samples analyzed with every preparatory batch?	X		
Were MS/MSD samples collected for this SDG?	X		
Were MS/MSD recoveries/RPDs within acceptance criteria listed in the UFP-QAPP?	X		

Sample CAAT109-B9-1.5 was spiked and analyzed for arsenic.

13.0 Dilution Test

Method 6020A Dilution Test Criteria	Yes	No	N/A
Was a dilution test sample analyzed with every preparatory batch?	X		
Were metals concentrations > 50x the LOD?	X		
Did the five-fold dilution agree within ± 10% of the original measurement?	X		
If the five-fold dilution did not agree within ± 10% of the original measurement, was a post digestion spike sample analyzed?			X

Sample CAAT109-B9-1.5 was diluted and analyzed for arsenic. Sample FT006-WC1-002 was diluted and analyzed for TAL metals.

14.0 Post Digestion Spike (PDS) Recoveries

Method 6020A PDS Criteria	Yes	No	N/A
Was a PDS sample analyzed if the dilution test failed or metals concentrations were > 50 x the LOD?	X		
Were the PDS recoveries within 75-125%?		X	

Sample FT006-WC1-002 was spiked and analyzed for TAL metals.

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

Sample ID	Parameter	Analyte	Serial Dilution %D	PDS Recovery
FT006-WC1-002	Metals	Aluminum	NA	**74**

Analytical data that required qualification based on post digestion spike data are included in the table below.

Field ID	Parameter	Analyte	Qualification
FT006-WC1-002	Metals	Aluminum	**J**

15.0 Interference Check Solutions (ICS)

Method 6020A ICS Criteria	Yes	No	N/A
Were ICS-A and ICSAB samples analyzed at the beginning of the analytical run and every 12 hours?	X		
Was the ICS-A absolute value concentration for all non-spiked metals < LOD (unless they are a verified trace impurity form one of the spiked metals)			X
Was the ICS-AB recoveries within ± 20%?	X		

16.0 Laboratory Duplicate Samples

Laboratory Duplicate Criteria	Yes	No	N/A
Were laboratory duplicate samples analyzed for this SDG? (if yes, list below)	X		
Were parent sample / laboratory duplicate RPDs ≤ 20% for analytes that had concentrations > 5x the LOQ.	X		
Were the differences between the parent sample / laboratory duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ	X		

Sample CAAT109-B9-1.5 was duplicated and analyzed for arsenic.

17.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	N/A
Were field duplicate samples collected for this SDG? (if yes, list below)		X	
Were parent sample / field duplicate RPDs ≤ 30% for water samples and ≤ 50% for soils for analytes that had concentrations > 5x the LOQ.			X
Were the differences between the parent sample / field duplicate > 2x the LOQ for analytes that had concentrations < 5x the LOQ			X

Cannon AFB PBR Data Verification

Laboratory and SDG#: EMAX 14K075 **URS Chemist: Lyn Griswold**
Date Verified: 12/10/2014 **URS ITR: Jeff Aust**
Guidance: DoD-QSM, Version 4.2
Applicable QAPP: Cannon PBR UFP-QAPP (URS, 2014)
Applicable Analytical Methods: 6020A, 7471B and 8015C

18.0 Sensitivity

Sensitivity Criteria	Yes	No	N/A
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		

19.0 Additional Qualifications

Additional Qualification Criteria	Yes	No	N/A
Were common laboratory contaminants detected?		X	
Were common laboratory contaminant concentrations < 2x the LOQ			X
Was professional judgment used to qualify data (if yes, list below)		X	

20.0 Completeness

Completeness Criteria	Yes	No	N/A
Were any data rejected during the verification process?		X	
Were any samples lost, broken, or in any other manner in not verified?		X	
Were samples analyses requested performed, the correct analyte lists used and correct sample preparation and analyses methods and units utilized?	X		

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **14K075**

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

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **14K075**

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LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-05-2014
EMAX Batch No.: 14K075

Attn: Lyn Griswold

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 11/12/14.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CAAT109-B9-1.5	K075-01	11/11/14	SOIL	TOTAL METALS BY ICP-MS
CAAT109-B9-009	K075-02	11/11/14	SOIL	TOTAL METALS BY ICP-MS
CAAT109-B9-11.5	K075-03	11/11/14	SOIL	TOTAL METALS BY ICP-MS
CAAT109-B9-16.5	K075-04	11/11/14	SOIL	TOTAL METALS BY ICP-MS
CAAT109-B9-31.5	K075-05	11/11/14	SOIL	TOTAL METALS BY ICP-MS
FT006-0781-0.5	K075-06	11/11/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
FT006-0785-0.5	K075-07	11/11/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
FT006-782-0.5	K075-08	11/11/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
FT006-783-0.5	K075-09	11/11/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
FT006-WC1-002	K075-10	11/11/14	SOIL	TOTAL METALS BY ICP-MS
				DRO & ORO
				GASOLINE RANGE ORGANICS
				MERCURY
FT006-WC3-002	K075-11	11/11/14	SOIL	TOTAL METALS BY ICP-MS
				DRO & ORO

Sample ID	Control #	Col Date	Matrix	Analysis
				GASOLINE RANGE ORGANICS
				MERCURY
FT006-WC2-002	K075-12	11/11/14	SOIL	TOTAL METALS BY ICP-MS
				DRO & ORO
				GASOLINE RANGE ORGANICS
				MERCURY

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K075

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

A total of seven(7) soil samples were received on 11/12/14 to be analyzed for Gasoline Range Organics by Purge and Trap in accordance with Method SW5035A/8015C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. GPK011SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. GRO was within LCS QC limits in GPK011SL/GPK011SC. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K075

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION
OIL RANGE ORGANICS BY EXTRACTION

A total of seven(7) soil samples were received on 11/12/14 to be analyzed for Diesel Range Organics and Oil Range Organics by Extraction in accordance with Method SW3550B/8015C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSK018SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DRO and ORO was within LCS QC limits in DSK018SL/DSK018SC. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.
Samples K075-06 (FT006-0781-0.5), -07 (FT006-0785-0.5), -10 (FT006-WC1-002), -11 (FT006-WC3-002), and -12 (FT006-WC2-002) displayed heavier fuel pattern.
Samples K075-08 (FT006-782-0.5), and -09 (FT006-783-0.5) displayed mix fuel pattern.

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 14K075
☑ Fedex ☐ UPS ☐ GSO ☐ Others	8057 6708 2220	Recipient Cecilia Chavez
☐ EMAX Courier ☐ Client Delivery	7801 5271 3360	Date 11-12-14 Time 0930

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☐ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note: Corrections made to COC are not initialed or dated

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☑ Custody Seal ☑ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☑ plastic bag
Temperatures (Cool, ≤6 °C but not frozen): B ☑ Cooler 1 2.5 °C B ☑ Cooler 2 2.3 °C ☐ Cooler 3 ____ °C ☐ Cooler 4 ____ °C ☐ Cooler 5 ____ °C
☐ Cooler 6 ____ °C ☐ Cooler 7 ____ °C ☐ Cooler 8 ____ °C ☐ Cooler 9 ____ °C ☐ Cooler 10 ____ °C
Thermometer: A - S/N 130538505 B S/N 140253070 C - S/N ____ D - S/N ____

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.** FM 10/23/14
Note: ____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1-12	1-5, 8, 11, 14, 17, 20, 22-24, 28	D10		Ok, proceed w/ analyses
				11/12/14

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in ____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in ____	D16	Preservation not indicated in ____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in ____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	____
D10	No initial/date on corrections in COC/label	D22	____	R10	____
D11	Container count mismatch COC vs received	D23	____	R11	____
D12	Container size mismatch COC vs received	D24	____	R12	____

REVIEWS:

Sample Labeling ____ Date 11-12-14
SRF ____ Date 11/12/14
PM ____ Date 11/12/14

FedEx Express Package US Airbill

FedEx Tracking Number 8057 6708 2220

MUR3

Form ID No. 0215

Recipient's Copy

1 From

Date Nov 11 2014 [redacted]

Sender's Name James Conodi Phone 402 890-2023

Company URS GCP

Address 12120 SHAMROCK PLZ STE 100 Dept/Floor/Suite/Room

City OMAHA State NE ZIP 68154-3539

2 Your Internal Billing Reference 23446540.54210.0022AA

3 To

Recipient's Name Molly Nguyen Phone 310 618 8889

Company Emax Laboratories

Address 1835 W 205th St Dept/Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Torrance State CA ZIP 90501

☐ HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

0114548986

8057 6708 2220

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4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the FedEx Express Freight US Airbill.*

Next Business Day

☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — **NOT available for** FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☒ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. ***Fee applies.***

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. ***Fee applies.***

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg ☐ Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

☒ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

[redacted]

Total Packages 2 Total Weight ____ lbs. [redacted] Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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ORIGIN ID:CVNA (402) 952-2661
URS GCP

12120 SHAMROCK PLZ STE 100

OMAHA, NE 681543539
UNITED STATES US

SHIP DATE: 11NOV14
ACTWGT: 36.8 LB
CAD: /POS1525
DIMS: 24x14x13 IN

BILL SENDER

Part # 156297-435 RITZ 09/14

TO **MOLLY NGUYEN**
EMAX LABORTORIES
1835 W 205TH ST

TORRANCE CA 90501

(310) 618-8889 REF:
INV:
PO: DEPT:

FedEx
Express

J14221409230 1 uv

2 of 2

MPS# 0681 **7801 5271 3360**

Mstr# 8057 6708 2220 0215

WED - 12 NOV 10:30A
PRIORITY OVERNIGHT

A7 HHRA

90501
CA-US **LAX**

URS Corporation
12120 Shamrock Plaza Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

14K075

Project Name: Cannon AFB PBR
Project Number: 23446540
Project Location: Cannon Air Force Base, Clovis New Mexico
Project Manager: Mike Sonderman
Sampler(s): James Conradi, Kyle Kloewer

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260B)	TPH-DRO/ORO (8015C)	TPH-GRO (8015C)	SVOCs (8270D)	TAL Metals (7471B/6010C)	PCBs (8082A)	Pesticides (8081A)	Remarks
6	Nov 11	1035	X		FT006-0781-0.5	Soil	1	8 oz Jar		X						4° C
		↓		X	" "		2	Voa			X					MeOH
7		1045	X		FT006-0785-0.5		1	8 oz Jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
8		1055	X		FT006-782-0.5		1	8 oz Jar		X						4° C
		↓		X	" "		2	Voa			X					MeOH
9		1100	X		FT006-783-0.5		1	8 oz Jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
10		1115	X		FT006-WC1-002		2	8 oz Jar		X			X			4°C
		↓		X	" "		2	Voa			X					MeOH
11		1130	X		FT006-WC3-002		2	8 oz Jar		X			X			4°C
		↓		X	" "		2	Voa			X					MeOH
12		1140	X		FT006-WC2-002		1	8 oz Jar		X			X			4°C one jar combined
	↓	↓		X	" "	↓	2	Voa			X					MeOH

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: James Conradi	Nov 11 2014	1700	Method of Shipment: Federal Express -Air	
Received by:			Airbill Number: 8057 6708 2220	
Relinquished by:			**Lab Address:** EMAX Laboratories Inc. 1835 W. 205th Street, Torrance, CA 90501 Atten: Molly Nguyen MNguyen@emaxlabs.com (310) 618-8889 ext. 119	
Received for Laboratory by:	11/12/14	0930		

$\bar{x} = 2.3°C$

White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : GCT039

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	GPK011SB	1	NA	11/13/1404:59	11/13/1404:59	EK12030A	EK12025A	GPK011S	Method Blank
LCS1S	GPK011SL	1	NA	11/13/1405:37	11/13/1405:37	EK12031A	EK12025A	GPK011S	Lab Control Sample (LCS)
LCD1S	GPK011SC	1	NA	11/13/1406:17	11/13/1406:17	EK12032A	EK12025A	GPK011S	LCS Duplicate
FT006-0781-0.5	K075-06	1.07	5.1	11/13/1407:35	11/13/1407:35	EK12034A	EK12025A	GPK011S	Field Sample
FT006-0785-0.5	K075-07	1.08	6.2	11/13/1408:14	11/13/1408:14	EK12035A	EK12025A	GPK011S	Field Sample
FT006-782-0.5	K075-08	1.01	5.9	11/13/1409:31	11/13/1409:31	EK12037A	EK12036A	GPK011S	Field Sample
FT006-783-0.5	K075-09	1.06	5.9	11/13/1410:49	11/13/1410:49	EK12039A	EK12036A	GPK011S	Field Sample
FT006-WC1-002	K075-10	1.15	4.9	11/13/1411:28	11/13/1411:28	EK12040A	EK12036A	GPK011S	Field Sample
FT006-WC3-002	K075-11	1.06	6.1	11/13/1412:07	11/13/1412:07	EK12041A	EK12036A	GPK011S	Field Sample
FT006-WC2-002	K075-12	1.15	7.0	11/13/1412:46	11/13/1412:46	EK12042A	EK12036A	GPK011S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
DIESEL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK018SB	1	NA	11/15/1408:57	11/14/1414:42	LK14078A	LK14076A	DSK018S	Method Blank
LCS1S	DSK018SL	1	NA	11/15/1409:14	11/14/1414:42	LK14079A	LK14076A	DSK018S	Lab Control Sample (LCS)
LCD1S	DSK018SC	1	NA	11/15/1409:31	11/14/1414:42	LK14080A	LK14076A	DSK018S	LCS Duplicate
FT006-0781-0.5	K075-06	1	5.1	11/15/1410:23	11/14/1414:42	LK14083A	LK14076A	DSK018S	Field Sample
FT006-0785-0.5	K075-07	1	6.2	11/15/1410:40	11/14/1414:42	LK14084A	LK14076A	DSK018S	Field Sample
FT006-782-0.5	K075-08	1	5.9	11/15/1410:57	11/14/1414:42	LK14085A	LK14076A	DSK018S	Field Sample
FT006-783-0.5	K075-09	1	5.9	11/15/1411:14	11/14/1414:42	LK14086A	LK14076A	DSK018S	Field Sample
FT006-WC1-002	K075-10	1	4.9	11/15/1411:31	11/14/1414:42	LK14087A	LK14076A	DSK018S	Field Sample
FT006-WC3-002	K075-11	1	6.1	11/15/1412:40	11/14/1414:42	LK14091A	LK14089A	DSK018S	Field Sample
FT006-WC2-002	K075-12	1	7.0	11/15/1412:57	11/14/1414:42	LK14092A	LK14089A	DSK018S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
OIL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK018SB	1	NA	11/15/1408:57	11/14/1414:42	LK14078A	LK14076A	DSK018S	Method Blank
LCS1S	DSK018SX	1	NA	11/15/1409:48	11/14/1414:42	LK14081A	LK14076A	DSK018S	Lab Control Sample (LCS)
LCD1S	DSK018SY	1	NA	11/15/1410:05	11/14/1414:42	LK14082A	LK14076A	DSK018S	LCS Duplicate
FT006-0781-0.5	K075-06	1	5.1	11/15/1410:23	11/14/1414:42	LK14083A	LK14076A	DSK018S	Field Sample
FT006-0785-0.5	K075-07	1	6.2	11/15/1410:40	11/14/1414:42	LK14084A	LK14076A	DSK018S	Field Sample
FT006-782-0.5	K075-08	1	5.9	11/15/1410:57	11/14/1414:42	LK14085A	LK14076A	DSK018S	Field Sample
FT006-783-0.5	K075-09	1	5.9	11/15/1411:14	11/14/1414:42	LK14086A	LK14076A	DSK018S	Field Sample
FT006-WC1-002	K075-10	1	4.9	11/15/1411:31	11/14/1414:42	LK14087A	LK14076A	DSK018S	Field Sample
FT006-WC3-002	K075-11	1	6.1	11/15/1412:40	11/14/1414:42	LK14091A	LK14089A	DSK018S	Field Sample
FT006-WC2-002	K075-12	1	7.0	11/15/1412:57	11/14/1414:42	LK14092A	LK14089A	DSK018S	Field Sample

FN - Filename
% Moist - Percent Moisture

RESULTS SUMMARIES

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 07:35
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/13/14 07:35
Lab Samp ID:	K075-06	Dilution Factor:	1.07
Lab File ID:	EK12034A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.1
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.34J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.00	2.255	88.9	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 08:14
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/13/14 08:14
Lab Samp ID:	K075-07	Dilution Factor:	1.08
Lab File ID:	EK12035A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	6.2
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.72J	1.2	0.29	0.58

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.91	2.303	83.0	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 09:31
Sample ID:	FT006-782-0.5	Date Analyzed:	11/13/14 09:31
Lab Samp ID:	K075-08	Dilution Factor:	1.01
Lab File ID:	EK12037A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.82	2.147	85.0	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 10:49
Sample ID:	FT006-783-0.5	Date Analyzed:	11/13/14 10:49
Lab Samp ID:	K075-09	Dilution Factor:	1.06
Lab File ID:	EK12039A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.50J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.84	2.253	81.8	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/15/14 10:23
Lab Samp ID:	K075-06	Dilution Factor:	1
Lab File ID:	LK14083A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.1
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	45	11	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	105.4	80.6	60-130
HEXACOSANE	23.6	26.34	89.4	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/15/14 10:40
Lab Samp ID:	K075-07	Dilution Factor:	1
Lab File ID:	LK14084A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.2
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	61	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	106.6	79.7	60-130
HEXACOSANE	23.9	26.65	89.9	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-782-0.5	Date Analyzed:	11/15/14 10:57
Lab Samp ID:	K075-08	Dilution Factor:	1
Lab File ID:	LK14085A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	17	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	77.7	106.3	73.1	60-130
HEXACOSANE	27.3	26.57	103	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-783-0.5	Date Analyzed:	11/15/14 11:14
Lab Samp ID:	K075-09	Dilution Factor:	1
Lab File ID:	LK14086A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	35	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.1	106.3	80.1	60-130
HEXACOSANE	24.8	26.57	93.2	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/15/14 10:23
Lab Samp ID:	K075-06	Dilution Factor:	1
Lab File ID:	LK14083A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.1
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	440	21	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	105.4	80.6	60-130
HEXACOSANE	23.6	26.34	89.4	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/15/14 10:40
Lab Samp ID:	K075-07	Dilution Factor:	1
Lab File ID:	LK14084A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.2
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	510	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	106.6	79.7	60-130
HEXACOSANE	23.9	26.65	89.9	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-782-0.5	Date Analyzed:	11/15/14 10:57
Lab Samp ID:	K075-08	Dilution Factor:	1
Lab File ID:	LK14085A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	110	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	77.7	106.3	73.1	60-130
HEXACOSANE	27.3	26.57	103	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-783-0.5	Date Analyzed:	11/15/14 11:14
Lab Samp ID:	K075-09	Dilution Factor:	1
Lab File ID:	LK14086A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	250	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.1	106.3	80.1	60-130
HEXACOSANE	24.8	26.57	93.2	60-130

Parameter	H-C Range
ORO	C24-C36

QC SUMMARIES

METHOD BLANK

Method: 8015C

QC Measure: GPK011SB

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/13/14
Batch No.	: 14K075	Date Extracted:	11/13/14 04:59
Sample ID:	MBLK1S	Date Analyzed:	11/13/14 04:59
Lab Samp ID:	GPK011SB	Dilution Factor:	1
Lab File ID:	EK12030A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	NA
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.89	2.000	94.5	67-134

Parameter	H-C Range
GRO	C6-C10

Method: 8015C

QC Measure: DSK018SB

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID	: MBLK1S	Date Analyzed:	11/15/14 08:57
Lab Samp ID	: DSK018SB	Dilution Factor:	1
Lab File ID	: LK14078A	Matrix :	SOIL
Ext Btch ID	: DSK018S	% Moisture :	NA
Calib. Ref.	: LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.0	100.0	88.0	60-130
HEXACOSANE	25.9	25.00	104	60-130

Parameter	H-C Range
DRO	C10-C24

Method: 8015C

QC Measure: DSK018SB

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	MBLK1S	Date Analyzed:	11/15/14 08:57
Lab Samp ID:	DSK018SB	Dilution Factor:	1
Lab File ID:	LK14078A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	NA
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.0	100.0	88.0	60-130
HEXACOSANE	25.9	25.00	104	60-130

Parameter	H-C Range
ORO	C24-C36

LCS/LCSD

Method: 8015C

QC Measure: GPK011SL

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GPK011SB	GPK011SL	GPK011SC		
LAB FILE ID:	EK12030A	EK12031A	EK12032A		
DATE EXTRACTED:	11/13/1404:59	11/13/1405:37	11/13/1406:17	DATE COLLECTED:	NA
DATE ANALYZED:	11/13/1404:59	11/13/1405:37	11/13/1406:17	DATE RECEIVED:	11/13/14
PREP. BATCH:	GPK011S	GPK011S	GPK011S		
CALIB. REF:	EK12025A	EK12025A	EK12025A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	25.0	22.2	89	25.0	22.2	89	0	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.28	114	2.00	2.24	112	67-134

Method: 8015C

QC Measure: DSK018SL

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SL	DSK018SC		
LAB FILE ID:	LK14078A	LK14079A	LK14080A		
DATE EXTRACTED:	11/14/1414:42	11/14/1414:42	11/14/1414:42	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1408:57	11/15/1409:14	11/15/1409:31	DATE RECEIVED:	11/14/14
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK14076A	LK14076A	LK14076A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	500	428	86	500	462	92	8	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	84.1	84	100	90.2	90	60-130
Hexacosane	25.0	23.5	94	25.0	25.7	103	60-130

Method: 8015C

QC Measure: DSK018SX

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SX	DSK018SY		
LAB FILE ID:	LK14078A	LK14081A	LK14082A		
DATE EXTRACTED:	11/14/1414:42	11/14/1414:42	11/14/1414:42	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1408:57	11/15/1409:48	11/15/1410:05	DATE RECEIVED:	11/14/14
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK14076A	LK14076A	LK14076A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	500	492	98	500	497	99	1	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	86.7	87	100	87.5	87	60-130
Hexacosane	25.0	23.7	95	25.0	23.9	96	60-130

RAW DATA

GRO - PURGE AND TRAP

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 07:35
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/13/14 07:35
Lab Samp ID:	K075-06	Dilution Factor:	1.07
Lab File ID:	EK12034A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.1
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.34J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.00	2.255	88.9	67-134

Parameter	H-C Range
GRO	C6-C10

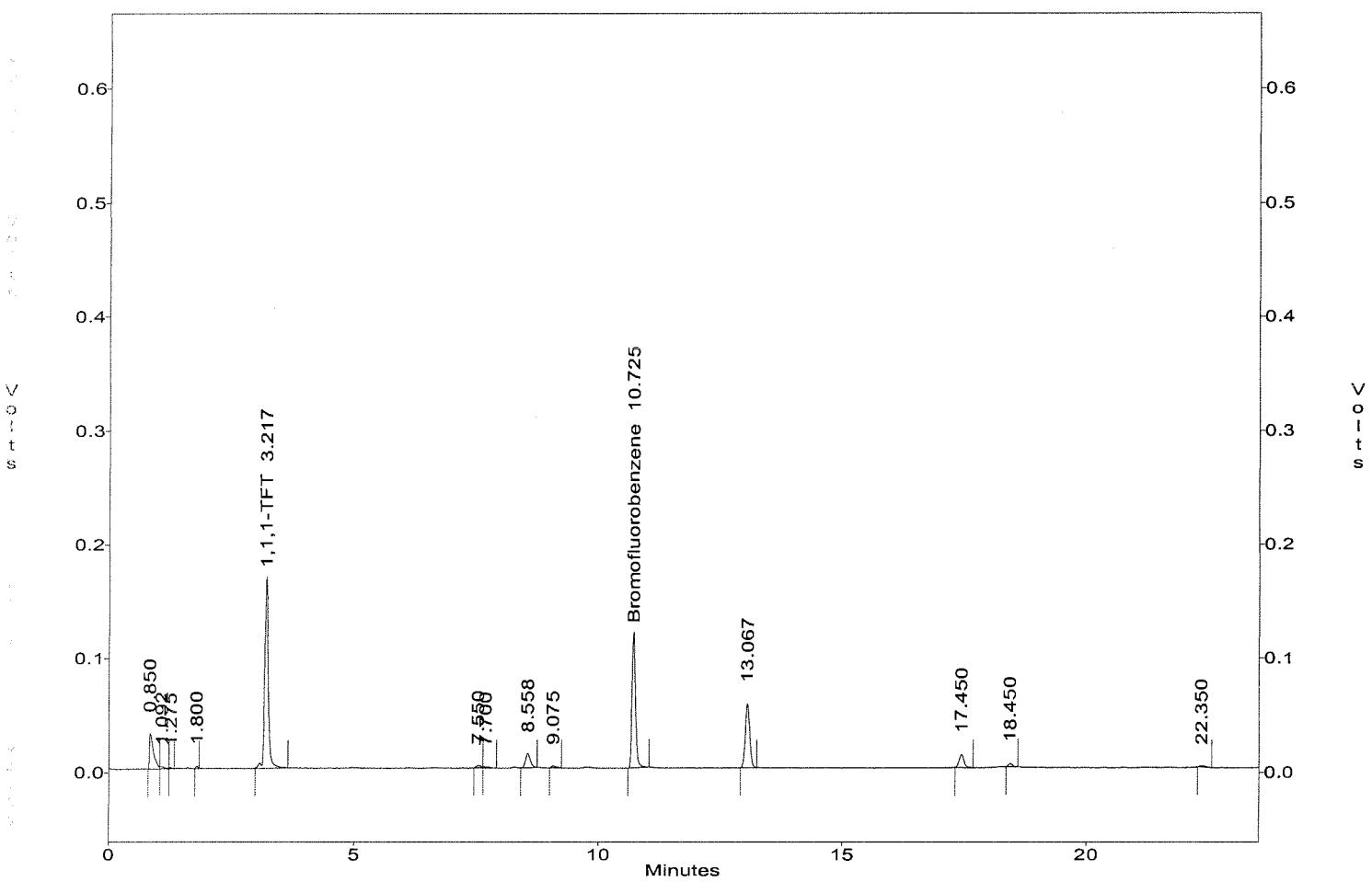
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.034
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K075-06 100uL S
Acquired : Nov 13, 2014 07:35:05
Printed : Nov 13, 2014 09:26:38
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.217	862622.0	21400.0	40.31
10	Bromofluorobenzene	10.725	594736.0	16725.9	35.56
G1	GASOLINE(TOTAL)		600531.0	28261.9	21.25
G2	GRO(C6-C10)		127248.0	21355.4	5.96
G3	GRO(2MP-124TMB)		127248.0	21297.0	5.97
G4	GRO(C5-C12)		578865.0	27928.9	20.73
G5	GRO(C6-C12)		575082.0	27890.2	20.62
G6	GRO(C5-C10)		131031.0	21396.8	6.12

c:\ezchrom\chrom\ek12\ek12.034 -- Channel A



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 08:14
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/13/14 08:14
Lab Samp ID:	K075-07	Dilution Factor:	1.08
Lab File ID:	EK12035A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	6.2
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.72J	1.2	0.29	0.58

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.91	2.303	83.0	67-134

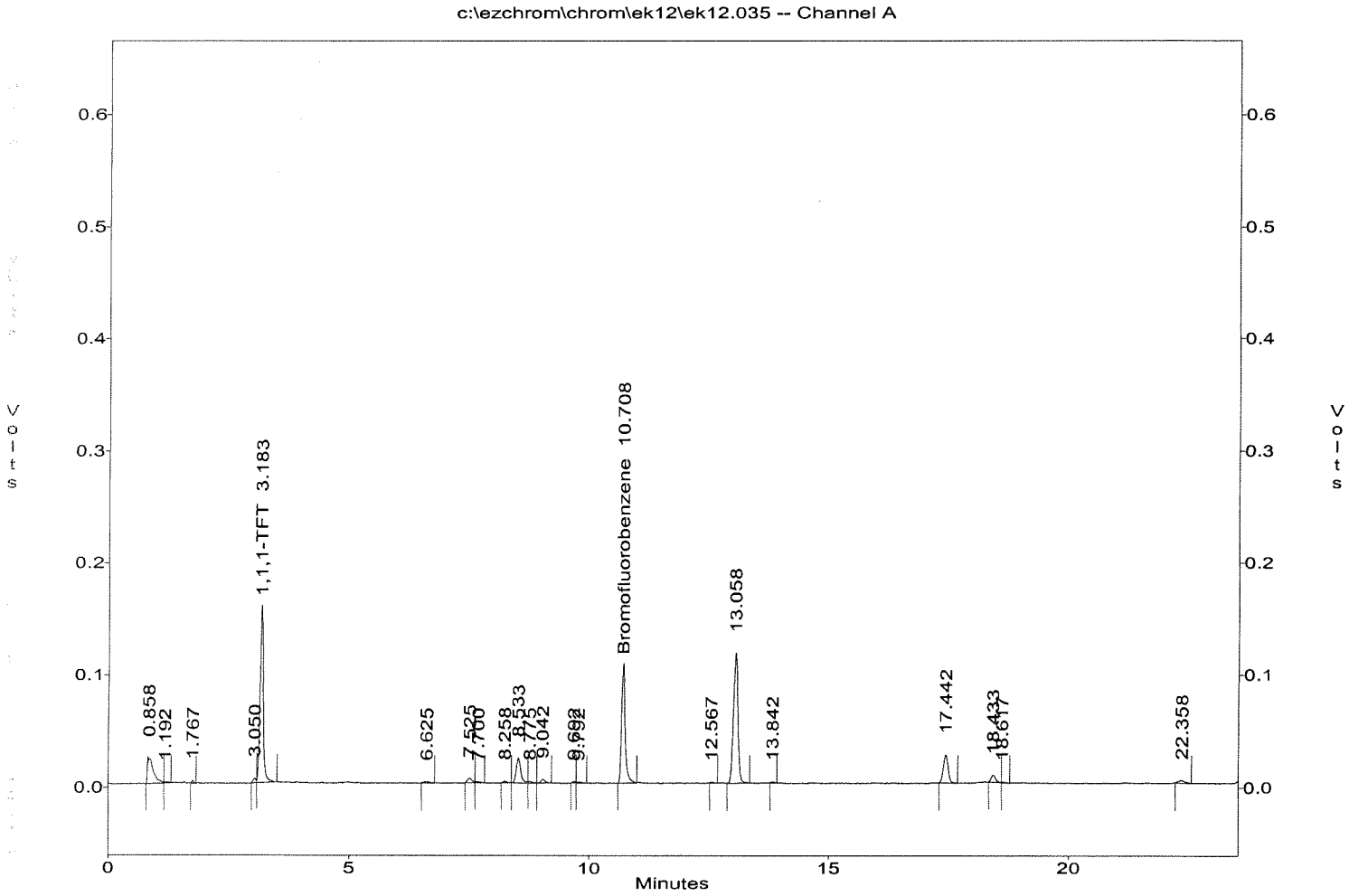
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.035
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K075-07 100uL S
Acquired : Nov 13, 2014 08:14:04
Printed : Nov 13, 2014 09:28:36
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.183	753672.0	21400.0	35.22
15	Bromofluorobenzene	10.708	555157.0	16725.9	33.19
G1	GASOLINE(TOTAL)		1259877.0	28261.9	44.58
G2	GRO(C6-C10)		267315.0	21355.4	12.52
G3	GRO(2MP-124TMB)		267315.0	21297.0	12.55
G4	GRO(C5-C12)		1238939.0	27928.9	44.36
G5	GRO(C6-C12)		1233117.0	27890.2	44.21
G6	GRO(C5-C10)		273137.0	21396.8	12.77



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 09:31
Sample ID:	FT006-782-0.5	Date Analyzed:	11/13/14 09:31
Lab Samp ID:	K075-08	Dilution Factor:	1.01
Lab File ID:	EK12037A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.82	2.147	85.0	67-134

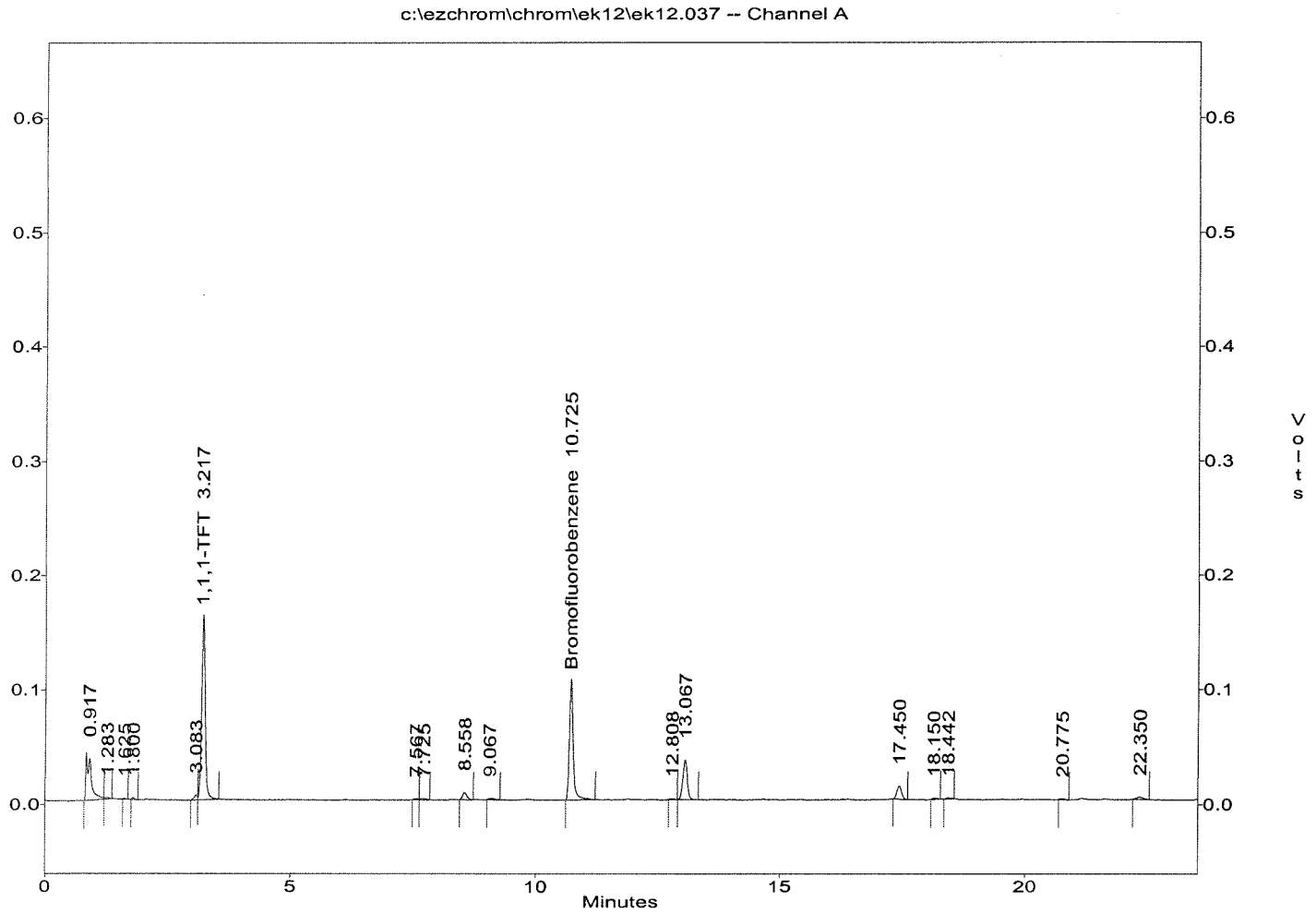
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.037
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K075-08 100uL S
Acquired : Nov 13, 2014 09:31:57
Printed : Nov 13, 2014 10:18:39
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	813890.0	21400.0	38.03
11	Bromofluorobenzene	10.725	568412.0	16725.9	33.98
G1	GASOLINE(TOTAL)		440942.0	28261.9	15.60
G2	GRO(C6-C10)		97391.0	21355.4	4.56
G3	GRO(2MP-124TMB)		97391.0	21297.0	4.57
G4	GRO(C5-C12)		415735.0	27928.9	14.89
G5	GRO(C6-C12)		407727.0	27890.2	14.62
G6	GRO(C5-C10)		105399.0	21396.8	4.93



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 10:49
Sample ID:	FT006-783-0.5	Date Analyzed:	11/13/14 10:49
Lab Samp ID:	K075-09	Dilution Factor:	1.06
Lab File ID:	EK12039A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.50J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.84	2.253	81.8	67-134

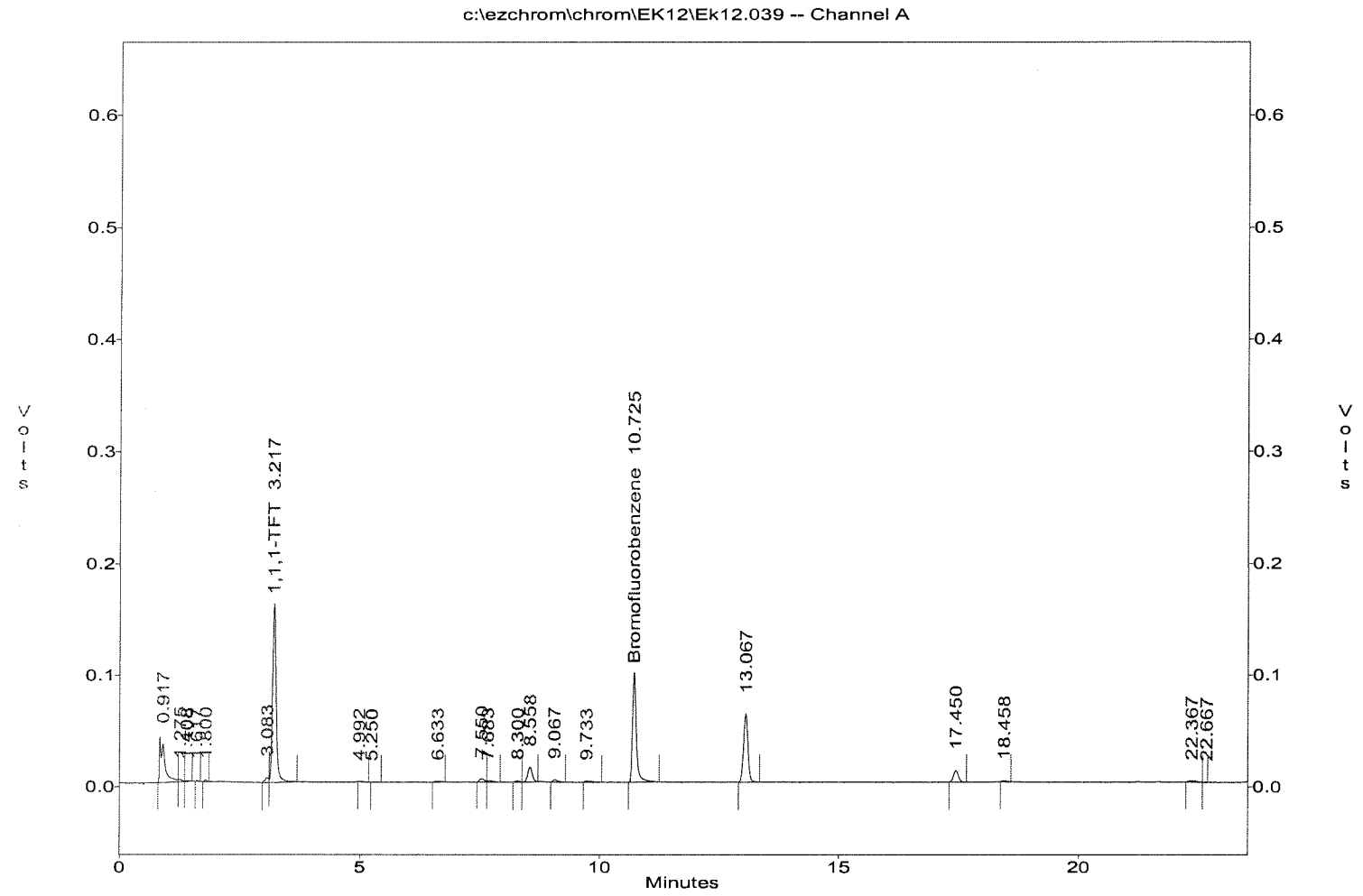
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.039
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K075-09 100uL S
Acquired : Nov 13, 2014 10:49:41
Printed : Nov 13, 2014 11:13:13
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	825161.0	21400.0	38.56
17	Bromofluorobenzene	10.725	547103.0	16725.9	32.71
G1	GASOLINE(TOTAL)		691010.0	28261.9	24.45
G2	GRO(C6-C10)		189263.0	21355.4	8.86
G3	GRO(2MP-124TMB)		195162.0	21297.0	9.16
G4	GRO(C5-C12)		675806.0	27928.9	24.20
G5	GRO(C6-C12)		659624.0	27890.2	23.65
G6	GRO(C5-C10)		205445.0	21396.8	9.60



QC SUMMARIES

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/13/14
Batch No.	: 14K075	Date Extracted:	11/13/14 04:59
Sample ID:	MBLK1S	Date Analyzed:	11/13/14 04:59
Lab Samp ID:	GPK011SB	Dilution Factor:	1
Lab File ID:	EK12030A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	NA
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.89	2.000	94.5	67-134

Parameter	H-C Range
GRO	C6-C10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GPK011SB	GPK011SL	GPK011SC		
LAB FILE ID:	EK12030A	EK12031A	EK12032A		
DATE EXTRACTED:	11/13/1404:59	11/13/1405:37	11/13/1406:17	DATE COLLECTED:	NA
DATE ANALYZED:	11/13/1404:59	11/13/1405:37	11/13/1406:17	DATE RECEIVED:	11/13/14
PREP. BATCH:	GPK011S	GPK011S	GPK011S		
CALIB. REF:	EK12025A	EK12025A	EK12025A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	25.0	22.2	89	25.0	22.2	89	0	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.28	114	2.00	2.24	112	67-134

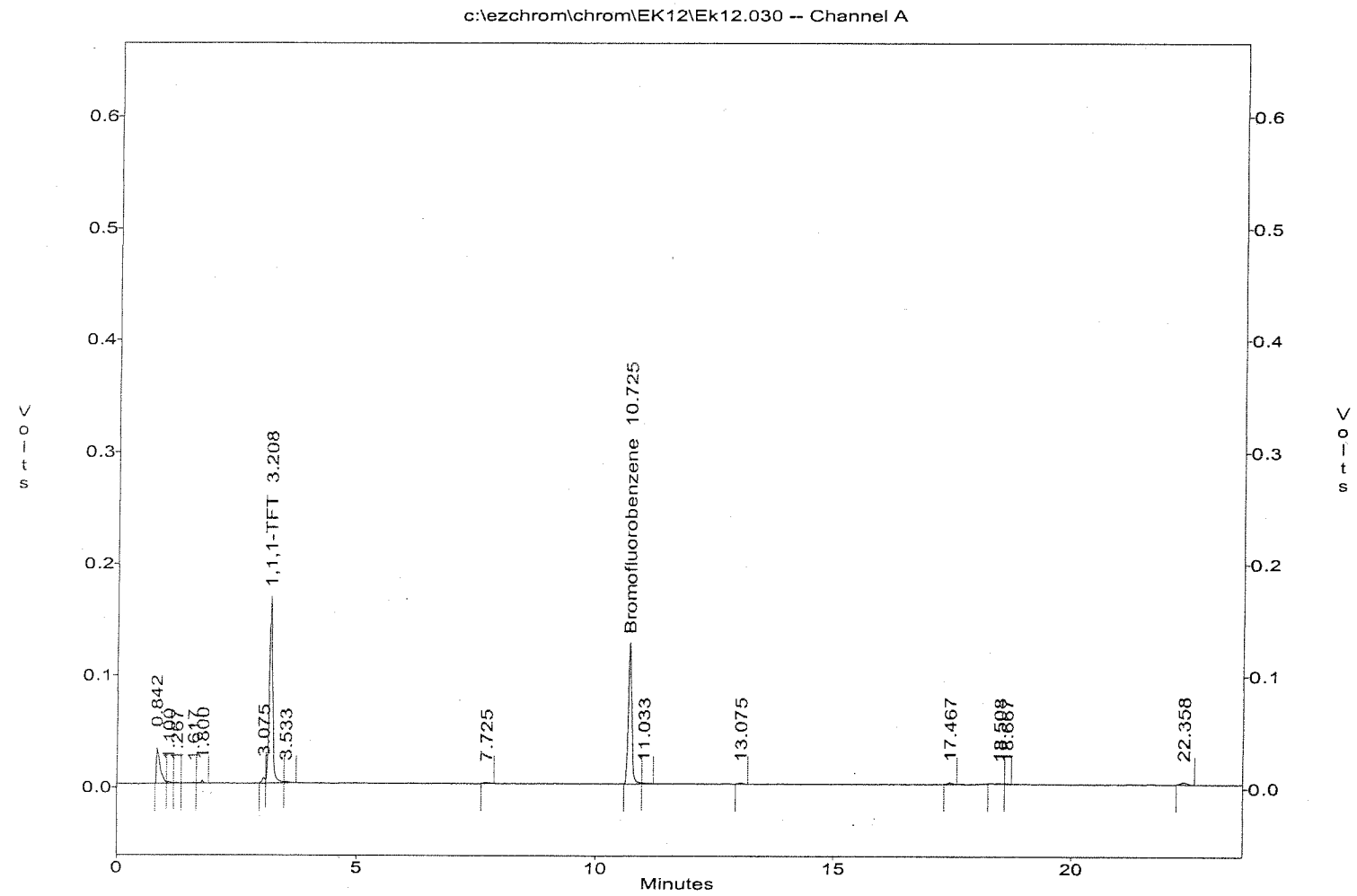
QC DATA

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.030
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : GPK011SB 100uL S
Acquired : Nov 13, 2014 04:59:00
Printed : Nov 13, 2014 05:22:32
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.208	834950.0	21400.0	39.02
10	Bromofluorobenzene	10.725	631901.0	16725.9	37.78
G1	GASOLINE(TOTAL)		108752.0	28261.9	3.85
G2	GRO(C6-C10)		43362.0	21355.4	2.03
G3	GRO(2MP-124TMB)		49273.0	21297.0	2.31
G4	GRO(C5-C12)		75467.0	27928.9	2.70
G5	GRO(C6-C12)		65086.0	27890.2	2.33
G6	GRO(C5-C10)		53743.0	21396.8	2.51

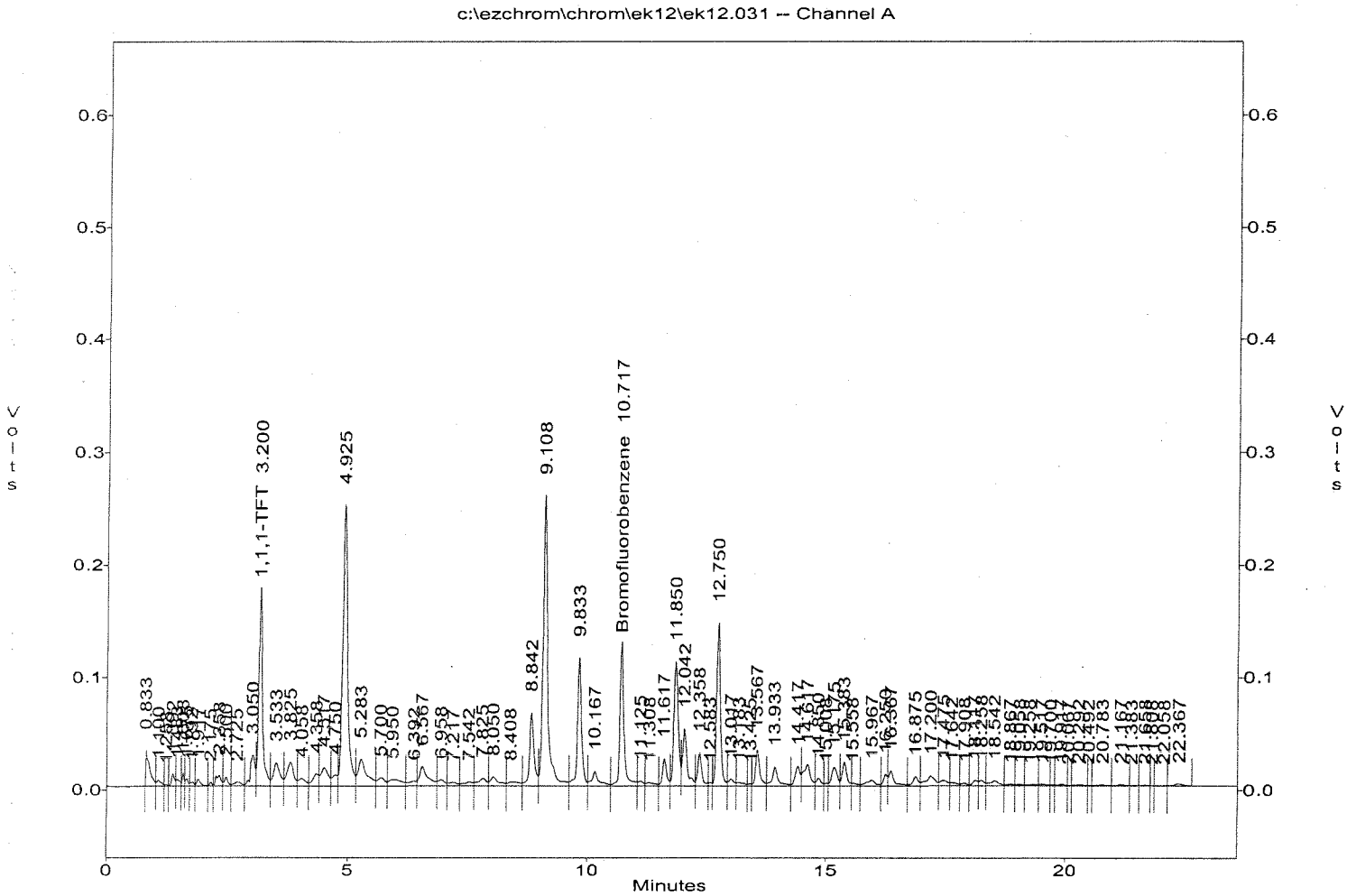


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.031
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : GPK011SL 100uL S
Acquired : Nov 13, 2014 05:37:57
Printed : Nov 13, 2014 09:23:02
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
15	1,1,1-TFT	3.200	957901.0	21400.0	44.76
38	Bromofluorobenzene	10.717	761505.0	16725.9	45.53
G1	GASOLINE(TOTAL)		11500837.0	28261.9	406.94
G2	GRO(C6-C10)		9484944.0	21355.4	444.15
G3	GRO(2MP-124TMB)		9500977.0	21297.0	446.12
G4	GRO(C5-C12)		11309115.0	27928.9	404.93
G5	GRO(C6-C12)		11194110.0	27890.2	401.36
G6	GRO(C5-C10)		9599949.0	21396.8	448.66



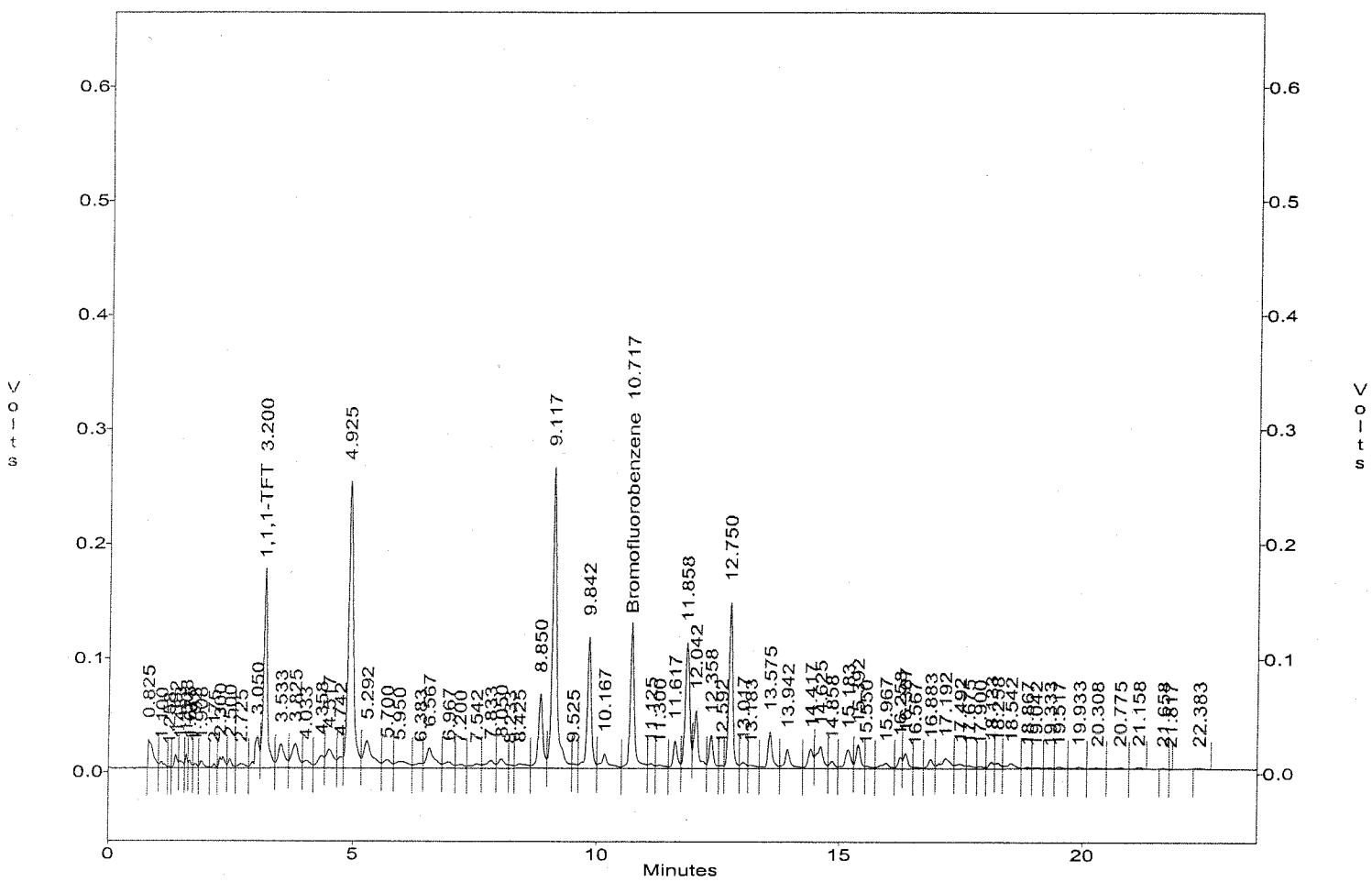
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.032
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : GPK011SC 100uL S
Acquired : Nov 13, 2014 06:17:00
Printed : Nov 13, 2014 06:40:32
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
15	1,1,1-TFT	3.200	946491.0	21400.0	44.23
40	Bromofluorobenzene	10.717	750846.0	16725.9	44.89
G1	GASOLINE(TOTAL)		11445785.0	28261.9	404.99
G2	GRO(C6-C10)		9466406.0	21355.4	443.28
G3	GRO(2MP-124TMB)		9491074.0	21297.0	445.65
G4	GRO(C5-C12)		11277539.0	27928.9	403.80
G5	GRO(C6-C12)		11157408.0	27890.2	400.05
G6	GRO(C5-C10)		9586537.0	21396.8	448.04

c:\ezchrom\chrom\EK12\Ek12.032 -- Channel A



INITIAL CALIBRATIONS

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EE02002A 05/02/14 11:39
LFID & Datetime: EE02003A 05/02/14 12:18
LFID & Datetime: EE02004A 05/02/14 12:57
LFID & Datetime: EE02005A 05/02/14 13:36
LFID & Datetime: EE02006A 05/02/14 14:15
LFID & Datetime: EE02007A 05/02/14 14:54
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.50X	5.00X	25.00X	50.00X	75.00X	MEAN	%RSD
Gasoline(TOTAL)	20.00	27801	27719	28723	28893	27835	28600	28261.9	1.9
GRO(C6-C10)	20.00	21440	21614	22072	21470	20441	21095	21355.4	2.6
GRO(2MP-124TMB)	20.00	21440	21614	21962	21379	20360	21028	21297.0	2.6
GRO(C5-C12)	20.00	27412	27451	28534	28563	27415	28199	27928.9	2.0
GRO(C6-C12)	20.00	27293	27392	28506	28556	27411	28184	27890.2	2.1
GRO(C5-C10)	20.00	21558	21673	22100	21481	20451	21117	21396.8	2.6
SURROGATE	**X**	**1.00X**	**2.00X**	**3.00X**	**4.00X**	**5.00X**	**8.00X**	**MEAN**	**%RSD**
Bromofluorobenzene	10.00	14346	14383	15057	18957	18920	18692	16725.9	14.0
1,1,1-Trifluorotoluene	10.00	21580	20507	21018	21584	21776	21933	21400.0	2.5

VG39E02.MET

AA 05/05/14

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EE02002A 05/02/14 11:39
LFID & Datetime: EE02003A 05/02/14 12:18
LFID & Datetime: EE02004A 05/02/14 12:57
LFID & Datetime: EE02005A 05/02/14 13:36
LFID & Datetime: EE02006A 05/02/14 14:15
LFID & Datetime: EE02007A 05/02/14 14:54

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.5X	5.0X	25.0X	50.0X	75.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Gasoline(TOTAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C6-C10)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(2MP-124TMB)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C5-C12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C6-C12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C5-C10)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SURROGATE	**1.0X**	**2.0X**	**3.0X**	**4.0X**	**5.0X**	**8.0X**	**RT**	**FROM**	**TO**	**WIDTH**
Bromofluorobenzene	10.733	10.725	10.725	10.725	10.725	10.717	10.725	10.682	10.768	0.043
1,1,1-Trifluorotoluene	3.217	3.217	3.217	3.208	3.208	3.208	3.212	3.088	3.336	0.124

VG39E02.MET

AA
05/05/12

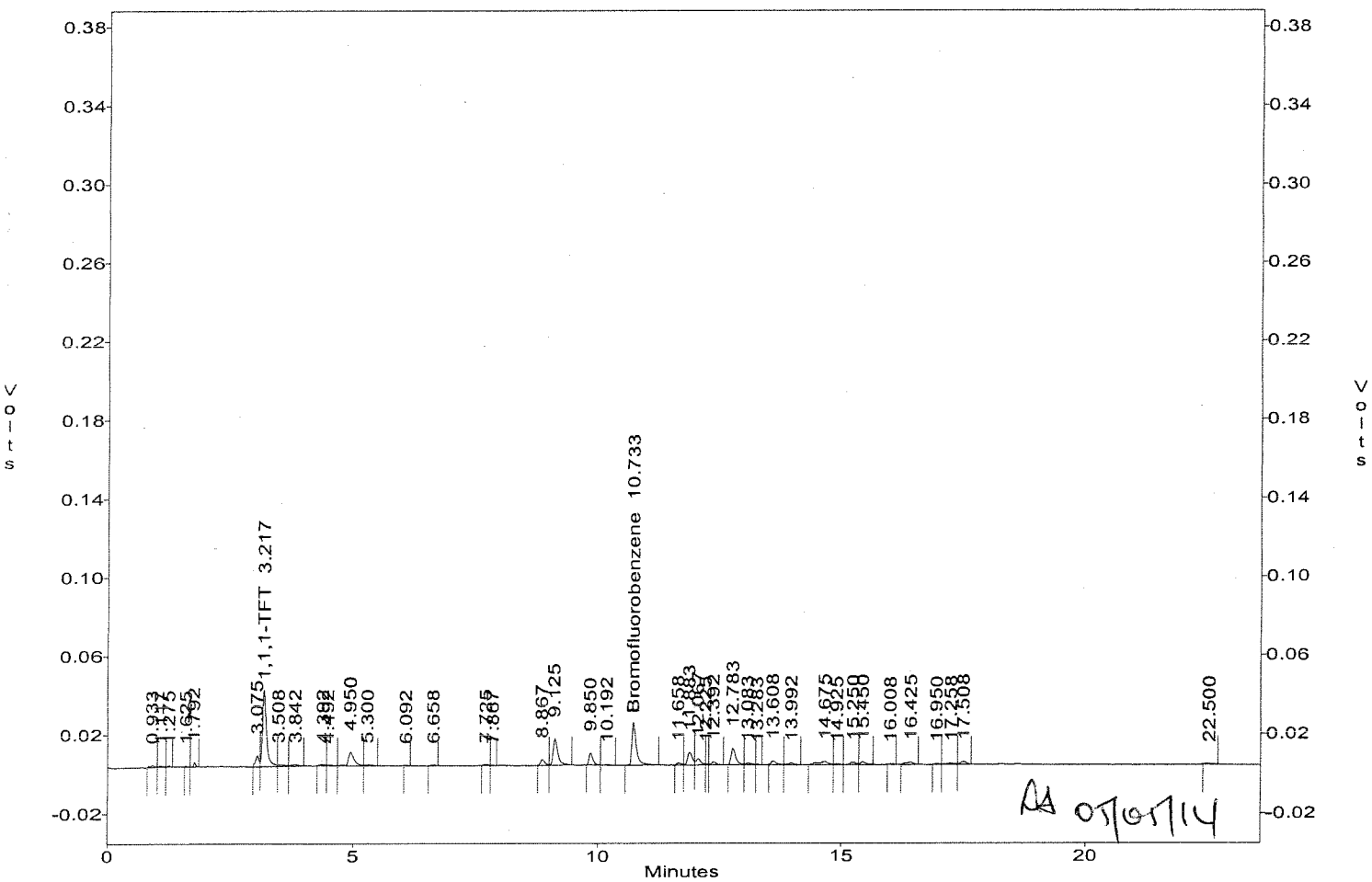
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.002
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0201 20/10
Acquired : May 02, 2014 11:39:55
Printed : May 05, 2014 09:31:15
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	215802.0 ✓	21400.0	10.00
22	Bromofluorobenzene	10.733	143459.0 ✓	16725.9	10.00
G1	GASOLINE(TOTAL)		556018.0 ✓	28261.9	20.00
G2	GRO(C6-C10)		428798.0 ✓	21355.4	20.00
G3	GRO(2MP-124TMB)		428798.0 ✓	21297.0	20.00
G4	GRO(C5-C12)		548233.0 ✓	27928.9	20.00
G5	GRO(C6-C12)		545864.0 ✓	27890.2	20.00
G6	GRO(C5-C10)		431167.0 ✓	21396.8	20.00

c:\ezchrom\chrom\ee02\ee02.002 -- Channel A

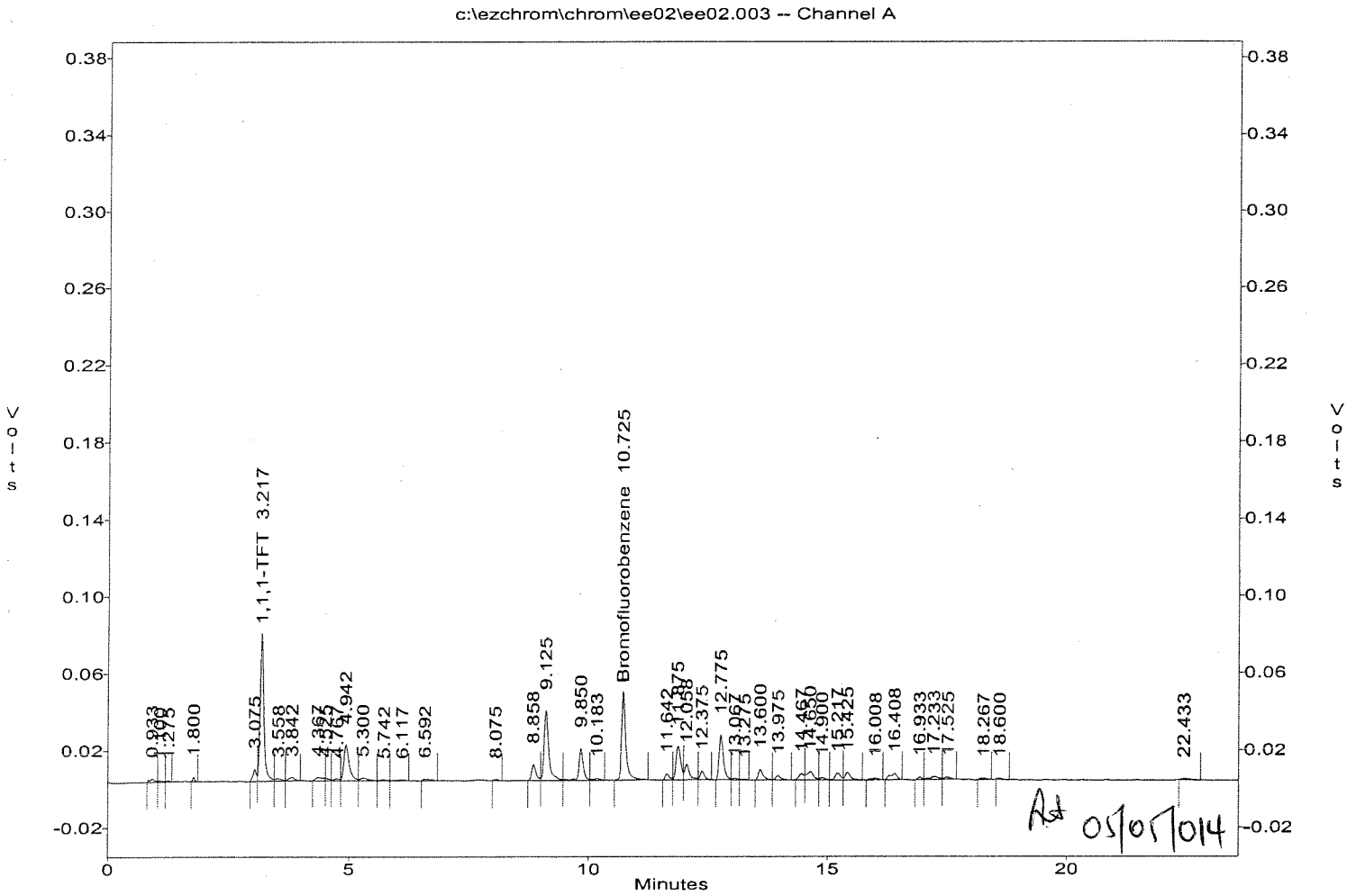


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.003
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0202 50/20
Acquired : May 02, 2014 12:18:52
Printed : May 05, 2014 09:31:23
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	410145.0	21400.0	20.00
22	Bromofluorobenzene	10.725	287659.0	16725.9	20.00
G1	GASOLINE(TOTAL)		1385955.0	28261.9	50.00
G2	GRO(C6-C10)		1080683.0	21355.4	50.00
G3	GRO(2MP-124TMB)		1080683.0	21297.0	50.00
G4	GRO(C5-C12)		1372563.0	27928.9	50.00
G5	GRO(C6-C12)		1369606.0	27890.2	50.00
G6	GRO(C5-C10)		1083640.0	21396.8	50.00

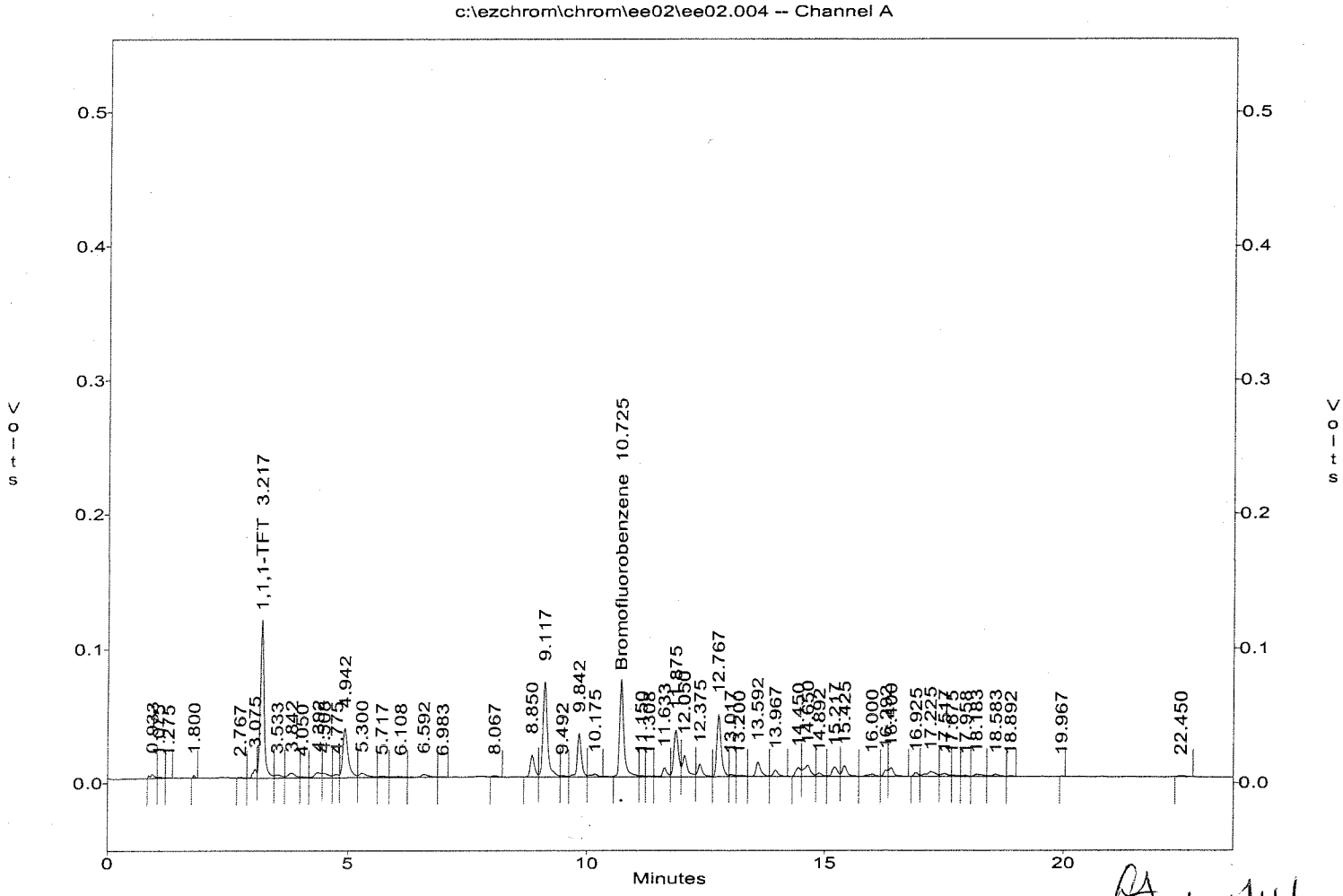


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.004
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0203 100/30
Acquired : May 02, 2014 12:57:53
Printed : May 05, 2014 09:31:56
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	630554.0	21400.0	30.00
26	Bromofluorobenzene	10.725	451712.0	16725.9	30.00
G1	GASOLINE(TOTAL)		2872293.0	28261.9	100.00
G2	GRO(C6-C10)		2207233.0	21355.4	100.00
G3	GRO(2MP-124TMB)		2196184.0	21297.0	100.00
G4	GRO(C5-C12)		2853376.0	27928.9	100.00
G5	GRO(C6-C12)		2850571.0	27890.2	100.00
G6	GRO(C5-C10)		2210038.0	21396.8	100.00



RS 05/05/14

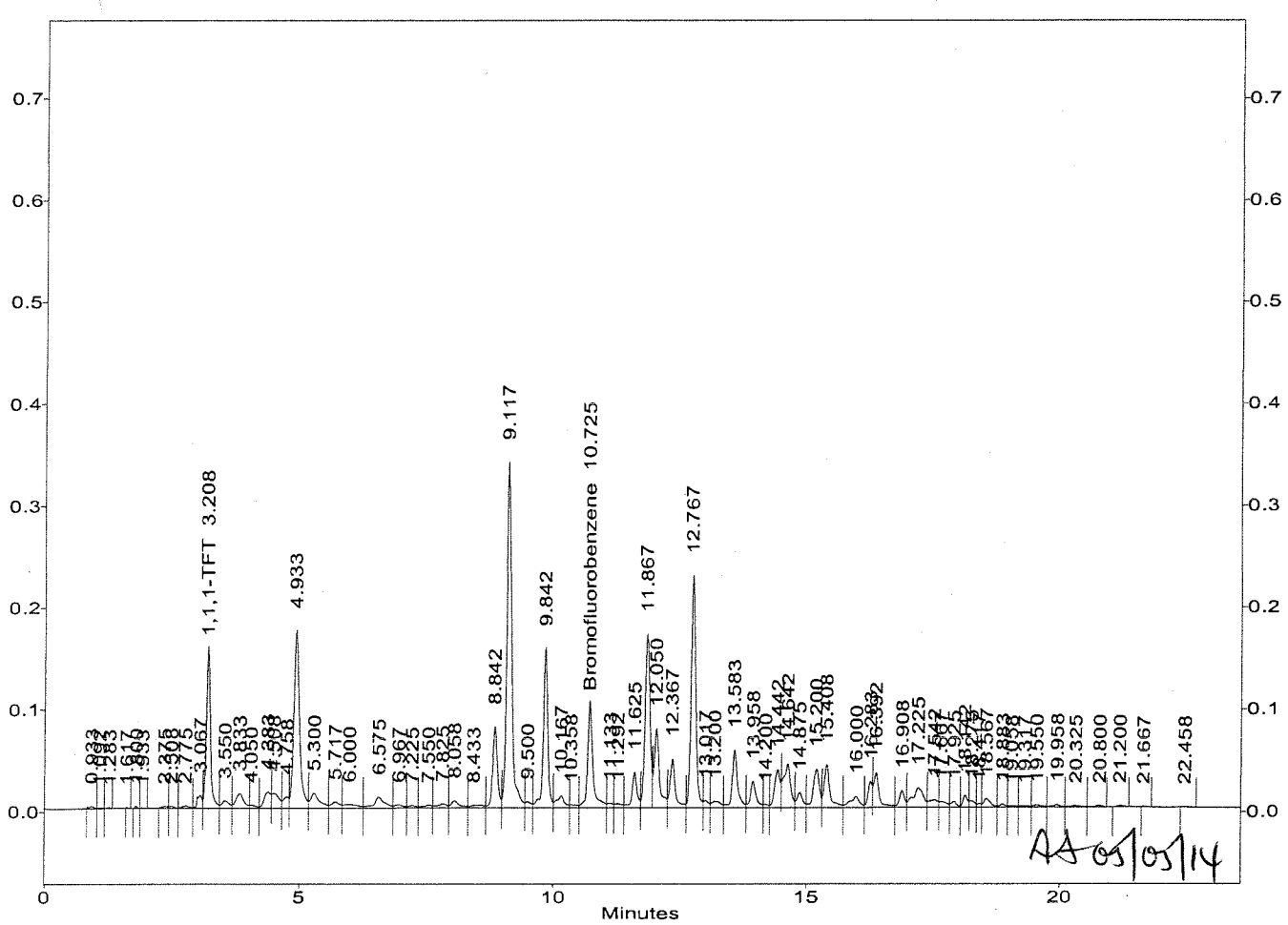
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.005
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0204 500/40
Acquired : May 02, 2014 13:36:49
Printed : May 05, 2014 09:32:30
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.208	863365.0	21400.0	40.00
35	Bromofluorobenzene	10.725	758288.0	16725.9	40.00
G1	GASOLINE(TOTAL)		14446530.0	28261.9	500.00
G2	GRO(C6-C10)		10735124.0	21355.4	500.00
G3	GRO(2MP-124TMB)		10689338.0	21297.0	500.00
G4	GRO(C5-C12)		14281643.0	27928.9	500.00
G5	GRO(C6-C12)		14278004.0	27890.2	500.00
G6	GRO(C5-C10)		10740735.0	21396.8	500.00

c:\ezchrom\chrom\ee02\ee02.005 -- Channel A



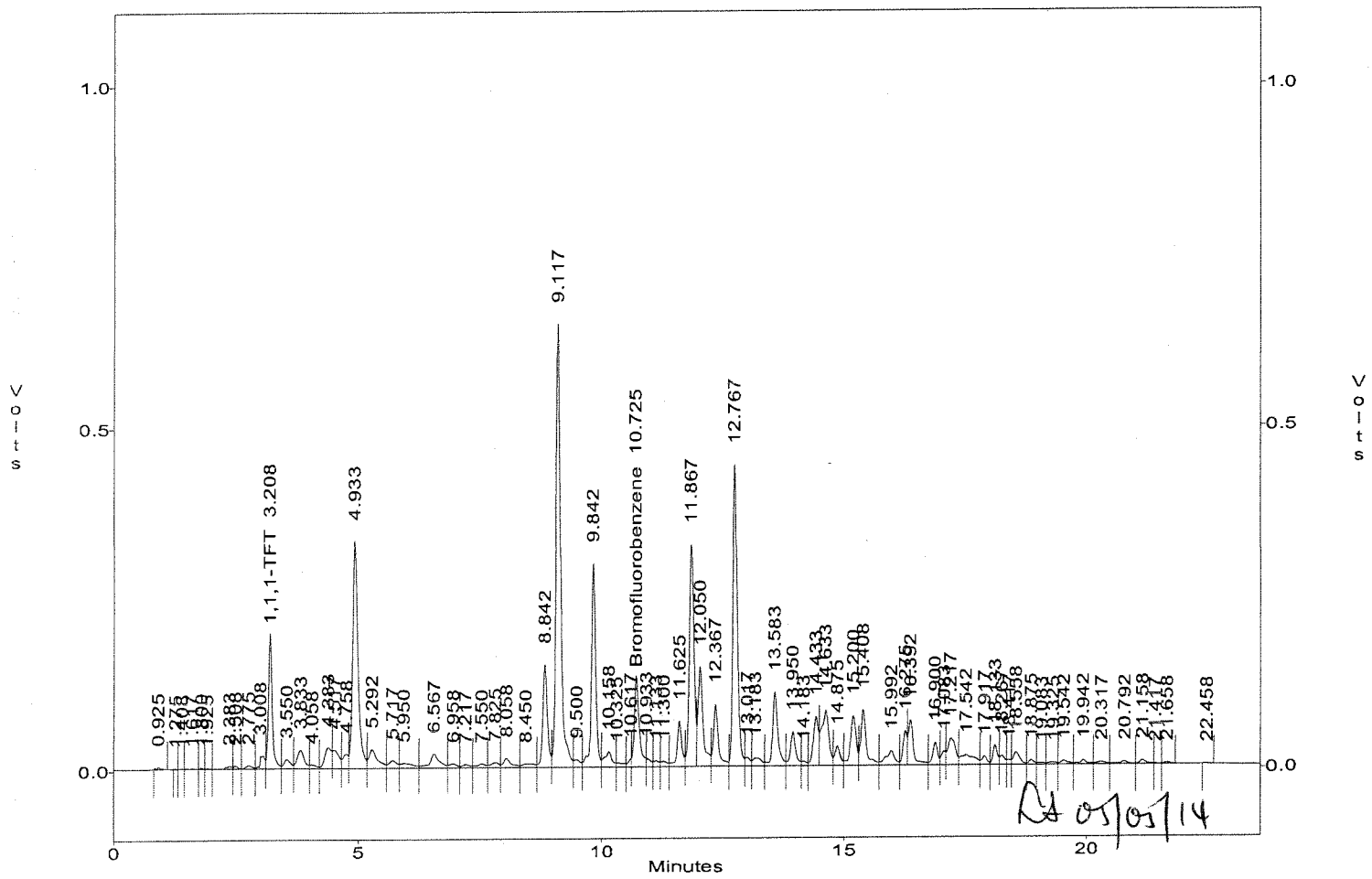
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.006
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0205 1000/50
Acquired : May 02, 2014 14:15:41
Printed : May 05, 2014 09:34:01
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.208	1088814.0	21400.0	50.00
36	Bromofluorobenzene	10.725	946013.0	16725.9	50.00
G1	GASOLINE(TOTAL)		27834716.0	28261.9	1000.00
G2	GRO(C6-C10)		20441208.0	21355.4	1000.00
G3	GRO(2MP-124TMB)		20359526.0	21297.0	1000.00
G4	GRO(C5-C12)		27414706.0	27928.9	1000.00
G5	GRO(C6-C12)		27410822.0	27890.2	1000.00
G6	GRO(C5-C10)		20451276.0	21396.8	1000.00

c:\ezchrom\chrom\ee02\ee02.006 -- Channel A



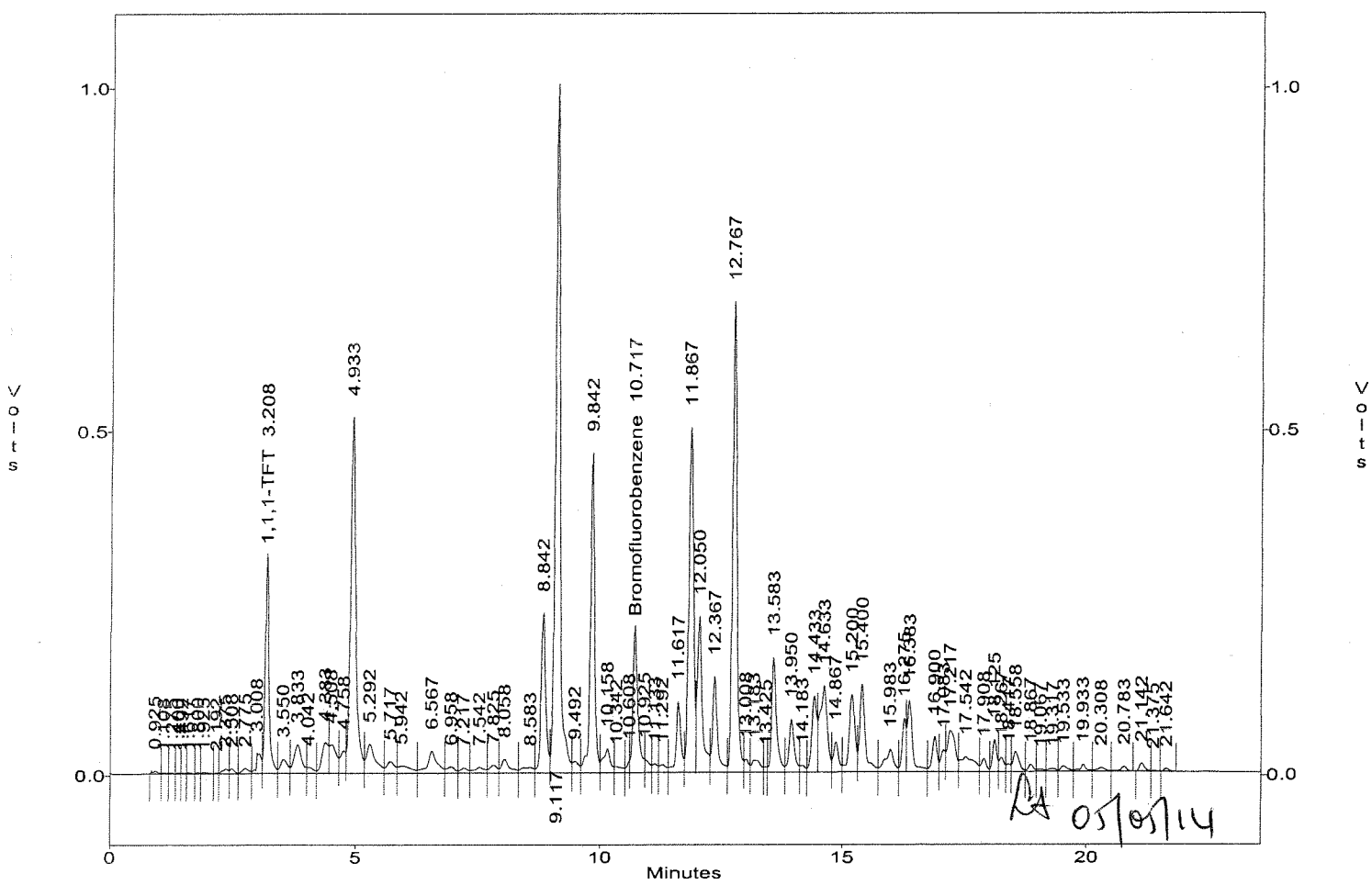
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.007
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0206 1500/80
Acquired : May 02, 2014 14:54:32
Printed : May 05, 2014 09:34:29
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.208	1754672.0	21400.0	80.00
39	Bromofluorobenzene	10.717	1495364.0	16725.9	80.00
G1	GASOLINE(TOTAL)		42900720.0	28261.9	1500.00
G2	GRO(C6-C10)		31643026.0	21355.4	1500.00
G3	GRO(2MP-124TMB)		31542302.0	21297.0	1500.00
G4	GRO(C5-C12)		42297752.0	27928.9	1500.00
G5	GRO(C6-C12)		42275336.0	27890.2	1500.00
G6	GRO(C5-C10)		31675030.0	21396.8	1500.00

c:\ezchrom\chrom\ee02\ee02.007 -- Channel A



05/05/14

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EE02008A 05/02/2014 15:33
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	13053470	461.88	-8		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10134937	474.58	-5		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10247177	481.16	-4		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	12590737	450.82	-10		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	12493550	447.95	-10		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10304659	481.60	-4		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.717	10.674	10.760	40.0	16725.9	696321	41.63	4		20
1,1,1-Trifluorotoluene	3.208	3.084	3.332	40.0	21400.0	954586	44.61	12		20

VG39E02.MET

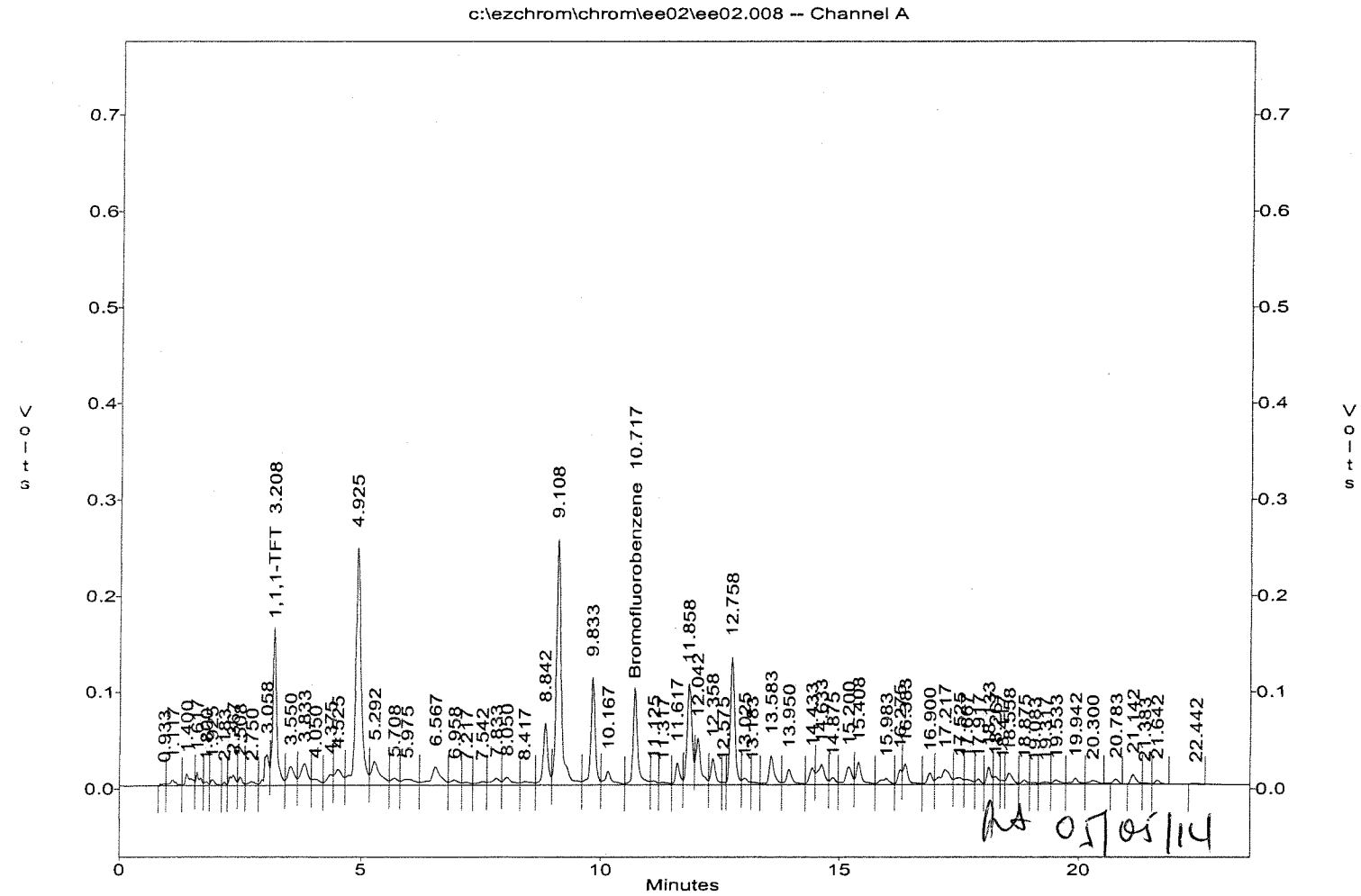
AS
05/05/14

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.008
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : IVG39E02001 500/40
Acquired : May 02, 2014 15:33:24
Printed : May 05, 2014 09:35:55
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.208	954586.0	21400.0	44.61
33	Bromofluorobenzene	10.717	696321.0	16725.9	41.63
G1	GASOLINE(TOTAL)		13053470.0	28261.9	461.88
G2	GRO(C6-C10)		10134937.0	21355.4	474.58
G3	GRO(2MP-124TMB)		10247177.0	21297.0	481.16
G4	GRO(C5-C12)		12590737.0	27928.9	450.81
G5	GRO(C6-C12)		12493550.0	27890.2	447.95
G6	GRO(C5-C10)		10304659.0	21396.8	481.60

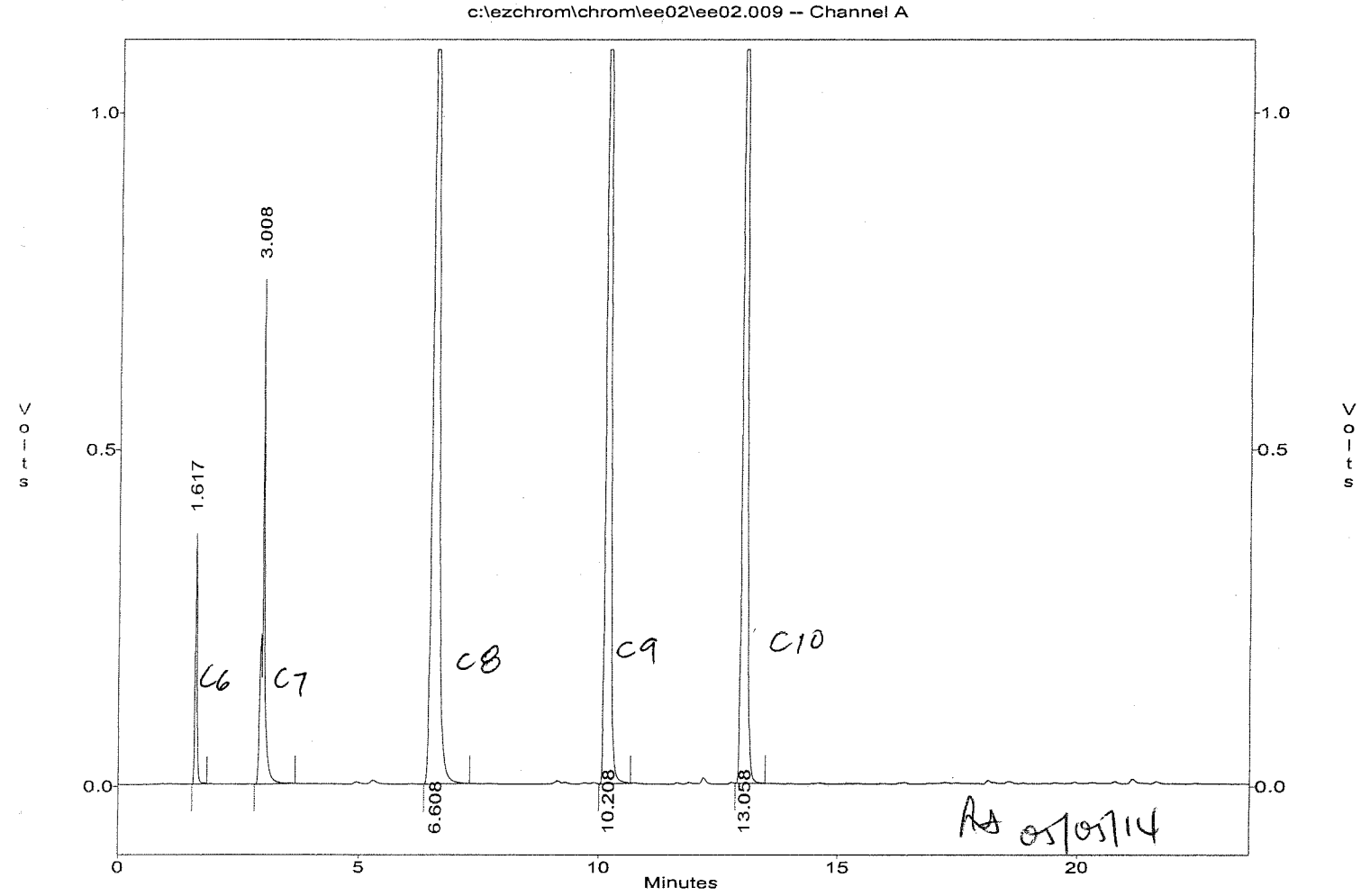


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.009
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : GRO 1UL
Acquired : May 02, 2014 16:12:18
Printed : May 05, 2014 09:36:36
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		32746974.0	28261.9	1158.70
G2	GRO(C6-C10)		22835384.0	21355.4	1069.30
G3	GRO(2MP-124TMB)		23874628.0	21297.0	1121.03
G4	GRO(C5-C12)		32746974.0	27928.9	1172.51
G5	GRO(C6-C12)		32746974.0	27890.2	1174.14
G6	GRO(C5-C10)		23874628.0	21396.8	1115.80

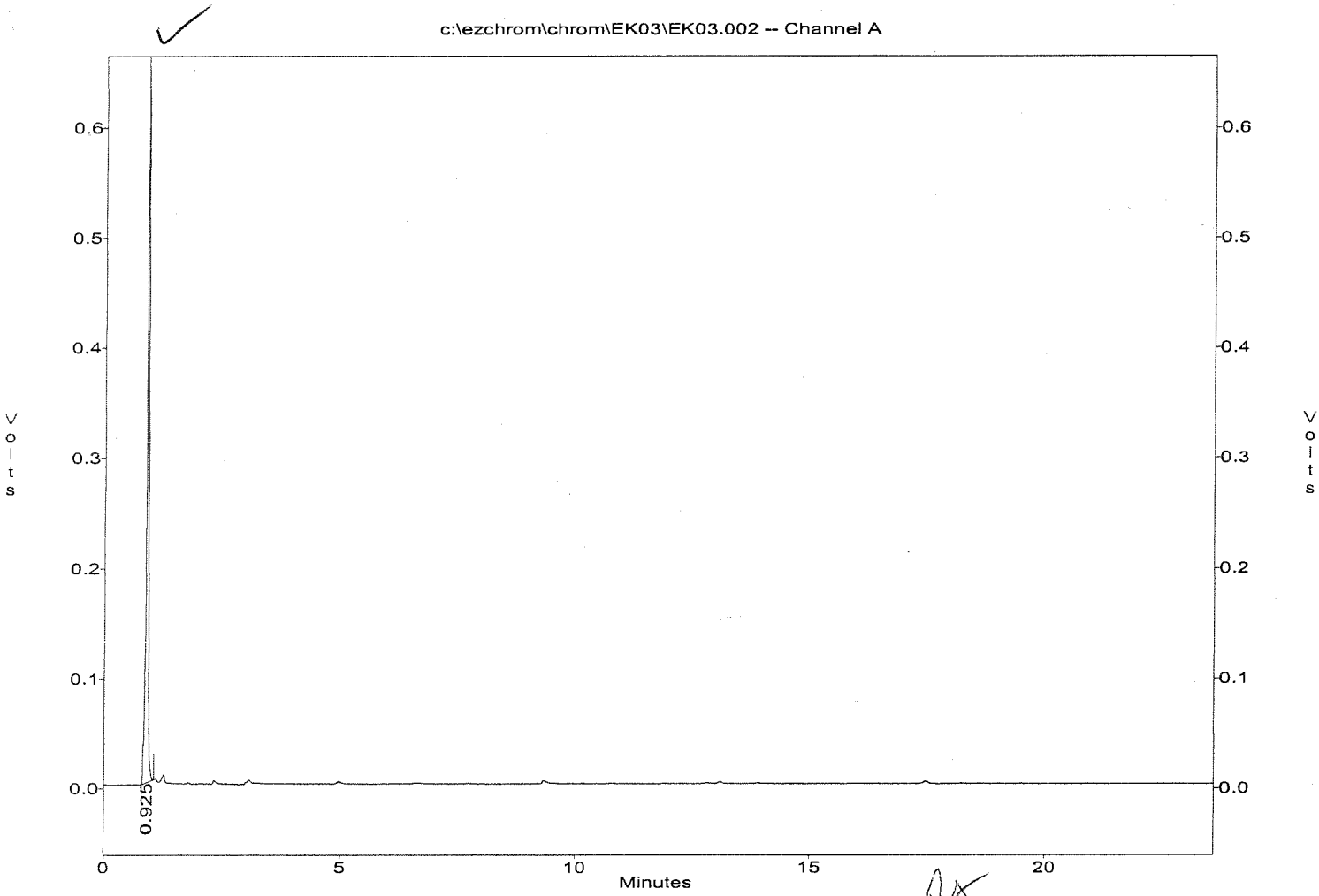


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK03\EK03.002
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : N-BUTANE 100uL
Acquired : Nov 03, 2014 10:53:47
Printed : Nov 04, 2014 10:42:29
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.225	0.0	0.0	0.00
--	Bromofluorobenzene	10.742	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		0.0	28261.9	0.00
G2	GRO(C6-C10)		0.0	21355.4	0.00
G3	GRO(2MP-124TMB)		0.0	21297.0	0.00
G4	GRO(C5-C12)		0.0	27928.9	0.00
G5	GRO(C6-C12)		0.0	27890.2	0.00
G6	GRO(C5-C10)		0.0	21396.8	0.00



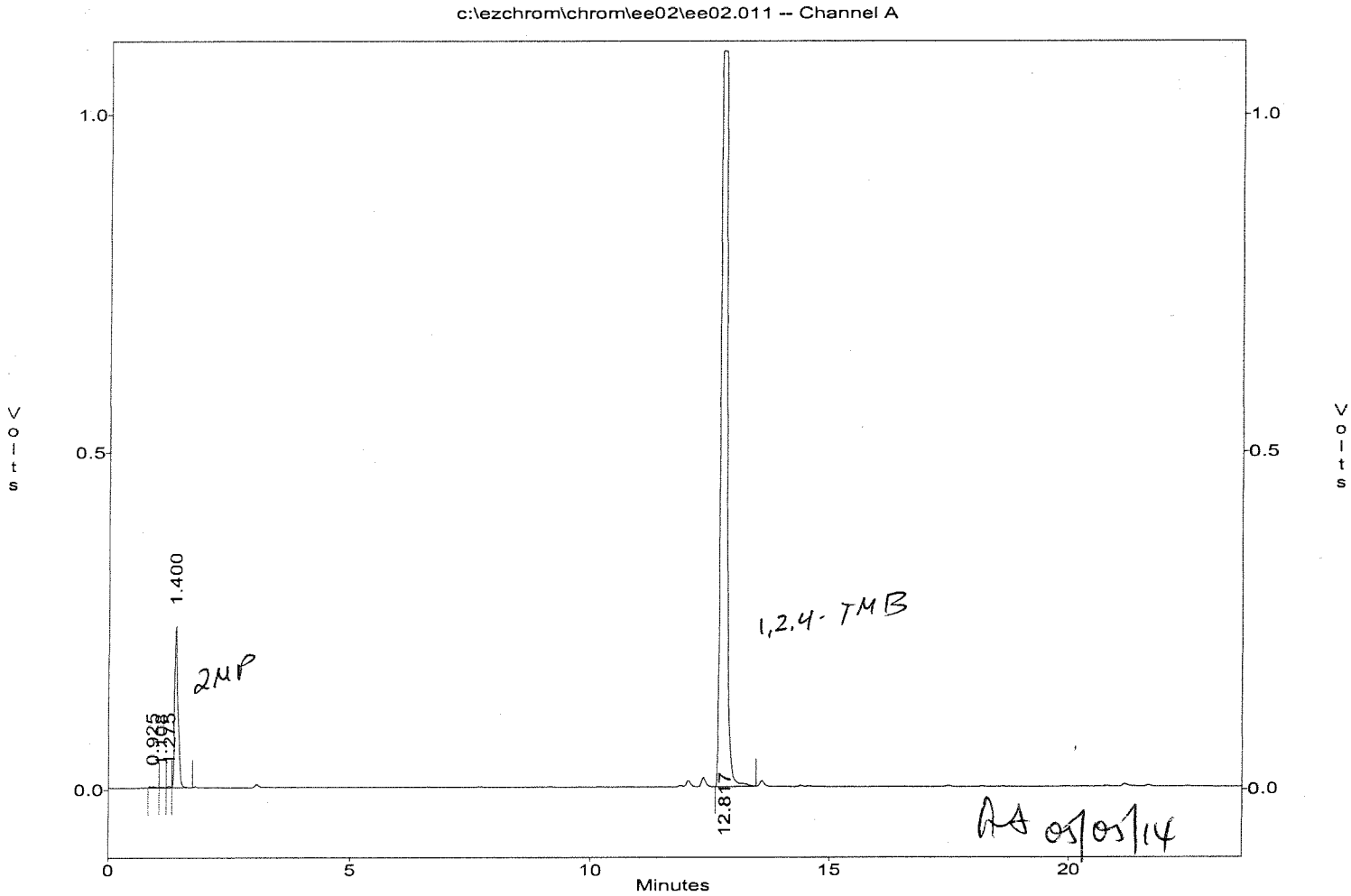
AX 11/04/14

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.011
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 2MP/1,2,4-TMB
Acquired : May 02, 2014 17:30:38
Printed : May 05, 2014 09:36:43
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		11435951.0	28261.9	404.64
G2	GRO(C6-C10)		10280670.0	21355.4	481.41
G3	GRO(2MP-124TMB)		11417507.0	21297.0	536.11
G4	GRO(C5-C12)		11428096.0	27928.9	409.19
G5	GRO(C6-C12)		10280670.0	27890.2	368.61
G6	GRO(C5-C10)		11428096.0	21396.8	534.10



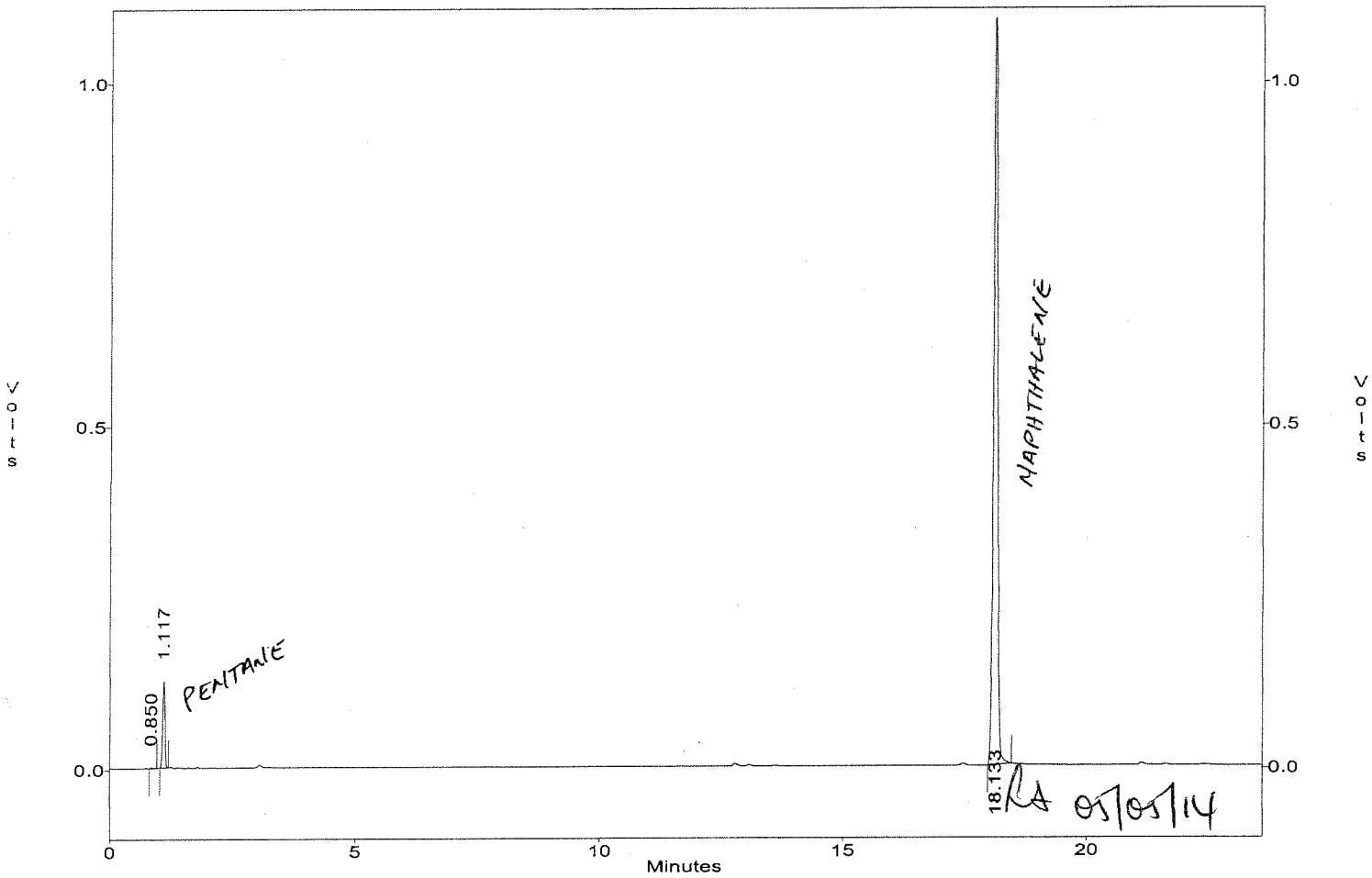
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.013
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : PENTANE/NAPHTHALENE
Acquired : May 02, 2014 18:48:50
Printed : May 05, 2014 09:37:29
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		7086992.0	28261.9	250.76
G2	GRO(C6-C10)		0.0	21355.4	0.00
G3	GRO(2MP-124TMB)		0.0	21297.0	0.00
G4	GRO(C5-C12)		6645801.0	27928.9	237.95
G5	GRO(C6-C12)		6645801.0	27890.2	238.28
G6	GRO(C5-C10)		0.0	21396.8	0.00

c:\ezchrom\chrom\ee02\ee02.013 -- Channel A

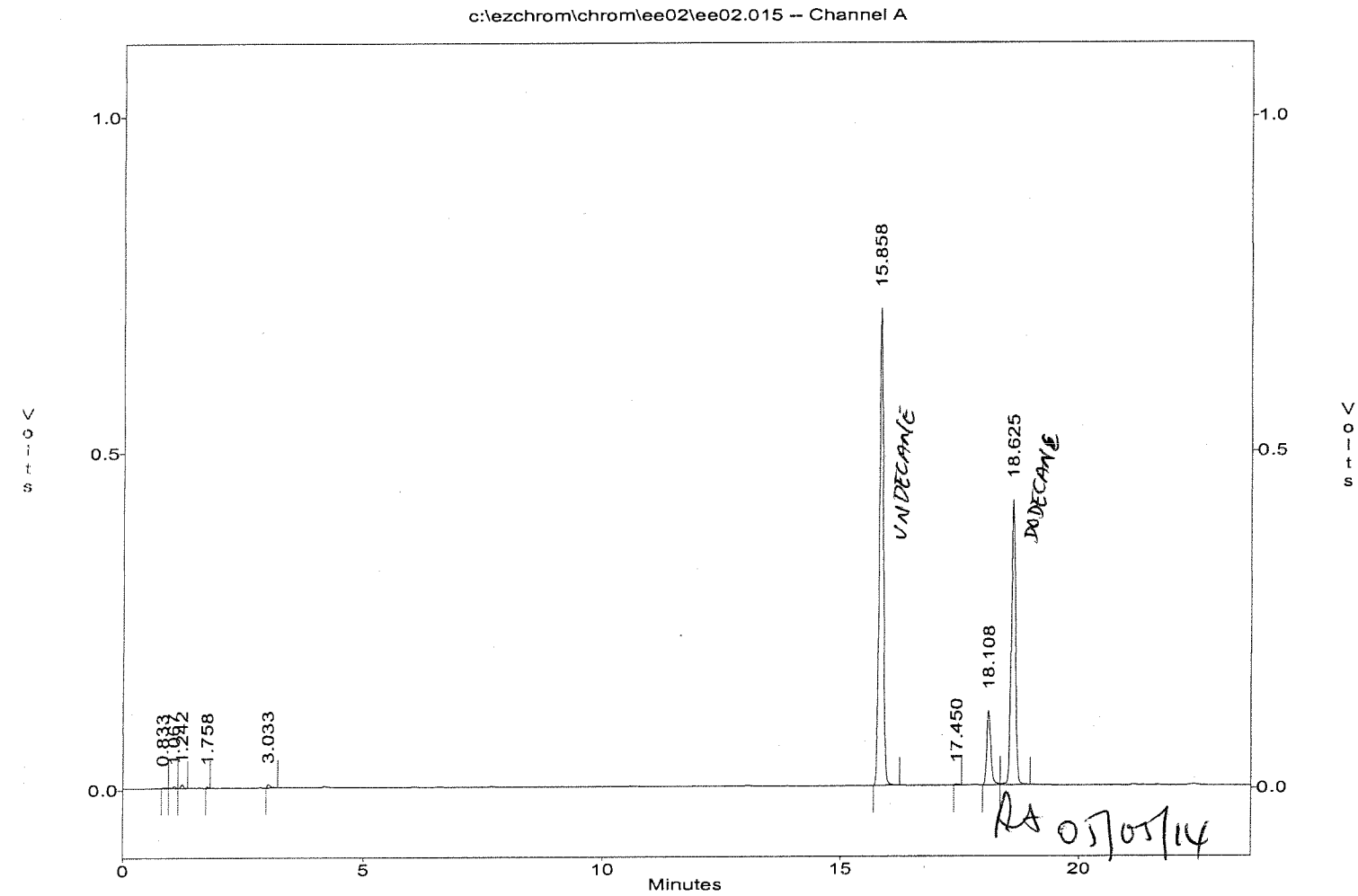


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.015
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : UNDECANE/DODECANE
Acquired : May 02, 2014 20:06:47
Printed : May 05, 2014 09:38:16
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		7612846.0	28261.9	269.37
G2	GRO(C6-C10)		30808.0	21355.4	1.44
G3	GRO(2MP-124TMB)		30808.0	21297.0	1.45
G4	GRO(C5-C12)		7599145.0	27928.9	272.09
G5	GRO(C6-C12)		7579660.0	27890.2	271.77
G6	GRO(C5-C10)		50293.0	21396.8	2.35



DAILY CALIBRATIONS

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK12025A 11/13/2014 01:43
CONC UNIT : ppb

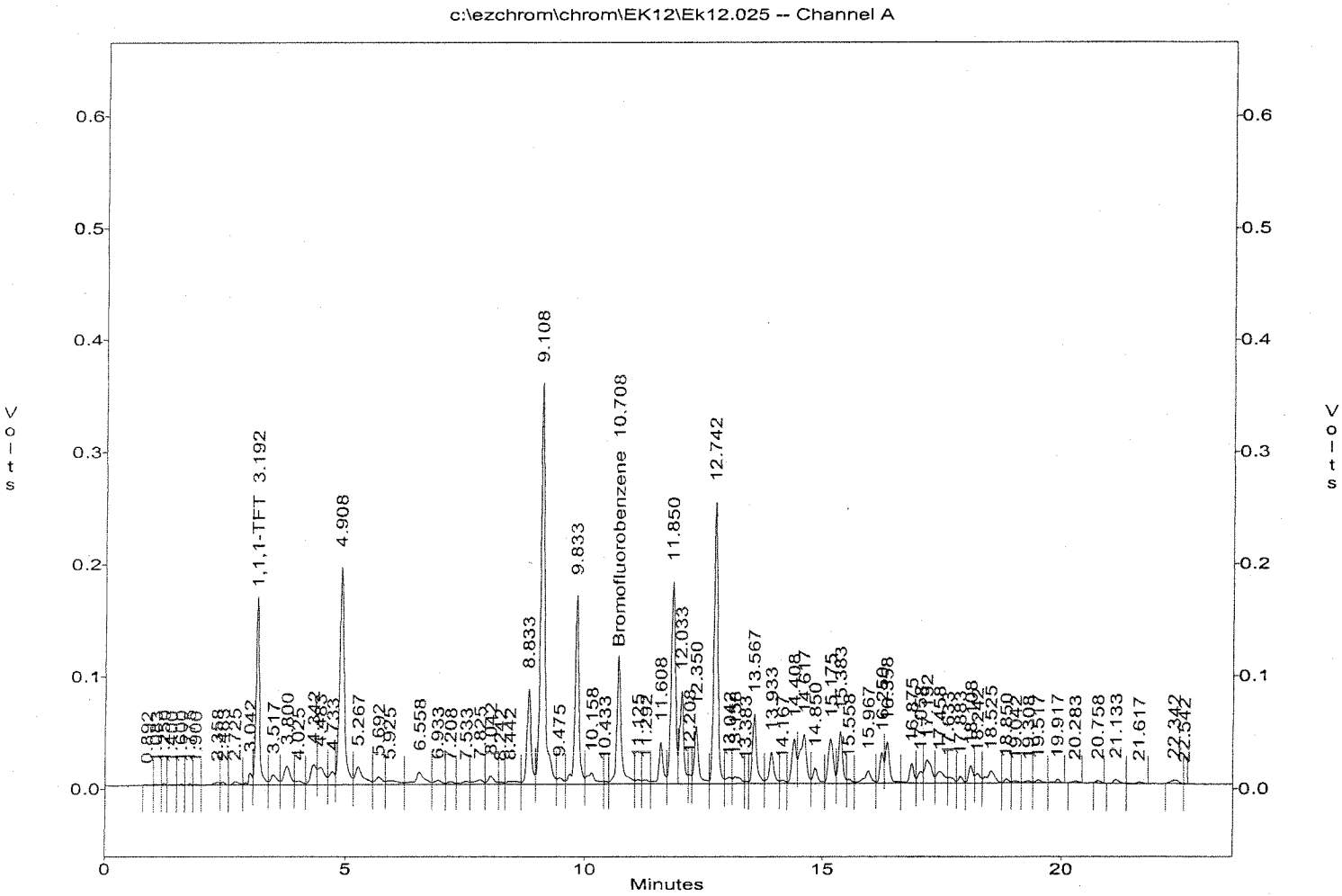
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	14267763	504.84	1		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10586905	495.75	-1		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10549464	495.35	-1		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	14052456	503.15	1		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	14036280	503.27	1		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10603081	495.55	-1		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.708	10.665	10.751	40.0	16725.9	741766	44.35	11		20
1,1,1-Trifluorotoluene	3.192	3.068	3.316	40.0	21400.0	831917	38.88	-3		20

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.025
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02779 500/40
Acquired : Nov 13, 2014 01:43:34
Printed : Nov 13, 2014 02:07:07
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.192	831917.0	21400.0	38.87
37	Bromofluorobenzene	10.708	741766.0	16725.9	44.35
G1	GASOLINE(TOTAL)		14267763.0	28261.9	504.84
G2	GRO(C6-C10)		10586905.0	21355.4	495.75
G3	GRO(2MP-124TMB)		10549464.0	21297.0	495.35
G4	GRO(C5-C12)		14052456.0	27928.9	503.15
G5	GRO(C6-C12)		14036280.0	27890.2	503.27
G6	GRO(C5-C10)		10603081.0	21396.8	495.54



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK12036A 11/13/2014 08:53
CONC UNIT : ppb

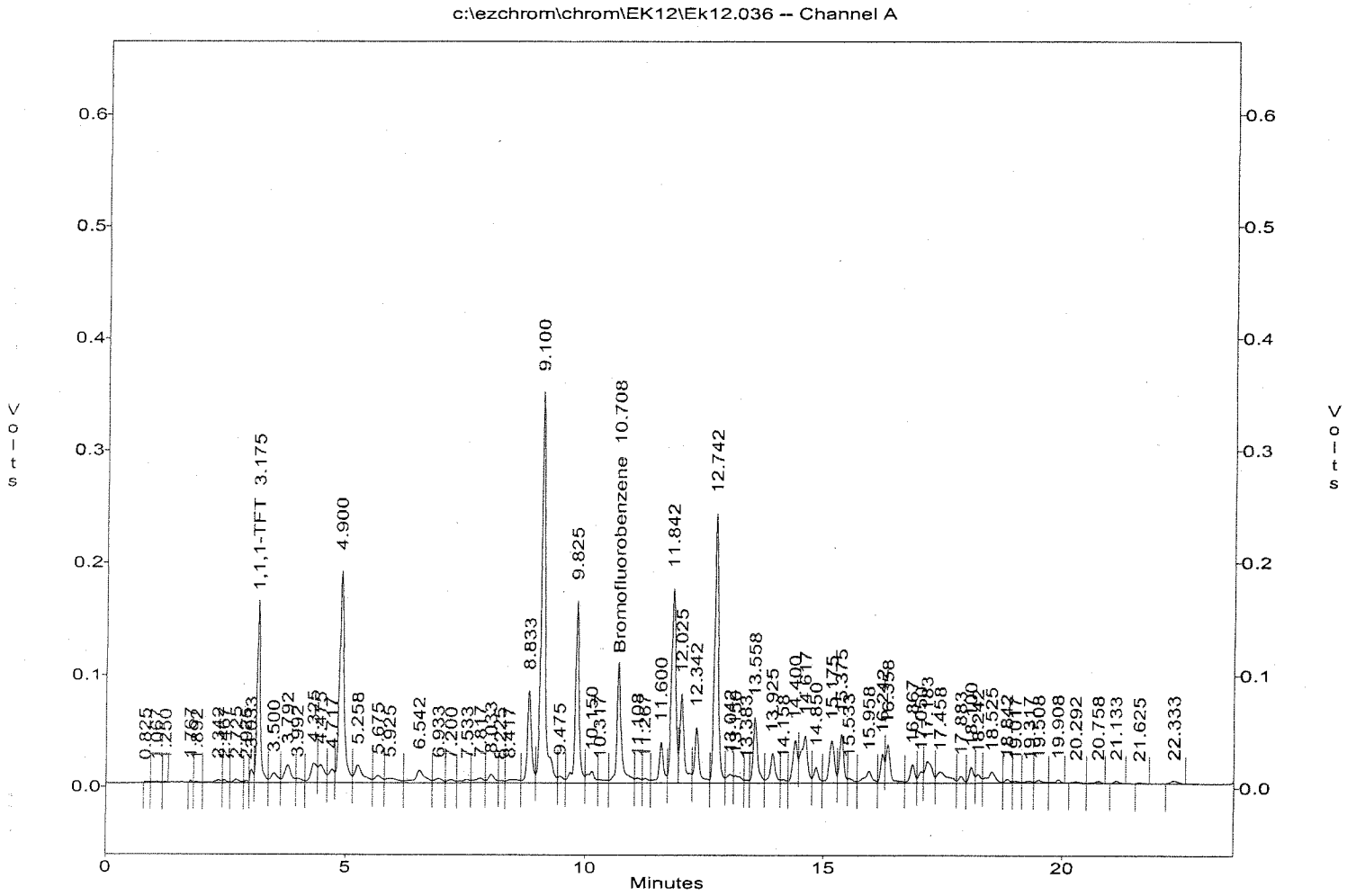
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	14011621	495.78	-1		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10441501	488.94	-2		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10376179	487.21	-3		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	13825159	495.01	-1		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	13821433	495.57	-1		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10445227	488.17	-2		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.708	10.665	10.751	40.0	16725.9	707504	42.30	6		20
1,1,1-Trifluorotoluene	3.175	3.051	3.299	40.0	21400.0	814522	38.06	-5		20

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.036
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02780 500/40
Acquired : Nov 13, 2014 08:53:04
Printed : Nov 13, 2014 09:16:37
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.175	814522.0	21400.0	38.06
36	Bromofluorobenzene	10.708	707504.0	16725.9	42.30
G1	GASOLINE(TOTAL)		14011621.0	28261.9	495.78
G2	GRO(C6-C10)		10441501.0	21355.4	488.94
G3	GRO(2MP-124TMB)		10376179.0	21297.0	487.21
G4	GRO(C5-C12)		13825159.0	27928.9	495.01
G5	GRO(C6-C12)		13821433.0	27890.2	495.57
G6	GRO(C5-C10)		10445227.0	21396.8	488.17



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK12047A 11/13/2014 16:09
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	13870495	490.79	-2		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10300568	482.34	-4		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10219037	479.83	-4		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	13697232	490.43	-2		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	13690172	490.86	-2		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10307628	481.74	-4		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.717	10.674	10.760	40.0	16725.9	715316	42.77	7		20
1,1,1-Trifluorotoluene	3.208	3.084	3.332	40.0	21400.0	823354	38.47	-4		20

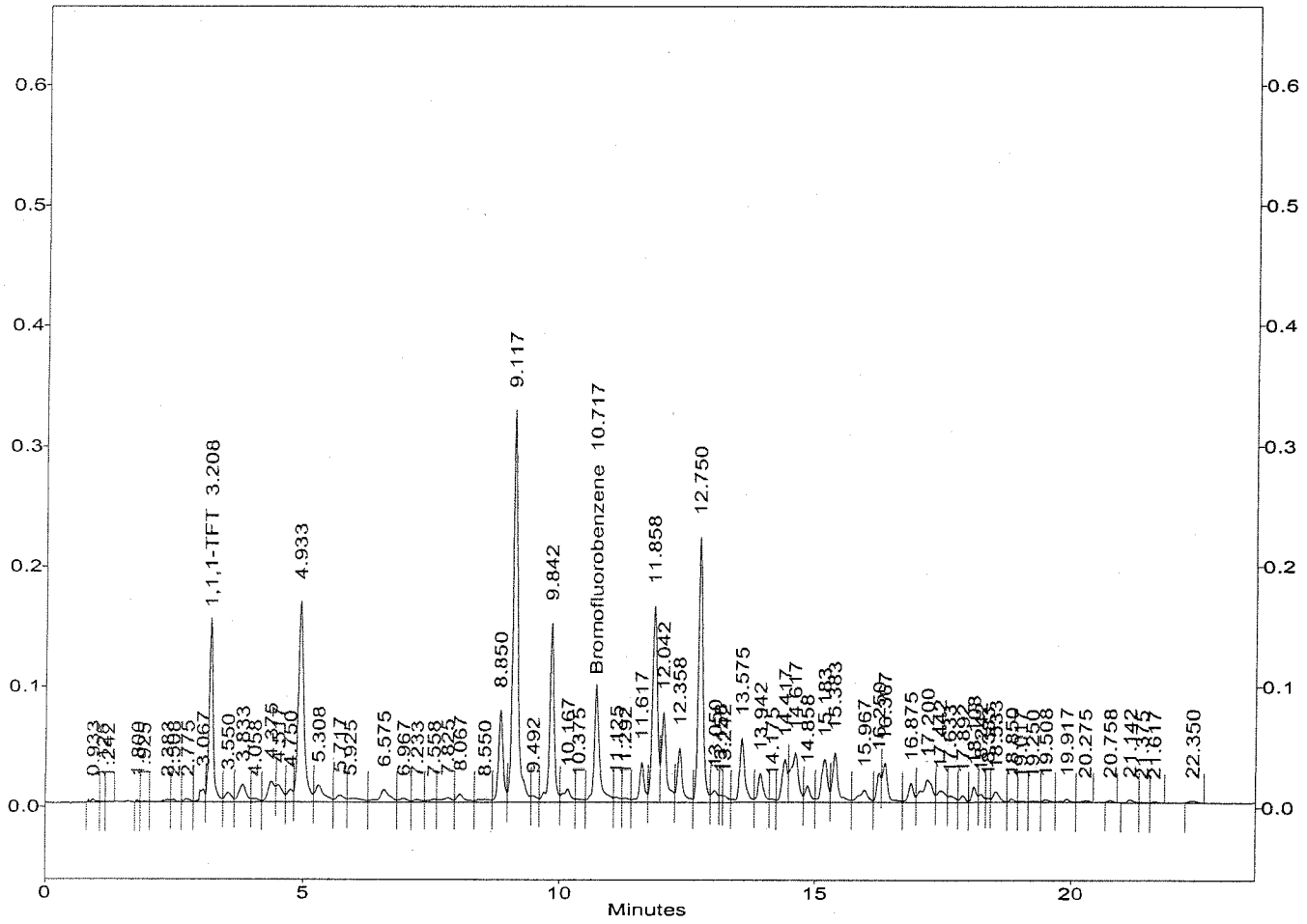
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.047
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02781 500/40
Acquired : Nov 13, 2014 16:09:52
Printed : Nov 13, 2014 16:33:23
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
10	1,1,1-TFT	3.208	823354.0	21400.0	38.47
34	Bromofluorobenzene	10.717	715316.0	16725.9	42.77
G1	GASOLINE(TOTAL)		13870495.0	28261.9	490.78
G2	GRO(C6-C10)		10300568.0	21355.4	482.34
G3	GRO(2MP-124TMB)		10219037.0	21297.0	479.84
G4	GRO(C5-C12)		13697232.0	27928.9	490.43
G5	GRO(C6-C12)		13690172.0	27890.2	490.86
G6	GRO(C5-C10)		10307628.0	21396.8	481.74

c:\ezchrom\chrom\EK12\Ek12.047 -- Channel A



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PURGEABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 ml

GASOLINE ICAL

GRO - SV2-07-02-13
2MP - SV2-09-06-01
TMB - SV2-05-23
PENTANE - SV2-07-01-03
NAPHTHALENE - SV2-05-24
UNDECANE - SV2-07-01-02
DODECANE - SV2-07-01-06

Book #:	A39-047
Instrument No.:	39
Analytical Sequence:	EE02
Method File:	☑ VG39E02
	☐
	☐
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-5030B	3
☐ EMAX-BTEXM	1
☑ EMAX-8015G	4
☐ EMAX-AK101	2
☐ EMAX-	

STANDARDS ID	Amt Added (µL)	Conc. (mg/L)
ICAL —	—	—
ICAL SV2-07-02-06	See Analysis Run logbook	5000
ICV SV2-07-02-04	0.5ml	5000
ICV —	—	—
DCC GAS —	—	—
DCC BTEX —	—	—
DCC —	—	—
BFB/TFT SV2-09-08-03 (~~Sample~~) (~~DCC~~)	SC 5/02/14 See Analysis Run Logbook	100
LCS/LCSD —	—	—
MS/MSD —	—	—
GRO (HC-Chain) SV2-07-02-13	1ml	2000

Solvent	ID/Lot #
Methanol	
Reagent Water	RW2-12-001
	Lot #
pH strip	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX SC	5/05/14

Analyzed By: SC

Date: 5/02/14

Method: Vg39e02.met Batch: Ee02.seq Data: Ee02.030 - [Batch: ee02.seq]

File Edit Method Batch Options Analysis Control Window Help

Method | Data | Batch | Setup | Batch | Preview | Single | STOP | Recalib | Analyse | Reports

Run	Sample ID	Method	Filename	Description
1	IB39E0201	vg39e02.met	EE02.001	
2	VG39E0201 20/10 0.02ul GAS ICAL STD / 0.5ul SUM	vg39e02.met	EE02.002	
3	VG39E0202 50/20 0.05ul / 1ul	vg39e02.met	EE02.003	
4	VG39E0203 100/30 0.1ul / 1.5ul	vg39e02.met	EE02.004	
5	VG39E0204 500/40 0.5ul / 2ul	vg39e02.met	EE02.005	GASOLINE ICAL
6	VG39E0205 1000/50 1ul / 2.5ul	vg39e02.met	EE02.006	
7	VG39E0206 1500/80 1.5ul / 4ul	vg39e02.met	EE02.007	
8	IVG39E02001 500/40 0.5ul GAS ICV STD / 2ul SUM	vg39e02.met	EE02.008	GASOLINE ICV
9	GRO 1UL	vg39e02.met	EE02.009	
10	RINSE	vg39e02.met	EE02.010	
11	2MP/1,2,4-TMB	vg39e02.met	EE02.011	
12	RINSE	vg39e02.met	EE02.012	
13	PENTANE/NAPHTHALENE	vg39e02.met	EE02.013	FINAL
14	RINSE	vg39e02.met	EE02.014	
15	UNDECANE/DODECANE	vg39e02.met	EE02.015	
16	RINSE	vg39e02.met	EE02.016	
17	IB	vg39e02.met	EE02.017	
18	IB	vg39e02.met	EE02.018	
19	IB	vg39e02.met	EE02.019	
20	IB	vg39e02.met	EE02.020	
21	IB	vg39e02.met	EE02.021	
22	IB	vg39e02.met	EE02.022	
23	IB SC 5/05/14	vg39e02.met	EE02.023	
24	IB	vg39e02.met	EE02.024	
25	IB	vg39e02.met	EE02.025	
26	IB	vg39e02.met	EE02.026	
27	IB	vg39e02.met	EE02.027	
28	IB	vg39e02.met	EE02.028	
29	IB	vg39e02.met	EE02.029	
30	IB	vg39e02.met	EE02.030	
31	IB	vg39e02.met	EE02.031	
32	IB	vg39e02.met	EE02.032	
33	IB	vg39e02.met	EE02.033	
34	IB	vg39e02.met	EE02.034	

Instrument 1: T-039

Start | EZChrom Chromatography | Untitled - Paint | Exploring - Export | Method: Vg39e02.me... | Monday, May 05, 2014

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PURGEABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 ml

preweighed vials

GPK009 (soil): K074

NOTE: 2ul surrogate TFT/BFB (SV2-09-17-03) added prior to analysis.

VG39K06 (water): K068, K074

Preweighed vials

GPK011 (soil): K075

NOTE: 2ul surrogate TFT/BFB (SV2-09-17-03) added prior to analysis.

VG39K07
~~VG39K06~~ (water): K087, K089
SC 11/13/14

Book #:	A39-049
Instrument No.:	39
Analytical Sequence:	EK12
Method File:	☑ VG39E02
	☐
	☐
Analytical Batch:	CVG39E02777

SOP #	Rev. #
☑ EMAX-5030B	3
☑ EMAX-8015G	5
☐ EMAX-AK101	3
☐ EMAX-	

STANDARDS ID		Amt Added (µL)	Conc. (mg/L)
ICAL			
ICAL		SC	11/13/14
ICV			
ICV			
DCC GAS	SV2-07-02-24	0.5ul	5000
DCC			
DCC		SC	11/13/14
BFB/TFT	SV2-09-17-03 water (Sample)	2ul	100
	(DCC)	2ul	100
water { LCS/LCSD	SV2-07-02-20	0.5ul	5000
MS/MSD	↓	↓	↓
GRO (HC-Chain)	SV2-07-02-13	1ul	2000

Solvent	ID/Lot #
Methanol	
Reagent Water	RW2-12-001
	Lot #
pH strip	HC412469

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX	

Analyzed By: SC

Date: 11/12/14

Method: Vg39e02.met Batch: Ek12.seq Data: Ek12.049 - [Batch: ek12.seq]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Description
1	IB39K1201	vg39e02.met	EK12.001	
2	GRO 1uL	vg39e02.met	EK12.002	SV2-07-02-13
3	CVG39E02777 500/40	vg39e02.met	EK12.003	
4	GPK009SL 100uL S	vg39e02.met	EK12.004	Conc. 500/40
5	GPK009SC 100uL S	vg39e02.met	EK12.005	
6	GPK009SB 100uL S	vg39e02.met	EK12.006	
7	14K074-02 100uL S	vg39e02.met	EK12.007	
8	14K074-03 100uL S	vg39e02.met	EK12.008	
9	14K074-05 100uL S	vg39e02.met	EK12.009	
10	14K074-06 100uL S	vg39e02.met	EK12.010	
11	14K074-07 100uL S	vg39e02.met	EK12.011	
12	14K074-08 100uL S	vg39e02.met	EK12.012	
13	14K074-09 100uL S	vg39e02.met	EK12.013	
14	CVG39E02778 500/40	vg39e02.met	EK12.014	FINAL
15	VG39K06L 5.0ML W	vg39e02.met	EK12.015	Conc. 500/40
16	VG39K06C 5.0ML W	vg39e02.met	EK12.016	
17	VG39K06Q 5.0ML W NOT evaluated	vg39e02.met	EK12.017	
18	VG39K06B 5.0ML W	vg39e02.met	EK12.018	
19	14K074-01 5.0ML W	vg39e02.met	EK12.019	PH<2
20	14K074-10 5.0ML W	vg39e02.met	EK12.020	PH<2
21	14K068-07 5.0ML W	vg39e02.met	EK12.021	PH<2
22	14K068-01 5.0ML W	vg39e02.met	EK12.022	PH<2
23	14K068-01M 5.0ML W	vg39e02.met	EK12.023	PH<2
24	14K068-01S 5.0ML W	vg39e02.met	EK12.024	PH<2
25	CVG39E02779 500/40	vg39e02.met	EK12.025	
26	14K068-03 5.0ML W	vg39e02.met	EK12.026	PH<2
27	14K068-04 5.0ML W	vg39e02.met	EK12.027	PH<2
28	14K068-05 5.0ML W	vg39e02.met	EK12.028	PH<2
29	14K068-06 5.0ML W	vg39e02.met	EK12.029	PH<2
30	GPK011SB 100uL S	vg39e02.met	EK12.030	
31	GPK011SL 100uL S	vg39e02.met	EK12.031	Conc. 500/40
32	GPK011SC 100uL S	vg39e02.met	EK12.032	
33	GPK011SQ 100uL S NOT evaluated	vg39e02.met	EK12.033	
34	14K075-06 100uL S	vg39e02.met	EK12.034	

Instrument 1 [T-039] - Running 14K089-02 5.0ML W (Run 49)...

Start | EZChrom Chromat... | Method: Vg39... | untitled - Paint | Method: Vg38e02... | Exploring - Export... | Method: Vg55f20... | Thursday, November 13, 2014

Method: Vg39e02.met Batch: Ek12.seq Data: Ek12.050 - [Batch: ek12.seq]

File Edit Method Batch Options Analysis Control Window Help

Method | Data | Batch | Setup | Batch | Preview | Run Single | STOP | Recalib | Analyze | Reports

Run	Sample ID	Method	Filename	Description
35	14K075-07 100uL S	vg39e02.met	EK12.035	
36	CVG39E02780 500/40	vg39e02.met	EK12.036	
37	14K075-08 100uL S	vg39e02.met	EK12.037	
38	IB39K1202	vg39e02.met	EK12.038	VIAL QC CHECK LOT# 071414-03 VWR
39	14K075-09 100uL S	vg39e02.met	EK12.039	
40	14K075-10 100uL S	vg39e02.met	EK12.040	
41	14K075-11 100uL S	vg39e02.met	EK12.041	
42	14K075-12 100uL S	vg39e02.met	EK12.042	
43	14K075-07N 100uL S Confirmation only	vg39e02.met	EK12.043	
44	VG39K07B 5.0ML W	vg39e02.met	EK12.044	
45	VG39K07L 5.0ML W	vg39e02.met	EK12.045	Conc. 500/40
46	VG39K07C 5.0ML W	vg39e02.met	EK12.046	
47	CVG39E02781 500/40	vg39e02.met	EK12.047	
48	14K089-01 5.0ML W	vg39e02.met	EK12.048	PH~7
49	14K089-02 5.0ML W	vg39e02.met	EK12.049	PH~7
50	14K089-03 5.0ML W	vg39e02.met	EK12.050	PH~7
51	14K087-01 5.0ML W	vg39e02.met	EK12.051	PH<2
52	14K087-02 5.0ML W	vg39e02.met	EK12.052	PH<2
53	14K087-03 5.0ML W	vg39e02.met	EK12.053	PH<2
54	14K087-04 5.0ML W	vg39e02.met	EK12.054	PH<2
55	14K087-05 5.0ML W	vg39e02.met	EK12.055	PH<2
56	14K087-06 5.0ML W	vg39e02.met	EK12.056	PH<2
57	14K087-07 5.0ML W	vg39e02.met	EK12.057	PH<2
58	CVG39E02782 500/40	vg39e02.met	EK12.058	
59	14K087-07M 5.0ML W	vg39e02.met	EK12.059	PH<2
60	14K087-07S 5.0ML W	vg39e02.met	EK12.060	PH<2
61	14K087-08 5.0ML W	vg39e02.met	EK12.061	PH<2
62	14K087-09 5.0ML W	vg39e02.met	EK12.062	PH<2
63	14K087-10 5.0ML W	vg39e02.met	EK12.063	PH<2
64	14K087-11 5.0ML W	vg39e02.met	EK12.064	PH<2
65	14K087-12 5.0ML W	vg39e02.met	EK12.065	PH<2
66	14K087-13 5.0ML W	vg39e02.met	EK12.066	PH<2
67	14K087-14 5.0ML W	vg39e02.met	EK12.067	PH<2
68	14K087-15 5.0ML W	vg39e02.met	EK12.068	PH<2

FINAL

Instrument 1: T-039

Start | EZChrom Chromat... | Method: Vg39... | Untitled - Paint | Method: Vg39e02... | Exploring - Export... | Method: Vg55r20...

Thursday, November 13, 2014 6:08 PM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
PURGEABLE TPH

Note: For samples, relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

SDG # K075

Book #.: E39-039

Preparation Batch: GPK011

Matrix soil Preweighed vials

SOP	Rev. #
☐ EMAX-5035	3
☐ EMAX-AK101	2
☐ EMAX-	

Standards	ID	Amount Added (ml)
Surrogate		
LCS/MS	SV2-07-02-20	25ml
Methanol		
Methanol w/ Surrogate MB, LCS/LCSD	SV2-09-17-02	5.0ml

Reagent	Lot # / ID
Silica Sand	SWIB-002-43-01

Prepared By: SC

Standard Added By: SC Checked By: DX

Extract Location: Vw06

Disposal By: Disposal Date:

EMAX LABORATORIES, INC.

FileID: GPK011S

PRESERVATION LOG FOR TPH

PrepBatchID	LabSampleID	Wi(g)	DateTime	Wf(g)	DateTime	Aliquot	Unit	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
14GPK011S01	GPK011SB	33.27	11/12/14 15:01	38.29	11/12/14 15:01	5.02	g	5	5	5	1	
14GPK011S02	GPK011SL	33.32	11/12/14 15:01	38.34	11/12/14 15:02	5.02	g	5	5	5	1	
14GPK011S03	GPK011SC	33.16	11/12/14 15:01	38.16	11/12/14 15:02	5	g	5	5	5	1	
14GPK011S04	K075-06	27.878	11/12/14 15:03	32.54	11/12/14 15:03	4.662	g	5	5	5	1.07	
14GPK011S05	K075-07	28.469	11/12/14 15:03	33.09	11/12/14 15:03	4.621	g	5	5	5	1.08	
14GPK011S06	K075-08	28.53	11/12/14 15:03	33.49	11/12/14 15:03	4.96	g	5	5	5	1.01	
14GPK011S07	K075-09	28.51	11/12/14 15:03	33.24	11/12/14 15:03	4.73	g	5	5	5	1.06	Preweighed
14GPK011S08	K075-10	28.179	11/12/14 15:04	32.53	11/12/14 15:04	4.351	g	5	5	5	1.15	vials
14GPK011S09	K075-11	28.307	11/12/14 15:04	33.02	11/12/14 15:04	4.713	g	5	5	5	1.06	
14GPK011S10	K075-12	28.665	11/12/14 15:04	33.01	11/12/14 15:04	4.345	g	5	5	5	1.15	

Balance ID: 25451062. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)*(Ve/ExpVe)

☑ Extraction Started @ 11/12/14 15:00 ☐ EMAX-5035 Rev. No. 2

Prepared By: SCerva

☑ Extraction Ended @ 11/12/14 15:04

Checked By: [illegible]

Comments:

Date 11/12/2014

DRO/ORO - EXTRACTION

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/15/14 10:23
Lab Samp ID:	K075-06	Dilution Factor:	1
Lab File ID:	LK14083A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.1
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	45	11	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	105.4	80.6	60-130
HEXACOSANE	23.6	26.34	89.4	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/15/14 10:23
Lab Samp ID:	K075-06	Dilution Factor:	1
Lab File ID:	LK14083A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.1
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	440	21	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	105.4	80.6	60-130
HEXACOSANE	23.6	26.34	89.4	60-130

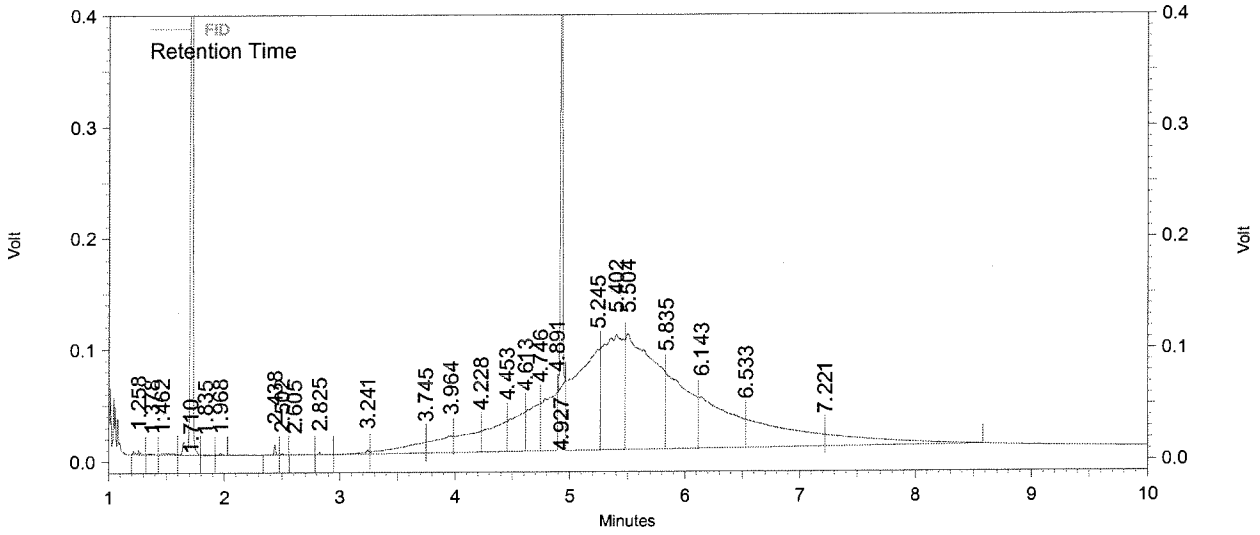
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14083.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-06**
Acquired	**: 11/15/14 10:23:07**
Printed	**: 11/17/14 09:52:05**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.710	1349657	16736.07261	80.644
HEXACOSANE	4.927	533457	23858.57389	22.359
DIESEL(TOTAL)		9124036	28620.13271	318.798
DIESEL(C10-C24)		1191486	27919.60062	42.676
M.OIL(C24-C36)		7572661	18035.59361	419.873
Totals		19771297		884.349



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/15/14 10:40
Lab Samp ID:	K075-07	Dilution Factor:	1
Lab File ID:	LK14084A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.2
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	61	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	106.6	79.7	60-130
HEXACOSANE	23.9	26.65	89.9	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/15/14 10:40
Lab Samp ID:	K075-07	Dilution Factor:	1
Lab File ID:	LK14084A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.2
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	510	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	106.6	79.7	60-130
HEXACOSANE	23.9	26.65	89.9	60-130

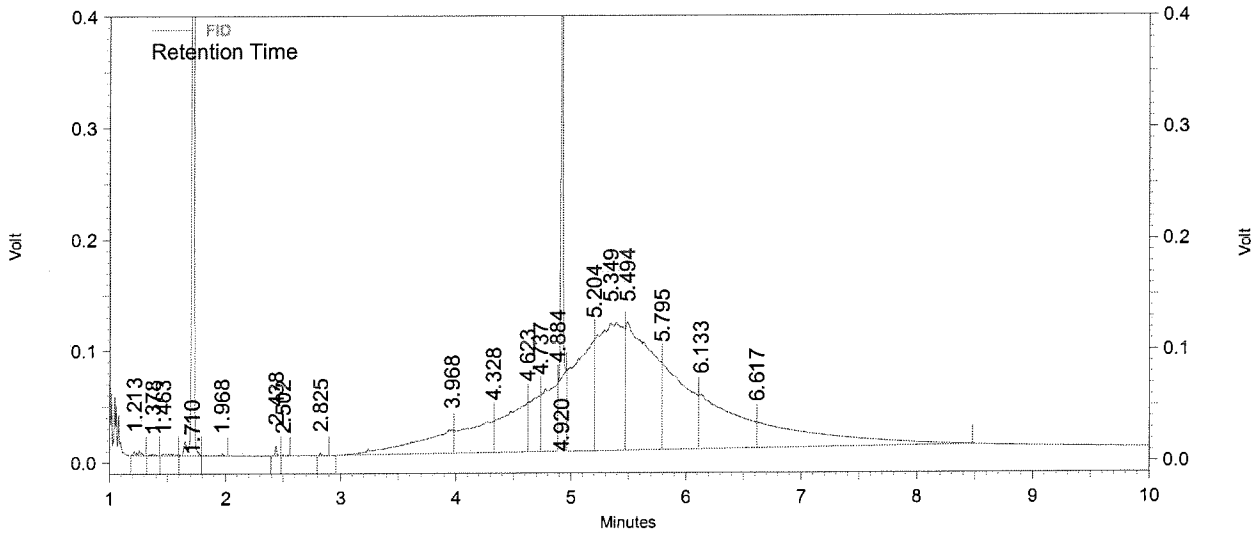
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14084.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-07**
Acquired	**: 11/15/14 10:40:18**
Printed	**: 11/17/14 09:53:15**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.710	1334358	16736.07261	79.729
HEXACOSANE	4.920	535928	23858.57389	22.463
DIESEL(TOTAL)		10234349	28620.13271	357.593
DIESEL(C10-C24)		1604380	27919.60062	57.464
M.OIL(C24-C36)		8605027	18035.59361	477.114
Totals		22314042		994.363



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-782-0.5	Date Analyzed:	11/15/14 10:57
Lab Samp ID:	K075-08	Dilution Factor:	1
Lab File ID:	LK14085A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	17	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	77.7	106.3	73.1	60-130
HEXACOSANE	27.3	26.57	103	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-782-0.5	Date Analyzed:	11/15/14 10:57
Lab Samp ID:	K075-08	Dilution Factor:	1
Lab File ID:	LK14085A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	110	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	77.7	106.3	73.1	60-130
HEXACOSANE	27.3	26.57	103	60-130

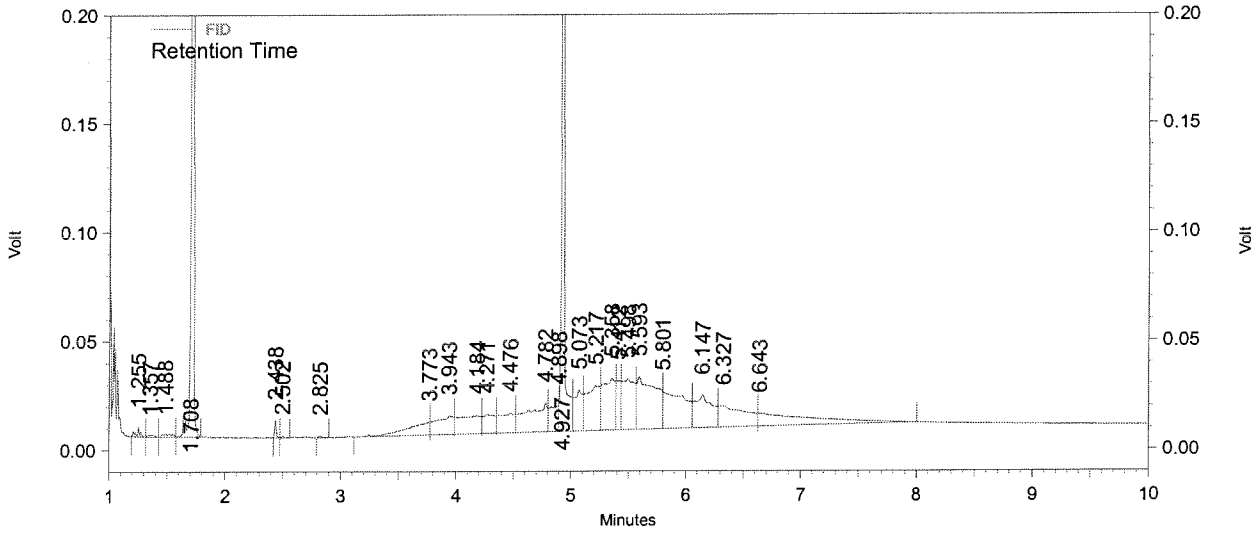
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14085.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-08**
Acquired	**: 11/15/14 10:57:30**
Printed	**: 11/17/14 10:04:18**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.708	1222882	16736.07261	73.069
HEXACOSANE	4.927	612879	23858.57389	25.688
DIESEL(TOTAL)		2360568	28620.13271	82.479
DIESEL(C10-C24)		436716	27919.60062	15.642
M.OIL(C24-C36)		1903343	18035.59361	105.533
Totals		6536388		302.410



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-783-0.5	Date Analyzed:	11/15/14 11:14
Lab Samp ID:	K075-09	Dilution Factor:	1
Lab File ID:	LK14086A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	35	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.1	106.3	80.1	60-130
HEXACOSANE	24.8	26.57	93.2	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-783-0.5	Date Analyzed:	11/15/14 11:14
Lab Samp ID:	K075-09	Dilution Factor:	1
Lab File ID:	LK14086A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	250	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.1	106.3	80.1	60-130
HEXACOSANE	24.8	26.57	93.2	60-130

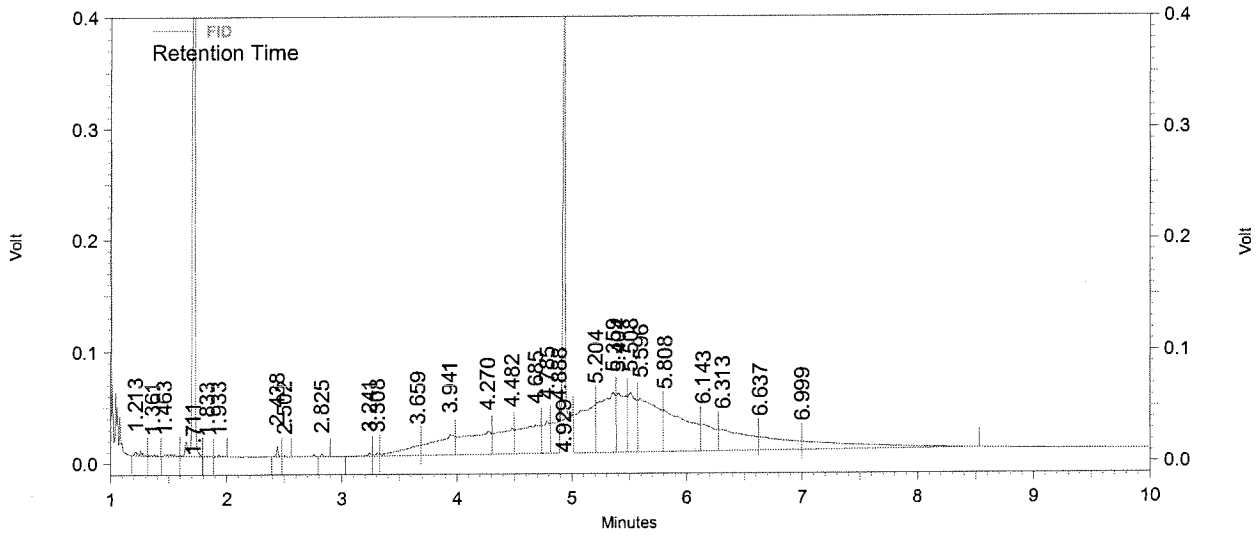
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14086.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : 14K075-09
Acquired : 11/15/14 11:14:34
Printed : 11/17/14 09:58:38
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1340856	16736.07261	80.118
HEXACOSANE	4.929	555705	23858.57389	23.292
DIESEL(TOTAL)		5164687	28620.13271	180.456
DIESEL(C10-C24)		925114	27919.60062	33.135
M.OIL(C24-C36)		4213391	18035.59361	233.615
Totals		12199753		550.616



Software Version: Version 3.3.1

QC SUMMARIES

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID	: MBLK1S	Date Analyzed:	11/15/14 08:57
Lab Samp ID	: DSK018SB	Dilution Factor:	1
Lab File ID	: LK14078A	Matrix :	SOIL
Ext Btch ID	: DSK018S	% Moisture :	NA
Calib. Ref.	: LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.0	100.0	88.0	60-130
HEXACOSANE	25.9	25.00	104	60-130

Parameter	H-C Range
DRO	C10-C24

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SL	DSK018SC		
LAB FILE ID:	LK14078A	LK14079A	LK14080A		
DATE EXTRACTED:	11/14/1414:42	11/14/1414:42	11/14/1414:42	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1408:57	11/15/1409:14	11/15/1409:31	DATE RECEIVED:	11/14/14
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK14076A	LK14076A	LK14076A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	500	428	86	500	462	92	8	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	84.1	84	100	90.2	90	60-130
Hexacosane	25.0	23.5	94	25.0	25.7	103	60-130

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	MBLK1S	Date Analyzed:	11/15/14 08:57
Lab Samp ID:	DSK018SB	Dilution Factor:	1
Lab File ID:	LK14078A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	NA
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.0	100.0	88.0	60-130
HEXACOSANE	25.9	25.00	104	60-130

Parameter	H-C Range
ORO	C24-C36

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SX	DSK018SY		
LAB FILE ID:	LK14078A	LK14081A	LK14082A		
DATE EXTRACTED:	11/14/1414:42	11/14/1414:42	11/14/1414:42	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1408:57	11/15/1409:48	11/15/1410:05	DATE RECEIVED:	11/14/14
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK14076A	LK14076A	LK14076A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	500	492	98	500	497	99	1	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	86.7	87	100	87.5	87	60-130
Hexacosane	25.0	23.7	95	25.0	23.9	96	60-130

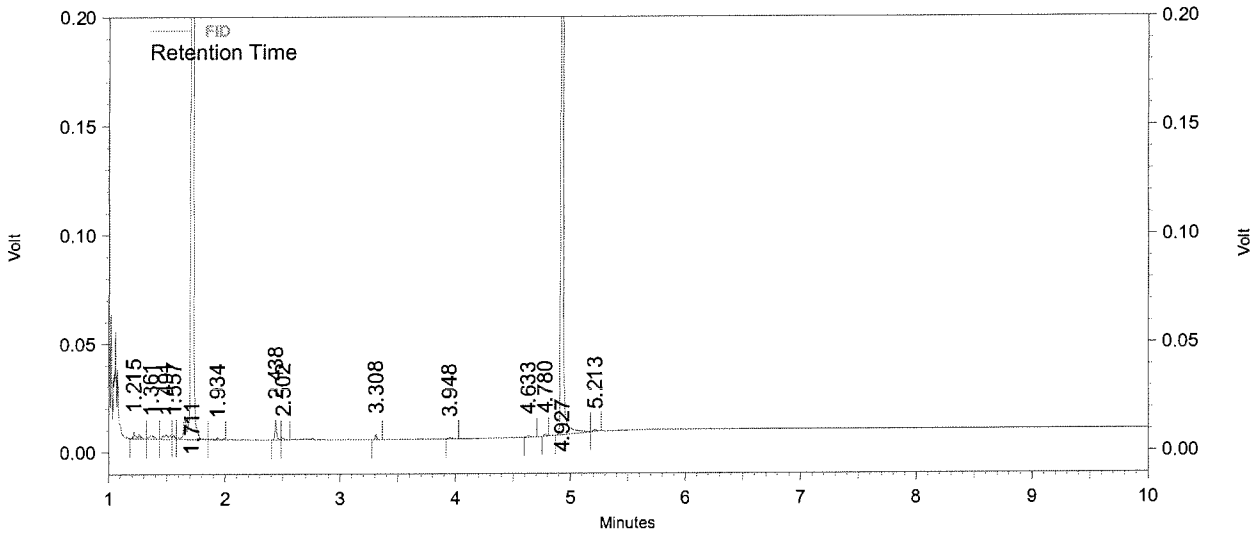
QC DATA

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14078.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : DSK018SB
Acquired : 11/15/14 08:57:16
Printed : 11/17/14 09:48:20
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1472596	16736.07261	87.989
HEXACOSANE	4.927	618011	23858.57389	25.903
DIESEL(TOTAL)		43281	28620.13271	1.512
DIESEL(C10-C24)		17728	27919.60062	0.635
M.OIL(C24-C36)		2922	18035.59361	0.162
Totals		2154538		116.202



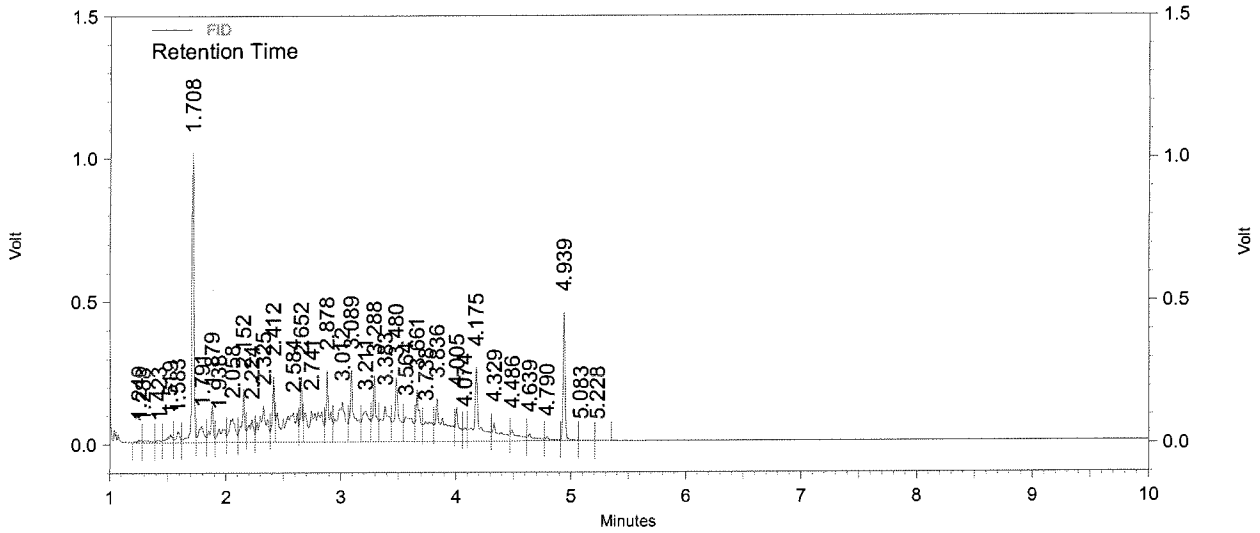
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14079.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK018SL**
Acquired	**: 11/15/14 09:14:37**
Printed	**: 11/17/14 10:01:56**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.708	1407751	16736.07261	84.115
HEXACOSANE	4.939	560712	23858.57389	23.501
DIESEL(TOTAL)		12426934	28620.13271	434.203
DIESEL(C10-C24)		11939156	27919.60062	427.626
Totals		26334553		969.445



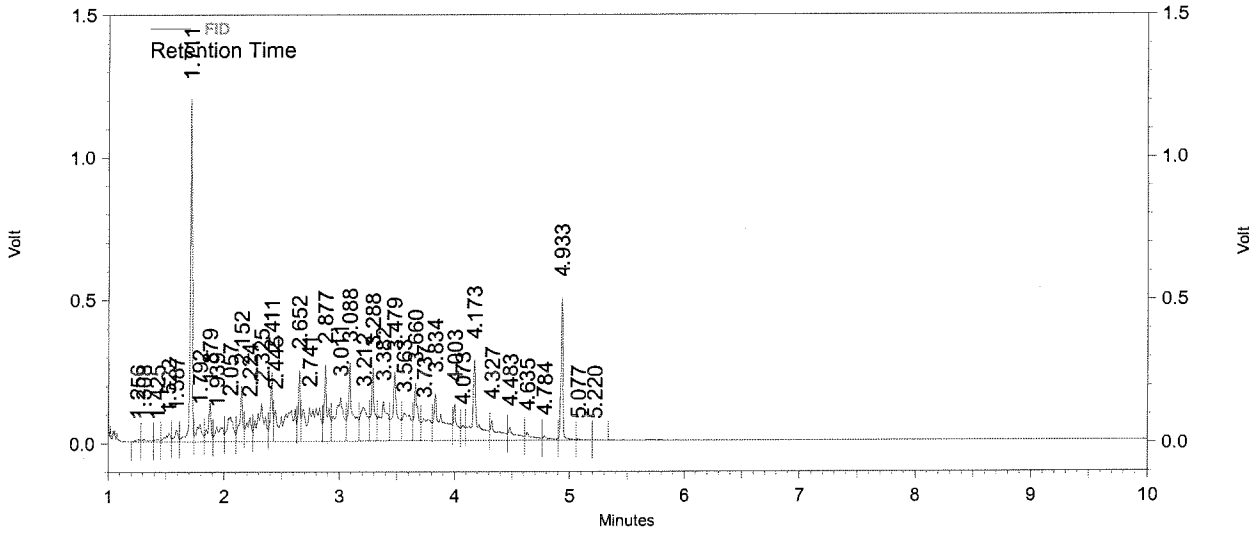
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14080.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK018SC**
Acquired	**: 11/15/14 09:31:50**
Printed	**: 11/17/14 10:02:04**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1509161	16736.07261	90.174
HEXACOSANE	4.933	613506	23858.57389	25.714
DIESEL(TOTAL)		13402366	28620.13271	468.285
DIESEL(C10-C24)		12886645	27919.60062	461.563 ✓
Totals		28411678		1045.736



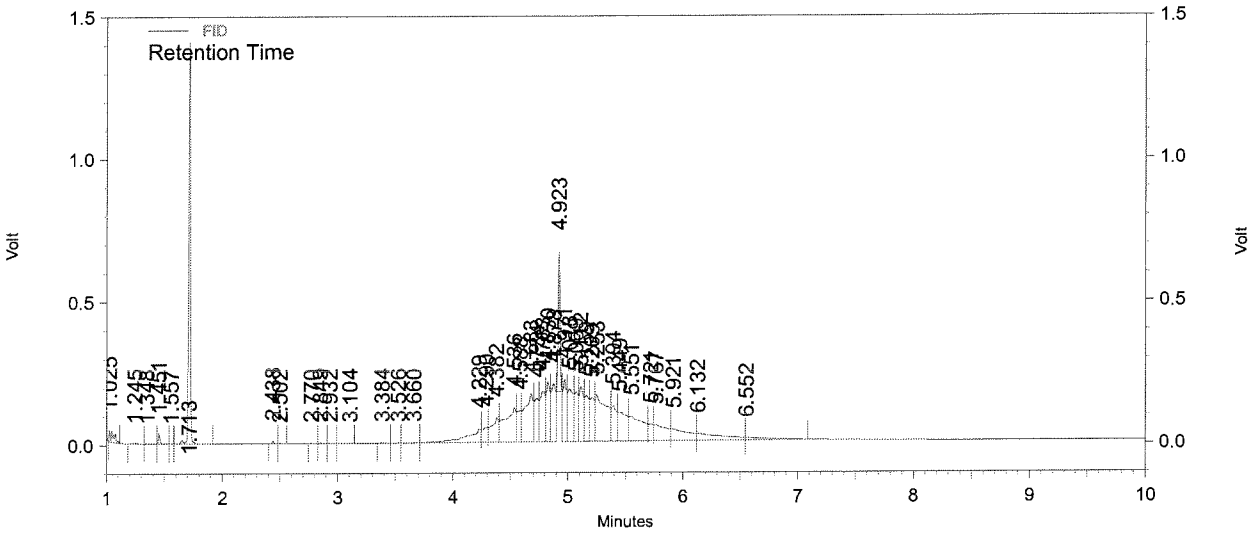
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14081.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK018SX**
Acquired	**: 11/15/14 09:48:51**
Printed	**: 11/17/14 10:02:35**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1450378	16736.07261	86.662
HEXACOSANE	4.923	564745	23858.57389	23.671
DIESEL(TOTAL)		11011898	28620.13271	384.761
M.OIL(C24-C36)		8867044	18035.59361	491.641
Totals		21894065		986.734



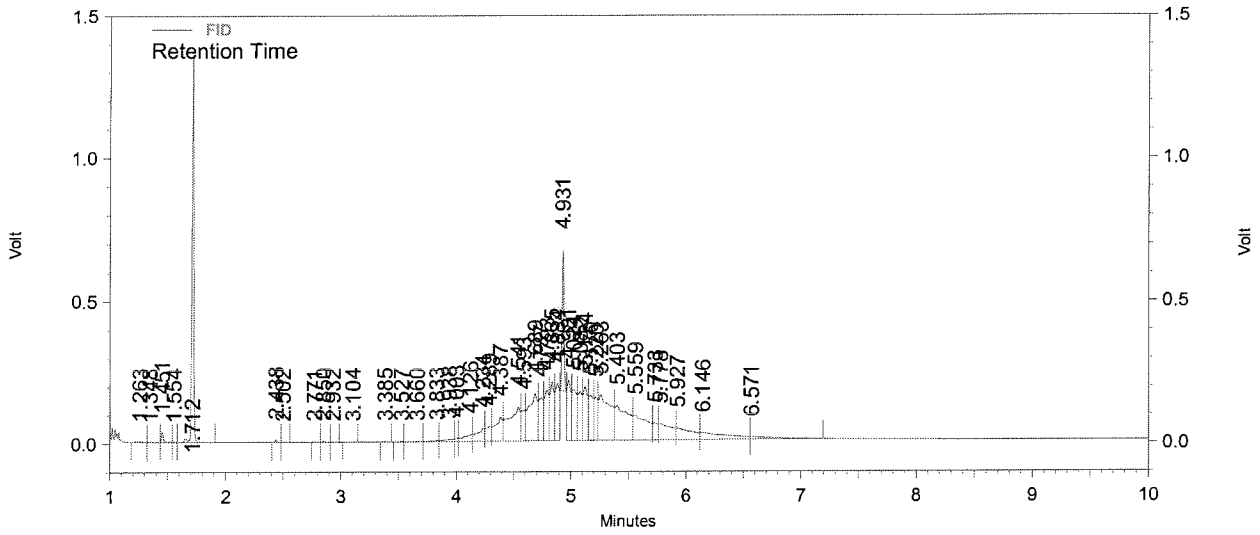
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14082.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK018SY**
Acquired	**: 11/15/14 10:05:56**
Printed	**: 11/17/14 10:03:00**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1464179	16736.07261	87.486
HEXACOSANE	4.931	569649	23858.57389	23.876
DIESEL(TOTAL)		11099621	28620.13271	387.826
M.OIL(C24-C36)		8958880	18035.59361	496.733 ✓
Totals		22092329		995.921



Software Version: Version 3.3.1

INITIAL CALIBRATIONS

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05003A 11/05/14 09:50
LFID & Datetime: LK05004A 11/05/14 10:07
LFID & Datetime: LK05005A 11/05/14 10:24
LFID & Datetime: LK05006A 11/05/14 10:41
LFID & Datetime: LK05007A 11/05/14 10:58
LFID & Datetime: LK05008A 11/05/14 11:15
LFID & Datetime: LK05009A 11/05/14 11:32
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
DIESEL(TOTAL)	5.00	30684	33548	29932	29947	26877	24217	25136	28620.1	11.6	✓
DIESEL(C10-C24)	5.00	30428	32621	29320	29249	26041	23422	24357	27919.6	12.1	✓
DIESEL(C10-C28)	5.00	30428	32683	29345	29299	26090	23472	24413	27961.5	12.1	✓
DIESEL(C10-C25)	5.00	30428	32683	29345	29299	26083	23465	24405	27958.5	12.1	✓
DIESEL(C9-C24)	5.00	30684	33302	29851	29674	26513	23703	24787	28359.1	12.2	✓
DIESEL(C9-C25)	5.00	30684	33365	29876	29715	26544	23733	24820	28390.9	12.2	✓
DIESEL(C10-C36)	5.00	30428	32683	29345	29299	26093	23474	24417	27962.7	12.1	✓
DIESEL(C10-C40)	5.00	30428	32683	29345	29299	26093	23474	24417	27962.7	12.1	✓
SURROGATE	X	0.00X	1.00X	2.00X	3.00X	4.00X	5.00X	11.00X	MEAN	%RSD	
BROMOBENZENE	20.00	0	16322	16474	16110	17270	17167	17074	16736.1	2.9	✓
HEXACOSANE	5.00	0	23912	24484	24145	24476	23217	22918	23858.6	2.8	✓

DSD5K05.MET

AS 11/06/14

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05003A 11/05/14 09:50
LFID & Datetime: LK05004A 11/05/14 10:07
LFID & Datetime: LK05005A 11/05/14 10:24
LFID & Datetime: LK05006A 11/05/14 10:41
LFID & Datetime: LK05007A 11/05/14 10:58
LFID & Datetime: LK05008A 11/05/14 11:15
LFID & Datetime: LK05009A 11/05/14 11:32

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	10.0X	20.0X	100.0X	300.0X	600.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
DIESEL(TOTAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C28)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C9-C24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C9-C25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SURROGATE	0.0X	1.0X	2.0X	3.0X	4.0X	5.0X	11.0X	RT	FROM	TO	WIDTH
BROMOBENZENE	0.000	1.712	1.712	1.712	1.713	1.711	1.715	1.712	1.709	1.715	0.003
HEXACOSANE	0.000	5.006	4.989	5.002	4.993	5.003	4.997	4.998	4.950	5.046	0.048

DSD5K05.MET

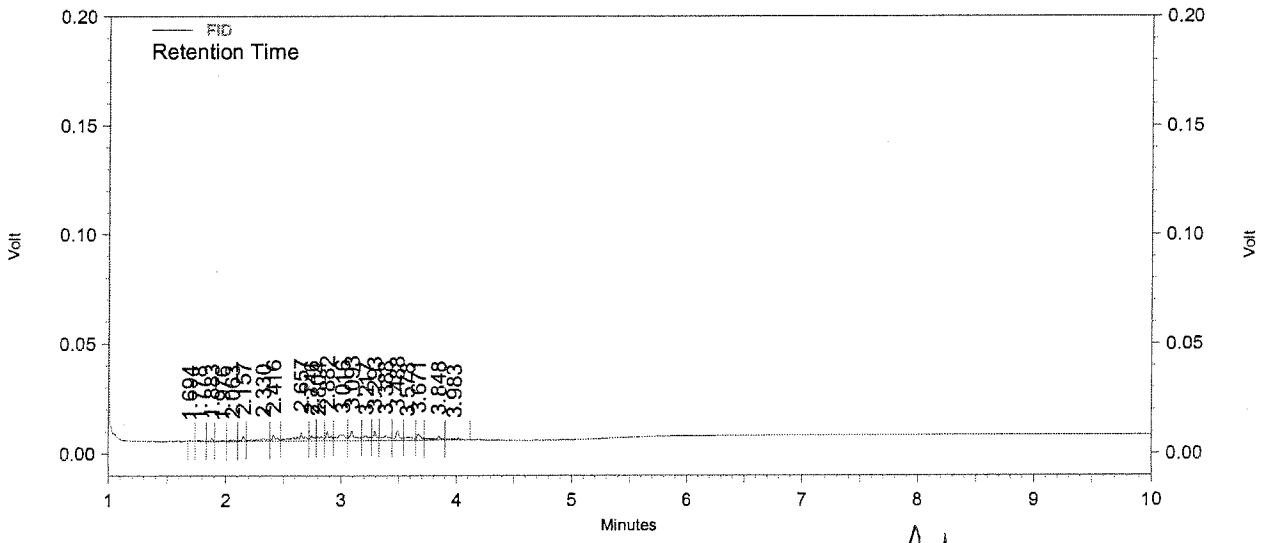
AS
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05003.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0501 DSL 5PPM**
Acquired	**: 11/05/14 09:50:32**
Printed	**: 11/06/14 09:49:00**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
DIESEL(TOTAL)		153419	28620.13271	5.000 CAL
DIESEL(C10-C24)		152142	27919.60062	5.000 CAL
DIESEL(C10-C28)		152142	27961.51805	5.000 CAL
DIESEL(C10-C25)		152142	27958.48881	5.000 CAL
DIESEL(C9-C24)		153419	28359.12910	5.000 CAL
DIESEL(C9-C25)		153419	28390.94238	5.000 CAL
DIESEL(C10-C36)		152142	27962.70357	5.000 CAL
DIESEL(C10-C40)		152142	27962.70357	5.000 CAL
Totals		1220967		40.000 CAL



11/06/14

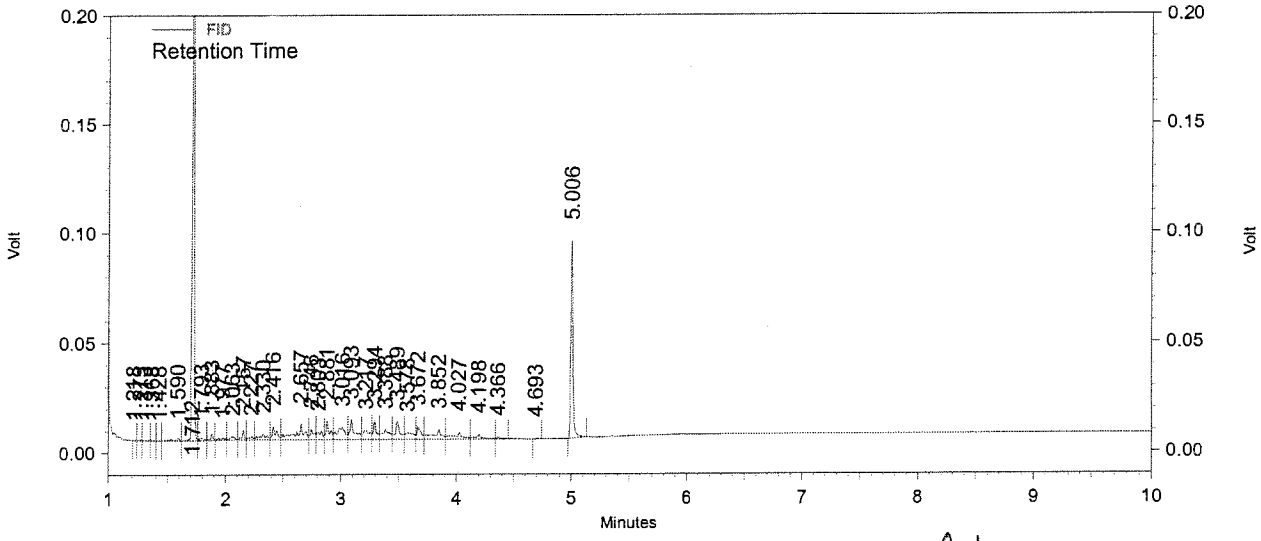
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05004.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0502 DSL 10/20/5PPM**
Acquired	**: 11/05/14 10:07:27**
Printed	**: 11/06/14 09:49:07**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	326432	16736.07261	20.000 CAL
HEXACOSANE	5.006	119562	23858.57389	5.000 CAL
DIESEL(TOTAL)		335480	28620.13271	10.000 CAL
DIESEL(C10-C24)		326205	27919.60062	10.000 CAL
DIESEL(C10-C28)		326834	27961.51805	10.000 CAL
DIESEL(C10-C25)		326834	27958.48881	10.000 CAL
DIESEL(C9-C24)		333020	28359.12910	10.000 CAL
DIESEL(C9-C25)		333649	28390.94238	10.000 CAL
DIESEL(C10-C36)		326834	27962.70357	10.000 CAL
DIESEL(C10-C40)		326834	27962.70357	10.000 CAL
Totals		3081684		105.000 CAL



AJ 11/06/14

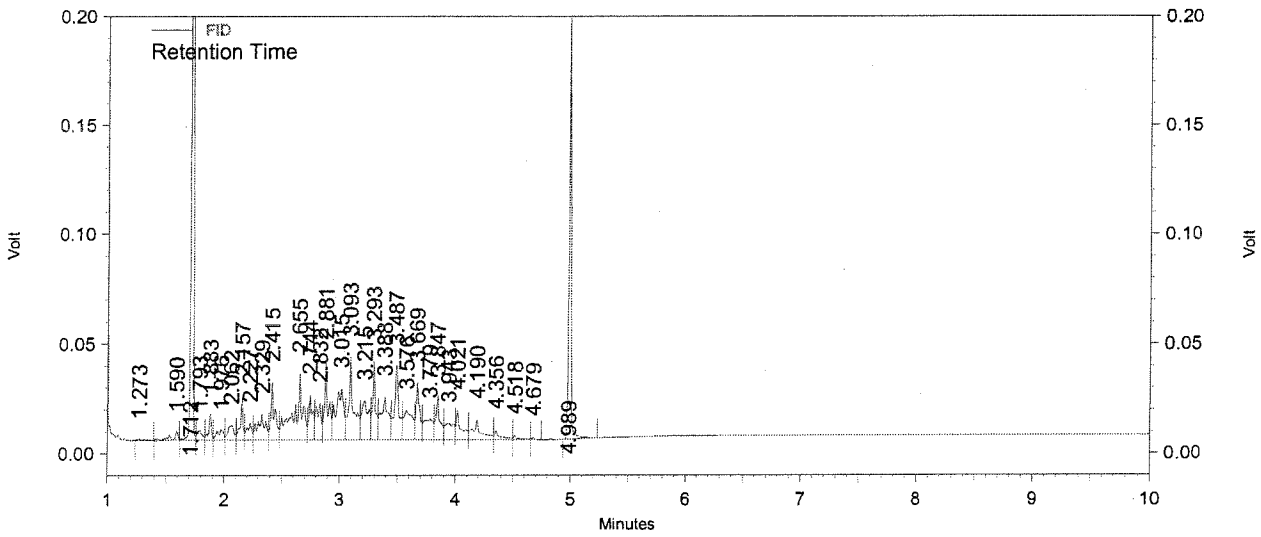
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05005.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0503 DSL 50/40/10PPM**
Acquired	**: 11/05/14 10:24:37**
Printed	**: 11/06/14 09:49:15**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	658957	16736.07261	40.000 CAL
HEXACOSANE	4.989	244835	23858.57389	10.000 CAL
DIESEL(TOTAL)		1496602	28620.13271	50.000 CAL
DIESEL(C10-C24)		1465992	27919.60062	50.000 CAL
DIESEL(C10-C28)		1467244	27961.51805	50.000 CAL
DIESEL(C10-C25)		1467244	27958.48881	50.000 CAL
DIESEL(C9-C24)		1492529	28359.12910	50.000 CAL
DIESEL(C9-C25)		1493781	28390.94238	50.000 CAL
DIESEL(C10-C36)		1467244	27962.70357	50.000 CAL
DIESEL(C10-C40)		1467244	27962.70357	50.000 CAL
Totals		12721672		450.000 CAL



DA
11/06/14

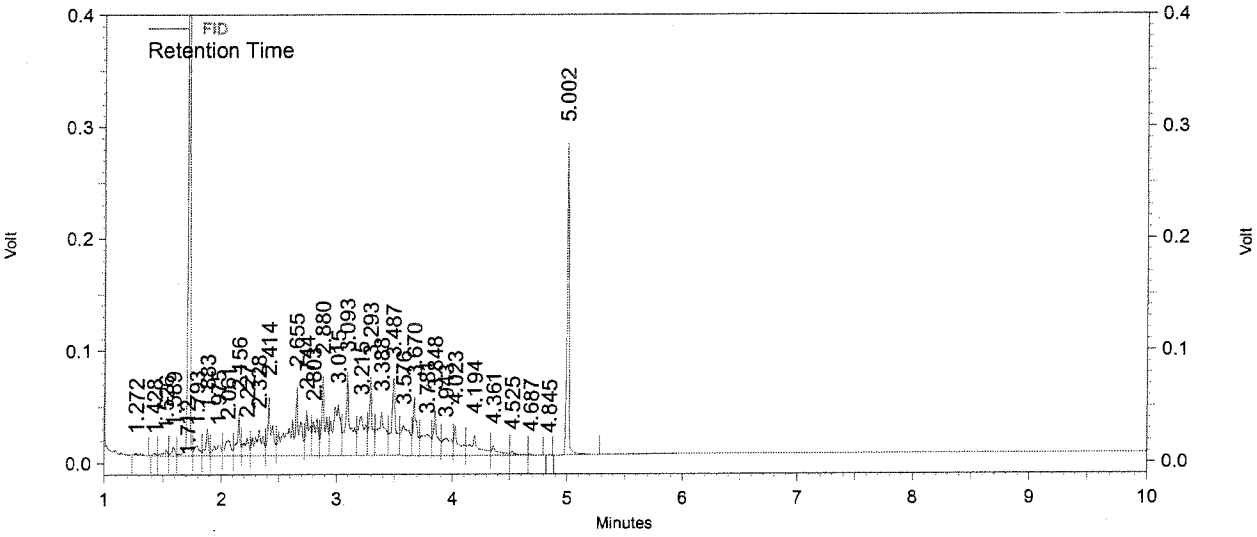
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05006.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0504 DSL 100/60/15PPM**
Acquired	**: 11/05/14 10:41:30**
Printed	**: 11/06/14 09:49:27**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	966609	16736.07261	60.000 CAL
HEXACOSANE	5.002	362168	23858.57389	15.000 CAL
DIESEL(TOTAL)		2994680	28620.13271	100.000 CAL
DIESEL(C10-C24)		2924901	27919.60062	100.000 CAL
DIESEL(C10-C28)		2929916	27961.51805	100.000 CAL
DIESEL(C10-C25)		2929916	27958.48881	100.000 CAL
DIESEL(C9-C24)		2967397	28359.12910	100.000 CAL
DIESEL(C9-C25)		2971468	28390.94238	100.000 CAL
DIESEL(C10-C36)		2929916	27962.70357	100.000 CAL
DIESEL(C10-C40)		2929916	27962.70357	100.000 CAL
Totals		24906887		875.000 CAL



LA
11/06/14

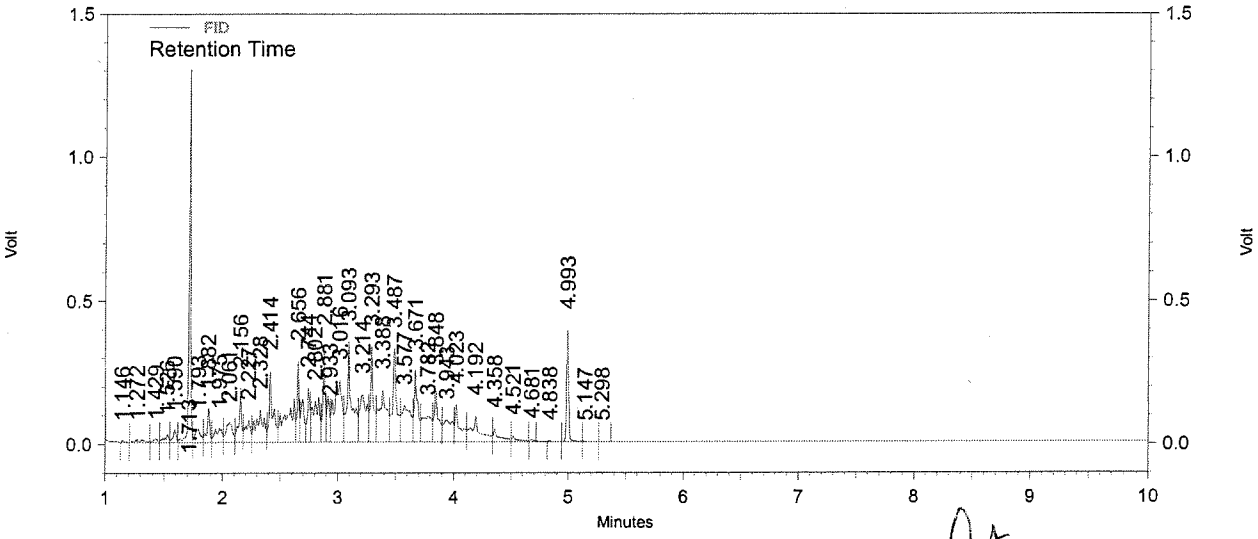
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05007.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0505 DSL 500/80/20PPM**
Acquired	**: 11/05/14 10:58:28**
Printed	**: 11/06/14 09:49:41**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1381565	16736.07261	80.000 CAL
HEXACOSANE	4.993	489517	23858.57389	20.000 CAL
DIESEL(TOTAL)		13438668	28620.13271	500.000 CAL
DIESEL(C10-C24)		13020338	27919.60062	500.000 CAL
DIESEL(C10-C28)		13045121 ✓	27961.51805	500.000 CAL
DIESEL(C10-C25)		13041741 ✓	27958.48881	500.000 CAL
DIESEL(C9-C24)		13256375	28359.12910	500.000 CAL
DIESEL(C9-C25)		13272243	28390.94238	500.000 CAL
DIESEL(C10-C36)		13046358	27962.70357	500.000 CAL
DIESEL(C10-C40)		13046358 ✓	27962.70357	500.000 CAL
Totals		107038284		4100.000 CAL



11/06/14

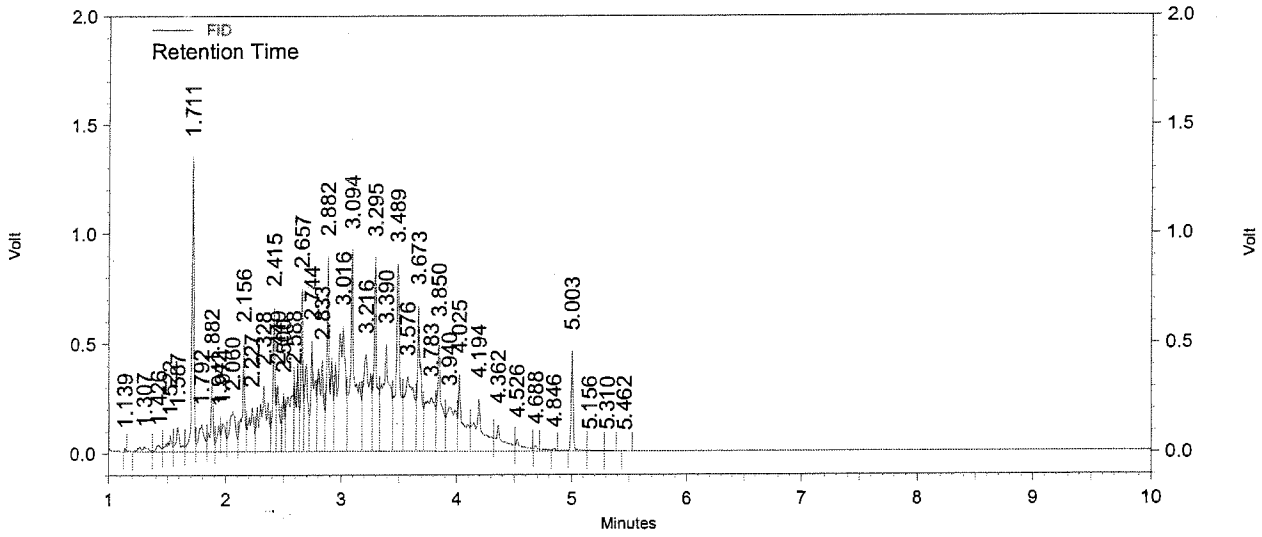
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05008.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0506 DSL 1500/100/25PPM**
Acquired	**: 11/05/14 11:15:24**
Printed	**: 11/06/14 09:49:56**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1716683 ✓	16736.07261	100.000 CAL
HEXACOSANE	5.003	580434 ✓	23858.57389	25.000 CAL
DIESEL(TOTAL)		36325296 ✓	28620.13271	1500.000 CAL
DIESEL(C10-C24)		35132708 ✓	27919.60062	1500.000 CAL
DIESEL(C10-C28)		35207349	27961.51805	1500.000 CAL
DIESEL(C10-C25)		35198098	27958.48881	1500.000 CAL
DIESEL(C9-C24)		35555234 ✓	28359.12910	1500.000 CAL
DIESEL(C9-C25)		35599912	28390.94238	1500.000 CAL
DIESEL(C10-C36)		35210674	27962.70357	1500.000 CAL
DIESEL(C10-C40)		35210674	27962.70357	1500.000 CAL
Totals		285737062		12125.000 CAL



AS 11/06/14

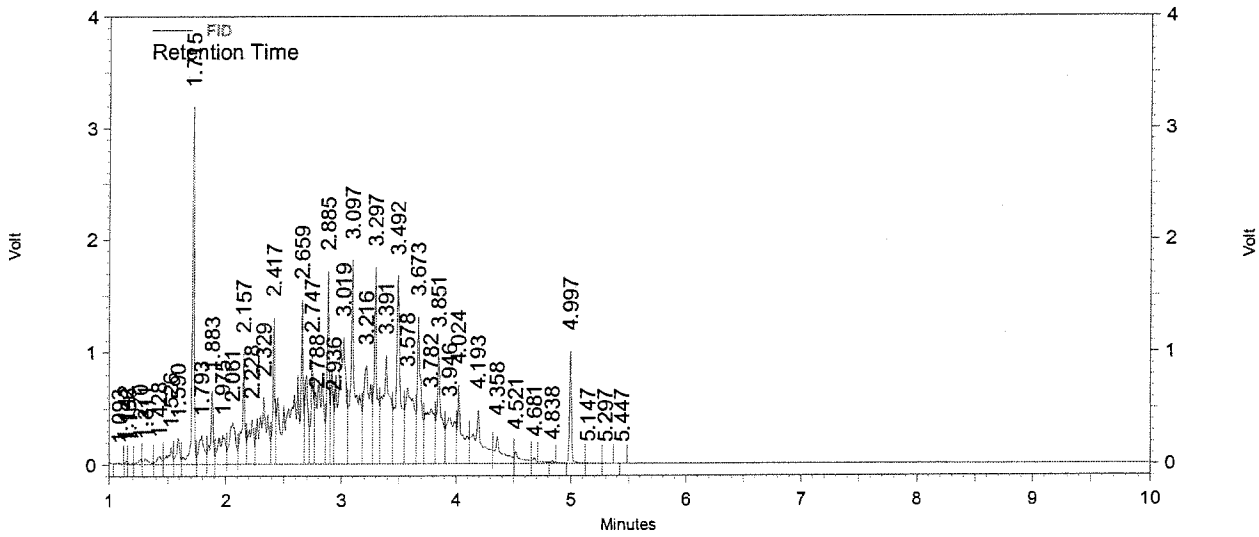
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05009.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0507 DSL 3000/220/55PPM**
Acquired	**: 11/05/14 11:32:14**
Printed	**: 11/06/14 09:51:33**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.715	3756361	16736.07261	220.000 CAL
HEXACOSANE	4.997	1260479	23858.57389	55.000 CAL
DIESEL(TOTAL)		75408267	28620.13271	3000.000 CAL
DIESEL(C10-C24)		73070919	27919.60062	3000.000 CAL
DIESEL(C10-C28)		73238935	27961.51805	3000.000 CAL
DIESEL(C10-C25)		73214103	27958.48881	3000.000 CAL
DIESEL(C9-C24)		74361943	28359.12910	3000.000 CAL
DIESEL(C9-C25)		74459508	28390.94238	3000.000 CAL
DIESEL(C10-C36)		73249759	27962.70357	3000.000 CAL
DIESEL(C10-C40)		73249759	27962.70357	3000.000 CAL
Totals		595270033		24275.000 CAL



11/06/14.

Software Version: Version 3.3.1

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05011A 11/05/14 12:06
LFID & Datetime: LK05012A 11/05/14 12:23
LFID & Datetime: LK05013A 11/05/14 12:39
LFID & Datetime: LK05014A 11/05/14 12:56
LFID & Datetime: LK05015A 11/05/14 13:13
LFID & Datetime: LK05016A 11/05/14 13:30
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
JP5(C8-C18)	5.00	25279	28997	26507	27549	24954	27295	26763.6	5.6	✓
M.OIL(C18-C36)	5.00	21271	21529	20230	22087	18839	21396	20892.0	5.6	✓
M.OIL(C24-C36)	5.00	19438	18662	17110	18899	16149	17956	18035.6	6.8	✓
M.OIL(C24-C40)	5.00	19438	18662	17110	18899	16149	17956	18035.6	6.8	✓

DSD5K05.MET

AS 11/06/14

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05011A 11/05/14 12:06
LFID & Datetime: LK05012A 11/05/14 12:23
LFID & Datetime: LK05013A 11/05/14 12:39
LFID & Datetime: LK05014A 11/05/14 12:56
LFID & Datetime: LK05015A 11/05/14 13:13
LFID & Datetime: LK05016A 11/05/14 13:30

COMPOUND	RT OF STANDARDS (MIN) 2.0X	10.0X	20.0X	100.0X	300.0X	600.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
JP5(C8-C18)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C18-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C24-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C24-C40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DSD5K05.MET

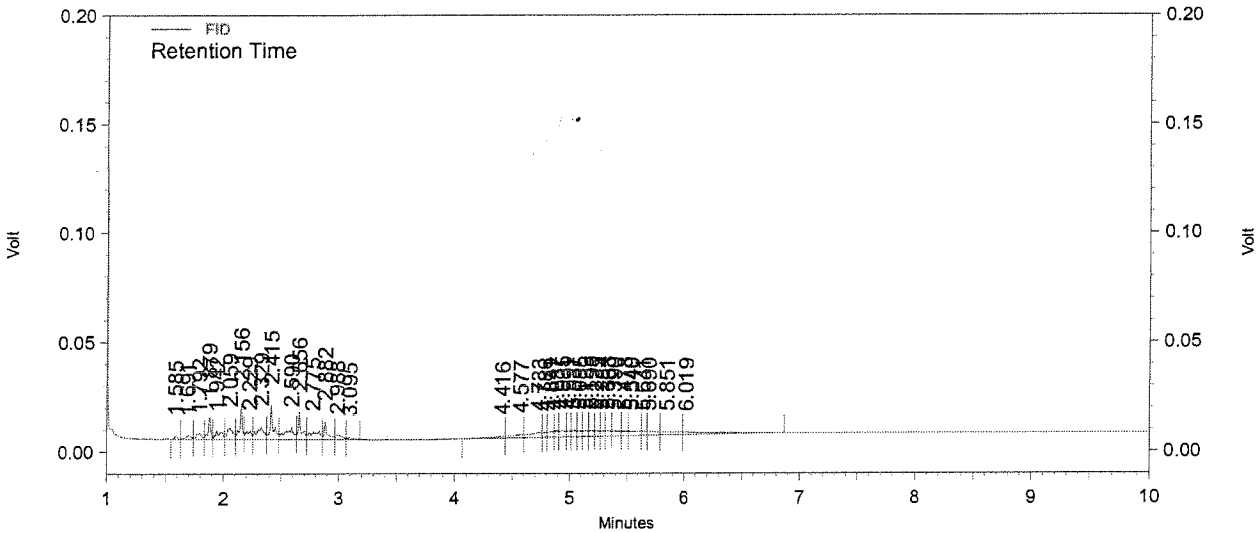
As
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05011.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0508 JP5/5W30 10/10PPM**
Acquired	**: 11/05/14 12:06:05**
Printed	**: 11/06/14 09:51:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		252786 ✓	26763.57150	10.000 CAL
M.OIL(C18-C36)		212707 ✓	20892.01950	10.000 CAL
M.OIL(C24-C36)		194381 ✓	18035.59361	10.000 CAL
M.OIL(C24-C40)		194381	18035.59361	10.000 CAL
Totals		854255		40.000 CAL



11/06/14

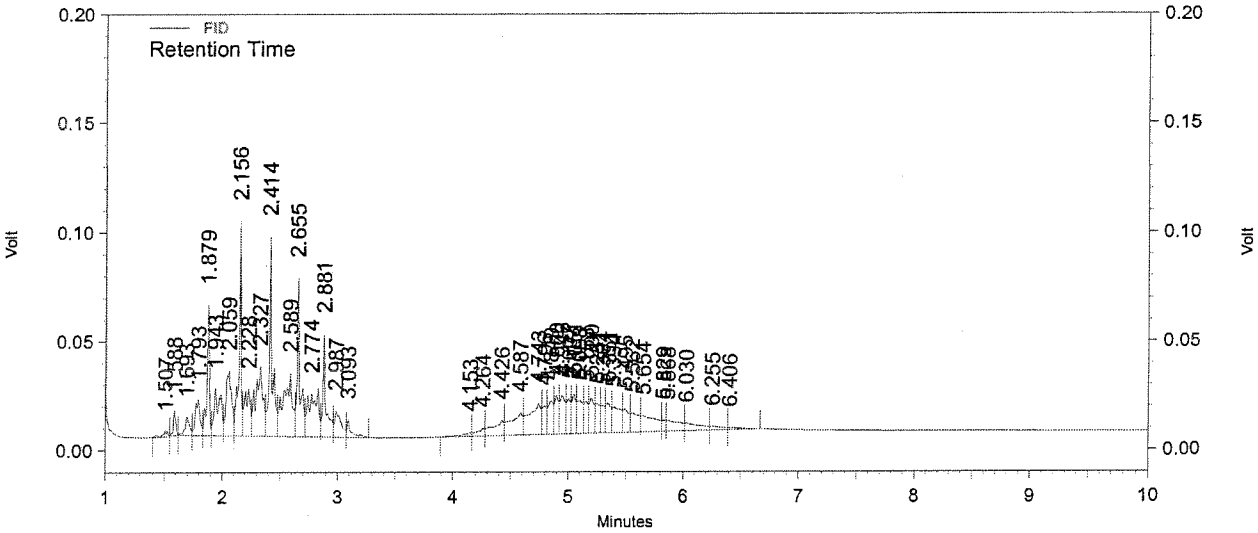
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05012.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0509 JP5/5W30 50/50PPM**
Acquired	**: 11/05/14 12:23:02**
Printed	**: 11/06/14 09:51:51**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		1449845 ✓	26763.57150	50.000 CAL
M.OIL(C18-C36)		1076439 ✓	20892.01950	50.000 CAL
M.OIL(C24-C36)		933084 ✓	18035.59361	50.000 CAL
M.OIL(C24-C40)		933084 ✓	18035.59361	50.000 CAL
Totals		4392452		200.000 CAL



AA 11/06/14

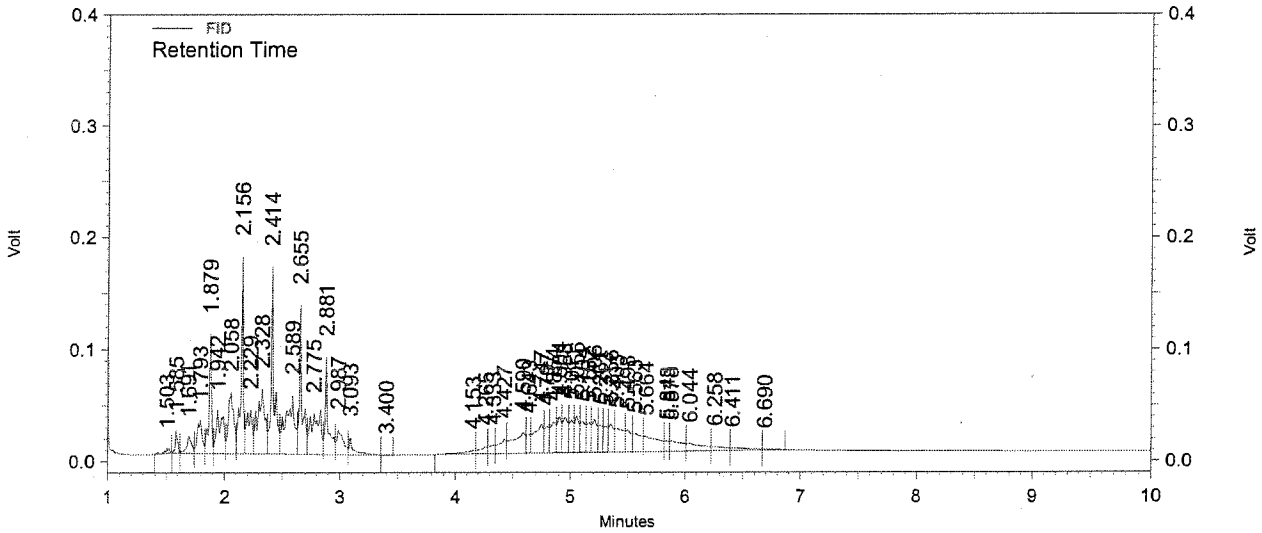
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05013.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0510 JP5/5W30 100/100PPM**
Acquired	**: 11/05/14 12:39:58**
Printed	**: 11/06/14 09:52:06**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		2650748	26763.57150	100.000 CAL
M.OIL(C18-C36)		2023033	20892.01950	100.000 CAL
M.OIL(C24-C36)		1710977	18035.59361	100.000 CAL
M.OIL(C24-C40)		1710977	18035.59361	100.000 CAL
Totals		8095735		400.000 CAL



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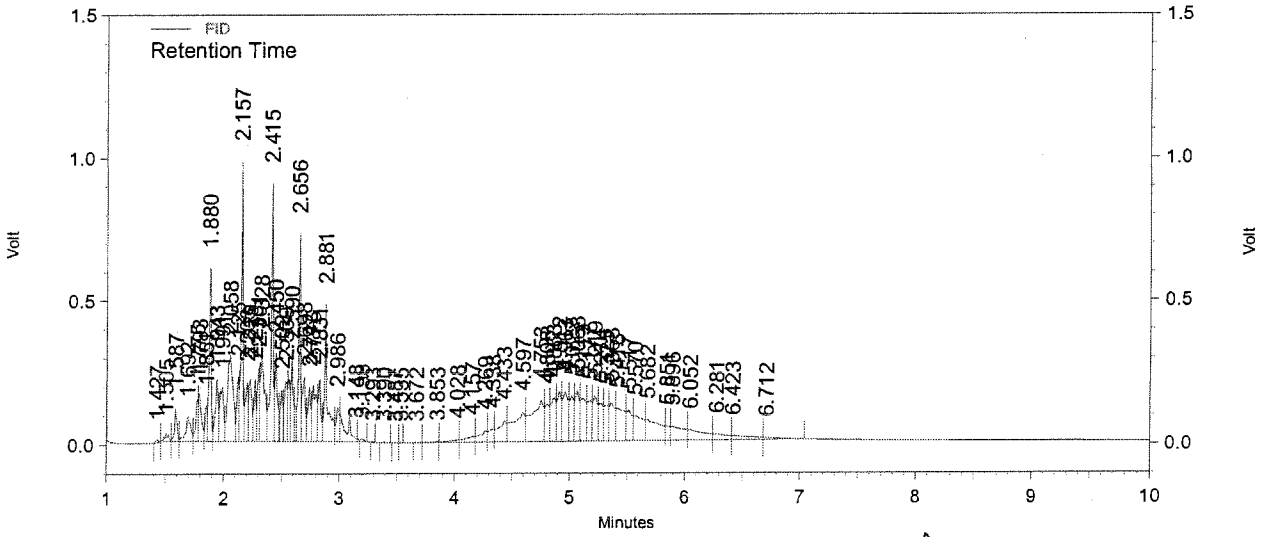
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05014.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0511 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 12:56:55**
Printed	**: 11/06/14 09:52:18**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		13774736 ✓	26763.57150	500.000 CAL
M.OIL(C18-C36)		11043302 ✓	20892.01950	500.000 CAL
M.OIL(C24-C36)		9449693 ✓	18035.59361	500.000 CAL
M.OIL(C24-C40)		9449693 ✓	18035.59361	500.000 CAL
Totals		43717424		2000.000 CAL



AS 11/06/14

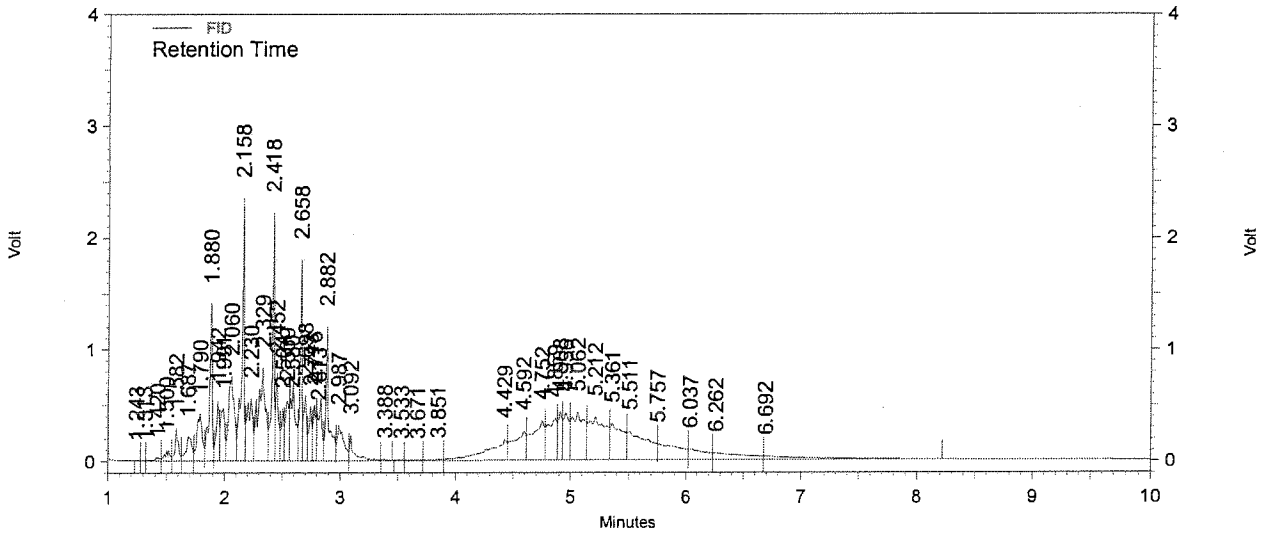
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05015.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0512 JP5/5W30 1500/1500PPM**
Acquired	**: 11/05/14 13:13:54**
Printed	**: 11/06/14 09:52:32**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		37431293 ✓	26763.57150	1500.000 CAL
M.OIL(C18-C36)		28258896 ✓	20892.01950	1500.000 CAL
M.OIL(C24-C36)		24223446 ✓	18035.59361	1500.000 CAL
M.OIL(C24-C40)		24223446 ✓	18035.59361	1500.000 CAL
Totals		114137081		6000.000 CAL



AA 11/06/14

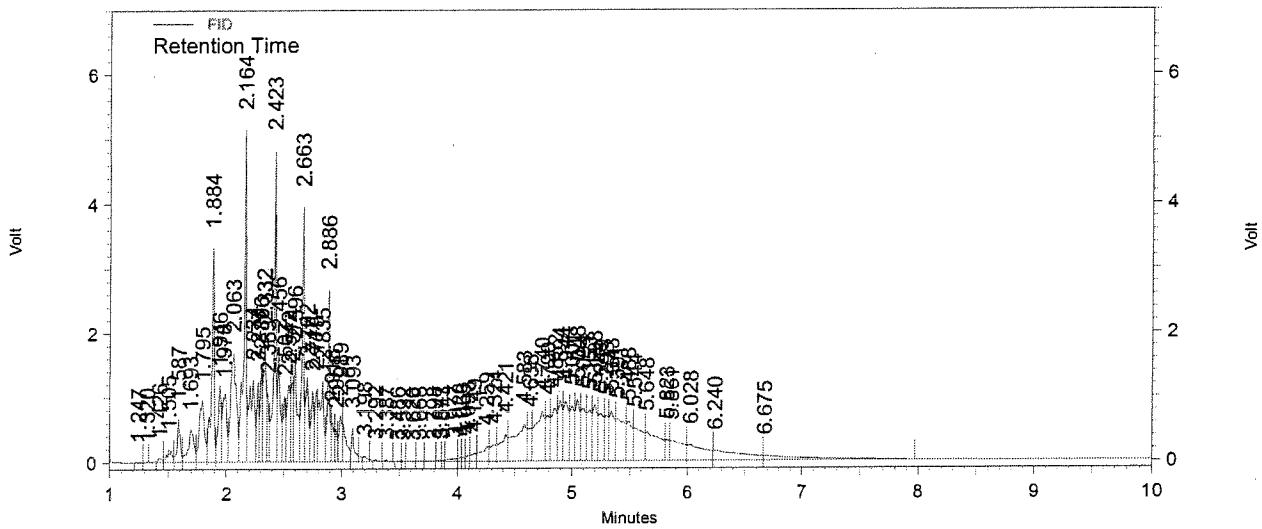
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05016.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0513 JP5/5W30 3000/3000PPM**
Acquired	**: 11/05/14 13:30:48**
Printed	**: 11/06/14 09:52:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		81884345	26763.57150	3000.000 CAL
M.OIL(C18-C36)		64189317	20892.01950	3000.000 CAL
M.OIL(C24-C36)		53866985	18035.59361	3000.000 CAL
M.OIL(C24-C40)		53866985	18035.59361	3000.000 CAL
Totals		253807632		12000.000 CAL



RS
11/06/14

Software Version: Version 3.3.1

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK05010A 11/05/2014 11:49
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	14475834	505.79	1		15
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	13846358	495.94	-1		15
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	13919850	497.82	-0		15
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	13905021	497.35	-1		15
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	14166762	499.55	-0		15
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	14225425	501.05	0		15
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	13924214	497.96	-0		15
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	13924214	497.96	-0		15
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.713	1.710	1.716	80.0	16736.1	1381725	82.56	3		15
HEXACOSANE	4.990	4.942	5.038	20.0	23858.6	521606	21.86	9		15

DSD5K05.MET

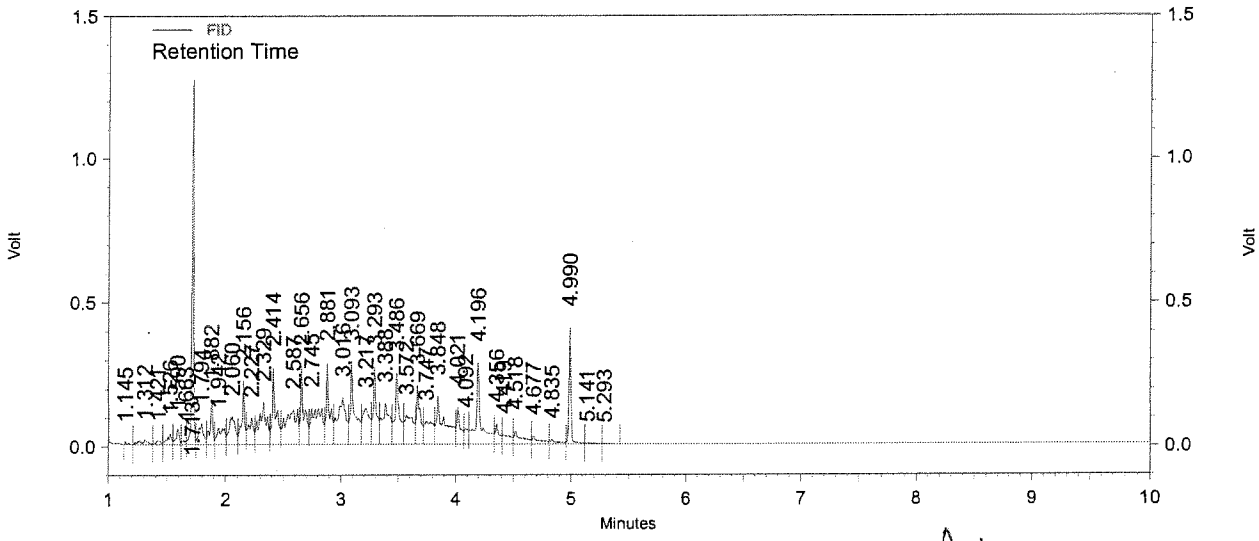
AS
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05010.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0501 DSL 500/80/20PPM**
Acquired	**: 11/05/14 11:49:11**
Printed	**: 11/06/14 09:04:57**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1381725	16736.07261	82.560
HEXACOSANE	4.990	521606	23858.57389	21.862
DIESEL(TOTAL)		14475834	28620.13271	505.792
DIESEL(C10-C24)		13846358	27919.60062	495.937
DIESEL(C10-C28)		13919850	27961.51805	497.822
DIESEL(C10-C25)		13905021	27958.48881	497.345
DIESEL(C9-C24)		14166762	28359.12910	499.549
DIESEL(C9-C25)		14225425	28390.94238	501.055
DIESEL(C10-C36)		13924214	27962.70357	497.957
DIESEL(C10-C40)		13924214	27962.70357	497.957
Totals		114291009		4097.835



AS 11/06/14

Software Version: Version 3.3.1

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK05017A 11/05/2014 13:47
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	11381114	425.25	-15		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9825630	470.30	-6		15
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8414955	466.58	-7		15
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8414955	466.58	-7		15

DSD5K05.MET

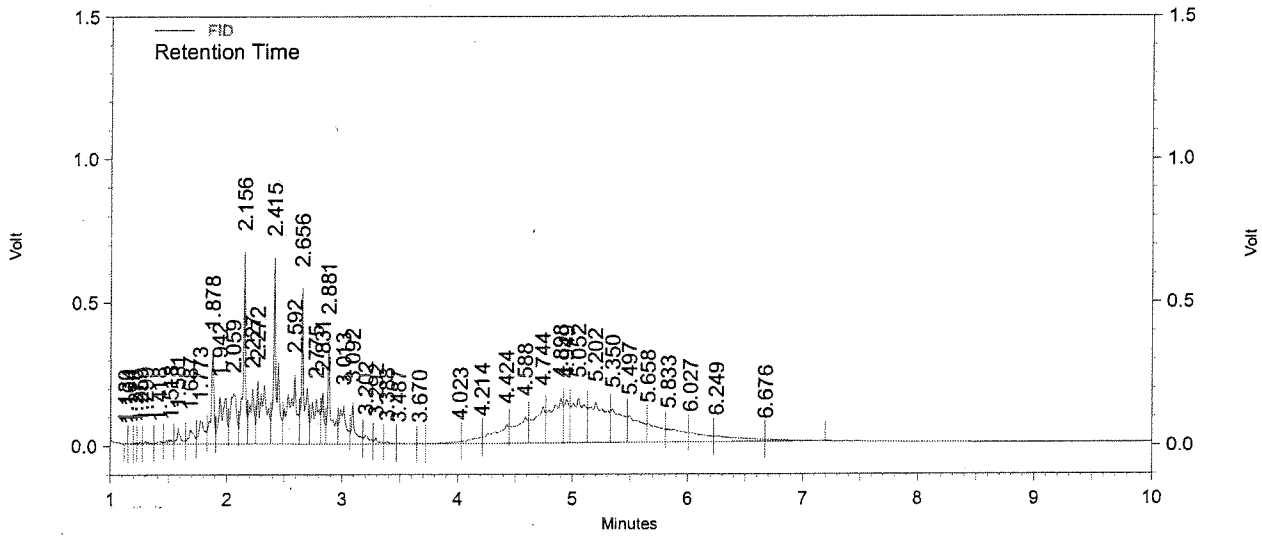
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05017.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0502 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 13:47:50**
Printed	**: 11/06/14 09:46:58**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		11381114	26763.57150	425.246
M.OIL(C18-C36)		9825630	20892.01950	470.305
M.OIL(C24-C36)		8414955	18035.59361	466.575
M.OIL(C24-C40)		8414955	18035.59361	466.575
Totals		38036654		1828.702



RA
11/06/14

Software Version: Version 3.3.1

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK05018A 11/05/2014 14:04
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	14925291	557.67	12		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	11193330	535.77	7		15
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	7814356	433.27	-13		15
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	7814356	433.27	-13		15

DSD5K05.MET

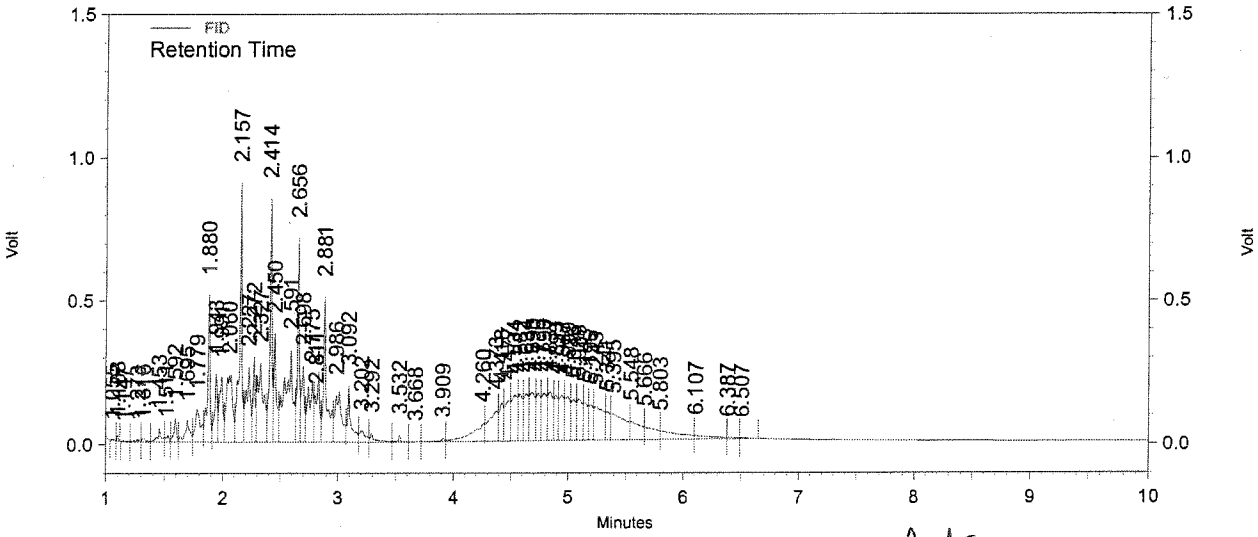
AS 11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05018.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0503 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 14:04:43**
Printed	**: 11/06/14 09:47:12**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		14925291	26763.57150	557.672
M.OIL(C18-C36)		11193330	20892.01950	535.771
M.OIL(C24-C36)		7814356	18035.59361	433.274
M.OIL(C24-C40)		7814356	18035.59361	433.274
Totals		41747333		1959.991



11/06/14

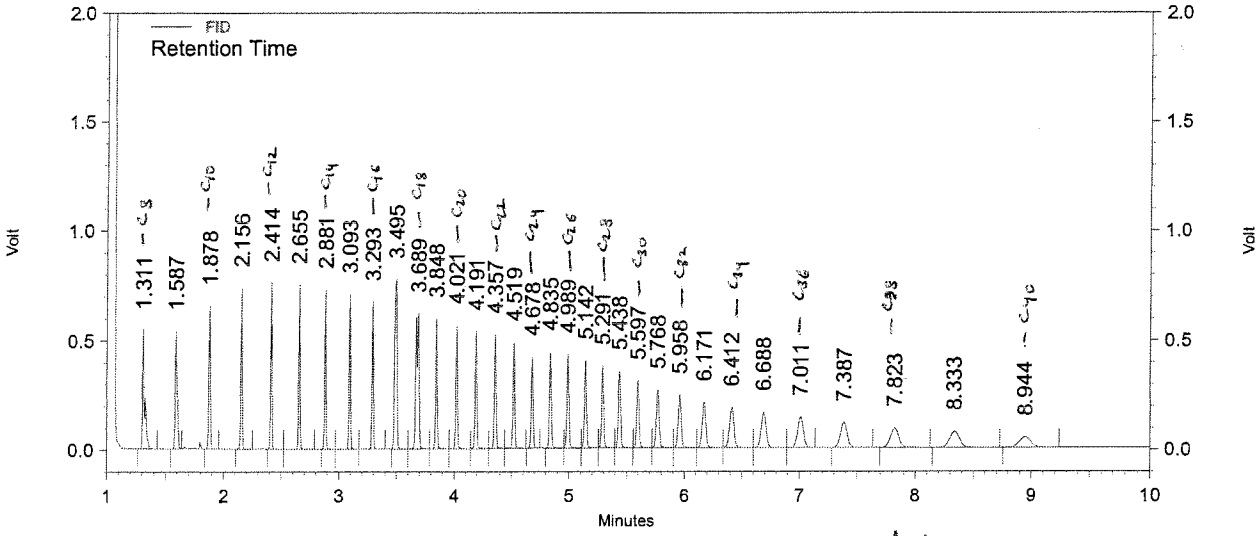
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05019.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DRO(C8-C40 + C9-C39)**
Acquired	**: 11/05/14 14:21:43**
Printed	**: 11/06/14 09:56:28**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE				0.000 BDL
HEXACOSANE	4.989	533787	23858.57389	22.373
DIESEL(TOTAL)		18433417	28620.13271	644.072
DIESEL(C10-C24)		9564207	27919.60062	342.562
DIESEL(C10-C28)		11576768	27961.51805	414.025
DIESEL(C10-C25)		10575219	27958.48881	378.247
DIESEL(C9-C24)		10214552	28359.12910	360.186
DIESEL(C9-C25)		11225564	28390.94238	395.392
DIESEL(C10-C36)		15453996	27962.70357	552.665
DIESEL(C10-C40)		16794424	27962.70357	600.601
Totals		104371934		3710.123



AA 11/06/14

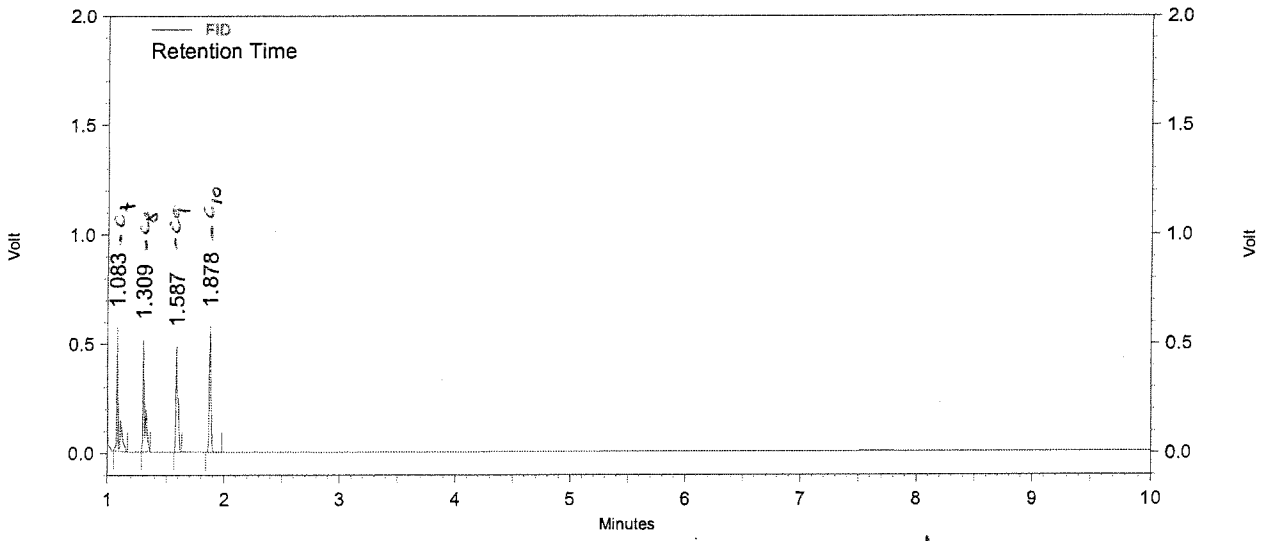
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05020.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: GRO(C6-C10)**
Acquired	**: 11/05/14 14:38:43**
Printed	**: 11/06/14 09:57:07**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE				0.000 BDL
HEXACOSANE				0.000 BDL
DIESEL(TOTAL)		1773382	28620.13271	61.963
DIESEL(C10-C24)		0	27919.60062	0.000
DIESEL(C10-C28)		0	27961.51805	0.000
DIESEL(C10-C25)		0	27958.48881	0.000
DIESEL(C9-C24)		601971	28359.12910	21.227
DIESEL(C9-C25)		601971	28390.94238	21.203
DIESEL(C10-C36)		0	27962.70357	0.000
DIESEL(C10-C40)		0	27962.70357	0.000
Totals		2977324		104.392



AS 11/06/14

Software Version: Version 3.3.1

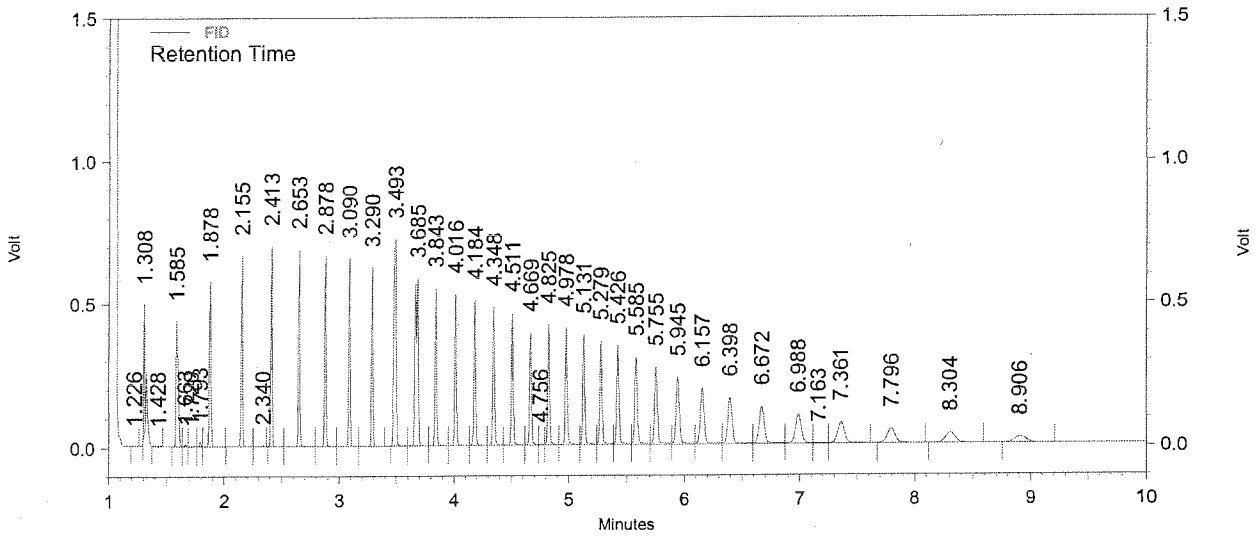
DAILY CALIBRATIONS

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105
File : D:\Projects\EZC331\Data\LK14\LK14002.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : DRO(C8-C40 + C9-C39)
Acquired : 11/14/14 11:24:41
Printed : 11/14/14 11:34:50
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.720	5966	16736.07261	0.356
HEXACOSANE	4.978	516369	23858.57389	21.643
DIESEL(TOTAL)		16241727	28620.13271	567.493
DIESEL(C10-C24)		8725961	27919.60062	312.539
DIESEL(C10-C28)		10215318	27961.51805	365.335
DIESEL(C10-C25)		9235498	27958.48881	330.329
DIESEL(C9-C24)		9352019	28359.12910	329.771
DIESEL(C9-C25)		9861556	28390.94238	347.349
DIESEL(C10-C36)		13815073	27962.70357	494.054
DIESEL(C10-C40)		14722105	27962.70357	526.491
Totals		92691592		3295.359



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14076A 11/15/2014 08:23
CONC UNIT : ppm

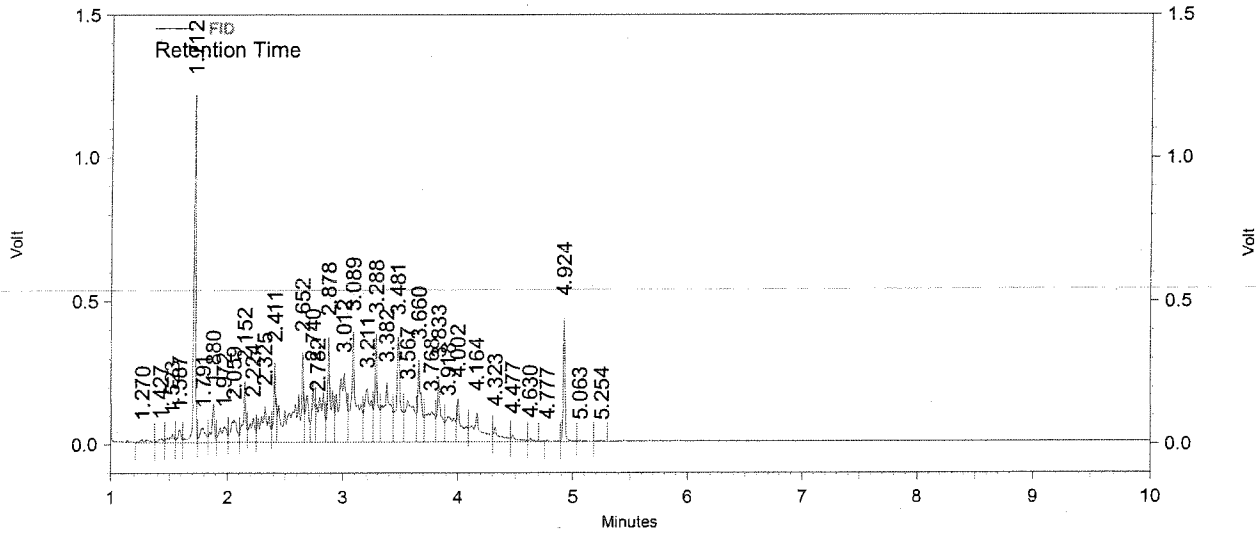
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15884055	555.00	11		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15429333	552.63	11		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15450530	552.56	11		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15438138	552.18	10		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15697830	553.54	11		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15706635	553.23	11		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15450530	552.54	11		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15450530	552.54	11		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1463583	87.45	9		20
HEXACOSANE	4.924	4.876	4.972	20.0	23858.6	520683	21.82	9		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14076.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : CDSD5K05463 DSL 500/80/20PPM
Acquired : 11/15/14 08:23:05
Printed : 11/17/14 10:54:46
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1463583	16736.07261	87.451
HEXACOSANE	4.924	520683	23858.57389	21.824
DIESEL(TOTAL)		15884055	28620.13271	554.996
DIESEL(C10-C24)		15429333	27919.60062	552.634
DIESEL(C10-C28)		15450530	27961.51805	552.564
DIESEL(C10-C25)		15438138	27958.48881	552.181
DIESEL(C9-C24)		15697830	28359.12910	553.537
DIESEL(C9-C25)		15706635	28390.94238	553.227
DIESEL(C10-C36)		15450530	27962.70357	552.541
DIESEL(C10-C40)		15450530	27962.70357	552.541
Totals		126491847		4533.495



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14077A 11/15/2014 08:40
CONC UNIT : ppm

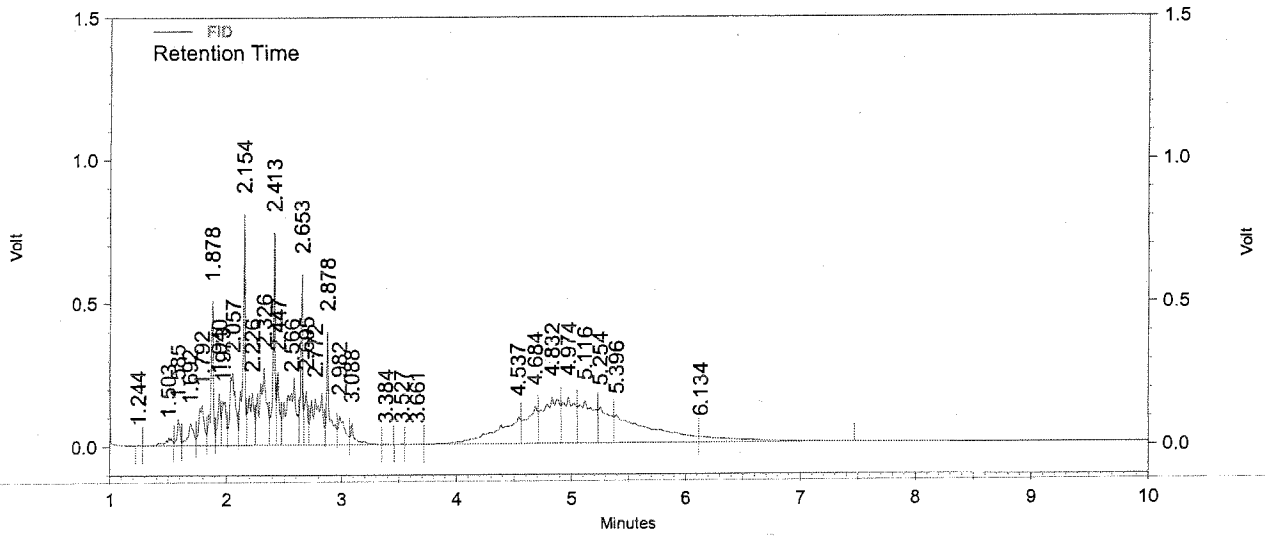
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12364753	462.00	-8		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9876717	472.75	-5		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8510662	471.88	-6		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8510662	471.88	-6		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14077.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05464 JP5/5W30 500/500PPM**
Acquired	**: 11/15/14 08:40:08**
Printed	**: 11/17/14 10:51:25**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12364753	26763.57150	461.999
M.OIL(C18-C36)		9876717	20892.01950	472.751
M.OIL(C24-C36)		8510662	18035.59361	471.881
M.OIL(C24-C40)		8510662	18035.59361	471.881
Totals		39262794		1878.513



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14089A 11/15/2014 12:06
CONC UNIT : ppm

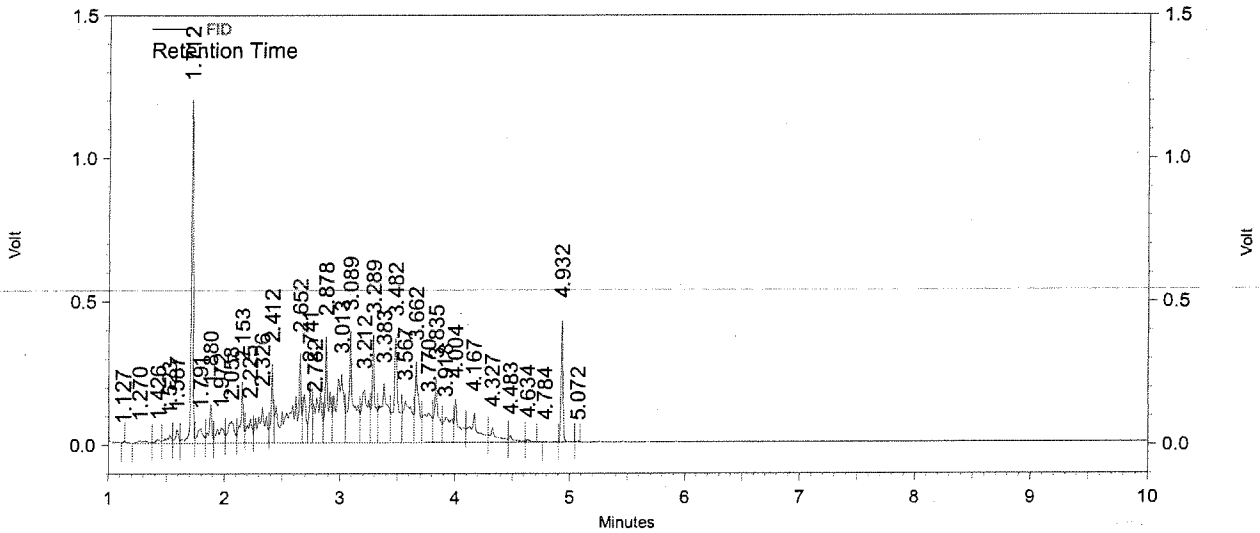
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15827446	553.02	11		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15376405	550.74	10		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15388952	550.36	10		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15385473	550.30	10		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15645979	551.71	10		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15655047	551.41	10		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15388952	550.34	10		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15388952	550.34	10		20
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1463545	87.45	9		20
HEXACOSANE	4.932	4.884	4.980	20.0	23858.6	510749	21.41	7		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14089.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05465 DSL 500/80/20PPM**
Acquired	**: 11/15/14 12:06:10**
Printed	**: 11/17/14 10:55:19**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1463545	16736.07261	87.449
HEXACOSANE	4.932	510749	23858.57389	21.407
DIESEL(TOTAL)		15827446	28620.13271	553.018
DIESEL(C10-C24)		15376405	27919.60062	550.739
DIESEL(C10-C28)		15388952	27961.51805	550.362
DIESEL(C10-C25)		15385473	27958.48881	550.297
DIESEL(C9-C24)		15645979	28359.12910	551.709
DIESEL(C9-C25)		15655047	28390.94238	551.410
DIESEL(C10-C36)		15388952	27962.70357	550.338
DIESEL(C10-C40)		15388952	27962.70357	550.338
Totals		126031500		4517.067



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14090A 11/15/2014 12:23
CONC UNIT : ppm

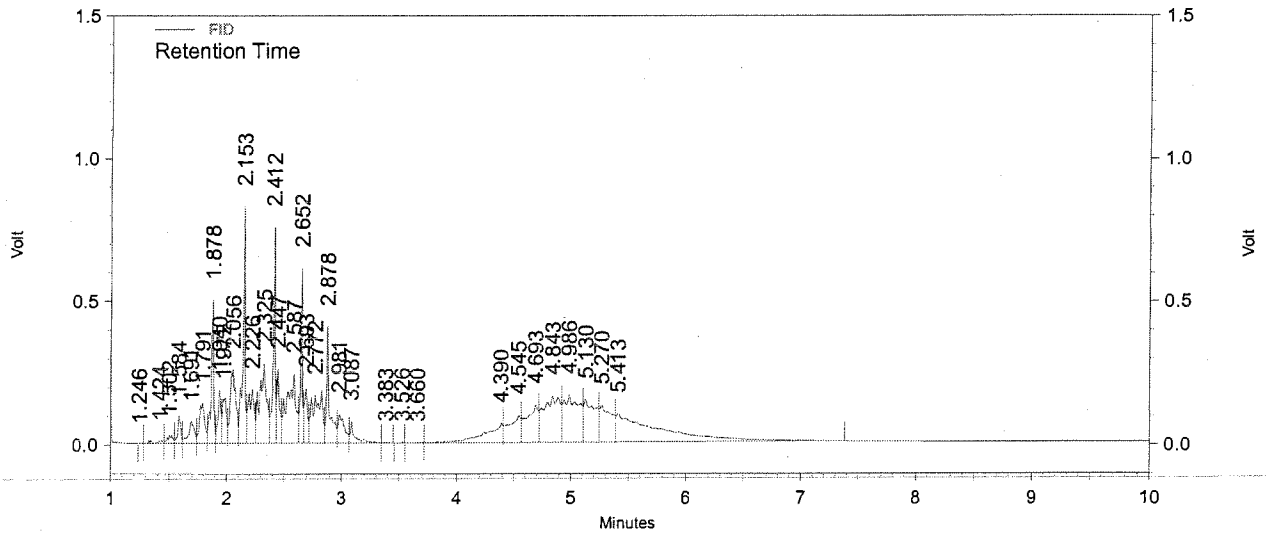
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12598735	470.74	-6		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	10021189	479.67	-4		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8628159	478.40	-4		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8628159	478.40	-4		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14090.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05466 JP5/5W30 500/500PPM**
Acquired	**: 11/15/14 12:23:19**
Printed	**: 11/17/14 10:51:39**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12598735	26763.57150	470.742
M.OIL(C18-C36)		10021189	20892.01950	479.666
M.OIL(C24-C36)		8628159	18035.59361	478.396
M.OIL(C24-C40)		8628159	18035.59361	478.396
Totals		39876242		1907.200



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14094A 11/15/2014 13:31
CONC UNIT : ppm

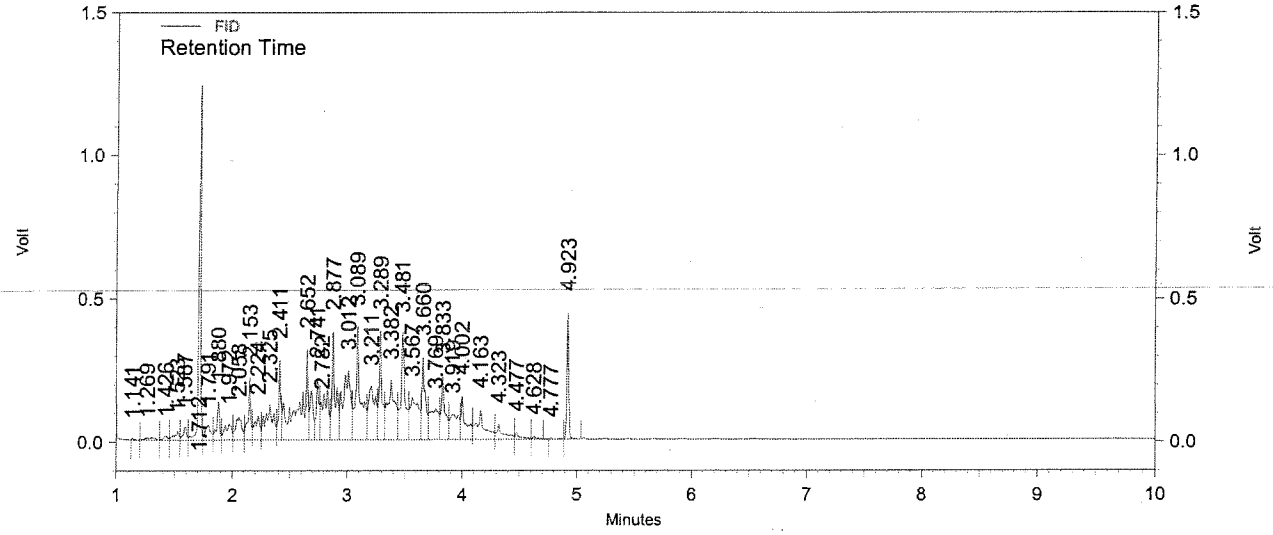
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	16052748	560.89	12		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15596206	558.61	12		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15605302	558.10	12		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15605302	558.16	12		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15867778	559.53	12		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15876874	559.22	12		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15605302	558.08	12		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15605302	558.08	12		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1479144	88.38	10		20
HEXACOSANE	4.923	4.875	4.971	20.0	23858.6	517591	21.69	8		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14094.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : CDSD5K05467 DSL 500/80/20PPM
Acquired : 11/15/14 13:31:41
Printed : 11/17/14 10:55:43
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1479144	16736.07261	88.381
HEXACOSANE	4.923	517591	23858.57389	21.694
DIESEL(TOTAL)		16052748	28620.13271	560.890
DIESEL(C10-C24)		15596206	27919.60062	558.611
DIESEL(C10-C28)		15605302	27961.51805	558.099
DIESEL(C10-C25)		15605302	27958.48881	558.160
DIESEL(C9-C24)		15867778	28359.12910	559.530
DIESEL(C9-C25)		15876874	28390.94238	559.223
DIESEL(C10-C36)		15605302	27962.70357	558.076
DIESEL(C10-C40)		15605302	27962.70357	558.076
Totals		127811549		4580.739



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14095A 11/15/2014 13:48
CONC UNIT : ppm

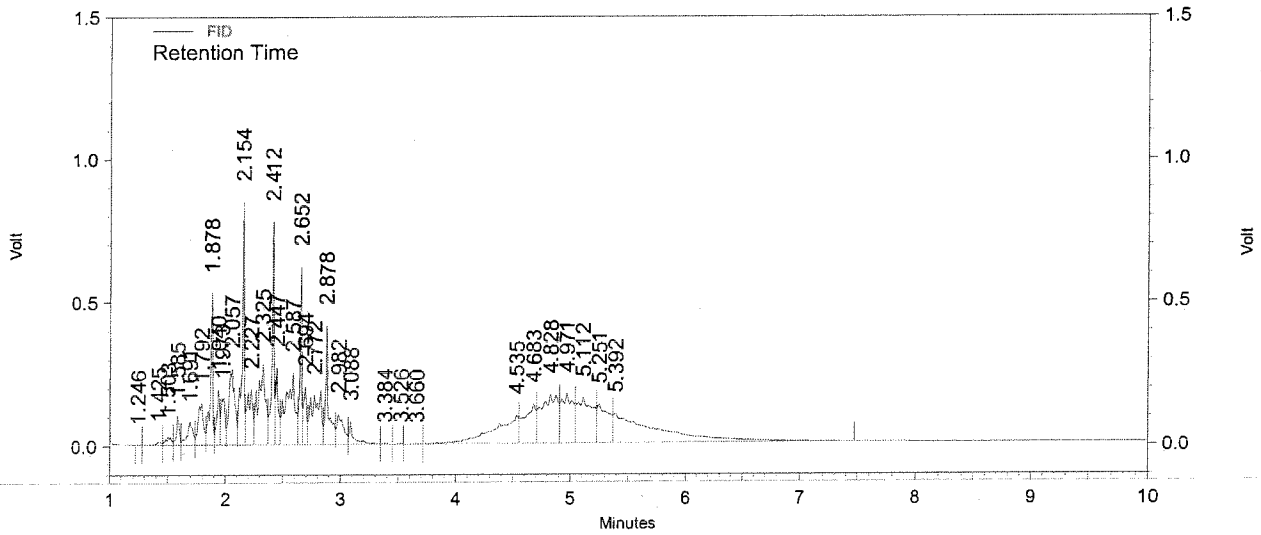
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12930515	483.14	-3		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	10327330	494.32	-1		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8897245	493.32	-1		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8897245	493.32	-1		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14095.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05468 JP5/5W30 500/500PPM**
Acquired	**: 11/15/14 13:48:49**
Printed	**: 11/17/14 10:51:47**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12930515	26763.57150	483.139
M.OIL(C18-C36)		10327330	20892.01950	494.319
M.OIL(C24-C36)		8897245	18035.59361	493.316
M.OIL(C24-C40)		8897245	18035.59361	493.316
Totals		41052335		1964.090



Software Version: Version 3.3.1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
EXTRACTABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK005W : K015
J216
DSK007S: LOQ-6, LOD-6 [AK102/AK103]
DSK004W: LOQ-5, LOD-5
J226
DSK006S : J226 [AK102, AK103]

KHL 11/5/14

Book #:	AD5-030
Instrument No.:	D5
Analytical Sequence:	LK05
Method File:	DSD5K05, AKD5I25
Analytical Batch:	CDSD5K05407

SOP #	Rev. #
☑ EMAX-8015D	6
☑ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID		Conc (mg/L)
ICAL		
☑ Diesel	SS3B-19-06-01	5→3000
☑ Motor Oil ☑ JP5	SS3B-19-06-03	10→3000
CH_2Cl_2	54184	Pure
DSL DCC	SS3B-17-96-02	500/80/20
JP5/5W30 DCC	SS3B-17-96-03	500/500
Alaska DCC	SS3B-17-90-02	500/500/20/80
~~Arizona DCC~~ DRO	SS3B-17-91-02	—
GRO	SS3B-17-82-02	—
DSL ICV	SS3B-19-06-02	500/80/20
JP5/5W30 ICV1	SS3B-19-07-01	500/500
JP5/5W30 ICV2	SS3B-19-07-02	500/500

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCHROM_GC6890N	
☐ External Hard Drive	

Analyzed By: KHL

Date: 11/5/14

GCT-105 Method: AKD5I25.met Data: LK05062.dat Project: EZC331 - [Sequence: LK05.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
1	Complete	Unknc	0	99	2	IB	DSD5K05.met	K05001.dat		
2	Complete	Unknown	0	100	2	IBD5K0501	DSD5K05.met	LK05002.dat		
3	Complete	Unknown	0	1	2	DSD5K0501 DSL 5PPM	DSD5K05.met	LK05003.dat		DSL + SURR. ICAL
4	Complete	Unknown	0	2	2	DSD5K0502 DSL 10/20/5PPM	DSD5K05.met	LK05004.dat		DSL + SURR. ICAL
5	Complete	Unknown	0	3	2	DSD5K0503 DSL 50/40/10PPM	DSD5K05.met	LK05005.dat		DSL + SURR. ICAL
6	Complete	Unknown	0	4	2	DSD5K0504 DSL 100/60/15PPM	DSD5K05.met	LK05006.dat		DSL + SURR. ICAL
7	Complete	Unknown	0	5	2	DSD5K0505 DSL 500/80/20PPM	DSD5K05.met	LK05007.dat		DSL + SURR. ICAL
8	Complete	Unknown	0	6	2	DSD5K0506 DSL 1500/100/25PPM	DSD5K05.met	LK05008.dat		DSL + SURR. ICAL
9	Complete	Unknown	0	7	2	DSD5K0507 DSL 3000/220/55PPM	DSD5K05.met	LK05009.dat		DSL + SURR. ICAL
10	Complete	Unknown	0	8	2	IDSD5K0501 DSL 500/80/20PPM	DSD5K05.met	LK05010.dat		DSL + SURR. ICV
11	Complete	Unknown	0	9	2	DSD5K0508 JP5/5W30 10/10PPM	DSD5K05.met	LK05011.dat		JP5 + 5W30 ICAL
12	Complete	Unknown	0	10	2	DSD5K0509 JP5/5W30 50/50PPM	DSD5K05.met	LK05012.dat		JP5 + 5W30 ICAL
13	Complete	Unknown	0	11	2	DSD5K0510 JP5/5W30 100/100PPM	DSD5K05.met	LK05013.dat		JP5 + 5W30 ICAL
14	Complete	Unknown	0	12	2	DSD5K0511 JP5/5W30 500/500PPM	DSD5K05.met	LK05014.dat		JP5 + 5W30 ICAL
15	Complete	Unknown	0	13	2	DSD5K0512 JP5/5W30 1500/1500PPM	DSD5K05.met	LK05015.dat		JP5 + 5W30 ICAL
16	Complete	Unknown	0	14	2	DSD5K0513 JP5/5W30 3000/3000PPM	DSD5K05.met	LK05016.dat		JP5 + 5W30 ICAL
17	Complete	Unknown	0	15	2	IDSD5K0502 JP5/5W30 500/500PPM	DSD5K05.met	LK05017.dat		JP5 + 5W30(RESTEK) ICV
18	Complete	Unknown	0	16	2	IDSD5K0503 JP5/5W30 500/500PPM	DSD5K05.met	LK05018.dat		JP5 + 5W30(ACCUSTD) ICV
19	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	DSD5K05.met	LK05019.dat		
20	Complete	Unknown	0	18	2	GRO(C6-C10)	DSD5K05.met	LK05020.dat		
21	Complete	Unknown	0	96	2	CDSD5K05407 DSL 500/80/20PPM	DSD5K05.met	LK05021.dat		
22	Complete	Unknown	0	97	2	CDSD5K05408 JP5/5W30 500/500PPM	DSD5K05.met	LK05022.dat		
23	Complete	Unknown	0	19	2	DSK005WB	DSD5K05.met	LK05023.dat		
24	Complete	Unknown	0	20	2	DSK005WL	DSD5K05.met	LK05024.dat		
25	Complete	Unknown	0	21	2	DSK005WC	DSD5K05.met	LK05025.dat		
26	Complete	Unknown	0	22	2	14K015-01	DSD5K05.met	LK05026.dat		
27	Complete	Unknown	0	23	2	14K015-02	DSD5K05.met	LK05027.dat		
28	Complete	Unknown	0	24	2	14K015-03	DSD5K05.met	LK05028.dat		
29	Complete	Unknown	0	25	2	14K015-03M	DSD5K05.met	LK05029.dat		
30	Complete	Unknown	0	26	2	14K015-03S	DSD5K05.met	LK05030.dat		
31	Complete	Unknown	0	27	2	14K015-05	DSD5K05.met	LK05031.dat		
32	Complete	Unknown	0	28	2	14K015-06	DSD5K05.met	LK05032.dat		
33	Complete	Unknown	0	96	2	CDSD5K05409 DSL 500/80/20PPM	DSD5K05.met	LK05033.dat		
34	Complete	Unknown	0	97	2	CDSD5K05410 JP5/5W30 500/500PPM	DSD5K05.met	LK05034.dat		
35	Complete	Unknown	0	29	2	14K015-07	DSD5K05.met	LK05035.dat		
36	Complete	Unknown	0	30	2	14K015-08	DSD5K05.met	LK05036.dat		
37	Complete	Unknown	0	31	2	14K015-09	DSD5K05.met	LK05037.dat		
38	Complete	Unknown	0	32	2	14K015-10	DSD5K05.met	LK05038.dat		
39	Complete	Unknown	0	33	2	14K015-11	DSD5K05.met	LK05039.dat		
40	Complete	Unknown	0	34	2	14J216-01I 0.02/1ML	DSD5K05.met	LK05040.dat		Yellow/ Turbid
41	Complete	Unknown	0	96	2	CDSD5K05411 DSL 500/80/20PPM	DSD5K05.met	LK05041.dat		
42	Complete	Unknown	0	97	2	CDSD5K05412 JP5/5W30 500/500PPM	DSD5K05.met	LK05042.dat		
43	Complete	Unknown	0	100	2	IBD5K0502	AKD5I25.met	LK05043.dat		
44	Complete	Unknown	0	98	2	CAKD5I25413 500/500/20/80PPM	AKD5I25.met	LK05044.dat		

FINAL

KHL 11/6/14

For Help, press F1

Start | untitled - Paint | EzChrom Elite | GCT-105 - Method: A... | GCT-105 (offline) | Me... | D:\Projects\EZC331\Export | Thursday, November 06, 2014 | 08:41

GCT-105 Method: AKD5125.met Data: LK05062.dat Project: EZC331 - [Sequence: LK05.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
44	Complete	Unknown	0	98	2	CAKD5I25413 500/500/20/80PPM	AKD5I25.met	LK05044.dat		
45	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	AKD5I25.met	LK05045.dat		
46	Complete	Unknown	0	35	2	DSK007SB	AKD5I25.met	LK05046.dat		
47	Complete	Unknown	0	36	2	LOQ-06	AKD5I25.met	LK05047.dat		
48	Complete	Unknown	0	37	2	LOD-06	AKD5I25.met	LK05048.dat		
49	Complete	Unknown	0	38	2	DSK004WB	AKD5I25.met	LK05049.dat		
50	Complete	Unknown	0	39	2	DSK004WL	AKD5I25.met	LK05050.dat		
51	Complete	Unknown	0	40	2	DSK004WC	AKD5I25.met	LK05051.dat		
52	Complete	Unknown	0	41	2	LOQ-05	AKD5I25.met	LK05052.dat		
53	Complete	Unknown	0	42	2	LOD-05	AKD5I25.met	LK05053.dat		
54	Complete	Unknown	0	43	2	14J226-02	AKD5I25.met	LK05054.dat		
55	Complete	Unknown	0	98	2	CAKD5I25414 500/500/20/80PPM	AKD5I25.met	LK05055.dat		
56	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	AKD5I25.met	LK05056.dat		
57	Complete	Unknown	0	44	2	DSK006SB	AKD5I25.met	LK05057.dat		
58	Complete	Unknown	0	45	2	DSK006SL	AKD5I25.met	LK05058.dat		
59	Complete	Unknown	0	46	2	DSK006SC	AKD5I25.met	LK05059.dat		
60	Complete	Unknown	0	47	2	14J226-04	AKD5I25.met	LK05060.dat		
61	Complete	Unknown	0	48	2	14J226-05	AKD5I25.met	LK05061.dat		
62	Stopped	Unknown	0	98	2	CAKD5I25415 500/500/20/80PPM	AKD5I25.met	LK05062.dat	ANY	
63		Unknown	0		2	IB	AKD5I25.met	LK05063.dat		
64		Unknown	0		2	IB	AKD5I25.met	LK05064.dat		
65		Unknown	0		2	IB	AKD5I25.met	LK05065.dat		
66		Unknown	0		2	IB	AKD5I25.met	LK05066.dat		
67		Unknown	0		2	IB	AKD5I25.met	LK05067.dat		
68		Unknown	0		2	IB	AKD5I25.met	LK05068.dat		
69		Unknown	0		2	IB	AKD5I25.met	LK05069.dat		
70		Unknown	0		2	IB	AKD5I25.met	LK05070.dat		
71		Unknown	0		2	IB	AKD5I25.met	LK05071.dat		
72		Unknown	0		2	IB	AKD5I25.met	LK05072.dat		
73		Unknown	0		2	IB	AKD5I25.met	LK05073.dat		
74		Unknown	0		2	IB	AKD5I25.met	LK05074.dat		
75		Unknown	0		2	IB	AKD5I25.met	LK05075.dat		
76		Unknown	0		2	IB	AKD5I25.met	LK05076.dat		
77		Unknown	0		2	IB	AKD5I25.met	LK05077.dat		
78		Unknown	0		2	IB	AKD5I25.met	LK05078.dat		
79		Unknown	0		2	IB	AKD5I25.met	LK05079.dat		
80		Unknown	0		2	IB	AKD5I25.met	LK05080.dat		
81		Unknown	0		2	IB	AKD5I25.met	LK05081.dat		
82		Unknown	0		2	IB	AKD5I25.met	LK05082.dat		
83		Unknown	0		2	IB	AKD5I25.met	LK05083.dat		
84		Unknown	0		2	IB	AKD5I25.met	LK05084.dat		
85		Unknown	0		2	IB	AKD5I25.met	LK05085.dat		
86		Unknown	0		2	IB	AKD5I25.met	LK05086.dat		
87		Unknown	0		2	IB	AKD5I25.met	LK05087.dat		

KHL 11/6/14

FINAL

KHL 11/6/14

For Help, press F1

Start | Untitled - Paint | EZChrom Elite | GCT-105 - Method: A... | GCT-105 (Offline) | Me... | D:\Projects\EZC331\Export | Thursday, November 06, 2014 | 08:41

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
EXTRACTABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK016W: K063

DSK017W: K068
K081
K082

DSK018 : K075

Book #:	AD5-030
Instrument No.:	D5
Analytical Sequence:	LK14
Method File:	DSD5K05
Analytical Batch:	CDSD5K05449

SOP #	Rev. #
☑ EMAX-8015D	6
☐ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID		Conc (mg/L)
ICAL		
☐ Diesel		
☐ Motor Oil ☐ JP5		
CH_2Cl_2	5184	Pure
DSL DCC	SS38-17-96-02	500/50/20
JP5/5W30 DCC	SS38-17-96-03	500/500
Alaska DCC		
Arizona DCC		
DRO	SS38-17-91-02	–

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCHROM_GC6890N	
☐ External Hard Drive	

Analyzed By: RT / KMC

Date: 11/14/14

217

GCT-105 Method: DSD5K05.met Data: LK14096.dat Project: EZC331 - [Sequence: LK14.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
1	Complete	Unknown	0	100	2	MECL2	DSD5K05.met	LK14001.dat		
2	Complete	Unknown	0	99	2	DRO(C8-C40 + C9-C39)	DSD5K05.met	LK14002.dat		
3	Complete	Unknown	0	100	2	IBD5K1401	DSD5K05.met	LK14003.dat		
4	Complete	Unknown	0	1	2	CDSD5K05449 DSL 500/80/20PPM	DSD5K05.met	LK14004.dat		
5	Complete	Unknown	0	2	2	CDSD5K05450 JP5/5W30 500/500PPM	DSD5K05.met	LK14005.dat		
6	Complete	Unknown	0	3	2	DSK016WB	DSD5K05.met	LK14006.dat		
7	Complete	Unknown	0	4	2	DSK016WL	DSD5K05.met	LK14007.dat		
8	Complete	Unknown	0	5	2	DSK016WC	DSD5K05.met	LK14008.dat		
9	Complete	Unknown	0	6	2	DSK016WX	DSD5K05.met	LK14009.dat		
10	Complete	Unknown	0	7	2	DSK016WY	DSD5K05.met	LK14010.dat		
11	Complete	Unknown	0	8	2	14K063-01	DSD5K05.met	LK14011.dat		
12	Complete	Unknown	0	9	2	14K063-02	DSD5K05.met	LK14012.dat		
13	Complete	Unknown	0	10	2	14K063-03	DSD5K05.met	LK14013.dat		
14	Complete	Unknown	0	11	2	14K063-04	DSD5K05.met	LK14014.dat		
15	Complete	Unknown	0	12	2	14K063-05	DSD5K05.met	LK14015.dat		
16	Complete	Unknown	0	100	2	IBD5K1402	DSD5K05.met	LK14016.dat		
17	Complete	Unknown	0	1	2	CDSD5K05451 DSL 500/80/20PPM	DSD5K05.met	LK14017.dat		
18	Complete	Unknown	0	2	2	CDSD5K05452 JP5/5W30 500/500PPM	DSD5K05.met	LK14018.dat		
19	Complete	Unknown	0	13	2	14K063-11	DSD5K05.met	LK14019.dat		
20	Complete	Unknown	0	14	2	14K063-12	DSD5K05.met	LK14020.dat		
21	Complete	Unknown	0	15	2	14K063-13	DSD5K05.met	LK14021.dat		
22	Complete	Unknown	0	16	2	14K063-14	DSD5K05.met	LK14022.dat		
23	Complete	Unknown	0	17	2	14K063-07	DSD5K05.met	LK14023.dat		
24	Complete	Unknown	0	18	2	14K063-08	DSD5K05.met	LK14024.dat		
25	Complete	Unknown	0	19	2	14K063-09	DSD5K05.met	LK14025.dat		
26	Complete	Unknown	0	20	2	14K063-10	DSD5K05.met	LK14026.dat		
27	Complete	Unknown	0	21	2	14K063-10M DSL	DSD5K05.met	LK14027.dat		
28	Complete	Unknown	0	22	2	14K063-10S DSL	DSD5K05.met	LK14028.dat		
29	Complete	Unknown	0	100	2	IBD5K1403	DSD5K05.met	LK14029.dat		
30	Complete	Unknown	0	1	2	CDSD5K05453 DSL 500/80/20PPM	DSD5K05.met	LK14030.dat		
31	Complete	Unknown	0	2	2	CDSD5K05454 JP5/5W30 500/500PPM	DSD5K05.met	LK14031.dat		
32	Complete	Unknown	0	23	2	14K063-10M 5W30	DSD5K05.met	LK14032.dat		
33	Complete	Unknown	0	24	2	14K063-10S 5W30	DSD5K05.met	LK14033.dat		
34	Complete	Unknown	0	100	2	IBD5K1404	DSD5K05.met	LK14034.dat		
35	Complete	Unknown	0	1	2	CDSD5K05455 DSL 500/80/20PPM	DSD5K05.met	LK14035.dat		
36	Complete	Unknown	0	2	2	CDSD5K05456 JP5/5W30 500/500PPM	DSD5K05.met	LK14036.dat		
37	Complete	Unknown	0	25	2	DSK017WB	DSD5K05.met	LK14037.dat		
38	Complete	Unknown	0	26	2	DSK017WL	DSD5K05.met	LK14038.dat		
39	Complete	Unknown	0	27	2	DSK017WC	DSD5K05.met	LK14039.dat		
40	Complete	Unknown	0	28	2	14K068-01	DSD5K05.met	LK14040.dat		
41	Complete	Unknown	0	29	2	14K068-01M	DSD5K05.met	LK14041.dat		
42	Complete	Unknown	0	30	2	14K068-01S	DSD5K05.met	LK14042.dat		
43	Complete	Unknown	0	31	2	14K068-03	DSD5K05.met	LK14043.dat		
44	Complete	Unknown	0	32	2	14K068-04	DSD5K05.met	LK14044.dat		

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For Help, press F1

Monday, November 17, 2014

Start | untitled - Paint | EZChrom Elite | GCT-105 Method: D... | GCT-105 (Offline) Me... | Calculator | D:\Projects\EZC331 | 10:47

GCT-105 Method: DSD5K05.met Data: LK14096.dat Project: EZC331 - [Sequence: LK14.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Rug	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
44	Complete	Unknown	0	32	2	14K068-04	DSD5K05.met	LK14044.dat		
45	Complete	Unknown	0	33	2	14K068-05	DSD5K05.met	LK14045.dat		
46	Complete	Unknown	0	34	2	14K068-06	DSD5K05.met	LK14046.dat		
47	Complete	Unknown	0	100	2	IBD5K1405	DSD5K05.met	LK14047.dat		
48	Complete	Unknown	0	1	2	CDSD5K05457 DSL 500/80/20PPM	DSD5K05.met	LK14048.dat		
49	Complete	Unknown	0	2	2	CDSD5K05458 JP5/5W30 500/500PPM	DSD5K05.met	LK14049.dat		
50	Complete	Unknown	0	35	2	14K068-07	DSD5K05.met	LK14050.dat		
51	Complete	Unknown	0	36	2	14K081-02	DSD5K05.met	LK14051.dat		
52	Complete	Unknown	0	37	2	14K081-03	DSD5K05.met	LK14052.dat		
53	Complete	Unknown	0	38	2	14K081-04	DSD5K05.met	LK14053.dat		
54	Complete	Unknown	0	39	2	14K081-04M	DSD5K05.met	LK14054.dat		
55	Complete	Unknown	0	40	2	14K081-04S	DSD5K05.met	LK14055.dat		
56	Complete	Unknown	0	41	2	14K081-05	DSD5K05.met	LK14056.dat		
57	Complete	Unknown	0	42	2	14K081-06	DSD5K05.met	LK14057.dat		
58	Complete	Unknown	0	43	2	14K081-07	DSD5K05.met	LK14058.dat		
59	Complete	Unknown	0	44	2	14K082-01	DSD5K05.met	LK14059.dat		
60	Complete	Unknown	0	100	2	IBD5K1406	DSD5K05.met	LK14060.dat		
61	Complete	Unknown	0	1	2	CDSD5K05459 DSL 500/80/20PPM	DSD5K05.met	LK14061.dat		
62	Complete	Unknown	0	2	2	CDSD5K05460 JP5/5W30 500/500PPM	DSD5K05.met	LK14062.dat		
63	Complete	Unknown	0	45	2	14K082-02	DSD5K05.met	LK14063.dat		
64	Complete	Unknown	0	46	2	14K082-05	DSD5K05.met	LK14064.dat		
65	Complete	Unknown	0	47	2	14K082-07	DSD5K05.met	LK14065.dat		
66	Complete	Unknown	0	48	2	14K082-08	DSD5K05.met	LK14066.dat		
67	Complete	Unknown	0	49	2	14K082-08M	DSD5K05.met	LK14067.dat		
68	Complete	Unknown	0	50	2	14K082-08S	DSD5K05.met	LK14068.dat		
69	Complete	Unknown	0	51	2	14K082-09	DSD5K05.met	LK14069.dat		
70	Complete	Unknown	0	100	2	IBD5K1407	DSD5K05.met	LK14070.dat		
71	Complete	Unknown	0	1	2	CDSD5K05461 DSL 500/80/20PPM	DSD5K05.met	LK14071.dat		
72	Complete	Unknown	0	2	2	CDSD5K05462 JP5/5W30 500/500PPM	DSD5K05.met	LK14072.dat		
73	Complete	Unknown	0	52	2	14K082-06	DSD5K05.met	LK14073.dat		
74	Complete	Unknown	0	53	2	14K082-03	DSD5K05.met	LK14074.dat		
75	Complete	Unknown	0	100	2	IBD5K1408	DSD5K05.met	LK14075.dat		
76	Complete	Unknown	0	1	2	CDSD5K05463 DSL 500/80/20PPM	DSD5K05.met	LK14076.dat		
77	Complete	Unknown	0	2	2	CDSD5K05464 JP5/5W30 500/500PPM	DSD5K05.met	LK14077.dat		
78	Complete	Unknown	0	54	2	DSK018SB	DSD5K05.met	LK14078.dat		
79	Complete	Unknown	0	55	2	DSK018SL	DSD5K05.met	LK14079.dat		
80	Complete	Unknown	0	56	2	DSK018SC	DSD5K05.met	LK14080.dat		
81	Complete	Unknown	0	57	2	DSK018SX	DSD5K05.met	LK14081.dat		
82	Complete	Unknown	0	58	2	DSK018SY	DSD5K05.met	LK14082.dat		
83	Complete	Unknown	0	59	2	14K075-06	DSD5K05.met	LK14083.dat		
84	Complete	Unknc	0	60	2	14K075-07	DSD5K05.met	K14084.dat		
85	Complete	Unknown	0	61	2	14K075-08	DSD5K05.met	LK14085.dat		
86	Complete	Unknown	0	62	2	14K075-09	DSD5K05.met	LK14086.dat		
87	Complete	Unknown	0	63	2	14K075-10	DSD5K05.met	LK14087.dat		

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Monday, November 17, 2014

GCT-105 Method: DSD5K05.met Data: LK14096.dat Project: EZC331 - [Sequence: LK14.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
87	Complete	Unknown	0	63	2	14K075-10	DSD5K05.met	LK14087.dat		
88	Complete	Unknown	0	100	2	IBD5K1409	DSD5K05.met	LK14088.dat		
89	Complete	Unknown	0	1	2	CDSD5K05465 DSL 500/80/20PPM	DSD5K05.met	LK14089.dat		
90	Complete	Unknown	0	2	2	CDSD5K05466 JP5/5W30 500/500PPM	DSD5K05.met	LK14090.dat		
91	Complete	Unknown	0	64	2	14K075-11	DSD5K05.met	LK14091.dat		
92	Complete	Unknown	0	65	2	14K075-12	DSD5K05.met	LK14092.dat		
93	Complete	Unknown	0	100	2	IBD5K1410	DSD5K05.met	LK14093.dat		
94	Complete	Unknown	0	1	2	CDSD5K05467 DSL 500/80/20PPM	DSD5K05.met	LK14094.dat		
95	Complete	Unknown	0	2	2	CDSD5K05468 JP5/5W30 500/500PPM	DSD5K05.met	LK14095.dat		
96	Stopped	Unknown	0		2	BB	DSD5K05.met	LK14096.dat		
97		Unknown	0		2	BB	DSD5K05.met	LK14097.dat		
98		Unknown	0		2	BB	DSD5K05.met	LK14098.dat		
99		Unknown	0		2	BB	DSD5K05.met	LK14099.dat		
100		Unknown	0		2	BB	DSD5K05.met	LK14100.dat		
101		Unknown	0		2	BB	DSD5K05.met	LK14101.dat		
102		Unknown	0		2	BB	DSD5K05.met	LK14102.dat		
103		Unknown	0		2	BB	DSD5K05.met	LK14103.dat		
104		Unknown	0		2	BB	DSD5K05.met	LK14104.dat		
105		Unknown	0		2	BB	DSD5K05.met	LK14105.dat		
106		Unknown	0		2	BB	DSD5K05.met	LK14106.dat		
107		Unknown	0		2	BB	DSD5K05.met	LK14107.dat		
108		Unknown	0		2	BB	DSD5K05.met	LK14108.dat		
109		Unknown	0		2	BB	DSD5K05.met	LK14109.dat		
110		Unknown	0		2	BB	DSD5K05.met	LK14110.dat		
111		Unknown	0		2	BB	DSD5K05.met	LK14111.dat		
112		Unknown	0		2	BB	DSD5K05.met	LK14112.dat		
113		Unknown	0		2	BB	DSD5K05.met	LK14113.dat		
114		Unknown	0		2	BB	DSD5K05.met	LK14114.dat		
115		Unknown	0		2	BB	DSD5K05.met	LK14115.dat		
116		Unknown	0		2	BB	DSD5K05.met	LK14116.dat		
117		Unknown	0		2	BB	DSD5K05.met	LK14117.dat		
118		Unknown	0		2	BB	DSD5K05.met	LK14118.dat		
119		Unknown	0		2	BB	DSD5K05.met	LK14119.dat		
120		Unknown	0		2	BB	DSD5K05.met	LK14120.dat		
121		Unknown	0		2	BB	DSD5K05.met	LK14121.dat		
122		Unknown	0		2	BB	DSD5K05.met	LK14122.dat		
123		Unknown	0		2	BB	DSD5K05.met	LK14123.dat		
124		Unknown	0		2	BB	DSD5K05.met	LK14124.dat		
125		Unknown	0		2	BB	DSD5K05.met	LK14125.dat		
126		Unknown	0		2	BB	DSD5K05.met	LK14126.dat		
127		Unknown	0		2	BB	DSD5K05.met	LK14127.dat		
128		Unknown	0		2	BB	DSD5K05.met	LK14128.dat		
129		Unknown	0		2	BB	DSD5K05.met	LK14129.dat		
130		Unknown	0		2	BB	DSD5K05.met	LK14130.dat		

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Monday, November 17, 2014

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EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
TPH

SOP	Rev. #
☐ EMAX-3520	5
☐ EMAX-3540	2
☑ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-8015AZ	2
☐ EMAX-AK 102/103	3
☐ EMAX-	

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

Book #: EDS-070
Preparation Batch: DSK018 S
Matrix: Soil
Micropipette ID: PEC0-03 (1000-uL)
Micropipette ID: PE97C-03 (100-uL)

Standards	ID	Amount Added (ml)
Surrogate		
Surrogate	SS3-009-08-30	0.5
LCS/MS (diesel)	SS3-009-08-04	0.10
LCS/MS (5x130)	SS3B-19-08-01	1.0
Reagent	**Lot # / ID**	
CH_2Cl_2	54184	
Na_2SO_4	S-X1B-002.57-24	
HCl	–	
Silica Sand	S-X1B-02-43-22	
Silica Gel	–	
Reagent Water	–	
pH strip	–	
Filter Paper	9587322B	

Lab Sample ID	Sonicator #	Concentrator #
DSK018-SB	4	1
-SL	6	1
-SC	6	1
-SX	4	1
-ST	4	1
K075-06	6	1
-07	6	2
-08	4	2
-09	6	2
-10	6	2
-11	4	2
-12	4	2

TUNING

Sonicator #	Reading
4	50%
6	50%

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1	35	35
2	35	35
3		
4		
5		
6		

Comments:

Test thermometer = SVOC-T1

Prepared By: JWile
Standard Added By: JWile
Witnessed By: AGG
Checked By: ML
Extract Received By: AU
Extraction Location: SE06#10
Disposal Date:
Disposed By:

FileID: DSK018S

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR EXTRACTABLE TPH

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
14DSK018S01	DSK018SB	10	g	11/14/14 10:59	10	10	10	1	
14DSK018S02	DSK018SL	10	g	11/14/14 10:59	10	10	10	1	diesel
14DSK018S03	DSK018SC	10	g	11/14/14 10:59	10	10	10	1	diesel
14DSK018S04	DSK018SX	10	g	11/14/14 11:00	10	10	10	1	5W30
14DSK018S05	DSK018SY	10	g	11/14/14 11:00	10	10	10	1	5W30
14DSK018S06	K075-06	10.01	g	11/14/14 11:01	10	10	10	1	
14D5K018S07	K075-07	10.03	g	11/14/14 11:01	10	10	10	1	
14DSK018S08	K075-08	10	g	11/14/14 11:02	10	10	10	1	
14DSK018S09	K075-09	10.03	g	11/14/14 11:02	10	10	10	1	
14DSK018S10	K075-10	10.04	g	11/14/14 11:02	10	10	10	1	
14DSK018S11	K075-11	10.01	g	11/14/14 11:03	10	10	10	1	
14DSK018S12	K075-12	10.02	g	11/14/14 11:04	10	10	10	1	

Balance ID: 10203192. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 11/14/14 14:42

Prepared By: Jville

☑ Extraction Ended @ 11/14/14 16:04

Checked By: ML

Comments:

Date 11/14/14

SOP

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Sample Identification #	Date Collected	Date Received	Matrix	Analysis
CAFB-FT006-BKF-001	9/16/2015	9/17/2015	Soil	VOCs (8260B), SVOCs (8270D), Metals (6020A/7471B)
CAFB-FT006-BKF-002	9/16/2015	9/17/2015	Soil	VOCs (8260B), SVOCs (8270D), Metals (6020A/7471B)
CAFB-FT006-BKF-003	9/16/2015	9/17/2015	Soil	VOCs (8260B), SVOCs (8270D), Metals (6020A/7471B)
CAFB-FT006-WC1-002	9/16/2015	9/17/2015	Soil	TCLP VOCs (8260B), TCLP SVOCs (8270D), TCLP Metals (6010C/7470A), TCLP Pesticides (8081B), TCLP Herbicides (8151A), Paint Filter (9095B)
CAFB-FT006-WC2-002	9/16/2015	9/17/2015	Soil	TCLP VOCs (8260B), TCLP SVOCs (8270D), TCLP Metals (6010C/7470A), TCLP Pesticides (8081B), TCLP Herbicides (8151A), Paint Filter (9095B)
CAFB-FT006-WC3-002	9/16/2015	9/17/2015	Soil	TCLP VOCs (8260B), TCLP SVOCs (8270D), TCLP Metals (6010C/7470A), TCLP Pesticides (8081B), TCLP Herbicides (8151A), Paint Filter (9095B)

1.0 Laboratory Case Narrative \ Cooler Receipt Form

Verification Criteria	Yes	No	N/A
Were any DoD-QSM deviations noted in the laboratory case narrative?	X		
Were DoD-QSM corrective actions followed if deviations were noted?	X		
Were any issues noted in the cooler receipt form?	X		

The laboratory case narrative indicated a %D was above evaluation criteria in a VOC CCV. VOCs and metals were detected in method blank samples. Some SVOC TCLP LCS/LCSD RPDs and metals MS/MSD recoveries were outside evaluation criteria. These issues are addressed in the appropriate sections below.

The cooler receipt form indicated a discrepancy in a sample ID between the COC and sample label for one sample. Per the URS chemist, the sample ID was changed to the ID on the COC. This issue is discussed further in Section 2.0.

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

2.0 Sample Documentation

Verification Criteria	Yes	No
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?		X
Were all sample identifications (IDs) documented correctly on sample labels?		X
Did samples listed on COCs match the sample labels?		X
Were samples relinquished properly on the COC?	X	

The cooler receipt form indicated a discrepancy in a sample ID between the COC and sample label for sample CAFB-FT006-WC3-002. The sample ID was documented as CAFB-FT006-WC3-002 on the COC. The sample ID was documented as CAFB-FT006-WC3-003 on the label. Per the URS chemist, the correct sample ID is CAFB-FT006-WC3-002. No qualification of the data was required.

3.0 Holding Time

Verification Criteria	Yes	No	N/A
Were all samples extracted/analyzed within holding time?	X		
Were samples outside holding time extracted/analyzed < 2x holding time?			X
Were samples outside holding time extracted/analyzed > 2x holding time?			X

4.0 Instrument Performance Check (Tuning)

Method 8260B Instrument Tuning Criteria (Filename)	**REB234**		
Instrument:	**03**		
Date of Tuning:	**05/20/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8260B Instrument Tuning Criteria (Filename)	**RIB331**		
Instrument:	**03**		
Date of Tuning:	**09/22/**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8260B Instrument Tuning Criteria (Filename)	**RIB361**		
Instrument:	**03**		
Date of Tuning:	**09/24/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8260B Instrument Tuning Criteria (Filename)	**RIB391**		
Instrument:	**03**		
Date of Tuning:	**09/25/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8260B Instrument Tuning Criteria (Filename)	**RIB393**		
Instrument:	**03**		
Date of Tuning:	**09/25/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8260B Instrument Tuning Criteria (Filename)	**RIB376**		
Instrument:	**03**		
Date of Tuning:	**09/24/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8260B Instrument Tuning Criteria (Filename)	**RIB451**		
Instrument:	**03**		
Date of Tuning:	**09/27/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8260B Instrument Tuning Criteria (Filename)	**RIB453**		
Instrument:	**03**		
Date of Tuning:	**09/27/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8270D Instrument Tuning Criteria (Filename)	**RDH002**		
Instrument:	**E7**		
Date of Tuning:	**04/03/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Method 8270D Instrument Tuning Criteria (Filename)	**RIH529**		
Instrument:	**E7**		
Date of Tuning:	**09/24/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Method 8270D Instrument Tuning Criteria (Filename)	**RJH002**		
Instrument:	**E7**		
Date of Tuning:	**10/1/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8270D Instrument Tuning Criteria (Filename)	**RGJ127**		
Instrument:	**E4**		
Date of Tuning:	**07/13/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Method 8270D Instrument Tuning Criteria (Filename)	**RIJ473**		
Instrument:	**E4**		
Date of Tuning:	**09/24/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Method 6020A Instrument Tuning Criteria (Filename)	**F6I16001.D**	
Instrument:	**F6**	
Date of Tuning:	**09/28/2015**	
	Yes	**No**
Was instrument tuning completed prior to calibration?	X	
Was mass calibration ≤ 0.1 amu from true value?	X	
Was resolution < 0.9 amu full width at 10% peak height?	X	
For stability, was the RSD ≤ 5% for at least four replicate analytes?	X	

5.0 Breakdown Check

Method 8081A Breakdown Check Criteria (Filename)	**RH26010**		
Instrument:	**F9**		
Date of Breakdown Check:	**08/26/2015**		
	Yes	**No**	**N/A**
Was the breakdown check analyzed at the beginning of each 12-hour period, prior to analysis of samples?	X		
Was the degradation ≤ 15% for both DDT and Endrin?	X		

Method 8081A Breakdown Check Criteria (Filename)	**RJ03003**		
Instrument:	**F9**		
Date of Breakdown Check:	**10/03/2015**		
	Yes	**No**	**N/A**
Was the breakdown check analyzed at the beginning of each 12-hour period, prior to analysis of samples?	X		
Was the degradation ≤ 15% for both DDT and Endrin?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

6.0 Initial Calibration

Method 8260B Initial Calibration Criteria			
Instrument:	**03**		
Date of Calibration:	**05/20/2015**		
	Yes	**No**	**N/A**
Are the average response factors (RFs) for SPCCs above the minimum DoD-QSM response factor? (VOCs - ≥ 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.)	X		
Are the RSDs for CCCs (1,1-Dichloroethene; Chloroform; 1,2-Dichloropropane; Toluene; Ethylbenzene and Vinyl Chloride) for VOCs ≤ 30%? and one option below?	X		
Option 1: RSD for each analyte ≤ 15%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 8260B Initial Calibration Criteria			
Instrument:	**03**		
Date of Calibration:	**09/24/2015**		
	Yes	**No**	**N/A**
Are the average response factors (RFs) for SPCCs above the minimum DoD-QSM response factor? (VOCs - ≥ 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.)	X		
Are the RSDs for CCCs (1,1-Dichloroethene; Chloroform; 1,2-Dichloropropane; Toluene; Ethylbenzene and Vinyl Chloride) for VOCs ≤ 30%? and one option below?	X		
Option 1: RSD for each analyte ≤ 15%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8260B Initial Calibration Criteria			
Instrument:	**03**		
Date of Calibration:	**09/24/2015**		
	Yes	**No**	**N/A**
Are the average response factors (RFs) for SPCCs above the minimum DoD-QSM response factor? (VOCs - ≥ 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.)	X		
Are the RSDs for CCCs (1,1-Dichloroethene; Chloroform; 1,2-Dichloropropane; Toluene; Ethylbenzene and Vinyl Chloride) for VOCs ≤ 30%? and one option below?	X		
Option 1: RSD for each analyte ≤ 15%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 8270D Initial Calibration Criteria			
Instrument:	**E7**		
Date of Calibration:	**04/03/2015**		
	Yes	**No**	**N/A**
Are the average response factors (RFs) for SPCCs above the minimum DoD-QSM response factor? (SVOCs - ≥ 0.05 for N-nitroso-di-n-propylamine; hexachlorocyclopentadiene; 2,4-dinitrophenol and 4-nitrophenol)	X		
Are the RSDs for CCCs (Acenaphthene; 1,4-Dichlorobenzene; Hexachlorobutadiene; Diphenylamine; Di-n-octyl phthalate; Fluoranthene; Benzo(a)pyrene; 4-Chloro-3-methylphenol; 2,4-Dichlorophenol; 2-Nitrophenol; Phenol; Pentachlorophenol and 2,4,6-Trichlorophenol) for SVOCs ≤ 30%? and one option below?	X		
Option 1: RSD for each analyte ≤ 15%?	X		
Option 2: If linear least squares regression was used was the r ≥ 0.995?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8270D Initial Calibration Criteria			
Instrument:	**E4**		
Date of Calibration:	**07/13/2015**		
	Yes	**No**	**N/A**
Are the average response factors (RFs) for SPCCs above the minimum DoD-QSM response factor? (SVOCs - ≥ 0.05 for N-nitroso-di-n-propylamine; hexachlorocyclopentadiene; 2,4-dinitrophenol and 4-nitrophenol)	X		
Are the RSDs for CCCs (Acenaphthene; 1,4-Dichlorobenzene; Hexachlorobutadiene; Diphenylamine; Di-n-octyl phthalate; Fluoranthene; Benzo(a)pyrene; 4-Chloro-3-methylphenol; 2,4-Dichlorophenol; 2-Nitrophenol; Phenol; Pentachlorophenol and 2,4,6-Trichlorophenol) for SVOCs ≤ 30%? and one option below?	X		
Option 1: RSD for each analyte ≤ 15%?	X		
Option 2: If linear least squares regression was used was the r ≥ 0.995?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq$ 0.99?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 8081A Initial Calibration Criteria			
Instrument:	**F9**		
Date of Calibration:	**08/26/2015**		
	Yes	**No**	**N/A**
Was the ICAL analyzed prior to sample analysis	X		
Option 1: RSD for each analyte ≤ 20%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 8081A Initial Calibration Criteria - Toxaphene			
Instrument:	**F9**		
Date of Calibration:	**08/26/2015**		
	Yes	**No**	**N/A**
Was the ICAL analyzed prior to sample analysis	X		
Option 1: RSD for each analyte ≤ 20%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8151A Initial Calibration Criteria			
Instrument:	**16**		
Date of Calibration:	**07/08/2015**		
	Yes	**No**	**N/A**
Was the ICAL analyzed prior to sample analysis	X		
Option 1: RSD for each analyte ≤ 20%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 6020A Initial Calibration Criteria			
Instrument:	**F6**		
Date of Calibration:	**09/28/2015**		
	Yes	**No**	**N/A**
Was a minimum of two standards and a calibration blank used for ICAL?	X		
Was $r \geq 0.995$?	X		

Method 6010C Initial Calibration Criteria			
Instrument:	**D8**		
Date of Calibration:	**10/08/2015**		
	Yes	**No**	**N/A**
Was a minimum of two standards and a calibration blank used for ICAL?	X		
Was $r \geq 0.995$?	X		

Method 7470A Initial Calibration Criteria			
Instrument:	**47**		
Date of Calibration:	**09/28/2015**		
	Yes	**No**	**N/A**
Was a minimum of five standards and a calibration blank used for ICAL?	X		
Was $r \geq 0.995$?	X		

Method 7471B Initial Calibration Criteria			
Instrument:	**47**		
Date of Calibration:	**09/29/2015**		
	Yes	**No**	**N/A**
Was a minimum of five standards and a calibration blank used for ICAL?	X		
Was $r \geq 0.995$?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

7.0 Initial Calibration Verification [(ICV) Second Source]

Method 8260B ICV Criteria (Filename)	**REB237**		
Instrument:	**03**		
Date of Initial Calibration Verification:	**05/20/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8260B ICV Criteria (Filename)	**RIB391**		
Instrument:	**03**		
Date of Initial Calibration Verification:	**09/25/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8260B ICV Criteria (Filename)	**RIB451**		
Instrument:	**03**		
Date of Initial Calibration Verification:	**09/27/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8270D ICV Criteria (Filename)	**RDH016.D**		
Instrument:	**E7**		
Date of Initial Calibration Verification:	**04/03/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8270D ICV Criteria (Filename)	**RGJ149.D**		
Instrument:	**E4**		
Date of Initial Calibration Verification:	**07/13/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 20% of the expected value (initial source)?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8081A ICV Criteria (Filename)	**RH26036-37**		
Instrument:	**F9**		
Date of Initial Calibration Verification:	**08/26/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8081A Toxaphene ICV Criteria (Filename)	**RH26019**		
Instrument:	**F9**		
Date of Initial Calibration Verification:	**08/26/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8151A ICV Criteria (Filename)	**WG08010**		
Instrument:	**16**		
Date of Initial Calibration Verification:	**07/08/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 20% of the expected value (initial source)?	X		

Method 6020A ICV Criteria (Filename)	**F6I16009.D**		
Instrument:	**F6**		
Date of Initial Calibration Verification	**09/28/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each ICAL, prior to the beginning of a sample analysis?	X		
Was the ICV %recovery (%R) for all analytes within 90-110%?	X		

Method 6010C ICV Criteria (Filename)	**ID8J007014.D**		
Instrument:	**D8**		
Date of Initial Calibration Verification	**10/08/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each ICAL, prior to the beginning of a sample analysis?	X		
Was the ICV %recovery (%R) for all analytes within 90-110%?	X		

Method 7470A ICV Criteria (Filename)	**M47I021007.D**		
Instrument:	**47**		
Date of Initial Calibration Verification	**09/28/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each ICAL, prior to the beginning of a sample analysis?	X		
Was the ICV %R within 90-110%?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 7471B ICV Criteria (Filename)	**M47I022007.D**		
Instrument:	**47**		
Date of Initial Calibration Verification	**09/29/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each ICAL, prior to the beginning of a sample analysis?	X		
Was the ICV %R within 90-110%?	X		

8.0 Continuing Calibration Verification (CCV)

Method 8260B CCV Criteria (Filename)	**RIB333**		
Instrument:	**03**		
Date of Calibration Verification:	**09/22/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Are the average response factors (RFs) for SPCCs above the minimum DoD QSM response factor? (VOCs - ≥ 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.)	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?		X	

The %D for 1,2-dichloroethane (-21.9%) was outside evaluation criteria. The %D indicated a high bias and all associated results were nondetect. No qualification of data was required.

Method 8260B CCV Criteria (Filename)	**RIB394**		
Instrument:	**03**		
Date of Calibration Verification:	**09/25/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Are the average response factors (RFs) for SPCCs above the minimum DoD QSM response factor? (VOCs - ≥ 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.)	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8260B CCV Criteria (Filename)	**RIB454**		
Instrument:	**03**		
Date of Calibration Verification:	**09/27/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Are the average response factors (RFs) for SPCCs above the minimum DoD QSM response factor? (VOCs - ≥ 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.)	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?	X		

Method 8270D CCV Criteria (Filename)	**RIJ474**		
Instrument:	**E4**		
Date of Calibration Verification:	**09/24/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Are the average response factors (RFs) for SPCCs above the minimum DoD QSM response factor? (SVOCs - ≥ 0.05 for N-nitroso-di-n-propylamine; hexachlorocyclopentadiene; 2,4-dinitrophenol and 4-nitrophenol)	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?	X		

Method 8270D CCV Criteria (Filename)	**RIH530**		
Instrument:	**E7**		
Date of Calibration Verification:	**09/24/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Are the average response factors (RFs) for SPCCs above the minimum DoD QSM response factor? (SVOCs - ≥ 0.05 for N-nitroso-di-n-propylamine; hexachlorocyclopentadiene; 2,4-dinitrophenol and 4-nitrophenol)	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?	X		

Method 8270D CCV Criteria (Filename)	**RJH003**		
Instrument:	**E7**		
Date of Calibration Verification:	**10/1/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Are the average response factors (RFs) for SPCCs above the minimum DoD QSM response factor? (SVOCs - ≥ 0.05 for N-nitroso-di-n-propylamine; hexachlorocyclopentadiene; 2,4-dinitrophenol and 4-nitrophenol)	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8081A CCV Criteria (Filename)	**RJ03013**		
Instrument:	**F9**		
Date of Calibration Verification:	**10/03/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed prior to sample analysis, after every 10 field samples, and at the end of the analysis sequence?	X		
Were all project analytes within established retention time windows?	X		
Were all project analytes within ± 20% of expected value from the ICAL?	X		

Method 8081A CCV Criteria (Filename) – Toxaphene	**RJ03014**		
Instrument:	**F9**		
Date of Calibration Verification:	**10/03/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed prior to sample analysis, after every 10 field samples, and at the end of the analysis sequence?	X		
Were all project analytes within established retention time windows?	X		
Were all project analytes within ± 20% of expected value from the ICAL?	X		

Method 8081A CCV Criteria (Filename)	**RJ03023**		
Instrument:	**F9**		
Date of Calibration Verification:	**10/03/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed prior to sample analysis, after every 10 field samples, and at the end of the analysis sequence?	X		
Were all project analytes within established retention time windows?	X		
Were all project analytes within ± 20% of expected value from the ICAL?	X		

Method 8081A CCV Criteria (Filename) – Toxaphene	**RJ03024**		
Instrument:	**F9**		
Date of Calibration Verification:	**10/03/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed prior to sample analysis, after every 10 field samples, and at the end of the analysis sequence?	X		
Were all project analytes within established retention time windows?	X		
Were all project analytes within ± 20% of expected value from the ICAL?	X		

Method 8151A CCV Criteria (Filename)	**WI25002**		
Instrument:	**16**		
Date of Calibration Verification:	**09/25/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed prior to sample analysis, after every 10 field samples, and at the end of the analysis sequence?	X		
Were all project analytes within established retention time windows?	X		
Were all project analytes within ± 20% of expected value from the ICAL?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Method 8151A CCV Criteria (Filename)	**WG25012**		
Instrument:	**16**		
Date of Calibration Verification:	**09/25/2015**		
	Yes	**No**	**N/A**
Was the CCV analyzed prior to sample analysis, after every 10 field samples, and at the end of the analysis sequence?	X		
Were all project analytes within established retention time windows?	X		
Were all project analytes within ± 20% of expected value from the ICAL?	X		

Method 6020A CCV Criteria (Date)	**All CCVs on 09/28/2015**		
Instrument:	**F6**		
	Yes	**No**	**N/A**
Was the CCV analyzed after every 10 samples and at the end of the analysis sequence?	X		
Were the CCV %Rs for all analytes within 90-110%?	X		

Method 7470A CCV Criteria (Date)	**All CCVs on 09/28/2015**		
Instrument:	**47**		
	Yes	**No**	**N/A**
Was the CCV analyzed after every 10 samples and at the end of the analysis sequence?	X		
Were the CCV %Rs within 80-120%?	X		

Method 7471B CCV Criteria (Date)	**All CCVs on 09/29/2015**		
Instrument:	**47**		
	Yes	**No**	**N/A**
Was the CCV analyzed after every 10 samples and at the end of the analysis sequence?	X		
Were the CCV %Rs within 80-120%?	X		

9.0 Blank Samples

Blank Criteria	**Yes**	**No**	**N/A**
Was a method blank analyzed with every preparatory batch?	X		
Were analytes detected > ½ the LOQ and > 1/10 the amount measured in any sample or 1/10 the regulatory limit?	X		
Were target analytes detected in method, trip or calibration blanks?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

Blank ID	Parameter	Analyte	Concentration	LOQ	Units
VS03I14B	VOCs	Methylene Chloride	0.0021	0.01	mg/Kg
VS03I18Q	VOCs	Dichlorodifluoromethane	0.0062	0.005	mg/Kg
VS03I18Q	VOCs	Methylene Chloride	0.0015	0.01	mg/Kg
IMI036SB	Metals	Zinc	0.821	2.0	mg/Kg

Analytical data that required qualification based on blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Field ID	Parameter	Analyte	New LOQ	Qualification
CAFB-FT006-BKF-002	VOCs	Dichlorodifluoromethane	-	**U**

10.0 Laboratory Control Sample (LCS)

LCS Criteria	Yes	No	N/A
Was an LCS analyzed with every preparatory batch?	X		
Were LCS recoveries within acceptance criteria listed in the UFP-QAPP?	X		

The RPDs for four analytes were outside evaluation criteria in the TCLP SVOC LCS/LCSD. All TCLP SVOC LCS/LCSD recoveries were within evaluation criteria, and data was not qualified on RPD alone.

11.0 Surrogates

Methods 8260B/8270D/8081B /8151A Surrogate Criteria	Yes	No	N/A
Were surrogate spikes added to all field and QC samples?	X		
Were surrogate recoveries within acceptance criteria listed in the UFP-QAPP?	X		

12.0 Internal Standards (IS)

Methods 8260B/8270D/6020A Criteria	Yes	No	N/A
Were internal standards spiked for all samples and standards?	X		
Were VOC and SVOC internal standard areas within -50% to + 100% of the ICAL midpoint standard area?	X		
Were VOC and SVOC retention times ± 30 seconds from the retention times of the midpoint standard of the ICAL?	X		
For Method 6020A, were internal standards spiked for all samples and standards?	X		
For Method 6020A, were internal standard areas within 30% to 120% of the ICAL midpoint standard area?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

13.0 Interference Check Sample (6020A Metals only)

Interference Check Sample Criteria	Yes	No	N/A
Were ICS-A and ICSAB samples analyzed at the beginning of the analytical run and every 12 hours?	X		
Was the ICS-A absolute value concentration for all non-spiked metals < LOD (unless they are a verified trace impurity form one of the spiked metals)	X		
Were the ICS-AB recoveries within ± 20%?	X		

14.0 Matrix Spike/Matrix Spike Duplicate

MS/MSD Criteria	Yes	No	N/A
Was a MS/MSD sample analyzed with every preparatory batch?	X		
Was a MS/MSD sample collected for this SDG?	X		
Were MS/MSD recoveries/RPDs within acceptance criteria listed in the UFP-QAPP?		X	

Sample CAFB-FT006-BKF-001 was spiked and analyzed for metals. Sample CAFB-FT006-WC1-002 was spiked and analyzed for TCLP metals.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
CAFB-FT006-BKF-001	Metals	Aluminum	**140**	N/A	80-120
CAFB-FT006-WC1-002	Metals	Mercury	**76/76**	1	80-120

Analytical data that required qualification based on MS/MSD recoveries are included in the table below.

Field ID	Parameter	Analyte	Qualification
CAFB-FT006-BKF-001	Metals	Aluminum	**J**
CAFB-FT006-WC1-002	Metals	Mercury	**UJ**

15.0 Matrix Duplicate

Matrix Duplicate (MD) Criteria	Yes	No	N/A
Were MD samples analyzed with every preparatory batch?	X		
Were MD samples collected for this SDG?	X		
Were MD RPDs within acceptance criteria listed in the UFP-QAPP?	X		

Sample CAFB-FT006-BKF-001 was duplicated and analyzed for metals. Sample CAFB-

FT006-WC1-002 was duplicated and analyzed for TCLP metals. Sample CAFB-FT006-WC1-002 was duplicated and analyzed for paint filter.

16.0 Dilution Test

Method 6020A Dilution Test Criteria	Yes	No	N/A
Was a dilution test sample analyzed with every preparatory batch?	X		
Was a dilution test sample analyzed from this SDG?	X		
Were metals concentrations > 50x the LOQ?	X		
Did the five-fold dilution agree within ± 10% of the original measurement?	X		
If the five-fold dilution did not agree within ± 10% of the original measurement, was a post digestion spike sample analyzed?	X		

Sample CAFB-FT006-BKF-001 was diluted and analyzed for metals. The %Ds for vanadium (17%) and zinc (65%) were outside evaluation criteria; however, the concentrations of vanadium and zinc were less than 50x the LOQ. Sample CAFB-FT006-WC1-002 was diluted and analyzed for TCLP metals.

17.0 Post Digestion Spike (PDS)

Method 6020A PDS Criteria	Yes	No	N/A
Was a PDS sample analyzed from this SDG?	X		
Was a PDS sample analyzed if the dilution test failed or metals concentrations were < 50 x the LOD?	X		
Were the PDS recoveries within 75-125%?	X		

Sample CAFB-FT006-BKF-001 was spiked and analyzed for metals. Sample CAFB-FT006-WC1-002 was spiked and analyzed for TCLP metals.

18.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	N/A
Were field duplicate samples collected for this SDG? (if yes, list below)		X	
Were parent sample / field duplicate RPDs ≤ 50% for soil analytes that had concentrations > 5x the LOQ.			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ			X

19.0 Sensitivity

Sensitivity Criteria	Yes	No	N/A
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15I185 **URS Chemist: Jennifer Zorinsky**
Date Verified: 10/21/2015 **URS ITR: Jeff Aust 1/6/2016**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 8260B, 8270D, 8081A, 8151A and 6020A/6010C/7470A/7471B), 9095B

20.0 Additional Qualifications

Additional Qualification Criteria	Yes	No	N/A
Were common laboratory contaminants detected?	X		
Were common laboratory contaminant concentrations < 2x the LOQ?		X	
Was professional judgment used to qualify data (if yes, list below)?	X		

USEPA Method 5035A states that acidification of certain soils with sodium bisulfate may produce a false positive acetone artifact of 0.10-0.20 ppm (mg/kg), or more. Acetone results reported at concentrations less than 0.20 ppm (mg/kg) were qualified as nondetect using professional judgment.

Sample ID	Parameter	Analyte	New LOQ	Qualification
CAFB-FT006-BKF-001	VOCs	Acetone	**0.019**	**U**
CAFB-FT006-BKF-002	VOCs	Acetone	**0.025**	**U**
CAFB-FT006-BKF-003	VOCs	Acetone	**0.033**	**U**

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **15I185**

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

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **15I185**

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EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 10-19-2015
EMAX Batch No.: 15I185

Attn: Jeff Aust

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 09/17/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CAFB-FT006-BKF-001	I185-01	09/16/15	SOIL	TOTAL METALS BY ICP-MS
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				VOLATILE ORGANICS BY GC/MS
CAFB-FT006-BKF-002	I185-02	09/16/15	SOIL	TOTAL METALS BY ICP-MS
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				VOLATILE ORGANICS BY GC/MS
CAFB-FT006-BKF-003	I185-03	09/16/15	SOIL	TOTAL METALS BY ICP-MS
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				VOLATILE ORGANICS BY GC/MS
CAFB-FT006-WC1-002	I185-04	09/16/15	SOIL	METALS ICP TCLP
				MERCURY TCLP
				SEMIVOLATILE ORGANICS TCLP
				VOLATILE ORGANICS TCLP
				PAINT FILTER LIQUID TEST
				CHLORINATED HERBICIDES TCLP
				PESTICIDES TCLP

Sample ID	Control #	Col Date	Matrix	Analysis
CAFB-FT006-WC2-002	I185-05	09/16/15	SOIL	METALS ICP TCLP
				MERCURY TCLP
				SEMIVOLATILE ORGANICS TCLP
				VOLATILE ORGANICS TCLP
				PAINT FILTER LIQUID TEST
				CHLORINATED HERBICIDES TCLP
				PESTICIDES TCLP
CAFB-FT006-WC3-002	I185-06	09/16/15	SOIL	METALS ICP TCLP
				MERCURY TCLP
				SEMIVOLATILE ORGANICS TCLP
				VOLATILE ORGANICS TCLP
				PAINT FILTER LIQUID TEST
				CHLORINATED HERBICIDES TCLP
				PESTICIDES TCLP

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number E871112
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

A total of three (3) soil samples were received on 09/17/15 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5035A/8260B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. For this SDG, the following were noted: 1,2-Dichloroethane was detected bias high(%D=22.0) in CCV(data file ID RIB333). However, 1,2-Dichloroethane was not detected in any of the field samples. Target analytes in CCV(Datafile ID:RIB394) were within calibration acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. Methylene Chloride (0.0021J <1/2 LOQ) was detected at trace level in VS03I14B. Dichlorodifluoromethane(0.0062) was detected above reporting limit and Methylene Chloride(0.0014J <1/2 LOQ) was detected at trace level in VS03I18Q. Dichlorodifluoromethane detected in VS03I18Q is suspected from lab contamination. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two (2) sets of LCS/LCD were analyzed. All Analytes in VS03I14L/VS03I14C and VS03I18L/VS03I18C were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.
Sample I185-02 (CAFB-FT006-BKF-002) was reported from the reanalysis because the initial analysis was not reportable due to purging deficiency.
Dichlorodifluoromethane which was detected but lab contamination is suspected. No additional analysis was performed because only 2 vials were received.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

A total of three (3) soil samples were received on 09/17/15 to be analyzed for TCLP Volatile Organics by GC/MS in accordance with Method SW1311/5030B/8260B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There was one (1) CCV associated with this SDG. Target analytes in CCV (Data file ID: RIB454) were within calibration acceptance criteria. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. TVI003SB and VS03I21B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in VS03I21L/VS03I21C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of three (3) soil samples were received on 09/17/15 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3550B/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There were two(2)CCVs associated with this SDG: CCV(Datafile ID:RIH530) and CCV(Datafile ID:RIJ474). All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. SVI038SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in SVI038SL/SVI038SC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

A total of three (3) soil samples were received on 09/17/15 to be analyzed for TCLP Semi Volatile Organics by GC/MS in accordance with Method SW1311/3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There was one (1) CCV associated with this SDG. Target analytes in CCV (Data file ID: RJH003) were within calibration acceptance criteria. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. SVI044WB and TXI007SB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes in SVI044WL/SVI044WC were within LCS limits except RPDs for 2,4,5-Trichlorophenol(RPD=38*), 2,4,6-Trichlorophenol(RPD=39*), 2-Methylphenol(RPD=34*) and 4-Methylphenol(RPD=35*) were greater than RPD QC limit. The rest of the analytes were in control. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW1311/SW3520C/8081B
TCLP PESTICIDES

A total of three (3) soil samples were received on 09/17/15 to be analyzed for TCLP Pesticides in accordance with Method SW1311/SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. CPI033WB and TXI007SB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in CPI033WL/CPI033WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as identified in Method 8081A/DOD QSM 5.0.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW1311/8151A
TCLP HERBICIDES

A total of three (3) soil samples were received on 09/17/15 to be analyzed for Tclp Herbicides in accordance with Method SW1311/8151A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. HEI004WB and TXI007SB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in HEI004WL/HEI004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW6020A
TOTAL METALS BY ICP-MS

A total of three (3) soil samples were received on 09/17/15 to be analyzed for Total Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. Zinc(0.821J <1/2 LOQ) was detected at trace level in IMI036SB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) LCS was analyzed. All Analytes in IMI036SL - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) MS was analyzed and the following was noted: I185-01M (CAFB-FT006-BKF-001MS) - Aluminum was out of MS QC limits. Presence of matrix interference was suspected. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

A total of three (3) soil samples were received on 09/17/15 to be analyzed for TCLP Metals by ICP in accordance with Method SW1311/3010A/6010C and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. IPJ008WB - result was compliant to project requirement. Barium(0.0187J <1/2 LOQ) and Selenium(0.0160J <1/2 LOQ) were detected at trace level in TXJ002SB. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) LCS was analyzed. IPJ008WL - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) MS was analyzed. I185-04M (CAFB-FT006-WC1-002MS) - matrix spike recovery for all analytes was within MS QC limits. In addition, analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW7471B
MERCURY BY COLD VAPOR

A total of three (3) soil samples were received on 09/17/15 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7471B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. Mercury was not detected in HGI033SB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) LCS was analyzed. MERCURY was within LCS QC limits in HGI033SL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) MS was analyzed. Matrix spike recovery for Mercury was within MS QC limits in I185-01M (CAFB-FT006-BKF-001MS). Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW1311/7470A
TCLP MERCURY

A total of three (3) soil samples were received on 09/17/15 to be analyzed for Tclp Mercury in accordance with Method SW1311/7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. HGI031WB and TXI007SB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. Mercury in HGI031WL/HGI031WC was within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of MS/MSD was analyzed and the following was noted: I185-04M/S (CAFB-FT006-WC1-002MS/MSD) - Percent recovery for Mercury was not within MS/MSD QC limits. Analytical spike was analyzed and evaluated. Result was within expected values. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15I185

METHOD SW9095B
PAINT FILTER LIQUID TEST

A total of three (3) soil samples were received on 09/17/15 to be analyzed for Paint Filter Liquid Test in accordance with Method SW9095B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Matrix QC Sample
Sample duplicate was analyzed and RPD was within expected value.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Reference Number: SM02.7.3

SAMPLE RECEIPT FORM 1

Type of Delivery	Airbill / Tracking Number	ECN 15-T155
☑ Fedex ☐ UPS ☐ GSO ☐ Others	8079 6108 1934	Recipient Chavez
☐ EMAX Courier ☐ Client Delivery		Date 9/17/15 Time 09:30

COC INSPECTION

☑ Client Name	☐ Client PM/FC	☐ Sampler Name	☐ Sampling Date/Time	☐ Sample ID	☑ Matrix
☑ Address	☐ Tel # / Fax #	☐ Courier Signature	☐ Analysis Required	☐ Preservative (if any)	☐ TAT
Safety Issues (if any)	☐ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note: Changes are not initialed/dated.

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☐ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 5.5 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
	☐ Cooler 6 _____ °C	☐ Cooler 7 _____ °C	☐ Cooler 8 _____ °C	☐ Cooler 9 _____ °C	☐ Cooler 10 _____ °C
Thermometer:	*A - S/N* _____	FM 1/20/15 *B - S/N* 140252070	*C - S/N* 140252067	*D - S/N* _____	

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY.

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
6	20-21	D3	Label CAFB-FT006-WC3-003 9/16/15-14:40	R1

CA 9/18/15

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS: Some label are smeared - Some samples were wated by time since ID can't be read.

☐ Continue to next page.

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☑ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	_____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	_____
D10	No initial/date on corrections in COC/label	D22	_____	R10	_____
D11	Container count mismatch COC vs received	D23	_____	R11	_____
D12	Container size mismatch COC vs received	D24	_____	R12	_____

REVIEWS:

Sample Labeling _____ Date 9/17/15

SRF _____ Date 9/18/15

PM _____ Date 9/18/15

Andy Mai

From: Zorinsky, Jennifer [jennifer.zorinsky@aecom.com]
Sent: Friday, September 18, 2015 8:46 AM
To: Andy Mai
Subject: RE: Cannon; discrepancies 15I185; 15I186

Hi Andy,

The correct sample ID is CAFB-FT006-WC3-002 (COC).

11 65 11 7

For SDG 15I186, please report only the RCRA TCLP list of analytes for total VOCs, SVOCs, metals, pests, and herbs. For the herbicide analysis, please follow Dod QSM 4.2 criteria, so the limits listed in the text file are correct. DL/LOD/LOQ listed are also ok.

Please let me know if you have any further questions.

Thanks,
Jennifer

From: Andy Mai [mailto:AMai@emaxlabs.com]
Sent: Thursday, September 17, 2015 11:04 PM
To: Zorinsky, Jennifer; Aust, Jeff
Subject: Cannon; discrepancies 15I185; 15I186

Hi Jennifer,

We found the following discrepancies for the samples received today:

1. 15I185-06: COC=CAFB-FT006-WC3-002 vs. Labels = CAFB-FT006-WC3-003; please confirm sample ID

For SDG 15I186, 8151 was requested but it is not in the QAPP. Are there specific requirements that should to be followed? If not, we will follow the QC and reporting limits listed in the attached text file.

Thanks,
Andy Mai
EMAX Laboratories, Inc.
1835 W. 205th St.
Torrance, CA 90501
Tel: 310-618-8889 ext. 117
Fax: 310-618-0818
AMai@emaxlabs.com

URS 1409

15I186

URS Corporation
12120 Shamrock Plaza, Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

15I/85 (2)

Project Name: Cannon AFB PBR
Project No.: 60425210.23446539.0008AA
Project Location: CLOVIS, NM
Project Manager: MIKE SONDERMAN
Sampler(s):

Analytical Parameters

Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260B)	SVOCs (8270D)	TAL Metals (6020A/7471B)	TCLP VOC (8260B)	TCLP SVOC (8270D)	TCLP Metals (6020A/7470A)	TCLP Pest. (8081B)	TCLP Herb. (8151A)	Paint Filter (9095B)	Preservative / Remarks
9/16/15	915		X	CAFB-FT006-BKF-001	Soil	3	40ml VOA	X									4°C
9/16/15	915		X	CAFB-FT006-BKF-001	Soil	1	8oz glass		X	X							4°C
9/16/15	917		X	CAFB-FT006-BKF-002	Soil	3	40ml VOA	X									4°C
9/16/15	917		X	CAFB-FT006-BKF-002	Soil	1	8oz glass		X	X							4°C
9/16/15	920		X	CAFB-FT006-BKF-003	Soil	3	40ml VOA	X									4°C
9/16/15	920		X	CAFB-FT006-BKF-003	Soil	1	8oz glass		X	X							4°C
9/16/15	1408		X	CAFB-FT006-WC1-002	Soil	3	8oz glass				X	X	X	X	X	X	4°C
9/16/15	1425		X	CAFB-FT006-WC2-002	Soil	3	8oz glass				X	X	X	X	X	X	4°C
9/16/15	1440		X	CAFB-FT006-WC3-002	Soil	3	8oz glass				X	X	X	X	X	X	4°C

Signatures	Date	Time
Relinquished by: Paul M. Wilson	9/16/15	
Received by:		
Relinquished by:		
Received for Laboratory by: [illegible]	9/17/15	09:30

Shipping Details
Method of Shipment: FedEx
Airbill No.: 8079 6108 1934
Lab Address: EMAX
1835 W 205th St
Torrance, CA 90501

Special Instructions
Temp 5.5°
URS Project Chemist:
Jennifer Zokinsky
(402) 952-2563

P Drive/Office Administration/Chain of Custody Form (Nov 2012) White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

120015

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : T-003

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	VS03I14B	1	NA	09/22/1516:42	09/22/1516:42	RIB337	REB240	VS03I14	Method Blank
LCS1S	VS03I14L	1	NA	09/22/1515:18	09/22/1515:18	RIB334	REB240	VS03I14	Lab Control Sample (LCS)
LCD1S	VS03I14C	1	NA	09/22/1515:46	09/22/1515:46	RIB335	REB240	VS03I14	LCS Duplicate
CAFB-FT006-BKF-001	I185-01	1.05	0.5	09/22/1522:14	09/22/1522:14	RIB349	REB240	VS03I14	Field Sample
CAFB-FT006-BKF-003	I185-03	1.2	0.5	09/22/1523:15	09/22/1523:15	RIB351	REB240	VS03I14	Field Sample
MBLK2S	VS03I18Q	1	NA	09/25/1511:24	09/25/1511:24	RIB398	RIB367	VS03I18	Method Blank
LCS2S	VS03I18L	1	NA	09/25/1509:41	09/25/1509:41	RIB395	RIB367	VS03I18	Lab Control Sample (LCS)
LCD2S	VS03I18C	1	NA	09/25/1510:09	09/25/1510:09	RIB396	RIB367	VS03I18	LCS Duplicate
CAFB-FT006-BKF-002	I185-02R	1.16	0.4	09/25/1514:19	09/25/1514:19	RIB402	RIB367	VS03I18	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 151185
Instrument ID : T-003

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VS03I21B	1	NA	09/27/1514:36	09/27/1514:36	RIB458	RIB382	VS03I21	Method Blank
LCS1W	VS03I21L	1	NA	09/27/1513:12	09/27/1513:12	RIB455	RIB382	VS03I21	Lab Control Sample (LCS)
LCD1W	VS03I21C	1	NA	09/27/1513:40	09/27/1513:40	RIB456	RIB382	VS03I21	LCS Duplicate
MBLK2W	TVI003SB	10	NA	09/27/1515:32	09/27/1515:32	RIB460	RIB382	VS03I21	Method Blank
CAFB-FT006-WC1-002	I185-04	10	NA	09/27/1517:23	09/27/1517:23	RIB464	RIB382	VS03I21	Field Sample
CAFB-FT006-WC2-002	I185-05	10	NA	09/27/1517:51	09/27/1517:51	RIB465	RIB382	VS03I21	Field Sample
CAFB-FT006-WC3-002	I185-06	10	NA	09/27/1518:19	09/27/1518:19	RIB466	RIB382	VS03I21	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : T-OE7

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1S	SVI038SL	1	NA	09/24/1513:39	09/23/1518:12	RIJ481	RGJ140	SVI038S	Lab Control Sample (LCS)
LCD1S	SVI038SC	1	NA	09/24/1513:58	09/23/1518:12	RIJ482	RGJ140	SVI038S	LCS Duplicate
MBLK1S	SVI038SB	1	NA	09/24/1515:35	09/23/1518:12	RIJ487	RGJ140	SVI038S	Method Blank
CAFB-FT006-BKF-001	I185-01	1	0.5	09/24/1517:40	09/23/1518:12	RIH553	RDH007	SVI038S	Field Sample
CAFB-FT006-BKF-002	I185-02	1	0.4	09/24/1517:59	09/23/1518:12	RIH554	RDH007	SVI038S	Field Sample
CAFB-FT006-BKF-003	I185-03	1	0.5	09/24/1518:18	09/23/1518:12	RIH555	RDH007	SVI038S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : T-OE7

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVI044WB	1	NA	10/01/1512:20	09/25/1512:30	RJH007	RDH007	SVI044W	Method Blank
LCS1W	SVI044WL	1	NA	10/01/1512:40	09/25/1512:30	RJH008	RDH007	SVI044W	Lab Control Sample (LCS)
LCD1W	SVI044WC	1	NA	10/01/1512:59	09/25/1512:30	RJH009	RDH007	SVI044W	LCS Duplicate
MBLK2W	TXI007SB	10	NA	10/01/1513:18	09/25/1512:30	RJH010	RDH007	SVI044W	Method Blank
CAFB-FT006-WC1-002	I185-04	10	NA	10/01/1513:37	09/25/1512:30	RJH011	RDH007	SVI044W	Field Sample
CAFB-FT006-WC2-002	I185-05	10	NA	10/01/1513:56	09/25/1512:30	RJH012	RDH007	SVI044W	Field Sample
CAFB-FT006-WC3-002	I185-06	10	NA	10/01/1514:15	09/25/1512:30	RJH013	RDH007	SVI044W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP PESTICIDES

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPI033WB	1	NA	10/03/1520:20	09/25/1517:24	RJ03015A	RJ03013A	CPI033W	Method Blank
LCS1W	CPI033WL	1	NA	10/03/1520:40	09/25/1517:24	RJ03016A	RJ03013A	CPI033W	Lab Control Sample (LCS)
LCD1W	CPI033WC	1	NA	10/03/1521:01	09/25/1517:24	RJ03017A	RJ03013A	CPI033W	LCS Duplicate
MBLK2W	TXI007SB	10	NA	10/03/1521:21	09/25/1517:24	RJ03018A	RJ03013A	CPI033W	Method Blank
CAFB-FT006-WC1-002	I185-04	10	NA	10/03/1521:41	09/25/1517:24	RJ03019A	RJ03013A	CPI033W	Field Sample
CAFB-FT006-WC2-002	I185-05	10	NA	10/03/1522:01	09/25/1517:24	RJ03020A	RJ03013A	CPI033W	Field Sample
CAFB-FT006-WC3-002	I185-06	10	NA	10/03/1522:22	09/25/1517:24	RJ03021A	RJ03013A	CPI033W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP HERBICIDES

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : GCT016

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEI004WB	1	NA	09/25/1519:33	09/25/1514:00	WI25004A	WI25002A	HEI004W	Method Blank
LCS1W	HEI004WL	1	NA	09/25/1520:06	09/25/1514:00	WI25005A	WI25002A	HEI004W	Lab Control Sample (LCS)
LCD1W	HEI004WC	1	NA	09/25/1520:39	09/25/1514:00	WI25006A	WI25002A	HEI004W	LCS Duplicate
MBLK2W	TXI007SB	50	NA	09/25/1521:12	09/25/1514:00	WI25007A	WI25002A	HEI004W	Method Blank
CAFB-FT006-WC1-002	I185-04	50	NA	09/25/1521:45	09/25/1514:00	WI25008A	WI25002A	HEI004W	Field Sample
CAFB-FT006-WC2-002	I185-05	50	NA	09/25/1522:18	09/25/1514:00	WI25009A	WI25002A	HEI004W	Field Sample
CAFB-FT006-WC3-002	I185-06	50	NA	09/25/1522:51	09/25/1514:00	WI25010A	WI25002A	HEI004W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TOTAL METALS BY ICP-MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : T-IF6

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IMI036SB	1	NA	09/28/1519:44	09/26/1515:30	F6I16107	F6I16105	IMI036S	Method Blank
LCS1S	IMI036SL	1	NA	09/28/1519:49	09/26/1515:30	F6I16108	F6I16105	IMI036S	Lab Control Sample (LCS)
CAFB-FT006-BKF-001MS	I185-01M	0.985	0.5	09/28/1519:53	09/26/1515:30	F6I16109	F6I16105	IMI036S	Matrix Spike Sample (MS)
CAFB-FT006-BKF-001AS	I185-01A	0.962	0.5	09/28/1519:57	09/26/1515:30	F6I16110	F6I16105	IMI036S	Analytical Spike Sample
CAFB-FT006-BKF-001	I185-01	0.962	0.5	09/28/1520:01	09/26/1515:30	F6I16111	F6I16105	IMI036S	Field Sample
CAFB-FT006-BKF-001DL	I185-01J	4.81	0.5	09/28/1520:06	09/26/1515:30	F6I16112	F6I16105	IMI036S	Diluted Sample
CAFB-FT006-BKF-001DUP	I185-01D	0.995	0.5	09/28/1520:10	09/26/1515:30	F6I16113	F6I16105	IMI036S	Duplicate Sample
CAFB-FT006-BKF-002	I185-02	0.990	0.4	09/28/1520:14	09/26/1515:30	F6I16114	F6I16105	IMI036S	Field Sample
CAFB-FT006-BKF-003	I185-03	0.985	0.5	09/28/1520:19	09/26/1515:30	F6I16115	F6I16105	IMI036S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP METALS BY ICP

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : T-ID8

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPJ008WB	1	NA	10/08/1513:40	10/07/1512:11	ID8J007036	ID8J007034	IPJ008W	Method Blank
LCS1W	IPJ008WL	1	NA	10/08/1513:43	10/07/1512:11	ID8J007037	ID8J007034	IPJ008W	Lab Control Sample (LCS)
MBLK2W	TXJ002SB	5	NA	10/08/1513:46	10/07/1512:11	ID8J007038	ID8J007034	IPJ008W	Method Blank
CAFB-FT006-WC1-002AS	I185-04A	5	NA	10/08/1513:49	10/07/1512:11	ID8J007039	ID8J007034	IPJ008W	Analytical Spike Sample
CAFB-FT006-WC1-002	I185-04R	5	NA	10/08/1513:52	10/07/1512:11	ID8J007040	ID8J007034	IPJ008W	Field Sample
CAFB-FT006-WC1-002DL	I185-04J	25	NA	10/08/1513:55	10/07/1512:11	ID8J007041	ID8J007034	IPJ008W	Diluted Sample
CAFB-FT006-WC1-002MS	I185-04M	5	NA	10/08/1513:58	10/07/1512:11	ID8J007042	ID8J007034	IPJ008W	Matrix Spike Sample (MS)
CAFB-FT006-WC1-002DUP	I185-04D	5	NA	10/08/1514:02	10/07/1512:11	ID8J007043	ID8J007034	IPJ008W	Duplicate Sample
CAFB-FT006-WC2-002	I185-05R	5	NA	10/08/1514:05	10/07/1512:11	ID8J007044	ID8J007034	IPJ008W	Field Sample
CAFB-FT006-WC3-002	I185-06R	5	NA	10/08/1514:08	10/07/1512:11	ID8J007045	ID8J007034	IPJ008W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : TI047

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	HGI033SB	1	NA	09/29/1519:38	09/29/1516:15	M47I022011	M47I022	HGI033S	Method Blank
LCS1S	HGI033SL	1	NA	09/29/1519:40	09/29/1516:15	M47I022012	M47I022	HGI033S	Lab Control Sample (LCS)
CAFB-FT006-BKF-001	I185-01	1	0.5	09/29/1519:45	09/29/1516:15	M47I022014	M47I022	HGI033S	Field Sample
CAFB-FT006-BKF-001MS	I185-01M	1	0.5	09/29/1519:49	09/29/1516:15	M47I022016	M47I022	HGI033S	Matrix Spike Sample (MS)
CAFB-FT006-BKF-001DUP	I185-01D	1	0.5	09/29/1519:51	09/29/1516:15	M47I022017	M47I022	HGI033S	Duplicate Sample
CAFB-FT006-8KF-002	I185-02	1	0.4	09/29/1519:54	09/29/1516:15	M47I022018	M47I022	HGI033S	Field Sample
CAFB-FT006-BKF-003	I185-03	1	0.5	09/29/1519:56	09/29/1516:15	M47I022019	M47I022	HGI033S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP MERCURY

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : TI047

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGI031W8	1	NA	09/28/1517:58	09/28/1513:30	M47I021011	M47I021	HGI031W	Method Blank
LCS1W	HGI031WL	1	NA	09/28/1518:00	09/28/1513:30	M47I021012	M47I021	HGI031W	Lab Control Sample (LCS)
LCD1W	HGI031WC	1	NA	09/28/1518:02	09/28/1513:30	M47I021013	M47I021	HGI031W	LCS Duplicate
MBLK2W	TXI007SB	1	NA	09/28/1518:51	09/28/1513:30	M47I021036	M47I021	HGI031W	Method Blank
CAFB-FT006-WC1-002	I185-04A	1	NA	09/28/1518:53	09/28/1513:30	M47I021037	M47I021	HGI031W	Analytical Spike Sample
CAFB-FT006-WC1-002	I185-04	1	NA	09/28/1518:56	09/28/1513:30	M47I021038	M47I021	HGI031W	Field Sample
CAFB-FT006-WC1-002	I185-04J	5	NA	09/28/1518:58	09/28/1513:30	M47I021039	M47I021	HGI031W	Diluted Sample
CAFB-FT006-WC1-002MS	I185-04M	1	NA	09/28/1519:00	09/28/1513:30	M47I021040	M47I021	HGI031W	Matrix Spike Sample (MS)
CAFB-FT006-WC1-002MSD	I185-04S	1	NA	09/28/1519:02	09/28/1513:30	M47I021041	M47I021	HGI031W	MS Duplicate (MSD)
CAFB-FT006-WC2-002	I185-05	1	NA	09/28/1519:04	09/28/1513:30	M47I021042	M47I021	HGI031W	Field Sample
CAFB-FT006-WC3-002	I185-06	1	NA	09/28/1519:06	09/28/1513:30	M47I021043	M47I021	HGI031W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
Paint Filter Liquid Test

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15I185
Instrument ID : NA

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
CAFB-FT006-WC1-002	I185-04	1.00	NA	09/17/1514:30	NANA	15PFI00101	15PFI001	PFI001S	Field Sample
CAFB-FT006-WC1-002DUP	I185-04D	1.00	NA	09/17/1514:30	NANA	15PFI00101	15PFI001	PFI001S	Duplicate Sample
CAFB-FT006-WC2-002	I185-05	1.00	NA	09/17/1514:30	NANA	15PFI00101	15PFI001	PFI001S	Field Sample
CAFB-FT006-WC3-002	I185-06	1.00	NA	09/17/1514:30	NANA	15PFI00101	15PFI001	PFI001S	Field Sample

FN - Filename
% Moist - Percent Moisture

RESULTS SUMMARIES

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/22/15 22:14
Sample ID:	CAFB-FT006-BKF-001	Date Analyzed:	09/22/15 22:14
Lab Samp ID:	I185-01	Dilution Factor:	1.05
Lab File ID:	RIB349	Matrix :	SOIL
Ext Btch ID:	VS03I14	% Moisture :	0.5
Calib. Ref.:	REB240	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0053	0.0011	0.0021
1,2,4-TRICHLOROBENZENE	ND	0.0053	0.0011	0.0021
1,2,4-TRIMETHYLBENZENE	ND	0.0053	0.00058	0.0021
1,2-DIBROMOETHANE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROBENZENE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROPROPANE	ND	0.0053	0.00053	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0053	0.00062	0.0021
1,3-DICHLOROBENZENE	ND	0.0053	0.00055	0.0011
1,3-DICHLOROPROPANE	ND	0.0053	0.00053	0.0011
1,4-DICHLOROBENZENE	ND	0.0053	0.00053	0.0011
2,2-DICHLOROPROPANE	ND	0.0053	0.0011	0.0021
2-BUTANONE	ND	0.011	0.0026	0.0053
2-CHLOROTOLUENE	ND	0.0053	0.00087	0.0011
4-CHLOROTOLUENE	ND	0.0053	0.00071	0.0011
ACETONE	0.019	0.011	0.0033	0.0053
BENZENE	ND	0.0053	0.00053	0.0011
BROMOBENZENE	ND	0.0053	0.00053	0.0011
BROMODICHLOROMETHANE	ND	0.0053	0.00053	0.0011
BROMOFORM	ND	0.0053	0.0011	0.0021
BROMOMETHANE	ND	0.011	0.0019	0.0021
CARBON TETRACHLORIDE	ND	0.0053	0.00057	0.0011
CHLOROBENZENE	ND	0.0053	0.00053	0.0011
CHLOROETHANE	ND	0.0053	0.0014	0.0021
CHLOROFORM	ND	0.0053	0.00053	0.0011
CHLOROMETHANE	ND	0.0053	0.0011	0.0021
CIS-1,2-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0053	0.0013	0.0021
ETHYLBENZENE	ND	0.0053	0.00053	0.0011
ISOPROPYLBENZENE	ND	0.0053	0.00068	0.0021
M/P-XYLENES	ND	0.011	0.0011	0.0021
4-METHYL-2-PENTANONE	ND	0.011	0.0030	0.0053
METHYLENE CHLORIDE	ND	0.011	0.0011	0.0021
METHYL TERT-BUTYL ETHER	ND	0.0053	0.00053	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0021
N-BUTYLBENZENE	ND	0.0053	0.00074	0.0011
N-PROPYLBENZENE	ND	0.0053	0.00069	0.0011
O-XYLENE	ND	0.0053	0.00053	0.0011
SEC-BUTYLBENZENE	ND	0.0053	0.00071	0.0011
STYRENE	ND	0.0053	0.00053	0.0011
TETRACHLOROETHENE	ND	0.0053	0.00053	0.0011
TOLUENE	ND	0.0053	0.00053	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
TRICHLOROETHENE	ND	0.0053	0.00053	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0053	0.0012	0.0021
VINYL CHLORIDE	ND	0.0053	0.0015	0.0021
XYLENES, TOTAL	ND	0.011	0.00053	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0561	0.05276	106	85-115
DIBROMOFLUOROMETHANE	0.0596	0.05276	113	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:19
Sample ID:	CAFB-FT006-BKF-002	Date Analyzed:	09/25/15 14:19
Lab Samp ID:	I185-02R	Dilution Factor:	1.16
Lab File ID:	RIB402	Matrix :	SOIL
Ext Btch ID:	VS03I18	% Moisture :	0.4
Calib. Ref.:	RIB367	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1,1-TRICHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1,2,2-TETRACHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1,2-TRICHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1-DICHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1-DICHLOROETHENE	ND	0.0058	0.00058	0.0012
1,1-DICHLOROPROPENE	ND	0.0058	0.00058	0.0012
1,2,3-TRICHLOROBENZENE	ND	0.0058	0.0012	0.0023
1,2,4-TRICHLOROBENZENE	ND	0.0058	0.0012	0.0023
1,2,4-TRIMETHYLBENZENE	ND	0.0058	0.00064	0.0023
1,2-DIBROMOETHANE	ND	0.0058	0.00058	0.0012
1,2-DICHLOROBENZENE	ND	0.0058	0.00058	0.0012
1,2-DICHLOROETHANE	ND	0.0058	0.00058	0.0012
1,2-DICHLOROPROPANE	ND	0.0058	0.00058	0.0012
1,3,5-TRIMETHYLBENZENE	ND	0.0058	0.00069	0.0023
1,3-DICHLOROBENZENE	ND	0.0058	0.00061	0.0012
1,3-DICHLOROPROPANE	ND	0.0058	0.00058	0.0012
1,4-DICHLOROBENZENE	ND	0.0058	0.00058	0.0012
2,2-DICHLOROPROPANE	ND	0.0058	0.0012	0.0023
2-BUTANONE	ND	0.012	0.0029	0.0058
2-CHLOROTOLUENE	ND	0.0058	0.00096	0.0012
4-CHLOROTOLUENE	ND	0.0058	0.00078	0.0012
ACETONE	0.025	0.012	0.0036	0.0058
BENZENE	ND	0.0058	0.00058	0.0012
BROMOBENZENE	ND	0.0058	0.00058	0.0012
BROMODICHLOROMETHANE	ND	0.0058	0.00058	0.0012
BROMOFORM	ND	0.0058	0.0012	0.0023
BROMOMETHANE	ND	0.012	0.0021	0.0023
CARBON TETRACHLORIDE	ND	0.0058	0.00063	0.0012
CHLOROBENZENE	ND	0.0058	0.00058	0.0012
CHLOROETHANE	ND	0.0058	0.0015	0.0023
CHLOROFORM	ND	0.0058	0.00058	0.0012
CHLOROMETHANE	ND	0.0058	0.0012	0.0023
CIS-1,2-DICHLOROETHENE	ND	0.0058	0.00058	0.0012
CIS-1,3-DICHLOROPROPENE	ND	0.0058	0.00058	0.0012
DICHLORODIFLUOROMETHANE	0.0058J	0.0058	0.0014	0.0023
ETHYLBENZENE	ND	0.0058	0.00058	0.0012
ISOPROPYLBENZENE	ND	0.0058	0.00075	0.0023
M/P-XYLENES	ND	0.012	0.0012	0.0023
4-METHYL-2-PENTANONE	ND	0.012	0.0033	0.0058
METHYLENE CHLORIDE	ND	0.012	0.0012	0.0023
METHYL TERT-BUTYL ETHER	ND	0.0058	0.00058	0.0012
NAPHTHALENE	ND	0.012	0.0012	0.0023
N-BUTYLBENZENE	ND	0.0058	0.00082	0.0012
N-PROPYLBENZENE	ND	0.0058	0.00076	0.0012
O-XYLENE	ND	0.0058	0.00058	0.0012
SEC-BUTYLBENZENE	ND	0.0058	0.00078	0.0012
STYRENE	ND	0.0058	0.00058	0.0012
TETRACHLOROETHENE	ND	0.0058	0.00058	0.0012
TOLUENE	ND	0.0058	0.00058	0.0012
TRANS-1,2-DICHLOROETHENE	ND	0.0058	0.00058	0.0012
TRANS-1,3-DICHLOROPROPENE	ND	0.0058	0.00058	0.0012
TRICHLOROETHENE	ND	0.0058	0.00058	0.0012
TRICHLOROFLUOROMETHANE	ND	0.0058	0.0013	0.0023
VINYL CHLORIDE	ND	0.0058	0.0016	0.0023
XYLENES, TOTAL	ND	0.012	0.00058	0.0012

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0598	0.05823	103	85-115
DIBROMOFLUOROMETHANE	0.0578	0.05823	99.3	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/22/15 23:15
Sample ID:	CAFB-FT006-BKF-003	Date Analyzed:	09/22/15 23:15
Lab Samp ID:	I185-03	Dilution Factor:	1.2
Lab File ID:	RIB351	Matrix :	SOIL
Ext Btch ID:	VS03I14	% Moisture :	0.5
Calib. Ref.:	REB240	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1,1-TRICHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1,2,2-TETRACHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1,2-TRICHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1-DICHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1-DICHLOROETHENE	ND	0.0060	0.00060	0.0012
1,1-DICHLOROPROPENE	ND	0.0060	0.00060	0.0012
1,2,3-TRICHLOROBENZENE	ND	0.0060	0.0012	0.0024
1,2,4-TRICHLOROBENZENE	ND	0.0060	0.0012	0.0024
1,2,4-TRIMETHYLBENZENE	ND	0.0060	0.00066	0.0024
1,2-DIBROMOETHANE	ND	0.0060	0.00060	0.0012
1,2-DICHLOROBENZENE	ND	0.0060	0.00060	0.0012
1,2-DICHLOROETHANE	ND	0.0060	0.00060	0.0012
1,2-DICHLOROPROPANE	ND	0.0060	0.00060	0.0012
1,3,5-TRIMETHYLBENZENE	ND	0.0060	0.00071	0.0024
1,3-DICHLOROBENZENE	ND	0.0060	0.00063	0.0012
1,3-DICHLOROPROPANE	ND	0.0060	0.00060	0.0012
1,4-DICHLOROBENZENE	ND	0.0060	0.00060	0.0012
2,2-DICHLOROPROPANE	ND	0.0060	0.0012	0.0024
2-BUTANONE	ND	0.012	0.0030	0.0060
2-CHLOROTOLUENE	ND	0.0060	0.00099	0.0012
4-CHLOROTOLUENE	ND	0.0060	0.00081	0.0012
ACETONE	0.033	0.012	0.0037	0.0060
BENZENE	ND	0.0060	0.00060	0.0012
BROMOBENZENE	ND	0.0060	0.00060	0.0012
BROMODICHLOROMETHANE	ND	0.0060	0.00060	0.0012
BROMOFORM	ND	0.0060	0.0012	0.0024
BROMOMETHANE	ND	0.012	0.0022	0.0024
CARBON TETRACHLORIDE	ND	0.0060	0.00065	0.0012
CHLOROBENZENE	ND	0.0060	0.00060	0.0012
CHLOROETHANE	ND	0.0060	0.0016	0.0024
CHLOROFORM	ND	0.0060	0.00060	0.0012
CHLOROMETHANE	ND	0.0060	0.0012	0.0024
CIS-1,2-DICHLOROETHENE	ND	0.0060	0.00060	0.0012
CIS-1,3-DICHLOROPROPENE	ND	0.0060	0.00060	0.0012
DICHLORODIFLUOROMETHANE	ND	0.0060	0.0014	0.0024
ETHYLBENZENE	ND	0.0060	0.00060	0.0012
ISOPROPYLBENZENE	ND	0.0060	0.00077	0.0024
M/P-XYLENES	ND	0.012	0.0012	0.0024
4-METHYL-2-PENTANONE	ND	0.012	0.0034	0.0060
METHYLENE CHLORIDE	ND	0.012	0.0012	0.0024
METHYL TERT-BUTYL ETHER	ND	0.0060	0.00060	0.0012
NAPHTHALENE	ND	0.012	0.0012	0.0024
N-BUTYLBENZENE	ND	0.0060	0.00084	0.0012
N-PROPYLBENZENE	ND	0.0060	0.00078	0.0012
O-XYLENE	ND	0.0060	0.00060	0.0012
SEC-BUTYLBENZENE	ND	0.0060	0.00081	0.0012
STYRENE	ND	0.0060	0.00060	0.0012
TETRACHLOROETHENE	ND	0.0060	0.00060	0.0012
TOLUENE	ND	0.0060	0.00060	0.0012
TRANS-1,2-DICHLOROETHENE	ND	0.0060	0.00060	0.0012
TRANS-1,3-DICHLOROPROPENE	ND	0.0060	0.00060	0.0012
TRICHLOROETHENE	ND	0.0060	0.00060	0.0012
TRICHLOROFLUOROMETHANE	ND	0.0060	0.0013	0.0024
VINYL CHLORIDE	ND	0.0060	0.0017	0.0024
XYLENES, TOTAL	ND	0.012	0.00060	0.0012

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0561	0.06030	93.0	85-115
DIBROMOFLUOROMETHANE	0.0715	0.06030	119	80-119

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/27/15 17:23
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	09/27/15 17:23
Lab Samp ID:	I185-04	Dilution Factor:	10
Lab File ID:	RIB464	Matrix :	LEACHATE
Ext Btch ID:	VS03I21	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	508	500.0	102	70-120
4-BROMOFLUOROBENZENE	504	500.0	101	75-120
TOLUENE-D8	507	500.0	101	85-120
DIBROMOFLUOROMETHANE	531	500.0	106	85-115

DateTime Leached: 09/23/15 19:30

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/27/15 17:51
Sample ID	: CAFB-FT006-WC2-002	Date Analyzed:	09/27/15 17:51
Lab Samp ID	: I185-05	Dilution Factor:	10
Lab File ID	: RIB465	Matrix :	LEACHATE
Ext Btch ID	: VS03I21	% Moisture :	NA
Calib. Ref.	: RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	544	500.0	109	70-120
4-BROMOFLUOROBENZENE	495	500.0	99.0	75-120
TOLUENE-D8	492	500.0	98.5	85-120
DIBROMOFLUOROMETHANE	564	500.0	113	85-115

DateTime Leached: 09/23/15 19:30

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/27/15 18:19
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	09/27/15 18:19
Lab Samp ID:	I185-06	Dilution Factor:	10
Lab File ID:	RIB466	Matrix :	LEACHATE
Ext Btch ID:	VS03I21	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	490	500.0	98.1	70-120
4-BROMOFLUOROBENZENE	500	500.0	100	75-120
TOLUENE-D8	512	500.0	102	85-120
DIBROMOFLUOROMETHANE	530	500.0	106	85-115

DateTime Leached: 09/23/15 19:30

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/23/15 18:12
Sample ID:	CAFB-FT006-BKF-001	Date Analyzed:	09/24/15 17:40
Lab Samp ID:	I185-01	Dilution Factor:	1
Lab File ID:	RIH553	Matrix :	SOIL
Ext Btch ID:	SVI038S	% Moisture :	0.5
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.34	2.010	66.5	35-125
2-FLUOROBIPHENYL	0.412	0.6701	61.5	45-105
2-FLUOROPHENOL	1.14	2.010	56.6	35-105
NITROBENZENE-D5	0.372	0.6701	55.5	35-100
TERPHENYL-D14	0.535	0.6701	79.8	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/23/15 18:12
Sample ID	: CAFB-FT006-BKF-002	Date Analyzed:	09/24/15 17:59
Lab Samp ID	: I185-02	Dilution Factor:	1
Lab File ID	: RIH554	Matrix :	SOIL
Ext Btch ID	: SVI038S	% Moisture :	0.4
Calib. Ref.	: RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.26	2.008	62.6	35-125
2-FLUOROBIPHENYL	0.380	0.6694	56.8	45-105
2-FLUOROPHENOL	0.988	2.008	49.2	35-105
NITROBENZENE-D5	0.328	0.6694	49.0	35-100
TERPHENYL-D14	0.503	0.6694	75.2	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/23/15 18:12
Sample ID:	CAFB-FT006-BKF-003	Date Analyzed:	09/24/15 18:18
Lab Samp ID:	I185-03	Dilution Factor:	1
Lab File ID:	RIH555	Matrix :	SOIL
Ext Btch ID:	SVI038S	% Moisture :	0.5
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.34	2.010	66.8	35-125
2-FLUOROBIPHENYL	0.411	0.6701	61.3	45-105
2-FLUOROPHENOL	1.13	2.010	56.1	35-105
NITROBENZENE-D5	0.366	0.6701	54.6	35-100
TERPHENYL-D14	0.538	0.6701	80.3	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 12:30
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	10/01/15 13:37
Lab Samp ID:	I185-04	Dilution Factor:	10
Lab File ID:	RJH011	Matrix :	LEACHATE
Ext Btch ID:	SVI044W	% Moisture :	NA
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	447	600.0	74.5	40-125
2-FLUOROBIPHENYL	154	200.0	77.1	50-110
2-FLUOROPHENOL	248	600.0	41.4	20-110
NITROBENZENE-D5	159	200.0	79.4	40-110
PHENOL-D5	363	600.0	60.5	10-115
TERPHENYL-D14	153	200.0	76.4	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 09/23/15 15:30

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 12:30
Sample ID:	CAFB-FT006-WC2-002	Date Analyzed:	10/01/15 13:56
Lab Samp ID:	I185-05	Dilution Factor:	10
Lab File ID:	RJH012	Matrix :	LEACHATE
Ext Btch ID:	SVI044W	% Moisture :	NA
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	474	600.0	79.1	40-125
2-FLUOROBIPHENYL	160	200.0	80.0	50-110
2-FLUOROPHENOL	395	600.0	65.8	20-110
NITROBENZENE-D5	170	200.0	85.0	40-110
PHENOL-D5	473	600.0	78.8	10-115
TERPHENYL-D14	153	200.0	76.5	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 09/23/15 15:30

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 12:30
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	10/01/15 14:15
Lab Samp ID:	I185-06	Dilution Factor:	10
Lab File ID:	RJH013	Matrix :	LEACHATE
Ext Btch ID:	SVI044W	% Moisture :	NA
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	502	600.0	83.7	40-125
2-FLUOROBIPHENYL	165	200.0	82.7	50-110
2-FLUOROPHENOL	387	600.0	64.5	20-110
NITROBENZENE-D5	170	200.0	84.9	40-110
PHENOL-D5	464	600.0	77.4	10-115
TERPHENYL-D14	164	200.0	81.9	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 09/23/15 15:30

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 151185	Date Extracted:	09/25/15 17:24
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	10/03/15 21:41
Lab Samp ID:	I185-04	Dilution Factor:	10
Lab File ID:	RJ03019A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND) | ND	1.0	0.050	0.10
HEPTACHLOR	(ND) | ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND) | ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ENDRIN	(ND) | ND	1.0	0.080	0.10
METHOXYCHLOR	(ND) | ND	10	0.50	1.0
TOXAPHENE	(ND) | ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	3.819 | (4.257)	4.000	95.5 | (106)	25-140
DECACHLOROBIPHENYL	3.361 | (3.484)	4.000	84.0 | (87.1)	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 09/23/15 15:30

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	CAFB-FT006-WC2-002	Date Analyzed:	10/03/15 22:01
Lab Samp ID:	I185-05	Dilution Factor:	10
Lab File ID:	RJ03020A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND)|ND	1.0	0.050	0.10
HEPTACHLOR	(ND)|ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND)|ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND)|ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND)|ND	1.0	0.050	0.10
ENDRIN	(ND)|ND	1.0	0.080	0.10
METHOXYCHLOR	(ND)|ND	10	0.50	1.0
TOXAPHENE	(ND)|ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	3.786|(3.913)	4.000	94.6|(97.8)	25-140
DECACHLOROBIPHENYL	(3.417)|3.201	4.000	(85.4)|80.0	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 09/23/15 15:30

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	10/03/15 22:22
Lab Samp ID:	I185-06	Dilution Factor:	10
Lab File ID:	RJ03021A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND) | ND	1.0	0.050	0.10
HEPTACHLOR	(ND) | ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND) | ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ENDRIN	(ND) | ND	1.0	0.080	0.10
METHOXYCHLOR	(ND) | ND	10	0.50	1.0
TOXAPHENE	(ND) | ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	3.847 | (5.230)	4.000	96.2 | (131)	25-140
DECACHLOROBIPHENYL	3.308 | (3.503)	4.000	82.7 | (87.6)	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 09/23/15 15:30

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	09/25/15 21:45
Lab Samp ID:	I185-04	Dilution Factor:	50
Lab File ID:	WI25008A	Matrix :	LEACHATE
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND)|ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	559.2|(589.4)	500.0	112|(118)	50-130

DateTime Leached: 09/23/15 15:30

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	CAFB-FT006-WC2-002	Date Analyzed:	09/25/15 22:18
Lab Samp ID:	I185-05	Dilution Factor:	50
Lab File ID:	WI25009A	Matrix :	LEACHATE
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND)|ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	364.6|(376.3)	500.0	72.9|(75.3)	50-130

DateTime Leached: 09/23/15 15:30

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	09/25/15 22:51
Lab Samp ID:	I185-06	Dilution Factor:	50
Lab File ID:	WI25010A	Matrix :	LEACHATE
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND)|ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	334.4|(350.8)	500.0	66.9|(70.2)	50-130

DateTime Leached: 09/23/15 15:30

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	09/26/15 15:30
Sample ID:	CAFB-FT006-BKF-001	Date Analyzed:	09/28/15 20:01
Lab Samp ID:	I185-01	Dilution Factor:	0.962
Lab File ID:	F6I16111	Matrix :	SOIL
Ext Btch ID:	IMI036S	% Moisture :	0.5
Calib. Ref.:	F6I16105	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	2340	96.7	4.83	9.67
Antimony	ND	0.483	0.0967	0.193
Arsenic	0.791	0.483	0.0483	0.0967
Barium	11.5	0.483	0.0696	0.0967
Cadmium	0.0627J	0.483	0.0551	0.0967
Chromium, total	3.49	0.483	0.0483	0.0967
Cobalt	0.696	0.483	0.0483	0.0967
Copper	1.21	0.483	0.0967	0.193
Iron	3280	96.7	4.83	9.67
Lead	2.29	0.483	0.0483	0.0967
Magnesium	359	96.7	9.67	19.3
Manganese	30.6	0.483	0.148	0.193
Nickel	1.71	0.483	0.0609	0.0967
Potassium	562	96.7	9.67	19.3
Selenium	ND	0.483	0.0483	0.0967
Silver	ND	0.483	0.0483	0.0967
Sodium	ND	96.7	9.67	19.3
Thallium	ND	0.483	0.0483	0.0967
Vanadium	6.77	0.483	0.184	0.290
Zinc	5.95	1.93	0.660	0.967

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	09/26/15 15:30
Sample ID:	CAFB-FT006-BKF-002	Date Analyzed:	09/28/15 20:14
Lab Samp ID:	I185-02	Dilution Factor:	0.990
Lab File ID:	F6I16114	Matrix :	SOIL
Ext Btch ID:	IMI036S	% Moisture :	0.4
Calib. Ref.:	F6I16105	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	2710	99.4	4.97	9.94
Antimony	ND	0.497	0.0994	0.199
Arsenic	0.818	0.497	0.0497	0.0994
Barium	13.0	0.497	0.0716	0.0994
Cadmium	0.0669J	0.497	0.0567	0.0994
Chromium, total	3.65	0.497	0.0497	0.0994
Cobalt	0.726	0.497	0.0497	0.0994
Copper	1.37	0.497	0.0994	0.199
Iron	3360	99.4	4.97	9.94
Lead	2.52	0.497	0.0497	0.0994
Magnesium	406	99.4	9.94	19.9
Manganese	34.5	0.497	0.152	0.199
Nickel	1.85	0.497	0.0626	0.0994
Potassium	661	99.4	9.94	19.9
Selenium	ND	0.497	0.0497	0.0994
Silver	ND	0.497	0.0497	0.0994
Sodium	ND	99.4	9.94	19.9
Thallium	ND	0.497	0.0497	0.0994
Vanadium	7.06	0.497	0.189	0.298
Zinc	6.66	1.99	0.679	0.994

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	09/26/15 15:30
Sample ID:	CAFB-FT006-BKF-003	Date Analyzed:	09/28/15 20:19
Lab Samp ID:	I185-03	Dilution Factor:	0.985
Lab File ID:	F6I16115	Matrix :	SOIL
Ext Btch ID:	IMI036S	% Moisture :	0.5
Calib. Ref.:	F6I16105	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	2900	99.0	4.95	9.90
Antimony	ND	0.495	0.0990	0.198
Arsenic	0.903	0.495	0.0495	0.0990
Barium	15.7	0.495	0.0713	0.0990
Cadmium	0.0860J	0.495	0.0564	0.0990
Chromium, total	4.10	0.495	0.0495	0.0990
Cobalt	0.876	0.495	0.0495	0.0990
Copper	1.54	0.495	0.0990	0.198
Iron	3840	99.0	4.95	9.90
Lead	3.00	0.495	0.0495	0.0990
Magnesium	450	99.0	9.90	19.8
Manganese	44.6	0.495	0.151	0.198
Nickel	2.06	0.495	0.0624	0.0990
Potassium	689	99.0	9.90	19.8
Selenium	ND	0.495	0.0495	0.0990
Silver	ND	0.495	0.0495	0.0990
Sodium	ND	99.0	9.90	19.8
Thallium	ND	0.495	0.0495	0.0990
Vanadium	7.80	0.495	0.188	0.297
Zinc	8.06	1.98	0.676	0.990

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	09/16/15 14:08
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	10/08/15 13:52
Lab Samp ID:	I185-04R	Dilution Factor:	5
Lab File ID:	ID8J007040	Matrix :	LEACHATE
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0500	0.0150	0.0250
Barium	1.26	0.0500	0.00500	0.0100
Cadmium	ND	0.0500	0.00500	0.0100
Chromium	ND	0.0500	0.00750	0.0150
Lead	ND	0.0500	0.00850	0.0150
Selenium	0.0154J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 10/05/15 16:00

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	09/16/15 14:25
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	CAFB-FT006-WC2-002	Date Analyzed:	10/08/15 14:05
Lab Samp ID:	I185-05R	Dilution Factor:	5
Lab File ID:	ID8J007044	Matrix :	LEACHATE
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0500	0.0150	0.0250
Barium	0.616	0.0500	0.00500	0.0100
Cadmium	ND	0.0500	0.00500	0.0100
Chromium	ND	0.0500	0.00750	0.0150
Lead	0.0144J	0.0500	0.00850	0.0150
Selenium	0.0134J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 10/05/15 16:00

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	09/16/15 14:40
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 151185	Date Extracted:	10/07/15 12:11
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	10/08/15 14:08
Lab Samp ID:	I185-06R	Dilution Factor:	5
Lab File ID:	ID8J007045	Matrix :	LEACHATE
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0500	0.0150	0.0250
Barium	0.875	0.0500	0.00500	0.0100
Cadmium	0.0398J	0.0500	0.00500	0.0100
Chromium	ND	0.0500	0.00750	0.0150
Lead	0.345	0.0500	0.00850	0.0150
Selenium	0.0219J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 10/05/15 16:00

METHOD SW7471B
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 15I185

Matrix : SOIL
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DIL'N FACTOR	MOIST (%)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	HGI033SB	ND	1	NA	0.10	0.010	0.020	09/29/1519:38	09/29/1516:15	M47I022011	M47I022	HGI033S	NA	NA
LCS1S	HGI033SL	0.416	1	NA	0.10	0.010	0.020	09/29/1519:40	09/29/1516:15	M47I022012	M47I022	HGI033S	NA	NA
CAFB-FT006-BKF-001	I185-01	ND	1	0.5	0.098	0.0098	0.020	09/29/1519:45	09/29/1516:15	M47I022014	M47I022	HGI033S	09/16/1509:15	09/17/15
CAFB-FT006-BKF-001MS	I185-01M	0.414	1	0.5	0.098	0.0098	0.020	09/29/1519:49	09/29/1516:15	M47I022016	M47I022	HGI033S	09/16/1509:15	09/17/15
CAFB-FT006-BKF-001DUP	I185-01D	ND	1	0.5	0.10	0.010	0.020	09/29/1519:51	09/29/1516:15	M47I022017	M47I022	HGI033S	09/16/1509:15	09/17/15
CAFB-FT006-BKF-002	I185-02	ND	1	0.4	0.10	0.010	0.020	09/29/1519:54	09/29/1516:15	M47I022018	M47I022	HGI033S	09/16/1509:17	09/17/15
CAFB-FT006-BKF-003	I185-03	ND	1	0.5	0.099	0.0099	0.020	09/29/1519:56	09/29/1516:15	M47I022019	M47I022	HGI033S	09/16/1509:20	09/17/15

METHOD SW1311/7470A
TCLP MERCURY

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 15I185

Matrix : LEACHATE
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DIL'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1W	HGI031WB	ND	1	NA	0.50	0.054	0.10	09/28/1517:58	09/28/1513:30	M47I021011	M47I021	HGI031W	NA	NA
LCS1W	HGI031WL	2.56	1	NA	0.50	0.054	0.10	09/28/1518:00	09/28/1513:30	M47I021012	M47I021	HGI031W	NA	NA
LCD1W	HGI031WC	2.53	1	NA	0.50	0.054	0.10	09/28/1518:02	09/28/1513:30	M47I021013	M47I021	HGI031W	NA	NA
MBLK2W	TXI007SB	ND	1	NA	5.0	0.54	1.0	09/28/1518:51	09/28/1513:30	M47I021036	M47I021	HGI031W	NA	NA
CAFB-FT006-WC1-002	I185-04A	30.0	1	NA	5.0	0.54	1.0	09/28/1518:53	09/28/1513:30	M47I021037	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC1-002	I185-04	ND	1	NA	5.0	0.54	1.0	09/28/1518:56	09/28/1513:30	M47I021038	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC1-002	I185-04J	ND	5	NA	25	2.7	5.0	09/28/1518:58	09/28/1513:30	M47I021039	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC1-002MS	I185-04M	19.0	1	NA	5.0	0.54	1.0	09/28/1519:00	09/28/1513:30	M47I021040	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC1-002MSD	I185-04S	19.1	1	NA	5.0	0.54	1.0	09/28/1519:02	09/28/1513:30	M47I021041	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC2-002	I185-05	ND	1	NA	5.0	0.54	1.0	09/28/1519:04	09/28/1513:30	M47I021042	M47I021	HGI031W	09/16/1514:25	09/17/15
CAFB-FT006-WC3-002	I185-06	ND	1	NA	5.0	0.54	1.0	09/28/1519:06	09/28/1513:30	M47I021043	M47I021	HGI031W	09/16/1514:40	09/17/15

DateTime Leached: 09/23/15 15:30
Note: 5 ml leachate was diluted to 50 ml reagent water prior to digestion.

METHOD SW9095B
PAINT FILTER LIQUID TEST

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 15I185

Matrix : SOIL
InstrumentID : NA

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ml)	PREP FACTOR	MOIST (%)	LOQ (ml)	LOD (ml)	DL (ml)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME
CAFB-FT006-WC1-002	I185-04	ND	1.00	NA	5.00	5.00	5.00	09/17/1514:30	NA	15PFI00101	15PFI001	PFI001S	09/16/1514:08
CAFB-FT006-WC1-002DUP	I185-04D	ND	1.00	NA	5.00	5.00	5.00	09/17/1514:30	NA	15PFI00101	15PFI001	PFI001S	09/16/1514:08
CAFB-FT006-WC2-002	I185-05	ND	1.00	NA	5.00	5.00	5.00	09/17/1514:30	NA	15PFI00101	15PFI001	PFI001S	09/16/1514:25
CAFB-FT006-WC3-002	I185-06	ND	1.00	NA	5.00	5.00	5.00	09/17/1514:30	NA	15PFI00101	15PFI001	PFI001S	09/16/1514:40

QC SUMMARIES

METHOD BLANK

Method: 8260B

QC Measure: VS03I14B

Associated Samples:

CAFB-FT006-BKF-001
CAFB-FT006-BKF-003

QC Measure: VS03I18Q

Associated Samples:

CAFB-FT006-BKF-002

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/22/15
Batch No.	: 15I185	Date Extracted:	09/22/15 16:42
Sample ID:	MBLK1S	Date Analyzed:	09/22/15 16:42
Lab Samp ID:	VS03I14B	Dilution Factor:	1
Lab File ID:	RIB337	Matrix :	SOIL
Ext Btch ID:	VS03I14	% Moisture :	NA
Calib. Ref.:	REB240	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0050	0.00055	0.0020
1,2-DIBROMOETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0050	0.00059	0.0020
1,3-DICHLOROBENZENE	ND	0.0050	0.00052	0.0010
1,3-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,4-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
2,2-DICHLOROPROPANE	ND	0.0050	0.0010	0.0020
2-BUTANONE	ND	0.010	0.0025	0.0050
2-CHLOROTOLUENE	ND	0.0050	0.00082	0.0010
4-CHLOROTOLUENE	ND	0.0050	0.00067	0.0010
ACETONE	ND	0.010	0.0031	0.0050
BENZENE	ND	0.0050	0.00050	0.0010
BROMOBENZENE	ND	0.0050	0.00050	0.0010
BROMODICHLOROMETHANE	ND	0.0050	0.00050	0.0010
BROMOFORM	ND	0.0050	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0050	0.00054	0.0010
CHLOROBENZENE	ND	0.0050	0.00050	0.0010
CHLOROETHANE	ND	0.0050	0.0013	0.0020
CHLOROFORM	ND	0.0050	0.00050	0.0010
CHLOROMETHANE	ND	0.0050	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0050	0.0012	0.0020
ETHYLBENZENE	ND	0.0050	0.00050	0.0010
ISOPROPYLBENZENE	ND	0.0050	0.00064	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0050
METHYLENE CHLORIDE	0.0021J	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0050	0.00050	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0050	0.00070	0.0010
N-PROPYLBENZENE	ND	0.0050	0.00065	0.0010
O-XYLENE	ND	0.0050	0.00050	0.0010
SEC-BUTYLBENZENE	ND	0.0050	0.00067	0.0010
STYRENE	ND	0.0050	0.00050	0.0010
TETRACHLOROETHENE	ND	0.0050	0.00050	0.0010
TOLUENE	ND	0.0050	0.00050	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
TRICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0050	0.0011	0.0020
VINYL CHLORIDE	ND	0.0050	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00050	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0512	0.05000	102	85-115
DIBROMOFLUOROMETHANE	0.0505	0.05000	101	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 11:24
Sample ID:	MBLK2S	Date Analyzed:	09/25/15 11:24
Lab Samp ID:	VS03I18Q	Dilution Factor:	1
Lab File ID:	RIB398	Matrix :	SOIL
Ext Btch ID:	VS03I18	% Moisture :	NA
Calib. Ref.:	RIB367	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0050	0.00055	0.0020
1,2-DIBROMOETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0050	0.00059	0.0020
1,3-DICHLOROBENZENE	ND	0.0050	0.00052	0.0010
1,3-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,4-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
2,2-DICHLOROPROPANE	ND	0.0050	0.0010	0.0020
2-BUTANONE	ND	0.010	0.0025	0.0050
2-CHLOROTOLUENE	ND	0.0050	0.00082	0.0010
4-CHLOROTOLUENE	ND	0.0050	0.00067	0.0010
ACETONE	ND	0.010	0.0031	0.0050
BENZENE	ND	0.0050	0.00050	0.0010
BROMOBENZENE	ND	0.0050	0.00050	0.0010
BROMODICHLOROMETHANE	ND	0.0050	0.00050	0.0010
BROMOFORM	ND	0.0050	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0050	0.00054	0.0010
CHLOROBENZENE	ND	0.0050	0.00050	0.0010
CHLOROETHANE	ND	0.0050	0.0013	0.0020
CHLOROFORM	ND	0.0050	0.00050	0.0010
CHLOROMETHANE	ND	0.0050	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
DICHLORODIFLUOROMETHANE	0.0062	0.0050	0.0012	0.0020
ETHYLBENZENE	ND	0.0050	0.00050	0.0010
ISOPROPYLBENZENE	ND	0.0050	0.00064	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0050
METHYLENE CHLORIDE	0.0015J	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0050	0.00050	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0050	0.00070	0.0010
N-PROPYLBENZENE	ND	0.0050	0.00065	0.0010
O-XYLENE	ND	0.0050	0.00050	0.0010
SEC-BUTYLBENZENE	ND	0.0050	0.00067	0.0010
STYRENE	ND	0.0050	0.00050	0.0010
TETRACHLOROETHENE	ND	0.0050	0.00050	0.0010
TOLUENE	ND	0.0050	0.00050	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
TRICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0050	0.0011	0.0020
VINYL CHLORIDE	ND	0.0050	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00050	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0501	0.05000	100	85-115
DIBROMOFLUOROMETHANE	0.0485	0.05000	97.0	80-119

Method: TCLP 8260B

QC Measure: VS03I21B

Associated Samples:

TVI003SB
CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/27/15
Batch No.	: 15I185	Date Extracted:	09/27/15 14:36
Sample ID:	MBLK1W	Date Analyzed:	09/27/15 14:36
Lab Samp ID:	VS03I21B	Dilution Factor:	1
Lab File ID:	RIB458	Matrix :	WATER
Ext Btch ID:	VS03I21	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	5.0	0.50	1.0
2-BUTANONE	ND	10	2.5	5.0
CARBON TETRACHLORIDE	ND	5.0	0.54	1.0
CHLOROBENZENE	ND	5.0	0.50	1.0
CHLOROFORM	ND	5.0	0.50	1.0
1,4-DICHLOROBENZENE	ND	5.0	0.50	1.0
1,2-DICHLOROETHANE	ND	5.0	0.50	1.0
1,1-DICHLOROETHENE	ND	5.0	0.50	1.0
TETRACHLOROETHENE	ND	5.0	0.50	1.0
TRICHLOROETHENE	ND	5.0	0.50	1.0
VINYL CHLORIDE	ND	5.0	0.61	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	50.3	50.00	101	70-120
4-BROMOFLUOROBENZENE	51.5	50.00	103	75-120
TOLUENE-D8	49.8	50.00	99.7	85-120
DIBROMOFLUOROMETHANE	55.1	50.00	110	85-115

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/27/15
Batch No.	: 15I185	Date Extracted:	09/27/15 15:32
Sample ID:	MBLK2W	Date Analyzed:	09/27/15 15:32
Lab Samp ID:	TVI003SB	Dilution Factor:	10
Lab File ID:	RIB460	Matrix :	LEACHATE
Ext Btch ID:	VS03I21	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	516	500.0	103	70-120
4-BROMOFLUOROBENZENE	498	500.0	99.6	75-120
TOLUENE-D8	511	500.0	102	85-120
DIBROMOFLUOROMETHANE	545	500.0	109	85-115

DateTime Leached: 09/23/15 19:30

Method: 8270D

QC Measure: SVI038SB

Associated Samples:

CAFB-FT006-BKF-001
CAFB-FT006-BKF-002
CAFB-FT006-BKF-003

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/23/15
Batch No.	: 15I185	Date Extracted:	09/23/15 18:12
Sample ID	: MBLK1S	Date Analyzed:	09/24/15 15:35
Lab Samp ID	: SVI038SB	Dilution Factor:	1
Lab File ID	: RIJ487	Matrix :	SOIL
Ext Btch ID	: SVI038S	% Moisture :	NA
Calib. Ref.	: RGJ140	Instrument ID :	T-OE4

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.35	2.000	67.3	35-125
2-FLUOROBIPHENYL	0.506	0.6667	75.9	45-105
2-FLUOROPHENOL	1.21	2.000	60.6	35-105
NITROBENZENE-D5	0.431	0.6667	64.6	35-100
TERPHENYL-D14	0.565	0.6667	84.8	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Method: TCLP 8270D

QC Measure: SVI044WB

Associated Samples:

TXI007SB
CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 12:30
Sample ID:	MBLK1W	Date Analyzed:	10/01/15 12:20
Lab Samp ID:	SVI044WB	Dilution Factor:	1
Lab File ID:	RJH007	Matrix :	WATER
Ext Btch ID:	SVI044W	% Moisture :	NA
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	10	2.5	5.0
2,4,6-TRICHLOROPHENOL	ND	10	2.5	5.0
2,4-DINITROTOLUENE	ND	10	2.5	5.0
2-METHYLPHENOL	ND	10	2.5	5.0
4-METHYLPHENOL (1)	ND	10	2.5	5.0
HEXACHLOROBENZENE	ND	10	2.5	5.0
HEXACHLOROBUTADIENE	ND	10	2.5	5.0
HEXACHLOROETHANE	ND	10	2.5	5.0
NITROBENZENE	ND	10	2.5	5.0
PENTACHLOROPHENOL	ND	20	2.5	5.0
PYRIDINE	ND	40	11	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	45.8	60.00	76.3	40-125
2-FLUOROBIPHENYL	13.7	20.00	68.4	50-110
2-FLUOROPHENOL	34.2	60.00	56.9	20-110
NITROBENZENE-D5	16.6	20.00	83.1	40-110
PHENOL-D5	44.7	60.00	74.5	10-115
TERPHENYL-D14	15.2	20.00	75.8	50-135

(1): Cannot be separated from 3-Methylphenol

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 12:30
Sample ID	: MBLK2W	Date Analyzed:	10/01/15 13:18
Lab Samp ID	: TXI007SB	Dilution Factor:	10
Lab File ID	: RJH010	Matrix :	LEACHATE
Ext Btch ID	: SVI044W	% Moisture :	NA
Calib. Ref.	: RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	481	600.0	80.1	40-125
2-FLUOROBIPHENYL	160	200.0	80.2	50-110
2-FLUOROPHENOL	353	600.0	58.9	20-110
NITROBENZENE-D5	167	200.0	83.6	40-110
PHENOL-D5	459	600.0	76.5	10-115
TERPHENYL-D14	155	200.0	77.6	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 09/23/15 15:30

Method: TCLP 8081A

QC Measure: CPI033WB

Associated Samples:

TXI007SB
CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	MBLK1W	Date Analyzed:	10/03/15 20:20
Lab Samp ID:	CPI033WB	Dilution Factor:	1
Lab File ID:	RJ03015A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND) | ND	0.10	0.0050	0.010
HEPTACHLOR	(ND) | ND	0.10	0.0070	0.010
HEPTACHLOR EPOXIDE	(ND) | ND	0.10	0.0050	0.010
GAMMA-CHLORDANE	(ND) | ND	0.10	0.0050	0.010
ALPHA-CHLORDANE	(ND) | ND	0.10	0.0050	0.010
ENDRIN	(ND) | ND	0.10	0.0080	0.010
METHOXYCHLOR	(ND) | ND	1.0	0.050	0.10
TOXAPHENE	(ND) | ND	2.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.3565 | (0.3736)	0.4000	89.1 | (93.4)	25-140
DECACHLOROBIPHENYL	0.3388 | (0.3668)	0.4000	84.7 | (91.7)	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	MBLK2W	Date Analyzed:	10/03/15 21:21
Lab Samp ID:	TXI007SB	Dilution Factor:	10
Lab File ID:	RJ03018A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND) | ND	1.0	0.050	0.10
HEPTACHLOR	(ND) | ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND) | ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ENDRIN	(ND) | ND	1.0	0.080	0.10
METHOXYCHLOR	(ND) | ND	10	0.50	1.0
TOXAPHENE	(ND) | ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	3.574 | (3.656)	4.000	89.3 | (91.4)	25-140
DECACHLOROBIPHENYL	3.431 | (3.573)	4.000	85.8 | (89.3)	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 09/23/15 15:30

Method: TCLP 8151A

QC Measure: HEI004WB

Associated Samples:

CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002
TXI007SB

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	MBLK1W	Date Analyzed:	09/25/15 19:33
Lab Samp ID:	SVI004WB	Dilution Factor:	1
Lab File ID:	WI25004A	Matrix :	WATER
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	0.40	0.10	0.20
2,4,5-TP (SILVEX)	(ND)|ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.149|(7.558)	10.00	71.5|(75.6)	50-130

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	MBLK2W	Date Analyzed:	09/25/15 21:12
Lab Samp ID:	TXI007SB	Dilution Factor:	50
Lab File ID:	WI25007A	Matrix :	LEACHATE
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND) | ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	434.8 | (442.7)	500.0	87.0 | (88.5)	50-130

DateTime Leached: 09/23/15 15:30

Method: 6020A

QC Measure: IMI036SB

Associated Samples:

CAFB-FT006-BKF-001
CAFB-FT006-BKF-002
CAFB-FT006-BKF-003

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/26/15
SDG NO.	: 15I185	Date Extracted:	09/26/15 15:30
Sample ID:	MBLK1S	Date Analyzed:	09/28/15 19:44
Lab Samp ID:	IMI036SB	Dilution Factor:	1
Lab File ID:	F6I16107	Matrix :	SOIL
Ext Btch ID:	IMI036S	% Moisture :	NA
Calib. Ref.:	F6I16105	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	ND	100	5.00	10.0
Antimony	ND	0.500	0.100	0.200
Arsenic	ND	0.500	0.0500	0.100
Barium	ND	0.500	0.0720	0.100
Cadmium	ND	0.500	0.0570	0.100
Chromium, total	ND	0.500	0.0500	0.100
Cobalt	ND	0.500	0.0500	0.100
Copper	ND	0.500	0.100	0.200
Iron	ND	100	5.00	10.0
Lead	ND	0.500	0.0500	0.100
Magnesium	ND	100	10.0	20.0
Manganese	ND	0.500	0.153	0.200
Nickel	ND	0.500	0.0630	0.100
Potassium	ND	100	10.0	20.0
Selenium	ND	0.500	0.0500	0.100
Silver	ND	0.500	0.0500	0.100
Sodium	ND	100	10.0	20.0
Thallium	ND	0.500	0.0500	0.100
Vanadium	ND	0.500	0.190	0.300
Zinc	0.821J	2.00	0.683	1.00

Method: TCLP 6010C

QC Measure: IPJ008WB

Associated Samples:
- CAFB-FT006-WC1-002
- CAFB-FT006-WC2-002
- CAFB-FT006-WC3-002
- TXJ002SB

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	10/07/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	MBLK1W	Date Analyzed:	10/08/15 13:40
Lab Samp ID:	IPJ008WB	Dilution Factor:	1
Lab File ID:	ID8J007036	Matrix :	WATER
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0100	0.00300	0.00500
Barium	ND	0.0100	0.00100	0.00200
Cadmium	ND	0.0100	0.00100	0.00200
Chromium	ND	0.0100	0.00150	0.00300
Lead	ND	0.0100	0.00170	0.00300
Selenium	ND	0.0100	0.00250	0.00500
Silver	ND	0.0100	0.00150	0.00300

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	10/07/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	MBLK2W	Date Analyzed:	10/08/15 13:46
Lab Samp ID:	TXJ002SB	Dilution Factor:	5
Lab File ID:	ID8J007038	Matrix :	LEACHATE
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0500	0.0150	0.0250
Barium	0.0187J	0.0500	0.00500	0.0100
Cadmium	ND	0.0500	0.00500	0.0100
Chromium	ND	0.0500	0.00750	0.0150
Lead	ND	0.0500	0.00850	0.0150
Selenium	0.0160J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 10/05/15 16:00

Method: 7471B

QC Measure: HGI033SB

Associated Samples:

CAFB-FT006-BKF-001
CAFB-FT006-BKF-002
CAFB-FT006-BKF-003

METHOD SW7471B
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 15I185

Matrix : SOIL
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DIL'N FACTOR	MOIST (%)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	HGI033SB	ND	1	NA	0.10	0.010	0.020	09/29/1519:38	09/29/1516:15	M47I022011	M47I022	HGI033S	NA	NA

Method: TCLP 7470A

QC Measure: HGI031WB

Associated Samples:
- CAFB-FT006-WC1-002
- CAFB-FT006-WC1-002
- CAFB-FT006-WC1-002
- CAFB-FT006-WC2-002
- CAFB-FT006-WC3-002
- TXI007SB

METHOD SW1311/7470A
TCLP MERCURY

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 15I185

Matrix : LEACHATE
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DIL'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1W	HGI031WB	ND	1	NA	0.50	0.054	0.10	09/28/1517:58	09/28/1513:30	M47I021011	M47I021	HGI031W	NA	NA

LCS/LCSD

Method: 8260B

QC Measure: VS03I14L

Associated Samples:

CAFB-FT006-BKF-001
CAFB-FT006-BKF-003

QC Measure: VS03I18L

Associated Samples:

CAFB-FT006-BKF-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW 5035A/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VS03I14B	VS03I14L	VS03I14C		
LAB FILE ID:	RIB337	RIB334	RIB335		
DATE EXTRACTED:	09/22/1516:42	09/22/1515:18	09/22/1515:46	DATE COLLECTED:	NA
DATE ANALYZED:	09/22/1516:42	09/22/1515:18	09/22/1515:46	DATE RECEIVED:	09/22/15
PREP. BATCH:	VS03I14	VS03I14	VS03I14		
CALIB. REF:	REB240	REB240	REB240		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0500	0.0569	114	0.0500	0.0526	105	8	75-125	30
1,1,1-Trichloroethane	ND	0.0500	0.0597	119	0.0500	0.0567	113	5	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0497	99	0.0500	0.0514	103	3	55-130	30
1,1,2-Trichloroethane	ND	0.0500	0.0521	104	0.0500	0.0530	106	2	60-125	30
1,1-Dichloroethane	ND	0.0500	0.0538	108	0.0500	0.0475	95	12	75-125	30
1,1-Dichloroethene	ND	0.0500	0.0574	115	0.0500	0.0518	104	10	65-135	30
1,1-Dichloropropene	ND	0.0500	0.0552	110	0.0500	0.0519	104	6	70-135	30
1,2,3-Trichlorobenzene	ND	0.0500	0.0591	118	0.0500	0.0527	105	11	60-135	30
1,2,4-Trichlorobenzene	ND	0.0500	0.0602	120	0.0500	0.0517	103	15	65-130	30
1,2,4-Trimethylbenzene	ND	0.0500	0.0498	100	0.0500	0.0497	99	0	65-135	30
1,2-Dibromoethane	ND	0.0500	0.0537	107	0.0500	0.0526	105	2	70-125	30
1,2-Dichlorobenzene	ND	0.0500	0.0549	110	0.0500	0.0529	106	4	75-120	30
1,2-Dichloroethane	ND	0.0500	0.0622	124	0.0500	0.0549	110	13	70-135	30
1,2-Dichloropropane	ND	0.0500	0.0498	100	0.0500	0.0489	98	2	70-120	30
1,3,5-Trimethylbenzene	ND	0.0500	0.0518	104	0.0500	0.0519	104	0	65-135	30
1,3-Dichlorobenzene	ND	0.0500	0.0526	105	0.0500	0.0514	103	2	70-125	30
1,3-Dichloropropane	ND	0.0500	0.0522	104	0.0500	0.0523	105	0	75-125	30
1,4-Dichlorobenzene	ND	0.0500	0.0514	103	0.0500	0.0498	100	3	70-125	30
2,2-Dichloropropane	ND	0.0500	0.0665	133	0.0500	0.0543	109	20	65-135	30
2-Butanone	ND	0.250	0.257	103	0.250	0.258	103	0	30-160	30
2-Chlorotoluene	ND	0.0500	0.0495	99	0.0500	0.0519	104	5	70-130	30
4-Chlorotoluene	ND	0.0500	0.0497	99	0.0500	0.0533	107	7	75-125	30
Acetone	ND	0.250	0.256	102	0.250	0.228	91	11	20-160	30
Benzene	ND	0.0500	0.0517	103	0.0500	0.0470	94	10	75-125	30
Bromobenzene	ND	0.0500	0.0472	94	0.0500	0.0505	101	7	65-120	30
Bromodichloromethane	ND	0.0500	0.0565	113	0.0500	0.0558	112	1	70-130	30
Bromoform	ND	0.0500	0.0529	106	0.0500	0.0574	115	8	55-135	30
Bromomethane	ND	0.0500	0.0425	85	0.0500	0.0383	77	10	30-160	30
Carbon Tetrachloride	ND	0.0500	0.0627	125	0.0500	0.0562	112	11	65-135	30
Chlorobenzene	ND	0.0500	0.0501	100	0.0500	0.0512	102	2	75-125	30
Chloroethane	ND	0.0500	0.0455	91	0.0500	0.0420	84	8	40-155	30
Chloroform	ND	0.0500	0.0569	114	0.0500	0.0514	103	10	70-125	30
Chloromethane	ND	0.0500	0.0476	95	0.0500	0.0433	87	10	50-130	30
cis-1,2-Dichloroethene	ND	0.0500	0.0557	111	0.0500	0.0455	91	20	65-125	30
cis-1,3-Dichloropropene	ND	0.0500	0.0540	108	0.0500	0.0539	108	0	70-125	30
Dichlorodifluoromethane	ND	0.0500	0.0592	118	0.0500	0.0506	101	16	35-135	30
Ethylbenzene	ND	0.0500	0.0506	101	0.0500	0.0507	101	0	75-125	30
Isopropylbenzene	ND	0.0500	0.0484	97	0.0500	0.0526	105	8	75-130	30
m/p-Xylenes	ND	0.100	0.104	104	0.100	0.102	102	1	80-125	30
4-Methyl-2-Pentanone	ND	0.250	0.252	101	0.250	0.250	100	1	45-145	30
Methylene Chloride	0.00214J	0.0500	0.0563	113	0.0500	0.0502	100	12	55-140	30
Methyl tert-butyl ether	ND	0.0500	0.0564	113	0.0500	0.0502	100	12	65-135	30
Naphthalene	ND	0.0500	0.0602	120	0.0500	0.0519	104	15	40-125	30
n-Butylbenzene	ND	0.0500	0.0535	107	0.0500	0.0523	105	2	65-135	30
n-Propylbenzene	ND	0.0500	0.0480	96	0.0500	0.0524	105	9	65-135	30
o-Xylene	ND	0.0500	0.0546	109	0.0500	0.0498	100	9	75-125	30
Sec-Butylbenzene	ND	0.0500	0.0515	103	0.0500	0.0511	102	1	65-130	30
Styrene	ND	0.0500	0.0532	106	0.0500	0.0505	101	5	75-125	30
Tetrachloroethene	ND	0.0500	0.0524	105	0.0500	0.0502	100	4	65-140	30
Toluene	ND	0.0500	0.0507	101	0.0500	0.0486	97	4	70-125	30
Trans-1,2-Dichloroethene	ND	0.0500	0.0550	110	0.0500	0.0463	92	17	65-135	30
Trans-1,3-Dichloropropene	ND	0.0500	0.0538	108	0.0500	0.0514	103	5	65-125	30
Trichloroethene	ND	0.0500	0.0560	112	0.0500	0.0525	105	7	75-125	30
Trichlorofluoromethane	ND	0.0500	0.0569	114	0.0500	0.0508	102	11	25-185	30
Vinyl Chloride	ND	0.0500	0.0508	102	0.0500	0.0473	95	7	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Toluene-d8	0.0500	0.0519	104	0.0500	0.0498	100	85-115
Dibromofluoromethane	0.0500	0.0545	109	0.0500	0.0507	101	80-119

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW 5035A/8260B

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK2S		
LAB SAMP ID:	VS03I18Q	VS03I18L	VS03I18C
LAB FILE ID:	RIB398	RIB395	RIB396
DATE EXTRACTED:	09/25/1511:24	09/25/1509:41	09/25/1510:09
DATE ANALYZED:	09/25/1511:24	09/25/1509:41	09/25/1510:09
PREP. BATCH:	VS03I18	VS03I18	VS03I18
CALIB. REF:	RIB367	RIB367	RIB367

DATE COLLECTED: NA
DATE RECEIVED: 09/25/15

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0500	0.0475	95	0.0500	0.0496	99	4	75-125	30
1,1,1-Trichloroethane	ND	0.0500	0.0440	88	0.0500	0.0534	107	19	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0462	92	0.0500	0.0487	97	5	55-130	30
1,1,2-Trichloroethane	ND	0.0500	0.0464	93	0.0500	0.0490	98	5	60-125	30
1,1-Dichloroethane	ND	0.0500	0.0449	90	0.0500	0.0530	106	17	75-125	30
1,1-Dichloroethene	ND	0.0500	0.0469	94	0.0500	0.0528	106	12	65-135	30
1,1-Dichloropropene	ND	0.0500	0.0483	97	0.0500	0.0517	103	7	70-135	30
1,2,3-Trichlorobenzene	ND	0.0500	0.0463	93	0.0500	0.0495	99	7	60-135	30
1,2,4-Trichlorobenzene	ND	0.0500	0.0476	95	0.0500	0.0509	102	7	65-130	30
1,2,4-Trimethylbenzene	ND	0.0500	0.0495	99	0.0500	0.0542	108	9	65-135	30
1,2-Dibromoethane	ND	0.0500	0.0455	91	0.0500	0.0477	95	5	70-125	30
1,2-Dichlorobenzene	ND	0.0500	0.0485	97	0.0500	0.0527	105	8	75-120	30
1,2-Dichloroethane	ND	0.0500	0.0471	94	0.0500	0.0518	104	9	70-135	30
1,2-Dichloropropane	ND	0.0500	0.0473	95	0.0500	0.0547	109	14	70-120	30
1,3,5-Trimethylbenzene	ND	0.0500	0.0493	99	0.0500	0.0521	104	5	65-135	30
1,3-Dichlorobenzene	ND	0.0500	0.0503	101	0.0500	0.0536	107	6	70-125	30
1,3-Dichloropropane	ND	0.0500	0.0460	92	0.0500	0.0491	98	6	75-125	30
1,4-Dichlorobenzene	ND	0.0500	0.0494	99	0.0500	0.0528	106	7	70-125	30
2,2-Dichloropropane	ND	0.0500	0.0477	95	0.0500	0.0484	97	1	65-135	30
2-Butanone	ND	0.250	0.220	88	0.250	0.214	86	2	30-160	30
2-Chlorotoluene	ND	0.0500	0.0510	102	0.0500	0.0525	105	3	70-130	30
4-Chlorotoluene	ND	0.0500	0.0492	98	0.0500	0.0523	105	6	75-125	30
Acetone	ND	0.250	0.212	85	0.250	0.211	84	0	20-160	30
Benzene	ND	0.0500	0.0480	96	0.0500	0.0533	107	10	75-125	30
Bromobenzene	ND	0.0500	0.0476	95	0.0500	0.0499	100	5	65-120	30
Bromodichloromethane	ND	0.0500	0.0465	93	0.0500	0.0520	104	11	70-130	30
Bromoform	ND	0.0500	0.0471	94	0.0500	0.0490	98	4	55-135	30
Bromomethane	ND	0.0500	0.0490	98	0.0500	0.0545	109	11	30-160	30
Carbon Tetrachloride	ND	0.0500	0.0471	94	0.0500	0.0494	99	5	65-135	30
Chlorobenzene	ND	0.0500	0.0467	93	0.0500	0.0509	102	9	75-125	30
Chloroethane	ND	0.0500	0.0481	96	0.0500	0.0488	98	1	40-155	30
Chloroform	ND	0.0500	0.0481	96	0.0500	0.0536	107	11	70-125	30
Chloromethane	ND	0.0500	0.0436	87	0.0500	0.0483	97	10	50-130	30
cis-1,2-Dichloroethene	ND	0.0500	0.0472	94	0.0500	0.0491	98	4	65-125	30
cis-1,3-Dichloropropene	ND	0.0500	0.0468	94	0.0500	0.0528	106	12	70-125	30
Dichlorodifluoromethane	0.00615	0.0500	0.0452	90	0.0500	0.0495	99	9	35-135	30
Ethylbenzene	ND	0.0500	0.0490	98	0.0500	0.0498	100	2	75-125	30
Isopropylbenzene	ND	0.0500	0.0500	100	0.0500	0.0520	104	4	75-130	30
m/p-Xylenes	ND	0.100	0.0933	93	0.100	0.101	101	8	80-125	30
4-Methyl-2-Pentanone	ND	0.250	0.212	85	0.250	0.220	88	4	45-145	30
Methylene Chloride	0.00145J	0.0500	0.0472	94	0.0500	0.0509	102	8	55-140	30
Methyl tert-butyl ether	ND	0.0500	0.0454	91	0.0500	0.0474	95	4	65-135	30
Naphthalene	ND	0.0500	0.0464	93	0.0500	0.0480	96	3	40-125	30
n-Butylbenzene	ND	0.0500	0.0510	102	0.0500	0.0550	110	8	65-135	30
n-Propylbenzene	ND	0.0500	0.0520	104	0.0500	0.0541	108	4	65-135	30
o-Xylene	ND	0.0500	0.0478	96	0.0500	0.0492	98	3	75-125	30
Sec-Butylbenzene	ND	0.0500	0.0493	99	0.0500	0.0540	108	9	65-130	30
Styrene	ND	0.0500	0.0489	98	0.0500	0.0515	103	5	75-125	30
Tetrachloroethene	ND	0.0500	0.0496	99	0.0500	0.0514	103	4	65-140	30
Toluene	ND	0.0500	0.0477	95	0.0500	0.0508	102	6	70-125	30
Trans-1,2-Dichloroethene	ND	0.0500	0.0488	98	0.0500	0.0530	106	8	65-135	30
Trans-1,3-Dichloropropene	ND	0.0500	0.0455	91	0.0500	0.0472	94	4	65-125	30
Trichloroethene	ND	0.0500	0.0468	94	0.0500	0.0517	103	10	75-125	30
Trichlorofluoromethane	ND	0.0500	0.0475	95	0.0500	0.0491	98	3	25-185	30
Vinyl Chloride	ND	0.0500	0.0479	96	0.0500	0.0517	103	8	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Toluene-d8	0.0500	0.0522	104	0.0500	0.0530	106	85-115
Dibromofluoromethane	0.0500	0.0478	96	0.0500	0.0515	103	80-119

Method: TCLP 8260B

QC Measure: VS03I21L

Associated Samples:

TVI003SB
CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VS03I21B	VS03I21L	VS03I21C		
LAB FILE ID:	RIB458	RIB455	RIB456		
DATE EXTRACTED:	09/27/1514:36	09/27/1513:12	09/27/1513:40	DATE COLLECTED:	NA
DATE ANALYZED:	09/27/1514:36	09/27/1513:12	09/27/1513:40	DATE RECEIVED:	09/27/15
PREP. BATCH:	VS03I21	VS03I21	VS03I21		
CALIB. REF:	RIB382	RIB382	RIB382		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Benzene	ND	50.0	46.8	94	50.0	48.4	97	3	80-120	30
2-Butanone	ND	250	234	93	250	217	87	8	30-150	30
Carbon Tetrachloride	ND	50.0	46.4	93	50.0	48.2	96	4	65-140	30
Chlorobenzene	ND	50.0	47.9	96	50.0	48.7	97	2	80-120	30
Chloroform	ND	50.0	45.0	90	50.0	44.4	89	1	65-135	30
1,4-Dichlorobenzene	ND	50.0	49.9	100	50.0	48.3	97	3	75-125	30
1,2-Dichloroethane	ND	50.0	44.6	89	50.0	44.2	88	1	70-130	30
1,1-Dichloroethene	ND	50.0	48.7	97	50.0	47.8	96	2	70-130	30
Tetrachloroethene	ND	50.0	47.1	94	50.0	48.3	97	3	45-150	30
Trichloroethene	ND	50.0	47.3	95	50.0	47.8	96	1	70-125	30
Vinyl Chloride	ND	50.0	51.9	104	50.0	50.7	101	2	50-145	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50.0	46.6	93	50.0	47.1	94	70-120
4-Bromofluorobenzene	50.0	48.1	96	50.0	48.6	97	75-120
Toluene-d8	50.0	52.8	106	50.0	51.2	102	85-120
Dibromofluoromethane	50.0	51.2	102	50.0	49.1	98	85-115

Method: 8270D

QC Measure: SVI038SL

Associated Samples:

CAFB-FT006-BKF-001
CAFB-FT006-BKF-002
CAFB-FT006-BKF-003

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW3550B/8270D

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVI038SB	SVI038SL	SVI038SC		
LAB FILE ID:	RIJ487	RIJ481	RIJ482		
DATE EXTRACTED:	09/23/1518:12	09/23/1518:12	09/23/1518:12	DATE COLLECTED:	NA
DATE ANALYZED:	09/24/1515:35	09/24/1513:39	09/24/1513:58	DATE RECEIVED:	09/23/15
PREP. BATCH:	SVI038S	SVI038S	SVI038S		
CALIB. REF:	RGJ140	RGJ140	RGJ140		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	1.33	0.943	71	1.33	0.883	66	7	45-110	30
1,2-Dichlorobenzene	ND	1.33	0.874	66	1.33	0.833	62	5	45-100	30
1,3-Dichlorobenzene	ND	1.33	0.874	66	1.33	0.819	61	6	40-100	30
1,4-Dichlorobenzene	ND	1.33	0.889	67	1.33	0.839	63	6	35-105	30
2,4,5-Trichlorophenol	ND	1.33	1.12	84	1.33	1.03	78	8	50-110	30
2,4,6-Trichlorophenol	ND	1.33	1.11	83	1.33	1.01	75	9	45-110	30
2,4-Dichlorophenol	ND	1.33	0.905	68	1.33	0.826	62	9	45-110	30
2,4-Dimethylphenol	ND	1.33	1.07	80	1.33	1.01	76	6	30-105	30
2,4-Dinitrophenol	ND	1.33	1.22	91	1.33	1.11	83	9	15-130	30
2,4-Dinitrotoluene	ND	1.33	1.10	83	1.33	1.03	77	7	50-115	30
2,6-Dinitrotoluene	ND	1.33	1.04	78	1.33	0.964	72	7	50-110	30
2-Chloronaphthalene	ND	1.33	1.02	77	1.33	0.983	74	4	45-105	30
2-Chlorophenol	ND	1.33	0.902	68	1.33	0.841	63	7	45-105	30
2-Methylphenol	ND	1.33	0.989	74	1.33	0.935	70	6	40-105	30
2-Nitroaniline	ND	1.33	1.20	90	1.33	1.11	83	8	45-120	30
2-Nitrophenol	ND	1.33	1.07	80	1.33	0.997	75	7	40-110	30
3&4-Methylphenol	ND	1.33	0.998	75	1.33	0.958	72	4	40-105	30
3-Nitroaniline	ND	1.33	1.17	88	1.33	1.10	82	7	25-110	30
4,6-Dinitro-2-Methylphenol	ND	1.33	1.28	96	1.33	1.24	93	3	30-135	30
4-Bromophenyl-phenylether	ND	1.33	0.994	75	1.33	0.951	71	4	45-115	30
4-Chloro-3-Methylphenol	ND	1.33	1.16	87	1.33	1.04	78	11	45-115	30
4-Chlorophenyl-phenylether	ND	1.33	1.06	79	1.33	0.995	75	6	45-110	30
4-Nitroaniline	ND	1.33	1.41	106	1.33	1.27	96	10	35-115	30
4-Nitrophenol	ND	1.33	1.35	101	1.33	1.21	91	11	15-140	30
Benzyl Alcohol	ND	1.33	0.979	73	1.33	0.923	69	6	20-125	30
bis(2-Chloroisopropyl)ether	ND	1.33	0.898	67	1.33	0.839	63	7	20-115	30
bis(2-Chloroethoxy)methane	ND	1.33	0.942	71	1.33	0.862	65	9	45-110	30
bis(2-Chloroethyl)ether	ND	1.33	0.874	66	1.33	0.801	60	9	40-105	30
bis(2-Ethylhexyl)phthalate	ND	1.33	1.05	79	1.33	1.06	79	1	45-125	30
Butylbenzylphthalate	ND	1.33	1.09	82	1.33	1.09	82	0	50-125	30
Carbazole	ND	1.33	1.16	87	1.33	1.13	85	3	45-115	30
Dibenzofuran	ND	1.33	1.04	78	1.33	0.963	72	7	50-105	30
Diethylphthalate	ND	1.33	1.09	81	1.33	1.03	77	6	50-115	30
Dimethylphthalate	ND	1.33	1.11	83	1.33	1.03	77	7	50-110	30
Di-n-butylphthalate	ND	1.33	1.04	78	1.33	1.03	77	1	55-110	30
Di-n-octylphthalate	ND	1.33	1.13	85	1.33	1.14	86	1	40-130	30
Hexachlorobenzene	ND	1.33	0.952	71	1.33	0.925	69	3	45-120	30
Hexachlorobutadiene	ND	1.33	0.933	70	1.33	0.852	64	9	40-115	30
Hexachloroethane	ND	1.33	0.820	62	1.33	0.765	57	7	35-110	30
Isophorone	ND	1.33	0.931	70	1.33	0.898	67	4	45-110	30
Nitrobenzene	ND	1.33	0.904	68	1.33	0.829	62	9	40-115	30
N-Nitrosodimethylamine	ND	1.33	0.846	63	1.33	0.752	56	12	20-115	30
n-Nitroso-di-n-propylamine	ND	1.33	0.966	72	1.33	0.895	67	8	40-115	30
n-Nitrosodiphenylamine	ND	1.33	1.09	82	1.33	1.04	78	5	50-115	30
Pentachlorophenol	ND	1.33	1.01	76	1.33	0.967	73	5	25-120	30
Phenol	ND	1.33	0.944	71	1.33	0.892	67	6	40-100	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	2.00	1.51	76	2.00	1.58	79	35-125
2-Fluorobiphenyl	0.667	0.524	79	0.667	0.504	76	45-105
2-Fluorophenol	2.00	1.20	60	2.00	1.23	62	35-105
Nitrobenzene-d5	0.667	0.447	67	0.667	0.470	70	35-100
Terphenyl-d14	0.667	0.525	79	0.667	0.589	88	30-125

Method: TCLP 8270D

QC Measure: SVI044WL

Associated Samples:

TXI007SB
CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 151185
METHOD: SW1311/3520C/8270D

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK1W		
LAB SAMP ID:	SVI044WB	SVI044WL	SVI044WC
LAB FILE ID:	RJH007	RJH008	RJH009
DATE EXTRACTED:	09/25/1512:30	09/25/1512:30	09/25/1512:30
DATE ANALYZED:	10/01/1512:20	10/01/1512:40	10/01/1512:59
PREP. BATCH:	SVI044W	SVI044W	SVI044W
CALIB. REF:	RDH007	RDH007	RDH007

DATE COLLECTED: NA
DATE RECEIVED: 09/25/15

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
2,4,5-Trichlorophenol	ND	40.0	23.8	59	40.0	34.8	87	38*	50-110	30
2,4,6-Trichlorophenol	ND	40.0	23.8	60	40.0	35.4	89	39*	50-115	30
2,4-Dinitrotoluene	ND	40.0	30.9	77	40.0	30.6	77	1	50-120	30
2-Methylphenol	ND	40.0	22.1	55	40.0	31.0	77	34*	40-110	30
4-Methylphenol	ND	40.0	23.1	58	40.0	33.0	82	35*	30-110	30
Hexachlorobenzene	ND	40.0	30.9	77	40.0	31.3	78	1	50-110	30
Hexachlorobutadiene	ND	40.0	27.2	68	40.0	31.7	79	15	25-105	30
Hexachloroethane	ND	40.0	19.8	50	40.0	22.8	57	14	30-100	30
Nitrobenzene	ND	40.0	25.8	65	40.0	29.7	74	14	45-110	30
Pentachlorophenol	ND	40.0	25.7	64	40.0	33.6	84	27	40-115	30
Pyridine	ND	80.0	43.5	54	80.0	56.1	70	25	30-160	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	60.0	35.3	59	60.0	50.7	84	40-125
2-Fluorobiphenyl	20.0	11.8	59	20.0	14.5	73	50-110
2-Fluorophenol	60.0	16.0	27	60.0	33.7	56	20-110
Nitrobenzene-d5	20.0	12.5	63	20.0	16.1	80	40-110
Phenol-d5	60.0	26.6	44	60.0	44.3	74	10-115
Terphenyl-d14	20.0	14.9	75	20.0	15.3	77	50-135

Method: TCLP 8081A

QC Measure: CPI033WL

Associated Samples:

TXI007SB
CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/3520C/8081B

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	CPI033WB	CPI033WL	CPI033WC		
LAB FILE ID:	RJ03015A	RJ03016A	RJ03017A		
DATE EXTRACTED:	09/25/1517:24	09/25/1517:24	09/25/1517:24	DATE COLLECTED:	NA
DATE ANALYZED:	10/03/1520:20	10/03/1520:40	10/03/1521:01	DATE RECEIVED:	09/25/15
PREP. BATCH:	CPI033W	CPI033W	CPI033W		
CALIB. REF:	RJ03013A	RJ03013A	RJ03013A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC
gamma-BHC (Lindane)	(ND) | ND	0.200	(0.199) | 0.222	(100) | 111	0.200	(0.210) | 0.235	(105) | 11
Heptachlor	(ND) | ND	0.200	(0.208) | 0.239	(104) | 119	0.200	(0.223) | 0.239	(112) | 11
Heptachlor Epoxide	(ND) | ND	0.200	0.203 | (0.223)	101 | (112)	0.200	0.213 | (0.235)	106 | (1
gamma-Chlordane	(ND) | ND	0.200	0.200 | (0.218)	100 | (109)	0.200	0.208 | (0.228)	104 | (1
alpha-Chlordane	(ND) | ND	0.200	0.200 | (0.210)	100 | (105)	0.200	0.210 | (0.221)	105 | (1
Endrin	(ND) | ND	0.200	0.222 | (0.233)	111 | (116)	0.200	0.227 | (0.236)	114 | (1
Methoxychlor	(ND) | ND	2.00	1.98 | (2.37)	99 | (118)	2.00	2.06 | (2.44)	103 | (1

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	0.4000	0.3612 | (0.3767)	90.3 | (94.2)	0.4000	0.3942 | (0.4030)	98.5 | (101)	25-140
Decachlorobiphenyl	0.4000	0.3335 | (0.3656)	83.4 | (91.4)	0.4000	0.3419 | (0.3640)	85.5 | (91.0)	30-135

Method: TCLP 8151A

QC Measure: HEI004WL

Associated Samples:

CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002
TXI007SB

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I186
METHOD: 8151A

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	HEI002WB	HEI002WL	HEI002WC		
LAB FILE ID:	WI23008A	WI23009A	WI23010A		
DATE EXTRACTED:	09/22/1515:33	09/22/1515:33	09/22/1515:33	DATE COLLECTED:	NA
DATE ANALYZED:	09/23/1521:22	09/23/1521:55	09/23/1522:28	DATE RECEIVED:	09/22/15
PREP. BATCH:	HEI002W	HEI002W	HEI002W		
CALIB. REF:	WI23002A	WI23002A	WI23002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
2,4-D	(ND)|ND	1.00	(1.15)|1.09	(115)|109	1.00	(1.04)|1.04	(104)|104	(10)|5	35-115	30
2,4,5-TP (Silvex)	(ND)|ND	1.00	1.20|(1.21)	120*|(121*)	1.00	1.06|(1.07)	106|(107)	12|(12)	50-115	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
2,4-DCPAA	10.00	(10.88)|10.84	(109)|108	10.00	(8.951)|8.849	(89.5)|88.5	50-130

Method: 6020A

QC Measure: IMI036SL

Associated Samples:

CAFB-FT006-BKF-001
CAFB-FT006-BKF-002
CAFB-FT006-BKF-003

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW6020A

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MATRIX:	SOIL		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MBLK1S			
CONTROL NO.:	IMI036SB	IMI036SL		
LAB FILE ID:	F6I16107	F6I16108		
DATIME EXTRCTD:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	NA
DATIME ANALYZD:	09/28/1519:44	09/28/1519:49	DATE RECEIVED:	09/26/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Aluminum	ND	2500	2370	95	80-120
Antimony	ND	25.0	24.8	99	80-120
Arsenic	ND	25.0	25.4	102	80-120
Barium	ND	25.0	24.8	99	80-120
Cadmium	ND	25.0	24.3	97	80-120
Chromium, total	ND	25.0	25.0	100	80-120
Cobalt	ND	25.0	24.2	97	80-120
Copper	ND	25.0	25.3	101	80-120
Iron	ND	2500	2620	105	80-120
Lead	ND	25.0	24.4	98	80-120
Magnesium	ND	2500	2480	99	80-120
Manganese	ND	25.0	25.0	100	80-120
Nickel	ND	25.0	24.9	100	80-120
Potassium	ND	2500	2650	106	80-120
Selenium	ND	25.0	24.1	96	80-120
Silver	ND	25.0	24.2	97	75-120
Sodium	ND	2500	2540	102	80-120
Thallium	ND	25.0	25.2	101	80-120
Vanadium	ND	25.0	25.4	102	80-120
Zinc	0.821J	50.0	48.9	98	80-120

Method: TCLP 6010C

QC Measure: IPJ008WL

Associated Samples:
CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002
TXJ002SB

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW1311/3010A/6010C

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MBLK1W			
CONTROL NO.:	IPJ008WB	IPJ008WL		
LAB FILE ID:	ID8J007036	ID8J007037		
DATIME EXTRCTD:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	NA
DATIME ANALYZD:	10/08/1513:40	10/08/1513:43	DATE RECEIVED:	10/07/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	QC LIMIT (%)
Arsenic	ND	.5	.488	98	80-120
Barium	ND	.5	.47	94	80-120
Cadmium	ND	.5	.513	103	80-120
Chromium	ND	.5	.493	99	80-120
Lead	ND	.5	.485	97	80-120
Selenium	ND	.5	.497	99	80-120
Silver	ND	.5	.484	97	80-120

Method: 7471B

QC Measure: HGI033SL

Associated Samples:

CAFB-FT006-BKF-001
CAFB-FT006-BKF-002
CAFB-FT006-BKF-003

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW7471B

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MATRIX	: SOIL	
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1S	LCS1S
LAB SAMPLE ID	: HGI033SB	HGI033SL
LAB FILE ID	: M47I022011	M47I022012
DATE PREPARED	: 09/29/1516:15	09/29/1516:15
DATE ANALYZED	: 09/29/1519:38	09/29/1519:40
PREP BATCH	: HGI033S	HGI033S
CALIBRATION REF	: M47I0220	M47I0220

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	QC LIMIT (%)
Mercury	ND	.417	0.416	100	80-120

Method: TCLP 7470A

QC Measure: HGI031WL

Associated Samples:
CAFB-FT006-WC1-002
CAFB-FT006-WC1-002
CAFB-FT006-WC1-002
CAFB-FT006-WC2-002
CAFB-FT006-WC3-002
TXI007SB

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW1311/7470A

MATRIX	WATER		% MOISTURE: N/A
DILUTION FACTOR	1	1	1
SAMPLE ID	MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	HGI031WB	HGI031WL	HGI031WC
LAB FILE ID	M47I021011	M47I021012	M47I021013
DATE PREPARED	09/28/1513:30	09/28/1513:30	09/28/1513:30
DATE ANALYZED	09/28/1517:58	09/28/1518:00	09/28/1518:02
PREP BATCH	HGI031W	HGI031W	HGI031W
CALIBRATION REF	M47I021	M47I021	M47I021

ACCESSION:

PARAMETER	MB RESULT (ug/L)	SPIKE AMT (ug/L)	BS RESULT (ug/L)	BS REC (%)	SPIKE AMT (ug/L)	BSD RESULT (ug/L)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Mercury	ND	2.50	2.56	102	2.50	2.53	101	1	80-120	20

MS/MSD / DUPLICATE / SERIAL DILUTION / ANALYTICAL SPIKE

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW6020A

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MATRIX:	SOIL		% MOISTURE:	0.5
DILTN FACTR:	0.962	0.985		
SAMPLE ID:	CAFB-FT006-BKF-001			
CONTROL NO.:	I185-01	I185-01M		
LAB FILE ID:	F6I16111	F6I16109		
DATIME EXTRCTD:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	09/16/15
DATIME ANALYZD:	09/28/1520:01	09/28/1519:53	DATE RECEIVED:	09/17/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
Aluminum	2340	2470	5800	140*	80-120
Antimony	ND	24.7	22.7	92	80-120
Arsenic	0.791	24.7	24.7	97	80-120
Barium	11.5	24.7	35.7	98	80-120
Cadmium	0.0627J	24.7	23.2	93	80-120
Chromium, total	3.49	24.7	27.9	99	80-120
Cobalt	0.696	24.7	23.7	93	80-120
Copper	1.21	24.7	24.8	95	80-120
Iron	3280	2470	5800	102	80-120
Lead	2.29	24.7	25.5	94	80-120
Magnesium	359	2470	2790	98	80-120
Manganese	30.6	24.7	52.8	90	80-120
Nickel	1.71	24.7	25.5	96	80-120
Potassium	562	2470	3150	104	80-120
Selenium	ND	24.7	22.9	93	80-120
Silver	ND	24.7	23.0	93	80-120
Sodium	ND	2470	2440	99	80-120
Thallium	ND	24.7	24.1	97	80-120
Vanadium	6.77	24.7	31.3	99	80-120
Zinc	5.95	49.5	51.2	91	80-120

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 151185
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	0.5
DILUTION FACTOR:	0.962	4.81		
SAMPLE ID:	CAFB-FT006-BKF	CAFB-FT006-BKF		
EMAX SAMP ID:	I185-01	I185-01J		
LAB FILE ID:	F6I16111	F6I16112		
DATE EXTRACTED:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	09/16/15
DATE ANALYZED:	09/28/1520:01	09/28/1520:06	DATE RECEIVED:	09/17/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Aluminum	2340	2420	4	10
Antimony	ND	ND	0	10
Arsenic	.791	.572J	NA	10
Barium	11.5	11.6	1	10
Cadmium	0.0627J	ND	NA	10
Chromium, total	3.49	3.32	5	10
Cobalt	.696	.709J	NA	10
Copper	1.21	1.93J	NA	10
Iron	3280	3400	4	10
Lead	2.29	2.4J	NA	10
Magnesium	359	375J	NA	10
Manganese	30.6	31.2	2	10
Nickel	1.71	1.76J	NA	10
Potassium	562	576	2	10
Selenium	ND	ND	0	10
Silver	ND	ND	0	10
Sodium	ND	ND	0	10
Thallium	ND	ND	0	10
Vanadium	6.77	5.64	17*	10
Zinc	5.95	9.84	65*	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	0.5
DILTN FACTR:	0.962	0.962		
SAMPLE ID:	CAFB-FT006-BKF-001			
CONTROL NO.:	I185-01	I185-01A		
LAB FILE ID:	F6I16111	F6I16110		
DATIME EXTRCTD:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	09/16/15
DATIME ANALYZD:	09/28/1520:01	09/28/1519:57	DATE RECEIVED:	09/17/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Aluminum	2340	2420	4630	95	75-125
Antimony	ND	24.2	23.9	99	75-125
Arsenic	0.791	24.2	25.1	100	75-125
Barium	11.5	24.2	35.7	100	75-125
Cadmium	0.0627J	24.2	23.6	97	75-125
Chromium, total	3.49	24.2	27.8	100	75-125
Cobalt	0.696	24.2	23.8	96	75-125
Copper	1.21	24.2	25.4	100	75-125
Iron	3280	2420	5710	101	75-125
Lead	2.29	24.2	26.0	98	75-125
Magnesium	359	2420	2730	98	75-125
Manganese	30.6	24.2	54.3	98	75-125
Nickel	1.71	24.2	25.5	99	75-125
Potassium	562	2420	3070	104	75-125
Selenium	ND	24.2	23.4	97	75-125
Silver	ND	24.2	22.1	92	75-120
Sodium	ND	2420	2460	102	75-125
Thallium	ND	24.2	24.6	102	75-125
Vanadium	6.77	24.2	31.6	103	75-125
Zinc	5.95	48.3	51.1	93	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	0.5
DILUTION FACTOR:	0.962	0.995		
SAMPLE ID:	CAFB-FT006-BKF	CAFB-FT006-BKF		
EMAX SAMP ID:	I185-01	I185-01D		
LAB FILE ID:	F6I16111	F6I16113		
DATE EXTRACTED:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	09/16/15
DATE ANALYZED:	09/28/1520:01	09/28/1520:10	DATE RECEIVED:	09/17/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Aluminum	2340	2170	8	20
Antimony	ND	ND	0	20
Arsenic	.791	.784	1	20
Barium	11.5	10.8	7	20
Cadmium	0.0627J	0.0609J	NA	20
Chromium, total	3.49	3.32	5	20
Cobalt	.696	.659	5	20
Copper	1.21	1.36	11	20
Iron	3280	3160	4	20
Lead	2.29	2.29	0	20
Magnesium	359	339	6	20
Manganese	30.6	29.3	4	20
Nickel	1.71	1.62	5	20
Potassium	562	526	7	20
Selenium	ND	ND	0	20
Silver	ND	ND	0	20
Sodium	ND	ND	0	20
Thallium	ND	ND	0	20
Vanadium	6.77	6.54	3	20
Zinc	5.95	6.13	3	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW1311/3010A/6010C

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MATRIX:	LEACHATE		% MOISTURE:	NA
DILTN FACTR:	5	5		
SAMPLE ID:	CAFB-FT006-WC1-002			
CONTROL NO.:	I185-04R	I185-04M		
LAB FILE ID:	ID8J007040	ID8J007042		
DATIME EXTRCTD:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	09/16/15 14:08
DATIME ANALYZD:	10/08/1513:52	10/08/1513:58	DATE RECEIVED:	09/17/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Arsenic	ND	2.5	2.58	103	80-120
Barium	1.26	2.5	3.42	86	80-120
Cadmium	ND	2.5	2.59	104	80-120
Chromium	ND	2.5	2.49	100	80-120
Lead	ND	2.5	2.41	97	80-120
Selenium	ND	2.5	2.71	108	80-120
Silver	ND	2.5	2.56	102	80-120

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/3010A/6010C

MATRIX:	LEACHATE		% MOISTURE:	NA
DILUTION FACTOR:	5	25		
SAMPLE ID:	CAFB-FT006-WC1-002	CAFB-FT006-WC1-002DL		
EMAX SAMP ID:	I185-04R	I185-04J		
LAB FILE ID:	ID8J007040	ID8J007041		
DATE EXTRACTED:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	09/16/15 14:08
DATE ANALYZED:	10/08/1513:52	10/08/1513:55	DATE RECEIVED:	09/17/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Barium	1.26	1.26	1	10
Cadmium	ND	ND	0	10
Chromium	ND	ND	0	10
Lead	ND	ND	0	10
Selenium	0.0154J	ND	NA	10
Silver	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW1311/3010A/6010C

MATRIX:	LEACHATE		% MOISTURE:	NA
DILTN FACTR:	5	5		
SAMPLE ID:	CAFB-FT006-WC1-002			
CONTROL NO.:	I185-04R	I185-04A		
LAB FILE ID:	ID8J007040	ID8J007039		
DATIME EXTRCTD:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	09/16/15 14:08
DATIME ANALYZD:	10/08/1513:52	10/08/1513:49	DATE RECEIVED:	09/17/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	2.5	2.67	107	75-125
Barium	1.26	2.5	3.68	97	75-125
Cadmium	ND	2.5	2.66	106	75-125
Chromium	ND	2.5	2.57	103	75-125
Lead	ND	2.5	2.52	101	75-125
Selenium	0.0154	2.5	2.79	111	75-125
Silver	ND	2.5	2.63	105	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/3010A/6010C

MATRIX:	LEACHATE		% MOISTURE:	NA
DILUTION FACTOR:	5	5		
SAMPLE ID:	CAFB-FT006-WC1-002	CAFB-FT006-WC1-002D		
EMAX SAMP ID:	I185-04R	I185-04D		
LAB FILE ID:	ID8J007040	ID8J007043		
DATE EXTRACTED:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	09/16/15 14:08
DATE ANALYZED:	10/08/1513:52	10/08/1514:02	DATE RECEIVED:	09/17/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	20
Barium	1.26	1.29	3	20
Cadmium	ND	ND	0	20
Chromium	ND	ND	0	20
Lead	ND	ND	0	20
Selenium	0.0154J	ND	NA	20
Silver	ND	ND	0	20

EMAX QUALITY CONTROL DATA
MATRIX SPIKE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW7471B

==========

MATRIX	: SOIL	% MOISTURE: 0.5
DILUTION FACTOR	: 1	1
SAMPLE ID	: CAFB-FT006-BKF-001	CAFB-FT006-BKF-001MS
LAB SAMPLE ID	: I185-01	I185-01M
LAB FILE ID	: M47I022014	M47I022016
DATE PREPARED	: 09/29/1516:15	09/29/1516:15
DATE ANALYZED	: 09/29/1519:45	09/29/1519:49
PREP BATCH	: HGI033S	HGI033S
CALIBRATION REF	: M47I022	M47I022

ACCESSION:

PARAMETER	PARENT RESULT (mg/kg)	SPIKE AMT (mg/kg)	MS RESULT (mg/kg)	MS REC (%)	QC LIMIT (%)
Mercury	ND	0.410	0.414	101	80-120

EMAX QUALITY CONTROL DATA
SAMPLE DUPLICATE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW7471B

==========

MATRIX	: SOIL	% MOISTURE: 0.5
DILUTION FACTOR	: 1	1
SAMPLE ID	: CAFB-FT006-BKF-001	CAFB-FT006-BKF-001DUP
LAB SAMPLE ID	: I185-01	I185-01D
LAB FILE ID	: M47I022014	M47I022017
DATE PREPARED	: 09/29/1516:15	09/29/1516:15
DATE ANALYZED	: 09/29/1519:45	09/29/1519:51
PREP BATCH	: HGI033S	HGI033S
CALIBRATION REF	: M47I022	M47I022

ACCESSION:

PARAMETER	PARENT RESULT (mg/kg)	DUP RESULT (mg/kg)	RPD (%)	MAX RPD (%)
Mercury	ND	ND	0	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW1311/7470A

MATRIX	: LEACHATE		% MOISTURE: NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: CAFB-FT006-WC1-002	CAFB-FT006-WC1-002MS	CAFB-FT006-WC1-002MSD
LAB SAMPLE ID	: I185-04	I185-04M	I185-04S
LAB FILE ID	: M47I021038	M47I021040	M47I021041
DATE PREPARED	: 09/28/1513:30	09/28/1513:30	09/28/1513:30
DATE ANALYZED	: 09/28/1518:56	09/28/1519:00	09/28/1519:02
PREP BATCH	: HGI031W	HGI031W	HGI031W
CALIBRATION REF	: M47I021	M47I021	M47I021

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SPIKE AMT (ug/L)	MS RESULT (ug/L)	MS REC (%)	SPIKE AMT (ug/L)	MSD RESULT (ug/L)	MSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Mercury	ND	25.0	19.0	76*	25.0	19.1	76*	1	80-120	20

* Out of MS QC limit.

EMAX QUALITY CONTROL DATA
SERIAL DILUTION

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW1311/7470A

==========

MATRIX	: LEACHATE	% MOISTURE: NA
DILUTION FACTOR	: 1	5
SAMPLE ID	: CAFB-FT006-WC1-002	CAFB-FT006-WC1-002
LAB SAMPLE ID	: I185-04	I185-04J
LAB FILE ID	: M47I021038	M47I021039
DATE PREPARED	: 09/28/1513:30	09/28/1513:30
DATE ANALYZED	: 09/28/1518:56	09/28/1518:58
PREP BATCH	: HGI031W	HGI031W
CALIBRATION REF	: M47I021	M47I021

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SER RESULT (ug/L)	RPD (%)	MAX RPD (%)
Mercury	ND	ND	0	10

EMAX QUALITY CONTROL DATA
POST SPIKE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW1311/7470A

==========

MATRIX	: LEACHATE	% MOISTURE: NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: CAFB-FT006-WC1-002	CAFB-FT006-WC1-002
LAB SAMPLE ID	: I185-04	I185-04A
LAB FILE ID	: M47I021038	M47I021037
DATE PREPARED	: 09/28/1513:30	09/28/1513:30
DATE ANALYZED	: 09/28/1518:56	09/28/1518:53
PREP BATCH	: HGI031W	HGI031W
CALIBRATION REF	: M47I021	M47I021

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SPIKE AMT (ug/L)	MS RESULT (ug/L)	MS REC (%)	QC LIMIT (%)
Mercury	ND	30.0	30.0	100	80-120

EMAX QUALITY CONTROL DATA
SAMPLE DUPLICATE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW9095B

==========

MATRIX	: SOIL	
DILUTION FACTOR	: 1.00	1.00
SAMPLE ID	: CAFB-FT006-WC1-002	CAFB-FT006-WC1-002DUP
LAB SAMPLE ID	: I185-04	I185-04D
LAB FILE ID	: 15PFI00101	15PFI00101
DATE PREPARED	: NA	NA
DATE ANALYZED	: 09/17/1514:30	09/17/1514:30
PREP BATCH	: PFI001S	PFI001S
CALIBRATION REF	: 15PFI001	15PFI001

ACCESSION:

PARAMETER	PARENT RESULT (ml)	DUP RESULT (ml)	RPD (%)	MAX RPD (%)
Paint Filter	ND	ND	0	20

RAW DATA

VOLATILE ORGANICS

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 151185	Date Extracted:	09/22/15 22:14
Sample ID:	CAFB-FT006-BKF-001	Date Analyzed:	09/22/15 22:14
Lab Samp ID:	I185-01	Dilution Factor:	1.05
Lab File ID:	RIB349	Matrix :	SOIL
Ext Btch ID:	VS03I14	% Moisture :	0.5
Calib. Ref.:	REB240	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0053	0.0011	0.0021
1,2,4-TRICHLOROBENZENE	ND	0.0053	0.0011	0.0021
1,2,4-TRIMETHYLBENZENE	ND	0.0053	0.00058	0.0021
1,2-DIBROMOETHANE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROBENZENE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROPROPANE	ND	0.0053	0.00053	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0053	0.00062	0.0021
1,3-DICHLOROBENZENE	ND	0.0053	0.00055	0.0011
1,3-DICHLOROPROPANE	ND	0.0053	0.00053	0.0011
1,4-DICHLOROBENZENE	ND	0.0053	0.00053	0.0011
2,2-DICHLOROPROPANE	ND	0.0053	0.0011	0.0021
2-BUTANONE	ND	0.011	0.0026	0.0053
2-CHLOROTOLUENE	ND	0.0053	0.00087	0.0011
4-CHLOROTOLUENE	ND	0.0053	0.00071	0.0011
ACETONE	0.019	0.011	0.0033	0.0053
BENZENE	ND	0.0053	0.00053	0.0011
BROMOBENZENE	ND	0.0053	0.00053	0.0011
BROMODICHLOROMETHANE	ND	0.0053	0.00053	0.0011
BROMOFORM	ND	0.0053	0.0011	0.0021
BROMOMETHANE	ND	0.011	0.0019	0.0021
CARBON TETRACHLORIDE	ND	0.0053	0.00057	0.0011
CHLOROBENZENE	ND	0.0053	0.00053	0.0011
CHLOROETHANE	ND	0.0053	0.0014	0.0021
CHLOROFORM	ND	0.0053	0.00053	0.0011
CHLOROMETHANE	ND	0.0053	0.0011	0.0021
CIS-1,2-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0053	0.0013	0.0021
ETHYLBENZENE	ND	0.0053	0.00053	0.0011
ISOPROPYLBENZENE	ND	0.0053	0.00068	0.0021
M/P-XYLENES	ND	0.011	0.0011	0.0021
4-METHYL-2-PENTANONE	ND	0.011	0.0030	0.0053
METHYLENE CHLORIDE	ND	0.011	0.0011	0.0021
METHYL TERT-BUTYL ETHER	ND	0.0053	0.00053	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0021
N-BUTYLBENZENE	ND	0.0053	0.00074	0.0011
N-PROPYLBENZENE	ND	0.0053	0.00069	0.0011
O-XYLENE	ND	0.0053	0.00053	0.0011
SEC-BUTYLBENZENE	ND	0.0053	0.00071	0.0011
STYRENE	ND	0.0053	0.00053	0.0011
TETRACHLOROETHENE	ND	0.0053	0.00053	0.0011
TOLUENE	ND	0.0053	0.00053	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
TRICHLOROETHENE	ND	0.0053	0.00053	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0053	0.0012	0.0021
VINYL CHLORIDE	ND	0.0053	0.0015	0.0021
XYLENES, TOTAL	ND	0.011	0.00053	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0561	0.05276	106	85-115
DIBROMOFLUOROMETHANE	0.0596	0.05276	113	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB349.D
Acq On : 22 Sep 2015 10:14 pm
Sample : 15I185-01
Misc :
MS Integration Params: RTE.P
Quant Time: Oct 5 21:06 2015

Vial: 19
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1522469	50.00 ug/l	-0.03
52) CHLOROBENZENE-D5	13.88	117	1591283	50.00 ug/l	-0.03
70) 1,2-DICHLOROBENZENE-D4	17.20	152	691255	50.00 ug/l	-0.03
System Monitoring Compounds					
34) Dibromofluoromethane	9.50	111	752147	56.48 ug/l	-0.03
Spiked Amount 50.000			Recovery	= 112.96%	
39) 1,2-Dichloroethane-d4	9.95	65	1143877	63.16 ug/l	-0.01
Spiked Amount 50.000			Recovery	= 126.32%	
53) Toluene-d8	12.13	98	1792517	53.19 ug/l	-0.03
Spiked Amount 50.000			Recovery	= 106.38%	
73) 4-Bromofluorobenzene	15.21	95	901116	61.42 ug/l	-0.04
Spiked Amount 50.000			Recovery	= 122.84%	
Target Compounds					Qvalue
14) Acetone	6.71	43	87657	17.82 ug/l	93
32) Tetrahydrofuran	9.30	42	95537	23.46 ug/l	98

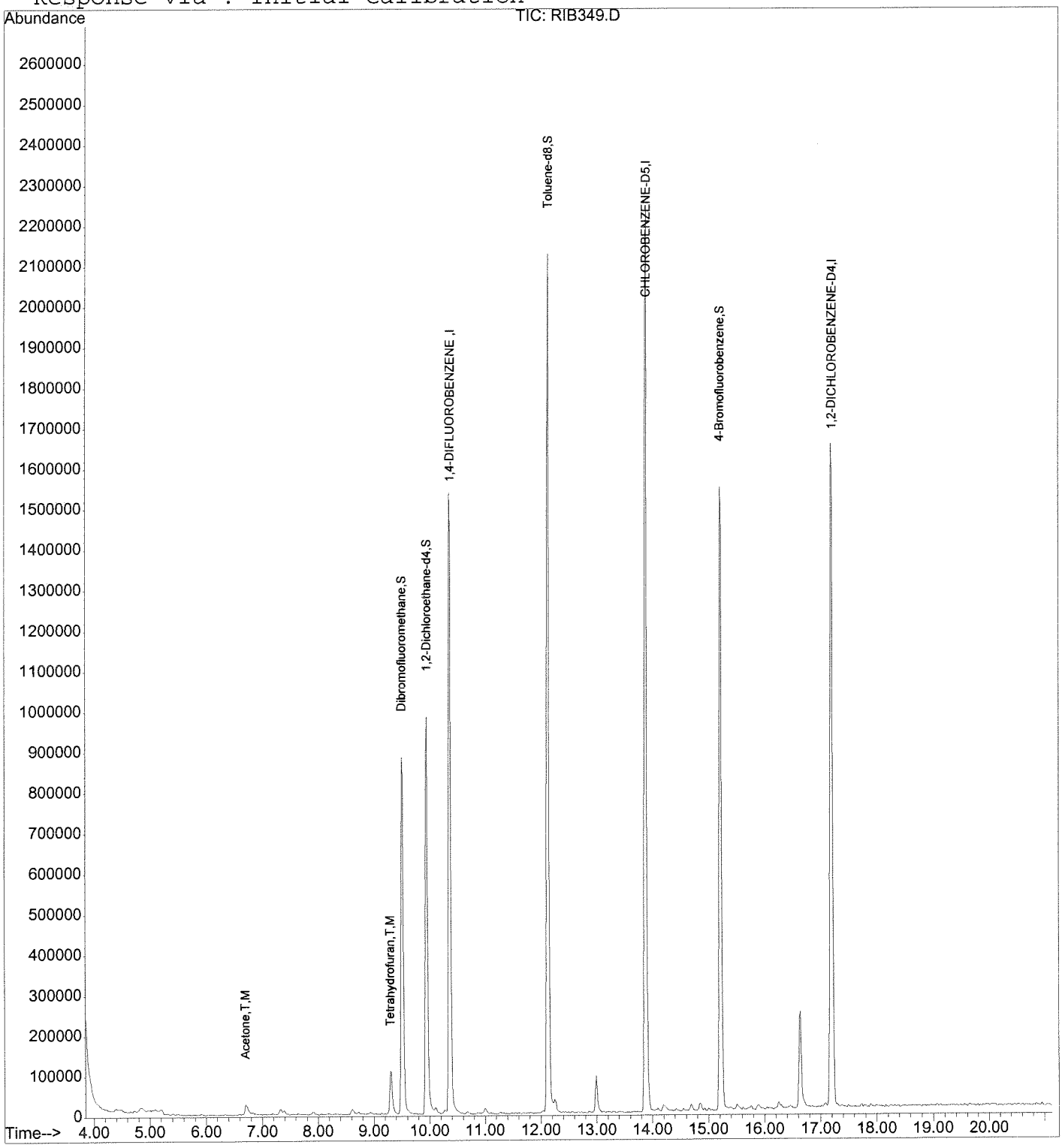
(#) = qualifier out of range (m) = manual integration

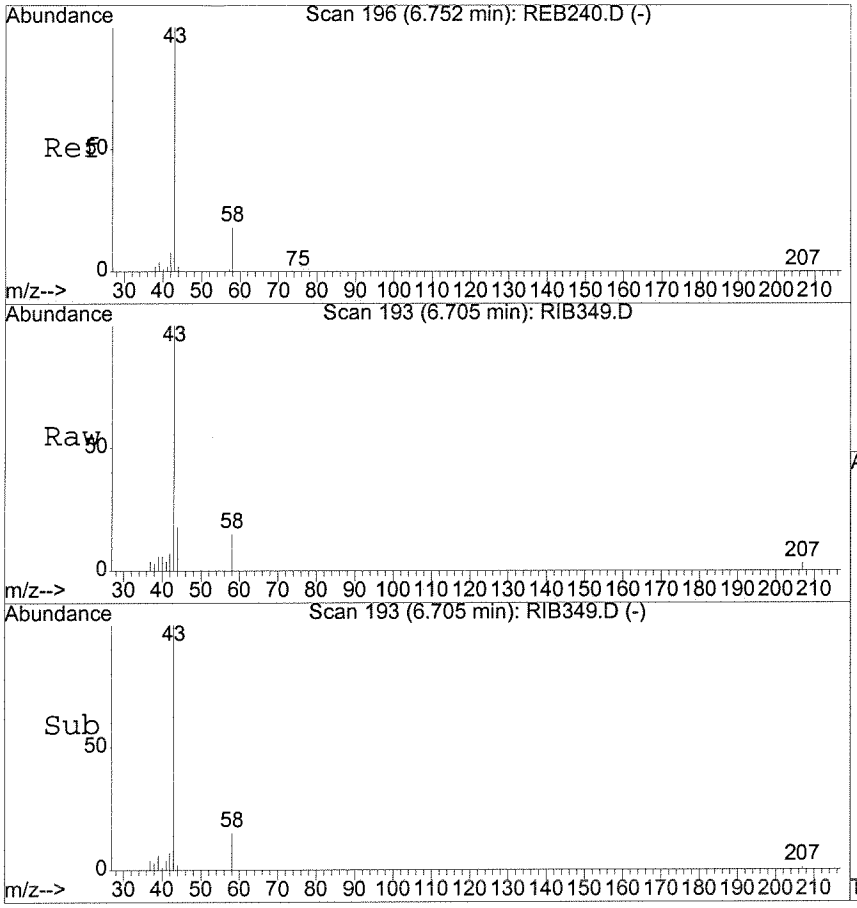
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB349.D
Acq On : 22 Sep 2015 10:14 pm
Sample : 15I185-01
Misc :
MS Integration Params: RTE.P
Quant Time: Oct 5 21:06 2015

Vial: 19
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration

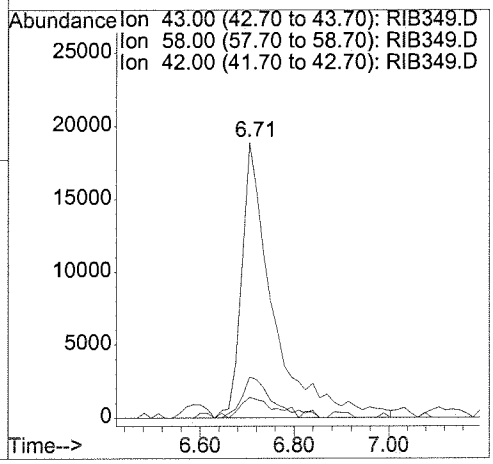


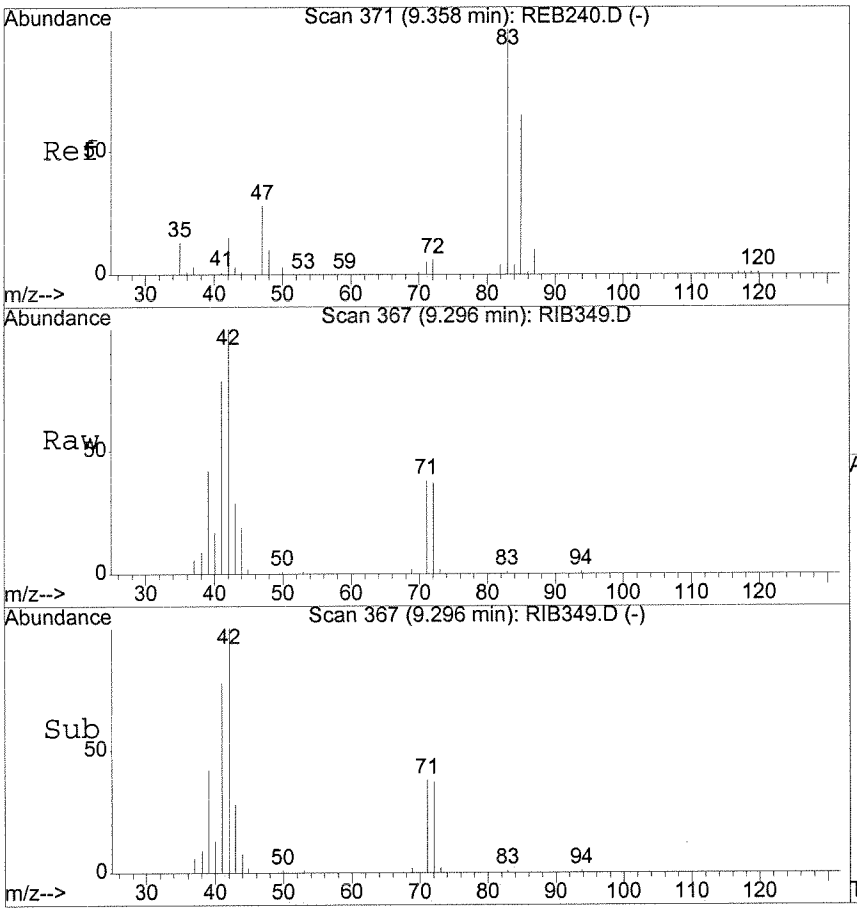


#14
Acetone
Concen: 17.82 ug/l
RT: 6.71 min Scan# 193
Delta R.T. -0.01 min
Lab File: RIB349.D
Acq: 22 Sep 2015 10:14 pm

Tgt Ion: 43 Resp: 87657

Ion	Ratio	Lower	Upper
43	100		
58	14.6	0.0	48.6
42	7.1	0.0	38.1

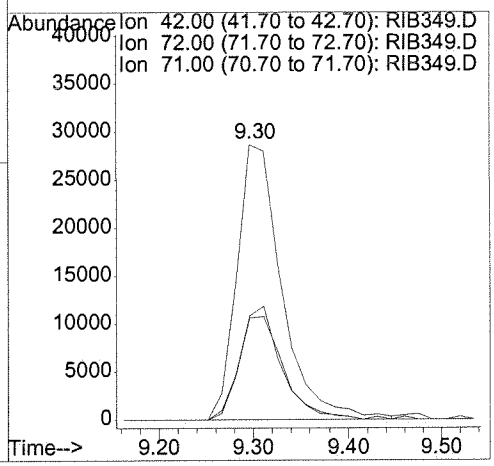




#32
Tetrahydrofuran
Concen: 23.46 ug/l
RT: 9.30 min Scan# 367
Delta R.T. -0.03 min
Lab File: RIB349.D
Acq: 22 Sep 2015 10:14 pm

Tgt Ion: 42 Resp: 95537

Ion	Ratio	Lower	Upper
42	100		
72	37.5	9.9	69.9
71	38.1	7.7	67.7



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 151185	Date Extracted:	09/25/15 14:19
Sample ID:	CAFB-FT006-BKF-002	Date Analyzed:	09/25/15 14:19
Lab Samp ID:	I185-02R	Dilution Factor:	1.16
Lab File ID:	RIB402	Matrix :	SOIL
Ext Btch ID:	VS03I18	% Moisture :	0.4
Calib. Ref.:	RIB367	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1,1-TRICHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1,2,2-TETRACHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1,2-TRICHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1-DICHLOROETHANE	ND	0.0058	0.00058	0.0012
1,1-DICHLOROETHENE	ND	0.0058	0.00058	0.0012
1,1-DICHLOROPROPENE	ND	0.0058	0.00058	0.0012
1,2,3-TRICHLOROBENZENE	ND	0.0058	0.0012	0.0023
1,2,4-TRICHLOROBENZENE	ND	0.0058	0.0012	0.0023
1,2,4-TRIMETHYLBENZENE	ND	0.0058	0.00064	0.0023
1,2-DIBROMOETHANE	ND	0.0058	0.00058	0.0012
1,2-DICHLOROBENZENE	ND	0.0058	0.00058	0.0012
1,2-DICHLOROETHANE	ND	0.0058	0.00058	0.0012
1,2-DICHLOROPROPANE	ND	0.0058	0.00058	0.0012
1,3,5-TRIMETHYLBENZENE	ND	0.0058	0.00069	0.0023
1,3-DICHLOROBENZENE	ND	0.0058	0.00061	0.0012
1,3-DICHLOROPROPANE	ND	0.0058	0.00058	0.0012
1,4-DICHLOROBENZENE	ND	0.0058	0.00058	0.0012
2,2-DICHLOROPROPANE	ND	0.0058	0.0012	0.0023
2-BUTANONE	ND	0.012	0.0029	0.0058
2-CHLOROTOLUENE	ND	0.0058	0.00096	0.0012
4-CHLOROTOLUENE	ND	0.0058	0.00078	0.0012
ACETONE	0.025	0.012	0.0036	0.0058
BENZENE	ND	0.0058	0.00058	0.0012
BROMOBENZENE	ND	0.0058	0.00058	0.0012
BROMODICHLOROMETHANE	ND	0.0058	0.00058	0.0012
BROMOFORM	ND	0.0058	0.0012	0.0023
BROMOMETHANE	ND	0.012	0.0021	0.0023
CARBON TETRACHLORIDE	ND	0.0058	0.00063	0.0012
CHLOROBENZENE	ND	0.0058	0.00058	0.0012
CHLOROETHANE	ND	0.0058	0.0015	0.0023
CHLOROFORM	ND	0.0058	0.00058	0.0012
CHLOROMETHANE	ND	0.0058	0.0012	0.0023
CIS-1,2-DICHLOROETHENE	ND	0.0058	0.00058	0.0012
CIS-1,3-DICHLOROPROPENE	ND	0.0058	0.00058	0.0012
DICHLORODIFLUOROMETHANE	0.0058J	0.0058	0.0014	0.0023
ETHYLBENZENE	ND	0.0058	0.00058	0.0012
ISOPROPYLBENZENE	ND	0.0058	0.00075	0.0023
M/P-XYLENES	ND	0.012	0.0012	0.0023
4-METHYL-2-PENTANONE	ND	0.012	0.0033	0.0058
METHYLENE CHLORIDE	ND	0.012	0.0012	0.0023
METHYL TERT-BUTYL ETHER	ND	0.0058	0.00058	0.0012
NAPHTHALENE	ND	0.012	0.0012	0.0023
N-BUTYLBENZENE	ND	0.0058	0.00082	0.0012
N-PROPYLBENZENE	ND	0.0058	0.00076	0.0012
O-XYLENE	ND	0.0058	0.00058	0.0012
SEC-BUTYLBENZENE	ND	0.0058	0.00078	0.0012
STYRENE	ND	0.0058	0.00058	0.0012
TETRACHLOROETHENE	ND	0.0058	0.00058	0.0012
TOLUENE	ND	0.0058	0.00058	0.0012
TRANS-1,2-DICHLOROETHENE	ND	0.0058	0.00058	0.0012
TRANS-1,3-DICHLOROPROPENE	ND	0.0058	0.00058	0.0012
TRICHLOROETHENE	ND	0.0058	0.00058	0.0012
TRICHLOROFLUOROMETHANE	ND	0.0058	0.0013	0.0023
VINYL CHLORIDE	ND	0.0058	0.0016	0.0023
XYLENES, TOTAL	ND	0.012	0.00058	0.0012

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0598	0.05823	103	85-115
DIBROMOFLUOROMETHANE	0.0578	0.05823	99.3	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB402.D
Acq On : 25 Sep 2015 2:19 pm
Sample : 15I185-02R
Misc :
MS Integration Params: RTE.P
Quant Time: Oct 5 21:18 2015

Vial: 10
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2074312	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	2071012	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	867023	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	923101	49.65	ug/l	0.00
Spiked Amount 50.000			Recovery	=	99.30%	
39) 1,2-Dichloroethane-d4	9.95	65	1210812	53.05	ug/l	0.00
Spiked Amount 50.000			Recovery	=	106.10%	
53) Toluene-d8	12.13	98	2729409	51.35	ug/l	0.00
Spiked Amount 50.000			Recovery	=	102.70%	
73) 4-Bromofluorobenzene	15.22	95	1153394	53.96	ug/l	0.00
Spiked Amount 50.000			Recovery	=	107.92%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.05	85	64509	4.94	ug/l	93
14) Acetone	6.72	43	147733	21.47	ug/l	96
32) Tetrahydrofuran	9.31	42	105183	16.40	ug/l	96

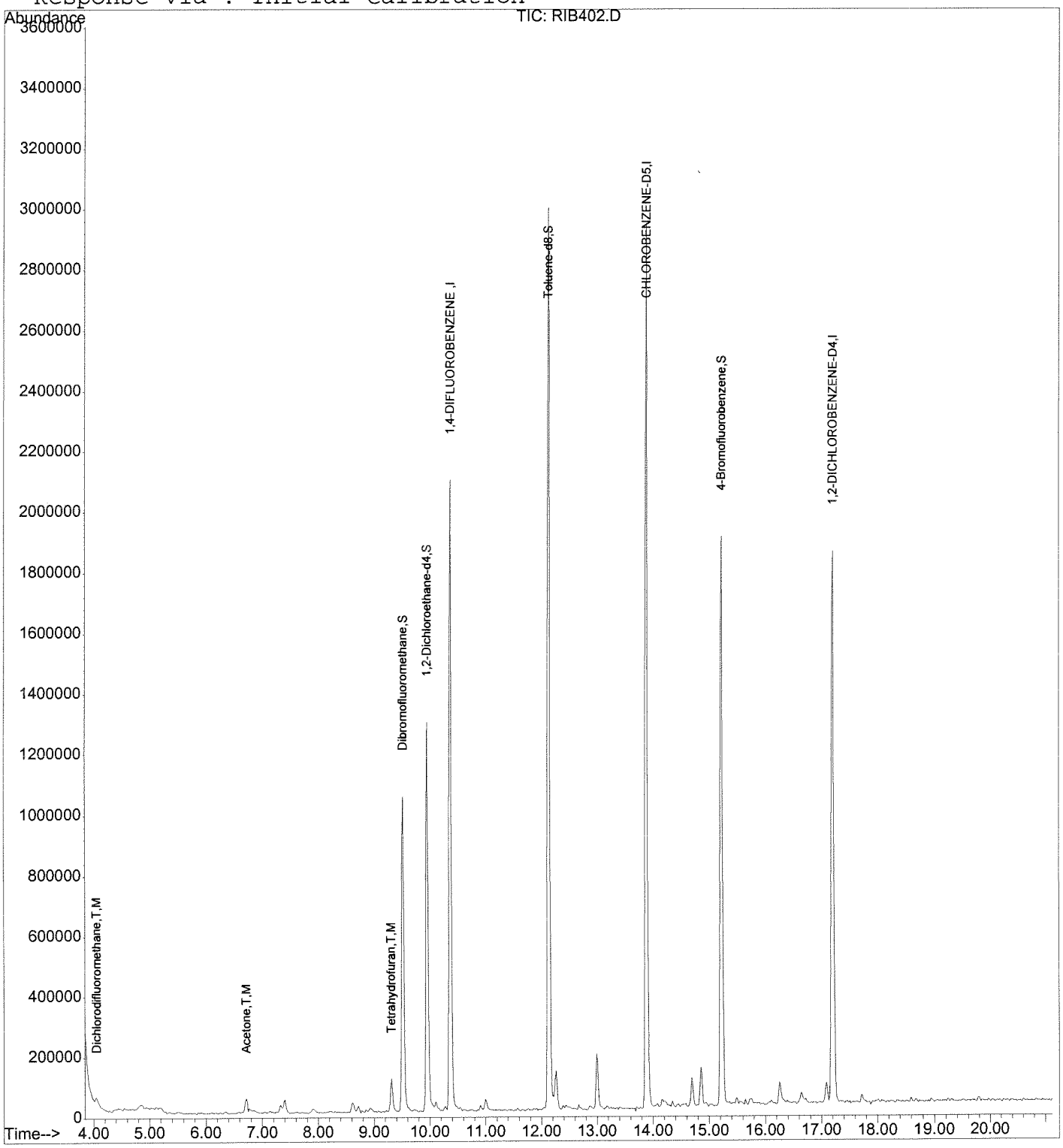
(#) = qualifier out of range (m) = manual integration

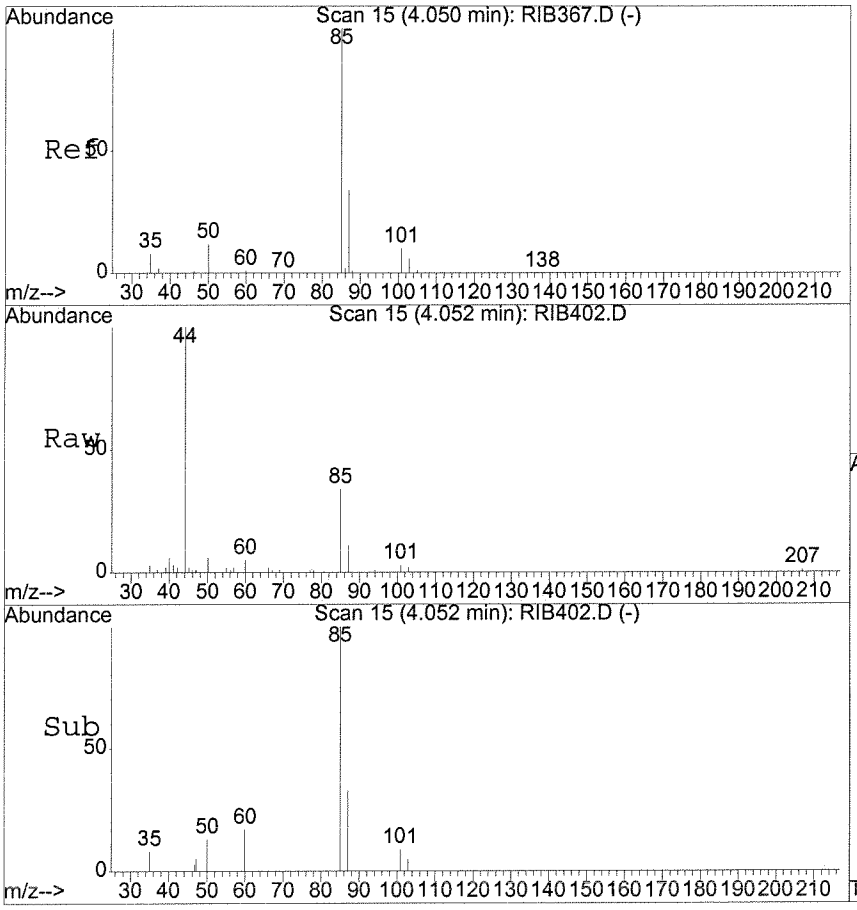
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB402.D
Acq On : 25 Sep 2015 2:19 pm
Sample : 15I185-02R
Misc :
MS Integration Params: RTE.P
Quant Time: Oct 5 21:18 2015

Vial: 10
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration

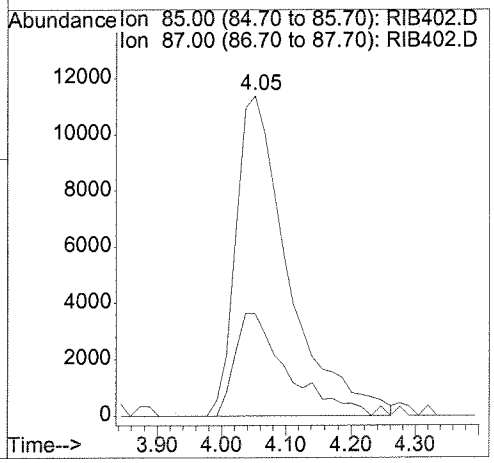


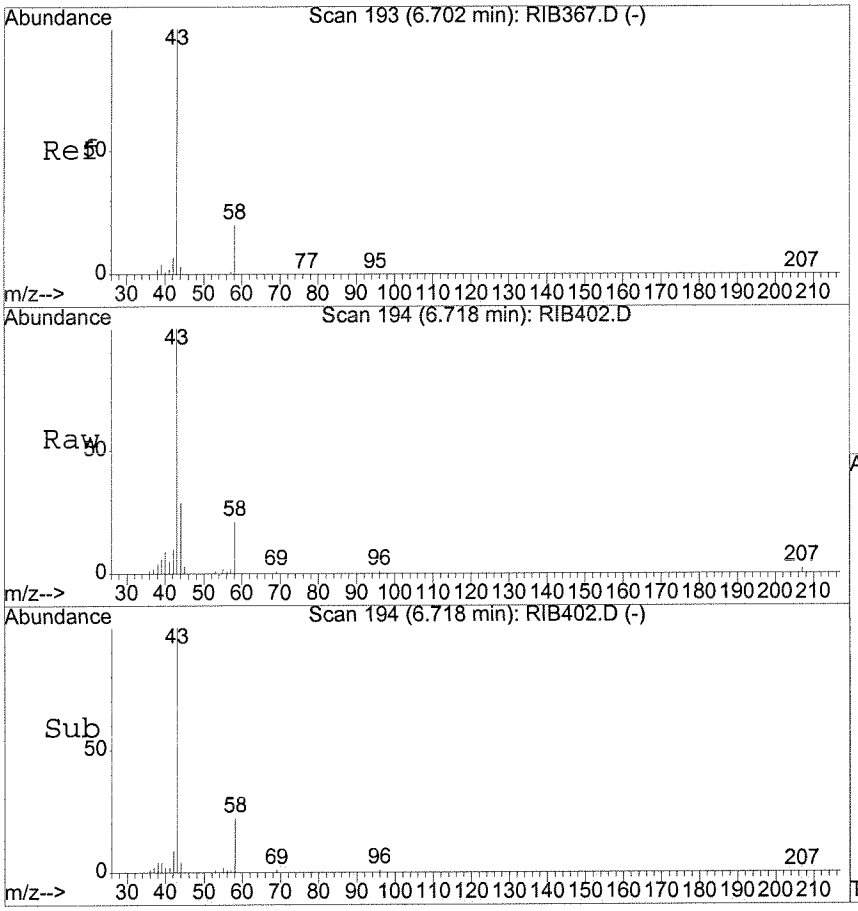


#3
Dichlorodifluoromethane
Concen: 4.94 ug/l
RT: 4.05 min Scan# 15
Delta R.T. 0.00 min
Lab File: RIB402.D
Acq: 25 Sep 2015 2:19 pm

Tgt Ion: 85 Resp: 64509

Ion	Ratio	Lower	Upper
85	100		
87	26.9	1.0	61.0

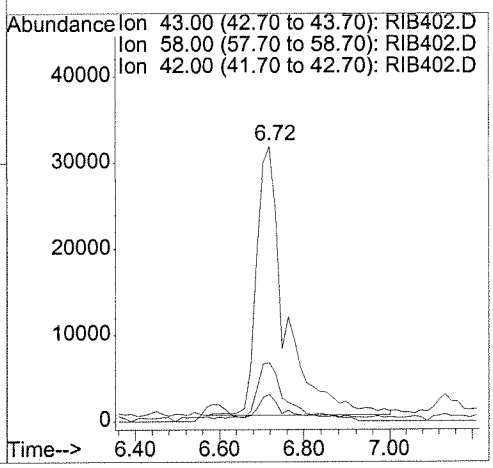


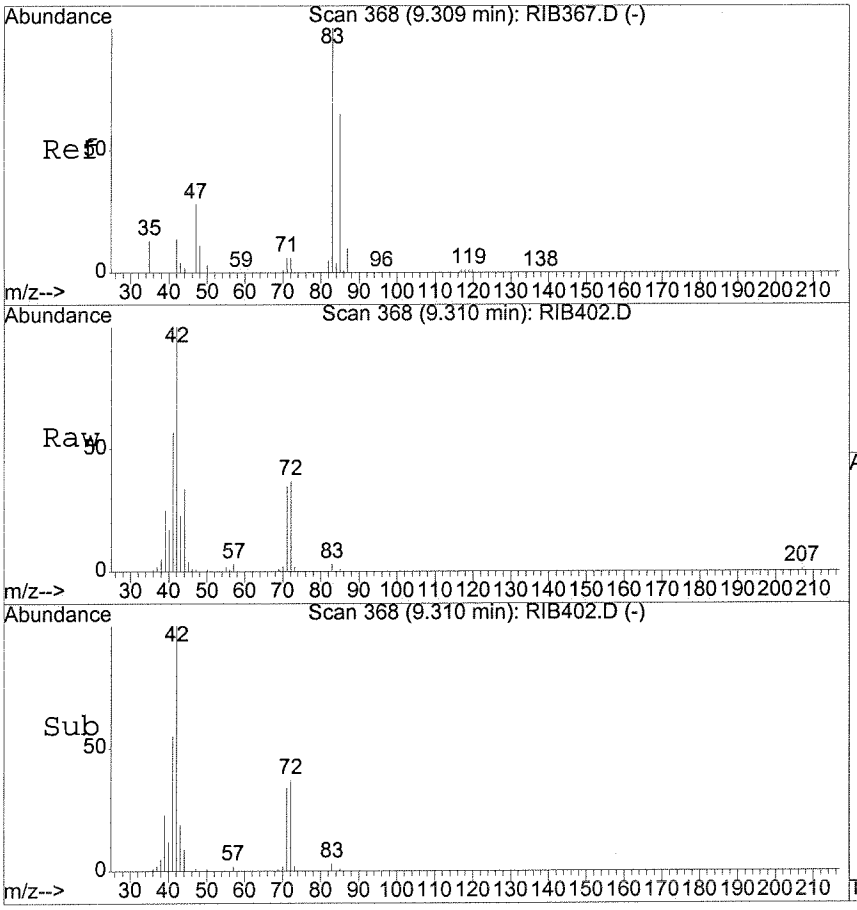


#14
Acetone
Concen: 21.47 ug/l
RT: 6.72 min Scan# 194
Delta R.T. 0.02 min
Lab File: RIB402.D
Acq: 25 Sep 2015 2:19 pm

Tgt Ion: 43 Resp: 147733

Ion	Ratio	Lower	Upper
43	100		
58	22.0	0.0	50.6
42	5.0	0.0	37.7

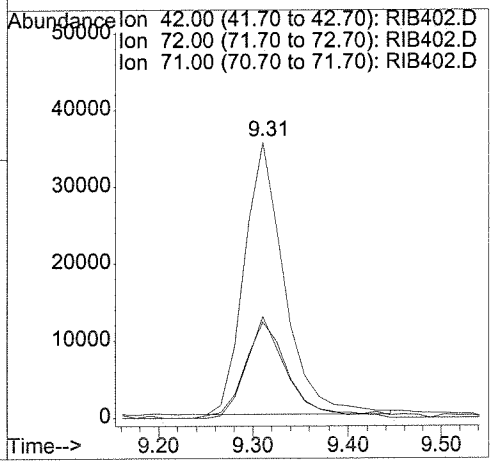




#32
Tetrahydrofuran
Concen: 16.40 ug/l
RT: 9.31 min Scan# 368
Delta R.T. 0.00 min
Lab File: RIB402.D
Acq: 25 Sep 2015 2:19 pm

Tgt Ion: 42 Resp: 105183

Ion	Ratio	Lower	Upper
42	100		
72	36.1	7.6	67.6
71	38.4	5.5	65.5



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 151185	Date Extracted:	09/22/15 23:15
Sample ID:	CAFB-FT006-BKF-003	Date Analyzed:	09/22/15 23:15
Lab Samp ID:	I185-03	Dilution Factor:	1.2
Lab File ID:	RIB351	Matrix :	SOIL
Ext Btch ID:	VS03I14	% Moisture :	0.5
Calib. Ref.:	REB240	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1,1-TRICHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1,2,2-TETRACHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1,2-TRICHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1-DICHLOROETHANE	ND	0.0060	0.00060	0.0012
1,1-DICHLOROETHENE	ND	0.0060	0.00060	0.0012
1,1-DICHLOROPROPENE	ND	0.0060	0.00060	0.0012
1,2,3-TRICHLOROBENZENE	ND	0.0060	0.0012	0.0024
1,2,4-TRICHLOROBENZENE	ND	0.0060	0.0012	0.0024
1,2,4-TRIMETHYLBENZENE	ND	0.0060	0.00066	0.0024
1,2-DIBROMOETHANE	ND	0.0060	0.00060	0.0012
1,2-DICHLOROBENZENE	ND	0.0060	0.00060	0.0012
1,2-DICHLOROETHANE	ND	0.0060	0.00060	0.0012
1,2-DICHLOROPROPANE	ND	0.0060	0.00060	0.0012
1,3,5-TRIMETHYLBENZENE	ND	0.0060	0.00071	0.0024
1,3-DICHLOROBENZENE	ND	0.0060	0.00063	0.0012
1,3-DICHLOROPROPANE	ND	0.0060	0.00060	0.0012
1,4-DICHLOROBENZENE	ND	0.0060	0.00060	0.0012
2,2-DICHLOROPROPANE	ND	0.0060	0.0012	0.0024
2-BUTANONE	ND	0.012	0.0030	0.0060
2-CHLOROTOLUENE	ND	0.0060	0.00099	0.0012
4-CHLOROTOLUENE	ND	0.0060	0.00081	0.0012
ACETONE	0.033	0.012	0.0037	0.0060
BENZENE	ND	0.0060	0.00060	0.0012
BROMOBENZENE	ND	0.0060	0.00060	0.0012
BROMODICHLOROMETHANE	ND	0.0060	0.00060	0.0012
BROMOFORM	ND	0.0060	0.0012	0.0024
BROMOMETHANE	ND	0.012	0.0022	0.0024
CARBON TETRACHLORIDE	ND	0.0060	0.00065	0.0012
CHLOROBENZENE	ND	0.0060	0.00060	0.0012
CHLOROETHANE	ND	0.0060	0.0016	0.0024
CHLOROFORM	ND	0.0060	0.00060	0.0012
CHLOROMETHANE	ND	0.0060	0.0012	0.0024
CIS-1,2-DICHLOROETHENE	ND	0.0060	0.00060	0.0012
CIS-1,3-DICHLOROPROPENE	ND	0.0060	0.00060	0.0012
DICHLORODIFLUOROMETHANE	ND	0.0060	0.0014	0.0024
ETHYLBENZENE	ND	0.0060	0.00060	0.0012
ISOPROPYLBENZENE	ND	0.0060	0.00077	0.0024
M/P-XYLENES	ND	0.012	0.0012	0.0024
4-METHYL-2-PENTANONE	ND	0.012	0.0034	0.0060
METHYLENE CHLORIDE	ND	0.012	0.0012	0.0024
METHYL TERT-BUTYL ETHER	ND	0.0060	0.00060	0.0012
NAPHTHALENE	ND	0.012	0.0012	0.0024
N-BUTYLBENZENE	ND	0.0060	0.00084	0.0012
N-PROPYLBENZENE	ND	0.0060	0.00078	0.0012
O-XYLENE	ND	0.0060	0.00060	0.0012
SEC-BUTYLBENZENE	ND	0.0060	0.00081	0.0012
STYRENE	ND	0.0060	0.00060	0.0012
TETRACHLOROETHENE	ND	0.0060	0.00060	0.0012
TOLUENE	ND	0.0060	0.00060	0.0012
TRANS-1,2-DICHLOROETHENE	ND	0.0060	0.00060	0.0012
TRANS-1,3-DICHLOROPROPENE	ND	0.0060	0.00060	0.0012
TRICHLOROETHENE	ND	0.0060	0.00060	0.0012
TRICHLOROFLUOROMETHANE	ND	0.0060	0.0013	0.0024
VINYL CHLORIDE	ND	0.0060	0.0017	0.0024
XYLENES, TOTAL	ND	0.012	0.00060	0.0012

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0561	0.06030	93.0	85-115
DIBROMOFLUOROMETHANE	0.0715	0.06030	119	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB351.D
Acq On : 22 Sep 2015 11:15 pm
Sample : 15I185-03
Misc :
MS Integration Params: RTE.P
Quant Time: Oct 5 21:07 2015

Vial: 21
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1286938	50.00	ug/l	-0.03
52) CHLOROBENZENE-D5	13.88	117	1397955	50.00	ug/l	-0.03
70) 1,2-DICHLOROBENZENE-D4	17.20	152	679665	50.00	ug/l	-0.03
System Monitoring Compounds						
34) Dibromofluoromethane	9.50	111	667066	59.26	ug/l	-0.03
Spiked Amount 50.000			Recovery	=	118.52%	
39) 1,2-Dichloroethane-d4	9.93	65	1009116	65.92	ug/l	-0.03
Spiked Amount 50.000			Recovery	=	131.84%	
53) Toluene-d8	12.12	98	1377417	46.52	ug/l	-0.03
Spiked Amount 50.000			Recovery	=	93.04%	
73) 4-Bromofluorobenzene	15.22	95	800959	55.53	ug/l	-0.03
Spiked Amount 50.000			Recovery	=	111.06%	
Target Compounds						Qvalue
14) Acetone	6.70	43	112883	27.15	ug/l	94
32) Tetrahydrofuran	9.31	42	71160	20.67	ug/l	96

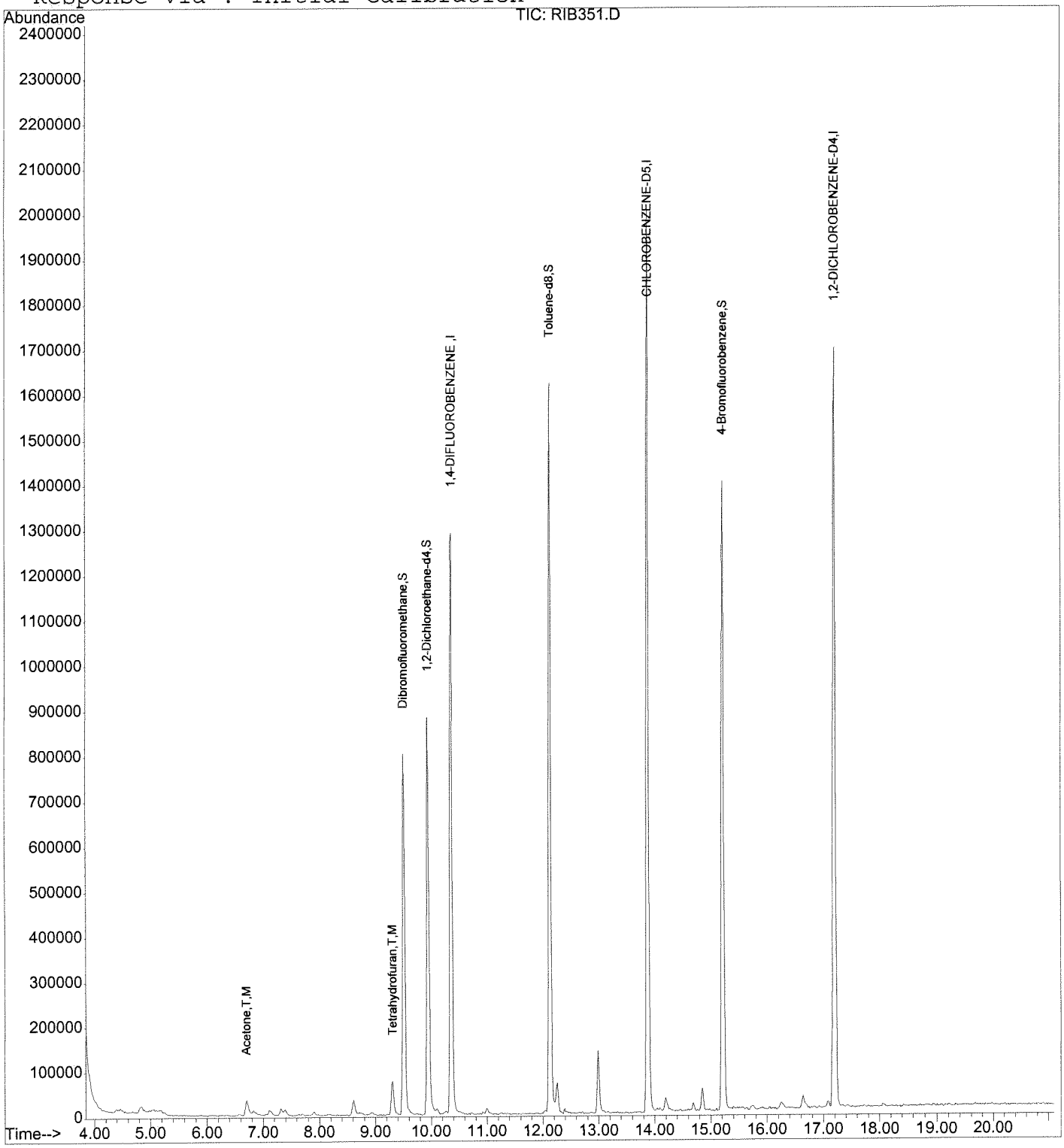
(#) = qualifier out of range (m) = manual integration

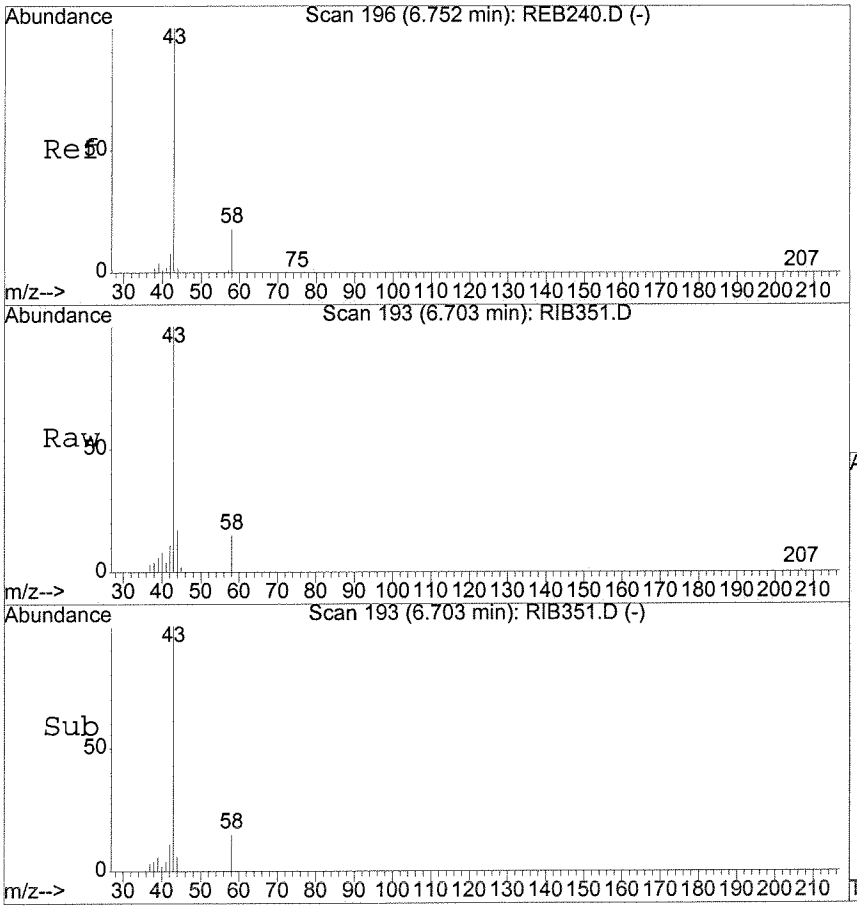
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB351.D
Acq On : 22 Sep 2015 11:15 pm
Sample : 15I185-03
Misc :
MS Integration Params: RTE.P
Quant Time: Oct 5 21:07 2015

Vial: 21
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration

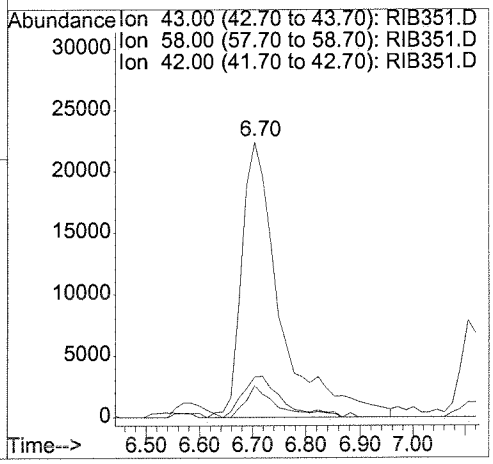


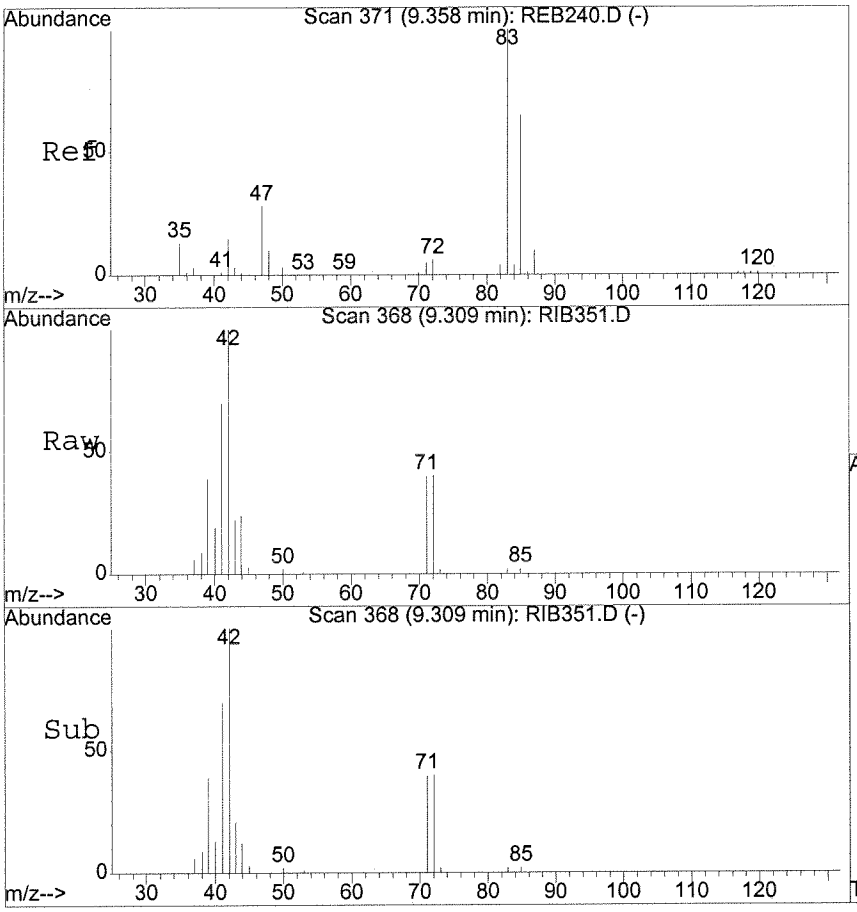


#14
Acetone
Concen: 27.15 ug/l
RT: 6.70 min Scan# 193
Delta R.T. -0.01 min
Lab File: RIB351.D
Acq: 22 Sep 2015 11:15 pm

Tgt Ion: 43 Resp: 112883

Ion	Ratio	Lower	Upper
43	100		
58	15.0	0.0	48.6
42	8.3	0.0	38.1

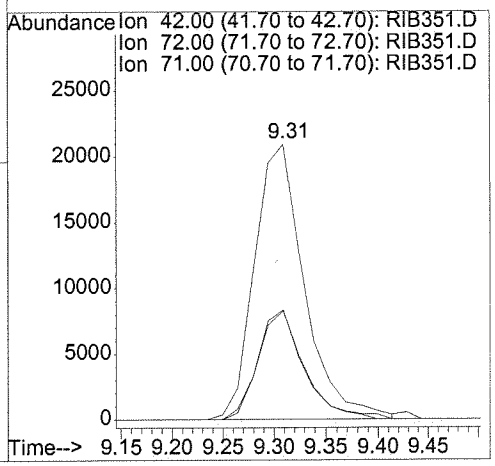




#32
Tetrahydrofuran
Concen: 20.67 ug/l
RT: 9.31 min Scan# 368
Delta R.T. -0.01 min
Lab File: RIB351.D
Acq: 22 Sep 2015 11:15 pm

Tgt Ion: 42 Resp: 71160

Ion	Ratio	Lower	Upper
42	100		
72	36.0	9.9	69.9
71	36.9	7.7	67.7



QC SUMMARIES

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/22/15
Batch No.	: 15I185	Date Extracted:	09/22/15 16:42
Sample ID:	MBLK1S	Date Analyzed:	09/22/15 16:42
Lab Samp ID:	VS03I14B	Dilution Factor:	1
Lab File ID:	RIB337	Matrix :	SOIL
Ext Btch ID:	VS03I14	% Moisture :	NA
Calib. Ref.:	REB240	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0050	0.00055	0.0020
1,2-DIBROMOETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0050	0.00059	0.0020
1,3-DICHLOROBENZENE	ND	0.0050	0.00052	0.0010
1,3-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,4-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
2,2-DICHLOROPROPANE	ND	0.0050	0.0010	0.0020
2-BUTANONE	ND	0.010	0.0025	0.0050
2-CHLOROTOLUENE	ND	0.0050	0.00082	0.0010
4-CHLOROTOLUENE	ND	0.0050	0.00067	0.0010
ACETONE	ND	0.010	0.0031	0.0050
BENZENE	ND	0.0050	0.00050	0.0010
BROMOBENZENE	ND	0.0050	0.00050	0.0010
BROMODICHLOROMETHANE	ND	0.0050	0.00050	0.0010
BROMOFORM	ND	0.0050	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0050	0.00054	0.0010
CHLOROBENZENE	ND	0.0050	0.00050	0.0010
CHLOROETHANE	ND	0.0050	0.0013	0.0020
CHLOROFORM	ND	0.0050	0.00050	0.0010
CHLOROMETHANE	ND	0.0050	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0050	0.0012	0.0020
ETHYLBENZENE	ND	0.0050	0.00050	0.0010
ISOPROPYLBENZENE	ND	0.0050	0.00064	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0050
METHYLENE CHLORIDE	0.0021J	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0050	0.00050	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0050	0.00070	0.0010
N-PROPYLBENZENE	ND	0.0050	0.00065	0.0010
O-XYLENE	ND	0.0050	0.00050	0.0010
SEC-BUTYLBENZENE	ND	0.0050	0.00067	0.0010
STYRENE	ND	0.0050	0.00050	0.0010
TETRACHLOROETHENE	ND	0.0050	0.00050	0.0010
TOLUENE	ND	0.0050	0.00050	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
TRICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0050	0.0011	0.0020
VINYL CHLORIDE	ND	0.0050	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00050	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0512	0.05000	102	85-115
DIBROMOFLUOROMETHANE	0.0505	0.05000	101	80-119

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW 5035A/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VS03I14B	VS03I14L	VS03I14C		
LAB FILE ID:	RIB337	RIB334	RIB335		
DATE EXTRACTED:	09/22/1516:42	09/22/1515:18	09/22/1515:46	DATE COLLECTED:	NA
DATE ANALYZED:	09/22/1516:42	09/22/1515:18	09/22/1515:46	DATE RECEIVED:	09/22/15
PREP. BATCH:	VS03I14	VS03I14	VS03I14		
CALIB. REF:	REB240	REB240	REB240		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0500	0.0569	114	0.0500	0.0526	105	8	75-125	30
1,1,1-Trichloroethane	ND	0.0500	0.0597	119	0.0500	0.0567	113	5	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0497	99	0.0500	0.0514	103	3	55-130	30
1,1,2-Trichloroethane	ND	0.0500	0.0521	104	0.0500	0.0530	106	2	60-125	30
1,1-Dichloroethane	ND	0.0500	0.0538	108	0.0500	0.0475	95	12	75-125	30
1,1-Dichloroethene	ND	0.0500	0.0574	115	0.0500	0.0518	104	10	65-135	30
1,1-Dichloropropene	ND	0.0500	0.0552	110	0.0500	0.0519	104	6	70-135	30
1,2,3-Trichlorobenzene	ND	0.0500	0.0591	118	0.0500	0.0527	105	11	60-135	30
1,2,4-Trichlorobenzene	ND	0.0500	0.0602	120	0.0500	0.0517	103	15	65-130	30
1,2,4-Trimethylbenzene	ND	0.0500	0.0498	100	0.0500	0.0497	99	0	65-135	30
1,2-Dibromoethane	ND	0.0500	0.0537	107	0.0500	0.0526	105	2	70-125	30
1,2-Dichlorobenzene	ND	0.0500	0.0549	110	0.0500	0.0529	106	4	75-120	30
1,2-Dichloroethane	ND	0.0500	0.0622	124	0.0500	0.0549	110	13	70-135	30
1,2-Dichloropropane	ND	0.0500	0.0498	100	0.0500	0.0489	98	2	70-120	30
1,3,5-Trimethylbenzene	ND	0.0500	0.0518	104	0.0500	0.0519	104	0	65-135	30
1,3-Dichlorobenzene	ND	0.0500	0.0526	105	0.0500	0.0514	103	2	70-125	30
1,3-Dichloropropane	ND	0.0500	0.0522	104	0.0500	0.0523	105	0	75-125	30
1,4-Dichlorobenzene	ND	0.0500	0.0514	103	0.0500	0.0498	100	3	70-125	30
2,2-Dichloropropane	ND	0.0500	0.0665	133	0.0500	0.0543	109	20	65-135	30
2-Butanone	ND	0.250	0.257	103	0.250	0.258	103	0	30-160	30
2-Chlorotoluene	ND	0.0500	0.0495	99	0.0500	0.0519	104	5	70-130	30
4-Chlorotoluene	ND	0.0500	0.0497	99	0.0500	0.0533	107	7	75-125	30
Acetone	ND	0.250	0.256	102	0.250	0.228	91	11	20-160	30
Benzene	ND	0.0500	0.0517	103	0.0500	0.0470	94	10	75-125	30
Bromobenzene	ND	0.0500	0.0472	94	0.0500	0.0505	101	7	65-120	30
Bromodichloromethane	ND	0.0500	0.0565	113	0.0500	0.0558	112	1	70-130	30
Bromoform	ND	0.0500	0.0529	106	0.0500	0.0574	115	8	55-135	30
Bromomethane	ND	0.0500	0.0425	85	0.0500	0.0383	77	10	30-160	30
Carbon Tetrachloride	ND	0.0500	0.0627	125	0.0500	0.0562	112	11	65-135	30
Chlorobenzene	ND	0.0500	0.0501	100	0.0500	0.0512	102	2	75-125	30
Chloroethane	ND	0.0500	0.0455	91	0.0500	0.0420	84	8	40-155	30
Chloroform	ND	0.0500	0.0569	114	0.0500	0.0514	103	10	70-125	30
Chloromethane	ND	0.0500	0.0476	95	0.0500	0.0433	87	10	50-130	30
cis-1,2-Dichloroethene	ND	0.0500	0.0557	111	0.0500	0.0455	91	20	65-125	30
cis-1,3-Dichloropropene	ND	0.0500	0.0540	108	0.0500	0.0539	108	0	70-125	30
Dichlorodifluoromethane	ND	0.0500	0.0592	118	0.0500	0.0506	101	16	35-135	30
Ethylbenzene	ND	0.0500	0.0506	101	0.0500	0.0507	101	0	75-125	30
Isopropylbenzene	ND	0.0500	0.0484	97	0.0500	0.0526	105	8	75-130	30
m/p-Xylenes	ND	0.100	0.104	104	0.100	0.102	102	1	80-125	30
4-Methyl-2-Pentanone	ND	0.250	0.252	101	0.250	0.250	100	1	45-145	30
Methylene Chloride	0.00214J	0.0500	0.0563	113	0.0500	0.0502	100	12	55-140	30
Methyl tert-butyl ether	ND	0.0500	0.0564	113	0.0500	0.0502	100	12	65-135	30
Naphthalene	ND	0.0500	0.0602	120	0.0500	0.0519	104	15	40-125	30
n-Butylbenzene	ND	0.0500	0.0535	107	0.0500	0.0523	105	2	65-135	30
n-Propylbenzene	ND	0.0500	0.0480	96	0.0500	0.0524	105	9	65-135	30
o-Xylene	ND	0.0500	0.0546	109	0.0500	0.0498	100	9	75-125	30
Sec-Butylbenzene	ND	0.0500	0.0515	103	0.0500	0.0511	102	1	65-130	30
Styrene	ND	0.0500	0.0532	106	0.0500	0.0505	101	5	75-125	30
Tetrachloroethene	ND	0.0500	0.0524	105	0.0500	0.0502	100	4	65-140	30
Toluene	ND	0.0500	0.0507	101	0.0500	0.0486	97	4	70-125	30
Trans-1,2-Dichloroethene	ND	0.0500	0.0550	110	0.0500	0.0463	92	17	65-135	30
Trans-1,3-Dichloropropene	ND	0.0500	0.0538	108	0.0500	0.0514	103	5	65-125	30
Trichloroethene	ND	0.0500	0.0560	112	0.0500	0.0525	105	7	75-125	30
Trichlorofluoromethane	ND	0.0500	0.0569	114	0.0500	0.0508	102	11	25-185	30
Vinyl Chloride	ND	0.0500	0.0508	102	0.0500	0.0473	95	7	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Toluene-d8	0.0500	0.0519	104	0.0500	0.0498	100	85-115
Dibromofluoromethane	0.0500	0.0545	109	0.0500	0.0507	101	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 11:24
Sample ID:	MBLK2S	Date Analyzed:	09/25/15 11:24
Lab Samp ID:	VS03I18Q	Dilution Factor:	1
Lab File ID:	RIB398	Matrix :	SOIL
Ext Btch ID:	VS03I18	% Moisture :	NA
Calib. Ref.:	RIB367	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0050	0.00055	0.0020
1,2-DIBROMOETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0050	0.00059	0.0020
1,3-DICHLOROBENZENE	ND	0.0050	0.00052	0.0010
1,3-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,4-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
2,2-DICHLOROPROPANE	ND	0.0050	0.0010	0.0020
2-BUTANONE	ND	0.010	0.0025	0.0050
2-CHLOROTOLUENE	ND	0.0050	0.00082	0.0010
4-CHLOROTOLUENE	ND	0.0050	0.00067	0.0010
ACETONE	ND	0.010	0.0031	0.0050
BENZENE	ND	0.0050	0.00050	0.0010
BROMOBENZENE	ND	0.0050	0.00050	0.0010
BROMODICHLOROMETHANE	ND	0.0050	0.00050	0.0010
BROMOFORM	ND	0.0050	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0050	0.00054	0.0010
CHLOROBENZENE	ND	0.0050	0.00050	0.0010
CHLOROETHANE	ND	0.0050	0.0013	0.0020
CHLOROFORM	ND	0.0050	0.00050	0.0010
CHLOROMETHANE	ND	0.0050	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
DICHLORODIFLUOROMETHANE	0.0062	0.0050	0.0012	0.0020
ETHYLBENZENE	ND	0.0050	0.00050	0.0010
ISOPROPYLBENZENE	ND	0.0050	0.00064	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0050
METHYLENE CHLORIDE	0.0015J	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0050	0.00050	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0050	0.00070	0.0010
N-PROPYLBENZENE	ND	0.0050	0.00065	0.0010
O-XYLENE	ND	0.0050	0.00050	0.0010
SEC-BUTYLBENZENE	ND	0.0050	0.00067	0.0010
STYRENE	ND	0.0050	0.00050	0.0010
TETRACHLOROETHENE	ND	0.0050	0.00050	0.0010
TOLUENE	ND	0.0050	0.00050	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
TRICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0050	0.0011	0.0020
VINYL CHLORIDE	ND	0.0050	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00050	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0501	0.05000	100	85-115
DIBROMOFLUOROMETHANE	0.0485	0.05000	97.0	80-119

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW 5035A/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2S				
LAB SAMP ID:	VS03I18Q	VS03I18L	VS03I18C		
LAB FILE ID:	RIB398	RIB395	RIB396		
DATE EXTRACTED:	09/25/1511:24	09/25/1509:41	09/25/1510:09	DATE COLLECTED:	NA
DATE ANALYZED:	09/25/1511:24	09/25/1509:41	09/25/1510:09	DATE RECEIVED:	09/25/15
PREP. BATCH:	VS03I18	VS03I18	VS03I18		
CALIB. REF:	RIB367	RIB367	RIB367		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0500	0.0475	95	0.0500	0.0496	99	4	75-125	30
1,1,1-Trichloroethane	ND	0.0500	0.0440	88	0.0500	0.0534	107	19	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0462	92	0.0500	0.0487	97	5	55-130	30
1,1,2-Trichloroethane	ND	0.0500	0.0464	93	0.0500	0.0490	98	5	60-125	30
1,1-Dichloroethane	ND	0.0500	0.0449	90	0.0500	0.0530	106	17	75-125	30
1,1-Dichloroethene	ND	0.0500	0.0469	94	0.0500	0.0528	106	12	65-135	30
1,1-Dichloropropene	ND	0.0500	0.0483	97	0.0500	0.0517	103	7	70-135	30
1,2,3-Trichlorobenzene	ND	0.0500	0.0463	93	0.0500	0.0495	99	7	60-135	30
1,2,4-Trichlorobenzene	ND	0.0500	0.0476	95	0.0500	0.0509	102	7	65-130	30
1,2,4-Trimethylbenzene	ND	0.0500	0.0495	99	0.0500	0.0542	108	9	65-135	30
1,2-Dibromoethane	ND	0.0500	0.0455	91	0.0500	0.0477	95	5	70-125	30
1,2-Dichlorobenzene	ND	0.0500	0.0485	97	0.0500	0.0527	105	8	75-120	30
1,2-Dichloroethane	ND	0.0500	0.0471	94	0.0500	0.0518	104	9	70-135	30
1,2-Dichloropropane	ND	0.0500	0.0473	95	0.0500	0.0547	109	14	70-120	30
1,3,5-Trimethylbenzene	ND	0.0500	0.0493	99	0.0500	0.0521	104	5	65-135	30
1,3-Dichlorobenzene	ND	0.0500	0.0503	101	0.0500	0.0536	107	6	70-125	30
1,3-Dichloropropane	ND	0.0500	0.0460	92	0.0500	0.0491	98	6	75-125	30
1,4-Dichlorobenzene	ND	0.0500	0.0494	99	0.0500	0.0528	106	7	70-125	30
2,2-Dichloropropane	ND	0.0500	0.0477	95	0.0500	0.0484	97	1	65-135	30
2-Butanone	ND	0.250	0.220	88	0.250	0.214	86	2	30-160	30
2-Chlorotoluene	ND	0.0500	0.0510	102	0.0500	0.0525	105	3	70-130	30
4-Chlorotoluene	ND	0.0500	0.0492	98	0.0500	0.0523	105	6	75-125	30
Acetone	ND	0.250	0.212	85	0.250	0.211	84	0	20-160	30
Benzene	ND	0.0500	0.0480	96	0.0500	0.0533	107	10	75-125	30
Bromobenzene	ND	0.0500	0.0476	95	0.0500	0.0499	100	5	65-120	30
Bromodichloromethane	ND	0.0500	0.0465	93	0.0500	0.0520	104	11	70-130	30
Bromoform	ND	0.0500	0.0471	94	0.0500	0.0490	98	4	55-135	30
Bromomethane	ND	0.0500	0.0490	98	0.0500	0.0545	109	11	30-160	30
Carbon Tetrachloride	ND	0.0500	0.0471	94	0.0500	0.0494	99	5	65-135	30
Chlorobenzene	ND	0.0500	0.0467	93	0.0500	0.0509	102	9	75-125	30
Chloroethane	ND	0.0500	0.0481	96	0.0500	0.0488	98	1	40-155	30
Chloroform	ND	0.0500	0.0481	96	0.0500	0.0536	107	11	70-125	30
Chloromethane	ND	0.0500	0.0436	87	0.0500	0.0483	97	10	50-130	30
cis-1,2-Dichloroethene	ND	0.0500	0.0472	94	0.0500	0.0491	98	4	65-125	30
cis-1,3-Dichloropropene	ND	0.0500	0.0468	94	0.0500	0.0528	106	12	70-125	30
Dichlorodifluoromethane	0.00615	0.0500	0.0452	90	0.0500	0.0495	99	9	35-135	30
Ethylbenzene	ND	0.0500	0.0490	98	0.0500	0.0498	100	2	75-125	30
Isopropylbenzene	ND	0.0500	0.0500	100	0.0500	0.0520	104	4	75-130	30
m/p-Xylenes	ND	0.100	0.0933	93	0.100	0.101	101	8	80-125	30
4-Methyl-2-Pentanone	ND	0.250	0.212	85	0.250	0.220	88	4	45-145	30
Methylene Chloride	0.00145J	0.0500	0.0472	94	0.0500	0.0509	102	8	55-140	30
Methyl tert-butyl ether	ND	0.0500	0.0454	91	0.0500	0.0474	95	4	65-135	30
Naphthalene	ND	0.0500	0.0464	93	0.0500	0.0480	96	3	40-125	30
n-Butylbenzene	ND	0.0500	0.0510	102	0.0500	0.0550	110	8	65-135	30
n-Propylbenzene	ND	0.0500	0.0520	104	0.0500	0.0541	108	4	65-135	30
o-Xylene	ND	0.0500	0.0478	96	0.0500	0.0492	98	3	75-125	30
Sec-Butylbenzene	ND	0.0500	0.0493	99	0.0500	0.0540	108	9	65-130	30
Styrene	ND	0.0500	0.0489	98	0.0500	0.0515	103	5	75-125	30
Tetrachloroethene	ND	0.0500	0.0496	99	0.0500	0.0514	103	4	65-140	30
Toluene	ND	0.0500	0.0477	95	0.0500	0.0508	102	6	70-125	30
Trans-1,2-Dichloroethene	ND	0.0500	0.0488	98	0.0500	0.0530	106	8	65-135	30
Trans-1,3-Dichloropropene	ND	0.0500	0.0455	91	0.0500	0.0472	94	4	65-125	30
Trichloroethene	ND	0.0500	0.0468	94	0.0500	0.0517	103	10	75-125	30
Trichlorofluoromethane	ND	0.0500	0.0475	95	0.0500	0.0491	98	3	25-185	30
Vinyl Chloride	ND	0.0500	0.0479	96	0.0500	0.0517	103	8	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Toluene-d8	0.0500	0.0522	104	0.0500	0.0530	106	85-115
Dibromofluoromethane	0.0500	0.0478	96	0.0500	0.0515	103	80-119

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB337.D
Acq On : 22 Sep 2015 4:42 pm
Sample : VS03I14B 5.0g
Misc : DF=1.0 MB
MS Integration Params: RTE.P
Quant Time: Sep 22 19:35 2015

Vial: 7
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1807314	50.00	ug/l	-0.02
52) CHLOROBENZENE-D5	13.88	117	1842932	50.00	ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.20	152	855455	50.00	ug/l	-0.02
System Monitoring Compounds						
34) Dibromofluoromethane	9.51	111	798856	50.54	ug/l	-0.02
Spiked Amount 50.000			Recovery	=	101.08%	
39) 1,2-Dichloroethane-d4	9.94	65	1075215	50.02	ug/l	-0.02
Spiked Amount 50.000			Recovery	=	100.04%	
53) Toluene-d8	12.13	98	1999376	51.22	ug/l	-0.02
Spiked Amount 50.000			Recovery	=	102.44%	
73) 4-Bromofluorobenzene	15.21	95	1042687	57.43	ug/l	-0.04
Spiked Amount 50.000			Recovery	=	114.86%	
Target Compounds						Qvalue
18) Methylene chloride	7.32	49	45637	2.14	ug/l	96

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

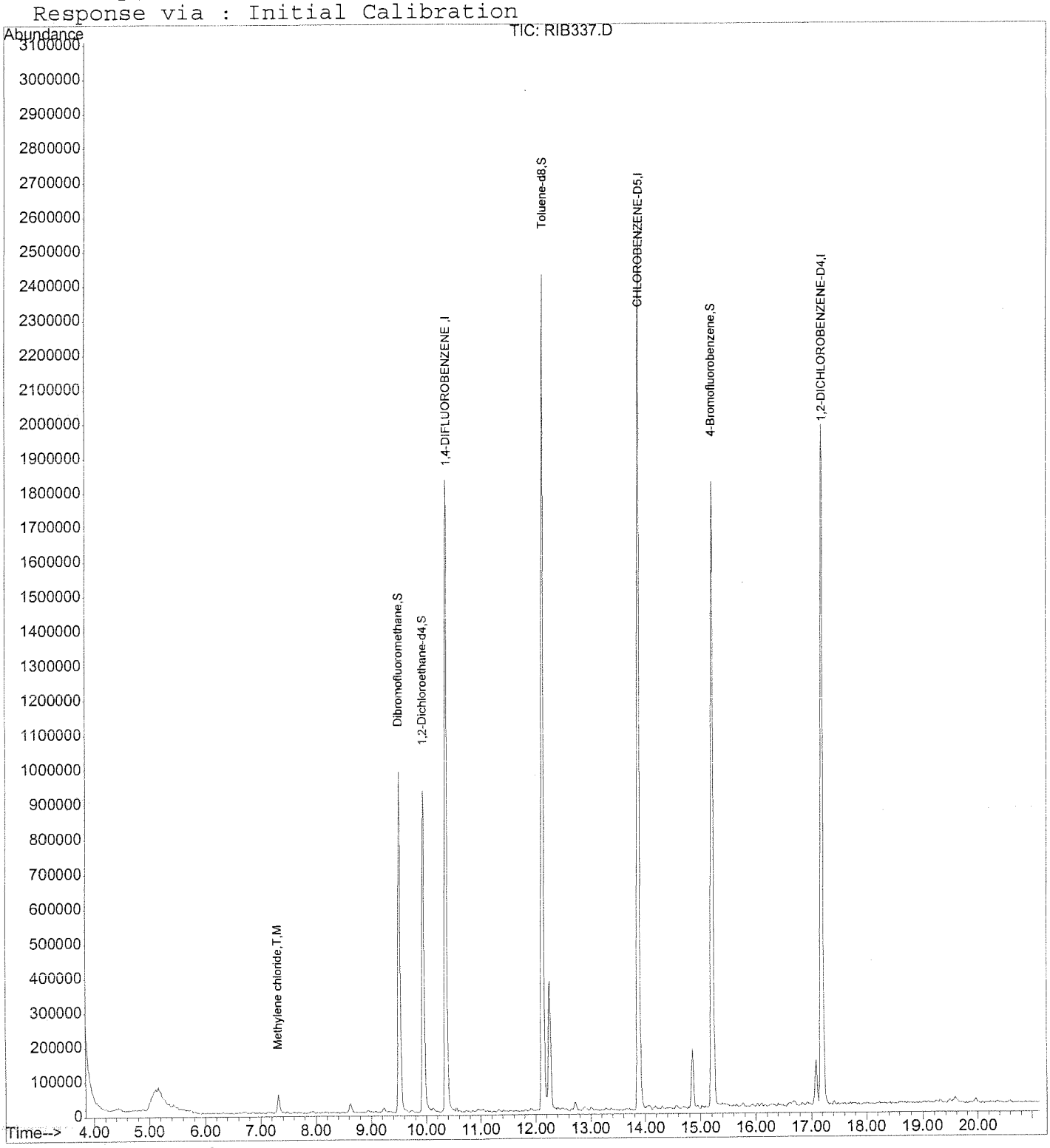
Quantitation Report

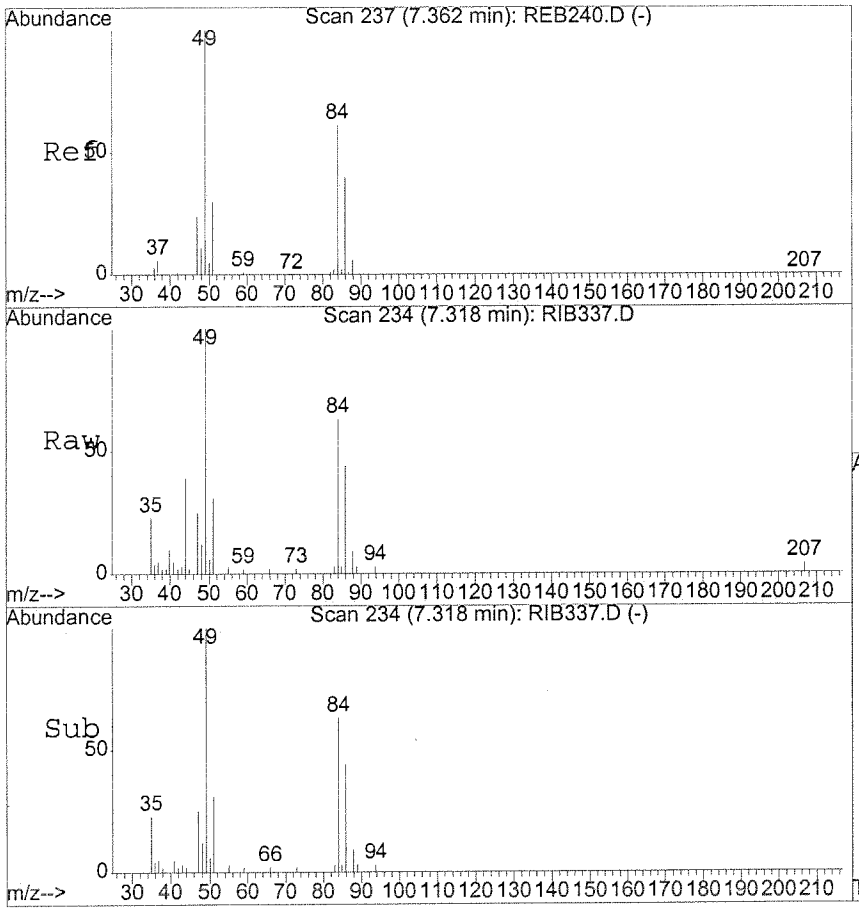
Data File : D:\HPCHEM\1\DATA\15I22\RIB337.D
Acq On : 22 Sep 2015 4:42 pm
Sample : VS03I14B 5.0g
Misc : DF=1.0 MB
MS Integration Params: RTE.P
Quant Time: Sep 22 19:35 2015

Vial: 7
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration

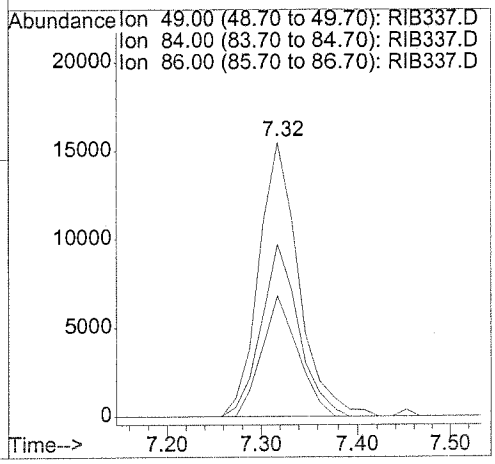




#18
Methylene chloride
Concen: 2.14 ug/l
RT: 7.32 min Scan# 234
Delta R.T. -0.02 min
Lab File: RIB337.D
Acq: 22 Sep 2015 4:42 pm

Tgt Ion: 49 Resp: 45637

Ion	Ratio	Lower	Upper
49	100		
84	59.1	33.6	93.6
86	39.6	10.6	70.6



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB334.D
Acq On : 22 Sep 2015 3:18 pm
Sample : VS03I14L 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 22 15:39 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1636976	50.00 ug/l	-0.03
52) CHLOROBENZENE-D5	13.88	117	1648359	50.00 ug/l	-0.03
70) 1,2-DICHLOROBENZENE-D4	17.20	152	1022488	50.00 ug/l	-0.03
System Monitoring Compounds					
34) Dibromofluoromethane	9.50	111	780757	54.53 ug/l	-0.03
Spiked Amount 50.000			Recovery =	109.06%	
39) 1,2-Dichloroethane-d4	9.93	65	1062668	54.58 ug/l	-0.03
Spiked Amount 50.000			Recovery =	109.16%	
53) Toluene-d8	12.12	98	1811083	51.88 ug/l	-0.03
Spiked Amount 50.000			Recovery =	103.76%	
73) 4-Bromofluorobenzene	15.22	95	1010700	46.57 ug/l	-0.03
Spiked Amount 50.000			Recovery =	93.14%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.04	85	650532	59.20 ug/l	100
4) Chloromethane	4.41	50	563480	47.65 ug/l	99
5) Vinyl chloride	4.65	62	496420	50.85 ug/l	98
7) Bromomethane	5.26	94	383888	42.52 ug/l	99
8) Chloroethane	5.44	64	244972	45.48 ug/l	98
9) Dichlorofluoromethane	5.73	67	1378138	61.55 ug/l	100
10) Trichlorofluoromethane	5.81	101	867084	56.92 ug/l	100
11) Acrolein	6.49	56	348177	242.62 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	325495	58.51 ug/l	99
13) 1,1-Dichloroethene	6.61	61	1071788	57.41 ug/l	99
14) Acetone	6.70	43	1351165	255.52 ug/l	98
15) Iodomethane	6.91	142	1125473	56.43 ug/l	95
16) Carbon disulfide	7.03	76	1772025	43.50 ug/l	98
18) Methylene chloride	7.31	49	1089329	56.34 ug/l	98
19) tert-Butyl alcohol	7.36	59	652879	300.62 ug/l	99
20) tert-Butyl methyl ether (M	7.58	73	1993012	56.43 ug/l	98
21) trans-1,2-Dichloroethene	7.66	61	1024975	54.96 ug/l	99
22) Acrylonitrile	7.64	53	1024802	237.14 ug/l	97
23) Isopropyl ether (DIPE)	8.13	45	2398138	50.82 ug/l	100
25) 1,1-Dichloroethane	8.22	63	1298608	53.78 ug/l	98
26) tert-Butyl ethyl ether (ET	8.58	59	2395089	54.76 ug/l	99
27) 2-Butanone	8.89	43	2073226	256.95 ug/l	100
28) 2,2-Dichloropropane	8.92	77	1193703	66.50 ug/l	99
29) cis-1,2-Dichloroethene	8.94	96	704081	55.73 ug/l	98
30) 2-Butanol	9.04	45	437292	246.43 ug/l	97
31) Bromochloromethane	9.26	49	954664	52.86 ug/l	99
32) Tetrahydrofuran	9.29	42	218365	49.88 ug/l	96

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB334.D Vial: 4
Acq On : 22 Sep 2015 3:18 pm Operator: CMendo
Sample : VS03I14L 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 22 15:39 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	Chloroform	9.29	83	1512200	56.94 ug/l		99
35)	1,1,1-Trichloroethane	9.55	97	1164700	59.66 ug/l		99
36)	Cyclohexane	9.61	56	651073	33.01 ug/l		95
37)	1,1-Dichloropropene	9.72	110	262739	55.17 ug/l		98
38)	Carbon tetrachloride	9.75	119	1027793	62.71 ug/l		99
40)	tert-Amyl methyl ether (TA	9.98	87	457814	56.26 ug/l		95
41)	Benzene	10.01	78	2092632	51.75 ug/l		99
42)	1,2-Dichloroethane	10.02	62	1382551	62.21 ug/l		99
43)	Trichloroethene	10.72	130	622184	56.02 ug/l		99
44)	Methylcyclohexane	10.93	83	757889	39.37 ug/l		98
45)	1,2-Dichloropropane	11.02	63	607168	49.77 ug/l	#	74
46)	1,4-Dioxane	11.14	88	162631	1232.49 ug/l		94
47)	Dibromomethane	11.21	93	575487	56.46 ug/l		98
48)	Bromodichloromethane	11.33	83	1163622	56.55 ug/l		99
50)	cis-1,3-Dichloropropene	11.81	75	1195876	53.98 ug/l		95
51)	4-Methyl-2-pentanone	11.88	43	5045126	251.92 ug/l		99
54)	Toluene	12.21	91	2126607	50.67 ug/l		100
55)	Ethyl methacrylate	12.36	69	923165	50.98 ug/l		99
56)	trans-1,3-Dichloropropene	12.43	75	1201555	53.80 ug/l		94
57)	1,1,2-Trichloroethane	12.69	97	546733	52.07 ug/l		99
58)	Tetrachloroethene	12.87	164	441881	52.36 ug/l		99
59)	2-Hexanone	12.85	43	3634259	242.76 ug/l		97
60)	1,3-Dichloropropane	12.90	76	1055721	52.23 ug/l		99
61)	Dibromochloromethane	13.22	129	826709	54.97 ug/l		98
62)	1,2-Dibromoethane	13.40	107	724118	53.70 ug/l		100
63)	1-Chlorohexane	13.72	91	905263	50.16 ug/l		98
64)	Chlorobenzene	13.91	112	1453889	50.09 ug/l		98
65)	Ethylbenzene	13.94	91	2794470	50.59 ug/l		99
66)	1,1,1,2-Tetrachloroethane	13.98	131	757107	56.90 ug/l		98
67)	m-Xylene & p-Xylene	14.06	91	4451377	103.64 ug/l		99
68)	o-Xylene	14.55	91	2636941	54.56 ug/l		99
69)	Styrene	14.56	104	1738165	53.23 ug/l		97
71)	Bromoform	14.92	173	640870	52.94 ug/l		100
72)	Isopropylbenzene	14.94	105	2957197	48.45 ug/l		100
74)	1,1,2,2-Tetrachloroethane	15.34	83	1296849	49.74 ug/l		99
75)	trans-1,4-Dichloro-2-buten	15.38	53	485283	53.99 ug/l		97
76)	n-Propylbenzene	15.43	91	4086349	47.98 ug/l		99
77)	1,2,3-Trichloropropane	15.44	110	327502	50.86 ug/l		97
78)	Bromobenzene	15.47	156	828601	47.21 ug/l		98
79)	1,3,5-Trimethylbenzene	15.59	105	2743738	51.78 ug/l		99
80)	2-Chlorotoluene	15.64	91	2783512	49.49 ug/l		100

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB334.D
Acq On : 22 Sep 2015 3:18 pm
Sample : VS03I14L 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 22 15:39 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

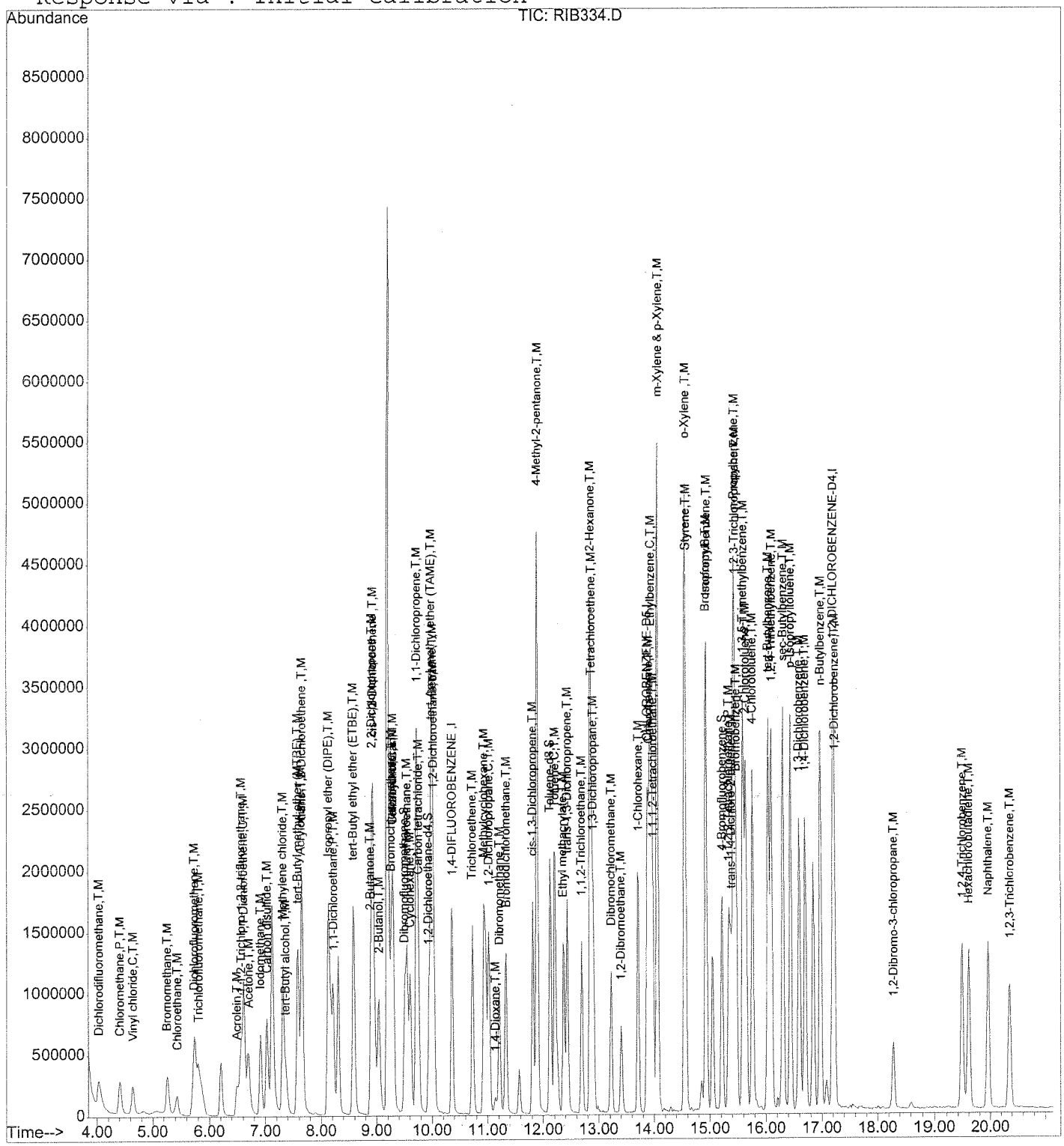
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81)	4-Chlorotoluene	15.76	91	2632217	49.70 ug/l	99
82)	tert-Butylbenzene	16.04	134	540160	52.36 ug/l	96
83)	1,2,4-Trimethylbenzene	16.10	105	2742332	49.82 ug/l	98
84)	sec-Butylbenzene	16.31	105	3577762	51.47 ug/l	98
85)	p-Isopropyltoluene	16.44	119	2824328	51.44 ug/l	99
86)	1,3-Dichlorobenzene	16.59	146	1571307	52.57 ug/l	98
87)	1,4-Dichlorobenzene	16.69	146	1546673	51.38 ug/l	99
88)	n-Butylbenzene	16.98	91	3102363	53.55 ug/l	99
89)	1,2-Dichlorobenzene	17.23	146	1515435	54.90 ug/l	98
90)	1,2-Dibromo-3-chloropropan	18.29	157	249384	58.72 ug/l	99
91)	1,2,4-Trichlorobenzene	19.48	180	790019	60.18 ug/l	99
92)	Hexachlorobutadiene	19.60	225	478418	55.96 ug/l	99
93)	Naphthalene	19.95	128	2174317	60.20 ug/l	100
94)	1,2,3-Trichlorobenzene	20.36	180	654180	59.05 ug/l	98

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB334.D Vial: 4
Acq On : 22 Sep 2015 3:18 pm Operator: CMendo
Sample : VS03I14L 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 22 15:39 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB335.D
Acq On : 22 Sep 2015 3:46 pm
Sample : VS03I14C 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 22 16:07 2015

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2004002	50.00	ug/l	-0.03
52) CHLOROBENZENE-D5	13.88	117	2101826	50.00	ug/l	-0.03
70) 1,2-DICHLOROBENZENE-D4	17.20	152	1101769	50.00	ug/l	-0.03
System Monitoring Compounds						
34) Dibromofluoromethane	9.50	111	888533	50.69	ug/l	-0.03
Spiked Amount 50.000			Recovery	=	101.38%	
39) 1,2-Dichloroethane-d4	9.95	65	1176839	49.37	ug/l	-0.01
Spiked Amount 50.000			Recovery	=	98.74%	
53) Toluene-d8	12.12	98	2217431	49.81	ug/l	-0.03
Spiked Amount 50.000			Recovery	=	99.62%	
73) 4-Bromofluorobenzene	15.22	95	1170165	50.04	ug/l	-0.03
Spiked Amount 50.000			Recovery	=	100.08%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.04	85	680624	50.59	ug/l	99
4) Chloromethane	4.41	50	626616	43.28	ug/l	99
5) Vinyl chloride	4.65	62	564750	47.25	ug/l	99
7) Bromomethane	5.27	94	423255	38.30	ug/l	100
8) Chloroethane	5.44	64	277285	42.05	ug/l	99
9) Dichlorofluoromethane	5.73	67	1394153	50.86	ug/l	100
10) Trichlorofluoromethane	5.81	101	947297	50.79	ug/l	100
11) Acrolein	6.49	56	379469	216.00	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	325773	47.84	ug/l	99
13) 1,1-Dichloroethene	6.63	61	1184217	51.82	ug/l	99
14) Acetone	6.70	43	1477501	228.24	ug/l	97
15) Iodomethane	6.93	142	1243960	50.94	ug/l	96
16) Carbon disulfide	7.03	76	2046465	41.04	ug/l	99
18) Methylene chloride	7.31	49	1187982	50.19	ug/l	98
19) tert-Butyl alcohol	7.37	59	672743	253.03	ug/l	97
20) tert-Butyl methyl ether (M	7.58	73	2171783	50.23	ug/l	99
21) trans-1,2-Dichloroethene	7.66	61	1055969	46.25	ug/l	99
22) Acrylonitrile	7.66	53	1098105	207.56	ug/l	96
23) Isopropyl ether (DIPE)	8.13	45	2632735	45.57	ug/l	99
25) 1,1-Dichloroethane	8.22	63	1403134	47.47	ug/l	99
26) tert-Butyl ethyl ether (ET	8.58	59	2668989	49.84	ug/l	99
27) 2-Butanone	8.91	43	2547788	257.93	ug/l	100
28) 2,2-Dichloropropane	8.94	77	1193712	54.32	ug/l	99
29) cis-1,2-Dichloroethene	8.94	96	703542	45.49	ug/l	94
30) 2-Butanol	9.04	45	473625	218.03	ug/l	98
31) Bromochloromethane	9.26	49	1012984	45.82	ug/l	99
32) Tetrahydrofuran	9.29	42	247901	46.25	ug/l	95

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB335.D Vial: 5
Acq On : 22 Sep 2015 3:46 pm Operator: CMendo
Sample : VS03I14C 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 22 16:07 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) Chloroform	9.31	83	1671899	51.43 ug/l	99
35) 1,1,1-Trichloroethane	9.55	97	1353879	56.65 ug/l	99
36) Cyclohexane	9.61	56	736489	30.50 ug/l	97
37) 1,1-Dichloropropene	9.73	110	302623	51.91 ug/l	99
38) Carbon tetrachloride	9.75	119	1128480	56.24 ug/l	100
40) tert-Amyl methyl ether (TA	9.98	87	483728	48.55 ug/l	96
41) Benzene	10.01	78	2324950	46.96 ug/l	99
42) 1,2-Dichloroethane	10.04	62	1493031	54.88 ug/l	100
43) Trichloroethene	10.72	130	713143	52.45 ug/l	98
44) Methylcyclohexane	10.93	83	852627	36.18 ug/l	99
45) 1,2-Dichloropropane	11.02	63	730184	48.90 ug/l	75
46) 1,4-Dioxane	11.14	88	179677	1112.29 ug/l	94
47) Dibromomethane	11.21	93	658183	52.75 ug/l	99
48) Bromodichloromethane	11.33	83	1405242	55.78 ug/l	100
50) cis-1,3-Dichloropropene	11.81	75	1460811	53.86 ug/l	95
51) 4-Methyl-2-pentanone	11.88	43	6121839	249.70 ug/l	99
54) Toluene	12.21	91	2603058	48.64 ug/l	100
55) Ethyl methacrylate	12.38	69	1128509	48.88 ug/l	96
56) trans-1,3-Dichloropropene	12.44	75	1464445	51.43 ug/l	94
57) 1,1,2-Trichloroethane	12.69	97	709152	52.97 ug/l	99
58) Tetrachloroethene	12.87	164	539813	50.17 ug/l	99
59) 2-Hexanone	12.85	43	4873493	255.30 ug/l	98
60) 1,3-Dichloropropane	12.90	76	1349145	52.34 ug/l	99
61) Dibromochloromethane	13.22	129	1035662	54.00 ug/l	99
62) 1,2-Dibromoethane	13.40	107	903686	52.56 ug/l	100
63) 1-Chlorohexane	13.72	91	1163206	50.55 ug/l	99
64) Chlorobenzene	13.91	112	1894377	51.18 ug/l	99
65) Ethylbenzene	13.94	91	3571213	50.71 ug/l	99
66) 1,1,1,2-Tetrachloroethane	13.98	131	893062	52.64 ug/l	99
67) m-Xylene & p-Xylene	14.06	91	5593646	102.14 ug/l	100
68) o-Xylene	14.55	91	3070749	49.83 ug/l	99
69) Styrene	14.56	104	2100753	50.46 ug/l	98
71) Bromoform	14.92	173	748631	57.39 ug/l	99
72) Isopropylbenzene	14.94	105	3462501	52.64 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.34	83	1443158	51.37 ug/l	98
75) trans-1,4-Dichloro-2-buten	15.38	53	540747	55.84 ug/l	100
76) n-Propylbenzene	15.43	91	4808349	52.39 ug/l	99
77) 1,2,3-Trichloropropane	15.44	110	385380	55.54 ug/l	96
78) Bromobenzene	15.47	156	955610	50.53 ug/l	99
79) 1,3,5-Trimethylbenzene	15.59	105	2965122	51.93 ug/l	99
80) 2-Chlorotoluene	15.64	91	3146057	51.91 ug/l	100

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB335.D Vial: 5
Acq On : 22 Sep 2015 3:46 pm Operator: CMendo
Sample : VS03I14C 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 22 16:07 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

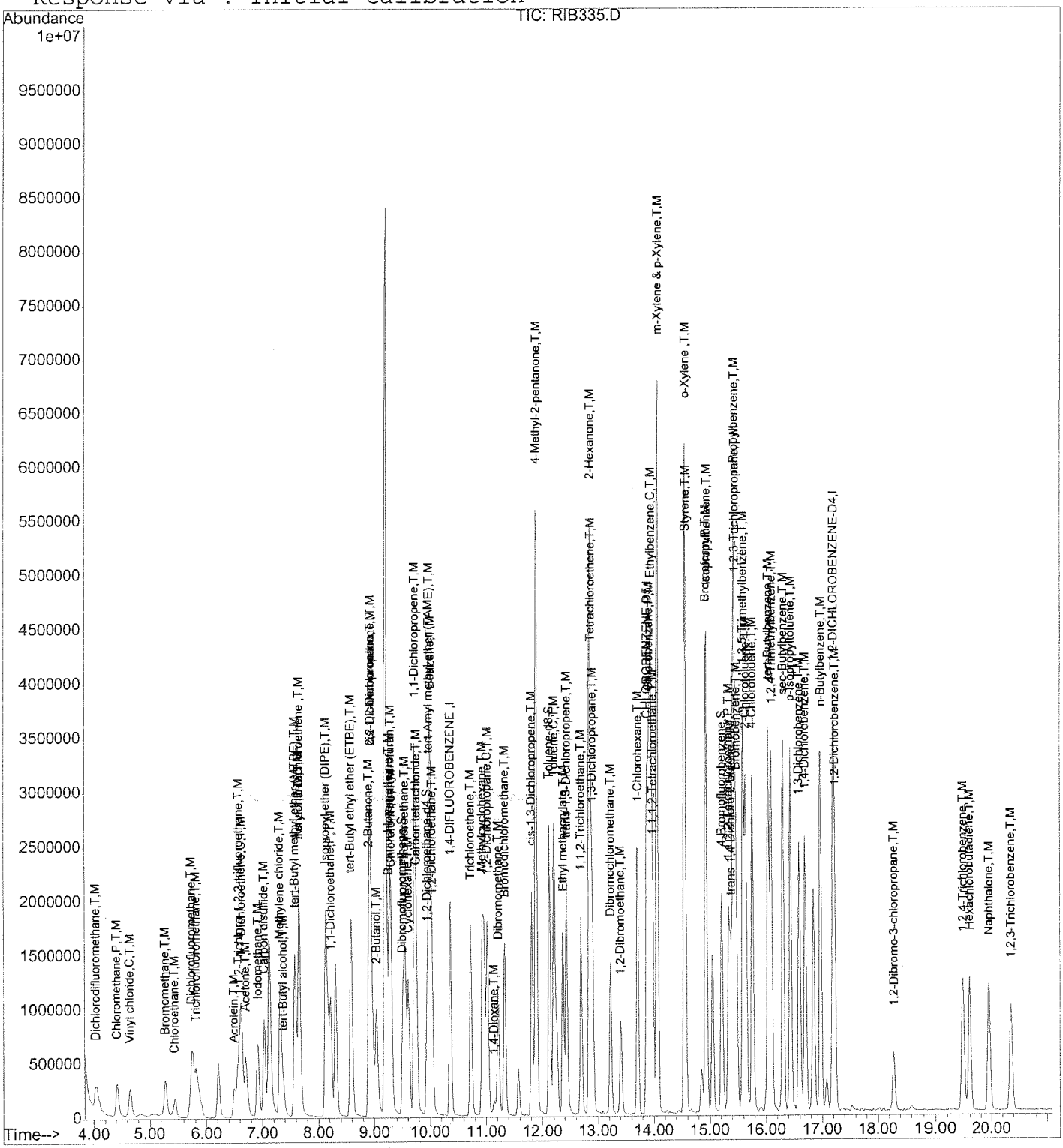
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81)	4-Chlorotoluene	15.76	91	3039198	53.25 ug/l	100
82)	tert-Butylbenzene	16.04	134	567638	51.06 ug/l	96
83)	1,2,4-Trimethylbenzene	16.10	105	2949209	49.72 ug/l	98
84)	sec-Butylbenzene	16.31	105	3828497	51.11 ug/l	99
85)	p-Isopropyltoluene	16.44	119	2947072	49.81 ug/l	99
86)	1,3-Dichlorobenzene	16.59	146	1656880	51.45 ug/l	98
87)	1,4-Dichlorobenzene	16.69	146	1615658	49.81 ug/l	99
88)	n-Butylbenzene	16.98	91	3264133	52.29 ug/l	99
89)	1,2-Dichlorobenzene	17.23	146	1574494	52.94 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.29	157	247233	54.03 ug/l	100
91)	1,2,4-Trichlorobenzene	19.48	180	731682	51.73 ug/l	99
92)	Hexachlorobutadiene	19.60	225	463497	50.31 ug/l	99
93)	Naphthalene	19.95	128	2021454	51.94 ug/l	99
94)	1,2,3-Trichlorobenzene	20.36	180	629161	52.71 ug/l	98

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB335.D Vial: 5
Acq On : 22 Sep 2015 3:46 pm Operator: CMendo
Sample : VS03I14C 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 22 16:07 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB398.D
Acq On : 25 Sep 2015 11:24 am
Sample : VS03I18Q 5.0g
Misc : DF=1.0 MB
MS Integration Params: RTE.P
Quant Time: Oct 8 17:46 2015

Vial: 6
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1936025	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1898608	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	880133	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	9.50	111	841929	48.52	ug/l	-0.01
Spiked Amount 50.000			Recovery =	97.04%		
39) 1,2-Dichloroethane-d4	9.94	65	981324	46.06	ug/l	-0.01
Spiked Amount 50.000			Recovery =	92.12%		
53) Toluene-d8	12.13	98	2439229	50.06	ug/l	0.00
Spiked Amount 50.000			Recovery =	100.12%		
73) 4-Bromofluorobenzene	15.22	95	1105746	50.96	ug/l	0.00
Spiked Amount 50.000			Recovery =	101.92%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.04	85	74917	6.15	ug/l	98
18) Methylene chloride	7.31	49	40714	1.45	ug/l	99

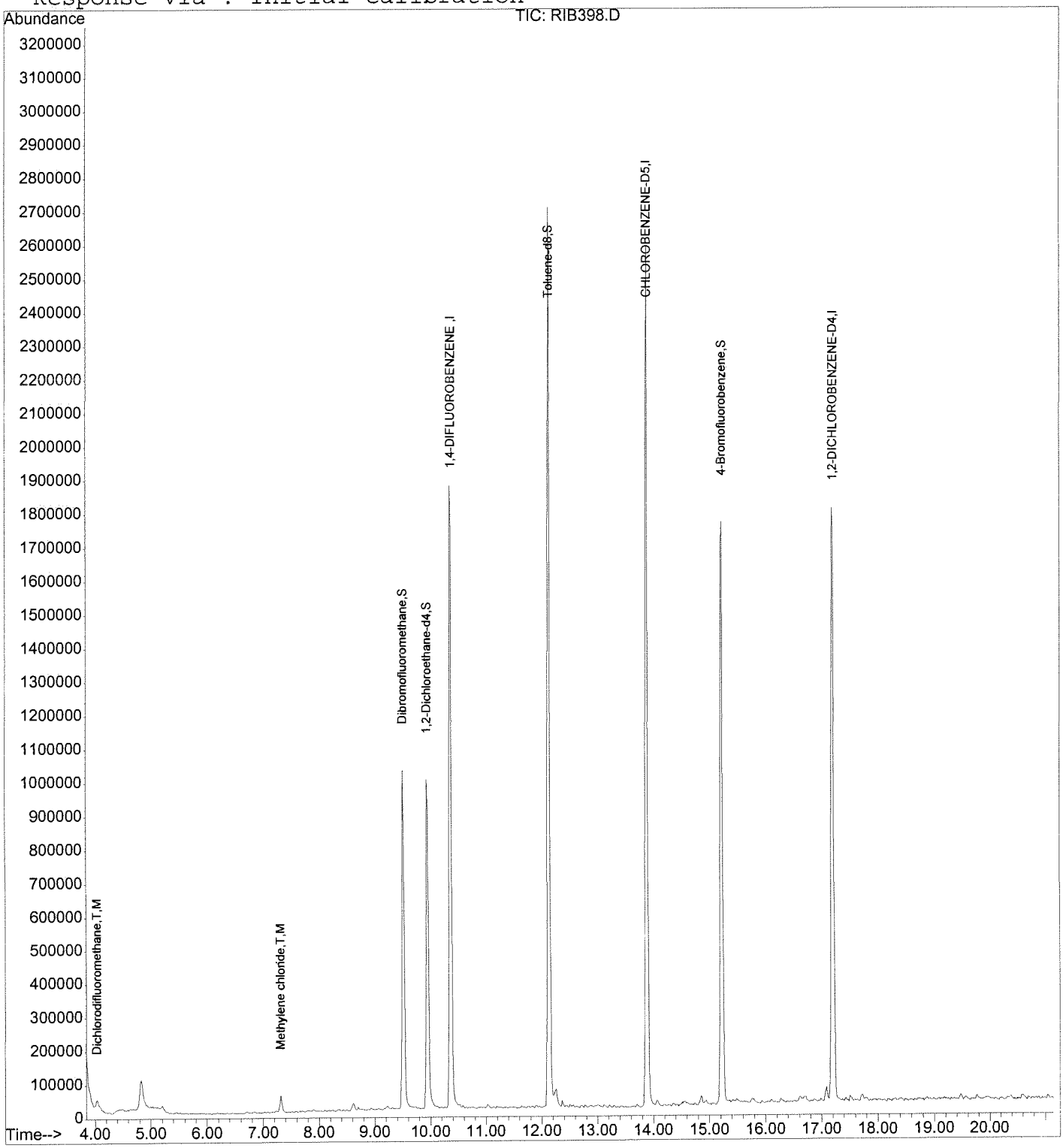
(#) = qualifier out of range (m) = manual integration

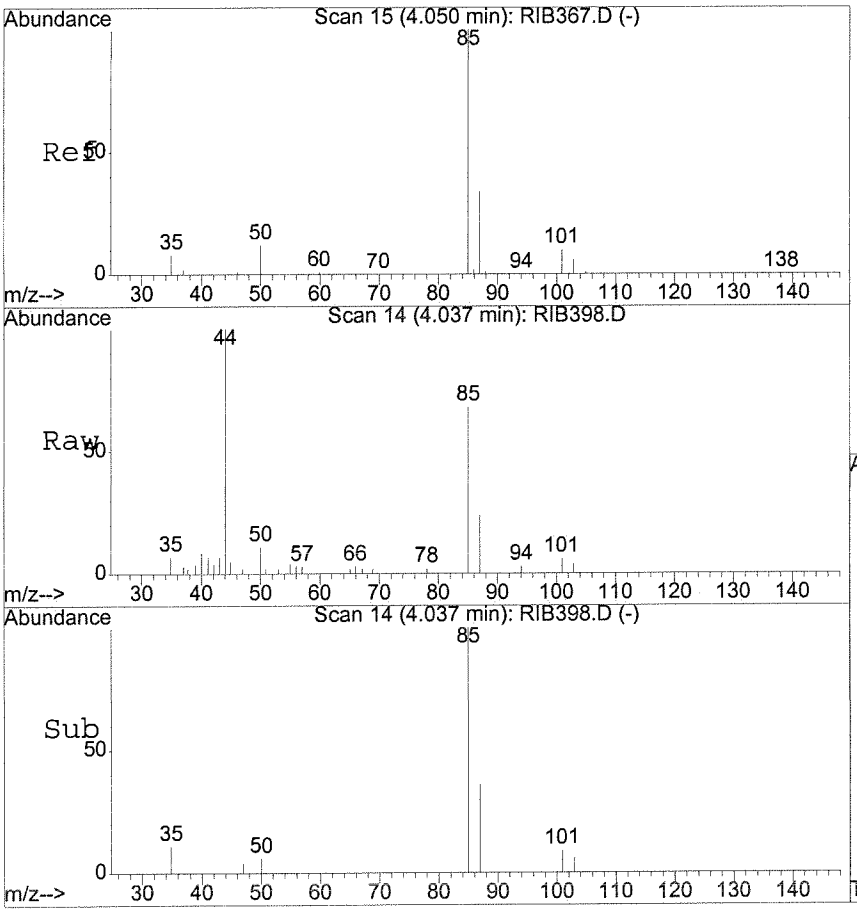
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB398.D
Acq On : 25 Sep 2015 11:24 am
Sample : VS03I18Q 5.0g
Misc : DF=1.0 MB
MS Integration Params: RTE.P
Quant Time: Oct 8 17:46 2015

Vial: 6
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration

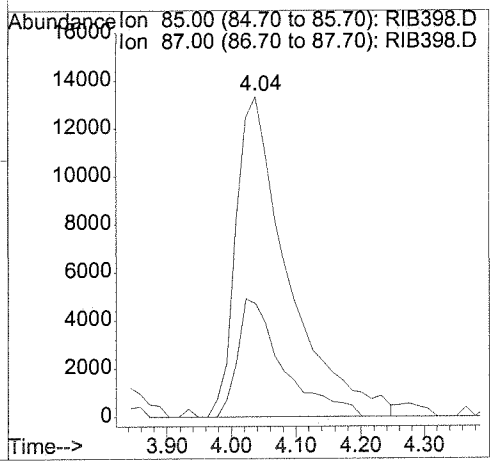


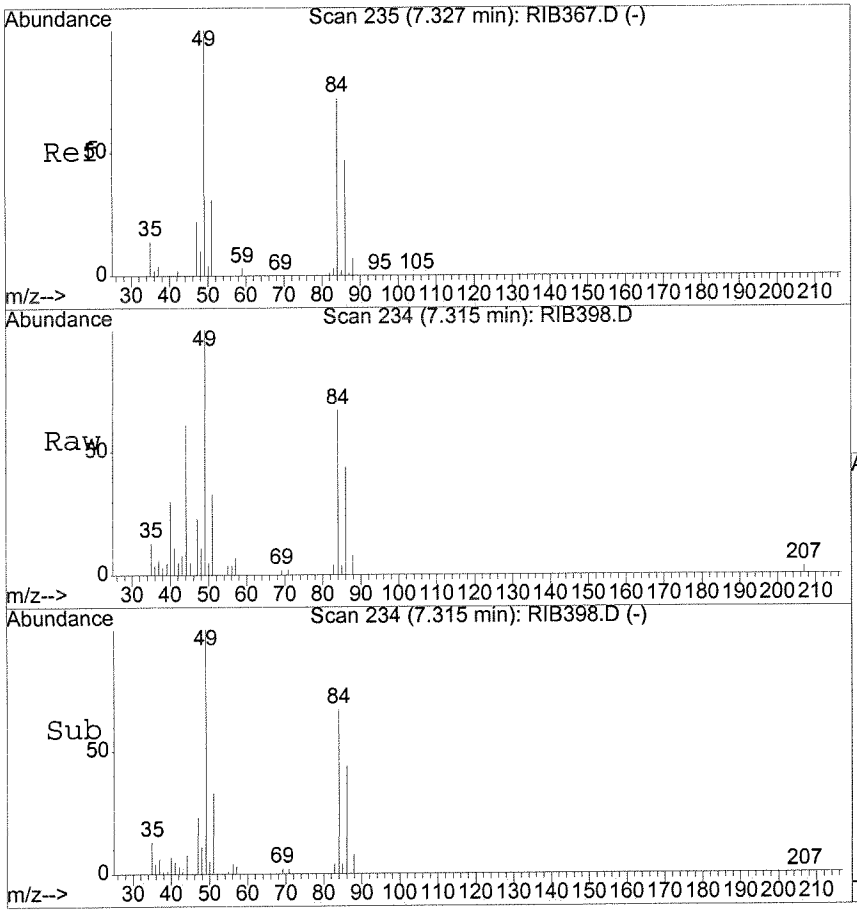


#3
Dichlorodifluoromethane
Concen: 6.15 ug/l
RT: 4.04 min Scan# 14
Delta R.T. -0.01 min
Lab File: RIB398.D
Acq: 25 Sep 2015 11:24 am

Tgt Ion: 85 Resp: 74917

Ion	Ratio	Lower	Upper
85	100		
87	32.1	1.0	61.0

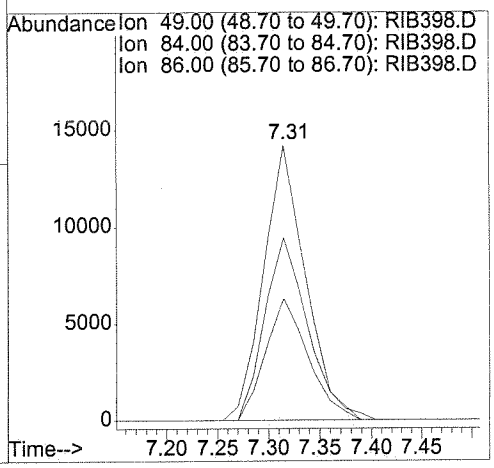




#18
Methylene chloride
Concen: 1.45 ug/l
RT: 7.31 min Scan# 234
Delta R.T. -0.01 min
Lab File: RIB398.D
Acq: 25 Sep 2015 11:24 am

Tgt Ion: 49 Resp: 40714

Ion	Ratio	Lower	Upper
49	100		
84	67.7	38.1	98.1
86	44.9	13.5	73.5



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB395.D
Acq On : 25 Sep 2015 9:41 am
Sample : VS03I18L 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:21 2015

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1987750	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1981244	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	1008034	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	851632	47.81	ug/l	0.00
Spiked Amount 50.000			Recovery =	95.62%		
39) 1,2-Dichloroethane-d4	9.95	65	1079393	49.35	ug/l	0.00
Spiked Amount 50.000			Recovery =	98.70%		
53) Toluene-d8	12.14	98	2652600	52.17	ug/l	0.02
Spiked Amount 50.000			Recovery =	104.34%		
73) 4-Bromofluorobenzene	15.23	95	1241297	49.95	ug/l	0.00
Spiked Amount 50.000			Recovery =	99.90%		
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.97	116	205766	46.03	ug/l	99
3) Dichlorodifluoromethane	4.04	85	565472	45.22	ug/l	86
4) Chloromethane	4.41	50	622016	43.62	ug/l	98
5) Vinyl chloride	4.65	62	511688	47.88	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	285252	45.38	ug/l	96
7) Bromomethane	5.28	94	493228	49.03	ug/l	99
8) Chloroethane	5.44	64	344320	48.11	ug/l	99
9) Dichlorofluoromethane	5.74	67	1461441	49.21	ug/l	100
10) Trichlorofluoromethane	5.81	101	888231	47.53	ug/l	100
11) Acrolein	6.50	56	483024	221.17	ug/l	98
12) 1,1,2-Trichloro-1,2,2-trif	6.59	151	365876	44.95	ug/l	99
13) 1,1-Dichloroethene	6.63	61	1182743	46.85	ug/l	100
14) Acetone	6.71	43	1395316	211.62	ug/l	99
15) Iodomethane	6.93	142	1402594	47.20	ug/l	99
16) Carbon disulfide	7.05	76	2936470	43.80	ug/l	100
18) Methylene chloride	7.33	49	1357949	47.22	ug/l	100
19) tert-Butyl alcohol	7.38	59	524364	206.55	ug/l	74
20) tert-Butyl methyl ether (M	7.60	73	2102460	45.40	ug/l	100
21) Acrylonitrile	7.66	53	1362808	227.37	ug/l	100
22) trans-1,2-Dichloroethene	7.67	61	1249893	48.83	ug/l	99
23) Isopropyl ether (DIPE)	8.14	45	3133237	45.42	ug/l	99
24) Vinyl acetate	8.18	43	2340318	51.69	ug/l	99
25) 1,1-Dichloroethane	8.23	63	1470242	44.85	ug/l	97
26) tert-Butyl ethyl ether (ET	8.60	59	2614489	46.43	ug/l	100
27) 2-Butanone	8.91	43	2699360	219.85	ug/l	100
28) 2,2-Dichloropropane	8.94	77	1214043	47.73	ug/l	99
29) cis-1,2-Dichloroethene	8.96	96	858996	47.24	ug/l	96

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB395.D
Acq On : 25 Sep 2015 9:41 am
Sample : VS03I18L 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:21 2015

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) 2-Butanol	9.06	45	486037	212.13 ug/l	99
31) Bromochloromethane	9.27	49	1143567	46.26 ug/l	100
32) Tetrahydrofuran	9.30	42	274013	43.94 ug/l	99
33) Chloroform	9.31	83	1686880	48.14 ug/l	98
35) 1,1,1-Trichloroethane	9.57	97	1094514	43.99 ug/l	99
36) Cyclohexane	9.63	56	857510	47.76 ug/l	99
37) 1,1-Dichloropropene	9.75	110	333523	48.32 ug/l	99
38) Carbon tetrachloride	9.76	119	940949	47.14 ug/l	100
40) tert-Amyl methyl ether (TA	10.00	87	513816	46.15 ug/l	97
41) Benzene	10.01	78	3023920	48.05 ug/l	99
42) 1,2-Dichloroethane	10.04	62	1266345	47.12 ug/l	99
43) Trichloroethene	10.74	130	743892	46.84 ug/l	98
44) Methylcyclohexane	10.95	83	991811	49.85 ug/l	99
45) 1,2-Dichloropropane	11.04	63	915173	47.33 ug/l	99
46) 1,4-Dioxane	11.16	88	172821	788.55 ug/l	97
47) Dibromomethane	11.22	93	664125	44.09 ug/l	99
48) Bromodichloromethane	11.34	83	1392745	46.49 ug/l	99
50) cis-1,3-Dichloropropene	11.83	75	1651525	46.80 ug/l	100
51) 4-Methyl-2-pentanone	11.91	43	7042625	212.13 ug/l	99
54) Toluene	12.22	91	3163961	47.74 ug/l	100
55) Ethyl methacrylate	12.38	69	1208102	43.83 ug/l	100
56) trans-1,3-Dichloropropene	12.44	75	1478364	45.51 ug/l	99
57) 1,1,2-Trichloroethane	12.71	97	751113	46.40 ug/l	99
58) 2-Hexanone	12.86	43	5194028	214.19 ug/l	99
59) Tetrachloroethene	12.89	164	641706	49.63 ug/l	99
60) 1,3-Dichloropropane	12.92	76	1428918	45.98 ug/l	99
61) Dibromochloromethane	13.23	129	918041	46.64 ug/l	100
62) 1,2-Dibromoethane	13.42	107	867006	45.52 ug/l	98
63) 1-Chlorohexane	13.72	91	1369614	47.01 ug/l	99
64) Chlorobenzene	13.93	112	1872243	46.72 ug/l	100
65) Ethylbenzene	13.96	91	3958391	48.96 ug/l	99
66) 1,1,1,2-Tetrachloroethane	13.99	131	811745	47.50 ug/l	99
67) m-Xylene & p-Xylene	14.08	91	5869945	93.27 ug/l	99
68) o-Xylene	14.56	91	3261493	47.76 ug/l	99
69) Styrene	14.57	104	2257977	48.86 ug/l	98
71) Bromoform	14.94	173	662683	47.12 ug/l	98
72) Isopropylbenzene	14.94	105	3353269	49.96 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.35	83	1437059	46.17 ug/l	99
75) trans-1,4-Dichloro-2-buten	15.39	53	427497	46.36 ug/l	100
76) n-Propylbenzene	15.44	91	5136298	51.97 ug/l	99
77) 1,2,3-Trichloropropane	15.45	110	306297	46.96 ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB395.D Vial: 3
Acq On : 25 Sep 2015 9:41 am Operator: CMendo
Sample : VS03I18L 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:21 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

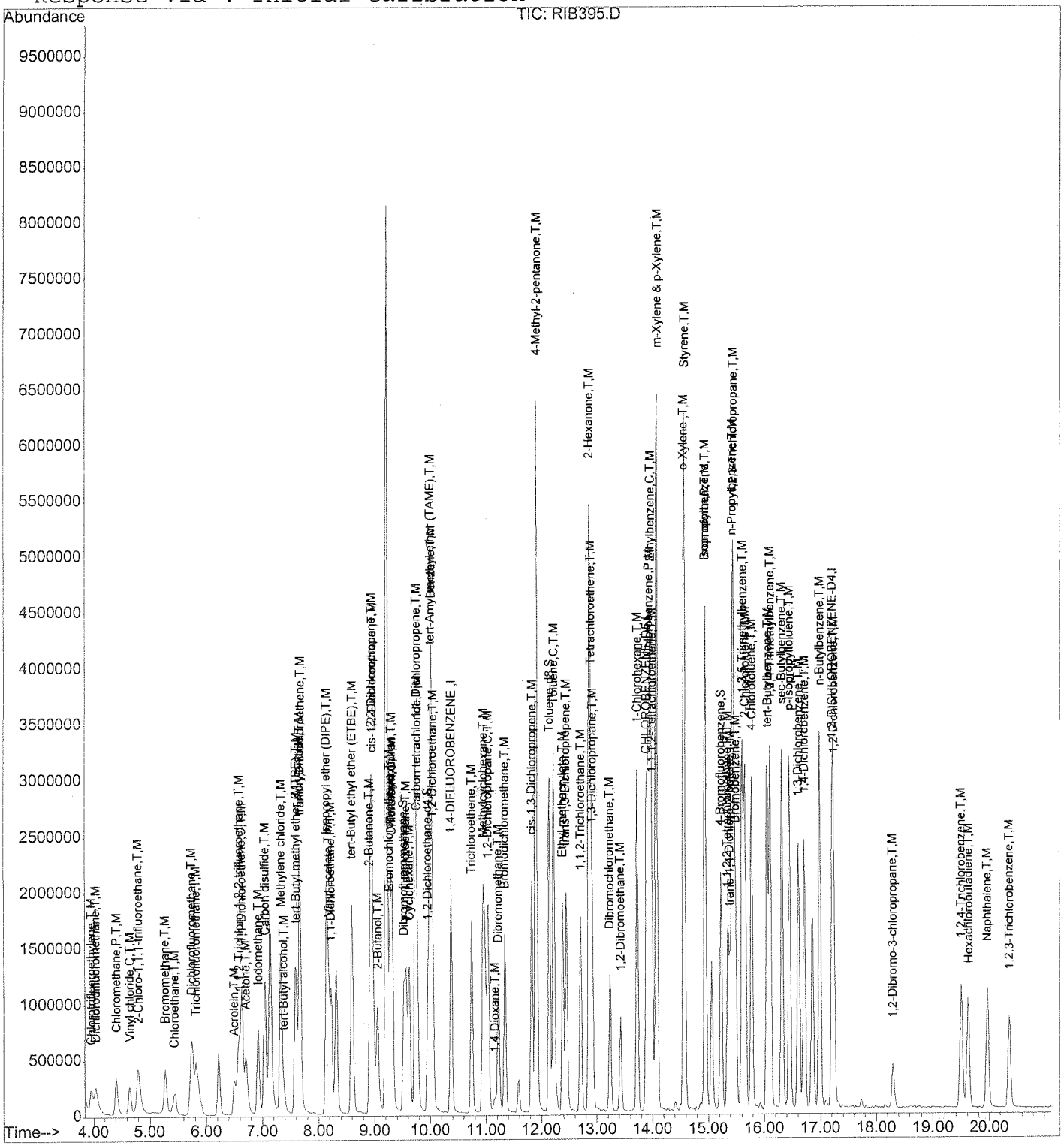
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) Bromobenzene	15.50	156	995992	47.63 ug/l	99
79) 1,3,5-Trimethylbenzene	15.61	105	2813752	49.33 ug/l	100
80) 2-Chlorotoluene	15.66	91	3268412	50.96 ug/l	100
81) 4-Chlorotoluene	15.78	91	2937241	49.19 ug/l	99
82) tert-Butylbenzene	16.06	134	569994	48.57 ug/l	97
83) 1,2,4-Trimethylbenzene	16.11	105	2829661	49.52 ug/l	91
84) sec-Butylbenzene	16.31	105	3593490	49.27 ug/l	99
85) p-Isopropyltoluene	16.45	119	2815244	51.61 ug/l	98
86) 1,3-Dichlorobenzene	16.61	146	1660325	50.27 ug/l	100
87) 1,4-Dichlorobenzene	16.72	146	1640209	49.39 ug/l	100
88) n-Butylbenzene	16.99	91	3205550	51.00 ug/l	99
89) 1,2-Dichlorobenzene	17.24	146	1485165	48.49 ug/l	99
90) 1,2-Dibromo-3-chloropropan	18.30	157	197261	44.50 ug/l	99
91) 1,2,4-Trichlorobenzene	19.49	180	638266	47.59 ug/l	99
92) Hexachlorobutadiene	19.62	225	385840	46.81 ug/l	100
93) Naphthalene	19.96	128	1662889	46.43 ug/l	100
94) 1,2,3-Trichlorobenzene	20.37	180	529949	46.31 ug/l	100

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB395.D Vial: 3
Acq On : 25 Sep 2015 9:41 am Operator: CMendo
Sample : VS03I18L 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:21 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB396.D
Acq On : 25 Sep 2015 10:09 am
Sample : VS03I18C 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:22 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1806007	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1913481	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	952897	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	832913	51.46 ug/l	0.00
Spiked Amount 50.000			Recovery	= 102.92%	
39) 1,2-Dichloroethane-d4	9.95	65	983107	49.47 ug/l	0.00
Spiked Amount 50.000			Recovery	= 98.94%	
53) Toluene-d8	12.12	98	2600853	52.96 ug/l	0.00
Spiked Amount 50.000			Recovery	= 105.92%	
73) 4-Bromofluorobenzene	15.22	95	1101670	46.90 ug/l	0.00
Spiked Amount 50.000			Recovery	= 93.80%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	211154	51.98 ug/l	98
3) Dichlorodifluoromethane	4.04	85	562359	49.49 ug/l	97
4) Chloromethane	4.41	50	625237	48.25 ug/l	100
5) Vinyl chloride	4.65	62	502357	51.74 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	266390	46.65 ug/l	99
7) Bromomethane	5.27	94	498126	54.50 ug/l	99
8) Chloroethane	5.44	64	317409	48.82 ug/l	99
9) Dichlorofluoromethane	5.75	67	1478627	54.80 ug/l	99
10) Trichlorofluoromethane	5.82	101	834423	49.14 ug/l	100
11) Acrolein	6.51	56	461367	232.51 ug/l	96
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	379117	51.26 ug/l	100
13) 1,1-Dichloroethene	6.63	61	1211928	52.84 ug/l	99
14) Acetone	6.70	43	1263299	210.88 ug/l	100
15) Iodomethane	6.93	142	1409845	52.22 ug/l	100
16) Carbon disulfide	7.04	76	3009290	49.40 ug/l	100
18) Methylene chloride	7.31	49	1330686	50.93 ug/l	100
19) tert-Butyl alcohol	7.37	59	473568	205.32 ug/l	75
20) tert-Butyl methyl ether (M	7.60	73	1995305	47.43 ug/l	99
21) Acrylonitrile	7.66	53	1244504	228.53 ug/l	100
22) trans-1,2-Dichloroethene	7.67	61	1232034	52.97 ug/l	99
23) Isopropyl ether (DIPE)	8.13	45	3363989	53.67 ug/l	99
24) Vinyl acetate	8.18	43	2163670	52.60 ug/l	100
25) 1,1-Dichloroethane	8.22	63	1579578	53.04 ug/l	99
26) tert-Butyl ethyl ether (ET	8.59	59	2689109	52.56 ug/l	98
27) 2-Butanone	8.91	43	2392552	214.47 ug/l	100
28) 2,2-Dichloropropane	8.94	77	1117606	48.36 ug/l	99
29) cis-1,2-Dichloroethene	8.95	96	811047	49.09 ug/l	97

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB396.D
Acq On : 25 Sep 2015 10:09 am
Sample : VS03I18C 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:22 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) 2-Butanol	9.06	45	466864	224.48 ug/l	98
31) Bromochloromethane	9.26	49	1129615	50.29 ug/l	99
32) Tetrahydrofuran	9.29	42	270685	47.75 ug/l	99
33) Chloroform	9.31	83	1707062	53.62 ug/l	99
35) 1,1,1-Trichloroethane	9.56	97	1207805	53.43 ug/l	98
36) Cyclohexane	9.61	56	864409	52.99 ug/l	99
37) 1,1-Dichloropropene	9.73	110	323910	51.65 ug/l	97
38) Carbon tetrachloride	9.76	119	895047	49.35 ug/l	99
40) tert-Amyl methyl ether (TA	9.99	87	483848	47.83 ug/l	95
41) Benzene	10.01	78	3046422	53.28 ug/l	99
42) 1,2-Dichloroethane	10.04	62	1263809	51.76 ug/l	99
43) Trichloroethene	10.72	130	745696	51.68 ug/l	99
44) Methylcyclohexane	10.93	83	941453	52.08 ug/l	98
45) 1,2-Dichloropropane	11.02	63	960239	54.66 ug/l	92
46) 1,4-Dioxane	11.14	88	173244	870.03 ug/l	97
47) Dibromomethane	11.22	93	696942	50.92 ug/l	99
48) Bromodichloromethane	11.33	83	1414312	51.96 ug/l	98
50) cis-1,3-Dichloropropene	11.81	75	1693058	52.80 ug/l	99
51) 4-Methyl-2-pentanone	11.90	43	6634968	219.96 ug/l	100
54) Toluene	12.21	91	3253533	50.83 ug/l	100
55) Ethyl methacrylate	12.38	69	1227581	46.12 ug/l	99
56) trans-1,3-Dichloropropene	12.44	75	1481123	47.21 ug/l	96
57) 1,1,2-Trichloroethane	12.69	97	766214	49.01 ug/l	98
58) 2-Hexanone	12.85	43	4924500	210.27 ug/l	100
59) Tetrachloroethene	12.87	164	642187	51.42 ug/l	99
60) 1,3-Dichloropropane	12.90	76	1472637	49.06 ug/l	99
61) Dibromochloromethane	13.23	129	924267	48.62 ug/l	100
62) 1,2-Dibromoethane	13.41	107	877563	47.70 ug/l	99
63) 1-Chlorohexane	13.72	91	1413176	50.22 ug/l	99
64) Chlorobenzene	13.91	112	1970649	50.92 ug/l	98
65) Ethylbenzene	13.94	91	3886357	49.77 ug/l	100
66) 1,1,1,2-Tetrachloroethane	13.99	131	818554	49.60 ug/l	99
67) m-Xylene & p-Xylene	14.06	91	6151702	101.21 ug/l	100
68) o-Xylene	14.55	91	3247443	49.24 ug/l	98
69) Styrene	14.57	104	2299256	51.51 ug/l	98
71) Bromoform	14.92	173	650773	48.95 ug/l	100
72) Isopropylbenzene	14.92	105	3296486	51.95 ug/l	100
74) 1,1,2,2-Tetrachloroethane	15.34	83	1431683	48.66 ug/l	98
75) trans-1,4-Dichloro-2-buten	15.37	53	417362	47.88 ug/l	98
76) n-Propylbenzene	15.43	91	5055577	54.11 ug/l	100
77) 1,2,3-Trichloropropane	15.45	110	296186	48.04 ug/l	98

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB396.D
Acq On : 25 Sep 2015 10:09 am
Sample : VS03I18C 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:22 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

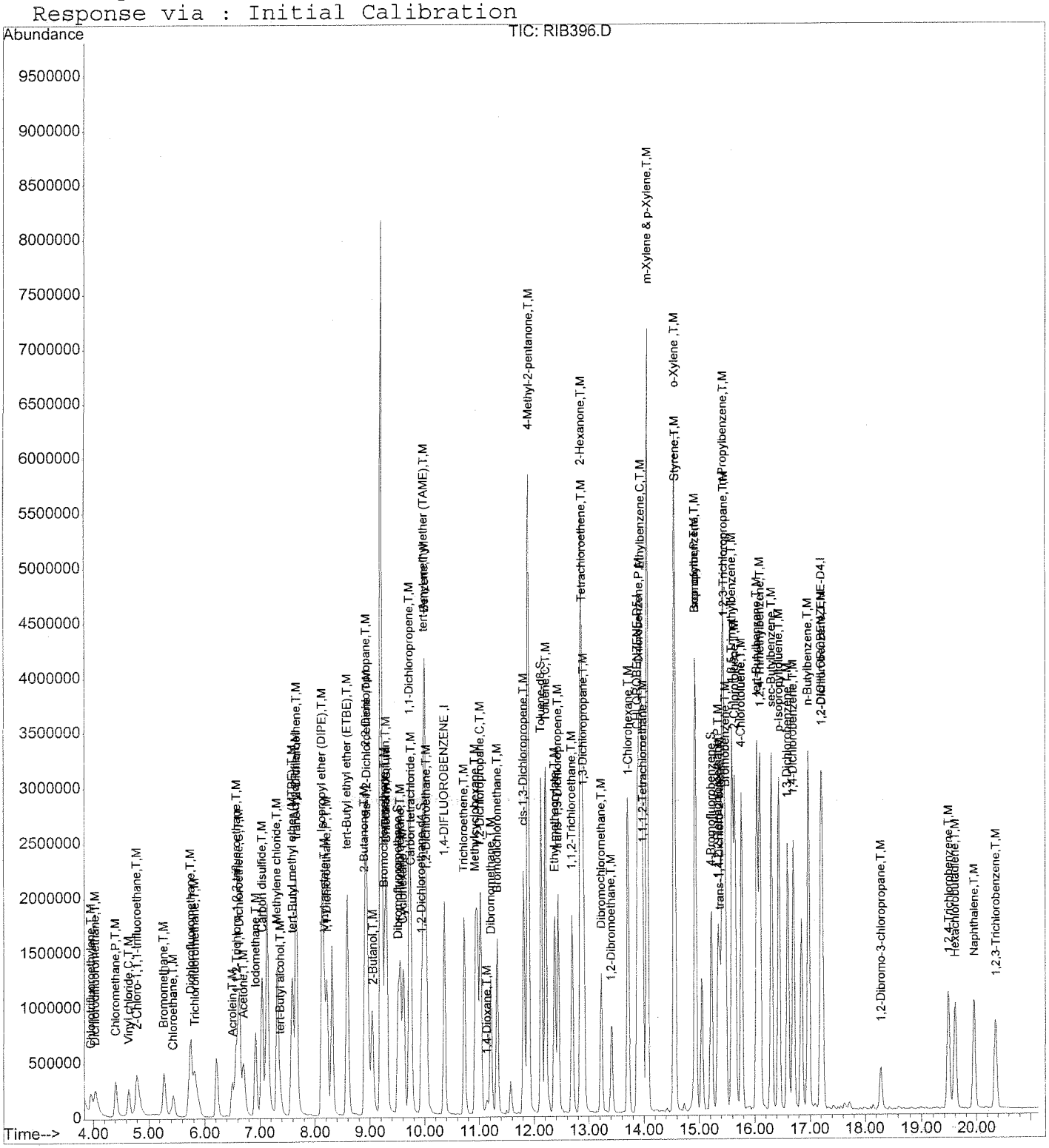
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	986407	49.90 ug/l	99
79)	1,3,5-Trimethylbenzene	15.60	105	2807402	52.06 ug/l	100
80)	2-Chlorotoluene	15.64	91	3181394	52.47 ug/l	99
81)	4-Chlorotoluene	15.76	91	2951438	52.29 ug/l	100
82)	tert-Butylbenzene	16.04	134	573801	51.73 ug/l	97
83)	1,2,4-Trimethylbenzene	16.10	105	2925421	54.16 ug/l	98
84)	sec-Butylbenzene	16.31	105	3722965	54.00 ug/l	100
85)	p-Isopropyltoluene	16.44	119	2761984	53.57 ug/l	99
86)	1,3-Dichlorobenzene	16.59	146	1674408	53.63 ug/l	100
87)	1,4-Dichlorobenzene	16.70	146	1658113	52.82 ug/l	100
88)	n-Butylbenzene	16.97	91	3267515	54.99 ug/l	99
89)	1,2-Dichlorobenzene	17.22	146	1526530	52.72 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.29	157	189775	45.29 ug/l	99
91)	1,2,4-Trichlorobenzene	19.48	180	645526	50.92 ug/l	99
92)	Hexachlorobutadiene	19.60	225	378671	48.60 ug/l	99
93)	Naphthalene	19.96	128	1624855	47.99 ug/l	100
94)	1,2,3-Trichlorobenzene	20.36	180	535491	49.50 ug/l	100

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB396.D Vial: 4
Acq On : 25 Sep 2015 10:09 am Operator: CMendo
Sample : VS03I18C 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:22 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



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INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: REB234
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 15I185
BFB Injection Date : 05/20/15
BFB Injection Time : 07:59
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.05
75	30.0 - 60.0% of mass 95	54.26
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	8.12
173	Less than 2.0% of mass 174	0.32(0.5)1
174	Greater than 50% of mass 95	64.41
175	5.0 - 9.0% of mass 174	5.50(8.5)1
176	95.0 - 101.0% of mass 174	64.25(99.7)1
177	5.0 - 9.0% of mass 176	4.84(7.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD02	V003E202	REB236	05/20/15	09:14
2	VSTD04	V003E203	REB237	05/20/15	09:45
3	VSTD010	V003E204	REB238	05/20/15	10:23
4	VSTD020	V003E205	REB239	05/20/15	10:53
5	VSTD050	V003E206	REB240	05/20/15	11:30
6	VSTD100	V003E207	REB241	05/20/15	12:01
7	VSTD200	V003E208	REB242	05/20/15	12:32
8	VSTD300	V003E209	REB243	05/20/15	13:02
9	VSTD500	V003E2010	REB244	05/20/15	13:32
10	VSTD050	IV003E201	REB247	05/20/15	15:03

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :05/20/15 09:14
Spike Units :PPB
IC File :REB240

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :05/20/15 13:32
HPChem Method :V003E20

M	IDX	Parameters	2 09:14 REB236	4 09:45 REB237	10 10:23 REB238	20 10:53 REB239	50 11:30 REB240	100 12:01 REB241	200 12:32 REB242	300 13:02 REB243	500 13:32 REB244	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	0	10.4236
	2	Chlorotrifluoroethylene	0.126	0.125	0.133	0.153	0.138	0.142	0.129	0.147	0.125	0.135	7.60	3.9839
	3	Dichlorodifluoromethane	0.275	0.368	0.354	0.357	0.342	0.365	0.308	0.359	0.292	0.336	10.33	4.0650
	4	Chloromethane	0.411	0.382	0.392	0.392	0.359	0.332	0.324	0.361	0.298	0.361	10.29	4.4439
	5	Vinyl chloride	0.308	0.310	0.314	0.317	0.304	0.291	0.270	0.310	0.260	0.298	6.87	4.6805
	6	2-Chloro-1,1,1-trifluoroethane	0.220	0.213	0.220	0.237	0.224	0.210	0.204	0.220	0.186	0.215	6.65	4.8343
	7	Bromomethane	0.349	0.307	0.288	0.279	0.257	0.250	0.221	0.254	------	0.276	14.28	5.3076
	8	Chloroethane	0.166	0.168	0.188	0.183	0.170	0.164	0.150	0.162	0.130	0.165	10.43	5.4730
	9	Dichlorofluoromethane	0.770	0.734	0.746	0.798	0.720	0.606	0.601	0.654	0.525	0.684	13.42	5.7873
	10	Trichlorofluoromethane	0.476	0.495	0.519	0.503	0.481	0.455	0.410	0.461	0.388	0.465	9.20	5.8750
	11	Acrolein	0.047	0.047	0.046	0.044	0.046	0.040	0.038	0.050	0.036	0.044	10.33	6.5434
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.195	0.175	0.175	0.187	0.172	0.155	0.154	0.172	0.145	0.170	9.47	6.6262
	13	1,1-Dichloroethene	0.594	0.597	0.631	0.650	0.611	0.516	0.486	0.582	0.465	0.570	11.50	6.6741
	14	Acetone	0.190	0.180	0.169	0.157	0.157	0.142	0.144	0.175	0.140	0.162	11.09	6.7519
	15	Iodomethane	0.675	0.652	0.663	0.677	0.641	0.554	0.519	0.608	0.495	0.609	11.47	6.9753
	16	Carbon disulfide	1.237	1.269	1.241	1.355	1.219	1.176	1.152	1.336	1.215	1.244	5.39	7.0894
	17	Methyl acetate	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	18	Methylene chloride	0.685	0.637	0.640	0.643	0.574	0.533	0.520	0.592	0.491	0.591	11.16	7.3674
	19	tert-Butyl alcohol	0.077	0.071	0.069	0.068	0.070	0.056	0.059	0.072	0.055	0.066	11.69	7.4253
	20	tert-Butyl methyl ether (MTBE)	1.170	1.179	1.104	1.206	1.172	0.993	0.927	1.044	0.913	1.079	10.51	7.6354
	21	trans-1,2-Dichloroethene	0.593	0.610	0.586	0.653	0.608	0.539	0.489	0.579	0.470	0.570	10.43	7.7099
	22	Acrylonitrile	0.123	0.131	0.129	0.129	0.141	0.127	0.126	0.155	0.127	0.132	7.70	7.7082
	23	Isopropyl ether (DIPE)	1.533	1.480	1.504	1.617	1.429	1.358	1.177	1.432	------	1.441	9.15	8.1889
	24	Vinyl acetate	------	0.873	0.885	0.974	1.045	1.076	------	------	------	0.971	9.44	8.2307
	25	1,1-Dichloroethane	0.789	0.747	0.793	0.842	0.758	0.668	0.657	0.742	0.640	0.737	9.33	8.2757
	26	tert-Butyl ethyl ether (ETBE)	1.447	1.446	1.437	1.480	1.406	1.249	1.153	1.359	1.047	1.336	11.40	8.6463
	27	2-Butanone	0.240	0.237	0.241	0.239	0.246	0.225	0.250	0.293	------	0.246	8.18	8.9651
	28	2,2-Dichloropropane	------	0.584	0.584	0.613	0.534	0.426	------	------	------	0.548	13.47	8.9931
	29	cis-1,2-Dichloroethene	0.416	0.420	0.413	0.432	0.395	0.351	0.340	0.376	0.330	0.386	9.86	9.0037
	30	2-Butanol	0.057	0.062	0.053	0.051	0.056	0.049	0.053	0.060	0.047	0.054	9.18	9.1096
	31	Bromochloromethane	0.605	0.558	0.587	0.591	0.545	0.472	0.507	0.548	------	0.552	8.14	9.3243
	32	Tetrahydrofuran	0.173	0.134	0.117	0.129	0.134	0.113	0.123	0.147	------	0.134	14.31	9.3615
	33	Chloroform	0.867	0.831	0.876	0.912	0.817	0.715	0.707	0.764	------	0.811	9.34	9.3634
	34	Dibromofluoromethane	0.454	0.460	0.465	0.500	0.435	0.416	0.403	0.434	0.370	0.437	8.73	9.5699
	35	1,1,1-Trichloroethane	0.604	0.638	0.634	0.690	0.614	0.539	0.499	0.551	------	0.596	10.41	9.6146
	36	Cyclohexane	0.606	0.655	0.673	0.646	0.567	0.566	0.568	0.620	0.521	0.602	8.39	9.6708
	37	1,1-Dichloropropene	0.148	0.149	0.149	0.163	0.147	0.140	0.136	0.151	0.126	0.145	7.12	9.7900
	38	Carbon tetrachloride	0.545	0.551	0.531	0.580	0.525	0.467	0.428	0.480	0.399	0.501	12.10	9.8131
	39	1,2-Dichloroethane-d4	0.609	0.620	0.594	0.629	0.567	0.550	------	------	------	0.595	5.25	10.0068
	40	tert-Amyl methyl ether (TAME)	0.276	0.269	0.267	0.279	0.257	0.228	0.222	0.241	0.198	0.249	11.22	10.0497
	41	Benzene	1.329	1.261	1.253	1.351	1.204	1.137	1.112	1.236	------	1.235	6.77	10.0688
	42	1,2-Dichloroethane	0.735	0.684	0.735	0.756	0.722	0.629	0.610	0.661	0.575	0.679	9.38	10.0977
	43	Trichloroethene	0.350	0.318	0.351	0.366	0.332	0.333	0.331	0.365	0.307	0.339	6.04	10.7942
	44	Methylcyclohexane	0.603	0.593	0.690	0.635	0.570	0.550	0.563	0.604	0.483	0.588	9.79	11.0027
	45	1,2-Dichloropropane	0.380	0.359	0.372	0.401	0.367	0.354	0.345	0.420	0.356	0.373	6.50	11.0904
	46	1,4-Dioxane	0.004	0.005	0.004	0.005	0.004	0.004	0.003	0.004	------	0.004	13.25	11.2098
	47	Dibromomethane	0.328	0.319	0.321	0.336	0.315	0.291	0.285	0.329	0.278	0.311	6.82	11.2807
	48	Bromodichloromethane	0.650	0.615	0.605	0.686	0.646	0.601	0.593	0.675	0.585	0.629	5.87	11.3965
	49	2-Chloroethyl vinyl ether	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	50	cis-1,3-Dichloropropene	0.682	0.652	0.646	0.718	0.663	0.687	0.649	0.743	0.651	0.677	5.09	11.8812
	51	4-Methyl-2-pentanone	0.650	0.670	0.656	0.604	0.623	0.578	0.501	------	------	0.612	9.56	11.9647
	52	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	0	13.9503
	53	Toluene-d8	------	0.980	1.054	1.108	1.010	1.051	1.022	1.189	------	1.059	6.60	12.1935
	54	Toluene	1.249	1.178	1.245	1.328	1.308	1.253	1.189	1.436	------	1.273	6.55	12.2801
	55	Ethyl methacrylate	0.556	0.545	0.555	0.598	0.568	0.515	0.480	0.625	0.502	0.549	8.32	12.4430
	56	trans-1,3-Dichloropropene	0.694	0.654	0.658	0.742	0.675	0.643	0.598	0.770	0.661	0.677	7.71	12.5075
	57	1,1,2-Trichloroethane	0.300	0.300	0.300	0.333	0.322	0.318	0.298	0.378	0.318	0.318	7.98	12.7656
	58	Tetrachloroethene	0.258	0.251	0.243	0.273	0.260	0.255	0.240	0.284	0.241	0.256	5.80	12.9476
	59	2-Hexanone	0.467	0.496	0.484	0.477	0.461	0.414	0.380	------	------	0.454	9.20	12.9219
	60	1,3-Dichloropropane	0.612	0.591	0.603	0.662	0.611	0.599	0.574	0.689	0.578	0.613	6.23	12.9791
	61	Dibromochloromethane	0.400	0.436	0.443	0.499	0.486	0.455	0.434	0.514	0.438	0.456	8.00	13.2967
	62	1,2-Dibromoethane	0.422	0.412	0.404	0.447	0.419	0.390	0.358	0.447	0.383	0.409	7.15	13.4853
	63	1-Chlorohexane	0.598	0.561	0.560	0.617	0.541	0.506	0.488	0.569	0.487	0.547	8.44	13.7832
	64	Chlorobenzene	0.900	0.864	0.862	0.993	0.885	0.844	0.826	0.960	0.790	0.880	7.23	13.9916
	65	Ethylbenzene	1.733	1.646	1.728	1.864	1.705	1.604	1.498	1.624	------	1.675	6.49	14.0223
	66	1,1,1,2-Tetrachloroethane	0.389	0.395	0.436	0.464	0.440	0.387	0.367	0.416	0.339	0.404	9.73	14.0512
2	67	m-Xylene & p-Xylene	1.350	1.326	1.376	1.473	1.293	1.225	1.076	------	------	1.303	9.67	14.1366
	68	o-Xylene	1.474	1.480	1.519	1.699	1.532	1.374	1.248	1.400	------	1.466	9.01	14.6272
	69	Styrene	1.007	1.019	1.039	1.181	1.040	0.965	0.861	0.980	0.823	0.990	10.58	14.6402
	70	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	0	17.2891
	71	Bromoform	0.602	0.571	0.564	0.581	0.593	0.595	0.637	------	------	0.592	4.06	15.0151
	72	Isopropylbenzene	3.169	2.763	2.772	2.941	2.752	2.817	2.921	3.744	------	2.985	11.28	15.0144
	73	4-Bromofluorobenzene	1.121	1.039	0.993	0.994	0.899	1.005	1.051	1.256	1.194	1.061	10.45	15.2971
	74	1,1,2,2-Tetrachloroethane	1.285	1.194	1.133	1.207	1.224	1.184	1.214	1.570	1.465	1.275	11.41	15.4211
	75	trans-1,4-Dichloro-2-butene	0.429	0.400	0.418	0.453	0.453	0.451	0.472	------	------	0.439	5.60	15.4618
	76	n-Propylbenzene	4.665	3.921	3.894	4.363	3.822	3.972	4.118	4.567	------	4.165	7.81	15.5095
	77	1,2,3-Trichloropropane	0.340	0.300	0.288	0.310	0.298	0.289	0.297	0.379	0.332	0.315	9.59	15.5254
	78	Bromobenzene	0.928	0.792	0.772	0.820	0.755	0.797	0.843	1.057	0.960	0.858	11.84	15.5584
	79	1,3,5-Trimethylbenzene	2.784	2.407	2.447	2.702	2.470	2.473	2.492	3.038	2.508	2.591	8.06	15.6759
	80	2-Chlorotoluene	2.855	2.554	2.555	2.814	2.576	2.530	2.718	3.256	2.895	2.750	8.60	15.7272
	81	4-Chlorotoluene	2.777	2.476	2.454	2.555	2.417	2.416	2.503	3.103	2.607	2.590	8.63	15.8480
	82	tert-Butylbenzene	0.561	0.471	0.454	0.522	0.473	0.494	0.456	0.583	0.527	0.504	9.24	16.1276
	83	1,2,4-Trimethylbenzene	2.812	2.587	2.536	2.824	2.641	2.604	2.568	3.070	2.583	2.692	6.53	16.1805
	84	sec-Butylbenzene	3.825	3.276	3.189	3.585	3.127	3.144	3.273	3.777	------	3.399	8.41	16.3936
	85	p-Isopropyltoluene	2.926	2.582	2.518	2.881	2.551	2.597	2.517	3.076	2.518	2.685	8.01	16.5280
	86	1,3-Dichlorobenzene	1.495	1.399	1.406	1.521	1.370	1.368	1.427	1.680	1.487	1.462	6.78	16.6901
	87	1,4-Dichlorobenzene	1.519	1.332	1.405	1.502	1.410	1.404	1.444	1.687	1.545	1.472	7.12	16.7944
	88	n-Butylbenzene	2.901	2.674	2.771	2.996	2.821	2.835	2.717	3.176	2.606	2.833	6.15	17.0624
	89	1,2-Dichlorobenzene	1.458	1.279	1.334	1.383	1.327	1.323	1.280	1.455	1.309	1.350	5.04	17.3172
	90	1,2-Dibromo-3-chloropropane	0.186	0.190	0.194	0.205	0.223	0.209	0.199	0.244	0.220	0.208	9.01	18.3910
	91	1,2,4-Trichlorobenzene	0.549	0.535	0.596	0.685	0.687	0.708	0.644	0.737	0.636	0.642	10.95	19.5872
	92	Hexachlorobutadiene	0.474	0.388	0.417	0.456	0.421	0.420	0.380	0.417	0.390	0.418	7.48	19.7113
	93	Naphthalene	1.461	1.440	1.624	1.854	1.960	1.862	1.820	2.077	1.798	1.766	12.26	20.0654
	94	1,2,3-Trichlorobenzene	0.490	0.463	0.500	0.581	0.585	0.567	0.564	0.590	0.534	0.542	8.66	20.4740

Spike Amount = Nominal Amount * M
Ave_%RSD : 8.9 Max_%RSD : 14.3

SCC 5/28/15

Compound List Report 03

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
Total Cpnds : 94

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	10.43	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	3.98	0.382	A	2	A	B
3	T	Dichlorodifluoromethane	85	4.07	0.390	A	1	A	B
4	T	Chloromethane	50	4.44	0.426	A	1	A	B
5	T	Vinyl chloride	62	4.68	0.449	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	4.83	0.463	A	2	A	B
7	T	Bromomethane	94	5.31	0.509	A	1	A	B
8	T	Chloroethane	64	5.47	0.525	A	2	A	B
9	T	Dichlorofluoromethane	67	5.78	0.555	A	1	A	B
10	T	Trichlorofluoromethane	101	5.87	0.563	A	1	A	B
11	T	Acrolein	56	6.54	0.627	A	1	A	B
12	T	1,1,2-Trichloro-1,2,2-trifluor	151	6.63	0.636	A	1	A	B
13	T	1,1-Dichloroethene	61	6.68	0.640	A	2	A	B
14	T	Acetone	43	6.75	0.647	A	2	A	B
15	T	Iodomethane	142	6.98	0.669	A	1	A	B
16	T	Carbon disulfide	76	7.09	0.680	A	1	A	B
17	T	Methyl acetate	43	0.00	0.000	A	1	A	B
18	T	Methylene chloride	49	7.36	0.706	A	2	A	B
~~19~~	~~T~~	~~tert-Butyl alcohol~~	~~59~~	~~7.42~~	~~0.712~~	~~A~~	~~1~~	~~A~~	~~B~~
20	T	tert-Butyl methyl ether (MTBE)	73	7.63	0.732	A	1	A	B
21	T	trans-1,2-Dichloroethene	61	7.70	0.739	A	2	A	B
22	T	Acrylonitrile	53	7.70	0.739	A	2	A	B
23	T	Isopropyl ether (DIPE)	45	8.18	0.784	A	1	A	B
24	T	Vinyl acetate	43	8.22	0.789	A	1	A	B
25	T	1,1-Dichloroethane	63	8.27	0.793	A	2	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	8.64	0.829	A	1	A	B
27	T	2-Butanone	43	8.96	0.859	A	1	A	B
28	T	2,2-Dichloropropane	77	8.98	0.861	A	2	A	B
29	T	cis-1,2-Dichloroethene	96	9.00	0.863	A	2	A	B
30	T	2-Butanol	45	9.10	0.873	A	1	A	B
31	T	Bromochloromethane	49	9.33	0.894	A	2	A	B
32	T	Tetrahydrofuran	42	9.36	0.897	A	2	A	B
33	T	Chloroform	83	9.36	0.897	A	2	A	B
34	S	Dibromofluoromethane	111	9.57	0.917	A	2	A	B
35	T	1,1,1-Trichloroethane	97	9.61	0.921	A	2	A	B
36	T	Cyclohexane	56	9.67	0.927	A	2	A	B
37	T	1,1-Dichloropropene	110	9.79	0.939	A	1	A	B
38	T	Carbon tetrachloride	119	9.82	0.941	A	1	A	B
39	S	1,2-Dichloroethane-d4	65	10.00	0.959	A	1	A	B
40	T	tert-Amyl methyl ether (TAME)	87	10.04	0.963	A	2	A	B
41	T	Benzene	78	10.07	0.966	A	2	A	B
42	T	1,2-Dichloroethane	62	10.10	0.969	A	1	A	B
43	T	Trichloroethene	130	10.79	1.034	A	3	A	B
44	T	Methylcyclohexane	83	11.00	1.054	A	2	A	B
45	T	1,2-Dichloropropane	63	11.08	1.063	A	2	A	B
46	T	1,4-Dioxane	88	11.20	1.074	A	1	A	B
47	T	Dibromomethane	93	11.28	1.081	A	2	A	B
48	T	Bromodichloromethane	83	11.40	1.093	A	1	A	B
49	T	2-Chloroethyl vinyl ether	63	0.00	0.000	A	1	A	B
50	T	cis-1,3-Dichloropropene	75	11.87	1.138	A	3	A	B
51	T	4-Methyl-2-pentanone	43	11.96	1.147	A	3	A	B
52	I	CHLOROBENZENE-D5	117	13.94	1.000	A	2	A	B

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53	S	Toluene-d8	98	12.19	0.874	A	1	A	B
54	T	Toluene	91	12.28	0.880	A	1	A	B
55	T	Ethyl methacrylate	69	12.44	0.892	A	2	A	B
56	T	trans-1,3-Dichloropropene	75	12.50	0.896	A	2	A	B
57	T	1,1,2-Trichloroethane	97	12.77	0.916	A	3	A	B
58	T	Tetrachloroethene	164	12.95	0.928	A	3	A	B
59	T	2-Hexanone	43	12.92	0.926	A	2	A	B
60	T	1,3-Dichloropropane	76	12.98	0.931	A	1	A	B
61	T	Dibromochloromethane	129	13.29	0.953	A	1	A	B
62	T	1,2-Dibromoethane	107	13.48	0.967	A	1	A	B
63	T	1-Chlorohexane	91	13.78	0.988	A	3	A	B
64	P,M	Chlorobenzene	112	13.99	1.003	A	3	A	B
65	T	Ethylbenzene	91	14.02	1.005	A	1	A	B
66	T	1,1,1,2-Tetrachloroethane	131	14.05	1.007	A	3	A	B
67	T	m-Xylene & p-Xylene	91	14.14	1.014	A	1	A	B
68	T	o-Xylene	91	14.61	1.048	A	1	A	B
69	T	Styrene	104	14.63	1.049	A	2	A	B
70	I	1,2-DICHLOROBENZENE-D4	152	17.28	1.000	A	1	A	B
71	T	Bromoform	173	15.00	0.868	A	2	A	B
72	T	Isopropylbenzene	105	15.00	0.868	A	3	A	B
73	S	4-Bromofluorobenzene	95	15.28	0.885	A	2	A	B
74	T	1,1,2,2-Tetrachloroethane	83	15.42	0.892	A	1	A	B
75	T	trans-1,4-Dichloro-2-butene	53	15.45	0.894	A	1	A	B
76	T	n-Propylbenzene	91	15.51	0.897	A	2	A	B
77	T	1,2,3-Trichloropropane	110	15.52	0.898	A	1	A	B
78	T	Bromobenzene	156	15.55	0.900	A	2	A	B
79	T	1,3,5-Trimethylbenzene	105	15.67	0.907	A	2	A	B
80	T	2-Chlorotoluene	91	15.72	0.910	A	1	A	B
81	T	4-Chlorotoluene	91	15.83	0.916	A	1	A	B
82	T	tert-Butylbenzene	134	16.12	0.933	A	2	A	B
83	T	1,2,4-Trimethylbenzene	105	16.18	0.936	A	1	A	B
84	T	sec-Butylbenzene	105	16.39	0.948	A	1	A	B
85	T	p-Isopropyltoluene	119	16.52	0.956	A	2	A	B
86	T	1,3-Dichlorobenzene	146	16.68	0.966	A	2	A	B
87	T	1,4-Dichlorobenzene	146	16.79	0.972	A	2	A	B
88	T	n-Butylbenzene	91	17.06	0.987	A	2	A	B
89	T	1,2-Dichlorobenzene	146	17.31	1.002	A	2	A	B
90	T	1,2-Dibromo-3-chloropropane	157	18.38	1.064	A	2	A	B
91	T	1,2,4-Trichlorobenzene	180	19.57	1.133	A	2	A	B
92	T	Hexachlorobutadiene	225	19.71	1.140	A	2	A	B
93	T	Naphthalene	128	20.05	1.160	A	1	A	B
94	T	1,2,3-Trichlorobenzene	180	20.47	1.184	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

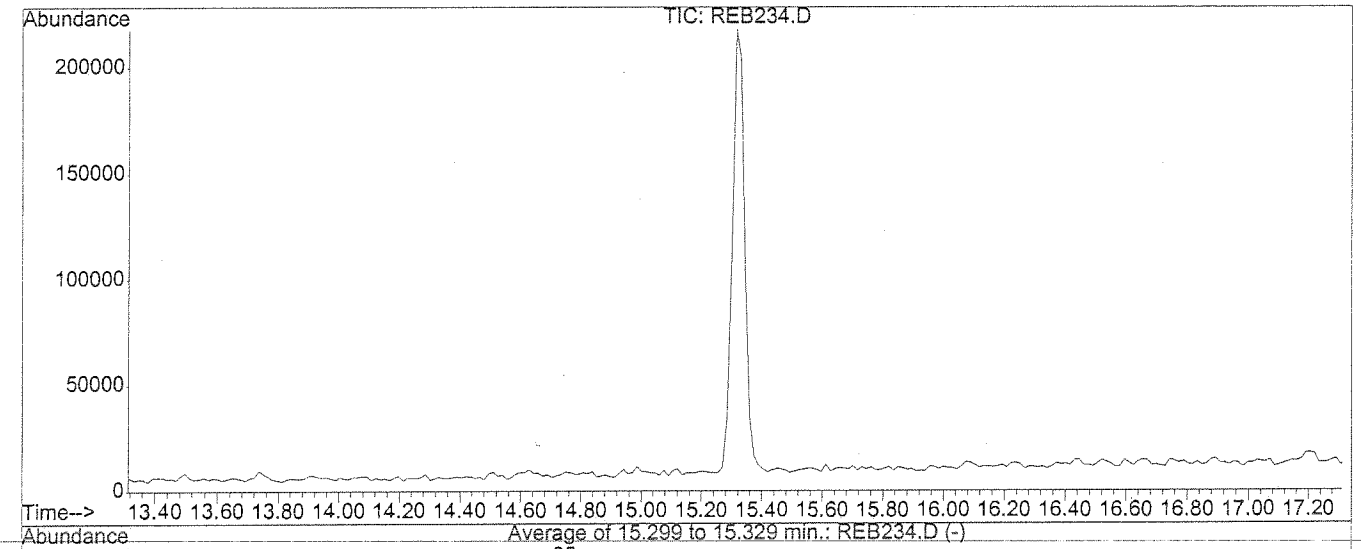
VO03E20.M Thu May 28 11:36:54 2015

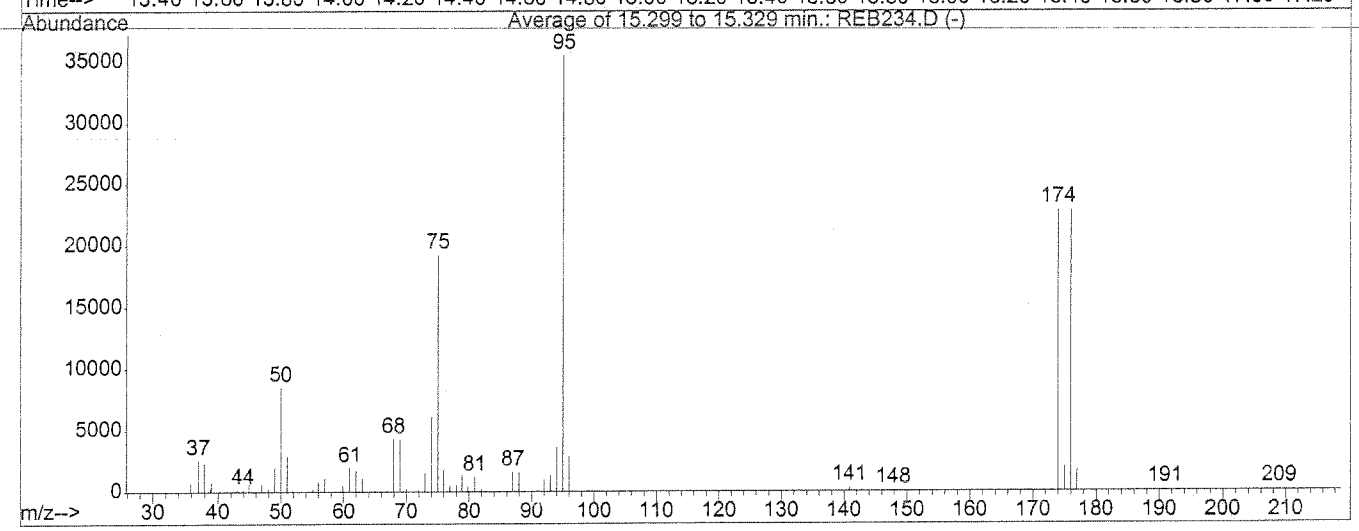
SU 5/28/15

BFB

Data File : D:\HPCHEM\1\DATA\15E20\REB234.D
Acq On : 20 May 2015 7:59 am
Sample : BFB03E19
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00





AutoFind: Scans 770, 771, 772; Background Corrected with Scan 766

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.1	8543	PASS
75	95	30	60	54.3	19272	PASS
95	95	100	100	100.0	35517	PASS
96	95	5	9	8.1	2884	PASS
173	174	0.00	2	0.5	115	PASS
174	95	50	100	64.4	22877	PASS
175	174	5	9	8.5	1953	PASS
176	174	95	101	99.7	22819	PASS
177	176	5	9	7.5	1718	PASS

REB234.D VO03E20.M Thu May 28 11:35:22 2015

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB236.D Vial: 3
Acq On : 20 May 2015 9:14 am Operator: CMendo
Sample : VO03E202 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 27 13:26 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.43	114	1535017	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.96	117	1596425	50.00 ug/l	0.01
70) 1,2-DICHLOROBENZENE-D4	17.31	152	854772	50.00 ug/l	0.03
System Monitoring Compounds					
34) Dibromofluoromethane	9.58	111	27850	2.07 ug/l	0.01
Spiked Amount 50.000			Recovery	= 4.14%	
39) 1,2-Dichloroethane-d4	10.01	65	37392	2.05 ug/l	0.02
Spiked Amount 50.000			Recovery	= 4.10%	
53) Toluene-d8	12.20	98	59673	1.76 ug/l	0.02
Spiked Amount 50.000			Recovery	= 3.52%	
73) 4-Bromofluorobenzene	15.31	95	38337	2.11 ug/l	0.03
Spiked Amount 50.000			Recovery	= 4.22%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.98	116	7726	1.86 ug/l	95
3) Dichlorodifluoromethane	4.07	85	16895	1.64 ug/l	97
4) Chloromethane	4.44	50	25237	2.28 ug/l	97
5) Vinyl chloride	4.68	62	18930	2.07 ug/l	87
6) 2-Chloro-1,1,1-trifluoroet	4.85	118	13537	2.05 ug/l	99
7) Bromomethane	5.32	94	21415	2.53 ug/l	75
8) Chloroethane	5.49	64	10167	2.01 ug/l	89
9) Dichlorofluoromethane	5.80	67	47304	2.25 ug/l	98
10) Trichlorofluoromethane	5.89	101	29225	2.05 ug/l	99
11) Acrolein	6.56	56	14321	10.64 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.63	151	11988	2.30 ug/l	93
13) 1,1-Dichloroethene	6.68	61	36499	2.08 ug/l	97
14) Acetone	6.77	43	58347	11.77 ug/l	95
15) Iodomethane	6.97	142	41443	2.22 ug/l	98
16) Carbon disulfide	7.09	76	75936	1.99 ug/l	96
18) Methylene chloride	7.38	49	42064	2.32 ug/l	95
19) tert-Butyl alcohol	7.42	59	23704	11.64 ug/l	95
20) tert-Butyl methyl ether (M	7.64	73	71856	2.17 ug/l	96
21) trans-1,2-Dichloroethene	7.72	61	36418	2.08 ug/l	98
22) Acrylonitrile	7.72	53	37775	9.32 ug/l	95
23) Isopropyl ether (DIPE)	8.20	45	94137	2.13 ug/l	97
24) Vinyl acetate	8.24	43	45516	1.53 ug/l	96
25) 1,1-Dichloroethane	8.29	63	48435	2.14 ug/l	96
26) tert-Butyl ethyl ether (ET	8.66	59	88833	2.17 ug/l	97
27) 2-Butanone	8.98	43	73619	9.73 ug/l	98
28) 2,2-Dichloropropane	9.00	77	37102	2.20 ug/l	97
29) cis-1,2-Dichloroethene	9.01	96	25537	2.16 ug/l	93

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB236.D
Acq On : 20 May 2015 9:14 am
Sample : VO03E202
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 27 13:26 2015

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	2-Butanol	9.12	45	17351	10.43 ug/l		99
31)	Bromochloromethane	9.33	49	37131	2.19 ug/l		93
32)	Tetrahydrofuran	9.37	42	10614	2.59 ug/l		75
33)	Chloroform	9.37	83	53230	2.14 ug/l		98
35)	1,1,1-Trichloroethane	9.63	97	37115	2.03 ug/l		97
36)	Cyclohexane	9.67	56	37217	2.01 ug/l		97
37)	1,1-Dichloropropene	9.80	110	9096	2.04 ug/l		98
38)	Carbon tetrachloride	9.82	119	33435	2.18 ug/l		98
40)	tert-Amyl methyl ether (TA	10.06	87	16928	2.22 ug/l		95
41)	Benzene	10.07	78	81617	2.15 ug/l		98
42)	~~1,2-Dichloroethane~~	~~10.10~~	~~62~~	~~45155~~	~~2.17 ug/l~~		~~98~~
43)	Trichloroethene	10.80	130	21513	2.07 ug/l		98
44)	Methylcyclohexane	11.01	83	37024	2.05 ug/l		97
45)	1,2-Dichloropropane	11.10	63	23322	2.04 ug/l	#	1
46)	1,4-Dioxane	11.22	88	4870	39.36 ug/l		83
47)	Dibromomethane	11.29	93	20133	2.11 ug/l		98
48)	Bromodichloromethane	11.40	83	39928	2.07 ug/l		94
50)	cis-1,3-Dichloropropene	11.89	75	41850	2.01 ug/l		95
51)	4-Methyl-2-pentanone	11.98	43	199618	10.63 ug/l		99
54)	Toluene	12.29	91	79758	1.96 ug/l		98
55)	Ethyl methacrylate	12.45	69	35497	2.02 ug/l		96
56)	trans-1,3-Dichloropropene	12.51	75	44338	2.05 ug/l		97
57)	1,1,2-Trichloroethane	12.77	97	19185	1.89 ug/l		93
58)	Tetrachloroethene	12.96	164	16499	2.02 ug/l		97
59)	2-Hexanone	12.93	43	149193	10.29 ug/l		99
60)	1,3-Dichloropropane	12.99	76	39100	2.00 ug/l		99
61)	Dibromochloromethane	13.30	129	25533	1.75 ug/l		93
62)	1,2-Dibromoethane	13.50	107	26947	2.06 ug/l		100
63)	1-Chlorohexane	13.79	91	38201	2.19 ug/l		98
64)	Chlorobenzene	14.00	112	57478	2.04 ug/l	#	66
65)	Ethylbenzene	14.03	91	110676	2.07 ug/l		99
66)	1,1,1,2-Tetrachloroethane	14.06	131	24828	1.93 ug/l		90
67)	m-Xylene & p-Xylene	14.14	91	172469	4.15 ug/l		97
68)	o-Xylene	14.64	91	94140	2.01 ug/l		99
69)	Styrene	14.66	104	64288	2.03 ug/l		99
71)	Bromoform	15.03	173	20596	2.04 ug/l		98
72)	Isopropylbenzene	15.03	105	108353	2.12 ug/l		98
74)	1,1,2,2-Tetrachloroethane	15.43	83	43934	2.02 ug/l		92
75)	trans-1,4-Dichloro-2-buten	15.48	53	14675	1.95 ug/l		94
76)	n-Propylbenzene	15.52	91	159492	2.24 ug/l		100
77)	1,2,3-Trichloropropane	15.54	110	11640	2.16 ug/l		92

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

SG 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB236.D Vial: 3
Acq On : 20 May 2015 9:14 am Operator: CMendo
Sample : VO03E202 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 27 13:26 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
78)	Bromobenzene	15.58	156	31745	2.16 ug/l		89
79)	1,3,5-Trimethylbenzene	15.69	105	95195	2.15 ug/l		98
80)	2-Chlorotoluene	15.75	91	97604	2.08 ug/l		98
81)	4-Chlorotoluene	15.86	91	94952	2.14 ug/l		98
82)	tert-Butylbenzene	16.15	134	19178	2.22 ug/l		95
83)	1,2,4-Trimethylbenzene	16.19	105	96135	2.09 ug/l		99
84)	sec-Butylbenzene	16.42	105	130771	2.25 ug/l		99
85)	p-Isopropyltoluene	16.55	119	100040	2.18 ug/l		99
86)	1,3-Dichlorobenzene	16.71	146	51120	2.05 ug/l		98
87)	1,4-Dichlorobenzene	16.82	146	51944	2.06 ug/l		98
88)	n-Butylbenzene	17.09	91	99179	2.05 ug/l		96
89)	1,2-Dichlorobenzene	17.34	146	49864	2.16 ug/l		85
90)	1,2-Dibromo-3-chloropropan	18.43	157	6367	1.79 ug/l	#	76
91)	1,2,4-Trichlorobenzene	19.63	180	18772	1.71 ug/l		97
92)	Hexachlorobutadiene	19.75	225	16222	2.27 ug/l		97
93)	Naphthalene	20.09	128	49961	1.65 ug/l		98
94)	1,2,3-Trichlorobenzene	20.51	180	16765	1.81 ug/l		96

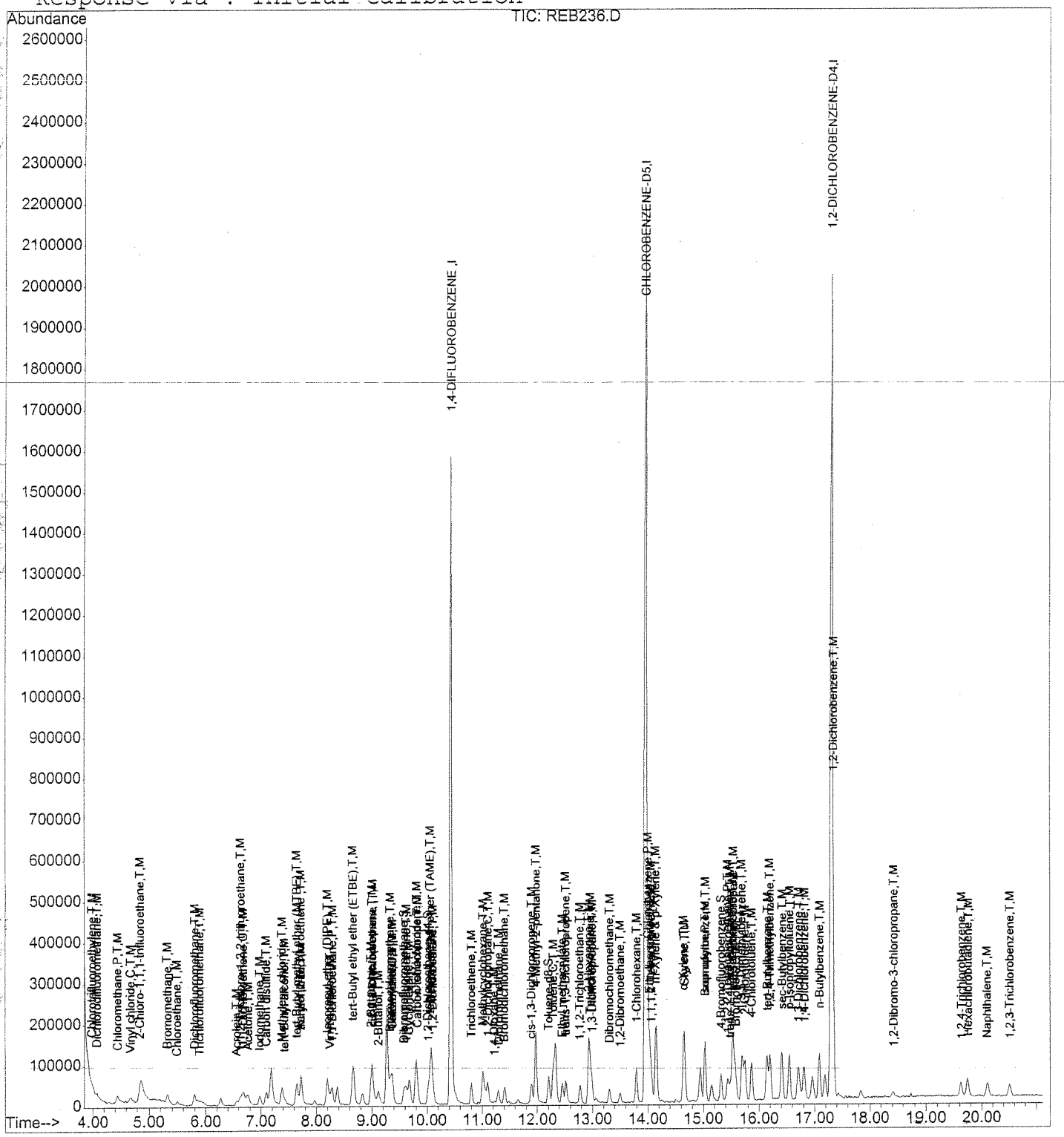
SU 5/28/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB236.D Vial: 3
Acq On : 20 May 2015 9:14 am Operator: CMendo
Sample : VO03E202 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 27 13:26 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB237.D
Acq On : 20 May 2015 9:45 am
Sample : VO03E203
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 27 13:25 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.42	114	1508868	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.95	117	1562693	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.30	152	893474	50.00 ug/l	0.02
System Monitoring Compounds					
34) Dibromofluoromethane	9.58	111	55499	4.21 ug/l	0.00
Spiked Amount 50.000			Recovery	= 8.42%	
39) 1,2-Dichloroethane-d4	10.01	65	74830	4.17 ug/l	0.01
Spiked Amount 50.000			Recovery	= 8.34%	
53) Toluene-d8	12.20	98	122516	3.70 ug/l	0.01
Spiked Amount 50.000			Recovery	= 7.40%	
~~73) 4-Bromofluorobenzene~~	~~15.31~~	~~95~~	~~74280~~	~~3.92 ug/l~~	~~0.02~~
Spiked Amount 50.000			Recovery	= 7.84%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.99	116	15043	3.69 ug/l	87
3) Dichlorodifluoromethane	4.07	85	44411	4.38 ug/l	84
4) Chloromethane	4.44	50	46053	4.22 ug/l	96
5) Vinyl chloride	4.68	62	37401	4.16 ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	4.84	118	25749	3.97 ug/l	98
7) Bromomethane	5.32	94	37006	4.45 ug/l	89
8) Chloroethane	5.48	64	20253	4.08 ug/l	95
9) Dichlorofluoromethane	5.79	67	88646	4.30 ug/l	99
10) Trichlorofluoromethane	5.85	101	59706	4.25 ug/l	100
11) Acrolein	6.55	56	28215	21.33 ug/l	97
12) 1,1,2-Trichloro-1,2,2-trif	6.63	151	21113	4.12 ug/l	97
13) 1,1-Dichloroethene	6.67	61	72080	4.19 ug/l	96
14) Acetone	6.76	43	108747	22.31 ug/l	98
15) Iodomethane	6.98	142	78691	4.28 ug/l	100
16) Carbon disulfide	7.09	76	153124	4.08 ug/l	97
18) Methylene chloride	7.37	49	76861	4.31 ug/l	98
19) tert-Butyl alcohol	7.43	59	42739	21.35 ug/l	94
20) tert-Butyl methyl ether (M	7.64	73	142333	4.37 ug/l	98
21) trans-1,2-Dichloroethene	7.71	61	73611	4.28 ug/l	98
22) Acrylonitrile	7.71	53	78821	19.79 ug/l	91
23) Isopropyl ether (DIPE)	8.19	45	178688	4.11 ug/l	98
24) Vinyl acetate	8.24	43	105320	3.60 ug/l	98
25) 1,1-Dichloroethane	8.28	63	90195	4.05 ug/l	99
26) tert-Butyl ethyl ether (ET	8.65	59	174557	4.33 ug/l	96
27) 2-Butanone	8.98	43	142857	19.21 ug/l	99
28) 2,2-Dichloropropane	8.99	77	70548	4.26 ug/l	99
29) cis-1,2-Dichloroethene	9.01	96	50684	4.35 ug/l	92

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

5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB237.D
Acq On : 20 May 2015 9:45 am
Sample : VO03E203
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 27 13:25 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	2-Butanol	9.11	45	37263	22.78 ug/l		99
31)	Bromochloromethane	9.32	49	67333	4.04 ug/l		98
32)	Tetrahydrofuran	9.37	42	16212	4.02 ug/l		100
33)	Chloroform	9.37	83	100320	4.10 ug/l		98
35)	1,1,1-Trichloroethane	9.62	97	77068	4.28 ug/l		99
36)	Cyclohexane	9.68	56	79055	4.35 ug/l		97
37)	1,1-Dichloropropene	9.80	110	18022	4.11 ug/l		99
38)	Carbon tetrachloride	9.81	119	66524	4.40 ug/l		99
40)	tert-Amyl methyl ether (TA	10.05	87	32437	4.32 ug/l		96
41)	Benzene	10.08	78	152163	4.08 ug/l		98
42)	~~1,2-Dichloroethane~~	~~10.11~~	~~62~~	~~82590~~	~~4.03 ug/l~~		~~96~~
43)	Trichloroethene	10.80	130	38361	3.75 ug/l		96
44)	Methylcyclohexane	11.00	83	71610	4.04 ug/l		98
45)	1,2-Dichloropropane	11.09	63	43302	3.85 ug/l	#	75
46)	1,4-Dioxane	11.23	88	12127	99.71 ug/l		90
47)	Dibromomethane	11.29	93	38466	4.09 ug/l		97
48)	Bromodichloromethane	11.41	83	74223	3.91 ug/l		99
50)	cis-1,3-Dichloropropene	11.88	75	78728	3.86 ug/l		99
51)	4-Methyl-2-pentanone	11.97	43	404385	21.91 ug/l		99
54)	Toluene	12.29	91	147233	3.70 ug/l		99
55)	Ethyl methacrylate	12.45	69	68136	3.97 ug/l		99
56)	trans-1,3-Dichloropropene	12.52	75	81752	3.86 ug/l		98
57)	1,1,2-Trichloroethane	12.78	97	37451	3.76 ug/l		97
58)	Tetrachloroethene	12.96	164	31318	3.91 ug/l		95
59)	2-Hexanone	12.93	43	310115	21.85 ug/l		99
60)	1,3-Dichloropropane	12.99	76	73843	3.85 ug/l		98
61)	Dibromochloromethane	13.30	129	54533	3.82 ug/l		99
62)	1,2-Dibromoethane	13.49	107	51479	4.03 ug/l		94
63)	1-Chlorohexane	13.79	91	70117	4.10 ug/l		99
64)	Chlorobenzene	14.00	112	108038	3.93 ug/l		85
65)	Ethylbenzene	14.03	91	205794	3.93 ug/l		99
66)	1,1,1,2-Tetrachloroethane	14.06	131	49367	3.91 ug/l		94
67)	m-Xylene & p-Xylene	14.15	91	331615	8.14 ug/l		100
68)	o-Xylene	14.64	91	185045	4.04 ug/l		97
69)	Styrene	14.65	104	127441	4.12 ug/l		99
71)	Bromoform	15.03	173	40831	3.86 ug/l		99
72)	Isopropylbenzene	15.03	105	197458	3.70 ug/l		99
74)	1,1,2,2-Tetrachloroethane	15.43	83	85317	3.74 ug/l		99
75)	trans-1,4-Dichloro-2-buten	15.47	53	28624	3.64 ug/l		95
76)	n-Propylbenzene	15.52	91	280236	3.77 ug/l		98
77)	1,2,3-Trichloropropane	15.53	110	21459	3.81 ug/l		94

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

SU 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB237.D
Acq On : 20 May 2015 9:45 am
Sample : VO03E203
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 27 13:25 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
78)	Bromobenzene	15.58	156	56583	3.69 ug/l	#	87
79)	1,3,5-Trimethylbenzene	15.68	105	172020	3.72 ug/l		99
80)	2-Chlorotoluene	15.74	91	182579	3.71 ug/l		99
81)	4-Chlorotoluene	15.86	91	176945	3.82 ug/l		100
82)	tert-Butylbenzene	16.14	134	33678	3.74 ug/l	#	90
83)	1,2,4-Trimethylbenzene	16.19	105	184919	3.84 ug/l		98
84)	sec-Butylbenzene	16.41	105	234169	3.85 ug/l		100
85)	p-Isopropyltoluene	16.54	119	184563	3.85 ug/l		99
86)	1,3-Dichlorobenzene	16.71	146	100006	3.83 ug/l		96
87)	1,4-Dichlorobenzene	16.81	146	95207	3.62 ug/l		99
88)	n-Butylbenzene	17.08	91	191167	3.78 ug/l		98
89)	1,2-Dichlorobenzene	17.33	146	91399	3.79 ug/l		91
90)	1,2-Dibromo-3-chloropropan	18.41	157	13552	3.65 ug/l		89
91)	1,2,4-Trichlorobenzene	19.61	180	38231	3.33 ug/l		98
92)	Hexachlorobutadiene	19.73	225	27723	3.71 ug/l		92
93)	Naphthalene	20.09	128	102897	3.26 ug/l		100
94)	1,2,3-Trichlorobenzene	20.51	180	33091	3.42 ug/l		99

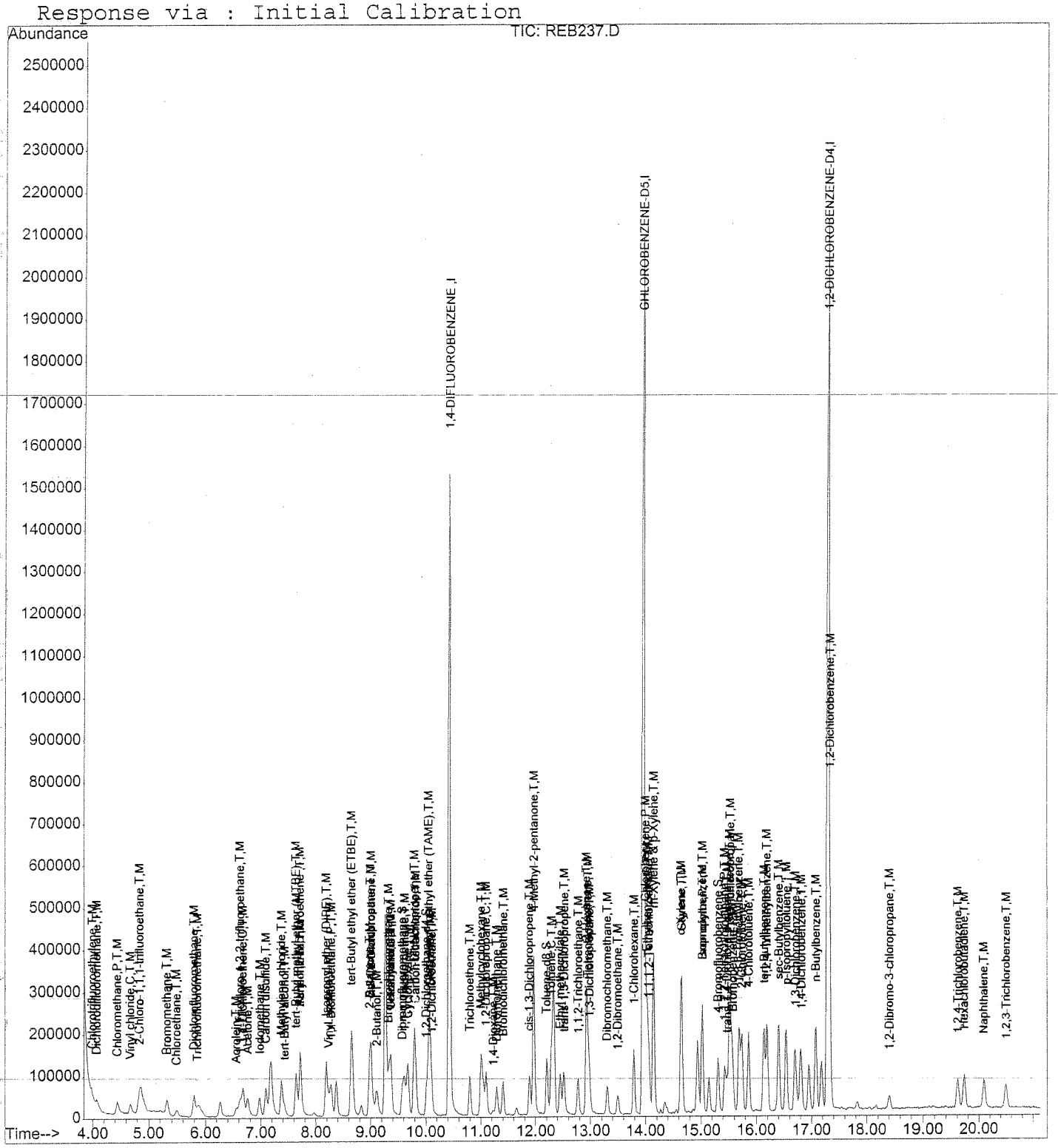
SA 5/28/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB237.D Vial: 4
Acq On : 20 May 2015 9:45 am Operator: CMendo
Sample : VO03E203 Inst : 03
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 27 13:25 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



SW 5/28/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB238.D
Acq On : 20 May 2015 10:23 am
Sample : VO03E204
Misc : 10ppb 8260/50ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.42	114	1523044	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.95	117	1448466	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.30	152	903465	50.00 ug/l	0.02
System Monitoring Compounds					
34) Dibromofluoromethane	9.58	111	141757	10.64 ug/l	0.00
Spiked Amount 50.000			Recovery	= 21.28%	
39) 1,2-Dichloroethane-d4	10.01	65	180913	9.99 ug/l	0.01
Spiked Amount 50.000			Recovery	= 19.98%	
53) Toluene-d8	12.20	98	305290	9.95 ug/l	0.01
Spiked Amount 50.000			Recovery	= 19.90%	
73) 4-Bromofluorobenzene	15.31	95	179447	9.36 ug/l	0.02
Spiked Amount 50.000			Recovery	= 18.72%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.99	116	40443	9.82 ug/l	86
3) Dichlorodifluoromethane	4.07	85	107983	10.56 ug/l	96
4) Chloromethane	4.44	50	119410	10.85 ug/l	97
5) Vinyl chloride	4.68	62	95574	10.52 ug/l	95
6) 2-Chloro-1,1,1-trifluoroet	4.84	118	67058	10.24 ug/l	98
7) Bromomethane	5.32	94	87694	10.44 ug/l	94
8) Chloroethane	5.48	64	57307	11.43 ug/l	95
9) Dichlorofluoromethane	5.79	67	227313	10.91 ug/l	99
10) Trichlorofluoromethane	5.87	101	158217	11.16 ug/l	99
11) Acrolein	6.55	56	70036	52.45 ug/l	93
12) 1,1,2-Trichloro-1,2,2-trif	6.63	151	53155	10.27 ug/l	95
13) 1,1-Dichloroethene	6.67	61	192088	11.06 ug/l	98
14) Acetone	6.76	43	256877	52.21 ug/l	100
15) Iodomethane	6.97	142	202093	10.89 ug/l	99
16) Carbon disulfide	7.09	76	378137	9.98 ug/l	98
18) Methylene chloride	7.37	49	194991	10.84 ug/l	99
19) tert-Butyl alcohol	7.43	59	105490	52.21 ug/l	99
20) tert-Butyl methyl ether (M	7.64	73	336277	10.23 ug/l	99
21) trans-1,2-Dichloroethene	7.71	61	178621	10.29 ug/l	98
22) Acrylonitrile	7.71	53	196278	48.82 ug/l	98
23) Isopropyl ether (DIPE)	8.19	45	458130	10.43 ug/l	99
24) Vinyl acetate	8.24	43	269648	9.12 ug/l	98
25) 1,1-Dichloroethane	8.28	63	241571	10.75 ug/l	99
26) tert-Butyl ethyl ether (ET	8.65	59	437811	10.76 ug/l	98
27) 2-Butanone	8.97	43	367489	48.95 ug/l	99
28) 2,2-Dichloropropane	9.00	77	177806	10.65 ug/l	100
29) cis-1,2-Dichloroethene	9.01	96	125924	10.71 ug/l	93

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

Su 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB238.D
Acq On : 20 May 2015 10:23 am
Sample : VO03E204
Misc : 10ppb 8260/50ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.11	45	81244	49.21 ug/l	98
31)	Bromochloromethane	9.32	49	178897	10.65 ug/l	97
32)	Tetrahydrofuran	9.37	42	35527	8.72 ug/l	96
33)	Chloroform	9.37	83	266770	10.80 ug/l	97
35)	1,1,1-Trichloroethane	9.62	97	192991	10.63 ug/l	98
36)	Cyclohexane	9.68	56	205129	11.18 ug/l	98
37)	1,1-Dichloropropene	9.80	110	45249	10.21 ug/l	97
38)	Carbon tetrachloride	9.81	119	161664	10.60 ug/l	97
40)	tert-Amyl methyl ether (TA	10.05	87	81228	10.73 ug/l	97
41)	Benzene	10.07	78	381590	10.14 ug/l	99
42)	1,2-Dichloroethane	10.10	62	223971	10.83 ug/l	98
43)	Trichloroethene	10.80	130	106917	10.35 ug/l	99
44)	Methylcyclohexane	11.01	83	210255	11.74 ug/l	99
45)	1,2-Dichloropropane	11.09	63	113205	9.97 ug/l	83
46)	1,4-Dioxane	11.21	88	25153	204.88 ug/l	92
47)	Dibromomethane	11.29	93	97722	10.30 ug/l	100
48)	Bromodichloromethane	11.41	83	184403	9.63 ug/l	100
50)	cis-1,3-Dichloropropene	11.88	75	196662	9.54 ug/l	98
51)	4-Methyl-2-pentanone	11.97	43	999729	53.65 ug/l	100
54)	Toluene	12.29	91	360550	9.78 ug/l	98
55)	Ethyl methacrylate	12.45	69	160798	10.11 ug/l	98
56)	trans-1,3-Dichloropropene	12.51	75	190607	9.71 ug/l	99
57)	1,1,2-Trichloroethane	12.78	97	86823	9.41 ug/l	98
58)	Tetrachloroethene	12.96	164	70430	9.50 ug/l	98
59)	2-Hexanone	12.93	43	700754	53.27 ug/l	99
60)	1,3-Dichloropropane	12.99	76	174811	9.84 ug/l	97
61)	Dibromochloromethane	13.30	129	128358	9.71 ug/l	99
62)	1,2-Dibromoethane	13.49	107	116944	9.87 ug/l	99
63)	1-Chlorohexane	13.79	91	162202	10.23 ug/l	99
64)	Chlorobenzene	14.00	112	249780	9.79 ug/l	93
65)	Ethylbenzene	14.03	91	500629	10.31 ug/l	99
66)	1,1,1,2-Tetrachloroethane	14.06	131	126241	10.80 ug/l	99
67)	m-Xylene & p-Xylene	14.15	91	797500	21.13 ug/l	99
68)	o-Xylene	14.64	91	440175	10.36 ug/l	99
69)	Styrene	14.65	104	300964	10.49 ug/l	99
71)	Bromoform	15.03	173	101887	9.53 ug/l	98
72)	Isopropylbenzene	15.03	105	500943	9.29 ug/l	99
74)	1,1,2,2-Tetrachloroethane	15.43	83	204642	8.88 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.47	53	75577	9.52 ug/l	97
76)	n-Propylbenzene	15.52	91	703672	9.35 ug/l	100
77)	1,2,3-Trichloropropane	15.53	110	52094	9.16 ug/l	100

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

SUS/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB238.D Vial: 5
Acq On : 20 May 2015 10:23 am Operator: CMendo
Sample : VO03E204 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.56	156	139491	8.99 ug/l	92
79)	1,3,5-Trimethylbenzene	15.68	105	442076	9.44 ug/l	99
80)	2-Chlorotoluene	15.74	91	461654	9.29 ug/l	99
81)	4-Chlorotoluene	15.86	91	443471	9.48 ug/l	99
82)	tert-Butylbenzene	16.14	134	82008	9.00 ug/l	99
83)	1,2,4-Trimethylbenzene	16.19	105	458289	9.42 ug/l	100
84)	sec-Butylbenzene	16.40	105	576249	9.38 ug/l	99
85)	p-Isopropyltoluene	16.54	119	454984	9.38 ug/l	99
86)	1,3-Dichlorobenzene	16.69	146	253984	9.62 ug/l	99
87)	1,4-Dichlorobenzene	16.80	146	253913	9.55 ug/l	99
88)	n-Butylbenzene	17.07	91	500737	9.78 ug/l	99
89)	1,2-Dichlorobenzene	17.33	146	241039	9.88 ug/l	97
90)	1,2-Dibromo-3-chloropropan	18.41	157	35043	9.34 ug/l	94
91)	1,2,4-Trichlorobenzene	19.61	180	107673	9.28 ug/l	99
92)	Hexachlorobutadiene	19.73	225	75382	9.98 ug/l	99
93)	Naphthalene	20.09	128	293455	9.20 ug/l	98
94)	1,2,3-Trichlorobenzene	20.49	180	90339	9.23 ug/l	100

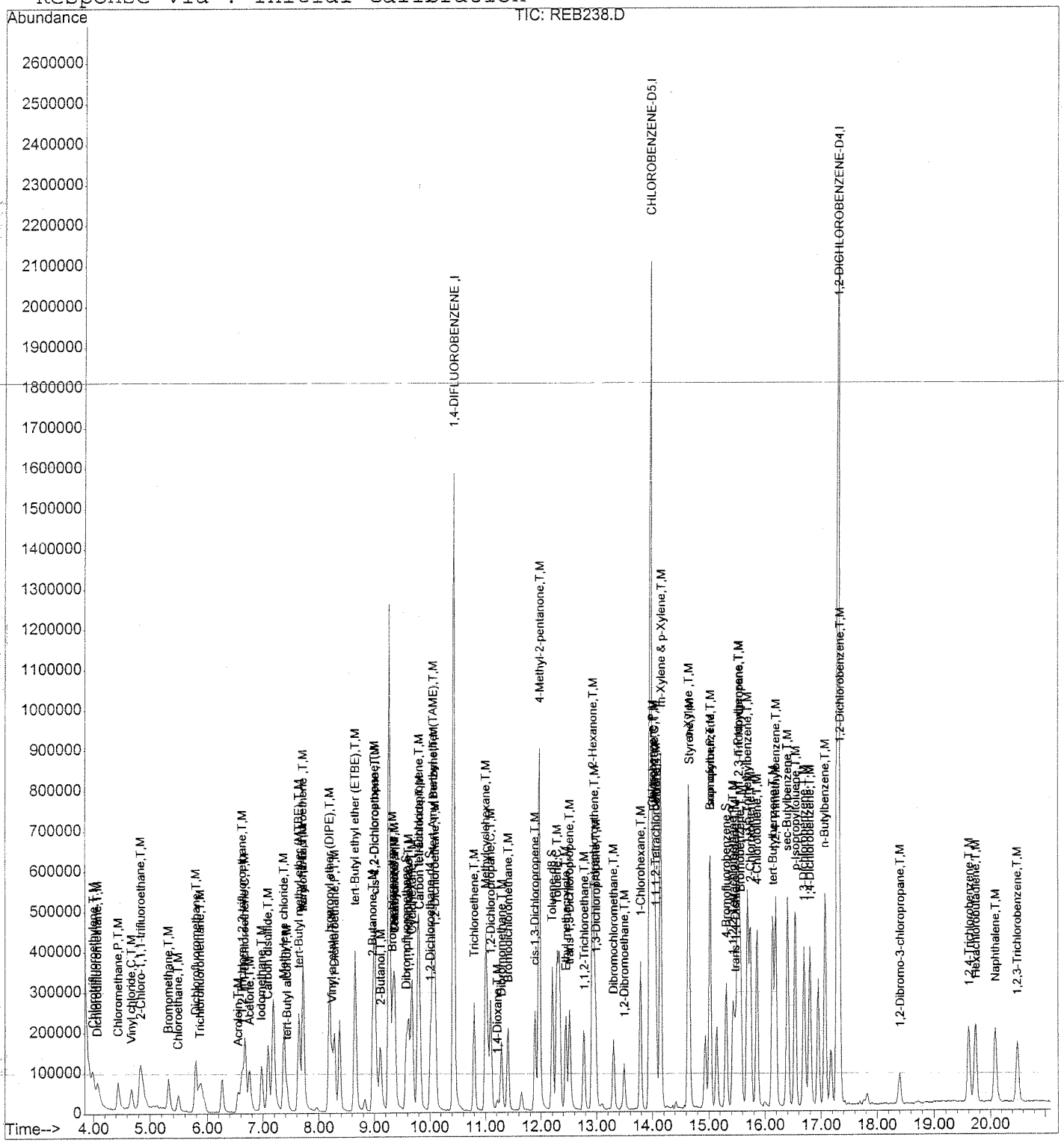
SY 5/28/15

(#) = qualifier out of range (m) = manual integration
REB238.D VO03E20.M Thu May 28 11:50:18 2015

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB238.D Vial: 5
Acq On : 20 May 2015 10:23 am Operator: CMendo
Sample : VO03E204 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB239.D Vial: 6
Acq On : 20 May 2015 10:53 am Operator: CMendo
Sample : VO03E205 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.43	114	1557623	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.95	117	1497384	50.00 ug/l	0.01
70) 1,2-DICHLOROBENZENE-D4	17.29	152	934571	50.00 ug/l	0.01
System Monitoring Compounds					
34) Dibromofluoromethane	9.58	111	311349	22.85 ug/l	0.01
Spiked Amount 50.000			Recovery	= 45.70%	
39) 1,2-Dichloroethane-d4	10.01	65	392181	21.17 ug/l	0.01
Spiked Amount 50.000			Recovery	= 42.34%	
53) Toluene-d8	12.20	98	663387	20.92 ug/l	0.01
Spiked Amount 50.000			Recovery	= 41.84%	
73) 4-Bromofluorobenzene	15.29	95	371416	18.73 ug/l	0.01
Spiked Amount 50.000			Recovery	= 37.46%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.99	116	95131	22.58 ug/l	98
3) Dichlorodifluoromethane	4.07	85	222368	21.27 ug/l	94
4) Chloromethane	4.44	50	244359	21.72 ug/l	98
5) Vinyl chloride	4.68	62	197751	21.29 ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	4.84	118	147608	22.03 ug/l	99
7) Bromomethane	5.32	94	174121	20.27 ug/l	98
8) Chloroethane	5.48	64	113998	22.24 ug/l	97
9) Dichlorofluoromethane	5.79	67	497029	23.33 ug/l	99
10) Trichlorofluoromethane	5.88	101	313145	21.60 ug/l	99
11) Acrolein	6.54	56	138235	101.24 ug/l	95
12) 1,1,2-Trichloro-1,2,2-trif	6.63	151	116581	22.02 ug/l	98
13) 1,1-Dichloroethene	6.67	61	404874	22.79 ug/l	98
14) Acetone	6.75	43	487625	96.91 ug/l	97
15) Iodomethane	6.97	142	421580	22.21 ug/l	98
16) Carbon disulfide	7.09	76	844097	21.78 ug/l	100
18) Methylene chloride	7.37	49	400763	21.78 ug/l	98
19) tert-Butyl alcohol	7.42	59	211078	102.14 ug/l	94
20) tert-Butyl methyl ether (M	7.64	73	751342	22.36 ug/l	100
21) trans-1,2-Dichloroethene	7.72	61	406664	22.92 ug/l	99
22) Acrylonitrile	7.72	53	400627	97.43 ug/l	99
23) Isopropyl ether (DIPE)	8.19	45	1007708	22.44 ug/l	99
24) Vinyl acetate	8.24	43	606543	20.06 ug/l	98
25) 1,1-Dichloroethane	8.28	63	524913	22.85 ug/l	100
26) tert-Butyl ethyl ether (ET	8.65	59	922252	22.16 ug/l	98
27) 2-Butanone	8.97	43	745732	97.13 ug/l	100
28) 2,2-Dichloropropane	9.00	77	381732	22.35 ug/l	100
29) cis-1,2-Dichloroethene	9.01	96	268990	22.38 ug/l	99

(#) = qualifier out of range (m) = manual integration
REB239.D VO03E20.M Thu May 28 12:52:15 2015 SU 5/28/15 Page 1

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB239.D Vial: 6
Acq On : 20 May 2015 10:53 am Operator: CMendo
Sample : VO03E205 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.10	45	159224	94.30 ug/l	99
31)	Bromochloromethane	9.32	49	368320	21.43 ug/l	98
32)	Tetrahydrofuran	9.37	42	80177	19.25 ug/l	97
33)	Chloroform	9.37	83	568176	22.49 ug/l	99
35)	1,1,1-Trichloroethane	9.62	97	429799	23.14 ug/l	99
36)	Cyclohexane	9.67	56	402519	21.45 ug/l	99
37)	1,1-Dichloropropene	9.79	110	101506	22.40 ug/l	98
38)	Carbon tetrachloride	9.81	119	361218	23.16 ug/l	100
40)	tert-Amyl methyl ether (TA	10.05	87	174034	22.47 ug/l	99
41)	Benzene	10.07	78	841535	21.87 ug/l	99
42)	1,2-Dichloroethane	10.10	62	471083	22.28 ug/l	100
43)	Trichloroethene	10.80	130	228339	21.61 ug/l	98
44)	Methylcyclohexane	11.01	83	395402	21.59 ug/l	100
45)	1,2-Dichloropropane	11.10	63	249992	21.54 ug/l	88
46)	1,4-Dioxane	11.21	88	56307	448.46 ug/l	93
47)	Dibromomethane	11.29	93	209437	21.59 ug/l	99
48)	Bromodichloromethane	11.39	83	427594	21.84 ug/l	99
50)	cis-1,3-Dichloropropene	11.88	75	447645	21.24 ug/l	99
51)	4-Methyl-2-pentanone	11.96	43	1881332	98.73 ug/l	100
54)	Toluene	12.29	91	795467	20.86 ug/l	100
55)	Ethyl methacrylate	12.45	69	357902	21.76 ug/l	97
56)	trans-1,3-Dichloropropene	12.51	75	444631	21.92 ug/l	95
57)	1,1,2-Trichloroethane	12.76	97	199162	20.88 ug/l	97
58)	Tetrachloroethene	12.94	164	163295	21.30 ug/l	97
59)	2-Hexanone	12.93	43	1427546	104.97 ug/l	99
60)	1,3-Dichloropropane	12.99	76	396424	21.59 ug/l	99
61)	Dibromochloromethane	13.30	129	298779	21.87 ug/l	100
62)	1,2-Dibromoethane	13.49	107	267573	21.84 ug/l	99
63)	1-Chlorohexane	13.79	91	369351	22.53 ug/l	99
64)	Chlorobenzene	14.00	112	594647	22.55 ug/l	99
65)	Ethylbenzene	14.03	91	1116634	22.25 ug/l	99
66)	1,1,1,2-Tetrachloroethane	14.06	131	278055	23.00 ug/l	99
67)	m-Xylene & p-Xylene	14.13	91	1764848	45.23 ug/l	100
68)	o-Xylene	14.62	91	1017911	23.19 ug/l	99
69)	Styrene	14.64	104	707303	23.85 ug/l	99
71)	Bromoform	15.01	173	217128	19.62 ug/l	99
72)	Isopropylbenzene	15.01	105	1099428	19.71 ug/l	99
74)	1,1,2,2-Tetrachloroethane	15.43	83	451240	18.93 ug/l	98
75)	trans-1,4-Dichloro-2-buten	15.46	53	169238	20.60 ug/l	98
76)	n-Propylbenzene	15.50	91	1630848	20.95 ug/l	100
77)	1,2,3-Trichloropropane	15.53	110	115948	19.70 ug/l	98

(#) = qualifier out of range (m) = manual integration
Su 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB239.D Vial: 6
Acq On : 20 May 2015 10:53 am Operator: CMendo
Sample : VO03E205 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.56	156	306585	19.11 ug/l	100
79)	1,3,5-Trimethylbenzene	15.68	105	1010238	20.86 ug/l	100
80)	2-Chlorotoluene	15.73	91	1051953	20.46 ug/l	99
81)	4-Chlorotoluene	15.85	91	955235	19.73 ug/l	100
82)	tert-Butylbenzene	16.13	134	195065	20.69 ug/l	99
83)	1,2,4-Trimethylbenzene	16.19	105	1055545	20.98 ug/l	89
84)	sec-Butylbenzene	16.40	105	1340016	21.09 ug/l	99
85)	p-Isopropyltoluene	16.53	119	1077150	21.46 ug/l	100
86)	1,3-Dichlorobenzene	16.69	146	568764	20.82 ug/l	100
87)	1,4-Dichlorobenzene	16.80	146	561543	20.41 ug/l	99
88)	n-Butylbenzene	17.07	91	1119875	21.15 ug/l	99
89)	1,2-Dichlorobenzene	17.32	146	516820	20.48 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.39	157	76476	19.70 ug/l	91
91)	1,2,4-Trichlorobenzene	19.58	180	256222	21.35 ug/l	100
92)	Hexachlorobutadiene	19.70	225	170425	21.81 ug/l	99
93)	Naphthalene	20.06	128	693040	20.99 ug/l	99
94)	1,2,3-Trichlorobenzene	20.48	180	217150	21.45 ug/l	98

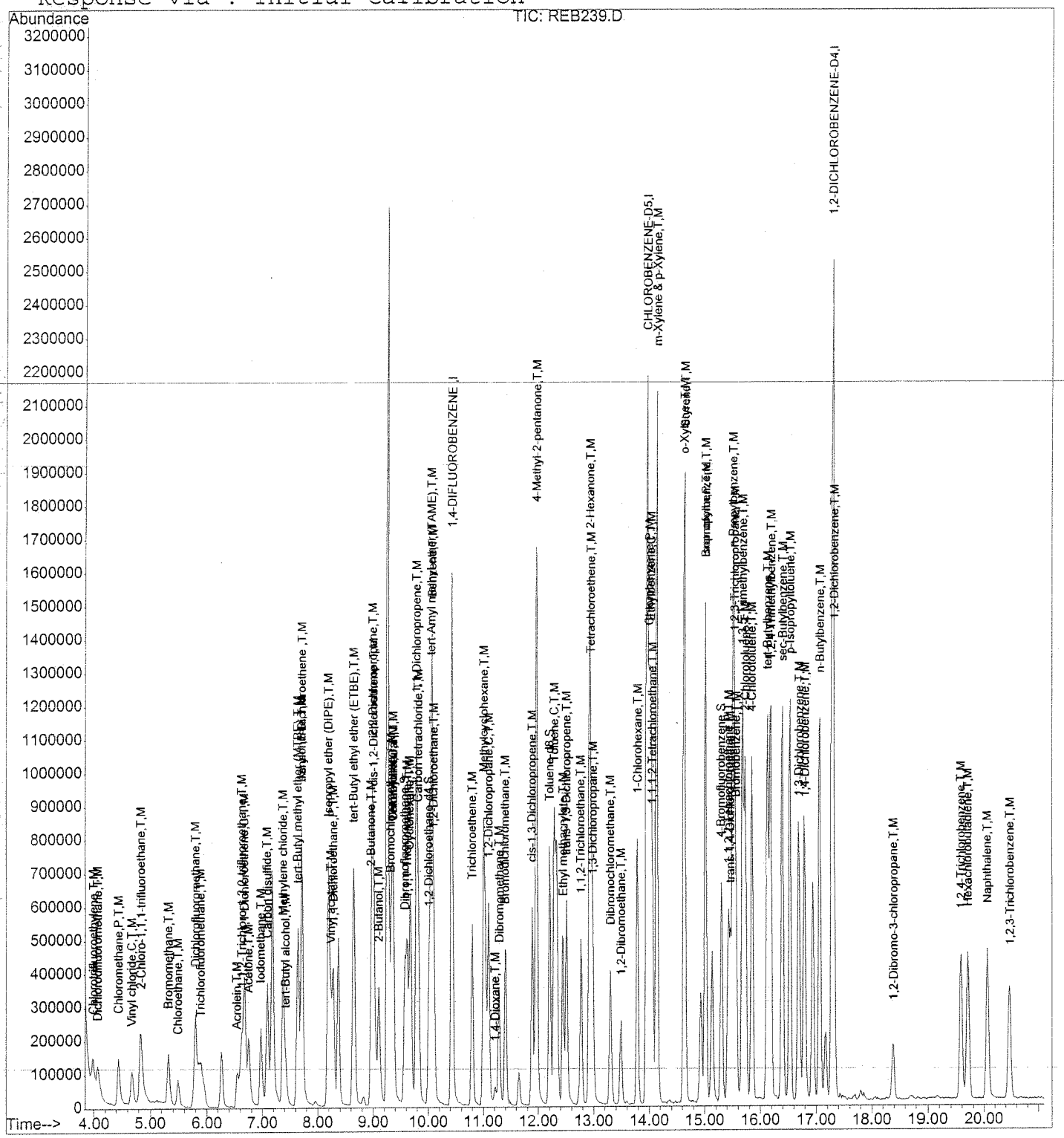
SU 5/28/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB239.D Vial: 6
Acq On : 20 May 2015 10:53 am Operator: CMendo
Sample : VO03E205 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB240.D Vial: 7
Acq On : 20 May 2015 11:30 am Operator: CMendo
Sample : VO03E206 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.43	114	1661900	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.94	117	1568728	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.28	152	950976	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.57	111	722881	49.73 ug/l	0.00
Spiked Amount 50.000			Recovery =	99.46%	
39) 1,2-Dichloroethane-d4	10.00	65	941589	47.63 ug/l	0.00
Spiked Amount 50.000			Recovery =	95.26%	
53) Toluene-d8	12.19	98	1584851	47.70 ug/l	0.00
Spiked Amount 50.000			Recovery =	95.40%	
73) 4-Bromofluorobenzene	15.28	95	854506	42.34 ug/l	0.00
Spiked Amount 50.000			Recovery =	84.68%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.98	116	229276	51.00 ug/l	100
3) Dichlorodifluoromethane	4.07	85	569035	51.01 ug/l	100
4) Chloromethane	4.44	50	597158	49.74 ug/l	100
5) Vinyl chloride	4.68	62	505038	50.95 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.83	118	372610	52.13 ug/l	100
7) Bromomethane	5.31	94	427738	46.67 ug/l	100
8) Chloroethane	5.47	64	282944	51.74 ug/l	100
9) Dichlorofluoromethane	5.78	67	1197349	52.68 ug/l	100
10) Trichlorofluoromethane	5.87	101	799684	51.71 ug/l	100
11) Acrolein	6.54	56	384214	263.72 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.63	151	285395	50.53 ug/l	100
13) 1,1-Dichloroethene	6.68	61	1016242	53.62 ug/l	100
14) Acetone	6.75	43	1302219	242.57 ug/l	100
15) Iodomethane	6.98	142	1065995	52.64 ug/l	100
16) Carbon disulfide	7.09	76	2025429	48.98 ug/l	100
18) Methylene chloride	7.36	49	953848	48.59 ug/l	100
19) tert-Butyl alcohol	7.42	59	577574	261.96 ug/l	100
20) tert-Butyl methyl ether (M	7.63	73	1947709	54.32 ug/l	100
21) trans-1,2-Dichloroethene	7.70	61	1010152	53.35 ug/l	100
22) Acrylonitrile	7.70	53	1174300	267.66 ug/l	100
23) Isopropyl ether (DIPE)	8.18	45	2375306	49.58 ug/l	100
24) Vinyl acetate	8.23	43	1737413	53.86 ug/l	100
25) 1,1-Dichloroethane	8.27	63	1259808	51.39 ug/l	100
26) tert-Butyl ethyl ether (ET	8.64	59	2335932	52.60 ug/l	100
27) 2-Butanone	8.96	43	2042623	249.36 ug/l	100
28) 2,2-Dichloropropane	8.99	77	887946	48.73 ug/l	100
29) cis-1,2-Dichloroethene	9.00	96	656921	51.22 ug/l	100

(#) = qualifier out of range (m) = manual integration Su 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB240.D
Acq On : 20 May 2015 11:30 am
Sample : VO03E206
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015

Vial: 7
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.10	45	463456	257.26 ug/l	100
31)	Bromochloromethane	9.33	49	906025	49.42 ug/l	100
32)	Tetrahydrofuran	9.36	42	223262	50.23 ug/l	100
33)	Chloroform	9.36	83	1357935	50.37 ug/l	100
35)	1,1,1-Trichloroethane	9.61	97	1019862	51.46 ug/l	100
36)	Cyclohexane	9.67	56	941588	47.02 ug/l	100
37)	1,1-Dichloropropene	9.79	110	243543	50.37 ug/l	100
38)	Carbon tetrachloride	9.82	119	872303	52.42 ug/l	100
40)	tert-Amyl methyl ether (TA	10.04	87	427781	51.78 ug/l	100
41)	Benzene	10.07	78	2000504	48.73 ug/l	100
42)	~~1,2-Dichloroethane~~	~~10.10~~	~~62~~	~~1200535~~	~~53.21 ug/l~~	~~100~~
43)	Trichloroethene	10.79	130	551145	48.88 ug/l	100
44)	Methylcyclohexane	11.00	83	948095	48.52 ug/l	100
45)	1,2-Dichloropropane	11.08	63	610688	49.31 ug/l	100
46)	1,4-Dioxane	11.20	88	130356	973.08 ug/l	100
47)	Dibromomethane	11.28	93	524243	50.66 ug/l	100
48)	Bromodichloromethane	11.40	83	1073407	51.38 ug/l	100
50)	cis-1,3-Dichloropropene	11.87	75	1102291	49.01 ug/l	100
51)	4-Methyl-2-pentanone	11.96	43	5174810	254.52 ug/l	100
54)	Toluene	12.28	91	2052551	51.39 ug/l	100
55)	Ethyl methacrylate	12.44	69	890935	51.70 ug/l	100
56)	trans-1,3-Dichloropropene	12.50	75	1058997	49.83 ug/l	100
57)	1,1,2-Trichloroethane	12.77	97	505388	50.58 ug/l	100
58)	Tetrachloroethene	12.95	164	408369	50.85 ug/l	100
59)	2-Hexanone	12.92	43	3615535	253.77 ug/l	100
60)	1,3-Dichloropropane	12.98	76	957804	49.79 ug/l	100
61)	Dibromochloromethane	13.29	129	763105	53.31 ug/l	100
62)	1,2-Dibromoethane	13.48	107	657672	51.25 ug/l	100
63)	1-Chlorohexane	13.78	91	849005	49.43 ug/l	100
64)	Chlorobenzene	13.99	112	1389011	50.28 ug/l	100
65)	Ethylbenzene	14.02	91	2675310	50.89 ug/l	100
66)	1,1,1,2-Tetrachloroethane	14.05	131	690701	54.54 ug/l	100
67)	m-Xylene & p-Xylene	14.14	91	4056912	99.25 ug/l	100
68)	o-Xylene	14.61	91	2402893	52.24 ug/l	100
69)	Styrene	14.63	104	1631316	52.50 ug/l	100
71)	Bromoform	15.00	173	564374	50.13 ug/l	100
72)	Isopropylbenzene	15.00	105	2616860	46.10 ug/l	100
74)	1,1,2,2-Tetrachloroethane	15.42	83	1164252	48.01 ug/l	100
75)	trans-1,4-Dichloro-2-buten	15.45	53	430348	51.48 ug/l	100
76)	~~n-Propylbenzene~~	~~15.51~~	~~91~~	~~3634516~~	~~45.88 ug/l~~	~~100~~
77)	1,2,3-Trichloropropane	15.52	110	283753	47.38 ug/l	100

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

SU 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB240.D Vial: 7
Acq On : 20 May 2015 11:30 am Operator: CMendo
Sample : VO03E206 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.55	156	718364	44.01 ug/l	100
79)	1,3,5-Trimethylbenzene	15.67	105	2349358	47.67 ug/l	100
80)	2-Chlorotoluene	15.72	91	2449558	46.83 ug/l	100
81)	4-Chlorotoluene	15.83	91	2298309	46.66 ug/l	100
82)	tert-Butylbenzene	16.12	134	449528	46.85 ug/l	100
83)	1,2,4-Trimethylbenzene	16.18	105	2511517	49.06 ug/l	100
84)	sec-Butylbenzene	16.39	105	2973642	45.99 ug/l	100
85)	p-Isopropyltoluene	16.52	119	2425672	47.50 ug/l	100
86)	1,3-Dichlorobenzene	16.68	146	1302684	46.86 ug/l	100
87)	1,4-Dichlorobenzene	16.79	146	1341177	47.90 ug/l	100
88)	n-Butylbenzene	17.06	91	2683074	49.79 ug/l	100
89)	1,2-Dichlorobenzene	17.31	146	1261790	49.15 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.38	157	211741	53.61 ug/l	100
91)	1,2,4-Trichlorobenzene	19.57	180	653782	53.55 ug/l	100
92)	Hexachlorobutadiene	19.71	225	400263	50.34 ug/l	100
93)	Naphthalene	20.05	128	1863663	55.48 ug/l	100
94)	1,2,3-Trichlorobenzene	20.47	180	556729	54.04 ug/l	100

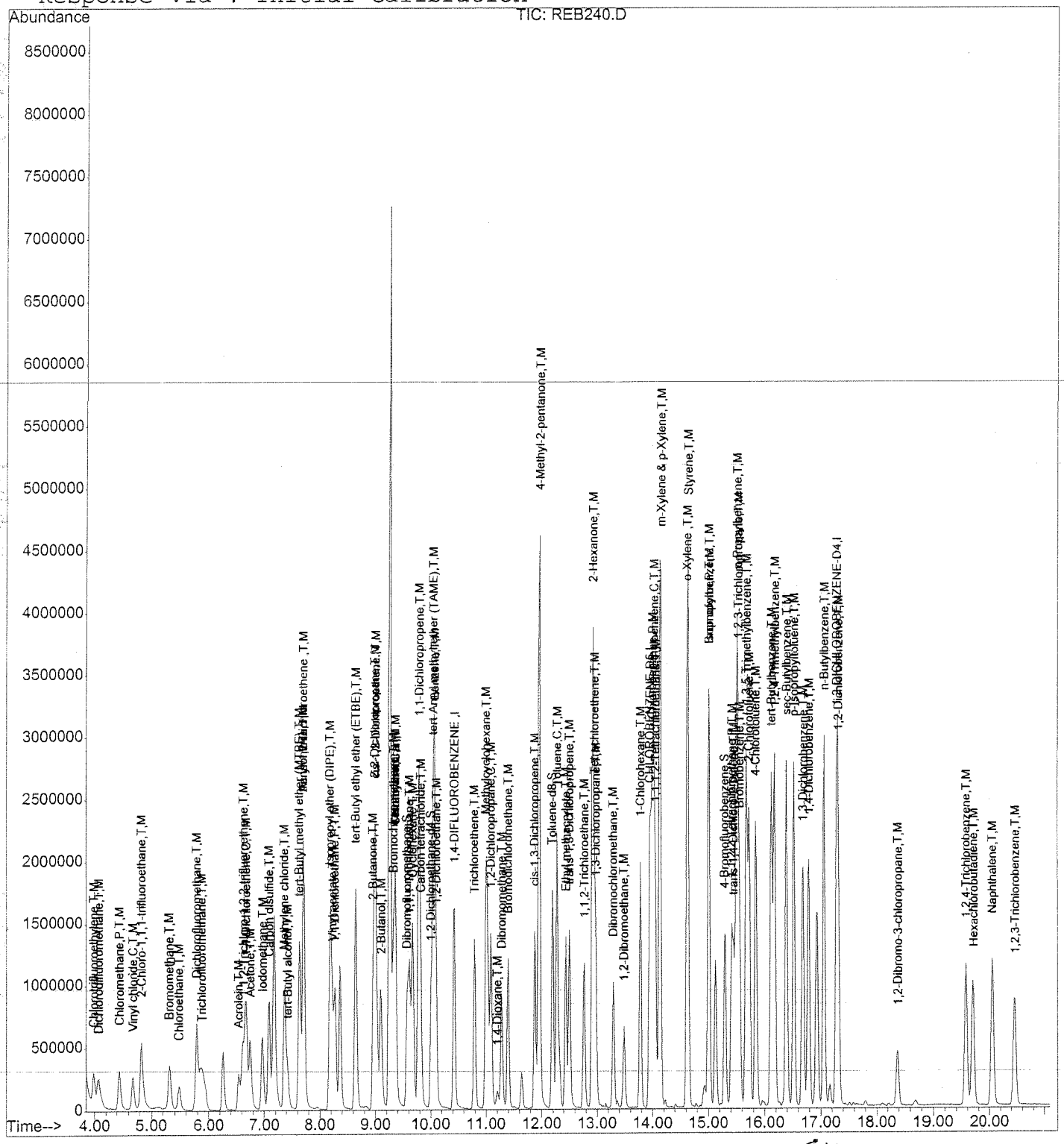
SU 5/28/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB240.D Vial: 7
Acq On : 20 May 2015 11:30 am Operator: CMendo
Sample : VO03E206 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



SM 5/28/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB241.D Vial: 8
Acq On : 20 May 2015 12:01 pm Operator: CMendo
Sample : VO03E207 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.42	114	1908275	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.95	117	1795448	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.27	152	970816	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	9.56	111	1586629	95.06	ug/l	0.00
Spiked Amount 50.000			Recovery	=	190.12%	
39) 1,2-Dichloroethane-d4	10.01	65	2097499	92.41	ug/l	0.01
Spiked Amount 50.000			Recovery	=	184.82%	
53) Toluene-d8	12.20	98	3772342	99.20	ug/l	0.01
Spiked Amount 50.000			Recovery	=	198.40%	
~~73) 4-Bromofluorobenzene~~	~~15.29~~	~~95~~	~~1951159~~	~~94.70~~	~~ug/l~~	~~0.00~~
Spiked Amount 50.000			Recovery	=	189.40%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.98	116	541409	104.88	ug/l	99
3) Dichlorodifluoromethane	4.07	85	1392646	108.71	ug/l	98
4) Chloromethane	4.45	50	1266036	91.83	ug/l	99
5) Vinyl chloride	4.68	62	1112252	97.73	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.83	118	803132	97.86	ug/l	99
7) Bromomethane	5.30	94	954872	90.73	ug/l	100
8) Chloroethane	5.48	64	627704	99.96	ug/l	99
9) Dichlorofluoromethane	5.79	67	2314393	88.67	ug/l	100
10) Trichlorofluoromethane	5.88	101	1734901	97.69	ug/l	100
11) Acrolein	6.54	56	764609	457.06	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.63	151	591016	91.14	ug/l	98
13) 1,1-Dichloroethene	6.67	61	1969262	90.49	ug/l	97
14) Acetone	6.75	43	2706748	439.11	ug/l	99
15) Iodomethane	6.97	142	2112652	90.86	ug/l	99
16) Carbon disulfide	7.09	76	4486871	94.49	ug/l	99
18) Methylene chloride	7.37	49	2035635	90.31	ug/l	96
19) tert-Butyl alcohol	7.42	59	1067233	421.55	ug/l	92
20) tert-Butyl methyl ether (M	7.62	73	3791726	92.10	ug/l	100
21) trans-1,2-Dichloroethene	7.71	61	2058876	94.70	ug/l	100
22) Acrylonitrile	7.70	53	2416447	479.67	ug/l	100
23) Isopropyl ether (DIPE)	8.19	45	5181700	94.20	ug/l	99
24) Vinyl acetate	8.22	43	4106080	110.86	ug/l	100
25) 1,1-Dichloroethane	8.28	63	2550915	90.63	ug/l	99
26) tert-Butyl ethyl ether (ET	8.64	59	4768004	93.51	ug/l	99
27) 2-Butanone	8.95	43	4301859	457.36	ug/l	99
~~28) 2,2-Dichloropropane~~	~~8.99~~	~~77~~	~~1626474~~	~~77.73~~	~~ug/l~~	~~99~~
29) cis-1,2-Dichloroethene	8.99	96	1341020	91.06	ug/l	96

(#) = qualifier out of range (m) = manual integration
REB241.D VO03E20.M Thu May 28 11:50:41 2015 SU 5/28/15 Page 1

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB241.D
Acq On : 20 May 2015 12:01 pm
Sample : VO03E207
Misc : 100ppb 8260/500ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015

Vial: 8
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.10	45	937491	453.21 ug/l	99
31)	Bromochloromethane	9.32	49	1801148	85.55 ug/l	99
32)	Tetrahydrofuran	9.35	42	431712	84.59 ug/l	99
33)	Chloroform	9.35	83	2728408	88.14 ug/l	100
35)	1,1,1-Trichloroethane	9.61	97	2058109	90.44 ug/l	100
36)	Cyclohexane	9.66	56	2160835	93.98 ug/l	98
37)	1,1-Dichloropropene	9.78	110	535038	96.38 ug/l	99
38)	Carbon tetrachloride	9.81	119	1783650	93.35 ug/l	100
40)	tert-Amyl methyl ether (TA	10.05	87	870136	91.72 ug/l	98
41)	Benzene	10.07	78	4338685	92.03 ug/l	100
42)	1,2-Dichloroethane	10.10	62	2401021	92.68 ug/l	99
43)	Trichloroethene	10.80	130	1270768	98.16 ug/l	98
44)	Methylcyclohexane	11.00	83	2097758	93.49 ug/l	99
45)	1,2-Dichloropropane	11.09	63	1351799	95.06 ug/l	96
46)	1,4-Dioxane	11.20	88	285815	1858.09 ug/l	95
47)	Dibromomethane	11.27	93	1112436	93.63 ug/l	98
48)	Bromodichloromethane	11.39	83	2293351	95.60 ug/l	100
50)	cis-1,3-Dichloropropene	11.88	75	2621336	101.50 ug/l	98
51)	4-Methyl-2-pentanone	11.96	43	11022416	472.14 ug/l	100
54)	Toluene	12.27	91	4497831	98.38 ug/l	99
55)	Ethyl methacrylate	12.43	69	1848750	93.73 ug/l	100
56)	trans-1,3-Dichloropropene	12.51	75	2308776	94.91 ug/l	99
57)	1,1,2-Trichloroethane	12.76	97	1142721	99.92 ug/l	99
58)	Tetrachloroethene	12.94	164	914083	99.45 ug/l	98
59)	2-Hexanone	12.91	43	7431490	455.74 ug/l	99
60)	1,3-Dichloropropane	12.97	76	2151964	97.74 ug/l	99
61)	Dibromochloromethane	13.30	129	1634696	99.78 ug/l	100
62)	1,2-Dibromoethane	13.48	107	1399148	95.26 ug/l	100
63)	1-Chlorohexane	13.77	91	1817419	92.45 ug/l	99
64)	Chlorobenzene	13.98	112	3031394	95.88 ug/l	99
65)	Ethylbenzene	14.01	91	5760287	95.75 ug/l	99
66)	1,1,1,2-Tetrachloroethane	14.04	131	1387985	95.77 ug/l	99
67)	m-Xylene & p-Xylene	14.13	91	8795387	188.00 ug/l	100
68)	o-Xylene	14.62	91	4934768	93.74 ug/l	100
69)	Styrene	14.64	104	3463552	97.38 ug/l	100
71)	Bromoform	15.01	173	1155567	100.54 ug/l	100
72)	Isopropylbenzene	15.01	105	5469685	94.38 ug/l	100
74)	1,1,2,2-Tetrachloroethane	15.41	83	2298137	92.83 ug/l	98
75)	trans-1,4-Dichloro-2-buten	15.46	53	875772	102.63 ug/l	98
76)	n-Propylbenzene	15.50	91	7712794	95.37 ug/l	100
77)	1,2,3-Trichloropropane	15.52	110	560289	91.64 ug/l	98

(#) = qualifier out of range (m) = manual integration
REB241.D VO03E20.M Thu May 28 11:50:41 2015 SU 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB241.D Vial: 8
Acq On : 20 May 2015 12:01 pm Operator: CMendo
Sample : VO03E207 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.55	156	1547207	92.85 ug/l	98
79)	1,3,5-Trimethylbenzene	15.67	105	4801194	95.43 ug/l	99
80)	2-Chlorotoluene	15.73	91	4912072	91.98 ug/l	100
81)	4-Chlorotoluene	15.84	91	4690761	93.28 ug/l	99
82)	tert-Butylbenzene	16.11	134	959531	97.96 ug/l	95
83)	1,2,4-Trimethylbenzene	16.17	105	5056619	96.75 ug/l	99
84)	sec-Butylbenzene	16.38	105	6104715	92.49 ug/l	99
85)	p-Isopropyltoluene	16.51	119	5042156	96.72 ug/l	99
86)	1,3-Dichlorobenzene	16.68	146	2655815	93.59 ug/l	99
87)	1,4-Dichlorobenzene	16.78	146	2726634	95.39 ug/l	99
88)	~~n-Butylbenzene~~	~~17.05~~	~~91~~	~~5503814~~	~~100.06 ug/l~~	~~99~~
89)	1,2-Dichlorobenzene	17.30	146	2569141	98.03 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.38	157	405174	100.48 ug/l	100
91)	1,2,4-Trichlorobenzene	19.57	180	1373848	110.22 ug/l	100
92)	Hexachlorobutadiene	19.70	225	814787	100.37 ug/l	99
93)	Naphthalene	20.06	128	3615849	105.44 ug/l	99
94)	1,2,3-Trichlorobenzene	20.46	180	1101728	104.75 ug/l	100

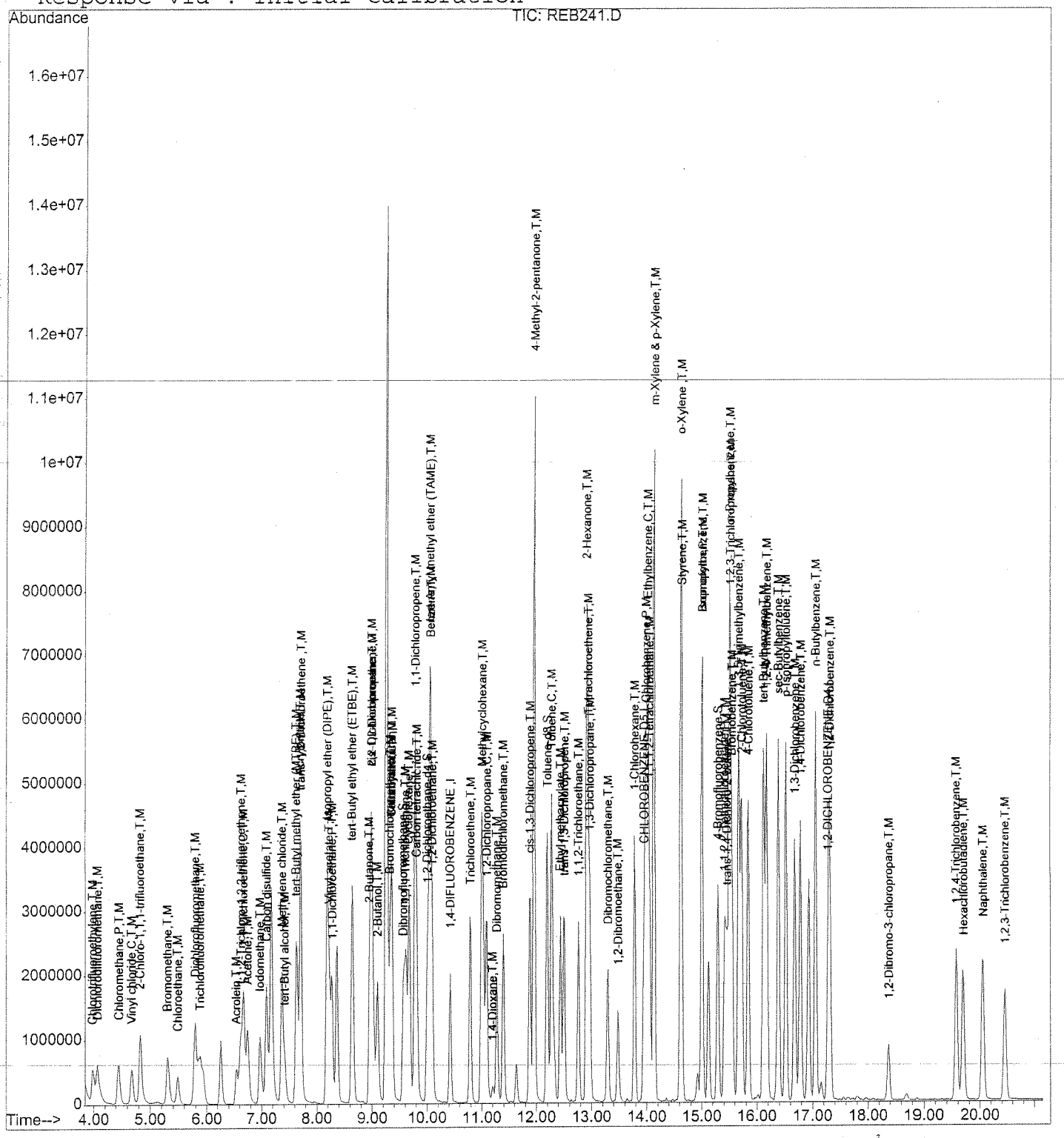
SU 5/28/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB241.D Vial: 8
Acq On : 20 May 2015 12:01 pm Operator: CMendo
Sample : VO03E207 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB242.D Vial: 9
Acq On : 20 May 2015 12:32 pm Operator: CMendo
Sample : VO03E208 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.41	114	1989905	50.00	ug/l	-0.02
52) CHLOROBENZENE-D5	13.94	117	1891660	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.28	152	879686	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	9.57	111	3207660	184.30	ug/l	0.00
Spiked Amount 50.000			Recovery = 368.60%			
39) 1,2-Dichloroethane-d4	10.00	65	4168385	176.11	ug/l	0.00
Spiked Amount 50.000			Recovery = 352.22%			
53) Toluene-d8	12.19	98	7731901	192.98	ug/l	0.00
Spiked Amount 50.000			Recovery = 385.96%			
73) 4-Bromofluorobenzene	15.28	95	3697408	198.04	ug/l	0.00
Spiked Amount 50.000			Recovery = 396.08%			

Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.98	116	1027085	190.80	ug/l	99
3) Dichlorodifluoromethane	4.07	85	2450016	183.41	ug/l	100
4) Chloromethane	4.44	50	2577457	179.29	ug/l	100
5) Vinyl chloride	4.68	62	2147880	180.98	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.83	118	1620837	189.40	ug/l	98
7) Bromomethane	5.29	94	1761696	160.53	ug/l	100
8) Chloroethane	5.47	64	1190750	181.85	ug/l	99
9) Dichlorofluoromethane	5.78	67	4781147	175.67	ug/l	100
10) Trichlorofluoromethane	5.87	101	3267319	176.44	ug/l	99
11) Acrolein	6.53	56	1526592	875.12	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.62	151	1224348	181.05	ug/l	100
13) 1,1-Dichloroethene	6.68	61	3864982	170.31	ug/l	94
14) Acetone	6.74	43	5748335	894.28	ug/l	99
15) Iodomethane	6.96	142	4129885	170.33	ug/l	99
16) Carbon disulfide	7.08	76	9169330	185.17	ug/l	100
18) Methylene chloride	7.36	49	4139715	176.13	ug/l	97
19) tert-Butyl alcohol	7.42	59	2349319	889.89	ug/l	92
20) tert-Butyl methyl ether (M	7.63	73	7381776	171.94	ug/l	99
21) trans-1,2-Dichloroethene	7.70	61	3890218	171.59	ug/l	99
22) Acrylonitrile	7.70	53	5021794	955.95	ug/l	100
23) Isopropyl ether (DIPE)	8.18	45	9370268	163.35	ug/l	98
24) Vinyl acetate	8.23	43	7930276	205.32	ug/l	99
25) 1,1-Dichloroethane	8.27	63	5232771	178.28	ug/l	99
26) tert-Butyl ethyl ether (ET	8.64	59	9177210	172.60	ug/l	100
27) 2-Butanone	8.96	43	9954224	1014.89	ug/l	99
28) 2,2-Dichloropropane	8.99	77	2968476	136.05	ug/l	98
29) cis-1,2-Dichloroethene	9.00	96	2706683	176.25	ug/l	93

(#) = qualifier out of range (m) = manual integration SG 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB242.D Vial: 9
Acq On : 20 May 2015 12:32 pm Operator: CMendo
Sample : VO03E208 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.10	45	2121767	983.64 ug/l	97
31)	Bromochloromethane	9.33	49	4032758	183.69 ug/l	96
32)	Tetrahydrofuran	9.36	42	978742	183.91 ug/l	100
33)	Chloroform	9.36	83	5626195	174.29 ug/l	99
35)	1,1,1-Trichloroethane	9.61	97	3974292	167.48 ug/l	100
36)	Cyclohexane	9.67	56	4519712	188.51 ug/l	99
37)	1,1-Dichloropropene	9.79	110	1084562	187.35 ug/l	100
38)	Carbon tetrachloride	9.80	119	3408672	171.09 ug/l	100
40)	tert-Amyl methyl ether (TA	10.04	87	1766720	178.59 ug/l	97
41)	Benzene	10.06	78	8853175	180.09 ug/l	100
42)	1,2-Dichloroethane	10.09	62	4858611	179.85 ug/l	100
43)	Trichloroethene	10.79	130	2634288	195.13 ug/l	96
44)	Methylcyclohexane	11.00	83	4479322	191.44 ug/l	99
45)	1,2-Dichloropropane	11.08	63	2744374	185.08 ug/l	93
46)	1,4-Dioxane	11.20	88	530758	3308.93 ug/l	88
47)	Dibromomethane	11.28	93	2266388	182.92 ug/l	97
48)	Bromodichloromethane	11.40	83	4719225	188.66 ug/l	100
50)	cis-1,3-Dichloropropene	11.87	75	5162416	191.69 ug/l	99
51)	4-Methyl-2-pentanone	11.95	43	19935945	818.92 ug/l	94
54)	Toluene	12.28	91	8997814	186.80 ug/l	100
55)	Ethyl methacrylate	12.44	69	3635621	174.96 ug/l	100
56)	trans-1,3-Dichloropropene	12.50	75	4526437	176.62 ug/l	96
57)	1,1,2-Trichloroethane	12.75	97	2253440	187.01 ug/l	99
58)	Tetrachloroethene	12.95	164	1814598	187.38 ug/l	99
59)	2-Hexanone	12.92	43	14377479	836.86 ug/l	100
60)	1,3-Dichloropropane	12.98	76	4342197	187.18 ug/l	98
61)	Dibromochloromethane	13.29	129	3283935	190.26 ug/l	100
62)	1,2-Dibromoethane	13.48	107	2709657	175.10 ug/l	99
63)	1-Chlorohexane	13.78	91	3690755	178.20 ug/l	98
64)	Chlorobenzene	13.99	112	6246879	187.54 ug/l	97
65)	Ethylbenzene	14.02	91	11331437	178.77 ug/l	99
66)	1,1,1,2-Tetrachloroethane	14.05	131	2777439	181.89 ug/l	99
67)	m-Xylene & p-Xylene	14.12	91	16276552	330.22 ug/l	98
68)	o-Xylene	14.61	91	9442798	170.26 ug/l	100
69)	Styrene	14.63	104	6512794	173.80 ug/l	99
71)	Bromoform	15.00	173	2240468	215.13 ug/l	100
72)	Isopropylbenzene	15.00	105	10278595	195.73 ug/l	99
74)	1,1,2,2-Tetrachloroethane	15.42	83	4272718	190.47 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.45	53	1661720	214.90 ug/l	98
76)	n-Propylbenzene	15.51	91	14490424	197.74 ug/l	100
77)	1,2,3-Trichloropropane	15.52	110	1045943	188.79 ug/l	99

(#) = qualifier out of range (m) = manual integration SU 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB242.D Vial: 9
Acq On : 20 May 2015 12:32 pm Operator: CMendo
Sample : VO03E208 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.55	156	2967005	196.49 ug/l	96
79)	1,3,5-Trimethylbenzene	15.67	105	8768394	192.33 ug/l	100
80)	2-Chlorotoluene	15.72	91	9564686	197.67 ug/l	99
81)	4-Chlorotoluene	15.83	91	8809169	193.33 ug/l	99
82)	tert-Butylbenzene	16.12	134	1603063	180.61 ug/l	96
83)	1,2,4-Trimethylbenzene	16.18	105	9037538	190.84 ug/l	100
84)	sec-Butylbenzene	16.39	105	11516875	192.56 ug/l	99
85)	p-Isopropyltoluene	16.52	119	8854962	187.45 ug/l	100
86)	1,3-Dichlorobenzene	16.68	146	5022504	195.32 ug/l	100
87)	1,4-Dichlorobenzene	16.79	146	5081579	196.19 ug/l	99
88)	n-Butylbenzene	17.06	91	9561518	191.83 ug/l	100
89)	1,2-Dichlorobenzene	17.31	146	4504618	189.68 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.38	157	699169	191.35 ug/l	99
91)	1,2,4-Trichlorobenzene	19.57	180	2267594	200.77 ug/l	99
92)	Hexachlorobutadiene	19.69	225	1335823	181.60 ug/l	100
93)	Naphthalene	20.05	128	6404593	206.10 ug/l	99
94)	1,2,3-Trichlorobenzene	20.45	180	1985694	208.35 ug/l	99

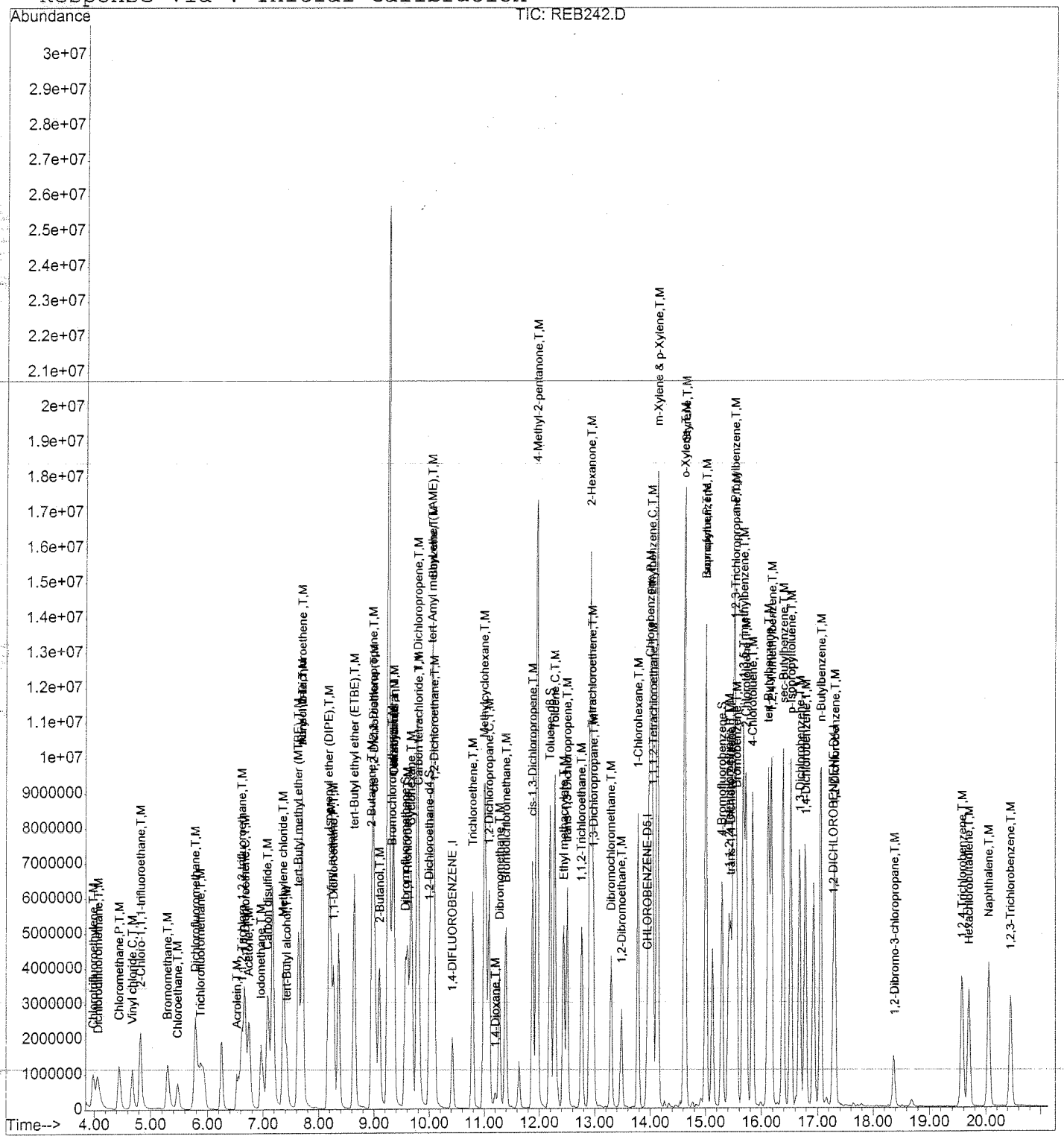
SU 5/28/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB242.D Vial: 9
Acq On : 20 May 2015 12:32 pm Operator: CMendo
Sample : VO03E208 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



Su 5/28/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB243.D Vial: 10
Acq On : 20 May 2015 1:02 pm Operator: CMendo
Sample : VO03E209 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.42	114	1813146	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.95	117	1670341	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.29	152	699308	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	9.56	111	4720148	297.64	ug/l	0.00
Spiked Amount 50.000			Recovery	=	595.28%	
39) 1,2-Dichloroethane-d4	10.01	65	5923155	274.64	ug/l	0.00
Spiked Amount 50.000			Recovery	=	549.28%	
53) Toluene-d8	12.19	98	11915110	336.80	ug/l	0.00
Spiked Amount 50.000			Recovery	=	673.60%	
~~73) 4-Bromofluorobenzene~~	~~15.29~~	~~95~~	~~5268143~~	~~354.96~~	~~ug/l~~	~~0.00~~
Spiked Amount 50.000			Recovery	=	709.92%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.98	116	1602556	326.72	ug/l	99
3) Dichlorodifluoromethane	4.05	85	3905736	320.89	ug/l	99
4) Chloromethane	4.45	50	3929884	300.02	ug/l	99
5) Vinyl chloride	4.69	62	3370426	311.67	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.82	118	2394505	307.08	ug/l	98
7) Bromomethane	5.29	94	2767147	276.73	ug/l	99
8) Chloroethane	5.46	64	1760698	295.11	ug/l	99
9) Dichlorofluoromethane	5.78	67	7112995	286.83	ug/l	100
10) Trichlorofluoromethane	5.88	101	5015312	297.23	ug/l	99
11) Acrolein	6.54	56	2708836	1704.22	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.63	151	1866736	302.96	ug/l	100
13) 1,1-Dichloroethene	6.67	61	6334182	306.32	ug/l	97
14) Acetone	6.74	43	9509599	1623.65	ug/l	98
15) Iodomethane	6.97	142	6611276	299.26	ug/l	97
16) Carbon disulfide	7.09	76	14532705	322.09	ug/l	100
18) Methylene chloride	7.36	49	6439948	300.70	ug/l	98
19) tert-Butyl alcohol	7.43	59	3934382	1635.58	ug/l	96
20) tert-Butyl methyl ether (M	7.64	73	11352867	290.22	ug/l	99
21) trans-1,2-Dichloroethene	7.70	61	6295682	304.77	ug/l	98
22) Acrylonitrile	7.70	53	8455660	1766.53	ug/l	99
23) Isopropyl ether (DIPE)	8.19	45	15576794	298.02	ug/l	99
24) Vinyl acetate	8.22	43	12910501	366.84	ug/l	100
25) 1,1-Dichloroethane	8.26	63	8066990	301.64	ug/l	99
26) tert-Butyl ethyl ether (ET	8.64	59	14781660	305.11	ug/l	99
27) 2-Butanone	8.96	43	15940723	1783.69	ug/l	99
~~28) 2,2-Dichloropropane~~	~~8.98~~	~~77~~	~~4062206~~	~~204.32~~	~~ug/l~~	~~97~~
29) cis-1,2-Dichloroethene	8.99	96	4087648	292.12	ug/l	93

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB243.D Vial: 10
Acq On : 20 May 2015 1:02 pm Operator: CMendo
Sample : VO03E209 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.11	45	3282512	1670.11 ug/l	97
31)	Bromochloromethane	9.32	49	5964416	298.17 ug/l	96
32)	Tetrahydrofuran	9.35	42	1597868	329.51 ug/l	99
33)	Chloroform	9.37	83	8315526	282.71 ug/l	99
35)	1,1,1-Trichloroethane	9.60	97	5999368	277.47 ug/l	99
36)	Cyclohexane	9.66	56	6743292	308.67 ug/l	100
37)	1,1-Dichloropropene	9.78	110	1644246	311.73 ug/l	99
38)	Carbon tetrachloride	9.81	119	5221646	287.63 ug/l	100
40)	tert-Amyl methyl ether (TA	10.05	87	2624450	291.15 ug/l	98
41)	Benzene	10.07	78	13443574	300.13 ug/l	99
42)	~~1,2-Dichloroethane~~	~~10.10~~	~~62~~	~~7190286~~	~~292.10 ug/l~~	~~100~~
43)	Trichloroethene	10.80	130	3971208	322.84 ug/l	97
44)	Methylcyclohexane	11.00	83	6569960	308.17 ug/l	99
45)	1,2-Dichloropropane	11.08	63	4564038	337.80 ug/l	96
46)	1,4-Dioxane	11.20	88	784664	5368.76 ug/l	95
47)	Dibromomethane	11.27	93	3580245	317.13 ug/l	97
48)	Bromodichloromethane	11.39	83	7342506	322.14 ug/l	99
50)	cis-1,3-Dichloropropene	11.88	75	8082732	329.39 ug/l	98
51)	4-Methyl-2-pentanone	11.96	43	24315246	1096.18 ug/l	77
54)	Toluene	12.27	91	14387663	338.28 ug/l	100
55)	Ethyl methacrylate	12.43	69	6263178	341.34 ug/l	99
56)	trans-1,3-Dichloropropene	12.51	75	7721459	341.20 ug/l	100
57)	1,1,2-Trichloroethane	12.76	97	3783923	355.64 ug/l	99
58)	Tetrachloroethene	12.94	164	2843240	332.50 ug/l	98
59)	2-Hexanone	12.91	43	20227301	1333.35 ug/l	88
60)	1,3-Dichloropropane	12.97	76	6901603	336.94 ug/l	99
61)	Dibromochloromethane	13.30	129	5152953	338.09 ug/l	99
62)	1,2-Dibromoethane	13.48	107	4481764	327.99 ug/l	100
63)	1-Chlorohexane	13.77	91	5701273	311.74 ug/l	98
64)	Chlorobenzene	13.98	112	9616489	326.95 ug/l	96
65)	Ethylbenzene	14.01	91	16280430	290.88 ug/l	97
66)	1,1,1,2-Tetrachloroethane	14.04	131	4170567	309.31 ug/l	99
67)	m-Xylene & p-Xylene	14.13	91	20561537	472.43 ug/l	83
68)	o-Xylene	14.62	91	14033730	286.56 ug/l	100
69)	Styrene	14.64	104	9824685	296.93 ug/l	99
71)	Bromoform	15.01	173	3593186	434.01 ug/l	99
72)	Isopropylbenzene	15.01	105	15710092	376.32 ug/l	100
74)	1,1,2,2-Tetrachloroethane	15.41	83	6588096	369.45 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.46	53	2589878	421.33 ug/l	99
76)	~~n-Propylbenzene~~	~~15.50~~	~~91~~	~~19161062~~	~~328.92 ug/l~~	~~96~~
77)	1,2,3-Trichloropropane	15.52	110	1591156	361.28 ug/l	99

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

SY 5/28/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB243.D Vial: 10
Acq On : 20 May 2015 1:02 pm Operator: CMendo
Sample : VO03E209 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.55	156	4433267	369.32 ug/l	97
79)	1,3,5-Trimethylbenzene	15.68	105	12745977	351.70 ug/l	100
80)	2-Chlorotoluene	15.72	91	13660469	355.13 ug/l	99
81)	4-Chlorotoluene	15.84	91	13020862	359.47 ug/l	98
82)	tert-Butylbenzene	16.13	134	2447971	346.95 ug/l	98
83)	1,2,4-Trimethylbenzene	16.17	105	12881090	342.15 ug/l	91
84)	sec-Butylbenzene	16.38	105	15848192	333.33 ug/l	100
85)	p-Isopropyltoluene	16.51	119	12906054	343.67 ug/l	99
86)	1,3-Dichlorobenzene	16.68	146	7049740	344.88 ug/l	99
87)	1,4-Dichlorobenzene	16.78	146	7079269	343.82 ug/l	100
~~88)~~	~~n-Butylbenzene~~	~~17.05~~	~~91~~	~~13325302~~	~~336.30 ug/l~~	~~100~~
89)	1,2-Dichlorobenzene	17.30	146	6106681	323.47 ug/l	98
90)	1,2-Dibromo-3-chloropropan	18.37	157	1025429	353.04 ug/l	99
91)	1,2,4-Trichlorobenzene	19.57	180	3091711	344.35 ug/l	100
92)	Hexachlorobutadiene	19.70	225	1751755	299.58 ug/l	99
93)	Naphthalene	20.06	128	8716168	352.84 ug/l	99
94)	1,2,3-Trichlorobenzene	20.46	180	2475987	326.80 ug/l	99

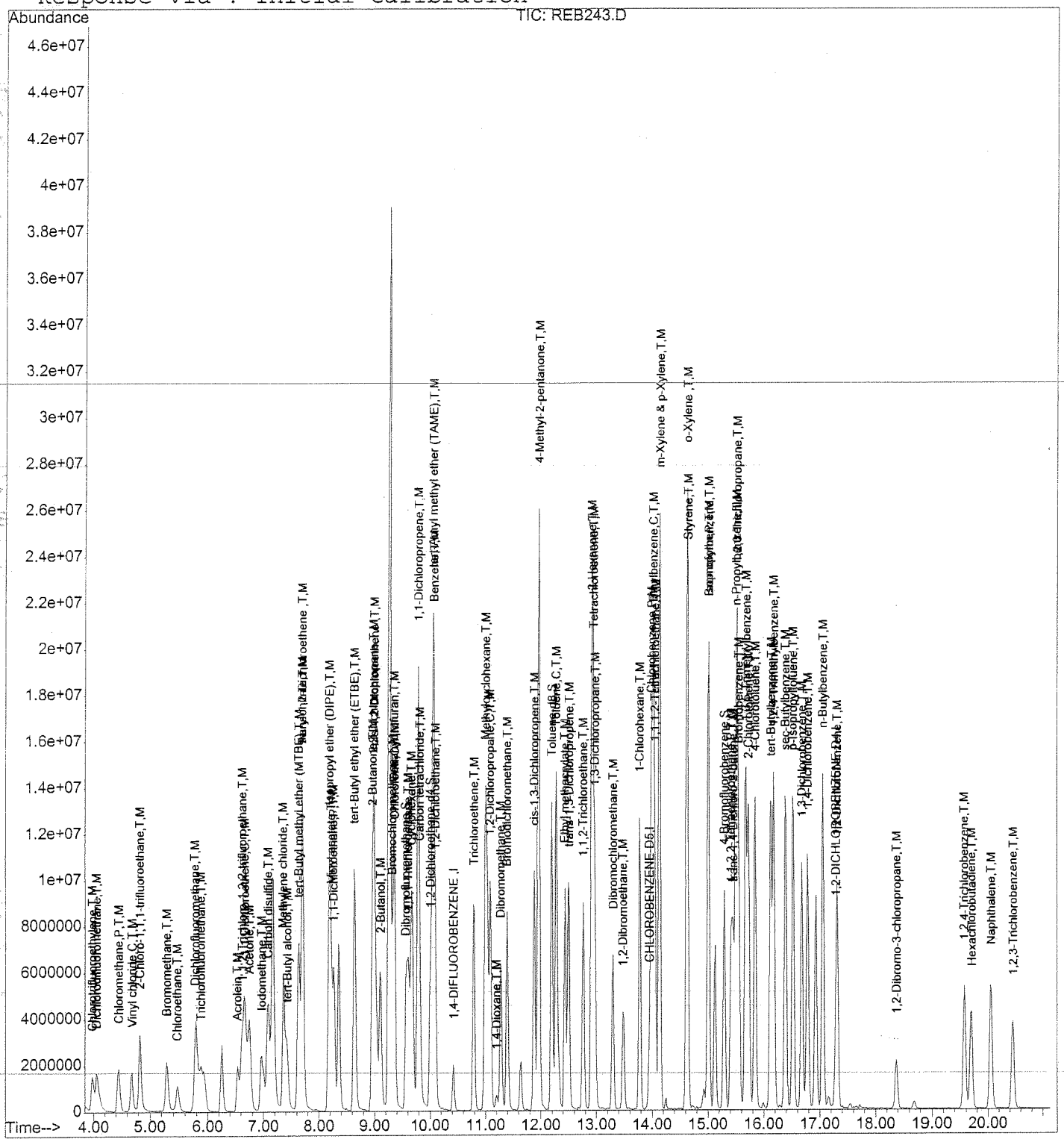
SU 5/28/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB243.D Vial: 10
Acq On : 20 May 2015 1:02 pm Operator: CMendo
Sample : VO03E209 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB244.D Vial: 11
Acq On : 20 May 2015 1:32 pm Operator: CMendo
Sample : VO03E2010 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.42	114	2052747	50.00 ug/l	-0.01
52) CHLOROBENZENE-D5	13.94	117	1911889	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.28	152	710794	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.57	111	7591933	422.85 ug/l	0.00
Spiked Amount 50.000			Recovery	= 845.70%	
39) 1,2-Dichloroethane-d4	10.00	65	9917731	406.18 ug/l	0.00
Spiked Amount 50.000			Recovery	= 812.36%	
53) Toluene-d8	12.20	98	18175053	448.84 ug/l	0.01
Spiked Amount 50.000			Recovery	= 897.68%	
~~73) 4-Bromofluorobenzene~~	~~15.29~~	~~95~~	~~8483913~~	~~562.39 ug/l~~	~~0.01~~
Spiked Amount 50.000			Recovery	= 1124.78%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.98	116	2571563	463.08 ug/l	99
3) Dichlorodifluoromethane	4.06	85	5998767	435.32 ug/l	99
4) Chloromethane	4.44	50	6119916	412.67 ug/l	100
5) Vinyl chloride	4.68	62	5329015	435.27 ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.83	118	3819948	432.70 ug/l	98
7) Bromomethane	5.28	94	3938540	347.91 ug/l	99
8) Chloroethane	5.44	64	2671059	395.44 ug/l	99
9) Dichlorofluoromethane	5.77	67	10768638	383.55 ug/l	100
10) Trichlorofluoromethane	5.87	101	7962350	416.81 ug/l	99
11) Acrolein	6.54	56	3722832	2068.78 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.62	151	2986526	428.12 ug/l	100
13) 1,1-Dichloroethene	6.68	61	9539736	407.50 ug/l	96
14) Acetone	6.75	43	14407420	2172.77 ug/l	98
15) Iodomethane	7.00	142	10151340	405.86 ug/l	98
16) Carbon disulfide	7.09	76	24931312	488.06 ug/l	97
18) Methylene chloride	7.36	49	10072989	415.44 ug/l	97
19) tert-Butyl alcohol	7.44	59	5663144	2079.45 ug/l	95
20) tert-Butyl methyl ether (M	7.63	73	18742461	423.19 ug/l	99
21) trans-1,2-Dichloroethene	7.70	61	9650245	412.63 ug/l	98
22) Acrylonitrile	7.70	53	13062898	2410.52 ug/l	100
23) Isopropyl ether (DIPE)	8.18	45	23871170	403.40 ug/l	93
24) Vinyl acetate	8.21	43	15960343	400.57 ug/l	99
25) 1,1-Dichloroethane	8.27	63	13146277	434.19 ug/l	100
26) tert-Butyl ethyl ether (ET	8.64	59	21489731	391.80 ug/l	99
27) 2-Butanone	8.96	43	23758168	2348.13 ug/l	95
~~28) 2,2-Dichloropropane~~	~~8.99~~	~~77~~	~~6066366~~	~~269.51 ug/l~~	~~97~~
29) cis-1,2-Dichloroethene	9.00	96	6764890	427.02 ug/l	93

(#) = qualifier out of range (m) = manual integration
REB244.D VO03E20.M Thu May 28 11:51:05 2015 SU 5/28/15 Page 1

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB244.D
Acq On : 20 May 2015 1:32 pm
Sample : VO03E2010
Misc : 500ppb 8260/2500ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015

Vial: 11
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	2-Butanol	9.12	45	4775158	2145.98 ug/l		95
31)	Bromochloromethane	9.27	49	1124695	49.66 ug/l	#	39
32)	Tetrahydrofuran	9.27	42	3103590	565.32 ug/l	#	38
33)	Chloroform	9.44	83	300977	9.04 ug/l		96
35)	1,1,1-Trichloroethane	9.61	97	9500225	388.09 ug/l		99
36)	Cyclohexane	9.67	56	10693740	432.37 ug/l		100
37)	1,1-Dichloropropene	9.78	110	2587761	433.34 ug/l		100
38)	Carbon tetrachloride	9.81	119	8189307	398.45 ug/l		100
40)	tert-Amyl methyl ether (TA	10.05	87	4067721	398.59 ug/l		93
41)	Benzene	10.06	78	19530070	385.12 ug/l		95
42)	1,2-Dichloroethane	10.09	62	11812108	423.85 ug/l		99
43)	Trichloroethene	10.79	130	6295232	452.04 ug/l		97
44)	Methylcyclohexane	11.00	83	9921242	411.04 ug/l		99
45)	1,2-Dichloropropane	11.09	63	7304869	477.55 ug/l		95
46)	1,4-Dioxane	11.21	88	1192716	7208.16 ug/l		86
47)	Dibromomethane	11.27	93	5698546	445.85 ug/l		96
48)	Bromodichloromethane	11.39	83	12018212	465.73 ug/l		99
50)	cis-1,3-Dichloropropene	11.88	75	13355304	480.73 ug/l		99
51)	4-Methyl-2-pentanone	11.94	43	10245717	407.99 ug/l	#	54
54)	Toluene	12.27	91	19951932	409.84 ug/l		87
55)	Ethyl methacrylate	12.44	69	9590253	456.63 ug/l		99
56)	trans-1,3-Dichloropropene	12.50	75	12646292	488.22 ug/l		97
57)	1,1,2-Trichloroethane	12.76	97	6088594	499.94 ug/l		99
58)	Tetrachloroethene	12.94	164	4601966	470.18 ug/l		98
59)	2-Hexanone	12.91	43	23977446	1380.87 ug/l		65
60)	1,3-Dichloropropane	12.97	76	11045425	471.11 ug/l		98
61)	Dibromochloromethane	13.30	129	8378627	480.28 ug/l		99
62)	1,2-Dibromoethane	13.48	107	7319672	468.01 ug/l		99
63)	1-Chlorohexane	13.78	91	9319103	445.18 ug/l		99
64)	Chlorobenzene	13.98	112	15103459	448.62 ug/l		96
65)	Ethylbenzene	14.01	91	20391084	318.29 ug/l		86
66)	1,1,1,2-Tetrachloroethane	14.04	131	6476925	419.68 ug/l		99
67)	m-Xylene & p-Xylene	14.13	91	24530911	492.42 ug/l		60
68)	o-Xylene	14.61	91	19005137	339.05 ug/l		89
69)	Styrene	14.62	104	15728364	415.30 ug/l		98
71)	Bromoform	15.00	173	5825710	692.29 ug/l		100
72)	Isopropylbenzene	15.00	105	20298558	478.37 ug/l		92
74)	1,1,2,2-Tetrachloroethane	15.41	83	10409818	574.33 ug/l		100
75)	trans-1,4-Dichloro-2-buten	15.46	53	4048329	647.96 ug/l		100
76)	n-Propylbenzene	15.50	91	23207313	391.94 ug/l		86
77)	1,2,3-Trichloropropane	15.52	110	2356681	526.45 ug/l		96

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB244.D Vial: 11
Acq On : 20 May 2015 1:32 pm Operator: CMendo
Sample : VO03E2010 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.55	156	6824373	559.33 ug/l	94
79)	1,3,5-Trimethylbenzene	15.67	105	17830121	484.03 ug/l	96
80)	2-Chlorotoluene	15.71	91	20579371	526.35 ug/l	98
81)	4-Chlorotoluene	15.85	91	18533447	503.38 ug/l	93
82)	tert-Butylbenzene	16.11	134	3743582	522.00 ug/l	99
83)	1,2,4-Trimethylbenzene	16.17	105	18361441	479.85 ug/l	95
84)	sec-Butylbenzene	16.38	105	21214349	438.98 ug/l	93
85)	p-Isopropyltoluene	16.52	119	17896214	468.86 ug/l	97
86)	1,3-Dichlorobenzene	16.68	146	10571314	508.80 ug/l	99
87)	1,4-Dichlorobenzene	16.78	146	10981012	524.70 ug/l	99
~~88)~~	~~n-Butylbenzene~~	~~17.05~~	~~91~~	~~18524424~~	~~459.96 ug/l~~	~~95~~
89)	1,2-Dichlorobenzene	17.31	146	9304789	484.91 ug/l	98
90)	1,2-Dibromo-3-chloropropan	18.38	157	1566184	530.49 ug/l	98
91)	1,2,4-Trichlorobenzene	19.57	180	4520773	495.38 ug/l	100
92)	Hexachlorobutadiene	19.69	225	2770200	466.09 ug/l	99
93)	Naphthalene	20.05	128	12778580	508.94 ug/l	99
94)	1,2,3-Trichlorobenzene	20.45	180	3795535	492.87 ug/l	99

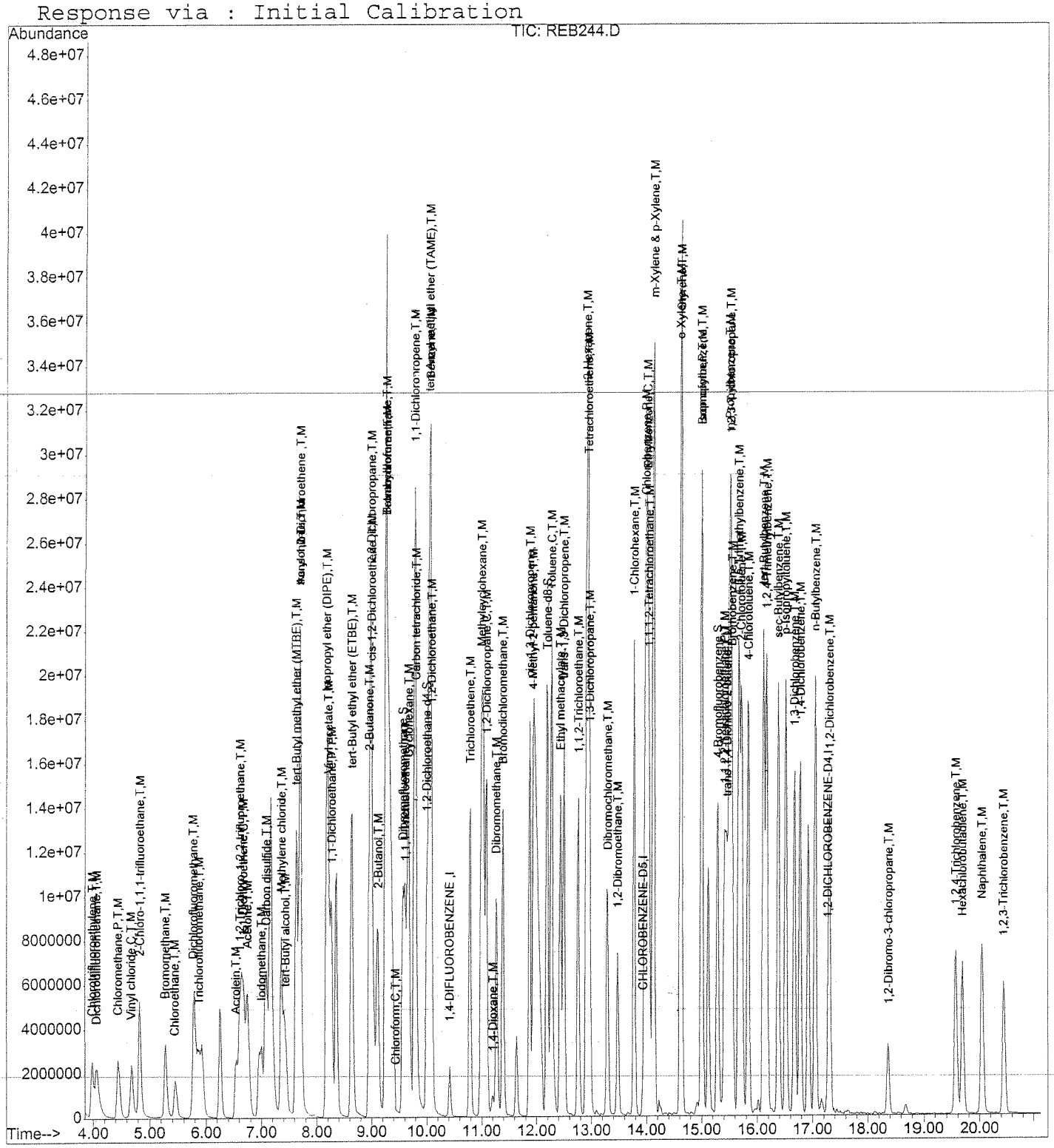
SU 5/28/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB244.D Vial: 11
Acq On : 20 May 2015 1:32 pm Operator: CMendo
Sample : VO03E2010 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 28 11:49 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



SU 5/28/15

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RIB361
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 15I185
BFB Injection Date : 09/24/15
BFB Injection Time : 12:26
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.64
75	30.0 - 60.0% of mass 95	46.07
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	5.98
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	66.61
175	5.0 - 9.0% of mass 174	5.30(8.0)1
176	95.0 - 101.0% of mass 174	64.19(96.4)1
177	5.0 - 9.0% of mass 176	4.41(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD01	V0031241	RIB362	09/24/15	12:59
2	VSTD02	V0031242	RIB363	09/24/15	13:29
3	VSTD04	V0031243	RIB364	09/24/15	13:57
4	VSTD010	V0031244	RIB365	09/24/15	14:25
5	VSTD020	V0031245	RIB366	09/24/15	14:53
6	VSTD050	V0031246	RIB367	09/24/15	15:21
7	VSTD100	V0031247	RIB368	09/24/15	15:50
8	VSTD200	V0031248	RIB369	09/24/15	16:18
9	VSTD300	V0031249	RIB370	09/24/15	16:47
10	VSTD500	V0031 2410	RIB371	09/24/15	17:15

FORM V VOA OLM02.0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RIB391
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 15I185
BFB Injection Date : 09/25/15
BFB Injection Time : 07:56
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.48
75	30.0 - 60.0% of mass 95	46.30
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.55
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	66.94
175	5.0 - 9.0% of mass 174	4.97(7.4)1
176	95.0 - 101.0% of mass 174	64.88(96.9)1
177	5.0 - 9.0% of mass 176	4.63(7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	IV0031242	RIB392	09/25/15	08:23

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :09/24/15 12:59
Spike Units :PPB
IC File :RIB367

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :09/24/15 17:15
HPChem Method :V003I24

	M IDX	Parameters	1 12:59 RIB362	2 13:29 RIB363	4 13:57 RIB364	10 14:25 RIB365	20 14:53 RIB366	50 15:21 RIB367	100 15:50 RIB368	200 16:18 RIB369	300 16:47 RIB370	500 17:15 RIB371	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	10.3670
	2	Chlorotrifluoroethylene	------	0.095	0.107	0.111	0.105	0.120	0.121	0.110	0.117	0.126	0.112	8.48	3.9614
	3	Dichlorodifluoromethane	0.304	0.233	0.266	0.321	0.315	0.357	0.345	0.325	0.329	0.351	0.315	12.30	4.0388
	4	Chloromethane	0.372	0.364	0.333	0.337	0.352	0.393	0.382	0.332	0.342	0.380	0.359	6.25	4.4112
	5	Vinyl chloride	0.200	0.227	0.250	0.262	0.283	0.305	0.316	0.277	0.263	0.305	0.269	13.66	4.6481
	6	2-Chloro-1,1,1-trifluoroethane	------	------	0.150	0.151	0.146	0.156	0.177	0.144	0.155	0.185	0.158	9.44	4.8008
	7	Bromomethane	------	0.257	0.246	0.266	0.283	0.274	0.250	0.196	------	------	0.253	11.23	5.2764
	8	Chloroethane	------	0.177	0.168	0.194	0.179	0.181	0.181	------	------	------	0.180	4.64	5.4460
	9	Dichlorofluoromethane	0.835	0.789	0.778	0.753	0.746	0.810	0.779	0.639	0.594	------	0.747	10.64	5.7438
	10	Trichlorofluoromethane	------	------	0.412	0.457	0.505	0.512	0.508	0.457	0.447	0.464	0.470	7.48	5.8082
5	11	Acrolein	------	0.070	0.061	0.050	0.050	0.054	0.052	0.048	------	------	0.055	14.09	6.5022
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.215	0.222	0.211	0.193	0.197	0.204	0.210	0.199	0.188	0.208	0.205	5.11	6.5802
	13	1,1-Dichloroethene	0.643	0.634	0.626	0.597	0.632	0.632	0.675	0.638	0.604	0.670	0.635	3.86	6.6264
5	14	Acetone	------	0.210	0.181	0.140	0.141	0.163	0.170	0.169	0.154	0.165	0.166	12.88	6.7123
	15	Iodomethane	0.755	0.762	0.739	0.692	0.719	0.784	0.816	0.714	0.721	0.773	0.747	5.03	6.9198
	16	Carbon disulfide	------	1.443	2.298	1.635	1.713	1.740	1.661	1.639	1.522	1.527	1.686	14.75	7.0351
	17	Methyl acetate	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	18	Methylene chloride	------	------	0.911	0.694	0.678	0.695	0.750	0.698	0.668	0.692	0.723	10.99	7.3184
5	19	tert-Butyl alcohol	------	0.075	0.074	0.053	0.055	0.062	0.070	0.066	0.060	0.060	0.064	12.33	7.3860
	20	tert-Butyl methyl ether (MTBE)	1.278	1.328	1.179	1.066	1.085	1.171	1.196	1.102	1.101	1.143	1.165	7.31	7.5947
5	21	Acrylonitrile	0.169	0.157	0.161	0.134	0.140	0.150	0.153	0.151	0.143	0.149	0.151	6.81	7.6617
	22	trans-1,2-Dichloroethene	0.695	0.653	0.678	0.623	0.652	0.646	0.673	0.614	0.604	0.602	0.644	4.99	7.6617
	23	Isopropyl ether (DIPE)	1.795	1.793	1.700	1.644	1.706	1.776	1.845	1.695	1.661	------	1.735	3.98	8.1372
	24	Vinyl acetate	------	------	0.960	1.032	1.134	1.336	1.313	1.186	1.088	1.061	1.139	11.66	8.1787
	25	1,1-Dichloroethane	0.877	0.853	0.854	0.749	0.781	0.886	0.855	0.810	0.778	0.801	0.825	5.69	8.2218
	26	tert-Butyl ethyl ether (ETBE)	1.627	1.423	1.422	1.390	1.361	1.429	1.434	1.313	1.350	------	1.417	6.29	8.5941
5	27	2-Butanone	0.331	0.333	0.347	0.272	0.267	0.327	0.317	0.322	0.278	0.294	0.309	9.27	8.9131
	28	2,2-Dichloropropane	0.716	0.704	0.639	0.602	0.595	0.633	0.589	------	------	------	0.640	8.08	8.9346
	29	cis-1,2-Dichloroethene	0.447	0.522	0.483	0.452	0.439	0.485	0.466	0.437	0.420	0.422	0.457	6.96	8.9503
5	30	2-Butanol	------	0.060	0.084	0.053	0.056	0.064	0.062	0.062	0.056	0.054	0.061	15.15	9.0628
	31	Bromochloromethane	0.647	0.688	0.640	0.586	0.580	0.622	0.673	0.592	0.605	0.586	0.622	6.18	9.2721
	32	Tetrahydrofuran	------	------	0.194	0.140	0.099	0.158	0.172	0.165	0.153	0.157	0.155	17.65	9.3090
	33	Chloroform	0.989	0.978	0.924	0.848	0.603	0.910	0.956	0.869	0.862	0.877	0.881	12.45	9.3093
	34	Dibromofluoromethane	0.478	0.414	0.440	0.420	0.472	0.454	0.474	0.443	0.434	0.453	0.448	4.99	9.5164
	35	1,1,1-Trichloroethane	0.653	0.638	0.645	0.600	0.638	0.619	0.667	0.596	0.597	0.607	0.626	4.10	9.5551
	36	Cyclohexane	0.463	0.405	0.462	0.442	0.491	0.479	0.481	0.426	0.448	0.419	0.452	6.37	9.6147
	37	1,1-Dichloropropene	0.189	0.188	0.185	0.167	0.177	0.177	0.179	0.158	0.158	0.159	0.174	7.21	9.7324
	38	Carbon tetrachloride	0.510	0.549	0.531	0.469	0.510	0.518	0.531	0.473	0.465	0.464	0.502	6.30	9.7562
	39	1,2-Dichloroethane-d4	0.530	0.529	0.540	0.533	0.558	0.554	0.596	0.552	0.553	0.556	0.550	3.57	9.9499
	40	tert-Amyl methyl ether (TAME)	0.377	0.303	0.307	0.259	0.250	0.282	0.282	0.260	0.246	0.236	0.280	14.80	9.9946
	41	Benzene	1.732	1.605	1.694	1.490	1.537	1.649	1.582	1.507	1.451	------	1.583	6.04	10.0109
	42	1,2-Dichloroethane	0.673	0.739	0.699	0.657	0.642	0.701	0.690	0.667	0.649	0.643	0.676	4.62	10.0408
	43	Trichloroethene	0.414	0.404	0.419	0.366	0.389	0.408	0.418	0.401	0.372	0.402	0.399	4.59	10.7364
	44	Methylcyclohexane	0.434	0.468	0.508	0.509	0.511	0.550	0.525	0.497	0.507	0.496	0.500	6.25	10.9435
	45	1,2-Dichloropropane	0.568	0.515	0.476	0.447	0.448	0.504	0.505	0.467	0.468	0.467	0.486	7.65	11.0284
20	46	1,4-Dioxane	------	0.007	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	14.90	11.1516
	47	Dibromomethane	0.401	0.423	0.390	0.351	0.350	0.382	0.401	0.364	0.355	0.372	0.379	6.48	11.2161
	48	Bromodichloromethane	0.750	0.789	0.748	0.715	0.712	0.763	0.805	0.757	0.738	0.757	0.754	3.84	11.3353

Sm
9/29/15

	49	2-Chloroethyl vinyl ether	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	50	cis-1,3-Dichloropropene	0.895	0.967	0.885	0.819	0.872	0.901	0.938	0.878	0.844	0.879	0.888	4.75	11.8180
5	51	4-Methyl-2-pentanone	0.968	0.904	0.894	0.706	0.744	0.825	0.805	------	------	------	0.835	11.13	11.9013
	52	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	13.8838
	53	Toluene-d8	1.081	1.100	1.291	1.301	1.493	1.317	1.331	1.269	1.367	------	1.283	9.92	12.1312
	54	Toluene	1.670	1.601	1.750	1.585	1.745	1.680	1.733	1.643	1.646	------	1.672	3.62	12.2157
	55	Ethyl methacrylate	0.772	0.725	0.732	0.609	0.706	0.692	0.672	0.670	0.677	0.701	0.696	6.30	12.3792
	56	trans-1,3-Dichloropropene	0.851	0.800	0.831	0.756	0.828	0.809	0.840	0.779	0.832	0.873	0.820	4.23	12.4403
	57	1,1,2-Trichloroethane	0.434	0.393	0.433	0.373	0.399	0.413	0.409	0.385	0.409	0.438	0.409	5.33	12.7010
5	58	2-Hexanone	0.769	0.669	0.654	0.525	0.576	0.613	0.583	0.507	------	------	0.612	13.89	12.8565
	59	Tetrachloroethene	0.321	0.335	0.350	0.315	0.358	0.333	0.329	0.302	0.310	0.310	0.326	5.61	12.8797
	60	1,3-Dichloropropane	0.797	0.816	0.822	0.739	0.807	0.820	0.804	0.741	0.743	0.754	0.784	4.52	12.9095
	61	Dibromochloromethane	0.479	0.506	0.493	0.466	0.490	0.500	0.509	0.497	0.502	0.526	0.497	3.33	13.2298
	62	1,2-Dibromoethane	0.510	0.494	0.491	0.447	0.459	0.479	0.486	0.466	0.469	0.506	0.481	4.25	13.4175
	63	1-Chlorohexane	0.777	0.754	0.785	0.663	0.793	0.742	0.738	0.667	0.722	0.711	0.735	6.18	13.7184
	64	Chlorobenzene	1.111	1.032	1.031	0.976	1.031	1.011	1.023	0.942	0.986	0.970	1.011	4.62	13.9225
	65	Ethylbenzene	2.052	2.065	2.139	1.997	2.216	2.120	2.130	1.866	1.778	------	2.040	6.86	13.9520
	66	1,1,1,2-Tetrachloroethane	0.477	0.437	0.447	0.412	0.453	0.438	0.443	0.397	0.397	0.412	0.431	6.04	13.9836
2	67	m-Xylene & p-Xylene	1.585	1.656	1.664	1.574	1.709	1.632	1.612	1.274	------	------	1.588	8.46	14.0631
	68	o-Xylene	1.837	1.777	1.839	1.663	1.815	1.779	1.748	1.524	1.527	------	1.723	7.20	14.5545
	69	Styrene	1.265	1.226	1.233	1.198	1.231	1.196	1.204	1.031	1.036	1.042	1.166	7.87	14.5690
	70	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	17.2013
	71	Bromoform	------	0.667	0.709	0.641	0.667	0.667	0.743	0.788	------	------	0.698	7.46	14.9339
	72	Isopropylbenzene	3.308	3.338	3.509	3.072	3.388	3.043	3.391	3.437	3.478	------	3.329	5.00	14.9402
	73	4-Bromofluorobenzene	1.226	1.125	1.159	1.144	1.267	1.142	1.253	1.265	1.350	1.396	1.233	7.46	15.2215
	74	1,1,2,2-Tetrachloroethane	1.643	1.486	1.500	1.339	1.467	1.465	1.568	1.592	1.638	1.740	1.544	7.45	15.3452
	75	trans-1,4-Dichloro-2-butene	0.407	0.445	0.407	0.393	0.421	0.439	0.483	0.490	0.525	0.566	0.457	12.43	15.3869
	76	n-Propylbenzene	4.855	4.934	5.218	4.455	5.268	4.756	5.106	4.957	4.572	------	4.902	5.64	15.4334
	77	1,2,3-Trichloropropane	------	0.366	0.351	0.293	0.313	0.303	0.324	0.327	0.306	0.327	0.324	7.22	15.4481
	78	Bromobenzene	1.092	1.005	1.041	0.951	1.029	0.969	1.033	1.068	1.031	1.151	1.037	5.58	15.4792
	79	1,3,5-Trimethylbenzene	2.932	2.810	2.967	2.610	2.834	2.702	2.830	2.911	2.922	2.775	2.829	3.95	15.6014
	80	2-Chlorotoluene	3.135	3.135	3.245	2.844	3.275	3.031	3.274	3.269	3.426	------	3.182	5.32	15.6486
	81	4-Chlorotoluene	2.898	2.969	2.896	2.717	2.974	2.836	3.038	3.142	3.187	------	2.962	4.97	15.7678
	82	tert-Butylbenzene	0.704	0.613	0.626	0.505	0.580	0.535	0.569	0.559	0.564	0.566	0.582	9.47	16.0483
	83	1,2,4-Trimethylbenzene	2.891	2.875	2.914	2.577	2.917	2.750	2.923	2.848	2.887	2.761	2.834	3.86	16.1019
	84	sec-Butylbenzene	3.696	3.609	3.737	3.282	3.753	3.560	3.673	3.668	3.579	------	3.618	3.93	16.3107
	85	p-Isopropyltoluene	2.679	2.660	2.861	2.411	2.860	2.680	2.804	2.729	2.723	2.648	2.705	4.80	16.4445
	86	1,3-Dichlorobenzene	1.675	1.550	1.603	1.501	1.609	1.622	1.670	1.662	1.746	1.746	1.638	4.78	16.6039
	87	1,4-Dichlorobenzene	1.801	1.598	1.575	1.456	1.628	1.636	1.684	1.650	1.736	1.708	1.647	5.77	16.7082
	88	n-Butylbenzene	2.912	3.023	3.229	2.857	3.383	3.147	3.193	3.154	3.162	------	3.118	5.22	16.9760
	89	1,2-Dichlorobenzene	1.640	1.568	1.532	1.394	1.515	1.500	1.527	1.432	1.523	1.561	1.519	4.54	17.2296
	90	1,2-Dibromo-3-chloropropane	------	------	0.219	0.205	0.208	0.235	0.233	------	------	------	0.220	6.33	18.2946
	91	1,2,4-Trichlorobenzene	0.648	0.631	0.582	0.575	0.622	0.685	0.710	0.671	0.743	0.787	0.665	10.25	19.4820
	92	Hexachlorobutadiene	0.444	0.432	0.413	0.379	0.423	0.410	0.399	0.365	0.398	0.425	0.409	5.92	19.6101
	93	Naphthalene	1.767	1.590	1.537	1.517	1.603	1.814	1.931	1.870	2.002	2.135	1.777	11.91	19.9617
	94	1,2,3-Trichlorobenzene	0.596	0.551	0.512	0.510	0.516	0.599	0.622	0.564	0.579	0.628	0.568	7.86	20.3624

Spike Amount = Nominal Amount * M
Ave_%RSD : 7.5 Max_%RSD : 17.7

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
30	2-Butanol	0.00425	0.05663	0.9978
32	Tetrahydrofuran	-0.00119	0.15821	0.9979

SC
9/29/15

Compound List Report 03

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
Total Cpnds : 94

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	10.37	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	3.96	0.382	A	2	A	B
3	T	Dichlorodifluoromethane	85	4.05	0.391	A	1	A	B
4	T	Chloromethane	50	4.41	0.425	A	1	A	B
5	T	Vinyl chloride	62	4.66	0.450	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	4.81	0.464	A	2	A	B
7	T	Bromomethane	94	5.29	0.510	A	1	A	B
8	T	Chloroethane	64	5.45	0.526	A	2	A	B
9	T	Dichlorofluoromethane	67	5.75	0.555	A	1	A	B
10	T	Trichlorofluoromethane	101	5.81	0.560	A	1	A	B
11	T	Acrolein	56	6.51	0.628	A	1	A	B
12	T	1,1,2-Trichloro-1,2,2-trifluor	151	6.60	0.636	A	1	A	B
13	T	1,1-Dichloroethene	61	6.64	0.641	A	2	A	B
14	T	Acetone	43	6.70	0.646	A	2	A	B
15	T	Iodomethane	142	6.93	0.668	A	1	A	B
16	T	Carbon disulfide	76	7.04	0.680	A	1	A	B
17	T	Methyl acetate	43	0.00	0.000	A	1	A	B
18	T	Methylene chloride	49	7.33	0.707	A	2	A	B
19	T	tert-Butyl alcohol	59	7.39	0.713	A	1	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	7.60	0.733	A	1	A	B
21	T	Acrylonitrile	53	7.66	0.738	A	2	A	B
22	T	trans-1,2-Dichloroethene	61	7.67	0.740	A	2	A	B
23	T	Isopropyl ether (DIPE)	45	8.15	0.786	A	1	A	B
24	T	Vinyl acetate	43	8.18	0.789	A	1	A	B
25	T	1,1-Dichloroethane	63	8.22	0.793	A	2	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	8.59	0.829	A	1	A	B
27	T	2-Butanone	43	8.91	0.859	A	1	A	B
28	T	2,2-Dichloropropane	77	8.94	0.862	A	2	A	B
29	T	cis-1,2-Dichloroethene	96	8.95	0.863	A	2	A	B
30	T	2-Butanol	45	9.06	0.874	L	1	A	B
31	T	Bromochloromethane	49	9.28	0.895	A	2	A	B
32	T	Tetrahydrofuran	42	9.31	0.898	L	2	A	B
33	T	Chloroform	83	9.31	0.898	A	2	A	B
34	S	Dibromofluoromethane	111	9.52	0.918	A	2	A	B
35	T	1,1,1-Trichloroethane	97	9.56	0.922	A	2	A	B
36	T	Cyclohexane	56	9.62	0.928	A	2	A	B
37	T	1,1-Dichloropropene	110	9.74	0.940	A	1	A	B
38	T	Carbon tetrachloride	119	9.76	0.941	A	1	A	B
39	S	1,2-Dichloroethane-d4	65	9.95	0.960	A	1	A	B
40	T	tert-Amyl methyl ether (TAME)	87	9.99	0.964	A	2	A	B
41	T	Benzene	78	10.01	0.966	A	2	A	B
42	T	1,2-Dichloroethane	62	10.04	0.968	A	1	A	B
43	T	Trichloroethene	130	10.74	1.036	A	3	A	B
44	T	Methylcyclohexane	83	10.95	1.056	A	2	A	B
45	T	1,2-Dichloropropane	63	11.04	1.065	A	2	A	B
46	T	1,4-Dioxane	88	11.16	1.076	A	1	A	B
47	T	Dibromomethane	93	11.22	1.082	A	2	A	B
48	T	Bromodichloromethane	83	11.33	1.093	A	1	A	B
49	T	2-Chloroethyl vinyl ether	63	0.00	0.000	A	1	A	B
50	T	cis-1,3-Dichloropropene	75	11.83	1.141	A	3	A	B
51	T	4-Methyl-2-pentanone	43	11.90	1.148	A	3	A	B
52	I	CHLOROBENZENE-D5	117	13.88	1.000	A	2	A	B

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53	S	Toluene-d8	98	12.12	0.873	A	1	A	B
54	T	Toluene	91	12.21	0.880	A	1	A	B
55	T	Ethyl methacrylate	69	12.38	0.892	A	2	A	B
56	T	trans-1,3-Dichloropropene	75	12.44	0.896	A	2	A	B
57	T	1,1,2-Trichloroethane	97	12.71	0.915	A	3	A	B
58	T	2-Hexanone	43	12.85	0.926	A	2	A	B
59	T	Tetrachloroethene	164	12.88	0.928	A	3	A	B
60	T	1,3-Dichloropropane	76	12.91	0.930	A	1	A	B
61	T	Dibromochloromethane	129	13.23	0.953	A	1	A	B
62	T	1,2-Dibromoethane	107	13.42	0.967	A	1	A	B
63	T	1-Chlorohexane	91	13.72	0.988	A	3	A	B
64	P,M	Chlorobenzene	112	13.93	1.003	A	3	A	B
65	T	Ethylbenzene	91	13.96	1.005	A	1	A	B
66	T	1,1,1,2-Tetrachloroethane	131	13.99	1.008	A	3	A	B
67	T	m-Xylene & p-Xylene	91	14.06	1.013	A	1	A	B
68	T	o-Xylene	91	14.55	1.048	A	1	A	B
69	T	Styrene	104	14.57	1.049	A	2	A	B
70	I	1,2-DICHLOROBENZENE-D4	152	17.20	1.000	A	1	A	B
71	T	Bromoform	173	14.94	0.868	A	2	A	B
72	T	Isopropylbenzene	105	14.94	0.868	A	3	A	B
73	S	4-Bromofluorobenzene	95	15.22	0.885	A	2	A	B
74	T	1,1,2,2-Tetrachloroethane	83	15.34	0.892	A	1	A	B
75	T	trans-1,4-Dichloro-2-butene	53	15.39	0.894	A	1	A	B
76	T	n-Propylbenzene	91	15.43	0.897	A	2	A	B
77	T	1,2,3-Trichloropropane	110	15.45	0.898	A	1	A	B
78	T	Bromobenzene	156	15.48	0.900	A	2	A	B
79	T	1,3,5-Trimethylbenzene	105	15.60	0.906	A	2	A	B
80	T	2-Chlorotoluene	91	15.65	0.910	A	1	A	B
81	T	4-Chlorotoluene	91	15.76	0.916	A	1	A	B
82	T	tert-Butylbenzene	134	16.04	0.932	A	2	A	B
83	T	1,2,4-Trimethylbenzene	105	16.10	0.936	A	1	A	B
84	T	sec-Butylbenzene	105	16.31	0.948	A	1	A	B
85	T	p-Isopropyltoluene	119	16.44	0.956	A	2	A	B
86	T	1,3-Dichlorobenzene	146	16.61	0.965	A	2	A	B
87	T	1,4-Dichlorobenzene	146	16.71	0.971	A	2	A	B
88	T	n-Butylbenzene	91	16.98	0.987	A	2	A	B
89	T	1,2-Dichlorobenzene	146	17.23	1.002	A	2	A	B
90	T	1,2-Dibromo-3-chloropropane	157	18.29	1.063	A	2	A	B
91	T	1,2,4-Trichlorobenzene	180	19.48	1.132	A	2	A	B
92	T	Hexachlorobutadiene	225	19.62	1.140	A	2	A	B
93	T	Naphthalene	128	19.96	1.160	A	1	A	B
94	T	1,2,3-Trichlorobenzene	180	20.36	1.184	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VO03I24.M Tue Sep 29 10:42:00 2015

S
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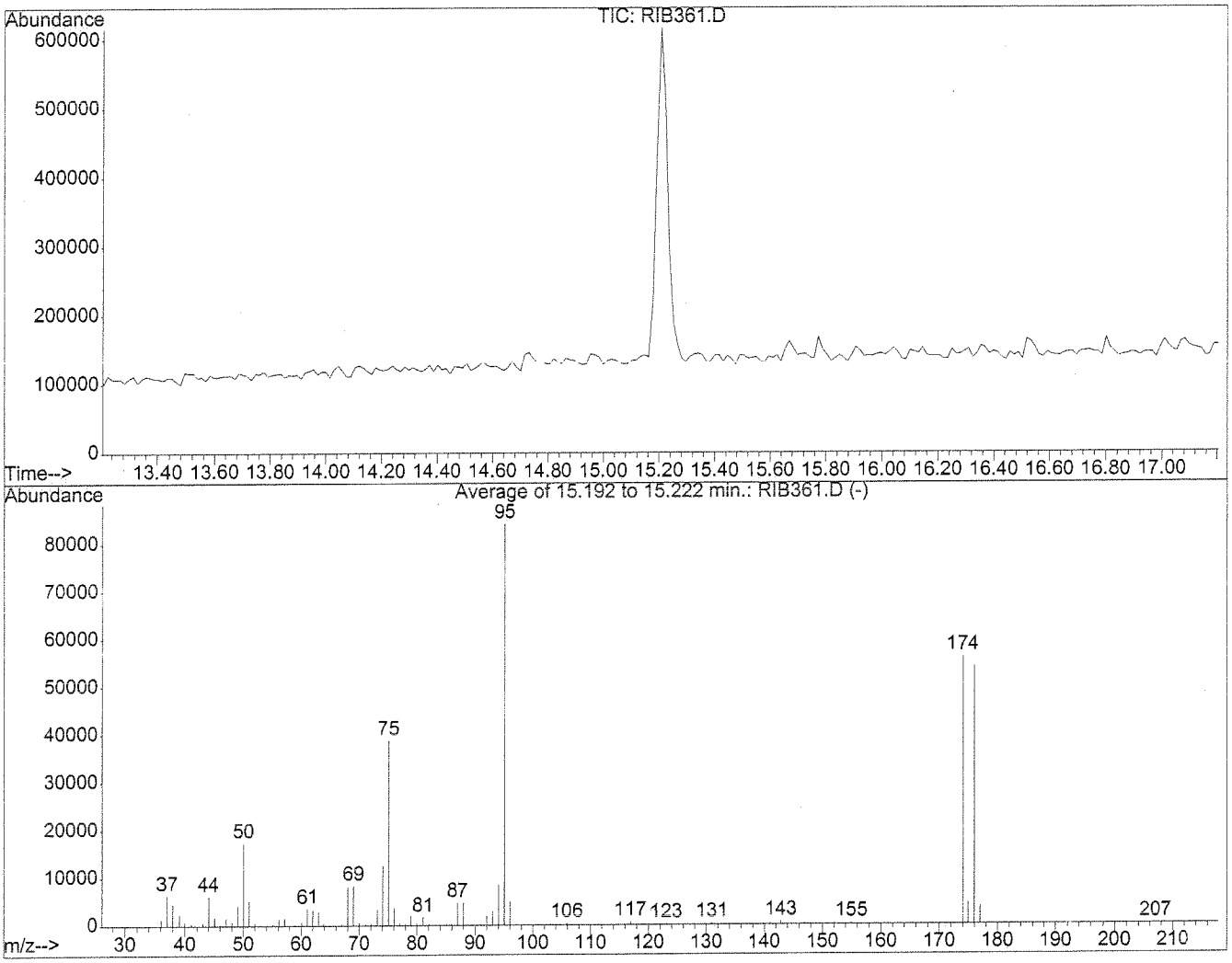
BFB

Data File : D:\HPCHEM\1\DATA\15I24\RIB361.D
Acq On : 24 Sep 2015 12:26 pm
Sample : BFB03I15
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00



AutoFind: Scans 763, 764, 765; Background Corrected with Scan 758

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.6	17384	PASS
75	95	30	60	46.1	38803	PASS
95	95	100	100	100.0	84226	PASS
96	95	5	9	6.0	5040	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	66.6	56099	PASS
175	174	5	9	8.0	4463	PASS
176	174	95	101	96.4	54064	PASS
177	176	5	9	6.9	3718	PASS

RIB361.D VO03I24.M Fri Sep 25 13:36:18 2015

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB362.D Vial: 2
Acq On : 24 Sep 2015 12:59 pm Operator: CMendo
Sample : VO03I241 Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1521750	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1549480	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	813640	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	14548	1.07 ug/l	0.00
Spiked Amount 50.000			Recovery	= 2.14%	
39) 1,2-Dichloroethane-d4	9.95	65	16125	0.96 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.92%	
53) Toluene-d8	12.12	98	33490	0.84 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.68%	
73) 4-Bromofluorobenzene	15.22	95	19952	0.99 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.98%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	1755	0.51 ug/l #	31
3) Dichlorodifluoromethane	4.04	85	9265	0.97 ug/l	91
4) Chloromethane	4.39	50	11335	1.04 ug/l	89
5) Vinyl chloride	4.62	62	6078	0.74 ug/l #	34
6) 2-Chloro-1,1,1-trifluoroet	4.79	118	4007	0.83 ug/l	85
7) Bromomethane	5.29	94	5431	0.71 ug/l	73
8) Chloroethane	5.44	64	4885	0.89 ug/l #	42
9) Dichlorofluoromethane	5.73	67	25404	1.12 ug/l	85
10) Trichlorofluoromethane	5.81	101	9247	0.65 ug/l	86
11) Acrolein	6.51	56	10932	6.54 ug/l	70
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	6548	1.05 ug/l	87
13) 1,1-Dichloroethene	6.63	61	19555	1.01 ug/l	84
14) Acetone	6.70	43	44878	8.89 ug/l	93
15) Iodomethane	6.91	142	22970	1.01 ug/l	95
16) Carbon disulfide	7.03	76	349959	6.82 ug/l	99
18) Methylene chloride	7.31	49	63224	2.87 ug/l	95
19) tert-Butyl alcohol	7.37	59	15740	8.10 ug/l	43
20) tert-Butyl methyl ether (M	7.60	73	38888	1.10 ug/l	80
21) Acrylonitrile	7.67	53	25759	5.61 ug/l	88
22) trans-1,2-Dichloroethene	7.66	61	21138	1.08 ug/l	90
23) Isopropyl ether (DIPE)	8.13	45	54637	1.03 ug/l	100
24) Vinyl acetate	8.19	43	18581	0.54 ug/l	98
25) 1,1-Dichloroethane	8.22	63	26695	1.06 ug/l	94
26) tert-Butyl ethyl ether (ET	8.59	59	49505	1.15 ug/l	95
27) 2-Butanone	8.92	43	50370	5.36 ug/l	97
28) 2,2-Dichloropropane	8.94	77	21799	1.12 ug/l	78
29) cis-1,2-Dichloroethene	8.95	96	13617	0.98 ug/l	80

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB362.D Vial: 2
Acq On : 24 Sep 2015 12:59 pm Operator: CMendo
Sample : VO03I241 Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	2-Butanol	9.06	45	13028	3.81 ug/l		91
31)	Bromochloromethane	9.26	49	19677	1.04 ug/l		95
32)	Tetrahydrofuran	9.31	42	8174	2.07 ug/l		86
33)	Chloroform	9.31	83	30085	1.12 ug/l		97
35)	1,1,1-Trichloroethane	9.55	97	19863	1.04 ug/l		93
36)	Cyclohexane	9.61	56	14095	1.03 ug/l		90
37)	1,1-Dichloropropene	9.73	110	5762	1.09 ug/l		99
38)	Carbon tetrachloride	9.76	119	15525	1.02 ug/l		97
40)	tert-Amyl methyl ether (TA	9.99	87	11464	1.34 ug/l	#	66
41)	Benzene	10.01	78	52706	1.09 ug/l		98
42)	1,2-Dichloroethane	10.04	62	20489	1.00 ug/l		76
43)	Trichloroethene	10.74	130	12613	1.04 ug/l		96
44)	Methylcyclohexane	10.95	83	13219	0.87 ug/l		96
45)	1,2-Dichloropropane	11.02	63	17292	1.17 ug/l	#	1
46)	1,4-Dioxane	11.16	88	4871	29.03 ug/l		70
47)	Dibromomethane	11.22	93	12210	1.06 ug/l		97
48)	Bromodichloromethane	11.33	83	22821	1.00 ug/l		98
50)	cis-1,3-Dichloropropene	11.83	75	27245	1.01 ug/l		97
51)	4-Methyl-2-pentanone	11.90	43	147290	5.80 ug/l		99
54)	Toluene	12.21	91	51751	1.00 ug/l		90
55)	Ethyl methacrylate	12.38	69	23923	1.11 ug/l		92
56)	trans-1,3-Dichloropropene	12.45	75	26378	1.04 ug/l		97
57)	1,1,2-Trichloroethane	12.71	97	13452	1.06 ug/l		93
58)	2-Hexanone	12.85	43	119158	6.28 ug/l		95
59)	Tetrachloroethene	12.88	164	9940	0.98 ug/l		90
60)	1,3-Dichloropropane	12.91	76	24702	1.02 ug/l		92
61)	Dibromochloromethane	13.23	129	14844	0.96 ug/l		91
62)	1,2-Dibromoethane	13.42	107	15809	1.06 ug/l		90
63)	1-Chlorohexane	13.72	91	24066	1.06 ug/l		94
64)	Chlorobenzene	13.93	112	34416	1.10 ug/l	#	73
65)	Ethylbenzene	13.96	91	63599	1.01 ug/l		95
66)	1,1,1,2-Tetrachloroethane	13.99	131	14772	1.11 ug/l		90
67)	m-Xylene & p-Xylene	14.06	91	98220	2.00 ug/l		94
68)	o-Xylene	14.55	91	56922	1.07 ug/l		99
69)	Styrene	14.57	104	39191	1.08 ug/l		97
71)	Bromoform	14.92	173	12205	1.08 ug/l		97
72)	Isopropylbenzene	14.94	105	53825	0.99 ug/l		93
74)	1,1,2,2-Tetrachloroethane	15.34	83	26731	1.06 ug/l		97
75)	trans-1,4-Dichloro-2-buten	15.39	53	6617	0.89 ug/l		75
76)	n-Propylbenzene	15.43	91	79008	0.99 ug/l		95
77)	1,2,3-Trichloropropane	15.45	110	7941	1.51 ug/l		97

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB362.D
Acq On : 24 Sep 2015 12:59 pm
Sample : VO03I241
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 2
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
78)	Bromobenzene	15.48	156	17773	1.05 ug/l		91
79)	1,3,5-Trimethylbenzene	15.60	105	47717	1.04 ug/l		96
80)	2-Chlorotoluene	15.64	91	51020	0.99 ug/l		93
81)	4-Chlorotoluene	15.77	91	47162	0.98 ug/l		94
82)	tert-Butylbenzene	16.04	134	11463	1.21 ug/l	#	68
83)	1,2,4-Trimethylbenzene	16.10	105	47044	1.02 ug/l		94
84)	sec-Butylbenzene	16.31	105	60146	1.02 ug/l		92
85)	p-Isopropyltoluene	16.44	119	43592	0.99 ug/l		88
86)	1,3-Dichlorobenzene	16.61	146	27260	1.02 ug/l		95
87)	1,4-Dichlorobenzene	16.71	146	29306	1.09 ug/l		97
88)	n-Butylbenzene	16.98	91	47382	0.93 ug/l		90
89)	1,2-Dichlorobenzene	17.23	146	26695	1.08 ug/l	#	72
90)	1,2-Dibromo-3-chloropropan	18.29	157	4710	1.32 ug/l		94
91)	1,2,4-Trichlorobenzene	19.47	180	10540	0.97 ug/l		97
92)	Hexachlorobutadiene	19.60	225	7225	1.09 ug/l		96
93)	Naphthalene	19.96	128	28748	0.99 ug/l		90
94)	1,2,3-Trichlorobenzene	20.36	180	9699	1.05 ug/l		96

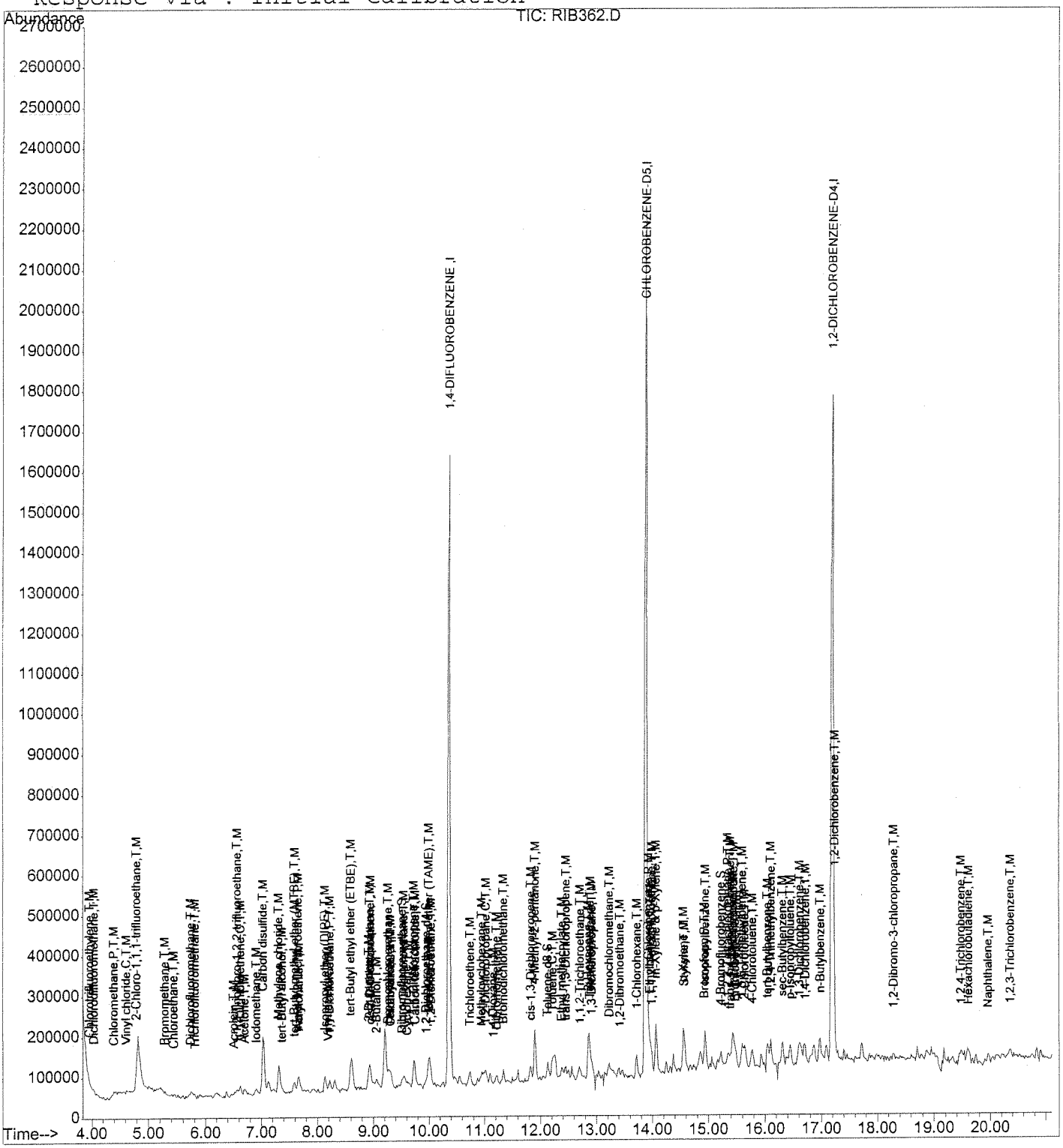
Sa 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB362.D Vial: 2
Acq On : 24 Sep 2015 12:59 pm Operator: CMendo
Sample : VO03I241 Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



SW 09/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB363.D Vial: 3
Acq On : 24 Sep 2015 1:29 pm Operator: CMendo
Sample : VO03I242 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1592778	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1666894	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.19	152	934715	50.00 ug/l	-0.01
System Monitoring Compounds					
34) Dibromofluoromethane	9.51	111	26346	1.85 ug/l	-0.01
Spiked Amount 50.000			Recovery	= 3.70%	
39) 1,2-Dichloroethane-d4	9.95	65	33715	1.92 ug/l	0.00
Spiked Amount 50.000			Recovery	= 3.84%	
53) Toluene-d8	12.13	98	73333	1.71 ug/l	0.00
Spiked Amount 50.000			Recovery	= 3.42%	
73) 4-Bromofluorobenzene	15.21	95	42062	1.83 ug/l	-0.01
Spiked Amount 50.000			Recovery	= 3.66%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.95	116	6062	1.69 ug/l #	58
3) Dichlorodifluoromethane	4.02	85	14851	1.48 ug/l	76
4) Chloromethane	4.40	50	23202	2.03 ug/l	93
5) Vinyl chloride	4.65	62	14441	1.69 ug/l	73
6) 2-Chloro-1,1,1-trifluoroet	4.78	118	6566	1.30 ug/l	96
7) Bromomethane	5.28	94	16344	2.03 ug/l	88
8) Chloroethane	5.44	64	11289	1.97 ug/l	93
9) Dichlorofluoromethane	5.74	67	50256	2.11 ug/l	87
10) Trichlorofluoromethane	5.81	101	25838	1.73 ug/l	100
11) Acrolein	6.51	56	22156	12.66 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	14130	2.17 ug/l	96
13) 1,1-Dichloroethene	6.63	61	40409	2.00 ug/l	93
14) Acetone	6.72	43	66984	12.68 ug/l	97
15) Iodomethane	6.91	142	48521	2.04 ug/l	99
16) Carbon disulfide	7.03	76	91936	1.71 ug/l	93
18) Methylene chloride	7.32	49	79082	3.43 ug/l	98
19) tert-Butyl alcohol	7.38	59	23851	11.73 ug/l	97
20) tert-Butyl methyl ether (M	7.58	73	84607	2.28 ug/l	89
21) Acrylonitrile	7.66	53	50024	10.42 ug/l	89
22) trans-1,2-Dichloroethene	7.66	61	41577	2.03 ug/l	95
23) Isopropyl ether (DIPE)	8.14	45	114265	2.07 ug/l	97
24) Vinyl acetate	8.19	43	45353	1.25 ug/l	91
25) 1,1-Dichloroethane	8.22	63	54368	2.07 ug/l	90
26) tert-Butyl ethyl ether (ET	8.60	59	90640	2.01 ug/l	95
27) 2-Butanone	8.91	43	106086	10.78 ug/l	92
28) 2,2-Dichloropropane	8.92	77	44868	2.20 ug/l	96
29) cis-1,2-Dichloroethene	8.95	96	33228	2.28 ug/l	92

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB363.D Vial: 3
Acq On : 24 Sep 2015 1:29 pm Operator: CMendo
Sample : VO03I242 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.06	45	19162	6.87 ug/l	85
31)	Bromochloromethane	9.27	49	43810	2.21 ug/l	99
32)	Tetrahydrofuran	9.31	42	14352	3.22 ug/l	95
33)	Chloroform	9.30	83	62311	2.22 ug/l	99
35)	1,1,1-Trichloroethane	9.55	97	40636	2.04 ug/l	95
36)	Cyclohexane	9.61	56	25802	1.79 ug/l	97
37)	1,1-Dichloropropene	9.74	110	11995	2.17 ug/l	98
38)	Carbon tetrachloride	9.76	119	34968	2.19 ug/l	98
40)	tert-Amyl methyl ether (TA	10.00	87	19277	2.16 ug/l	95
41)	Benzene	10.01	78	102281	2.03 ug/l	97
42)	1,2-Dichloroethane	10.04	62	47097	2.19 ug/l	94
43)	Trichloroethene	10.74	130	25753	2.02 ug/l	97
44)	Methylcyclohexane	10.94	83	29786	1.87 ug/l	95
45)	1,2-Dichloropropane	11.03	63	32842	2.12 ug/l	89
46)	1,4-Dioxane	11.14	88	9450	53.81 ug/l	68
47)	Dibromomethane	11.22	93	26925	2.23 ug/l	90
48)	Bromodichloromethane	11.34	83	50260	2.09 ug/l	99
50)	cis-1,3-Dichloropropene	11.81	75	61603	2.18 ug/l	94
51)	4-Methyl-2-pentanone	11.90	43	287985	10.83 ug/l	99
54)	Toluene	12.22	91	106737	1.91 ug/l	97
55)	Ethyl methacrylate	12.38	69	48320	2.08 ug/l	97
56)	trans-1,3-Dichloropropene	12.44	75	53363	1.95 ug/l	96
57)	1,1,2-Trichloroethane	12.69	97	26182	1.92 ug/l	92
58)	2-Hexanone	12.86	43	223164	10.94 ug/l	99
59)	Tetrachloroethene	12.87	164	22364	2.06 ug/l	99
60)	1,3-Dichloropropane	12.90	76	54417	2.08 ug/l	96
61)	Dibromochloromethane	13.23	129	33735	2.04 ug/l	99
62)	1,2-Dibromoethane	13.41	107	32923	2.05 ug/l	94
63)	1-Chlorohexane	13.72	91	50298	2.05 ug/l	94
64)	Chlorobenzene	13.92	112	68816	2.04 ug/l	80
65)	Ethylbenzene	13.95	91	137657	2.02 ug/l	95
66)	1,1,1,2-Tetrachloroethane	13.97	131	29131	2.03 ug/l	96
67)	m-Xylene & p-Xylene	14.06	91	220829	4.17 ug/l	98
68)	o-Xylene	14.56	91	118464	2.06 ug/l	98
69)	Styrene	14.57	104	81726	2.10 ug/l	97
71)	Bromoform	14.93	173	24943	1.91 ug/l	96
72)	Isopropylbenzene	14.94	105	124798	2.01 ug/l	99
74)	1,1,2,2-Tetrachloroethane	15.35	83	55554	1.92 ug/l	98
75)	trans-1,4-Dichloro-2-buten	15.39	53	16620	1.94 ug/l	93
76)	n-Propylbenzene	15.43	91	184469	2.01 ug/l	99
77)	1,2,3-Trichloropropane	15.45	110	13677	2.26 ug/l	94

(#) = qualifier out of range (m) = manual integration SL 9/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB363.D
Acq On : 24 Sep 2015 1:29 pm
Sample : VO03I242
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
78)	Bromobenzene	15.48	156	37585	1.94 ug/l		92
79)	1,3,5-Trimethylbenzene	15.60	105	105079	1.99 ug/l		98
80)	2-Chlorotoluene	15.64	91	117226	1.97 ug/l		96
81)	4-Chlorotoluene	15.76	91	110993	2.00 ug/l		98
82)	tert-Butylbenzene	16.05	134	22918	2.11 ug/l	#	79
83)	1,2,4-Trimethylbenzene	16.11	105	107486	2.03 ug/l		96
84)	sec-Butylbenzene	16.31	105	134939	2.00 ug/l		97
85)	p-Isopropyltoluene	16.45	119	99469	1.97 ug/l		99
86)	1,3-Dichlorobenzene	16.60	146	57955	1.89 ug/l		94
87)	1,4-Dichlorobenzene	16.70	146	59759	1.94 ug/l		96
88)	n-Butylbenzene	16.97	91	113041	1.94 ug/l		99
89)	1,2-Dichlorobenzene	17.22	146	58625	2.06 ug/l		86
90)	1,2-Dibromo-3-chloropropan	18.30	157	9790	2.38 ug/l		96
91)	1,2,4-Trichlorobenzene	19.49	180	23582	1.90 ug/l		93
92)	Hexachlorobutadiene	19.61	225	16140	2.11 ug/l		98
93)	Naphthalene	19.96	128	59466	1.79 ug/l		93
94)	1,2,3-Trichlorobenzene	20.37	180	20596	1.94 ug/l		97

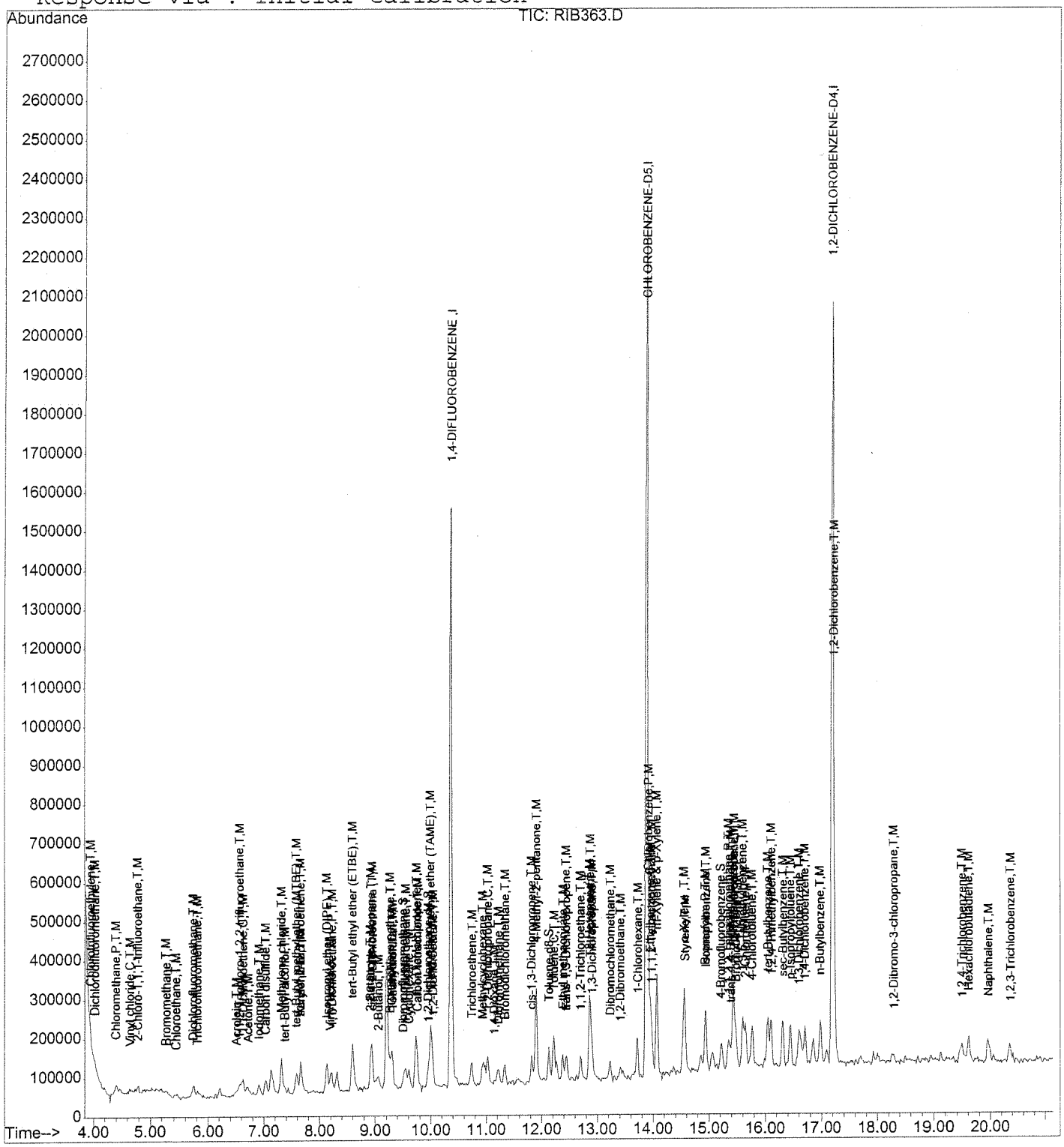
SW 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB363.D Vial: 3
Acq On : 24 Sep 2015 1:29 pm Operator: CMendo
Sample : VO03I242 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



SU 09/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB364.D Vial: 4
Acq On : 24 Sep 2015 1:57 pm Operator: CMendo
Sample : VO03I243 Inst : 03
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1826952	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1857812	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	978044	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	64368	3.93 ug/l	0.00
Spiked Amount 50.000			Recovery	= 7.86%	
39) 1,2-Dichloroethane-d4	9.96	65	78961	3.93 ug/l	0.00
Spiked Amount 50.000			Recovery	= 7.86%	
53) Toluene-d8	12.13	98	191836	4.02 ug/l	0.00
Spiked Amount 50.000			Recovery	= 8.04%	
73) 4-Bromofluorobenzene	15.23	95	90714	3.76 ug/l	0.00
Spiked Amount 50.000			Recovery	= 7.52%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.97	116	15584	3.79 ug/l	90
3) Dichlorodifluoromethane	4.04	85	38839	3.38 ug/l	87
4) Chloromethane	4.40	50	48707	3.72 ug/l	99
5) Vinyl chloride	4.64	62	36579	3.72 ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	21970	3.80 ug/l	79
7) Bromomethane	5.29	94	35931	3.89 ug/l	90
8) Chloroethane	5.46	64	24528	3.73 ug/l	93
9) Dichlorofluoromethane	5.75	67	113669	4.16 ug/l	95
10) Trichlorofluoromethane	5.81	101	60227	3.51 ug/l	97
11) Acrolein	6.50	56	44520	22.18 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.59	151	30784	4.11 ug/l	96
13) 1,1-Dichloroethene	6.63	61	91513	3.94 ug/l	95
14) Acetone	6.72	43	132042	21.79 ug/l	96
15) Iodomethane	6.93	142	107979	3.95 ug/l	99
16) Carbon disulfide	7.04	76	335879	5.45 ug/l	98
18) Methylene chloride	7.32	49	133124	5.04 ug/l	97
19) tert-Butyl alcohol	7.38	59	54063	23.17 ug/l	89
20) tert-Butyl methyl ether (M	7.60	73	172310	4.05 ug/l	98
21) Acrylonitrile	7.66	53	117594	21.35 ug/l	96
22) trans-1,2-Dichloroethene	7.66	61	99049	4.21 ug/l	99
23) Isopropyl ether (DIPE)	8.14	45	248469	3.92 ug/l	97
24) Vinyl acetate	8.18	43	140306	3.37 ug/l	96
25) 1,1-Dichloroethane	8.23	63	124885	4.15 ug/l	94
26) tert-Butyl ethyl ether (ET	8.60	59	207771	4.01 ug/l	99
27) 2-Butanone	8.91	43	253360	22.45 ug/l	99
28) 2,2-Dichloropropane	8.94	77	93413	4.00 ug/l	94
29) cis-1,2-Dichloroethene	8.96	96	70658	4.23 ug/l	94

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

Sm 9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB364.D Vial: 4
Acq On : 24 Sep 2015 1:57 pm Operator: CMendo
Sample : VO03I243 Inst : 03
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	2-Butanol	9.06	45	61027	25.74 ug/l		99
31)	Bromochloromethane	9.27	49	93516	4.12 ug/l		98
32)	Tetrahydrofuran	9.31	42	28387	5.29 ug/l		93
33)	Chloroform	9.31	83	135041	4.19 ug/l		99
35)	1,1,1-Trichloroethane	9.55	97	94343	4.13 ug/l		99
36)	Cyclohexane	9.61	56	67485	4.09 ug/l		95
37)	1,1-Dichloropropene	9.73	110	26980	4.25 ug/l		94
38)	Carbon tetrachloride	9.76	119	77596	4.23 ug/l		100
40)	tert-Amyl methyl ether (TA	10.00	87	44894	4.39 ug/l	#	86
41)	Benzene	10.01	78	247558	4.28 ug/l		98
42)	1,2-Dichloroethane	10.04	62	102147	4.14 ug/l		97
43)	Trichloroethene	10.73	130	61294	4.20 ug/l		96
44)	Methylcyclohexane	10.94	83	74296	4.06 ug/l		95
45)	1,2-Dichloropropane	11.03	63	69577	3.92 ug/l	#	1
46)	1,4-Dioxane	11.15	88	18299	90.84 ug/l		89
47)	Dibromomethane	11.22	93	56944	4.11 ug/l		93
48)	Bromodichloromethane	11.34	83	109324	3.97 ug/l		95
50)	cis-1,3-Dichloropropene	11.82	75	129305	3.99 ug/l		99
51)	4-Methyl-2-pentanone	11.91	43	653259	21.41 ug/l		99
54)	Toluene	12.22	91	260020	4.18 ug/l		98
55)	Ethyl methacrylate	12.38	69	108815	4.21 ug/l		98
56)	trans-1,3-Dichloropropene	12.44	75	123517	4.05 ug/l		95
57)	1,1,2-Trichloroethane	12.70	97	64350	4.24 ug/l		98
58)	2-Hexanone	12.86	43	486219	21.38 ug/l		99
59)	Tetrachloroethene	12.88	164	52081	4.30 ug/l		100
60)	1,3-Dichloropropane	12.90	76	122167	4.19 ug/l		100
61)	Dibromochloromethane	13.23	129	73251	3.97 ug/l		100
62)	1,2-Dibromoethane	13.41	107	73027	4.09 ug/l		98
63)	1-Chlorohexane	13.72	91	116740	4.27 ug/l		99
64)	Chlorobenzene	13.92	112	153230	4.08 ug/l		88
65)	Ethylbenzene	13.95	91	317892	4.19 ug/l		98
66)	1,1,1,2-Tetrachloroethane	13.98	131	66502	4.15 ug/l		96
67)	m-Xylene & p-Xylene	14.07	91	494524	8.38 ug/l		99
68)	o-Xylene	14.56	91	273382	4.27 ug/l		99
69)	Styrene	14.57	104	183250	4.23 ug/l		99
71)	Bromoform	14.93	173	55484	4.07 ug/l		99
72)	Isopropylbenzene	14.95	105	274588	4.22 ug/l		100
74)	1,1,2,2-Tetrachloroethane	15.35	83	117374	3.89 ug/l		95
75)	trans-1,4-Dichloro-2-buten	15.39	53	31809	3.56 ug/l		89
76)	n-Propylbenzene	15.44	91	408248	4.26 ug/l		99
77)	1,2,3-Trichloropropane	15.45	110	27494	4.34 ug/l		95

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

SC 9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB364.D
Acq On : 24 Sep 2015 1:57 pm
Sample : VO03I243
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	81427	4.01 ug/l	93
79)	1,3,5-Trimethylbenzene	15.60	105	232160	4.19 ug/l	100
80)	2-Chlorotoluene	15.65	91	253865	4.08 ug/l	99
81)	4-Chlorotoluene	15.77	91	226565	3.91 ug/l	99
82)	tert-Butylbenzene	16.05	134	48971	4.30 ug/l	92
83)	1,2,4-Trimethylbenzene	16.11	105	228021	4.11 ug/l	89
84)	sec-Butylbenzene	16.32	105	292430	4.13 ug/l	99
85)	p-Isopropyltoluene	16.45	119	223851	4.23 ug/l	99
86)	1,3-Dichlorobenzene	16.60	146	125398	3.91 ug/l	99
87)	1,4-Dichlorobenzene	16.70	146	123226	3.82 ug/l	99
88)	n-Butylbenzene	16.97	91	252625	4.14 ug/l	99
89)	1,2-Dichlorobenzene	17.22	146	119879	4.03 ug/l	91
90)	1,2-Dibromo-3-chloropropan	18.30	157	17097	3.98 ug/l	90
91)	1,2,4-Trichlorobenzene	19.47	180	45499	3.50 ug/l	97
92)	Hexachlorobutadiene	19.61	225	32346	4.04 ug/l	98
93)	Naphthalene	19.97	128	120274	3.46 ug/l	98
94)	1,2,3-Trichlorobenzene	20.37	180	40024	3.60 ug/l	98

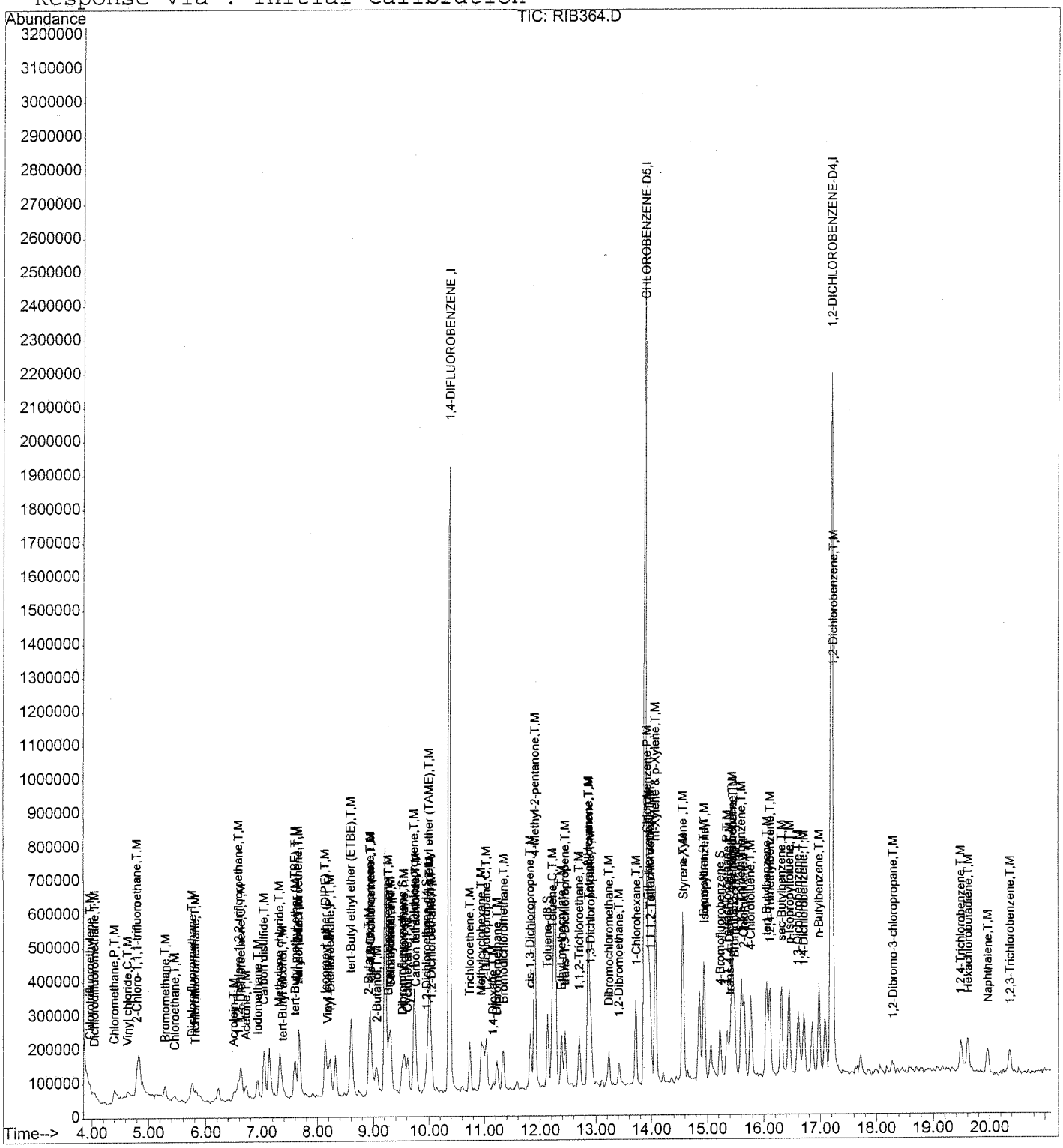
Sa 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB364.D Vial: 4
Acq On : 24 Sep 2015 1:57 pm Operator: CMendo
Sample : VO03I243 Inst : 03
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



SL 9/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB365.D Vial: 5
Acq On : 24 Sep 2015 2:25 pm Operator: CMendo
Sample : VO03I244 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.36	114	1682933	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1657707	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	913120	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.51	111	141235	9.36 ug/l	0.00
Spiked Amount 50.000			Recovery =	18.72%	
39) 1,2-Dichloroethane-d4	9.94	65	179498	9.69 ug/l	0.00
Spiked Amount 50.000			Recovery =	19.38%	
53) Toluene-d8	12.13	98	431379	10.14 ug/l	0.00
Spiked Amount 50.000			Recovery =	20.28%	
73) 4-Bromofluorobenzene	15.21	95	208948	9.28 ug/l	0.00
Spiked Amount 50.000			Recovery =	18.56%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.97	116	37521	9.91 ug/l #	83
3) Dichlorodifluoromethane	4.03	85	108026	10.20 ug/l	100
4) Chloromethane	4.40	50	113556	9.41 ug/l	98
5) Vinyl chloride	4.64	62	88300	9.76 ug/l	97
6) 2-Chloro-1,1,1-trifluoroet	4.79	118	50823	9.55 ug/l	97
7) Bromomethane	5.26	94	89604	10.52 ug/l	96
8) Chloroethane	5.43	64	65195	10.76 ug/l	96
9) Dichlorofluoromethane	5.74	67	253454	10.08 ug/l	99
10) Trichlorofluoromethane	5.80	101	153798	9.72 ug/l	99
11) Acrolein	6.50	56	84460	45.68 ug/l	97
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	64842	9.41 ug/l	100
13) 1,1-Dichloroethene	6.62	61	200867	9.40 ug/l	99
14) Acetone	6.69	43	235402	42.17 ug/l	95
15) Iodomethane	6.92	142	232935	9.26 ug/l	99
16) Carbon disulfide	7.04	76	550324	9.70 ug/l	99
18) Methylene chloride	7.32	49	233540	9.59 ug/l	97
19) tert-Butyl alcohol	7.36	59	89331	41.56 ug/l	91
20) tert-Butyl methyl ether (M	7.59	73	358714	9.15 ug/l	98
21) Acrylonitrile	7.66	53	225292	44.40 ug/l	99
22) trans-1,2-Dichloroethene	7.66	61	209730	9.68 ug/l	99
23) Isopropyl ether (DIPE)	8.14	45	553463	9.48 ug/l	97
24) Vinyl acetate	8.18	43	347391	9.06 ug/l	98
25) 1,1-Dichloroethane	8.21	63	252051	9.08 ug/l	98
26) tert-Butyl ethyl ether (ET	8.59	59	467863	9.81 ug/l	99
27) 2-Butanone	8.91	43	457957	44.05 ug/l	99
28) 2,2-Dichloropropane	8.93	77	202664	9.41 ug/l	96
29) cis-1,2-Dichloroethene	8.94	96	152277	9.89 ug/l	96

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

9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB365.D
Acq On : 24 Sep 2015 2:25 pm
Sample : VO03I244
Misc : 10ppb 8260/50ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) 2-Butanol	9.05	45	89397	43.15 ug/l	99
31) Bromochloromethane	9.27	49	197339	9.43 ug/l	99
32) Tetrahydrofuran	9.30	42	47213	9.24 ug/l	95
33) Chloroform	9.30	83	285561	9.62 ug/l	99
35) 1,1,1-Trichloroethane	9.55	97	201901	9.58 ug/l	99
36) Cyclohexane	9.61	56	148913	9.80 ug/l	96
37) 1,1-Dichloropropene	9.73	110	56112	9.60 ug/l	97
38) Carbon tetrachloride	9.75	119	157708	9.33 ug/l	99
40) tert-Amyl methyl ether (TA	9.99	87	87147	9.24 ug/l	100
41) Benzene	10.02	78	501456	9.41 ug/l	99
42) 1,2-Dichloroethane	10.04	62	221055	9.72 ug/l	99
43) Trichloroethene	10.73	130	123353	9.17 ug/l	99
44) Methylcyclohexane	10.94	83	171465	10.18 ug/l	98
45) 1,2-Dichloropropane	11.03	63	150347	9.18 ug/l	92
46) 1,4-Dioxane	11.15	88	35473	191.17 ug/l	96
47) Dibromomethane	11.21	93	118191	9.27 ug/l	99
48) Bromodichloromethane	11.33	83	240767	9.49 ug/l	96
50) cis-1,3-Dichloropropene	11.82	75	275676	9.23 ug/l	98
51) 4-Methyl-2-pentanone	11.89	43	1188150	42.27 ug/l	100
54) Toluene	12.22	91	525605	9.48 ug/l	100
55) Ethyl methacrylate	12.38	69	201819	8.75 ug/l	98
56) trans-1,3-Dichloropropene	12.44	75	250626	9.22 ug/l	97
57) 1,1,2-Trichloroethane	12.70	97	123609	9.13 ug/l	99
58) 2-Hexanone	12.86	43	869928	42.88 ug/l	100
59) Tetrachloroethene	12.88	164	104401	9.65 ug/l	99
60) 1,3-Dichloropropane	12.91	76	245039	9.42 ug/l	97
61) Dibromochloromethane	13.23	129	154529	9.38 ug/l	99
62) 1,2-Dibromoethane	13.41	107	148123	9.29 ug/l	97
63) 1-Chlorohexane	13.71	91	219916	9.02 ug/l	99
64) Chlorobenzene	13.92	112	323578	9.65 ug/l	96
65) Ethylbenzene	13.95	91	662234	9.79 ug/l	99
66) 1,1,1,2-Tetrachloroethane	13.98	131	136477	9.54 ug/l	98
67) m-Xylene & p-Xylene	14.07	91	1043979	19.83 ug/l	100
68) o-Xylene	14.56	91	551347	9.65 ug/l	97
69) Styrene	14.57	104	397138	10.27 ug/l	97
71) Bromoform	14.93	173	117131	9.19 ug/l	99
72) Isopropylbenzene	14.93	105	561111	9.23 ug/l	98
74) 1,1,2,2-Tetrachloroethane	15.35	83	244617	8.68 ug/l	98
75) trans-1,4-Dichloro-2-buten	15.38	53	71738	8.59 ug/l	99
76) n-Propylbenzene	15.44	91	813656	9.09 ug/l	100
77) 1,2,3-Trichloropropane	15.45	110	53473	9.05 ug/l	100

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

9/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB365.D
Acq On : 24 Sep 2015 2:25 pm
Sample : VO03I244
Misc : 10ppb 8260/50ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	173766	9.17 ug/l	93
79)	1,3,5-Trimethylbenzene	15.60	105	476619	9.22 ug/l	99
80)	2-Chlorotoluene	15.65	91	519455	8.94 ug/l	99
81)	4-Chlorotoluene	15.77	91	496129	9.17 ug/l	98
82)	tert-Butylbenzene	16.05	134	92147	8.67 ug/l	97
83)	1,2,4-Trimethylbenzene	16.09	105	470658	9.09 ug/l	92
84)	sec-Butylbenzene	16.30	105	599455	9.07 ug/l	100
85)	p-Isopropyltoluene	16.44	119	440374	8.91 ug/l	99
86)	1,3-Dichlorobenzene	16.60	146	274039	9.16 ug/l	99
87)	1,4-Dichlorobenzene	16.70	146	265865	8.84 ug/l	99
88)	n-Butylbenzene	16.97	91	521786	9.16 ug/l	99
89)	1,2-Dichlorobenzene	17.23	146	254554	9.17 ug/l	96
90)	1,2-Dibromo-3-chloropropan	18.30	157	37406	9.32 ug/l	95
91)	1,2,4-Trichlorobenzene	19.49	180	104999	8.64 ug/l	100
92)	Hexachlorobutadiene	19.61	225	69149	9.26 ug/l	99
93)	Naphthalene	19.97	128	277042	8.54 ug/l	99
94)	1,2,3-Trichlorobenzene	20.35	180	93163	8.99 ug/l	98

Sa 9/29/15

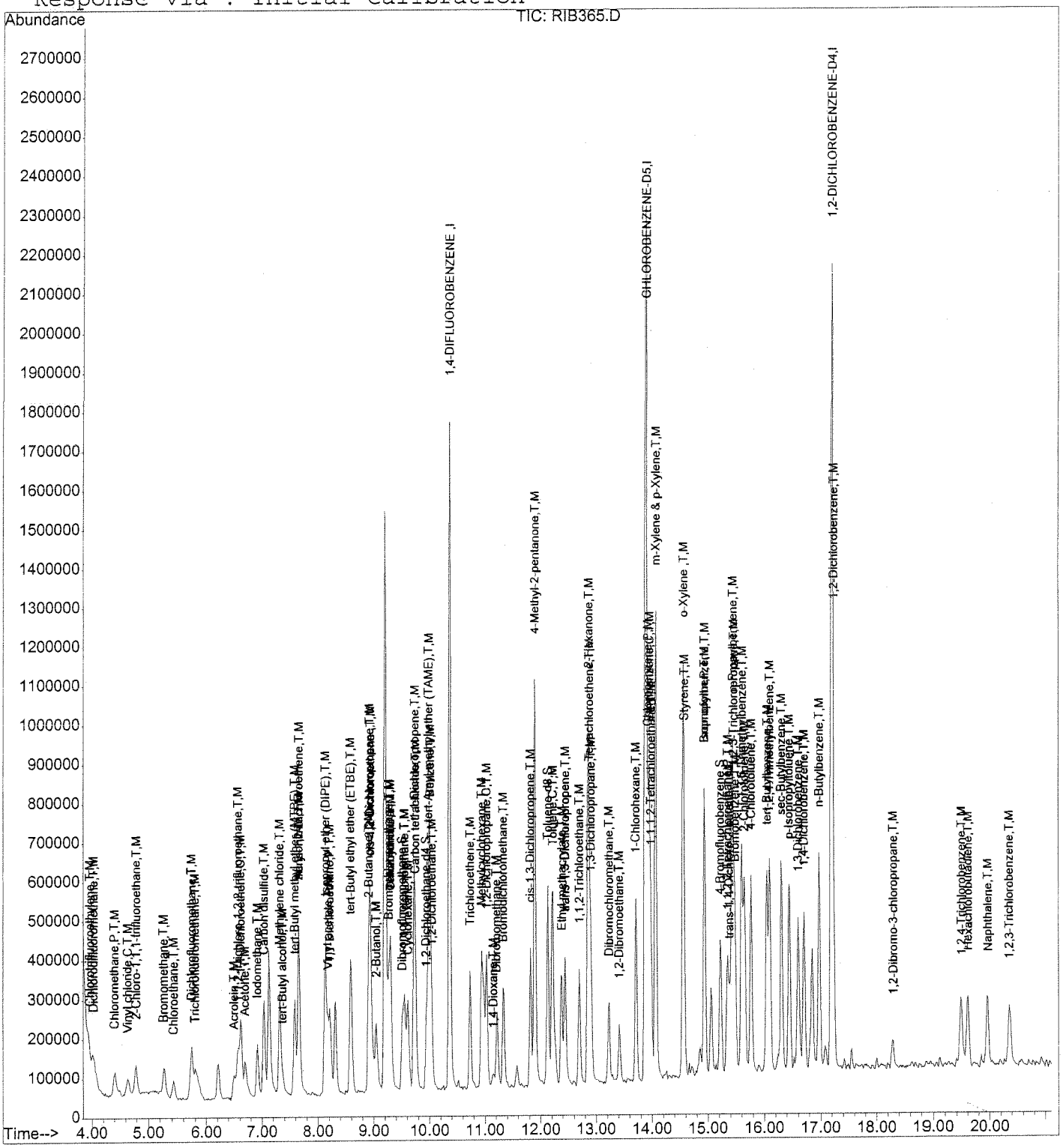
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB365.D
Acq On : 24 Sep 2015 2:25 pm
Sample : VO03I244
Misc : 10ppb 8260/50ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB366.D
Acq On : 24 Sep 2015 2:53 pm
Sample : VO03I245
Misc : 20ppb 8260/100ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 6
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1864982	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1779045	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	982555	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	352039	21.06 ug/l	0.00
Spiked Amount 50.000			Recovery =	42.12%	
39) 1,2-Dichloroethane-d4	9.95	65	416360	20.29 ug/l	0.00
Spiked Amount 50.000			Recovery =	40.58%	
53) Toluene-d8	12.13	98	1062335	23.27 ug/l	0.00
Spiked Amount 50.000			Recovery =	46.54%	
73) 4-Bromofluorobenzene	15.23	95	497799	20.55 ug/l	0.00
Spiked Amount 50.000			Recovery =	41.10%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	78191	18.64 ug/l	97
3) Dichlorodifluoromethane	4.05	85	234799	20.01 ug/l	99
4) Chloromethane	4.41	50	262414	19.61 ug/l	100
5) Vinyl chloride	4.65	62	210940	21.04 ug/l	95
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	108944	18.47 ug/l	99
7) Bromomethane	5.29	94	210892	22.34 ug/l	97
8) Chloroethane	5.45	64	133228	19.84 ug/l	98
9) Dichlorofluoromethane	5.75	67	556553	19.98 ug/l	99
10) Trichlorofluoromethane	5.83	101	376541	21.47 ug/l	97
11) Acrolein	6.50	56	186115	90.83 ug/l	97
12) 1,1,2-Trichloro-1,2,2-trif	6.60	151	146982	19.24 ug/l	100
13) 1,1-Dichloroethene	6.63	61	471112	19.89 ug/l	98
14) Acetone	6.71	43	527131	85.21 ug/l	99
15) Iodomethane	6.93	142	536688	19.25 ug/l	100
16) Carbon disulfide	7.05	76	1277997	20.32 ug/l	100
18) Methylene chloride	7.32	49	505610	18.74 ug/l	97
19) tert-Butyl alcohol	7.38	59	203323	85.36 ug/l	71
20) tert-Butyl methyl ether (M	7.60	73	809076	18.62 ug/l	100
21) Acrylonitrile	7.66	53	524013	93.18 ug/l	100
22) trans-1,2-Dichloroethene	7.67	61	486321	20.25 ug/l	98
23) Isopropyl ether (DIPE)	8.14	45	1272759	19.66 ug/l	99
24) Vinyl acetate	8.18	43	846313	19.92 ug/l	99
25) 1,1-Dichloroethane	8.22	63	582314	18.93 ug/l	97
26) tert-Butyl ethyl ether (ET	8.60	59	1015064	19.21 ug/l	99
27) 2-Butanone	8.91	43	995498	86.42 ug/l	100
28) 2,2-Dichloropropane	8.94	77	443851	18.60 ug/l	99
29) cis-1,2-Dichloroethene	8.95	96	327450	19.19 ug/l	98

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB366.D
Acq On : 24 Sep 2015 2:53 pm
Sample : VO03I245
Misc : 20ppb 8260/100ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 6
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) 2-Butanol	9.06	45	207169	94.32 ug/l	93
31) Bromochloromethane	9.27	49	433007	18.67 ug/l	96
32) Tetrahydrofuran	9.31	42	74216	12.95 ug/l	81
33) Chloroform	9.33	83	449558	13.67 ug/l	81
35) 1,1,1-Trichloroethane	9.55	97	475579	20.37 ug/l	98
36) Cyclohexane	9.61	56	366563	21.76 ug/l	97
37) 1,1-Dichloropropene	9.73	110	132069	20.40 ug/l	97
38) Carbon tetrachloride	9.76	119	380723	20.33 ug/l	100
40) tert-Amyl methyl ether (TA	10.00	87	186626	17.87 ug/l	95
41) Benzene	10.01	78	1146828	19.42 ug/l	99
42) 1,2-Dichloroethane	10.04	62	478656	18.98 ug/l	99
43) Trichloroethene	10.74	130	289932	19.46 ug/l	97
44) Methylcyclohexane	10.95	83	381057	20.41 ug/l	100
45) 1,2-Dichloropropane	11.03	63	333894	18.40 ug/l	95
46) 1,4-Dioxane	11.16	88	72220	351.22 ug/l	98
47) Dibromomethane	11.22	93	261163	18.48 ug/l	98
48) Bromodichloromethane	11.34	83	531115	18.90 ug/l	98
50) cis-1,3-Dichloropropene	11.81	75	650349	19.64 ug/l	99
51) 4-Methyl-2-pentanone	11.90	43	2774331	89.07 ug/l	100
54) Toluene	12.22	91	1241684	20.87 ug/l	100
55) Ethyl methacrylate	12.38	69	502518	20.30 ug/l	99
56) trans-1,3-Dichloropropene	12.44	75	589217	20.20 ug/l	97
57) 1,1,2-Trichloroethane	12.69	97	284258	19.56 ug/l	99
58) 2-Hexanone	12.86	43	2048849	94.09 ug/l	100
59) Tetrachloroethene	12.87	164	254776	21.94 ug/l	98
60) 1,3-Dichloropropane	12.90	76	574461	20.58 ug/l	100
61) Dibromochloromethane	13.23	129	348459	19.71 ug/l	98
62) 1,2-Dibromoethane	13.42	107	326799	19.11 ug/l	98
63) 1-Chlorohexane	13.72	91	564396	21.57 ug/l	99
64) Chlorobenzene	13.92	112	733946	20.40 ug/l	98
65) Ethylbenzene	13.95	91	1576729	21.72 ug/l	100
66) 1,1,1,2-Tetrachloroethane	13.99	131	322388	21.01 ug/l	99
67) m-Xylene & p-Xylene	14.06	91	2432559	43.05 ug/l	99
68) o-Xylene	14.56	91	1291710	21.07 ug/l	100
69) Styrene	14.57	104	876323	21.12 ug/l	99
71) Bromoform	14.93	173	262306	19.13 ug/l	99
72) Isopropylbenzene	14.94	105	1331436	20.35 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.35	83	576571	19.00 ug/l	99
75) trans-1,4-Dichloro-2-buten	15.39	53	165494	18.41 ug/l	97
76) n-Propylbenzene	15.43	91	2070355	21.49 ug/l	100
77) 1,2,3-Trichloropropane	15.45	110	123180	19.38 ug/l	99

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

9/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB366.D Vial: 6
Acq On : 24 Sep 2015 2:53 pm Operator: CMendo
Sample : VO03I245 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	404574	19.85 ug/l	93
79)	1,3,5-Trimethylbenzene	15.60	105	1113956	20.03 ug/l	99
80)	2-Chlorotoluene	15.64	91	1287166	20.59 ug/l	100
81)	4-Chlorotoluene	15.76	91	1168797	20.08 ug/l	99
82)	tert-Butylbenzene	16.05	134	227943	19.93 ug/l	98
83)	1,2,4-Trimethylbenzene	16.11	105	1146592	20.59 ug/l	98
84)	sec-Butylbenzene	16.31	105	1475140	20.75 ug/l	100
85)	p-Isopropyltoluene	16.45	119	1124106	21.14 ug/l	99
86)	1,3-Dichlorobenzene	16.60	146	632484	19.65 ug/l	99
87)	1,4-Dichlorobenzene	16.70	146	639909	19.77 ug/l	99
88)	n-Butylbenzene	16.97	91	1329606	21.70 ug/l	99
89)	1,2-Dichlorobenzene	17.22	146	595492	19.95 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.30	157	81717	18.91 ug/l	99
91)	1,2,4-Trichlorobenzene	19.49	180	244324	18.69 ug/l	100
92)	Hexachlorobutadiene	19.61	225	166185	20.69 ug/l	99
93)	Naphthalene	19.96	128	629977	18.04 ug/l	100
94)	1,2,3-Trichlorobenzene	20.37	180	202853	18.19 ug/l	98

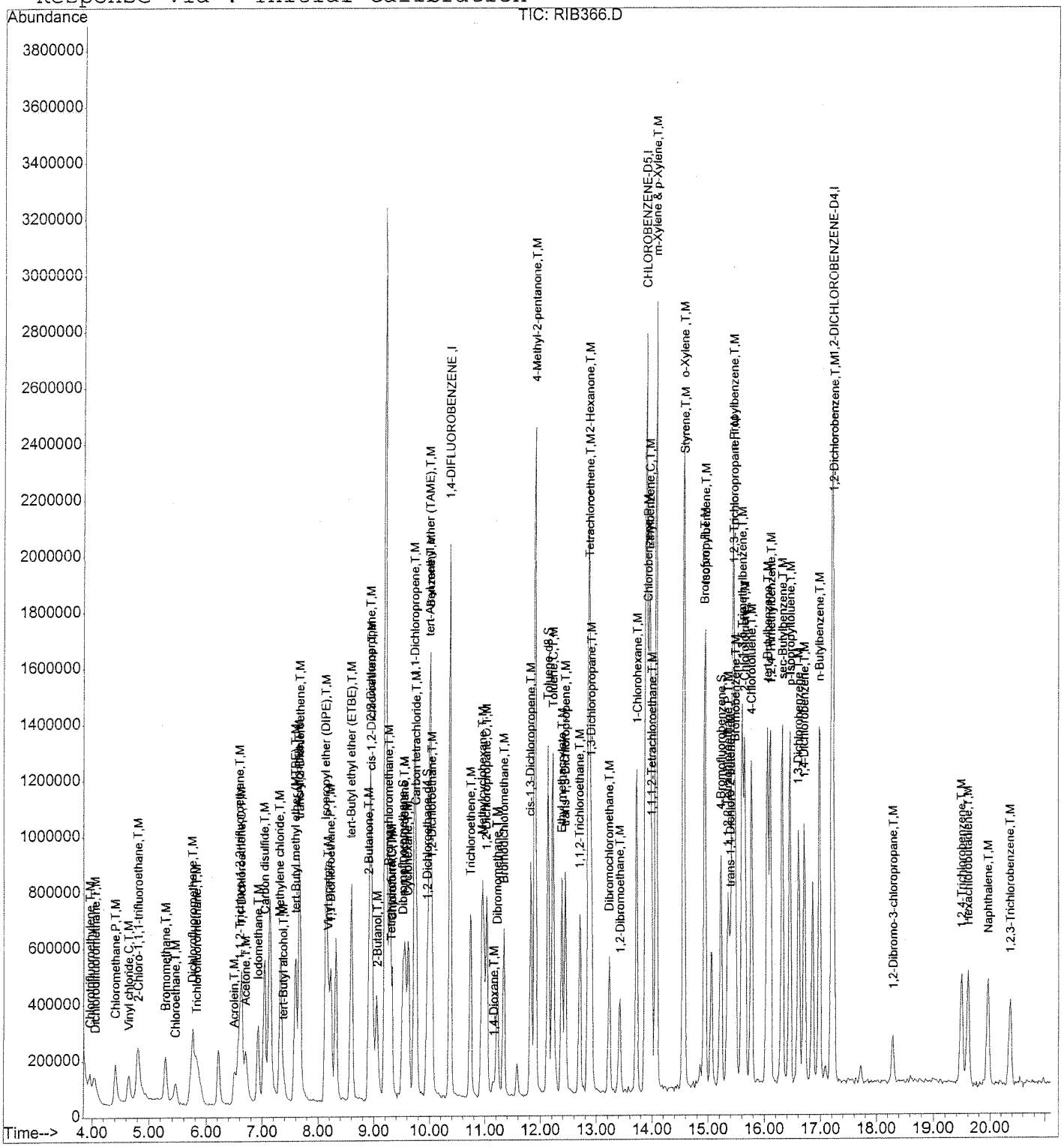
SU 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB366.D Vial: 6
Acq On : 24 Sep 2015 2:53 pm Operator: CMendo
Sample : VO03I245 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



9/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB367.D Vial: 7
Acq On : 24 Sep 2015 3:21 pm Operator: CMendo
Sample : VO03I246 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1709270	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1727373	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	980817	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	776098	50.66 ug/l	0.00
Spiked Amount 50.000			Recovery	= 101.32%	
39) 1,2-Dichloroethane-d4	9.95	65	947396	50.37 ug/l	0.00
Spiked Amount 50.000			Recovery	= 100.74%	
53) Toluene-d8	12.12	98	2275022	51.32 ug/l	0.00
Spiked Amount 50.000			Recovery	= 102.64%	
73) 4-Bromofluorobenzene	15.22	95	1119655	46.30 ug/l	0.00
Spiked Amount 50.000			Recovery	= 92.60%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	204785	53.27 ug/l	100
3) Dichlorodifluoromethane	4.05	85	609484	56.67 ug/l	100
4) Chloromethane	4.41	50	671759	54.78 ug/l	100
5) Vinyl chloride	4.66	62	522074	56.81 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	267093	49.42 ug/l	100
7) Bromomethane	5.29	94	468776	54.19 ug/l	100
8) Chloroethane	5.45	64	310067	50.39 ug/l	100
9) Dichlorofluoromethane	5.75	67	1385334	54.25 ug/l	100
10) Trichlorofluoromethane	5.81	101	875241	54.46 ug/l	100
11) Acrolein	6.51	56	465518	247.88 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.60	151	349295	49.90 ug/l	100
13) 1,1-Dichloroethene	6.64	61	1079809	49.75 ug/l	100
14) Acetone	6.70	43	1391754	245.47 ug/l	100
15) Iodomethane	6.93	142	1340194	52.45 ug/l	100
16) Carbon disulfide	7.04	76	2973288	51.57 ug/l	100
18) Methylene chloride	7.33	49	1188766	48.08 ug/l	100
19) tert-Butyl alcohol	7.39	59	526829	241.34 ug/l	100
20) tert-Butyl methyl ether (M	7.60	73	2000895	50.25 ug/l	100
21) Acrylonitrile	7.66	53	1279965	248.34 ug/l	100
22) trans-1,2-Dichloroethene	7.67	61	1104034	50.16 ug/l	100
23) Isopropyl ether (DIPE)	8.15	45	3036450	51.19 ug/l	100
24) Vinyl acetate	8.18	43	2283325	58.65 ug/l	100
25) 1,1-Dichloroethane	8.22	63	1514617	53.73 ug/l	100
26) tert-Butyl ethyl ether (ET	8.59	59	2442500	50.44 ug/l	100
27) 2-Butanone	8.91	43	2798044	265.01 ug/l	100
28) 2,2-Dichloropropane	8.94	77	1082242	49.48 ug/l	100
29) cis-1,2-Dichloroethene	8.95	96	828261	52.97 ug/l	100

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB367.D Vial: 7
Acq On : 24 Sep 2015 3:21 pm Operator: CMendo
Sample : VO03I246 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.06	45	548914	279.78 ug/l	100
31)	Bromochloromethane	9.28	49	1063466	50.03 ug/l	100
32)	Tetrahydrofuran	9.31	42	270452	50.38 ug/l	100
33)	Chloroform	9.31	83	1555213	51.61 ug/l	100
35)	1,1,1-Trichloroethane	9.56	97	1057846	49.44 ug/l	100
36)	Cyclohexane	9.62	56	819000	53.05 ug/l	100
37)	1,1-Dichloropropene	9.74	110	302103	50.90 ug/l	100
38)	Carbon tetrachloride	9.76	119	885492	51.59 ug/l	100
40)	tert-Amyl methyl ether (TA	9.99	87	481531	50.30 ug/l	100
41)	Benzene	10.01	78	2819132	52.09 ug/l	100
42)	1,2-Dichloroethane	10.04	62	1198069	51.85 ug/l	100
43)	Trichloroethene	10.74	130	697351	51.07 ug/l	100
44)	Methylcyclohexane	10.95	83	939739	54.93 ug/l	100
45)	1,2-Dichloropropane	11.04	63	860935	51.78 ug/l	100
46)	1,4-Dioxane	11.16	88	182555	968.68 ug/l	100
47)	Dibromomethane	11.22	93	653352	50.44 ug/l	100
48)	Bromodichloromethane	11.33	83	1304278	50.63 ug/l	100
50)	cis-1,3-Dichloropropene	11.83	75	1539364	50.72 ug/l	100
51)	4-Methyl-2-pentanone	11.90	43	7048972	246.91 ug/l	100
54)	Toluene	12.21	91	2901289	50.21 ug/l	100
55)	Ethyl methacrylate	12.38	69	1195518	49.75 ug/l	100
56)	trans-1,3-Dichloropropene	12.44	75	1397278	49.33 ug/l	100
57)	1,1,2-Trichloroethane	12.71	97	712898	50.51 ug/l	100
58)	2-Hexanone	12.85	43	5295785	250.48 ug/l	100
59)	Tetrachloroethene	12.88	164	574672	50.98 ug/l	100
60)	1,3-Dichloropropane	12.91	76	1416955	52.29 ug/l	100
61)	Dibromochloromethane	13.23	129	863855	50.34 ug/l	100
62)	1,2-Dibromoethane	13.42	107	827627	49.83 ug/l	100
63)	1-Chlorohexane	13.72	91	1281459	50.45 ug/l	100
64)	Chlorobenzene	13.93	112	1745869	49.97 ug/l	100
65)	Ethylbenzene	13.96	91	3662714	51.96 ug/l	100
66)	1,1,1,2-Tetrachloroethane	13.99	131	755987	50.74 ug/l	100
67)	m-Xylene & p-Xylene	14.06	91	5637852	102.75 ug/l	100
68)	o-Xylene	14.55	91	3073585	51.62 ug/l	100
69)	Styrene	14.57	104	2066457	51.29 ug/l	100
71)	Bromoform	14.94	173	654573	47.83 ug/l	100
72)	Isopropylbenzene	14.94	105	2984414	45.70 ug/l	100
74)	1,1,2,2-Tetrachloroethane	15.34	83	1437128	47.45 ug/l	100
75)	trans-1,4-Dichloro-2-buten	15.39	53	430566	47.99 ug/l	100
76)	n-Propylbenzene	15.43	91	4665151	48.51 ug/l	100
77)	1,2,3-Trichloropropane	15.45	110	297599	46.89 ug/l	100

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

9/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB367.D Vial: 7
Acq On : 24 Sep 2015 3:21 pm Operator: CMendo
Sample : VO03I246 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	950373	46.71 ug/l	100
79)	1,3,5-Trimethylbenzene	15.60	105	2650369	47.75 ug/l	100
80)	2-Chlorotoluene	15.65	91	2972617	47.63 ug/l	100
81)	4-Chlorotoluene	15.76	91	2782050	47.88 ug/l	100
82)	tert-Butylbenzene	16.04	134	524660	45.95 ug/l	100
83)	1,2,4-Trimethylbenzene	16.10	105	2697736	48.52 ug/l	100
84)	sec-Butylbenzene	16.31	105	3491702	49.20 ug/l	100
85)	p-Isopropyltoluene	16.44	119	2628506	49.53 ug/l	100
86)	1,3-Dichlorobenzene	16.61	146	1590548	49.49 ug/l	100
87)	1,4-Dichlorobenzene	16.71	146	1604824	49.67 ug/l	100
88)	n-Butylbenzene	16.98	91	3086224	50.46 ug/l	100
89)	1,2-Dichlorobenzene	17.23	146	1471713	49.38 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.29	157	230746	53.50 ug/l	100
91)	1,2,4-Trichlorobenzene	19.48	180	671844	51.48 ug/l	100
92)	Hexachlorobutadiene	19.62	225	402372	50.18 ug/l	100
93)	Naphthalene	19.96	128	1779324	51.06 ug/l	100
94)	1,2,3-Trichlorobenzene	20.36	180	587810	52.79 ug/l	100

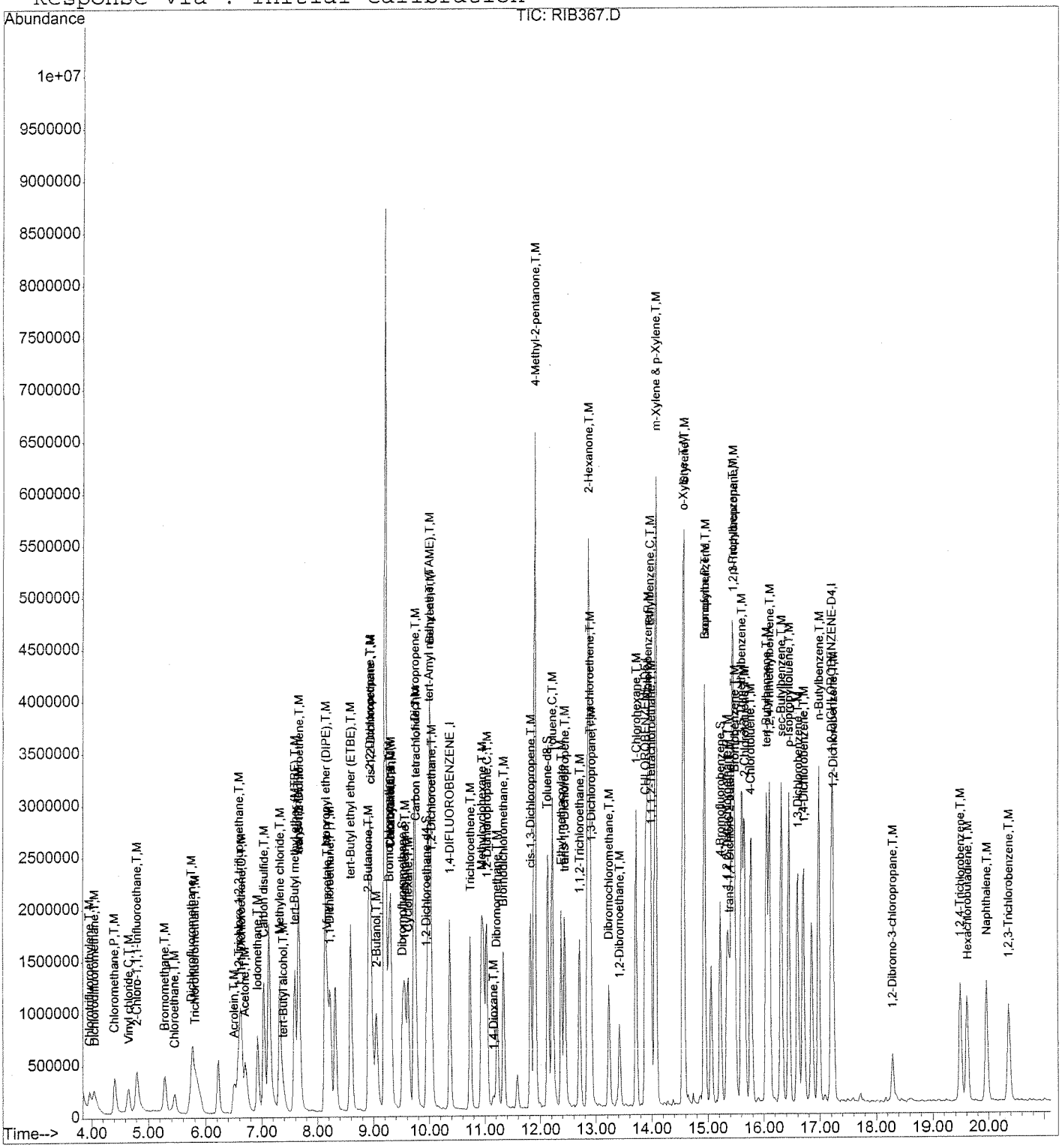
SG 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB367.D Vial: 7
Acq On : 24 Sep 2015 3:21 pm Operator: CMendo
Sample : VO03I246 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



Sa 9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB368.D
Acq On : 24 Sep 2015 3:50 pm
Sample : VO03I247
Misc : 100ppb 8260/500ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 8
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1628539	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1696744	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	877328	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	1544654	105.83 ug/l	0.00
Spiked Amount 50.000			Recovery	= 211.66%	
39) 1,2-Dichloroethane-d4	9.95	65	1941645	108.35 ug/l	0.00
Spiked Amount 50.000			Recovery	= 216.70%	
53) Toluene-d8	12.14	98	4516140	103.71 ug/l	0.01
Spiked Amount 50.000			Recovery	= 207.42%	
73) 4-Bromofluorobenzene	15.22	95	2198706	101.66 ug/l	0.00
Spiked Amount 50.000			Recovery	= 203.32%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.97	116	395339	107.94 ug/l	99
3) Dichlorodifluoromethane	4.05	85	1123268	109.63 ug/l	98
4) Chloromethane	4.42	50	1243636	106.44 ug/l	100
5) Vinyl chloride	4.66	62	1030307	117.67 ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.79	118	575604	111.78 ug/l	97
7) Bromomethane	5.27	94	813777	98.74 ug/l	100
8) Chloroethane	5.45	64	590670	100.75 ug/l	98
9) Dichlorofluoromethane	5.75	67	2536731	104.26 ug/l	100
10) Trichlorofluoromethane	5.81	101	1653138	107.97 ug/l	99
11) Acrolein	6.51	56	844101	471.75 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	684943	102.70 ug/l	100
13) 1,1-Dichloroethene	6.63	61	2197405	106.25 ug/l	99
14) Acetone	6.72	43	2773064	513.35 ug/l	99
15) Iodomethane	6.92	142	2658097	109.18 ug/l	99
16) Carbon disulfide	7.04	76	5409901	98.49 ug/l	100
18) Methylene chloride	7.33	49	2443561	103.72 ug/l	99
19) tert-Butyl alcohol	7.37	59	1133802	545.13 ug/l	93
20) tert-Butyl methyl ether (M	7.59	73	3896126	102.70 ug/l	98
21) Acrylonitrile	7.67	53	2490123	507.09 ug/l	99
22) trans-1,2-Dichloroethene	7.67	61	2190771	104.46 ug/l	98
23) Isopropyl ether (DIPE)	8.13	45	6009937	106.34 ug/l	100
24) Vinyl acetate	8.18	43	4276970	115.30 ug/l	100
25) 1,1-Dichloroethane	8.22	63	2785611	103.72 ug/l	98
26) tert-Butyl ethyl ether (ET	8.59	59	4672273	101.27 ug/l	100
27) 2-Butanone	8.91	43	5167283	513.68 ug/l	100
28) 2,2-Dichloropropane	8.94	77	1918375	92.05 ug/l	99
29) cis-1,2-Dichloroethene	8.95	96	1519309	101.98 ug/l	98

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

Sa 9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB368.D Vial: 8
Acq On : 24 Sep 2015 3:50 pm Operator: CMendo
Sample : VO03I247 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.05	45	1002412	539.69 ug/l	99
31)	Bromochloromethane	9.28	49	2190629	108.16 ug/l	96
32)	Tetrahydrofuran	9.31	42	559800	109.01 ug/l	99
33)	Chloroform	9.31	83	3113495	108.45 ug/l	100
35)	1,1,1-Trichloroethane	9.56	97	2172530	106.57 ug/l	99
36)	Cyclohexane	9.62	56	1565612	106.43 ug/l	98
37)	1,1-Dichloropropene	9.74	110	583652	103.22 ug/l	99
38)	Carbon tetrachloride	9.75	119	1730842	105.84 ug/l	100
40)	tert-Amyl methyl ether (TA	9.99	87	918483	100.69 ug/l	97
41)	Benzene	10.01	78	5151897	99.92 ug/l	100
42)	1,2-Dichloroethane	10.04	62	2247201	102.07 ug/l	100
43)	Trichloroethene	10.74	130	1362458	104.72 ug/l	99
44)	Methylcyclohexane	10.95	83	1709944	104.90 ug/l	99
45)	1,2-Dichloropropane	11.04	63	1643568	103.75 ug/l	99
46)	1,4-Dioxane	11.15	88	337531	1879.80 ug/l	99
47)	Dibromomethane	11.21	93	1304634	105.71 ug/l	99
48)	Bromodichloromethane	11.33	83	2623557	106.89 ug/l	99
50)	cis-1,3-Dichloropropene	11.83	75	3053834	105.61 ug/l	99
51)	4-Methyl-2-pentanone	11.90	43	13114493	482.15 ug/l	100
54)	Toluene	12.21	91	5882458	103.65 ug/l	100
55)	Ethyl methacrylate	12.38	69	2280561	96.62 ug/l	100
56)	trans-1,3-Dichloropropene	12.44	75	2848839	102.40 ug/l	98
57)	1,1,2-Trichloroethane	12.70	97	1387273	100.07 ug/l	99
58)	2-Hexanone	12.85	43	9885197	475.99 ug/l	100
59)	Tetrachloroethene	12.88	164	1116816	100.86 ug/l	100
60)	1,3-Dichloropropane	12.91	76	2726763	102.45 ug/l	99
61)	Dibromochloromethane	13.23	129	1726178	102.40 ug/l	99
62)	1,2-Dibromoethane	13.42	107	1649095	101.09 ug/l	99
63)	1-Chlorohexane	13.72	91	2504334	100.37 ug/l	99
64)	Chlorobenzene	13.93	112	3471290	101.15 ug/l	99
65)	Ethylbenzene	13.96	91	7227716	104.39 ug/l	100
66)	1,1,1,2-Tetrachloroethane	13.99	131	1503374	102.72 ug/l	100
67)	m-Xylene & p-Xylene	14.06	91	10940850	203.00 ug/l	100
68)	o-Xylene	14.55	91	5933325	101.46 ug/l	100
69)	Styrene	14.57	104	4087275	103.27 ug/l	99
71)	Bromoform	14.94	173	1303267	106.47 ug/l	99
72)	Isopropylbenzene	14.94	105	5950856	101.87 ug/l	100
74)	1,1,2,2-Tetrachloroethane	15.34	83	2752028	101.59 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.39	53	847440	105.60 ug/l	99
76)	n-Propylbenzene	15.43	91	8958522	104.15 ug/l	100
77)	1,2,3-Trichloropropane	15.45	110	569302	100.29 ug/l	100

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

SC 9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB368.D Vial: 8
Acq On : 24 Sep 2015 3:50 pm Operator: CMendo
Sample : VO03I247 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	1812436	99.59 ug/l	98
79)	1,3,5-Trimethylbenzene	15.61	105	4964943	100.01 ug/l	100
80)	2-Chlorotoluene	15.65	91	5744883	102.91 ug/l	100
81)	4-Chlorotoluene	15.77	91	5331408	102.58 ug/l	99
82)	tert-Butylbenzene	16.06	134	998835	97.80 ug/l	99
83)	1,2,4-Trimethylbenzene	16.10	105	5128228	103.11 ug/l	100
84)	sec-Butylbenzene	16.31	105	6444638	101.53 ug/l	100
85)	p-Isopropyltoluene	16.44	119	4919233	103.63 ug/l	98
86)	1,3-Dichlorobenzene	16.61	146	2930656	101.95 ug/l	100
87)	1,4-Dichlorobenzene	16.71	146	2955519	102.26 ug/l	99
88)	n-Butylbenzene	16.98	91	5603361	102.42 ug/l	100
89)	1,2-Dichlorobenzene	17.23	146	2680047	100.53 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.29	157	408464	105.88 ug/l	100
91)	1,2,4-Trichlorobenzene	19.48	180	1244973	106.66 ug/l	98
92)	Hexachlorobutadiene	19.62	225	700243	97.62 ug/l	100
93)	Naphthalene	19.96	128	3388144	108.69 ug/l	100
94)	1,2,3-Trichlorobenzene	20.36	180	1091598	109.61 ug/l	99

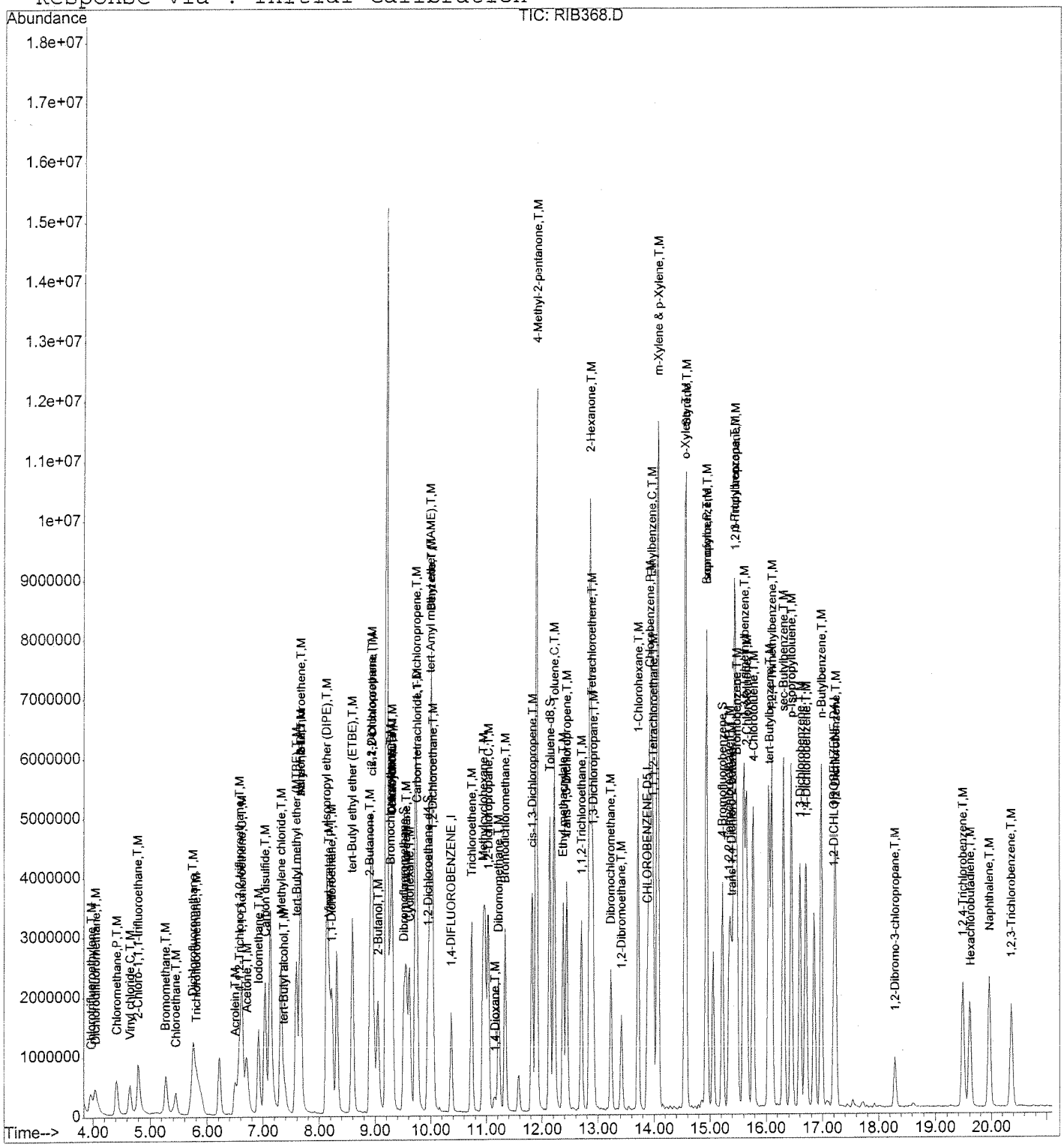
Sw 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB368.D Vial: 8
Acq On : 24 Sep 2015 3:50 pm Operator: CMendo
Sample : VO03I247 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



SC 9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB369.D Vial: 9
Acq On : 24 Sep 2015 4:18 pm Operator: CMendo
Sample : VO03I248 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1774920	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1776931	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	806328	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	3147538	197.87 ug/l	0.00
Spiked Amount 50.000			Recovery	= 395.74%	
39) 1,2-Dichloroethane-d4	9.95	65	3918822	200.65 ug/l	0.00
Spiked Amount 50.000			Recovery	= 401.30%	
53) Toluene-d8	12.14	98	9016253	197.71 ug/l	0.01
Spiked Amount 50.000			Recovery	= 395.42%	
73) 4-Bromofluorobenzene	15.22	95	4080773	205.28 ug/l	0.00
Spiked Amount 50.000			Recovery	= 410.56%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	782229	195.95 ug/l	98
3) Dichlorodifluoromethane	4.04	85	2310889	206.94 ug/l	99
4) Chloromethane	4.44	50	2355434	184.97 ug/l	99
5) Vinyl chloride	4.66	62	1968026	206.23 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	1024194	182.49 ug/l	98
7) Bromomethane	5.26	94	1390534	154.81 ug/l	99
8) Chloroethane	5.44	64	838565	131.23 ug/l	94
9) Dichlorofluoromethane	5.75	67	4539955	171.21 ug/l	100
10) Trichlorofluoromethane	5.81	101	3241260	194.23 ug/l	99
11) Acrolein	6.49	56	1693133	868.21 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	1414051	194.54 ug/l	99
13) 1,1-Dichloroethene	6.63	61	4526055	200.80 ug/l	100
14) Acetone	6.72	43	5984541	1016.49 ug/l	100
15) Iodomethane	6.93	142	5068313	191.01 ug/l	98
16) Carbon disulfide	7.03	76	11639626	194.43 ug/l	100
18) Methylene chloride	7.31	49	4954074	192.94 ug/l	98
19) tert-Butyl alcohol	7.39	59	2352656	1037.87 ug/l	99
20) tert-Butyl methyl ether (M	7.60	73	7825686	189.26 ug/l	99
21) Acrylonitrile	7.66	53	5377544	1004.77 ug/l	99
22) trans-1,2-Dichloroethene	7.66	61	4362394	190.85 ug/l	98
23) Isopropyl ether (DIPE)	8.13	45	12031641	195.33 ug/l	97
24) Vinyl acetate	8.18	43	8422128	208.33 ug/l	99
25) 1,1-Dichloroethane	8.22	63	5753447	196.56 ug/l	99
26) tert-Butyl ethyl ether (ET	8.59	59	9324109	185.43 ug/l	100
27) 2-Butanone	8.91	43	11434198	1042.92 ug/l	100
28) 2,2-Dichloropropane	8.94	77	3482479	153.32 ug/l	99
29) cis-1,2-Dichloroethene	8.95	96	3099304	190.88 ug/l	99

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

SW 9/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB369.D
Acq On : 24 Sep 2015 4:18 pm
Sample : VO03I248
Misc : 200ppb 8260/1000ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015

Vial: 9
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.07	45	2183611	1082.42 ug/l	100
31)	Bromochloromethane	9.28	49	4204063	190.45 ug/l	98
32)	Tetrahydrofuran	9.31	42	1169353	208.59 ug/l	99
33)	Chloroform	9.31	83	6166971	197.09 ug/l	99
35)	1,1,1-Trichloroethane	9.56	97	4228105	190.31 ug/l	99
36)	Cyclohexane	9.62	56	3022665	188.54 ug/l	99
37)	1,1-Dichloropropene	9.73	110	1121073	181.91 ug/l	99
38)	Carbon tetrachloride	9.76	119	3357638	188.39 ug/l	100
40)	tert-Amyl methyl ether (TA	9.99	87	1845743	185.66 ug/l	98
41)	Benzene	10.01	78	10700266	190.41 ug/l	100
42)	1,2-Dichloroethane	10.04	62	4733890	197.28 ug/l	100
43)	Trichloroethene	10.74	130	2847402	200.80 ug/l	98
44)	Methylcyclohexane	10.95	83	3529126	198.65 ug/l	98
45)	1,2-Dichloropropane	11.02	63	3313285	191.90 ug/l	97
46)	1,4-Dioxane	11.16	88	750901	3837.08 ug/l	98
47)	Dibromomethane	11.22	93	2584562	192.16 ug/l	100
48)	Bromodichloromethane	11.33	83	5377256	201.02 ug/l	100
50)	cis-1,3-Dichloropropene	11.81	75	6233423	197.80 ug/l	99
51)	4-Methyl-2-pentanone	11.90	43	21709586	732.32 ug/l	92
54)	Toluene	12.21	91	11676989	196.46 ug/l	100
55)	Ethyl methacrylate	12.38	69	4761796	192.64 ug/l	98
56)	trans-1,3-Dichloropropene	12.44	75	5534759	189.96 ug/l	98
57)	1,1,2-Trichloroethane	12.71	97	2737528	188.55 ug/l	100
58)	2-Hexanone	12.85	43	18011179	828.13 ug/l	95
59)	Tetrachloroethene	12.88	164	2143016	184.79 ug/l	99
60)	1,3-Dichloropropane	12.91	76	5267283	188.96 ug/l	99
61)	Dibromochloromethane	13.23	129	3530925	200.01 ug/l	99
62)	1,2-Dibromoethane	13.42	107	3311493	193.83 ug/l	98
63)	1-Chlorohexane	13.72	91	4743755	181.55 ug/l	99
64)	Chlorobenzene	13.93	112	6697043	186.35 ug/l	98
65)	Ethylbenzene	13.96	91	13261334	182.89 ug/l	99
66)	1,1,1,2-Tetrachloroethane	13.99	131	2823530	184.22 ug/l	100
67)	m-Xylene & p-Xylene	14.06	91	18109215	320.84 ug/l	95
68)	o-Xylene	14.55	91	10831745	176.86 ug/l	99
69)	Styrene	14.57	104	7327078	176.77 ug/l	99
71)	Bromoform	14.94	173	2541322	225.90 ug/l	99
72)	Isopropylbenzene	14.94	105	11086188	206.48 ug/l	100
74)	1,1,2,2-Tetrachloroethane	15.34	83	5133561	206.19 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.39	53	1580107	214.23 ug/l	97
76)	n-Propylbenzene	15.43	91	15988281	202.24 ug/l	100
77)	1,2,3-Trichloropropane	15.45	110	1055171	202.25 ug/l	100

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

Sen 9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB369.D Vial: 9
Acq On : 24 Sep 2015 4:18 pm Operator: CMendo
Sample : VO03I248 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) Bromobenzene	15.48	156	3446039	206.02 ug/l	97
79) 1,3,5-Trimethylbenzene	15.60	105	9389720	205.78 ug/l	99
80) 2-Chlorotoluene	15.65	91	10542373	205.48 ug/l	100
81) 4-Chlorotoluene	15.77	91	10135475	212.19 ug/l	99
82) tert-Butylbenzene	16.04	134	1802898	192.07 ug/l	100
83) 1,2,4-Trimethylbenzene	16.10	105	9186586	200.98 ug/l	100
84) sec-Butylbenzene	16.31	105	11829461	202.77 ug/l	100
85) p-Isopropyltoluene	16.44	119	8801591	201.73 ug/l	99
86) 1,3-Dichlorobenzene	16.61	146	5360604	202.89 ug/l	100
87) 1,4-Dichlorobenzene	16.71	146	5320542	200.29 ug/l	99
88) n-Butylbenzene	16.98	91	10173760	202.34 ug/l	100
89) 1,2-Dichlorobenzene	17.23	146	4617971	188.48 ug/l	100
90) 1,2-Dibromo-3-chloropropan	18.29	157	760781	214.57 ug/l	99
91) 1,2,4-Trichlorobenzene	19.48	180	2164378	201.75 ug/l	99
92) Hexachlorobutadiene	19.60	225	1177981	178.68 ug/l	99
93) Naphthalene	19.96	128	6030789	210.49 ug/l	100
94) 1,2,3-Trichlorobenzene	20.36	180	1817930	198.61 ug/l	100

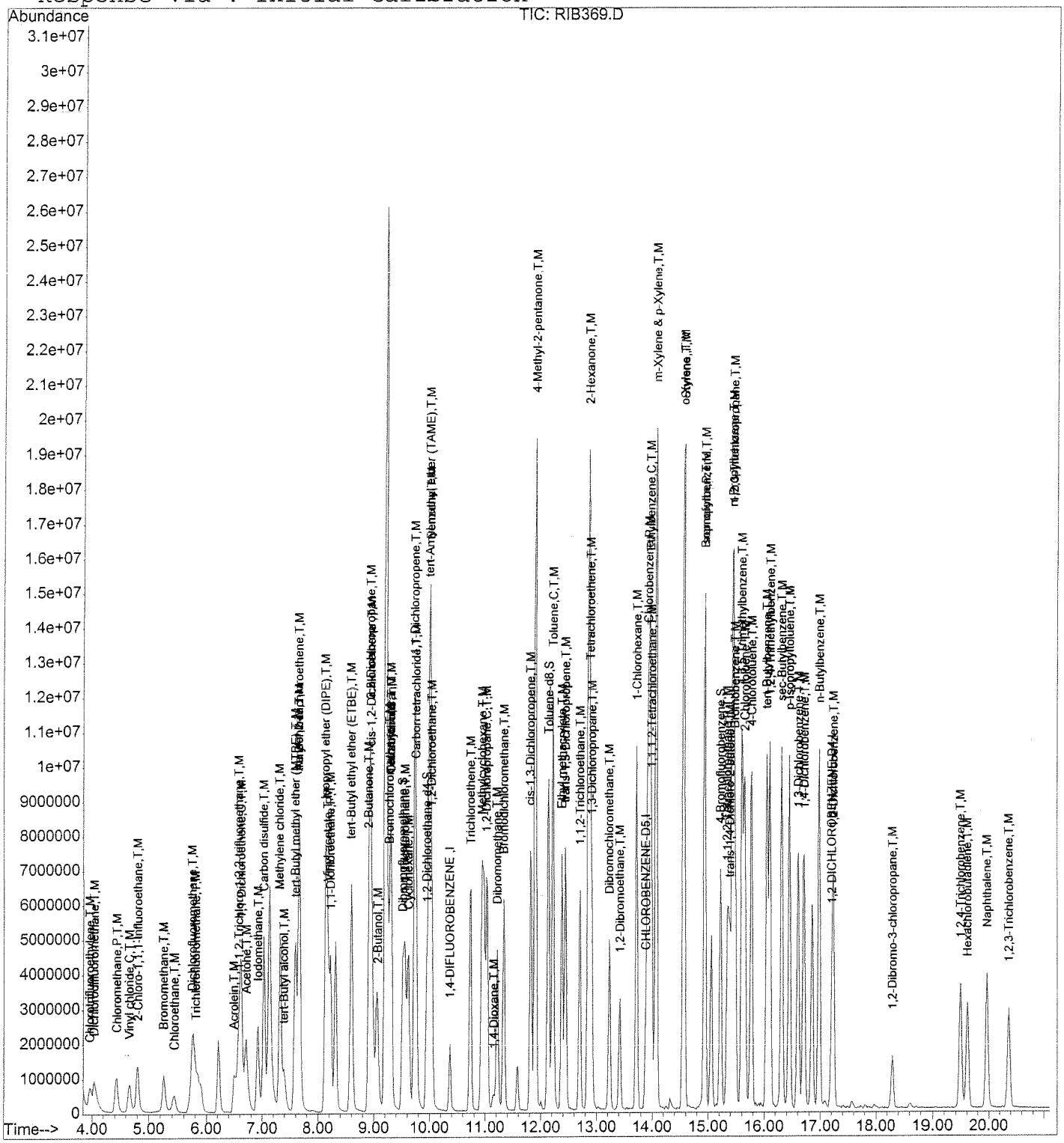
SM 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB369.D Vial: 9
Acq On : 24 Sep 2015 4:18 pm Operator: CMendo
Sample : VO03I248 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:01 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB370.D
Vial: 10
Acq On : 24 Sep 2015 4:47 pm
Operator: CMendo
Sample : VO03I249
Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An
Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:02 2015
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1721033	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1627369	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	713910	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	4476463	290.22	ug/l	0.00
Spiked Amount 50.000			Recovery	=	580.44%	
39) 1,2-Dichloroethane-d4	9.95	65	5705696	301.29	ug/l	0.00
Spiked Amount 50.000			Recovery	=	602.58%	
53) Toluene-d8	12.14	98	13349589	319.64	ug/l	0.01
Spiked Amount 50.000			Recovery	=	639.28%	
73) 4-Bromofluorobenzene	15.22	95	5780963	328.46	ug/l	0.00
Spiked Amount 50.000			Recovery	=	656.92%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.95	116	1207992	312.08	ug/l	97
3) Dichlorodifluoromethane	4.04	85	3401416	314.13	ug/l	98
4) Chloromethane	4.42	50	3530879	285.96	ug/l	99
5) Vinyl chloride	4.66	62	2712138	293.11	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.79	118	1598170	293.67	ug/l	97
7) Bromomethane	5.24	94	1560280	179.14	ug/l	99
8) Chloroethane	5.41	64	1098359	177.27	ug/l	96
9) Dichlorofluoromethane	5.73	67	6131149	238.46	ug/l	100
10) Trichlorofluoromethane	5.79	101	4614963	285.21	ug/l	100
11) Acrolein	6.51	56	2099562	1110.33	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	1944018	275.82	ug/l	99
13) 1,1-Dichloroethene	6.61	61	6238882	285.45	ug/l	99
14) Acetone	6.72	43	7944257	1391.60	ug/l	99
15) Iodomethane	6.91	142	7442078	289.26	ug/l	99
16) Carbon disulfide	7.03	76	15713268	270.70	ug/l	99
18) Methylene chloride	7.31	49	6899185	277.11	ug/l	99
19) tert-Butyl alcohol	7.40	59	3112614	1416.12	ug/l	92
20) tert-Butyl methyl ether (M	7.60	73	11371846	283.64	ug/l	100
21) Acrylonitrile	7.66	53	7365417	1419.28	ug/l	99
22) trans-1,2-Dichloroethene	7.66	61	6237250	281.42	ug/l	99
23) Isopropyl ether (DIPE)	8.15	45	17156855	287.25	ug/l	97
24) Vinyl acetate	8.18	43	11232848	286.55	ug/l	99
25) 1,1-Dichloroethane	8.22	63	8033564	283.05	ug/l	99
26) tert-Butyl ethyl ether (ET	8.59	59	13944235	285.99	ug/l	99
27) 2-Butanone	8.92	43	14366487	1351.41	ug/l	100
28) 2,2-Dichloropropane	8.94	77	4713168	214.01	ug/l	99
29) cis-1,2-Dichloroethene	8.95	96	4341217	275.74	ug/l	98

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB370.D Vial: 10
Acq On : 24 Sep 2015 4:47 pm Operator: CMendo
Sample : VO03I249 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:02 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.07	45	2895994	1481.87 ug/l	99
31)	Bromochloromethane	9.28	49	6248418	291.92 ug/l	98
32)	Tetrahydrofuran	9.31	42	1583785	291.22 ug/l	99
33)	Chloroform	9.31	83	8904074	293.47 ug/l	100
35)	1,1,1-Trichloroethane	9.56	97	6160799	285.98 ug/l	99
36)	Cyclohexane	9.62	56	4629129	297.79 ug/l	98
37)	1,1-Dichloropropene	9.73	110	1626594	272.20 ug/l	98
38)	Carbon tetrachloride	9.76	119	4805493	278.06 ug/l	100
40)	tert-Amyl methyl ether (TA	9.99	87	2537986	263.28 ug/l	98
41)	Benzene	10.01	78	14984266	274.99 ug/l	100
42)	1,2-Dichloroethane	10.04	62	6698627	287.91 ug/l	99
43)	Trichloroethene	10.74	130	3843092	279.51 ug/l	98
44)	Methylcyclohexane	10.95	83	5231313	303.69 ug/l	100
45)	1,2-Dichloropropane	11.04	63	4833496	288.71 ug/l	98
46)	1,4-Dioxane	11.16	88	1021816	5384.94 ug/l	100
47)	Dibromomethane	11.22	93	3667945	281.24 ug/l	100
48)	Bromodichloromethane	11.33	83	7622198	293.87 ug/l	99
50)	cis-1,3-Dichloropropene	11.81	75	8719622	285.36 ug/l	99
51)	4-Methyl-2-pentanone	11.90	43	24339779	846.75 ug/l	82
54)	Toluene	12.21	91	16069982	295.22 ug/l	98
55)	Ethyl methacrylate	12.38	69	6612366	292.08 ug/l	98
56)	trans-1,3-Dichloropropene	12.44	75	8123746	304.44 ug/l	98
57)	1,1,2-Trichloroethane	12.71	97	3992384	300.26 ug/l	99
58)	2-Hexanone	12.85	43	20573763	1032.90 ug/l	91
59)	Tetrachloroethene	12.88	164	3025813	284.90 ug/l	98
60)	1,3-Dichloropropane	12.91	76	7257919	284.31 ug/l	99
61)	Dibromochloromethane	13.23	129	4903568	303.29 ug/l	99
62)	1,2-Dibromoethane	13.42	107	4582939	292.91 ug/l	99
63)	1-Chlorohexane	13.72	91	7046211	294.45 ug/l	100
64)	Chlorobenzene	13.93	112	9627290	292.50 ug/l	96
65)	Ethylbenzene	13.96	91	17358942	261.40 ug/l	97
66)	1,1,1,2-Tetrachloroethane	13.99	131	3873398	275.95 ug/l	100
67)	m-Xylene & p-Xylene	14.06	91	21243213	410.95 ug/l	82
68)	o-Xylene	14.55	91	14913955	265.89 ug/l	100
69)	Styrene	14.57	104	10119109	266.57 ug/l	99
71)	Bromoform	14.94	173	3426701	344.04 ug/l	99
72)	Isopropylbenzene	14.94	105	14895851	313.35 ug/l	100
74)	1,1,2,2-Tetrachloroethane	15.34	83	7018162	318.38 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.39	53	2247234	344.12 ug/l	100
76)	n-Propylbenzene	15.43	91	19584392	279.79 ug/l	97
77)	1,2,3-Trichloropropane	15.45	110	1309639	283.52 ug/l	95

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

SC 9/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB370.D Vial: 10
Acq On : 24 Sep 2015 4:47 pm Operator: CMendo
Sample : VO03I249 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:02 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	4417287	298.28 ug/l	97
79)	1,3,5-Trimethylbenzene	15.61	105	12517612	309.85 ug/l	99
80)	2-Chlorotoluene	15.65	91	14673406	323.01 ug/l	100
81)	4-Chlorotoluene	15.77	91	13651780	322.80 ug/l	99
82)	tert-Butylbenzene	16.06	134	2416311	290.74 ug/l	99
83)	1,2,4-Trimethylbenzene	16.10	105	12366861	305.58 ug/l	100
84)	sec-Butylbenzene	16.31	105	15329128	296.78 ug/l	100
85)	p-Isopropyltoluene	16.44	119	11662906	301.92 ug/l	100
86)	1,3-Dichlorobenzene	16.61	146	7477563	319.65 ug/l	100
87)	1,4-Dichlorobenzene	16.71	146	7436395	316.18 ug/l	100
88)	n-Butylbenzene	16.98	91	13544519	304.26 ug/l	99
89)	1,2-Dichlorobenzene	17.23	146	6522840	300.69 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.29	157	1086937	346.25 ug/l	99
91)	1,2,4-Trichlorobenzene	19.48	180	3182774	335.09 ug/l	99
92)	Hexachlorobutadiene	19.62	225	1703968	291.92 ug/l	100
93)	Naphthalene	19.96	128	8575620	338.07 ug/l	100
94)	1,2,3-Trichlorobenzene	20.36	180	2478026	305.77 ug/l	99

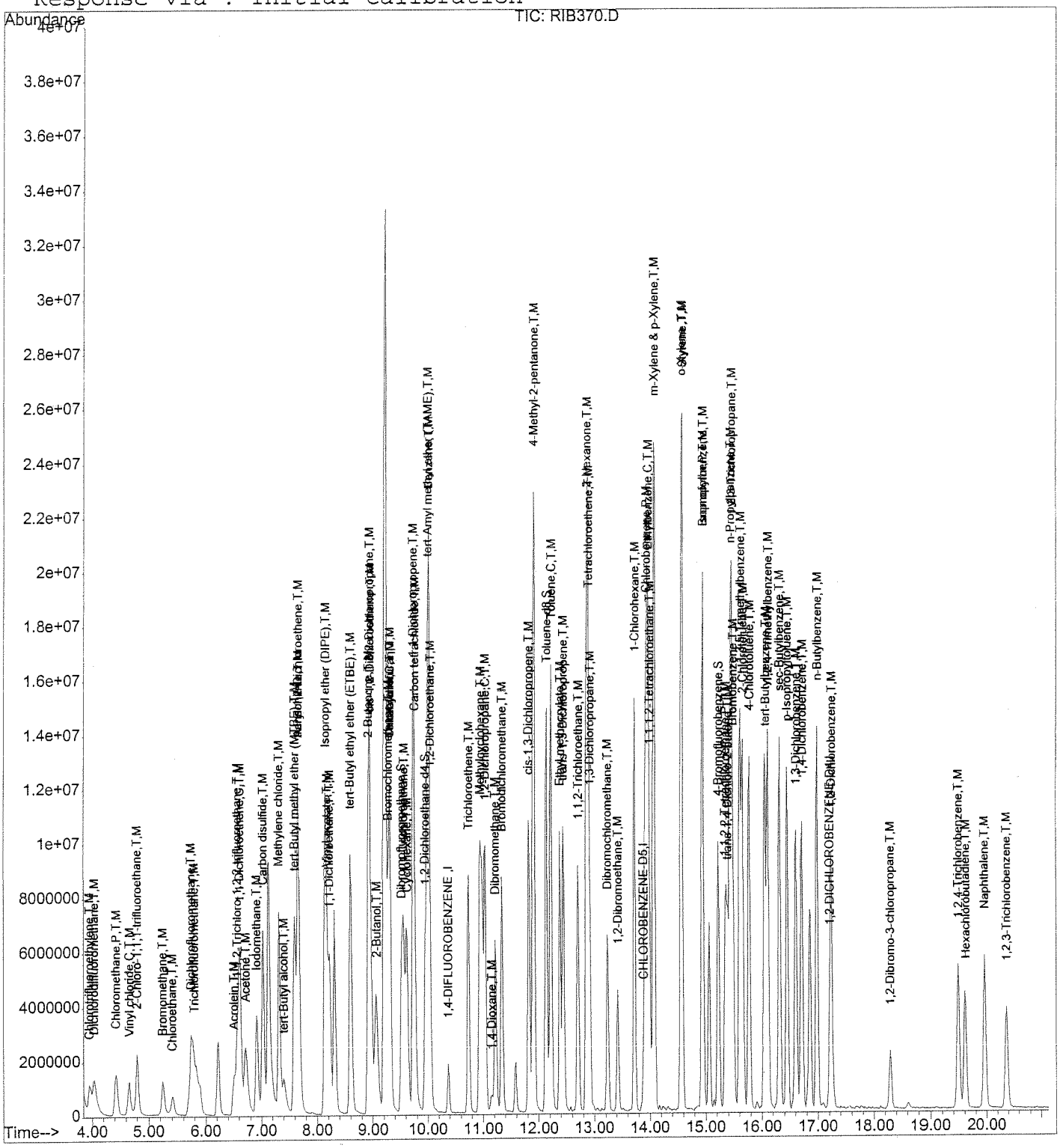
Sm 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB370.D Vial: 10
Acq On : 24 Sep 2015 4:47 pm Operator: CMendo
Sample : VO03I249 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:02 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB371.D Vial: 11
Acq On : 24 Sep 2015 5:15 pm Operator: CMendo
Sample : VO03I2410 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:02 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1649386	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1526729	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	630565	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	7463514	504.90 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1009.80%	
39) 1,2-Dichloroethane-d4	9.95	65	9174045	505.48 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1010.96%	
53) Toluene-d8	12.14	98	33229852	848.09 ug/l	0.01
Spiked Amount 50.000			Recovery	= 1696.18%	
73) 4-Bromofluorobenzene	15.22	95	8802338	566.23 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1132.46%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	2072945	558.80 ug/l	98
3) Dichlorodifluoromethane	4.04	85	5781438	557.12 ug/l	98
4) Chloromethane	4.42	50	6261781	529.17 ug/l	99
5) Vinyl chloride	4.65	62	5028232	567.02 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	3058847	586.50 ug/l	96
7) Bromomethane	5.23	94	2211531	264.95 ug/l	98
8) Chloroethane	5.39	64	1165018	196.19 ug/l	88
9) Dichlorofluoromethane	5.72	67	8500853	344.99 ug/l	100
10) Trichlorofluoromethane	5.81	101	7651248	493.40 ug/l	100
11) Acrolein	6.50	56	3880024	2141.03 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	3435893	508.67 ug/l	99
13) 1,1-Dichloroethene	6.61	61	11057536	527.90 ug/l	99
14) Acetone	6.72	43	13601025	2486.00 ug/l	100
15) Iodomethane	6.91	142	12754914	517.29 ug/l	100
16) Carbon disulfide	7.02	76	25179908	452.63 ug/l	98
18) Methylene chloride	7.31	49	11419962	478.62 ug/l	99
19) tert-Butyl alcohol	7.43	59	4984637	2366.32 ug/l	78
20) tert-Butyl methyl ether (M	7.60	73	18844629	490.45 ug/l	100
21) Acrylonitrile	7.67	53	12311589	2475.44 ug/l	100
22) trans-1,2-Dichloroethene	7.66	61	9932653	467.62 ug/l	98
23) Isopropyl ether (DIPE)	8.15	45	24756731	432.50 ug/l	92
24) Vinyl acetate	8.18	43	17502564	465.89 ug/l	99
25) 1,1-Dichloroethane	8.22	63	13219562	486.01 ug/l	99
26) tert-Butyl ethyl ether (ET	8.60	59	22297593	477.18 ug/l	98
27) 2-Butanone	8.92	43	24220695	2377.33 ug/l	100
28) 2,2-Dichloropropane	8.94	77	6883299	326.12 ug/l	98
29) cis-1,2-Dichloroethene	8.94	96	6962789	461.47 ug/l	96

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

9/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB371.D Vial: 11
Acq On : 24 Sep 2015 5:15 pm Operator: CMendo
Sample : VO03I2410 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:02 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) 2-Butanol	9.09	45	4446147	2376.16 ug/l	98
31) Bromochloromethane	9.27	49	9660442	470.94 ug/l	98
32) Tetrahydrofuran	9.31	42	2593445	497.31 ug/l	98
33) Chloroform	9.31	83	14457497	497.20 ug/l	99
35) 1,1,1-Trichloroethane	9.55	97	10016840	485.17 ug/l	99
36) Cyclohexane	9.61	56	6906058	463.56 ug/l	99
37) 1,1-Dichloropropene	9.73	110	2618847	457.29 ug/l	98
38) Carbon tetrachloride	9.76	119	7658123	462.37 ug/l	100
40) tert-Amyl methyl ether (TA	10.00	87	3887100	420.74 ug/l	99
41) Benzene	10.01	78	20739924	397.16 ug/l	96
42) 1,2-Dichloroethane	10.04	62	10613415	475.98 ug/l	99
43) Trichloroethene	10.73	130	6628910	503.06 ug/l	98
44) Methylcyclohexane	10.93	83	8176020	495.25 ug/l	98
45) 1,2-Dichloropropane	11.02	63	7698541	479.83 ug/l #	52
46) 1,4-Dioxane	11.14	88	1672885	9199.01 ug/l	98
47) Dibromomethane	11.22	93	6141226	491.33 ug/l	99
48) Bromodichloromethane	11.34	83	12492665	502.56 ug/l	98
50) cis-1,3-Dichloropropene	11.81	75	14503287	495.25 ug/l	98
54) Toluene	12.21	91	21620219	423.36 ug/l	82
55) Ethyl methacrylate	12.38	69	10695810	503.60 ug/l	93
56) trans-1,3-Dichloropropene	12.44	75	13328234	532.40 ug/l	99
57) 1,1,2-Trichloroethane	12.70	97	6682860	535.73 ug/l	99
58) 2-Hexanone	12.85	43	24535167	1312.97 ug/l	70
59) Tetrachloroethene	12.88	164	4739918	475.71 ug/l	98
60) 1,3-Dichloropropane	12.91	76	11506080	480.43 ug/l	99
61) Dibromochloromethane	13.24	129	8033888	529.65 ug/l	99
62) 1,2-Dibromoethane	13.42	107	7719009	525.87 ug/l	99
63) 1-Chlorohexane	13.72	91	10849109	483.26 ug/l	99
64) Chlorobenzene	13.93	112	14804139	479.44 ug/l	96
65) Ethylbenzene	13.96	91	21228409	340.75 ug/l	83
66) 1,1,1,2-Tetrachloroethane	13.98	131	6296066	478.11 ug/l	99
67) m-Xylene & p-Xylene	14.06	91	25389275	523.53 ug/l	60
68) o-Xylene	14.55	91	19988056	379.84 ug/l	91
69) Styrene	14.57	104	15915655	446.91 ug/l	99
71) Bromoform	14.94	173	5636643	640.71 ug/l	99
72) Isopropylbenzene	14.94	105	20220222	481.58 ug/l	95
74) 1,1,2,2-Tetrachloroethane	15.36	83	10970224	563.44 ug/l	99
75) trans-1,4-Dichloro-2-buten	15.39	53	3566302	618.29 ug/l	99
76) n-Propylbenzene	15.43	91	23879404	386.24 ug/l	89
77) 1,2,3-Trichloropropane	15.44	110	2064465	506.01 ug/l	97
78) Bromobenzene	15.49	156	7260224	555.05 ug/l	94

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

9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB371.D Vial: 11
Acq On : 24 Sep 2015 5:15 pm Operator: CMendo
Sample : VO03I2410 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:02 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,3,5-Trimethylbenzene	15.61	105	17497210	490.35 ug/l	99
80) 2-Chlorotoluene	15.65	91	20932107	521.70 ug/l	99
81) 4-Chlorotoluene	15.77	91	19352952	518.10 ug/l	98
82) tert-Butylbenzene	16.06	134	3566445	485.85 ug/l	100
83) 1,2,4-Trimethylbenzene	16.10	105	17408234	487.01 ug/l	92
84) sec-Butylbenzene	16.31	105	20502601	449.41 ug/l	95
85) p-Isopropyltoluene	16.44	119	16694900	489.31 ug/l	99
86) 1,3-Dichlorobenzene	16.61	146	11010378	532.89 ug/l	99
87) 1,4-Dichlorobenzene	16.71	146	10768749	518.39 ug/l	100
88) n-Butylbenzene	16.98	91	18839138	479.13 ug/l	97
89) 1,2-Dichlorobenzene	17.23	146	9841629	513.65 ug/l	99
90) 1,2-Dibromo-3-chloropropan	18.29	157	1799102	648.86 ug/l	100
91) 1,2,4-Trichlorobenzene	19.48	180	4963566	591.65 ug/l	99
92) Hexachlorobutadiene	19.62	225	2681142	520.04 ug/l	100
93) Naphthalene	19.96	128	13462018	600.84 ug/l	100
94) 1,2,3-Trichlorobenzene	20.36	180	3957476	552.87 ug/l	99

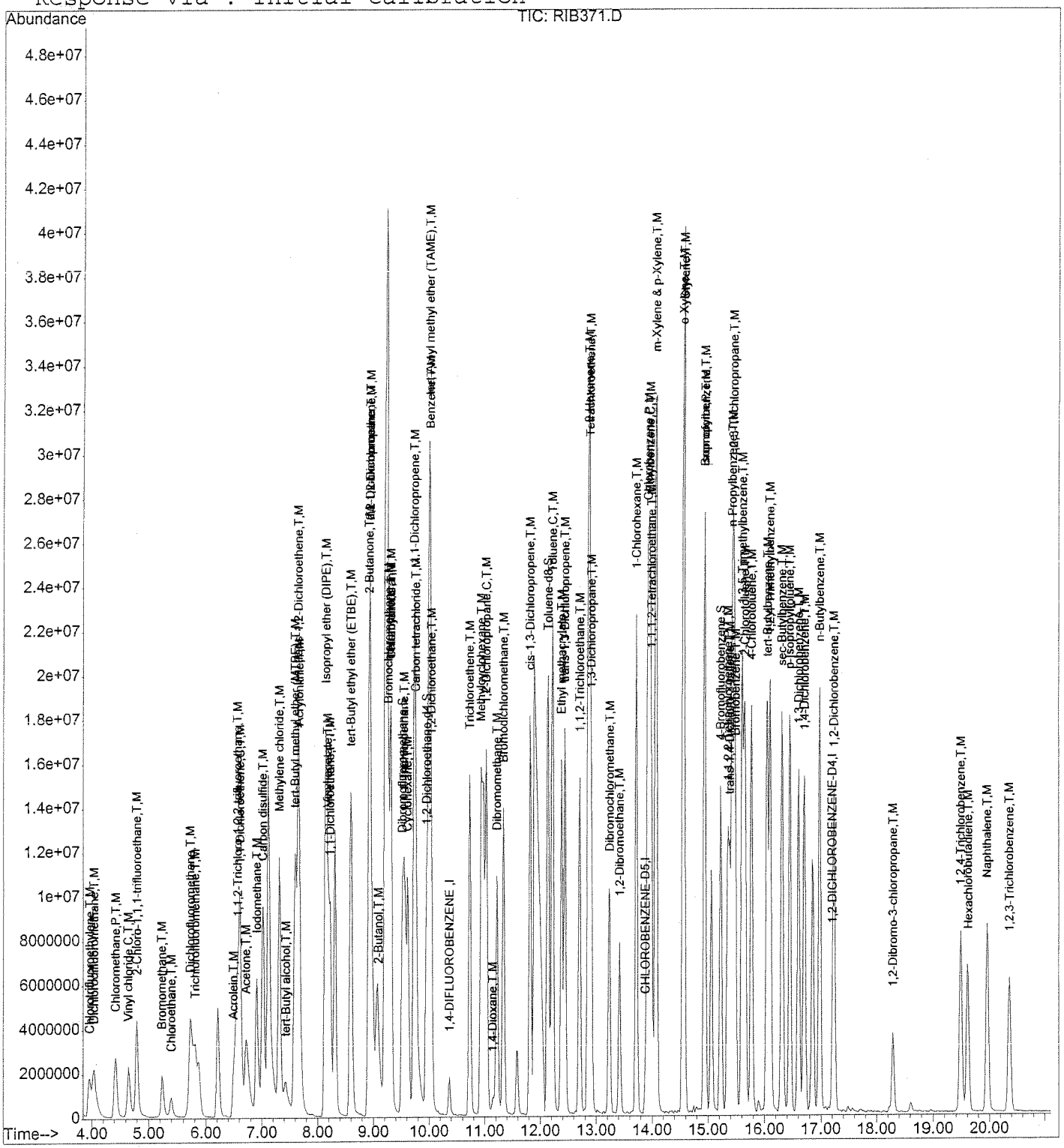
SW 9/29/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB371.D Vial: 11
Acq On : 24 Sep 2015 5:15 pm Operator: CMendo
Sample : VO03I2410 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:02 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



9/29/15

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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC Beginning DateTime :05/20/15 09:14
Spike Amount :50 PPB
CC/CV File :REB247
IC File :REB240

Column Spec :ZB-624 ID :0.25MM
IC Ending DateTime :05/20/15 13:32
HPChem Method :V003E20
Date_Time :05/20/15 15:03

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AVRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	50.000	0	1646405	1	1	10.415	10.424	0				
	2	Chlorotrifluoroethylene	52.716	5.4	234792	0.143	0.135	3.982	3.984	7.60				
	3	Dichlorodifluoromethane	49.563	-0.9	547778	0.333	0.336	4.071	4.065	10.33				
	4	Chloromethane	51.493	3.0	612475	0.372	0.361	4.444	4.444	10.29				
	5	Vinyl chloride	52.964	5.9	520082	0.316	0.298	4.682	4.681	6.87				
	6	2-Chloro-1,1,1-trifluoroethane	53.209	6.4	376755	0.229	0.215	4.831	4.834	6.65				
	7	Bromomethane	48.972	-2.1	444658	0.270	0.276	5.322	5.308	14.28				
	8	Chloroethane	53.655	7.3	290683	0.177	0.165	5.486	5.473	10.43				
	9	Dichlorofluoromethane	51.902	3.8	1168751	0.710	0.684	5.799	5.787	13.42				
	10	Trichlorofluoromethane	48.642	-2.7	745272	0.453	0.465	5.873	5.875	9.20				
5	11	Acrolein	260.867	4.3	376513	0.046	0.044	6.543	6.543	10.33				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	53.831	7.7	301184	0.183	0.170	6.633	6.626	9.47				
	13	1,1-Dichloroethene	53.743	7.5	1009095	0.613	0.570	6.677	6.674	11.50				
5	14	Acetone	259.058	3.6	1377753	0.167	0.162	6.737	6.752	11.09				
	15	Iodomethane	54.107	8.2	1085418	0.659	0.609	6.975	6.975	11.47				
	16	Carbon disulfide	53.281	6.6	2182959	1.326	1.244	7.079	7.089	5.39				
	17	Methyl acetate												
	18	Methylene chloride	53.978	8.0	1049695	0.638	0.591	7.362	7.367	11.16				
5	19	tert-Butyl alcohol	274.254	9.7	599050	0.073	0.066	7.422	7.425	11.69				
	20	tert-Butyl methyl ether (MTBE)	55.368	10.7	1966725	1.195	1.079	7.630	7.635	10.51				
	21	trans-1,2-Dichloroethene	54.008	8.0	1013067	0.615	0.570	7.705	7.710	10.43				
5	22	Acrylonitrile	269.532	7.8	1171494	0.142	0.132	7.705	7.708	7.70				
	23	Isopropyl ether (DIPE)	55.096	10.2	2614906	1.588	1.441	8.181	8.189	9.15				
	24	Vinyl acetate	53.019	6.0	1694327	1.029	0.971	8.226	8.231	9.44				
	25	1,1-Dichloroethane	54.579	9.2	1325398	0.805	0.737	8.271	8.276	9.33				
	26	tert-Butyl ethyl ether (ETBE)	55.020	10.0	2420384	1.470	1.336	8.643	8.646	11.40				
5	27	2-Butanone	279.788	11.9	2270502	0.276	0.246	8.955	8.965	8.18				
	28	2,2-Dichloropropane	47.332	-5.3	854491	0.519	0.548	8.985	8.993	13.47				
	29	cis-1,2-Dichloroethene	56.586	13.2	719003	0.437	0.386	9.000	9.004	9.86				
5	30	2-Butanol	280.153	12.1	499988	0.061	0.054	9.104	9.110	9.18				
	31	Bromochloromethane	53.803	7.6	977282	0.594	0.552	9.313	9.324	8.14				
	32	Tetrahydrofuran	55.569	11.1	244684	0.149	0.134	9.358	9.361	14.31				
	33	Chloroform	54.835	9.7	1464567	0.890	0.811	9.358	9.363	9.34				
	34	Dibromofluoromethane	51.034	2.1	734895	0.446	0.437	9.566	9.570	8.73				
	35	1,1,1-Trichloroethane	51.819	3.6	1017396	0.618	0.596	9.611	9.615	10.41				
	36	Cyclohexane	48.795	-2.4	967941	0.588	0.602	9.670	9.671	8.39				
	37	1,1-Dichloropropene	56.980	14.0	272913	0.166	0.145	9.789	9.790	7.12				
	38	Carbon tetrachloride	54.715	9.4	901934	0.548	0.501	9.804	9.813	12.10				
	39	1,2-Dichloroethane-d4	50.132	0.3	981772	0.596	0.595	9.998	10.007	5.25				
	40	tert-Amyl methyl ether (TAME)	51.245	2.5	419441	0.255	0.249	10.042	10.050	11.22				
	41	Benzene	53.206	6.4	2164057	1.314	1.235	10.057	10.069	6.77				
	42	1,2-Dichloroethane	54.818	9.6	1225277	0.744	0.679	10.087	10.098	9.38				
	43	Trichloroethene	55.678	11.4	621899	0.378	0.339	10.787	10.794	6.04				
	44	Methylcyclohexane	51.091	2.2	989073	0.601	0.588	10.995	11.003	9.79				
	45	1,2-Dichloropropane	52.863	5.7	648548	0.394	0.373	11.085	11.090	6.50				
20	46	1,4-Dioxane	931.905	-6.8	123676	0.004	0.004	11.204	11.210	13.25				
	47	Dibromomethane	54.751	9.5	561268	0.341	0.311	11.278	11.281	6.82				
	48	Bromodichloromethane	53.473	6.9	1106721	0.672	0.629	11.398	11.396	5.87				
	49	2-Chloroethyl vinyl ether												
	50	cis-1,3-Dichloropropene	53.222	6.4	1185890	0.720	0.677	11.874	11.881	5.09				
5	51	4-Methyl-2-pentanone	280.975	12.4	5659347	0.687	0.612	11.948	11.965	9.56				
	52	CHLOROBENZENE-D5	50.000	0	1560971	1	1	13.944	13.950	0				
	53	Toluene-d8	51.326	2.7	1696899	1.087	1.059	12.187	12.193	6.60				
	54	Toluene	53.982	8.0	2145619	1.375	1.273	12.276	12.280	6.55				
	55	Ethyl methacrylate	52.040	4.1	892355	0.572	0.549	12.440	12.443	8.32				
	56	trans-1,3-Dichloropropene	51.091	2.2	1080492	0.692	0.677	12.500	12.507	7.71				
	57	1,1,2-Trichloroethane	53.477	7.0	531736	0.341	0.318	12.753	12.766	7.98				
	58	Tetrachloroethene	52.126	4.3	416554	0.267	0.256	12.931	12.948	5.80				
5	59	2-Hexanone	267.277	6.9	3789177	0.485	0.454	12.916	12.922	9.20				
	60	1,3-Dichloropropane	51.579	3.2	987340	0.633	0.613	12.976	12.979	6.23				
	61	Dibromochloromethane	55.659	11.3	792763	0.508	0.456	13.289	13.297	8.00				
	62	1,2-Dibromoethane	53.982	8.0	689317	0.442	0.409	13.482	13.485	7.15				
	63	1-Chlorohexane	52.413	4.8	895791	0.574	0.547	13.780	13.783	8.44				
	64	Chlorobenzene	54.088	8.2	1486712	0.952	0.880	13.988	13.992	7.23				
	65	Ethylbenzene	55.138	10.3	2884003	1.848	1.675	14.018	14.022	6.49				
	66	1,1,1,2-Tetrachloroethane	55.937	11.9	704838	0.452	0.404	14.048	14.051	9.73				
2	67	m-Xylene & p-Xylene	103.021	3.0	4190208	1.342	1.303	14.123	14.137	9.67				
	68	o-Xylene	53.645	7.3	2455110	1.573	1.466	14.614	14.627	9.01				
	69	Styrene	54.387	8.8	1681710	1.077	0.990	14.629	14.640	10.58				
	70	1,2-DICHLOROBENZENE-D4	50.000	0	885258	1	1	17.279	17.289	0				
	71	Bromoform	55.233	10.5	578879	0.654	0.592	15.001	15.015	4.06				
	72	Isopropylbenzene	51.105	2.2	2700766	3.051	2.985	15.001	15.014	11.28				
	73	4-Bromofluorobenzene	46.138	-7.7	866849	0.979	1.061	15.284	15.297	10.45				
	74	1,1,2,2-Tetrachloroethane	52.512	5.0	1185419	1.339	1.275	15.418	15.421	11.41				
	75	trans-1,4-Dichloro-2-butene	56.769	13.5	441743	0.499	0.439	15.448	15.462	5.60				
	76	n-Propylbenzene	52.008	4.0	3835292	4.332	4.165	15.507	15.509	7.81				
	77	1,2,3-Trichloropropane	53.706	7.4	299432	0.338	0.315	15.522	15.525	9.59				
	78	Bromobenzene	49.271	-1.5	748707	0.846	0.858	15.552	15.558	11.84				
	79	1,3,5-Trimethylbenzene	52.219	4.4	2395706	2.706	2.591	15.671	15.676	8.06				
	80	2-Chlorotoluene	50.325	0.7	2450562	2.768	2.750	15.716	15.727	8.60				
	81	4-Chlorotoluene	48.999	-2.0	2246835	2.538	2.590	15.835	15.848	8.63				
	82	tert-Butylbenzene	51.088	2.2	456310	0.515	0.504	16.118	16.128	9.24				
	83	1,2,4-Trimethylbenzene	50.566	1.1	2409831	2.722	2.692	16.177	16.181	6.53				
	84	sec-Butylbenzene	52.596	5.2	3165652	3.576	3.399	16.386	16.394	8.41				
	85	p-Isopropyltoluene	50.743	1.5	2412242	2.725	2.685	16.520	16.528	8.01				
	86	1,3-Dichlorobenzene	50.908	1.8	1317331	1.488	1.462	16.669	16.690	6.78				
	87	1,4-Dichlorobenzene	51.604	3.2	1345042	1.519	1.472	16.773	16.794	7.12				
	88	n-Butylbenzene	52.848	5.7	2650845	2.994	2.833	17.056	17.062	6.15				
	89	1,2-Dichlorobenzene	52.399	4.8	1252268	1.415	1.350	17.309	17.317	5.04				
	90	1,2-Dibromo-3-chloropropane	59.079	18.2	217231	0.245	0.208	18.366	18.391	9.01				
	91	1,2,4-Trichlorobenzene	55.481	11.0	630588	0.712	0.642	19.573	19.587	10.95				
	92	Hexachlorobutadiene	50.756	1.5	375710	0.424	0.418	19.692	19.711	7.48				
	93	Naphthalene	55.992	12.0	1750948	1.978	1.766	20.049	20.065	12.26				
	94	1,2,3-Trichlorobenzene	53.320	6.6	511398	0.578	0.542	20.451	20.474	8.66				

Spike Amount = Nominal Amount * M

SU 5/28/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	99	-0.01
2	T,M	Chlorotrifluoroethylene	50.000	52.716	-5.4	102	0.00
3	T,M	Dichlorodifluoromethane	50.000	49.563	0.9	96	0.00
4	P,T,M	Chloromethane	50.000	51.493	-3.0	103	0.00
5	C,T,M	Vinyl chloride	50.000	52.964	-5.9	103	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	53.209	-6.4	101	0.00
7	T,M	Bromomethane	50.000	48.972	2.1	104	0.02
8	T,M	Chloroethane	50.000	53.655	-7.3	103	0.01
9	T,M	Dichlorofluoromethane	50.000	51.902	-3.8	98	0.01
10	T,M	Trichlorofluoromethane	50.000	48.642	2.7	93	0.00
11	T,M	Acrolein	250.000	260.867	-4.3	98	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	53.831	-7.7	106	0.00
13	C,T,M	1,1-Dichloroethene	50.000	53.743	-7.5	99	0.00
14	T,M	Acetone	250.000	259.058	-3.6	106	-0.01
15	T,M	Iodomethane	50.000	54.107	-8.2	102	0.00
16	T,M	Carbon disulfide	50.000	53.281	-6.6	108	-0.01
17	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
18	T,M	Methylene chloride	50.000	53.978	-8.0	110	0.00
19	T,M	tert-Butyl alcohol	250.000	274.254	-9.7	104	0.00
20	T,M	tert-Butyl methyl ether (MT	50.000	55.367	-10.7	101	0.00
21	T,M	trans-1,2-Dichloroethene	50.000	54.008	-8.0	100	0.00
22	T,M	Acrylonitrile	250.000	269.532	-7.8	100	0.00
23	T,M	Isopropyl ether (DIPE)	50.000	55.096	-10.2	110	0.00
24	T,M	Vinyl acetate	50.000	53.019	-6.0	98	0.00
25	P,T,M	1,1-Dichloroethane	50.000	54.579	-9.2	105	0.00
26	T,M	tert-Butyl ethyl ether (ETB	50.000	55.019	-10.0	104	0.00
27	T,M	2-Butanone	250.000	279.788	-11.9	111	0.00
28	T,M	2,2-Dichloropropane	50.000	47.332	5.3	96	0.00
29	T,M	cis-1,2-Dichloroethene	50.000	56.586	-13.2	109	0.00
30	T,M	2-Butanol	250.000	280.153	-12.1	108	0.00
31	T,M	Bromochloromethane	50.000	53.803	-7.6	108	-0.01
32	T,M	Tetrahydrofuran	50.000	55.569	-11.1	110	0.00
33	C,T,M	Chloroform	50.000	54.835	-9.7	108	0.00
34	S	Dibromofluoromethane	50.000	51.034	-2.1	102	0.00
35	T,M	1,1,1-Trichloroethane	50.000	51.819	-3.6	100	0.00
36	T,M	Cyclohexane	50.000	48.795	2.4	103	0.00
37	T,M	1,1-Dichloropropene	50.000	56.980	-14.0	112	0.00
38	T,M	Carbon tetrachloride	50.000	54.715	-9.4	103	-0.01
39	S	1,2-Dichloroethane-d4	50.000	50.132	-0.3	104	0.00
40	T,M	tert-Amyl methyl ether (TAM	50.000	51.245	-2.5	98	0.00
41	T,M	Benzene	50.000	53.206	-6.4	108	-0.01

(#) = Out of Range

SM 5/28/15

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Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	50.000	54.818	-9.6	102	-0.01
43	T,M	Trichloroethene	50.000	55.678	-11.4	113	0.00
44	T,M	Methylcyclohexane	50.000	51.091	-2.2	104	0.00
45	C,T,M	1,2-Dichloropropane	50.000	52.863	-5.7	106	0.00
46	T,M	1,4-Dioxane	1000.000	931.905	6.8	95	0.00
47	T,M	Dibromomethane	50.000	54.751	-9.5	107	0.00
48	T,M	Bromodichloromethane	50.000	53.473	-6.9	103	0.00
49	T,M	2-Chloroethyl vinyl ether	-1.000	0.000	0.0	0	0.00
50	T,M	cis-1,3-Dichloropropene	50.000	53.222	-6.4	108	0.00
51	T,M	4-Methyl-2-pentanone	250.000	280.975	-12.4	109	-0.01
52	I	CHLOROBENZENE-D5	50.000	50.000	0.0	100	0.00
53	S	Toluene-d8	50.000	51.326	-2.7	107	0.00
54	C,T,M	Toluene	50.000	53.982	-8.0	105	0.00
55	T,M	Ethyl methacrylate	50.000	52.040	-4.1	100	0.00
56	T,M	trans-1,3-Dichloropropene	50.000	51.091	-2.2	102	0.00
57	T,M	1,1,2-Trichloroethane	50.000	53.477	-7.0	105	-0.01
58	T,M	Tetrachloroethene	50.000	52.126	-4.3	102	-0.01
59	T,M	2-Hexanone	250.000	267.277	-6.9	105	0.00
60	T,M	1,3-Dichloropropane	50.000	51.579	-3.2	103	0.00
61	T,M	Dibromochloromethane	50.000	55.659	-11.3	104	0.00
62	T,M	1,2-Dibromoethane	50.000	53.982	-8.0	105	0.00
63	T,M	1-Chlorohexane	50.000	52.413	-4.8	106	0.00
64	P,M	Chlorobenzene	50.000	54.088	-8.2	107	0.00
65	C,T,M	Ethylbenzene	50.000	55.138	-10.3	108	0.00
66	T,M	1,1,1,2-Tetrachloroethane	50.000	55.937	-11.9	102	0.00
67	T,M	m-Xylene & p-Xylene	100.000	103.021	-3.0	103	-0.01
68	T,M	o-Xylene	50.000	53.645	-7.3	102	0.00
69	T,M	Styrene	50.000	54.387	-8.8	103	0.00
70	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	93	0.00
71	P,T,M	Bromoform	50.000	55.233	-10.5	103	0.00
72	T,M	Isopropylbenzene	50.000	51.105	-2.2	103	0.00
73	S	4-Bromofluorobenzene	50.000	46.138	7.7	101	0.00
74	P,T,M	1,1,2,2-Tetrachloroethane	50.000	52.512	-5.0	102	0.00
75	T,M	trans-1,4-Dichloro-2-butene	50.000	56.769	-13.5	103	0.00
76	T,M	n-Propylbenzene	50.000	52.008	-4.0	106	0.00
77	T,M	1,2,3-Trichloropropane	50.000	53.706	-7.4	106	0.00
78	T,M	Bromobenzene	50.000	49.271	1.5	104	0.00
79	T,M	1,3,5-Trimethylbenzene	50.000	52.219	-4.4	102	0.00
80	T,M	2-Chlorotoluene	50.000	50.325	-0.7	100	0.00

(#) = Out of Range

SH 5/28/15

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Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T,M	4-Chlorotoluene	50.000	48.999	2.0	98	0.00
82	T,M	tert-Butylbenzene	50.000	51.088	-2.2	102	0.00
83	T,M	1,2,4-Trimethylbenzene	50.000	50.566	-1.1	96	0.00
84	T,M	sec-Butylbenzene	50.000	52.596	-5.2	106	0.00
85	T,M	p-Isopropyltoluene	50.000	50.743	-1.5	99	0.00
86	T,M	1,3-Dichlorobenzene	50.000	50.908	-1.8	101	-0.01
87	T,M	1,4-Dichlorobenzene	50.000	51.604	-3.2	100	-0.01
88	T,M	n-Butylbenzene	50.000	52.848	-5.7	99	0.00
9	T,M	1,2-Dichlorobenzene	50.000	52.399	-4.8	99	0.00
0	T,M	1,2-Dibromo-3-chloropropane	50.000	59.079	-18.2	103	-0.01
	T,M	1,2,4-Trichlorobenzene	50.000	55.481	-11.0	96	0.00
	T,M	Hexachlorobutadiene	50.000	50.756	-1.5	94	-0.01
	T,M	Naphthalene	50.000	55.992	-12.0	94	0.00
	T,M	1,2,3-Trichlorobenzene	50.000	53.320	-6.6	92	-0.01

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

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	99	-0.01
2	T,M	Chlorotrifluoroethylene	0.135	0.143	-5.9	102	0.00
3	T,M	Dichlorodifluoromethane	0.336	0.333	0.9	96	0.00
4	P,T,M	Chloromethane	0.361	0.372	-3.0	103	0.00
5	C,T,M	Vinyl chloride	0.298	0.316	-6.0	103	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.215	0.229	-6.5	101	0.00
7	T,M	Bromomethane	0.276	0.270	2.2	104	0.02
8	T,M	Chloroethane	0.165	0.177	-7.3	103	0.01
9	T,M	Dichlorofluoromethane	0.684	0.710	-3.8	98	0.01
10	T,M	Trichlorofluoromethane	0.465	0.453	2.6	93	0.00
11	T,M	Acrolein	0.044	0.046	-4.5	98	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.170	0.183	-7.6	106	0.00
13	C,T,M	1,1-Dichloroethene	0.570	0.613	-7.5	99	0.00
14	T,M	Acetone	0.162	0.167	-3.1	106	-0.01
15	T,M	Iodomethane	0.609	0.659	-8.2	102	0.00
16	T,M	Carbon disulfide	1.244	1.326	-6.6	108	-0.01
17	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
18	T,M	Methylene chloride	0.591	0.638	-8.0	110	0.00
19	T,M	tert-Butyl alcohol	0.066	0.073	-10.6	104	0.00
20	T,M	tert-Butyl methyl ether (MT	1.079	1.195	-10.8	101	0.00
21	T,M	trans-1,2-Dichloroethene	0.570	0.615	-7.9	100	0.00
22	T,M	Acrylonitrile	0.132	0.142	-7.6	100	0.00
23	T,M	Isopropyl ether (DIPE)	1.441	1.588	-10.2	110	0.00
24	T,M	Vinyl acetate	0.971	1.029	-6.0	98	0.00
25	P,T,M	1,1-Dichloroethane	0.737	0.805	-9.2	105	0.00
26	T,M	tert-Butyl ethyl ether (ETB	1.336	1.470	-10.0	104	0.00
27	T,M	2-Butanone	0.246	0.276	-12.2	111	0.00
28	T,M	2,2-Dichloropropane	0.548	0.519	5.3	96	0.00
29	T,M	cis-1,2-Dichloroethene	0.386	0.437	-13.2	109	0.00
30	T,M	2-Butanol	0.054	0.061	-13.0	108	0.00
31	T,M	Bromochloromethane	0.552	0.594	-7.6	108	-0.01
32	T,M	Tetrahydrofuran	0.134	0.149	-11.2	110	0.00
33	C,T,M	Chloroform	0.811	0.890	-9.7	108	0.00
34	S	Dibromofluoromethane	0.437	0.446	-2.1	102	0.00
35	T,M	1,1,1-Trichloroethane	0.596	0.618	-3.7	100	0.00
36	T,M	Cyclohexane	0.602	0.588	2.3	103	0.00
37	T,M	1,1-Dichloropropene	0.145	0.166	-14.5	112	0.00
38	T,M	Carbon tetrachloride	0.501	0.548	-9.4	103	-0.01
39	S	1,2-Dichloroethane-d4	0.595	0.596	-0.2	104	0.00
40	T,M	tert-Amyl methyl ether (TAM	0.249	0.255	-2.4	98	0.00
41	T,M	Benzene	1.235	1.314	-6.4	108	-0.01

#) = Out of Range

SU 5/28/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
	T,M	1,2-Dichloroethane	0.679	0.744	-9.6	102	-0.01
	T,M	Trichloroethene	0.339	0.378	-11.5	113	0.00
	T,M	Methylcyclohexane	0.588	0.601	-2.2	104	0.00
	C,T,M	1,2-Dichloropropane	0.373	0.394	-5.6	106	0.00
	T,M	1,4-Dioxane	0.004	0.004	0.0	95	0.00
7	T,M	Dibromomethane	0.311	0.341	-9.6	107	0.00
3	T,M	Bromodichloromethane	0.629	0.672	-6.8	103	0.00
49	T,M	2-Chloroethyl vinyl ether	0.000	0.000	0.0	0#	0.00
50	T,M	cis-1,3-Dichloropropene	0.677	0.720	-6.4	108	0.00
51	T,M	4-Methyl-2-pentanone	0.612	0.687	-12.3	109	-0.01
52	I	CHLOROBENZENE-D5	1.000	1.000	0.0	100	0.00
53	S	Toluene-d8	1.059	1.087	-2.6	107	0.00
4	C,T,M	Toluene	1.273	1.375	-8.0	105	0.00
5	T,M	Ethyl methacrylate	0.549	0.572	-4.2	100	0.00
6	T,M	trans-1,3-Dichloropropene	0.677	0.692	-2.2	102	0.00
	T,M	1,1,2-Trichloroethane	0.318	0.341	-7.2	105	-0.01
	T,M	Tetrachloroethene	0.256	0.267	-4.3	102	-0.01
	T,M	2-Hexanone	0.454	0.485	-6.8	105	0.00
	T,M	1,3-Dichloropropane	0.613	0.633	-3.3	103	0.00
	T,M	Dibromochloromethane	0.456	0.508	-11.4	104	0.00
	T,M	1,2-Dibromoethane	0.409	0.442	-8.1	105	0.00
	T,M	1-Chlorohexane	0.547	0.574	-4.9	106	0.00
4	P,M	Chlorobenzene	0.880	0.952	-8.2	107	0.00
5	C,T,M	Ethylbenzene	1.675	1.848	-10.3	108	0.00
66	T,M	1,1,1,2-Tetrachloroethane	0.404	0.452	-11.9	102	0.00
67	T,M	m-Xylene & p-Xylene	1.303	1.342	-3.0	103	-0.01
68	T,M	o-Xylene	1.466	1.573	-7.3	102	0.00
69	T,M	Styrene	0.990	1.077	-8.8	103	0.00
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	93	0.00
1	P,T,M	Bromoform	0.592	0.654	-10.5	103	0.00
2	T,M	Isopropylbenzene	2.985	3.051	-2.2	103	0.00
	S	4-Bromofluorobenzene	1.061	0.979	7.7	101	0.00
	P,T,M	1,1,2,2-Tetrachloroethane	1.275	1.339	-5.0	102	0.00
	T,M	trans-1,4-Dichloro-2-butene	0.439	0.499	-13.7	103	0.00
	T,M	n-Propylbenzene	4.165	4.332	-4.0	106	0.00
	T,M	1,2,3-Trichloropropane	0.315	0.338	-7.3	106	0.00
	T,M	Bromobenzene	0.858	0.846	1.4	104	0.00
	T,M	1,3,5-Trimethylbenzene	2.591	2.706	-4.4	102	0.00
	T,M	2-Chlorotoluene	2.750	2.768	-0.7	100	0.00

(#) = Out of Range

SM 5/28/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.590	2.538	2.0	98	0.00
82	T,M	tert-Butylbenzene	0.504	0.515	-2.2	102	0.00
83	T,M	1,2,4-Trimethylbenzene	2.692	2.722	-1.1	96	0.00
84	T,M	sec-Butylbenzene	3.399	3.576	-5.2	106	0.00
85	T,M	p-Isopropyltoluene	2.685	2.725	-1.5	99	0.00
86	T,M	1,3-Dichlorobenzene	1.462	1.488	-1.8	101	-0.01
87	T,M	1,4-Dichlorobenzene	1.472	1.519	-3.2	100	-0.01
88	T,M	n-Butylbenzene	2.833	2.994	-5.7	99	0.00
89	T,M	1,2-Dichlorobenzene	1.350	1.415	-4.8	99	0.00
90	T,M	1,2-Dibromo-3-chloropropane	0.208	0.245	-17.8	103	-0.01
91	T,M	1,2,4-Trichlorobenzene	0.642	0.712	-10.9	96	0.00
92	T,M	Hexachlorobutadiene	0.418	0.424	-1.4	94	-0.01
93	T,M	Naphthalene	1.766	1.978	-12.0	94	0.00
94	T,M	1,2,3-Trichlorobenzene	0.542	0.578	-6.6	92	-0.01

SU 5/28/15

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 26 12:43 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.41	114	1646405	50.00 ug/l	-0.01
52) CHLOROBENZENE-D5	13.94	117	1560971	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.28	152	885258	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.57	111	734895	51.03 ug/l	0.00
Spiked Amount 50.000			Recovery	= 102.06%	
39) 1,2-Dichloroethane-d4	10.00	65	981772	50.13 ug/l	0.00
Spiked Amount 50.000			Recovery	= 100.26%	
53) Toluene-d8	12.19	98	1696899	51.33 ug/l	0.00
Spiked Amount 50.000			Recovery	= 102.66%	
73) 4-Bromofluorobenzene	15.28	95	866849	46.14 ug/l	0.00
Spiked Amount 50.000			Recovery	= 92.28%	

Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.98	116	234792	52.72 ug/l	99
3) Dichlorodifluoromethane	4.07	85	547778	49.56 ug/l	99
4) Chloromethane	4.44	50	612475	51.49 ug/l	99
5) Vinyl chloride	4.68	62	520082	52.96 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.83	118	376755	53.21 ug/l	98
7) Bromomethane	5.32	94	444658	48.97 ug/l	99
8) Chloroethane	5.49	64	290683	53.66 ug/l	98
9) Dichlorofluoromethane	5.80	67	1168751	51.90 ug/l	100
10) Trichlorofluoromethane	5.87	101	745272	48.64 ug/l	99
11) Acrolein	6.54	56	376513	260.87 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.63	151	301184	53.83 ug/l	99
13) 1,1-Dichloroethene	6.68	61	1009095	53.74 ug/l	98
14) Acetone	6.74	43	1377753	259.06 ug/l	99
15) Iodomethane	6.98	142	1085418	54.11 ug/l	98
16) Carbon disulfide	7.08	76	2182959	53.28 ug/l	100
18) Methylene chloride	7.36	49	1049695	53.98 ug/l	98
19) tert-Butyl alcohol	7.42	59	599050	274.25 ug/l	94
20) tert-Butyl methyl ether (M	7.63	73	1966725	55.37 ug/l	100
21) trans-1,2-Dichloroethene	7.70	61	1013067	54.01 ug/l	99
22) Acrylonitrile	7.70	53	1171494	269.53 ug/l	98
23) Isopropyl ether (DIPE)	8.18	45	2614906	55.10 ug/l	99
24) Vinyl acetate	8.23	43	1694327	53.02 ug/l	100
25) 1,1-Dichloroethane	8.27	63	1325398	54.58 ug/l	99
26) tert-Butyl ethyl ether (ET	8.64	59	2420384	55.02 ug/l	98
27) 2-Butanone	8.96	43	2270502	279.79 ug/l	100
28) 2,2-Dichloropropane	8.99	77	854491	47.33 ug/l	99
29) cis-1,2-Dichloroethene	9.00	96	719003	56.59 ug/l	96

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

SG 5/28/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D
Acq On : 20 May 2015 3:03 pm
Sample : IVO03E201
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: May 26 12:43 2015

Vial: 14
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.10	45	499988	280.15 ug/l	97
31)	Bromochloromethane	9.31	49	977282	53.80 ug/l	97
32)	Tetrahydrofuran	9.36	42	244684	55.57 ug/l	100
33)	Chloroform	9.36	83	1464567	54.84 ug/l	99
35)	1,1,1-Trichloroethane	9.61	97	1017396	51.82 ug/l	99
36)	Cyclohexane	9.67	56	967941	48.79 ug/l	100
37)	1,1-Dichloropropene	9.79	110	272913	56.98 ug/l	98
38)	Carbon tetrachloride	9.80	119	901934	54.71 ug/l	100
40)	tert-Amyl methyl ether (TA	10.04	87	419441	51.24 ug/l	98
41)	Benzene	10.06	78	2164057	53.21 ug/l	99
42)	1,2-Dichloroethane	10.09	62	1225277	54.82 ug/l	100
43)	Trichloroethene	10.79	130	621899	55.68 ug/l	97
44)	Methylcyclohexane	11.00	83	989073	51.09 ug/l	98
45)	1,2-Dichloropropane	11.08	63	648548	52.86 ug/l	86
46)	1,4-Dioxane	11.20	88	123676	931.91 ug/l	99
47)	Dibromomethane	11.28	93	561268	54.75 ug/l	98
48)	Bromodichloromethane	11.40	83	1106721	53.47 ug/l	99
50)	cis-1,3-Dichloropropene	11.87	75	1185890	53.22 ug/l	99
51)	4-Methyl-2-pentanone	11.95	43	5659347	280.97 ug/l	100
54)	Toluene	12.28	91	2145619	53.98 ug/l	100
55)	Ethyl methacrylate	12.44	69	892355	52.04 ug/l	98
56)	trans-1,3-Dichloropropene	12.50	75	1080492	51.09 ug/l	97
57)	1,1,2-Trichloroethane	12.75	97	531736	53.48 ug/l	100
58)	Tetrachloroethene	12.93	164	416554	52.13 ug/l	99
59)	2-Hexanone	12.92	43	3789177	267.28 ug/l	99
60)	1,3-Dichloropropane	12.98	76	987340	51.58 ug/l	99
61)	Dibromochloromethane	13.29	129	792763	55.66 ug/l	100
62)	1,2-Dibromoethane	13.48	107	689317	53.98 ug/l	100
63)	1-Chlorohexane	13.78	91	895791	52.41 ug/l	99
64)	Chlorobenzene	13.99	112	1486712	54.09 ug/l	100
65)	Ethylbenzene	14.02	91	2884003	55.14 ug/l	99
66)	1,1,1,2-Tetrachloroethane	14.05	131	704838	55.94 ug/l	99
67)	m-Xylene & p-Xylene	14.12	91	4190208	103.02 ug/l	99
68)	o-Xylene	14.61	91	2455110	53.64 ug/l	99
69)	Styrene	14.63	104	1681710	54.39 ug/l	99
71)	Bromoform	15.00	173	578879	55.23 ug/l	99
72)	Isopropylbenzene	15.00	105	2700766	51.10 ug/l	99
74)	1,1,2,2-Tetrachloroethane	15.42	83	1185419	52.51 ug/l	100
75)	trans-1,4-Dichloro-2-buten	15.45	53	441743	56.77 ug/l	99
76)	n-Propylbenzene	15.51	91	3835292	52.01 ug/l	100
77)	1,2,3-Trichloropropane	15.52	110	299432	53.71 ug/l	97

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

SU 5/28/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 26 12:43 2015 Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.55	156	748707	49.27 ug/l	97
79)	1,3,5-Trimethylbenzene	15.67	105	2395706	52.22 ug/l	100
80)	2-Chlorotoluene	15.72	91	2450562	50.32 ug/l	99
81)	4-Chlorotoluene	15.83	91	2246835	49.00 ug/l	100
82)	tert-Butylbenzene	16.12	134	456310	51.09 ug/l	99
83)	1,2,4-Trimethylbenzene	16.18	105	2409831	50.57 ug/l	99
84)	sec-Butylbenzene	16.39	105	3165652	52.60 ug/l	100
85)	p-Isopropyltoluene	16.52	119	2412242	50.74 ug/l	99
86)	1,3-Dichlorobenzene	16.67	146	1317331	50.91 ug/l	99
87)	1,4-Dichlorobenzene	16.77	146	1345042	51.60 ug/l	99
88)	n-Butylbenzene	17.06	91	2650845	52.85 ug/l	99
89)	1,2-Dichlorobenzene	17.31	146	1252268	52.40 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.37	157	217231	59.08 ug/l	98
91)	1,2,4-Trichlorobenzene	19.57	180	630588	55.48 ug/l	99
92)	Hexachlorobutadiene	19.69	225	375710	50.76 ug/l	100
93)	Naphthalene	20.05	128	1750948	55.99 ug/l	99
94)	1,2,3-Trichlorobenzene	20.45	180	511398	53.32 ug/l	99

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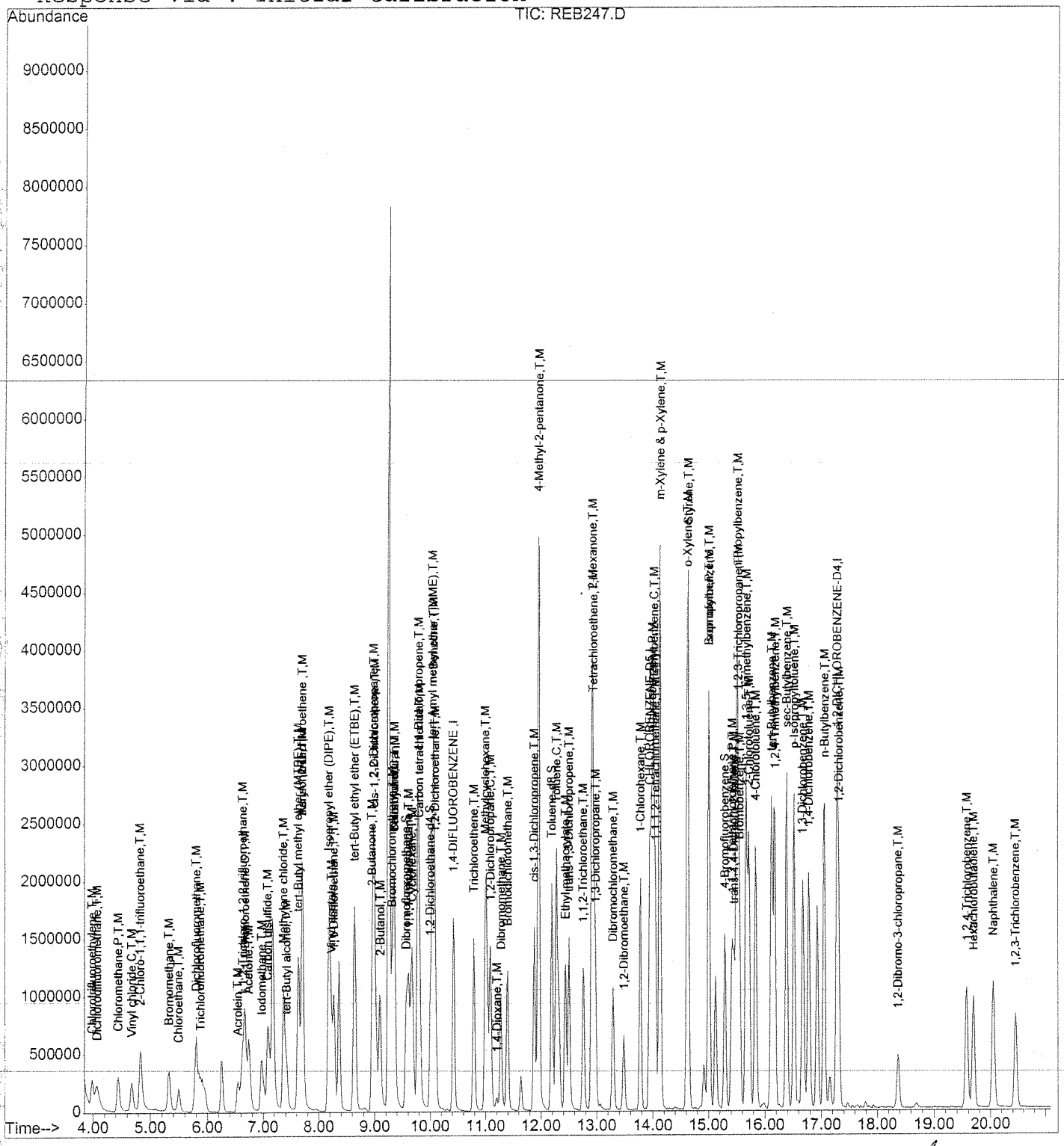
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15E20\REB247.D Vial: 14
Acq On : 20 May 2015 3:03 pm Operator: CMendo
Sample : IVO03E201 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: May 26 12:43 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue May 26 12:43:06 2015
Response via : Initial Calibration



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CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :09/24/15 12:59
Spike Amount :50 PPB
CC/CV File :RIB392
IC File :RIB367

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :09/24/15 17:15
HPChem Method :V003I24
Date_Time :09/25/15 08:23

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	50.000	0	1720085	1	1	10.370	10.367	0				
	2	Chlorotrifluoroethylene	51.395	2.8	198828	0.116	0.112	3.964	3.961	8.48				
	3	Dichlorodifluoromethane	48.131	-3.7	520883	0.303	0.315	4.039	4.039	12.30				
	4	Chloromethane	44.814	-10.4	553025	0.322	0.359	4.426	4.411	6.25				
	5	Vinyl chloride	49.118	-1.8	454234	0.264	0.269	4.649	4.648	13.66				
	6	2-Chloro-1,1,1-trifluoroethane	48.724	-2.6	265011	0.154	0.158	4.798	4.801	9.44				
	7	Bromomethane	52.349	4.7	455691	0.265	0.253	5.290	5.276	11.23				
	8	Chloroethane	47.918	-4.2	296740	0.173	0.180	5.439	5.446	4.64				
	9	Dichlorofluoromethane	52.570	5.1	1350909	0.785	0.747	5.737	5.744	10.64				
	10	Trichlorofluoromethane	50.833	1.7	822054	0.478	0.470	5.811	5.808	7.48				
5	11	Acrolein	268.207	7.3	506884	0.059	0.055	6.497	6.502	14.09				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	48.161	-3.7	339252	0.197	0.205	6.571	6.580	5.11				
	13	1,1-Dichloroethene	52.159	4.3	1139352	0.662	0.635	6.631	6.626	3.86				
5	14	Acetone	240.192	-3.9	1370429	0.159	0.166	6.705	6.712	12.88				
	15	Iodomethane	52.459	4.9	1348940	0.784	0.747	6.929	6.920	5.03				
	16	Carbon disulfide	51.097	2.2	2964370	1.723	1.686	7.048	7.035	14.75				
	17	Methyl acetate												
	18	Methylene chloride	50.533	1.1	1257408	0.731	0.723	7.316	7.318	10.99				
5	19	tert-Butyl alcohol	236.543	-5.4	519634	0.060	0.064	7.376	7.386	12.33				
	20	tert-Butyl methyl ether (MTBE)	53.300	6.6	2135762	1.242	1.165	7.584	7.595	7.31				
5	21	Acrylonitrile	257.926	3.2	1337778	0.156	0.151	7.659	7.662	6.81				
	22	trans-1,2-Dichloroethene	52.974	5.9	1173441	0.682	0.644	7.659	7.662	4.99				
	23	Isopropyl ether (DIPE)	52.870	5.7	3156066	1.835	1.735	8.135	8.137	3.98				
	24	Vinyl acetate	52.491	5.0	2056488	1.196	1.139	8.180	8.179	11.66				
	25	1,1-Dichloroethane	52.365	4.7	1485406	0.864	0.825	8.225	8.222	5.69				
	26	tert-Butyl ethyl ether (ETBE)	54.935	9.9	2677005	1.556	1.417	8.582	8.594	6.29				
5	27	2-Butanone	240.913	-3.6	2559670	0.298	0.309	8.910	8.913	9.27				
	28	2,2-Dichloropropane	52.429	4.9	1154031	0.671	0.640	8.940	8.935	8.08				
	29	cis-1,2-Dichloroethene	54.162	8.3	852230	0.495	0.457	8.940	8.950	6.96				
5	30	2-Butanol	249.362	-0.3	493130	0.057	0.061	9.044	9.063	15.15	0.0043	0.0566		0.9978
	31	Bromochloromethane	52.275	4.5	1118288	0.650	0.622	9.267	9.272	6.18				
	32	Tetrahydrofuran	52.154	4.3	281802	0.164	0.155	9.297	9.309	17.65	-0.0012	0.1582		0.9979
	33	Chloroform	54.236	8.5	1644664	0.956	0.881	9.312	9.309	12.45				
	34	Dibromofluoromethane	51.911	3.8	800241	0.465	0.448	9.506	9.516	4.99				
	35	1,1,1-Trichloroethane	50.566	1.1	1088726	0.633	0.626	9.550	9.555	4.10				
	36	Cyclohexane	49.495	-1.0	768984	0.447	0.452	9.610	9.615	6.37				
	37	1,1-Dichloropropene	51.141	2.3	305437	0.178	0.174	9.729	9.732	7.21				
	38	Carbon tetrachloride	51.658	3.3	892255	0.519	0.502	9.759	9.756	6.30				
	39	1,2-Dichloroethane-d4	53.339	6.7	1009562	0.587	0.550	9.938	9.950	3.57				
	40	tert-Amyl methyl ether (TAME)	48.604	-2.8	468279	0.272	0.280	9.983	9.995	14.80				
	41	Benzene	48.306	-3.4	2630713	1.529	1.583	10.012	10.011	6.04				
	42	1,2-Dichloroethane	51.121	2.2	1188761	0.691	0.676	10.042	10.041	4.62				
	43	Trichloroethene	52.322	4.6	719007	0.418	0.399	10.727	10.736	4.59				
	44	Methylcyclohexane	51.681	3.4	889767	0.517	0.500	10.936	10.943	6.25				
	45	1,2-Dichloropropane	50.344	0.7	842369	0.490	0.486	11.025	11.028	7.65				
P0	46	1,4-Dioxane	878.255	-12.2	166561	0.005	0.006	11.144	11.152	14.90				
	47	Dibromomethane	50.890	1.8	663339	0.386	0.379	11.219	11.216	6.48				
	48	Bromodichloromethane	51.873	3.7	1344710	0.782	0.754	11.338	11.335	3.84				
	49	2-Chloroethyl vinyl ether												

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	50	cis-1,3-Dichloropropene	49.220	-1.6	1503175	0.874	0.888	11.815	11.818	4.75				
5	51	4-Methyl-2-pentanone	240.069	-4.0	6896937	0.802	0.835	11.889	11.901	11.13				
	52	CHLOROBENZENE-D5	50.000	0	1821549	1	1	13.885	13.884	0				
	53	Toluene-d8	50.496	1.0	2360620	1.296	1.283	12.128	12.131	9.92				
	54	Toluene	49.458	-1.1	3013485	1.654	1.672	12.217	12.216	3.62				
	55	Ethyl methacrylate	46.797	-6.4	1185839	0.651	0.696	12.366	12.379	6.30				
	56	trans-1,3-Dichloropropene	48.375	-3.3	1444870	0.793	0.820	12.440	12.440	4.23				
	57	1,1,2-Trichloroethane	48.970	-2.1	728823	0.400	0.409	12.694	12.701	5.33				
5	58	2-Hexanone	226.457	-9.4	5048902	0.554	0.612	12.843	12.856	13.89				
	59	Tetrachloroethene	49.029	-1.9	582852	0.320	0.326	12.873	12.880	5.61				
	60	1,3-Dichloropropane	50.112	0.2	1431907	0.786	0.784	12.902	12.910	4.52				
	61	Dibromochloromethane	49.326	-1.3	892659	0.490	0.497	13.230	13.230	3.33				
	62	1,2-Dibromoethane	46.661	-6.7	817186	0.449	0.481	13.409	13.417	4.25				
	63	1-Chlorohexane	49.338	-1.3	1321531	0.725	0.735	13.707	13.718	6.18				
	64	Chlorobenzene	49.849	-0.3	1836464	1.008	1.011	13.915	13.922	4.62				
	65	Ethylbenzene	49.997	-0.0	3716305	2.040	2.040	13.945	13.952	6.86				
	66	1,1,1,2-Tetrachloroethane	49.756	-0.5	781740	0.429	0.431	13.975	13.984	6.04				
2	67	m-Xylene & p-Xylene	99.008	-1.0	5728669	1.572	1.588	14.064	14.063	8.46				
	68	o-Xylene	50.059	0.1	3142884	1.725	1.723	14.556	14.554	7.20				
	69	Styrene	50.384	0.8	2140812	1.175	1.166	14.571	14.569	7.87				
	70	1,2-DICHLOROBENZENE-D4	50.000	0	955489	1	1	17.193	17.201	0				
	71	Bromoform	48.522	-3.0	646827	0.677	0.698	14.928	14.934	7.46				
	72	Isopropylbenzene	49.102	-1.8	3124029	3.270	3.329	14.928	14.940	5.00				
	73	4-Bromofluorobenzene	46.720	-6.6	1100538	1.152	1.233	15.211	15.222	7.46				
	74	1,1,2,2-Tetrachloroethane	48.482	-3.0	1430352	1.497	1.544	15.345	15.345	7.45				
	75	trans-1,4-Dichloro-2-butene	48.754	-2.5	426113	0.446	0.457	15.375	15.387	12.43				
	76	n-Propylbenzene	49.746	-0.5	4660338	4.877	4.902	15.435	15.433	5.64				
	77	1,2,3-Trichloropropane	47.943	-4.1	296394	0.310	0.324	15.450	15.448	7.22				
	78	Bromobenzene	47.372	-5.3	938934	0.983	1.037	15.479	15.479	5.58				
	79	1,3,5-Trimethylbenzene	48.199	-3.6	2606104	2.728	2.829	15.599	15.601	3.95				
	80	2-Chlorotoluene	49.468	-1.1	3007596	3.148	3.182	15.643	15.649	5.32				
	81	4-Chlorotoluene	49.944	-0.1	2826921	2.959	2.962	15.762	15.768	4.97				
	82	tert-Butylbenzene	47.794	-4.4	531622	0.556	0.582	16.045	16.048	9.47				
	83	1,2,4-Trimethylbenzene	49.437	-1.1	2677725	2.802	2.834	16.090	16.102	3.86				
	84	sec-Butylbenzene	50.058	0.1	3460526	3.622	3.618	16.299	16.311	3.93				
	85	p-Isopropyltoluene	48.817	-2.4	2523850	2.641	2.705	16.448	16.444	4.80				
	86	1,3-Dichlorobenzene	50.287	0.6	1574409	1.648	1.638	16.597	16.604	4.78				
	87	1,4-Dichlorobenzene	48.997	-2.0	1542339	1.614	1.647	16.701	16.708	5.77				
	88	n-Butylbenzene	50.009	0.0	2979580	3.118	3.118	16.969	16.976	5.22				
	89	1,2-Dichlorobenzene	49.588	-0.8	1439695	1.507	1.519	17.222	17.230	4.54				
	90	1,2-Dibromo-3-chloropropane	46.844	-6.3	196813	0.206	0.220	18.295	18.295	6.33				
	91	1,2,4-Trichlorobenzene	48.386	-3.2	615097	0.644	0.665	19.472	19.482	10.25				
	92	Hexachlorobutadiene	46.618	-6.8	364194	0.381	0.409	19.606	19.610	5.92				
	93	Naphthalene	48.224	-3.6	1637248	1.714	1.777	19.948	19.962	11.91				
	94	1,2,3-Trichlorobenzene	48.678	-2.6	527987	0.553	0.568	20.366	20.362	7.86				

Spike Amount = Nominal Amount * M

8a
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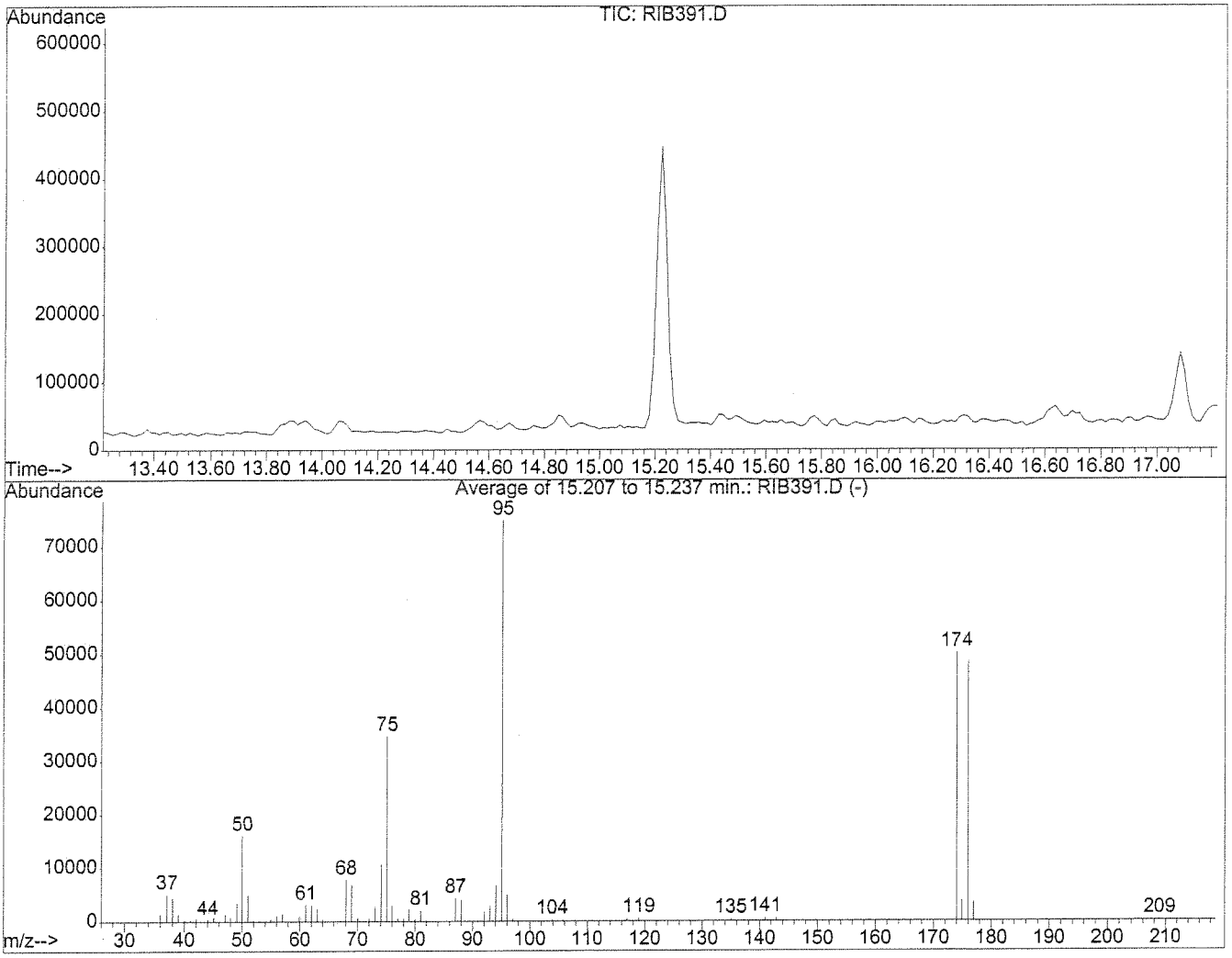
BFB

Data File : D:\HPCHEM\1\DATA\15I25\RIB391.D
Acq On : 25 Sep 2015 7:56 am
Sample : BFB03I17
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00



AutoFind: Scans 764, 765, 766; Background Corrected with Scan 759

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.5	16100	PASS
75	95	30	60	46.3	34699	PASS
95	95	100	100	100.0	74948	PASS
96	95	5	9	6.5	4906	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	66.9	50173	PASS
175	174	5	9	7.4	3725	PASS
176	174	95	101	96.9	48629	PASS
177	176	5	9	7.1	3473	PASS

RIB391.D VO03I24.M Fri Sep 25 13:37:59 2015

SM 9/29/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	101	0.00
2	T,M	Chlorotrifluoroethylene	50.000	51.395	-2.8	97	0.00
3	T,M	Dichlorodifluoromethane	50.000	48.131	3.7	85	-0.01
4	P,T,M	Chloromethane	50.000	44.814	10.4	82	0.02
5	C,T,M	Vinyl chloride	50.000	49.118	1.8	87	-0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	48.724	2.6	99	-0.01
7	T,M	Bromomethane	50.000	52.349	-4.7	97	0.00
8	T,M	Chloroethane	50.000	47.919	4.2	96	-0.01
9	T,M	Dichlorofluoromethane	50.000	52.570	-5.1	98	-0.01
10	T,M	Trichlorofluoromethane	50.000	50.832	-1.7	94	0.00
11	T,M	Acrolein	250.000	268.207	-7.3	109	-0.01
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	48.161	3.7	97	-0.03
13	C,T,M	1,1-Dichloroethene	50.000	52.159	-4.3	106	-0.01
14	T,M	Acetone	250.000	240.192	3.9	98	0.00
15	T,M	Iodomethane	50.000	52.459	-4.9	101	0.00
16	T,M	Carbon disulfide	50.000	51.097	-2.2	100	0.00
17	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
18	T,M	Methylene chloride	50.000	50.533	-1.1	106	-0.01
19	T,M	tert-Butyl alcohol	250.000	236.543	5.4	99	-0.01
20	T,M	tert-Butyl methyl ether (MT	50.000	53.300	-6.6	107	-0.01
21	T,M	Acrylonitrile	250.000	257.926	-3.2	105	0.00
22	T,M	trans-1,2-Dichloroethene	50.000	52.974	-5.9	106	-0.01
23	T,M	Isopropyl ether (DIPE)	50.000	52.870	-5.7	104	-0.01
24	T,M	Vinyl acetate	50.000	52.491	-5.0	90	0.00
25	P,T,M	1,1-Dichloroethane	50.000	52.365	-4.7	98	0.00
26	T,M	tert-Butyl ethyl ether (ETB	50.000	54.935	-9.9	110	-0.01
27	T,M	2-Butanone	250.000	240.913	3.6	91	0.00
28	T,M	2,2-Dichloropropane	50.000	52.429	-4.9	107	0.00
29	T,M	cis-1,2-Dichloroethene	50.000	54.162	-8.3	103	-0.01
30	T,M	2-Butanol	250.000	249.362	0.3	90	-0.01
31	T,M	Bromochloromethane	50.000	52.275	-4.5	105	-0.01
32	T,M	Tetrahydrofuran	50.000	52.154	-4.3	104	-0.01
33	C,T,M	Chloroform	50.000	54.236	-8.5	106	0.00
34	S	Dibromofluoromethane	50.000	51.911	-3.8	103	-0.01
35	T,M	1,1,1-Trichloroethane	50.000	50.566	-1.1	103	-0.01
36	T,M	Cyclohexane	50.000	49.495	1.0	94	-0.01
37	T,M	1,1-Dichloropropene	50.000	51.141	-2.3	101	-0.01
38	T,M	Carbon tetrachloride	50.000	51.657	-3.3	101	0.00
39	S	1,2-Dichloroethane-d4	50.000	53.339	-6.7	107	-0.01
40	T,M	tert-Amyl methyl ether (TAM	50.000	48.604	2.8	97	-0.01
41	T,M	Benzene	50.000	48.306	3.4	93	0.00

(#) = Out of Range

9/29/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	50.000	51.121	-2.2	99	0.00
43	T,M	Trichloroethene	50.000	52.322	-4.6	103	-0.01
44	T,M	Methylcyclohexane	50.000	51.681	-3.4	95	-0.01
45	C,T,M	1,2-Dichloropropane	50.000	50.344	-0.7	98	-0.01
46	T,M	1,4-Dioxane	1000.000	878.255	12.2	91	-0.01
47	T,M	Dibromomethane	50.000	50.890	-1.8	102	0.00
48	T,M	Bromodichloromethane	50.000	51.873	-3.7	103	0.00
49	T,M	2-Chloroethyl vinyl ether	-1.000	0.000	0.0	0	0.00
50	T,M	cis-1,3-Dichloropropene	50.000	49.219	1.6	98	-0.01
51	T,M	4-Methyl-2-pentanone	250.000	240.069	4.0	98	-0.01
52	I	CHLOROBENZENE-D5	50.000	50.000	0.0	105	0.00
53	S	Toluene-d8	50.000	50.496	-1.0	104	0.00
54	C,T,M	Toluene	50.000	49.458	1.1	104	0.00
55	T,M	Ethyl methacrylate	50.000	46.797	6.4	99	-0.01
56	T,M	trans-1,3-Dichloropropene	50.000	48.375	3.3	103	0.00
57	T,M	1,1,2-Trichloroethane	50.000	48.970	2.1	102	-0.01
58	T,M	2-Hexanone	250.000	226.457	9.4	95	-0.01
59	T,M	Tetrachloroethene	50.000	49.029	1.9	101	-0.01
60	T,M	1,3-Dichloropropane	50.000	50.112	-0.2	101	-0.01
61	T,M	Dibromochloromethane	50.000	49.326	1.3	103	0.00
62	T,M	1,2-Dibromoethane	50.000	46.661	6.7	99	-0.01
63	T,M	1-Chlorohexane	50.000	49.338	1.3	103	-0.01
64	P,M	Chlorobenzene	50.000	49.849	0.3	105	-0.01
65	C,T,M	Ethylbenzene	50.000	49.997	0.0	101	-0.01
66	T,M	1,1,1,2-Tetrachloroethane	50.000	49.756	0.5	103	-0.01
67	T,M	m-Xylene & p-Xylene	100.000	99.008	1.0	102	0.00
68	T,M	o-Xylene	50.000	50.059	-0.1	102	0.00
69	T,M	Styrene	50.000	50.384	-0.8	104	0.00
70	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	97	-0.01
71	P,T,M	Bromoform	50.000	48.522	3.0	99	-0.01
72	T,M	Isopropylbenzene	50.000	49.102	1.8	105	-0.01
73	S	4-Bromofluorobenzene	50.000	46.720	6.6	98	-0.01
74	P,T,M	1,1,2,2-Tetrachloroethane	50.000	48.482	3.0	100	0.00
75	T,M	trans-1,4-Dichloro-2-butene	50.000	48.754	2.5	99	-0.01
76	T,M	n-Propylbenzene	50.000	49.746	0.5	100	0.00
77	T,M	1,2,3-Trichloropropane	50.000	47.943	4.1	100	0.00
78	T,M	Bromobenzene	50.000	47.372	5.3	99	0.00
79	T,M	1,3,5-Trimethylbenzene	50.000	48.199	3.6	98	0.00
80	T,M	2-Chlorotoluene	50.000	49.469	1.1	101	-0.01

(#) = Out of Range

SW 9/29/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	50.000	49.944	0.1	102	0.00
82	T,M	tert-Butylbenzene	50.000	47.794	4.4	101	0.00
83	T,M	1,2,4-Trimethylbenzene	50.000	49.437	1.1	99	-0.01
84	T,M	sec-Butylbenzene	50.000	50.058	-0.1	99	-0.01
85	T,M	p-Isopropyltoluene	50.000	48.817	2.4	96	0.00
86	T,M	1,3-Dichlorobenzene	50.000	50.287	-0.6	99	-0.01
87	T,M	1,4-Dichlorobenzene	50.000	48.997	2.0	96	-0.01
88	T,M	n-Butylbenzene	50.000	50.009	-0.0	97	-0.01
89	T,M	1,2-Dichlorobenzene	50.000	49.588	0.8	98	-0.01
90	T,M	1,2-Dibromo-3-chloropropane	50.000	46.844	6.3	85	0.00
91	T,M	1,2,4-Trichlorobenzene	50.000	48.386	3.2	92	-0.01
92	T,M	Hexachlorobutadiene	50.000	46.618	6.8	91	-0.01
93	T,M	Naphthalene	50.000	48.225	3.5	92	-0.01
94	T,M	1,2,3-Trichlorobenzene	50.000	48.678	2.6	90	0.00

SW 9/29/15

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

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	101	0.00
2	T,M	Chlorotrifluoroethylene	0.112	0.116	-3.6	97	0.00
3	T,M	Dichlorodifluoromethane	0.315	0.303	3.8	85	-0.01
4	P,T,M	Chloromethane	0.359	0.322	10.3	82	0.02
5	C,T,M	Vinyl chloride	0.269	0.264	1.9	87	-0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.158	0.154	2.5	99	-0.01
7	T,M	Bromomethane	0.253	0.265	-4.7	97	0.00
8	T,M	Chloroethane	0.180	0.173	3.9	96	-0.01
9	T,M	Dichlorofluoromethane	0.747	0.785	-5.1	98	-0.01
10	T,M	Trichlorofluoromethane	0.470	0.478	-1.7	94	0.00
11	T,M	Acrolein	0.055	0.059	-7.3	109	-0.01
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.205	0.197	3.9	97	-0.03
13	C,T,M	1,1-Dichloroethene	0.635	0.662	-4.3	106	-0.01
14	T,M	Acetone	0.166	0.159	4.2	98	0.00
15	T,M	Iodomethane	0.747	0.784	-5.0	101	0.00
16	T,M	Carbon disulfide	1.686	1.723	-2.2	100	0.00
17	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
18	T,M	Methylene chloride	0.723	0.731	-1.1	106	-0.01
19	T,M	tert-Butyl alcohol	0.064	0.060	6.3	99	-0.01
20	T,M	tert-Butyl methyl ether (MT	1.165	1.242	-6.6	107	-0.01
21	T,M	Acrylonitrile	0.151	0.156	-3.3	105	0.00
22	T,M	trans-1,2-Dichloroethene	0.644	0.682	-5.9	106	-0.01
23	T,M	Isopropyl ether (DIPE)	1.735	1.835	-5.8	104	-0.01
24	T,M	Vinyl acetate	1.139	1.196	-5.0	90	0.00
25	P,T,M	1,1-Dichloroethane	0.825	0.864	-4.7	98	0.00
26	T,M	tert-Butyl ethyl ether (ETB	1.417	1.556	-9.8	110	-0.01
27	T,M	2-Butanone	0.309	0.298	3.6	91	0.00
28	T,M	2,2-Dichloropropane	0.640	0.671	-4.8	107	0.00
29	T,M	cis-1,2-Dichloroethene	0.457	0.495	-8.3	103	-0.01
30	T,M	2-Butanol	0.061	0.057	6.6	90	-0.01
31	T,M	Bromochloromethane	0.622	0.650	-4.5	105	-0.01
32	T,M	Tetrahydrofuran	0.155	0.164	-5.8	104	-0.01
33	C,T,M	Chloroform	0.881	0.956	-8.5	106	0.00
34	S	Dibromofluoromethane	0.448	0.465	-3.8	103	-0.01
35	T,M	1,1,1-Trichloroethane	0.626	0.633	-1.1	103	-0.01
36	T,M	Cyclohexane	0.452	0.447	1.1	94	-0.01
37	T,M	1,1-Dichloropropene	0.174	0.178	-2.3	101	-0.01
38	T,M	Carbon tetrachloride	0.502	0.519	-3.4	101	0.00
39	S	1,2-Dichloroethane-d4	0.550	0.587	-6.7	107	-0.01
40	T,M	tert-Amyl methyl ether (TAM	0.280	0.272	2.9	97	-0.01
41	T,M	Benzene	1.583	1.529	3.4	93	0.00

(#) = Out of Range

S 09/29/15

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Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	0.676	0.691	-2.2	99	0.00
43	T,M	Trichloroethene	0.399	0.418	-4.8	103	-0.01
44	T,M	Methylcyclohexane	0.500	0.517	-3.4	95	-0.01
45	C,T,M	1,2-Dichloropropane	0.486	0.490	-0.8	98	-0.01
46	T,M	1,4-Dioxane	0.006	0.005	16.7	91	-0.01
47	T,M	Dibromomethane	0.379	0.386	-1.8	102	0.00
48	T,M	Bromodichloromethane	0.754	0.782	-3.7	103	0.00
49	T,M	2-Chloroethyl vinyl ether	0.000	0.000	0.0	0#	0.00
50	T,M	cis-1,3-Dichloropropene	0.888	0.874	1.6	98	-0.01
51	T,M	4-Methyl-2-pentanone	0.835	0.802	4.0	98	-0.01
52	I	CHLOROBENZENE-D5	1.000	1.000	0.0	105	0.00
53	S	Toluene-d8	1.283	1.296	-1.0	104	0.00
54	C,T,M	Toluene	1.672	1.654	1.1	104	0.00
55	T,M	Ethyl methacrylate	0.696	0.651	6.5	99	-0.01
56	T,M	trans-1,3-Dichloropropene	0.820	0.793	3.3	103	0.00
57	T,M	1,1,2-Trichloroethane	0.409	0.400	2.2	102	-0.01
58	T,M	2-Hexanone	0.612	0.554	9.5	95	-0.01
59	T,M	Tetrachloroethene	0.326	0.320	1.8	101	-0.01
60	T,M	1,3-Dichloropropane	0.784	0.786	-0.3	101	-0.01
61	T,M	Dibromochloromethane	0.497	0.490	1.4	103	0.00
62	T,M	1,2-Dibromoethane	0.481	0.449	6.7	99	-0.01
63	T,M	1-Chlorohexane	0.735	0.725	1.4	103	-0.01
64	P,M	Chlorobenzene	1.011	1.008	0.3	105	-0.01
65	C,T,M	Ethylbenzene	2.040	2.040	0.0	101	-0.01
66	T,M	1,1,1,2-Tetrachloroethane	0.431	0.429	0.5	103	-0.01
67	T,M	m-Xylene & p-Xylene	1.588	1.572	1.0	102	0.00
68	T,M	o-Xylene	1.723	1.725	-0.1	102	0.00
69	T,M	Styrene	1.166	1.175	-0.8	104	0.00
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	97	-0.01
71	P,T,M	Bromoform	0.698	0.677	3.0	99	-0.01
72	T,M	Isopropylbenzene	3.329	3.270	1.8	105	-0.01
73	S	4-Bromofluorobenzene	1.233	1.152	6.6	98	-0.01
74	P,T,M	1,1,2,2-Tetrachloroethane	1.544	1.497	3.0	100	0.00
75	T,M	trans-1,4-Dichloro-2-butene	0.457	0.446	2.4	99	-0.01
76	T,M	n-Propylbenzene	4.902	4.877	0.5	100	0.00
77	T,M	1,2,3-Trichloropropane	0.324	0.310	4.3	100	0.00
78	T,M	Bromobenzene	1.037	0.983	5.2	99	0.00
79	T,M	1,3,5-Trimethylbenzene	2.829	2.728	3.6	98	0.00
80	T,M	2-Chlorotoluene	3.182	3.148	1.1	101	-0.01

(#) = Out of Range

Sw 9/29/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.962	2.959	0.1	102	0.00
82	T,M	tert-Butylbenzene	0.582	0.556	4.5	101	0.00
83	T,M	1,2,4-Trimethylbenzene	2.834	2.802	1.1	99	-0.01
84	T,M	sec-Butylbenzene	3.618	3.622	-0.1	99	-0.01
85	T,M	p-Isopropyltoluene	2.705	2.641	2.4	96	0.00
86	T,M	1,3-Dichlorobenzene	1.638	1.648	-0.6	99	-0.01
87	T,M	1,4-Dichlorobenzene	1.647	1.614	2.0	96	-0.01
88	T,M	n-Butylbenzene	3.118	3.118	0.0	97	-0.01
89	T,M	1,2-Dichlorobenzene	1.519	1.507	0.8	98	-0.01
90	T,M	1,2-Dibromo-3-chloropropane	0.220	0.206	6.4	85	0.00
91	T,M	1,2,4-Trichlorobenzene	0.665	0.644	3.2	92	-0.01
92	T,M	Hexachlorobutadiene	0.409	0.381	6.8	91	-0.01
93	T,M	Naphthalene	1.777	1.714	3.5	92	-0.01
94	T,M	1,2,3-Trichlorobenzene	0.568	0.553	2.6	90	0.00

Sw 09/29/15

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D
Acq On : 25 Sep 2015 8:23 am
Sample : IVO03I242
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 16:16 2015

Vial: 2
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1720085	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1821549	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.19	152	955489	50.00 ug/l	-0.01
System Monitoring Compounds					
34) Dibromofluoromethane	9.51	111	800241	51.91 ug/l	-0.01
Spiked Amount 50.000			Recovery =	103.82%	
39) 1,2-Dichloroethane-d4	9.94	65	1009562	53.34 ug/l	-0.01
Spiked Amount 50.000			Recovery =	106.68%	
53) Toluene-d8	12.13	98	2360620	50.50 ug/l	0.00
Spiked Amount 50.000			Recovery =	101.00%	
73) 4-Bromofluorobenzene	15.21	95	1100538	46.72 ug/l	-0.01
Spiked Amount 50.000			Recovery =	93.44%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	198828	51.39 ug/l	99
3) Dichlorodifluoromethane	4.04	85	520883	48.13 ug/l	98
4) Chloromethane	4.43	50	553025	44.81 ug/l	99
5) Vinyl chloride	4.65	62	454234	49.12 ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	265011	48.72 ug/l	96
7) Bromomethane	5.29	94	455691	52.35 ug/l	96
8) Chloroethane	5.44	64	296740	47.92 ug/l	99
9) Dichlorofluoromethane	5.74	67	1350909	52.57 ug/l	100
10) Trichlorofluoromethane	5.81	101	822054	50.83 ug/l	100
11) Acrolein	6.50	56	506884	268.21 ug/l	97
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	339252	48.16 ug/l	100
13) 1,1-Dichloroethene	6.63	61	1139352	52.16 ug/l	100
14) Acetone	6.71	43	1370429	240.19 ug/l	99
15) Iodomethane	6.93	142	1348940	52.46 ug/l	100
16) Carbon disulfide	7.05	76	2964370	51.10 ug/l	100
18) Methylene chloride	7.32	49	1257408	50.53 ug/l	100
19) tert-Butyl alcohol	7.38	59	519634	236.54 ug/l	74
20) tert-Butyl methyl ether (M	7.58	73	2135762	53.30 ug/l	99
21) Acrylonitrile	7.66	53	1337778	257.93 ug/l	99
22) trans-1,2-Dichloroethene	7.66	61	1173441	52.97 ug/l	98
23) Isopropyl ether (DIPE)	8.14	45	3156066	52.87 ug/l	99
24) Vinyl acetate	8.18	43	2056488	52.49 ug/l	99
25) 1,1-Dichloroethane	8.22	63	1485406	52.37 ug/l	98
26) tert-Butyl ethyl ether (ET	8.58	59	2677005	54.93 ug/l	99
27) 2-Butanone	8.91	43	2559670	240.91 ug/l	99
28) 2,2-Dichloropropane	8.94	77	1154031	52.43 ug/l	99
29) cis-1,2-Dichloroethene	8.94	96	852230	54.16 ug/l	97

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

SU 09/29/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 16:16 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	2-Butanol	9.04	45	493130	249.36 ug/l	99
31)	Bromochloromethane	9.27	49	1118288	52.27 ug/l	99
32)	Tetrahydrofuran	9.30	42	281802	52.15 ug/l	97
33)	Chloroform	9.31	83	1644664	54.24 ug/l	99
35)	1,1,1-Trichloroethane	9.55	97	1088726	50.57 ug/l	99
36)	Cyclohexane	9.61	56	768984	49.50 ug/l	98
37)	1,1-Dichloropropene	9.73	110	305437	51.14 ug/l	99
38)	Carbon tetrachloride	9.76	119	892255	51.66 ug/l	100
40)	tert-Amyl methyl ether (TA	9.98	87	468279	48.60 ug/l	97
41)	Benzene	10.01	78	2630713	48.31 ug/l	99
42)	1,2-Dichloroethane	10.04	62	1188761	51.12 ug/l	99
43)	Trichloroethene	10.73	130	719007	52.32 ug/l	97
44)	Methylcyclohexane	10.94	83	889767	51.68 ug/l	100
45)	1,2-Dichloropropane	11.03	63	842369	50.34 ug/l	94
46)	1,4-Dioxane	11.14	88	166561	878.25 ug/l	99
47)	Dibromomethane	11.22	93	663339	50.89 ug/l	99
48)	Bromodichloromethane	11.34	83	1344710	51.87 ug/l	98
50)	cis-1,3-Dichloropropene	11.81	75	1503175	49.22 ug/l	98
51)	4-Methyl-2-pentanone	11.89	43	6896937	240.07 ug/l	99
54)	Toluene	12.22	91	3013485	49.46 ug/l	100
55)	Ethyl methacrylate	12.37	69	1185839	46.80 ug/l	99
56)	trans-1,3-Dichloropropene	12.44	75	1444870	48.37 ug/l	100
57)	1,1,2-Trichloroethane	12.69	97	728823	48.97 ug/l	99
58)	2-Hexanone	12.84	43	5048902	226.46 ug/l	100
59)	Tetrachloroethene	12.87	164	582852	49.03 ug/l	99
60)	1,3-Dichloropropane	12.90	76	1431907	50.11 ug/l	100
61)	Dibromochloromethane	13.23	129	892659	49.33 ug/l	99
62)	1,2-Dibromoethane	13.41	107	817186	46.66 ug/l	98
63)	1-Chlorohexane	13.71	91	1321531	49.34 ug/l	99
64)	Chlorobenzene	13.92	112	1836464	49.85 ug/l	98
65)	Ethylbenzene	13.95	91	3716305	50.00 ug/l	99
66)	1,1,1,2-Tetrachloroethane	13.97	131	781740	49.76 ug/l	99
67)	m-Xylene & p-Xylene	14.06	91	5728669	99.01 ug/l	99
68)	o-Xylene	14.56	91	3142884	50.06 ug/l	99
69)	Styrene	14.57	104	2140812	50.38 ug/l	98
71)	Bromoform	14.93	173	646827	48.52 ug/l	98
72)	Isopropylbenzene	14.93	105	3124029	49.10 ug/l	99
74)	1,1,2,2-Tetrachloroethane	15.35	83	1430352	48.48 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.38	53	426113	48.75 ug/l	99
76)	n-Propylbenzene	15.43	91	4660338	49.75 ug/l	100
77)	1,2,3-Trichloropropane	15.45	110	296394	47.94 ug/l	99

(#) = qualifier out of range (m) = manual integration SW 09/29/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 16:16 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

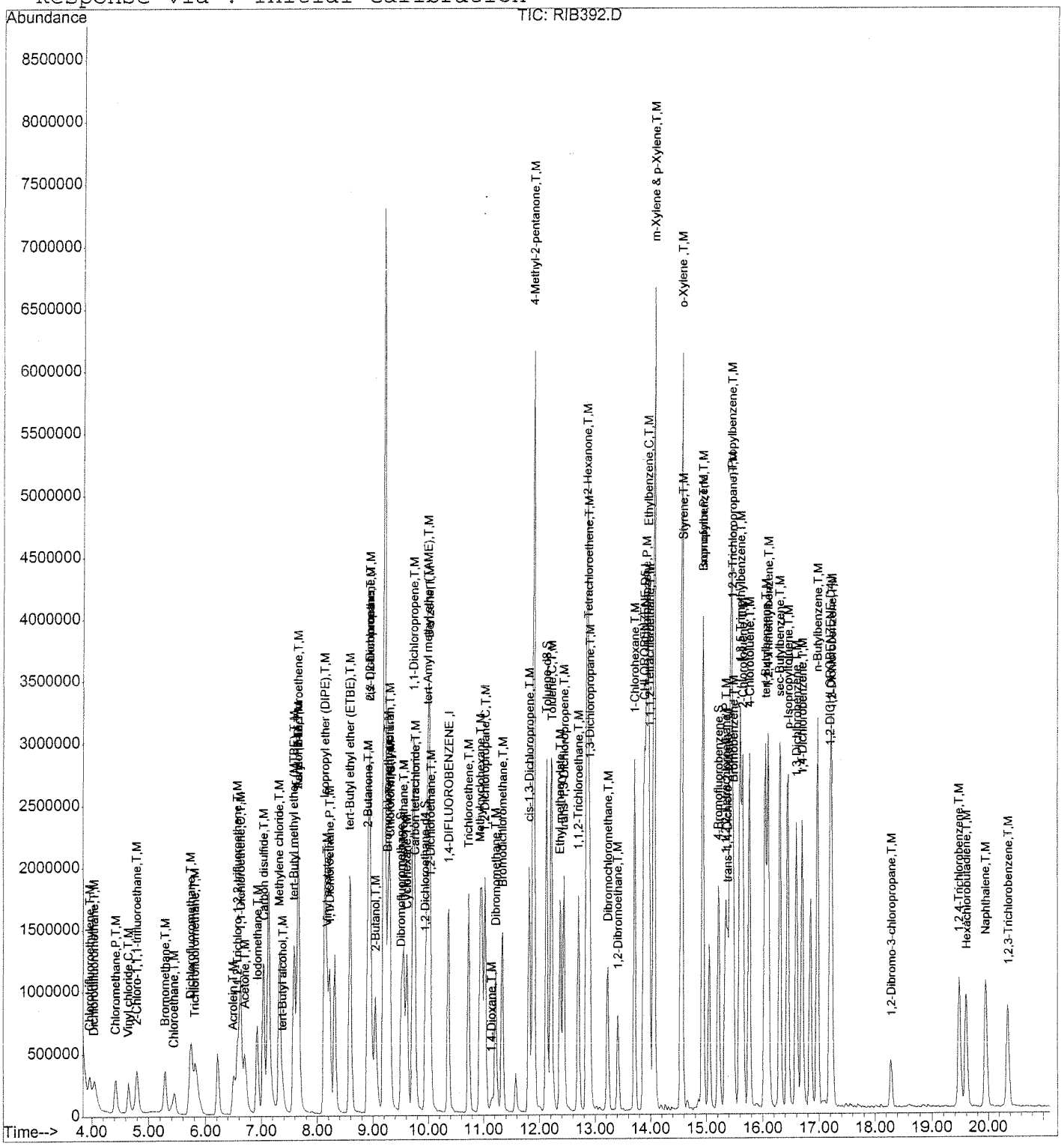
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	938934	47.37 ug/l	99
79)	1,3,5-Trimethylbenzene	15.60	105	2606104	48.20 ug/l	100
80)	2-Chlorotoluene	15.64	91	3007596	49.47 ug/l	100
81)	4-Chlorotoluene	15.76	91	2826921	49.94 ug/l	100
82)	tert-Butylbenzene	16.05	134	531622	47.79 ug/l	98
83)	1,2,4-Trimethylbenzene	16.09	105	2677725	49.44 ug/l	93
84)	sec-Butylbenzene	16.30	105	3460526	50.06 ug/l	99
85)	p-Isopropyltoluene	16.45	119	2523850	48.82 ug/l	99
86)	1,3-Dichlorobenzene	16.60	146	1574409	50.29 ug/l	100
87)	1,4-Dichlorobenzene	16.70	146	1542339	49.00 ug/l	99
88)	n-Butylbenzene	16.97	91	2979580	50.01 ug/l	99
89)	1,2-Dichlorobenzene	17.22	146	1439695	49.59 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.29	157	196813	46.84 ug/l	99
91)	1,2,4-Trichlorobenzene	19.47	180	615097	48.39 ug/l	99
92)	Hexachlorobutadiene	19.61	225	364194	46.62 ug/l	99
93)	Naphthalene	19.95	128	1637248	48.22 ug/l	100
94)	1,2,3-Trichlorobenzene	20.37	180	527987	48.68 ug/l	99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB392.D Vial: 2
Acq On : 25 Sep 2015 8:23 am Operator: CMendo
Sample : IVO03I242 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 16:16 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



Sw 9/29/15

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DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RIB331
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 15I185
BFB Injection Date : 09/22/15
BFB Injection Time : 13:23
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.36
75	30.0 - 60.0% of mass 95	54.63
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.92
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	64.82
175	5.0 - 9.0% of mass 174	5.04(7.8)1
176	95.0 - 101.0% of mass 174	63.51(98.0)1
177	5.0 - 9.0% of mass 176	4.50(7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	CV003E2040	RIB333	09/22/15	14:34
2	MBLK1S	VS03I14B	RIB337	09/22/15	16:42
3	LCS1S	VS03I14L	RIB334	09/22/15	15:18
4	LCD1S	VS03I14C	RIB335	09/22/15	15:46
5	CAFB-FT006-BKF-001	I185-01	RIB349	09/22/15	22:14
6	CAFB-FT006-BKF-003	I185-03	RIB351	09/22/15	23:15

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : EMAX INC.
Lab Code : EMXT
Lab File ID : REB240
Instrument ID: 03
GC Column : ZB-624 ID:0.25mm (mm)

Project : CANNON AFB PBR
SDG No. : 15I185
Date Analyzed : 05/20/15
Time Analyzed : 11:30
Heated Purge : Yes

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1661900	10.43	1568728	13.94	950976	17.28
	UPPER LIMIT	3323800	10.93	3137456	14.44	1901952	17.78
	LOWER LIMIT	830950	9.93	784364	13.44	475488	16.78
	SAMPLE ID						
1	VSTD050	1745157	10.35	1751589	13.88	1078836	17.20
2	MBLK1S	1807314	10.37	1842932	13.88	855455	17.20
3	LCS1S	1636976	10.37	1648359	13.88	1022488	17.20
4	LCD1S	2004002	10.37	2101826	13.88	1101769	17.20
5	CAFB-FT006-BKF-001	1522469	10.37	1591283	13.88	691255	17.20
6	CAFB-FT006-BKF-003	1286938	10.37	1397955	13.88	679665	17.20

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

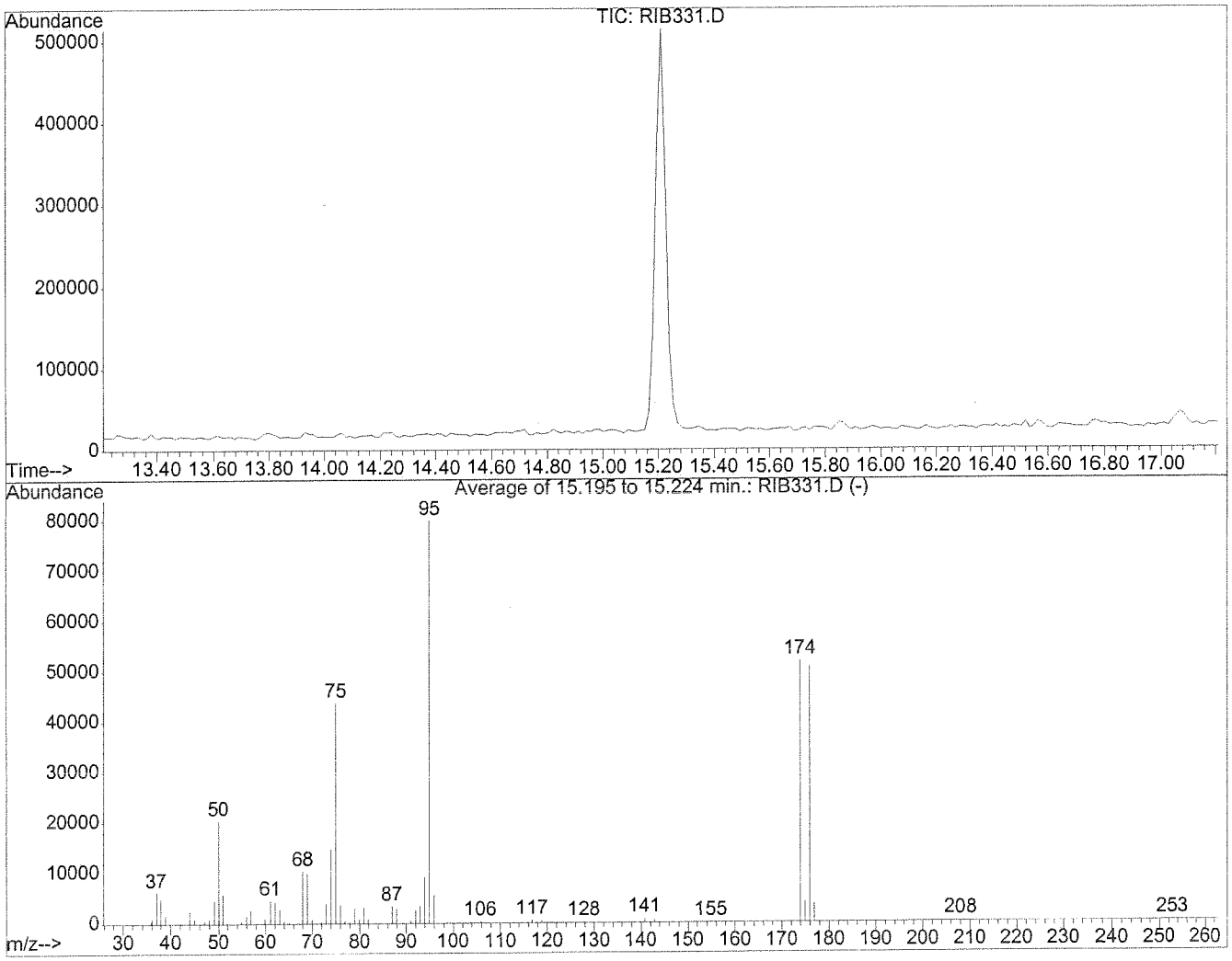
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.5 minutes (30 sec) of internal standard RT
RT LOWER LIMIT = - 0.5 minutes (30 sec) of internal standard RT

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

BFB

Data File : D:\HPCHEM\1\DATA\15I22\RIB331.D
Acq On : 22 Sep 2015 1:23 pm
Sample : BFB03I14
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00



AutoFind: Scans 763, 764, 765; Background Corrected with Scan 758

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.4	20305	PASS
75	95	30	60	54.6	43749	PASS
95	95	100	100	100.0	80080	PASS
96	95	5	9	6.9	5538	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	64.8	51907	PASS
175	174	5	9	7.8	4034	PASS
176	174	95	101	98.0	50859	PASS
177	176	5	9	7.1	3604	PASS

RIB331.D VO03E20.M Tue Sep 22 19:38:57 2015

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D
Acq On : 22 Sep 2015 2:34 pm
Sample : CVO03E2040
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	105	-0.04
2	T,M	Chlorotrifluoroethylene	50.000	0.000	100.0#	0	-3.98#
3	T,M	Dichlorodifluoromethane	50.000	56.523	-13.0	116	-0.01
4	P,T,M	Chloromethane	50.000	46.698	6.6	99	-0.01
5	C,T,M	Vinyl chloride	50.000	50.763	-1.5	105	-0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	0.000	100.0#	0	-4.81#
7	T,M	Bromomethane	50.000	43.519	13.0	98	-0.03
8	T,M	Chloroethane	50.000	45.591	8.8	93	-0.04
9	T,M	Dichlorofluoromethane	50.000	56.215	-12.4	112	-0.03
10	T,M	Trichlorofluoromethane	50.000	55.513	-11.0	113	-0.06
11	T,M	Acrolein	250.000	222.350	11.1	89	-0.01
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	55.575	-11.2	115	-0.03
13	C,T,M	1,1-Dichloroethene	50.000	51.699	-3.4	101	-0.03
14	T,M	Acetone	250.000	245.999	1.6	106	-0.03
15	T,M	Iodomethane	50.000	53.472	-6.9	107	-0.03
16	T,M	Carbon disulfide	50.000	42.227	15.5	91	-0.03
17	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
18	T,M	Methylene chloride	50.000	50.375	-0.8	109	-0.03
19	T,M	tert-Butyl alcohol	250.000	303.597	-21.4#	122	-0.03
20	T,M	tert-Butyl methyl ether (MT	50.000	53.370	-6.7	103	-0.03
21	T,M	trans-1,2-Dichloroethene	50.000	51.166	-2.3	101	-0.03
22	T,M	Acrylonitrile	250.000	222.677	10.9	87	-0.03
23	T,M	Isopropyl ether (DIPE)	50.000	45.797	8.4	97	-0.03
24	T,M	Vinyl acetate	50.000	0.000	100.0#	0	-8.19#
25	P,T,M	1,1-Dichloroethane	50.000	47.320	5.4	97	-0.03
26	T,M	tert-Butyl ethyl ether (ETB	50.000	49.079	1.8	98	-0.03
27	T,M	2-Butanone	250.000	251.082	-0.4	106	-0.03
28	T,M	2,2-Dichloropropane	50.000	58.855	-17.7	127	-0.03
29	T,M	cis-1,2-Dichloroethene	50.000	49.169	1.7	101	-0.03
30	T,M	2-Butanol	250.000	243.035	2.8	99	-0.03
31	T,M	Bromochloromethane	50.000	49.140	1.7	104	-0.04
32	T,M	Tetrahydrofuran	50.000	50.116	-0.2	105	-0.03
33	C,T,M	Chloroform	50.000	54.679	-9.4	114	-0.03
34	S	Dibromofluoromethane	50.000	51.269	-2.5	108	-0.03
35	T,M	1,1,1-Trichloroethane	50.000	55.632	-11.3	114	-0.03
36	T,M	Cyclohexane	50.000	32.525	35.0#	73	-0.03
37	T,M	1,1-Dichloropropene	50.000	49.774	0.5	104	-0.03
38	T,M	Carbon tetrachloride	50.000	57.272	-14.5	115	-0.04
39	S	1,2-Dichloroethane-d4	50.000	54.407	-8.8	120	-0.03
40	T,M	tert-Amyl methyl ether (TAM	50.000	50.768	-1.5	103	-0.03
41	T,M	Benzene	50.000	47.271	5.5	102	-0.04

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D Vial: 3
Acq On : 22 Sep 2015 2:34 pm Operator: CMendo
Sample : CVO03E2040 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	50.000	61.008	-22.0#	120	-0.04
43	T,M	Trichloroethene	50.000	53.246	-6.5	114	-0.03
44	T,M	Methylcyclohexane	50.000	39.878	20.2#	86	-0.03
45	C,T,M	1,2-Dichloropropane	50.000	51.049	-2.1	109	-0.03
46	T,M	1,4-Dioxane	1000.000	1202.730	-20.3#	130	-0.03
47	T,M	Dibromomethane	50.000	56.067	-12.1	116	-0.04
48	T,M	Bromodichloromethane	50.000	56.925	-13.8	116	-0.04
49	T,M	2-Chloroethyl vinyl ether	-1.000	0.000	0.0	0	0.00
50	T,M	cis-1,3-Dichloropropene	50.000	56.009	-12.0	120	-0.03
51	T,M	4-Methyl-2-pentanone	250.000	253.873	-1.5	105	-0.03
52	I	CHLOROBENZENE-D5	50.000	50.000	0.0	112	-0.03
53	S	Toluene-d8	50.000	52.457	-4.9	123	-0.03
54	C,T,M	Toluene	50.000	50.348	-0.7	109	-0.04
55	T,M	Ethyl methacrylate	50.000	51.936	-3.9	112	-0.04
56	T,M	trans-1,3-Dichloropropene	50.000	57.586	-15.2	129	-0.03
57	T,M	1,1,2-Trichloroethane	50.000	55.262	-10.5	122	-0.03
58	T,M	Tetrachloroethene	50.000	53.859	-7.7	118	-0.03
59	T,M	2-Hexanone	250.000	259.667	-3.9	114	-0.04
60	T,M	1,3-Dichloropropane	50.000	55.699	-11.4	125	-0.03
61	T,M	Dibromochloromethane	50.000	59.344	-18.7	124	-0.03
62	T,M	1,2-Dibromoethane	50.000	56.317	-12.6	123	-0.04
63	T,M	1-Chlorohexane	50.000	51.530	-3.1	116	-0.04
64	P,M	Chlorobenzene	50.000	53.314	-6.6	118	-0.03
65	C,T,M	Ethylbenzene	50.000	50.867	-1.7	112	-0.03
66	T,M	1,1,1,2-Tetrachloroethane	50.000	53.542	-7.1	110	-0.04
67	T,M	m-Xylene & p-Xylene	100.000	102.322	-2.3	115	-0.03
68	T,M	o-Xylene	50.000	51.421	-2.8	110	-0.03
69	T,M	Styrene	50.000	52.666	-5.3	112	-0.03
70	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	113	-0.03
71	P,T,M	Bromoform	50.000	53.152	-6.3	120	-0.04
72	T,M	Isopropylbenzene	50.000	45.282	9.4	111	-0.04
73	S	4-Bromofluorobenzene	50.000	47.030	5.9	126	-0.04
74	P,T,M	1,1,2,2-Tetrachloroethane	50.000	51.016	-2.0	121	-0.03
75	T,M	trans-1,4-Dichloro-2-butene	50.000	55.241	-10.5	122	-0.04
76	T,M	n-Propylbenzene	50.000	48.311	3.4	119	-0.03
77	T,M	1,2,3-Trichloropropane	50.000	54.402	-8.8	130	-0.03
78	T,M	Bromobenzene	50.000	49.782	0.4	128	-0.03
79	T,M	1,3,5-Trimethylbenzene	50.000	48.372	3.3	115	-0.03
80	T,M	2-Chlorotoluene	50.000	49.037	1.9	119	-0.04

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D
Acq On : 22 Sep 2015 2:34 pm
Sample : CVO03E2040
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	50.000	50.637	-1.3	123	-0.04
82	T,M	tert-Butylbenzene	50.000	50.266	-0.5	122	-0.04
83	T,M	1,2,4-Trimethylbenzene	50.000	50.191	-0.4	116	-0.04
84	T,M	sec-Butylbenzene	50.000	50.141	-0.3	124	-0.03
85	T,M	p-Isopropyltoluene	50.000	51.227	-2.5	122	-0.03
86	T,M	1,3-Dichlorobenzene	50.000	53.316	-6.6	129	-0.04
87	T,M	1,4-Dichlorobenzene	50.000	52.980	-6.0	125	-0.04
88	T,M	n-Butylbenzene	50.000	51.957	-3.9	118	-0.04
89	T,M	1,2-Dichlorobenzene	50.000	54.179	-8.4	125	-0.04
90	T,M	1,2-Dibromo-3-chloropropane	50.000	60.785	-21.6#	129	-0.04
91	T,M	1,2,4-Trichlorobenzene	50.000	56.710	-13.4	120	-0.04
92	T,M	Hexachlorobutadiene	50.000	53.840	-7.7	121	-0.04
93	T,M	Naphthalene	50.000	59.696	-19.4	122	-0.04
94	T,M	1,2,3-Trichlorobenzene	50.000	56.830	-13.7	119	-0.04

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

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D Vial: 3
Acq On : 22 Sep 2015 2:34 pm Operator: CMendo
Sample : CVO03E2040 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	-0.04
2	T,M	Chlorotrifluoroethylene	0.135	0.000	100.0#	0#	-3.98#
3	T,M	Dichlorodifluoromethane	0.336	0.379	-12.8	116	-0.01
4	P,T,M	Chloromethane	0.361	0.337	6.6	99	-0.01
5	C,T,M	Vinyl chloride	0.298	0.303	-1.7	105	-0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.215	0.000	100.0#	0#	-4.81#
7	T,M	Bromomethane	0.276	0.240	13.0	98	-0.03
8	T,M	Chloroethane	0.165	0.150	9.1	93	-0.04
9	T,M	Dichlorofluoromethane	0.684	0.769	-12.4	112	-0.03
10	T,M	Trichlorofluoromethane	0.465	0.517	-11.2	113	-0.06
11	T,M	Acrolein	0.044	0.039	11.4	89	-0.01
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.170	0.189	-11.2	115	-0.03
13	C,T,M	1,1-Dichloroethene	0.570	0.590	-3.5	101	-0.03
14	T,M	Acetone	0.162	0.159	1.9	106	-0.03
15	T,M	Iodomethane	0.609	0.652	-7.1	107	-0.03
16	T,M	Carbon disulfide	1.244	1.051	15.5	91	-0.03
17	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
18	T,M	Methylene chloride	0.591	0.595	-0.7	109	-0.03
19	T,M	tert-Butyl alcohol	0.066	0.081	-22.7#	122	-0.03
20	T,M	tert-Butyl methyl ether (MT	1.079	1.151	-6.7	103	-0.03
21	T,M	trans-1,2-Dichloroethene	0.570	0.583	-2.3	101	-0.03
22	T,M	Acrylonitrile	0.132	0.118	10.6	87	-0.03
23	T,M	Isopropyl ether (DIPE)	1.441	1.320	8.4	97	-0.03
24	T,M	Vinyl acetate	0.971	0.000	100.0#	0#	-8.19#
25	P,T,M	1,1-Dichloroethane	0.737	0.698	5.3	97	-0.03
26	T,M	tert-Butyl ethyl ether (ETB	1.336	1.311	1.9	98	-0.03
27	T,M	2-Butanone	0.246	0.248	-0.8	106	-0.03
28	T,M	2,2-Dichloropropane	0.548	0.645	-17.7	127	-0.03
29	T,M	cis-1,2-Dichloroethene	0.386	0.379	1.8	101	-0.03
30	T,M	2-Butanol	0.054	0.053	1.9	99	-0.03
31	T,M	Bromochloromethane	0.552	0.542	1.8	104	-0.04
32	T,M	Tetrahydrofuran	0.134	0.134	0.0	105	-0.03
33	C,T,M	Chloroform	0.811	0.887	-9.4	114	-0.03
34	S	Dibromofluoromethane	0.437	0.448	-2.5	108	-0.03
35	T,M	1,1,1-Trichloroethane	0.596	0.663	-11.2	114	-0.03
36	T,M	Cyclohexane	0.602	0.392	34.9#	73	-0.03
37	T,M	1,1-Dichloropropene	0.145	0.145	0.0	104	-0.03
38	T,M	Carbon tetrachloride	0.501	0.573	-14.4	115	-0.04
39	S	1,2-Dichloroethane-d4	0.595	0.647	-8.7	120	-0.03
40	T,M	tert-Amyl methyl ether (TAM	0.249	0.252	-1.2	103	-0.03
41	T,M	Benzene	1.235	1.168	5.4	102	-0.04

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D Vial: 3
Acq On : 22 Sep 2015 2:34 pm Operator: CMendo
Sample : CVO03E2040 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	0.679	0.828	-21.9#	120	-0.04
43	T,M	Trichloroethene	0.339	0.361	-6.5	114	-0.03
44	T,M	Methylcyclohexane	0.588	0.469	20.2#	86	-0.03
45	C,T,M	1,2-Dichloropropane	0.373	0.380	-1.9	109	-0.03
46	T,M	1,4-Dioxane	0.004	0.005	-25.0#	130	-0.03
47	T,M	Dibromomethane	0.311	0.349	-12.2	116	-0.04
48	T,M	Bromodichloromethane	0.629	0.716	-13.8	116	-0.04
49	T,M	2-Chloroethyl vinyl ether	0.000	0.000	0.0	0#	0.00
50	T,M	cis-1,3-Dichloropropene	0.677	0.758	-12.0	120	-0.03
51	T,M	4-Methyl-2-pentanone	0.612	0.621	-1.5	105	-0.03
52	I	CHLOROBENZENE-D5	1.000	1.000	0.0	112	-0.03
53	S	Toluene-d8	1.059	1.111	-4.9	123	-0.03
54	C,T,M	Toluene	1.273	1.282	-0.7	109	-0.04
55	T,M	Ethyl methacrylate	0.549	0.571	-4.0	112	-0.04
56	T,M	trans-1,3-Dichloropropene	0.677	0.780	-15.2	129	-0.03
57	T,M	1,1,2-Trichloroethane	0.318	0.352	-10.7	122	-0.03
58	T,M	Tetrachloroethene	0.256	0.276	-7.8	118	-0.03
59	T,M	2-Hexanone	0.454	0.472	-4.0	114	-0.04
60	T,M	1,3-Dichloropropane	0.613	0.683	-11.4	125	-0.03
61	T,M	Dibromochloromethane	0.456	0.541	-18.6	124	-0.03
62	T,M	1,2-Dibromoethane	0.409	0.461	-12.7	123	-0.04
63	T,M	1-Chlorohexane	0.547	0.564	-3.1	116	-0.04
64	P,M	Chlorobenzene	0.880	0.939	-6.7	118	-0.03
65	C,T,M	Ethylbenzene	1.675	1.704	-1.7	112	-0.03
66	T,M	1,1,1,2-Tetrachloroethane	0.404	0.432	-6.9	110	-0.04
67	T,M	m-Xylene & p-Xylene	1.303	1.333	-2.3	115	-0.03
68	T,M	o-Xylene	1.466	1.508	-2.9	110	-0.03
69	T,M	Styrene	0.990	1.043	-5.4	112	-0.03
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	113	-0.03
71	P,T,M	Bromoform	0.592	0.629	-6.3	120	-0.04
72	T,M	Isopropylbenzene	2.985	2.703	9.4	111	-0.04
73	S	4-Bromofluorobenzene	1.061	0.998	5.9	126	-0.04
74	P,T,M	1,1,2,2-Tetrachloroethane	1.275	1.301	-2.0	121	-0.03
75	T,M	trans-1,4-Dichloro-2-butene	0.439	0.486	-10.7	122	-0.04
76	T,M	n-Propylbenzene	4.165	4.024	3.4	119	-0.03
77	T,M	1,2,3-Trichloropropane	0.315	0.343	-8.9	130	-0.03
78	T,M	Bromobenzene	0.858	0.855	0.3	128	-0.03
79	T,M	1,3,5-Trimethylbenzene	2.591	2.507	3.2	115	-0.03
80	T,M	2-Chlorotoluene	2.750	2.697	1.9	119	-0.04

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D
Acq On : 22 Sep 2015 2:34 pm
Sample : CVO03E2040
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.590	2.623	-1.3	123	-0.04
82	T,M	tert-Butylbenzene	0.504	0.507	-0.6	122	-0.04
83	T,M	1,2,4-Trimethylbenzene	2.692	2.702	-0.4	116	-0.04
84	T,M	sec-Butylbenzene	3.399	3.409	-0.3	124	-0.03
85	T,M	p-Isopropyltoluene	2.685	2.751	-2.5	122	-0.03
86	T,M	1,3-Dichlorobenzene	1.462	1.558	-6.6	129	-0.04
87	T,M	1,4-Dichlorobenzene	1.472	1.560	-6.0	125	-0.04
88	T,M	n-Butylbenzene	2.833	2.944	-3.9	118	-0.04
89	T,M	1,2-Dichlorobenzene	1.350	1.463	-8.4	125	-0.04
90	T,M	1,2-Dibromo-3-chloropropane	0.208	0.252	-21.2#	129	-0.04
91	T,M	1,2,4-Trichlorobenzene	0.642	0.728	-13.4	120	-0.04
92	T,M	Hexachlorobutadiene	0.418	0.450	-7.7	121	-0.04
93	T,M	Naphthalene	1.766	2.109	-19.4	122	-0.04
94	T,M	1,2,3-Trichlorobenzene	0.542	0.616	-13.7	119	-0.04

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D
Acq On : 22 Sep 2015 2:34 pm
Sample : CVO03E2040
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 22 14:56 2015

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.35	114	1745157	50.00 ug/l	-0.04
52) CHLOROBENZENE-D5	13.88	117	1751589	50.00 ug/l	-0.03
70) 1,2-DICHLOROBENZENE-D4	17.20	152	1078836	50.00 ug/l	-0.03
System Monitoring Compounds					
34) Dibromofluoromethane	9.50	111	782553	51.27 ug/l	-0.03
Spiked Amount 50.000			Recovery	= 102.54%	
39) 1,2-Dichloroethane-d4	9.94	65	1129400	54.41 ug/l	-0.03
Spiked Amount 50.000			Recovery	= 108.82%	
53) Toluene-d8	12.12	98	1946061	52.46 ug/l	-0.03
Spiked Amount 50.000			Recovery	= 104.92%	
73) 4-Bromofluorobenzene	15.21	95	1076829	47.03 ug/l	-0.04
Spiked Amount 50.000			Recovery	= 94.06%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.04	85	662181	56.52 ug/l	99
4) Chloromethane	4.41	50	588758	46.70 ug/l	100
5) Vinyl chloride	4.65	62	528363	50.76 ug/l	98
7) Bromomethane	5.26	94	418848	43.52 ug/l	98
8) Chloroethane	5.42	64	261811	45.59 ug/l	96
9) Dichlorofluoromethane	5.74	67	1341786	56.21 ug/l	100
10) Trichlorofluoromethane	5.80	101	901563	55.51 ug/l	100
11) Acrolein	6.50	56	340169	222.35 ug/l	98
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	329594	55.57 ug/l	100
13) 1,1-Dichloroethene	6.62	61	1028939	51.70 ug/l	99
14) Acetone	6.69	43	1386771	246.00 ug/l	97
15) Iodomethane	6.91	142	1137021	53.47 ug/l	94
16) Carbon disulfide	7.03	76	1833844	42.23 ug/l	99
18) Methylene chloride	7.32	49	1038390	50.37 ug/l	99
19) tert-Butyl alcohol	7.36	59	702917	303.60 ug/l	98
20) tert-Butyl methyl ether (M	7.58	73	2009470	53.37 ug/l	98
21) trans-1,2-Dichloroethene	7.66	61	1017318	51.17 ug/l	99
22) Acrylonitrile	7.64	53	1025897	222.68 ug/l	96
23) Isopropyl ether (DIPE)	8.13	45	2303949	45.80 ug/l	98
25) 1,1-Dichloroethane	8.21	63	1218043	47.32 ug/l	98
26) tert-Butyl ethyl ether (ET	8.58	59	2288542	49.08 ug/l	99
27) 2-Butanone	8.89	43	2159767	251.08 ug/l	100
28) 2,2-Dichloropropane	8.92	77	1126243	58.85 ug/l	99
29) cis-1,2-Dichloroethene	8.94	96	662233	49.17 ug/l	96
30) 2-Butanol	9.04	45	459760	243.04 ug/l	99
31) Bromochloromethane	9.25	49	946110	49.14 ug/l	97
32) Tetrahydrofuran	9.30	42	233911	50.12 ug/l	96

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D
Acq On : 22 Sep 2015 2:34 pm
Sample : CVO03E2040
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 22 14:56 2015

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) Chloroform	9.30	83	1547975	54.68 ug/l	99
35) 1,1,1-Trichloroethane	9.55	97	1157767	55.63 ug/l	99
36) Cyclohexane	9.61	56	683898	32.53 ug/l	95
37) 1,1-Dichloropropene	9.73	110	252695	49.77 ug/l	100
38) Carbon tetrachloride	9.74	119	1000722	57.27 ug/l	100
40) tert-Amyl methyl ether (TA	9.98	87	440467	50.77 ug/l	99
41) Benzene	10.00	78	2038020	47.27 ug/l	99
42) 1,2-Dichloroethane	10.03	62	1445419	61.01 ug/l	99
43) Trichloroethene	10.73	130	630413	53.25 ug/l	97
44) Methylcyclohexane	10.93	83	818297	39.88 ug/l	100
45) 1,2-Dichloropropane	11.02	63	663858	51.05 ug/l	76
46) 1,4-Dioxane	11.14	88	169192	1202.73 ug/l	94
47) Dibromomethane	11.20	93	609229	56.07 ug/l	99
48) Bromodichloromethane	11.32	83	1248834	56.92 ug/l	98
50) cis-1,3-Dichloropropene	11.81	75	1322847	56.01 ug/l	96
51) 4-Methyl-2-pentanone	11.89	43	5420165	253.87 ug/l	98
54) Toluene	12.20	91	2245523	50.35 ug/l	100
55) Ethyl methacrylate	12.36	69	999329	51.94 ug/l	95
56) trans-1,3-Dichloropropene	12.44	75	1366573	57.59 ug/l	95
57) 1,1,2-Trichloroethane	12.69	97	616580	55.26 ug/l	98
58) Tetrachloroethene	12.87	164	482956	53.86 ug/l	99
59) 2-Hexanone	12.84	43	4130829	259.67 ug/l	98
60) 1,3-Dichloropropane	12.90	76	1196393	55.70 ug/l	100
61) Dibromochloromethane	13.23	129	948473	59.34 ug/l	99
62) 1,2-Dibromoethane	13.41	107	806960	56.32 ug/l	99
63) 1-Chlorohexane	13.70	91	988256	51.53 ug/l	98
64) Chlorobenzene	13.91	112	1644418	53.31 ug/l	99
65) Ethylbenzene	13.94	91	2985555	50.87 ug/l	99
66) 1,1,1,2-Tetrachloroethane	13.97	131	757039	53.54 ug/l	99
67) m-Xylene & p-Xylene	14.06	91	4669987	102.32 ug/l	100
68) o-Xylene	14.55	91	2640714	51.42 ug/l	98
69) Styrene	14.57	104	1827380	52.67 ug/l	96
71) Bromoform	14.92	173	678878	53.15 ug/l	99
72) Isopropylbenzene	14.92	105	2916368	45.28 ug/l	98
74) 1,1,2,2-Tetrachloroethane	15.34	83	1403464	51.02 ug/l	99
75) trans-1,4-Dichloro-2-buten	15.37	53	523845	55.24 ug/l	96
76) n-Propylbenzene	15.43	91	4341709	48.31 ug/l	100
77) 1,2,3-Trichloropropane	15.45	110	369636	54.40 ug/l	95
78) Bromobenzene	15.48	156	921878	49.78 ug/l	96
79) 1,3,5-Trimethylbenzene	15.59	105	2704507	48.37 ug/l	100
80) 2-Chlorotoluene	15.64	91	2909982	49.04 ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D
Acq On : 22 Sep 2015 2:34 pm
Sample : CVO03E2040
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 22 14:56 2015

Vial: 3
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03E20.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration
DataAcq Meth : VO03E20

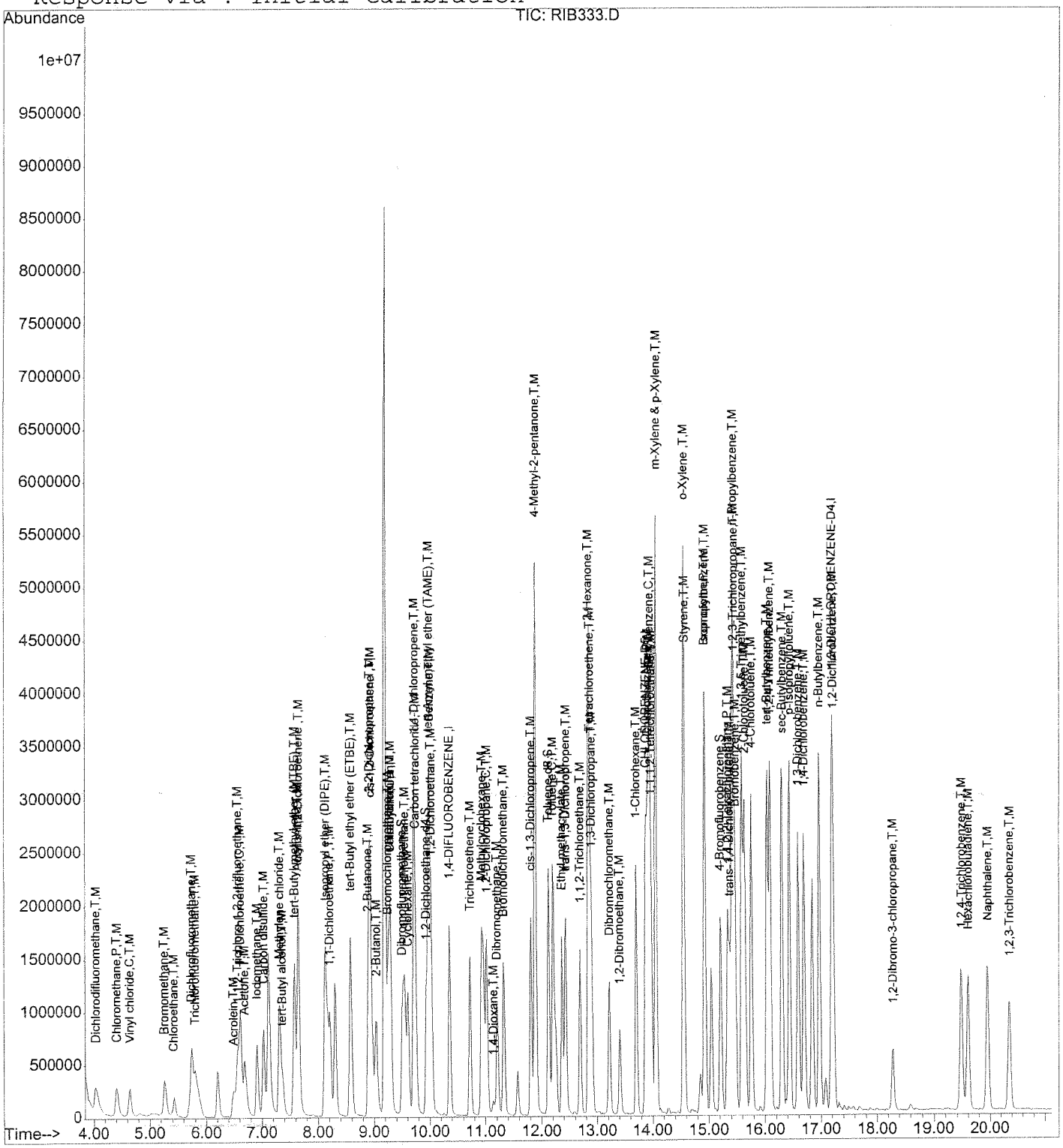
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81) 4-Chlorotoluene	15.76	91	2829655	50.64 ug/l	99
82) tert-Butylbenzene	16.04	134	547143	50.27 ug/l	97
83) 1,2,4-Trimethylbenzene	16.09	105	2915019	50.19 ug/l	93
84) sec-Butylbenzene	16.31	105	3677823	50.14 ug/l	98
85) p-Isopropyltoluene	16.44	119	2967761	51.23 ug/l	100
86) 1,3-Dichlorobenzene	16.59	146	1681336	53.32 ug/l	98
87) 1,4-Dichlorobenzene	16.70	146	1682881	52.98 ug/l	99
88) n-Butylbenzene	16.96	91	3176003	51.96 ug/l	100
89) 1,2-Dichlorobenzene	17.22	146	1577937	54.18 ug/l	98
90) 1,2-Dibromo-3-chloropropan	18.29	157	272378	60.79 ug/l	99
91) 1,2,4-Trichlorobenzene	19.48	180	785502	56.71 ug/l	100
92) Hexachlorobutadiene	19.60	225	485690	53.84 ug/l	99
93) Naphthalene	19.96	128	2274965	59.70 ug/l	99
94) 1,2,3-Trichlorobenzene	20.36	180	664242	56.83 ug/l	99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I22\RIB333.D Vial: 3
Acq On : 22 Sep 2015 2:34 pm Operator: CMendo
Sample : CVO03E2040 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 22 14:56 2015 Quant Results File: VO03E20.RES

Method : D:\HPCHEM\1\METHODS\VO03E20.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Tue Jul 14 07:17:25 2015
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RIB393
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 15I185
BFB Injection Date : 09/25/15
BFB Injection Time : 08:47
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.32
75	30.0 - 60.0% of mass 95	45.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.24
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	66.18
175	5.0 - 9.0% of mass 174	4.81(7.3)1
176	95.0 - 101.0% of mass 174	63.88(96.5)1
177	5.0 - 9.0% of mass 176	4.20(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	CV003I2401	RIB394	09/25/15	09:14
2	MBLK2S	VS03I18Q	RIB398	09/25/15	11:24
3	LCS2S	VS03I18L	RIB395	09/25/15	09:41
4	LCD2S	VS03I18C	RIB396	09/25/15	10:09
5	CAFB-FT006-BKF-002	I185-02R	RIB402	09/25/15	14:19

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : EMAX INC.
Lab Code : EMXT
Lab File ID : RIB367
Instrument ID: 03
GC Column : ZB-624 ID:0.25mm (mm)

Project : CANNON AFB PBR
SDG No. : 151185
Date Analyzed : 09/24/15
Time Analyzed : 15:21
Heated Purge : Yes

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1709270	10.37	1727373	13.88	980817	17.20
	UPPER LIMIT	3418540	10.87	3454746	14.38	1961634	17.70
	LOWER LIMIT	854635	9.87	863687	13.38	490409	16.70
	SAMPLE ID						
1	VSTD050	1646951	10.36	1803340	13.87	907077	17.20
2	MBLK2S	1936025	10.37	1898608	13.88	880133	17.21
3	LCS2S	1987750	10.37	1981244	13.89	1008034	17.21
4	LCD2S	1806007	10.37	1913481	13.88	952897	17.20
5	CAFB-FT006-BKF-002	2074312	10.37	2071012	13.88	867023	17.21

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

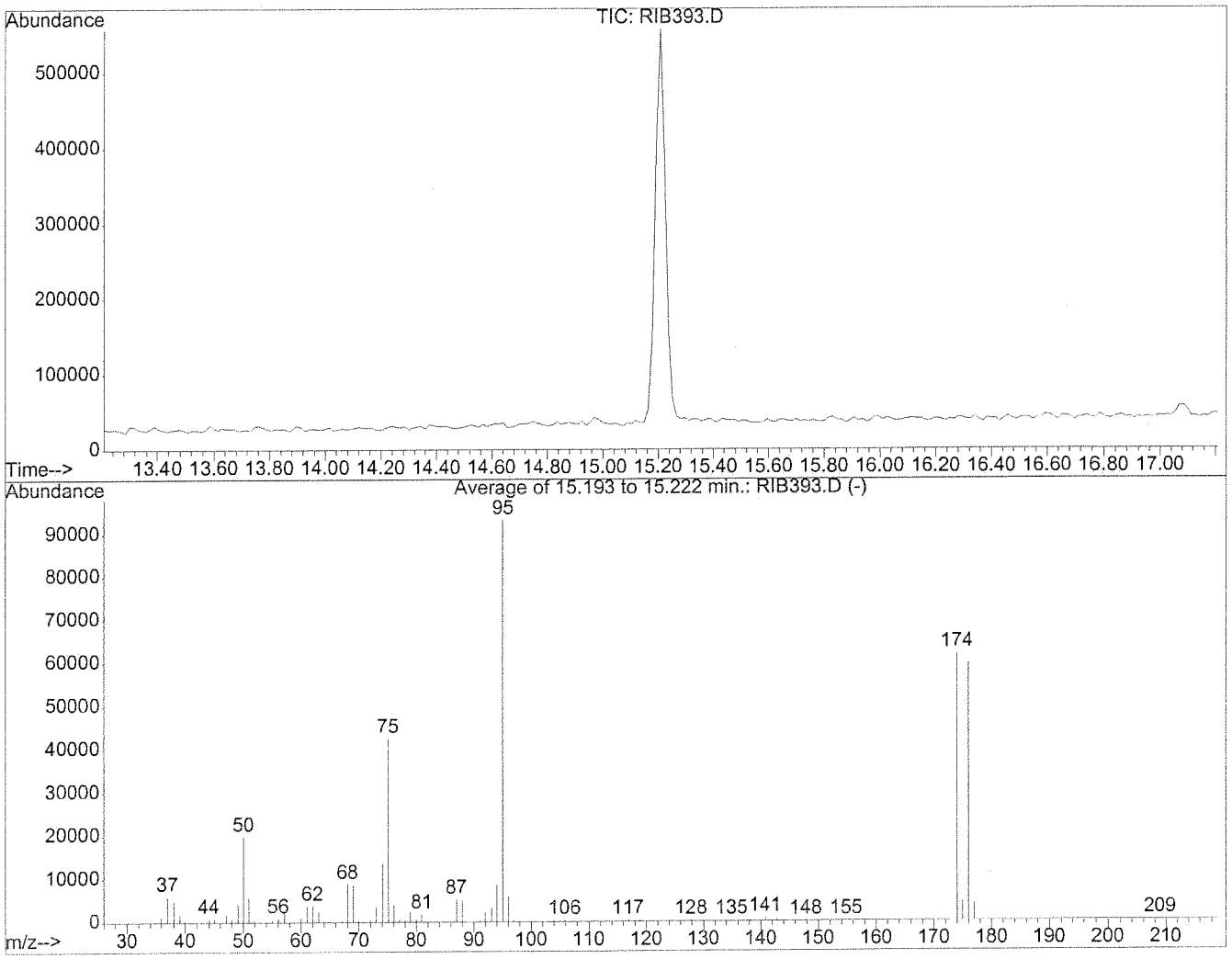
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.5 minutes (30 sec) of internal standard RT
RT LOWER LIMIT = - 0.5 minutes (30 sec) of internal standard RT

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

BFB

Data File : D:\HPCHEM\1\DATA\15I25\RIB393.D
Acq On : 25 Sep 2015 8:47 am
Sample : BFB03I18
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00



AutoFind: Scans 763, 764, 765; Background Corrected with Scan 758

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.3	19910	PASS
75	95	30	60	45.5	42520	PASS
95	95	100	100	100.0	93400	PASS
96	95	5	9	6.2	5830	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	66.2	61811	PASS
175	174	5	9	7.3	4494	PASS
176	174	95	101	96.5	59659	PASS
177	176	5	9	6.6	3919	PASS

RIB393.D VO03I24.M Mon Sep 28 17:58:24 2015

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	96	0.00
2	T,M	Chlorotrifluoroethylene	50.000	44.448	11.1	80	0.00
3	T,M	Dichlorodifluoromethane	50.000	44.185	11.6	75	0.00
4	P,T,M	Chloromethane	50.000	44.657	10.7	79	0.02
5	C,T,M	Vinyl chloride	50.000	48.858	2.3	83	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	51.231	-2.5	100	0.00
7	T,M	Bromomethane	50.000	51.580	-3.2	92	0.00
8	T,M	Chloroethane	50.000	46.401	7.2	89	0.00
9	T,M	Dichlorofluoromethane	50.000	56.321	-12.6	100	0.00
10	T,M	Trichlorofluoromethane	50.000	50.384	-0.8	89	0.00
11	T,M	Acrolein	250.000	256.855	-2.7	100	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	51.962	-3.9	100	0.00
13	C,T,M	1,1-Dichloroethene	50.000	56.714	-13.4	110	0.00
14	T,M	Acetone	250.000	248.068	0.8	97	0.00
15	T,M	Iodomethane	50.000	57.624	-15.2	106	0.00
16	T,M	Carbon disulfide	50.000	51.396	-2.8	96	0.00
17	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
18	T,M	Methylene chloride	50.000	56.077	-12.2	112	0.00
19	T,M	tert-Butyl alcohol	250.000	247.576	1.0	99	-0.02
20	T,M	tert-Butyl methyl ether (MT	50.000	57.768	-15.5	111	0.00
21	T,M	Acrylonitrile	250.000	264.400	-5.8	103	0.00
22	T,M	trans-1,2-Dichloroethene	50.000	55.783	-11.6	107	0.00
23	T,M	Isopropyl ether (DIPE)	50.000	59.353	-18.7	112	0.00
24	T,M	Vinyl acetate	50.000	49.190	1.6	81	0.00
25	P,T,M	1,1-Dichloroethane	50.000	54.848	-9.7	98	0.00
26	T,M	tert-Butyl ethyl ether (ETB	50.000	56.754	-13.5	108	0.00
27	T,M	2-Butanone	250.000	246.410	1.4	90	0.00
28	T,M	2,2-Dichloropropane	50.000	53.155	-6.3	104	0.00
29	T,M	cis-1,2-Dichloroethene	50.000	53.869	-7.7	98	0.00
30	T,M	2-Butanol	250.000	251.077	-0.4	87	0.00
31	T,M	Bromochloromethane	50.000	54.287	-8.6	105	0.00
32	T,M	Tetrahydrofuran	50.000	51.116	-2.2	98	0.00
33	C,T,M	Chloroform	50.000	54.675	-9.3	102	0.00
34	S	Dibromofluoromethane	50.000	50.893	-1.8	97	0.00
35	T,M	1,1,1-Trichloroethane	50.000	53.218	-6.4	104	0.00
36	T,M	Cyclohexane	50.000	52.571	-5.1	95	0.00
37	T,M	1,1-Dichloropropene	50.000	54.674	-9.3	103	0.00
38	T,M	Carbon tetrachloride	50.000	55.065	-10.1	103	0.00
39	S	1,2-Dichloroethane-d4	50.000	49.570	0.9	95	0.00
40	T,M	tert-Amyl methyl ether (TAM	50.000	53.677	-7.4	103	0.00
41	T,M	Benzene	50.000	55.194	-10.4	102	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	50.000	55.670	-11.3	103	0.00
43	T,M	Trichloroethene	50.000	55.744	-11.5	105	0.00
44	T,M	Methylcyclohexane	50.000	50.876	-1.8	89	0.00
45	C,T,M	1,2-Dichloropropane	50.000	57.058	-14.1	106	0.00
46	T,M	1,4-Dioxane	1000.000	954.851	4.5	95	0.00
47	T,M	Dibromomethane	50.000	52.608	-5.2	100	0.00
48	T,M	Bromodichloromethane	50.000	55.335	-10.7	105	0.00
49	T,M	2-Chloroethyl vinyl ether	-1.000	0.000	0.0	0	0.00
50	T,M	cis-1,3-Dichloropropene	50.000	55.878	-11.8	106	0.00
51	T,M	4-Methyl-2-pentanone	250.000	260.323	-4.1	102	0.00
52	I	CHLOROBENZENE-D5	50.000	50.000	0.0	104	0.00
53	S	Toluene-d8	50.000	49.318	1.4	100	0.00
54	C,T,M	Toluene	50.000	53.330	-6.7	111	0.00
55	T,M	Ethyl methacrylate	50.000	53.722	-7.4	113	0.00
56	T,M	trans-1,3-Dichloropropene	50.000	52.975	-6.0	112	0.00
57	T,M	1,1,2-Trichloroethane	50.000	51.853	-3.7	107	0.00
58	T,M	2-Hexanone	250.000	243.974	2.4	102	0.00
59	T,M	Tetrachloroethene	50.000	50.113	-0.2	103	0.00
60	T,M	1,3-Dichloropropane	50.000	51.243	-2.5	102	0.00
61	T,M	Dibromochloromethane	50.000	52.669	-5.3	109	0.00
62	T,M	1,2-Dibromoethane	50.000	49.253	1.5	103	0.00
63	T,M	1-Chlorohexane	50.000	51.617	-3.2	107	0.00
64	P,M	Chlorobenzene	50.000	53.955	-7.9	113	0.00
65	C,T,M	Ethylbenzene	50.000	54.666	-9.3	110	0.00
66	T,M	1,1,1,2-Tetrachloroethane	50.000	53.443	-6.9	110	0.00
67	T,M	m-Xylene & p-Xylene	100.000	104.542	-4.5	106	0.00
68	T,M	o-Xylene	50.000	52.042	-4.1	105	0.00
69	T,M	Styrene	50.000	52.937	-5.9	108	0.00
70	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	92	0.00
71	P,T,M	Bromoform	50.000	54.096	-8.2	105	0.00
72	T,M	Isopropylbenzene	50.000	54.196	-8.4	110	0.00
73	S	4-Bromofluorobenzene	50.000	48.855	2.3	98	0.00
74	P,T,M	1,1,2,2-Tetrachloroethane	50.000	53.278	-6.6	104	0.00
75	T,M	trans-1,4-Dichloro-2-butene	50.000	52.181	-4.4	101	0.00
76	T,M	n-Propylbenzene	50.000	54.696	-9.4	104	0.00
77	T,M	1,2,3-Trichloropropane	50.000	54.130	-8.3	107	0.00
78	T,M	Bromobenzene	50.000	53.346	-6.7	106	0.00
79	T,M	1,3,5-Trimethylbenzene	50.000	52.570	-5.1	102	0.00
80	T,M	2-Chlorotoluene	50.000	54.729	-9.5	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	50.000	53.870	-7.7	104	0.00
82	T,M	tert-Butylbenzene	50.000	50.943	-1.9	103	0.00
83	T,M	1,2,4-Trimethylbenzene	50.000	54.363	-8.7	104	0.00
84	T,M	sec-Butylbenzene	50.000	53.343	-6.7	100	0.00
85	T,M	p-Isopropyltoluene	50.000	54.357	-8.7	101	0.00
86	T,M	1,3-Dichlorobenzene	50.000	54.462	-8.9	102	0.00
87	T,M	1,4-Dichlorobenzene	50.000	53.164	-6.3	99	0.00
88	T,M	n-Butylbenzene	50.000	54.048	-8.1	99	0.00
89	T,M	1,2-Dichlorobenzene	50.000	52.667	-5.3	99	0.00
90	T,M	1,2-Dibromo-3-chloropropane	50.000	51.224	-2.4	89	0.00
91	T,M	1,2,4-Trichlorobenzene	50.000	53.248	-6.5	96	0.00
92	T,M	Hexachlorobutadiene	50.000	50.751	-1.5	94	-0.02
93	T,M	Naphthalene	50.000	53.574	-7.1	97	0.00
94	T,M	1,2,3-Trichlorobenzene	50.000	53.738	-7.5	94	0.00

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	96	0.00
2	T,M	Chlorotrifluoroethylene	0.112	0.100	10.7	80	0.00
3	T,M	Dichlorodifluoromethane	0.315	0.278	11.7	75	0.00
4	P,T,M	Chloromethane	0.359	0.320	10.9	79	0.02
5	C,T,M	Vinyl chloride	0.269	0.263	2.2	83	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.158	0.162	-2.5	100	0.00
7	T,M	Bromomethane	0.253	0.261	-3.2	92	0.00
8	T,M	Chloroethane	0.180	0.167	7.2	89	0.00
9	T,M	Dichlorofluoromethane	0.747	0.841	-12.6	100	0.00
10	T,M	Trichlorofluoromethane	0.470	0.474	-0.9	89	0.00
11	T,M	Acrolein	0.055	0.056	-1.8	100	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.205	0.213	-3.9	100	0.00
13	C,T,M	1,1-Dichloroethene	0.635	0.720	-13.4	110	0.00
14	T,M	Acetone	0.166	0.165	0.6	97	0.00
15	T,M	Iodomethane	0.747	0.861	-15.3	106	0.00
16	T,M	Carbon disulfide	1.686	1.733	-2.8	96	0.00
17	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
18	T,M	Methylene chloride	0.723	0.811	-12.2	112	0.00
19	T,M	tert-Butyl alcohol	0.064	0.063	1.6	99	-0.02
20	T,M	tert-Butyl methyl ether (MT	1.165	1.346	-15.5	111	0.00
21	T,M	Acrylonitrile	0.151	0.159	-5.3	103	0.00
22	T,M	trans-1,2-Dichloroethene	0.644	0.718	-11.5	107	0.00
23	T,M	Isopropyl ether (DIPE)	1.735	2.060	-18.7	112	0.00
24	T,M	Vinyl acetate	1.139	1.120	1.7	81	0.00
25	P,T,M	1,1-Dichloroethane	0.825	0.905	-9.7	98	0.00
26	T,M	tert-Butyl ethyl ether (ETB	1.417	1.608	-13.5	108	0.00
27	T,M	2-Butanone	0.309	0.304	1.6	90	0.00
28	T,M	2,2-Dichloropropane	0.640	0.680	-6.3	104	0.00
29	T,M	cis-1,2-Dichloroethene	0.457	0.493	-7.9	98	0.00
30	T,M	2-Butanol	0.061	0.058	4.9	87	0.00
31	T,M	Bromochloromethane	0.622	0.675	-8.5	105	0.00
32	T,M	Tetrahydrofuran	0.155	0.161	-3.9	98	0.00
33	C,T,M	Chloroform	0.881	0.964	-9.4	102	0.00
34	S	Dibromofluoromethane	0.448	0.456	-1.8	97	0.00
35	T,M	1,1,1-Trichloroethane	0.626	0.666	-6.4	104	0.00
36	T,M	Cyclohexane	0.452	0.475	-5.1	95	0.00
37	T,M	1,1-Dichloropropene	0.174	0.190	-9.2	103	0.00
38	T,M	Carbon tetrachloride	0.502	0.553	-10.2	103	0.00
39	S	1,2-Dichloroethane-d4	0.550	0.545	0.9	95	0.00
40	T,M	tert-Amyl methyl ether (TAM	0.280	0.301	-7.5	103	0.00
41	T,M	Benzene	1.583	1.747	-10.4	102	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	0.676	0.753	-11.4	103	0.00
43	T,M	Trichloroethene	0.399	0.445	-11.5	105	0.00
44	T,M	Methylcyclohexane	0.500	0.509	-1.8	89	0.00
45	C,T,M	1,2-Dichloropropane	0.486	0.555	-14.2	106	0.00
46	T,M	1,4-Dioxane	0.006	0.005	16.7	95	0.00
47	T,M	Dibromomethane	0.379	0.399	-5.3	100	0.00
48	T,M	Bromodichloromethane	0.754	0.834	-10.6	105	0.00
49	T,M	2-Chloroethyl vinyl ether	0.000	0.000	0.0	0#	0.00
50	T,M	cis-1,3-Dichloropropene	0.888	0.992	-11.7	106	0.00
51	T,M	4-Methyl-2-pentanone	0.835	0.870	-4.2	102	0.00
52	I	CHLOROBENZENE-D5	1.000	1.000	0.0	104	0.00
53	S	Toluene-d8	1.283	1.266	1.3	100	0.00
54	C,T,M	Toluene	1.672	1.784	-6.7	111	0.00
55	T,M	Ethyl methacrylate	0.696	0.747	-7.3	113	0.00
56	T,M	trans-1,3-Dichloropropene	0.820	0.869	-6.0	112	0.00
57	T,M	1,1,2-Trichloroethane	0.409	0.424	-3.7	107	0.00
58	T,M	2-Hexanone	0.612	0.597	2.5	102	0.00
59	T,M	Tetrachloroethene	0.326	0.327	-0.3	103	0.00
60	T,M	1,3-Dichloropropane	0.784	0.804	-2.6	102	0.00
61	T,M	Dibromochloromethane	0.497	0.523	-5.2	109	0.00
62	T,M	1,2-Dibromoethane	0.481	0.474	1.5	103	0.00
63	T,M	1-Chlorohexane	0.735	0.759	-3.3	107	0.00
64	P,M	Chlorobenzene	1.011	1.091	-7.9	113	0.00
65	C,T,M	Ethylbenzene	2.040	2.231	-9.4	110	0.00
66	T,M	1,1,1,2-Tetrachloroethane	0.431	0.461	-7.0	110	0.00
67	T,M	m-Xylene & p-Xylene	1.588	1.660	-4.5	106	0.00
68	T,M	o-Xylene	1.723	1.794	-4.1	105	0.00
69	T,M	Styrene	1.166	1.235	-5.9	108	0.00
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	92	0.00
71	P,T,M	Bromoform	0.698	0.755	-8.2	105	0.00
72	T,M	Isopropylbenzene	3.329	3.609	-8.4	110	0.00
73	S	4-Bromofluorobenzene	1.233	1.204	2.4	98	0.00
74	P,T,M	1,1,2,2-Tetrachloroethane	1.544	1.645	-6.5	104	0.00
75	T,M	trans-1,4-Dichloro-2-butene	0.457	0.477	-4.4	101	0.00
76	T,M	n-Propylbenzene	4.902	5.363	-9.4	104	0.00
77	T,M	1,2,3-Trichloropropane	0.324	0.350	-8.0	107	0.00
78	T,M	Bromobenzene	1.037	1.107	-6.8	106	0.00
79	T,M	1,3,5-Trimethylbenzene	2.829	2.975	-5.2	102	0.00
80	T,M	2-Chlorotoluene	3.182	3.482	-9.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.962	3.191	-7.7	104	0.00
82	T,M	tert-Butylbenzene	0.582	0.593	-1.9	103	0.00
83	T,M	1,2,4-Trimethylbenzene	2.834	3.082	-8.8	104	0.00
84	T,M	sec-Butylbenzene	3.618	3.859	-6.7	100	0.00
85	T,M	p-Isopropyltoluene	2.705	2.941	-8.7	101	0.00
86	T,M	1,3-Dichlorobenzene	1.638	1.785	-9.0	102	0.00
87	T,M	1,4-Dichlorobenzene	1.647	1.751	-6.3	99	0.00
88	T,M	n-Butylbenzene	3.118	3.370	-8.1	99	0.00
89	T,M	1,2-Dichlorobenzene	1.519	1.600	-5.3	99	0.00
90	T,M	1,2-Dibromo-3-chloropropane	0.220	0.225	-2.3	89	0.00
91	T,M	1,2,4-Trichlorobenzene	0.665	0.708	-6.5	96	0.00
92	T,M	Hexachlorobutadiene	0.409	0.415	-1.5	94	-0.02
93	T,M	Naphthalene	1.777	1.904	-7.1	97	0.00
94	T,M	1,2,3-Trichlorobenzene	0.568	0.610	-7.4	94	0.00

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:21 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.36	114	1646951	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.87	117	1803340	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	907077	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.51	111	751200	50.89 ug/l	0.00
Spiked Amount 50.000			Recovery =	101.78%	
39) 1,2-Dichloroethane-d4	9.94	65	898330	49.57 ug/l	0.00
Spiked Amount 50.000			Recovery =	99.14%	
53) Toluene-d8	12.13	98	2282466	49.32 ug/l	0.00
Spiked Amount 50.000			Recovery =	98.64%	
73) 4-Bromofluorobenzene	15.21	95	1092518	48.86 ug/l	0.00
Spiked Amount 50.000			Recovery =	97.72%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.97	116	164640	44.45 ug/l	98
3) Dichlorodifluoromethane	4.04	85	457844	44.19 ug/l	99
4) Chloromethane	4.43	50	527654	44.66 ug/l	100
5) Vinyl chloride	4.65	62	432621	48.86 ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	266800	51.23 ug/l	96
7) Bromomethane	5.29	94	429909	51.58 ug/l	100
8) Chloroethane	5.46	64	275123	46.40 ug/l	100
9) Dichlorofluoromethane	5.75	67	1385777	56.32 ug/l	100
10) Trichlorofluoromethane	5.81	101	780154	50.38 ug/l	100
11) Acrolein	6.50	56	464791	256.86 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.59	151	350468	51.96 ug/l	99
13) 1,1-Dichloroethene	6.63	61	1186181	56.71 ug/l	100
14) Acetone	6.71	43	1355189	248.07 ug/l	99
15) Iodomethane	6.93	142	1418746	57.62 ug/l	100
16) Carbon disulfide	7.04	76	2854925	51.40 ug/l	99
18) Methylene chloride	7.32	49	1336028	56.08 ug/l	99
19) tert-Butyl alcohol	7.36	59	520746	247.58 ug/l	71
20) tert-Butyl methyl ether (M	7.59	73	2216382	57.77 ug/l	100
21) Acrylonitrile	7.66	53	1313050	264.40 ug/l	98
22) trans-1,2-Dichloroethene	7.66	61	1183133	55.78 ug/l	100
23) Isopropyl ether (DIPE)	8.14	45	3392421	59.35 ug/l	99
24) Vinyl acetate	8.17	43	1845249	49.19 ug/l	100
25) 1,1-Dichloroethane	8.23	63	1489682	54.85 ug/l	97
26) tert-Butyl ethyl ether (ET	8.58	59	2648074	56.75 ug/l	100
27) 2-Butanone	8.90	43	2506756	246.41 ug/l	100
28) 2,2-Dichloropropane	8.93	77	1120266	53.15 ug/l	100
29) cis-1,2-Dichloroethene	8.94	96	811590	53.87 ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D
Acq On : 25 Sep 2015 9:14 am
Sample : CVO03I2401
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 28 17:21 2015

Vial: 2
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) 2-Butanol	9.05	45	475362	251.08 ug/l	100
31) Bromochloromethane	9.27	49	1111949	54.29 ug/l	99
32) Tetrahydrofuran	9.30	42	264410	51.12 ug/l	97
33) Chloroform	9.30	83	1587490	54.68 ug/l	99
35) 1,1,1-Trichloroethane	9.55	97	1097104	53.22 ug/l	99
36) Cyclohexane	9.61	56	782039	52.57 ug/l	99
37) 1,1-Dichloropropene	9.73	110	312651	54.67 ug/l	99
38) Carbon tetrachloride	9.76	119	910679	55.07 ug/l	99
40) tert-Amyl methyl ether (TA	9.99	87	495167	53.68 ug/l	95
41) Benzene	10.01	78	2878045	55.19 ug/l	99
42) 1,2-Dichloroethane	10.03	62	1239514	55.67 ug/l	100
43) Trichloroethene	10.73	130	733470	55.74 ug/l	98
44) Methylcyclohexane	10.94	83	838671	50.88 ug/l	97
45) 1,2-Dichloropropane	11.03	63	914106	57.06 ug/l	97
46) 1,4-Dioxane	11.15	88	173388	954.85 ug/l	95
47) Dibromomethane	11.21	93	656584	52.61 ug/l	99
48) Bromodichloromethane	11.33	83	1373486	55.34 ug/l	99
50) cis-1,3-Dichloropropene	11.82	75	1633978	55.88 ug/l	99
51) 4-Methyl-2-pentanone	11.89	43	7160840	260.32 ug/l	100
54) Toluene	12.20	91	3216911	53.33 ug/l	100
55) Ethyl methacrylate	12.37	69	1347687	53.72 ug/l	98
56) trans-1,3-Dichloropropene	12.44	75	1566463	52.98 ug/l	99
57) 1,1,2-Trichloroethane	12.70	97	764020	51.85 ug/l	100
58) 2-Hexanone	12.85	43	5385088	243.97 ug/l	100
59) Tetrachloroethene	12.88	164	589786	50.11 ug/l	99
60) 1,3-Dichloropropane	12.90	76	1449587	51.24 ug/l	98
61) Dibromochloromethane	13.23	129	943632	52.67 ug/l	99
62) 1,2-Dibromoethane	13.41	107	853960	49.25 ug/l	98
63) 1-Chlorohexane	13.71	91	1368744	51.62 ug/l	99
64) Chlorobenzene	13.92	112	1967868	53.95 ug/l	98
65) Ethylbenzene	13.95	91	4022738	54.67 ug/l	100
66) 1,1,1,2-Tetrachloroethane	13.98	131	831288	53.44 ug/l	99
67) m-Xylene & p-Xylene	14.07	91	5988427	104.54 ug/l	99
68) o-Xylene	14.54	91	3234703	52.04 ug/l	99
69) Styrene	14.56	104	2226806	52.94 ug/l	98
71) Bromoform	14.93	173	684599	54.10 ug/l	99
72) Isopropylbenzene	14.93	105	3273433	54.20 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.33	83	1492214	53.28 ug/l	99
75) trans-1,4-Dichloro-2-buten	15.38	53	432965	52.18 ug/l	99
76) n-Propylbenzene	15.42	91	4864480	54.70 ug/l	100
77) 1,2,3-Trichloropropane	15.44	110	317685	54.13 ug/l	98

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:21 2015 Quant Results File: VO03I24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration
DataAcq Meth : VO03I24

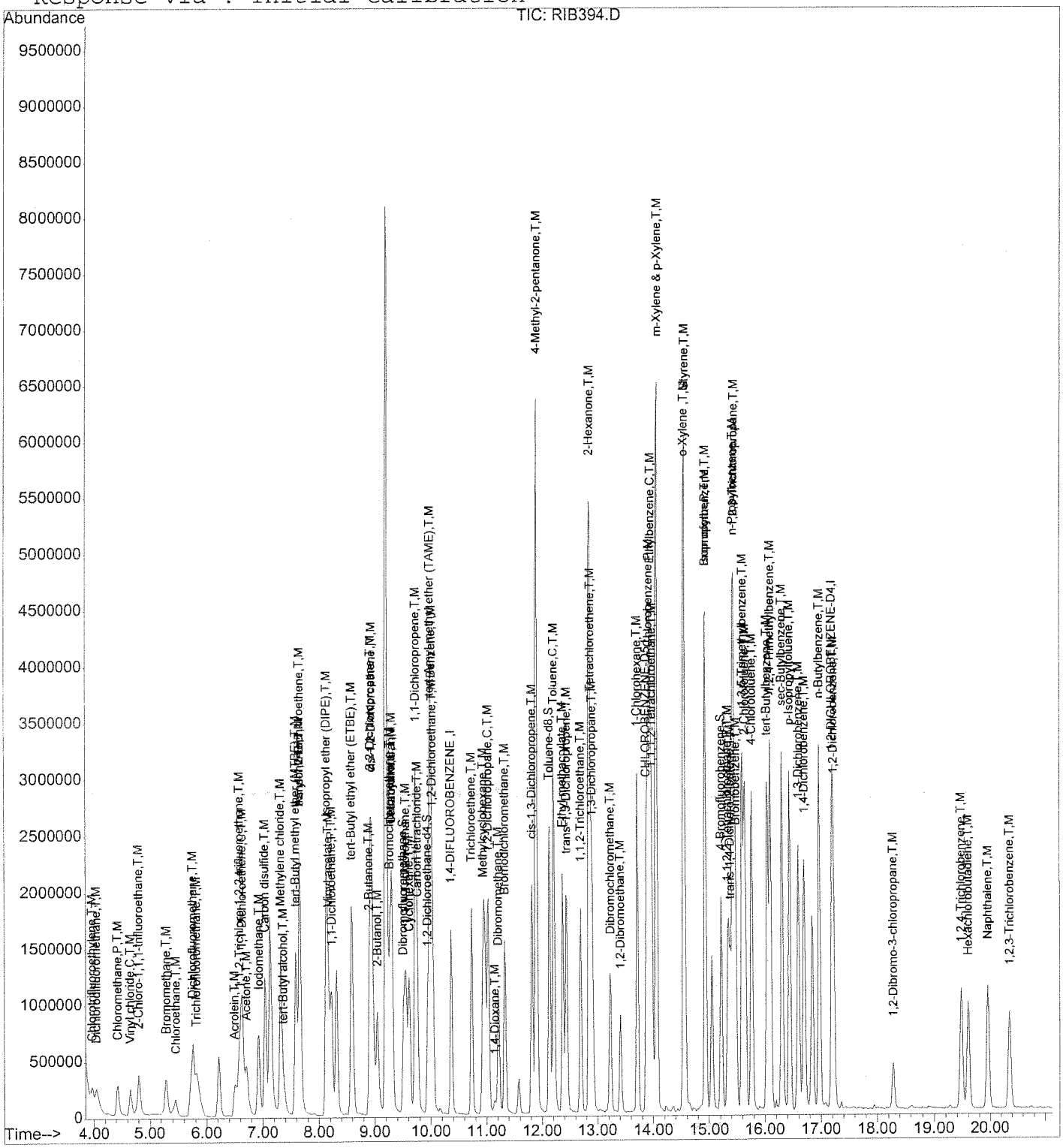
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	1003780	53.35 ug/l	100
79)	1,3,5-Trimethylbenzene	15.60	105	2698425	52.57 ug/l	99
80)	2-Chlorotoluene	15.65	91	3158804	54.73 ug/l	100
81)	4-Chlorotoluene	15.77	91	2894686	53.87 ug/l	99
82)	tert-Butylbenzene	16.03	134	537936	50.94 ug/l	98
83)	1,2,4-Trimethylbenzene	16.09	105	2795343	54.36 ug/l	99
84)	sec-Butylbenzene	16.30	105	3500790	53.34 ug/l	99
85)	p-Isopropyltoluene	16.44	119	2667903	54.36 ug/l	99
86)	1,3-Dichlorobenzene	16.60	146	1618738	54.46 ug/l	99
87)	1,4-Dichlorobenzene	16.70	146	1588708	53.16 ug/l	99
88)	n-Butylbenzene	16.97	91	3057067	54.05 ug/l	100
89)	1,2-Dichlorobenzene	17.22	146	1451615	52.67 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.28	157	204313	51.22 ug/l	99
91)	1,2,4-Trichlorobenzene	19.47	180	642615	53.25 ug/l	100
92)	Hexachlorobutadiene	19.59	225	376393	50.75 ug/l	99
93)	Naphthalene	19.95	128	1726708	53.57 ug/l	99
94)	1,2,3-Trichlorobenzene	20.35	180	553338	53.74 ug/l	99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I25\RIB394.D Vial: 2
Acq On : 25 Sep 2015 9:14 am Operator: CMendo
Sample : CVO03I2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 28 17:21 2015 Quant Results File: VO03I24.RES

Method : D:\HPCHEM\1\METHODS\VO03I24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Mon Sep 28 16:15:52 2015
Response via : Initial Calibration



ANALYTICAL LOG(S)

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 5/20/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-057

BATCH V0Ø3E2Ø6

	Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount (µL)	DF	Matrix W pH <2	Matrix W Cl_2 <5ppm	Matrix S	Notes
01		REB234	BFBØ3E19	A 1 B	NA	NA	NA	NA	07:59
02		35	VUØ3E2Ø1	.02 .1	1.0				bad spike
03		36	2	.04 .2					2 10 ppb
04		37	3	.08 .4					4 20
05		38	4	.2 1					10 50
06		39	5	.4 2					20 100
07		40	6	1 5					50 250
08		41	7	2 10					100 500
09		42	8	4 20					200 1000
10		43	9	6 30					300 1500
11		44	10	10 50					500 2500
12		45	Rinse						
13		46							
14		47	VUØ3E2Ø1						50 250 250
15		48	Rinse						
16		49	LOQV	.1 .5					5 25 10
17		50	LODV	.02 .1					1 5 5 16:34
18		51	Rinse						
19									
20									
21									A = SS, CS_2, Kel/AA/gAd d1,
22									Gases, Freons
23									B: 8260
24									
25									
26									
27									
28									
29									
30									CGM 5/20/15

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	5/20/15
ICAL ID	VUØ3E2Ø

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC	SV1-24-42-3	*	250/1250
DCC CS2 Gases	44-1 48-1		250 250
DCC Freons	42-1		250
DCC 8260	39 47-2 CGM 5/20/15		50/250
BFB	17-1	1	50
IS/SURR. 15 SS	41-2 41-3	1 *	250 250
ICV/LCS CS2 Gases	44-2 45-1	1 1	250 250
ICV/LCS 3Hexd/1 Kel/AA/n	19-1 35-1	5 5	250 250
ICV/LCS 8260 TEM	41-1 SV1-12-49-15	5 .25	50 1000
ICV/LCS 2C111 TEM 2BuCH	49-17 49-16	.25 1.25	1000 1000
Data File Folder	15E20		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-05
Chlorine strip		02-22-3
Methanol		01-23
$NaHSO_4$	SW1A-005-03-22	01-25
Reagent Water	RW5-14-001	J08-B411464
Sand	SW1B-002-43-23	CGM 5/20/15

Electronic Data Archival Location	Date
HPCHEM_VOA/TO03	5/26/15

Comments: All ICAL and QC standards were prepared with 5.0 mL (20% w/v) $NaHSO_4$ solution.

☐ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 5/21/15 Disposed By: CGM

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 9/24/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-057

BATCH VO03I246

	Sample Prep ID	Data File Name	Lab Sample ID	* Sample Amount (µL)	DF	Matrix W pH <2	Matrix W Cl_2 ≤5ppm	Matrix S	Notes	
01		RIB361	BFB03I15		1.0	NA	NA	NA		12:26
02		62	VO03I241	.02					1	5 ppb
03		63	2	.04					2	10
04		64	3	.08					4	20
05		65	4	.2					10	50
06		66	5	.4					20	100
07		67	6	1					50	250
08		68	7	2					100	500
09		69	8	4					200	1000
10		70	9	6					300	1500
11		71	10	10					500	2500
12		72	Rinse							
13		73								
14		74	VO03I241 same analytes are out						50	250 18:40
15		75	Rinse						(refere to page 96)	
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30									CEM 9/24/15	

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	9/24/15
ICAL ID	VO03I24

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC Freons	SV1-24-78-03	*	250
DCC Gases CS2	90-01		250
	85-01		250
DCC Ket/AN/4AAH	86-01		1250
DCC 8260	86-02		250
BFB	76-01	1	50
IS/SURR. 15 SS	88-03	1	250
	89-01	*	250
ICV/LCS Gases CS2	90-02	1	250
	90-03	1	250
ICV/LCS 8260 Ket/A-An	85-02	5	250
	93-01	5	50
ICV/LCS 2 3AAH Bu04	80-03	5	50
	SV1-12-49-16	1.25	1000
ICV/LCS 2CIIIFM TCFM	SV1-25-03-04	.25	1000
	03-05	.25	1000
Data File Folder	15I24		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		-10-20
Methanol		-10-23
$NaHSO_4$	SW1A-005-03-22	-21
Reagent Water	RW5-14-001	JCB-BH1L4
Sand	SW1A-005-11-18-20	

Electronic Data Archival Location CEM	Date
HPCHEM_VOA/TO03 9/24/15	9/28/15

Comments: All ICAL and QC standards were prepared with 5.0 mL (20% w/v) $NaHSO_4$ solution.

☐ Refer to sample weight log

Analyzed By: CEM

Date Disposed: 9/25/15 Disposed By: CEM

3018

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 9/25/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-057

BATCH VO03I242

Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl_2 <5ppm	Matrix S	Notes
01	RIB391	BFB03I17		1.0	NA	NA	NA	07:56
02	↓ 92	IVO03I242		↓	↓	↓	↓	08:23
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 9/25/15

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	9/24/15
ICAL ID	VO03

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC			
DCC			
DCC			
DCC			
BFB	SM-24-76-01	1	
IS/SURR.	89-02	1	50
ICV/LCS	90-02	1	250
ICV/LCS	90-3	1	
ICV/LCS	85-02	5	1000
ICV/LCS	93-01	5	
ICV/LCS	80-03	5	
ICV/LCS	SW-12-49-16	1.25	
ICV/LCS	SW-25-03-04	.25	
	08-05	.25	
Data File Folder	15I25		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		-10-20
Methanol	CGM 9/25/15	-10-23
$NaHSO_4$	SW1A-005-~~0322~~ 03-22	-21
Reagent Water	RW5-14-001	
Sand	SW1A-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO03	9/28/15

Comments:

☐ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 9/26/15 Disposed By: CGM

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 9/22/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-057

BATCH CVU03E2040

Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH < 2	Matrix W Cl_2 < 5ppm	Matrix S	Notes
01	RIB331	BFB03I14						13:23
02	32	Std. Check						
03	33	CVU03E2040						
04	34	VS03I14L	5.0g	1.0				
05	35	C						
06	36	Rinse						
07	37	VS03I14B	5.0g	1.0				
08	38	15I116-08R	☆	☆				
09	39	04R						SS4↑
10	40	05R						↓
11	41	07R						↓
12	42	10R						153↓, SS4↑
13	43	11R						SS4↑
14	44	12R						↓
15	45	15I188-01R						SS4↑
16	46	02R						↓
17	47	03R						↓
18	48	04R						↓
19	49	15I185-01						~~SS4A~~ ✓ ok SS4 9/19/15 RR
20	50	02						bad purge 3I5↓ RR
21	51	03						
22	52	15I116-08M						
23	53	08S						
24	54	CVU03E2040A						00:37
25	55-60	Rinse						
26								
27								
28								
29								
30								CGM 9/22/15

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	5/20/15
ICAL ID	VU02E20

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC	SV1-24-75-01	1	
DCC	79-01 81-03	1 1	
DCC	80-01	5	
DCC	82-01	5	
BFB	75-03	1	50
IS/SURR.	84-01	1	/250
ICV/LCS	87-01 81-01	1 1	/100
ICV/LCS	85-02 40-03	5 5	
ICV/LCS	80-03	5	
ICV/LCS	SV1-12-49-16	1.25	
Data File Folder	15I22		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		10-20
Methanol		10-23
$NaHSO_4$	SW1A-005-03-22	21
Reagent Water	RW5-14-001	
Sand	SW1A-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO03	

Comments:

☆ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 9/23/15 Disposed By: CGM

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 9/25/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-057

BATCH CVO03I24Ø1

Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl_2 <5ppm	Matrix S	Notes
01	RIB393	BFBØ3I18						08:47 ~~07:56~~ CGM 9/25/15
02	394	CVOØ3I24Ø1	CGM 9/25/15					
03	395	VSØ3I18L	5.0 mL	1.0				
04	396	C						
05	397	B						dichlorodifluoromethane contamination
06	398	Q						
07	399	Test1						
08	400	Test 2						
09	401	15I185-01R	☆	☆			✓	* - record only
10	402	02R					✓	*
11	403	15I210-02					✓	* RR
12	404	15I211-05					✓	
13	405	15I210-03					✓	* RR
14	406	04					✓	* RR
15	407	15I211-01					✓	
16	408	02					✓	
17	409	03					✓	
18	410	04					✓	
19	411	15I232-01					✓	SSA, RR
20	412	02					✓	
21	413	15I211-05M					✓	3 out
22	414	05S					✓	4 out } RPD all in
23	415	CVOØ3I24Ø1A						20:22
24	416-420	Rinse						
25								
26								* DCDFM contamination
27								
28								
29								
30								CGM 9/25/15

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	9/24/15
ICAL ID	VOØ3I24

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC	SV1-24-81-03	1	
DCC	79-01 / 75-01	1 / 1	
DCC	80-01	5	
DCC	82-01	5	SV/250/1000
BFB	CGM 9/25/15 76-01	1	
IS/SURR.	89-01	1	
ICV/LCS	81-01 / 87-01	1 / 1	
ICV/LCS	85-02 / 91-02	5 / 5	
ICV/LCS	80-03	5	
ICV/LCS	SV1-12-49-16	1.25	
Data File Folder	15I25		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		-10-20
Methanol	CGM 9/25/15	-10-23
$NaHSO_4$	SW1A-005-03-22	-21
Reagent Water	RW5-14-01	
Sand	SW1A-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO03	9/28/15

Comments:

☆ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 9/26/15 Disposed By: CGM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

PRESERVATION LOG FOR VOLATILES

15VPI026

PrepBatchID	Lab Sample ID	W1 (g)	DateTime	Wf (g)	DateTime	ExpWs(g)	Ws(g)	Prep□Factor	Comments
15VPI02601	15I185-01	32.454	9/17/15 15:50	37.21	9/17/15 15:51	5	4.756	1.05	
15VPI02602	15I185-02	30.996	9/17/15 15:51	35.51	9/17/15 15:51	5	4.514	1.11	
15VPI02603	15I185-03	31.077	9/17/15 15:51	35.23	9/17/15 15:51	5	4.153	1.2	
15VPI02604	15I185-01R	30.862	9/17/15 15:51	35.35	9/17/15 15:51	5	4.488	1.11	
15VPI02605	15I185-02R	31.2	9/17/15 15:51	35.51	9/17/15 15:52	5	4.31	1.16	
15VPI02606	15I185-03R	31.138	9/17/15 15:52	35.29	9/17/15 15:52	5	4.152	1.2	

☑ EMAX-5035 Rev. 3 ☑ Balance Calibration Check performed prior to use Surrogate ID: Prepared By: RTorra

☐ Encore+$NaHSO_4 \cdot H_2O$ ☑ BalanceID 25451062 ☐ BalanceID 25650797 BlankSoil Lot#: Standard Added By: N/A

☐ Frozen Sample ☐ Pre-weighed vial w/ H2O NaHSO4H2O: LOT # 143424 Witnessed By: DNguye

☑ Pre-weighed vial w/ NaHSO4•H2O soln LOT # 0327101X Expected Ws(g): 5 Extract Rcvd By: DNguye

☐ Volumetric dispenser was checked with 5-ml volumetric flask Sample Location: VW01 Checked By: DNguye

W1=Weight of Vial + Stirrer+NaHSO4•H2O+Solvent Wf=W1 + Sample

VOLATILE ORGANICS
TCLP

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/27/15 17:23
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	09/27/15 17:23
Lab Samp ID:	I185-04	Dilution Factor:	10
Lab File ID:	RIB464	Matrix :	LEACHATE
Ext Btch ID:	VS03I21	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	508	500.0	102	70-120
4-BROMOFLUOROBENZENE	504	500.0	101	75-120
TOLUENE-D8	507	500.0	101	85-120
DIBROMOFLUOROMETHANE	531	500.0	106	85-115

DateTime Leached: 09/23/15 19:30

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB464.D Vial: 12
Acq On : 27 Sep 2015 5:23 pm Operator: CMendo
Sample : 15I185-04 0.5mL Inst : 03
Misc : DF=10 TCLP Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:46 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.38	114	2151061	50.00	ug/l	0.01
52) CHLOROBENZENE-D5	13.90	117	2197730	50.00	ug/l	0.01
70) 1,2-DICHLOROBENZENE-D4	17.20	152	1012720	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	953570	53.14	ug/l	0.00
Spiked Amount 50.000			Recovery	=	106.28%	
39) 1,2-Dichloroethane-d4	9.95	65	1095221	50.75	ug/l	0.00
Spiked Amount 50.000			Recovery	=	101.50%	
53) Toluene-d8	12.14	98	2688162	50.65	ug/l	0.01
Spiked Amount 50.000			Recovery	=	101.30%	
73) 4-Bromofluorobenzene	15.22	95	1255165	50.37	ug/l	0.01
Spiked Amount 50.000			Recovery	=	100.74%	
Target Compounds						Qvalue
14) Acetone	6.73	43	27595	4.44	ug/l	94
17) Methyl acetate	7.13	43	35730	2.80	ug/l	98
18) Methylene chloride	7.33	49	74199	2.39	ug/l	94

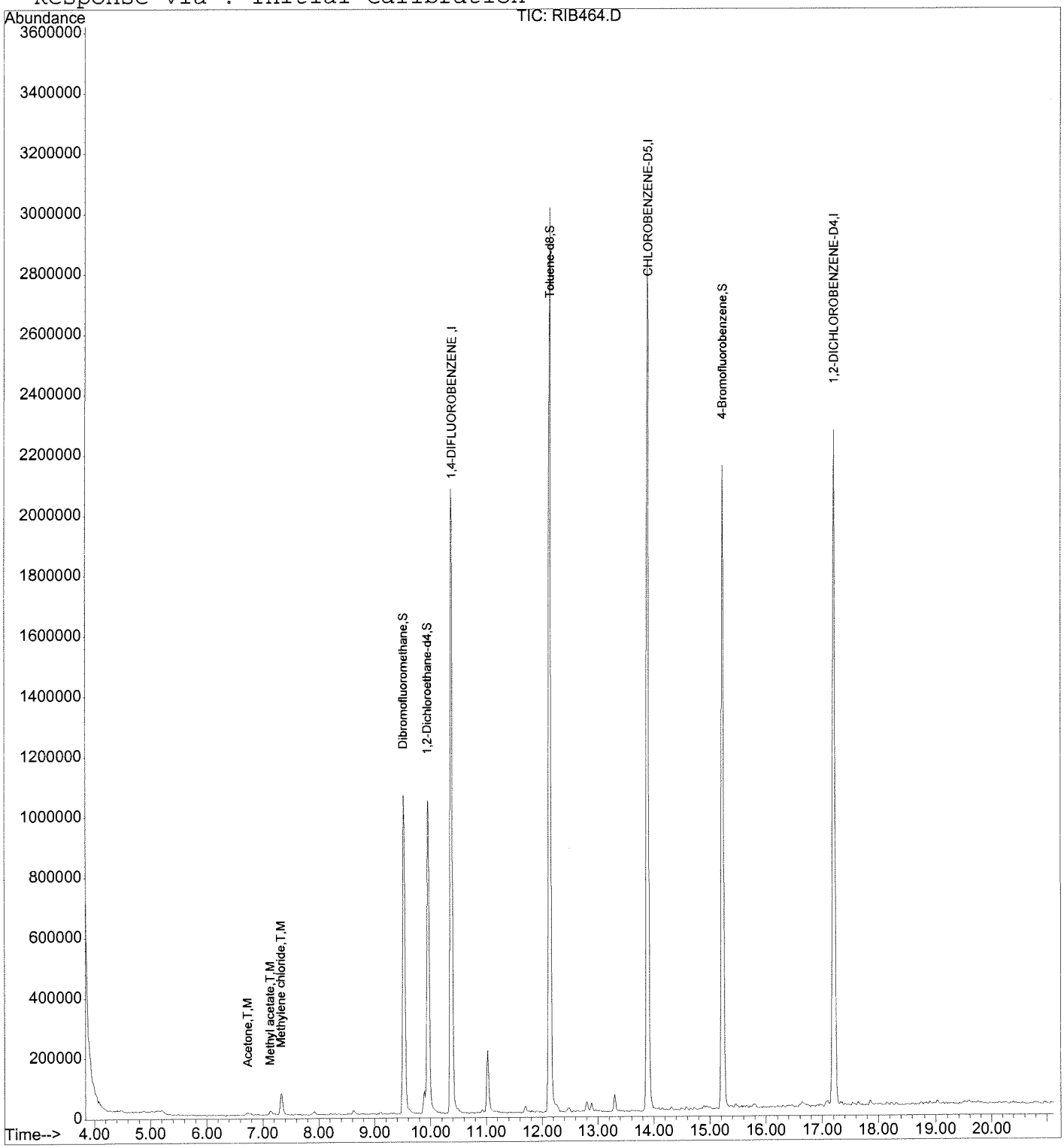
(#) = qualifier out of range (m) = manual integration

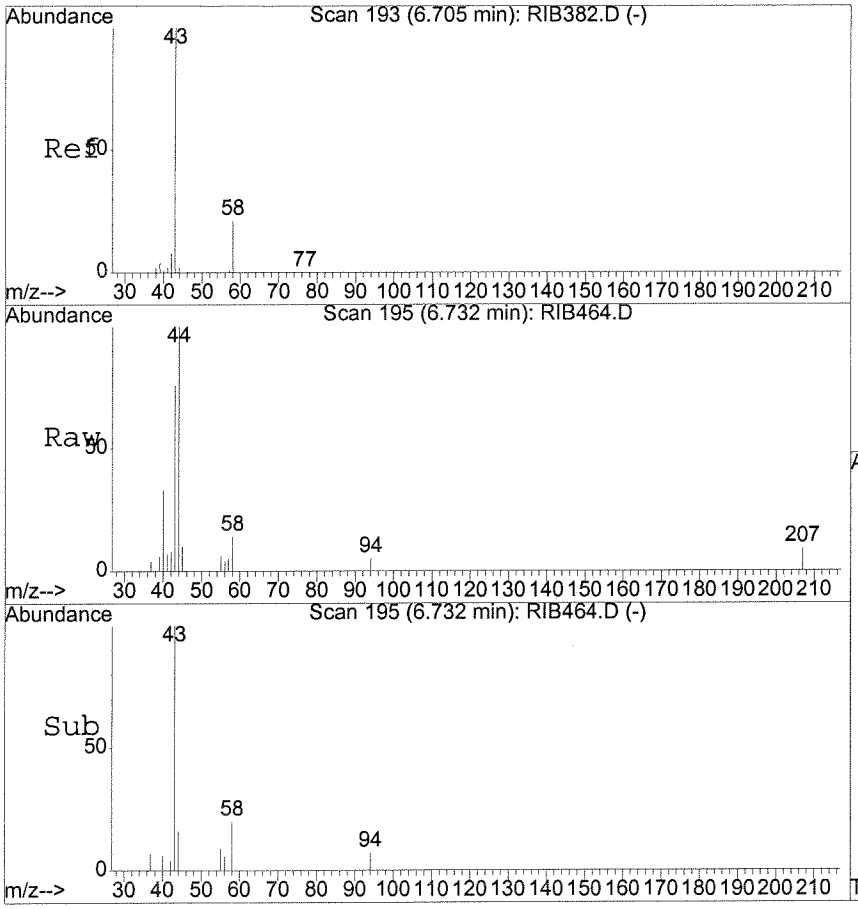
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB464.D
Acq On : 27 Sep 2015 5:23 pm
Sample : 15I185-04 0.5mL
Misc : DF=10 TCLP
MS Integration Params: RTE.P
Quant Time: Oct 7 21:46 2015

Vial: 12
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration

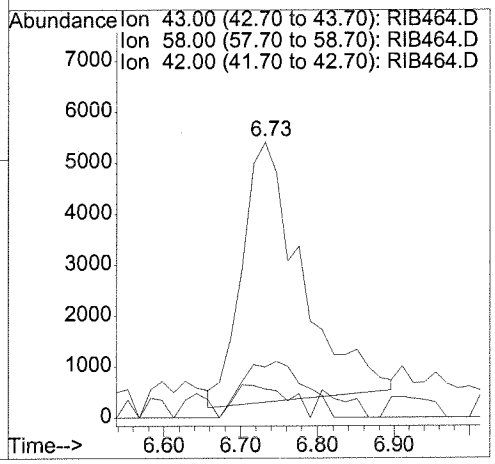


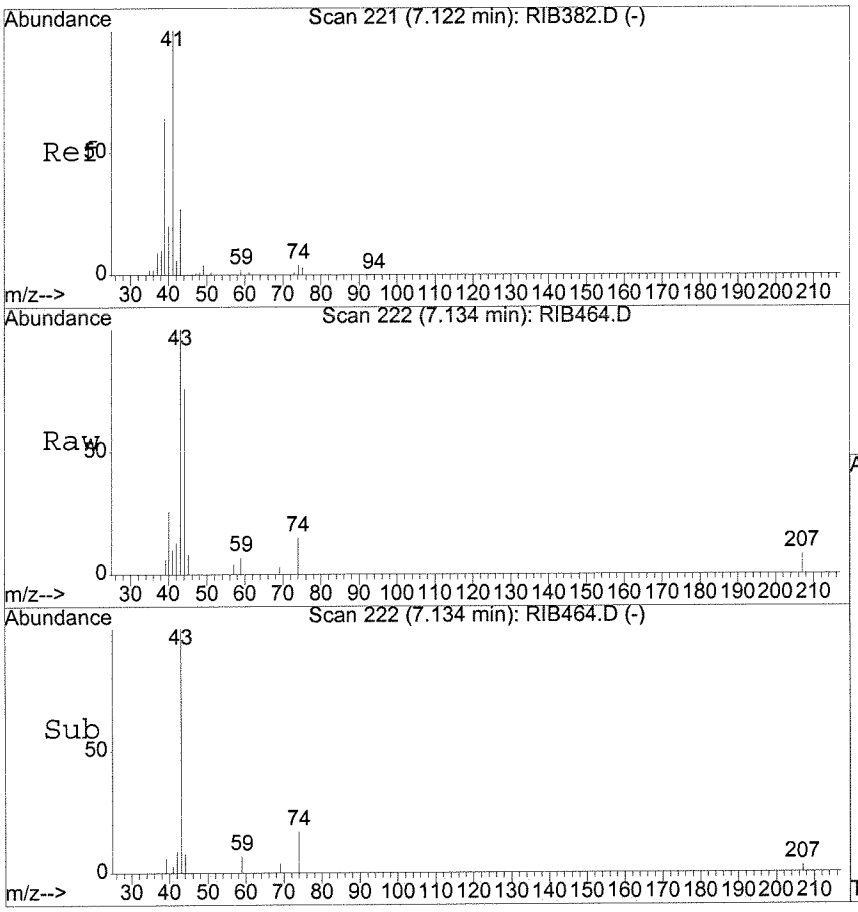


#14
Acetone
Concen: 4.44 ug/l
RT: 6.73 min Scan# 195
Delta R.T. 0.03 min
Lab File: RIB464.D
Acq: 27 Sep 2015 5:23 pm

Tgt Ion: 43 Resp: 27595

Ion	Ratio	Lower	Upper
43	100		
58	22.3	0.0	49.8
42	9.7	0.0	37.3

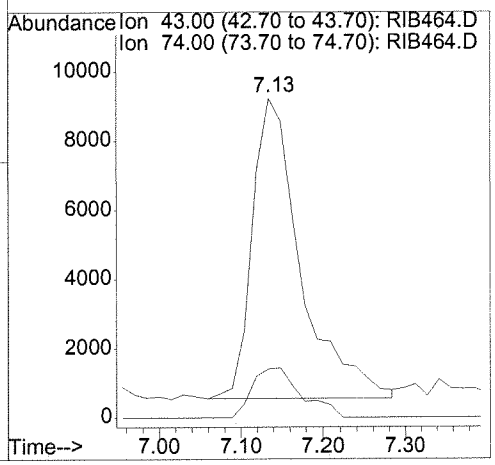


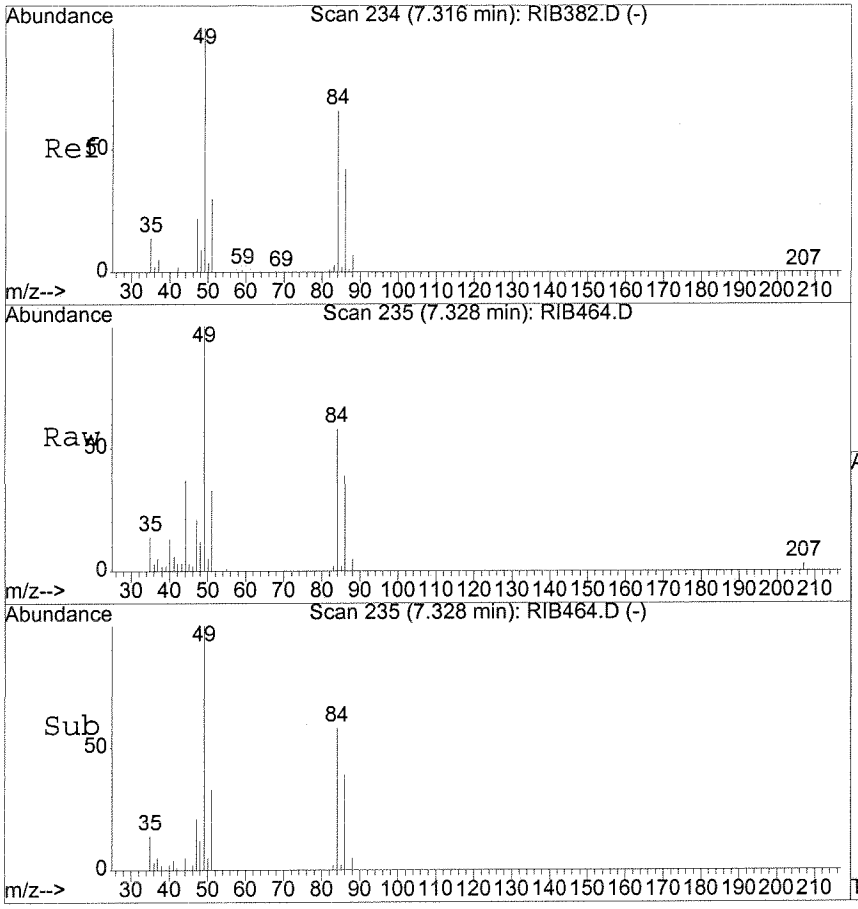


#17
Methyl acetate
Concen: 2.80 ug/l
RT: 7.13 min Scan# 222
Delta R.T. 0.01 min
Lab File: RIB464.D
Acq: 27 Sep 2015 5:23 pm

Tgt Ion: 43 Resp: 35730

Ion	Ratio	Lower	Upper
43	100		
74	14.6	0.0	45.6

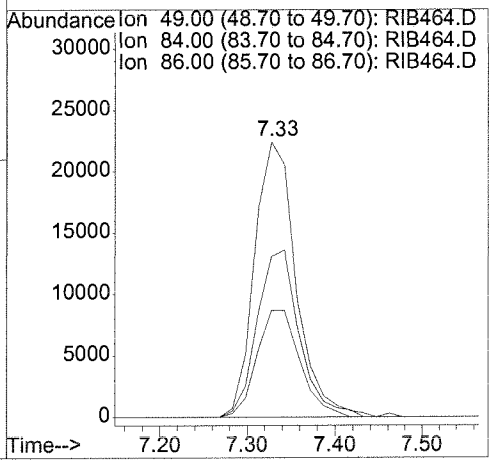




#18
Methylene chloride
Concen: 2.39 ug/l
RT: 7.33 min Scan# 235
Delta R.T. 0.01 min
Lab File: RIB464.D
Acq: 27 Sep 2015 5:23 pm

Tgt Ion: 49 Resp: 74199

Ion	Ratio	Lower	Upper
49	100		
84	61.7	37.7	97.7
86	40.3	13.1	73.1



METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/27/15 17:51
Sample ID	: CAFB-FT006-WC2-002	Date Analyzed:	09/27/15 17:51
Lab Samp ID	: I185-05	Dilution Factor:	10
Lab File ID	: RIB465	Matrix	: LEACHATE
Ext Btch ID	: VS03I21	% Moisture	: NA
Calib. Ref.	: RIB382	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	544	500.0	109	70-120
4-BROMOFLUOROBENZENE	495	500.0	99.0	75-120
TOLUENE-D8	492	500.0	98.5	85-120
DIBROMOFLUOROMETHANE	564	500.0	113	85-115

DateTime Leached: 09/23/15 19:30

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB465.D
Acq On : 27 Sep 2015 5:51 pm
Sample : 15I185-05 0.5mL
Misc : DF=10 TCLP
MS Integration Params: RTE.P
Quant Time: Oct 7 21:46 2015

Vial: 13
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2125745	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	2282581	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	1021202	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	1000534	56.42	ug/l	0.00
Spiked Amount 50.000			Recovery = 112.84%			
39) 1,2-Dichloroethane-d4	9.95	65	1160047	54.40	ug/l	0.00
Spiked Amount 50.000			Recovery = 108.80%			
53) Toluene-d8	12.14	98	2714058	49.24	ug/l	0.01
Spiked Amount 50.000			Recovery = 98.48%			
73) 4-Bromofluorobenzene	15.22	95	1243212	49.48	ug/l	0.01
Spiked Amount 50.000			Recovery = 98.96%			
Target Compounds						Qvalue
14) Acetone	6.73	43	23592	3.84	ug/l	94
17) Methyl acetate	7.13	43	25324	2.01	ug/l	92
18) Methylene chloride	7.33	49	76172	2.48	ug/l	98
58) 2-Hexanone	12.80	43	12224	0.65	ug/l	59

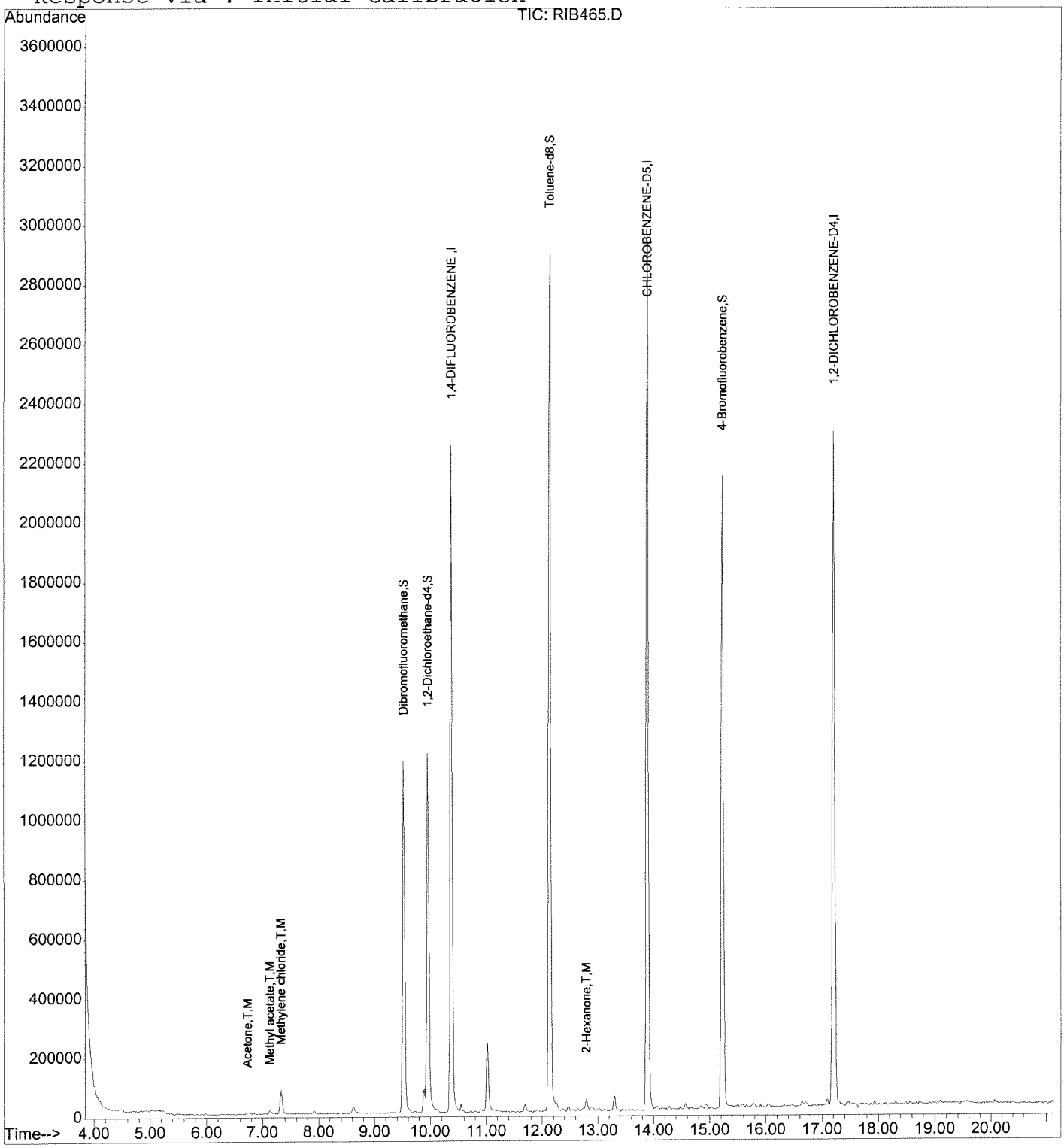
(#) = qualifier out of range (m) = manual integration

Quantitation Report

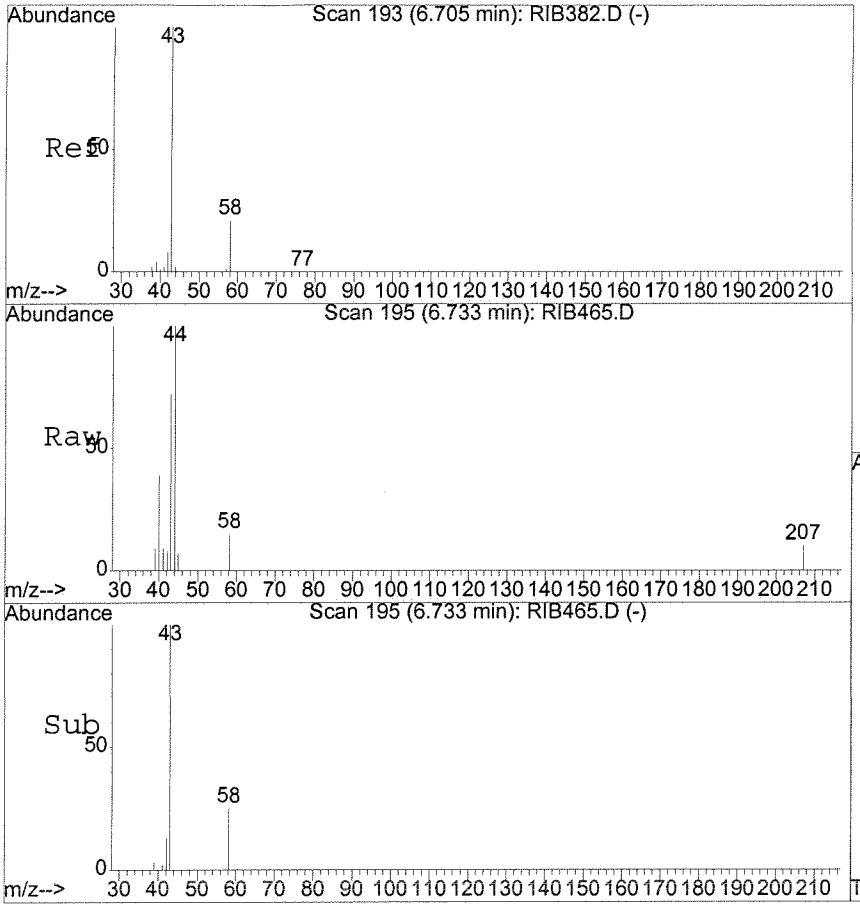
Data File : D:\HPCHEM\1\DATA\15I27\RIB465.D
Acq On : 27 Sep 2015 5:51 pm
Sample : 15I185-05 0.5mL
Misc : DF=10 TCLP
MS Integration Params: RTE.P
Quant Time: Oct 7 21:46 2015

Vial: 13
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



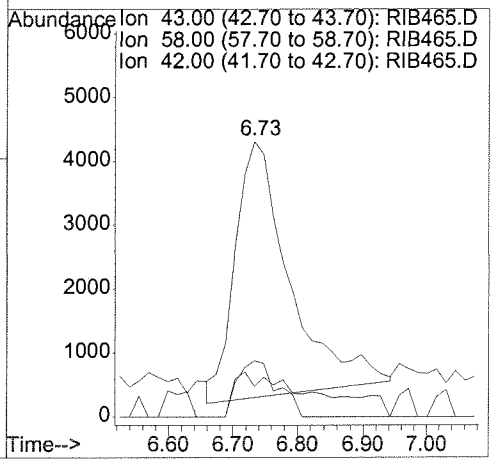
322

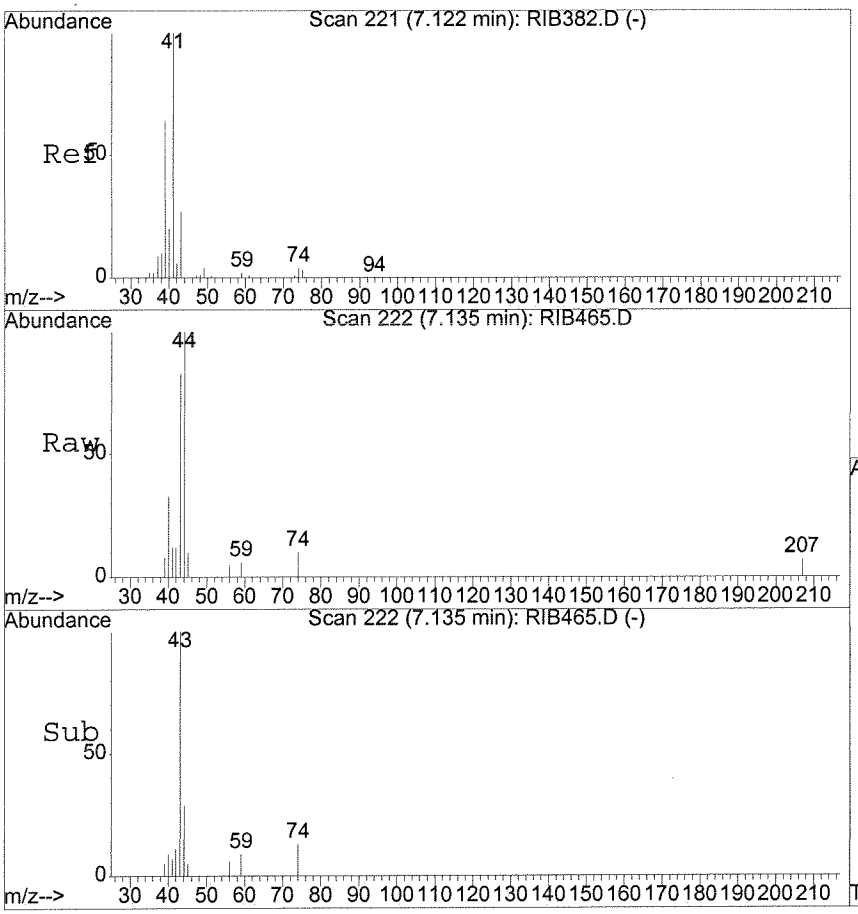


#14
Acetone
Concen: 3.84 ug/l
RT: 6.73 min Scan# 195
Delta R.T. 0.03 min
Lab File: RIB465.D
Acq: 27 Sep 2015 5:51 pm

Tgt Ion: 43 Resp: 23592

Ion	Ratio	Lower	Upper
43	100		
58	16.1	0.0	49.8
42	6.7	0.0	37.3

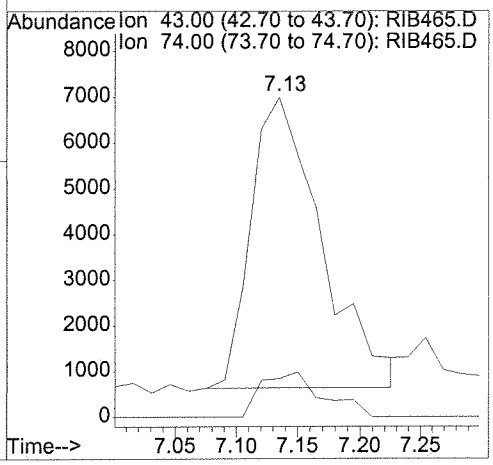


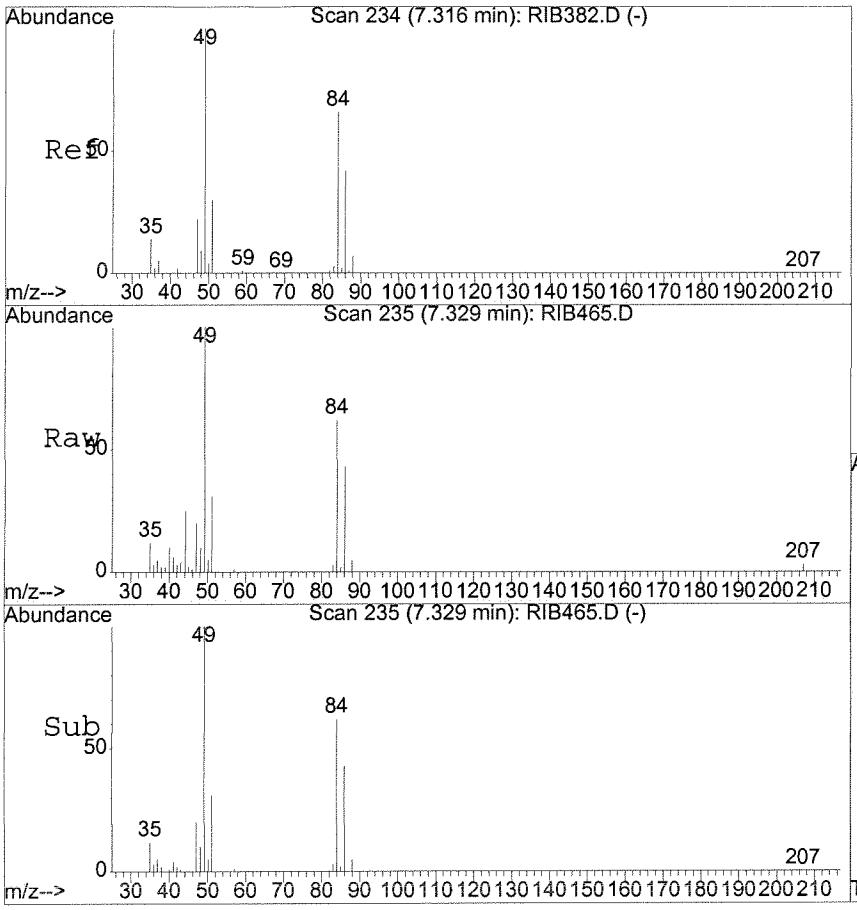


#17
Methyl acetate
Concen: 2.01 ug/l
RT: 7.13 min Scan# 222
Delta R.T. 0.01 min
Lab File: RIB465.D
Acq: 27 Sep 2015 5:51 pm

Tgt Ion: 43 Resp: 25324

Ion	Ratio	Lower	Upper
43	100		
74	12.0	0.0	45.6

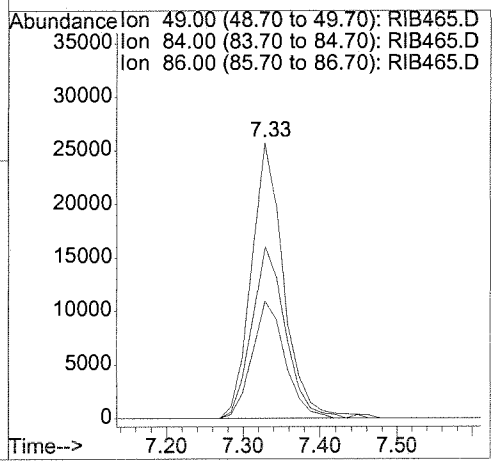


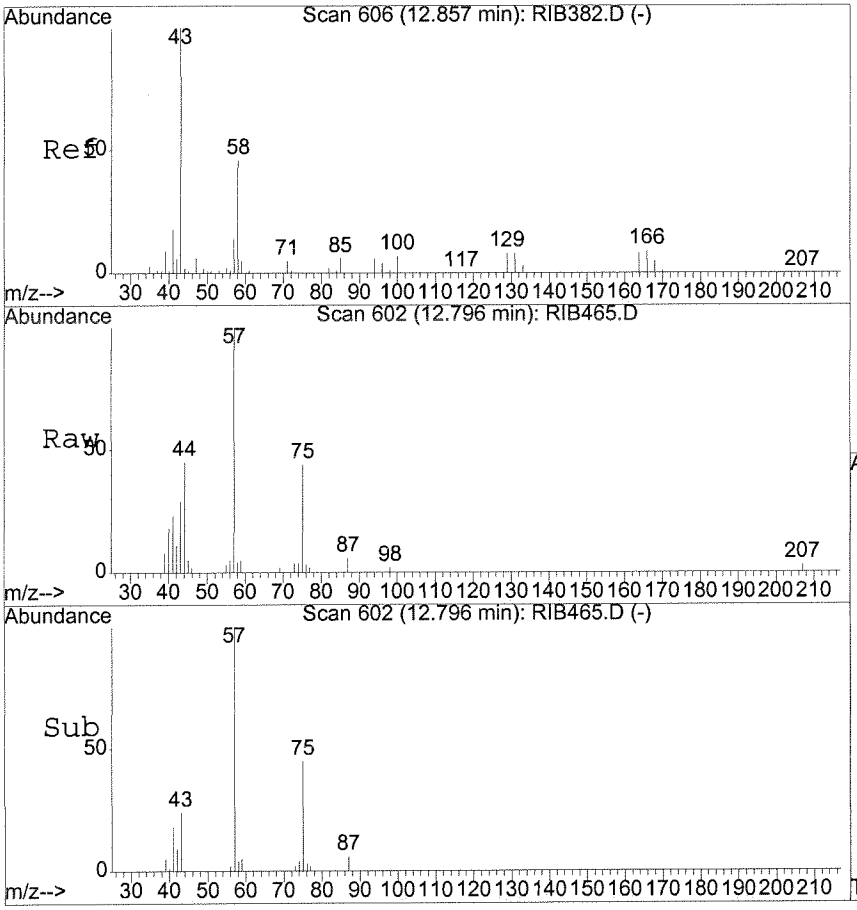


#18
Methylene chloride
Concen: 2.48 ug/l
RT: 7.33 min Scan# 235
Delta R.T. 0.01 min
Lab File: RIB465.D
Acq: 27 Sep 2015 5:51 pm

Tgt Ion: 49 Resp: 76172

Ion	Ratio	Lower	Upper
49	100		
84	64.9	37.7	97.7
86	43.2	13.1	73.1

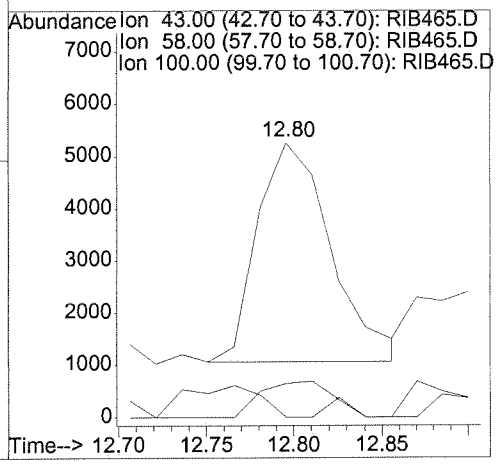




#58
2-Hexanone
Concen: 0.65 ug/l
RT: 12.80 min Scan# 602
Delta R.T. -0.06 min
Lab File: RIB465.D
Acq: 27 Sep 2015 5:51 pm

Tgt Ion: 43 Resp: 12224

Ion	Ratio	Lower	Upper
43	100		
58	15.9	14.4	74.4
100	14.9	0.0	36.7



METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/27/15 18:19
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	09/27/15 18:19
Lab Samp ID:	I185-06	Dilution Factor:	10
Lab File ID:	RIB466	Matrix :	LEACHATE
Ext Btch ID:	VS03I21	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	490	500.0	98.1	70-120
4-BROMOFLUOROBENZENE	500	500.0	100	75-120
TOLUENE-D8	512	500.0	102	85-120
DIBROMOFLUOROMETHANE	530	500.0	106	85-115

DateTime Leached: 09/23/15 19:30

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB466.D Vial: 14
Acq On : 27 Sep 2015 6:19 pm Operator: CMendo
Sample : 15I185-06 0.5mL Inst : 03
Misc : DF=10 TCLP Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:46 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2187259	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	2231545	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	1011023	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	967474	53.03	ug/l	0.00
Spiked Amount 50.000			Recovery = 106.06%			
39) 1,2-Dichloroethane-d4	9.95	65	1076216	49.05	ug/l	0.00
Spiked Amount 50.000			Recovery = 98.10%			
53) Toluene-d8	12.14	98	2757057	51.16	ug/l	0.01
Spiked Amount 50.000			Recovery = 102.32%			
73) 4-Bromofluorobenzene	15.22	95	1244026	50.01	ug/l	0.01
Spiked Amount 50.000			Recovery = 100.02%			
Target Compounds						Qvalue
14) Acetone	6.73	43	24702	3.91	ug/l	97
17) Methyl acetate	7.13	43	42755	3.29	ug/l	96
18) Methylene chloride	7.33	49	79739	2.52	ug/l	99

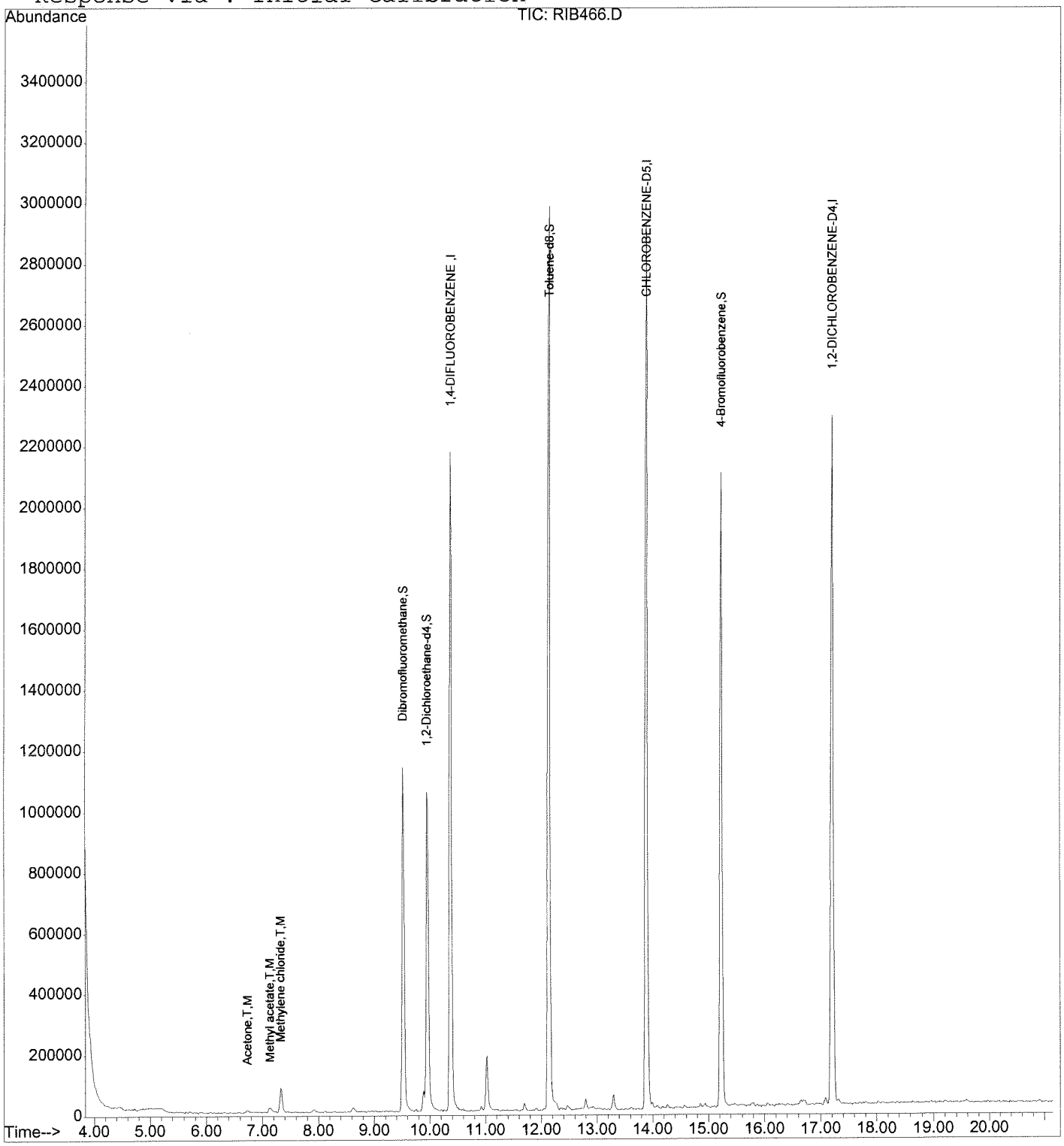
(#) = qualifier out of range (m) = manual integration

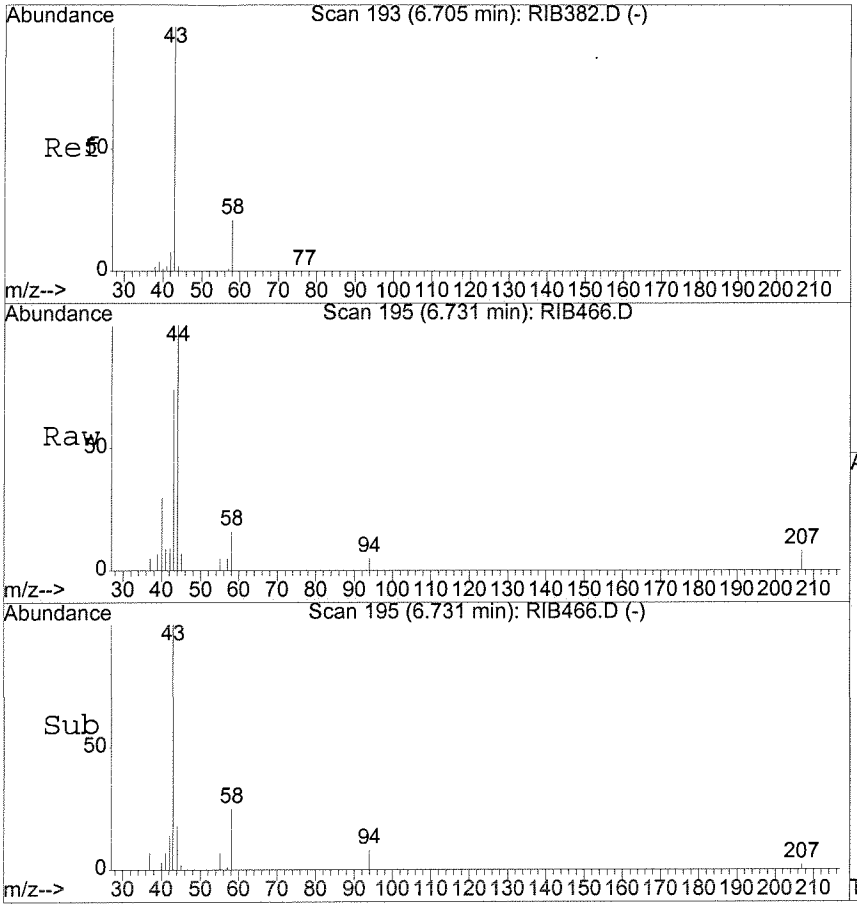
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB466.D
Acq On : 27 Sep 2015 6:19 pm
Sample : 15I185-06 0.5mL
Misc : DF=10 TCLP
MS Integration Params: RTE.P
Quant Time: Oct 7 21:46 2015

Vial: 14
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration

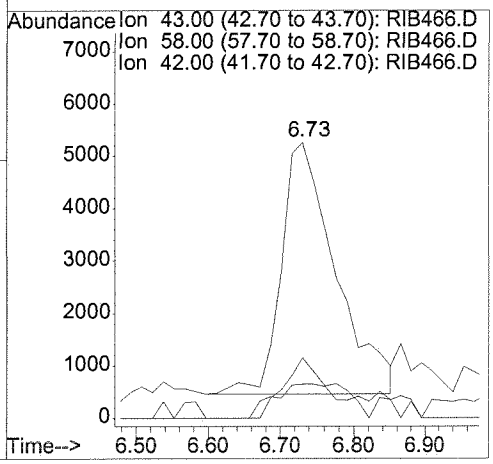


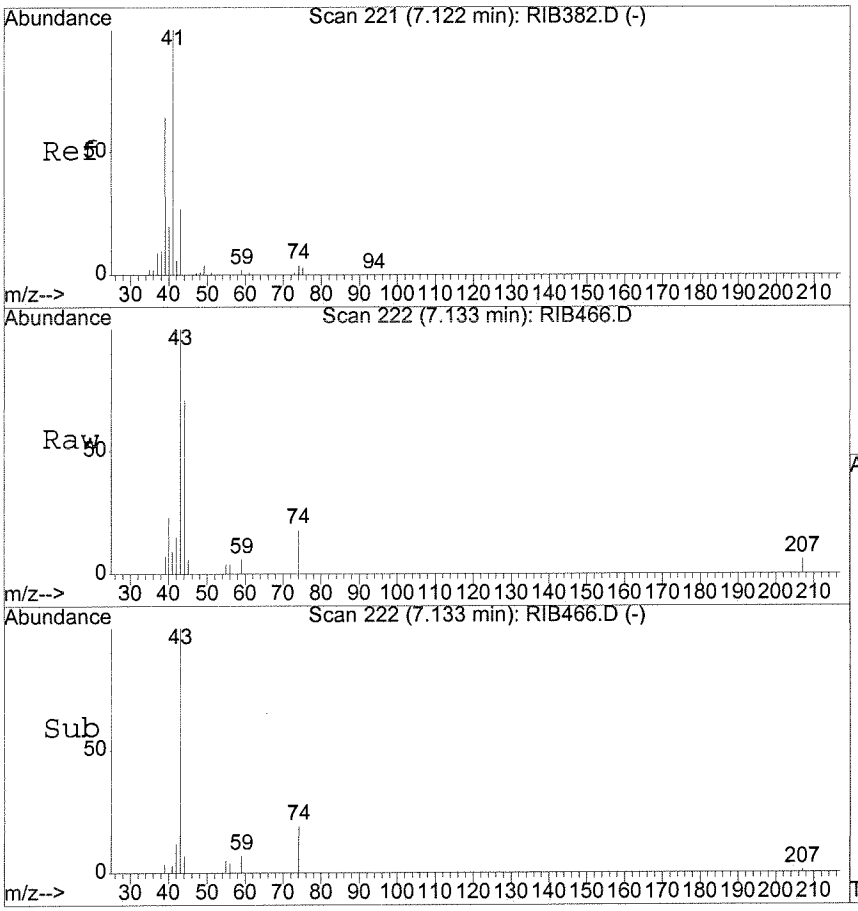


#14
Acetone
Concen: 3.91 ug/l
RT: 6.73 min Scan# 195
Delta R.T. 0.03 min
Lab File: RIB466.D
Acq: 27 Sep 2015 6:19 pm

Tgt Ion: 43 Resp: 24702

Ion	Ratio	Lower	Upper
43	100		
58	21.3	0.0	49.8
42	6.7	0.0	37.3

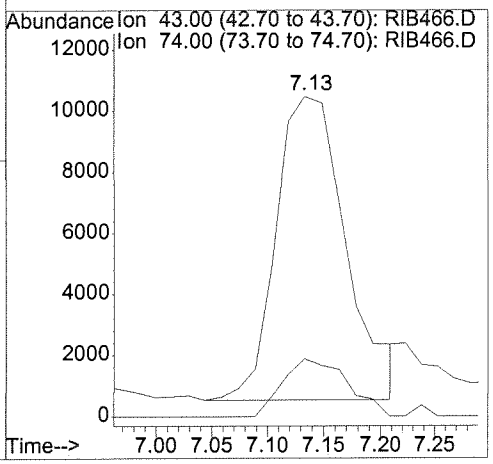


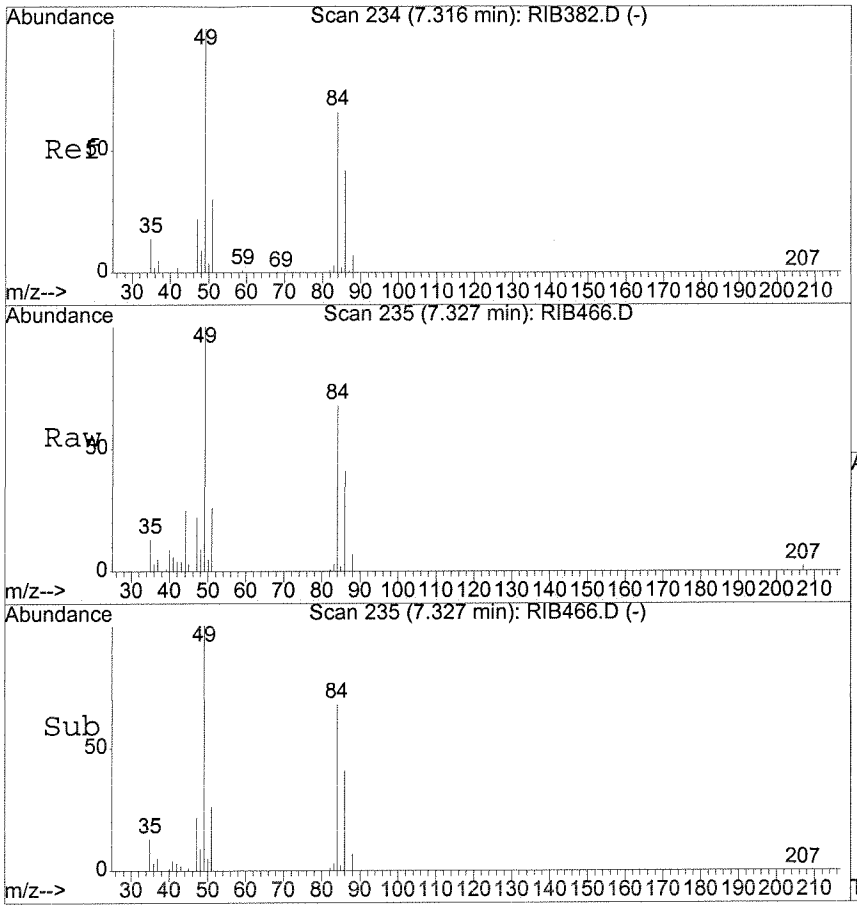


#17
Methyl acetate
Concen: 3.29 ug/l
RT: 7.13 min Scan# 222
Delta R.T. 0.01 min
Lab File: RIB466.D
Acq: 27 Sep 2015 6:19 pm

Tgt Ion: 43 Resp: 42755

Ion	Ratio	Lower	Upper
43	100		
74	17.4	0.0	45.6

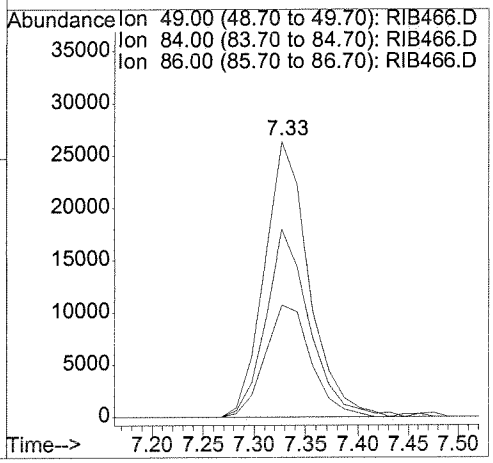




#18
Methylene chloride
Concen: 2.52 ug/l
RT: 7.33 min Scan# 235
Delta R.T. 0.01 min
Lab File: RIB466.D
Acq: 27 Sep 2015 6:19 pm

Tgt Ion: 49 Resp: 79739

Ion	Ratio	Lower	Upper
49	100		
84	67.2	37.7	97.7
86	42.2	13.1	73.1



QC SUMMARIES

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/27/15
Batch No.	: 15I185	Date Extracted:	09/27/15 14:36
Sample ID:	MBLK1W	Date Analyzed:	09/27/15 14:36
Lab Samp ID:	VS03I21B	Dilution Factor:	1
Lab File ID:	RIB458	Matrix :	WATER
Ext Btch ID:	VS03I21	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	5.0	0.50	1.0
2-BUTANONE	ND	10	2.5	5.0
CARBON TETRACHLORIDE	ND	5.0	0.54	1.0
CHLOROBENZENE	ND	5.0	0.50	1.0
CHLOROFORM	ND	5.0	0.50	1.0
1,4-DICHLOROBENZENE	ND	5.0	0.50	1.0
1,2-DICHLOROETHANE	ND	5.0	0.50	1.0
1,1-DICHLOROETHENE	ND	5.0	0.50	1.0
TETRACHLOROETHENE	ND	5.0	0.50	1.0
TRICHLOROETHENE	ND	5.0	0.50	1.0
VINYL CHLORIDE	ND	5.0	0.61	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	50.3	50.00	101	70-120
4-BROMOFLUOROBENZENE	51.5	50.00	103	75-120
TOLUENE-D8	49.8	50.00	99.7	85-120
DIBROMOFLUOROMETHANE	55.1	50.00	110	85-115

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/5030B/8260B

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VS03I21B	VS03I21L	VS03I21C		
LAB FILE ID:	RIB458	RIB455	RIB456		
DATE EXTRACTED:	09/27/1514:36	09/27/1513:12	09/27/1513:40	DATE COLLECTED:	NA
DATE ANALYZED:	09/27/1514:36	09/27/1513:12	09/27/1513:40	DATE RECEIVED:	09/27/15
PREP. BATCH:	VS03I21	VS03I21	VS03I21		
CALIB. REF:	RIB382	RIB382	RIB382		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Benzene	ND	50.0	46.8	94	50.0	48.4	97	3	80-120	30
2-Butanone	ND	250	234	93	250	217	87	8	30-150	30
Carbon Tetrachloride	ND	50.0	46.4	93	50.0	48.2	96	4	65-140	30
Chlorobenzene	ND	50.0	47.9	96	50.0	48.7	97	2	80-120	30
Chloroform	ND	50.0	45.0	90	50.0	44.4	89	1	65-135	30
1,4-Dichlorobenzene	ND	50.0	49.9	100	50.0	48.3	97	3	75-125	30
1,2-Dichloroethane	ND	50.0	44.6	89	50.0	44.2	88	1	70-130	30
1,1-Dichloroethene	ND	50.0	48.7	97	50.0	47.8	96	2	70-130	30
Tetrachloroethene	ND	50.0	47.1	94	50.0	48.3	97	3	45-150	30
Trichloroethene	ND	50.0	47.3	95	50.0	47.8	96	1	70-125	30
Vinyl Chloride	ND	50.0	51.9	104	50.0	50.7	101	2	50-145	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50.0	46.6	93	50.0	47.1	94	70-120
4-Bromofluorobenzene	50.0	48.1	96	50.0	48.6	97	75-120
Toluene-d8	50.0	52.8	106	50.0	51.2	102	85-120
Dibromofluoromethane	50.0	51.2	102	50.0	49.1	98	85-115

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/27/15
Batch No.	: 15I185	Date Extracted:	09/27/15 15:32
Sample ID:	MBLK2W	Date Analyzed:	09/27/15 15:32
Lab Samp ID:	TVI003SB	Dilution Factor:	10
Lab File ID:	RIB460	Matrix :	LEACHATE
Ext Btch ID:	VS03I21	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	516	500.0	103	70-120
4-BROMOFLUOROBENZENE	498	500.0	99.6	75-120
TOLUENE-D8	511	500.0	102	85-120
DIBROMOFLUOROMETHANE	545	500.0	109	85-115

DateTime Leached: 09/23/15 19:30

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB458.D Vial: 6
Acq On : 27 Sep 2015 2:36 pm Operator: CMendo
Sample : VS03I21B 5.0mL Inst : 03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:41 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2159054	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	2207952	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	942765	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	992863	55.13	ug/l	0.00
Spiked Amount 50.000			Recovery = 110.26%			
39) 1,2-Dichloroethane-d4	9.95	65	1090011	50.32	ug/l	0.00
Spiked Amount 50.000			Recovery = 100.64%			
53) Toluene-d8	12.14	98	2657522	49.84	ug/l	0.01
Spiked Amount 50.000			Recovery = 99.68%			
73) 4-Bromofluorobenzene	15.22	95	1195569	51.54	ug/l	0.01
Spiked Amount 50.000			Recovery = 103.08%			
Target Compounds						Qvalue
18) Methylene chloride	7.33	49	83758	2.68	ug/l	99

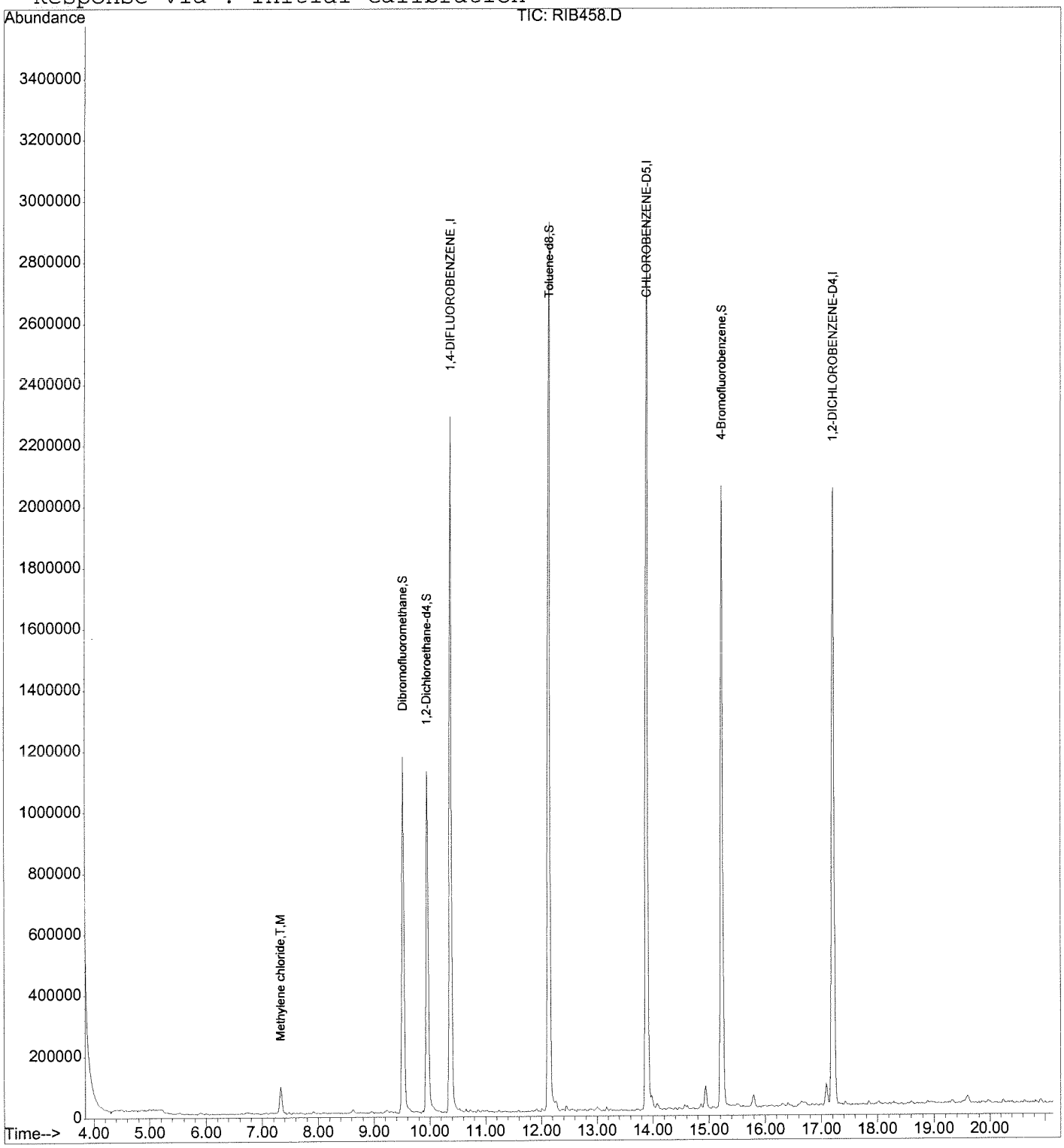
(#) = qualifier out of range (m) = manual integration

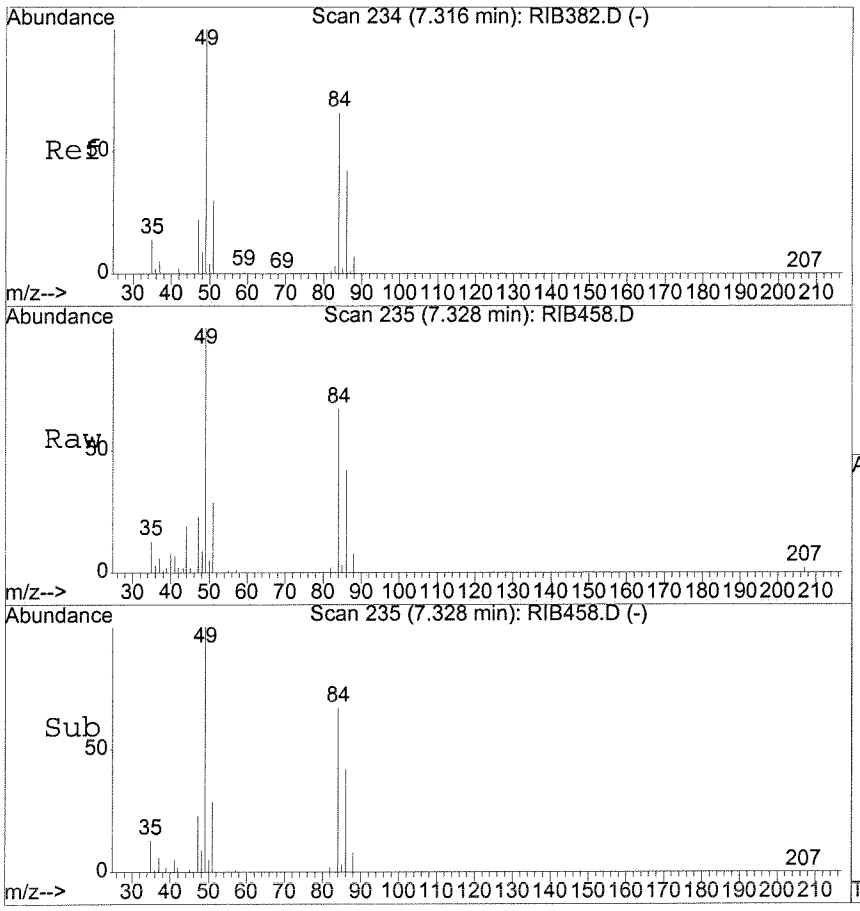
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB458.D
Acq On : 27 Sep 2015 2:36 pm
Sample : VS03I21B 5.0mL
Misc : DF=1.0 MB
MS Integration Params: RTE.P
Quant Time: Oct 7 21:41 2015

Vial: 6
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration

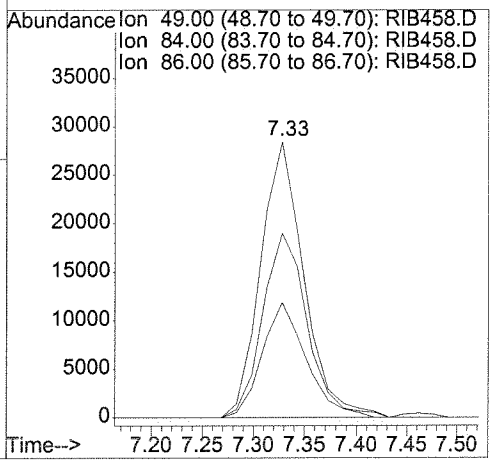




#18
Methylene chloride
Concen: 2.68 ug/l
RT: 7.33 min Scan# 235
Delta R.T. 0.01 min
Lab File: RIB458.D
Acq: 27 Sep 2015 2:36 pm

Tgt Ion: 49 Resp: 83758

Ion	Ratio	Lower	Upper
49	100		
84	68.9	37.7	97.7
86	42.5	13.1	73.1



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB455.D Vial: 3
Acq On : 27 Sep 2015 1:12 pm Operator: CMendo
Sample : VS03I21L 5.0mL Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 13:33 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2121029	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	2052236	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	1012197	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	906513	51.24	ug/l	0.00
Spiked Amount 50.000			Recovery =	102.48%		
39) 1,2-Dichloroethane-d4	9.95	65	990726	46.56	ug/l	0.00
Spiked Amount 50.000			Recovery =	93.12%		
53) Toluene-d8	12.13	98	2618233	52.83	ug/l	0.00
Spiked Amount 50.000			Recovery =	105.66%		
73) 4-Bromofluorobenzene	15.22	95	1197879	48.10	ug/l	0.01
Spiked Amount 50.000			Recovery =	96.20%		
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	238987	55.33	ug/l	98
3) Dichlorodifluoromethane	4.04	85	633993	50.30	ug/l	98
4) Chloromethane	4.41	50	714013	51.50	ug/l	99
5) Vinyl chloride	4.65	62	567392	51.90	ug/l	97
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	335578	55.62	ug/l	96
7) Bromomethane	5.29	94	545057	48.08	ug/l	98
8) Chloroethane	5.45	64	346805	50.05	ug/l	97
9) Dichlorofluoromethane	5.75	67	1512235	48.00	ug/l	100
10) Trichlorofluoromethane	5.81	101	905791	50.53	ug/l	100
11) Acrolein	6.51	56	467430	226.10	ug/l	98
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	365786	45.76	ug/l	98
13) 1,1-Dichloroethene	6.63	61	1238278	48.70	ug/l	100
14) Acetone	6.70	43	1243695	202.85	ug/l	97
15) Iodomethane	6.93	142	1398272	45.52	ug/l	99
16) Carbon disulfide	7.05	76	3195950	51.94	ug/l	100
17) Methyl acetate	7.12	43	578472	45.94	ug/l	99
18) Methylene chloride	7.33	49	1435263	46.82	ug/l	99
19) tert-Butyl alcohol	7.37	59	377928	206.80	ug/l	98
20) tert-Butyl methyl ether (M	7.60	73	1959271	44.17	ug/l	98
21) trans-1,2-Dichloroethene	7.67	61	1310192	50.06	ug/l	99
22) Acrylonitrile	7.66	53	1293164	251.61	ug/l	99
23) Isopropyl ether (DIPE)	8.13	45	3259519	46.84	ug/l	98
24) Vinyl acetate	8.18	43	2221451	48.31	ug/l	99
25) 1,1-Dichloroethane	8.22	63	1648180	47.77	ug/l	99
26) tert-Butyl ethyl ether (ET	8.59	59	2532653	44.15	ug/l	96
27) 2-Butanone	8.91	43	2267052	233.71	ug/l	99
28) 2,2-Dichloropropane	8.94	77	1119374	48.62	ug/l	100

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB455.D Vial: 3
Acq On : 27 Sep 2015 1:12 pm Operator: CMendo
Sample : VS03I21L 5.0mL Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 13:33 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	8.95	96	862811	45.50 ug/l	96
30) 2-Butanol	9.06	45	397655	218.40 ug/l	100
31) Bromochloromethane	9.27	49	1146603	45.41 ug/l	99
32) Tetrahydrofuran	9.31	42	232238	42.99 ug/l	97
33) Chloroform	9.31	83	1686996	44.97 ug/l	100
35) 1,1,1-Trichloroethane	9.56	97	1149141	45.04 ug/l	99
36) Cyclohexane	9.62	56	905288	51.06 ug/l	96
37) 1,1-Dichloropropene	9.74	110	352266	50.48 ug/l	99
38) Carbon tetrachloride	9.76	119	925315	46.41 ug/l	99
40) tert-Amyl methyl ether (TA	9.99	87	442997	42.87 ug/l	93
41) Benzene	10.01	78	3041689	46.81 ug/l	99
42) 1,2-Dichloroethane	10.04	62	1191229	44.64 ug/l	99
43) Trichloroethene	10.74	130	783189	47.32 ug/l	96
44) Methylcyclohexane	10.95	83	1052215	50.91 ug/l	97
45) 1,2-Dichloropropane	11.02	63	980774	48.04 ug/l	93
46) 1,4-Dioxane	11.16	88	145918	819.25 ug/l	100
47) Dibromomethane	11.22	93	639788	44.28 ug/l	99
48) Bromodichloromethane	11.34	83	1350821	44.57 ug/l	100
49) 2-Chloroethyl vinyl ether	11.56	63	535928	44.79 ug/l	99
50) cis-1,3-Dichloropropene	11.83	75	1603290	43.82 ug/l	98
51) 4-Methyl-2-pentanone	11.90	43	5340801	217.04 ug/l	99
54) Toluene	12.21	91	3186868	46.65 ug/l	100
55) Ethyl methacrylate	12.38	69	1103900	46.06 ug/l	97
56) trans-1,3-Dichloropropene	12.44	75	1438880	45.98 ug/l	97
57) 1,1,2-Trichloroethane	12.71	97	701461	44.48 ug/l	98
58) 2-Hexanone	12.86	43	4118219	245.34 ug/l	97
59) Tetrachloroethene	12.89	164	623150	47.11 ug/l	97
60) 1,3-Dichloropropane	12.91	76	1391338	46.51 ug/l	100
61) Dibromochloromethane	13.23	129	889313	46.80 ug/l	99
62) 1,2-Dibromoethane	13.42	107	786774	46.02 ug/l	99
63) 1-Chlorohexane	13.72	91	1399569	48.51 ug/l	100
64) Chlorobenzene	13.93	112	1990318	47.94 ug/l	99
65) Ethylbenzene	13.96	91	3968858	48.32 ug/l	98
66) 1,1,1,2-Tetrachloroethane	13.99	131	830869	49.40 ug/l	99
67) m-Xylene & p-Xylene	14.06	91	6065413	93.25 ug/l	97
68) o-Xylene	14.55	91	3216345	46.76 ug/l	97
69) Styrene	14.57	104	2314164	49.79 ug/l	100
71) Bromoform	14.94	173	570760	43.89 ug/l	99
72) Isopropylbenzene	14.94	105	3432275	49.71 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.34	83	1269613	46.89 ug/l	100
75) trans-1,4-Dichloro-2-buten	15.39	53	343391	44.83 ug/l	96

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB455.D Vial: 3
Acq On : 27 Sep 2015 1:12 pm Operator: CMendo
Sample : VS03I21L 5.0mL Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 13:33 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

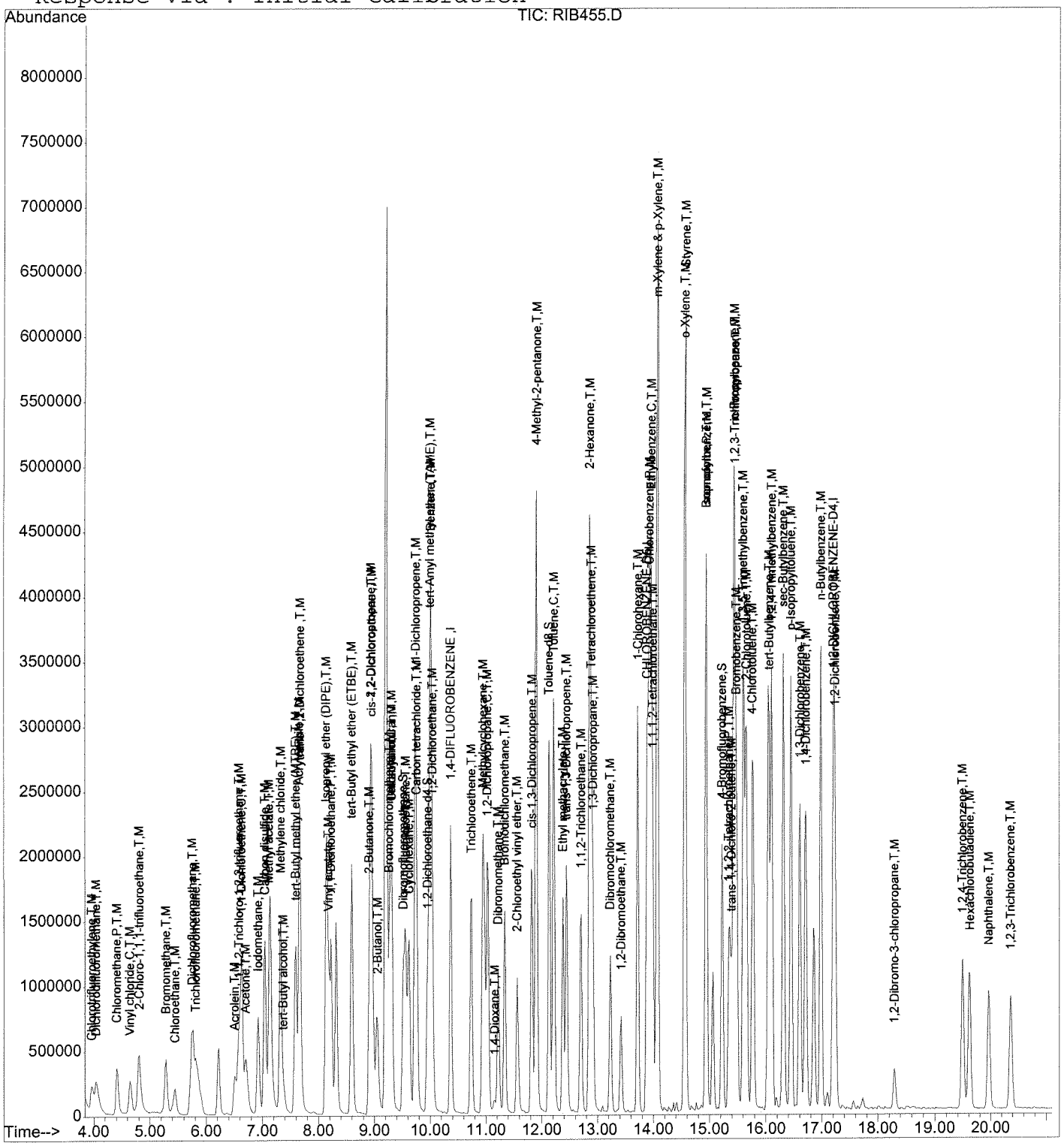
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
76)	n-Propylbenzene	15.43	91	5180604	51.23	ug/l		99
77)	1,2,3-Trichloropropane	15.45	110	257870	47.58	ug/l		98
78)	Bromobenzene	15.48	156	993832	47.09	ug/l		88
79)	1,3,5-Trimethylbenzene	15.60	105	2956712	51.74	ug/l		98
80)	2-Chlorotoluene	15.66	91	3200395	48.48	ug/l		97
81)	4-Chlorotoluene	15.76	91	2938220	48.74	ug/l		99
82)	tert-Butylbenzene	16.06	134	615025	51.93	ug/l	#	90
83)	1,2,4-Trimethylbenzene	16.10	105	2925751	50.12	ug/l		88
84)	sec-Butylbenzene	16.31	105	3861061	51.59	ug/l		99
85)	p-Isopropyltoluene	16.45	119	2970415	53.83	ug/l		97
86)	1,3-Dichlorobenzene	16.61	146	1675646	49.34	ug/l		100
87)	1,4-Dichlorobenzene	16.71	146	1668688	49.90	ug/l		99
88)	n-Butylbenzene	16.98	91	3350636	54.46	ug/l		99
89)	1,2-Dichlorobenzene	17.23	146	1500880	48.46	ug/l		98
90)	1,2-Dibromo-3-chloropropan	18.29	157	152112	43.63	ug/l		99
91)	1,2,4-Trichlorobenzene	19.48	180	681814	53.87	ug/l		99
92)	Hexachlorobutadiene	19.62	225	421189	52.38	ug/l		99
93)	Naphthalene	19.96	128	1479582	50.87	ug/l		100
94)	1,2,3-Trichlorobenzene	20.36	180	560586	53.19	ug/l		99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB455.D Vial: 3
Acq On : 27 Sep 2015 1:12 pm Operator: CMendo
Sample : VS03I21L 5.0mL Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 13:33 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB456.D Vial: 4
Acq On : 27 Sep 2015 1:40 pm Operator: CMendo
Sample : VS03I21C 5.0mL Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 14:01 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2152563	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	2063658	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	1041087	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	881237	49.08	ug/l	0.00
Spiked Amount 50.000			Recovery = 98.16%			
39) 1,2-Dichloroethane-d4	9.95	65	1016961	47.09	ug/l	0.00
Spiked Amount 50.000			Recovery = 94.18%			
53) Toluene-d8	12.14	98	2550469	51.18	ug/l	0.01
Spiked Amount 50.000			Recovery = 102.36%			
73) 4-Bromofluorobenzene	15.22	95	1244587	48.59	ug/l	0.01
Spiked Amount 50.000			Recovery = 97.18%			
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.98	116	213069	48.61	ug/l	99
3) Dichlorodifluoromethane	4.04	85	501231	39.18	ug/l	98
4) Chloromethane	4.41	50	682184	48.48	ug/l	100
5) Vinyl chloride	4.65	62	562086	50.67	ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	317044	51.78	ug/l	95
7) Bromomethane	5.29	94	516459	44.89	ug/l	99
8) Chloroethane	5.45	64	353843	50.32	ug/l	96
9) Dichlorofluoromethane	5.75	67	1583623	49.53	ug/l	99
10) Trichlorofluoromethane	5.82	101	864372	47.51	ug/l	99
11) Acrolein	6.51	56	459636	219.04	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	377786	46.57	ug/l	100
13) 1,1-Dichloroethene	6.63	61	1233539	47.81	ug/l	100
14) Acetone	6.70	43	1224356	196.77	ug/l	97
15) Iodomethane	6.93	142	1447266	46.42	ug/l	100
16) Carbon disulfide	7.04	76	3073805	49.23	ug/l	99
17) Methyl acetate	7.12	43	539968	42.26	ug/l	99
18) Methylene chloride	7.33	49	1464980	47.09	ug/l	98
19) tert-Butyl alcohol	7.37	59	387431	208.90	ug/l	98
20) tert-Butyl methyl ether (M	7.60	73	1906288	42.34	ug/l	99
21) trans-1,2-Dichloroethene	7.67	61	1308763	49.27	ug/l	99
22) Acrylonitrile	7.66	53	1258551	241.29	ug/l	99
23) Isopropyl ether (DIPE)	8.15	45	3449913	48.85	ug/l	98
24) Vinyl acetate	8.18	43	2213723	47.43	ug/l	99
25) 1,1-Dichloroethane	8.22	63	1607920	45.92	ug/l	98
26) tert-Butyl ethyl ether (ET	8.59	59	2728486	46.87	ug/l	97
27) 2-Butanone	8.91	43	2131629	216.53	ug/l	100
28) 2,2-Dichloropropane	8.94	77	1094794	46.85	ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB456.D Vial: 4
Acq On : 27 Sep 2015 1:40 pm Operator: CMendo
Sample : VS03I21C 5.0mL Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 14:01 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	8.95	96	869707	45.19 ug/l	99
30)	2-Butanol	9.06	45	363057	196.48 ug/l	96
31)	Bromochloromethane	9.26	49	1171617	45.72 ug/l	99
32)	Tetrahydrofuran	9.31	42	228882	41.75 ug/l	98
33)	Chloroform	9.31	83	1691335	44.42 ug/l	99
35)	1,1,1-Trichloroethane	9.56	97	1191458	46.01 ug/l	100
36)	Cyclohexane	9.62	56	787427	43.76 ug/l	97
37)	1,1-Dichloropropene	9.74	110	350963	49.55 ug/l	99
38)	Carbon tetrachloride	9.76	119	974510	48.16 ug/l	100
40)	tert-Amyl methyl ether (TA	9.99	87	482591	46.01 ug/l	97
41)	Benzene	10.01	78	3192492	48.41 ug/l	100
42)	1,2-Dichloroethane	10.04	62	1196964	44.20 ug/l	100
43)	Trichloroethene	10.74	130	802416	47.77 ug/l	97
44)	Methylcyclohexane	10.95	83	848963	40.47 ug/l	96
45)	1,2-Dichloropropane	11.04	63	958330	46.25 ug/l	92
46)	1,4-Dioxane	11.16	88	145151	803.00 ug/l	99
47)	Dibromomethane	11.22	93	646438	44.09 ug/l	98
48)	Bromodichloromethane	11.33	83	1351840	43.95 ug/l	100
49)	2-Chloroethyl vinyl ether	11.56	63	546015	44.96 ug/l	99
50)	cis-1,3-Dichloropropene	11.83	75	1613717	43.46 ug/l	98
51)	4-Methyl-2-pentanone	11.90	43	5493779	219.99 ug/l	99
54)	Toluene	12.21	91	3269392	47.59 ug/l	100
55)	Ethyl methacrylate	12.38	69	1080030	44.81 ug/l	100
56)	trans-1,3-Dichloropropene	12.44	75	1456972	46.30 ug/l	97
57)	1,1,2-Trichloroethane	12.71	97	715939	45.14 ug/l	100
58)	2-Hexanone	12.85	43	3986548	236.18 ug/l	97
59)	Tetrachloroethene	12.88	164	642815	48.33 ug/l	98
60)	1,3-Dichloropropane	12.91	76	1399177	46.51 ug/l	100
61)	Dibromochloromethane	13.23	129	881337	46.12 ug/l	99
62)	1,2-Dibromoethane	13.42	107	787503	45.81 ug/l	100
63)	1-Chlorohexane	13.72	91	1428978	49.25 ug/l	100
64)	Chlorobenzene	13.93	112	2031972	48.67 ug/l	99
65)	Ethylbenzene	13.96	91	4042532	48.94 ug/l	99
66)	1,1,1,2-Tetrachloroethane	13.99	131	843537	49.88 ug/l	97
67)	m-Xylene & p-Xylene	14.08	91	6128197	93.69 ug/l	98
68)	o-Xylene	14.55	91	3385369	48.95 ug/l	97
69)	Styrene	14.57	104	2389685	51.13 ug/l	100
71)	Bromoform	14.94	173	588181	43.98 ug/l	100
72)	Isopropylbenzene	14.94	105	3616550	50.93 ug/l	98
74)	1,1,2,2-Tetrachloroethane	15.34	83	1276076	45.82 ug/l	100
75)	trans-1,4-Dichloro-2-buten	15.39	53	362928	46.07 ug/l	92

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB456.D Vial: 4
Acq On : 27 Sep 2015 1:40 pm Operator: CMendo
Sample : VS03I21C 5.0mL Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 14:01 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

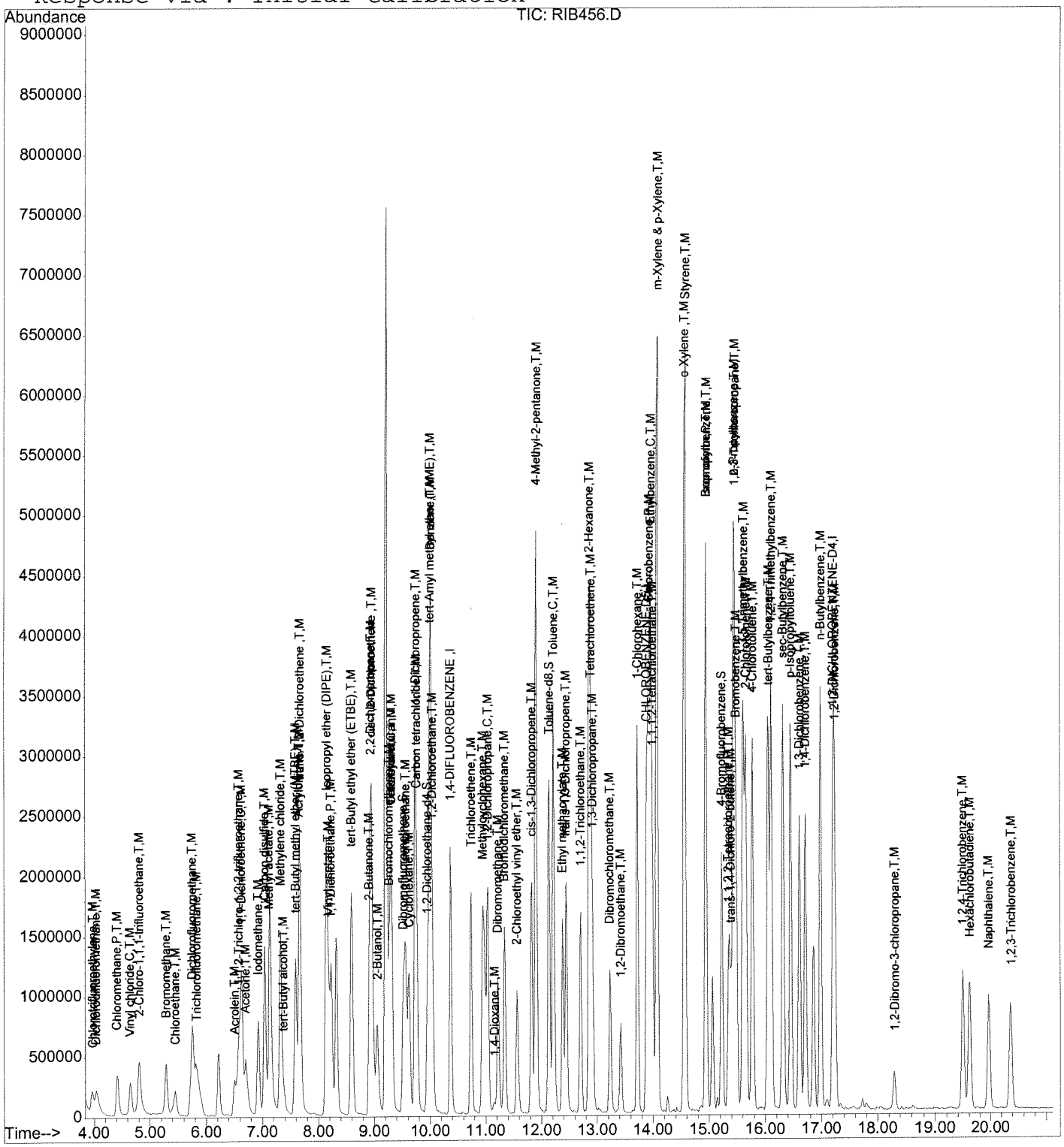
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
76)	n-Propylbenzene	15.43	91	5263515	50.61 ug/l		99
77)	1,2,3-Trichloropropane	15.45	110	261201	46.86 ug/l		98
78)	Bromobenzene	15.48	156	983732	45.32 ug/l		88
79)	1,3,5-Trimethylbenzene	15.61	105	2904500	49.42 ug/l		98
80)	2-Chlorotoluene	15.65	91	3325790	48.98 ug/l		98
81)	4-Chlorotoluene	15.77	91	3076593	49.62 ug/l		99
82)	tert-Butylbenzene	16.06	134	625664	51.37 ug/l	#	92
83)	1,2,4-Trimethylbenzene	16.10	105	3095762	51.56 ug/l		99
84)	sec-Butylbenzene	16.31	105	3844802	49.95 ug/l		100
85)	p-Isopropyltoluene	16.44	119	2957670	52.11 ug/l		97
86)	1,3-Dichlorobenzene	16.61	146	1702704	48.75 ug/l		99
87)	1,4-Dichlorobenzene	16.71	146	1662704	48.34 ug/l		99
88)	n-Butylbenzene	16.98	91	3314040	52.37 ug/l		99
89)	1,2-Dichlorobenzene	17.23	146	1531342	48.07 ug/l		99
90)	1,2-Dibromo-3-chloropropan	18.31	157	152044	42.40 ug/l		100
91)	1,2,4-Trichlorobenzene	19.48	180	688557	52.89 ug/l		98
92)	Hexachlorobutadiene	19.62	225	417810	50.52 ug/l		100
93)	Naphthalene	19.96	128	1486090	49.67 ug/l		100
94)	1,2,3-Trichlorobenzene	20.38	180	574017	52.95 ug/l		99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB456.D Vial: 4
Acq On : 27 Sep 2015 1:40 pm Operator: CMendo
Sample : VS03I21C 5.0mL Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 14:01 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB460.D Vial: 8
Acq On : 27 Sep 2015 3:32 pm Operator: CMendo
Sample : TVI003SB 0.5mL Inst : 03
Misc : DF=10 TCLP BLANK Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:44 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2152034	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	2265562	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	1009681	50.00	ug/l	0.02
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	978190	54.49	ug/l	0.00
Spiked Amount 50.000			Recovery = 108.98%			
39) 1,2-Dichloroethane-d4	9.95	65	1113064	51.56	ug/l	0.00
Spiked Amount 50.000			Recovery = 103.12%			
53) Toluene-d8	12.13	98	2795977	51.10	ug/l	0.00
Spiked Amount 50.000			Recovery = 102.20%			
73) 4-Bromofluorobenzene	15.23	95	1236679	49.78	ug/l	0.02
Spiked Amount 50.000			Recovery = 99.56%			
Target Compounds						Qvalue
14) Acetone	6.72	43	28189	4.53	ug/l	97
18) Methylene chloride	7.33	49	79158	2.54	ug/l	98

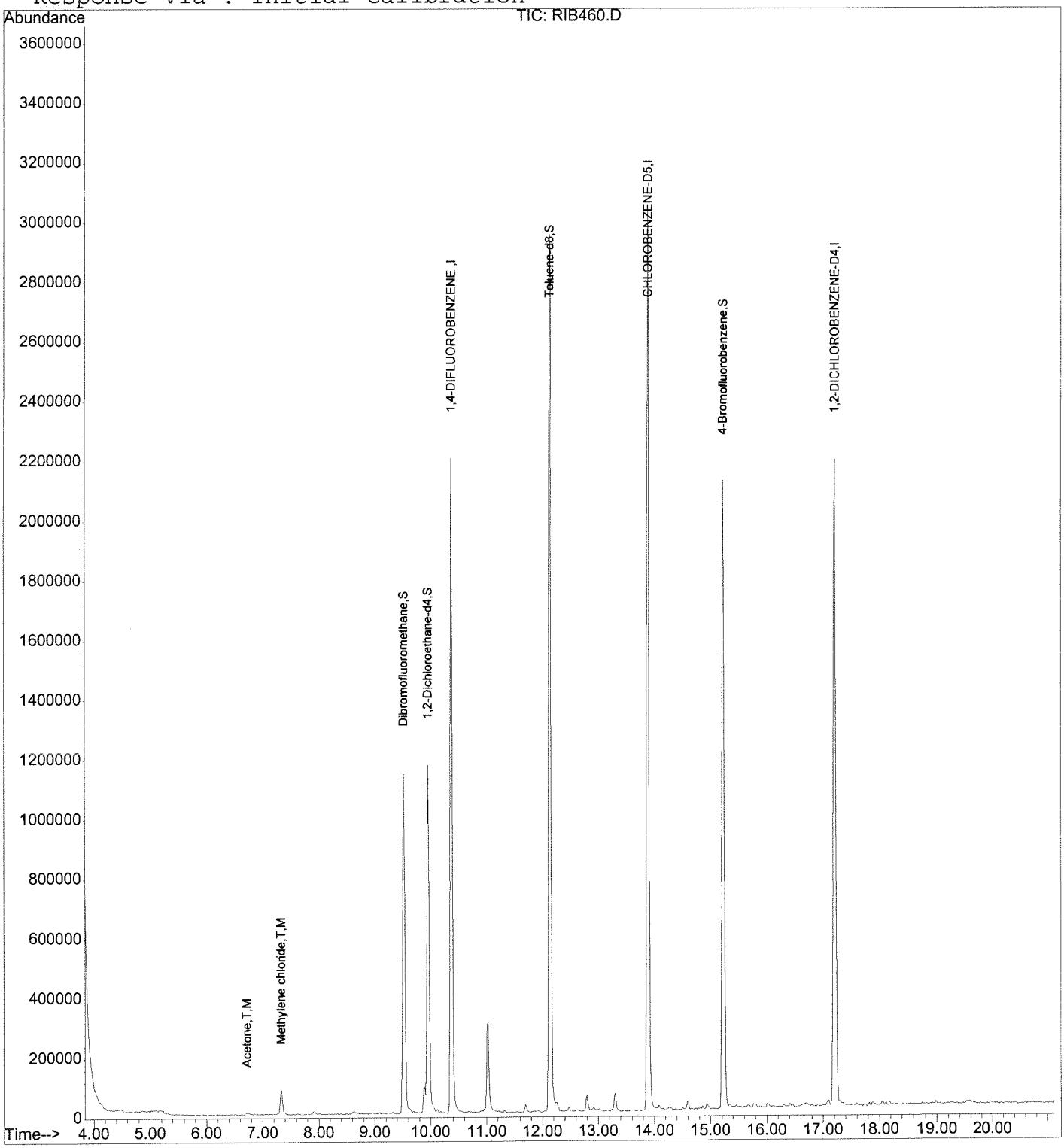
(#) = qualifier out of range (m) = manual integration

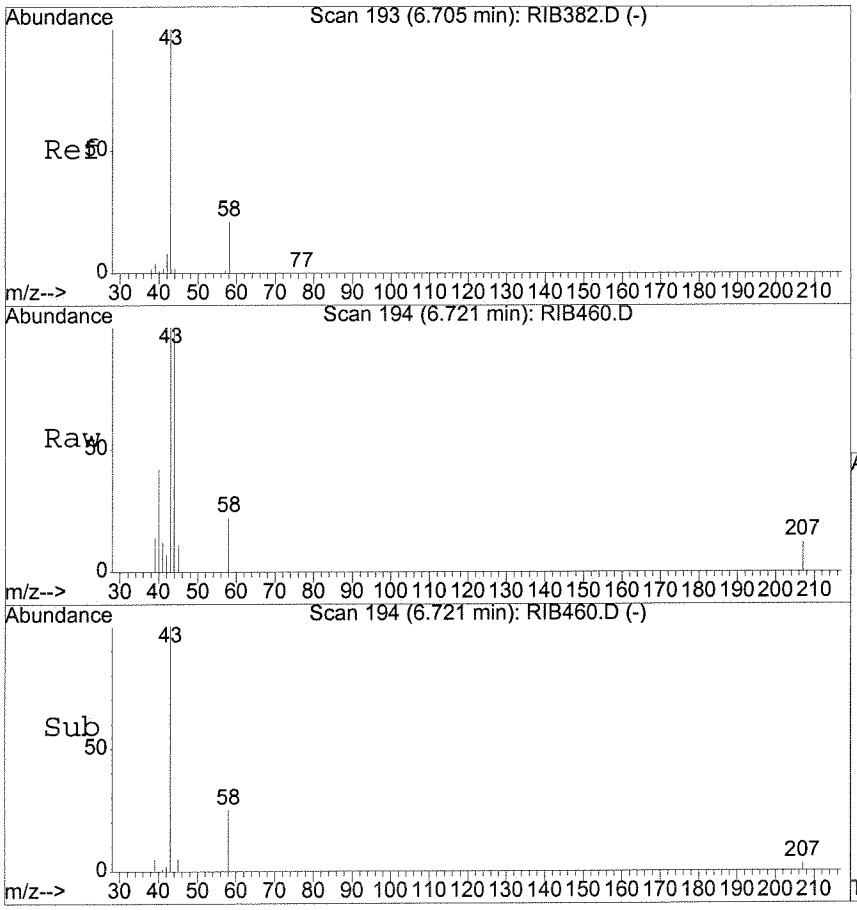
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB460.D
Acq On : 27 Sep 2015 3:32 pm
Sample : TVI003SB 0.5mL
Misc : DF=10 TCLP BLANK
MS Integration Params: RTE.P
Quant Time: Oct 7 21:44 2015

Vial: 8
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration

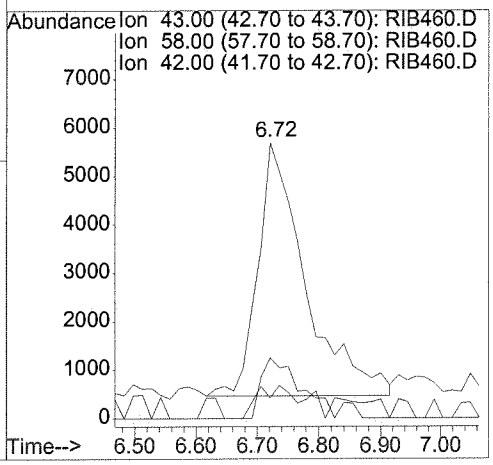


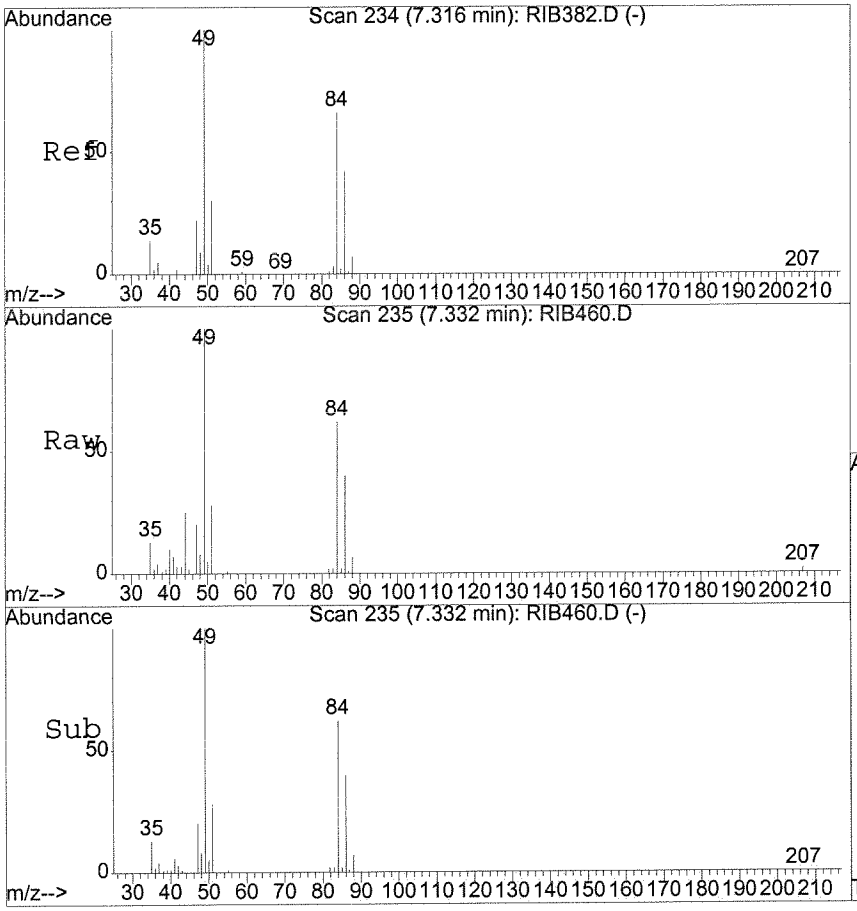


#14
Acetone
Concen: 4.53 ug/l
RT: 6.72 min Scan# 194
Delta R.T. 0.02 min
Lab File: RIB460.D
Acq: 27 Sep 2015 3:32 pm

Tgt Ion: 43 Resp: 28189

Ion	Ratio	Lower	Upper
43	100		
58	19.6	0.0	49.8
42	4.5	0.0	37.3

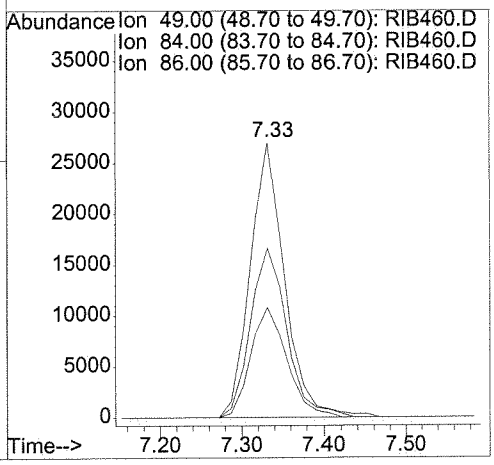




#18
Methylene chloride
Concen: 2.54 ug/l
RT: 7.33 min Scan# 235
Delta R.T. 0.02 min
Lab File: RIB460.D
Acq: 27 Sep 2015 3:32 pm

Tgt Ion: 49 Resp: 79158

Ion	Ratio	Lower	Upper
49	100		
84	65.1	37.7	97.7
86	42.2	13.1	73.1



INITIAL CALIBRATION(S)

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc Contract: CANNON AFB PBR
Lab Code: EMXT Case No.: SAS No.: SDG No.: 15I185
Lab File ID: RIB376 BFB Injection Date : 09/24/15
Instrument ID: 03 BFB Injection Time : 22:24
GC Column: ZB-624 ID:0.25mm (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.87
75	30.0 - 60.0% of mass 95	46.46
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.19
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	64.72
175	5.0 - 9.0% of mass 174	4.72(7.3)1
176	95.0 - 101.0% of mass 174	62.00(95.8)1
177	5.0 - 9.0% of mass 176	4.23(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD01	V003I251	RIB377	09/24/15	22:55
2	VSTD02	V003I252	RIB378	09/24/15	23:23
3	VSTD04	V003I253	RIB379	09/24/15	23:51
4	VSTD010	V003I254	RIB380	09/25/15	00:19
5	VSTD020	V003I255	RIB381	09/25/15	00:48
6	VSTD050	V003I256	RIB382	09/25/15	01:16
7	VSTD100	V003I257	RIB383	09/25/15	01:45
8	VSTD200	V003I258	RIB384	09/25/15	02:13
9	VSTD300	V003I259	RIB385	09/25/15	02:41
10	VSTD500	V003I2510	RIB386	09/25/15	03:09

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc — Contract: CANNON AFB PBR

Lab Code: EMXT — Case No.: — SAS No.: — SDG No.: 15I185

Lab File ID: RIB451 — BFB Injection Date : 09/27/15

Instrument ID: 03 — BFB Injection Time : 11:19

GC Column: ZB-624 ID:0.25mm (mm) — Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.16
75	30.0 - 60.0% of mass 95	47.29
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	5.75
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	63.24
175	5.0 - 9.0% of mass 174	4.85(7.7)1
176	95.0 - 101.0% of mass 174	61.07(96.6)1
177	5.0 - 9.0% of mass 176	4.18(6.8)2

1-Value is % mass 174 — 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	IV0031252	RIB452	09/27/15	11:52

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :09/24/15 22:55
Spike Units :PPB
IC File :RIB382

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :09/25/15 03:09
HPChem Method :V003125

M	IDX	Parameters	1 22:55 RIB377	2 23:23 RIB378	4 23:51 RIB379	10 00:19 RIB380	20 00:48 RIB381	50 01:16 RIB382	100 01:45 RIB383	200 02:13 RIB384	300 02:41 RIB385	500 03:09 RIB386	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	10.3689
	2	Chlorotrifluoroethylene	------	0.069	0.095	0.102	0.102	0.109	0.107	0.115	0.105	0.112	0.102	13.57	3.9653
	3	Dichlorodifluoromethane	0.368	0.215	0.298	0.261	0.297	0.305	0.296	0.324	0.300	0.307	0.297	13.31	4.0362
	4	Chloromethane	0.344	0.318	0.331	0.321	0.320	0.348	0.310	0.325	0.326	0.325	0.327	3.54	4.4132
	5	Vinyl chloride	0.257	0.231	0.253	0.254	0.267	0.274	0.262	0.245	0.267	0.268	0.258	4.93	4.6485
	6	2-Chloro-1,1,1-trifluoroethane	------	0.114	0.127	0.135	0.138	0.152	0.146	0.160	0.150	0.158	0.142	10.63	4.8028
	7	Bromomethane	------	0.246	0.312	0.282	0.275	0.261	0.228	------	------	------	0.267	10.96	5.2848
	8	Chloroethane	0.182	0.163	0.170	0.166	0.184	0.155	0.159	0.126	------	------	0.163	11.02	5.4473
	9	Dichlorofluoromethane	0.872	0.814	0.844	0.682	0.739	0.763	0.685	0.695	0.589	------	0.743	12.19	5.7512
	10	Trichlorofluoromethane	0.409	0.370	0.434	0.410	0.454	0.438	0.431	0.452	0.419	0.409	0.423	5.90	5.8209
5	11	Acrolein	0.066	0.069	0.040	0.045	0.045	0.048	0.048	0.047	0.049	0.050	0.051	18.38	6.5032
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.195	0.210	0.200	0.174	0.186	0.201	0.181	0.172	0.176	0.188	0.188	6.89	6.5851
	13	1,1-Dichloroethene	0.605	0.597	0.647	0.564	0.579	0.647	0.581	0.599	0.574	0.601	0.599	4.71	6.6268
5	14	Acetone	0.194	0.166	0.148	0.129	0.123	0.137	0.133	0.133	0.143	0.140	0.145	14.46	6.7103
	15	Iodomethane	0.728	0.716	0.734	0.681	0.705	0.761	0.718	0.762	0.716	0.722	0.724	3.33	6.9233
	16	Carbon disulfide	1.271	1.307	1.535	1.468	1.517	1.611	1.488	1.519	1.364	1.424	1.450	7.44	7.0335
	17	Methyl acetate	0.288	0.199	0.241	0.317	0.307	0.320	0.317	0.319	0.325	0.335	0.297	14.62	7.1199
	18	Methylene chloride	------	------	0.935	0.742	0.687	0.720	0.676	0.715	0.655	0.651	0.723	12.68	7.3168
5	19	tert-Butyl alcohol	------	0.044	0.044	0.040	0.041	0.043	0.043	0.041	0.050	0.043	0.043	6.87	7.3849
	20	tert-Butyl methyl ether (MTBE)	1.088	1.049	1.023	0.979	1.028	1.086	1.049	1.034	1.061	1.060	1.046	3.08	7.5936
	21	trans-1,2-Dichloroethene	0.641	0.631	0.652	0.563	0.629	0.667	0.593	0.609	0.587	0.598	0.617	5.26	7.6637
5	22	Acrylonitrile	0.109	0.120	0.114	0.110	0.117	0.132	0.123	0.123	0.134	0.129	0.121	7.27	7.6637
	23	Isopropyl ether (DIPE)	1.607	1.596	1.684	1.474	1.640	1.724	1.721	1.625	1.694	------	1.641	4.78	8.1363
	24	Vinyl acetate	------	------	0.816	0.992	1.144	1.107	1.131	1.147	1.207	1.128	1.084	11.44	8.1809
	25	1,1-Dichloroethane	0.876	0.800	0.835	0.766	0.810	0.849	0.788	0.813	0.780	0.815	0.813	4.08	8.2238
	26	tert-Butyl ethyl ether (ETBE)	1.358	1.294	1.345	1.254	1.366	1.428	1.401	1.344	1.380	------	1.352	3.91	8.5948
5	27	2-Butanone	0.183	0.230	0.229	0.216	0.226	0.245	0.239	0.240	0.258	0.219	0.229	8.85	8.9135
	28	2,2-Dichloropropane	0.601	0.618	0.642	0.499	0.544	0.572	0.493	0.485	0.431	------	0.543	13.02	8.9391
	29	cis-1,2-Dichloroethene	0.488	0.467	0.479	0.404	0.435	0.472	0.434	0.453	0.428	0.410	0.447	6.49	8.9537
5	30	2-Butanol	------	0.044	0.042	0.042	0.040	0.043	0.047	0.043	0.049	0.038	0.043	7.78	9.0650
	31	Bromochloromethane	0.613	0.599	0.580	0.554	0.586	0.609	0.572	0.724	0.568	0.549	0.595	8.39	9.2681
	32	Tetrahydrofuran	------	0.132	0.144	0.122	0.122	0.125	0.130	0.126	0.128	0.118	0.127	5.90	9.3033
	33	Chloroform	1.006	0.918	0.923	0.828	0.846	0.920	0.881	0.889	0.806	0.828	0.884	6.83	9.3098
	34	Dibromofluoromethane	0.403	0.374	0.372	0.357	0.423	0.474	0.440	0.461	0.438	0.430	0.417	9.46	9.5198
	35	1,1,1-Trichloroethane	0.642	0.676	0.652	0.570	0.596	0.625	0.578	0.592	0.542	0.541	0.601	7.67	9.5541
	36	Cyclohexane	0.411	0.377	0.420	0.402	0.431	0.442	0.434	0.428	0.425	0.409	0.418	4.52	9.6122
	37	1,1-Dichloropropene	0.190	0.167	0.171	0.158	0.162	0.173	0.162	0.169	0.147	0.147	0.165	7.70	9.7299
	38	Carbon tetrachloride	0.484	0.509	0.492	0.449	0.472	0.499	0.466	0.484	0.419	0.426	0.470	6.41	9.7582
	39	1,2-Dichloroethane-d4	0.522	0.460	0.449	0.437	0.495	0.570	0.521	0.530	0.527	0.506	0.502	8.31	9.9518
	40	tert-Amyl methyl ether (TAME)	0.257	0.229	0.255	0.240	0.238	0.267	0.245	0.247	0.239	0.220	0.244	5.69	9.9935
	41	Benzene	1.795	1.583	1.629	1.501	1.545	1.640	1.527	1.541	1.391	1.164	1.532	10.88	10.0114
	42	1,2-Dichloroethane	0.630	0.623	0.635	0.608	0.616	0.670	0.650	0.656	0.626	0.575	0.629	4.24	10.0412
	43	Trichloroethene	0.404	0.417	0.399	0.356	0.388	0.417	0.382	0.394	0.369	0.376	0.390	5.14	10.7339
	44	Methylcyclohexane	0.551	0.413	0.473	0.482	0.476	0.532	0.489	0.506	0.482	0.468	0.487	7.68	10.9380
	45	1,2-Dichloropropane	0.537	0.494	0.509	0.444	0.452	0.509	0.476	0.494	0.467	0.432	0.481	6.88	11.0274
20	46	1,4-Dioxane	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	11.89	11.1540
	47	Dibromomethane	0.357	0.338	0.333	0.311	0.331	0.363	0.336	0.355	0.350	0.332	0.341	4.61	11.2181
	48	Bromodichloromethane	0.700	0.726	0.687	0.641	0.685	0.765	0.765	0.758	0.720	0.698	0.715	5.64	11.3372

SG
10/9/15

	49	2-Chloroethyl vinyl ether	0.266	0.248	0.275	0.261	0.274	0.288	0.315	0.308	0.302	0.283	0.282	7.60	11.5577
	50	cis-1,3-Dichloropropene	0.866	0.867	0.886	0.805	0.817	0.932	0.865	0.920	0.833	0.833	0.863	4.87	11.8169
5	51	4-Methyl-2-pentanone	0.596	0.579	0.587	0.581	0.583	0.606	0.575	0.534	------	------	0.580	3.62	11.8976
	52	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	13.8846
	53	Toluene-d8	1.170	1.061	1.158	1.064	1.198	1.390	1.200	1.345	1.280	------	1.207	9.43	12.1271
	54	Toluene	1.866	1.655	1.749	1.659	1.606	1.740	1.550	1.678	1.478	------	1.664	6.89	12.2148
	55	Ethyl methacrylate	0.618	0.549	0.568	0.571	0.565	0.612	0.569	0.585	0.583	0.620	0.584	4.22	12.3785
	56	trans-1,3-Dichloropropene	0.782	0.690	0.768	0.735	0.716	0.781	0.759	0.815	0.768	0.810	0.762	5.15	12.4411
	57	1,1,2-Trichloroethane	0.420	0.385	0.394	0.377	0.360	0.380	0.360	0.394	0.375	0.399	0.384	4.80	12.6958
5	58	2-Hexanone	0.457	0.384	0.410	0.427	0.426	0.431	0.400	0.396	0.350	------	0.409	7.59	12.8554
	59	Tetrachloroethene	0.359	0.338	0.357	0.322	0.318	0.316	0.299	0.320	0.282	0.311	0.322	7.46	12.8776
	60	1,3-Dichloropropane	0.723	0.684	0.755	0.742	0.713	0.750	0.711	0.762	0.709	0.740	0.729	3.43	12.9074
	61	Dibromochloromethane	0.417	0.423	0.462	0.443	0.447	0.496	0.468	0.494	0.473	0.508	0.463	6.65	13.2291
	62	1,2-Dibromoethane	0.441	0.391	0.398	0.399	0.411	0.435	0.403	0.436	0.419	0.432	0.417	4.42	13.4154
	63	1-Chlorohexane	0.758	0.714	0.773	0.702	0.707	0.729	0.614	0.697	0.653	0.682	0.703	6.63	13.7148
	64	Chlorobenzene	1.121	1.042	1.041	0.987	1.004	1.090	0.972	0.983	0.899	0.978	1.012	6.32	13.9174
	65	Ethylbenzene	2.055	2.012	2.153	2.063	2.066	2.208	1.962	1.931	1.560	------	2.001	9.32	13.9478
	66	1,1,1,2-Tetrachloroethane	0.423	0.409	0.412	0.404	0.415	0.450	0.406	0.412	0.376	0.392	0.410	4.67	13.9829
2	67	m-Xylene & p-Xylene	1.793	1.685	1.731	1.527	1.563	1.640	1.446	1.294	------	------	1.585	10.28	14.0633
	68	o-Xylene	1.832	1.681	1.832	1.656	1.704	1.771	1.608	1.598	1.398	------	1.676	8.08	14.5520
	69	Styrene	1.315	1.107	1.219	1.138	1.154	1.226	1.092	1.099	0.953	1.020	1.132	9.23	14.5699
	70	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	17.2022
	71	Bromoform	0.638	0.565	0.591	0.596	0.594	0.629	0.621	0.736	0.684	0.770	0.642	10.42	14.9319
	72	Isopropylbenzene	3.788	3.521	3.585	3.241	3.287	3.377	3.090	3.722	3.085	------	3.411	7.59	14.9376
	73	4-Bromofluorobenzene	1.646	1.115	1.119	0.993	1.177	1.215	1.136	1.357	1.216	1.327	1.230	14.66	15.2194
	74	1,1,2,2-Tetrachloroethane	1.380	1.316	1.354	1.285	1.251	1.311	1.263	1.418	1.339	1.458	1.338	5.00	15.3445
	75	trans-1,4-Dichloro-2-butene	------	0.431	0.334	0.318	0.346	0.360	0.364	0.417	0.399	0.437	0.378	11.58	15.3846
	76	n-Propylbenzene	5.510	5.137	5.585	4.800	4.957	5.042	4.651	5.271	4.003	------	4.995	9.64	15.4309
	77	1,2,3-Trichloropropane	0.297	0.269	0.298	0.252	0.257	0.262	0.253	0.279	0.257	0.254	0.268	6.64	15.4473
	78	Bromobenzene	1.142	1.073	1.068	0.961	0.967	1.015	0.957	1.146	1.003	1.094	1.043	6.92	15.4786
	79	1,3,5-Trimethylbenzene	3.053	2.955	3.109	2.734	2.824	2.832	2.595	2.974	2.553	2.598	2.823	7.06	15.5978
	80	2-Chlorotoluene	3.601	3.391	3.465	3.106	3.201	3.239	2.977	3.519	3.040	3.070	3.261	6.74	15.6440
	81	4-Chlorotoluene	3.300	2.840	3.026	2.901	2.981	2.937	2.776	3.368	2.822	2.829	2.978	6.83	15.7616
	82	tert-Butylbenzene	0.705	0.614	0.634	0.566	0.584	0.559	0.517	0.615	0.503	0.553	0.585	10.18	16.0447
	83	1,2,4-Trimethylbenzene	3.268	2.921	3.104	2.788	2.897	2.895	2.670	3.041	2.581	2.672	2.884	7.44	16.0998
	84	sec-Butylbenzene	3.942	3.841	4.062	3.557	3.743	3.638	3.471	3.799	3.220	------	3.697	6.95	16.3081
	85	p-Isopropyltoluene	3.208	2.737	2.925	2.515	2.787	2.724	2.528	2.892	2.412	2.530	2.726	8.85	16.4454
	86	1,3-Dichlorobenzene	1.983	1.675	1.652	1.555	1.636	1.693	1.576	1.780	1.545	1.680	1.678	7.68	16.6003
	87	1,4-Dichlorobenzene	2.076	1.569	1.654	1.424	1.628	1.633	1.526	1.778	1.540	1.692	1.652	10.77	16.7031
	88	n-Butylbenzene	3.386	3.003	3.235	2.904	3.140	3.127	2.837	3.224	2.716	2.818	3.039	7.15	16.9728
	89	1,2-Dichlorobenzene	1.846	1.550	1.550	1.437	1.482	1.547	1.447	1.542	1.390	1.507	1.530	8.12	17.2275
	90	1,2-Dibromo-3-chloropropane	0.208	0.149	0.173	0.156	0.162	0.169	0.165	0.172	0.176	0.194	0.172	10.18	18.2926
	91	1,2,4-Trichlorobenzene	0.717	0.518	0.574	0.542	0.623	0.661	0.609	0.700	0.602	0.705	0.625	11.11	19.4799
	92	Hexachlorobutadiene	0.438	0.421	0.436	0.366	0.415	0.416	0.362	0.396	0.340	0.382	0.397	8.45	19.6050
	93	Naphthalene	1.771	1.198	1.278	1.197	1.389	1.497	1.416	1.582	1.442	1.597	1.437	12.80	19.9596
	94	1,2,3-Trichlorobenzene	0.595	0.447	0.494	0.462	0.518	0.551	0.518	0.569	0.482	0.570	0.521	9.58	20.3633

Spike Amount = Nominal Amount * M

Ave_%RSD : 7.9 Max_%RSD : 18.4

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15

Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
11	Acrolein	0.00103	0.04851	0.9994

SA
10/9/15

Compound List Report 03

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
Total Cpnds : 94

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	10.37	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	3.96	0.382	A	2	A	B
3	T	Dichlorodifluoromethane	85	4.04	0.389	A	1	A	B
4	T	Chloromethane	50	4.41	0.425	A	1	A	B
5	T	Vinyl chloride	62	4.65	0.448	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	4.80	0.463	A	2	A	B
7	T	Bromomethane	94	5.27	0.509	A	1	A	B
8	T	Chloroethane	64	5.45	0.526	A	2	A	B
9	T	Dichlorofluoromethane	67	5.75	0.555	A	1	A	B
10	T	Trichlorofluoromethane	101	5.81	0.560	A	1	A	B
11	T	Acrolein	56	6.50	0.626	L	1	A	B
12	T	1,1,2-Trichloro-1,2,2-trifluor	151	6.59	0.635	A	1	A	B
13	T	1,1-Dichloroethene	61	6.63	0.639	A	2	A	B
14	T	Acetone	43	6.70	0.647	A	2	A	B
15	T	Iodomethane	142	6.93	0.668	A	1	A	B
16	T	Carbon disulfide	76	7.03	0.678	A	1	A	B
17	T	Methyl acetate	43	7.12	0.687	A	1	A	B
18	T	Methylene chloride	49	7.32	0.705	A	2	A	B
19	T	tert-Butyl alcohol	59	7.38	0.711	A	1	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	7.58	0.731	A	1	A	B
21	T	trans-1,2-Dichloroethene	61	7.66	0.739	A	2	A	B
22	T	Acrylonitrile	53	7.66	0.739	A	2	A	B
23	T	Isopropyl ether (DIPE)	45	8.13	0.784	A	1	A	B
24	T	Vinyl acetate	43	8.18	0.789	A	1	A	B
25	T	1,1-Dichloroethane	63	8.22	0.793	A	2	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	8.60	0.829	A	1	A	B
27	T	2-Butanone	43	8.91	0.859	A	1	A	B
28	T	2,2-Dichloropropane	77	8.94	0.862	A	2	A	B
29	T	cis-1,2-Dichloroethene	96	8.95	0.864	A	2	A	B
30	T	2-Butanol	45	9.06	0.874	A	1	A	B
31	T	Bromochloromethane	49	9.27	0.894	A	2	A	B
32	T	Tetrahydrofuran	42	9.30	0.897	A	2	A	B
33	T	Chloroform	83	9.31	0.898	A	2	A	B
34	S	Dibromofluoromethane	111	9.52	0.918	A	2	A	B
35	T	1,1,1-Trichloroethane	97	9.55	0.921	A	2	A	B
36	T	Cyclohexane	56	9.61	0.927	A	2	A	B
37	T	1,1-Dichloropropene	110	9.73	0.938	A	1	A	B
38	T	Carbon tetrachloride	119	9.76	0.941	A	1	A	B
39	S	1,2-Dichloroethane-d4	65	9.95	0.960	A	1	A	B
40	T	tert-Amyl methyl ether (TAME)	87	9.98	0.963	A	2	A	B
41	T	Benzene	78	10.01	0.966	A	2	A	B
42	T	1,2-Dichloroethane	62	10.04	0.968	A	1	A	B
43	T	Trichloroethene	130	10.73	1.034	A	3	A	B
44	T	Methylcyclohexane	83	10.94	1.055	A	2	A	B
45	T	1,2-Dichloropropane	63	11.02	1.063	A	2	A	B
46	T	1,4-Dioxane	88	11.14	1.075	A	1	A	B
47	T	Dibromomethane	93	11.22	1.082	A	2	A	B
48	T	Bromodichloromethane	83	11.34	1.093	A	1	A	B
49	T	2-Chloroethyl vinyl ether	63	11.56	1.115	A	1	A	B
50	T	cis-1,3-Dichloropropene	75	11.81	1.139	A	3	A	B
51	T	4-Methyl-2-pentanone	43	11.89	1.147	A	3	A	B
52	I	CHLOROBENZENE-D5	117	13.89	1.000	A	2	A	B

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53	S	Toluene-d8	98	12.13	0.873	A	1	A	B
54	T	Toluene	91	12.22	0.880	A	1	A	B
55	T	Ethyl methacrylate	69	12.38	0.892	A	2	A	B
56	T	trans-1,3-Dichloropropene	75	12.44	0.896	A	2	A	B
57	T	1,1,2-Trichloroethane	97	12.69	0.914	A	3	A	B
58	T	2-Hexanone	43	12.86	0.926	A	2	A	B
59	T	Tetrachloroethene	164	12.87	0.927	A	3	A	B
60	T	1,3-Dichloropropane	76	12.90	0.929	A	1	A	B
61	T	Dibromochloromethane	129	13.23	0.953	A	1	A	B
62	T	1,2-Dibromoethane	107	13.41	0.966	A	1	A	B
63	T	1-Chlorohexane	91	13.71	0.987	A	3	A	B
64	P,M	Chlorobenzene	112	13.91	1.002	A	3	A	B
65	T	Ethylbenzene	91	13.94	1.004	A	1	A	B
66	T	1,1,1,2-Tetrachloroethane	131	13.97	1.006	A	3	A	B
67	T	m-Xylene & p-Xylene	91	14.06	1.013	A	1	A	B
68	T	o-Xylene	91	14.56	1.048	A	1	A	B
69	T	Styrene	104	14.57	1.049	A	2	A	B
70	I	1,2-DICHLOROBENZENE-D4	152	17.19	1.000	A	1	A	B
71	T	Bromoform	173	14.93	0.868	A	2	A	B
72	T	Isopropylbenzene	105	14.93	0.868	A	3	A	B
73	S	4-Bromofluorobenzene	95	15.21	0.885	A	2	A	B
74	T	1,1,2,2-Tetrachloroethane	83	15.35	0.893	A	1	A	B
75	T	trans-1,4-Dichloro-2-butene	53	15.37	0.894	A	1	A	B
76	T	n-Propylbenzene	91	15.43	0.898	A	2	A	B
77	T	1,2,3-Trichloropropane	110	15.45	0.899	A	1	A	B
78	T	Bromobenzene	156	15.48	0.900	A	2	A	B
79	T	1,3,5-Trimethylbenzene	105	15.60	0.907	A	2	A	B
80	T	2-Chlorotoluene	91	15.64	0.910	A	1	A	B
81	T	4-Chlorotoluene	91	15.76	0.917	A	1	A	B
82	T	tert-Butylbenzene	134	16.05	0.933	A	2	A	B
83	T	1,2,4-Trimethylbenzene	105	16.09	0.936	A	1	A	B
84	T	sec-Butylbenzene	105	16.30	0.948	A	1	A	B
85	T	p-Isopropyltoluene	119	16.45	0.957	A	2	A	B
86	T	1,3-Dichlorobenzene	146	16.60	0.965	A	2	A	B
87	T	1,4-Dichlorobenzene	146	16.70	0.971	A	2	A	B
88	T	n-Butylbenzene	91	16.97	0.987	A	2	A	B
89	T	1,2-Dichlorobenzene	146	17.22	1.002	A	2	A	B
90	T	1,2-Dibromo-3-chloropropane	157	18.29	1.064	A	2	A	B
91	T	1,2,4-Trichlorobenzene	180	19.47	1.133	A	2	A	B
92	T	Hexachlorobutadiene	225	19.61	1.140	A	2	A	B
93	T	Naphthalene	128	19.96	1.161	A	1	A	B
94	T	1,2,3-Trichlorobenzene	180	20.35	1.184	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

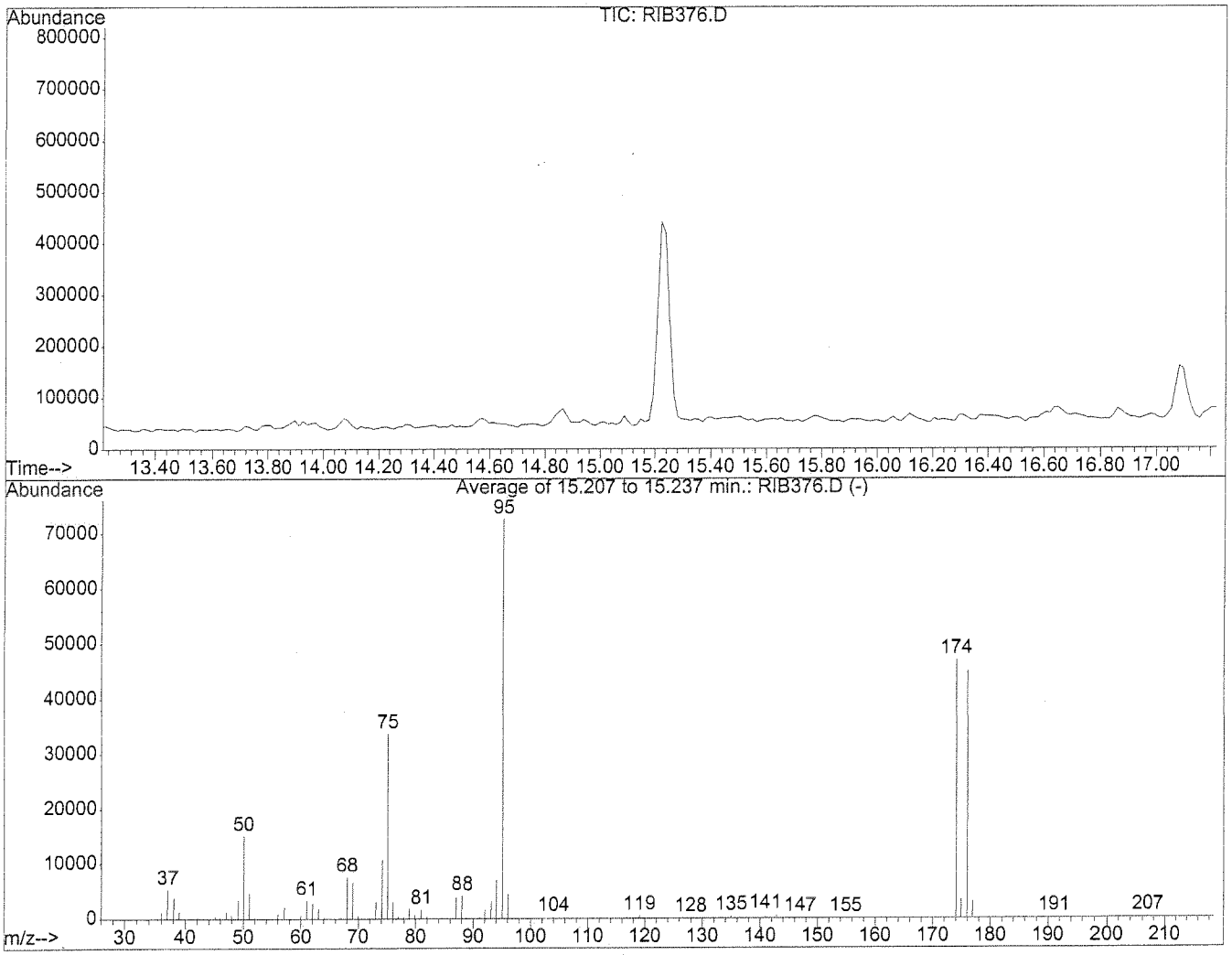
VO03I25.M Wed Oct 07 21:19:11 2015

SW 10/9/15

BFB

Data File : D:\HPCHEM\1\DATA\15I24\RIB376.D
Acq On : 24 Sep 2015 10:24 pm
Sample : BFB03I16
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00



AutoFind: Scans 764, 765, 766; Background Corrected with Scan 760

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.9	15162	PASS
75	95	30	60	46.5	33744	PASS
95	95	100	100	100.0	72638	PASS
96	95	5	9	6.2	4496	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	64.7	47011	PASS
175	174	5	9	7.3	3427	PASS
176	174	95	101	95.8	45035	PASS
177	176	5	9	6.8	3072	PASS

RIB376.D VO03I25.M Wed Oct 07 21:13:18 2015

SU 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB377.D Vial: 2
Acq On : 24 Sep 2015 10:55 pm Operator: CMendo
Sample : VO03I251 Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:08 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1643525	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1709876	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	869076	50.00 ug/l	0.01
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	13250	0.97 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.94%	
39) 1,2-Dichloroethane-d4	9.95	65	17143	1.04 ug/l	0.00
Spiked Amount 50.000			Recovery	= 2.08%	
53) Toluene-d8	12.12	98	40027	0.97 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.94%	
73) 4-Bromofluorobenzene	15.22	95	28617	1.34 ug/l	0.01
Spiked Amount 50.000			Recovery	= 2.68%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.98	116	2644	0.79 ug/l #	32
3) Dichlorodifluoromethane	4.02	85	12110	1.24 ug/l	90
4) Chloromethane	4.41	50	11318	1.05 ug/l	97
5) Vinyl chloride	4.63	62	8446	1.00 ug/l	91
6) 2-Chloro-1,1,1-trifluoroet	4.79	118	3096	0.66 ug/l #	54
7) Bromomethane	5.27	94	10752	1.22 ug/l	91
8) Chloroethane	5.44	64	5980	1.11 ug/l	88
9) Dichlorofluoromethane	5.75	67	28667	1.17 ug/l	76
10) Trichlorofluoromethane	5.82	101	13449	0.97 ug/l	94
11) Acrolein	6.51	56	10768	5.69 ug/l	96
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	6410	1.03 ug/l	95
13) 1,1-Dichloroethene	6.63	61	19901	1.01 ug/l	90
14) Acetone	6.70	43	31847	6.70 ug/l	88
15) Iodomethane	6.92	142	23929	1.01 ug/l	98
16) Carbon disulfide	7.03	76	41783	0.88 ug/l	95
17) Methyl acetate	7.13	43	9473	0.97 ug/l	99
18) Methylene chloride	7.31	49	59762	2.52 ug/l	99
19) tert-Butyl alcohol	7.37	59	8530	6.02 ug/l	93
20) tert-Butyl methyl ether (M	7.60	73	35765	1.04 ug/l	85
21) trans-1,2-Dichloroethene	7.67	61	21076	1.04 ug/l	95
22) Acrylonitrile	7.67	53	17972	4.51 ug/l	86
23) Isopropyl ether (DIPE)	8.13	45	52821	0.98 ug/l	97
24) Vinyl acetate	8.19	43	24567	0.69 ug/l #	86
25) 1,1-Dichloroethane	8.22	63	28806	1.08 ug/l	96
26) tert-Butyl ethyl ether (ET	8.59	59	44652	1.00 ug/l	99
27) 2-Butanone	8.92	43	30111	4.01 ug/l	92
28) 2,2-Dichloropropane	8.94	77	19744	1.11 ug/l	84

(#) = qualifier out of range (m) = manual integration
RIB377.D VO03I25.M Wed Oct 07 21:13:24 2015 S 10/9/15 Page 1

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB377.D
Acq On : 24 Sep 2015 10:55 pm
Sample : VO03I251
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Oct 7 21:08 2015

Vial: 2
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
29)	cis-1,2-Dichloroethene	8.95	96	16044	1.09 ug/l		93
30)	2-Butanol	9.05	45	8621	6.11 ug/l		94
31)	Bromochloromethane	9.26	49	20134	1.03 ug/l		94
32)	Tetrahydrofuran	9.31	42	4135	0.99 ug/l		86
33)	Chloroform	9.31	83	33078	1.14 ug/l		94
35)	1,1,1-Trichloroethane	9.56	97	21095	1.07 ug/l		97
36)	Cyclohexane	9.61	56	13524	0.98 ug/l		93
37)	1,1-Dichloropropene	9.73	110	6234	1.15 ug/l		92
38)	Carbon tetrachloride	9.76	119	15905	1.03 ug/l		100
40)	tert-Amyl methyl ether (TA	9.99	87	8432	1.05 ug/l		90
41)	Benzene	10.01	78	59018	1.17 ug/l		96
42)	1,2-Dichloroethane	10.04	62	20713	1.00 ug/l		97
43)	Trichloroethene	10.74	130	13285	1.04 ug/l		85
44)	Methylcyclohexane	10.93	83	18110	1.13 ug/l		89
45)	1,2-Dichloropropane	11.04	63	17641	1.12 ug/l	#	36
46)	1,4-Dioxane	11.17	88	3606	26.13 ug/l	#	56
47)	Dibromomethane	11.22	93	11740	1.05 ug/l		90
48)	Bromodichloromethane	11.33	83	23000	0.98 ug/l		99
49)	2-Chloroethyl vinyl ether	11.56	63	8732	0.94 ug/l		63
50)	cis-1,3-Dichloropropene	11.83	75	28473	1.00 ug/l		95
51)	4-Methyl-2-pentanone	11.90	43	97916	5.14 ug/l		99
54)	Toluene	12.21	91	63798	1.12 ug/l		97
55)	Ethyl methacrylate	12.38	69	21133	1.06 ug/l		98
56)	trans-1,3-Dichloropropene	12.45	75	26733	1.03 ug/l		94
57)	1,1,2-Trichloroethane	12.69	97	14379	1.09 ug/l		92
58)	2-Hexanone	12.85	43	78091	5.58 ug/l		98
59)	Tetrachloroethene	12.87	164	12285	1.11 ug/l		96
60)	1,3-Dichloropropane	12.91	76	24717	0.99 ug/l		81
61)	Dibromochloromethane	13.23	129	14269	0.90 ug/l		91
62)	1,2-Dibromoethane	13.42	107	15091	1.06 ug/l		97
63)	1-Chlorohexane	13.72	91	25920	1.08 ug/l		91
64)	Chlorobenzene	13.91	112	38322	1.11 ug/l	#	59
65)	Ethylbenzene	13.96	91	70281	1.03 ug/l		93
66)	1,1,1,2-Tetrachloroethane	13.99	131	14458	1.03 ug/l	#	77
67)	m-Xylene & p-Xylene	14.06	91	122662	2.26 ug/l		99
68)	o-Xylene	14.55	91	62647	1.09 ug/l		96
69)	Styrene	14.57	104	44968	1.16 ug/l		95
71)	Bromoform	14.94	173	11087	0.99 ug/l		95
72)	Isopropylbenzene	14.94	105	65839	1.11 ug/l		95
74)	1,1,2,2-Tetrachloroethane	15.34	83	23992	1.03 ug/l		92
75)	trans-1,4-Dichloro-2-buten	15.39	53	10499	1.60 ug/l		68

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

SC 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB377.D Vial: 2
Acq On : 24 Sep 2015 10:55 pm Operator: CMendo
Sample : VO03I251 Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:08 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
76)	n-Propylbenzene	15.43	91	95768	1.10 ug/l		96
77)	1,2,3-Trichloropropane	15.45	110	5165	1.11 ug/l		85
78)	Bromobenzene	15.48	156	19858	1.10 ug/l		88
79)	1,3,5-Trimethylbenzene	15.59	105	53059	1.08 ug/l		96
80)	2-Chlorotoluene	15.64	91	62592	1.10 ug/l		99
81)	4-Chlorotoluene	15.76	91	57352	1.11 ug/l		98
82)	tert-Butylbenzene	16.04	134	12256	1.21 ug/l	#	83
83)	1,2,4-Trimethylbenzene	16.10	105	56811	1.13 ug/l		92
84)	sec-Butylbenzene	16.31	105	68526	1.07 ug/l		97
85)	p-Isopropyltoluene	16.44	119	55754	1.18 ug/l		96
86)	1,3-Dichlorobenzene	16.61	146	34470	1.18 ug/l		98
87)	1,4-Dichlorobenzene	16.71	146	36078	1.26 ug/l		98
88)	n-Butylbenzene	16.98	91	58860	1.11 ug/l		96
89)	1,2-Dichlorobenzene	17.23	146	32080	1.21 ug/l	#	67
90)	1,2-Dibromo-3-chloropropan	18.29	157	3607	1.20 ug/l		90
91)	1,2,4-Trichlorobenzene	19.48	180	12460	1.15 ug/l		97
92)	Hexachlorobutadiene	19.60	225	7617	1.10 ug/l		92
93)	Naphthalene	19.96	128	30790	1.23 ug/l		100
94)	1,2,3-Trichlorobenzene	20.36	180	10349	1.14 ug/l		94

Su 10/9/15

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

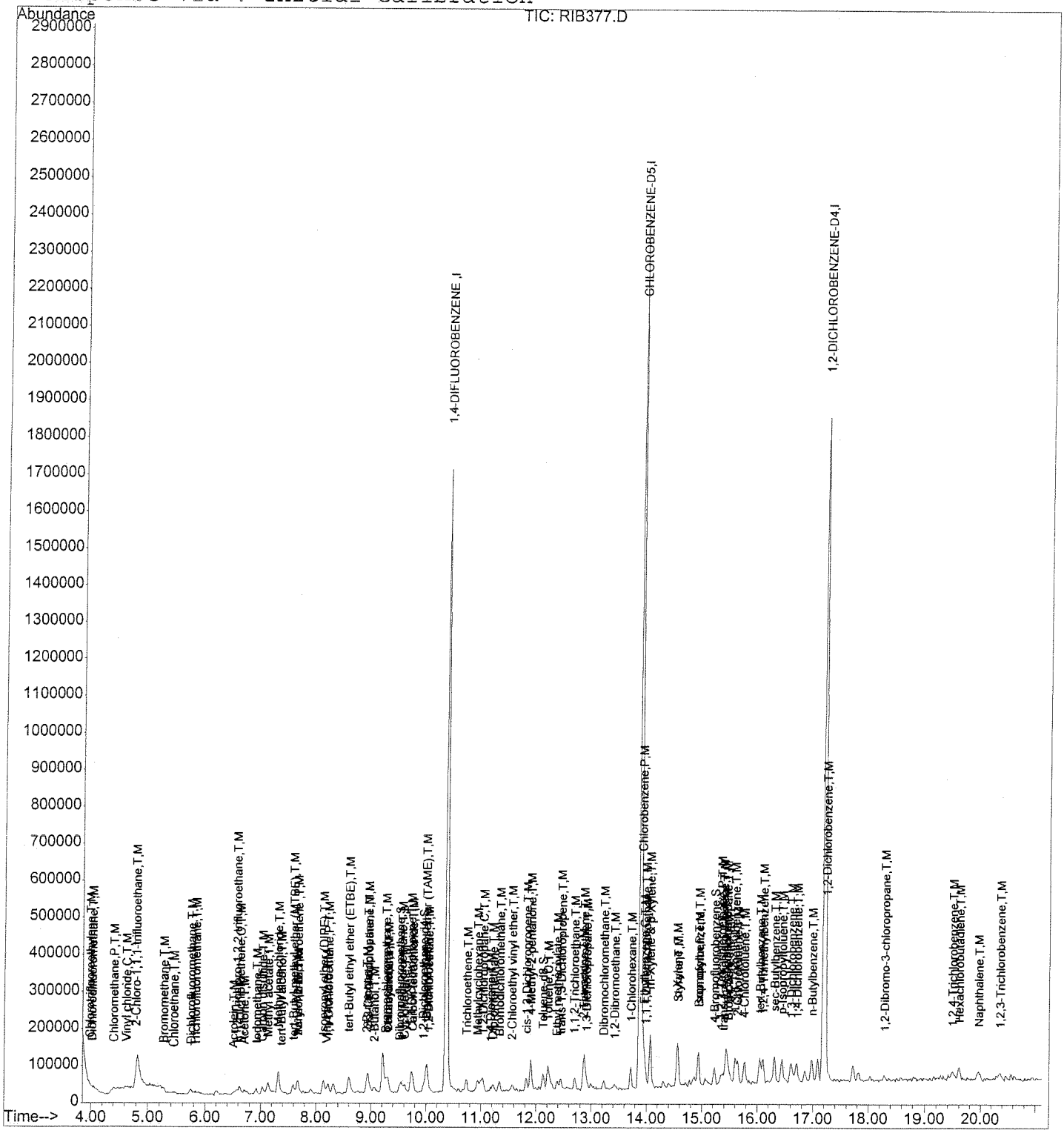
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB377.D
Acq On : 24 Sep 2015 10:55 pm
Sample : VO03I251
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Oct 7 21:08 2015

Vial: 2
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



10/9/15

360

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB378.D Vial: 3
Acq On : 24 Sep 2015 11:23 pm Operator: CMendo
Sample : VO03I252 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:08 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1824007	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1958210	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	942909	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	27251	1.79	ug/l	0.00
Spiked Amount 50.000			Recovery	=	3.58%	
39) 1,2-Dichloroethane-d4	9.96	65	33530	1.83	ug/l	0.00
Spiked Amount 50.000			Recovery	=	3.66%	
53) Toluene-d8	12.13	98	83121	1.76	ug/l	0.00
Spiked Amount 50.000			Recovery	=	3.52%	
73) 4-Bromofluorobenzene	15.21	95	42072	1.81	ug/l	0.00
Spiked Amount 50.000			Recovery	=	3.62%	

Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.97	116	4998	1.35	ug/l #	78
3) Dichlorodifluoromethane	4.04	85	15692	1.45	ug/l	70
4) Chloromethane	4.40	50	23217	1.95	ug/l	99
5) Vinyl chloride	4.64	62	16856	1.79	ug/l	86
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	8337	1.61	ug/l	92
7) Bromomethane	5.29	94	17936	1.84	ug/l	96
8) Chloroethane	5.44	64	11901	2.00	ug/l	89
9) Dichlorofluoromethane	5.75	67	59413	2.19	ug/l	86
10) Trichlorofluoromethane	5.81	101	27015	1.75	ug/l	100
11) Acrolein	6.51	56	25148	13.15	ug/l	83
12) 1,1,2-Trichloro-1,2,2-trif	6.59	151	15341	2.23	ug/l	95
13) 1,1-Dichloroethene	6.63	61	43551	1.99	ug/l	94
14) Acetone	6.72	43	60377	11.45	ug/l	93
15) Iodomethane	6.93	142	52238	1.98	ug/l	99
16) Carbon disulfide	7.04	76	95342	1.80	ug/l	96
17) Methyl acetate	7.13	43	14519	1.34	ug/l	97
18) Methylene chloride	7.32	49	86346	3.28	ug/l	94
19) tert-Butyl alcohol	7.38	59	15894	10.11	ug/l	72
20) tert-Butyl methyl ether (M	7.60	73	76511	2.01	ug/l	96
21) trans-1,2-Dichloroethene	7.68	61	46064	2.05	ug/l	94
22) Acrylonitrile	7.68	53	43747	9.90	ug/l	93
23) Isopropyl ether (DIPE)	8.14	45	116437	1.95	ug/l	99
24) Vinyl acetate	8.20	43	47748	1.21	ug/l	97
25) 1,1-Dichloroethane	8.23	63	58389	1.97	ug/l	93
26) tert-Butyl ethyl ether (ET	8.59	59	94415	1.91	ug/l	98
27) 2-Butanone	8.93	43	84079	10.08	ug/l	98
28) 2,2-Dichloropropane	8.94	77	45088	2.28	ug/l	95

(#) = qualifier out of range (m) = manual integration SU 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB378.D Vial: 3
Acq On : 24 Sep 2015 11:23 pm Operator: CMendo
Sample : VO03I252 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:08 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	8.96	96	34088	2.09 ug/l	97
30)	2-Butanol	9.08	45	16074	10.27 ug/l	84
31)	Bromochloromethane	9.27	49	43672	2.01 ug/l	96
32)	Tetrahydrofuran	9.32	42	9610	2.07 ug/l	87
33)	Chloroform	9.32	83	66999	2.08 ug/l	97
35)	1,1,1-Trichloroethane	9.55	97	49326	2.25 ug/l	95
36)	Cyclohexane	9.61	56	27538	1.81 ug/l	97
37)	1,1-Dichloropropene	9.73	110	12152	2.02 ug/l	96
38)	Carbon tetrachloride	9.76	119	37114	2.16 ug/l	96
40)	tert-Amyl methyl ether (TA	10.00	87	16717	1.88 ug/l	91
41)	Benzene	10.02	78	115516	2.07 ug/l	99
42)	1,2-Dichloroethane	10.05	62	45486	1.98 ug/l	93
43)	Trichloroethene	10.75	130	30414	2.14 ug/l	95
44)	Methylcyclohexane	10.94	83	30168	1.70 ug/l	95
45)	1,2-Dichloropropane	11.03	63	36021	2.05 ug/l	94
46)	1,4-Dioxane	11.16	88	6232	40.69 ug/l	66
47)	Dibromomethane	11.22	93	24689	1.99 ug/l	95
48)	Bromodichloromethane	11.34	83	52933	2.03 ug/l	95
49)	2-Chloroethyl vinyl ether	11.56	63	18103	1.76 ug/l	87
50)	cis-1,3-Dichloropropene	11.82	75	63266	2.01 ug/l	98
51)	4-Methyl-2-pentanone	11.91	43	211162	9.98 ug/l	99
54)	Toluene	12.22	91	129597	1.99 ug/l	99
55)	Ethyl methacrylate	12.38	69	42977	1.88 ug/l	98
56)	trans-1,3-Dichloropropene	12.44	75	54079	1.81 ug/l	89
57)	1,1,2-Trichloroethane	12.70	97	30151	2.00 ug/l	96
58)	2-Hexanone	12.86	43	150488	9.40 ug/l	98
59)	Tetrachloroethene	12.88	164	26512	2.10 ug/l	96
60)	1,3-Dichloropropane	12.91	76	53550	1.88 ug/l	91
61)	Dibromochloromethane	13.23	129	33103	1.83 ug/l	99
62)	1,2-Dibromoethane	13.41	107	30609	1.88 ug/l	98
63)	1-Chlorohexane	13.71	91	55910	2.03 ug/l	97
64)	Chlorobenzene	13.92	112	81604	2.06 ug/l	79
65)	Ethylbenzene	13.95	91	157631	2.01 ug/l	97
66)	1,1,1,2-Tetrachloroethane	13.98	131	32006	1.99 ug/l	95
67)	m-Xylene & p-Xylene	14.07	91	263948	4.25 ug/l	98
68)	o-Xylene	14.54	91	131667	2.01 ug/l	98
69)	Styrene	14.57	104	86737	1.96 ug/l	96
71)	Bromoform	14.93	173	21325	1.76 ug/l	95
72)	Isopropylbenzene	14.93	105	132785	2.06 ug/l	97
74)	1,1,2,2-Tetrachloroethane	15.35	83	49628	1.97 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.39	53	16269	2.28 ug/l	84

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

SU 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB378.D Vial: 3
Acq On : 24 Sep 2015 11:23 pm Operator: CMendo
Sample : VO03I252 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:08 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
76)	n-Propylbenzene	15.42	91	193749	2.06 ug/l		99
77)	1,2,3-Trichloropropane	15.45	110	10161	2.01 ug/l		85
78)	Bromobenzene	15.48	156	40457	2.06 ug/l		96
79)	1,3,5-Trimethylbenzene	15.60	105	111468	2.09 ug/l		99
80)	2-Chlorotoluene	15.65	91	127911	2.08 ug/l		100
81)	4-Chlorotoluene	15.77	91	107109	1.91 ug/l		98
82)	tert-Butylbenzene	16.05	134	23167	2.10 ug/l	#	87
83)	1,2,4-Trimethylbenzene	16.09	105	110173	2.03 ug/l		94
84)	sec-Butylbenzene	16.30	105	144863	2.08 ug/l		99
85)	p-Isopropyltoluene	16.44	119	103240	2.01 ug/l		97
86)	1,3-Dichlorobenzene	16.60	146	63193	2.00 ug/l		99
87)	1,4-Dichlorobenzene	16.70	146	59195	1.90 ug/l		93
88)	n-Butylbenzene	16.97	91	113273	1.98 ug/l		99
89)	1,2-Dichlorobenzene	17.23	146	58470	2.03 ug/l		83
90)	1,2-Dibromo-3-chloropropan	18.30	157	5601	1.72 ug/l		90
91)	1,2,4-Trichlorobenzene	19.47	180	19551	1.66 ug/l		95
92)	Hexachlorobutadiene	19.61	225	15882	2.12 ug/l		93
93)	Naphthalene	19.95	128	45199	1.67 ug/l		94
94)	1,2,3-Trichlorobenzene	20.37	180	16846	1.72 ug/l		98

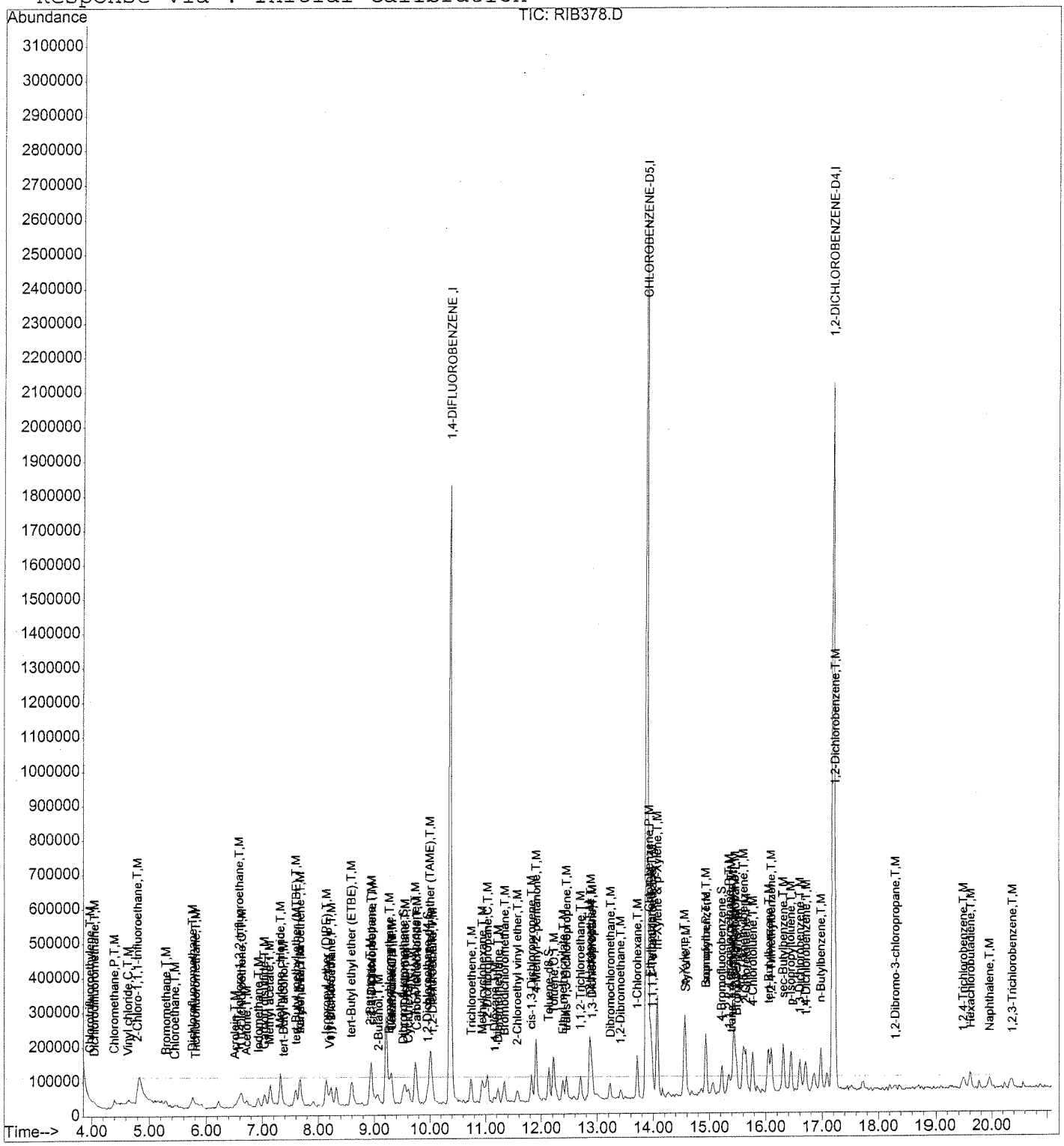
Su 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB378.D Vial: 3
Acq On : 24 Sep 2015 11:23 pm Operator: CMendo
Sample : VO03I252 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:08 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



Sm 10/9/15

364

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB379.D Vial: 4
Acq On : 24 Sep 2015 11:51 pm Operator: CMendo
Sample : VO03I253 Inst : 03
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1831230	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1863323	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	922854	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	54436	3.56	ug/l	0.00
Spiked Amount 50.000			Recovery	=	7.12%	
39) 1,2-Dichloroethane-d4	9.95	65	65842	3.58	ug/l	0.00
Spiked Amount 50.000			Recovery	=	7.16%	
53) Toluene-d8	12.12	98	172659	3.84	ug/l	0.00
Spiked Amount 50.000			Recovery	=	7.68%	
73) 4-Bromofluorobenzene	15.22	95	82588	3.64	ug/l	0.01
Spiked Amount 50.000			Recovery	=	7.28%	

Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	13976	3.75	ug/l	83
3) Dichlorodifluoromethane	4.04	85	43685	4.01	ug/l	100
4) Chloromethane	4.41	50	48474	4.05	ug/l	100
5) Vinyl chloride	4.63	62	37039	3.92	ug/l	85
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	18548	3.56	ug/l	86
7) Bromomethane	5.29	94	45636	4.66	ug/l	90
8) Chloroethane	5.45	64	24977	4.18	ug/l	90
9) Dichlorofluoromethane	5.75	67	123655	4.55	ug/l	94
10) Trichlorofluoromethane	5.82	101	63523	4.10	ug/l	100
11) Acrolein	6.51	56	28938	15.23	ug/l	95
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	29362	4.25	ug/l	99
13) 1,1-Dichloroethene	6.63	/61	94798	4.32	ug/l	98
14) Acetone	6.72	43	108460	20.49	ug/l	96
15) Iodomethane	6.93	142	107463	4.05	ug/l	100
16) Carbon disulfide	7.04	76	224863	4.23	ug/l	100
17) Methyl acetate	7.12	43	35344	3.25	ug/l	96
18) Methylene chloride	7.33	49	137011	5.18	ug/l	98
19) tert-Butyl alcohol	7.37	59	31974	20.26	ug/l	91
20) tert-Butyl methyl ether (M	7.60	73	149838	3.91	ug/l	98
21) trans-1,2-Dichloroethene	7.67	/61	95475	4.23	ug/l	98
22) Acrylonitrile	7.67	53	83324	18.78	ug/l	93
23) Isopropyl ether (DIPE)	8.13	45	246675	4.11	ug/l	97
24) Vinyl acetate	8.19	43	119596	3.01	ug/l	97
25) 1,1-Dichloroethane	8.22	/ 63	122313	4.11	ug/l	98
26) tert-Butyl ethyl ether (ET	8.59	59	196991	3.98	ug/l	96
27) 2-Butanone	8.92	43	168103	20.07	ug/l	100
28) 2,2-Dichloropropane	8.94	77	94040	4.73	ug/l	98

(#) = qualifier out of range (m) = manual integration
RIB379.D VO03I25.M Wed Oct 07 21:13:38 2015

SV 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB379.D Vial: 4
Acq On : 24 Sep 2015 11:51 pm Operator: CMendo
Sample : VO03I253 Inst : 03
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	8.95	96	70100	4.28 ug/l	100
30)	2-Butanol	9.06	45	30673	19.51 ug/l	90
31)	Bromochloromethane	9.26	49	85024	3.90 ug/l	99
32)	Tetrahydrofuran	9.31	42	21067	4.52 ug/l	97
33)	Chloroform	9.31	83	135157	4.17 ug/l	98
35)	1,1,1-Trichloroethane	9.56	97	95540	4.34 ug/l	94
36)	Cyclohexane	9.62	56	61499	4.02 ug/l	98
37)	1,1-Dichloropropene	9.74	110	24999	4.15 ug/l	98
38)	Carbon tetrachloride	9.76	119	72123	4.19 ug/l	99
40)	tert-Amyl methyl ether (TA	9.99	87	37371	4.19 ug/l	96
41)	Benzene	10.01	78	238698	4.25 ug/l	99
42)	1,2-Dichloroethane	10.04	62	93052	4.04 ug/l	98
43)	Trichloroethene	10.74	130	58474	4.09 ug/l	97
44)	Methylcyclohexane	10.95	83	69282	3.88 ug/l	95
45)	1,2-Dichloropropane	11.04	63	74618	4.23 ug/l	92
46)	1,4-Dioxane	11.16	88	12428	80.82 ug/l	83
47)	Dibromomethane	11.22	93	48836	3.92 ug/l	97
48)	Bromodichloromethane	11.33	83	100615	3.84 ug/l	94
49)	2-Chloroethyl vinyl ether	11.56	63	40308	3.90 ug/l	92
50)	cis-1,3-Dichloropropene	11.83	75	129831	4.11 ug/l	97
51)	4-Methyl-2-pentanone	11.90	43	429721	20.23 ug/l	99
54)	Toluene	12.21	91	260736	4.20 ug/l	100
55)	Ethyl methacrylate	12.38	69	84697	3.89 ug/l	92
56)	trans-1,3-Dichloropropene	12.44	75	114485	4.03 ug/l	97
57)	1,1,2-Trichloroethane	12.71	97	58717	4.10 ug/l	98
58)	2-Hexanone	12.85	43	305677	20.06 ug/l	98
59)	Tetrachloroethene	12.88	164	53182	4.43 ug/l	96
60)	1,3-Dichloropropane	12.91	76	112482	4.14 ug/l	96
61)	Dibromochloromethane	13.23	129	68845	3.99 ug/l	96
62)	1,2-Dibromoethane	13.42	107	59364	3.82 ug/l	98
63)	1-Chlorohexane	13.72	91	115205	4.40 ug/l	97
64)	Chlorobenzene	13.91	112	155203	4.12 ug/l	89
65)	Ethylbenzene	13.96	91	320968	4.30 ug/l	99
66)	1,1,1,2-Tetrachloroethane	13.99	131	61355	4.02 ug/l	94
67)	m-Xylene & p-Xylene	14.06	91	515969	8.74 ug/l	99
68)	o-Xylene	14.55	91	273103	4.37 ug/l	99
69)	Styrene	14.57	104	181731	4.31 ug/l	97
71)	Bromoform	14.92	173	43621	3.68 ug/l	98
72)	Isopropylbenzene	14.94	105	264689	4.20 ug/l	98
74)	~~1,1,2,2-Tetrachloroethane~~	~~15.34~~	~~83~~	~~99994~~	~~4.05 ug/l~~	~~98~~
75)	trans-1,4-Dichloro-2-buten	15.39	53	24623	3.53 ug/l	98

(#) = qualifier out of range (m) = manual integration
RIB379.D VO03I25.M Wed Oct 07 21:13:38 2015 Sa 10/9/15 Page 2

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB379.D
Acq On : 24 Sep 2015 11:51 pm
Sample : VO03I253
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	15.43	91	412347	4.47 ug/l	99
77)	1,2,3-Trichloropropane	15.45	110	21993	4.45 ug/l	97
78)	Bromobenzene	15.48	156	78815	4.10 ug/l	91
79)	1,3,5-Trimethylbenzene	15.60	105	229499	4.41 ug/l	99
80)	2-Chlorotoluene	15.64	91	255779	4.25 ug/l	100
81)	4-Chlorotoluene	15.76	91	223377	4.06 ug/l	100
82)	tert-Butylbenzene	16.04	134	46793	4.33 ug/l	92
83)	1,2,4-Trimethylbenzene	16.10	105	229161	4.31 ug/l	97
84)	sec-Butylbenzene	16.31	105	299898	4.40 ug/l	100
85)	p-Isopropyltoluene	16.44	119	215958	4.29 ug/l	99
86)	1,3-Dichlorobenzene	16.61	146	121989	3.94 ug/l	99
87)	1,4-Dichlorobenzene	16.70	146	122134	4.01 ug/l	98
88)	n-Butylbenzene	16.98	91	238809	4.26 ug/l	98
89)	1,2-Dichlorobenzene	17.22	146	114462	4.05 ug/l	92
90)	1,2-Dibromo-3-chloropropan	18.29	157	12794	4.02 ug/l	95
91)	1,2,4-Trichlorobenzene	19.48	180	42361	3.67 ug/l	95
92)	Hexachlorobutadiene	19.60	225	32174	4.39 ug/l	99
93)	Naphthalene	19.96	128	94330	3.56 ug/l	98
94)	1,2,3-Trichlorobenzene	20.36	180	36451	3.79 ug/l	97

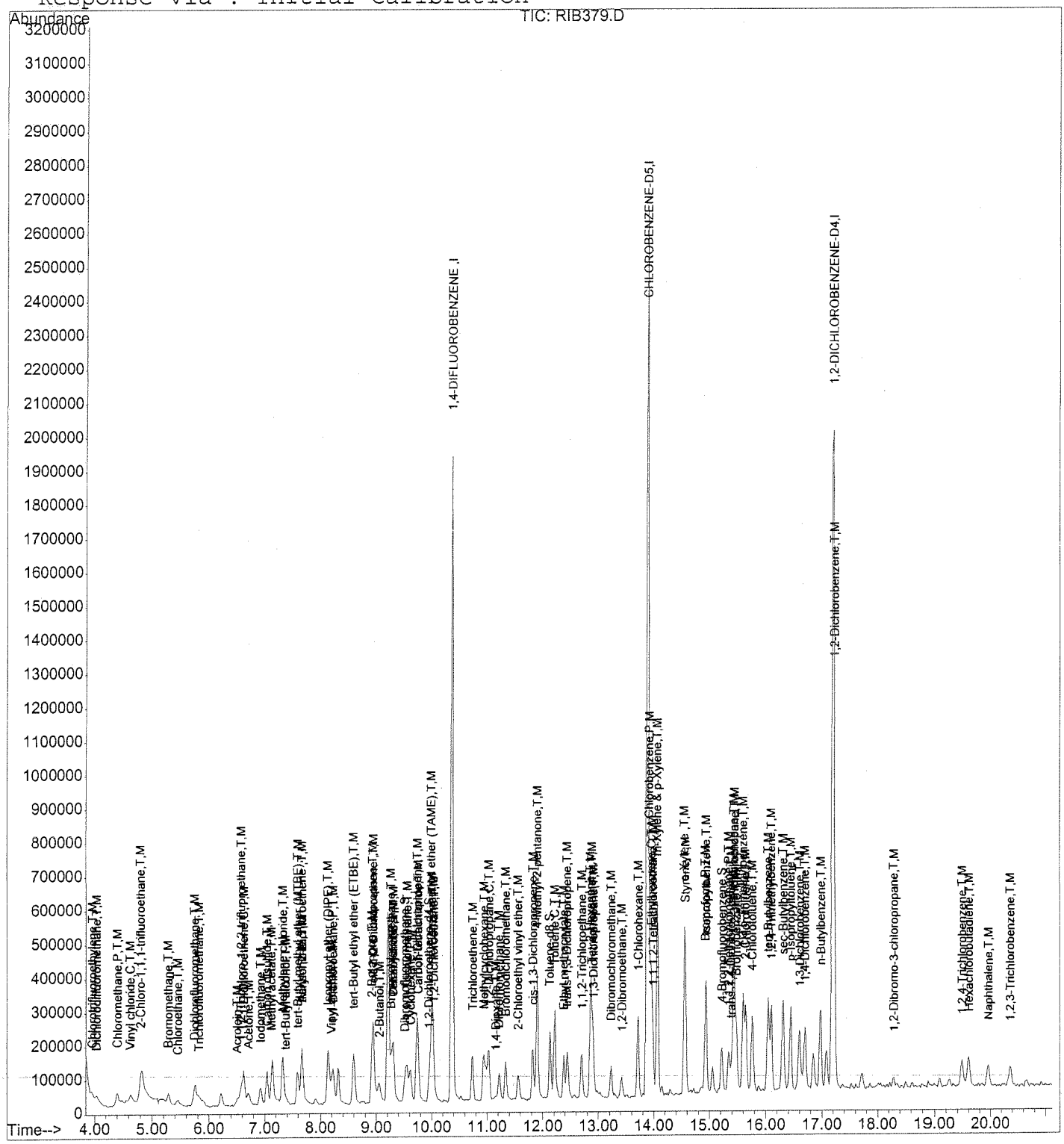
Su 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB379.D Vial: 4
Acq On : 24 Sep 2015 11:51 pm Operator: CMendo
Sample : VO03I253 Inst : 03
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB380.D Vial: 5
Acq On : 25 Sep 2015 12:19 am Operator: CMendo
Sample : VO03I254 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1942669	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1898605	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.19	152	953791	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	138861	8.57 ug/l	0.00
Spiked Amount 50.000			Recovery	= 17.14%	
39) 1,2-Dichloroethane-d4	9.95	65	169800	8.71 ug/l	0.00
Spiked Amount 50.000			Recovery	= 17.42%	
53) Toluene-d8	12.13	98	403911	8.81 ug/l	0.00
Spiked Amount 50.000			Recovery	= 17.62%	
73) 4-Bromofluorobenzene	15.21	95	189394	8.07 ug/l	0.00
Spiked Amount 50.000			Recovery	= 16.14%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.97	116	39558	10.00 ug/l	87
3) Dichlorodifluoromethane	4.04	85	101237	8.77 ug/l	97
4) Chloromethane	4.41	50	124617	9.81 ug/l	100
5) Vinyl chloride	4.65	62	98826	9.87 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	52491	9.50 ug/l	95
7) Bromomethane	5.29	94	109731	10.57 ug/l	98
8) Chloroethane	5.46	64	64583	10.18 ug/l	97
9) Dichlorofluoromethane	5.75	67	265147	9.19 ug/l	97
10) Trichlorofluoromethane	5.83	101	159185	9.69 ug/l	99
11) Acrolein	6.50	56	87909	45.58 ug/l	90
12) 1,1,2-Trichloro-1,2,2-trif	6.59	151	67620	9.24 ug/l	100
13) 1,1-Dichloroethene	6.63	61	219317	9.42 ug/l	97
14) Acetone	6.71	43	251403	44.77 ug/l	97
15) Iodomethane	6.93	142	264749	9.41 ug/l	99
16) Carbon disulfide	7.05	76	570533	10.12 ug/l	100
17) Methyl acetate	7.12	43	123102	10.67 ug/l	99
18) Methylene chloride	7.32	49	288259	10.27 ug/l	95
19) tert-Butyl alcohol	7.38	59	76841	45.91 ug/l	78
20) tert-Butyl methyl ether (M	7.59	73	380320	9.36 ug/l	100
21) trans-1,2-Dichloroethene	7.66	61	218626	9.12 ug/l	99
22) Acrylonitrile	7.66	53	213311	45.31 ug/l	96
23) Isopropyl ether (DIPE)	8.14	45	572771	8.99 ug/l	100
24) Vinyl acetate	8.18	43	385331	9.15 ug/l	99
25) 1,1-Dichloroethane	8.23	63	297545	9.42 ug/l	100
26) tert-Butyl ethyl ether (ET	8.60	59	487118	9.27 ug/l	100
27) 2-Butanone	8.91	43	419468	47.21 ug/l	98
28) 2,2-Dichloropropane	8.94	77	193964	9.20 ug/l	100

(#) = qualifier out of range (m) = manual integration
RIB380.D VO03I25.M Wed Oct 07 21:13:44 2015

Sa 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB380.D
Acq On : 25 Sep 2015 12:19 am
Sample : VO03I254
Misc : 10ppb 8260/50ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	8.96	96	157153	9.05 ug/l	96
30)	2-Butanol	9.06	45	81208	48.70 ug/l	92
31)	Bromochloromethane	9.27	49	215111	9.30 ug/l	98
32)	Tetrahydrofuran	9.30	42	47531	9.61 ug/l	93
33)	Chloroform	9.30	83	321662	9.36 ug/l	98
35)	1,1,1-Trichloroethane	9.55	97	221484	9.48 ug/l	98
36)	Cyclohexane	9.61	56	156018	9.61 ug/l	98
37)	1,1-Dichloropropene	9.73	110	61216	9.58 ug/l	98
38)	Carbon tetrachloride	9.76	119	174293	9.54 ug/l	99
40)	tert-Amyl methyl ether (TA	9.98	87	93384	9.87 ug/l	99
41)	Benzene	10.01	78	583154	9.80 ug/l	100
42)	1,2-Dichloroethane	10.04	62	236357	9.67 ug/l	100
43)	Trichloroethene	10.73	130	138184	9.12 ug/l	99
44)	Methylcyclohexane	10.94	83	187164	9.89 ug/l	99
45)	1,2-Dichloropropane	11.03	63	172418	9.22 ug/l	80
46)	1,4-Dioxane	11.15	88	30891	189.36 ug/l	95
47)	Dibromomethane	11.22	93	120715	9.12 ug/l	97
48)	Bromodichloromethane	11.34	83	249232	8.98 ug/l	99
49)	2-Chloroethyl vinyl ether	11.56	63	101578	9.27 ug/l	95
50)	cis-1,3-Dichloropropene	11.82	75	312758	9.33 ug/l	99
51)	4-Methyl-2-pentanone	11.89	43	1129561	50.12 ug/l	99
54)	Toluene	12.20	91	629820	9.97 ug/l	100
55)	Ethyl methacrylate	12.38	69	216737	9.77 ug/l	100
56)	trans-1,3-Dichloropropene	12.44	75	279233	9.65 ug/l	99
57)	1,1,2-Trichloroethane	12.70	97	143030	9.80 ug/l	99
58)	2-Hexanone	12.86	43	810849	52.21 ug/l	98
59)	Tetrachloroethene	12.87	164	122273	9.99 ug/l	99
60)	1,3-Dichloropropane	12.90	76	281733	10.18 ug/l	98
61)	Dibromochloromethane	13.23	129	168194	9.57 ug/l	99
62)	1,2-Dibromoethane	13.41	107	151645	9.59 ug/l	99
63)	1-Chlorohexane	13.71	91	266555	9.99 ug/l	100
64)	Chlorobenzene	13.92	112	374917	9.76 ug/l	95
65)	Ethylbenzene	13.95	91	783343	10.31 ug/l	99
66)	1,1,1,2-Tetrachloroethane	13.98	131	153323	9.85 ug/l	98
67)	m-Xylene & p-Xylene	14.07	91	1159289	19.26 ug/l	100
68)	o-Xylene	14.54	91	628811	9.88 ug/l	100
69)	Styrene	14.57	104	431985	10.05 ug/l	99
71)	Bromoform	14.93	173	113634	9.27 ug/l	99
72)	Isopropylbenzene	14.93	105	618224	9.50 ug/l	99
74)	1,1,2,2-Tetrachloroethane	15.35	83	245053	9.60 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.38	53	60718	8.41 ug/l	100

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB380.D Vial: 5
Acq On : 25 Sep 2015 12:19 am Operator: CMendo
Sample : VO03I254 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	15.42	91	915677	9.61 ug/l	100
77)	1,2,3-Trichloropropane	15.44	110	48013	9.40 ug/l	93
78)	Bromobenzene	15.48	156	183342	9.22 ug/l	89
79)	1,3,5-Trimethylbenzene	15.60	105	521599	9.69 ug/l	99
80)	2-Chlorotoluene	15.64	91	592553	9.53 ug/l	99
81)	4-Chlorotoluene	15.76	91	553375	9.74 ug/l	99
82)	tert-Butylbenzene	16.05	134	108030	9.68 ug/l	96
83)	1,2,4-Trimethylbenzene	16.09	105	531905	9.67 ug/l	100
84)	sec-Butylbenzene	16.30	105	678443	9.62 ug/l	100
85)	p-Isopropyltoluene	16.45	119	479739	9.23 ug/l	98
86)	1,3-Dichlorobenzene	16.60	146	296536	9.27 ug/l	99
87)	1,4-Dichlorobenzene	16.70	146	271656	8.62 ug/l	98
88)	n-Butylbenzene	16.97	91	553984	9.56 ug/l	99
89)	1,2-Dichlorobenzene	17.22	146	274156	9.39 ug/l	97
90)	1,2-Dibromo-3-chloropropan	18.28	157	29670	9.03 ug/l	99
91)	1,2,4-Trichlorobenzene	19.47	180	103412	8.67 ug/l	99
92)	Hexachlorobutadiene	19.61	225	69843	9.22 ug/l	99
93)	Naphthalene	19.95	128	228428	8.33 ug/l	100
94)	1,2,3-Trichlorobenzene	20.37	180	88163	8.88 ug/l	98

Sa 10/9/15

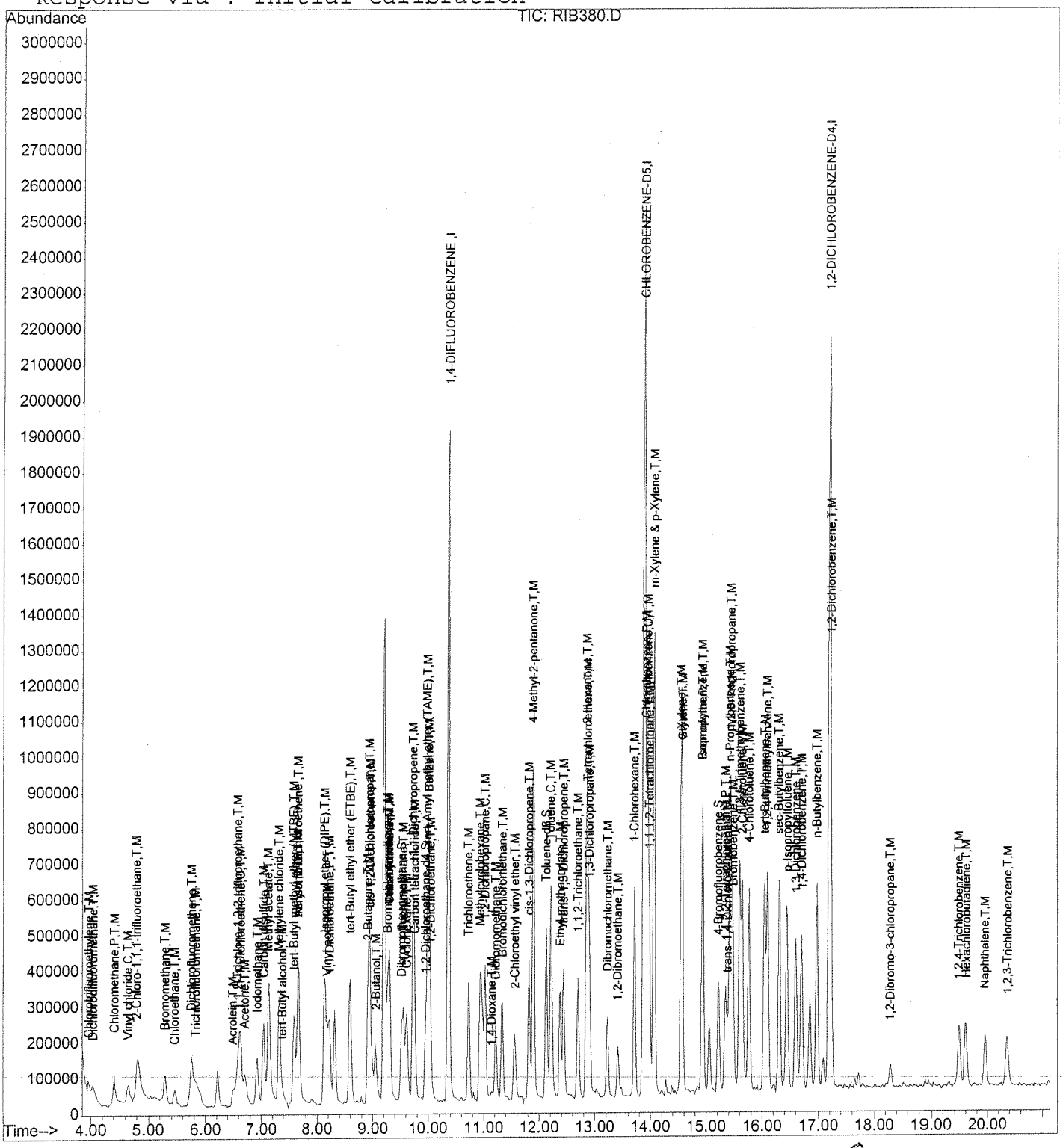
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB380.D
Acq On : 25 Sep 2015 12:19 am
Sample : VO03I254
Misc : 10ppb 8260/50ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



Sa 10/9/15 372

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB381.D Vial: 6
Acq On : 25 Sep 2015 12:48 am Operator: CMendo
Sample : VO03I255 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1878456	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1921544	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	979469	50.00 ug/l	0.01
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	317867	20.29 ug/l	0.00
Spiked Amount 50.000			Recovery =	40.58%	
39) 1,2-Dichloroethane-d4	9.95	65	372054	19.74 ug/l	0.00
Spiked Amount 50.000			Recovery =	39.48%	
53) Toluene-d8	12.12	98	920446	19.84 ug/l	0.00
Spiked Amount 50.000			Recovery =	39.68%	
73) 4-Bromofluorobenzene	15.22	95	461324	19.14 ug/l	0.01
Spiked Amount 50.000			Recovery =	38.28%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.98	116	76824	20.08 ug/l	95
3) Dichlorodifluoromethane	4.04	85	223206	20.00 ug/l	99
4) Chloromethane	4.41	50	240237	19.57 ug/l	97
5) Vinyl chloride	4.65	62	200801	20.74 ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	103829	19.43 ug/l	95
7) Bromomethane	5.29	94	206463	20.56 ug/l	99
8) Chloroethane	5.45	64	138183	22.52 ug/l	97
9) Dichlorofluoromethane	5.75	67	555304	19.90 ug/l	99
10) Trichlorofluoromethane	5.82	101	341310	21.50 ug/l	100
11) Acrolein	6.51	56	169985	92.21 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	139715	19.74 ug/l	100
13) 1,1-Dichloroethene	6.63	61	435359	19.33 ug/l	99
14) Acetone	6.72	43	461861	85.06 ug/l	96
15) Iodomethane	6.93	142	529558	19.46 ug/l	99
16) Carbon disulfide	7.04	76	1139503	20.91 ug/l	100
17) Methyl acetate	7.12	43	230349	20.66 ug/l	100
18) Methylene chloride	7.31	49	516329	19.02 ug/l	97
19) tert-Butyl alcohol	7.37	59	153305	94.72 ug/l	97
20) tert-Butyl methyl ether (M	7.60	73	772393	19.66 ug/l	99
21) trans-1,2-Dichloroethene	7.67	61	472396	20.38 ug/l	99
22) Acrylonitrile	7.66	53	440888	96.86 ug/l	97
23) Isopropyl ether (DIPE)	8.13	45	1232185	19.99 ug/l	98
24) Vinyl acetate	8.18	43	859462	21.10 ug/l	99
25) 1,1-Dichloroethane	8.22	63	608761	19.92 ug/l	99
26) tert-Butyl ethyl ether (ET	8.59	59	1026335	20.20 ug/l	100
27) 2-Butanone	8.91	43	849490	98.88 ug/l	99
28) 2,2-Dichloropropane	8.94	77	408672	20.04 ug/l	100

(#) = qualifier out of range (m) = manual integration
RIB381.D VO03I25.M Wed Oct 07 21:13:51 2015

SC 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB381.D
Acq On : 25 Sep 2015 12:48 am
Sample : VO03I255
Misc : 20ppb 8260/100ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015

Vial: 6
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
29)	cis-1,2-Dichloroethene	8.95	96	327032	19.47 ug/l		100
30)	2-Butanol	9.06	45	150667	93.44 ug/l		99
31)	Bromochloromethane	9.26	49	440124	19.68 ug/l		95
32)	Tetrahydrofuran	9.31	42	91352	19.10 ug/l		98
33)	Chloroform	9.31	83	635679	19.13 ug/l		100
35)	1,1,1-Trichloroethane	9.56	97	447740	19.81 ug/l		97
36)	Cyclohexane	9.62	56	323986	20.63 ug/l		99
37)	1,1-Dichloropropene	9.73	110	121942	19.73 ug/l		99
38)	Carbon tetrachloride	9.76	119	354583	20.08 ug/l		99
40)	tert-Amyl methyl ether (TA	9.99	87	178587	19.51 ug/l		97
41)	Benzene	10.01	78	1161076	20.18 ug/l		98
42)	1,2-Dichloroethane	10.04	62	462848	19.59 ug/l		99
43)	Trichloroethene	10.74	130	291324	19.87 ug/l		99
44)	Methylcyclohexane	10.95	83	357398	19.52 ug/l		99
45)	1,2-Dichloropropane	11.02	63	339288	18.76 ug/l		91
46)	1,4-Dioxane	11.16	88	55950	354.69 ug/l		95
47)	Dibromomethane	11.22	93	248501	19.42 ug/l		98
48)	Bromodichloromethane	11.33	83	515015	19.19 ug/l		100
49)	2-Chloroethyl vinyl ether	11.56	63	206100	19.45 ug/l		100
50)	cis-1,3-Dichloropropene	11.81	75	613529	18.93 ug/l	#	75
51)	4-Methyl-2-pentanone	11.90	43	2189565	100.47 ug/l		99
54)	Toluene	12.21	91	1234092	19.29 ug/l		100
55)	Ethyl methacrylate	12.38	69	434346	19.35 ug/l		98
56)	trans-1,3-Dichloropropene	12.44	75	550322	18.78 ug/l		98
57)	1,1,2-Trichloroethane	12.69	97	276547	18.73 ug/l		99
58)	2-Hexanone	12.85	43	1635809	104.08 ug/l		98
59)	Tetrachloroethene	12.88	164	244662	19.76 ug/l		99
60)	1,3-Dichloropropane	12.91	76	547772	19.56 ug/l		98
61)	Dibromochloromethane	13.23	129	343638	19.31 ug/l		100
62)	1,2-Dibromoethane	13.42	107	315986	19.74 ug/l		97
63)	1-Chlorohexane	13.72	91	543037	20.10 ug/l		99
64)	Chlorobenzene	13.93	112	771395	19.84 ug/l		98
65)	Ethylbenzene	13.94	91	1587926	20.65 ug/l		100
66)	1,1,1,2-Tetrachloroethane	13.99	131	318703	20.24 ug/l		100
67)	m-Xylene & p-Xylene	14.06	91	2402034	39.44 ug/l		99
68)	o-Xylene	14.55	91	1309710	20.34 ug/l		100
69)	Styrene	14.57	104	887036	20.38 ug/l		97
71)	Bromoform	14.94	173	232829	18.50 ug/l		99
72)	Isopropylbenzene	14.94	105	1287888	19.28 ug/l		100
74)	1,1,2,2-Tetrachloroethane	15.34	83	490130	18.71 ug/l		98
75)	trans-1,4-Dichloro-2-buten	15.39	53	135497	18.28 ug/l		98

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

10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB381.D Vial: 6
Acq On : 25 Sep 2015 12:48 am Operator: CMendo
Sample : VO03I255 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	15.43	91	1941920	19.85 ug/l	99
77)	1,2,3-Trichloropropane	15.45	110	100507	19.17 ug/l	100
78)	Bromobenzene	15.48	156	378791	18.55 ug/l	89
79)	1,3,5-Trimethylbenzene	15.60	105	1106244	20.01 ug/l	99
80)	2-Chlorotoluene	15.64	91	1254153	19.63 ug/l	100
81)	4-Chlorotoluene	15.76	91	1167916	20.02 ug/l	98
82)	tert-Butylbenzene	16.04	134	228691	19.96 ug/l	96
83)	1,2,4-Trimethylbenzene	16.10	105	1134821	20.09 ug/l	91
84)	sec-Butylbenzene	16.31	105	1466302	20.25 ug/l	100
85)	p-Isopropyltoluene	16.44	119	1092043	20.45 ug/l	99
86)	1,3-Dichlorobenzene	16.59	146	640921	19.50 ug/l	99
87)	1,4-Dichlorobenzene	16.70	146	637812	19.71 ug/l	99
88)	n-Butylbenzene	16.97	91	1230191	20.66 ug/l	99
89)	1,2-Dichlorobenzene	17.22	146	580811	19.38 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.29	157	63403	18.79 ug/l	99
91)	1,2,4-Trichlorobenzene	19.48	180	243972	19.92 ug/l	100
92)	Hexachlorobutadiene	19.60	225	162459	20.88 ug/l	98
93)	Naphthalene	19.96	128	544213	19.34 ug/l	100
94)	1,2,3-Trichlorobenzene	20.36	180	203080	19.91 ug/l	98

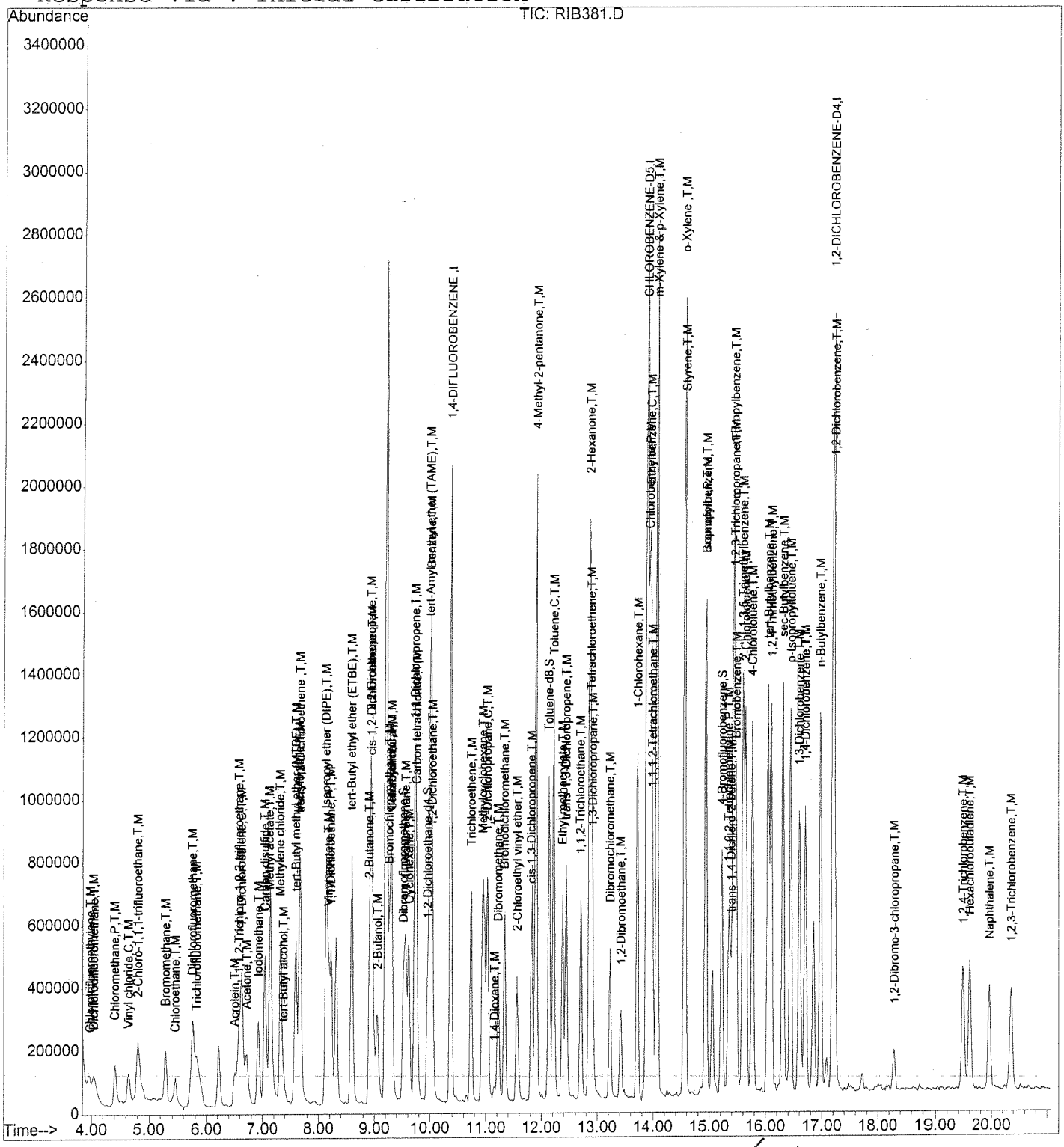
(#) = qualifier out of range (m) = manual integration
RIB381.D VO03I25.M Wed Oct 07 21:13:52 2015

Sa 10/9/15

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB381.D Vial: 6
Acq On : 25 Sep 2015 12:48 am Operator: CMendo
Sample : VO03I255 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



SA 10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB382.D Vial: 7
Acq On : 25 Sep 2015 1:16 am Operator: CMendo
Sample : VO03I256 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1767389	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1796606	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.19	152	962172	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	837783	56.83 ug/l	0.00
Spiked Amount 50.000			Recovery	= 113.66%	
39) 1,2-Dichloroethane-d4	9.95	65	1008176	56.86 ug/l	0.00
Spiked Amount 50.000			Recovery	= 113.72%	
53) Toluene-d8	12.13	98	2497818	57.57 ug/l	0.00
Spiked Amount 50.000			Recovery	= 115.14%	
73) 4-Bromofluorobenzene	15.21	95	1169153	49.38 ug/l	0.00
Spiked Amount 50.000			Recovery	= 98.76%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	191833	53.30 ug/l	100
3) Dichlorodifluoromethane	4.04	85	539292	51.35 ug/l	100
4) Chloromethane	4.41	50	614606	53.20 ug/l	100
5) Vinyl chloride	4.65	62	483561	53.09 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	268999	53.50 ug/l	100
7) Bromomethane	5.27	94	461125	48.82 ug/l	100
8) Chloroethane	5.45	64	274588	47.56 ug/l	100
9) Dichlorofluoromethane	5.75	67	1348742	51.38 ug/l	100
10) Trichlorofluoromethane	5.81	101	774953	51.88 ug/l	100
11) Acrolein	6.50	56	421378	244.69 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.59	151	356003	53.45 ug/l	100
13) 1,1-Dichloroethene	6.63	61	1143033	53.95 ug/l	100
14) Acetone	6.70	43	1210646	236.97 ug/l	100
15) Iodomethane	6.93	142	1344710	52.53 ug/l	100
16) Carbon disulfide	7.03	76	2847384	55.54 ug/l	100
17) Methyl acetate	7.12	43	565093	53.86 ug/l	100
18) Methylene chloride	7.32	49	1272641	49.82 ug/l	100
19) tert-Butyl alcohol	7.38	59	379870	249.46 ug/l	100
20) tert-Butyl methyl ether (M	7.58	73	1920033	51.95 ug/l	100
21) trans-1,2-Dichloroethene	7.66	61	1178659	54.04 ug/l	100
22) Acrylonitrile	7.66	53	1166134	272.29 ug/l	100
23) Isopropyl ether (DIPE)	8.13	45	3047385	52.55 ug/l	100
24) Vinyl acetate	8.18	43	1956986	51.07 ug/l	100
25) 1,1-Dichloroethane	8.22	63	1500915	52.21 ug/l	100
26) tert-Butyl ethyl ether (ET	8.60	59	2523408	52.79 ug/l	100
27) 2-Butanone	8.91	43	2168247	268.26 ug/l	100
28) 2,2-Dichloropropane	8.94	77	1011358	52.72 ug/l	100

(#) = qualifier out of range (m) = manual integration
RIB382.D VO03I25.M Wed Oct 07 21:13:58 2015 SW 10/9/15 Page 1

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB382.D Vial: 7
Acq On : 25 Sep 2015 1:16 am Operator: CMendo
Sample : VO03I256 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	8.95	96	834516	52.81 ug/l	100
30)	2-Butanol	9.06	45	376737	248.31 ug/l	100
31)	Bromochloromethane	9.27	49	1075533	51.12 ug/l	100
32)	Tetrahydrofuran	9.30	42	220086	48.90 ug/l	100
33)	Chloroform	9.31	83	1626016	52.01 ug/l	100
35)	1,1,1-Trichloroethane	9.55	97	1105449	52.00 ug/l	100
36)	Cyclohexane	9.61	56	780972	52.86 ug/l	100
37)	1,1-Dichloropropene	9.73	110	306271	52.67 ug/l	100
38)	Carbon tetrachloride	9.76	119	881517	53.06 ug/l	100
40)	tert-Amyl methyl ether (TA	9.98	87	472765	54.90 ug/l	100
41)	Benzene	10.01	78	2899028	53.54 ug/l	100
42)	1,2-Dichloroethane	10.04	62	1183461	53.23 ug/l	100
43)	Trichloroethene	10.73	130	736883	53.43 ug/l	100
44)	Methylcyclohexane	10.94	83	940231	54.59 ug/l	100
45)	1,2-Dichloropropane	11.02	63	899069	52.84 ug/l	100
46)	1,4-Dioxane	11.14	88	150083	1011.23 ug/l	100
47)	Dibromomethane	11.22	93	641260	53.26 ug/l	100
48)	Bromodichloromethane	11.34	83	1352923	53.57 ug/l	100
49)	2-Chloroethyl vinyl ether	11.56	63	509542	51.10 ug/l	100
50)	cis-1,3-Dichloropropene	11.81	75	1647416	54.03 ug/l	100
51)	4-Methyl-2-pentanone	11.89	43	5355223	261.17 ug/l	100
54)	Toluene	12.22	91	3125913	52.27 ug/l	100
55)	Ethyl methacrylate	12.38	69	1100183	52.43 ug/l	100
56)	trans-1,3-Dichloropropene	12.44	75	1402513	51.20 ug/l	100
57)	1,1,2-Trichloroethane	12.69	97	682170	49.41 ug/l	100
58)	2-Hexanone	12.86	43	3872515	263.53 ug/l	100
59)	Tetrachloroethene	12.87	164	567468	49.01 ug/l	100
60)	1,3-Dichloropropane	12.90	76	1348179	51.48 ug/l	100
61)	Dibromochloromethane	13.23	129	891373	53.58 ug/l	100
62)	1,2-Dibromoethane	13.41	107	781089	52.19 ug/l	100
63)	1-Chlorohexane	13.71	91	1309557	51.85 ug/l	100
64)	Chlorobenzene	13.91	112	1958137	53.87 ug/l	100
65)	Ethylbenzene	13.94	91	3967554	55.18 ug/l	100
66)	1,1,1,2-Tetrachloroethane	13.97	131	807937	54.88 ug/l	100
67)	m-Xylene & p-Xylene	14.06	91	5894080	103.51 ug/l	100
68)	o-Xylene	14.56	91	3182101	52.85 ug/l	100
69)	Styrene	14.57	104	2203143	54.15 ug/l	100
71)	Bromoform	14.93	173	605002	48.95 ug/l	100
72)	Isopropylbenzene	14.93	105	3249464	49.51 ug/l	100
74)	1,1,2,2-Tetrachloroethane	15.35	83	1261809	49.02 ug/l	100
75)	trans-1,4-Dichloro-2-buten	15.37	53	346072	47.53 ug/l	100

(#) = qualifier out of range (m) = manual integration SU 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB382.D Vial: 7
Acq On : 25 Sep 2015 1:16 am Operator: CMendo
Sample : VO03I256 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	15.43	91	4851045	50.47 ug/l	100
77)	1,2,3-Trichloropropane	15.45	110	251640	48.85 ug/l	100
78)	Bromobenzene	15.48	156	976395	48.67 ug/l	100
79)	1,3,5-Trimethylbenzene	15.60	105	2725314	50.17 ug/l	100
80)	2-Chlorotoluene	15.64	91	3116348	49.66 ug/l	100
81)	4-Chlorotoluene	15.76	91	2825622	49.31 ug/l	100
82)	tert-Butylbenzene	16.05	134	537963	47.79 ug/l	100
83)	1,2,4-Trimethylbenzene	16.09	105	2785149	50.19 ug/l	100
84)	sec-Butylbenzene	16.30	105	3500067	49.20 ug/l	100
85)	p-Isopropyltoluene	16.45	119	2621322	49.97 ug/l	100
86)	1,3-Dichlorobenzene	16.60	146	1629313	50.47 ug/l	100
87)	1,4-Dichlorobenzene	16.70	146	1570985	49.42 ug/l	100
88)	n-Butylbenzene	16.97	91	3008652	51.45 ug/l	100
89)	1,2-Dichlorobenzene	17.22	146	1488751	50.57 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.29	157	162182	48.93 ug/l	100
91)	1,2,4-Trichlorobenzene	19.47	180	636417	52.90 ug/l	100
92)	Hexachlorobutadiene	19.61	225	400496	52.40 ug/l	100
93)	Naphthalene	19.96	128	1440454	52.10 ug/l	100
94)	1,2,3-Trichlorobenzene	20.35	180	529952	52.89 ug/l	100

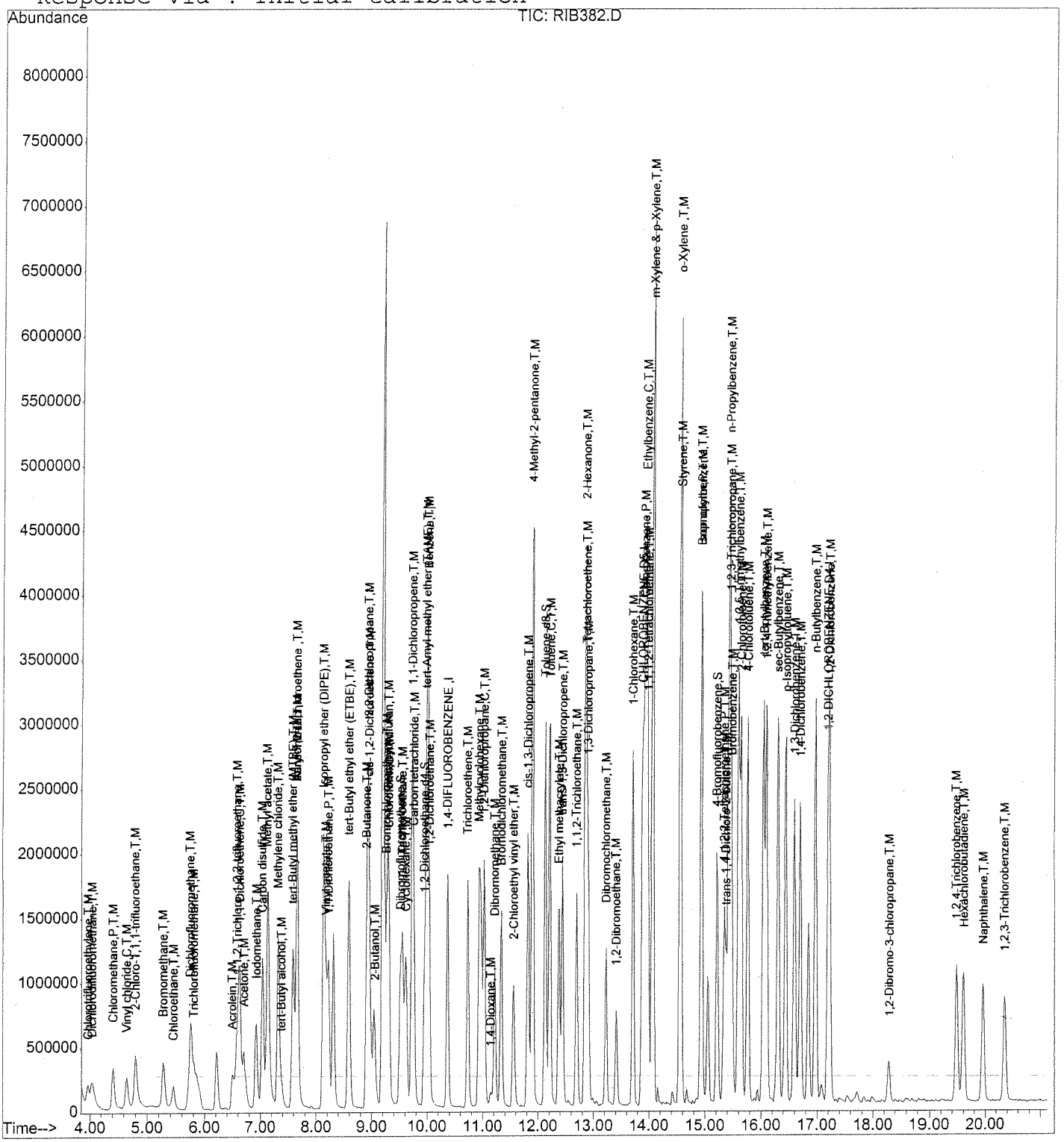
Su 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB382.D Vial: 7
Acq On : 25 Sep 2015 1:16 am Operator: CMendo
Sample : VO03I256 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



SCA 10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB383.D Vial: 8
Acq On : 25 Sep 2015 1:45 am Operator: CMendo
Sample : VO03I257 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1841885	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1932427	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	986312	50.00	ug/l	0.02
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	1622545	105.60	ug/l	0.00
Spiked Amount 50.000			Recovery	=	211.20%	
39) 1,2-Dichloroethane-d4	9.95	65	1917768	103.78	ug/l	0.00
Spiked Amount 50.000			Recovery	=	207.56%	
53) Toluene-d8	12.13	98	4639352	99.42	ug/l	0.00
Spiked Amount 50.000			Recovery	=	198.84%	
73) 4-Bromofluorobenzene	15.21	95	2241348	92.36	ug/l	0.00
Spiked Amount 50.000			Recovery	=	184.72%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.97	116	395118	105.35	ug/l	97
3) Dichlorodifluoromethane	4.04	85	1088937	99.49	ug/l	100
4) Chloromethane	4.41	50	1142977	94.93	ug/l	99
5) Vinyl chloride	4.65	62	964208	101.57	ug/l	97
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	536809	102.45	ug/l	99
7) Bromomethane	5.28	94	839706	85.30	ug/l	100
8) Chloroethane	5.45	64	586238	97.43	ug/l	98
9) Dichlorofluoromethane	5.75	67	2524436	92.27	ug/l	100
10) Trichlorofluoromethane	5.81	101	1588650	102.05	ug/l	100
11) Acrolein	6.50	56	884474	493.92	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.59	151	665617	95.90	ug/l	99
13) 1,1-Dichloroethene	6.63	✓61	2138492	96.86	ug/l	99
14) Acetone	6.71	43	2441041	458.47	ug/l	99
15) Iodomethane	6.91	142	2645292	99.16	ug/l	100
16) Carbon disulfide	7.03	76	5482662	102.61	ug/l	100
17) Methyl acetate	7.11	43	1167677	106.79	ug/l	99
18) Methylene chloride	7.32	49	2491997	93.60	ug/l	99
19) tert-Butyl alcohol	7.38	59	787114	495.98	ug/l	96
20) tert-Butyl methyl ether (M	7.59	73	3865269	100.34	ug/l	99
21) trans-1,2-Dichloroethene	7.66	✓61	2185866	96.17	ug/l	99
22) Acrylonitrile	7.66	53	2266525	507.83	ug/l	99
23) Isopropyl ether (DIPE)	8.14	45	6340765	104.92	ug/l	100
24) Vinyl acetate	8.18	43	4164785	104.29	ug/l	100
25) 1,1-Dichloroethane	8.23	✓63	2902362	96.88	ug/l	100
26) tert-Butyl ethyl ether (ET	8.60	59	5161272	103.61	ug/l	99
27) 2-Butanone	8.91	43	4396394	521.92	ug/l	99
28) 2,2-Dichloropropane	8.94	77	1817627	90.91	ug/l	100

(#) = qualifier out of range (m) = manual integration
RIB383.D VO03I25.M Wed Oct 07 21:14:06 2015 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB383.D Vial: 8
Acq On : 25 Sep 2015 1:45 am Operator: CMendo
Sample : VO03I257 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	8.96	96	1597496	97.00 ug/l	100
30) 2-Butanol	9.06	45	858080	542.70 ug/l	99
31) Bromochloromethane	9.27	49	2107123	96.10 ug/l	100
32) Tetrahydrofuran	9.30	42	477921	101.89 ug/l	99
33) Chloroform	9.31	83	3244288	99.58 ug/l	100
35) 1,1,1-Trichloroethane	9.55	97	2128314	96.06 ug/l	99
36) Cyclohexane	9.61	56	1600486	103.95 ug/l	99
37) 1,1-Dichloropropene	9.73	110	598185	98.71 ug/l	99
38) Carbon tetrachloride	9.76	119	1717470	99.19 ug/l	98
40) tert-Amyl methyl ether (TA	10.00	87	900739	100.37 ug/l	99
41) Benzene	10.01	78	5624756	99.68 ug/l	100
42) 1,2-Dichloroethane	10.04	62	2395131	103.37 ug/l	100
43) Trichloroethene	10.73	130	1407520	97.93 ug/l	98
44) Methylcyclohexane	10.94	83	1800543	100.32 ug/l	98
45) 1,2-Dichloropropane	11.03	63	1753911	98.92 ug/l	98
46) 1,4-Dioxane	11.15	88	305102	1972.58 ug/l	99
47) Dibromomethane	11.22	93	1237492	98.63 ug/l	97
48) Bromodichloromethane	11.34	83	2818866	107.10 ug/l	100
49) 2-Chloroethyl vinyl ether	11.55	63	1159930	111.63 ug/l	100
50) cis-1,3-Dichloropropene	11.82	75	3187886	100.33 ug/l	98
51) 4-Methyl-2-pentanone	11.89	43	10584482	495.32 ug/l	100
54) Toluene	12.22	91	5989664	93.12 ug/l	100
55) Ethyl methacrylate	12.37	69	2199306	97.45 ug/l	98
56) trans-1,3-Dichloropropene	12.44	75	2932037	99.51 ug/l	100
57) 1,1,2-Trichloroethane	12.69	97	1390094	93.60 ug/l	99
58) 2-Hexanone	12.84	43	7730247	489.07 ug/l	99
59) Tetrachloroethene	12.87	164	1156178	92.83 ug/l	99
60) 1,3-Dichloropropane	12.90	76	2748404	97.57 ug/l	100
61) Dibromochloromethane	13.23	129	1807001	100.98 ug/l	99
62) 1,2-Dibromoethane	13.41	107	1559289	96.86 ug/l	100
63) 1-Chlorohexane	13.71	91	2373524	87.37 ug/l	96
64) Chlorobenzene	13.92	112	3755510	96.06 ug/l	99
65) Ethylbenzene	13.95	91	7583791	98.05 ug/l	99
66) 1,1,1,2-Tetrachloroethane	13.98	131	1570849	99.19 ug/l	99
67) m-Xylene & p-Xylene	14.07	91	11176430	182.48 ug/l	99
68) o-Xylene	14.56	91	6216329	95.99 ug/l	100
69) Styrene	14.57	104	4219510	96.42 ug/l	98
71) Bromoform	14.93	173	1225827	96.74 ug/l	100
72) Isopropylbenzene	14.94	105	6095469	90.60 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.35	83	2490611	94.39 ug/l	99
75) trans-1,4-Dichloro-2-buten	15.38	53	718429	96.26 ug/l	98

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

Sw 10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB383.D Vial: 8
Acq On : 25 Sep 2015 1:45 am Operator: CMendo
Sample : VO03I257 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	15.44	91	9174122	93.11 ug/l	100
77)	1,2,3-Trichloropropane	15.45	110	499239	94.54 ug/l	99
78)	Bromobenzene	15.48	156	1887799	91.80 ug/l	97
79)	1,3,5-Trimethylbenzene	15.60	105	5118568	91.93 ug/l	100
80)	2-Chlorotoluene	15.64	91	5871789	91.28 ug/l	99
81)	4-Chlorotoluene	15.76	91	5475426	93.21 ug/l	99
82)	tert-Butylbenzene	16.05	134	1020448	88.43 ug/l	98
83)	1,2,4-Trimethylbenzene	16.11	105	5267758	92.60 ug/l	97
84)	sec-Butylbenzene	16.31	105	6847174	93.89 ug/l	99
85)	p-Isopropyltoluene	16.45	119	4987335	92.75 ug/l	99
86)	1,3-Dichlorobenzene	16.60	146	3108279	93.93 ug/l	100
87)	1,4-Dichlorobenzene	16.70	146	3009510	92.35 ug/l	99
88)	n-Butylbenzene	16.97	91	5596550	93.35 ug/l	100
89)	1,2-Dichlorobenzene	17.22	146	2854281	94.57 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.30	157	324840	95.61 ug/l	97
91)	1,2,4-Trichlorobenzene	19.47	180	1202117	97.47 ug/l	100
92)	Hexachlorobutadiene	19.61	225	714235	91.16 ug/l	100
93)	Naphthalene	19.96	128	2792897	98.54 ug/l	100
94)	1,2,3-Trichlorobenzene	20.37	180	1022355	99.54 ug/l	99

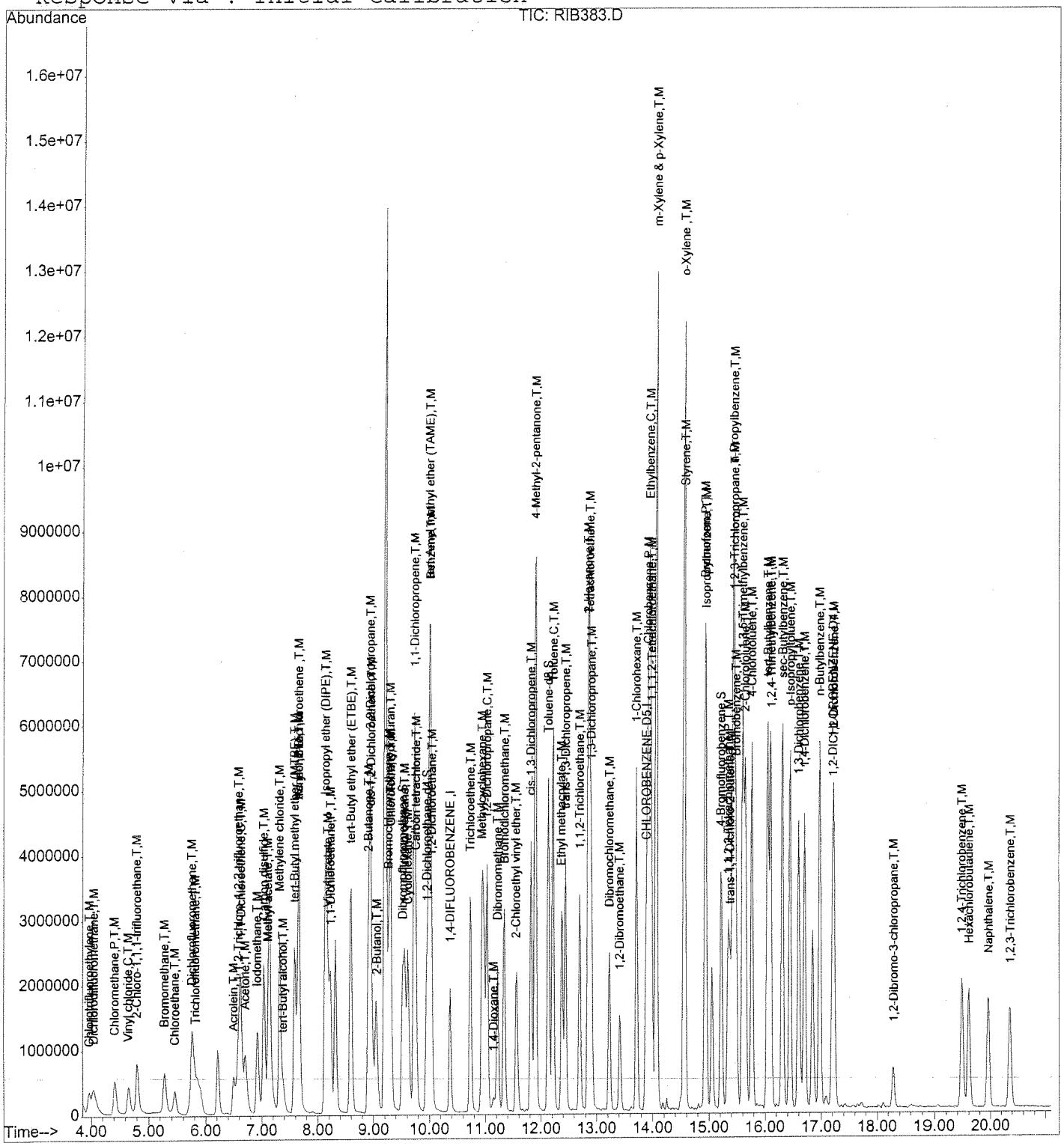
Su 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB383.D Vial: 8
Acq On : 25 Sep 2015 1:45 am Operator: CMendo
Sample : VO03I257 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



Su 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB384.D
Acq On : 25 Sep 2015 2:13 am
Sample : VO03I258
Misc : 200ppb 8260/1000ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015

Vial: 9
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1756218	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1781337	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	781341	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	3236068	220.89	ug/l	0.00
Spiked Amount 50.000			Recovery	=	441.78%	
39) 1,2-Dichloroethane-d4	9.95	65	3724879	211.41	ug/l	0.00
Spiked Amount 50.000			Recovery	=	422.82%	
53) Toluene-d8	12.12	98	9582038	222.75	ug/l	0.00
Spiked Amount 50.000			Recovery	=	445.50%	
73) 4-Bromofluorobenzene	15.22	95	4239591	220.52	ug/l	0.01
Spiked Amount 50.000			Recovery	=	441.04%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	810794	226.72	ug/l	98
3) Dichlorodifluoromethane	4.04	85	2278523	218.32	ug/l	98
4) Chloromethane	4.42	50	2282821	198.86	ug/l	100
5) Vinyl chloride	4.66	62	1719588	189.98	ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	1122182	224.62	ug/l	100
7) Bromomethane	5.26	94	1416449	150.90	ug/l	100
8) Chloroethane	5.44	64	888473	154.87	ug/l	98
9) Dichlorofluoromethane	5.75	67	4881914	187.15	ug/l	100
10) Trichlorofluoromethane	5.84	101	3173415	213.79	ug/l	100
11) Acrolein	6.51	56	1633714	957.82	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.60	151	1210851	182.96	ug/l	99
13) 1,1-Dichloroethene	6.63	61	4204431	199.71	ug/l	99
14) Acetone	6.70	43	4673754	920.64	ug/l	98
15) Iodomethane	6.93	142	5351012	210.37	ug/l	100
16) Carbon disulfide	7.03	76	10669905	209.44	ug/l	100
17) Methyl acetate	7.12	43	2240152	214.87	ug/l	99
18) Methylene chloride	7.31	49	5025940	197.99	ug/l	99
19) tert-Butyl alcohol	7.39	59	1455435	961.85	ug/l	99
20) tert-Butyl methyl ether (M	7.60	73	7263985	197.77	ug/l	100
21) trans-1,2-Dichloroethene	7.66	61	4278575	197.43	ug/l	99
22) Acrylonitrile	7.66	53	4318747	1014.84	ug/l	98
23) Isopropyl ether (DIPE)	8.15	45	11417592	198.14	ug/l	99
24) Vinyl acetate	8.18	43	8056795	211.59	ug/l	100
25) 1,1-Dichloroethane	8.22	63	5709597	199.88	ug/l	100
26) tert-Butyl ethyl ether (ET	8.59	59	9442606	198.80	ug/l	99
27) 2-Butanone	8.91	43	8427536	1049.29	ug/l	100
28) 2,2-Dichloropropane	8.94	77	3406109	178.67	ug/l	100

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

Sw 10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB384.D Vial: 9
Acq On : 25 Sep 2015 2:13 am Operator: CMendo
Sample : VO03I258 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	8.95	96	3180724	202.56 ug/l	99
30) 2-Butanol	9.06	45	1500157	995.06 ug/l	99
31) Bromochloromethane	9.28	49	5083008	243.14 ug/l	87
32) Tetrahydrofuran	9.29	42	885630	198.01 ug/l	98
33) Chloroform	9.31	83	6243204	200.98 ug/l	97
35) 1,1,1-Trichloroethane	9.55	97	4159760	196.90 ug/l	99
36) Cyclohexane	9.61	56	3009296	204.98 ug/l	100
37) 1,1-Dichloropropene	9.73	110	1185795	205.22 ug/l	99
38) Carbon tetrachloride	9.76	119	3402293	206.07 ug/l	98
40) tert-Amyl methyl ether (TA	9.99	87	1734671	202.72 ug/l	98
41) Benzene	10.01	78	10823071	201.17 ug/l	100
42) 1,2-Dichloroethane	10.04	62	4609898	208.65 ug/l	99
43) Trichloroethene	10.74	130	2766516	201.87 ug/l	99
44) Methylcyclohexane	10.93	83	3554985	207.73 ug/l	99
45) 1,2-Dichloropropane	11.02	63	3473388	205.45 ug/l	96
46) 1,4-Dioxane	11.14	88	575909	3905.06 ug/l	96
47) Dibromomethane	11.22	93	2496414	208.68 ug/l	99
48) Bromodichloromethane	11.34	83	5321982	212.06 ug/l	100
49) 2-Chloroethyl vinyl ether	11.54	63	2162079	218.22 ug/l	99
50) cis-1,3-Dichloropropene	11.81	75	6462102	213.30 ug/l	100
51) 4-Methyl-2-pentanone	11.90	43	18772382	921.35 ug/l	98
54) Toluene	12.21	91	11956953	201.65 ug/l	100
55) Ethyl methacrylate	12.38	69	4170783	200.47 ug/l	99
56) trans-1,3-Dichloropropene	12.44	75	5805904	213.75 ug/l	95
57) 1,1,2-Trichloroethane	12.69	97	2804309	204.84 ug/l	99
58) 2-Hexanone	12.85	43	14096848	967.52 ug/l	100
59) Tetrachloroethene	12.88	164	2282176	198.78 ug/l	99
60) 1,3-Dichloropropane	12.90	76	5431726	209.19 ug/l	99
61) Dibromochloromethane	13.23	129	3516670	213.19 ug/l	100
62) 1,2-Dibromoethane	13.42	107	3106899	209.36 ug/l	100
63) 1-Chlorohexane	13.72	91	4968959	198.42 ug/l	99
64) Chlorobenzene	13.91	112	7001161	194.27 ug/l	98
65) Ethylbenzene	13.94	91	13758237	192.97 ug/l	99
66) 1,1,1,2-Tetrachloroethane	13.99	131	2934680	201.03 ug/l	100
67) m-Xylene & p-Xylene	14.06	91	18437313	326.56 ug/l	92
68) o-Xylene	14.55	91	11389696	190.78 ug/l	100
69) Styrene	14.57	104	7829495	194.09 ug/l	98
71) Bromoform	14.93	173	2300083	229.15 ug/l	99
72) Isopropylbenzene	14.94	105	11633091	218.27 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.34	83	4432870	212.08 ug/l	99
75) trans-1,4-Dichloro-2-buten	15.39	53	1302338	220.27 ug/l	98

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

Sc 10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB384.D Vial: 9
Acq On : 25 Sep 2015 2:13 am Operator: CMendo
Sample : VO03I258 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	15.43	91	16473078	211.04 ug/l	99
77)	1,2,3-Trichloropropane	15.45	110	871091	208.24 ug/l	97
78)	Bromobenzene	15.48	156	3580674	219.79 ug/l	98
79)	1,3,5-Trimethylbenzene	15.60	105	9293866	210.70 ug/l	99
80)	2-Chlorotoluene	15.64	91	10998476	215.83 ug/l	100
81)	4-Chlorotoluene	15.76	91	10527657	226.23 ug/l	98
82)	tert-Butylbenzene	16.04	134	1920886	210.13 ug/l	97
83)	1,2,4-Trimethylbenzene	16.10	105	9505211	210.93 ug/l	91
84)	sec-Butylbenzene	16.31	105	11873080	205.52 ug/l	100
85)	p-Isopropyltoluene	16.45	119	9037308	212.16 ug/l	98
86)	1,3-Dichlorobenzene	16.59	146	5563258	212.21 ug/l	100
87)	1,4-Dichlorobenzene	16.70	146	5555361	215.20 ug/l	99
88)	n-Butylbenzene	16.97	91	10077397	212.19 ug/l	100
89)	1,2-Dichlorobenzene	17.23	146	4819571	201.58 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.29	157	537197	199.59 ug/l	98
91)	1,2,4-Trichlorobenzene	19.48	180	2188536	224.01 ug/l	99
92)	Hexachlorobutadiene	19.60	225	1238406	199.53 ug/l	100
93)	Naphthalene	19.96	128	4944529	220.22 ug/l	100
94)	1,2,3-Trichlorobenzene	20.36	180	1777629	218.49 ug/l	99

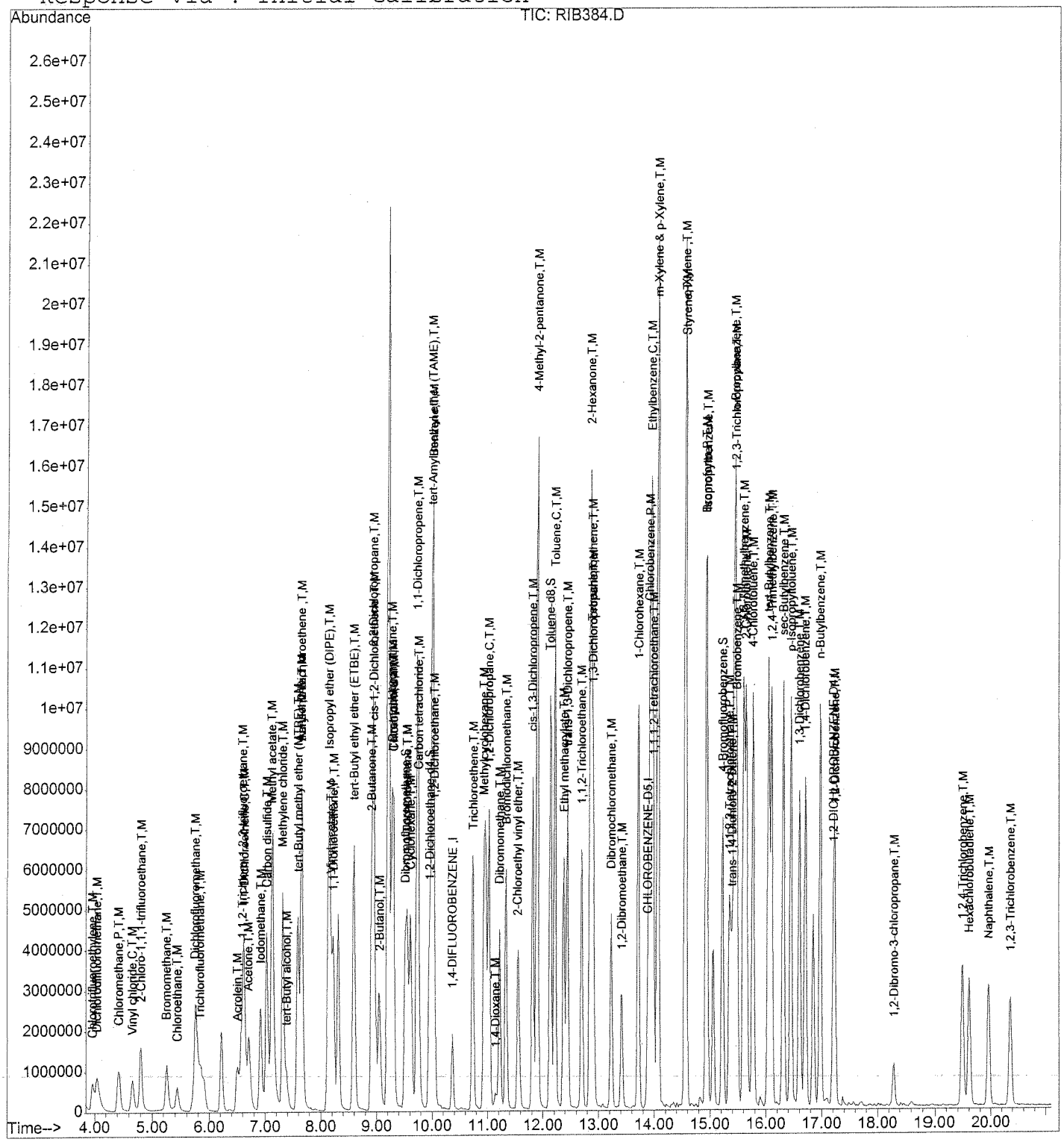
SU 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB384.D Vial: 9
Acq On : 25 Sep 2015 2:13 am Operator: CMendo
Sample : VO03I258 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



Su 10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB385.D Vial: 10
Acq On : 25 Sep 2015 2:41 am Operator: CMendo
Sample : VO03I259 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1845737	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.89	117	1862058	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	859688	50.00	ug/l	0.02
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	4845394	314.70	ug/l	0.00
Spiked Amount 50.000			Recovery	=	629.40%	
39) 1,2-Dichloroethane-d4	9.96	65	5831430	314.92	ug/l	0.00
Spiked Amount 50.000			Recovery	=	629.84%	
53) Toluene-d8	12.13	98	14305533	318.13	ug/l	0.00
Spiked Amount 50.000			Recovery	=	636.26%	
73) 4-Bromofluorobenzene	15.23	95	6274843	296.64	ug/l	0.02
Spiked Amount 50.000			Recovery	=	593.28%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.97	116	1164240	309.77	ug/l	95
3) Dichlorodifluoromethane	4.04	85	3317710	302.47	ug/l	96
4) Chloromethane	4.43	50	3610934	299.29	ug/l	100
5) Vinyl chloride	4.67	62	2955276	310.66	ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	4.80	118	1661645	316.48	ug/l	99
7) Bromomethane	5.25	94	1431539	145.12	ug/l	100
8) Chloroethane	5.40	64	1121952	186.08	ug/l	97
9) Dichlorofluoromethane	5.75	67	6518735	237.78	ug/l	99
10) Trichlorofluoromethane	5.83	101	4638520	297.33	ug/l	100
11) Acrolein	6.50	56	2694441	1503.69	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.59	151	1950534	280.43	ug/l	99
13) 1,1-Dichloroethene	6.62	61	6356572	287.30	ug/l	100
14) Acetone	6.71	43	7933818	1487.01	ug/l	99
15) Iodomethane	6.92	142	7924755	296.44	ug/l	99
16) Carbon disulfide	7.02	76	15106564	282.14	ug/l	99
17) Methyl acetate	7.11	43	3602716	328.80	ug/l	100
18) Methylene chloride	7.32	49	7249076	271.72	ug/l	99
19) tert-Butyl alcohol	7.41	59	2772909	1743.64	ug/l	99
20) tert-Butyl methyl ether (M	7.60	73	11751691	304.44	ug/l	99
21) trans-1,2-Dichloroethene	7.66	61	6497950	285.30	ug/l	99
22) Acrylonitrile	7.66	53	7431277	1661.55	ug/l	98
23) Isopropyl ether (DIPE)	8.14	45	18757826	309.73	ug/l	99
24) Vinyl acetate	8.18	43	13371032	334.13	ug/l	99
25) 1,1-Dichloroethane	8.23	63	8643564	287.91	ug/l	99
26) tert-Butyl ethyl ether (ET	8.60	59	15287639	306.25	ug/l	100
27) 2-Butanone	8.91	43	14284930	1692.31	ug/l	99
28) 2,2-Dichloropropane	8.94	77	4769046	238.03	ug/l	100

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

Su 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB385.D Vial: 10
Acq On : 25 Sep 2015 2:41 am Operator: CMendo
Sample : VO03I259 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	8.96	96	4740201	287.23 ug/l	98
30)	2-Butanol	9.08	45	2708382	1709.36 ug/l	98
31)	Bromochloromethane	9.27	49	6293749	286.45 ug/l	96
32)	Tetrahydrofuran	9.30	42	1420431	302.18 ug/l	98
33)	Chloroform	9.31	83	8921342	273.26 ug/l	100
35)	1,1,1-Trichloroethane	9.55	97	6002760	270.36 ug/l	99
36)	Cyclohexane	9.61	56	4702659	304.79 ug/l	98
37)	1,1-Dichloropropene	9.73	110	1624857	267.56 ug/l	100
38)	Carbon tetrachloride	9.76	119	4645179	267.71 ug/l	99
40)	tert-Amyl methyl ether (TA	10.00	87	2642794	293.87 ug/l	99
41)	Benzene	10.01	78	15409320	272.52 ug/l	100
42)	1,2-Dichloroethane	10.04	62	6929756	298.44 ug/l	100
43)	Trichloroethene	10.73	130	4090519	284.01 ug/l	98
44)	Methylcyclohexane	10.94	83	5341101	296.96 ug/l	99
45)	1,2-Dichloropropane	11.03	63	5166789	290.80 ug/l	98
46)	1,4-Dioxane	11.16	88	917345	5918.55 ug/l	97
47)	Dibromomethane	11.22	93	3873188	308.06 ug/l	99
48)	Bromodichloromethane	11.34	83	7968853	302.13 ug/l	100
49)	2-Chloroethyl vinyl ether	11.56	63	3347322	321.46 ug/l	99
50)	cis-1,3-Dichloropropene	11.82	75	9230263	289.89 ug/l	97
51)	4-Methyl-2-pentanone	11.91	43	23020234	1075.03 ug/l	87
54)	Toluene	12.22	91	16511283	266.39 ug/l	98
55)	Ethyl methacrylate	12.38	69	6510083	299.35 ug/l	97
56)	trans-1,3-Dichloropropene	12.44	75	8582775	302.29 ug/l	95
57)	1,1,2-Trichloroethane	12.70	97	4191533	292.90 ug/l	100
58)	2-Hexanone	12.86	43	19555643	1284.00 ug/l	90
59)	Tetrachloroethene	12.88	164	3145561	262.11 ug/l	99
60)	1,3-Dichloropropane	12.90	76	7916733	291.68 ug/l	100
61)	Dibromochloromethane	13.23	129	5289703	306.77 ug/l	100
62)	1,2-Dibromoethane	13.41	107	4678888	301.62 ug/l	100
63)	1-Chlorohexane	13.72	91	7298665	278.81 ug/l	99
64)	Chlorobenzene	13.92	112	10041643	266.56 ug/l	97
65)	Ethylbenzene	13.95	91	17423919	233.79 ug/l	95
66)	1,1,1,2-Tetrachloroethane	13.99	131	4203807	275.49 ug/l	99
67)	m-Xylene & p-Xylene	14.07	91	21938969	371.73 ug/l	79
68)	o-Xylene	14.56	91	15621171	250.32 ug/l	100
69)	Styrene	14.57	104	10652416	252.62 ug/l	98
71)	Bromoform	14.93	173	3526023	319.27 ug/l	100
72)	Isopropylbenzene	14.95	105	15910639	271.32 ug/l	99
74)	1,1,2,2-Tetrachloroethane	15.35	83	6909144	300.42 ug/l	100
75)	trans-1,4-Dichloro-2-buten	15.39	53	2056460	316.11 ug/l	98

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

Sw 10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB385.D Vial: 10
Acq On : 25 Sep 2015 2:41 am Operator: CMendo
Sample : VO03I259 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76) n-Propylbenzene	15.44	91	20647420	240.41 ug/l	95
77) 1,2,3-Trichloropropane	15.45	110	1325879	288.07 ug/l	99
78) Bromobenzene	15.48	156	5173182	288.60 ug/l	98
79) 1,3,5-Trimethylbenzene	15.60	105	13169136	271.35 ug/l	99
80) 2-Chlorotoluene	15.65	91	15682356	279.70 ug/l	100
81) 4-Chlorotoluene	15.77	91	14556689	284.31 ug/l	98
82) tert-Butylbenzene	16.05	134	2592884	257.79 ug/l	99
83) 1,2,4-Trimethylbenzene	16.11	105	13313809	268.52 ug/l	92
84) sec-Butylbenzene	16.32	105	16611121	261.33 ug/l	100
85) p-Isopropyltoluene	16.45	119	12440084	265.43 ug/l	98
86) 1,3-Dichlorobenzene	16.60	146	7971803	276.37 ug/l	99
87) 1,4-Dichlorobenzene	16.70	146	7945196	279.72 ug/l	99
88) n-Butylbenzene	16.97	91	14008315	268.08 ug/l	99
89) 1,2-Dichlorobenzene	17.24	146	7170618	272.59 ug/l	100
90) 1,2-Dibromo-3-chloropropan	18.30	157	909856	307.24 ug/l	98
91) 1,2,4-Trichlorobenzene	19.49	180	3106482	288.99 ug/l	99
92) Hexachlorobutadiene	19.61	225	1752969	256.69 ug/l	98
93) Naphthalene	19.97	128	7438481	301.11 ug/l	100
94) 1,2,3-Trichlorobenzene	20.37	180	2486990	277.82 ug/l	100

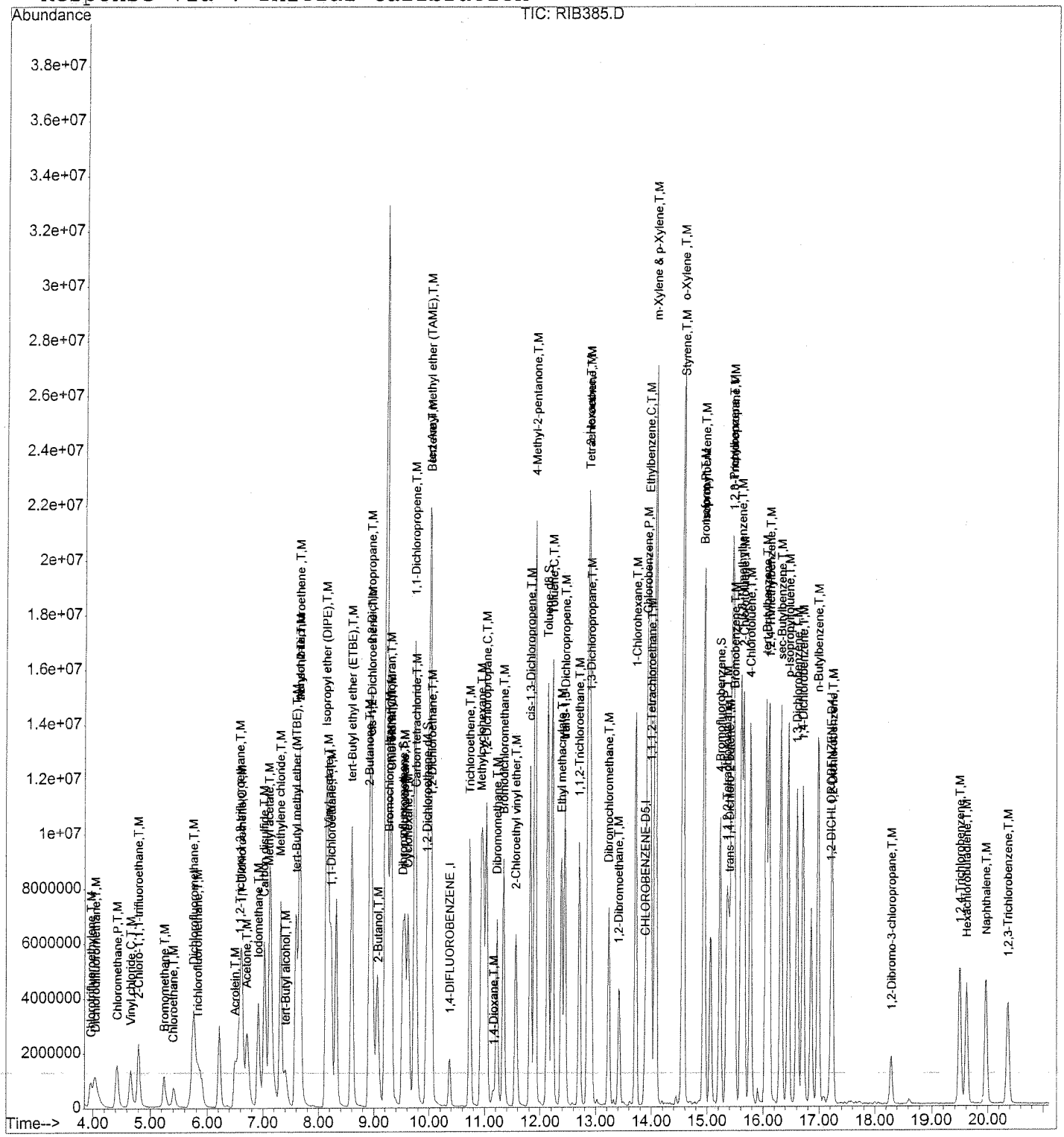
Sa 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB385.D Vial: 10
Acq On : 25 Sep 2015 2:41 am Operator: CMendo
Sample : VO03I259 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:09 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



SW 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB386.D Vial: 11
Acq On : 25 Sep 2015 3:09 am Operator: CMendo
Sample : VO03I2510 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:25 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	1785965	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	1623939	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	690722	50.00 ug/l	0.01
System Monitoring Compounds					
34) Dibromofluoromethane	9.52	111	7672116	514.97 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1029.94%	
39) 1,2-Dichloroethane-d4	9.95	65	9029424	503.95 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1007.90%	
53) Toluene-d8	12.14	98	19549276	498.49 ug/l	0.01
Spiked Amount 50.000			Recovery	= 996.98%	
73) 4-Bromofluorobenzene	15.22	95	9168428	539.47 ug/l	0.01
Spiked Amount 50.000			Recovery	= 1078.94%	

Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	2000669	550.13 ug/l	97
3) Dichlorodifluoromethane	4.04	85	5489170	517.19 ug/l	99
4) Chloromethane	4.42	50	5811425	497.80 ug/l	99
5) Vinyl chloride	4.66	62	4778566	519.14 ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	4.79	118	2825666	556.19 ug/l	99
7) Bromomethane	5.24	94	2053629	215.14 ug/l	100
8) Chloroethane	5.41	64	1177653	201.86 ug/l	91
9) Dichlorofluoromethane	5.73	67	9681746	364.97 ug/l	100
10) Trichlorofluoromethane	5.81	101	7301224	483.67 ug/l	100
11) Acrolein	6.49	56	4442591	2563.01 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	3355652	498.60 ug/l	99
13) 1,1-Dichloroethene	6.61	61	10726373	501.02 ug/l	99
14) Acetone	6.72	43	12480568	2417.49 ug/l	96
15) Iodomethane	6.91	142	12892693	498.42 ug/l	100
16) Carbon disulfide	7.01	76	25435372	490.95 ug/l	100
17) Methyl acetate	7.12	43	5991731	565.13 ug/l	99
18) Methylene chloride	7.31	49	11621107	450.18 ug/l	100
19) tert-Butyl alcohol	7.42	59	3831472	2489.92 ug/l	79
20) tert-Butyl methyl ether (M	7.60	73	18926277	506.71 ug/l	99
21) trans-1,2-Dichloroethene	7.66	61	10682891	484.74 ug/l	99
22) Acrylonitrile	7.67	53	11538728	2666.27 ug/l	99
23) Isopropyl ether (DIPE)	8.15	45	25434244	434.03 ug/l	93
24) Vinyl acetate	8.18	43	20153124	520.46 ug/l	99
25) 1,1-Dichloroethane	8.22	63	14552523	500.95 ug/l	100
26) tert-Butyl ethyl ether (ET	8.59	59	22647268	468.87 ug/l	98
27) 2-Butanone	8.91	43	19597154	2399.34 ug/l	99
28) 2,2-Dichloropropane	8.94	77	6926120	357.26 ug/l	99

(#) = qualifier out of range (m) = manual integration
RIB386.D VO03I25.M Wed Oct 07 21:25:59 2015

Sw 10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB386.D Vial: 11
Acq On : 25 Sep 2015 3:09 am Operator: CMendo
Sample : VO03I2510 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:25 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	8.95	96	7330379	459.05 ug/l	98
30)	2-Butanol	9.09	45	3358578	2190.66 ug/l	98
31)	Bromochloromethane	9.26	49	9797126	460.83 ug/l	97
32)	Tetrahydrofuran	9.31	42	2107451	463.34 ug/l	98
33)	Chloroform	9.31	83	14788691	468.13 ug/l	100
35)	1,1,1-Trichloroethane	9.55	97	9666332	449.94 ug/l	99
36)	Cyclohexane	9.61	56	7303121	489.17 ug/l	98
37)	1,1-Dichloropropene	9.73	110	2628879	447.38 ug/l	100
38)	Carbon tetrachloride	9.76	119	7613867	453.48 ug/l	99
40)	tert-Amyl methyl ether (TA	9.99	87	3925441	451.11 ug/l	93
41)	Benzene	10.01	78	20785803	379.91 ug/l	95
42)	1,2-Dichloroethane	10.04	62	10273204	457.24 ug/l	100
43)	Trichloroethene	10.72	130	6714139	481.77 ug/l	98
44)	Methylcyclohexane	10.93	83	8366659	480.74 ug/l	99
45)	1,2-Dichloropropane	11.02	63	7721339	449.11 ug/l	94
46)	1,4-Dioxane	11.16	88	1308489	8724.68 ug/l	95
47)	Dibromomethane	11.22	93	5924116	486.96 ug/l	99
48)	Bromodichloromethane	11.33	83	12471843	488.67 ug/l	100
49)	2-Chloroethyl vinyl ether	11.56	63	5052670	501.48 ug/l	99
50)	cis-1,3-Dichloropropene	11.81	75	14884268	483.11 ug/l	99
54)	Toluene	12.21	91	21714524	401.70 ug/l	81
55)	Ethyl methacrylate	12.38	69	10060911	530.45 ug/l	100
56)	trans-1,3-Dichloropropene	12.44	75	13156852	531.34 ug/l	96
57)	1,1,2-Trichloroethane	12.71	97	6475569	518.86 ug/l	99
58)	2-Hexanone	12.85	43	22449225	1690.12 ug/l	78
59)	Tetrachloroethene	12.88	164	5048426	482.35 ug/l	97
60)	1,3-Dichloropropane	12.91	76	12018070	507.71 ug/l	100
61)	Dibromochloromethane	13.23	129	8243897	548.21 ug/l	100
62)	1,2-Dibromoethane	13.42	107	7009426	518.11 ug/l	100
63)	1-Chlorohexane	13.72	91	11082993	485.46 ug/l	99
64)	Chlorobenzene	13.93	112	15883118	483.44 ug/l	97
65)	Ethylbenzene	13.96	91	21423996	329.62 ug/l	81
66)	1,1,1,2-Tetrachloroethane	13.99	131	6362372	478.08 ug/l	99
68)	o-Xylene	14.55	91	20468658	376.09 ug/l	89
69)	Styrene	14.57	104	16557313	450.22 ug/l	97
71)	Bromoform	14.94	173	5315434	599.02 ug/l	100
72)	Isopropylbenzene	14.94	105	20998474	445.68 ug/l	94
74)	1,1,2,2-Tetrachloroethane	15.34	83	10070016	544.97 ug/l	99
75)	trans-1,4-Dichloro-2-buten	15.39	53	3018283	577.46 ug/l	100
76)	n-Propylbenzene	15.43	91	24052093	348.57 ug/l	87
77)	1,2,3-Trichloropropane	15.45	110	1753595	474.19 ug/l	98

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

10/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I24\RIB386.D Vial: 11
Acq On : 25 Sep 2015 3:09 am Operator: CMendo
Sample : VO03I2510 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:25 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	Bromobenzene	15.48	156	7557549	524.76 ug/l	96
79)	1,3,5-Trimethylbenzene	15.60	105	17946653	460.24 ug/l	96
80)	2-Chlorotoluene	15.65	91	21207590	470.77 ug/l	96
81)	4-Chlorotoluene	15.76	91	19537836	474.94 ug/l	97
82)	tert-Butylbenzene	16.04	134	3819484	472.63 ug/l	99
83)	1,2,4-Trimethylbenzene	16.10	105	18455339	463.26 ug/l	88
84)	sec-Butylbenzene	16.31	105	21454696	420.09 ug/l	93
85)	p-Isopropyltoluene	16.44	119	17477527	464.13 ug/l	99
86)	1,3-Dichlorobenzene	16.61	146	11605101	500.75 ug/l	99
87)	1,4-Dichlorobenzene	16.71	146	11687617	512.14 ug/l	98
88)	n-Butylbenzene	16.98	91	19466966	463.68 ug/l	94
89)	1,2-Dichlorobenzene	17.23	146	10411109	492.59 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.29	157	1341018	563.62 ug/l	97
91)	1,2,4-Trichlorobenzene	19.48	180	4868643	563.71 ug/l	100
92)	Hexachlorobutadiene	19.60	225	2635166	480.27 ug/l	99
93)	Naphthalene	19.96	128	11029822	555.70 ug/l	100
94)	1,2,3-Trichlorobenzene	20.36	180	3938428	547.58 ug/l	100

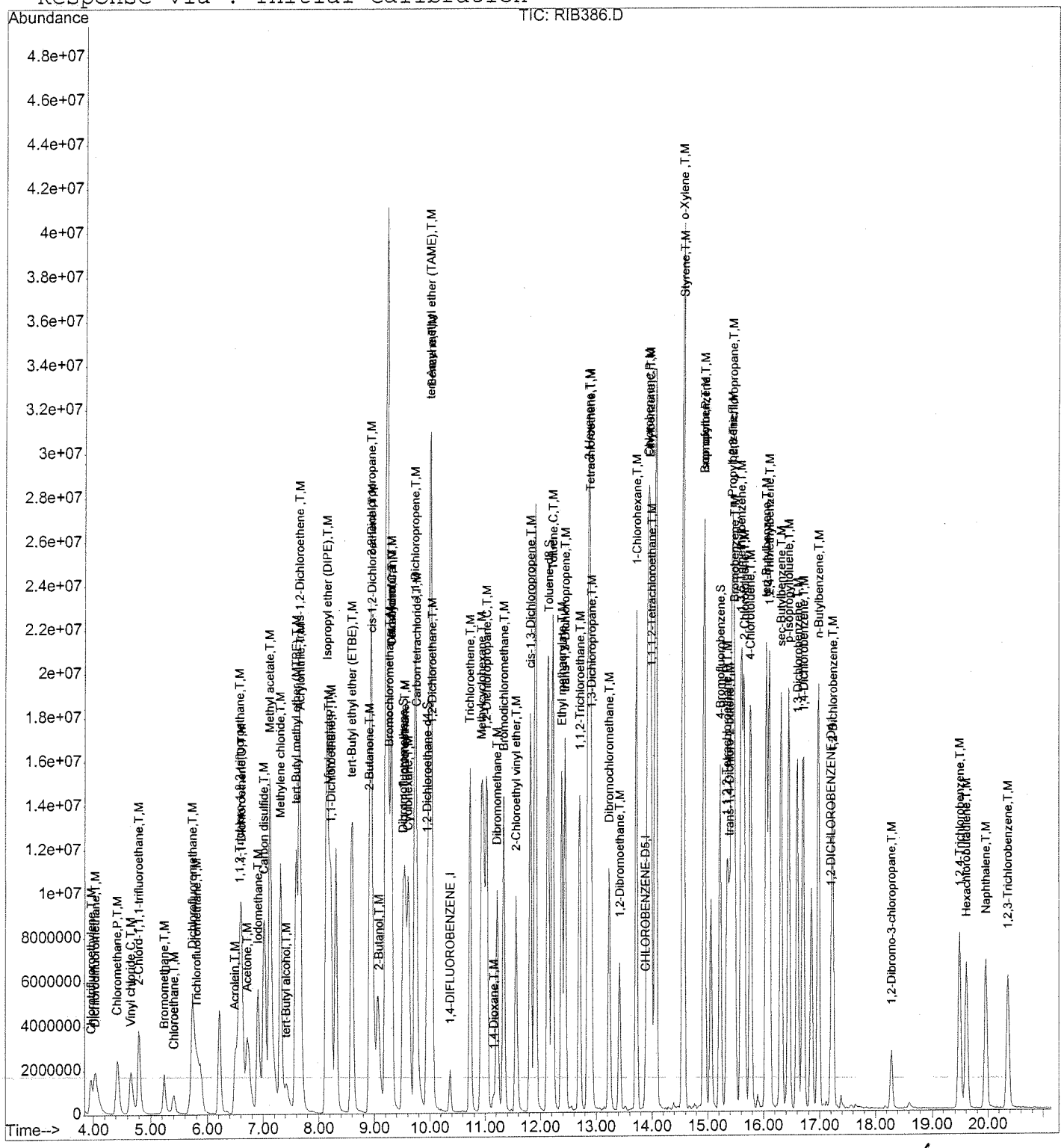
Su 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I24\RIB386.D Vial: 11
Acq On : 25 Sep 2015 3:09 am Operator: CMendo
Sample : VO03I2510 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 7 21:25 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



Sa 10/9/15

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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :09/24/15 22:55
Spike Amount :50 PPB
CC/CV File :RIB452
IC File :RIB382

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :09/25/15 03:09
HPChem Method :V003I25
Date_Time :09/27/15 11:52

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	50.000	0	2193017	1	1	10.358	10.369	0				
	2	Chlorotrifluoroethylene	55.128	10.3	246179	0.112	0.102	3.952	3.965	13.57				
	3	Dichlorodifluoromethane	50.705	1.4	660809	0.301	0.297	4.042	4.036	13.31				
	4	Chloromethane	47.317	-5.4	678287	0.309	0.327	4.399	4.413	3.54				
	5	Vinyl chloride	50.373	0.7	569348	0.260	0.258	4.637	4.648	4.93				
	6	2-Chloro-1,1,1-trifluoroethane	54.213	8.4	338199	0.154	0.142	4.786	4.803	10.63				
	7	Bromomethane	46.630	-6.7	546545	0.249	0.267	5.263	5.285	10.96				
	8	Chloroethane	51.671	3.3	370158	0.169	0.163	5.427	5.447	11.02				
	9	Dichlorofluoromethane	47.257	-5.5	1539314	0.702	0.743	5.740	5.751	12.19				
	10	Trichlorofluoromethane	52.986	6.0	982139	0.448	0.423	5.814	5.821	5.90				
5	11	Acrolein	232.278	-7.1	496439	0.045	0.051	6.499	6.503	18.38	0.0010	0.0485		0.9994
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	45.630	-8.7	377091	0.172	0.188	6.574	6.585	6.89				
	13	1,1-Dichloroethene	46.670	-6.7	1226881	0.559	0.599	6.619	6.627	4.71				
5	14	Acetone	219.449	-12.2	1391146	0.127	0.145	6.693	6.710	14.46				
	15	Iodomethane	45.504	-9.0	1445324	0.659	0.724	6.917	6.923	3.33				
	16	Carbon disulfide	48.511	-3.0	3086115	1.407	1.450	7.036	7.034	7.44				
	17	Methyl acetate	48.335	-3.3	629273	0.287	0.297	7.110	7.120	14.62				
	18	Methylene chloride	46.254	-7.5	1466154	0.669	0.723	7.319	7.317	12.68				
5	19	tert-Butyl alcohol	231.845	-7.3	438074	0.040	0.043	7.364	7.385	6.87				
	20	tert-Butyl methyl ether (MTBE)	46.048	-7.9	2111973	0.963	1.046	7.587	7.594	3.08				
	21	trans-1,2-Dichloroethene	48.928	-2.1	1324046	0.604	0.617	7.661	7.664	5.26				
5	22	Acrylonitrile	260.177	4.1	1382581	0.126	0.121	7.647	7.664	7.27				
	23	Isopropyl ether (DIPE)	48.604	-2.8	3497403	1.595	1.641	8.123	8.136	4.78				
	24	Vinyl acetate	41.040	-17.9	1951360	0.890	1.084	8.168	8.181	11.44				
	25	1,1-Dichloroethane	48.839	-2.3	1742108	0.794	0.813	8.213	8.224	4.08				
	26	tert-Butyl ethyl ether (ETBE)	45.259	-9.5	2684322	1.224	1.352	8.585	8.595	3.91				
5	27	2-Butanone	249.283	-0.3	2500131	0.228	0.229	8.898	8.913	8.85				
	28	2,2-Dichloropropane	50.568	1.1	1203788	0.549	0.543	8.928	8.939	13.02				
	29	cis-1,2-Dichloroethene	47.240	-5.5	926301	0.422	0.447	8.943	8.954	6.49				
5	30	2-Butanol	252.036	0.8	474473	0.043	0.043	9.047	9.065	7.78				
	31	Bromochloromethane	46.286	-7.4	1208300	0.551	0.595	9.270	9.268	8.39				
	32	Tetrahydrofuran	47.457	-5.1	265048	0.121	0.127	9.300	9.303	5.90				
	33	Chloroform	45.121	-9.8	1750265	0.798	0.884	9.300	9.310	6.83				
	34	Dibromofluoromethane	50.369	0.7	921427	0.420	0.417	9.509	9.520	9.46				
	35	1,1,1-Trichloroethane	45.293	-9.4	1194839	0.545	0.601	9.553	9.554	7.67				
	36	Cyclohexane	50.929	1.9	933639	0.426	0.418	9.613	9.612	4.52				
	37	1,1-Dichloropropene	49.664	-0.7	358348	0.163	0.165	9.732	9.730	7.70				
	38	Carbon tetrachloride	46.373	-7.3	956037	0.436	0.470	9.747	9.758	6.41				
	39	1,2-Dichloroethane-d4	47.321	-5.4	1041105	0.475	0.502	9.941	9.952	8.31				
	40	tert-Amyl methyl ether (TAME)	44.291	-11.4	473249	0.216	0.244	9.985	9.993	5.69				
	41	Benzene	46.747	-6.5	3140586	1.432	1.532	10.000	10.011	10.88				
	42	1,2-Dichloroethane	41.583	-16.8	1147197	0.523	0.629	10.045	10.041	4.24				
	43	Trichloroethene	49.860	-0.3	853247	0.389	0.390	10.730	10.734	5.14				
	44	Methylcyclohexane	49.939	-0.1	1067193	0.487	0.487	10.939	10.938	7.68				
	45	1,2-Dichloropropane	48.165	-3.7	1016809	0.464	0.481	11.028	11.027	6.88				
20	46	1,4-Dioxane	930.356	-7.0	171332	0.004	0.004	11.147	11.154	11.89				
	47	Dibromomethane	44.820	-10.4	669542	0.305	0.341	11.222	11.218	4.61				
	48	Bromodichloromethane	44.807	-10.4	1404199	0.640	0.715	11.341	11.337	5.64				
	49	2-Chloroethyl vinyl ether	46.047	-7.9	569688	0.260	0.282	11.550	11.558	7.60				

Sm
10/9/15

	50	cis-1,3-Dichloropropene	45.585	-8.8	1724539	0.786	0.863	11.818	11.817	4.87				
5	51	4-Methyl-2-pentanone	237.174	-5.1	6034289	0.550	0.580	11.892	11.898	3.62				
	52	CHLOROBENZENE-D5	50.000	0	2172313	1	1	13.888	13.885	0				
	53	Toluene-d8	53.404	6.8	2801520	1.290	1.207	12.130	12.127	9.43				
	54	Toluene	45.351	-9.3	3279281	1.510	1.664	12.220	12.215	6.89				
	55	Ethyl methacrylate	46.569	-6.9	1181514	0.544	0.584	12.384	12.378	4.22				
	56	trans-1,3-Dichloropropene	44.916	-10.2	1487763	0.685	0.762	12.443	12.441	5.15				
	57	1,1,2-Trichloroethane	45.961	-8.1	767315	0.353	0.384	12.697	12.696	4.80				
5	58	2-Hexanone	250.837	0.3	4456863	0.410	0.409	12.860	12.855	7.59				
	59	Tetrachloroethene	48.575	-2.9	680077	0.313	0.322	12.875	12.878	7.46				
	60	1,3-Dichloropropane	44.342	-11.3	1404048	0.646	0.729	12.905	12.907	3.43				
	61	Dibromochloromethane	45.416	-9.2	913589	0.421	0.463	13.233	13.229	6.65				
	62	1,2-Dibromoethane	46.297	-7.4	837850	0.386	0.417	13.412	13.415	4.42				
	63	1-Chlorohexane	49.106	-1.8	1499661	0.690	0.703	13.724	13.715	6.63				
	64	Chlorobenzene	46.654	-6.7	2050389	0.944	1.012	13.918	13.917	6.32				
	65	Ethylbenzene	48.252	-3.5	4195241	1.931	2.001	13.948	13.948	9.32				
	66	1,1,1,2-Tetrachloroethane	49.521	-1.0	881580	0.406	0.410	13.993	13.983	4.67				
2	67	m-Xylene & p-Xylene	87.893	-12.1	6051591	1.393	1.585	14.067	14.063	10.28				
	68	o-Xylene	45.856	-8.3	3338415	1.537	1.676	14.559	14.552	8.08				
	69	Styrene	48.322	-3.4	2377191	1.094	1.132	14.574	14.570	9.23				
	70	1,2-DICHLOROBENZENE-D4	50.000	0	1032508	1	1	17.210	17.202	0				
	71	Bromoform	45.584	-8.8	604649	0.586	0.642	14.931	14.932	10.42				
	72	Isopropylbenzene	50.805	1.6	3578207	3.466	3.411	14.946	14.938	7.59				
	73	4-Bromofluorobenzene	49.877	-0.2	1267130	1.227	1.230	15.229	15.219	14.66				
	74	1,1,2,2-Tetrachloroethane	48.651	-2.7	1343821	1.302	1.338	15.348	15.344	5.00				
	75	trans-1,4-Dichloro-2-butene	49.076	-1.8	383441	0.371	0.378	15.393	15.385	11.58				
	76	n-Propylbenzene	51.584	3.2	5320737	5.153	4.995	15.438	15.431	9.64				
	77	1,2,3-Trichloropropane	50.558	1.1	279479	0.271	0.268	15.453	15.447	6.64				
	78	Bromobenzene	46.568	-6.9	1002515	0.971	1.043	15.482	15.479	6.92				
	79	1,3,5-Trimethylbenzene	53.230	6.5	3102736	3.005	2.823	15.601	15.598	7.06				
	80	2-Chlorotoluene	50.847	1.7	3424016	3.316	3.261	15.646	15.644	6.74				
	81	4-Chlorotoluene	50.257	0.5	3090456	2.993	2.978	15.765	15.762	6.83				
	82	tert-Butylbenzene	53.542	7.1	646787	0.626	0.585	16.048	16.045	10.18				
	83	1,2,4-Trimethylbenzene	51.786	3.6	3083898	2.987	2.884	16.108	16.100	7.44				
	84	sec-Butylbenzene	55.074	10.1	4204470	4.072	3.697	16.316	16.308	6.95				
	85	p-Isopropyltoluene	53.484	7.0	3010582	2.916	2.726	16.451	16.445	8.85				
	86	1,3-Dichlorobenzene	50.536	1.1	1750713	1.696	1.678	16.615	16.600	7.68				
	87	1,4-Dichlorobenzene	50.770	1.5	1731933	1.677	1.652	16.704	16.703	10.77				
	88	n-Butylbenzene	55.951	11.9	3511338	3.401	3.039	16.987	16.973	7.15				
	89	1,2-Dichlorobenzene	49.470	-1.1	1562946	1.514	1.530	17.240	17.228	8.12				
	90	1,2-Dibromo-3-chloropropane	48.646	-2.7	173016	0.168	0.172	18.298	18.293	10.18				
	91	1,2,4-Trichlorobenzene	55.650	11.3	718476	0.696	0.625	19.490	19.480	11.11				
	92	Hexachlorobutadiene	53.977	8.0	442713	0.429	0.397	19.609	19.605	8.45				
	93	Naphthalene	54.988	10.0	1631499	1.580	1.437	19.966	19.960	12.80				
	94	1,2,3-Trichlorobenzene	54.246	8.5	583226	0.565	0.521	20.368	20.363	9.58				

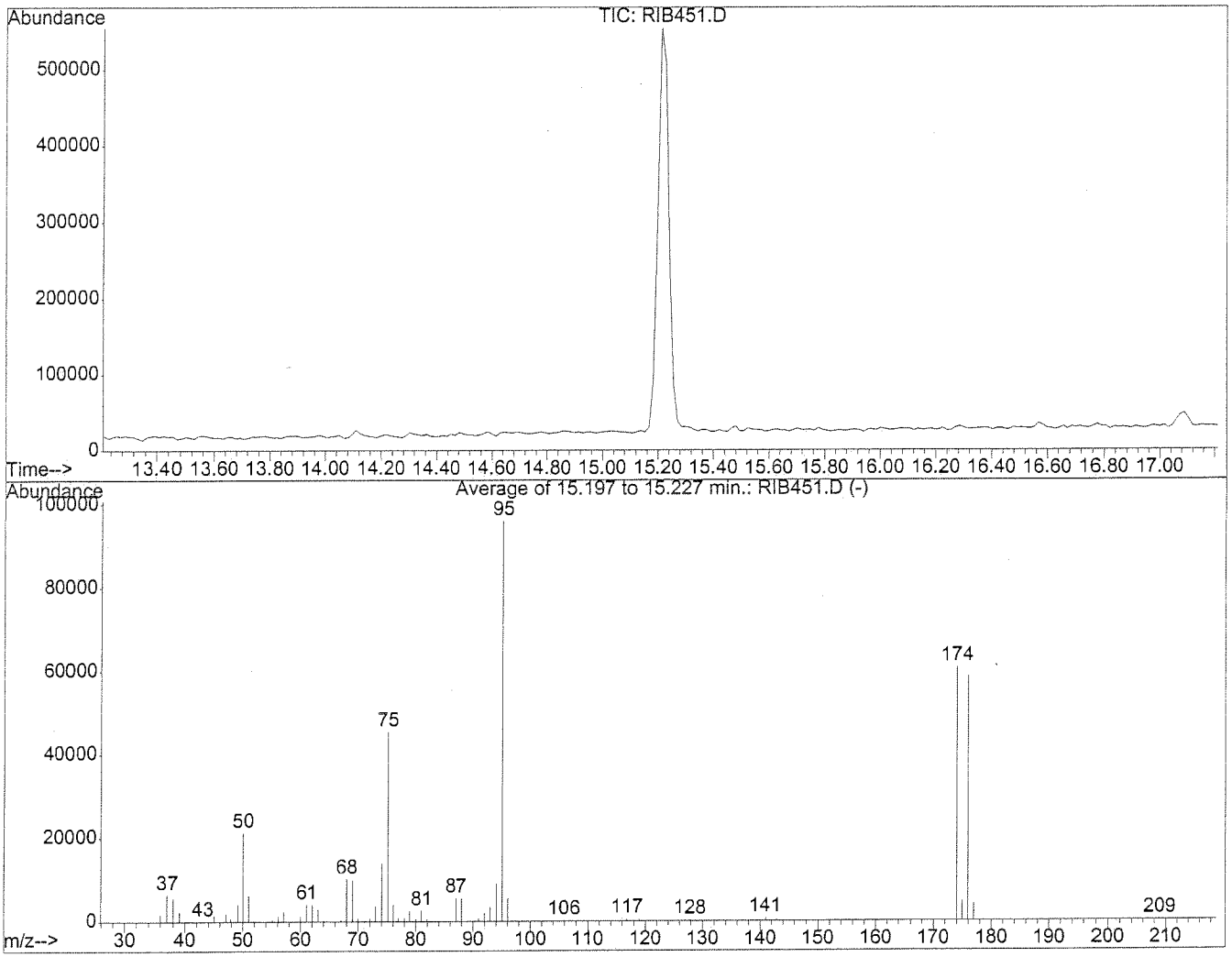
Spike Amount = Nominal Amount * M

Sa
10/9/15

BFB

Data File : D:\HPCHEM\1\DATA\15I27\RIB451.D
Acq On : 27 Sep 2015 11:19 am
Sample : BFB03I20
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00



AutoFind: Scans 763, 764, 765; Background Corrected with Scan 759

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.2	21293	PASS
75	95	30	60	47.3	45445	PASS
95	95	100	100	100.0	96101	PASS
96	95	5	9	5.8	5529	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	63.2	60773	PASS
175	174	5	9	7.7	4659	PASS
176	174	95	101	96.6	58685	PASS
177	176	5	9	6.8	4012	PASS

RIB451.D VO03I25.M Wed Oct 07 21:14:44 2015 SU 10/9/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	124	-0.01
2	T,M	Chlorotrifluoroethylene	50.000	55.128	-10.3	128	-0.01
3	T,M	Dichlorodifluoromethane	50.000	50.705	-1.4	123	0.00
4	P,T,M	Chloromethane	50.000	47.317	5.4	110	-0.01
5	C,T,M	Vinyl chloride	50.000	50.373	-0.7	118	-0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	54.213	-8.4	126	-0.01
7	T,M	Bromomethane	50.000	46.630	6.7	119	-0.01
8	T,M	Chloroethane	50.000	51.671	-3.3	135	-0.03
9	T,M	Dichlorofluoromethane	50.000	47.257	5.5	114	-0.01
10	T,M	Trichlorofluoromethane	50.000	52.986	-6.0	127	0.00
11	T,M	Acrolein	250.000	232.278	7.1	118	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	45.630	8.7	106	-0.01
13	C,T,M	1,1-Dichloroethene	50.000	46.670	6.7	107	-0.01
14	T,M	Acetone	250.000	219.449	12.2	115	-0.01
15	T,M	Iodomethane	50.000	45.504	9.0	107	-0.01
16	T,M	Carbon disulfide	50.000	48.511	3.0	108	0.00
17	T,M	Methyl acetate	50.000	48.335	3.3	111	-0.01
18	T,M	Methylene chloride	50.000	46.254	7.5	115	0.00
19	T,M	tert-Butyl alcohol	250.000	231.845	7.3	115	-0.01
20	T,M	tert-Butyl methyl ether (MT	50.000	46.048	7.9	110	0.00
21	T,M	trans-1,2-Dichloroethene	50.000	48.928	2.1	112	0.00
22	T,M	Acrylonitrile	250.000	260.177	-4.1	119	-0.01
23	T,M	Isopropyl ether (DIPE)	50.000	48.604	2.8	115	-0.01
24	T,M	Vinyl acetate	50.000	41.040	17.9	100	-0.01
25	P,T,M	1,1-Dichloroethane	50.000	48.839	2.3	116	-0.01
26	T,M	tert-Butyl ethyl ether (ETB	50.000	45.259	9.5	106	-0.01
27	T,M	2-Butanone	250.000	249.283	0.3	115	-0.01
28	T,M	2,2-Dichloropropane	50.000	50.568	-1.1	119	-0.01
29	T,M	cis-1,2-Dichloroethene	50.000	47.240	5.5	111	-0.01
30	T,M	2-Butanol	250.000	252.036	-0.8	126	-0.01
31	T,M	Bromochloromethane	50.000	46.286	7.4	112	0.00
32	T,M	Tetrahydrofuran	50.000	47.457	5.1	120	0.00
33	C,T,M	Chloroform	50.000	45.121	9.8	108	-0.01
34	S	Dibromofluoromethane	50.000	50.369	-0.7	110	-0.01
35	T,M	1,1,1-Trichloroethane	50.000	45.293	9.4	108	0.00
36	T,M	Cyclohexane	50.000	50.929	-1.9	120	0.00
37	T,M	1,1-Dichloropropene	50.000	49.664	0.7	117	0.00
38	T,M	Carbon tetrachloride	50.000	46.373	7.3	108	-0.01
39	S	1,2-Dichloroethane-d4	50.000	47.321	5.4	103	-0.01
40	T,M	tert-Amyl methyl ether (TAM	50.000	44.291	11.4	100	0.00
41	T,M	Benzene	50.000	46.747	6.5	108	-0.01

(#) = Out of Range

SZ 10/9/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	50.000	41.583	16.8	97	0.00
43	T,M	Trichloroethene	50.000	49.860	0.3	116	0.00
44	T,M	Methylcyclohexane	50.000	49.939	0.1	114	0.00
45	C,T,M	1,2-Dichloropropane	50.000	48.165	3.7	113	0.00
46	T,M	1,4-Dioxane	1000.000	930.356	7.0	114	0.00
47	T,M	Dibromomethane	50.000	44.820	10.4	104	0.00
48	T,M	Bromodichloromethane	50.000	44.807	10.4	104	0.00
49	T,M	2-Chloroethyl vinyl ether	50.000	46.047	7.9	112	-0.01
50	T,M	cis-1,3-Dichloropropene	50.000	45.585	8.8	105	0.00
51	T,M	4-Methyl-2-pentanone	250.000	237.174	5.1	113	0.00
52	I	CHLOROBENZENE-D5	50.000	50.000	0.0	121	0.00
53	S	Toluene-d8	50.000	53.404	-6.8	112	0.00
54	C,T,M	Toluene	50.000	45.351	9.3	105	0.00
55	T,M	Ethyl methacrylate	50.000	46.569	6.9	107	0.00
56	T,M	trans-1,3-Dichloropropene	50.000	44.916	10.2	106	0.00
57	T,M	1,1,2-Trichloroethane	50.000	45.961	8.1	112	0.00
58	T,M	2-Hexanone	250.000	250.837	-0.3	115	0.00
59	T,M	Tetrachloroethene	50.000	48.575	2.8	120	0.00
60	T,M	1,3-Dichloropropane	50.000	44.342	11.3	104	0.00
61	T,M	Dibromochloromethane	50.000	45.416	9.2	102	0.00
62	T,M	1,2-Dibromoethane	50.000	46.297	7.4	107	0.00
63	T,M	1-Chlorohexane	50.000	49.106	1.8	115	0.02
64	P,M	Chlorobenzene	50.000	46.654	6.7	105	0.00
65	C,T,M	Ethylbenzene	50.000	48.252	3.5	106	0.00
66	T,M	1,1,1,2-Tetrachloroethane	50.000	49.521	1.0	109	0.02
67	T,M	m-Xylene & p-Xylene	100.000	87.893	12.1	103	0.00
68	T,M	o-Xylene	50.000	45.856	8.3	105	0.00
69	T,M	Styrene	50.000	48.322	3.4	108	0.00
70	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	107	0.02
71	P,T,M	Bromoform	50.000	45.585	8.8	100	0.00
72	T,M	Isopropylbenzene	50.000	50.805	-1.6	110	0.02
73	S	4-Bromofluorobenzene	50.000	49.877	0.2	108	0.02
74	P,T,M	1,1,2,2-Tetrachloroethane	50.000	48.651	2.7	106	0.00
75	T,M	trans-1,4-Dichloro-2-butene	50.000	49.076	1.8	111	0.02
76	T,M	n-Propylbenzene	50.000	51.584	-3.2	110	0.00
77	T,M	1,2,3-Trichloropropane	50.000	50.558	-1.1	111	0.00
78	T,M	Bromobenzene	50.000	46.568	6.9	103	0.00
79	T,M	1,3,5-Trimethylbenzene	50.000	53.230	-6.5	114	0.00
80	T,M	2-Chlorotoluene	50.000	50.847	-1.7	110	0.00

(#) = Out of Range

SU 10/9/15

402

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	50.000	50.257	-0.5	109	0.00
82	T,M	tert-Butylbenzene	50.000	53.542	-7.1	120	0.00
83	T,M	1,2,4-Trimethylbenzene	50.000	51.786	-3.6	111	0.02
84	T,M	sec-Butylbenzene	50.000	55.074	-10.1	120	0.02
85	T,M	p-Isopropyltoluene	50.000	53.484	-7.0	115	0.00
86	T,M	1,3-Dichlorobenzene	50.000	50.536	-1.1	107	0.02
87	T,M	1,4-Dichlorobenzene	50.000	50.770	-1.5	110	0.00
88	T,M	n-Butylbenzene	50.000	55.951	-11.9	117	0.02
89	T,M	1,2-Dichlorobenzene	50.000	49.470	1.1	105	0.02
90	T,M	1,2-Dibromo-3-chloropropane	50.000	48.646	2.7	107	0.00
91	T,M	1,2,4-Trichlorobenzene	50.000	55.650	-11.3	113	0.02
92	T,M	Hexachlorobutadiene	50.000	53.977	-8.0	111	0.00
93	T,M	Naphthalene	50.000	54.988	-10.0	113	0.00
94	T,M	1,2,3-Trichlorobenzene	50.000	54.246	-8.5	110	0.02

Sa 10/9/15

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

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	124	-0.01
2	T,M	Chlorotrifluoroethylene	0.102	0.112	-9.8	128	-0.01
3	T,M	Dichlorodifluoromethane	0.297	0.301	-1.3	123	0.00
4	P,T,M	Chloromethane	0.327	0.309	5.5	110	-0.01
5	C,T,M	Vinyl chloride	0.258	0.260	-0.8	118	-0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.142	0.154	-8.5	126	-0.01
7	T,M	Bromomethane	0.267	0.249	6.7	119	-0.01
8	T,M	Chloroethane	0.163	0.169	-3.7	135	-0.03
9	T,M	Dichlorofluoromethane	0.743	0.702	5.5	114	-0.01
10	T,M	Trichlorofluoromethane	0.423	0.448	-5.9	127	0.00
11	T,M	Acrolein	0.051	0.045	11.8	118	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.188	0.172	8.5	106	-0.01
13	C,T,M	1,1-Dichloroethene	0.599	0.559	6.7	107	-0.01
14	T,M	Acetone	0.145	0.127	12.4	115	-0.01
15	T,M	Iodomethane	0.724	0.659	9.0	107	-0.01
16	T,M	Carbon disulfide	1.450	1.407	3.0	108	0.00
17	T,M	Methyl acetate	0.297	0.287	3.4	111	-0.01
18	T,M	Methylene chloride	0.723	0.669	7.5	115	0.00
19	T,M	tert-Butyl alcohol	0.043	0.040	7.0	115	-0.01
20	T,M	tert-Butyl methyl ether (MT	1.046	0.963	7.9	110	0.00
21	T,M	trans-1,2-Dichloroethene	0.617	0.604	2.1	112	0.00
22	T,M	Acrylonitrile	0.121	0.126	-4.1	119	-0.01
23	T,M	Isopropyl ether (DIPE)	1.641	1.595	2.8	115	-0.01
24	T,M	Vinyl acetate	1.084	0.890	17.9	100	-0.01
25	P,T,M	1,1-Dichloroethane	0.813	0.794	2.3	116	-0.01
26	T,M	tert-Butyl ethyl ether (ETB	1.352	1.224	9.5	106	-0.01
27	T,M	2-Butanone	0.229	0.228	0.4	115	-0.01
28	T,M	2,2-Dichloropropane	0.543	0.549	-1.1	119	-0.01
29	T,M	cis-1,2-Dichloroethene	0.447	0.422	5.6	111	-0.01
30	T,M	2-Butanol	0.043	0.043	0.0	126	-0.01
31	T,M	Bromochloromethane	0.595	0.551	7.4	112	0.00
32	T,M	Tetrahydrofuran	0.127	0.121	4.7	120	0.00
33	C,T,M	Chloroform	0.884	0.798	9.7	108	-0.01
34	S	Dibromofluoromethane	0.417	0.420	-0.7	110	-0.01
35	T,M	1,1,1-Trichloroethane	0.601	0.545	9.3	108	0.00
36	T,M	Cyclohexane	0.418	0.426	-1.9	120	0.00
37	T,M	1,1-Dichloropropene	0.165	0.163	1.2	117	0.00
38	T,M	Carbon tetrachloride	0.470	0.436	7.2	108	-0.01
39	S	1,2-Dichloroethane-d4	0.502	0.475	5.4	103	-0.01
40	T,M	tert-Amyl methyl ether (TAM	0.244	0.216	11.5	100	0.00
41	T,M	Benzene	1.532	1.432	6.5	108	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	0.629	0.523	16.9	97	0.00
43	T,M	Trichloroethene	0.390	0.389	0.3	116	0.00
44	T,M	Methylcyclohexane	0.487	0.487	0.0	114	0.00
45	C,T,M	1,2-Dichloropropane	0.481	0.464	3.5	113	0.00
46	T,M	1,4-Dioxane	0.004	0.004	0.0	114	0.00
47	T,M	Dibromomethane	0.341	0.305	10.6	104	0.00
48	T,M	Bromodichloromethane	0.715	0.640	10.5	104	0.00
49	T,M	2-Chloroethyl vinyl ether	0.282	0.260	7.8	112	-0.01
50	T,M	cis-1,3-Dichloropropene	0.863	0.786	8.9	105	0.00
51	T,M	4-Methyl-2-pentanone	0.580	0.550	5.2	113	0.00
52	I	CHLOROBENZENE-D5	1.000	1.000	0.0	121	0.00
53	S	Toluene-d8	1.207	1.290	-6.9	112	0.00
54	C,T,M	Toluene	1.664	1.510	9.3	105	0.00
55	T,M	Ethyl methacrylate	0.584	0.544	6.8	107	0.00
56	T,M	trans-1,3-Dichloropropene	0.762	0.685	10.1	106	0.00
57	T,M	1,1,2-Trichloroethane	0.384	0.353	8.1	112	0.00
58	T,M	2-Hexanone	0.409	0.410	-0.2	115	0.00
59	T,M	Tetrachloroethene	0.322	0.313	2.8	120	0.00
60	T,M	1,3-Dichloropropane	0.729	0.646	11.4	104	0.00
61	T,M	Dibromochloromethane	0.463	0.421	9.1	102	0.00
62	T,M	1,2-Dibromoethane	0.417	0.386	7.4	107	0.00
63	T,M	1-Chlorohexane	0.703	0.690	1.8	115	0.02
64	P,M	Chlorobenzene	1.012	0.944	6.7	105	0.00
65	C,T,M	Ethylbenzene	2.001	1.931	3.5	106	0.00
66	T,M	1,1,1,2-Tetrachloroethane	0.410	0.406	1.0	109	0.02
67	T,M	m-Xylene & p-Xylene	1.585	1.393	12.1	103	0.00
68	T,M	o-Xylene	1.676	1.537	8.3	105	0.00
69	T,M	Styrene	1.132	1.094	3.4	108	0.00
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	107	0.02
71	P,T,M	Bromoform	0.642	0.586	8.7	100	0.00
72	T,M	Isopropylbenzene	3.411	3.466	-1.6	110	0.02
73	S	4-Bromofluorobenzene	1.230	1.227	0.2	108	0.02
74	P,T,M	1,1,2,2-Tetrachloroethane	1.338	1.302	2.7	106	0.00
75	T,M	trans-1,4-Dichloro-2-butene	0.378	0.371	1.9	111	0.02
76	T,M	n-Propylbenzene	4.995	5.153	-3.2	110	0.00
77	T,M	1,2,3-Trichloropropane	0.268	0.271	-1.1	111	0.00
78	T,M	Bromobenzene	1.043	0.971	6.9	103	0.00
79	T,M	1,3,5-Trimethylbenzene	2.823	3.005	-6.4	114	0.00
80	T,M	2-Chlorotoluene	3.261	3.316	-1.7	110	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.978	2.993	-0.5	109	0.00
82	T,M	tert-Butylbenzene	0.585	0.626	-7.0	120	0.00
83	T,M	1,2,4-Trimethylbenzene	2.884	2.987	-3.6	111	0.02
84	T,M	sec-Butylbenzene	3.697	4.072	-10.1	120	0.02
85	T,M	p-Isopropyltoluene	2.726	2.916	-7.0	115	0.00
86	T,M	1,3-Dichlorobenzene	1.678	1.696	-1.1	107	0.02
87	T,M	1,4-Dichlorobenzene	1.652	1.677	-1.5	110	0.00
88	T,M	n-Butylbenzene	3.039	3.401	-11.9	117	0.02
89	T,M	1,2-Dichlorobenzene	1.530	1.514	1.0	105	0.02
90	T,M	1,2-Dibromo-3-chloropropane	0.172	0.168	2.3	107	0.00
91	T,M	1,2,4-Trichlorobenzene	0.625	0.696	-11.4	113	0.02
92	T,M	Hexachlorobutadiene	0.397	0.429	-8.1	111	0.00
93	T,M	Naphthalene	1.437	1.580	-10.0	113	0.00
94	T,M	1,2,3-Trichlorobenzene	0.521	0.565	-8.4	110	0.02

Su
10/9/15

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 12:13 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.36	114	2193017	50.00 ug/l	-0.01
52) CHLOROBENZENE-D5	13.89	117	2172313	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.21	152	1032508	50.00 ug/l	0.02
System Monitoring Compounds					
34) Dibromofluoromethane	9.51	111	921427	50.37 ug/l	-0.01
Spiked Amount 50.000			Recovery =	100.74%	
39) 1,2-Dichloroethane-d4	9.94	65	1041105	47.32 ug/l	-0.01
Spiked Amount 50.000			Recovery =	94.64%	
53) Toluene-d8	12.13	98	2801520	53.40 ug/l	0.00
Spiked Amount 50.000			Recovery =	106.80%	
73) 4-Bromofluorobenzene	15.23	95	1267130	49.88 ug/l	0.02
Spiked Amount 50.000			Recovery =	99.76%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.95	116	246179	55.13 ug/l	99
3) Dichlorodifluoromethane	4.04	85	660809	50.71 ug/l	98
4) Chloromethane	4.40	50	678287	47.32 ug/l	99
5) Vinyl chloride	4.64	62	569348	50.37 ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	4.79	118	338199	54.21 ug/l	95
7) Bromomethane	5.26	94	546545	46.63 ug/l	99
8) Chloroethane	5.43	64	370158	51.67 ug/l	96
9) Dichlorofluoromethane	5.74	67	1539314	47.26 ug/l	100
10) Trichlorofluoromethane	5.81	101	982139	52.99 ug/l	100
11) Acrolein	6.50	56	496439	232.28 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	6.57	151	377091	45.63 ug/l	99
13) 1,1-Dichloroethene	6.62	61	1226881	46.67 ug/l	99
14) Acetone	6.69	43	1391146	219.45 ug/l	97
15) Iodomethane	6.92	142	1445324	45.50 ug/l	100
16) Carbon disulfide	7.04	76	3086115	48.51 ug/l	100
17) Methyl acetate	7.11	43	629273	48.34 ug/l	100
18) Methylene chloride	7.32	49	1466154	46.25 ug/l	99
19) tert-Butyl alcohol	7.36	59	438074	231.84 ug/l	96
20) tert-Butyl methyl ether (M	7.59	73	2111973	46.05 ug/l	98
21) trans-1,2-Dichloroethene	7.66	61	1324046	48.93 ug/l	99
22) Acrylonitrile	7.65	53	1382581	260.18 ug/l	100
23) Isopropyl ether (DIPE)	8.12	45	3497403	48.60 ug/l	97
24) Vinyl acetate	8.17	43	1951360	41.04 ug/l	98
25) 1,1-Dichloroethane	8.21	63	1742108	48.84 ug/l	99
26) tert-Butyl ethyl ether (ET	8.59	59	2684322	45.26 ug/l	97
27) 2-Butanone	8.90	43	2500131	249.28 ug/l	100
28) 2,2-Dichloropropane	8.93	77	1203788	50.57 ug/l	100

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

Sa 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 12:13 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	8.94	96	926301	47.24 ug/l	99
30) 2-Butanol	9.05	45	474473	252.04 ug/l	98
31) Bromochloromethane	9.27	49	1208300	46.29 ug/l	99
32) Tetrahydrofuran	9.30	42	265048	47.46 ug/l	99
33) Chloroform	9.30	83	1750265	45.12 ug/l	100
35) 1,1,1-Trichloroethane	9.55	97	1194839	45.29 ug/l	99
36) Cyclohexane	9.61	56	933639	50.93 ug/l	95
37) 1,1-Dichloropropene	9.73	110	358348	49.66 ug/l	99
38) Carbon tetrachloride	9.75	119	956037	46.37 ug/l	98
40) tert-Amyl methyl ether (TA	9.99	87	473249	44.29 ug/l	93
41) Benzene	10.00	78	3140586	46.75 ug/l	100
42) 1,2-Dichloroethane	10.04	62	1147197	41.58 ug/l	98
43) Trichloroethene	10.73	130	853247	49.86 ug/l	98
44) Methylcyclohexane	10.94	83	1067193	49.94 ug/l	98
45) 1,2-Dichloropropane	11.03	63	1016809	48.17 ug/l	87
46) 1,4-Dioxane	11.15	88	171332	930.36 ug/l	98
47) Dibromomethane	11.22	93	669542	44.82 ug/l	98
48) Bromodichloromethane	11.34	83	1404199	44.81 ug/l	100
49) 2-Chloroethyl vinyl ether	11.55	63	569688	46.05 ug/l	99
50) cis-1,3-Dichloropropene	11.82	75	1724539	45.59 ug/l	99
51) 4-Methyl-2-pentanone	11.89	43	6034289	237.17 ug/l	99
54) Toluene	12.22	91	3279281	45.35 ug/l	100
55) Ethyl methacrylate	12.38	69	1181514	46.57 ug/l	98
56) trans-1,3-Dichloropropene	12.44	75	1487763	44.92 ug/l	99
57) 1,1,2-Trichloroethane	12.70	97	767315	45.96 ug/l	99
58) 2-Hexanone	12.86	43	4456863	250.84 ug/l	97
59) Tetrachloroethene	12.88	164	680077	48.57 ug/l	98
60) 1,3-Dichloropropane	12.91	76	1404048	44.34 ug/l	100
61) Dibromochloromethane	13.23	129	913589	45.42 ug/l	99
62) 1,2-Dibromoethane	13.41	107	837850	46.30 ug/l	100
63) 1-Chlorohexane	13.72	91	1499661	49.11 ug/l	100
64) Chlorobenzene	13.92	112	2050389	46.65 ug/l	99
65) Ethylbenzene	13.95	91	4195241	48.25 ug/l	98
66) 1,1,1,2-Tetrachloroethane	13.99	131	881580	49.52 ug/l	99
67) m-Xylene & p-Xylene	14.07	91	6051591	87.89 ug/l	98
68) o-Xylene	14.56	91	3338415	45.86 ug/l	97
69) Styrene	14.57	104	2377191	48.32 ug/l	99
71) Bromoform	14.93	173	604649	45.58 ug/l	99
72) Isopropylbenzene	14.95	105	3578207	50.80 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.35	83	1343821	48.65 ug/l	99
75) trans-1,4-Dichloro-2-buten	15.39	53	383441	49.08 ug/l	95

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

SG 10/9/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 12:13 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
76) n-Propylbenzene	15.44	91	5320737	51.58 ug/l		99
77) 1,2,3-Trichloropropane	15.45	110	279479	50.56 ug/l		99
78) Bromobenzene	15.48	156	1002515	46.57 ug/l		94
79) 1,3,5-Trimethylbenzene	15.60	105	3102736	53.23 ug/l		98
80) 2-Chlorotoluene	15.65	91	3424016	50.85 ug/l		98
81) 4-Chlorotoluene	15.77	91	3090456	50.26 ug/l		99
82) tert-Butylbenzene	16.05	134	646787	53.54 ug/l	#	92
83) 1,2,4-Trimethylbenzene	16.11	105	3083898	51.79 ug/l		88
84) sec-Butylbenzene	16.32	105	4204470	55.07 ug/l		99
85) p-Isopropyltoluene	16.45	119	3010582	53.48 ug/l		97
86) 1,3-Dichlorobenzene	16.61	146	1750713	50.54 ug/l		100
87) 1,4-Dichlorobenzene	16.70	146	1731933	50.77 ug/l		99
88) n-Butylbenzene	16.99	91	3511338	55.95 ug/l		99
89) 1,2-Dichlorobenzene	17.24	146	1562946	49.47 ug/l		99
90) 1,2-Dibromo-3-chloropropan	18.30	157	173016	48.65 ug/l		98
91) 1,2,4-Trichlorobenzene	19.49	180	718476	55.65 ug/l		99
92) Hexachlorobutadiene	19.61	225	442713	53.98 ug/l		100
93) Naphthalene	19.97	128	1631499	54.99 ug/l		100
94) 1,2,3-Trichlorobenzene	20.37	180	583226	54.25 ug/l		99

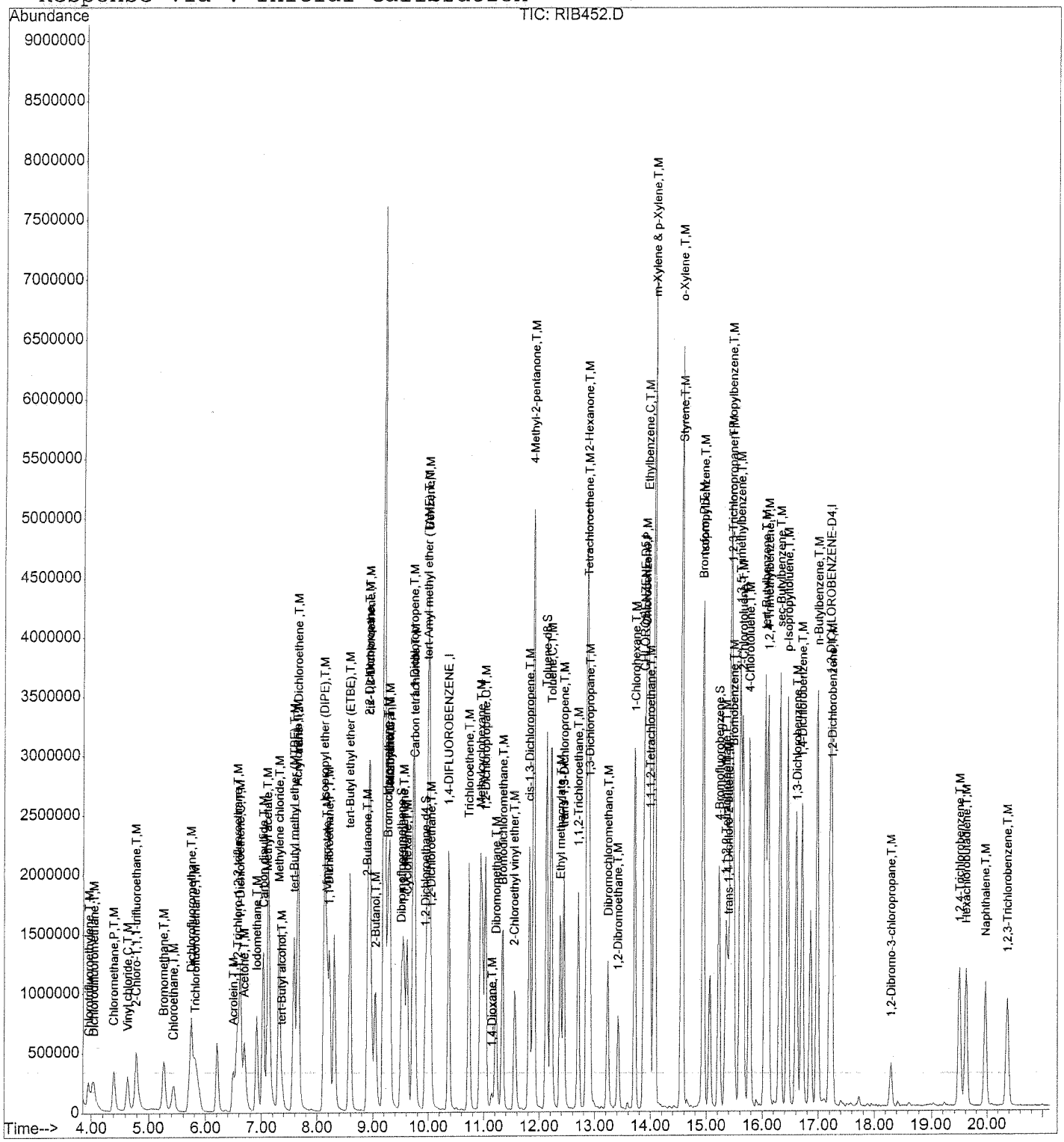
Su 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB452.D Vial: 2
Acq On : 27 Sep 2015 11:52 am Operator: CMendo
Sample : IVO03I252 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 12:13 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



S 10/9/15

410

DAILY CALIBRATION(S)

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc — Contract: CANNON AFB PBR

Lab Code: EMXT — Case No.: — SAS No.: — SDG No.: 15I185

Lab File ID: RIB453 — BFB Injection Date : 09/27/15

Instrument ID: 03 — BFB Injection Time : 12:16

GC Column: ZB-624 ID:0.25mm (mm) — Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.85
75	30.0 - 60.0% of mass 95	45.96
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.81
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	71.94
175	5.0 - 9.0% of mass 174	5.13(7.1)1
176	95.0 - 101.0% of mass 174	71.68(99.6)1
177	5.0 - 9.0% of mass 176	4.70(6.6)2

1-Value is % mass 174 — 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	CV003I2501	RIB454	09/27/15	12:44
2	MBLK1W	VS03I21B	RIB458	09/27/15	14:36
3	LCS1W	VS03I21L	RIB455	09/27/15	13:12
4	LCD1W	VS03I21C	RIB456	09/27/15	13:40
5	MBLK2W	TVI003SB	RIB460	09/27/15	15:32
6	CAFB-FT006-WC1-002	I185-04	RIB464	09/27/15	17:23
7	CAFB-FT006-WC2-002	I185-05	RIB465	09/27/15	17:51
8	CAFB-FT006-WC3-002	I185-06	RIB466	09/27/15	18:19

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : EMAX INC.
Lab Code : EMXT
Lab File ID : RIB382
Instrument ID: 03
GC Column : ZB-624 ID:0.25mm (mm)

Project : CANNON AFB PBR
SDG No. : 151185
Date Analyzed : 09/25/15
Time Analyzed : 01:16
Heated Purge : Yes

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1767389	10.37	1796606	13.89	962172	17.19
	UPPER LIMIT	3534778	10.87	3593212	14.39	1924344	17.69
	LOWER LIMIT	883695	9.87	898303	13.39	481086	16.69
	SAMPLE ID						
1	VSTD050	2205968	10.37	2174691	13.88	970430	17.20
2	MBLK1W	2159054	10.37	2207952	13.88	942765	17.20
3	LCS1W	2121029	10.37	2052236	13.88	1012197	17.21
4	LCD1W	2152563	10.37	2063658	13.88	1041087	17.20
5	MBLK2W	2152034	10.37	2265562	13.89	1009681	17.21
6	CAFB-FT006-WC1-002	2151061	10.38	2197730	13.90	1012720	17.20
7	CAFB-FT006-WC2-002	2125745	10.37	2282581	13.88	1021202	17.21
8	CAFB-FT006-WC3-002	2187259	10.37	2231545	13.88	1011023	17.20

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

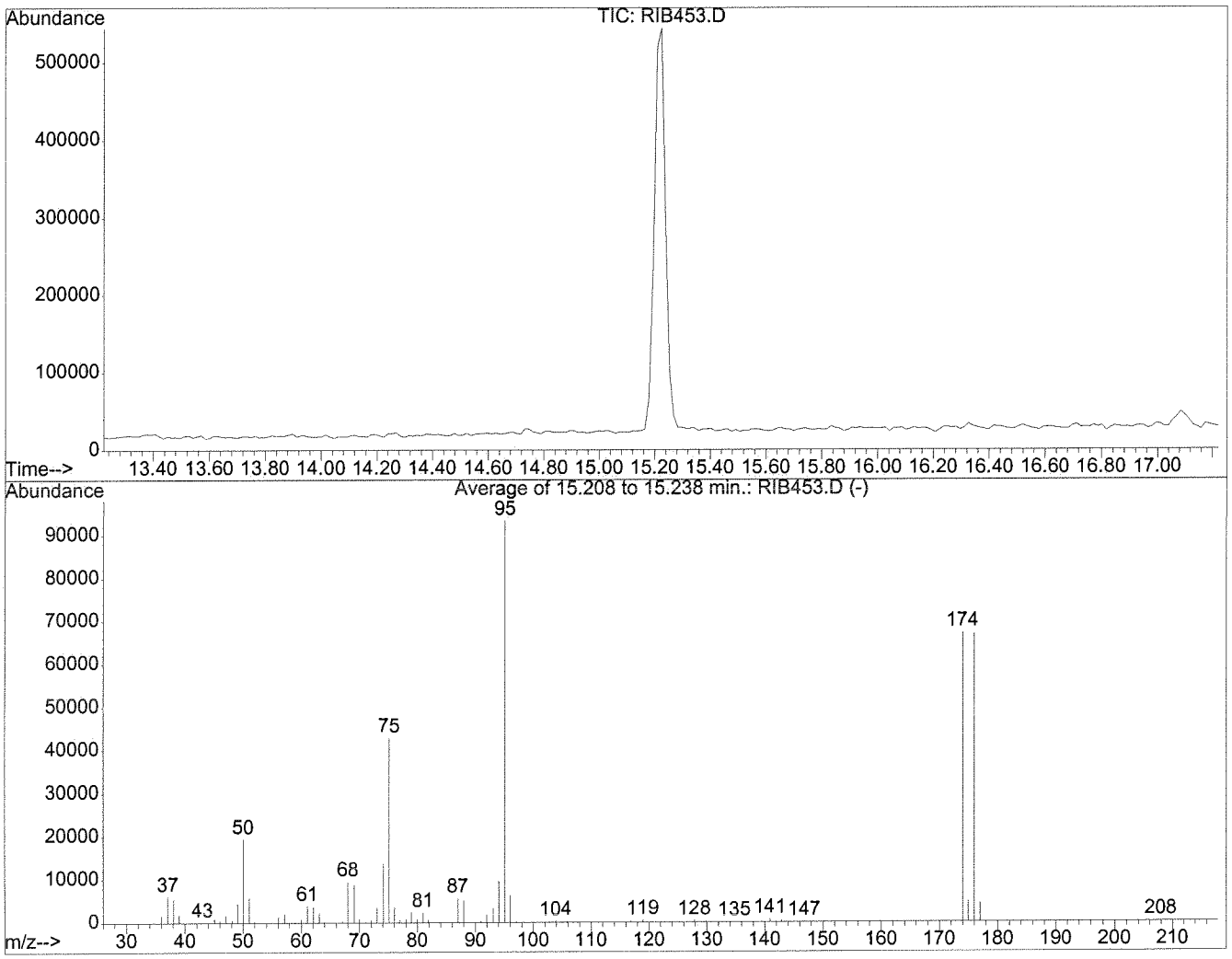
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.5 minutes (30 sec) of internal standard RT
RT LOWER LIMIT = - 0.5 minutes (30 sec) of internal standard RT

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

BFB

Data File : D:\HPCHEM\1\DATA\15I27\RIB453.D
Acq On : 27 Sep 2015 12:16 pm
Sample : BFB03I21
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00



AutoFind: Scans 764, 765, 766; Background Corrected with Scan 759

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.9	19501	PASS
75	95	30	60	46.0	42973	PASS
95	95	100	100	100.0	93509	PASS
96	95	5	9	6.8	6368	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	71.9	67272	PASS
175	174	5	9	7.1	4793	PASS
176	174	95	101	99.6	67024	PASS
177	176	5	9	6.6	4394	PASS

RIB453.D VO03I25.M Wed Oct 07 21:42:24 2015

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	125	0.00
2	T,M	Chlorotrifluoroethylene	50.000	46.878	6.2	110	0.00
3	T,M	Dichlorodifluoromethane	50.000	40.334	19.3	98	0.01
4	P,T,M	Chloromethane	50.000	45.197	9.6	106	0.01
5	C,T,M	Vinyl chloride	50.000	49.304	1.4	116	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	49.706	0.6	116	0.01
7	T,M	Bromomethane	50.000	44.939	10.1	115	0.01
8	T,M	Chloroethane	50.000	51.636	-3.3	136	0.00
9	T,M	Dichlorofluoromethane	50.000	46.786	6.4	114	0.00
10	T,M	Trichlorofluoromethane	50.000	49.262	1.5	119	0.01
11	T,M	Acrolein	250.000	227.746	8.9	116	0.01
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	45.454	9.1	106	0.00
13	C,T,M	1,1-Dichloroethene	50.000	51.713	-3.4	120	0.00
14	T,M	Acetone	250.000	193.759	22.5#	102	0.00
15	T,M	Iodomethane	50.000	48.606	2.8	115	0.00
16	T,M	Carbon disulfide	50.000	49.646	0.7	112	0.01
17	T,M	Methyl acetate	50.000	47.514	5.0	110	0.00
18	T,M	Methylene chloride	50.000	48.161	3.7	121	0.01
19	T,M	tert-Butyl alcohol	250.000	209.189	16.3	105	0.00
20	T,M	tert-Butyl methyl ether (MT	50.000	44.193	11.6	106	0.01
21	T,M	trans-1,2-Dichloroethene	50.000	50.909	-1.8	118	0.01
22	T,M	Acrylonitrile	250.000	236.036	5.6	108	0.00
23	T,M	Isopropyl ether (DIPE)	50.000	51.461	-2.9	122	0.00
24	T,M	Vinyl acetate	50.000	51.586	-3.2	126	0.00
25	P,T,M	1,1-Dichloroethane	50.000	49.418	1.2	118	0.00
26	T,M	tert-Butyl ethyl ether (ETB	50.000	48.842	2.3	115	0.00
27	T,M	2-Butanone	250.000	237.948	4.8	111	0.00
28	T,M	2,2-Dichloropropane	50.000	51.451	-2.9	122	0.00
29	T,M	cis-1,2-Dichloroethene	50.000	49.714	0.6	118	0.00
30	T,M	2-Butanol	250.000	216.968	13.2	109	0.00
31	T,M	Bromochloromethane	50.000	46.485	7.0	113	0.00
32	T,M	Tetrahydrofuran	50.000	46.663	6.7	119	0.00
33	C,T,M	Chloroform	50.000	48.210	3.6	116	0.00
34	S	Dibromofluoromethane	50.000	50.005	-0.0	110	0.00
35	T,M	1,1,1-Trichloroethane	50.000	47.920	4.2	115	0.01
36	T,M	Cyclohexane	50.000	53.127	-6.3	125	0.00
37	T,M	1,1-Dichloropropene	50.000	51.836	-3.7	123	0.00
38	T,M	Carbon tetrachloride	50.000	51.004	-2.0	120	0.00
39	S	1,2-Dichloroethane-d4	50.000	46.087	7.8	101	0.00
40	T,M	tert-Amyl methyl ether (TAM	50.000	43.899	12.2	100	0.01
41	T,M	Benzene	50.000	50.319	-0.6	117	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	50.000	48.489	3.0	114	0.00
43	T,M	Trichloroethene	50.000	52.214	-4.4	122	0.01
44	T,M	Methylcyclohexane	50.000	46.855	6.3	107	0.01
45	C,T,M	1,2-Dichloropropane	50.000	49.380	1.2	117	0.00
46	T,M	1,4-Dioxane	1000.000	813.911	18.6	100	0.01
47	T,M	Dibromomethane	50.000	45.805	8.4	107	0.00
48	T,M	Bromodichloromethane	50.000	46.955	6.1	109	0.00
49	T,M	2-Chloroethyl vinyl ether	50.000	46.413	7.2	113	0.00
50	T,M	cis-1,3-Dichloropropene	50.000	48.784	2.4	113	0.00
51	T,M	4-Methyl-2-pentanone	250.000	225.382	9.8	108	0.01
52	I	CHLOROBENZENE-D5	50.000	50.000	0.0	121	0.00
53	S	Toluene-d8	50.000	55.050	-10.1	116	0.00
54	C,T,M	Toluene	50.000	49.939	0.1	116	0.00
55	T,M	Ethyl methacrylate	50.000	49.538	0.9	114	0.00
56	T,M	trans-1,3-Dichloropropene	50.000	49.083	1.8	116	0.00
57	T,M	1,1,2-Trichloroethane	50.000	48.984	2.0	120	0.01
58	T,M	2-Hexanone	250.000	238.877	4.4	110	0.00
59	T,M	Tetrachloroethene	50.000	49.863	0.3	123	0.01
60	T,M	1,3-Dichloropropane	50.000	49.569	0.9	117	0.01
61	T,M	Dibromochloromethane	50.000	49.029	1.9	111	0.00
62	T,M	1,2-Dibromoethane	50.000	48.231	3.5	112	0.01
63	T,M	1-Chlorohexane	50.000	51.747	-3.5	121	0.01
64	P,M	Chlorobenzene	50.000	49.482	1.0	111	0.01
65	C,T,M	Ethylbenzene	50.000	52.969	-5.9	116	0.01
66	T,M	1,1,1,2-Tetrachloroethane	50.000	51.797	-3.6	114	0.01
67	T,M	m-Xylene & p-Xylene	100.000	98.599	1.4	115	0.00
68	T,M	o-Xylene	50.000	49.709	0.6	114	0.00
69	T,M	Styrene	50.000	52.552	-5.1	117	0.00
70	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	101	0.01
71	P,T,M	Bromoform	50.000	50.627	-1.3	104	0.01
72	T,M	Isopropylbenzene	50.000	56.747	-13.5	116	0.01
73	S	4-Bromofluorobenzene	50.000	50.141	-0.3	102	0.01
74	P,T,M	1,1,2,2-Tetrachloroethane	50.000	51.215	-2.4	105	0.00
75	T,M	trans-1,4-Dichloro-2-butene	50.000	50.493	-1.0	107	0.01
76	T,M	n-Propylbenzene	50.000	58.476	-17.0	117	0.00
77	T,M	1,2,3-Trichloropropane	50.000	52.526	-5.1	108	0.00
78	T,M	Bromobenzene	50.000	51.282	-2.6	106	0.00
79	T,M	1,3,5-Trimethylbenzene	50.000	56.086	-12.2	113	0.01
80	T,M	2-Chlorotoluene	50.000	54.462	-8.9	111	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	50.000	54.396	-8.8	111	0.01
82	T,M	tert-Butylbenzene	50.000	56.796	-13.6	120	0.00
83	T,M	1,2,4-Trimethylbenzene	50.000	55.841	-11.7	112	0.01
84	T,M	sec-Butylbenzene	50.000	57.067	-14.1	117	0.01
85	T,M	p-Isopropyltoluene	50.000	56.753	-13.5	115	0.00
86	T,M	1,3-Dichlorobenzene	50.000	54.129	-8.3	108	0.01
87	T,M	1,4-Dichlorobenzene	50.000	53.779	-7.6	110	0.01
88	T,M	n-Butylbenzene	50.000	59.143	-18.3	116	0.01
89	T,M	1,2-Dichlorobenzene	50.000	50.470	-0.9	101	0.01
90	T,M	1,2-Dibromo-3-chloropropane	50.000	45.895	8.2	95	0.00
91	T,M	1,2,4-Trichlorobenzene	50.000	52.657	-5.3	100	0.01
92	T,M	Hexachlorobutadiene	50.000	54.315	-8.6	105	0.01
93	T,M	Naphthalene	50.000	53.045	-6.1	103	0.00
94	T,M	1,2,3-Trichlorobenzene	50.000	53.095	-6.2	101	0.03

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

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	125	0.00
2	T,M	Chlorotrifluoroethylene	0.102	0.095	6.9	110	0.00
3	T,M	Dichlorodifluoromethane	0.297	0.240	19.2	98	0.01
4	P,T,M	Chloromethane	0.327	0.295	9.8	106	0.01
5	C,T,M	Vinyl chloride	0.258	0.254	1.6	116	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.142	0.141	0.7	116	0.01
7	T,M	Bromomethane	0.267	0.240	10.1	115	0.01
8	T,M	Chloroethane	0.163	0.169	-3.7	136	0.00
9	T,M	Dichlorofluoromethane	0.743	0.695	6.5	114	0.00
10	T,M	Trichlorofluoromethane	0.423	0.416	1.7	119	0.01
11	T,M	Acrolein	0.051	0.044	13.7	116	0.01
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.188	0.171	9.0	106	0.00
13	C,T,M	1,1-Dichloroethene	0.599	0.620	-3.5	120	0.00
14	T,M	Acetone	0.145	0.112	22.8#	102	0.00
15	T,M	Iodomethane	0.724	0.704	2.8	115	0.00
16	T,M	Carbon disulfide	1.450	1.440	0.7	112	0.01
17	T,M	Methyl acetate	0.297	0.282	5.1	110	0.00
18	T,M	Methylene chloride	0.723	0.696	3.7	121	0.01
19	T,M	tert-Butyl alcohol	0.043	0.036	16.3	105	0.00
20	T,M	tert-Butyl methyl ether (MT	1.046	0.924	11.7	106	0.01
21	T,M	trans-1,2-Dichloroethene	0.617	0.628	-1.8	118	0.01
22	T,M	Acrylonitrile	0.121	0.114	5.8	108	0.00
23	T,M	Isopropyl ether (DIPE)	1.641	1.689	-2.9	122	0.00
24	T,M	Vinyl acetate	1.084	1.118	-3.1	126	0.00
25	P,T,M	1,1-Dichloroethane	0.813	0.804	1.1	118	0.00
26	T,M	tert-Butyl ethyl ether (ETB	1.352	1.321	2.3	115	0.00
27	T,M	2-Butanone	0.229	0.218	4.8	111	0.00
28	T,M	2,2-Dichloropropane	0.543	0.559	-2.9	122	0.00
29	T,M	cis-1,2-Dichloroethene	0.447	0.445	0.4	118	0.00
30	T,M	2-Butanol	0.043	0.037	14.0	109	0.00
31	T,M	Bromochloromethane	0.595	0.553	7.1	113	0.00
32	T,M	Tetrahydrofuran	0.127	0.119	6.3	119	0.00
33	C,T,M	Chloroform	0.884	0.853	3.5	116	0.00
34	S	Dibromofluoromethane	0.417	0.417	0.0	110	0.00
35	T,M	1,1,1-Trichloroethane	0.601	0.576	4.2	115	0.01
36	T,M	Cyclohexane	0.418	0.444	-6.2	125	0.00
37	T,M	1,1-Dichloropropene	0.165	0.171	-3.6	123	0.00
38	T,M	Carbon tetrachloride	0.470	0.479	-1.9	120	0.00
39	S	1,2-Dichloroethane-d4	0.502	0.462	8.0	101	0.00
40	T,M	tert-Amyl methyl ether (TAM	0.244	0.214	12.3	100	0.01
41	T,M	Benzene	1.532	1.542	-0.7	117	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	0.629	0.610	3.0	114	0.00
43	T,M	Trichloroethene	0.390	0.407	-4.4	122	0.01
44	T,M	Methylcyclohexane	0.487	0.457	6.2	107	0.01
45	C,T,M	1,2-Dichloropropane	0.481	0.475	1.2	117	0.00
46	T,M	1,4-Dioxane	0.004	0.003	25.0#	100	0.01
47	T,M	Dibromomethane	0.341	0.312	8.5	107	0.00
48	T,M	Bromodichloromethane	0.715	0.671	6.2	109	0.00
49	T,M	2-Chloroethyl vinyl ether	0.282	0.262	7.1	113	0.00
50	T,M	cis-1,3-Dichloropropene	0.863	0.842	2.4	113	0.00
51	T,M	4-Methyl-2-pentanone	0.580	0.523	9.8	108	0.01
52	I	CHLOROBENZENE-D5	1.000	1.000	0.0	121	0.00
53	S	Toluene-d8	1.207	1.329	-10.1	116	0.00
54	C,T,M	Toluene	1.664	1.662	0.1	116	0.00
55	T,M	Ethyl methacrylate	0.584	0.579	0.9	114	0.00
56	T,M	trans-1,3-Dichloropropene	0.762	0.748	1.8	116	0.00
57	T,M	1,1,2-Trichloroethane	0.384	0.376	2.1	120	0.01
58	T,M	2-Hexanone	0.409	0.391	4.4	110	0.00
59	T,M	Tetrachloroethene	0.322	0.321	0.3	123	0.01
60	T,M	1,3-Dichloropropane	0.729	0.723	0.8	117	0.01
61	T,M	Dibromochloromethane	0.463	0.454	1.9	111	0.00
62	T,M	1,2-Dibromoethane	0.417	0.402	3.6	112	0.01
63	T,M	1-Chlorohexane	0.703	0.727	-3.4	121	0.01
64	P,M	Chlorobenzene	1.012	1.001	1.1	111	0.01
65	C,T,M	Ethylbenzene	2.001	2.120	-5.9	116	0.01
66	T,M	1,1,1,2-Tetrachloroethane	0.410	0.424	-3.4	114	0.01
67	T,M	m-Xylene & p-Xylene	1.585	1.563	1.4	115	0.00
68	T,M	o-Xylene	1.676	1.666	0.6	114	0.00
69	T,M	Styrene	1.132	1.190	-5.1	117	0.00
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	101	0.01
71	P,T,M	Bromoform	0.642	0.650	-1.2	104	0.01
72	T,M	Isopropylbenzene	3.411	3.871	-13.5	116	0.01
73	S	4-Bromofluorobenzene	1.230	1.234	-0.3	102	0.01
74	P,T,M	1,1,2,2-Tetrachloroethane	1.338	1.370	-2.4	105	0.00
75	T,M	trans-1,4-Dichloro-2-butene	0.378	0.382	-1.1	107	0.01
76	T,M	n-Propylbenzene	4.995	5.842	-17.0	117	0.00
77	T,M	1,2,3-Trichloropropane	0.268	0.281	-4.9	108	0.00
78	T,M	Bromobenzene	1.043	1.069	-2.5	106	0.00
79	T,M	1,3,5-Trimethylbenzene	2.823	3.166	-12.2	113	0.01
80	T,M	2-Chlorotoluene	3.261	3.552	-8.9	111	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.978	3.240	-8.8	111	0.01
82	T,M	tert-Butylbenzene	0.585	0.664	-13.5	120	0.00
83	T,M	1,2,4-Trimethylbenzene	2.884	3.221	-11.7	112	0.01
84	T,M	sec-Butylbenzene	3.697	4.219	-14.1	117	0.01
85	T,M	p-Isopropyltoluene	2.726	3.094	-13.5	115	0.00
86	T,M	1,3-Dichlorobenzene	1.678	1.816	-8.2	108	0.01
87	T,M	1,4-Dichlorobenzene	1.652	1.777	-7.6	110	0.01
88	T,M	n-Butylbenzene	3.039	3.595	-18.3	116	0.01
89	T,M	1,2-Dichlorobenzene	1.530	1.544	-0.9	101	0.01
90	T,M	1,2-Dibromo-3-chloropropane	0.172	0.158	8.1	95	0.00
91	T,M	1,2,4-Trichlorobenzene	0.625	0.658	-5.3	100	0.01
92	T,M	Hexachlorobutadiene	0.397	0.431	-8.6	105	0.01
93	T,M	Naphthalene	1.437	1.524	-6.1	103	0.00
94	T,M	1,2,3-Trichlorobenzene	0.521	0.553	-6.1	101	0.03

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D
Acq On : 27 Sep 2015 12:44 pm
Sample : CVO03I2501
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Sep 27 13:05 2015

Vial: 2
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	10.37	114	2205968	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	13.88	117	2174691	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.20	152	970430	50.00	ug/l	0.01
System Monitoring Compounds						
34) Dibromofluoromethane	9.52	111	920166	50.00	ug/l	0.00
Spiked Amount 50.000			Recovery = 100.00%			
39) 1,2-Dichloroethane-d4	9.95	65	1019952	46.09	ug/l	0.00
Spiked Amount 50.000			Recovery = 92.18%			
53) Toluene-d8	12.12	98	2891070	55.05	ug/l	0.00
Spiked Amount 50.000			Recovery = 110.10%			
73) 4-Bromofluorobenzene	15.22	95	1197257	50.14	ug/l	0.01
Spiked Amount 50.000			Recovery = 100.28%			
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	210577	46.88	ug/l	97
3) Dichlorodifluoromethane	4.05	85	528757	40.33	ug/l	99
4) Chloromethane	4.42	50	651731	45.20	ug/l	100
5) Vinyl chloride	4.65	62	560556	49.30	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	4.81	118	311912	49.71	ug/l	96
7) Bromomethane	5.29	94	529839	44.94	ug/l	99
8) Chloroethane	5.45	64	372091	51.64	ug/l	95
9) Dichlorofluoromethane	5.75	67	1532999	46.79	ug/l	100
10) Trichlorofluoromethane	5.82	101	918508	49.26	ug/l	100
11) Acrolein	6.51	56	489673	227.75	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	6.58	151	377857	45.45	ug/l	99
13) 1,1-Dichloroethene	6.63	61	1367493	51.71	ug/l	99
14) Acetone	6.70	43	1235543	193.76	ug/l	97
15) Iodomethane	6.92	142	1552985	48.61	ug/l	99
16) Carbon disulfide	7.04	76	3176943	49.65	ug/l	100
17) Methyl acetate	7.12	43	622229	47.51	ug/l	99
18) Methylene chloride	7.33	49	1535622	48.16	ug/l	99
19) tert-Butyl alcohol	7.37	59	397600	209.19	ug/l	97
20) tert-Butyl methyl ether (M	7.60	73	2038830	44.19	ug/l	98
21) trans-1,2-Dichloroethene	7.67	61	1385800	50.91	ug/l	98
22) Acrylonitrile	7.65	53	1261705	236.04	ug/l	99
23) Isopropyl ether (DIPE)	8.13	45	3724852	51.46	ug/l	99
24) Vinyl acetate	8.18	43	2467277	51.59	ug/l	100
25) 1,1-Dichloroethane	8.22	63	1773175	49.42	ug/l	99
26) tert-Butyl ethyl ether (ET	8.59	59	2913911	48.84	ug/l	97
27) 2-Butanone	8.91	43	2400548	237.95	ug/l	99
28) 2,2-Dichloropropane	8.94	77	1232062	51.45	ug/l	100

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 13:05 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	8.95	96	980560	49.71 ug/l	100
30) 2-Butanol	9.06	45	410868	216.97 ug/l	99
31) Bromochloromethane	9.26	49	1220674	46.49 ug/l	99
32) Tetrahydrofuran	9.29	42	262152	46.66 ug/l	99
33) Chloroform	9.31	83	1881163	48.21 ug/l	99
35) 1,1,1-Trichloroethane	9.56	97	1271590	47.92 ug/l	99
36) Cyclohexane	9.61	56	979689	53.13 ug/l	95
37) 1,1-Dichloropropene	9.73	110	376229	51.84 ug/l	99
38) Carbon tetrachloride	9.76	119	1057730	51.00 ug/l	98
40) tert-Amyl methyl ether (TA	9.99	87	471835	43.90 ug/l	95
41) Benzene	10.01	78	3400517	50.32 ug/l	100
42) 1,2-Dichloroethane	10.04	62	1345637	48.49 ug/l	100
43) Trichloroethene	10.74	130	898804	52.21 ug/l	97
44) Methylcyclohexane	10.95	83	1007217	46.86 ug/l	97
45) 1,2-Dichloropropane	11.02	63	1048607	49.38 ug/l	96
46) 1,4-Dioxane	11.16	88	150773	813.91 ug/l	97
47) Dibromomethane	11.22	93	688291	45.80 ug/l	99
48) Bromodichloromethane	11.33	83	1480197	46.95 ug/l	100
49) 2-Chloroethyl vinyl ether	11.56	63	577610	46.41 ug/l	97
50) cis-1,3-Dichloropropene	11.81	75	1856466	48.78 ug/l	98
51) 4-Methyl-2-pentanone	11.90	43	5768144	225.38 ug/l	99
54) Toluene	12.21	91	3615016	49.94 ug/l	100
55) Ethyl methacrylate	12.38	69	1258222	49.54 ug/l	97
56) trans-1,3-Dichloropropene	12.44	75	1627587	49.08 ug/l	97
57) 1,1,2-Trichloroethane	12.70	97	818674	48.98 ug/l	99
58) 2-Hexanone	12.85	43	4249004	238.88 ug/l	97
59) Tetrachloroethene	12.88	164	698873	49.86 ug/l	98
60) 1,3-Dichloropropane	12.91	76	1571274	49.57 ug/l	100
61) Dibromochloromethane	13.23	129	987347	49.03 ug/l	99
62) 1,2-Dibromoethane	13.42	107	873806	48.23 ug/l	99
63) 1-Chlorohexane	13.72	91	1582054	51.75 ug/l	99
64) Chlorobenzene	13.93	112	2177043	49.48 ug/l	99
65) Ethylbenzene	13.96	91	4610378	52.97 ug/l	98
66) 1,1,1,2-Tetrachloroethane	13.99	131	923105	51.80 ug/l	98
67) m-Xylene & p-Xylene	14.06	91	6796133	98.60 ug/l	98
68) o-Xylene	14.55	91	3622892	49.71 ug/l	97
69) Styrene	14.57	104	2588105	52.55 ug/l	100
71) Bromoform	14.94	173	631162	50.63 ug/l	99
72) Isopropylbenzene	14.94	105	3756391	56.75 ug/l	99
74) 1,1,2,2-Tetrachloroethane	15.34	83	1329587	51.22 ug/l	100
75) trans-1,4-Dichloro-2-buten	15.39	53	370792	50.49 ug/l	95

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 13:05 2015 Quant Results File: VO03I25.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration
DataAcq Meth : VO03I25

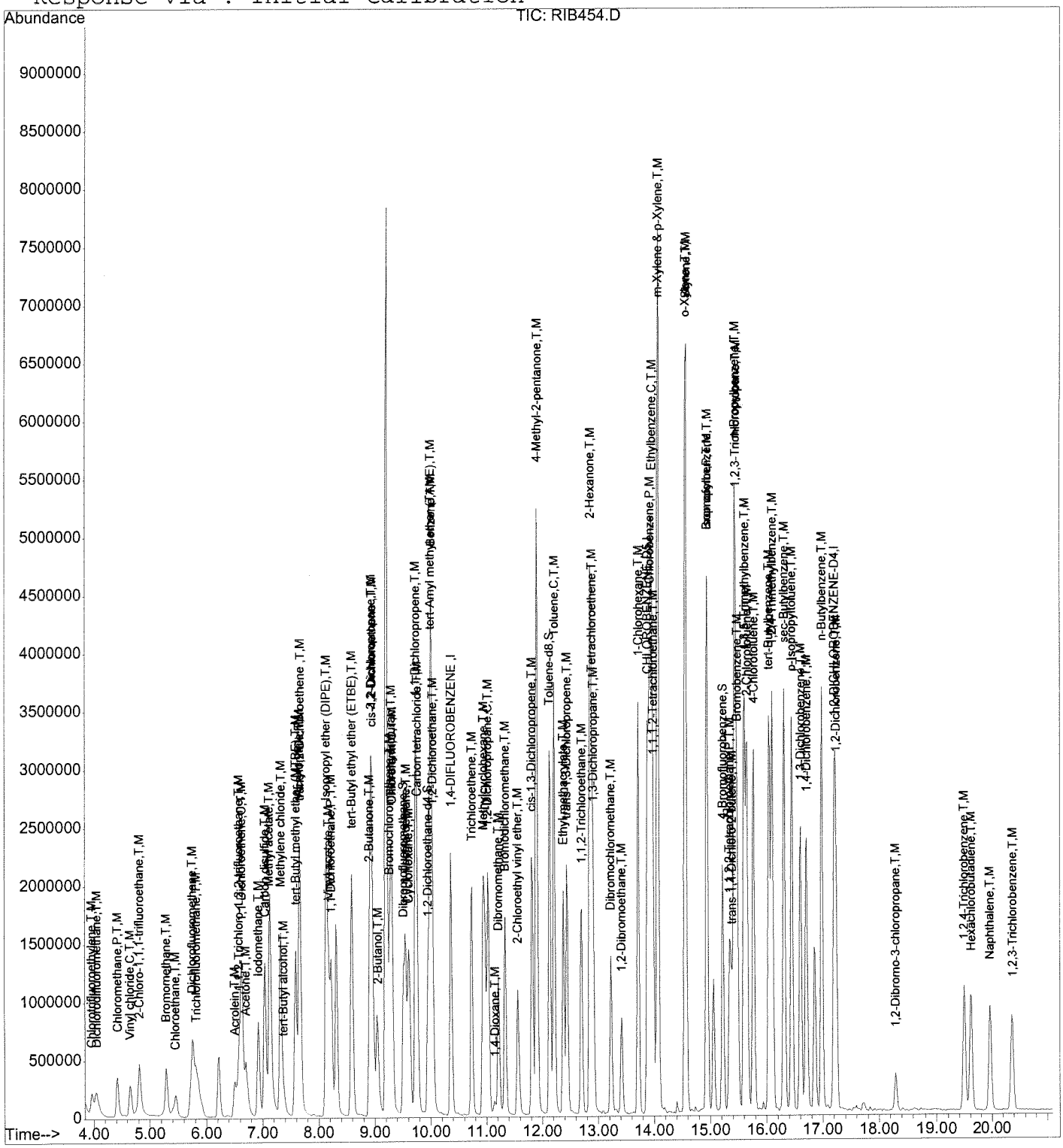
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
76)	n-Propylbenzene	15.43	91	5668980	58.48 ug/l		99
77)	1,2,3-Trichloropropane	15.45	110	272903	52.53 ug/l		96
78)	Bromobenzene	15.48	156	1037622	51.28 ug/l		89
79)	1,3,5-Trimethylbenzene	15.61	105	3072637	56.09 ug/l		98
80)	2-Chlorotoluene	15.65	91	3446914	54.46 ug/l		98
81)	4-Chlorotoluene	15.77	91	3143879	54.40 ug/l		99
82)	tert-Butylbenzene	16.04	134	644848	56.80 ug/l	#	90
83)	1,2,4-Trimethylbenzene	16.10	105	3125435	55.84 ug/l		88
84)	sec-Butylbenzene	16.31	105	4094703	57.07 ug/l		99
85)	p-Isopropyltoluene	16.44	119	3002553	56.75 ug/l		98
86)	1,3-Dichlorobenzene	16.61	146	1762456	54.13 ug/l		99
87)	1,4-Dichlorobenzene	16.71	146	1724304	53.78 ug/l		99
88)	n-Butylbenzene	16.98	91	3488522	59.14 ug/l		99
89)	1,2-Dichlorobenzene	17.23	146	1498692	50.47 ug/l		98
90)	1,2-Dibromo-3-chloropropan	18.29	157	153420	45.90 ug/l		99
91)	1,2,4-Trichlorobenzene	19.48	180	638957	52.66 ug/l		98
92)	Hexachlorobutadiene	19.62	225	418703	54.32 ug/l		99
93)	Naphthalene	19.96	128	1479220	53.04 ug/l		100
94)	1,2,3-Trichlorobenzene	20.38	180	536528	53.10 ug/l		100

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15I27\RIB454.D Vial: 2
Acq On : 27 Sep 2015 12:44 pm Operator: CMendo
Sample : CVO03I2501 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Sep 27 13:05 2015 Quant Results File: VO03I25.RES

Method : D:\HPCHEM\1\METHODS\VO03I25.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Sun Sep 27 10:40:43 2015
Response via : Initial Calibration



ANALYTICAL LOG(S)

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 9/24/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-057

BATCH V0Φ3I256

Sample Prep ID	Data File Name	Lab Sample ID	* Sample Amount (ML)	DF	Matrix W pH <2	Matrix W Cl_2 <5ppm	Matrix S	Notes
01	RIB316	BFBΦ3I 16		1.0	NA	NA	NA	22:24
02	77	VOΦ3I251	.02					1 5 ppb
03	78	2	.04					2 10
04	79	3	.08					4 20
05	80	4	.2					10 50
06	81	5	.4					20 100
07	82	6	1					50 250
08	83	7	2					100 500
09	84	8	4					200 1000
10	85	9	6					300 1500
11	86	10	10					500 2500
12	87	Rinse						
13	88							
14	89	IVOΦ3I257-1						bad IS spike 04:34
15	90	Rinse CGM 9/25/15						
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 9/25/15

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	9/25/15
ICAL ID	VOΦ3I25

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC Freons	SV1-24-78-03	*	250
DCC Gases CS2	90-01		250
	85-01		250
DCC Ketones/Alcohols	86-01		1250
DCC 8260	86-02		250
BFB	76-01	1	50
IS/SURR. IS	85-03	1	250
SS	89-01	*	250
ICV/LCS Gases CS2	90-02	1	250
	90-03	1	250
ICV/LCS Ketones/Alcohols	85-02	5	250
	93-01	5	50
ICV/LCS 2 Acetones	80-03	5	50
ICV/LCS 2Butanone	SV1-13-99-16	1.25	1000
ICV/LCS 2C11TFM	SV1-25-03-04	.25	1000
ICV/LCS CTFM	03-05	.25	1000
Data File Folder	15I24		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		-10-20
Methanol		-10-23
$NaHSO_4$		-21
Reagent Water	RWS-14-001	J08-B4164
Sand	SWA-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO03	9/28/15

Comments:

☐ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 9/25 Disposed By: CGM

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 9/27/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-057

BATCH V0Ø3I252

Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl_2 <5ppm	Matrix S	Notes
01	RIB451	BFBØ3I2Ø		1.0	NA	NA	NA	11:19
02	↓ 52	IVOØ3I252						11:52
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								- CGM 9/27/15

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	9/25/15
ICAL ID	VØØ3I25

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC			
DCC			
DCC			
DCC			
BFB	SVI-24-76-01	1	
IS/SURR.	88-01	1	
ICV/LCS	90-02 90-03	1 1	50/
ICV/LCS	85-02 91-02	5 5	/250
ICV/LCS	80-03	5	/1000
ICV/LCS	SVI-12-49-16	1.25	
Data File Folder	15I27		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		– 10-20
Methanol		– 10-23
$NaHSO_4$		– 21
Reagent Water	RWS-14-001	
Sand	SWIA-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO03	9/28/15

Comments: SVI-25-03-04 .25 1000
↓ 03-05 .25 1000

☐ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 9/28/15 Disposed By: CGM

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 9/27/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-057

BATCH CVØ3I25Ø1

	Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl_2 <5ppm	Matrix S	Notes
01		RIB453	BFBØ3I21 ✓						12:16
02		54	CVØ3I25Ø1 ✓						
03		55	VSØ3I21L ✓	5.0mL	1.0				
04		56	C ✓						
05		57	Rinse						
06		58	VSØ3I21B ✓	5.0mL	1.0				
07		59	TVI002SB ✓	0.5mL	10	<5	✓		
08		60	TVI003SB ✓			<5	✓		
09		61	15I055-03 ✓			6	✓		
10		62	15I094-02			7	✓		1x/10x
11		63	15I131-06			6	✓		1x
12		64	15I185-04 ✓			6	✓		
13		65	05 ✓			6	✓		
14		66	06 ✓			6	✓		
15		67	Rinse						
16		68	15I562-02 ✓	5.0mL	1.0	✓	✓		19:15
17		69	Rinse						
18		70							
19		71							
20		72							
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									CGM 9/27/15

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	9/25/15
ICAL ID	VØ3I25

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC	SV1-24-90-01	1	
DCC	85-01	1	
DCC	89-03	5	
DCC	82-01	5	
BFB	76-01	1	50
IS/SURR.	88-01	1	250
ICV/LCS	90-02	1	
ICV/LCS	90-03	1	
ICV/LCS	85-02	5	
ICV/LCS	91-02	5	
Data File Folder	15I27		

	LOT #	Syringe Lot #
pH strip	HC547770	MSV-01-02-23
Chlorine strip	5190	10-20
Methanol		10-23
$NaHSO_4$		21
Reagent Water	RW5-14-001	
Sand	SW1A-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/T003	9/28/15

Comments:

☆ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 9/28/15 Disposed By: CGM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

FileID: TVI003S

VOLATILES TCLP EXTRACTION LOG

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vessel#	TCLPSolnVol	Pressure(psi) Before Agitation	Pressure(psi) After Agitation
15TVI003S01	TVI003SB	0	g	9/23/15 17:14	2	500	50	40
15TVI003S02	I131-06	24	g	9/23/15 17:16	1	480	50	50
15TVI003S03	I185-04	24	g	9/23/15 17:20	10	480	50	50
15TVI003S04	I185-05	24	g	9/23/15 17:27	11	480	50	50
15TVI003S05	I185-06	24	g	9/23/15 17:30	12	480	50	45
15TVI003S06	I094-02	24	g	9/23/15 17:49	15	480	50	50

☑ DateTimeStarted 9/23/2015 19:30 ☑ DateTimeEnded 9/24/2015 13:30

Comment:

Calibration of pH Meter InstrumentID: 96

BufferID	Value	Reading	DateTime
SP1A-05-02-01	4	4.01	9/23/15 17:54
SP1A-05-02-02	7	7	9/23/15 17:53
SW1A-005-12-24	CalVer 5	5.05	9/23/15 17:55
	4		
	7		
	CalVer 5		

TCLP Soln ID	Desc	pH	Expiration Date
SP1B-08-12-01	TCLP (VOA)	4.92	11/11/15

Rotary Agitator #	Criteria	rpm	DateTime
3	30 ± 2 rpm	30	9/23/15 17:56

Thermostat Setting (°F):		Thermometer ID:	
TCLP Room Temperature	Criteria	Rdg	DateTime
Room Temp (°C) High	23 ± 2 °C	23.4	9/24/15 13:02
Room Temp (°C) Low	23 ± 2 °C	21.4	9/24/15 6:44

Balance ID: 25451062. Calibration check was verified prior to use.

☑ Thermometer Reset on: 9/23/15 19:29

Extract Location: VW05 Prepared By: DFelic/MLyudm

Received by: DH Checked By: ML

Date: 9/24/15 Date: 9/24/15

1135

SEMI VOLATILE ORGANICS

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/23/15 18:12
Sample ID:	CAFB-FT006-BKF-001	Date Analyzed:	09/24/15 17:40
Lab Samp ID:	I185-01	Dilution Factor:	1
Lab File ID:	RIH553	Matrix :	SOIL
Ext Btch ID:	SVI038S	% Moisture :	0.5
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.34	2.010	66.5	35-125
2-FLUOROBIPHENYL	0.412	0.6701	61.5	45-105
2-FLUOROPHENOL	1.14	2.010	56.6	35-105
NITROBENZENE-D5	0.372	0.6701	55.5	35-100
TERPHENYL-D14	0.535	0.6701	79.8	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIH553.D Vial: 26
Acq On : 24 Sep 2015 17:40 Operator: KVu
Sample : 15I185-01 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 05 11:51:57 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

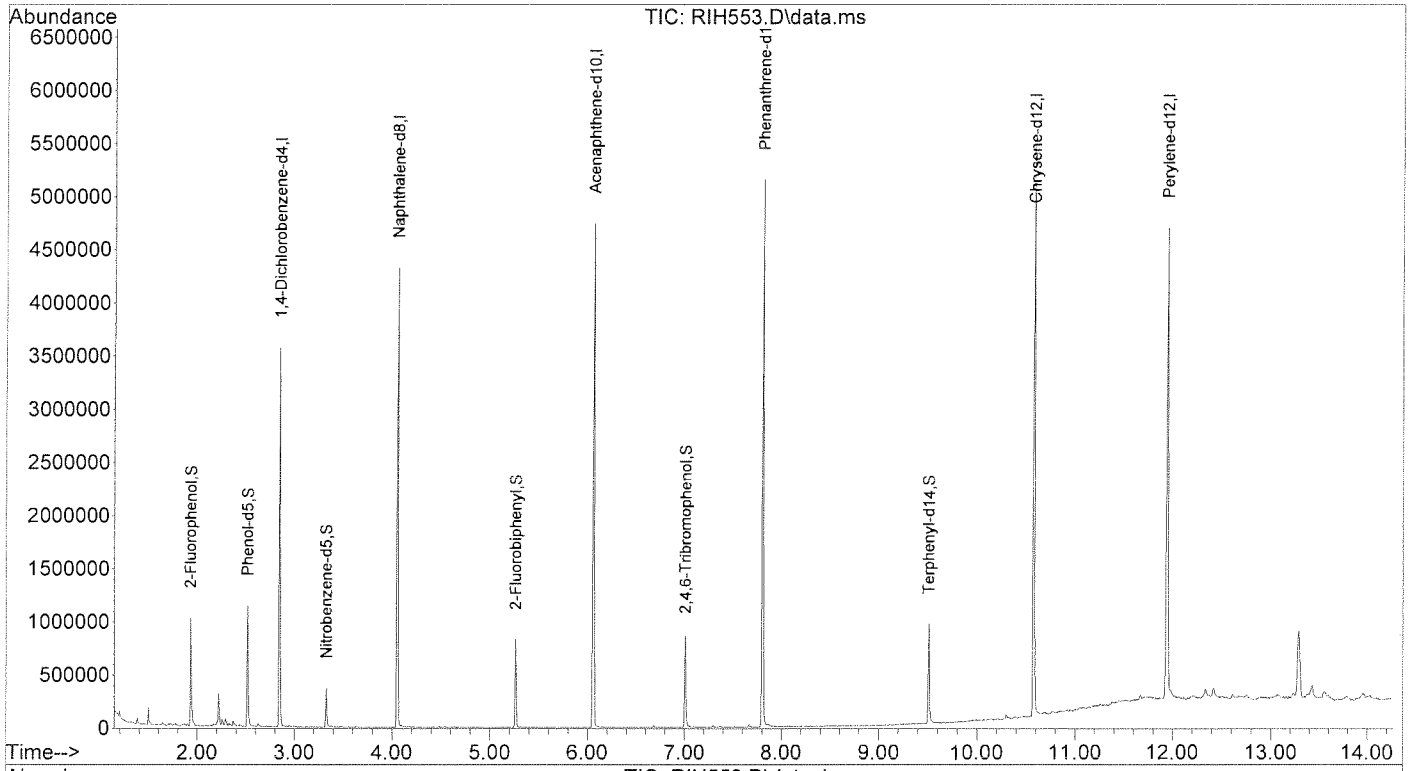
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	478093	40.00	ppm	0.00
21) Naphthalene-d8	4.055	136	1793997	40.00	ppm	0.00
41) Acenaphthene-d10	6.061	164	1102416	40.00	ppm	0.00
71) Phenanthrene-d10	7.807	188	1908621	40.00	ppm	0.00
87) Chrysene-d12	10.580	240	2090507	40.00	ppm	0.00
97) Perylene-d12	11.946	264	1836635	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.932	112	238923	16.98	ppm	0.00
Spiked Amount 30.000			Recovery = 56.60%			
6) Phenol-d5	2.517	99	310320	18.38	ppm	0.01
Spiked Amount 30.000			Recovery = 61.27%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.329	82	90428	5.55	ppm	0.00
Spiked Amount 10.000			Recovery = 55.50%			
46) 2-Fluorobiphenyl	5.262	172	264189	6.15	ppm	0.00
Spiked Amount 10.000			Recovery = 61.50%			
75) 2,4,6-Tribromophenol	7.011	330	103489	19.94	ppm	0.01
Spiked Amount 30.000			Recovery = 66.47%			
90) Terphenyl-d14	9.508	244	353808	7.98	ppm	0.00
Spiked Amount 10.000			Recovery = 79.80%			

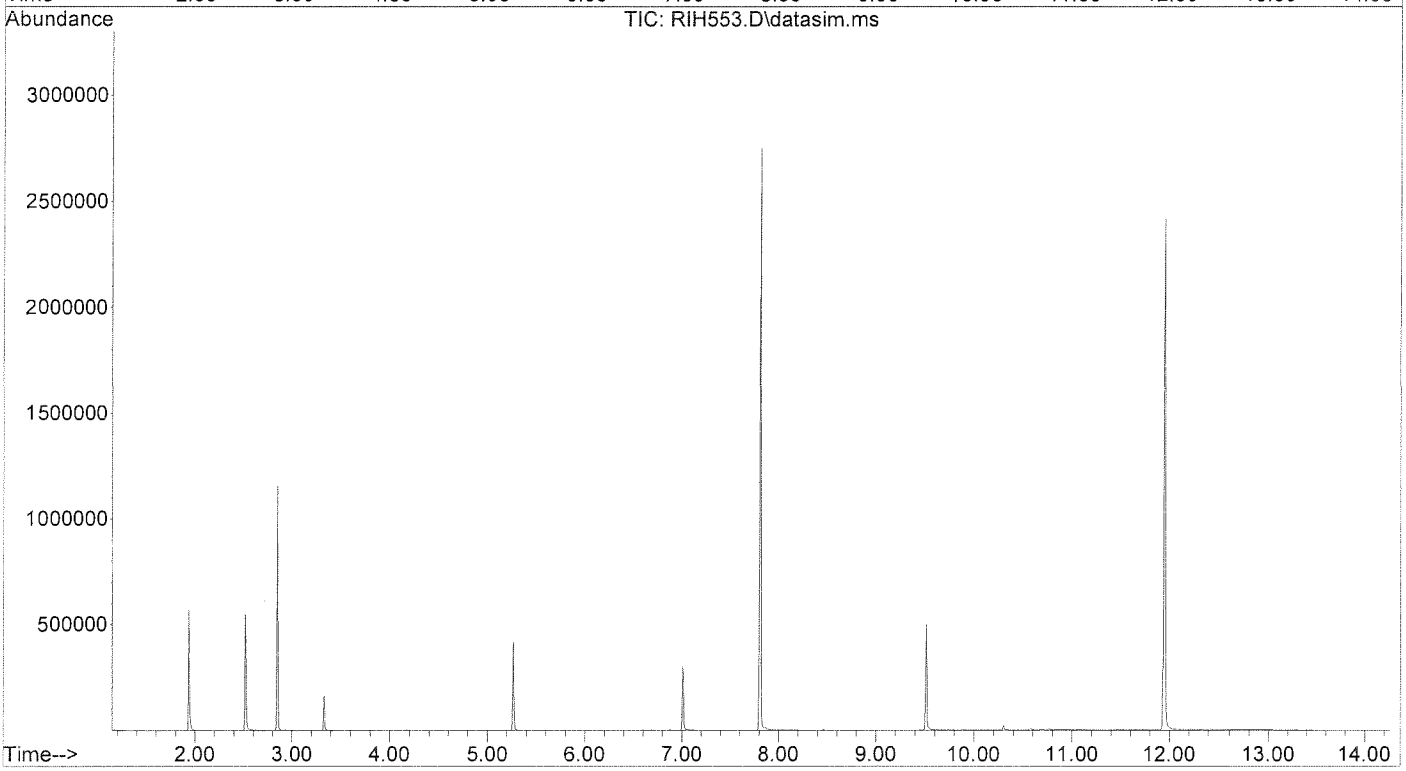
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIH553.D Vial: 26
Acq On : 24 Sep 2015 17:40 Operator: KVu
Sample : 15I185-01 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 05 11:51:57 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/23/15 18:12
Sample ID:	CAFB-FT006-BKF-002	Date Analyzed:	09/24/15 17:59
Lab Samp ID:	I185-02	Dilution Factor:	1
Lab File ID:	RIH554	Matrix :	SOIL
Ext Btch ID:	SVI038S	% Moisture :	0.4
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.26	2.008	62.6	35-125
2-FLUOROBIPHENYL	0.380	0.6694	56.8	45-105
2-FLUOROPHENOL	0.988	2.008	49.2	35-105
NITROBENZENE-D5	0.328	0.6694	49.0	35-100
TERPHENYL-D14	0.503	0.6694	75.2	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

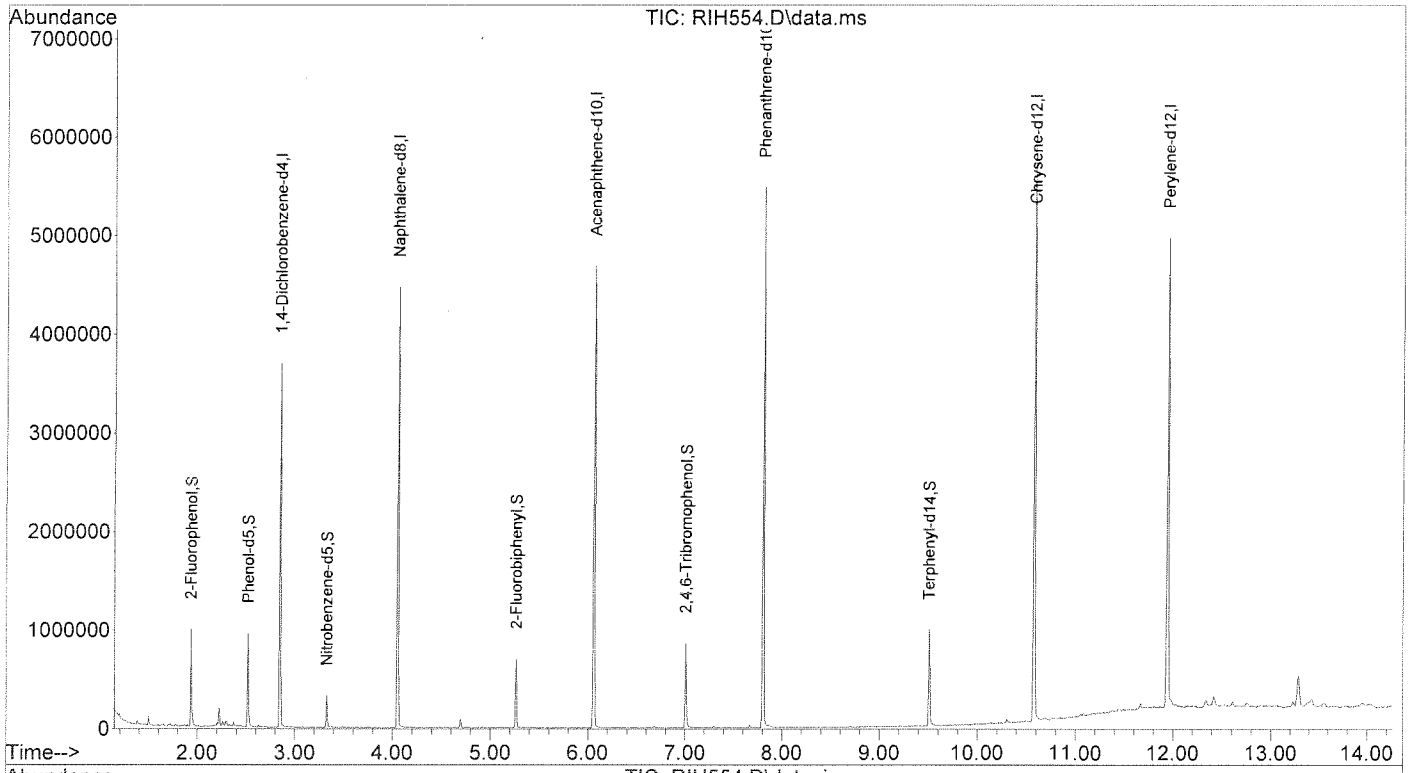
Data File : D:\DATA\15I24\RIH554.D Vial: 27
Acq On : 24 Sep 2015 17:59 Operator: KVu
Sample : 15I185-02 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 05 11:52:12 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

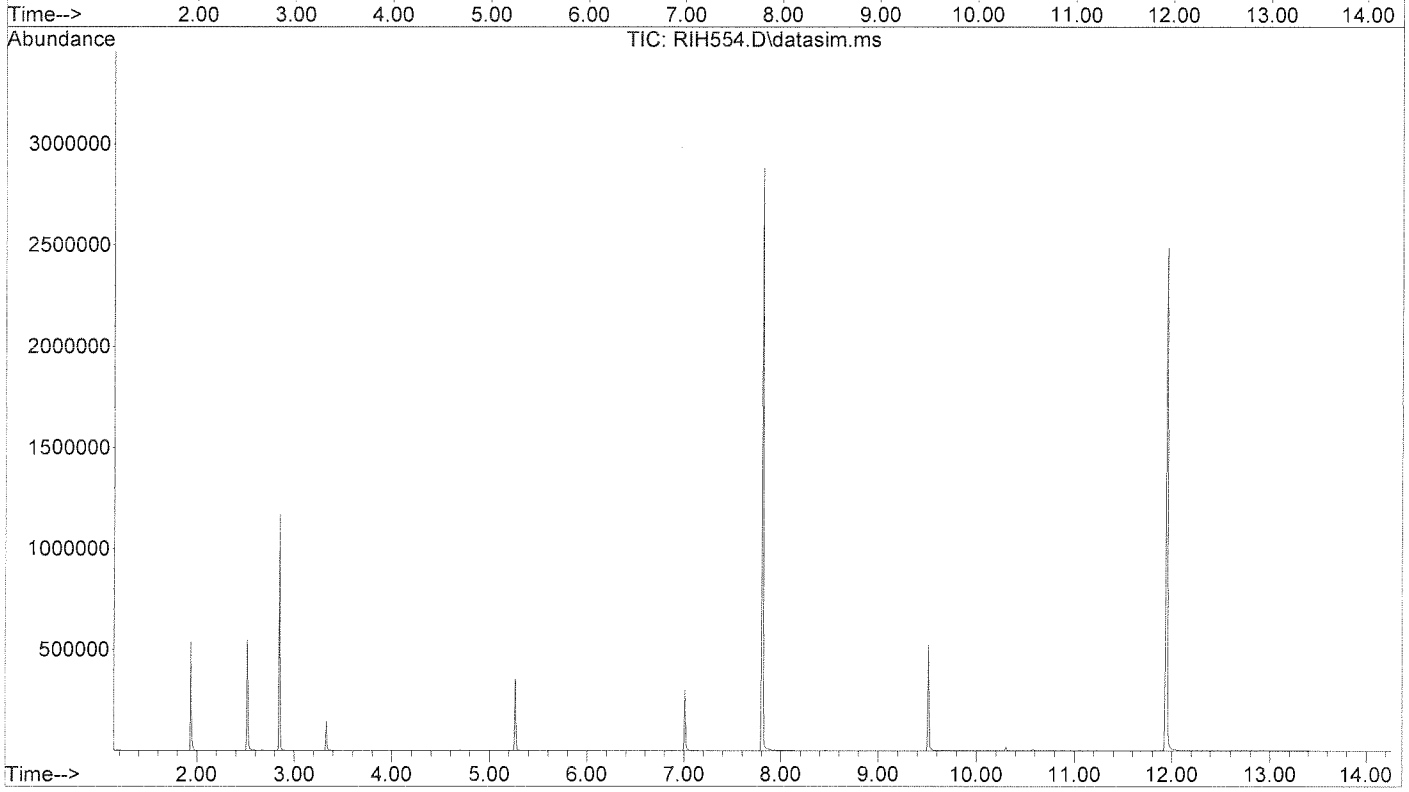
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	2.845	152	487088	40.00 ppm	0.00
21) Naphthalene-d8	4.055	136	1814146	40.00 ppm	0.00
41) Acenaphthene-d10	6.061	164	1075808	40.00 ppm	0.00
71) Phenanthrene-d10	7.807	188	1955679	40.00 ppm	0.00
87) Chrysene-d12	10.580	240	2231915	40.00 ppm	0.00
97) Perylene-d12	11.946	264	1993104	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	1.932	112	211494	14.75 ppm	0.00
Spiked Amount 30.000			Recovery	= 49.17%	
6) Phenol-d5	2.517	99	272444	15.84 ppm	0.01
Spiked Amount 30.000			Recovery	= 52.80%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
22) Nitrobenzene-d5	3.329	82	80782	4.90 ppm	0.00
Spiked Amount 10.000			Recovery	= 49.00%	
46) 2-Fluorobiphenyl	5.262	172	238113	5.68 ppm	0.00
Spiked Amount 10.000			Recovery	= 56.80%	
75) 2,4,6-Tribromophenol	7.006	330	99873	18.78 ppm	0.00
Spiked Amount 30.000			Recovery	= 62.60%	
90) Terphenyl-d14	9.508	244	355684	7.52 ppm	0.00
Spiked Amount 10.000			Recovery	= 75.20%	
Target Compounds					Qvalue

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

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIH554.D Vial: 27
Acq On : 24 Sep 2015 17:59 Operator: KVu
Sample : 15I185-02 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 05 11:52:12 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/23/15 18:12
Sample ID:	CAFB-FT006-BKF-003	Date Analyzed:	09/24/15 18:18
Lab Samp ID:	I185-03	Dilution Factor:	1
Lab File ID:	RIH555	Matrix :	SOIL
Ext Btch ID:	SVI038S	% Moisture :	0.5
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.34	2.010	66.8	35-125
2-FLUOROBIPHENYL	0.411	0.6701	61.3	45-105
2-FLUOROPHENOL	1.13	2.010	56.1	35-105
NITROBENZENE-D5	0.366	0.6701	54.6	35-100
TERPHENYL-D14	0.538	0.6701	80.3	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

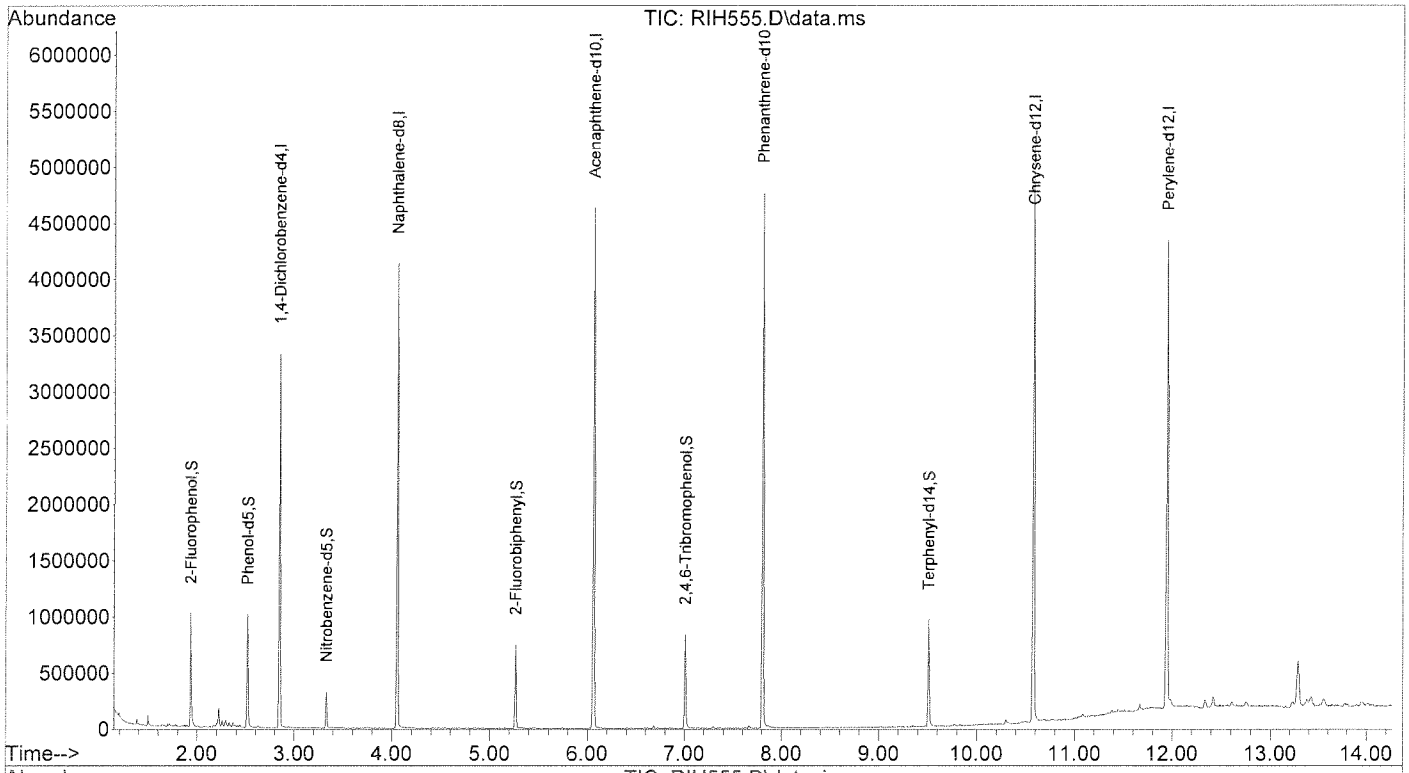
Data File : D:\DATA\15I24\RIH555.D Vial: 28
Acq On : 24 Sep 2015 18:18 Operator: KVu
Sample : 15I185-03 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 05 11:52:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

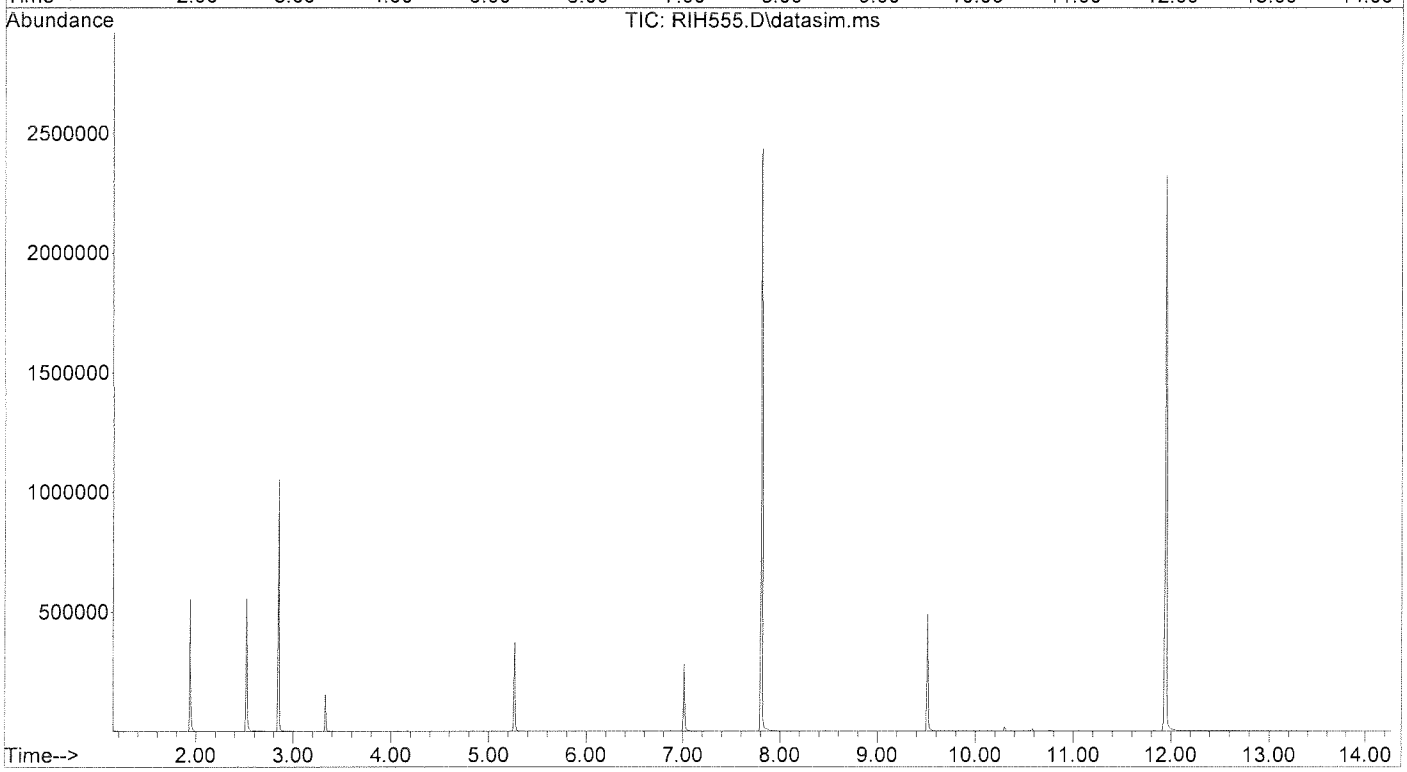
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	460819	40.00	ppm	0.00
21) Naphthalene-d8	4.055	136	1717979	40.00	ppm	0.00
41) Acenaphthene-d10	6.061	164	1049988	40.00	ppm	0.00
71) Phenanthrene-d10	7.807	188	1822012	40.00	ppm	0.00
87) Chrysene-d12	10.580	240	2030423	40.00	ppm	0.00
97) Perylene-d12	11.946	264	1794120	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.932	112	228190	16.83	ppm	0.00
Spiked Amount 30.000			Recovery = 56.10%			
6) Phenol-d5	2.517	99	285150	17.52	ppm	0.01
Spiked Amount 30.000			Recovery = 58.40%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.329	82	85177	5.46	ppm	0.00
Spiked Amount 10.000			Recovery = 54.60%			
46) 2-Fluorobiphenyl	5.262	172	250777	6.13	ppm	0.00
Spiked Amount 10.000			Recovery = 61.30%			
75) 2,4,6-Tribromophenol	7.006	330	99340	20.05	ppm	0.00
Spiked Amount 30.000			Recovery = 66.83%			
90) Terphenyl-d14	9.508	244	345842	8.03	ppm	0.00
Spiked Amount 10.000			Recovery = 80.30%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIH555.D Vial: 28
Acq On : 24 Sep 2015 18:18 Operator: KVu
Sample : 15I185-03 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 05 11:52:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





QC SUMMARIES

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/23/15
Batch No.	: 15I185	Date Extracted:	09/23/15 18:12
Sample ID:	MBLK1S	Date Analyzed:	09/24/15 15:35
Lab Samp ID:	SVI038SB	Dilution Factor:	1
Lab File ID:	RIJ487	Matrix :	SOIL
Ext Btch ID:	SVI038S	% Moisture :	NA
Calib. Ref.:	RGJ140	Instrument ID :	T-OE4

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.35	2.000	67.3	35-125
2-FLUOROBIPHENYL	0.506	0.6667	75.9	45-105
2-FLUOROPHENOL	1.21	2.000	60.6	35-105
NITROBENZENE-D5	0.431	0.6667	64.6	35-100
TERPHENYL-D14	0.565	0.6667	84.8	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW3550B/8270D

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK1S		
LAB SAMP ID:	SVI038SB	SVI038SL	SVI038SC
LAB FILE ID:	RIJ487	RIJ481	RIJ482
DATE EXTRACTED:	09/23/1518:12	09/23/1518:12	09/23/1518:12
DATE ANALYZED:	09/24/1515:35	09/24/1513:39	09/24/1513:58
PREP. BATCH:	SVI038S	SVI038S	SVI038S
CALIB. REF:	RGJ140	RGJ140	RGJ140

DATE COLLECTED: NA
DATE RECEIVED: 09/23/15

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	1.33	0.943	71	1.33	0.883	66	7	45-110	30
1,2-Dichlorobenzene	ND	1.33	0.874	66	1.33	0.833	62	5	45-100	30
1,3-Dichlorobenzene	ND	1.33	0.874	66	1.33	0.819	61	6	40-100	30
1,4-Dichlorobenzene	ND	1.33	0.889	67	1.33	0.839	63	6	35-105	30
2,4,5-Trichlorophenol	ND	1.33	1.12	84	1.33	1.03	78	8	50-110	30
2,4,6-Trichlorophenol	ND	1.33	1.11	83	1.33	1.01	75	9	45-110	30
2,4-Dichlorophenol	ND	1.33	0.905	68	1.33	0.826	62	9	45-110	30
2,4-Dimethylphenol	ND	1.33	1.07	80	1.33	1.01	76	6	30-105	30
2,4-Dinitrophenol	ND	1.33	1.22	91	1.33	1.11	83	9	15-130	30
2,4-Dinitrotoluene	ND	1.33	1.10	83	1.33	1.03	77	7	50-115	30
2,6-Dinitrotoluene	ND	1.33	1.04	78	1.33	0.964	72	7	50-110	30
2-Chloronaphthalene	ND	1.33	1.02	77	1.33	0.983	74	4	45-105	30
2-Chlorophenol	ND	1.33	0.902	68	1.33	0.841	63	7	45-105	30
2-Methylphenol	ND	1.33	0.989	74	1.33	0.935	70	6	40-105	30
2-Nitroaniline	ND	1.33	1.20	90	1.33	1.11	83	8	45-120	30
2-Nitrophenol	ND	1.33	1.07	80	1.33	0.997	75	7	40-110	30
3&4-Methylphenol	ND	1.33	0.998	75	1.33	0.958	72	4	40-105	30
3-Nitroaniline	ND	1.33	1.17	88	1.33	1.10	82	7	25-110	30
4,6-Dinitro-2-Methylphenol	ND	1.33	1.28	96	1.33	1.24	93	3	30-135	30
4-Bromophenyl-phenylether	ND	1.33	0.994	75	1.33	0.951	71	4	45-115	30
4-Chloro-3-Methylphenol	ND	1.33	1.16	87	1.33	1.04	78	11	45-115	30
4-Chlorophenyl-phenylether	ND	1.33	1.06	79	1.33	0.995	75	6	45-110	30
4-Nitroaniline	ND	1.33	1.41	106	1.33	1.27	96	10	35-115	30
4-Nitrophenol	ND	1.33	1.35	101	1.33	1.21	91	11	15-140	30
Benzyl Alcohol	ND	1.33	0.979	73	1.33	0.923	69	6	20-125	30
bis(2-Chloroisopropyl)ether	ND	1.33	0.898	67	1.33	0.839	63	7	20-115	30
bis(2-Chloroethoxy)methane	ND	1.33	0.942	71	1.33	0.862	65	9	45-110	30
bis(2-Chloroethyl)ether	ND	1.33	0.874	66	1.33	0.801	60	9	40-105	30
bis(2-Ethylhexyl)phthalate	ND	1.33	1.05	79	1.33	1.06	79	1	45-125	30
Butylbenzylphthalate	ND	1.33	1.09	82	1.33	1.09	82	0	50-125	30
Carbazole	ND	1.33	1.16	87	1.33	1.13	85	3	45-115	30
Dibenzofuran	ND	1.33	1.04	78	1.33	0.963	72	7	50-105	30
Diethylphthalate	ND	1.33	1.09	81	1.33	1.03	77	6	50-115	30
Dimethylphthalate	ND	1.33	1.11	83	1.33	1.03	77	7	50-110	30
Di-n-butylphthalate	ND	1.33	1.04	78	1.33	1.03	77	1	55-110	30
Di-n-octylphthalate	ND	1.33	1.13	85	1.33	1.14	86	1	40-130	30
Hexachlorobenzene	ND	1.33	0.952	71	1.33	0.925	69	3	45-120	30
Hexachlorobutadiene	ND	1.33	0.933	70	1.33	0.852	64	9	40-115	30
Hexachloroethane	ND	1.33	0.820	62	1.33	0.765	57	7	35-110	30
Isophorone	ND	1.33	0.931	70	1.33	0.898	67	4	45-110	30
Nitrobenzene	ND	1.33	0.904	68	1.33	0.829	62	9	40-115	30
N-Nitrosodimethylamine	ND	1.33	0.846	63	1.33	0.752	56	12	20-115	30
n-Nitroso-di-n-propylamine	ND	1.33	0.966	72	1.33	0.895	67	8	40-115	30
n-Nitrosodiphenylamine	ND	1.33	1.09	82	1.33	1.04	78	5	50-115	30
Pentachlorophenol	ND	1.33	1.01	76	1.33	0.967	73	5	25-120	30
Phenol	ND	1.33	0.944	71	1.33	0.892	67	6	40-100	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	2.00	1.51	76	2.00	1.58	79	35-125
2-Fluorobiphenyl	0.667	0.524	79	0.667	0.504	76	45-105
2-Fluorophenol	2.00	1.20	60	2.00	1.23	62	35-105
Nitrobenzene-d5	0.667	0.447	67	0.667	0.470	70	35-100
Terphenyl-d14	0.667	0.525	79	0.667	0.589	88	30-125

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ487.D
Acq On : 24 Sep 2015 15:35
Sample : SVI038SB
Misc :
Integrator: RTE
Quant Time: Sep 30 18:11:58 2015

Vial: 16
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.006	152	379724	40.00	ppm	0.00
21) Naphthalene-d8	4.234	136	1371795	40.00	ppm	0.00
41) Acenaphthene-d10	6.260	164	827390	40.00	ppm	0.00
71) Phenanthrene-d10	7.999	188	1463035	40.00	ppm	0.00
87) Chrysene-d12	10.790	240	1621705	40.00	ppm	0.00
97) Perylene-d12	12.226	264	1424893	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	2.065	112	224867	18.18	ppm	0.00
Spiked Amount 30.000			Recovery	=	60.60%	
6) Phenol-d5	2.654	99	299309	19.99	ppm	0.00
Spiked Amount 30.000			Recovery	=	66.63%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.495	82	95101	6.46	ppm	0.00
Spiked Amount 10.000			Recovery	=	64.60%	
46) 2-Fluorobiphenyl	5.452	172	235568	7.59	ppm	0.00
Spiked Amount 10.000			Recovery	=	75.90%	
75) 2,4,6-Tribromophenol	7.200	330	79365	20.20	ppm	0.00
Spiked Amount 30.000			Recovery	=	67.33%	
90) Terphenyl-d14	9.707	244	298301	8.48	ppm	0.00
Spiked Amount 10.000			Recovery	=	84.80%	

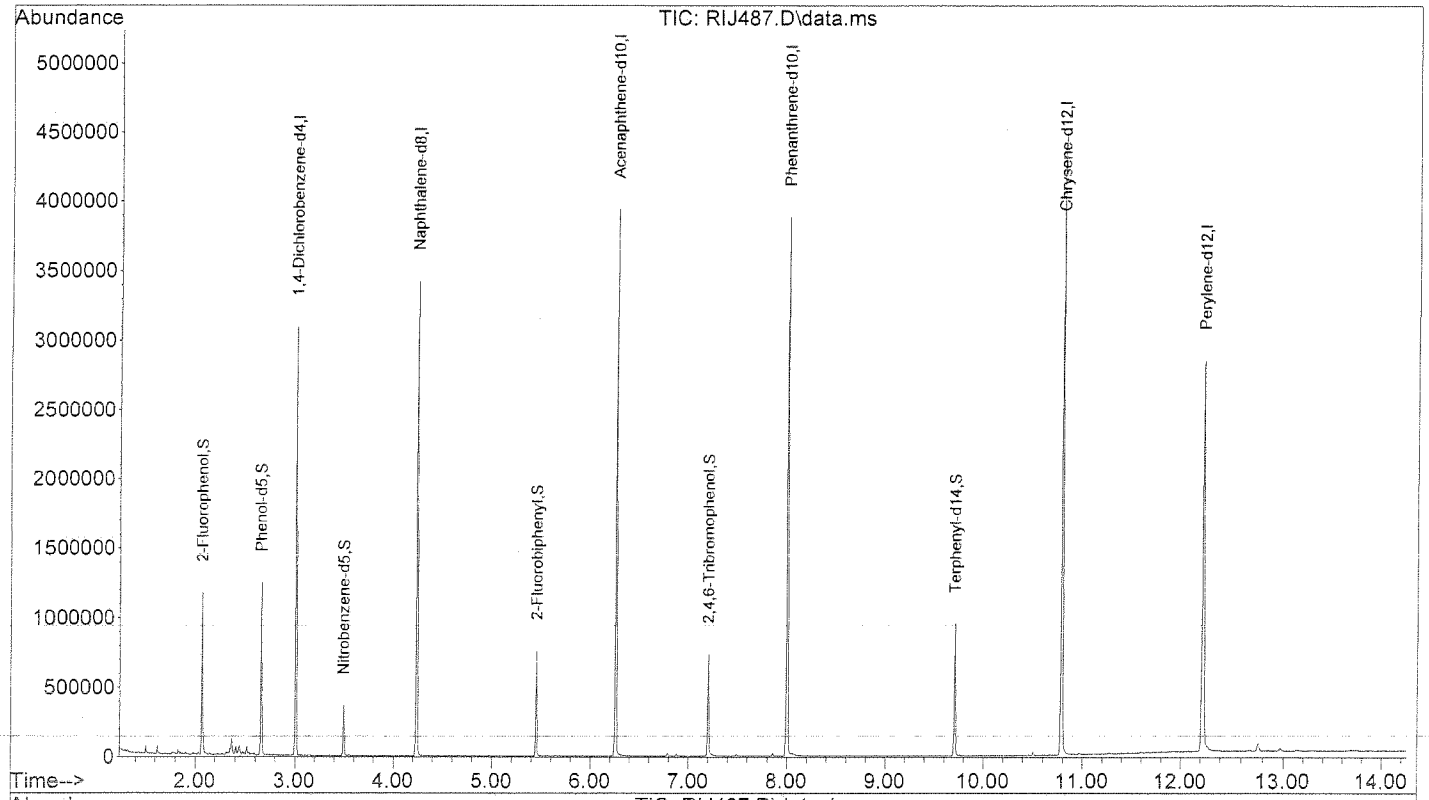
Target Compounds Qvalue

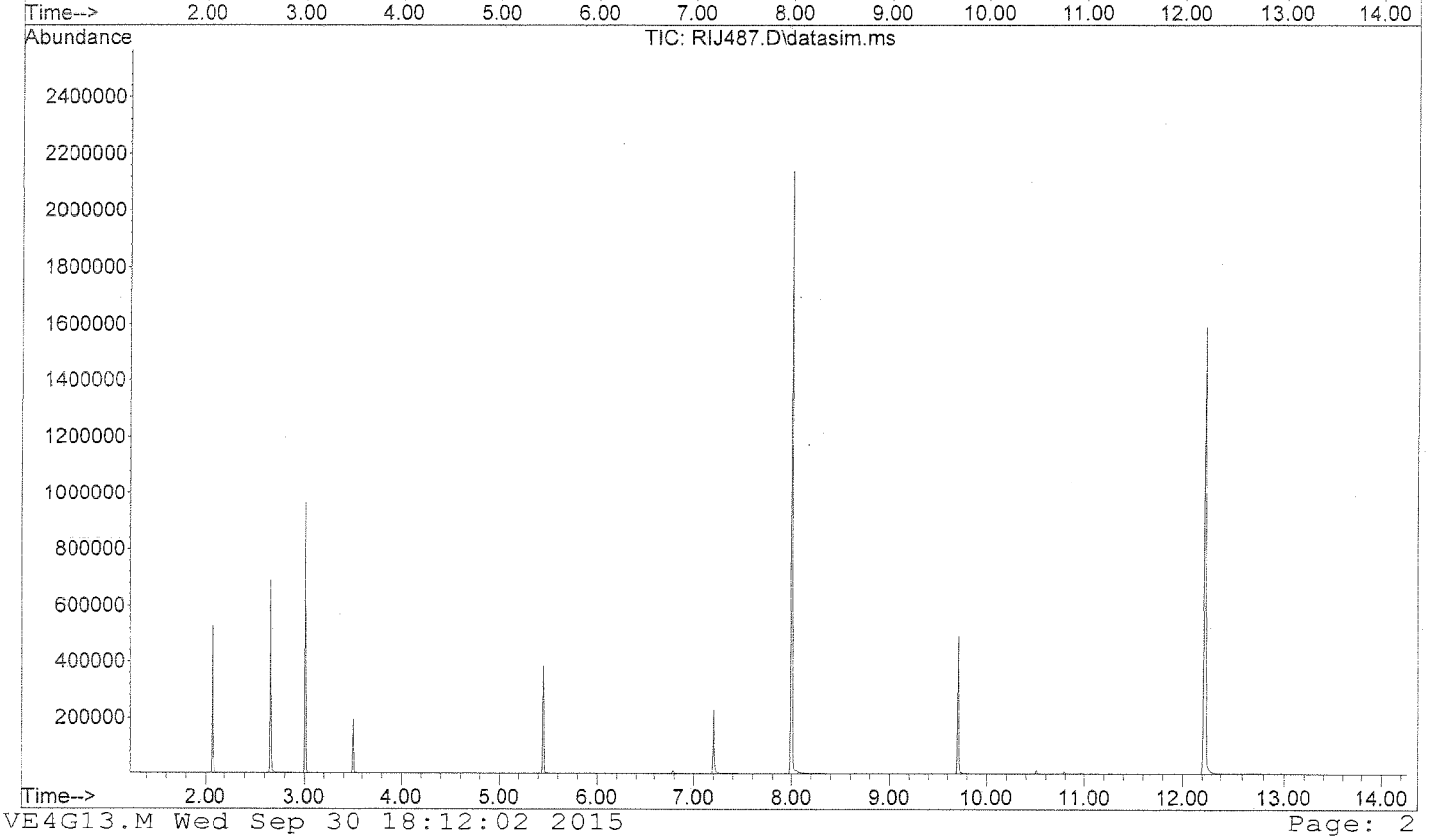
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ487.D
Acq On : 24 Sep 2015 15:35
Sample : SVI038SB
Misc :
Integrator: RTE
Quant Time: Sep 30 18:11:58 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 16
Operator: KVu
Inst : E4
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ481.D
Acq On : 24 Sep 2015 13:39
Sample : SVI038SL
Misc :
Integrator: RTE
Quant Time: Sep 30 18:11:10 2015

Vial: 10
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	395829	40.00	ppm	0.00
21) Naphthalene-d8	4.239	136	1456709	40.00	ppm	0.00
41) Acenaphthene-d10	6.264	164	910723	40.00	ppm	0.00
71) Phenanthrene-d10	8.004	188	1777574	40.00	ppm	0.00
87) Chrysene-d12	10.795	240	2071442	40.00	ppm	0.00
97) Perylene-d12	12.231	264	1824192	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	2.065	112	231445	17.95	ppm	0.00
Spiked Amount 30.000			Recovery = 59.83%			
6) Phenol-d5	2.659	99	316036	20.25	ppm	0.00
Spiked Amount 30.000			Recovery = 67.50%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.499	82	104771	6.71	ppm	0.00
Spiked Amount 10.000			Recovery = 67.10%			
46) 2-Fluorobiphenyl	5.452	172	268112	7.85	ppm	0.00
Spiked Amount 10.000			Recovery = 78.50%			
75) 2,4,6-Tribromophenol	7.205	330	108211	22.67	ppm	0.00
Spiked Amount 30.000			Recovery = 75.57%			
90) Terphenyl-d14	9.707	244	353750	7.87	ppm	0.00
Spiked Amount 10.000			Recovery = 78.70%			
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.462	74	103166	12.69	ppm	87
4) Pyridine	1.491	79	196132	13.26	ppm	87
7) Phenol	2.670	94	219566	14.17	ppm	97
8) Aniline	2.737	93	267729	13.24	ppm	97
9) bis(2-chloroethyl)ether	2.764	93	165754	13.11	ppm	98
10) 2-Chlorophenol	2.831	128	177850	13.53	ppm	91
11) 1,3-Dichlorobenzene	2.962	146	204082	13.10	ppm	97
13) 1,4-Dichlorobenzene	3.025	146	211024	13.33	ppm	96
14) Benzyl alcohol	3.102	108	126410	14.68	ppm	97
15) 1,2-Dichlorobenzene	3.154	146	198577	13.12	ppm	98
16) 2-Methylphenol	3.178	107	156764	14.83	ppm	95
17) bis(2-chloroisopropyl)...	3.217	45	340109	13.47	ppm	100
18) 4-Methylphenol	3.322	107	208182	14.98	ppm	99
19) N-Nitroso-di-n-propyla...	3.341	70	145689	14.49	ppm	92
20) Hexachloroethane	3.466	117	77175	12.31	ppm	95
23) Nitrobenzene	3.519	77	217451	13.56	ppm	99
24) Isophorone	3.749	82	412868	13.96	ppm	99
25) 2-Nitrophenol	3.830	139	104733	16.00	ppm	87
26) 2,4-Dimethylphenol	3.849	107	213814	16.09	ppm	98
27) Benzoic acid	3.931	105	159962	17.58	ppm	99
28) bis(2-Chloroethoxy)met...	3.955	93	228477	14.13	ppm	99
29) 3,5-Dimethylphenol	3.988	107	239942	16.12	ppm	97
30) 2,4-Dichlorophenol	4.075	162	170109	13.58	ppm	100
31) 3,4-Dimethylphenol	4.167	107	261170	15.98	ppm	99
32) 1,2,4-Trichlorobenzene	4.171	180	194365	14.15	ppm	98
33) Naphthalene	4.263	128	565659	14.10	ppm	100
34) 4-Chloroaniline	4.307	127	245275	15.29	ppm	100
35) 2,6-Dichlorophenol	4.316	162	173982	15.53	ppm	100
36) Hexachlorobutadiene	4.384	225	130252	14.00	ppm	99
38) 4-Chloro-3-methylphenol	4.837	107	186528	17.45	ppm	99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ481.D
Acq On : 24 Sep 2015 13:39
Sample : SVI038SL
Misc :
Integrator: RTE
Quant Time: Sep 30 18:11:10 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 10
Operator: KVu
Inst : E4
Multiplr: 1.00

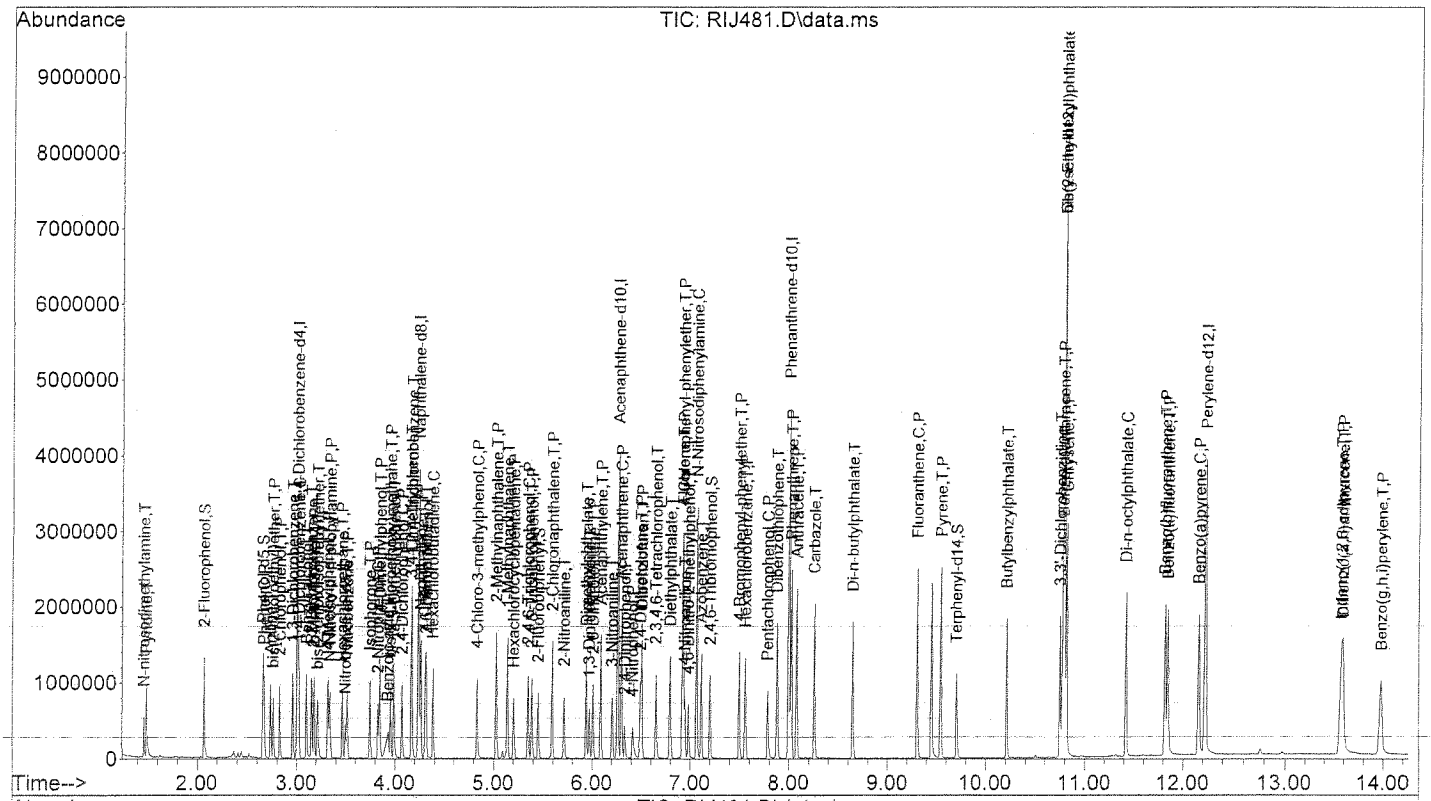
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39)	2-Methylnaphthalene	5.029	142	396827	14.46	ppm	95
40)	1-Methylnaphthalene	5.144	142	369861	14.94	ppm	95
42)	Hexachlorocyclopentadiene	5.206	237	113870	11.35	ppm	99
44)	2,4,6-Trichlorophenol	5.350	196	146239	16.59	ppm	98
45)	2,4,5-Trichlorophenol	5.389	196	153312	16.74	ppm	96
49)	2-Chloronaphthalene	5.596	162	454242	15.32	ppm	95
50)	2-Nitroaniline	5.716	65	140694	18.06	ppm	97
53)	Dimethylphthalate	5.942	163	525720	16.67	ppm	100
54)	1,3-Dinitrobenzene	5.971	168	73727	17.01	ppm	79
55)	2,6-Dinitrotoluene	6.009	165	110132	15.56	ppm	100
57)	Acenaphthylene	6.091	152	764132	16.60	ppm	99
58)	3-Nitroaniline	6.207	138	120307	17.59	ppm	96
59)	Acenaphthene	6.298	153	465213	15.30	ppm	97
60)	2,4-Dinitrophenol	6.331	184	52409	18.28	ppm	97
61)	4-Nitrophenol	6.413	109	72110	20.27	ppm	94
62)	2,4-Dinitrotoluene	6.494	165	151443	16.52	ppm	99
63)	Dibenzofuran	6.509	168	604864	15.56	ppm	99
65)	2,3,4,6-Tetrachlorophenol	6.653	232	148827	16.41	ppm	96
67)	Diethylphthalate	6.799	149	517203	16.30	ppm	99
68)	Fluorene	6.921	166	518895	16.17	ppm	100
69)	4-Chlorophenyl-phenyle...	6.926	204	265529	15.87	ppm	99
70)	4-Nitroaniline	6.945	138	141952	21.18	ppm	98
72)	4,6-Dinitro-2-methylph...	6.982	198	98952	19.23	ppm	98
73)	N-Nitrosodiphenylamine	7.067	169	455661	16.37	ppm	96
74)	Azobenzene	7.115	77	476343	14.47	ppm	100
76)	4-Bromophenyl-phenylether	7.499	248	163873	14.91	ppm	98
77)	Hexachlorobenzene	7.560	284	165235	14.27	ppm	98
78)	Pentachlorophenol	7.787	266	94661	15.20	ppm	100
79)	Dibenzothiophene	7.881	184	781752	16.82	ppm	97
80)	Phenanthrene	8.027	178	835193	15.95	ppm	99
82)	Anthracene	8.084	178	842318	15.73	ppm	99
83)	Carbazole	8.262	167	750976	17.42	ppm	99
84)	Di-n-butylphthalate	8.649	149	859420	15.58	ppm	99
86)	Fluoranthene	9.306	202	989647	17.25	ppm	99
89)	Pyrene	9.547	202	1094328	16.46	ppm	96
91)	Butylbenzylphthalate	10.213	149	391362	16.42	ppm	100
93)	3,3'-Dichlorobenzidine	10.751	252	364687	19.07	ppm	99
94)	Benzo(a)anthracene	10.780	228	981797	15.92	ppm	91
95)	Chrysene	10.819	228	970858	16.26	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.795	149	568476	15.74	ppm	100
98)	Di-n-octylphthalate	11.420	149	963704	16.95	ppm	98
99)	Benzo(b)fluoranthene	11.819	252	886643	16.33	ppm	98
100)	Benzo(k)fluoranthene	11.848	252	756824	13.14	ppm	98
102)	Benzo(a)pyrene	12.163	252	866316	16.56	ppm	99
104)	Indeno(1,2,3-cd)pyrene	13.576	276	1001405	16.56	ppm	98
105)	Dibenzo(a,h)anthracene	13.596	278	819151	16.19	ppm	99
106)	Benzo(g,h,i)perylene	13.984	276	811839	14.96	ppm	98

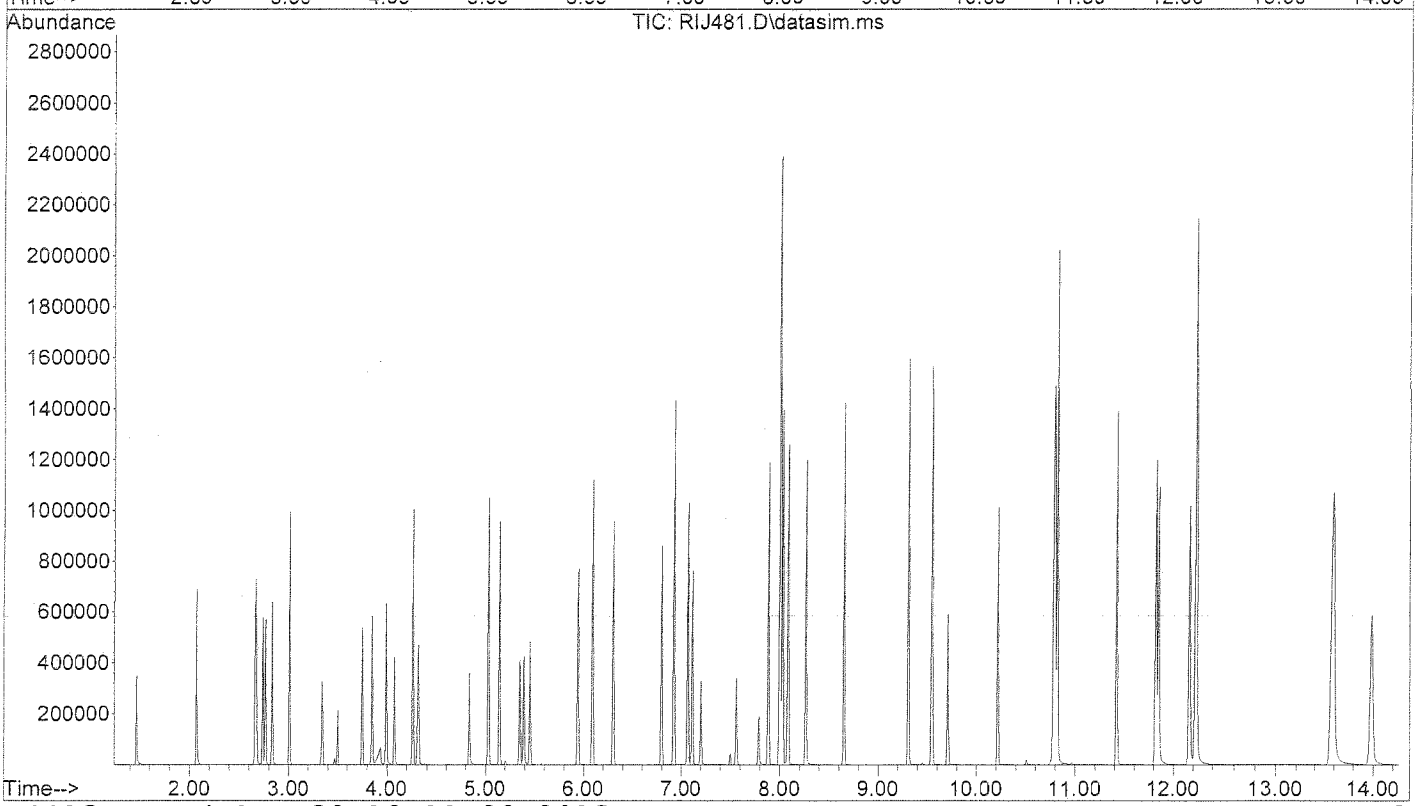
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ481.D
Acq On : 24 Sep 2015 13:39
Sample : SVI038SL
Misc :
Integrator: RTE
Quant Time: Sep 30 18:11:10 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 10
Operator: KVu
Inst : E4
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ482.D
Acq On : 24 Sep 2015 13:58
Sample : SVI038SC
Misc :
Integrator: RTE
Quant Time: Sep 30 18:11:37 2015

Vial: 11
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.005	152	372949	40.00	ppm	0.00
21) Naphthalene-d8	4.239	136	1383615	40.00	ppm	0.00
41) Acenaphthene-d10	6.264	164	852228	40.00	ppm	0.00
71) Phenanthrene-d10	7.999	188	1599856	40.00	ppm	0.00
87) Chrysene-d12	10.795	240	1839631	40.00	ppm	0.00
97) Perylene-d12	12.231	264	1632652	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	2.065	112	224692	18.50	ppm	0.00
Spiked Amount 30.000			Recovery = 61.67%			
6) Phenol-d5	2.659	99	313395	21.31	ppm	0.00
Spiked Amount 30.000			Recovery = 71.03%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.499	82	104510	7.04	ppm	0.00
Spiked Amount 10.000			Recovery = 70.40%			
46) 2-Fluorobiphenyl	5.452	172	241398	7.56	ppm	0.00
Spiked Amount 10.000			Recovery = 75.60%			
75) 2,4,6-Tribromophenol	7.205	330	101547	23.64	ppm	0.00
Spiked Amount 30.000			Recovery = 78.80%			
90) Terphenyl-d14	9.707	244	352534	8.83	ppm	0.00
Spiked Amount 10.000			Recovery = 88.30%			
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.462	74	86398	11.28	ppm	79
4) Pyridine	1.491	79	152563	10.94	ppm	88
7) Phenol	2.670	94	195491	13.39	ppm	96
8) Aniline	2.737	93	228155	11.98	ppm	96
9) bis(2-chloroethyl)ether	2.764	93	143241	12.02	ppm	99
10) 2-Chlorophenol	2.831	128	156254	12.61	ppm	91
11) 1,3-Dichlorobenzene	2.962	146	180259	12.28	ppm	99
13) 1,4-Dichlorobenzene	3.020	146	187701	12.59	ppm	97
14) Benzyl alcohol	3.101	108	112287	13.84	ppm	99
15) 1,2-Dichlorobenzene	3.154	146	178165	12.49	ppm	96
16) 2-Methylphenol	3.178	107	139644	14.02	ppm	93
17) bis(2-chloroisopropyl)...	3.217	45	299587	12.59	ppm	99
18) 4-Methylphenol	3.317	107	188135	14.36	ppm	98
19) N-Nitroso-di-n-propyla...	3.341	70	127192	13.42	ppm	90
20) Hexachloroethane	3.466	117	67803	11.48	ppm	93
23) Nitrobenzene	3.518	77	189334	12.43	ppm	99
24) Isophorone	3.749	82	378059	13.46	ppm	100
25) 2-Nitrophenol	3.830	139	93008	14.96	ppm	97
26) 2,4-Dimethylphenol	3.849	107	191774	15.19	ppm	94
27) Benzoic acid	3.926	105	125447	14.52	ppm	100
28) bis(2-Chloroethoxy)met...	3.955	93	198635	12.93	ppm	99
29) 3,5-Dimethylphenol	3.988	107	218765	15.47	ppm	94
30) 2,4-Dichlorophenol	4.070	162	147454	12.39	ppm	100
31) 3,4-Dimethylphenol	4.166	107	228581	14.72	ppm	99
32) 1,2,4-Trichlorobenzene	4.171	180	172823	13.24	ppm	100
33) Naphthalene	4.258	128	496413	13.03	ppm	100
34) 4-Chloroaniline	4.306	127	209324	13.73	ppm	100
35) 2,6-Dichlorophenol	4.316	162	155554	14.62	ppm	99
36) Hexachlorobutadiene	4.384	225	112964	12.78	ppm	100
38) 4-Chloro-3-methylphenol	4.837	107	158461	15.61	ppm	100

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ482.D
Acq On : 24 Sep 2015 13:58
Sample : SVI038SC
Misc :
Integrator: RTE
Quant Time: Sep 30 18:11:37 2015

Vial: 11
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

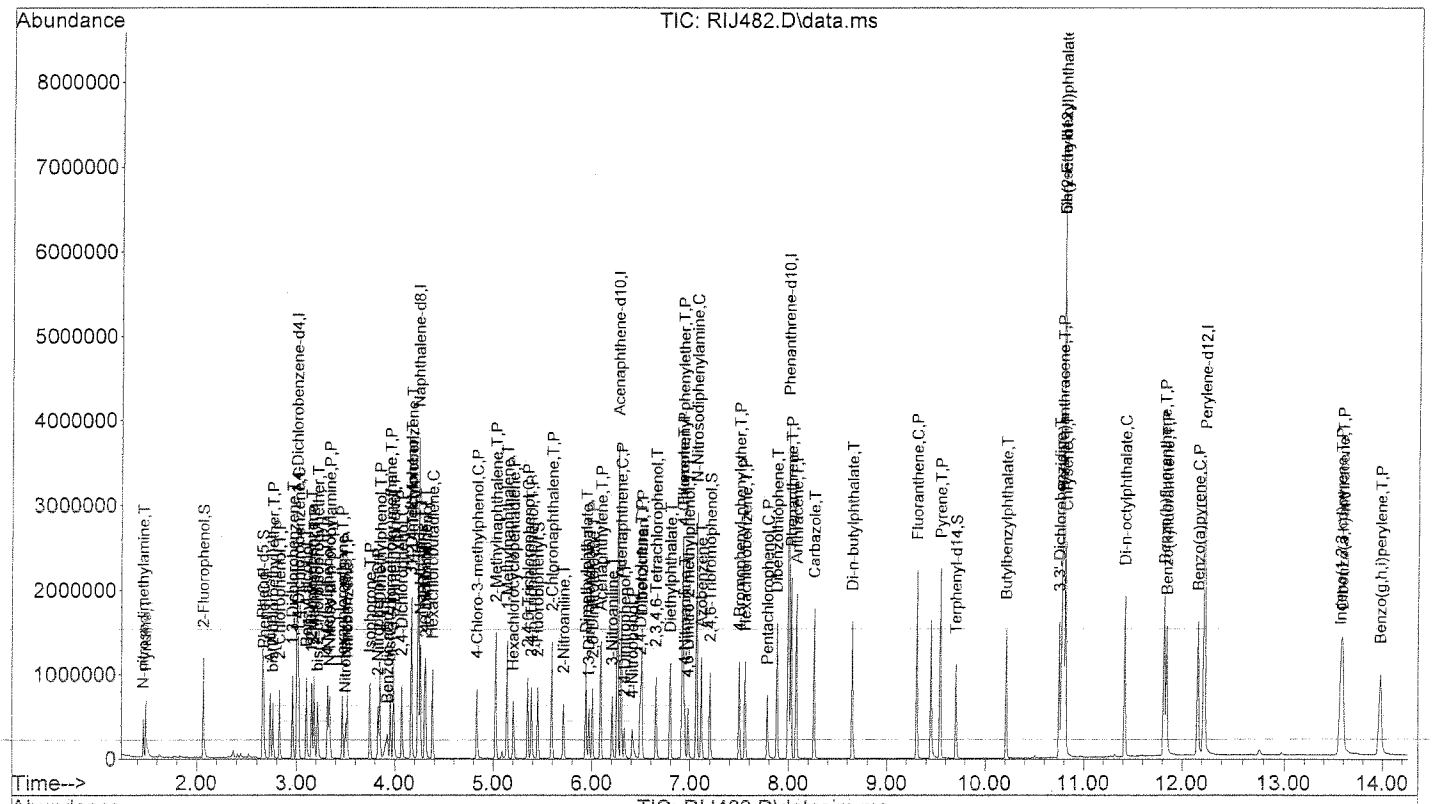
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39)	2-Methylnaphthalene	5.029	142	348223	13.36	ppm	94
40)	1-Methylnaphthalene	5.144	142	337262	14.34	ppm	98
42)	Hexachlorocyclopentadiene	5.206	237	96444	10.28	ppm	99
44)	2,4,6-Trichlorophenol	5.350	196	124478	15.09	ppm	96
45)	2,4,5-Trichlorophenol	5.389	196	132968	15.52	ppm	93
49)	2-Chloronaphthalene	5.596	162	409331	14.75	ppm	96
50)	2-Nitroaniline	5.716	65	121211	16.62	ppm	96
53)	Dimethylphthalate	5.942	163	457364	15.50	ppm	99
54)	1,3-Dinitrobenzene	5.971	168	63507	15.65	ppm	78
55)	2,6-Dinitrotoluene	6.009	165	95793	14.46	ppm	100
57)	Acenaphthylene	6.091	152	652798	15.15	ppm	99
58)	3-Nitroaniline	6.207	138	105171	16.43	ppm	94
59)	Acenaphthene	6.298	153	407163	14.31	ppm	97
60)	2,4-Dinitrophenol	6.331	184	44274	16.70	ppm	97
61)	4-Nitrophenol	6.413	109	60590	18.20	ppm	94
62)	2,4-Dinitrotoluene	6.494	165	132748	15.47	ppm	100
63)	Dibenzofuran	6.509	168	525311	14.44	ppm	98
65)	2,3,4,6-Tetrachlorophenol	6.652	232	126579	14.91	ppm	96
67)	Diethylphthalate	6.799	149	457547	15.41	ppm	99
68)	Fluorene	6.921	166	445384	14.83	ppm	100
69)	4-Chlorophenyl-phenyle...	6.926	204	233750	14.93	ppm	99
70)	4-Nitroaniline	6.945	138	119805	19.10	ppm	99
72)	4,6-Dinitro-2-methylph...	6.982	198	86016	18.64	ppm	97
73)	N-Nitrosodiphenylamine	7.067	169	390619	15.59	ppm	98
74)	Azobenzene	7.115	77	410187	13.85	ppm	100
76)	4-Bromophenyl-phenylether	7.499	248	141143	14.27	ppm	98
77)	Hexachlorobenzene	7.560	284	144580	13.88	ppm	99
78)	Pentachlorophenol	7.787	266	81284	14.50	ppm	100
79)	Dibenzothiophene	7.881	184	618305	14.78	ppm	100
80)	Phenanthrene	8.027	178	732182	15.53	ppm	99
82)	Anthracene	8.084	178	741069	15.37	ppm	99
83)	Carbazole	8.262	167	658120	16.96	ppm	99
84)	Di-n-butylphthalate	8.649	149	768865	15.49	ppm	99
86)	Fluoranthene	9.306	202	877068	16.99	ppm	99
89)	Pyrene	9.547	202	915674	15.51	ppm	98
91)	Butylbenzylphthalate	10.213	149	346502	16.37	ppm	99
93)	3,3'-Dichlorobenzidine	10.751	252	310245	18.27	ppm	99
94)	Benzo(a)anthracene	10.780	228	870805	15.90	ppm	91
95)	Chrysene	10.819	228	856511	16.15	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.795	149	508356	15.85	ppm	98
98)	Di-n-octylphthalate	11.421	149	871376	17.13	ppm	99
99)	Benzo(b)fluoranthene	11.819	252	817507	16.82	ppm	96
100)	Benzo(k)fluoranthene	11.848	252	640891	12.43	ppm	99
102)	Benzo(a)pyrene	12.163	252	761893	16.28	ppm	100
104)	Indeno(1,2,3-cd)pyrene	13.571	276	894177	16.52	ppm	99
105)	Dibenzo(a,h)anthracene	13.591	278	731289	16.15	ppm	100
106)	Benzo(g,h,i)perylene	13.979	276	737581	15.19	ppm	98

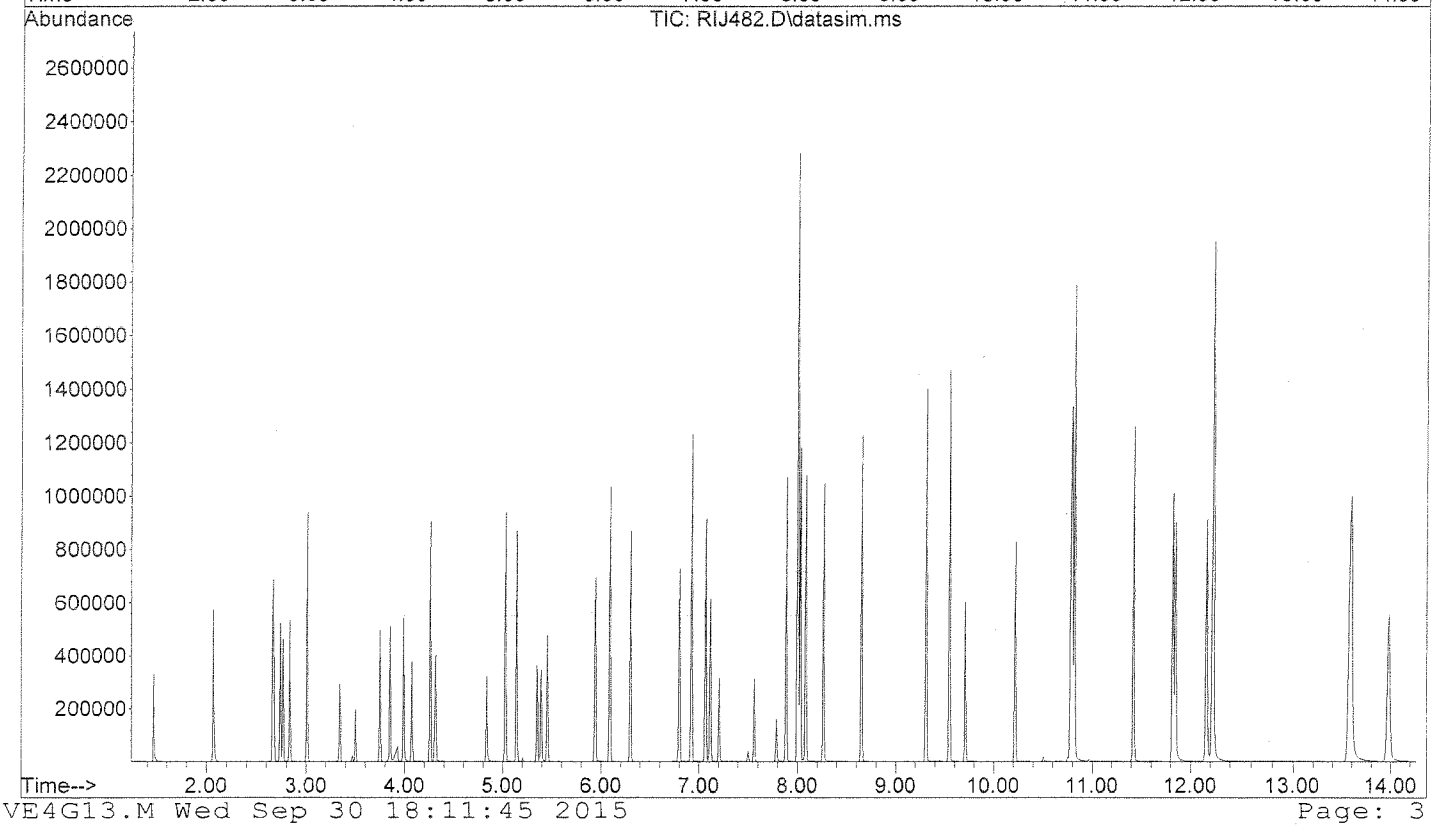
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ482.D
Acq On : 24 Sep 2015 13:58
Sample : SVI038SC
Misc :
Integrator: RTE
Quant Time: Sep 30 18:11:37 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 11
Operator: KVu
Inst : E4
Multiplr: 1.00





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INITIAL CALIBRATIONS

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RGJ127
Instrument ID: TOE4

Project: CANNON AFB PBR
SDG No.: 15I185
DFTPP Injection Date: 07/13/15
DFTPP Injection Time: 14:49

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	42.92
68	Less than 2% of mass 69	0.66(1.6)1
69	% of mass 198	40.76
70	Less than 2% of mass 69	0.08(0.2)1
127	10.0 - 80.0% of mass 198	45.32
197	Less than 2.0% of mass 198	0.34
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.79
275	10.0 - 60.0% of mass 198	25.18
365	Greater than 1.00% of mass 198	2.78
441	Present, but less than 24% of mass 442	11.68(15.8)2
442	Greater than 50% of mass 198	74.16
443	15.0 - 24.0% of mass 442	13.50(18.2)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD100	SVE4G131	RGJ136	07/13/15	17:35
2	SSTD080	SVE4G132	RGJ137	07/13/15	17:55
3	SSTD050	SVE4G133	RGJ138	07/13/15	18:14
4	SSTD040	SVE4G134	RGJ139	07/13/15	18:34
5	SSTD025	SVE4G135	RGJ140	07/13/15	18:54
6	SSTD020	SVE4G136	RGJ141	07/13/15	19:13
7	SSTD010	SVE4G137	RGJ142	07/13/15	19:33
8	SSTD004	SVE4G138	RGJ143	07/13/15	19:53
9	SSTD025	ISVE4G144	RGJ149	07/13/15	21:50

FORM V SV OLM03.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :E4
Beginning DateTime :07/13/15 17:35
Spike Units :PPM
IC File :RGJ140

Column Spec :ZB-SEMIVOA ID :0.18MM
Ending DateTime :07/13/15 19:53
HPChem Method :SVE4G13

IDX	Parameters	4 19:53 RGJ143	10 19:33 RGJ142	20 19:13 RGJ141	25 18:54 RGJ140	40 18:34 RGJ139	50 18:14 RGJ138	80 17:55 RGJ137	100 17:35 RGJ136	Av_RRF	% RSD	Av_Rt_M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	0	3.0104
2	1,4-Dioxane	0.627	0.594	0.558	0.579	0.550	0.560	------	------	0.578	5.02	1.3522
3	N-nitrosodimethylamine	0.796	0.823	0.811	0.835	0.829	0.836	------	------	0.822	1.88	1.4671
4	Pyridine	1.540	1.528	1.458	1.497	1.461	1.476	1.537	1.465	1.485	2.35	1.4910
5	2-Fluorophenol	1.276	1.338	1.321	1.319	1.280	1.283	------	------	1.303	2.02	2.0622
6	Phenol-d5	1.576	1.593	1.605	1.585	1.552	1.552	------	------	1.577	1.38	2.6515
7	Phenol	1.574	1.611	1.557	1.573	1.545	1.539	------	------	1.566	1.65	2.6637
8	Aniline	2.053	2.103	2.009	2.075	2.017	2.001	------	------	2.043	2.00	2.7358
9	bis(2-chloroethyl)ether	1.285	1.314	1.272	1.291	1.248	1.262	------	------	1.278	1.81	2.7653
10	2-Chlorophenol	1.269	1.311	1.286	1.437	1.273	1.326	------	------	1.328	5.33	2.8314
11	1,3-Dichlorobenzene	1.596	1.620	1.543	1.589	1.543	1.554	------	------	1.574	2.04	2.9640
12	1,2-Dichlorobenzene-d4	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
13	1,4-Dichlorobenzene	1.678	1.635	1.562	1.595	1.564	1.562	------	------	1.599	3.00	3.0248
14	Benzyl alcohol	0.846	0.903	0.853	0.880	0.867	0.871	------	------	0.870	2.34	3.1007
15	1,2-Dichlorobenzene	1.581	1.580	1.501	1.524	1.484	1.501	------	------	1.530	2.64	3.1591
16	2-Methylphenol	1.055	1.135	1.042	1.070	1.058	1.049	------	------	1.068	3.18	3.1759
17	bis(2-chloroisopropyl)ether	2.543	2.564	2.423	2.809	2.366	2.610	------	------	2.552	6.09	3.2231
18	4-Methylphenol	1.413	1.441	1.373	1.403	1.399	1.400	------	------	1.405	1.57	3.3158
19	N-Nitroso-di-n-propylamine	0.992	1.037	0.993	0.999	0.985	1.091	------	------	1.016	4.05	3.3421
20	Hexachloroethane	0.647	0.650	0.616	0.639	0.626	0.624	------	------	0.634	2.15	3.4706
21	Naphthalene-d8	1	1	1	1	1	1	1	1	1	0	4.2402
22	Nitrobenzene-d5	0.434	0.435	0.423	0.434	0.421	0.426	------	------	0.429	1.42	3.5010
23	Nitrobenzene	0.442	0.451	0.427	0.443	0.429	0.430	------	------	0.440	3.22	3.5202
24	Isophorone	0.759	0.860	0.801	0.826	0.805	0.820	------	------	0.812	4.10	3.7496
25	2-Nitrophenol	0.172	0.181	0.178	0.186	0.184	0.172	------	------	0.180	2.76	3.8319
26	2,4-Dimethylphenol	0.375	0.377	0.359	0.367	0.354	0.357	------	------	0.365	2.68	3.8463
27	Benzoic acid	0.202	0.209	0.241	0.257	0.268	0.273	0.272	0.277	0.250	11.90	3.9291
28	bis(2-Chloroethoxy)methane	0.452	0.456	0.438	0.452	0.435	0.430	------	------	0.444	2.49	3.9589
29	2,3-Dimethylphenol	0.385	0.389	0.412	0.424	0.417	0.426	------	------	0.409	4.30	3.9844
30	2,4-Dichlorophenol	0.351	0.356	0.335	0.357	0.310	0.354	------	------	0.344	5.37	4.0692
31	3,4-Dimethylphenol	0.465	0.464	0.432	0.450	0.435	0.440	------	------	0.449	2.84	4.1650
32	1,2,4-Trichlorobenzene	0.398	0.385	0.365	0.380	0.367	0.368	------	------	0.377	3.44	4.1730
33	Naphthalene	1.163	1.136	1.080	1.104	1.063	1.064	------	------	1.102	3.68	4.2639
34	4-Chloroaniline	0.453	0.456	0.432	0.446	0.427	0.430	------	------	0.441	2.83	4.3074
35	2,6-Dichlorophenol	0.314	0.312	0.303	0.311	0.300	0.305	------	------	0.308	1.84	4.3162
36	Hexachlorobutadiene	0.272	0.261	0.246	0.258	0.246	0.251	------	------	0.256	4.02	4.3894
37	Hydroquinone	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
38	4-Chloro-3-methylphenol	0.288	0.299	0.285	0.301	0.291	0.297	------	------	0.294	2.27	4.8291
39	2-Methylnaphthalene	0.773	0.773	0.737	0.763	0.737	0.739	------	------	0.754	2.35	5.0319
40	1-Methylnaphthalene	0.706	0.694	0.661	0.688	0.663	0.666	------	------	0.680	2.77	5.1461
41	Acenaphthene-d10	1	1	1	1	1	1	1	1	1	0	6.2652
42	Hexachlorocyclopentadiene	0.424	0.436	0.433	0.457	0.447	0.446	------	------	0.441	2.69	5.2124
43	2,3,5-Trichlorophenol	0.357	0.352	0.351	0.365	0.357	0.396	------	------	0.360	5.48	5.2172
44	2,4,6-Trichlorophenol	0.372	0.386	0.377	0.399	0.394	0.393	------	------	0.387	2.72	5.3486
45	2,4,5-Trichlorophenol	0.378	0.408	0.399	0.414	0.406	0.407	------	------	0.402	3.20	5.3848
46	2-Fluorobiphenyl	1.268	1.539	1.485	1.509	1.445	1.454	------	------	1.500	3.20	5.4597
47	2,3,4-Trichlorophenol	0.337	0.338	0.322	0.338	0.357	0.360	------	------	0.342	4.15	5.4626
48	Biphenyl	1.886	1.562	1.485	1.529	1.483	1.486	------	------	1.572	9.99	5.5786
49	2-Chloronaphthalene	1.316	1.295	1.232	1.278	1.349	1.346	------	------	1.303	3.41	5.6001
50	2-Nitroaniline	0.334	0.346	0.339	0.349	0.342	0.343	------	------	0.342	1.64	5.7152
51	2,6-Dimethylnaphthalene	1.093	1.084	1.049	1.075	1.041	1.151	------	------	1.082	3.65	5.7648
52	1,4-Dinitrobenzene	0.147	0.165	0.162	0.174	0.176	0.169	------	------	0.166	6.34	5.8826
53	Dimethylphthalate	1.408	1.405	1.360	1.403	1.372	1.364	------	------	1.385	1.63	5.9477
54	1,3-Dinitrobenzene	0.182	0.193	0.187	0.195	0.192	0.193	------	------	0.190	2.53	5.9702
55	2,6-Dinitrotoluene	0.309	0.315	0.304	0.315	0.313	0.309	------	------	0.311	1.37	6.0104
56	1,2-Dinitrobenzene	0.113	0.118	0.112	0.118	0.116	0.116	------	------	0.115	2.16	6.0707
57	Acenaphthylene	2.006	2.022	2.073	2.187	1.924	1.922	------	------	2.022	4.93	6.0948
58	3-Nitroaniline	0.287	0.301	0.295	0.310	0.306	0.303	------	------	0.300	2.74	6.2079
59	Acenaphthene	1.400	1.366	1.304	1.342	1.300	1.292	------	------	1.336	3.19	6.3037
60	2,4-Dinitrophenol	0.080	0.106	0.120	0.133	0.137	0.136	------	------	0.119	18.77	6.3309
61	4-Nitrophenol	0.141	0.154	0.158	0.163	0.158	0.162	------	------	0.156	5.05	6.3964
62	2,4-Dinitrotoluene	0.383	0.401	0.397	0.417	0.409	0.408	------	------	0.403	2.94	6.4939
63	Dibenzofuran	1.789	1.741	1.664	1.727	1.660	1.662	------	------	1.707	3.13	6.5123
64	2,3,5,6-Tetrachlorophenol	0.278	0.282	0.286	0.305	0.295	0.302	------	------	0.291	3.78	6.6017
65	2,3,4,6-Tetrachlorophenol	0.391	0.406	0.375	0.409	0.405	0.403	------	------	0.398	3.22	6.6545
66	2,3,5-Trimethylnaphthalene	1.034	1.046	0.990	1.030	1.000	1.007	------	------	1.018	3.14	6.7675
67	Diethylphthalate	1.425	1.418	1.369	1.422	1.361	1.367	------	------	1.394	2.21	6.8043
68	Fluorene	1.464	1.426	1.381	1.425	1.383	1.378	------	------	1.410	2.45	6.9262
69	4-Chlorophenyl-phenylether	0.752	0.746	0.718	0.750	0.723	0.721	------	------	0.735	2.18	6.9340
70	4-Nitroaniline	0.271	0.285	0.281	0.313	0.308	0.308	------	------	0.294	5.98	6.9426
71	Phenanthrene-d10	1	1	1	1	1	1	1	1	1	0	8.0018
72	4,6-Dinitro-2-methylphenol	0.073	0.106	0.112	0.118	0.124	0.123	------	------	0.109	17.58	6.9793
73	N-Nitrosodiphenylamine	0.635	0.650	0.608	0.634	0.616	0.616	------	------	0.626	2.55	7.0721
74	Azobenzene	0.766	0.778	0.713	0.748	0.722	0.718	------	------	0.741	3.69	7.1211
75	2,4,6-Tribromophenol	0.100	0.106	0.107	0.109	0.110	0.112	------	------	0.107	3.87	7.2042
76	4-Bromophenyl-phenylether	0.251	0.249	0.243	0.250	0.244	0.246	------	------	0.247	1.39	7.5045
77	Hexachlorobenzene	0.267	0.265	0.254	0.262	0.257	0.258	------	------	0.261	1.96	7.5604
78	Pentachlorophenol	0.137	0.137	0.137	0.143	0.148	0.149	------	------	0.140	5.91	7.7816
79	Dibenzothiophene	1.055	1.051	0.979	1.016	1.090	1.083	------	------	1.046	4.03	7.8855
80	Phenanthrene	1.243	1.215	1.126	1.186	1.150	1.152	------	------	1.179	3.74	8.0284
81	Dinoseb	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
82	Anthracene	1.254	1.241	1.161	1.217	1.178	1.180	------	------	1.205	3.14	8.0848
83	Carbazole	0.987	0.994	0.943	0.993	0.952	0.952	------	------	0.970	2.44	8.2611
84	Di-n-butylphthalate	1.211	1.273	1.215	1.275	1.238	1.235	------	------	1.241	2.21	8.6566
85	1-Methylphenanthrene	0.842	0.852	0.793	0.832	0.808	0.817	------	------	0.824	2.67	8.6985
86	Fluoranthene	1.303	1.321	1.249	1.301	1.288	1.283	------	------	1.291	1.89	9.3056
87	Chrysene-d12	1	1	1	1	1	1	1	1	1	0	10.7842
88	Benzidine	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
89	Pyrene	1.294	1.290	1.219	1.290	1.287	1.321	------	------	1.284	2.66	9.5424
90	Terphenyl-d14	0.865	0.876	0.856	0.897	0.845	0.868	------	------	0.868	2.07	9.7091
91	Butylbenzylphthalate	0.399	0.456	0.462	0.491	0.475	0.478	------	------	0.460	7.06	10.2158
92	bis(2-ethylhexyl)adipate	0.315	0.353	0.367	0.390	0.374	0.379	------	------	0.365	7.10	10.2972
93	3,3'-Dichlorobenzidine	0.327	0.358	0.368	0.393	0.386	0.383	------	------	0.369	6.59	10.7432
94	Benzo(a)anthracene	1.202	1.219	1.153	1.204	1.178	1.189	------	------	1.191	1.95	10.7764
95	Chrysene	1.181	1.196	1.125	1.167	1.118	1.132	------	------	1.153	2.83	10.8097
96	bis(2-Ethylhexyl)phthalate	0.647	0.704	0.687	0.735	0.707	0.705	------	------	0.697	4.18	10.7991
97	Perylene-d12	1	1	1	1	1	1	1	1	1	0	12.2117
98	Di-n-octylphthalate	0.999	1.211	1.255	1.362	1.329	1.323	------	------	1.246	10.69	11.4224
99	Benzo(b)fluoranthene	1.122	1.239	1.178	1.222	1.164	1.184	------	------	1.191	3.46	11.8065
100	Benzo(k)fluoranthene	1.288	1.230	1.216	1.308	1.263	1.273	------	------	1.263	2.74	11.8355
101	Benzo(e)pyrene	1.057	1.078	1.027	1.092	1.070	1.068	------	------	1.065	2.07	12.0910
102	Benzo(a)pyrene	1.091	1.134	1.125	1.199	1.161	1.170	------	------	1.147	3.32	12.1501
103	Perylene	1.049	1.116	1.050	1.105	1.083	1.083	------	------	1.081	2.54	12.2408
104	Indeno(1,2,3-cd)pyrene	1.227	1.304	1.299	1.389	1.369	1.368	------	------	1.326	4.61	13.5522
105	Dibenzo(a,h)anthracene	1.008	1.089	1.094	1.159	1.158	1.148	------	------	1.109	5.28	13.5757
106	Benzo(g,h,i)perylene	1.159	1.189	1.162	1.250	1.217	1.160	------	------	1.190	3.14	13.9560

Ave_%RSD : 3.8 Max_%RSD : 18.8

7/17/15

Use Least Square Linear Regression with weighting factor of inverse concentration
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
60	2,4-Dinitrophenol	-0.00706	0.14137	0.9992
72	4,6-Dinitro-2-methylphenol	-0.00566	0.12754	0.9998

7/17/15

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR(%REC)

Instrument ID :E4
Beginning DateTime :07/13/15 17:35
Spike Units :PPM
IC File :RGJ140

Column Spec :ZB-SEMIVOA ID :0.18MM
Ending DateTime :07/13/15 19:53
HPChem Method :SVE4G13

IDX	Parameters	4 19:53 RGJ143	10 19:33 RGJ142	20 19:13 RGJ141	25 18:54 RGJ140	40 18:34 RGJ139	50 18:14 RGJ138	80 17:55 RGJ137	100 17:35 RGJ136	AvDRec	% RSD	Av_Rt_M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	0	3.0104
2	1,4-Dioxane	108	103	97	100	95	97	------	------	3.8	5.02	1.3522
3	N-nitrosodimethylamine	97	100	99	102	101	102	------	------	1.5	1.88	1.4671
4	Pyridine	103	102	98	100	98	99	103	98	2	2.35	1.4910
5	2-Fluorophenol	98	103	101	101	98	98	------	------	1.8	2.06	2.0625
6	Phenol-d5	100	101	102	101	98	98	------	------	1.1	1.38	2.6515
7	Phenol	101	103	99	100	99	98	------	------	1.2	1.65	2.6637
8	Aniline	100	103	98	102	99	98	------	------	1.7	2.00	2.7358
9	bis(2-chloroethyl)ether	100	103	100	101	98	99	------	------	1.4	1.81	2.7653
10	2-Chlorophenol	96	99	97	108	96	105	------	------	4.4	5.33	2.8314
11	1,3-Dichlorobenzene	101	103	98	101	98	99	------	------	1.7	2.04	2.9640
12	1,2-Dichlorobenzene-d4	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
13	1,4-Dichlorobenzene	105	102	98	100	98	98	------	------	2.4	3.00	3.0248
14	Benzyl alcohol	97	104	98	101	100	100	------	------	1.7	2.34	3.1007
15	1,2-Dichlorobenzene	103	103	98	100	98	98	------	------	2.2	2.64	3.1591
16	2-Methylphenol	99	106	98	100	99	98	------	------	2.1	3.18	3.1759
17	bis(2-chloroisopropyl)ether	100	100	95	110	93	102	------	------	4.3	6.09	3.2231
18	4-Methylphenol	101	103	98	100	100	100	------	------	1.1	1.57	3.3158
19	N-Nitroso-di-n-propylamine	98	102	98	98	97	107	------	------	3.1	4.05	3.3421
20	Hexachloroethane	102	103	97	101	99	98	------	------	1.8	2.15	3.4706
21	Naphthalene-d8	1	1	1	1	1	1	1	1	1	0	4.2402
22	Nitrobenzene-d5	101	101	99	101	98	99	------	------	1.3	1.42	3.5010
23	Nitrobenzene	105	102	97	101	98	98	------	------	2.7	3.22	3.5202
24	Isophorone	93	106	99	102	99	101	------	------	2.9	4.10	3.7496
25	2-Nitrophenol	96	101	99	103	102	99	------	------	2	2.76	3.8319
26	2,4-Dimethylphenol	103	103	98	101	97	98	------	------	2.5	2.68	3.8463
27	Benzoic acid	81	84	96	103	107	109	109	111	9.8	11.90	3.9291
28	bis(2-Chloroethoxy)methane	102	103	99	102	98	97	------	------	2.1	2.49	3.9589
29	2,5-Dimethylphenol	94	95	101	104	102	104	------	------	3.5	4.30	3.9844
30	2,4-Dichlorophenol	102	103	97	104	99	103	------	------	4.1	5.37	4.0692
31	3,4-Dimethylphenol	104	103	98	100	97	98	------	------	2.2	2.94	4.1650
32	1,2,4-Trichlorobenzene	106	102	97	101	97	98	------	------	2.8	3.44	4.1730
33	Naphthalene	106	103	98	100	96	97	------	------	3	3.69	4.2637
34	4-Chloroaniline	103	103	98	101	97	98	------	------	2.5	2.83	4.3074
35	2,6-Dichlorophenol	102	101	98	101	97	99	------	------	1.6	1.84	4.3162
36	Hexachlorobutadiene	106	102	96	101	96	98	------	------	3.1	4.02	4.3894
37	Hydroquinone	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
38	4-Chloro-3-methylphenol	98	102	97	102	99	101	------	------	1.9	2.27	4.8291
39	2-Methylnaphthalene	103	103	98	101	98	98	------	------	2.1	2.35	5.0319
40	1-Methylnaphthalene	104	102	97	101	98	98	------	------	2.4	2.77	5.1461
41	Acenaphthene-d10	1	1	1	1	1	1	1	1	1	0	6.2652
42	Hexachlorocyclopentadiene	96	99	98	104	101	101	------	------	2.2	2.69	5.2124
43	2,3,5-Trichlorophenol	94	98	97	101	99	110	------	------	3.9	5.48	5.2172
44	2,4,6-Trichlorophenol	96	101	97	103	102	102	------	------	3.2	2.72	5.3486
45	2,4,5-Trichlorophenol	94	101	99	103	101	101	------	------	2.5	3.20	5.3848
46	2-Fluorobiphenyl	105	103	99	101	96	97	------	------	2.6	3.20	5.4597
47	2,3,4-Trichlorophenol	99	99	94	99	104	105	------	------	5.9	7.15	5.4929
48	Biphenyl	120	99	94	97	94	95	------	------	2.4	4.15	5.5786
49	2-Chloronaphthalene	101	99	95	98	104	103	------	------	6.7	9.99	5.6001
50	2-Nitroaniline	98	101	99	102	100	100	------	------	2.6	3.41	5.7152
51	2,6-Dimethylnaphthalene	101	100	97	99	96	106	------	------	1.1	1.64	5.7648
52	1,4-Dinitrobenzene	89	99	98	105	106	102	------	------	2.5	3.65	5.8826
53	Dimethylphthalate	102	101	98	101	98	98	------	------	4.5	6.34	5.9477
54	1,3-Dinitrobenzene	96	102	98	103	101	102	------	------	1.4	1.63	5.9702
55	2,6-Dinitrotoluene	99	101	98	101	101	99	------	------	2.1	2.33	6.0104
56	1,2-Dinitrobenzene	98	103	97	103	101	101	------	------	1.1	1.37	6.0707
57	Acenaphthylene	99	100	103	108	95	95	------	------	1.9	2.16	6.0948
58	3-Nitroaniline	96	100	98	103	102	101	------	------	3.5	4.23	6.2079
59	Acenaphthene	102	102	98	101	97	97	------	------	2.1	2.74	6.3037
60	2,4-Dinitrophenol	107	95	95	102	102	100	------	------	2.7	3.19	6.3309
61	4-Nitrophenol	90	99	101	104	101	104	------	------	2.3	3.05	6.3664
62	2,4-Dinitrotoluene	95	100	99	103	101	101	------	------	3.6	3.05	6.3964
63	Dibenzofuran	105	102	97	101	97	97	------	------	2.2	2.94	6.4939
64	2,3,5,6-Tetrachlorophenol	96	97	98	105	101	104	------	------	2.6	3.13	6.5123
65	2,3,4,6-Tetrachlorophenol	98	102	94	103	102	101	------	------	3.2	3.78	6.6017
66	2,3,5-Trimethylnaphthalene	102	103	97	101	98	99	------	------	2.6	3.22	6.6545
67	Diethylphthalate	102	102	98	102	98	98	------	------	1.9	2.14	6.7675
68	Fluorene	104	101	98	101	98	98	------	------	2	2.21	6.8043
69	4-Chlorophenyl-phenylether	102	101	98	102	98	98	------	------	2	2.45	6.8262
70	4-Nitroaniline	92	97	96	106	105	105	------	------	2	2.18	6.9340
71	Phenanthrene-d10	1	1	1	1	1	1	1	1	5.2	5.98	6.9426
72	4,6-Dinitro-2-methylphenol	101	101	97	100	102	100	------	------	1	0	8.0018
73	N-Nitrosodiphenylamine	101	104	97	101	98	98	------	------	1.2	1.81	6.9793
74	Azobenzene	103	105	96	101	97	97	------	------	2.1	2.55	7.0721
75	2,4,6-Tribromophenol	93	99	100	102	103	105	------	------	3.1	3.69	7.1211
76	4-Bromophenyl-phenylether	102	101	98	101	99	100	------	------	2.8	3.87	7.2042
77	Hexachlorobenzene	102	102	97	100	98	99	------	------	1.1	1.39	7.2045
78	Pentachlorophenol	91	98	98	102	106	106	------	------	1.6	1.96	7.5604
79	Dibenzothiophene	101	100	94	97	104	104	------	------	4.6	5.91	7.7816
80	Phenanthrene	105	103	96	101	98	98	------	------	3.1	4.03	7.8855
81	Dinoseb	------	------	------	------	------	------	------	------	3.1	3.74	8.0284
82	Anthracene	104	103	96	101	98	98	------	------	0.000	0.00	0.0000
83	Carbazole	102	102	97	102	98	98	------	------	2.7	3.14	8.0848
84	Di-n-butylphthalate	98	103	98	103	100	100	------	------	2.2	2.44	8.2611
85	1-Methylphenanthrene	102	103	96	101	98	99	------	------	1.8	2.21	8.6566
86	Fluoranthene	101	102	97	101	100	99	------	------	2.2	2.67	8.6985
87	Chrysene-d12	1	1	1	1	1	1	1	1	1.4	1.89	9.3056
88	Benzidine	------	------	------	------	------	------	------	------	1	0	10.7842
89	Pyrene	101	100	95	100	100	103	------	------	0.000	0.00	0.0000
90	Terphenyl-d14	100	101	99	103	97	100	------	------	1.6	2.66	9.5424
91	Butylbenzylphthalate	87	99	100	107	103	104	------	------	1.4	2.07	9.7091
92	bis(2-ethylhexyl)adipate	86	99	101	107	102	104	------	------	4.7	7.06	10.2158
93	3,3'-Dichlorobenzidine	89	97	100	107	105	104	------	------	4.7	7.10	10.2972
94	Benzo(a)anthracene	101	102	97	101	99	100	------	------	4.9	6.59	10.7432
95	Chrysene	102	104	98	101	97	98	------	------	1.5	1.85	10.7724
96	bis(2-Ethylhexyl)phthalate	93	101	99	105	101	101	------	------	2.4	2.83	10.8057
97	Perylene-d12	1	1	1	1	1	1	1	1	2.9	4.18	10.7991
98	Di-n-octylphthalate	80	97	101	109	107	106	------	------	1	0	12.2117
99	Benzo(b)fluoranthene	94	104	99	103	100	99	------	------	7.6	10.69	11.4224
100	Benzo(k)fluoranthene	102	97	96	107	100	101	------	------	2.4	3.46	11.8065
101	Benzo(e)pyrene	99	101	96	103	100	100	------	------	2.1	3.74	11.8355
102	Benzo(a)pyrene	95	99	98	105	101	102	------	------	1.5	5.07	12.0910
103	Perylene	97	103	97	102	100	100	------	------	2.8	3.32	12.1501
104	Indeno(1,2,3-cd)pyrene	93	98	98	105	103	103	------	------	1.9	2.54	12.2408
105	Dibenzo(a,h)anthracene	91	98	99	105	104	104	------	------	3.7	4.61	13.5522
106	Benzo(g,h,i)perylene	97	100	98	105	102	97	------	------	4.1	5.28	13.5757
										2.5	3.14	13.9560

7/17/15

Compound List Report E4

Method Path : C:\msdchem\1\METHODS\
Method File : SVE4G13.M
Title : SEMIVOLATILES
Last Update : Wed Jul 15 11:03:28 2015
Response Via : Initial Calibration

Total Cpnds : 106

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dichlorobenzene-d4	152	3.010	1.000	A	1	A	B
2	T	1,4-Dioxane	88	1.352	0.449	A	1	A	B
3	T	N-nitrosodimethylamine	74	1.467	0.487	A	1	A	B
4	T	Pyridine	79	1.491	0.495	A	1	A	B
5	S	2-Fluorophenol	112	2.061	0.685	A	1	A	B
6	S	Phenol-d5	99	2.654	0.882	A	1	A	B
7	C,P	Phenol	94	2.665	0.885	A	1	A	B
8	T	Aniline	93	2.738	0.910	A	1	A	B
9	T	bis(2-chloroethyl)ether	93	2.764	0.918	A	1	A	B
10	T	2-Chlorophenol	128	2.832	0.941	A	1	A	B
11	T	1,3-Dichlorobenzene	146	2.962	0.984	A	1	A	B
12	S	1,2-Dichlorobenzene-d4	152	0.000	0.000	A	1	A	B
13	C	1,4-Dichlorobenzene	146	3.025	1.005	A	1	A	B
14	T	Benzyl alcohol	108	3.102	1.031	A	1	A	B
15	T	1,2-Dichlorobenzene	146	3.159	1.050	A	1	A	B
16	T	2-Methylphenol	107	3.178	1.056	A	1	A	B
17	T	bis(2-chloroisopropyl)ether	45	3.222	1.070	A	1	A	B
18	T	4-Methylphenol	107	3.317	1.102	A	1	A	B
19	P,P	N-Nitroso-di-n-propylamine	70	3.341	1.110	A	1	A	B
20	T	Hexachloroethane	117	3.471	1.153	A	1	A	B
21	I	Naphthalene-d8	136	4.239	1.000	A	1	A	B
22	S	Nitrobenzene-d5	82	3.499	0.825	A	1	A	B
23	T	Nitrobenzene	77	3.519	0.830	A	1	A	B
24	T	Isophorone	82	3.749	0.884	A	1	A	B
25	C,P	2-Nitrophenol	139	3.830	0.904	A	1	A	B
26	T	2,4-Dimethylphenol	107	3.845	0.907	A	1	A	B
27	T	Benzoic acid	105	3.921	0.925	A	1	A	B
28	T	bis(2-Chloroethoxy)methane	93	3.960	0.934	A	1	A	B
29	T	3,5-Dimethylphenol	107	3.984	0.940	A	1	A	B
30	C,P	2,4-Dichlorophenol	162	4.070	0.960	A	1	A	B
31	T	3,4-Dimethylphenol	107	4.167	0.983	A	1	A	B
32	T	1,2,4-Trichlorobenzene	180	4.172	0.984	A	1	A	B
33	T	Naphthalene	128	4.263	1.006	A	1	A	B
34	T	4-Chloroaniline	127	4.307	1.016	A	1	A	B
35	T	2,6-Dichlorophenol	162	4.316	1.018	A	1	A	B
36	C	Hexachlorobutadiene	225	4.389	1.035	A	1	A	B
37	T	Hydroquinone	110	0.000	0.000	A	1	A	B
38	C,P	4-Chloro-3-methylphenol	107	4.828	1.139	A	1	A	B
39	T	2-Methylnaphthalene	142	5.034	1.188	A	1	A	B
40	T	1-Methylnaphthalene	142	5.149	1.215	A	1	A	B
41	I	Acenaphthene-d10	164	6.265	1.000	A	1	A	B
42	P	Hexachlorocyclopentadiene	237	5.211	0.832	A	1	A	B
43	T	2,3,5-Trichlorophenol	196	5.216	0.833	A	1	A	B
44	C,P	2,4,6-Trichlorophenol	196	5.350	0.854	A	1	A	B
45	T	2,4,5-Trichlorophenol	196	5.384	0.859	A	1	A	B
46	S	2-Fluorobiphenyl	172	5.461	0.872	A	1	A	B
47	T	2,3,4-Trichlorophenol	196	5.461	0.872	A	1	A	B
48	T	Biphenyl	154	5.577	0.890	A	1	A	B
49	T	2-Chloronaphthalene	162	5.601	0.894	A	1	A	B
50	T	2-Nitroaniline	65	5.716	0.912	A	1	A	B
51	T	2,6-Dimethylnaphthalene	156	5.764	0.920	A	1	A	B
52	T	1,4-Dinitrobenzene	168	5.884	0.939	A	1	A	B
53	T	Dimethylphthalate	163	5.947	0.949	A	1	A	B
54	T	1,3-Dinitrobenzene	168	5.971	0.953	A	1	A	B

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55	T	2,6-Dinitrotoluene	165	6.010	0.959	A	1	A	B
56	T	1,2-Dinitrobenzene	168	6.072	0.969	A	1	A	B
57	T	Acenaphthylene	152	6.097	0.973	A	1	A	B
58	T	3-Nitroaniline	138	6.207	0.991	A	1	A	B
59	C,P	Acenaphthene	153	6.303	1.006	A	1	A	B
60	P	2,4-Dinitrophenol	184	6.332	1.011	L ✓	1	A	B
61	P	4-Nitrophenol	109	6.394	1.021	A	1	A	B
62	T	2,4-Dinitrotoluene	165	6.495	1.037	A	1	A	B
63	T	Dibenzofuran	168	6.514	1.040	A	1	A	B
64	T	2,3,5,6-Tetrachlorophenol	230	6.600	1.053	A	1	A	B
65	T	2,3,4,6-Tetrachlorophenol	232	6.653	1.062	A	1	A	B
66	T	2,3,5-Trimethylnaphthalene	170	6.767	1.080	A	1	A	B
67	T	Diethylphthalate	149	6.804	1.086	A	1	A	B
68	T	Fluorene	166	6.926	1.106	A	1	A	B
69	T	4-Chlorophenyl-phenylether	204	6.936	1.107	A	1	A	B
70	T	4-Nitroaniline	138	6.945	1.109	A	1	A	B
71	I	Phenanthrene-d10	188	8.004	1.000	A	1	A	B
72	T	4,6-Dinitro-2-methylphenol	198	6.978	0.872	L ✓	1	A	B
73	C	N-Nitrosodiphenylamine	169	7.072	0.884	A	1	A	B
74	T	Azobenzene	77	7.120	0.890	A	1	A	B
75	S	2,4,6-Tribromophenol	330	7.205	0.900	A	1	A	B
76	T	4-Bromophenyl-phenylether	248	7.504	0.938	A	1	A	B
77	T	Hexachlorobenzene	284	7.561	0.945	A	1	A	B
78	C,P	Pentachlorophenol	266	7.782	0.972	A	1	A	B
79	T	Dibenzothiophene	184	7.886	0.985	A	1	A	B
80	T	Phenanthrene	178	8.028	1.003	A	1	A	B
81	T	Dinoseb	211	0.000	0.000	A	1	A	B
82	T	Anthracene	178	8.084	1.010	A	1	A	B
83	T	Carbazole	167	8.263	1.032	A	1	A	B
84	T	Di-n-butylphthalate	149	8.659	1.082	A	1	A	B
85	T	1-Methylphenanthrene	192	8.698	1.087	A	1	A	B
86	C,P	Fluoranthene	202	9.307	1.163	A	1	A	B
87	I	Chrysene-d12	240	10.786	1.000	A	1	A	B
88	T	Benzidine	184	0.000	0.000	A	1	A	B
89	T	Pyrene	202	9.543	0.885	A	1	A	B
90	S	Terphenyl-d14	244	9.711	0.900	A	1	A	B
91	T	Butylbenzylphthalate	149	10.218	0.947	A	1	A	B
92	T	bis(2-ethylhexyl)adipate	129	10.299	0.955	A	1	A	B
93	T	3,3'-Dichlorobenzidine	252	10.742	0.996	A	1	A	B
94	T	Benzo(a)anthracene	228	10.771	0.999	A	1	A	B
95	T	Chrysene	228	10.810	1.002	A	1	A	B
96	T	bis(2-Ethylhexyl)phthalate	149	10.800	1.001	A	1	A	B
97	I	Perylene-d12	264	12.212	1.000	A	1	A	B
98	C	Di-n-octylphthalate	149	11.421	0.935	A	1	A	B
99	T	Benzo(b)fluoranthene	252	11.805	0.967	A	1	A	B
100	T	Benzo(k)fluoranthene	252	11.834	0.969	A	1	A	B
101	T	Benzo(e)pyrene	252	12.090	0.990	A	1	A	B
102	C,P	Benzo(a)pyrene	252	12.149	0.995	A	1	A	B
103	T	Perylene	252	12.241	1.002	A	1	A	B
104	T	Indeno(1,2,3-cd)pyrene	276	13.552	1.110	A	1	A	B
105	T	Dibenzo(a,h)anthracene	278	13.577	1.112	A	1	A	B
106	T	Benzo(g,h,i)perylene	276	13.955	1.143	A	1	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

SVE4G13.M Wed Jul 15 11:04:46 2015

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RGJ140
Instrument ID: TOE4

Project:ICAL
SDG No.:ICAL
Date Analyzed: 07/13/15
Time Analyzed: 18:54

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	418611	3.01	1549894	4.24	929511	6.26
	UPPER LIMIT	837222	3.51	3099788	4.74	1859022	6.76
	LOWER LIMIT	209306	2.51	774947	3.74	464756	5.76
	SAMPLE ID						
1	SVE4G131	420976	3.01	1547703	4.24	935283	6.26
2	SVE4G132	415230	3.01	1557480	4.24	944014	6.26
3	SVE4G133	425878	3.01	1596023	4.24	959825	6.26
4	SVE4G134	416082	3.01	1559586	4.24	937533	6.26
5	SVE4G136	421249	3.01	1563829	4.24	951077	6.27
6	SVE4G137	422388	3.01	1560731	4.24	924260	6.26
7	SVE4G138	424431	3.01	1571302	4.24	929907	6.26
8	ISVE4G131	402978	3.01	1499259	4.24	920036	6.26

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

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

FORM VIII SV-1 OLM02.0

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RGJ140
Instrument ID: TOE4

Project:ICAL
SDG No.:ICAL
Date Analyzed: 07/13/15
Time Analyzed: 18:54

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1635650	8.00	1728950	10.79	1540741	12.21
	UPPER LIMIT	3271300	8.50	3457900	11.29	3081482	12.71
	LOWER LIMIT	817825	7.50	864475	10.29	770371	11.71
	SAMPLE ID						
1	SVE4G131	1635952	8.00	1783519	10.78	1603258	12.21
2	SVE4G132	1636134	8.00	1763135	10.79	1577562	12.21
3	SVE4G133	1694762	8.00	1812420	10.79	1627287	12.21
4	SVE4G134	1657201	8.00	1812375	10.79	1615755	12.22
5	SVE4G136	1679341	8.00	1808520	10.79	1619370	12.22
6	SVE4G137	1607458	8.00	1763214	10.78	1550735	12.21
7	SVE4G138	1618278	8.00	1721513	10.78	1530458	12.21
8	ISVE4G131	1609594	8.00	1750677	10.79	1566782	12.21

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

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

FORM VIII SV-2 OLM02.0

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Quantitation Limit from Lowest Initial Calibration Concentration

Instrument ID :E4
Beginning DateTime :07/13/15 17:35
IC File :RGJ140

Column Spec :ZB-SEMIVOA ID :0.18MM
Ending DateTime :07/13/15 19:53
HPChem Method :SVE4G13

WATER Init. Vol. (ml) : 1000 Final Vol. (ml) : 2
SOIL Init. Weight (gm) : 30 Final Vol. (ml) : 2

IDX	Parameters	ON COL MG/L	WATER UG/L	SOIL MG/KG	R FILE
1	1,4-Dichlorobenzene-d4	IntSTD	IntSTD	IntSTD	IntSTD
2	1,4-Dioxane	4	8	.2667	RGJ143
3	N-nitrosodimethylamine	4	8	.2667	RGJ143
4	Pyridine	4	8	.2667	RGJ143
5	2-Fluorophenol	4	8	.2667	RGJ143
6	Phenol-d5	4	8	.2667	RGJ143
7	Phenol	4	8	.2667	RGJ143
8	Aniline	4	8	.2667	RGJ143
9	bis(2-chloroethyl)ether	4	8	.2667	RGJ143
10	2-Chlorophenol	4	8	.2667	RGJ143
11	1,3-Dichlorobenzene	4	8	.2667	RGJ143
12	1,2-Dichlorobenzene-d4	NA	NA	NA	NA
13	1,4-Dichlorobenzene	4	8	.2667	RGJ143
14	Benzyl alcohol	4	8	.2667	RGJ143
15	1,2-Dichlorobenzene	4	8	.2667	RGJ143
16	2-Methylphenol	4	8	.2667	RGJ143
17	bis(2-chloroisopropyl)ether	4	8	.2667	RGJ143
18	4-Methylphenol	4	8	.2667	RGJ143
19	N-Nitroso-di-n-propylamine	4	8	.2667	RGJ143
20	Hexachloroethane	4	8	.2667	RGJ143
21	Naphthalene-d8	IntSTD	IntSTD	IntSTD	IntSTD
22	Nitrobenzene-d5	4	8	.2667	RGJ143
23	Nitrobenzene	4	8	.2667	RGJ143
24	Isophorone	4	8	.2667	RGJ143
25	2-Nitrophenol	4	8	.2667	RGJ143
26	2,4-Dimethylphenol	4	8	.2667	RGJ143
27	Benzoic acid	4	8	.2667	RGJ143
28	bis(2-Chloroethoxy)methane	4	8	.2667	RGJ143
29	3,5-Dimethylphenol	4	8	.2667	RGJ143
30	2,4-Dichlorophenol	4	8	.2667	RGJ143
31	3,4-Dimethylphenol	4	8	.2667	RGJ143
32	1,2,4-Trichlorobenzene	4	8	.2667	RGJ143
33	Naphthalene	4	8	.2667	RGJ143
34	4-Chloroaniline	4	8	.2667	RGJ143
35	2,6-Dichlorophenol	4	8	.2667	RGJ143
36	Hexachlorobutadiene	4	8	.2667	RGJ143
37	Hydroquinone	NA	NA	NA	NA
38	4-Chloro-3-methylphenol	4	8	.2667	RGJ143
39	2-Methylnaphthalene	4	8	.2667	RGJ143
40	1-Methylnaphthalene	4	8	.2667	RGJ143
41	Acenaphthene-d10	IntSTD	IntSTD	IntSTD	IntSTD
42	Hexachlorocyclopentadiene	4	8	.2667	RGJ143
43	2,3,5-Trichlorophenol	4	8	.2667	RGJ143
44	2,4,6-Trichlorophenol	4	8	.2667	RGJ143
45	2,4,5-Trichlorophenol	4	8	.2667	RGJ143
46	2-Fluorobiphenyl	4	8	.2667	RGJ143
47	2,3,4-Trichlorophenol	4	8	.2667	RGJ143
48	Biphenyl	4	8	.2667	RGJ143
49	2-Chloronaphthalene	4	8	.2667	RGJ143
50	2-Nitroaniline	4	8	.2667	RGJ143
51	2,6-Dimethylnaphthalene	4	8	.2667	RGJ143
52	1,4-Dinitrobenzene	4	8	.2667	RGJ143
53	Dimethylphthalate	4	8	.2667	RGJ143
54	1,3-Dinitrobenzene	4	8	.2667	RGJ143
55	2,6-Dinitrotoluene	4	8	.2667	RGJ143
56	1,2-Dinitrobenzene	4	8	.2667	RGJ143
57	Acenaphthylene	4	8	.2667	RGJ143
58	3-Nitroaniline	4	8	.2667	RGJ143
59	Acenaphthene	4	8	.2667	RGJ143
60	2,4-Dinitrophenol	4	8	.2667	RGJ143
61	4-Nitrophenol	4	8	.2667	RGJ143
62	2,4-Dinitrotoluene	4	8	.2667	RGJ143
63	Dibenzofuran	4	8	.2667	RGJ143
64	2,3,5,6-Tetrachlorophenol	4	8	.2667	RGJ143
65	2,3,4,6-Tetrachlorophenol	4	8	.2667	RGJ143
66	2,3,5-Trimethylnaphthalene	4	8	.2667	RGJ143
67	Diethylphthalate	4	8	.2667	RGJ143
68	Fluorene	4	8	.2667	RGJ143
69	4-Chlorophenyl-phenylether	4	8	.2667	RGJ143
70	4-Nitroaniline	4	8	.2667	RGJ143
71	Phenanthrene-d10	IntSTD	IntSTD	IntSTD	IntSTD
72	4,6-Dinitro-2-methylphenol	4	8	.2667	RGJ143
73	N-Nitrosodiphenylamine	4	8	.2667	RGJ143
74	Azobenzene	4	8	.2667	RGJ143
75	2,4,6-Tribromophenol	4	8	.2667	RGJ143
76	4-Bromophenyl-phenylether	4	8	.2667	RGJ143
77	Hexachlorobenzene	4	8	.2667	RGJ143
78	Pentachlorophenol	4	8	.2667	RGJ143
79	Dibenzothiophene	4	8	.2667	RGJ143
80	Phenanthrene	4	8	.2667	RGJ143
81	Dinoseb	NA	NA	NA	NA
82	Anthracene	4	8	.2667	RGJ143
83	Carbazole	4	8	.2667	RGJ143
84	Di-n-butylphthalate	4	8	.2667	RGJ143
85	1-Methylphenanthrene	4	8	.2667	RGJ143
86	Fluoranthene	4	8	.2667	RGJ143
87	Chrysene-d12	IntSTD	IntSTD	IntSTD	IntSTD
88	Benzidine	NA	NA	NA	NA
89	Pyrene	4	8	.2667	RGJ143
90	Terphenyl-d14	4	8	.2667	RGJ143
91	Butylbenzylphthalate	4	8	.2667	RGJ143
92	bis(2-ethylhexyl)adipate	4	8	.2667	RGJ143
93	3,3'-Dichlorobenzidine	4	8	.2667	RGJ143
94	Benzo(a)anthracene	4	8	.2667	RGJ143
95	Chrysene	4	8	.2667	RGJ143
96	bis(2-Ethylhexyl)phthalate	4	8	.2667	RGJ143
97	Perylene-d12	IntSTD	IntSTD	IntSTD	IntSTD
98	Di-n-octylphthalate	4	8	.2667	RGJ143
99	Benzo(b)fluoranthene	4	8	.2667	RGJ143
100	Benzo(k)fluoranthene	4	8	.2667	RGJ143
101	Benzo(e)pyrene	4	8	.2667	RGJ143
102	Benzo(a)pyrene	4	8	.2667	RGJ143
103	Perylene	4	8	.2667	RGJ143
104	Indeno(1,2,3-cd)pyrene	4	8	.2667	RGJ143
105	Dibenzo(a,h)anthracene	4	8	.2667	RGJ143
106	Benzo(g,h,i)perylene	4	8	.2667	RGJ143

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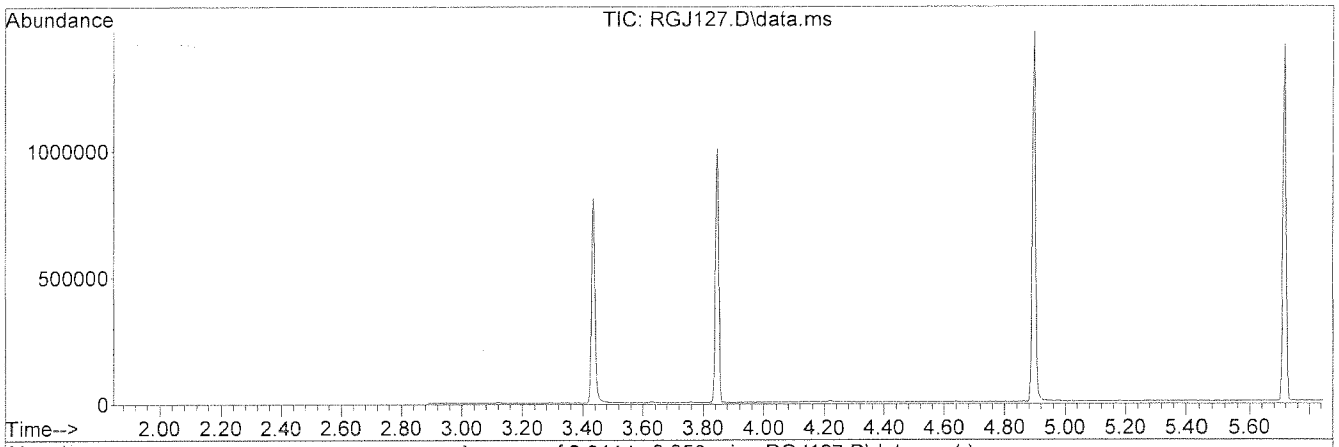
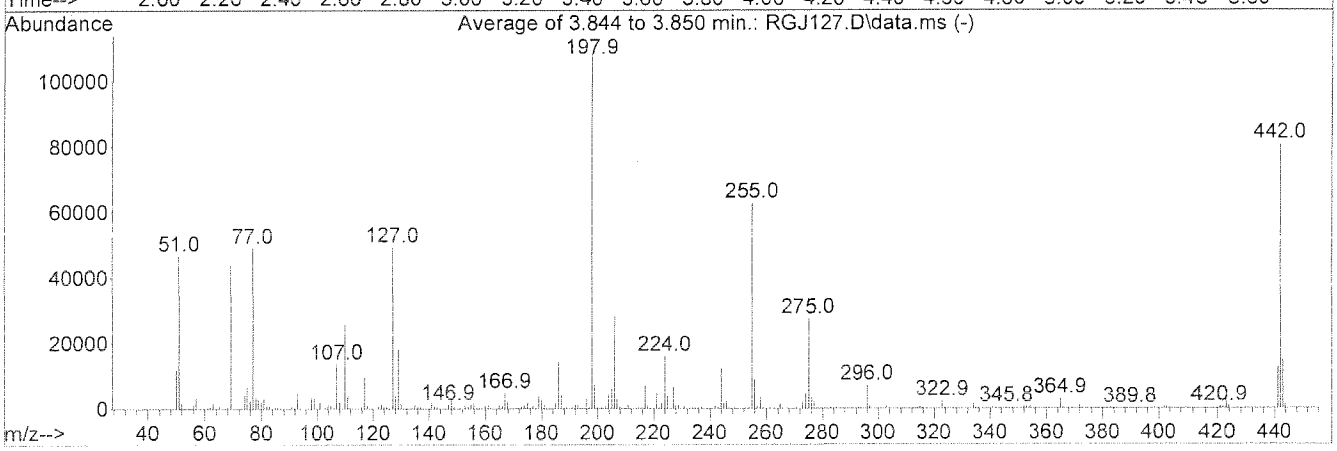
Data Path : D:\DATA\15G13\
Data File : RGJ127.D
Acq On : 13 Jul 2015 14:49
Operator : KVu
Sample : DFTE4G1301
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP 8270D
Last Update : Wed Jul 15 10:38:35 2015





AutoFind: Scans 340, 341, 342; Background Corrected with Scan 332

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	42.9	46675	PASS
68	69	0.00	2	1.6	715	PASS
69	198	0.00	100	40.8	44323	PASS
70	69	0.00	2	0.2	90	PASS
127	198	10	80	45.3	49285	PASS
197	198	0.00	2	0.3	372	PASS
198	198	100	100	100.0	108744	PASS
199	198	5	9	6.8	7381	PASS
275	198	10	60	25.2	27387	PASS
365	198	1	100	2.8	3023	PASS
441	442	0.01	24	15.8	12704	PASS
442	198	50	100	74.2	80645	PASS
443	442	15	24	18.2	14678	PASS

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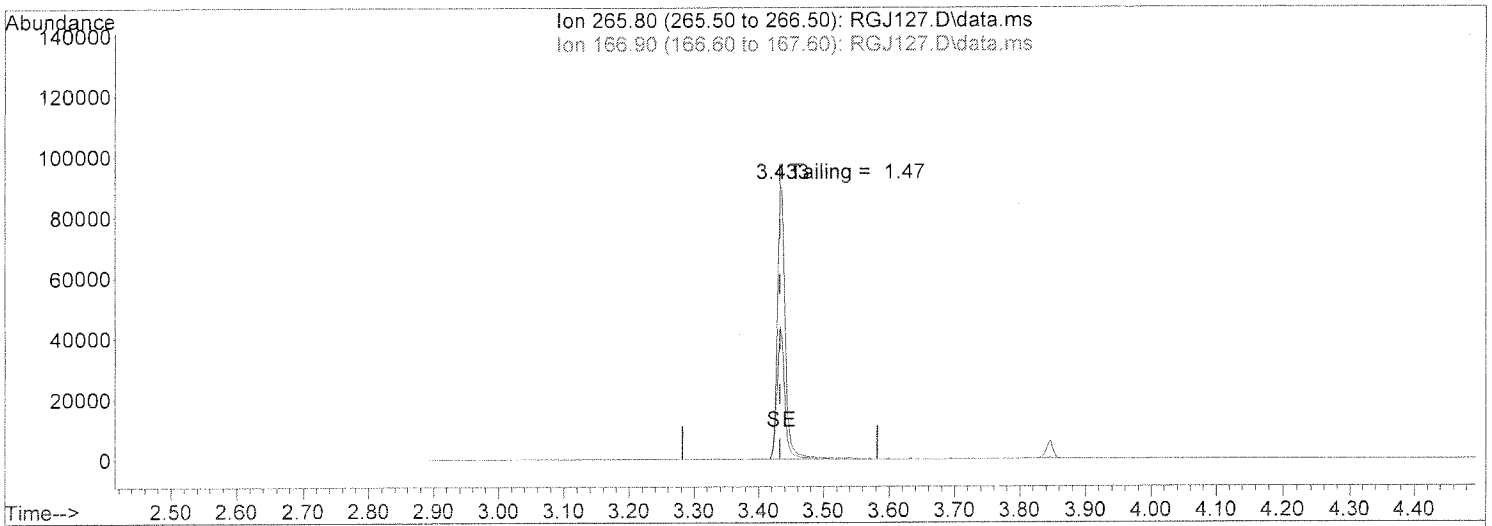
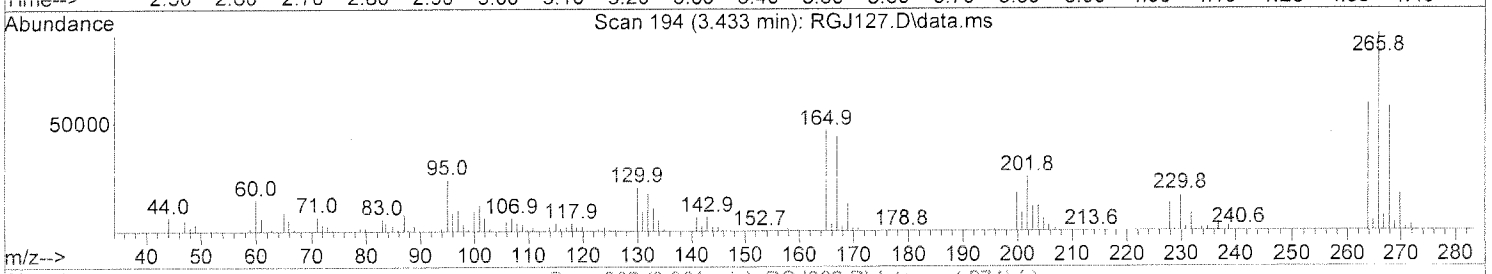
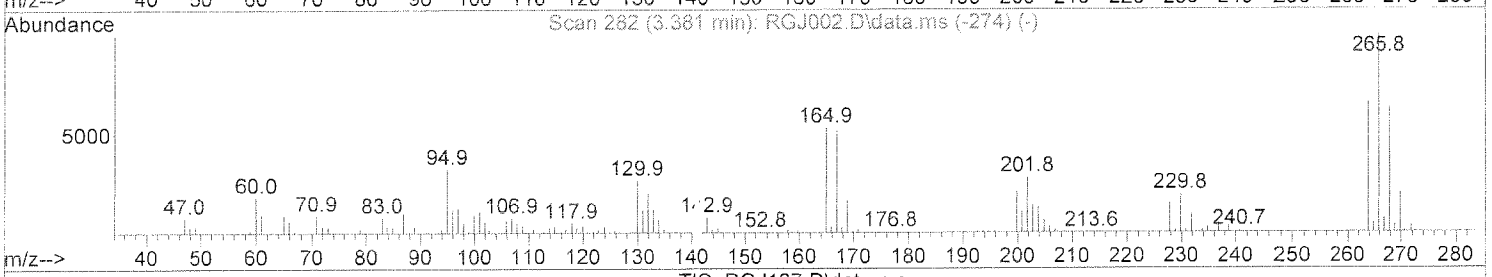
Quantitation Report (Qedit)

Data File : D:\DATA\15G13\RGJ127.D
Acq On : 13 Jul 2015 14:49
Sample : DFTE4G1301
Misc :
Integrator: RTE
Quant Time: Jul 15 10:38:38 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP 8270D
QLast Update : Wed Jul 15 10:38:36 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E4
Multiplr: 1.00







TIC: RGJ127.D\data.ms

(1) Pentachlorophenol (T)

3.433min (-0.000) 50.00 ppm

response 77148

Ion	Exp%	Act%
265.80	100	100
166.90	46.10	46.15
0.00	0.00	0.00
0.00	0.00	0.00

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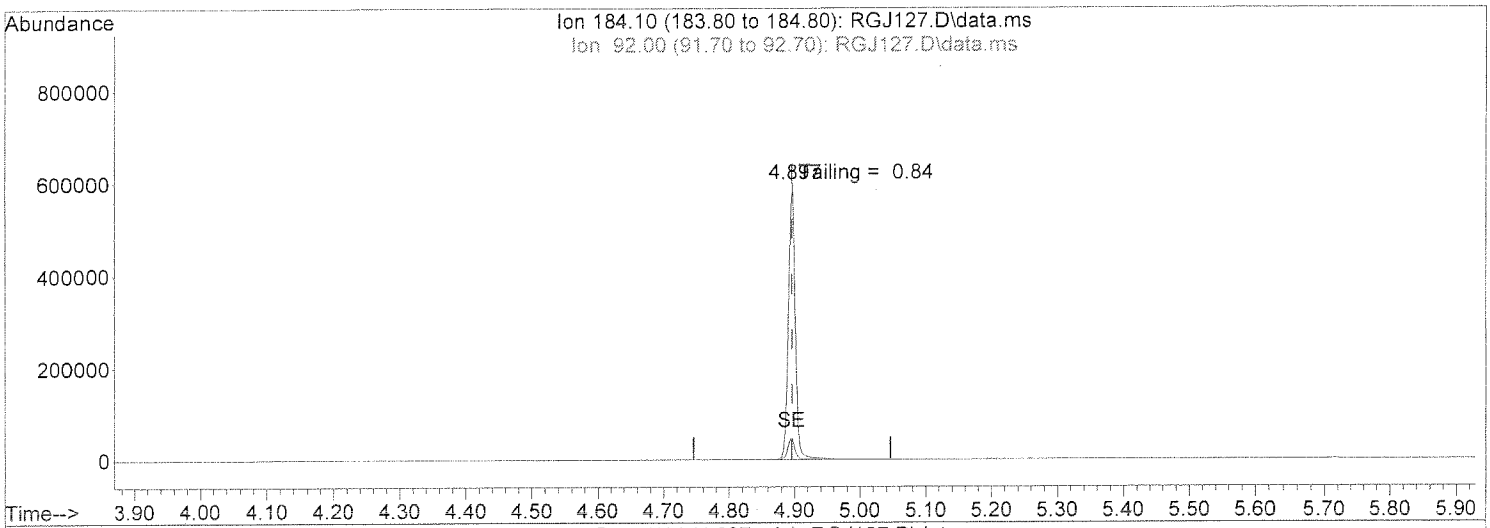
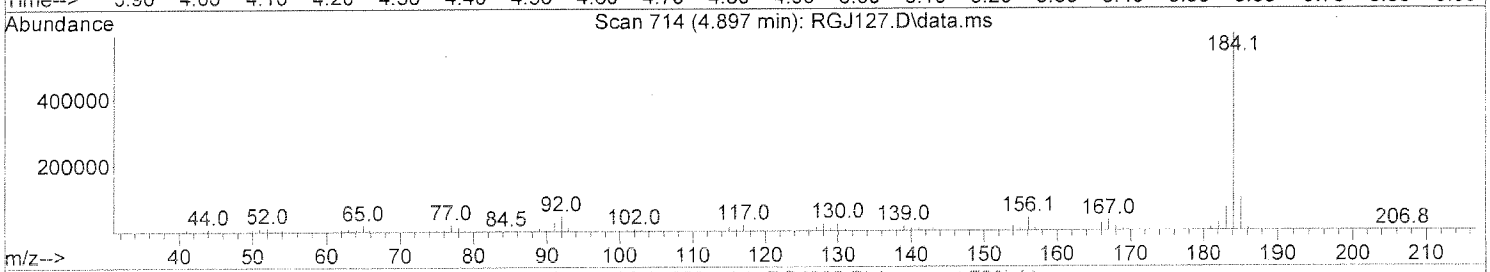
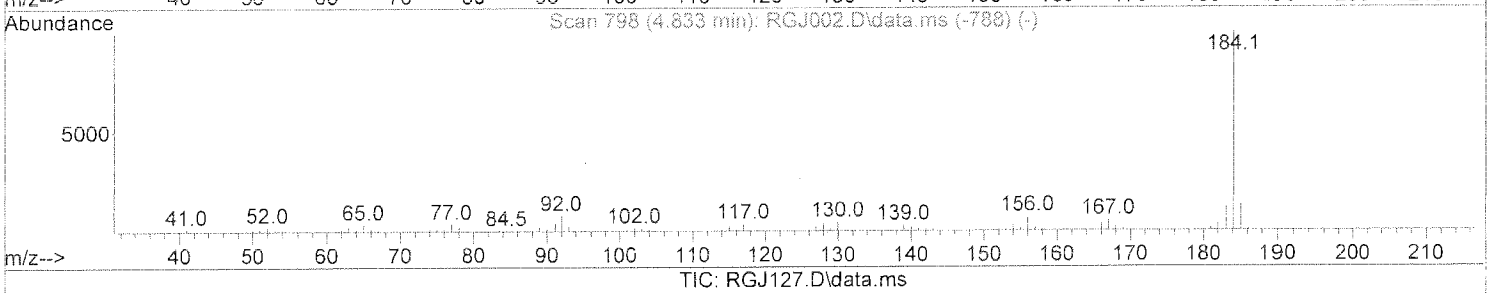
Quantitation Report (Qedit)

Data File : D:\DATA\15G13\RGJ127.D
Acq On : 13 Jul 2015 14:49
Sample : DFTE4G1301
Misc :
Integrator: RTE
Quant Time: Jul 15 10:38:38 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP 8270D
QLast Update : Wed Jul 15 10:38:36 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E4
Multiplr: 1.00







TIC: RGJ127.D\data.ms

(3) Benzidine (T)

4.897min (0.000) 50.00 ppm

response 442256

Ion	Exp%	Act%
184.10	100	100
92.00	8.10	8.13
0.00	0.00	0.00
0.00	0.00	0.00

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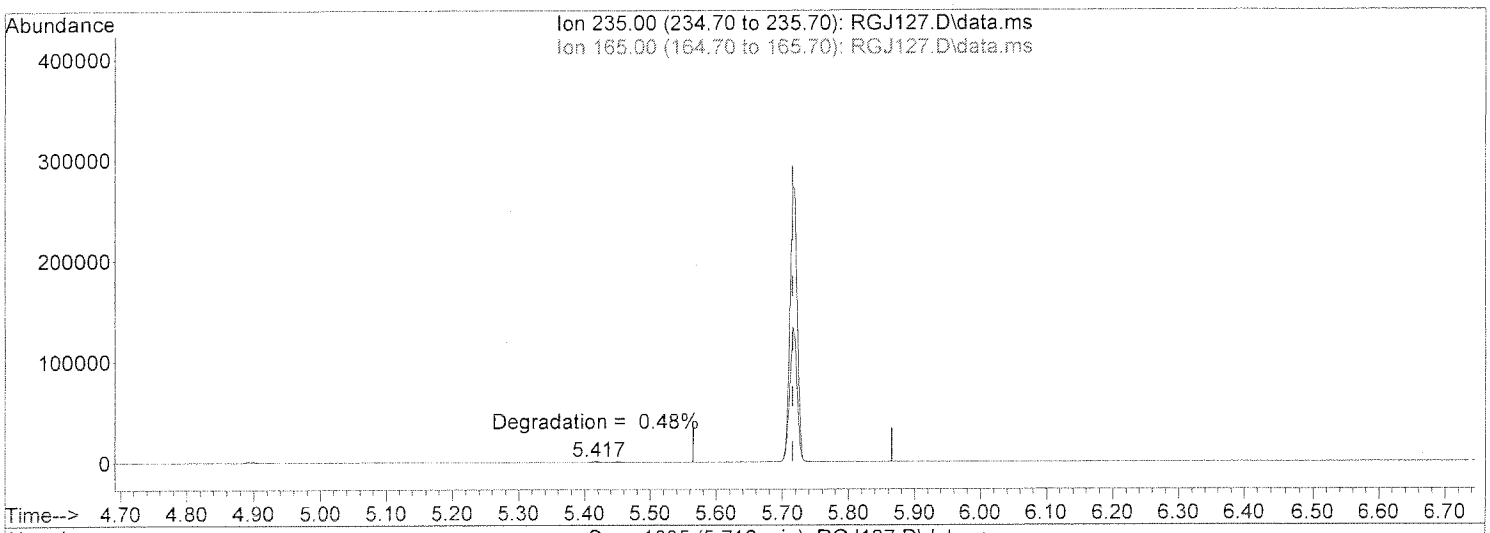
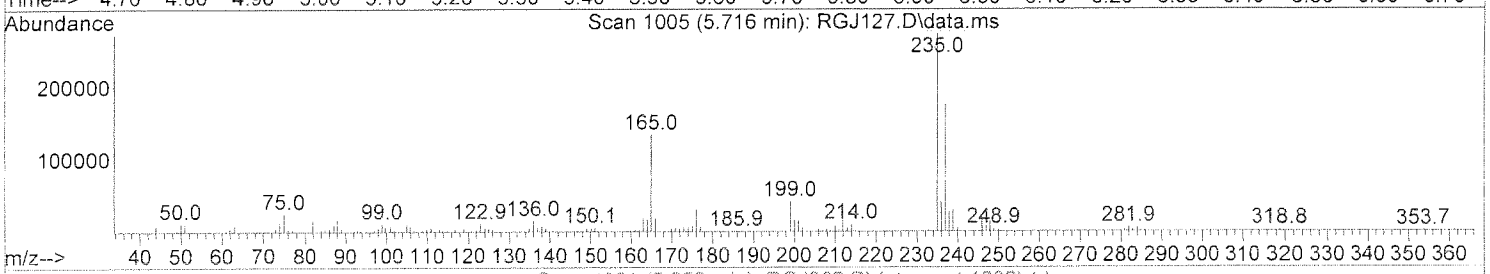
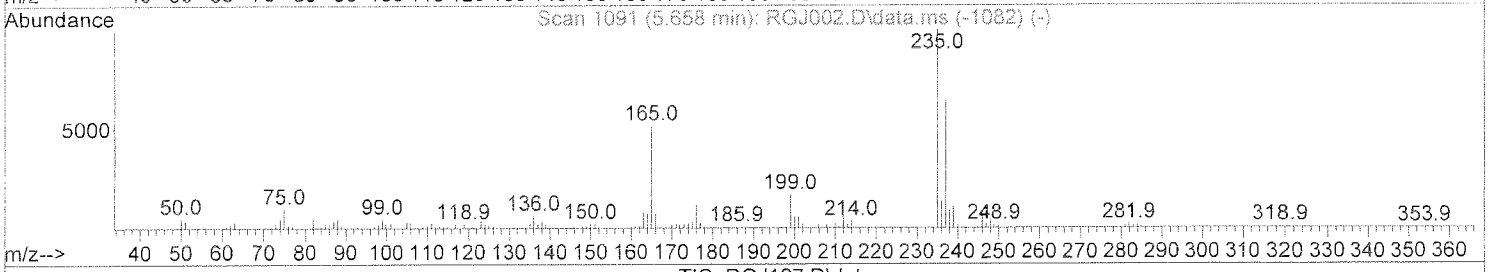
Quantitation Report (Qedit)

Data File : D:\DATA\15G13\RGJ127.D
Acq On : 13 Jul 2015 14:49
Sample : DFTE4G1301
Misc :
Integrator: RTE
Quant Time: Jul 15 10:38:38 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP 8270D
QLast Update : Wed Jul 15 10:38:36 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E4
Multiplr: 1.00







TIC: RGJ127.D\data.ms

(6) DDT (T)

5.716min (0.000) 50.00 ppm

response 210563

Ion	Exp%	Act%
235.00	100	100
165.00	48.00	47.95
0.00	0.00	0.00
0.00	0.00	0.00

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ143.D
Acq On : 13 Jul 2015 19:53
Sample : SVE4G138
Misc : 4PPM
Integrator: RTE
Quant Time: Jul 15 14:33:22 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 18
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	420976	40.00	ppm	0.00
21) Naphthalene-d8	4.239	136	1547703	40.00	ppm	0.00
41) Acenaphthene-d10	6.265	164	935283	40.00	ppm	0.00
71) Phenanthrene-d10	7.999	188	1635952	40.00	ppm	0.00
87) Chrysene-d12	10.780	240	1783519	40.00	ppm	0.00
97) Perylene-d12	12.212	264	1603258	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.061	112	53732	3.92	ppm	0.00
Spiked Amount 30.000			Recovery	=	13.07%	
6) Phenol-d5	2.649	99	66346	4.00	ppm	0.00
Spiked Amount 30.000			Recovery	=	13.33%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.499	82	67170	4.05	ppm	0.00
Spiked Amount 10.000			Recovery	=	40.50%	
46) 2-Fluorobiphenyl	5.456	172	146611	4.18	ppm	0.00
Spiked Amount 10.000			Recovery	=	41.80%	
75) 2,4,6-Tribromophenol	7.200	330	16383	3.73	ppm	0.00
Spiked Amount 30.000			Recovery	=	12.43%	
90) Terphenyl-d14	9.707	244	154255	3.99	ppm	0.00
Spiked Amount 10.000			Recovery	=	39.90%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.352	88	26404	4.34	ppm	93
3) N-nitrosodimethylamine	1.467	74	33530	3.88	ppm	94
4) Pyridine	1.491	79	64829	4.12	ppm	99
7) Phenol	2.659	94	66241	4.02	ppm	97
8) Aniline	2.732	93	86414	4.02	ppm	99
9) bis(2-chloroethyl)ether	2.764	93	53979	4.01	ppm	98
10) 2-Chlorophenol	2.831	128	53423	3.82	ppm	89
11) 1,3-Dichlorobenzene	2.962	146	67170	4.06	ppm	98
13) 1,4-Dichlorobenzene	3.025	146	70633	4.20	ppm	99
14) Benzyl alcohol	3.097	108	35634	3.89	ppm	94
15) 1,2-Dichlorobenzene	3.159	146	66539	4.13	ppm	100
16) 2-Methylphenol	3.173	107	44414	3.95	ppm	96
17) bis(2-chloroisopropyl)...	3.221	45	107040	3.98	ppm	97
18) 4-Methylphenol	3.312	107	59474	4.02	ppm	99
19) N-Nitroso-di-n-propyla...	3.336	70	41768	3.91	ppm	96
20) Hexachloroethane	3.471	117	27239	4.08	ppm	98
23) Nitrobenzene	3.518	77	71546	4.20	ppm	97
24) Isophorone	3.744	82	117471	3.74	ppm	95
25) 2-Nitrophenol	3.830	139	26592	3.82	ppm	99
26) 2,4-Dimethylphenol	3.845	107	58057	4.11	ppm	94
27) Benzoic acid	3.869	105	31214	3.23	ppm	82
28) bis(2-Chloroethoxy)met...	3.955	93	70022	4.08	ppm	100
29) 3,5-Dimethylphenol	3.979	107	59622	3.77	ppm	96
30) 2,4-Dichlorophenol	4.065	162	54377	4.08	ppm	100
31) 3,4-Dimethylphenol	4.162	107	71950	4.14	ppm	98
32) 1,2,4-Trichlorobenzene	4.171	180	61616	4.22	ppm	98
33) Naphthalene	4.263	128	179940	4.22	ppm	99
34) 4-Chloroaniline	4.302	127	70089	4.11	ppm	100
35) 2,6-Dichlorophenol	4.311	162	48599	4.08	ppm	99
36) Hexachlorobutadiene	4.389	225	42147	4.26	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ143.D
Acq On : 13 Jul 2015 19:53
Sample : SVE4G138
Misc : 4PPM
Integrator: RTE
Quant Time: Jul 15 14:33:22 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 18
Operator: KVu
Inst : E4
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38)	4-Chloro-3-methylphenol	4.827	107	44525	3.92	ppm	98
39)	2-Methylnaphthalene	5.029	142	119625	4.10	ppm	99
40)	1-Methylnaphthalene	5.144	142	109304	4.16	ppm	100
42)	Hexachlorocyclopentadiene	5.211	237	39626	3.85	ppm	100
43)	2,3,5-Trichlorophenol	5.215	196	31556	3.75	ppm	100
44)	2,4,6-Trichlorophenol	5.345	196	34787	3.84	ppm	99
45)	2,4,5-Trichlorophenol	5.384	196	35349	3.76	ppm	95
47)	2,3,4-Trichlorophenol	5.461	196	31505	3.94	ppm	97
48)	Biphenyl	5.577	154	176353	4.80	ppm	90
49)	2-Chloronaphthalene	5.596	162	123062	4.04	ppm	99
50)	2-Nitroaniline	5.711	65	31192	3.90	ppm	99
51)	2,6-Dimethylnaphthalene	5.759	156	102249	4.04	ppm	99
52)	1,4-Dinitrobenzene	5.879	168	13778	3.56	ppm	92
53)	Dimethylphthalate	5.942	163	131719	4.07	ppm	99
54)	1,3-Dinitrobenzene	5.961	168	17034	3.83	ppm	85
55)	2,6-Dinitrotoluene	6.005	165	28932	3.98	ppm	99
56)	1,2-Dinitrobenzene	6.063	168	10577	3.92	ppm	97
57)	Acenaphthylene	6.092	152	187610	3.97	ppm	96
58)	3-Nitroaniline	6.202	138	26853	3.82	ppm	99
59)	Acenaphthene	6.298	153	130948	4.19	ppm	98
60)	2,4-Dinitrophenol	6.327	184	7509	4.27	ppm	90
61)	4-Nitrophenol	6.389	109	13229	3.62	ppm	97
62)	2,4-Dinitrotoluene	6.485	165	35838	3.81	ppm	96
63)	Dibenzofuran	6.509	168	167277	4.19	ppm	99
64)	2,3,5,6-Tetrachlorophenol	6.600	230	25996	3.82	ppm	96
65)	2,3,4,6-Tetrachlorophenol	6.653	232	36579	3.93	ppm	98
66)	2,3,5-Trimethylnaphtha...	6.762	170	96677	4.06	ppm	98
67)	Diethylphthalate	6.799	149	133234	4.09	ppm	100
68)	Fluorene	6.921	166	136917	4.15	ppm	98
69)	4-Chlorophenyl-phenyle...	6.931	204	70344	4.09	ppm	98
70)	4-Nitroaniline	6.931	138	25348	3.68	ppm	86
72)	4,6-Dinitro-2-methylph...	6.973	198	11876	4.05	ppm	93
73)	N-Nitrosodiphenylamine	7.067	169	103941	4.06	ppm	99
74)	Azobenzene	7.119	77	125238	4.13	ppm	97
76)	4-Bromophenyl-phenylether	7.504	248	41140	4.07	ppm	99
77)	Hexachlorobenzene	7.556	284	43740	4.11	ppm	97
78)	Pentachlorophenol	7.778	266	20715	3.61	ppm	96
79)	Dibenzothiophene	7.882	184	172619	4.04	ppm	99
80)	Phenanthrene	8.023	178	203283	4.22	ppm	100
82)	Anthracene	8.079	178	205113	4.16	ppm	100
83)	Carbazole	8.258	167	161497	4.07	ppm	99
84)	Di-n-butylphthalate	8.654	149	198190	3.90	ppm	100
85)	1-Methylphenanthrene	8.693	192	137737	4.09	ppm	100
86)	Fluoranthene	9.302	202	213128	4.04	ppm	99
89)	Pyrene	9.538	202	230730	4.03	ppm	100
91)	Butylbenzylphthalate	10.213	149	71156	3.47	ppm	95
92)	bis(2-ethylhexyl)adipate	10.295	129	56269	3.46	ppm	95
93)	3,3'-Dichlorobenzidine	10.742	252	58337	3.54	ppm	98
94)	Benzo(a)anthracene	10.771	228	214314	4.04	ppm	99
95)	Chrysene	10.805	228	210694	4.10	ppm	100
96)	bis(2-Ethylhexyl)phtha...	10.800	149	115418	3.71	ppm	99
98)	Di-n-octylphthalate	11.421	149	160087	3.20	ppm	99
99)	Benzo(b)fluoranthene	11.800	252	179903	3.77	ppm	100
100)	Benzo(k)fluoranthene	11.829	252	206453	4.08	ppm	99
101)	Benzo(e)pyrene	12.085	252	169386	3.97	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ143.D
Acq On : 13 Jul 2015 19:53
Sample : SVE4G138
Misc : 4PPM
Integrator: RTE
Quant Time: Jul 15 14:33:22 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 18
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) Benzo(a)pyrene	12.144	252	174886	3.80	ppm	99
103) Perylene	12.236	252	168154	3.88	ppm	98
104) Indeno(1,2,3-cd)pyrene	13.542	276	196661	3.70	ppm	100
105) Dibenzo(a,h)anthracene	13.567	278	161592	3.63	ppm	98
106) Benzo(g,h,i)perylene	13.941	276	185850	3.90	ppm	96

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

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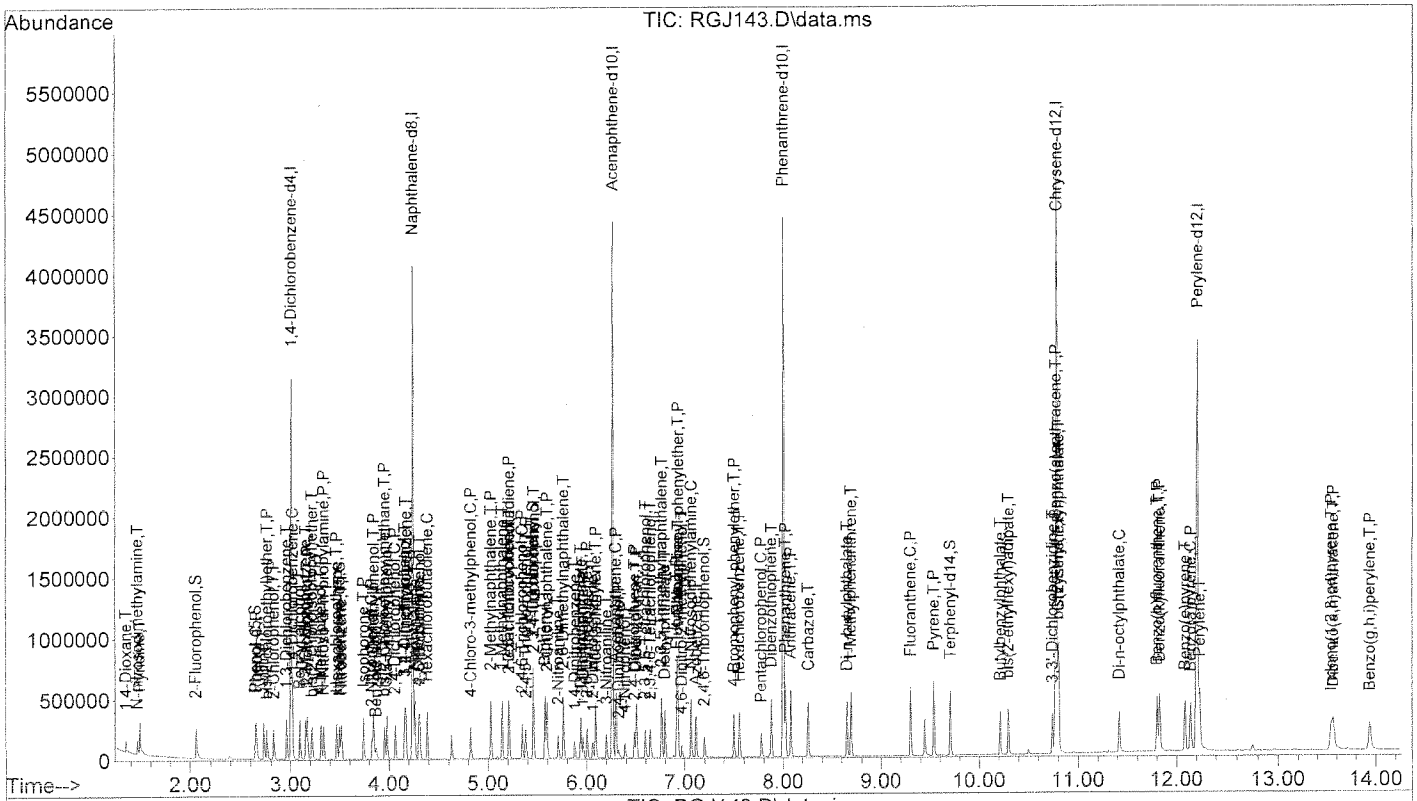
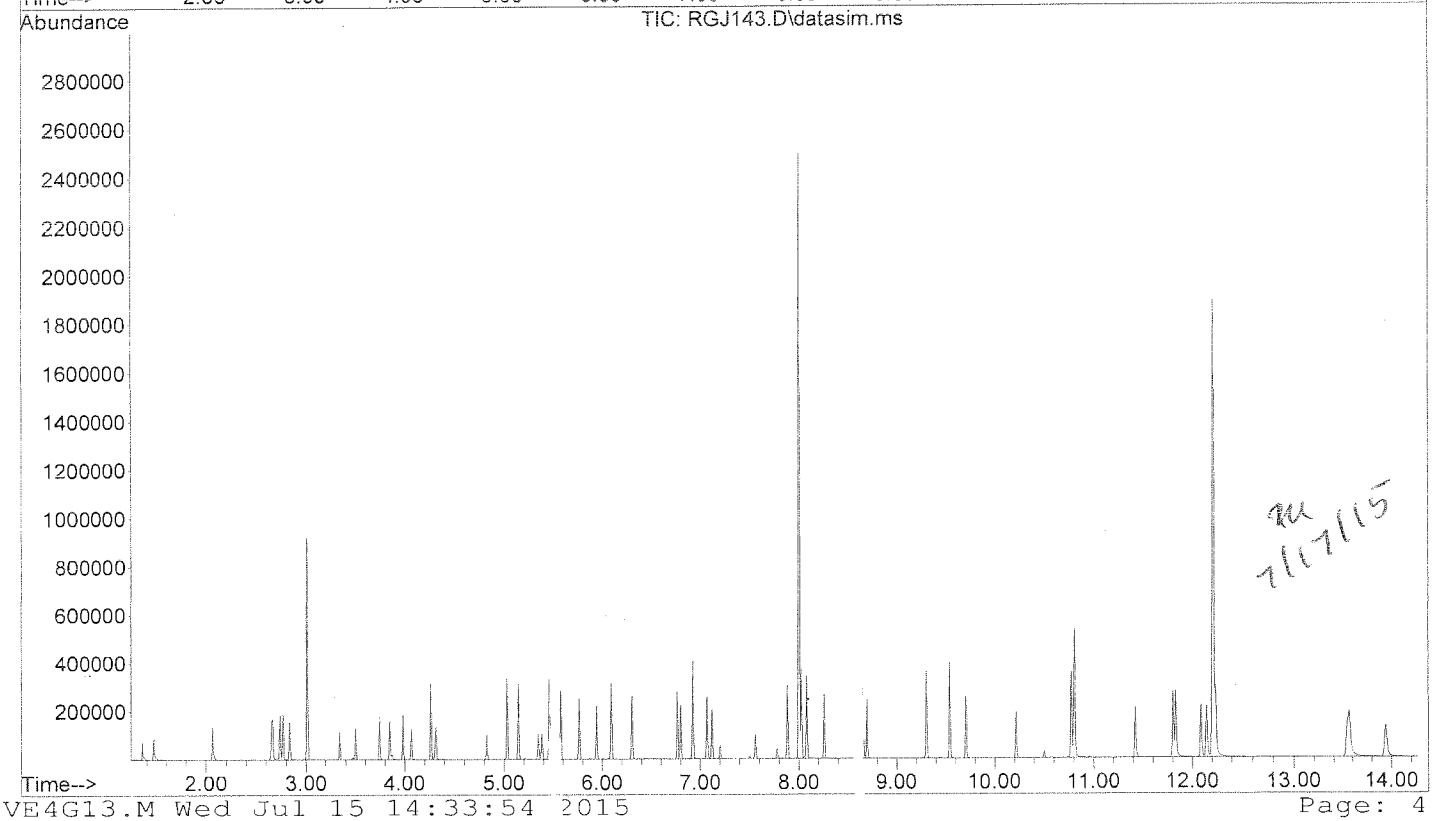
Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ143.D
Acq On : 13 Jul 2015 19:53
Sample : SVE4G138
Misc : 4PPM
Integrator: RTE
Quant Time: Jul 15 14:33:22 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 18
Operator: KVu
Inst : E4
Multiplr: 1.00





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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ142.D
Acq On : 13 Jul 2015 19:33
Sample : SVE4G137
Misc : 10PPM
Integrator: RTE
Quant Time: Jul 15 14:32:53 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 17
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	415230	40.00	ppm	0.00
21) Naphthalene-d8	4.239	136	1557480	40.00	ppm	0.00
41) Acenaphthene-d10	6.265	164	944014	40.00	ppm	0.00
71) Phenanthrene-d10	7.999	188	1636134	40.00	ppm	0.00
87) Chrysene-d12	10.785	240	1763135	40.00	ppm	0.00
97) Perylene-d12	12.212	264	1577562	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.061	112	138869	10.27	ppm	0.00
Spiked Amount 30.000			Recovery	=	34.23%	
6) Phenol-d5	2.649	99	165386	10.10	ppm	0.00
Spiked Amount 30.000			Recovery	=	33.67%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.499	82	169404	10.14	ppm	0.00
Spiked Amount 10.000			Recovery	=	101.40%	
46) 2-Fluorobiphenyl	5.456	172	363143	10.26	ppm	0.00
Spiked Amount 10.000			Recovery	=	102.60%	
75) 2,4,6-Tribromophenol	7.200	330	43236	9.84	ppm	0.00
Spiked Amount 30.000			Recovery	=	32.80%	
90) Terphenyl-d14	9.707	244	386166	10.10	ppm	0.00
Spiked Amount 10.000			Recovery	=	101.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.352	88	61713	10.28	ppm	99
3) N-nitrosodimethylamine	1.467	74	85448	10.02	ppm	98
4) Pyridine	1.491	79	158568	10.22	ppm	99
7) Phenol	2.659	94	167186	10.28	ppm	99
8) Aniline	2.732	93	218331	10.29	ppm	99
9) bis(2-chloroethyl)ether	2.764	93	136383	10.28	ppm	99
10) 2-Chlorophenol	2.831	128	136045	9.86	ppm	92
11) 1,3-Dichlorobenzene	2.962	146	168151	10.29	ppm	98
13) 1,4-Dichlorobenzene	3.025	146	169727	10.22	ppm	100
14) Benzyl alcohol	3.097	108	93781	10.38	ppm	98
15) 1,2-Dichlorobenzene	3.159	146	164020	10.33	ppm	100
16) 2-Methylphenol	3.174	107	117786	10.62	ppm	89
17) bis(2-chloroisopropyl)...	3.222	45	266183	10.05	ppm	98
18) 4-Methylphenol	3.313	107	149583	10.26	ppm	100
19) N-Nitroso-di-n-propyla...	3.337	70	107674	10.21	ppm	99
20) Hexachloroethane	3.471	117	67471	10.26	ppm	100
23) Nitrobenzene	3.519	77	175441	10.23	ppm	100
24) Isophorone	3.744	82	334852	10.59	ppm	100
25) 2-Nitrophenol	3.830	139	70461	10.07	ppm	97
26) 2,4-Dimethylphenol	3.845	107	146955	10.34	ppm	97
27) Benzoic acid	3.888	105	81412	8.37	ppm	87
28) bis(2-Chloroethoxy)met...	3.955	93	177739	10.28	ppm	99
29) 3,5-Dimethylphenol	3.984	107	151434	9.52	ppm	89
30) 2,4-Dichlorophenol	4.065	162	138751	10.36	ppm	98
31) 3,4-Dimethylphenol	4.162	107	180848	10.35	ppm	99
32) 1,2,4-Trichlorobenzene	4.171	180	150063	10.22	ppm	98
33) Naphthalene	4.263	128	442369	10.31	ppm	100
34) 4-Chloroaniline	4.307	127	177387	10.34	ppm	99
35) 2,6-Dichlorophenol	4.311	162	121661	10.16	ppm	97
36) Hexachlorobutadiene	4.389	225	101563	10.21	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ142.D
Acq On : 13 Jul 2015 19:33
Sample : SVE4G137
Misc : 10PPM
Integrator: RTE
Quant Time: Jul 15 14:32:53 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 17
Operator: KVu
Inst : E4
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38)	4-Chloro-3-methylphenol	4.827	107	116444	10.19	ppm	99
39)	2-Methylnaphthalene	5.029	142	301009	10.26	ppm	99
40)	1-Methylnaphthalene	5.144	142	270327	10.21	ppm	99
42)	Hexachlorocyclopentadiene	5.211	237	102953	9.90	ppm	98
43)	2,3,5-Trichlorophenol	5.216	196	83124	9.79	ppm	97
44)	2,4,6-Trichlorophenol	5.345	196	91759	10.04	ppm	99
45)	2,4,5-Trichlorophenol	5.384	196	96304	10.15	ppm	98
47)	2,3,4-Trichlorophenol	5.461	196	79785	9.89	ppm	99
48)	Biphenyl	5.577	154	368648	9.94	ppm	99
49)	2-Chloronaphthalene	5.596	162	305534	9.94	ppm	99
50)	2-Nitroaniline	5.711	65	81761	10.12	ppm	98
51)	2,6-Dimethylnaphthalene	5.764	156	255770	10.01	ppm	100
52)	1,4-Dinitrobenzene	5.879	168	38957	9.96	ppm	95
53)	Dimethylphthalate	5.942	163	331493	10.14	ppm	100
54)	1,3-Dinitrobenzene	5.966	168	45501	10.13	ppm	78
55)	2,6-Dinitrotoluene	6.005	165	74373	10.14	ppm	98
56)	1,2-Dinitrobenzene	6.063	168	27770	10.20	ppm	96
57)	Acenaphthylene	6.092	152	477217	10.00	ppm	96
58)	3-Nitroaniline	6.202	138	71033	10.02	ppm	98
59)	Acenaphthene	6.303	153	322301	10.22	ppm	98
60)	2,4-Dinitrophenol	6.327	184	24917	9.47	ppm	100
61)	4-Nitrophenol	6.389	109	36440	9.88	ppm	99
62)	2,4-Dinitrotoluene	6.490	165	94628	9.96	ppm	97
63)	Dibenzofuran	6.509	168	410828	10.20	ppm	100
64)	2,3,5,6-Tetrachlorophenol	6.600	230	66490	9.68	ppm	97
65)	2,3,4,6-Tetrachlorophenol	6.653	232	95844	10.20	ppm	96
66)	2,3,5-Trimethylnaphtha...	6.767	170	246835	10.28	ppm	98
67)	Diethylphthalate	6.800	149	334679	10.18	ppm	99
68)	Fluorene	6.921	166	336438	10.11	ppm	100
69)	4-Chlorophenyl-phenyle...	6.931	204	176122	10.15	ppm	99
70)	4-Nitroaniline	6.936	138	67270	9.68	ppm	94
72)	4,6-Dinitro-2-methylph...	6.973	198	43344	10.08	ppm	94
73)	N-Nitrosodiphenylamine	7.067	169	265898	10.38	ppm	98
74)	Azobenzene	7.120	77	318409	10.51	ppm	98
76)	4-Bromophenyl-phenylether	7.504	248	102039	10.09	ppm	99
77)	Hexachlorobenzene	7.556	284	108325	10.17	ppm	99
78)	Pentachlorophenol	7.778	266	56022	9.78	ppm	99
79)	Dibenzothiophene	7.882	184	430017	10.05	ppm	100
80)	Phenanthrene	8.028	178	496871	10.31	ppm	99
82)	Anthracene	8.084	178	507746	10.30	ppm	100
83)	Carbazole	8.258	167	406569	10.24	ppm	100
84)	Di-n-butylphthalate	8.654	149	520588	10.25	ppm	100
85)	1-Methylphenanthrene	8.698	192	348393	10.34	ppm	99
86)	Fluoranthene	9.302	202	540392	10.24	ppm	100
89)	Pyrene	9.538	202	568786	10.05	ppm	99
91)	Butylbenzylphthalate	10.213	149	201006	9.91	ppm	98
92)	bis(2-ethylhexyl)adipate	10.295	129	160000	9.95	ppm	98
93)	3,3'-Dichlorobenzidine	10.742	252	157697	9.69	ppm	98
94)	Benzo(a)anthracene	10.771	228	537247	10.24	ppm	100
95)	Chrysene	10.805	228	527298	10.37	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.800	149	310128	10.09	ppm	100
98)	Di-n-octylphthalate	11.421	149	477562	9.71	ppm	100
99)	Benzo(b)fluoranthene	11.805	252	488579	10.41	ppm	98
100)	Benzo(k)fluoranthene	11.829	252	485246	9.74	ppm	97
101)	Benzo(e)pyrene	12.085	252	425116	10.12	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ142.D
Acq On : 13 Jul 2015 19:33
Sample : SVE4G137
Misc : 10PPM
Integrator: RTE
Quant Time: Jul 15 14:32:53 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 17
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) Benzo(a)pyrene	12.144	252	447390	9.89 ppm	98
103) Perylene	12.236	252	439978	10.32 ppm	100
104) Indeno(1,2,3-cd)pyrene	13.542	276	514374	9.84 ppm	99
105) Dibenzo(a,h)anthracene	13.567	278	429663	9.82 ppm	100
106) Benzo(g,h,i)perylene	13.946	276	469049	10.00 ppm	99

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

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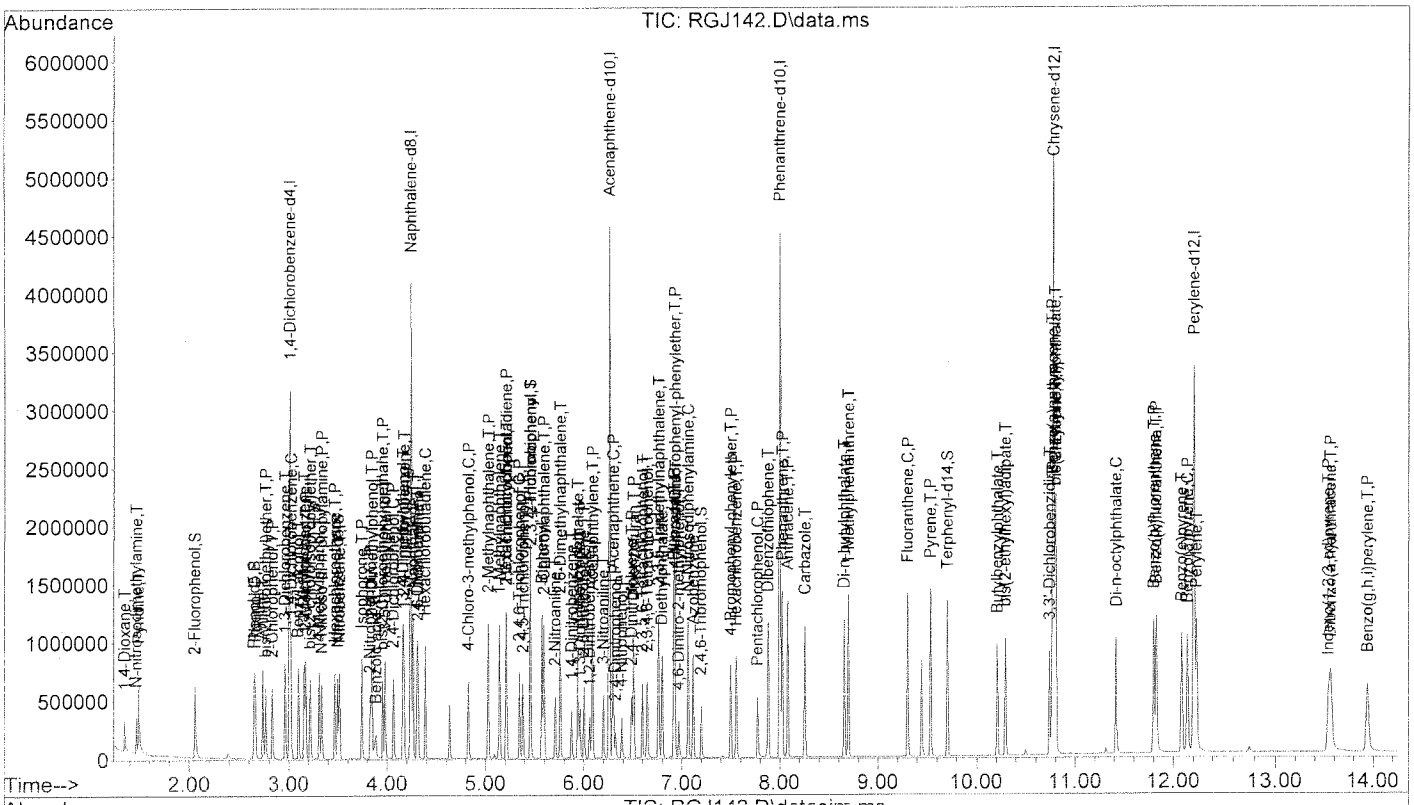
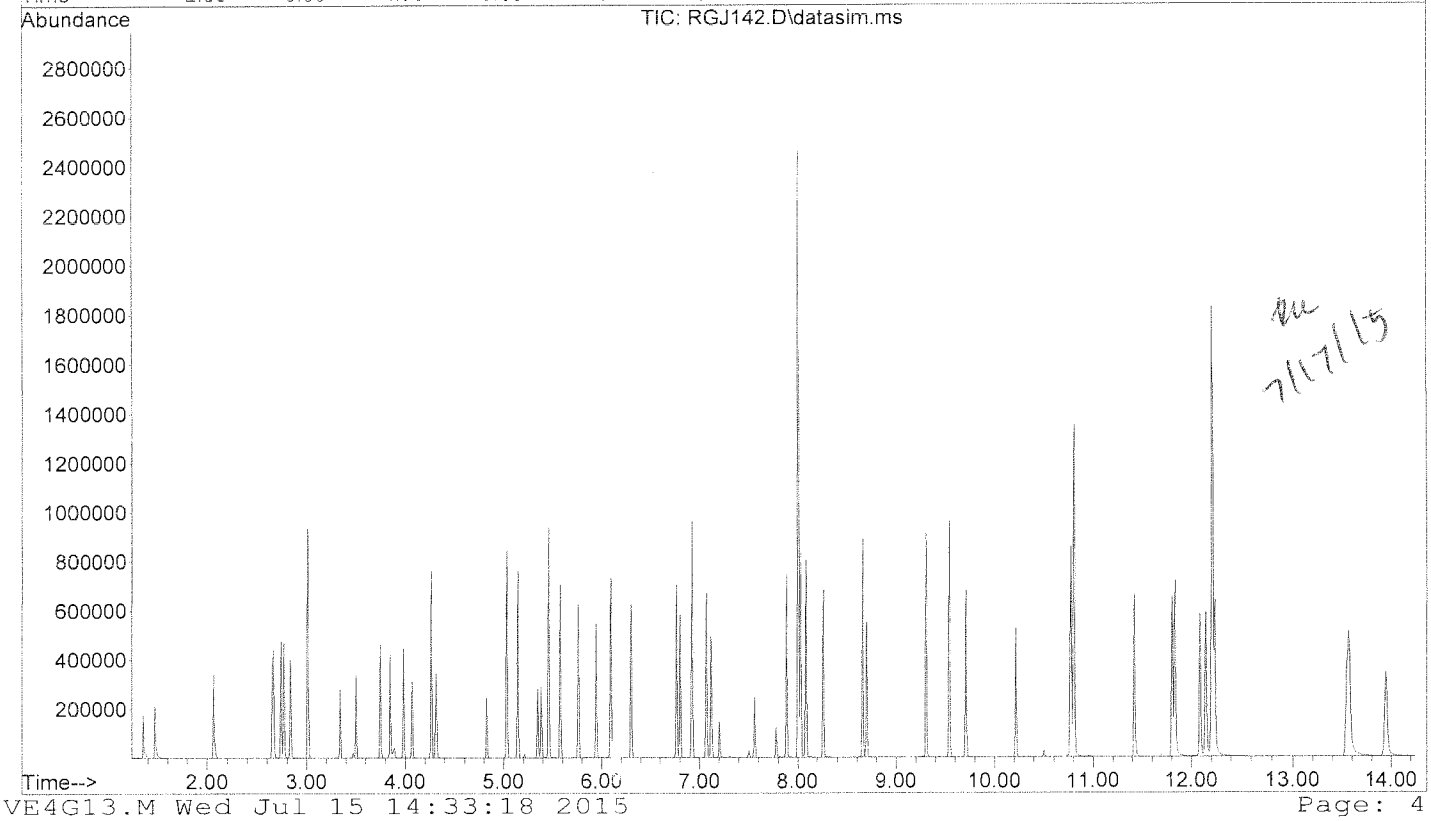
Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ142.D
Acq On : 13 Jul 2015 19:33
Sample : SVE4G137
Misc : 10PPM
Integrator: RTE
Quant Time: Jul 15 14:32:53 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 17
Operator: KVu
Inst : E4
Multiplr: 1.00





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474

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ141.D
Acq On : 13 Jul 2015 19:13
Sample : SVE4G136
Misc : 20PPM
Integrator: RTE
Quant Time: Jul 15 14:32:30 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 16
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	425878	40.00	ppm	0.00
21) Naphthalene-d8	4.239	136	1596023	40.00	ppm	0.00
41) Acenaphthene-d10	6.265	164	959825	40.00	ppm	0.00
71) Phenanthrene-d10	8.004	188	1694762	40.00	ppm	0.00
87) Chrysene-d12	10.785	240	1812420	40.00	ppm	0.00
97) Perylene-d12	12.207	264	1627287	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.061	112	281188	20.27	ppm	0.00
Spiked Amount 30.000			Recovery	=	67.57%	
6) Phenol-d5	2.649	99	341748	20.35	ppm	0.00
Spiked Amount 30.000			Recovery	=	67.83%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.499	82	337829	19.74	ppm	0.00
Spiked Amount 10.000			Recovery	=	197.40%	
46) 2-Fluorobiphenyl	5.461	172	711454	19.77	ppm	0.00
Spiked Amount 10.000			Recovery	=	197.70%	
75) 2,4,6-Tribromophenol	7.205	330	90837	19.96	ppm	0.00
Spiked Amount 30.000			Recovery	=	66.53%	
90) Terphenyl-d14	9.707	244	775320	19.72	ppm	0.00
Spiked Amount 10.000			Recovery	=	197.20%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.352	88	118821	19.30	ppm	99
3) N-nitrosodimethylamine	1.467	74	172636	19.73	ppm	98
4) Pyridine	1.491	79	310482	19.50	ppm	99
7) Phenol	2.665	94	331482	19.88	ppm	99
8) Aniline	2.738	93	427877	19.67	ppm	99
9) bis(2-chloroethyl)ether	2.764	93	270797	19.90	ppm	100
10) 2-Chlorophenol	2.831	128	273742	19.35	ppm	92
11) 1,3-Dichlorobenzene	2.962	146	328465	19.60	ppm	98
13) 1,4-Dichlorobenzene	3.025	146	332651	19.53	ppm	98
14) Benzyl alcohol	3.102	108	181602	19.60	ppm	100
15) 1,2-Dichlorobenzene	3.159	146	319535	19.62	ppm	100
16) 2-Methylphenol	3.174	107	221822	19.51	ppm	92
17) bis(2-chloroisopropyl)...	3.221	45	515967	18.99	ppm	97
18) 4-Methylphenol	3.313	107	292371	19.55	ppm	99
19) N-Nitroso-di-n-propyla...	3.341	70	211405	19.54	ppm	100
20) Hexachloroethane	3.471	117	131253	19.45	ppm	98
23) Nitrobenzene	3.519	77	340801	19.40	ppm	100
24) Isophorone	3.749	82	639253	19.73	ppm	99
25) 2-Nitrophenol	3.830	139	141723	19.76	ppm	99
26) 2,4-Dimethylphenol	3.845	107	286269	19.66	ppm	100
27) Benzoic acid	3.912	105	192243	19.29	ppm	98
28) bis(2-Chloroethoxy)met...	3.960	93	349686	19.74	ppm	100
29) 3,5-Dimethylphenol	3.984	107	328539	20.15	ppm	90
30) 2,4-Dichlorophenol	4.070	162	267274	19.47	ppm	97
31) 3,4-Dimethylphenol	4.162	107	350357	19.56	ppm	98
32) 1,2,4-Trichlorobenzene	4.171	180	291658	19.38	ppm	98
33) Naphthalene	4.263	128	861798	19.61	ppm	99
34) 4-Chloroaniline	4.307	127	344928	19.62	ppm	99
35) 2,6-Dichlorophenol	4.316	162	241706	19.69	ppm	98
36) Hexachlorobutadiene	4.389	225	196224	19.25	ppm	98

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ141.D
Acq On : 13 Jul 2015 19:13
Sample : SVE4G136
Misc : 20PPM
Integrator: RTE
Quant Time: Jul 15 14:32:30 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 16
Operator: KVu
Inst : E4
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38)	4-Chloro-3-methylphenol	4.827	107	227235	19.40	ppm	99
39)	2-Methylnaphthalene	5.033	142	588443	19.57	ppm	100
40)	1-Methylnaphthalene	5.144	142	527647	19.45	ppm	100
42)	Hexachlorocyclopentadiene	5.211	237	207748	19.65	ppm	99
43)	2,3,5-Trichlorophenol	5.216	196	168679	19.53	ppm	98
44)	2,4,6-Trichlorophenol	5.350	196	180720	19.45	ppm	100
45)	2,4,5-Trichlorophenol	5.384	196	191553	19.85	ppm	98
47)	2,3,4-Trichlorophenol	5.461	196	154549	18.83	ppm	98
48)	Biphenyl	5.577	154	712583	18.89	ppm	99
49)	2-Chloronaphthalene	5.601	162	591466	18.92	ppm	99
50)	2-Nitroaniline	5.711	65	162690	19.81	ppm	99
51)	2,6-Dimethylnaphthalene	5.764	156	503320	19.38	ppm	98
52)	1,4-Dinitrobenzene	5.879	168	77720	19.55	ppm	95
53)	Dimethylphthalate	5.947	163	652529	19.63	ppm	100
54)	1,3-Dinitrobenzene	5.971	168	89913	19.68	ppm	98
55)	2,6-Dinitrotoluene	6.010	165	145951	19.56	ppm	98
56)	1,2-Dinitrobenzene	6.067	168	53709	19.40	ppm	99
57)	Acenaphthylene	6.092	152	994892	20.50	ppm	99
58)	3-Nitroaniline	6.207	138	141627	19.65	ppm	98
59)	Acenaphthene	6.303	153	625980	19.53	ppm	100
60)	2,4-Dinitrophenol	6.327	184	57484	18.94	ppm	97
61)	4-Nitrophenol	6.394	109	75958	20.26	ppm	98
62)	2,4-Dinitrotoluene	6.490	165	190582	19.73	ppm	98
63)	Dibenzofuran	6.509	168	798649	19.50	ppm	100
64)	2,3,5,6-Tetrachlorophenol	6.600	230	137152	19.63	ppm	99
65)	2,3,4,6-Tetrachlorophenol	6.653	232	180185	18.85	ppm	94
66)	2,3,5-Trimethylnaphtha...	6.767	170	475189	19.46	ppm	99
67)	Diethylphthalate	6.804	149	656870	19.64	ppm	100
68)	Fluorene	6.926	166	662813	19.60	ppm	98
69)	4-Chlorophenyl-phenyle...	6.936	204	344574	19.54	ppm	99
70)	4-Nitroaniline	6.940	138	134660	19.07	ppm	94
72)	4,6-Dinitro-2-methylph...	6.978	198	94945	19.34	ppm	98
73)	N-Nitrosodiphenylamine	7.072	169	514989	19.40	ppm	99
74)	Azobenzene	7.120	77	604525	19.26	ppm	99
76)	4-Bromophenyl-phenylether	7.504	248	205876	19.65	ppm	97
77)	Hexachlorobenzene	7.560	284	214923	19.47	ppm	99
78)	Pentachlorophenol	7.782	266	116292	19.59	ppm	97
79)	Dibenzothiophene	7.886	184	829308	18.72	ppm	99
80)	Phenanthrene	8.028	178	954248	19.11	ppm	100
82)	Anthracene	8.084	178	983723	19.26	ppm	100
83)	Carbazole	8.258	167	799045	19.44	ppm	100
84)	Di-n-butylphthalate	8.654	149	1029311	19.57	ppm	100
85)	1-Methylphenanthrene	8.698	192	672106	19.26	ppm	100
86)	Fluoranthene	9.306	202	1058236	19.35	ppm	99
89)	Pyrene	9.542	202	1104385	18.99	ppm	99
91)	Butylbenzylphthalate	10.213	149	418623	20.08	ppm	99
92)	bis(2-ethylhexyl)adipate	10.295	129	332357	20.11	ppm	99
93)	3,3'-Dichlorobenzidine	10.741	252	333782	19.95	ppm	99
94)	Benzo(a)anthracene	10.771	228	1044494	19.36	ppm	100
95)	Chrysene	10.810	228	1019305	19.51	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.795	149	622941	19.71	ppm	100
98)	Di-n-octylphthalate	11.421	149	1021369	20.14	ppm	100
99)	Benzo(b)fluoranthene	11.805	252	958590	19.79	ppm	100
100)	Benzo(k)fluoranthene	11.834	252	989165	19.25	ppm	99
101)	Benzo(e)pyrene	12.090	252	835805	19.28	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ141.D
Acq On : 13 Jul 2015 19:13
Sample : SVE4G136
Misc : 20PPM
Integrator: RTE
Quant Time: Jul 15 14:32:30 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 16
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) Benzo(a)pyrene	12.148	252	915660	19.62 ppm	100
103) Perylene	12.236	252	854589	19.43 ppm	100
104) Indeno(1,2,3-cd)pyrene	13.547	276	1057056	19.59 ppm	100
105) Dibenzo(a,h)anthracene	13.572	278	890322	19.73 ppm	100
106) Benzo(g,h,i)perylene	13.950	276	945571	19.54 ppm	99

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

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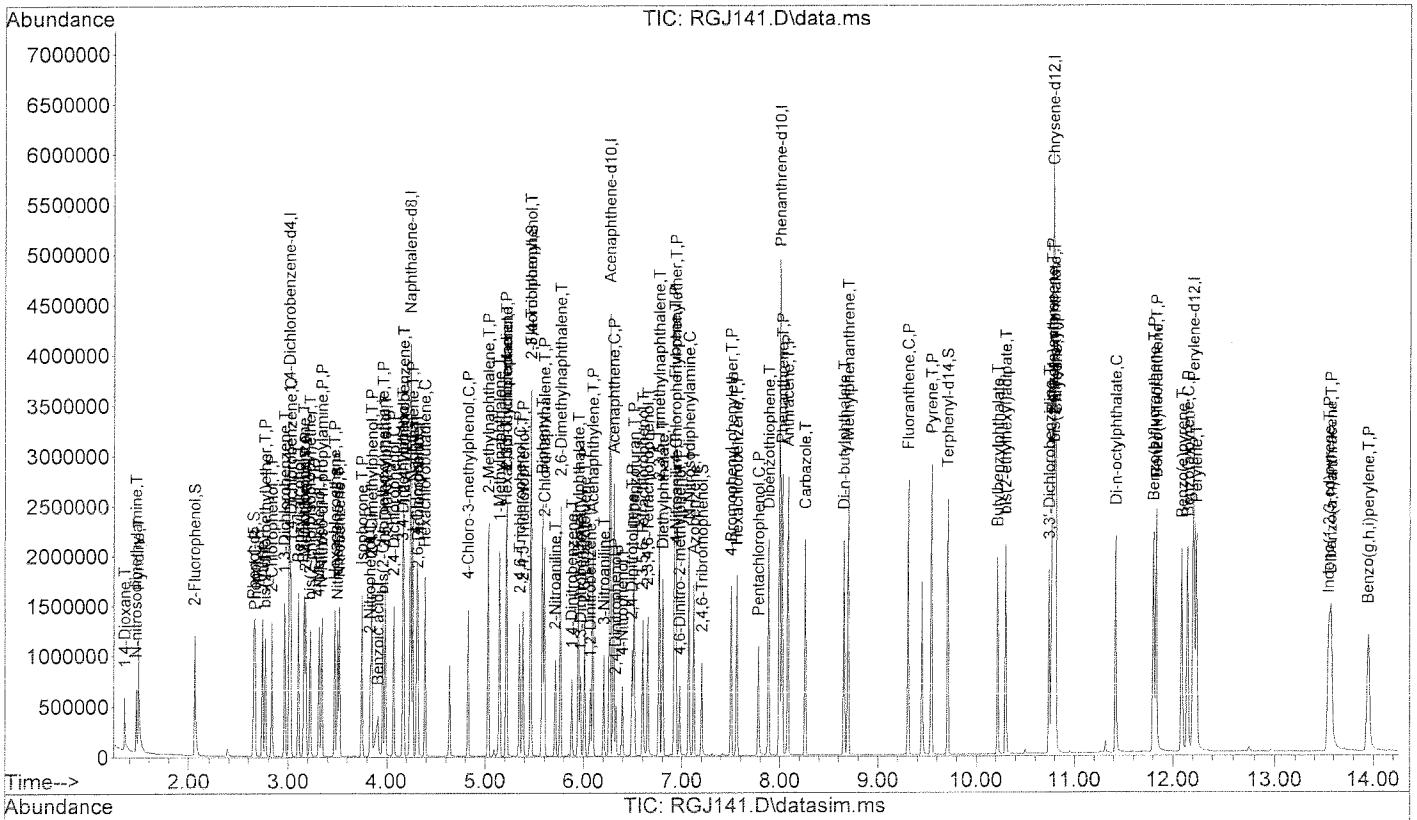
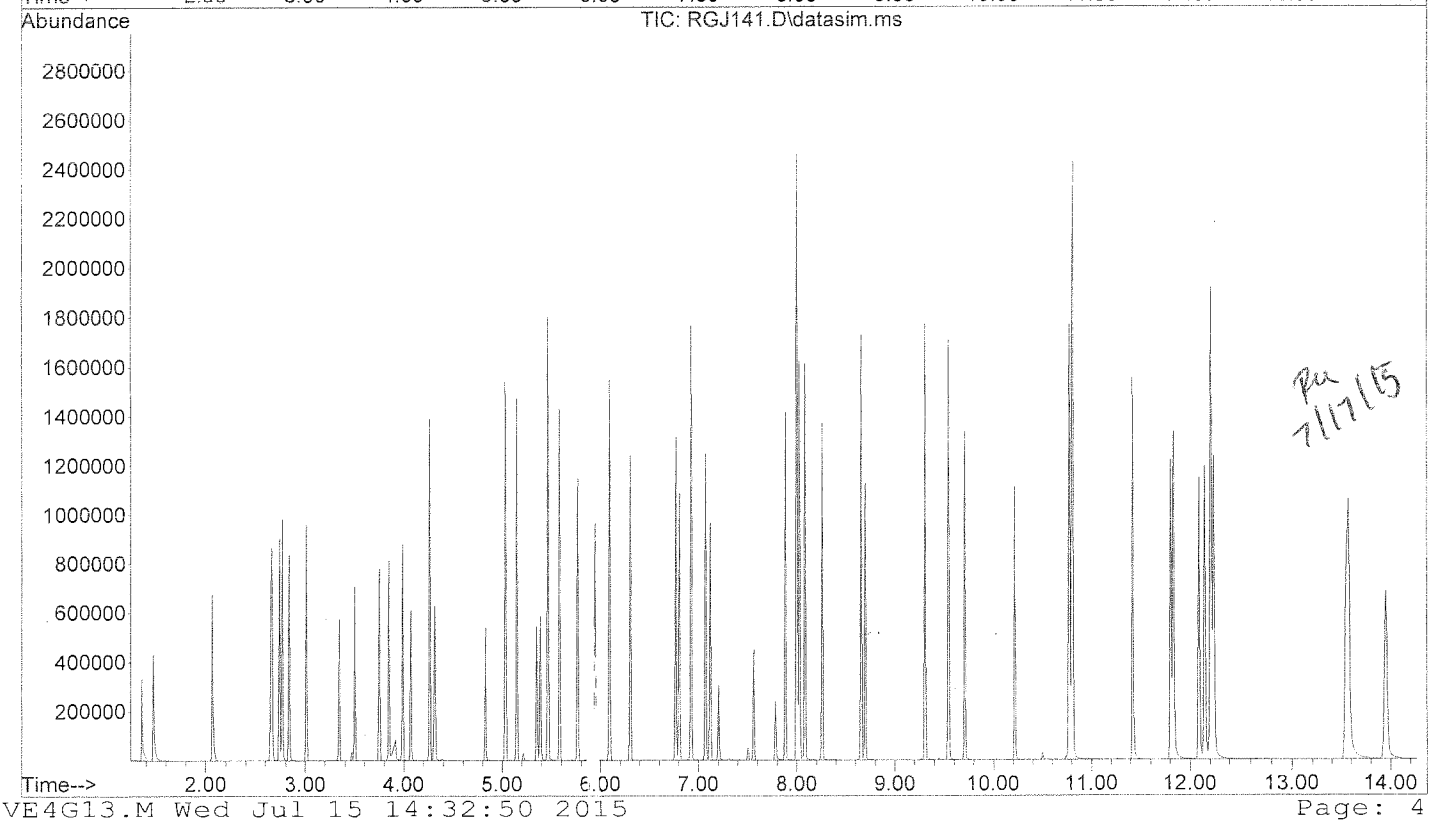
Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ141.D
Acq On : 13 Jul 2015 19:13
Sample : SVE4G136
Misc : 20PPM
Integrator: RTE
Quant Time: Jul 15 14:32:30 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 16
Operator: KVu
Inst : E4
Multiplr: 1.00





Pu 7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ140.D
Acq On : 13 Jul 2015 18:54
Sample : SVE4G135
Misc : 25PPM
Integrator: RTE
Quant Time: Jul 15 14:31:57 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 15
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	418611	40.00	ppm	0.00
21) Naphthalene-d8	4.239	136	1549894	40.00	ppm	0.00
41) Acenaphthene-d10	6.265	164	929511	40.00	ppm	0.00
71) Phenanthrene-d10	8.004	188	1635650	40.00	ppm	0.00
87) Chrysene-d12	10.786	240	1728950	40.00	ppm	0.00
97) Perylene-d12	12.212	264	1540741	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.061	112	345180	25.32	ppm	0.00
Spiked Amount 30.000			Recovery	=	84.40%	
6) Phenol-d5	2.654	99	414744	25.13	ppm	0.00
Spiked Amount 30.000			Recovery	=	83.77%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.499	82	420454	25.30	ppm	0.00
Spiked Amount 10.000			Recovery	=	253.00%	
46) 2-Fluorobiphenyl	5.461	172	876596	25.16	ppm	0.00
Spiked Amount 10.000			Recovery	=	251.60%	
75) 2,4,6-Tribromophenol	7.205	330	111849	25.47	ppm	0.00
Spiked Amount 30.000			Recovery	=	84.90%	
90) Terphenyl-d14	9.711	244	969340	25.84	ppm	0.00
Spiked Amount 10.000			Recovery	=	258.40%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.352	88	151470	25.04	ppm	100
3) N-nitrosodimethylamine	1.467	74	218380	25.39	ppm	100
4) Pyridine	1.491	79	391792	25.04	ppm	100
7) Phenol	2.665	94	411421	25.10	ppm	100
8) Aniline	2.738	93	542966	25.39	ppm	100
9) bis(2-chloroethyl)ether	2.764	93	337821	25.26	ppm	100
10) 2-Chlorophenol	2.832	128	375926	27.04	ppm	100
11) 1,3-Dichlorobenzene	2.962	146	415609	25.23	ppm	100
13) 1,4-Dichlorobenzene	3.025	146	417378	24.94	ppm	100
14) Benzyl alcohol	3.102	108	230322	25.29	ppm	100
15) 1,2-Dichlorobenzene	3.159	146	398621	24.90	ppm	100
16) 2-Methylphenol	3.178	107	279949	25.04	ppm	100
17) bis(2-chloroisopropyl)...	3.222	45	734923	27.51	ppm	100
18) 4-Methylphenol	3.317	107	367014	24.96	ppm	100
19) N-Nitroso-di-n-propyla...	3.341	70	261248	24.56	ppm	100
20) Hexachloroethane	3.471	117	167230	25.22	ppm	100
23) Nitrobenzene	3.519	77	429110	25.15	ppm	100
24) Isophorone	3.749	82	800412	25.45	ppm	100
25) 2-Nitrophenol	3.830	139	179787	25.81	ppm	100
26) 2,4-Dimethylphenol	3.845	107	355649	25.15	ppm	100
27) Benzoic acid	3.921	105	249180	25.74	ppm	100
28) bis(2-Chloroethoxy)met...	3.960	93	438144	25.46	ppm	100
29) 3,5-Dimethylphenol	3.984	107	410576	25.92	ppm	100
30) 2,4-Dichlorophenol	4.070	162	346180	25.97	ppm	100
31) 3,4-Dimethylphenol	4.167	107	436073	25.07	ppm	100
32) 1,2,4-Trichlorobenzene	4.172	180	367836	25.17	ppm	100
33) Naphthalene	4.263	128	1068955	25.04	ppm	100
34) 4-Chloroaniline	4.307	127	432240	25.32	ppm	100
35) 2,6-Dichlorophenol	4.316	162	301393	25.28	ppm	100
36) Hexachlorobutadiene	4.389	225	249716	25.22	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ140.D
Acq On : 13 Jul 2015 18:54
Sample : SVE4G135
Misc : 25PPM
Integrator: RTE
Quant Time: Jul 15 14:31:57 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 15
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 4-Chloro-3-methylphenol	4.828	107	292037	25.68	ppm	100
39) 2-Methylnaphthalene	5.034	142	738693	25.29	ppm	100
40) 1-Methylnaphthalene	5.149	142	665983	25.28	ppm	100
42) Hexachlorocyclopentadiene	5.211	237	265355	25.92	ppm	100
43) 2,3,5-Trichlorophenol	5.216	196	212314	25.39	ppm	100
44) 2,4,6-Trichlorophenol	5.350	196	231561	25.74	ppm	100
45) 2,4,5-Trichlorophenol	5.384	196	240782	25.76	ppm	100
47) 2,3,4-Trichlorophenol	5.461	196	196339	24.71	ppm	100
48) Biphenyl	5.577	154	888254	24.32	ppm	100
49) 2-Chloronaphthalene	5.601	162	742159	24.52	ppm	100
50) 2-Nitroaniline	5.716	65	202996	25.52	ppm	100
51) 2,6-Dimethylnaphthalene	5.764	156	624545	24.84	ppm	100
52) 1,4-Dinitrobenzene	5.884	168	101162	26.27	ppm	100
53) Dimethylphthalate	5.947	163	815279	25.33	ppm	100
54) 1,3-Dinitrobenzene	5.971	168	113452	25.64	ppm	100
55) 2,6-Dinitrotoluene	6.010	165	183121	25.34	ppm	100
56) 1,2-Dinitrobenzene	6.072	168	68700	25.62	ppm	100
57) Acenaphthylene	6.097	152	1270604	27.04	ppm	100
58) 3-Nitroaniline	6.207	138	180108	25.80	ppm	100
59) Acenaphthene	6.303	153	783940	25.25	ppm	100
60) 2,4-Dinitrophenol	6.332	184	77057	25.45	ppm	100
61) 4-Nitrophenol	6.394	109	94761	26.10	ppm	100
62) 2,4-Dinitrotoluene	6.495	165	242437	25.91	ppm	100
63) Dibenzofuran	6.514	168	1003064	25.29	ppm	100
64) 2,3,5,6-Tetrachlorophenol	6.600	230	177082	26.17	ppm	100
65) 2,3,4,6-Tetrachlorophenol	6.653	232	237811	25.69	ppm	100
66) 2,3,5-Trimethylnaphtha...	6.767	170	598445	25.30	ppm	100
67) Diethylphthalate	6.804	149	826164	25.51	ppm	100
68) Fluorene	6.926	166	828129	25.28	ppm	100
69) 4-Chlorophenyl-phenyle...	6.936	204	435551	25.50	ppm	100
70) 4-Nitroaniline	6.945	138	181745	26.57	ppm	100
72) 4,6-Dinitro-2-methylph...	6.978	198	120618	24.90	ppm	100
73) N-Nitrosodiphenylamine	7.072	169	647924	25.30	ppm	100
74) Azobenzene	7.120	77	764171	25.23	ppm	100
76) 4-Bromophenyl-phenylether	7.504	248	255328	25.25	ppm	100
77) Hexachlorobenzene	7.561	284	267604	25.12	ppm	100
78) Pentachlorophenol	7.782	266	146614	25.59	ppm	100
79) Dibenzothiophene	7.886	184	1038538	24.29	ppm	100
80) Phenanthrene	8.028	178	1212196	25.15	ppm	100
82) Anthracene	8.084	178	1244467	25.25	ppm	100
83) Carbazole	8.263	167	1015567	25.60	ppm	100
84) Di-n-butylphthalate	8.659	149	1303437	25.68	ppm	100
85) 1-Methylphenanthrene	8.698	192	850185	25.24	ppm	100
86) Fluoranthene	9.307	202	1329487	25.19	ppm	100
89) Pyrene	9.543	202	1394156	25.13	ppm	100
91) Butylbenzylphthalate	10.218	149	530988	26.69	ppm	100
92) bis(2-ethylhexyl)adipate	10.299	129	421186	26.72	ppm	100
93) 3,3'-Dichlorobenzidine	10.742	252	425013	26.63	ppm	100
94) Benzo(a)anthracene	10.771	228	1301482	25.29	ppm	100
95) Chrysene	10.810	228	1261197	25.30	ppm	100
96) bis(2-Ethylhexyl)phtha...	10.800	149	794729	26.36	ppm	100
98) Di-n-octylphthalate	11.421	149	1311092	27.31	ppm	100
99) Benzo(b)fluoranthene	11.805	252	1180390	25.74	ppm	100
100) Benzo(k)fluoranthene	11.834	252	1259255	25.89	ppm	100
101) Benzo(e)pyrene	12.090	252	1051649	25.63	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ140.D
Acq On : 13 Jul 2015 18:54
Sample : SVE4G135
Misc : 25PPM
Integrator: RTE
Quant Time: Jul 15 14:31:57 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 15
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) Benzo(a)pyrene	12.149	252	1154607	26.14 ppm	100
103) Perylene	12.241	252	1064327	25.56 ppm	100
104) Indeno(1,2,3-cd)pyrene	13.552	276	1337376	26.18 ppm	100
105) Dibenzo(a,h)anthracene	13.577	278	1115788	26.11 ppm	100
106) Benzo(g,h,i)perylene	13.955	276	1203740	26.27 ppm	100

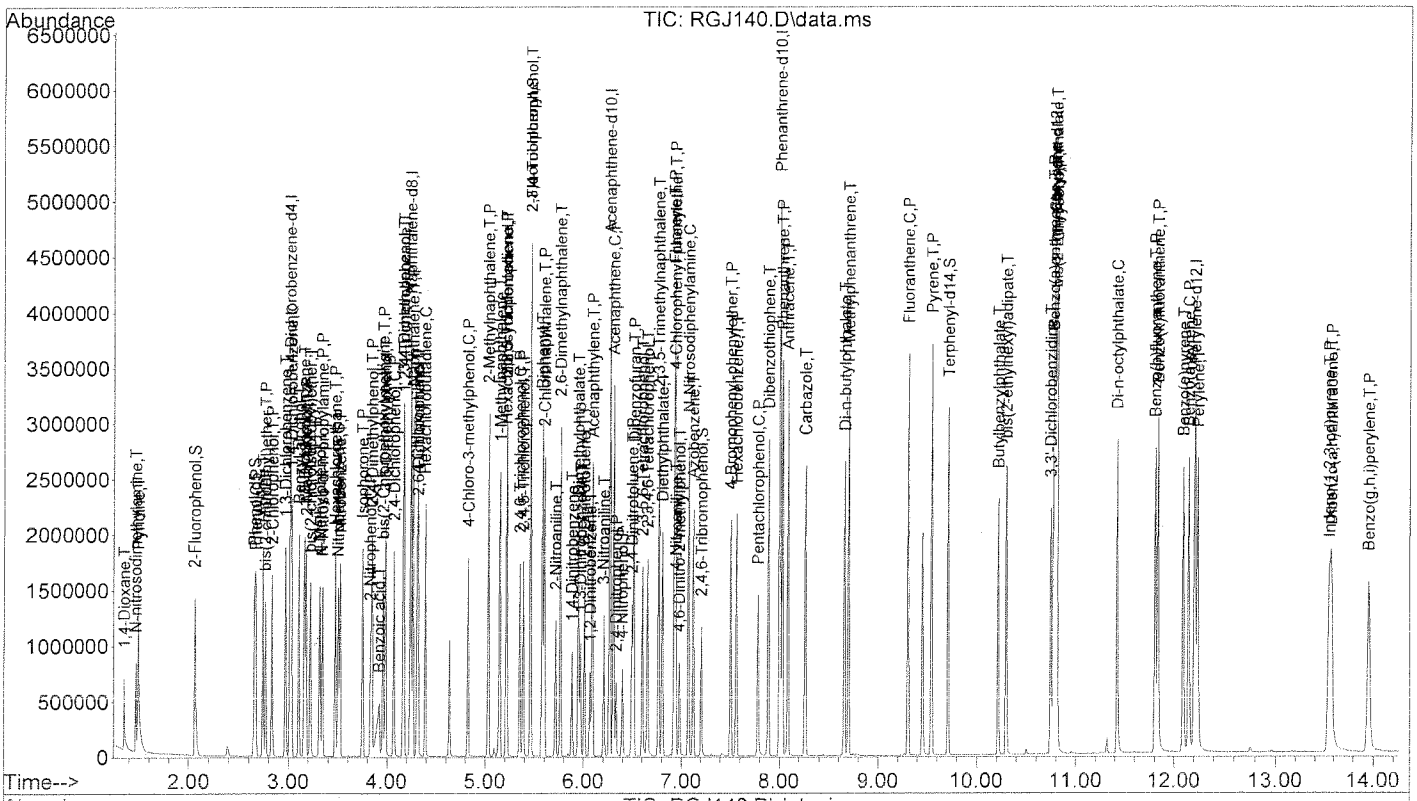
(#) = qualifier out of range (m) = manual integration (+) = signals summed

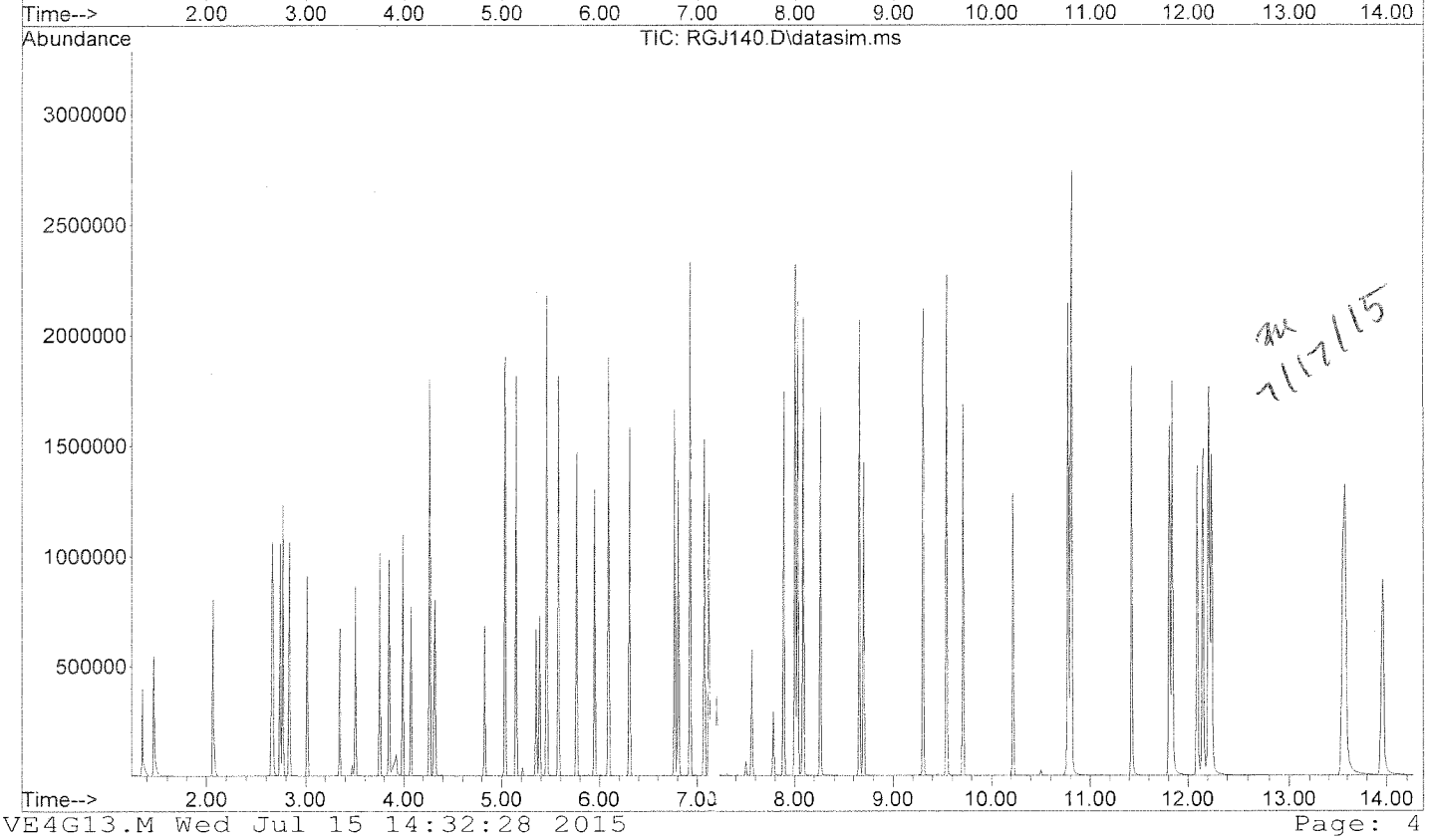
RW 7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ140.D
Acq On : 13 Jul 2015 18:54
Sample : SVE4G135
Misc : 25PPM
Integrator: RTE
Quant Time: Jul 15 14:31:57 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 15
Operator: KVu
Inst : E4
Multiplr: 1.00





JK 7/17/15

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ139.D
Acq On : 13 Jul 2015 18:34
Sample : SVE4G134
Misc : 40PPM
Integrator: RTE
Quant Time: Jul 15 14:31:33 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 14
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	416082	40.00	ppm	0.00
21) Naphthalene-d8	4.244	136	1559586	40.00	ppm	0.00
41) Acenaphthene-d10	6.265	164	937533	40.00	ppm	0.00
71) Phenanthrene-d10	8.004	188	1657201	40.00	ppm	0.00
87) Chrysene-d12	10.785	240	1812375	40.00	ppm	0.00
97) Perylene-d12	12.216	264	1615755	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.065	112	532484	39.30	ppm	0.00
Spiked Amount 30.000			Recovery	=	131.00%	
6) Phenol-d5	2.654	99	645782	39.36	ppm	0.00
Spiked Amount 30.000			Recovery	=	131.20%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.504	82	657206	39.29	ppm	0.00
Spiked Amount 10.000			Recovery	=	392.90%	
46) 2-Fluorobiphenyl	5.461	172	1355108	38.56	ppm	0.00
Spiked Amount 10.000			Recovery	=	385.60%	
75) 2,4,6-Tribromophenol	7.205	330	182914	41.11	ppm	0.00
Spiked Amount 30.000			Recovery	=	137.03%	
90) Terphenyl-d14	9.711	244	1531270	38.95	ppm	0.00
Spiked Amount 10.000			Recovery	=	389.50%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.352	88	228680	38.03	ppm	98
3) N-nitrosodimethylamine	1.467	74	345133	40.38	ppm	99
4) Pyridine	1.491	79	607794	39.08	ppm	99
7) Phenol	2.665	94	642809	39.46	ppm	100
8) Aniline	2.738	93	839231	39.49	ppm	99
9) bis(2-chloroethyl)ether	2.769	93	519228	39.05	ppm	100
10) 2-Chlorophenol	2.831	128	529645	38.33	ppm	93
11) 1,3-Dichlorobenzene	2.967	146	641939	39.21	ppm	99
13) 1,4-Dichlorobenzene	3.025	146	650813	39.12	ppm	98
14) Benzyl alcohol	3.102	108	360846	39.86	ppm	100
15) 1,2-Dichlorobenzene	3.159	146	621447	39.05	ppm	99
16) 2-Methylphenol	3.178	107	440125	39.61	ppm	91
17) bis(2-chloroisopropyl)...	3.226	45	984328	37.07	ppm	96
18) 4-Methylphenol	3.317	107	582247	39.84	ppm	99
19) N-Nitroso-di-n-propyla...	3.346	70	410016	38.79	ppm	90
20) Hexachloroethane	3.471	117	260299	39.49	ppm	99
23) Nitrobenzene	3.523	77	668700	38.95	ppm	99
24) Isophorone	3.754	82	1255122	39.65	ppm	95
25) 2-Nitrophenol	3.835	139	286976	40.95	ppm	98
26) 2,4-Dimethylphenol	3.849	107	552762	38.85	ppm	100
27) Benzoic acid	3.945	105	417390	42.86	ppm	100
28) bis(2-Chloroethoxy)met...	3.960	93	679171	39.23	ppm	100
29) 3,5-Dimethylphenol	3.988	107	650036	40.79	ppm	99
30) 2,4-Dichlorophenol	4.070	162	483933	36.08	ppm	100
31) 3,4-Dimethylphenol	4.167	107	678321	38.76	ppm	99
32) 1,2,4-Trichlorobenzene	4.176	180	572385	38.92	ppm	100
33) Naphthalene	4.263	128	1658460	38.61	ppm	100
34) 4-Chloroaniline	4.311	127	665854	38.76	ppm	99
35) 2,6-Dichlorophenol	4.321	162	468070	39.02	ppm	99
36) Hexachlorobutadiene	4.389	225	383408	38.48	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ139.D
Acq On : 13 Jul 2015 18:34
Sample : SVE4G134
Misc : 40PPM
Integrator: RTE
Quant Time: Jul 15 14:31:33 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 14
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 4-Chloro-3-methylphenol	4.832	107	454055	39.68	ppm	100
39) 2-Methylnaphthalene	5.033	142	1149804	39.13	ppm	100
40) 1-Methylnaphthalene	5.148	142	1034556	39.03	ppm	100
42) Hexachlorocyclopentadiene	5.216	237	419521	40.63	ppm	99
43) 2,3,5-Trichlorophenol	5.220	196	335012	39.71	ppm	99
44) 2,4,6-Trichlorophenol	5.350	196	369449	40.72	ppm	100
45) 2,4,5-Trichlorophenol	5.384	196	380918	40.40	ppm	99
47) 2,3,4-Trichlorophenol	5.466	196	334621	41.75	ppm	92
48) Biphenyl	5.582	154	1390254	37.74	ppm	99
49) 2-Chloronaphthalene	5.601	162	1264923	41.43	ppm	95
50) 2-Nitroaniline	5.721	65	320707	39.98	ppm	100
51) 2,6-Dimethylnaphthalene	5.769	156	975763	38.47	ppm	98
52) 1,4-Dinitrobenzene	5.884	168	165397	42.59	ppm	98
53) Dimethylphthalate	5.952	163	1286043	39.61	ppm	100
54) 1,3-Dinitrobenzene	5.976	168	180230	40.38	ppm	97
55) 2,6-Dinitrotoluene	6.014	165	293102	40.22	ppm	98
56) 1,2-Dinitrobenzene	6.077	168	108380	40.08	ppm	97
57) Acenaphthylene	6.096	152	1803852	38.06	ppm	96
58) 3-Nitroaniline	6.212	138	287135	40.78	ppm	97
59) Acenaphthene	6.308	153	1218920	38.93	ppm	100
60) 2,4-Dinitrophenol	6.336	184	128194	40.69	ppm	97
61) 4-Nitrophenol	6.404	109	148114	40.45	ppm	97
62) 2,4-Dinitrotoluene	6.499	165	383886	40.68	ppm	99
63) Dibenzofuran	6.514	168	1556237	38.90	ppm	100
64) 2,3,5,6-Tetrachlorophenol	6.605	230	276336	40.49	ppm	98
65) 2,3,4,6-Tetrachlorophenol	6.658	232	379608	40.66	ppm	100
66) 2,3,5-Trimethylnaphtha...	6.771	170	937971	39.32	ppm	99
67) Diethylphthalate	6.809	149	1276441	39.08	ppm	99
68) Fluorene	6.931	166	1296872	39.25	ppm	100
69) 4-Chlorophenyl-phenyle...	6.936	204	677550	39.34	ppm	99
70) 4-Nitroaniline	6.950	138	288884	41.87	ppm	100
72) 4,6-Dinitro-2-methylph...	6.987	198	205687	40.70	ppm	98
73) N-Nitrosodiphenylamine	7.077	169	1020403	39.32	ppm	100
74) Azobenzene	7.124	77	1195960	38.97	ppm	100
76) 4-Bromophenyl-phenylether	7.504	248	404457	39.47	ppm	98
77) Hexachlorobenzene	7.565	284	426437	39.51	ppm	98
78) Pentachlorophenol	7.782	266	244780	42.17	ppm	96
79) Dibenzothiophene	7.886	184	1806738	41.70	ppm	96
80) Phenanthrene	8.032	178	1906104	39.04	ppm	100
82) Anthracene	8.089	178	1952091	39.09	ppm	100
83) Carbazole	8.263	167	1577951	39.25	ppm	100
84) Di-n-butylphthalate	8.659	149	2052281	39.91	ppm	99
85) 1-Methylphenanthrene	8.702	192	1338616	39.22	ppm	99
86) Fluoranthene	9.306	202	2134973	39.93	ppm	99
89) Pyrene	9.547	202	2332268	40.10	ppm	98
91) Butylbenzylphthalate	10.218	149	860298	41.26	ppm	100
92) bis(2-ethylhexyl)adipate	10.299	129	677928	41.03	ppm	100
93) 3,3'-Dichlorobenzidine	10.746	252	699122	41.79	ppm	99
94) Benzo(a)anthracene	10.776	228	2135873	39.59	ppm	100
95) Chrysene	10.814	228	2025904	38.77	ppm	99
96) bis(2-Ethylhexyl)phtha...	10.800	149	1280443	40.52	ppm	99
98) Di-n-octylphthalate	11.426	149	2147340	42.65	ppm	100
99) Benzo(b)fluoranthene	11.810	252	1929686	40.13	ppm	99
100) Benzo(k)fluoranthene	11.844	252	2041504	40.02	ppm	100
101) Benzo(e)pyrene	12.095	252	1729192	40.18	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ139.D
Acq On : 13 Jul 2015 18:34
Sample : SVE4G134
Misc : 40PPM
Integrator: RTE
Quant Time: Jul 15 14:31:33 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 14
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) Benzo(a)pyrene	12.158	252	1876571	40.51 ppm	99
103) Perylene	12.246	252	1749429	40.06 ppm	100
104) Indeno(1,2,3-cd)pyrene	13.562	276	2212773	41.31 ppm	100
105) Dibenzo(a,h)anthracene	13.586	278	1870752	41.75 ppm	98
106) Benzo(g,h,i)perylene	13.970	276	1967003	40.93 ppm	98

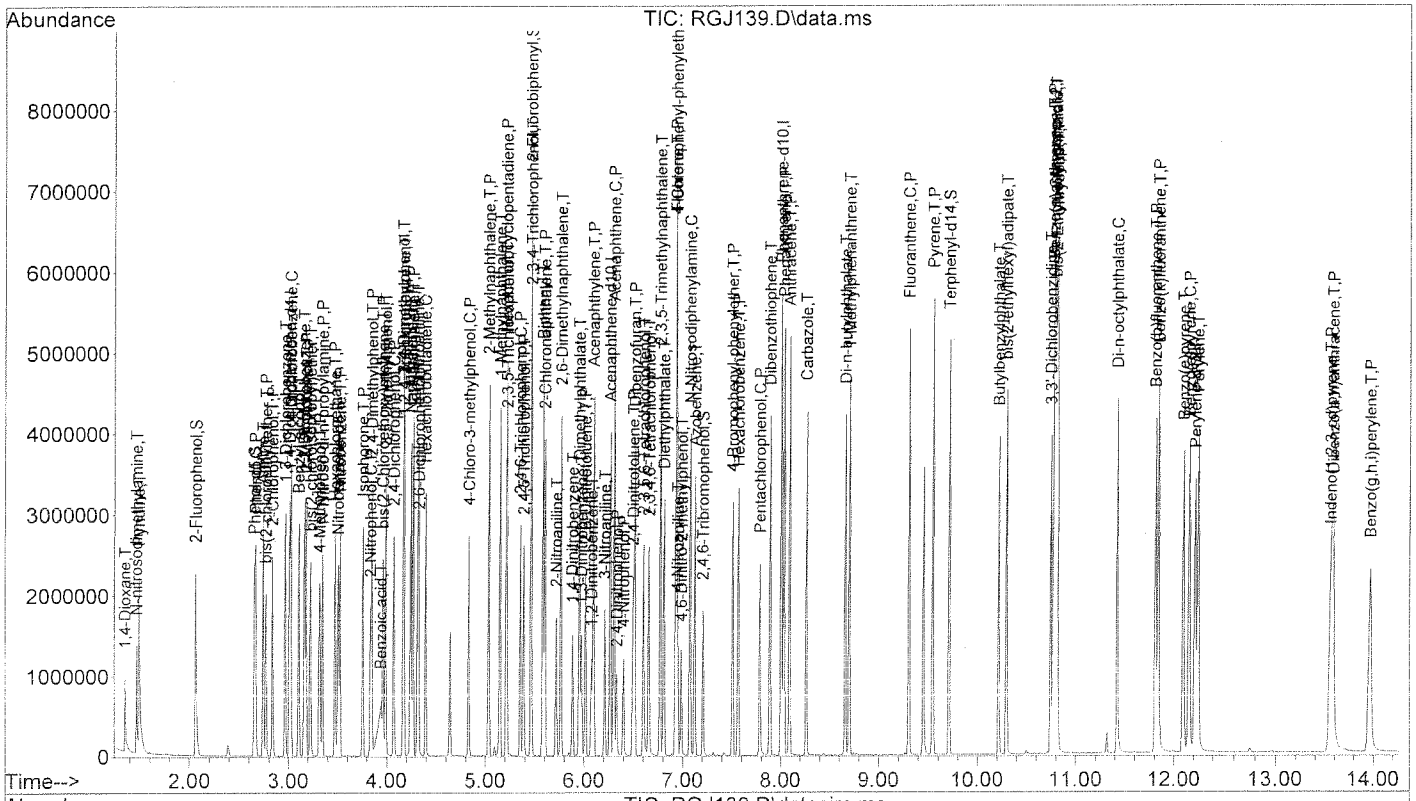
(#) = qualifier out of range (m) = manual integration (+) = signals summed

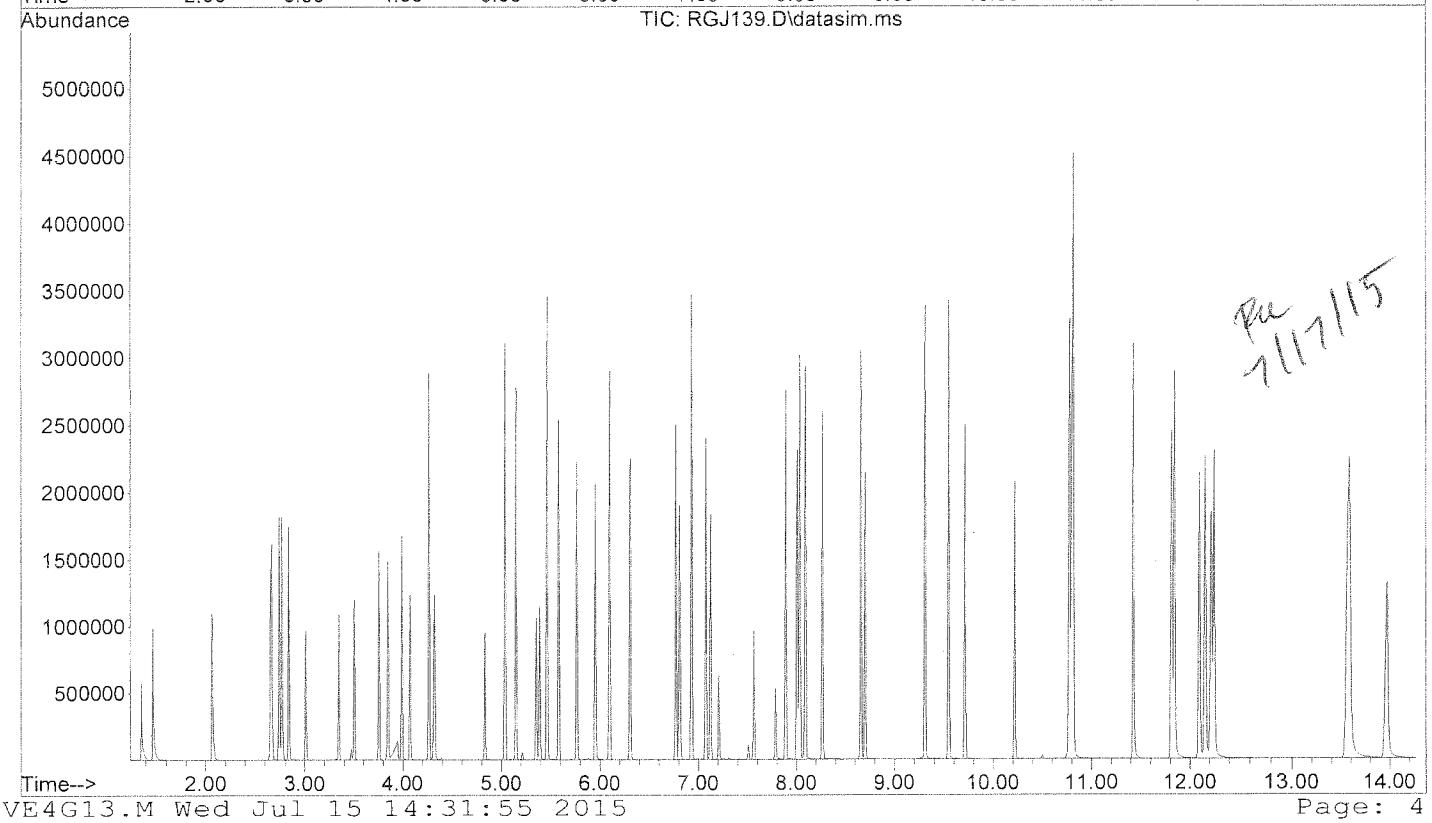
pm 7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ139.D
Acq On : 13 Jul 2015 18:34
Sample : SVE4G134
Misc : 40PPM
Integrator: RTE
Quant Time: Jul 15 14:31:33 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 14
Operator: KVu
Inst : E4
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ138.D
Acq On : 13 Jul 2015 18:14
Sample : SVE4G133
Misc : 50PPM
Integrator: RTE
Quant Time: Jul 15 14:28:44 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 13
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	421249	40.00	ppm	0.00
21) Naphthalene-d8	4.244	136	1563829	40.00	ppm	0.00
41) Acenaphthene-d10	6.269	164	951077	40.00	ppm	0.00
71) Phenanthrene-d10	8.004	188	1679341	40.00	ppm	0.00
87) Chrysene-d12	10.790	240	1808520	40.00	ppm	0.00
97) Perylene-d12	12.216	264	1619370	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.065	112	675330	49.23	ppm	0.00
Spiked Amount 30.000			Recovery	=	164.10%	
6) Phenol-d5	2.654	99	817258	49.20	ppm	0.00
Spiked Amount 30.000			Recovery	=	164.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.504	82	832589	49.65	ppm	0.00
Spiked Amount 10.000			Recovery	=	496.50%	
46) 2-Fluorobiphenyl	5.461	172	1728627	48.48	ppm	0.00
Spiked Amount 10.000			Recovery	=	484.80%	
75) 2,4,6-Tribromophenol	7.210	330	234286	51.96	ppm	0.00
Spiked Amount 30.000			Recovery	=	173.20%	
90) Terphenyl-d14	9.711	244	1962711	50.02	ppm	0.00
Spiked Amount 10.000			Recovery	=	500.20%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.352	88	295054	48.46	ppm	99
3) N-nitrosodimethylamine	1.467	74	440235	50.87	ppm	98
4) Pyridine	1.491	79	777339	49.37	ppm	99
7) Phenol	2.670	94	810311	49.13	ppm	99
8) Aniline	2.738	93	1053420	48.96	ppm	100
9) bis(2-chloroethyl)ether	2.769	93	664486	49.37	ppm	98
10) 2-Chlorophenol	2.831	128	735090	52.54	ppm	99
11) 1,3-Dichlorobenzene	2.967	146	818063	49.36	ppm	99
13) 1,4-Dichlorobenzene	3.025	146	822413	48.83	ppm	99
14) Benzyl alcohol	3.106	108	458641	50.05	ppm	99
15) 1,2-Dichlorobenzene	3.159	146	790358	49.06	ppm	100
16) 2-Methylphenol	3.178	107	552546	49.12	ppm	92
17) bis(2-chloroisopropyl)...	3.226	45	1374088	51.12	ppm	99
18) 4-Methylphenol	3.322	107	737270	49.83	ppm	94
19) N-Nitroso-di-n-propyla...	3.351	70	574710	53.70	ppm	92
20) Hexachloroethane	3.471	117	328572	49.23	ppm	99
23) Nitrobenzene	3.523	77	841060	48.86	ppm	99
24) Isophorone	3.758	82	1602580	50.49	ppm	95
25) 2-Nitrophenol	3.835	139	349009	49.66	ppm	99
26) 2,4-Dimethylphenol	3.849	107	697773	48.90	ppm	100
27) Benzoic acid	3.955	105	533744	54.65	ppm	99
28) bis(2-Chloroethoxy)met...	3.964	93	839648	48.36	ppm	99
29) 3,5-Dimethylphenol	3.988	107	832497	52.10	ppm	98
30) 2,4-Dichlorophenol	4.075	162	692031	51.45	ppm	90
31) 3,4-Dimethylphenol	4.171	107	860023	49.00	ppm	98
32) 1,2,4-Trichlorobenzene	4.176	180	718746	48.73	ppm	99
33) Naphthalene	4.268	128	2080802	48.31	ppm	100
34) 4-Chloroaniline	4.311	127	840215	48.78	ppm	100
35) 2,6-Dichlorophenol	4.321	162	596783	49.62	ppm	99
36) Hexachlorobutadiene	4.393	225	489695	49.02	ppm	98

7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ138.D
Acq On : 13 Jul 2015 18:14
Sample : SVE4G133
Misc : 50PPM
Integrator: RTE
Quant Time: Jul 15 14:28:44 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 13
Operator: KVu
Inst : E4
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38)	4-Chloro-3-methylphenol	4.832	107	580623	50.60	ppm	99
39)	2-Methylnaphthalene	5.034	142	1444861	49.03	ppm	100
40)	1-Methylnaphthalene	5.149	142	1302391	49.00	ppm	99
42)	Hexachlorocyclopentadiene	5.216	237	530424	50.64	ppm	99
43)	2,3,5-Trichlorophenol	5.220	196	470283	54.96	ppm	93
44)	2,4,6-Trichlorophenol	5.350	196	466930	50.73	ppm	100
45)	2,4,5-Trichlorophenol	5.389	196	484389	50.65	ppm	100
47)	2,3,4-Trichlorophenol	5.466	196	428119	52.65	ppm	95
48)	Biphenyl	5.582	154	1766774	47.28	ppm	99
49)	2-Chloronaphthalene	5.606	162	1600302	51.67	ppm	95
50)	2-Nitroaniline	5.721	65	407777	50.11	ppm	100
51)	2,6-Dimethylnaphthalene	5.769	156	1368689	53.19	ppm	91
52)	1,4-Dinitrobenzene	5.889	168	201304	51.09	ppm	98
53)	Dimethylphthalate	5.957	163	1620992	49.22	ppm	100
54)	1,3-Dinitrobenzene	5.976	168	229029	50.59	ppm	97
55)	2,6-Dinitrotoluene	6.019	165	367542	49.71	ppm	99
56)	1,2-Dinitrobenzene	6.082	168	137593	50.16	ppm	86
57)	Acenaphthylene	6.101	152	2284741	47.51	ppm	96
58)	3-Nitroaniline	6.217	138	360144	50.42	ppm	97
59)	Acenaphthene	6.308	153	1540203	48.49	ppm	100
60)	2,4-Dinitrophenol	6.337	184	161951	50.18	ppm	99
61)	4-Nitrophenol	6.408	109	192695	51.88	ppm	98
62)	2,4-Dinitrotoluene	6.504	165	484853	50.64	ppm	100
63)	Dibenzofuran	6.519	168	1975643	48.68	ppm	100
64)	2,3,5,6-Tetrachlorophenol	6.605	230	358885	51.84	ppm	99
65)	2,3,4,6-Tetrachlorophenol	6.658	232	479252	50.60	ppm	99
66)	2,3,5-Trimethylnaphtha...	6.771	170	1196691	49.45	ppm	99
67)	Diethylphthalate	6.809	149	1625200	49.04	ppm	100
68)	Fluorene	6.931	166	1638380	48.88	ppm	100
69)	4-Chlorophenyl-phenyle...	6.936	204	856661	49.03	ppm	100
70)	4-Nitroaniline	6.954	138	366682	52.39	ppm	99
72)	4,6-Dinitro-2-methylph...	6.987	198	257829	49.92	ppm	99
73)	N-Nitrosodiphenylamine	7.077	169	1292492	49.15	ppm	100
74)	Azobenzene	7.124	77	1506212	48.44	ppm	100
76)	4-Bromophenyl-phenylether	7.508	248	516713	49.77	ppm	98
77)	Hexachlorobenzene	7.565	284	541782	49.54	ppm	97
78)	Pentachlorophenol	7.787	266	312193	53.07	ppm	97
79)	Dibenzothiophene	7.891	184	2273103	51.78	ppm	97
80)	Phenanthrene	8.032	178	2418553	48.88	ppm	100
82)	Anthracene	8.089	178	2477026	48.95	ppm	100
83)	Carbazole	8.267	167	1998049	49.05	ppm	99
84)	Di-n-butylphthalate	8.659	149	2592418	49.75	ppm	99
85)	1-Methylphenanthrene	8.703	192	1714272	49.56	ppm	100
86)	Fluoranthene	9.311	202	2692732	49.69	ppm	100
89)	Pyrene	9.547	202	2987386	51.48	ppm	98
91)	Butylbenzylphthalate	10.218	149	1081164	51.96	ppm	100
92)	bis(2-ethylhexyl)adipate	10.299	129	856822	51.97	ppm	99
93)	3,3'-Dichlorobenzidine	10.746	252	866666	51.91	ppm	99
94)	Benzo(a)anthracene	10.776	228	2687687	49.92	ppm	100
95)	Chrysene	10.814	228	2559515	49.09	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.800	149	1593211	50.52	ppm	100
98)	Di-n-octylphthalate	11.426	149	2678795	53.09	ppm	100
99)	Benzo(b)fluoranthene	11.815	252	2396941	49.73	ppm	99
100)	Benzo(k)fluoranthene	11.843	252	2576218	50.39	ppm	98
101)	Benzo(e)pyrene	12.100	252	2162487	50.14	ppm	100

7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ138.D
Acq On : 13 Jul 2015 18:14
Sample : SVE4G133
Misc : 50PPM
Integrator: RTE
Quant Time: Jul 15 14:28:44 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 13
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) Benzo(a)pyrene	12.158	252	2369300	51.03 ppm	99
103) Perylene	12.250	252	2193058	50.11 ppm	99
104) Indeno(1,2,3-cd)pyrene	13.567	276	2768757	51.58 ppm	99
105) Dibenzo(a,h)anthracene	13.586	278	2323208	51.73 ppm	100
106) Benzo(g,h,i)perylene	13.975	276	2347831	48.75 ppm	99

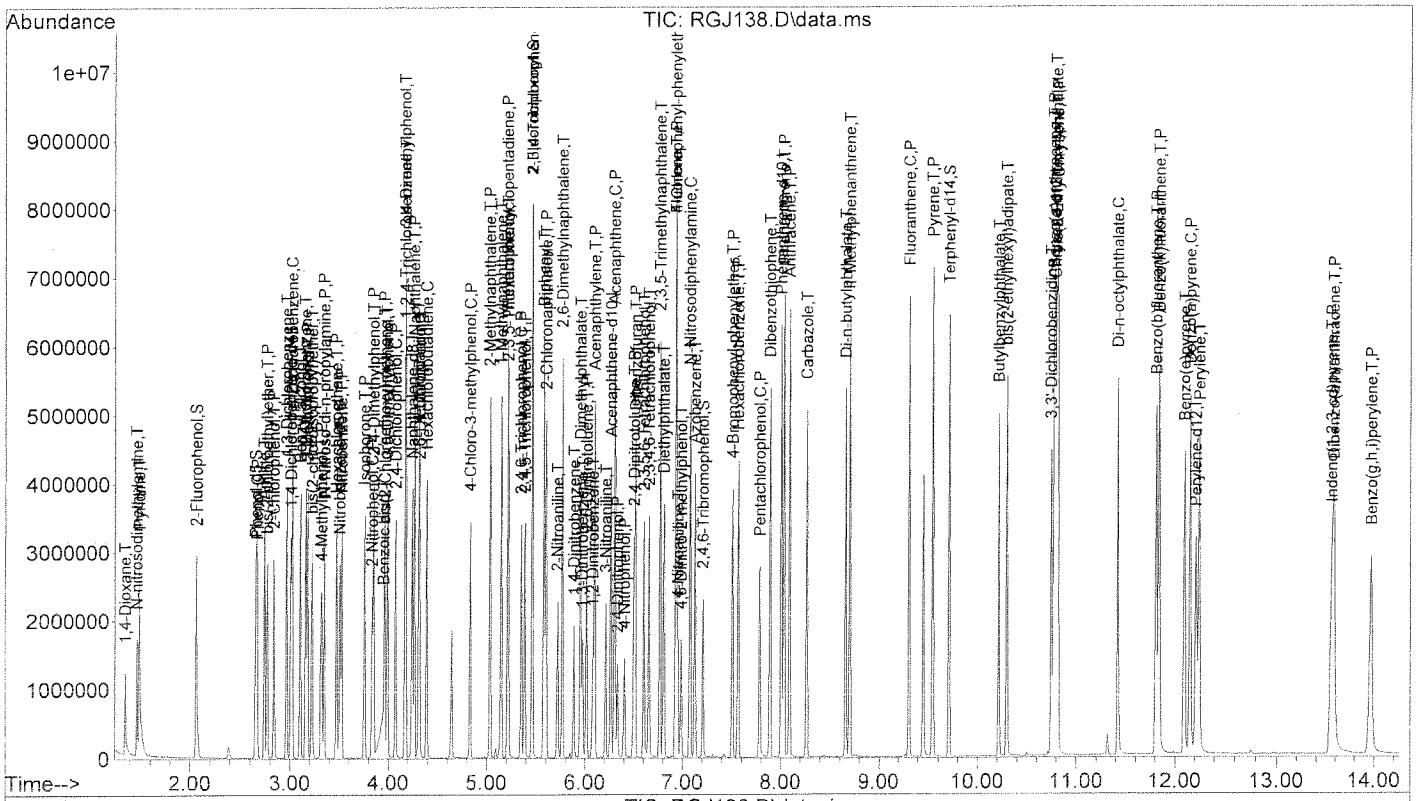
(#) = qualifier out of range (m) = manual integration (+) = signals summed

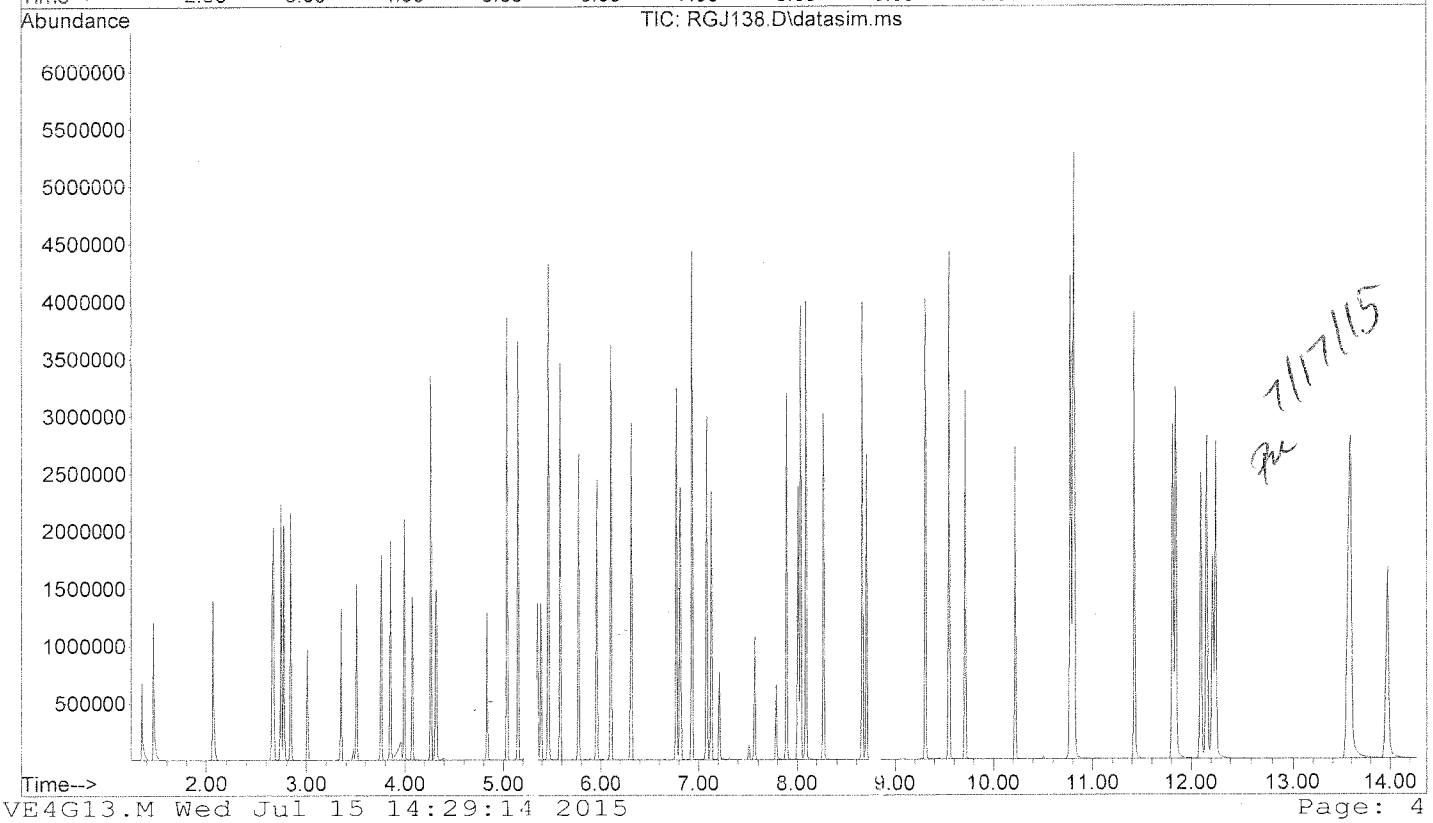
m 7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ138.D
Acq On : 13 Jul 2015 18:14
Sample : SVE4G133
Misc : 50PPM
Integrator: RTE
Quant Time: Jul 15 14:28:44 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 13
Operator: KVu
Inst : E4
Multiplr: 1.00





7/17/15

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ137.D
Acq On : 13 Jul 2015 17:55
Sample : SVE4G132
Misc : 80PPM
Integrator: RTE
Quant Time: Jul 15 14:28:30 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 12
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	3.010	152	422388	40.00 ppm	0.00
21) Naphthalene-d8	4.239	136	1560731	40.00 ppm	0.00
41) Acenaphthene-d10	6.265	164	924260	40.00 ppm	0.00
71) Phenanthrene-d10	7.999	188	1607458	40.00 ppm	0.00
87) Chrysene-d12	10.781	240	1763214	40.00 ppm	0.00
97) Perylene-d12	12.207	264	1550735	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	0.000	112	0	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
6) Phenol-d5	0.000	99	0d	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
22) Nitrobenzene-d5	0.000	82	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
46) 2-Fluorobiphenyl	0.000	172	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
75) 2,4,6-Tribromophenol	0.000	330	0	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
90) Terphenyl-d14	0.000	244	0d	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
Target Compounds					Qvalue
4) Pyridine	1.491	79	1298212	82.22 ppm	99
27) Benzoic acid	3.964	105	849021	87.11 ppm	97

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

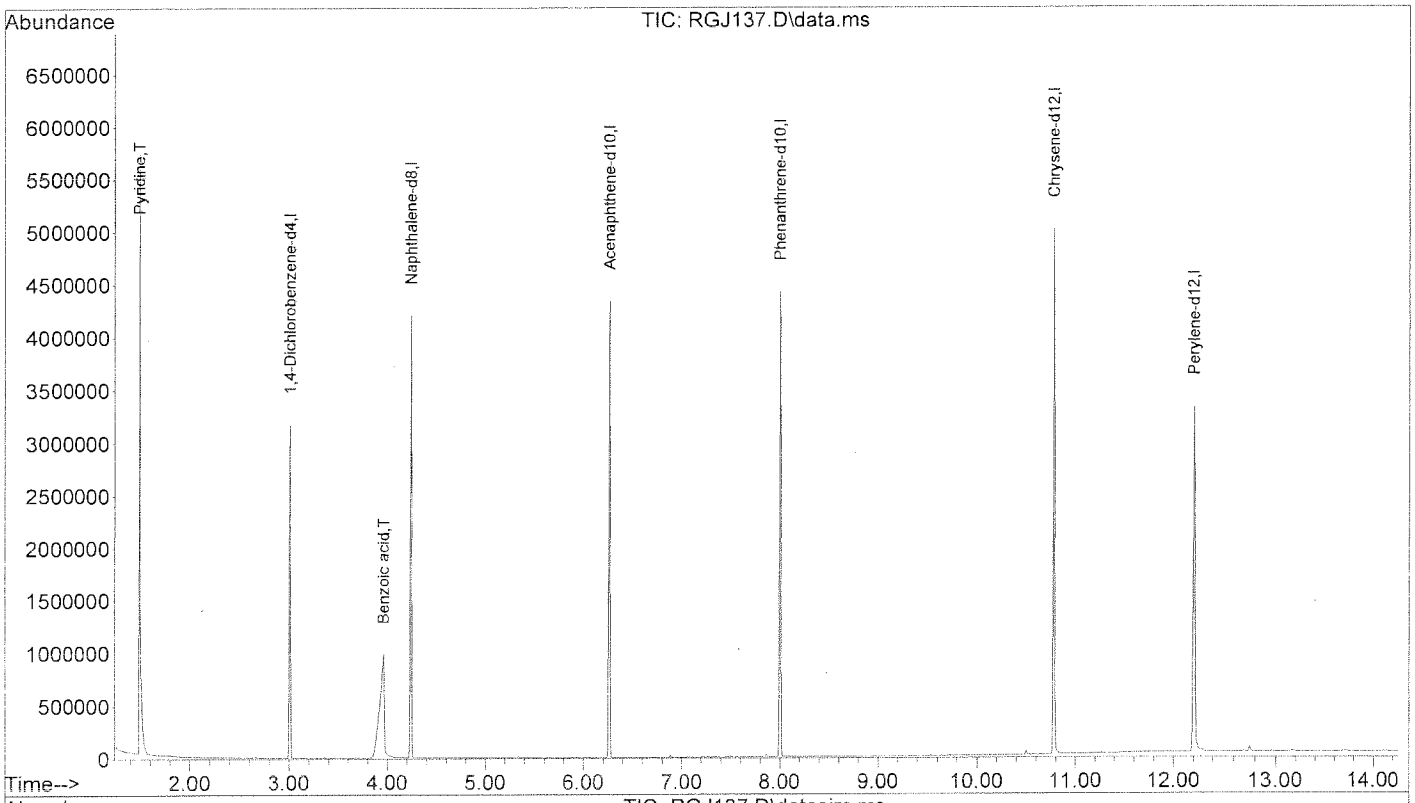
7/17/15

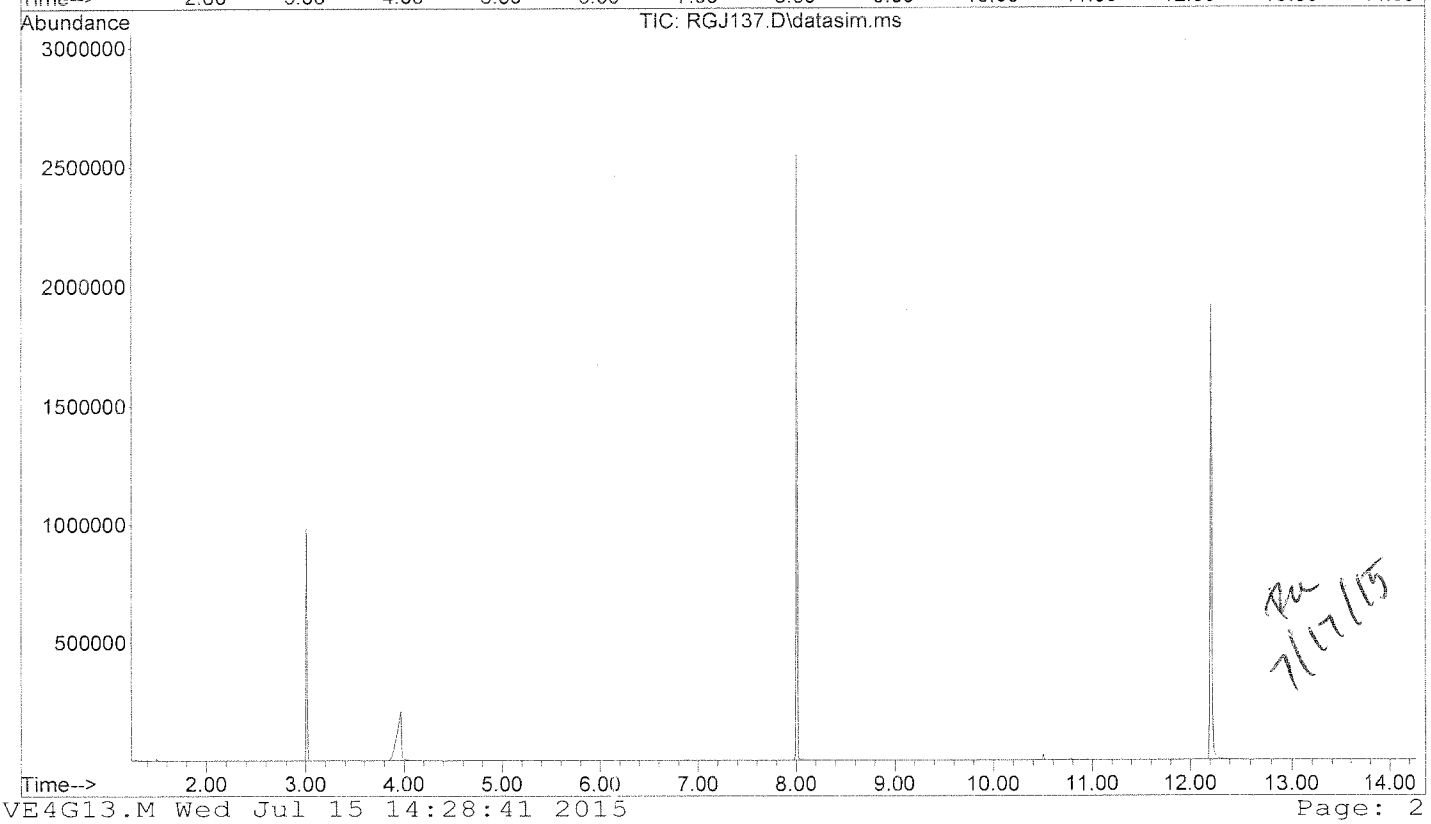
451

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ137.D
Acq On : 13 Jul 2015 17:55
Sample : SVE4G132
Misc : 80PPM
Integrator: RTE
Quant Time: Jul 15 14:28:30 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 12
Operator: KVu
Inst : E4
Multiplr: 1.00





RW 7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ136.D
Acq On : 13 Jul 2015 17:35
Sample : SVE4G131
Misc : 100PPM
Integrator: RTE
Quant Time: Jul 15 14:27:56 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 11
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	3.010	152	424431	40.00 ppm	0.00
21) Naphthalene-d8	4.239	136	1571302	40.00 ppm	0.00
41) Acenaphthene-d10	6.265	164	929907	40.00 ppm	0.00
71) Phenanthrene-d10	7.999	188	1618278	40.00 ppm	0.00
87) Chrysene-d12	10.780	240	1721513	40.00 ppm	0.00
97) Perylene-d12	12.212	264	1530458	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	0.000	112	0d	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
6) Phenol-d5	0.000	99	0d	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
22) Nitrobenzene-d5	0.000	82	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
46) 2-Fluorobiphenyl	0.000	172	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
75) 2,4,6-Tribromophenol	0.000	330	0	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
90) Terphenyl-d14	0.000	244	0d	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
Target Compounds					Qvalue
4) Pyridine	1.491	79	1554347	97.97 ppm	100
27) Benzoic acid	3.979	105	1087195	110.80 ppm	99

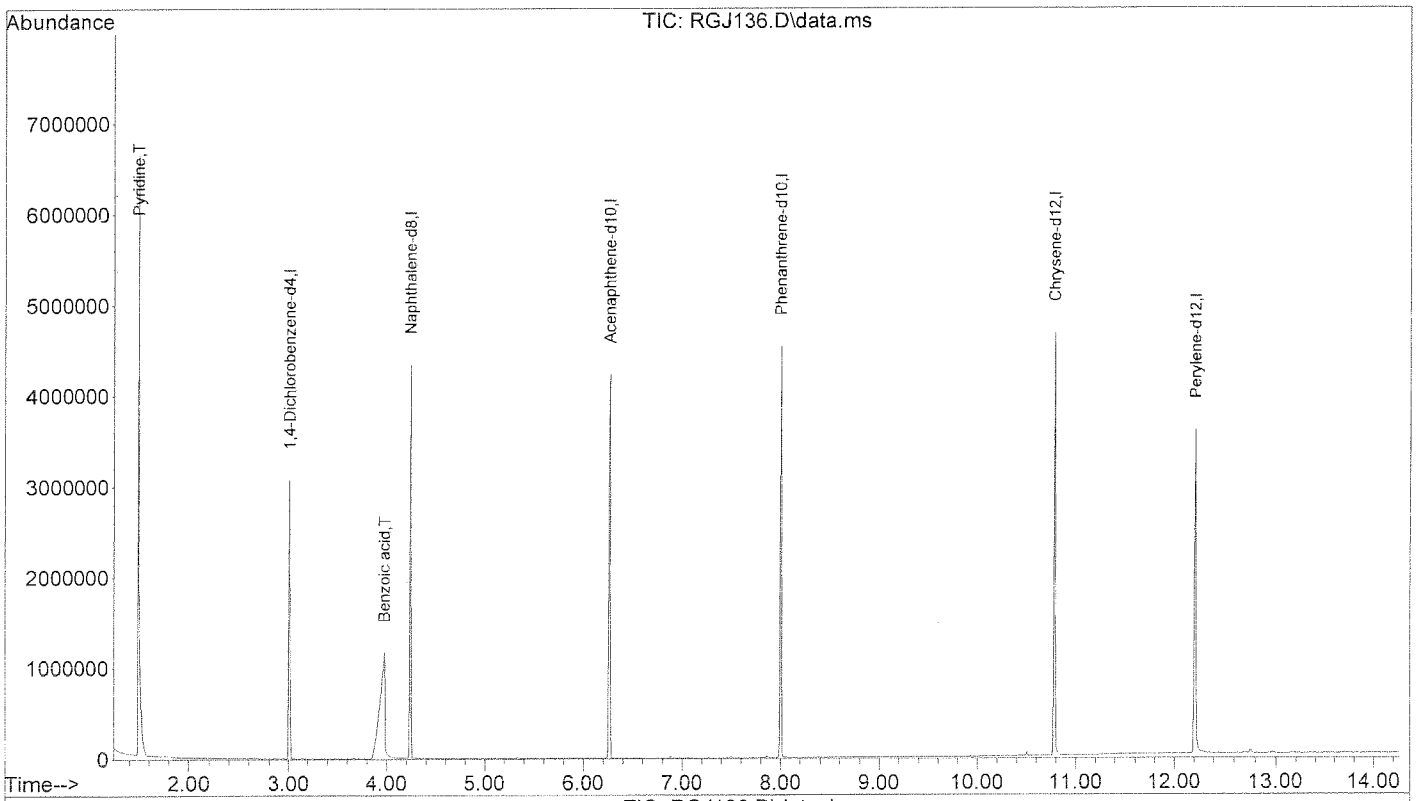
(#) = qualifier out of range (m) = manual integration (+) = signals summed

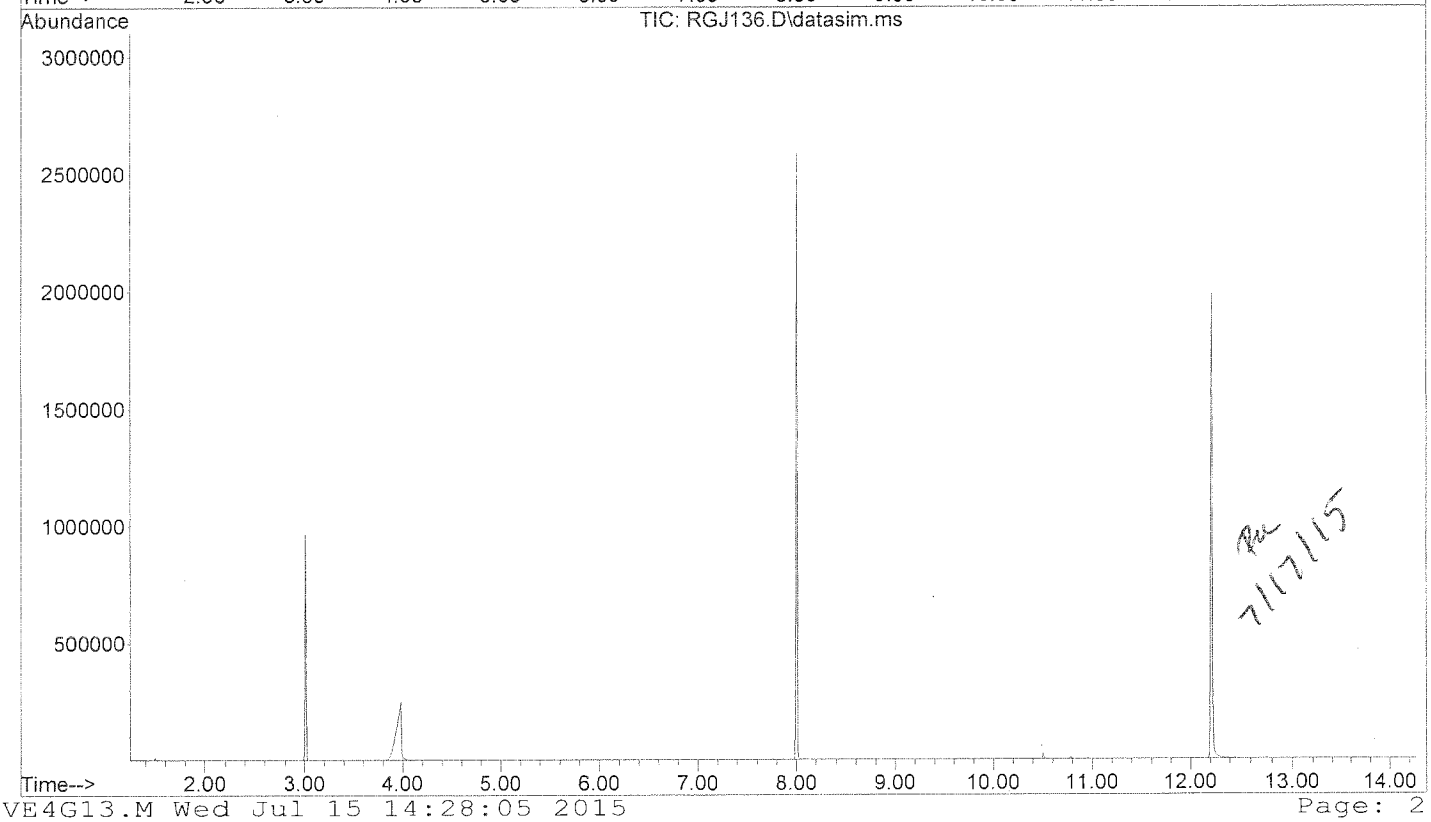
7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ136.D
Acq On : 13 Jul 2015 17:35
Sample : SVE4G131
Misc : 100PPM
Integrator: RTE
Quant Time: Jul 15 14:27:56 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 11
Operator: KVu
Inst : E4
Multiplr: 1.00





RW 7/17/15

45H

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH002
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 15I185
DFTPP Injection Date: 04/03/15
DFTPP Injection Time: 09:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	50.98
68	Less than 2% of mass 69	0.54(1.3)1
69	% of mass 198	41.45
70	Less than 2% of mass 69	0.16(0.4)1
127	10.0 - 80.0% of mass 198	49.43
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.98
275	10.0 - 60.0% of mass 198	24.60
365	Greater than 1.00% of mass 198	2.60
441	Present, but less than 24% of mass 442	11.80(16.0)2
442	Greater than 50% of mass 198	73.74
443	15.0 - 24.0% of mass 442	14.55(19.7)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD100	SVE7D031	RDH003	04/03/15	09:30
2	SSTD080	SVE7D032	RDH004	04/03/15	09:49
3	SSTD050	SVE7D033	RDH005	04/03/15	10:08
4	SSTD040	SVE7D034	RDH006	04/03/15	10:27
5	SSTD025	SVE7D035	RDH007	04/03/15	10:46
6	SSTD020	SVE7D036	RDH008	04/03/15	11:05
7	SSTD010	SVE7D037	RDH009	04/03/15	11:24
8	SSTD004	SVE7D038	RDH010	04/03/15	11:43
9	SSTD025	ISVE7D031	RDH016	04/03/15	14:02

FORM V SV OLM03.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :E7
Beginning DateTime :04/03/15 09:30
Spike Units :PPM
IC File :RDH007

Column Spec :ZB-SemiVoa ID :0.18MM
Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03

IDX	Parameters	4 11:43 RDH010	10 11:24 RDH009	20 11:05 RDH008	25 10:46 RDH007	40 10:27 RDH006	50 10:08 RDH005	80 09:49 RDH004	100 09:30 RDH003	Av_RRF	% RSD	Av_Rt_M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	0	2.8481
2	1,4-Dioxane	0.590	0.532	0.453	0.431	0.425	0.446	------	------	0.480	13.89	1.2314
3	N-nitrosodimethylamine	0.720	0.694	0.683	0.661	0.659	0.684	------	------	0.675	2.07	1.3391
4	Pyridine	1.170	1.235	1.208	1.182	1.222	1.249	1.157	1.169	1.200	2.81	1.3658
5	2-Fluorophenol	1.137	1.202	1.173	1.137	1.146	1.177	------	------	1.177	3.15	1.8271
6	Phenol-d5	1.286	1.374	1.416	1.348	1.370	1.383	------	------	1.412	3.82	2.5045
7	Phenol	1.398	1.470	1.418	1.348	1.376	1.377	------	------	1.216	3.85	2.5158
8	Aniline	1.794	1.857	1.857	1.764	1.828	1.845	------	------	1.832	2.53	2.5819
9	bis(2-chloroethyl)ether	1.173	1.150	1.138	1.094	1.131	1.135	------	------	1.129	2.38	2.5923
10	2-Chlorophenol	1.218	1.255	1.244	1.188	1.245	1.244	------	------	1.237	2.29	2.6778
11	1,3-Dichlorobenzene	1.544	1.557	1.524	1.488	1.508	1.523	------	------	1.524	1.73	2.8748
12	1,2-Dichlorobenzene-d4	------	------	------	------	------	------	------	------	0.000	0.61	2.8047
13	1,4-Dichlorobenzene	1.616	1.624	1.569	1.540	1.570	1.569	------	------	1.581	0.00	0.0000
14	Benzyl alcohol	0.769	0.819	0.800	0.779	0.791	0.797	------	------	0.792	2.02	2.8625
15	1,2-Dichlorobenzene	1.515	1.549	1.486	1.462	1.468	1.498	------	------	1.497	2.21	2.9409
16	2-Methylphenol	0.957	0.987	0.971	0.932	0.959	0.963	------	------	0.962	2.15	2.9929
17	Bis(2-chloroisopropyl)ether	2.729	2.704	2.636	2.535	2.564	2.570	------	------	2.623	1.88	3.0177
18	4-Methylphenol	1.258	1.310	1.291	1.212	1.253	1.282	------	------	1.262	3.05	3.0609
19	N-Nitroso-di-n-propylamine	0.828	0.857	0.858	0.833	0.846	0.851	------	------	0.846	2.56	3.1551
20	Hexachloroethane	0.726	0.740	0.718	0.689	0.674	0.704	------	------	0.708	1.48	3.1798
21	Naphthalene-d8	1	1	1	1	1	1	1	1	1	3.46	3.2987
22	Nitrobenzene-d5	0.362	0.369	0.362	0.354	0.370	0.365	------	------	0.363	0	2.0569
23	Nitrobenzene	0.382	0.388	0.382	0.375	0.391	0.387	------	------	0.385	1.55	3.3315
24	Isophorone	0.662	0.372	0.386	0.375	0.391	0.383	------	------	0.382	1.57	3.3799
25	2-Nitrophenol	0.160	0.744	0.732	0.726	0.756	0.752	------	------	0.729	2.77	3.5277
26	2,4-Dimethylphenol	0.335	0.167	0.177	0.174	0.183	0.177	------	------	0.175	4.68	3.6569
27	Benzoic acid	0.137	0.342	0.336	0.330	0.346	0.375	------	------	0.344	4.69	3.6797
28	bis(2-Chloroethoxy)methane	0.413	0.208	0.222	0.239	0.260	0.257	0.259	0.258	0.230	18.47	3.7638
29	2,5-Dimethylphenol	0.397	0.415	0.410	0.402	0.413	0.414	------	------	0.411	1.21	3.7853
30	2,4-Dichlorophenol	0.310	0.354	0.407	0.397	0.418	0.403	------	------	0.396	5.61	3.8141
31	1,2,4-Trichlorobenzene	0.392	0.317	0.313	0.313	0.324	0.326	------	------	0.317	1.97	3.8926
32	3,4-Dimethylphenol	0.720	0.392	0.382	0.377	0.382	0.382	------	------	0.384	1.59	3.9923
33	Naphthalene	1.092	0.728	0.725	0.712	0.721	0.726	------	------	0.423	1.65	3.9899
34	4-Chloroaniline	0.423	1.109	1.086	1.065	1.106	1.101	------	------	1.094	1.44	4.0792
35	2,6-Dichlorophenol	0.343	0.431	0.438	0.438	0.448	0.447	------	------	0.437	2.33	4.1274
36	Hexachlorobutadiene	0.310	0.321	0.319	0.308	0.328	0.321	------	------	0.317	1.80	4.1347
37	Hydroquinone	0.250	0.250	0.247	0.240	0.249	0.246	------	------	0.247	1.54	4.2071
38	4-Chloro-3-methylphenol	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
39	2-Methylnaphthalene	0.254	0.274	0.273	0.272	0.282	0.282	------	------	0.273	3.85	4.8476
40	1-Methylnaphthalene	0.761	0.757	0.752	0.737	0.768	0.764	------	------	0.756	1.49	4.8430
41	Acenaphthene-d10	0.686	0.697	0.685	0.673	0.703	0.702	------	------	0.691	1.66	4.9537
42	Hexachlorocyclopentadiene	1	1	1	1	1	1	1	1	1	0	6.0606
43	2,3,5-Trichlorophenol	0.407	0.418	0.429	0.422	0.442	0.437	------	------	0.426	3.00	5.0197
44	2,4,6-Trichlorophenol	0.302	0.359	0.363	0.357	0.382	0.379	------	------	0.357	8.12	5.0261
45	2,4,5-Trichlorophenol	0.378	0.403	0.410	0.390	0.412	0.413	------	------	0.401	3.48	5.1560
46	2-Fluorobiphenyl	0.382	0.406	0.417	0.412	0.438	0.436	------	------	0.415	5.03	5.1914
47	2,3,4-Trichlorophenol	1.499	1.508	1.646	1.615	1.665	1.612	------	------	1.558	4.84	5.2663
48	Biphenyl	0.381	0.413	0.400	0.395	0.406	0.411	------	------	0.401	2.94	5.2671
49	2-Chloronaphthalene	1.563	1.558	1.562	1.507	1.560	1.574	------	------	1.554	1.52	5.3824
50	2-Nitroaniline	1.300	1.308	1.306	1.268	1.290	1.320	------	------	1.303	1.47	5.4008
51	2,6-Dimethylnaphthalene	0.300	0.331	0.332	0.330	0.343	0.347	------	------	0.331	4.85	5.5199
52	1,4-Dinitrobenzene	1.113	1.119	1.103	1.091	1.103	1.118	------	------	1.103	1.93	5.5654
53	Dimethylphthalate	0.134	0.152	0.159	0.161	0.173	0.168	------	------	0.158	8.74	5.6880
54	1,3-Dinitrobenzene	1.450	1.475	1.447	1.467	1.465	1.482	------	------	1.466	1.48	5.6839
55	2,6-Dinitrotoluene	0.170	0.184	0.182	0.185	0.194	0.193	------	------	0.183	4.82	5.7221
56	1,2-Dinitrobenzene	0.288	0.303	0.300	0.300	0.313	0.311	------	------	0.303	2.99	5.7158
57	Acenaphthylene	0.108	0.112	0.115	0.110	0.117	0.115	------	------	0.113	3.06	5.8158
58	3-Nitroaniline	2.043	2.081	2.093	2.033	2.300	2.107	------	------	2.113	4.50	5.8730
59	Acenaphthene	0.278	0.296	0.298	0.297	0.310	0.308	------	------	0.298	3.82	5.8906
60	2,4-Dinitrophenol	1.356	1.376	1.347	1.306	1.371	1.361	------	------	1.353	1.86	6.0085
61	4-Nitrophenol	0.090	0.125	0.144	0.151	0.171	0.164	------	------	0.141	21.16	6.0988
62	2,4-Dinitrotoluene	0.132	0.149	0.151	0.154	0.157	0.158	------	------	0.151	5.29	6.1307
63	Dibenzofuran	0.382	0.385	0.392	0.387	0.402	0.400	------	------	0.388	3.72	6.2042
64	2,3,5,6-Tetrachlorophenol	1.262	1.261	1.238	1.270	1.310	1.286	------	------	1.224	2.25	6.2937
65	2,3,4,6-Tetrachlorophenol	0.283	0.301	0.272	0.288	0.310	0.308	------	------	0.300	5.97	6.3057
66	2,3,5-Trimethylnaphthalene	0.353	0.356	0.382	0.376	0.370	0.438	------	------	0.364	5.76	6.3967
67	Diethylphthalate	1.065	1.206	1.190	1.017	1.144	1.135	------	------	1.195	6.84	6.4487
68	Fluorene	1.376	1.328	1.378	1.364	1.387	1.386	------	------	1.361	2.84	6.5205
69	4-Chlorophenyl-phenylether	1.457	1.457	1.439	1.399	1.475	1.426	------	------	1.438	1.37	6.6182
70	4-Nitroaniline	0.767	0.738	0.731	0.727	0.744	0.735	------	------	0.740	1.94	6.7301
71	Phenanthrene-d10	0.268	0.274	0.285	0.288	0.300	0.299	------	------	0.286	4.47	6.7419
72	4,6-Dinitro-2-methylphenol	1	1	1	1	1	1	1	1	1	0	7.7993
73	N-Nitrosodiphenylamine	0.080	0.101	0.123	0.122	0.140	0.134	------	------	0.117	18.96	6.7793
74	Azobenzene	0.624	0.640	0.633	0.656	0.641	0.630	------	------	0.637	1.75	6.8713
75	2,4,6-Tribromophenol	0.663	0.688	0.682	0.660	0.694	0.686	------	------	0.679	2.16	6.9188
76	4-Bromophenyl-phenylether	0.101	0.108	0.108	0.108	0.114	0.113	------	------	0.109	4.26	7.0002
77	Hexachlorobenzene	0.221	0.227	0.228	0.236	0.245	0.243	------	------	0.243	1.87	7.3044
78	Pentachlorophenol	0.249	0.270	0.264	0.257	0.267	0.262	------	------	0.266	1.87	7.3571
79	Dibenzothiophene	0.122	0.148	0.148	0.142	0.159	0.155	------	------	0.146	8.50	7.5830
80	Phenanthrene	1.047	1.195	1.136	1.092	1.141	1.143	------	------	1.102	3.87	7.8829
81	Dinoseb	1.216	1.218	1.189	1.150	1.204	1.187	------	------	1.187	2.11	7.8267
82	Anthracene	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
83	Carbazole	1.210	1.264	1.229	1.172	1.243	1.244	------	------	1.227	2.86	7.8829
84	Di-n-butylphthalate	0.992	1.015	0.992	0.976	1.027	1.011	------	------	1.002	1.89	8.0624
85	1-Methylphenanthrene	1.155	1.259	1.246	1.212	1.264	1.277	------	------	1.235	3.67	8.4849
86	Fluoranthene	0.863	0.863	0.849	0.829	0.868	0.871	------	------	0.857	1.84	8.4971
87	Chrysene-d12	1.310	1.361	1.343	1.311	1.370	1.371	------	------	1.344	2.09	9.1026
88	Benzidine	1	1	1	1	1	1	1	1	1	0	10.5720
89	Pyrene	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
90	Terphenyl-d14	1.315	1.349	1.442	1.299	1.443	1.441	------	------	1.381	4.03	9.3369
91	Butylbenzylphthalate	0.848	0.851	0.854	0.819	0.864	0.851	------	------	0.848	1.81	9.5081
92	bis(2-ethylhexyl)adipate	0.402	0.458	0.473	0.458	0.469	0.485	------	------	0.459	6.43	10.0164
93	3,3'-Dichlorobenzidine	0.324	0.386	0.387	0.366	0.381	0.385	------	------	0.367	6.31	10.1014
94	Benzo(a)anthracene	0.386	0.429	0.424	0.414	0.428	0.428	------	------	0.418	4.00	10.5388
95	Chrysene	1.183	1.188	1.171	1.137	1.162	1.170	------	------	1.167	1.55	10.5605
96	bis(2-Ethylhexyl)phthalate	1.210	1.176	1.157	1.112	1.152	1.133	------	------	1.157	2.93	10.5978
97	Perylene-d12	0.637	0.705	0.730	0.694	0.726	0.724	------	------	0.703	4.99	10.5978
98	Di-n-octylphthalate	1	1	1	1	1	1	1	1	1	0	11.9400
99	Benzo(b)fluoranthene	1.053	1.222	1.271	1.247	1.336	1.344	------	------	1.245	8.50	11.2158
100	Benzo(k)fluoranthene	1.164	1.203	1.201	1.184	1.266	1.260	------	------	1.213	3.40	11.5719
101	Benzo(e)pyrene	1.349	1.351	1.346	1.294	1.339	1.360	------	------	1.339	1.76	11.5976
102	Benzo(a)pyrene	1.092	1.120	1.127	1.079	1.138	1.145	------	------	1.121	2.41	11.8315
103	Perylene	1.067	1.152	1.183	1.169	1.232	1.247	------	------	1.180	4.70	11.8839
104	Indeno(1,2,3-cd)pyrene	1.078	1.217	1.183	1.157	1.203	1.201	------	------	1.182	4.77	13.9660
105	Dibenzo(a,h)anthracene	1.178	1.217	1.275	1.236	1.302	1.320	------	------	1.271	2.90	13.1482
106	Benzo(g,h,i)perylene	1.000	1.063	1.071	1.050	1.116	1.124	------	------	1.071	2.24	13.1683
		1.063	1.121	1.114	1.080	1.152	1.149	------	------	1.113	3.23	13.5098

Ave_%RSD : 3.8 Max_%RSD : 21.2

Use Least Square Linear Regression with weighting factor of inverse concentration
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCE
27	Benzoic acid	-0.01396	0.26532	0.9997
60	2,4-Dinitrophenol	-0.00964	0.17184	0.9984
72	4,6-Dinitro-2-methylphenol	-0.00717	0.13985	0.9984

4/9/15

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR(%REC)

Instrument ID :E7
Beginning DateTime :04/03/15 09:30
Spike Units :PPM
IC File :RDH007

Column Spec :ZB-SemiVoa ID :0.18MM
Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03

IDX	Parameters	4 11:43 RDH010	10 11:24 RDH009	20 11:05 RDH008	25 10:46 RDH007	40 10:27 RDH006	50 10:08 RDH005	80 09:49 RDH004	100 09:30 RDH003	AvDRec	% RSD	Av Rt M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	0	2.8481
2	1,4-Dioxane	123	111	94	90	89	93	------	------	11.4	13.89	1.2314
3	N-nitrosodimethylamine	99	103	101	98	98	101	------	------	1.8	2.07	1.3391
4	Pyridine	97	103	101	99	102	104	96	97	2.4	2.81	1.3658
5	2-Fluorophenol	105	103	100	97	98	99	------	------	2.4	3.15	1.9271
6	Phenol-d5	105	104	100	95	97	99	------	------	3	3.86	2.5045
7	Phenol	96	104	101	97	100	102	------	------	2.3	2.22	2.5158
8	Aniline	98	102	100	98	100	102	------	------	1.2	1.53	2.5819
9	bis(2-chloroethyl)ether	103	101	100	96	99	100	------	------	1.5	2.28	2.6123
10	2-Chlorophenol	99	102	101	97	101	101	------	------	1.4	1.73	2.6748
11	1,3-Dichlorobenzene	101	102	100	98	99	100	------	------	1.2	1.61	2.8049
12	1,2-Dichlorobenzene-d4	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
13	1,4-Dichlorobenzene	102	103	99	97	99	99	------	------	1.6	2.02	2.8625
14	Benzyl alcohol	97	103	101	98	100	101	------	------	1.6	2.21	2.9409
15	1,2-Dichlorobenzene	101	103	99	98	98	100	------	------	1.6	2.15	2.9929
16	2-Methylphenol	99	103	101	97	100	100	------	------	1.3	1.88	3.0177
17	bis(2-chloroisopropyl)ether	104	103	100	97	98	98	------	------	2.5	3.05	3.0609
18	4-Methylphenol	100	104	100	96	99	102	------	------	1.8	2.56	3.1551
19	N-Nitroso-di-n-propylamine	98	101	101	98	100	101	------	------	1.2	1.48	3.1798
20	Hexachloroethane	103	105	101	97	95	99	------	------	2.8	3.46	3.2987
21	Naphthalene-d8	1	1	1	1	1	1	1	1	1	0	4.0569
22	Nitrobenzene-d5	100	101	100	98	102	101	------	------	1.1	1.52	3.3315
23	Nitrobenzene	99	102	100	97	102	100	------	------	1.2	1.27	3.3429
24	Isophorone	91	102	100	100	104	103	------	------	3.2	4.77	3.5777
25	2-Nitrophenol	92	97	102	101	106	102	------	------	3.7	4.68	3.6560
26	2,4-Dimethylphenol	97	99	98	96	101	100	------	------	3.2	4.69	3.6767
27	Benzoic acid	104	99	94	98	103	101	100	100	2.1	3.05	3.7638
28	bis(2-Chloroethoxy)methane	100	101	100	98	100	101	------	------	.9	1.21	3.7853
29	3,5-Dimethylphenol	100	89	103	100	106	102	------	------	3.5	5.61	3.8141
30	2,4-Dichlorophenol	98	100	99	99	102	103	------	------	1.6	1.97	3.8926
31	1,2,4-Trichlorobenzene	102	102	99	98	99	99	------	------	1.3	1.59	3.9923
32	3,4-Dimethylphenol	99	101	100	97	102	101	------	------	1.2	1.65	3.9899
33	Naphthalene	100	101	100	97	101	101	------	------	1.1	1.44	4.0792
34	4-Chloroaniline	97	101	100	98	103	102	------	------	1.9	2.33	4.1274
35	2,6-Dichlorophenol	98	101	100	97	102	101	------	------	1.6	1.90	4.1347
36	Hexachlorobutadiene	101	101	100	97	101	100	------	------	1.1	1.54	4.2071
37	Hydroquinone	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
38	4-Chloro-3-methylphenol	93	100	101	100	103	103	------	------	2.5	3.85	4.6476
39	2-Methylnaphthalene	101	100	99	97	102	101	------	------	1.1	1.49	4.8400
40	1-Methylnaphthalene	99	101	99	97	102	102	------	------	1.4	1.66	4.9534
41	Acenaphthene-d10	1	1	1	1	1	1	1	1	1	0	5.0606
42	Hexachlorocyclopentadiene	96	98	101	99	104	103	------	------	2.4	3.00	5.0197
43	2,3,5-Trichlorophenol	85	101	102	100	107	106	------	------	5.1	8.12	5.0261
44	2,4,6-Trichlorophenol	94	100	102	97	103	103	------	------	2.8	3.48	5.1560
45	2,4,5-Trichlorophenol	92	98	100	99	106	105	------	------	3.7	5.03	5.1914
46	2-Fluorobiphenyl	96	97	106	104	94	103	------	------	4.3	4.84	5.2663
47	2,3,4-Trichlorophenol	95	103	100	99	101	102	------	------	2.2	2.94	5.2671
48	Biphenyl	101	100	101	97	100	101	------	------	1	1.52	5.3824
49	2-Chloronaphthalene	100	100	100	97	101	101	------	------	1	1.47	5.4008
50	2-Nitroaniline	91	100	101	100	104	104	------	------	3.1	4.85	5.5199
51	2,6-Dimethylnaphthalene	101	101	100	97	100	101	------	------	1.1	1.63	5.5654
52	1,4-Dinitrobenzene	85	96	101	102	109	106	------	------	6.2	8.74	5.6880
53	Dimethylphthalate	100	101	99	98	101	101	------	------	1	1.28	5.7532
54	1,3-Dinitrobenzene	92	99	98	100	105	105	------	------	3.4	4.85	5.7741
55	2,6-Dinitrotoluene	95	100	99	99	103	103	------	------	2.1	2.99	5.8158
56	1,2-Dinitrobenzene	96	99	102	97	104	102	------	------	2.5	3.06	5.8730
57	Acenaphthylene	98	98	99	96	109	100	------	------	3	4.50	5.8906
58	3-Nitroaniline	93	99	100	100	104	103	------	------	2.5	3.82	6.0085
59	Acenaphthene	100	102	100	97	101	101	------	------	1.3	1.86	6.0988
60	2,4-Dinitrophenol	108	95	95	97	105	100	------	------	4.6	5.76	6.1307
61	4-Nitrophenol	90	99	100	102	104	105	------	------	3.6	5.69	6.2042
62	2,4-Dinitrotoluene	93	99	101	100	104	103	------	------	3.6	3.72	6.2937
63	Dibenzofuran	103	102	101	97	99	98	------	------	1.9	3.25	6.3057
64	2,3,5,6-Tetrachlorophenol	95	100	100	99	103	103	------	------	2.1	2.67	6.3767
65	2,3,4,6-Tetrachlorophenol	96	96	99	97	101	111	------	------	3.9	5.76	6.4487
66	2,3,5-Trimethylnaphthalene	95	107	106	90	102	101	------	------	5.1	6.44	6.5605
67	Diethylphthalate	100	101	100	99	100	100	------	------	.6	0.84	6.6059
68	Fluorene	101	101	100	97	101	99	------	------	1.2	1.57	6.7192
69	4-Chlorophenyl-phenylether	104	100	99	98	101	99	------	------	1.4	1.94	6.7301
70	4-Nitroaniline	94	96	100	101	105	105	------	------	3.5	4.47	6.7418
71	Phenanthrene-d10	1	1	1	1	1	1	1	1	1	0	7.7223
72	4,6-Dinitro-2-methylphenol	109	93	98	96	105	100	------	------	4.6	5.93	6.7793
73	N-Nitrosodiphenylamine	98	100	99	103	101	99	------	------	1.3	1.75	6.8713
74	Azobenzene	97	101	101	97	102	101	------	------	1.8	2.16	6.9188
75	2,4,6-Tribromophenol	93	99	99	99	105	104	------	------	3.1	4.26	7.0002
76	4-Bromophenyl-phenylether	99	102	102	97	101	100	------	------	2.4	1.87	7.3044
77	Hexachlorobenzene	105	102	99	97	99	98	------	------	2.1	2.87	7.3571
78	Pentachlorophenol	84	101	101	102	106	106	------	------	5.6	8.50	7.5830
79	Dibenzothiophene	93	104	101	98	102	102	------	------	3	3.87	7.6829
80	Phenanthrene	102	102	100	96	101	99	------	------	1.6	2.11	7.8267
81	Dinoseb	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
82	Anthracene	99	103	100	96	101	101	------	------	2	2.62	7.8826
83	Carbazole	99	101	99	97	102	101	------	------	1.5	1.86	8.0624
84	Di-n-butylphthalate	94	102	101	98	102	103	------	------	2.8	3.67	8.4649
85	1-Methylphenanthrene	101	101	99	97	101	102	------	------	1.4	1.84	8.4971
86	Fluoranthene	97	101	100	98	102	102	------	------	1.7	2.09	9.1026
87	Chrysene-d12	1	1	1	1	1	1	1	1	1	0	10.5720
88	Benzidine	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
89	Pyrene	95	98	104	94	104	104	------	------	4.4	4.93	9.3369
90	Terphenyl-d14	100	100	101	97	102	100	------	------	1.1	1.81	9.5081
91	Butylbenzylphthalate	88	100	103	100	104	105	------	------	4.2	6.43	10.0164
92	bis(2-ethylhexyl)adipate	88	99	105	100	104	104	------	------	4.5	6.31	10.1014
93	3,3'-Dichlorobenzidine	92	103	101	99	102	102	------	------	2.9	4.00	10.5386
94	Benzo(a)anthracene	101	102	100	97	100	100	------	------	1	1.53	10.5605
95	Chrysene	105	102	100	96	100	98	------	------	2.1	2.95	10.5970
96	bis(2-Ethylhexyl)phthalate	91	100	104	99	103	103	------	------	3.5	4.99	10.5978
97	Perylene-d12	1	1	1	1	1	1	1	1	1	0	11.9400
98	Di-n-octylphthalate	85	98	102	100	107	108	------	------	5.8	8.50	11.2158
99	Benzo(b)fluoranthene	96	99	99	98	104	104	------	------	2.7	3.40	11.5719
100	Benzo(k)fluoranthene	101	101	101	97	100	102	------	------	1.2	1.76	11.5976
101	Benzo(e)pyrene	98	102	101	96	102	102	------	------	2	2.41	11.8315
102	Benzo(a)pyrene	93	98	100	99	105	106	------	------	3.5	4.70	11.8839
103	Perylene	99	102	100	97	101	101	------	------	1.3	1.77	11.9660
104	Indeno(1,2,3-cd)pyrene	96	100	100	97	102	104	------	------	2.2	2.90	13.1482
105	Dibenzo(a,h)anthracene	93	99	100	98	104	105	------	------	3.1	4.24	13.1693
106	Benzo(g,h,i)perylene	96	101	100	97	104	103	------	------	2.5	3.23	13.5098

JW 4/9/15

Compound List Report E7

Method Path : C:\msdchem\1\METHODS\
Method File : SVE7D03.M
Title : SEMIVOLATILES
Last Update : Fri Apr 03 12:48:46 2015
Response Via : Initial Calibration

Total Cpnds : 106

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dichlorobenzene-d4	152	2.848	1.000	A	1	A	B
2	T	1,4-Dioxane	88	1.233	0.433	A	1	A	B
3	T	N-nitrosodimethylamine	74	1.338	0.470	A	1	A	B
4	T	Pyridine	79	1.367	0.480	A	1	A	B
5	S	2-Fluorophenol	112	1.927	0.677	A	1	A	B
6	S	Phenol-d5	99	2.506	0.880	A	1	A	B
7	C,P	Phenol	94	2.517	0.884	A	1	A	B
8	T	Aniline	93	2.584	0.907	A	1	A	B
9	T	bis(2-chloroethyl)ether	93	2.611	0.917	A	1	A	B
10	T	2-Chlorophenol	128	2.673	0.939	A	1	A	B
11	T	1,3-Dichlorobenzene	146	2.805	0.985	A	1	A	B
12	S	1,2-Dichlorobenzene-d4	152	2.989	1.050	A	1	A	B
13	C	1,4-Dichlorobenzene	146	2.863	1.005	A	1	A	B
14	T	Benzyl alcohol	108	2.939	1.032	A	1	A	B
15	T	1,2-Dichlorobenzene	146	2.992	1.051	A	1	A	B
16	T	2-Methylphenol	107	3.016	1.059	A	1	A	B
17	T	bis(2-chloroisopropyl)ether	45	3.059	1.074	A	1	A	B
18	T	4-Methylphenol	107	3.155	1.108	A	1	A	B
19	P,P	N-Nitroso-di-n-propylamine	70	3.179	1.116	A	1	A	B
20	T	Hexachloroethane	117	3.299	1.158	A	1	A	B
21	I	Naphthalene-d8	136	4.058	1.000	A	1	A	B
22	S	Nitrobenzene-d5	82	3.332	0.821	A	1	A	B
23	T	Nitrobenzene	77	3.351	0.826	A	1	A	B
24	T	Isophorone	82	3.577	0.881	A	1	A	B
25	C,P	2-Nitrophenol	139	3.658	0.901	A	1	A	B
26	T	2,4-Dimethylphenol	107	3.678	0.906	A	1	A	B
27	T	Benzoic acid	105	3.754	0.925	L	1	A	B
28	T	bis(2-Chloroethoxy)methane	93	3.788	0.933	A	1	A	B
29	T	3,5-Dimethylphenol	107	3.816	0.940	A	1	A	B
30	C,P	2,4-Dichlorophenol	162	3.893	0.959	A	1	A	B
31	T	1,2,4-Trichlorobenzene	180	3.995	0.984	A	1	A	B
32	T	3,4-Dimethylphenol	107	3.990	0.983	A	1	A	B
33	T	Naphthalene	128	4.082	1.006	A	1	A	B
34	T	4-Chloroaniline	127	4.130	1.018	A	1	A	B
35	T	2,6-Dichlorophenol	162	4.135	1.019	A	1	A	B
36	C	Hexachlorobutadiene	225	4.207	1.037	A	1	A	B
37	T	Hydroquinone	110	0.000	0.000	A	1	A	B
38	C,P	4-Chloro-3-methylphenol	107	4.646	1.145	A	1	A	B
39	T	2-Methylnaphthalene	142	4.842	1.193	A	1	A	B
40	T	1-Methylnaphthalene	142	4.953	1.221	A	1	A	B
41	I	Acenaphthene-d10	164	6.064	1.000	A	1	A	B
42	P	Hexachlorocyclopentadiene	237	5.020	0.828	A	1	A	B
43	T	2,3,5-Trichlorophenol	196	5.024	0.828	A	1	A	B
44	C,P	2,4,6-Trichlorophenol	196	5.154	0.850	A	1	A	B
45	T	2,4,5-Trichlorophenol	196	5.193	0.856	A	1	A	B
46	S	2-Fluorobiphenyl	172	5.265	0.868	A	1	A	B
47	T	2,3,4-Trichlorophenol	196	5.265	0.868	A	1	A	B
48	T	Biphenyl	154	5.381	0.887	A	1	A	B
49	T	2-Chloronaphthalene	162	5.400	0.891	A	1	A	B
50	T	2-Nitroaniline	65	5.520	0.910	A	1	A	B
51	T	2,6-Dimethylnaphthalene	156	5.568	0.918	A	1	A	B
52	T	1,4-Dinitrobenzene	168	5.688	0.938	A	1	A	B
53	T	Dimethylphthalate	163	5.756	0.949	A	1	A	B
54	T	1,3-Dinitrobenzene	168	5.775	0.952	A	1	A	B

55	T	2,6-Dinitrotoluene	165	5.818	0.959	A	1	A	B
56	T	1,2-Dinitrobenzene	168	5.876	0.969	A	1	A	B
57	T	Acenaphthylene	152	5.891	0.971	A	1	A	B
58	T	3-Nitroaniline	138	6.011	0.991	A	1	A	B
59	C,P	Acenaphthene	153	6.097	1.005	A	1	A	B
60	P	2,4-Dinitrophenol	184	6.131	1.011	L	1	A	B
61	P	4-Nitrophenol	109	6.203	1.023	A	1	A	B
62	T	2,4-Dinitrotoluene	165	6.294	1.038	A	1	A	B
63	T	Dibenzofuran	168	6.308	1.040	A	1	A	B
64	T	2,3,5,6-Tetrachlorophenol	230	6.399	1.055	A	1	A	B
65	T	2,3,4,6-Tetrachlorophenol	232	6.447	1.063	A	1	A	B
66	T	2,3,5-Trimethylnaphthalene	170	6.561	1.082	A	1	A	B
67	T	Diethylphthalate	149	6.608	1.090	A	1	A	B
68	T	Fluorene	166	6.721	1.108	A	1	A	B
69	T	4-Chlorophenyl-phenylether	204	6.730	1.110	A	1	A	B
70	T	4-Nitroaniline	138	6.744	1.112	A	1	A	B
71	I	Phenanthrene-d10	188	7.801	1.000	A	1	A	B
72	T	4,6-Dinitro-2-methylphenol	198	6.782	0.869	L	1	A	B
73	C	N-Nitrosodiphenylamine	169	6.871	0.881	A	1	A	B
74	T	Azobenzene	77	6.919	0.887	A	1	A	B
75	S	2,4,6-Tribromophenol	330	6.999	0.897	A	1	A	B
76	T	4-Bromophenyl-phenylether	248	7.303	0.936	A	1	A	B
77	T	Hexachlorobenzene	284	7.359	0.943	A	1	A	B
78	C,P	Pentachlorophenol	266	7.581	0.972	A	1	A	B
79	T	Dibenzothiophene	184	7.685	0.985	A	1	A	B
80	T	Phenanthrene	178	7.828	1.003	A	1	A	B
81	T	Dinoseb	211	0.000	0.000	A	1	A	B
82	T	Anthracene	178	7.883	1.011	A	1	A	B
83	T	Carbazole	167	8.064	1.034	A	1	A	B
84	T	Di-n-butylphthalate	149	8.467	1.085	A	1	A	B
85	T	1-Methylphenanthrene	192	8.496	1.089	A	1	A	B
86	C,P	Fluoranthene	202	9.104	1.167	A	1	A	B
87	I	Chrysene-d12	240	10.573	1.000	A	1	A	B
88	T	Benzidine	184	0.000	0.000	A	1	A	B
89	T	Pyrene	202	9.335	0.883	A	1	A	B
90	S	Terphenyl-d14	244	9.507	0.899	A	1	A	B
91	T	Butylbenzylphthalate	149	10.016	0.947	A	1	A	B
92	T	bis(2-ethylhexyl)adipate	129	10.099	0.955	A	1	A	B
93	T	3,3'-Dichlorobenzidine	252	10.539	0.997	A	1	A	B
94	T	Benzo(a)anthracene	228	10.558	0.999	A	1	A	B
95	T	Chrysene	228	10.597	1.002	A	1	A	B
96	T	bis(2-Ethylhexyl)phthalate	149	10.597	1.002	A	1	A	B
97	I	Perylene-d12	264	11.939	1.000	A	1	A	B
98	C	Di-n-octylphthalate	149	11.218	0.940	A	1	A	B
99	T	Benzo(b)fluoranthene	252	11.573	0.969	A	1	A	B
100	T	Benzo(k)fluoranthene	252	11.598	0.971	A	1	A	B
101	T	Benzo(e)pyrene	252	11.832	0.991	A	1	A	B
102	C,P	Benzo(a)pyrene	252	11.883	0.995	A	1	A	B
103	T	Perylene	252	11.968	1.002	A	1	A	B
104	T	Indeno(1,2,3-cd)pyrene	276	13.147	1.101	A	1	A	B
105	T	Dibenzo(a,h)anthracene	278	13.172	1.103	A	1	A	B
106	T	Benzo(g,h,i)perylene	276	13.511	1.132	A	1	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

4/9/15

SVE7D03.M Fri Apr 03 17:13:29 2015

Quantitation Limit from Lowest Initial Calibration Concentration

Instrument ID :E7
Beginning DateTime :04/03/15 09:30
IC File :RDH007

Column Spec :ZB-SemiVoa ID :0.18MM
Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03

WATER Init. Vol. (ml) : 1000 Final Vol. (ml) : 2
SOIL Init. Weight (gm) : 30 Final Vol. (ml) : 2

IDX	Parameters	ON COL MG/L	WATER UG/L	SOIL MG/KG	R_FILE
1	1,4-Dichlorobenzene-d4	IntSTD	IntSTD	IntSTD	IntSTD
2	1,4-Dioxane	4	8	.2667	RDH010
3	N-nitrosodimethylamine	4	8	.2667	RDH010
4	Pyridine	4	8	.2667	RDH010
5	2-Fluorophenol	4	8	.2667	RDH010
6	Phenol-d5	4	8	.2667	RDH010
7	Phenol	4	8	.2667	RDH010
8	Aniline	4	8	.2667	RDH010
9	bis(2-chloroethyl)ether	4	8	.2667	RDH010
10	2-Chlorophenol	4	8	.2667	RDH010
11	1,3-Dichlorobenzene	4	8	.2667	RDH010
12	1,2-Dichlorobenzene-d4	NA	NA	NA	NA
13	1,4-Dichlorobenzene	4	8	.2667	RDH010
14	Benzyl alcohol	4	8	.2667	RDH010
15	1,2-Dichlorobenzene	4	8	.2667	RDH010
16	2-Methylphenol	4	8	.2667	RDH010
17	bis(2-chloroisopropyl)ether	4	8	.2667	RDH010
18	4-Methylphenol	4	8	.2667	RDH010
19	N-Nitroso-di-n-propylamine	4	8	.2667	RDH010
20	Hexachloroethane	4	8	.2667	RDH010
21	Naphthalene-d8	IntSTD	IntSTD	IntSTD	IntSTD
22	Nitrobenzene-d5	4	8	.2667	RDH010
23	Nitrobenzene	4	8	.2667	RDH010
24	Isophorone	4	8	.2667	RDH010
25	2-Nitrophenol	4	8	.2667	RDH010
26	2,4-Dimethylphenol	4	8	.2667	RDH010
27	Benzoic acid	4	8	.2667	RDH010
28	bis(2-Chloroethoxy)methane	4	8	.2667	RDH010
29	3,5-Dimethylphenol	4	8	.2667	RDH010
30	2,4-Dichlorophenol	4	8	.2667	RDH010
31	1,2,4-Trichlorobenzene	4	8	.2667	RDH010
32	3,4-Dimethylphenol	4	8	.2667	RDH010
33	Naphthalene	4	8	.2667	RDH010
34	4-Chloroaniline	4	8	.2667	RDH010
35	2,6-Dichlorophenol	4	8	.2667	RDH010
36	Hexachlorobutadiene	4	8	.2667	RDH010
37	Hydroquinone	NA	NA	NA	NA
38	4-Chloro-3-methylphenol	4	8	.2667	RDH010
39	2-Methylnaphthalene	4	8	.2667	RDH010
40	1-Methylnaphthalene	4	8	.2667	RDH010
41	Acenaphthene-d10	IntSTD	IntSTD	IntSTD	IntSTD
42	Hexachlorocyclopentadiene	4	8	.2667	RDH010
43	2,3,5-Trichlorophenol	4	8	.2667	RDH010
44	2,4,6-Trichlorophenol	4	8	.2667	RDH010
45	2,4,5-Trichlorophenol	4	8	.2667	RDH010
46	2-Fluorobiphenyl	4	8	.2667	RDH010
47	2,3,4-Trichlorophenol	4	8	.2667	RDH010
48	Biphenyl	4	8	.2667	RDH010
49	2-Chloronaphthalene	4	8	.2667	RDH010
50	2-Nitroaniline	4	8	.2667	RDH010
51	2,6-Dimethylnaphthalene	4	8	.2667	RDH010
52	1,4-Dinitrobenzene	4	8	.2667	RDH010
53	Dimethylphthalate	4	8	.2667	RDH010
54	1,3-Dinitrobenzene	4	8	.2667	RDH010
55	2,6-Dinitrotoluene	4	8	.2667	RDH010
56	1,2-Dinitrobenzene	4	8	.2667	RDH010
57	Acenaphthylene	4	8	.2667	RDH010
58	3-Nitroaniline	4	8	.2667	RDH010
59	Acenaphthene	4	8	.2667	RDH010
60	2,4-Dinitrophenol	4	8	.2667	RDH010
61	4-Nitrophenol	4	8	.2667	RDH010
62	2,4-Dinitrotoluene	4	8	.2667	RDH010
63	Dibenzofuran	4	8	.2667	RDH010
64	2,3,5,6-Tetrachlorophenol	4	8	.2667	RDH010
65	2,3,4,6-Tetrachlorophenol	4	8	.2667	RDH010
66	2,3,5-Trimethylnaphthalene	4	8	.2667	RDH010
67	Diethylphthalate	4	8	.2667	RDH010
68	Fluorene	4	8	.2667	RDH010
69	4-Chlorophenyl-phenylether	4	8	.2667	RDH010
70	4-Nitroaniline	4	8	.2667	RDH010
71	Phenanthrene-d10	IntSTD	IntSTD	IntSTD	IntSTD
72	4,6-Dinitro-2-methylphenol	4	8	.2667	RDH010
73	N-Nitrosodiphenylamine	4	8	.2667	RDH010
74	Azobenzene	4	8	.2667	RDH010
75	2,4,6-Tribromophenol	4	8	.2667	RDH010
76	4-Bromophenyl-phenylether	4	8	.2667	RDH010
77	Hexachlorobenzene	4	8	.2667	RDH010
78	Pentachlorophenol	4	8	.2667	RDH010
79	Dibenzothiophene	4	8	.2667	RDH010
80	Phenanthrene	4	8	.2667	RDH010
81	Dinoseb	NA	NA	NA	NA
82	Anthracene	4	8	.2667	RDH010
83	Carbazole	4	8	.2667	RDH010
84	Di-n-butylphthalate	4	8	.2667	RDH010
85	1-Methylphenanthrene	4	8	.2667	RDH010
86	Fluoranthene	4	8	.2667	RDH010
87	Chrysene-d12	IntSTD	IntSTD	IntSTD	IntSTD
88	Benzidine	NA	NA	NA	NA
89	Pyrene	4	8	.2667	RDH010
90	Terphenyl-d14	4	8	.2667	RDH010
91	Butylbenzylphthalate	4	8	.2667	RDH010
92	bis(2-ethylhexyl)adipate	4	8	.2667	RDH010
93	3,3'-Dichlorobenzidine	4	8	.2667	RDH010
94	Benzo(a)anthracene	4	8	.2667	RDH010
95	Chrysene	4	8	.2667	RDH010
96	bis(2-Ethylhexyl)phthalate	4	8	.2667	RDH010
97	Perylene-d12	IntSTD	IntSTD	IntSTD	IntSTD
98	Di-n-octylphthalate	4	8	.2667	RDH010
99	Benzo(b)fluoranthene	4	8	.2667	RDH010
100	Benzo(k)fluoranthene	4	8	.2667	RDH010
101	Benzo(e)pyrene	4	8	.2667	RDH010
102	Benzo(a)pyrene	4	8	.2667	RDH010
103	Perylene	4	8	.2667	RDH010
104	Indeno(1,2,3-cd)pyrene	4	8	.2667	RDH010
105	Dibenzo(a,h)anthracene	4	8	.2667	RDH010
106	Benzo(g,h,i)perylene	4	8	.2667	RDH010

mc 4/9/15

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH007
Instrument ID: TOE7

Project:ICAL
SDG No.:CAL\8270\2015
Date Analyzed: 04/03/15
Time Analyzed: 10:46

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	567854	2.85	2117278	4.06	1301658	6.06
	UPPER LIMIT	1135708	3.35	4234556	4.56	2603316	6.56
	LOWER LIMIT	283927	2.35	1058639	3.56	650829	5.56
	SAMPLE ID						
1	SVE7D031	517430	2.85	1930059	4.06	1104062	6.06
2	SVE7D032	504151	2.85	1863603	4.05	1050881	6.06
3	SVE7D033	541281	2.85	2013141	4.06	1228017	6.06
4	SVE7D034	564861	2.85	2073381	4.06	1275998	6.06
5	SVE7D036	543780	2.85	2041343	4.06	1242554	6.06
6	SVE7D037	535024	2.85	2009700	4.06	1220031	6.06
7	SVE7D038	540431	2.85	1989051	4.06	1200151	6.06
8	ISVE7D031	600353	2.85	2230730	4.05	1396618	6.06

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

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

FORM VIII SV-1 OLM02.0

4/9/15

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH007
Instrument ID: TOE7

Project:ICAL
SDG No.:CAL\8270\2015
Date Analyzed: 04/03/15
Time Analyzed: 10:46

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	2320209	7.80	2507024	10.57	2285835	11.94
	UPPER LIMIT	4640418	8.30	5014048	11.07	4571670	12.44
	LOWER LIMIT	1160105	7.30	1253512	10.07	1142918	11.44
	SAMPLE ID						
1	SVE7D031	1925784	7.80	2143208	10.57	1957813	11.94
2	SVE7D032	1831349	7.80	2011846	10.57	1833822	11.93
3	SVE7D033	2161365	7.80	2351580	10.58	2118519	11.94
4	SVE7D034	2237485	7.80	2398598	10.58	2162744	11.94
5	SVE7D036	2156231	7.80	2290964	10.57	2112375	11.94
6	SVE7D037	2137658	7.80	2322556	10.57	2118965	11.94
7	SVE7D038	2137463	7.80	2287636	10.57	2063620	11.94
8	ISVE7D031	2398781	7.80	2553528	10.58	2319642	11.95

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

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

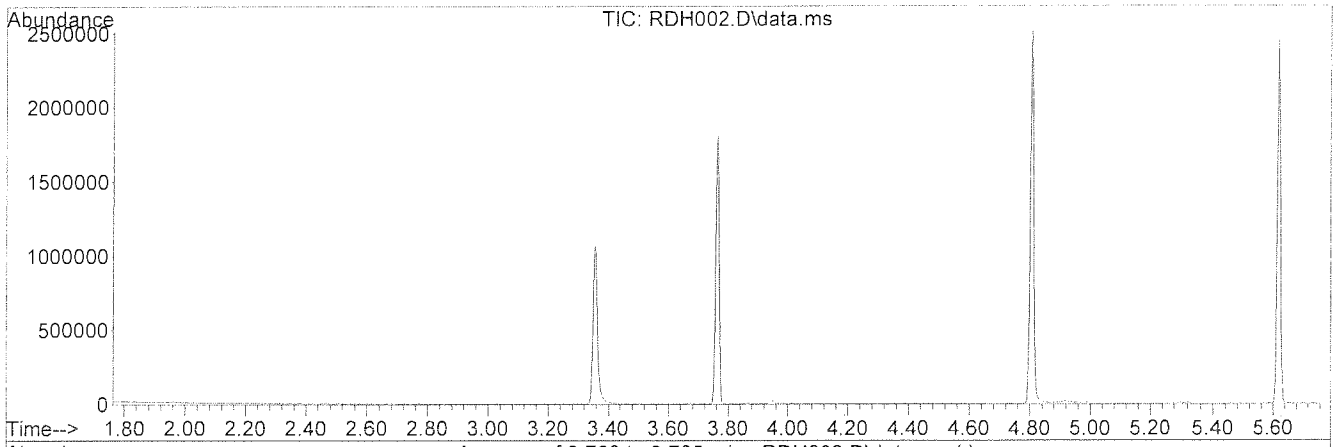
FORM VIII SV-2 OLM02.0

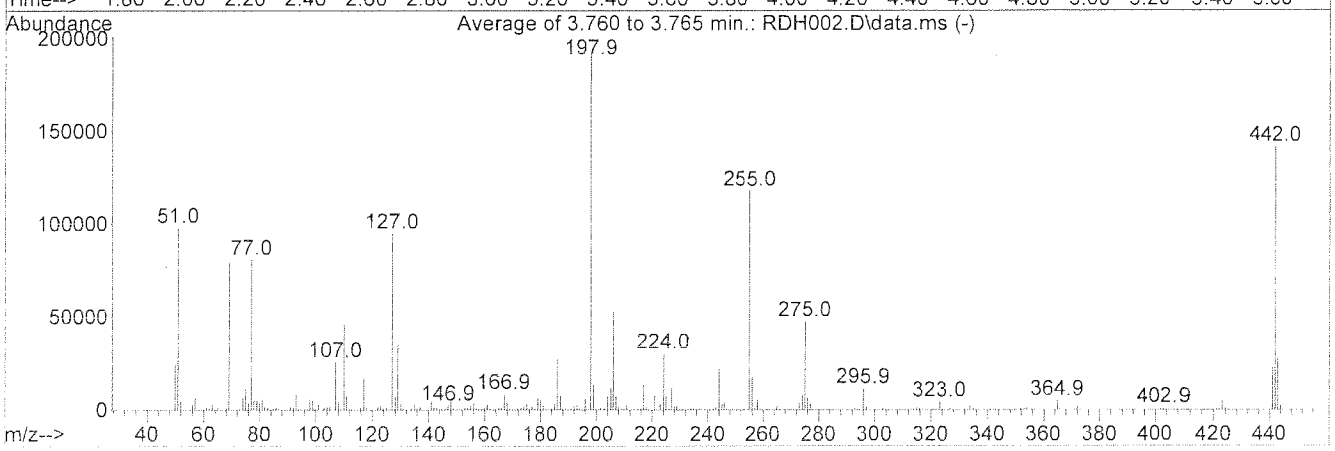
4/9/15

Data Path : D:\DATA\15D03\
Data File : RDH002.D
Acq On : 3 Apr 2015 9:19
Operator : RZhou
Sample : DFTE7D0301
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Mon Apr 06 08:19:55 2015





AutoFind: Scans 772, 773, 774; Background Corrected with Scan 764

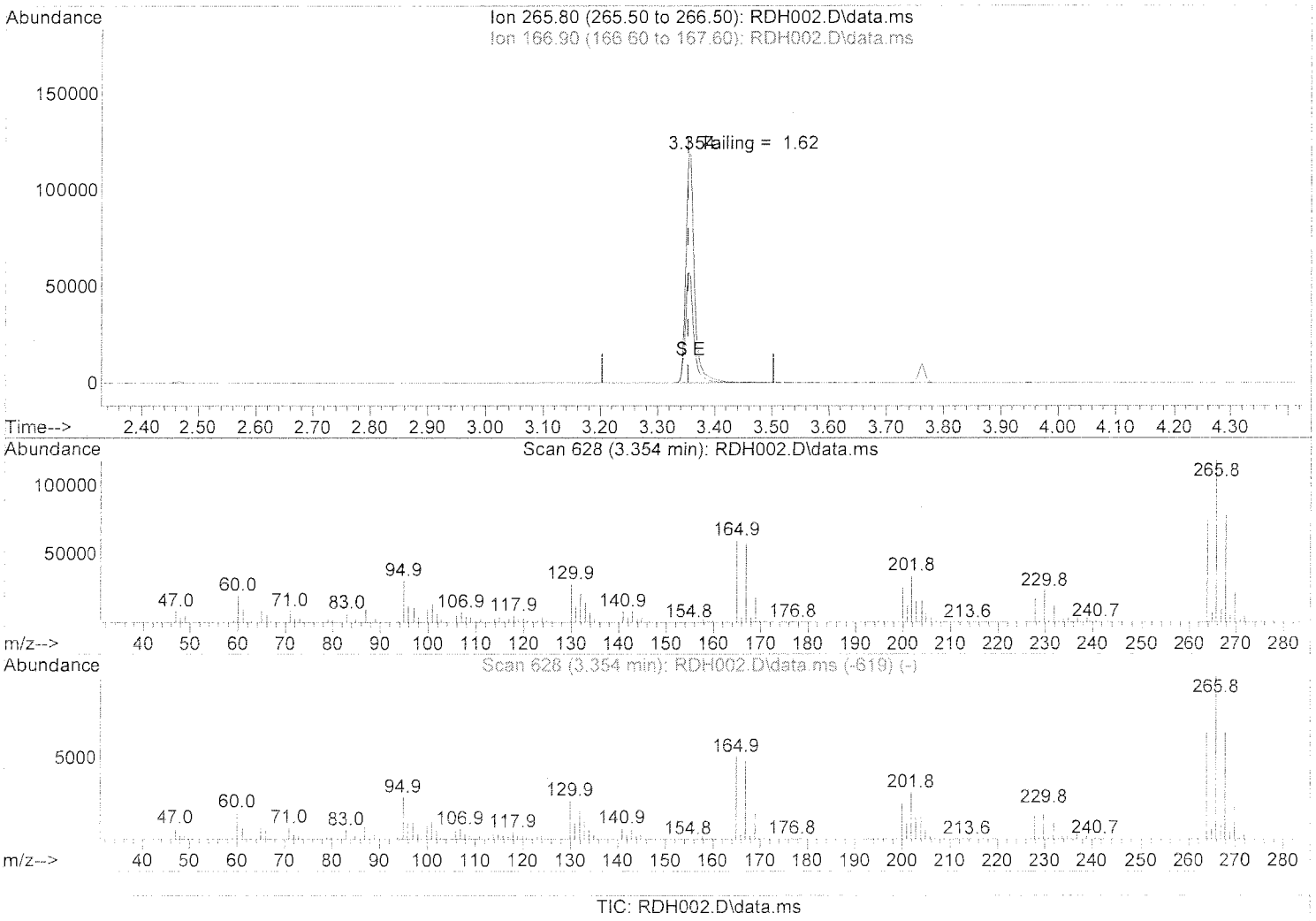
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	51.0	97884	PASS
68	69	0.00	2	1.3	1040	PASS
69	198	0.00	100	41.5	79597	PASS
70	69	0.00	2	0.4	314	PASS
127	198	10	80	49.4	94912	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	192021	PASS
199	198	5	9	7.0	13395	PASS
275	198	10	60	24.6	47245	PASS
365	198	1	100	2.6	4989	PASS
441	442	0.01	24	16.0	22667	PASS
442	198	50	100	73.7	141603	PASS
443	442	15	24	19.7	27931	PASS

7L 4/9/15

Quantitation Report (Qedit)

Data File : D:\DATA\15D03\RDH002.D
Acq On : 3 Apr 2015 9:19
Sample : DFTE7D0301
Misc :
Integrator: RTE
Quant Time: Apr 06 08:19:57 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: RZhou
Inst : E7
Multiplr: 1.00



(1) Pentachlorophenol (T)

3.354min (+0.000) 50.00 ppm

response 125025

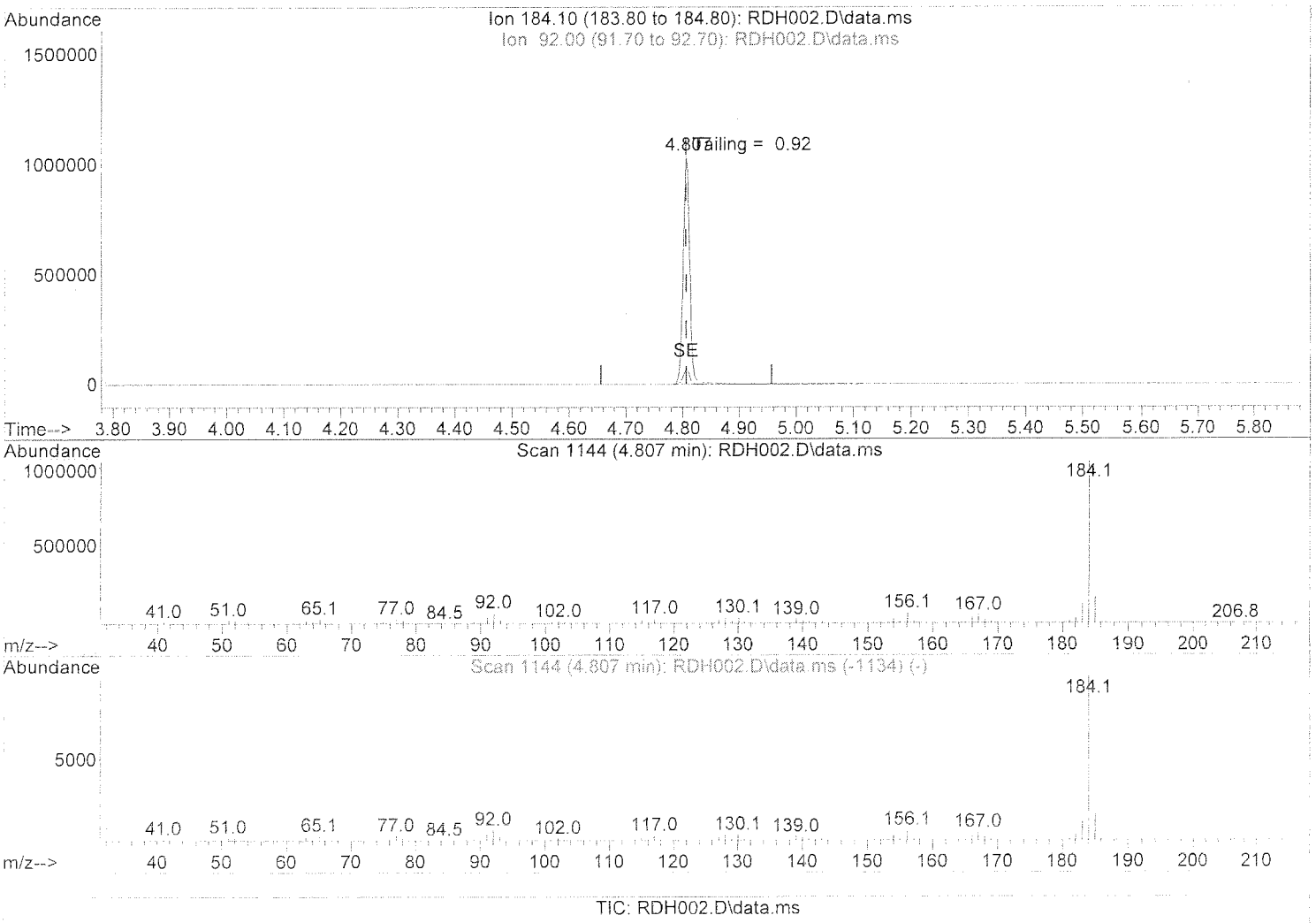
Ion	Exp%	Act%
265.80	100	100
166.90	46.90	46.90
0.00	0.00	0.00
0.00	0.00	0.00

4/9/15

Quantitation Report (Qedit)

Data File : D:\DATA\15D03\RDH002.D
Acq On : 3 Apr 2015 9:19
Sample : DFTE7D0301
Misc :
Integrator: RTE
Quant Time: Apr 06 08:19:57 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: RZhou
Inst : E7
Multiplr: 1.00



(3) Benzidine (T)

4.807min (0.000) 50.00 ppm

response 839412

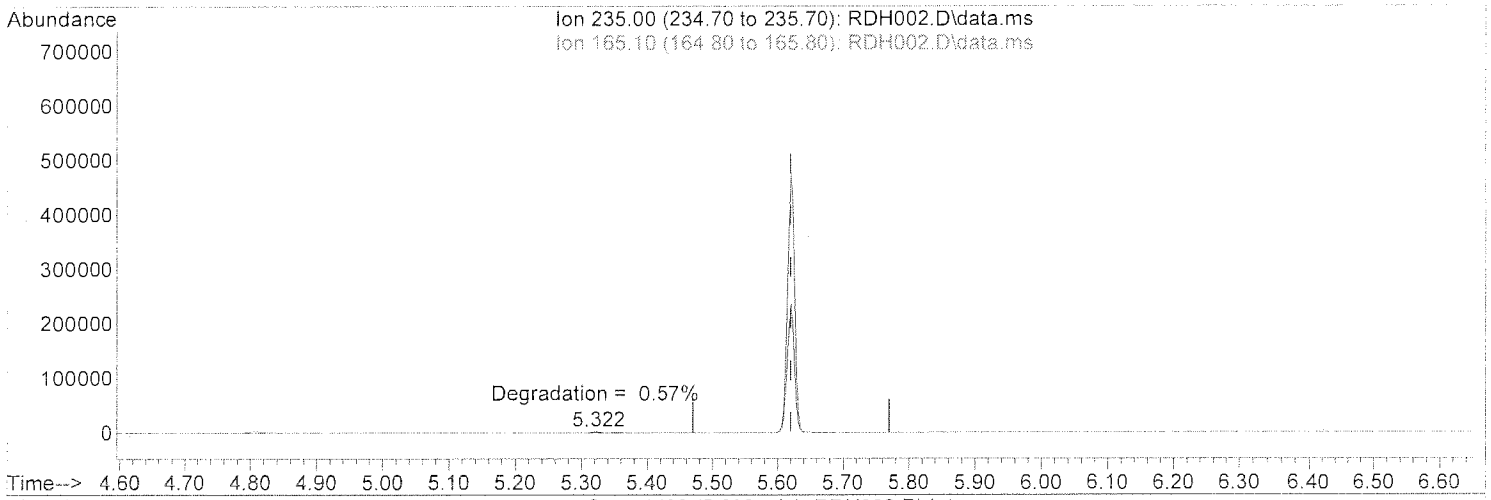
Ion	Exp%	Act%
184.10	100	100
92.00	6.60	6.59
0.00	0.00	0.00
0.00	0.00	0.00

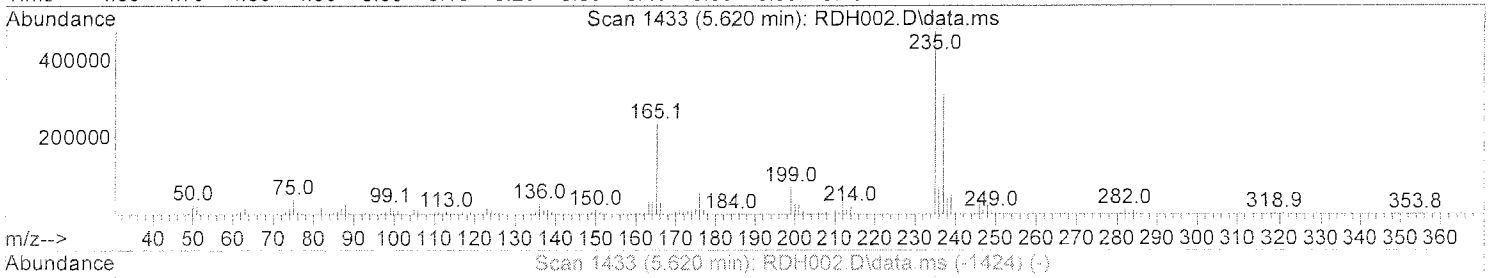
4/9/15

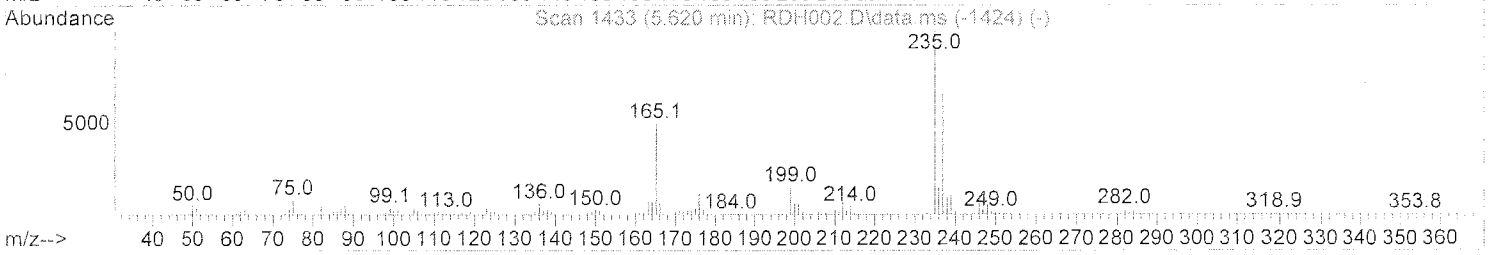
Quantitation Report (Qedit)

Data File : D:\DATA\15D03\RDH002.D
Acq On : 3 Apr 2015 9:19
Sample : DFTE7D0301
Misc :
Integrator: RTE
Quant Time: Apr 06 08:19:57 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: RZhou
Inst : E7
Multiplr: 1.00







TIC: RDH002.D\data.ms

(6) DDT (T)

5.620min (0.000) 50.00 ppm

response 362143

Ion	Exp%	Act%
235.00	100	100
165.10	49.20	49.18
0.00	0.00	0.00
0.00	0.00	0.00

NC 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH010.D
Acq On : 3 Apr 2015 11:43
Sample : SVE7D038
Misc : 4PPM
Integrator: RTE
Quant Time: Apr 03 12:53:42 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 10
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	540431	40.00	ppm	0.00
21) Naphthalene-d8	4.057	136	1989051	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1200151	40.00	ppm	0.00
71) Phenanthrene-d10	7.796	188	2137463	40.00	ppm	0.00
87) Chrysene-d12	10.568	240	2287636	40.00	ppm	0.00
97) Perylene-d12	11.939	264	2063620	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	66841	4.20	ppm	0.00
Spiked Amount 30.000			Recovery	=	14.00%	
6) Phenol-d5	2.501	99	80231	4.20	ppm	0.00
Spiked Amount 30.000			Recovery	=	14.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.327	82	72067	3.99	ppm	0.00
Spiked Amount 10.000			Recovery	=	39.90%	
46) 2-Fluorobiphenyl	5.261	172	179939	3.85	ppm	0.00
Spiked Amount 10.000			Recovery	=	38.50%	
75) 2,4,6-Tribromophenol	6.995	330	21626	3.72	ppm	0.00
Spiked Amount 30.000			Recovery	=	12.40%	
90) Terphenyl-d14	9.506	244	194250	4.00	ppm	0.00
Spiked Amount 10.000			Recovery	=	40.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	31890	4.92	ppm	80
3) N-nitrosodimethylamine	1.338	74	36191	3.97	ppm	96
4) Pyridine	1.367	79	63242	3.90	ppm	99
7) Phenol	2.511	94	73904	3.85	ppm	98
8) Aniline	2.579	93	96932	3.93	ppm	99
9) bis(2-chloroethyl)ether	2.610	93	63405	4.13	ppm	98
10) 2-Chlorophenol	2.673	128	65851	3.95	ppm	99
11) 1,3-Dichlorobenzene	2.805	146	83453	4.05	ppm	99
13) 1,4-Dichlorobenzene	2.862	146	87323	4.09	ppm	99
14) Benzyl alcohol	2.939	108	41550	3.88	ppm	98
15) 1,2-Dichlorobenzene	2.992	146	81893	4.05	ppm	98
16) 2-Methylphenol	3.016	107	51725	3.98	ppm	100
17) bis(2-chloroisopropyl)...	3.059	45	147484	4.16	ppm	100
18) 4-Methylphenol	3.150	107	68005	3.99	ppm	99
19) N-Nitroso-di-n-propyla...	3.174	70	44768	3.92	ppm	95
20) Hexachloroethane	3.299	117	39252	4.10	ppm	99
23) Nitrobenzene	3.347	77	76019	3.97	ppm	97
24) Isophorone	3.572	82	131591	3.63	ppm	97
25) 2-Nitrophenol	3.653	139	31869	3.71	ppm	92
26) 2,4-Dimethylphenol	3.673	107	66701	3.90	ppm	96
27) Benzoic acid	3.701	105	27156	4.16	ppm	79
28) bis(2-Chloroethoxy)met...	3.783	93	82074	4.02	ppm	99
29) 3,5-Dimethylphenol	3.807	107	79055	4.01	ppm	97
30) 2,4-Dichlorophenol	3.888	162	61662	3.91	ppm	98
31) 1,2,4-Trichlorobenzene	3.990	180	77885	4.07	ppm	99
32) 3,4-Dimethylphenol	3.985	107	83550	3.97	ppm	97
33) Naphthalene	4.077	128	218068	4.01	ppm	100
34) 4-Chloroaniline	4.120	127	84167	3.87	ppm	97
35) 2,6-Dichlorophenol	4.130	162	61668	3.91	ppm	97

RW 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH010.D
Acq On : 3 Apr 2015 11:43
Sample : SVE7D038
Misc : 4PPM
Integrator: RTE
Quant Time: Apr 03 12:53:42 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 10
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Hexachlorobutadiene	4.207	225	49661	4.04	ppm		98
38) 4-Chloro-3-methylphenol	4.646	107	50451	3.71	ppm		98
39) 2-Methylnaphthalene	4.838	142	151273	4.02	ppm		100
40) 1-Methylnaphthalene	4.948	142	136431	3.97	ppm		99
42) Hexachlorocyclopentadiene	5.020	237	48894	3.83	ppm		96
43) 2,3,5-Trichlorophenol	5.024	196	36200	3.38	ppm		93
44) 2,4,6-Trichlorophenol	5.154	196	45398	3.77	ppm		98
45) 2,4,5-Trichlorophenol	5.188	196	45832	3.68	ppm		99
47) 2,3,4-Trichlorophenol	5.265	196	45758	3.80	ppm		96
48) Biphenyl	5.381	154	187572	4.02	ppm		99
49) 2-Chloronaphthalene	5.395	162	155974	3.99	ppm		100
50) 2-Nitroaniline	5.515	65	36016	3.63	ppm		97
51) 2,6-Dimethylnaphthalene	5.563	156	133534	4.03	ppm		99
52) 1,4-Dinitrobenzene	5.683	168	16076	3.39	ppm		74
53) Dimethylphthalate	5.746	163	173962	3.98	ppm		99
54) 1,3-Dinitrobenzene	5.765	168	20423	3.68	ppm		97
55) 2,6-Dinitrotoluene	5.809	165	34558	3.81	ppm		100
56) 1,2-Dinitrobenzene	5.862	168	12945	3.82	ppm	#	73
57) Acenaphthylene	5.886	152	247611	3.91	ppm		98
58) 3-Nitroaniline	6.001	138	33380	3.73	ppm		97
59) Acenaphthene	6.097	153	162773	4.01	ppm		100
60) 2,4-Dinitrophenol	6.126	184	10784	4.34	ppm		99
61) 4-Nitrophenol	6.198	109	16315	3.61	ppm		96
62) 2,4-Dinitrotoluene	6.284	165	43462	3.73	ppm		97
63) Dibenzofuran	6.303	168	212315	4.10	ppm		99
64) 2,3,5,6-Tetrachlorophenol	6.394	230	34249	3.80	ppm		99
65) 2,3,4,6-Tetrachlorophenol	6.447	232	42377	3.84	ppm		100
66) 2,3,5-Trimethylnaphtha...	6.556	170	127868	3.79	ppm		87
67) Diethylphthalate	6.599	149	165129	3.98	ppm		99
68) Fluorene	6.716	166	174874	4.06	ppm		99
69) 4-Chlorophenyl-phenyle...	6.725	204	92079	4.15	ppm		99
70) 4-Nitroaniline	6.730	138	32215	3.76	ppm		95
72) 4,6-Dinitro-2-methylph...	6.772	198	17179	4.35	ppm		95
73) N-Nitrosodiphenylamine	6.866	169	133406	3.92	ppm		93
74) Azobenzene	6.914	77	141395	3.89	ppm		99
76) 4-Bromophenyl-phenylether	7.303	248	51492	3.96	ppm		100
77) Hexachlorobenzene	7.355	284	59680	4.20	ppm		99
78) Pentachlorophenol	7.581	266	26031	3.33	ppm		97
79) Dibenzothiophene	7.681	184	223720	3.74	ppm		97
80) Phenanthrene	7.824	178	259984	4.07	ppm		100
82) Anthracene	7.878	178	258722	3.95	ppm		99
83) Carbazole	8.059	167	212084	3.96	ppm		100
84) Di-n-butylphthalate	8.461	149	246877	3.74	ppm		100
85) 1-Methylphenanthrene	8.495	192	184372	4.03	ppm		100
86) Fluoranthene	9.099	202	279946	3.90	ppm		99
89) Pyrene	9.335	202	300805	3.81	ppm		100
91) Butylbenzylphthalate	10.016	149	91958	3.51	ppm		95
92) bis(2-ethylhexyl)adipate	10.099	129	74161	3.53	ppm		94
93) 3,3'-Dichlorobenzidine	10.534	252	88389	3.69	ppm		97
94) Benzo(a)anthracene	10.558	228	270641	4.04	ppm		99
95) Chrysene	10.592	228	276770	4.18	ppm		99
96) bis(2-Ethylhexyl)phtha...	10.597	149	145687	3.63	ppm		99
98) Di-n-octylphthalate	11.213	149	217303	3.38	ppm		100
99) Benzo(b)fluoranthene	11.568	252	240254	3.84	ppm		99

4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH010.D
Acq On : 3 Apr 2015 11:43
Sample : SVE7D038
Misc : 4PPM
Integrator: RTE
Quant Time: Apr 03 12:53:42 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 10
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) Benzo(k)fluoranthene	11.593	252	278312	4.03 ppm	99
101) Benzo(e)pyrene	11.827	252	226333	3.91 ppm	99
102) Benzo(a)pyrene	11.878	252	226299	3.72 ppm	94
103) Perylene	11.958	252	243150	3.96 ppm	96
104) Indeno(1,2,3-cd)pyrene	13.138	276	252143	3.85 ppm	100
105) Dibenzo(a,h)anthracene	13.162	278	206389	3.74 ppm	96
106) Benzo(g,h,i)perylene	13.497	276	219402	3.82 ppm	91

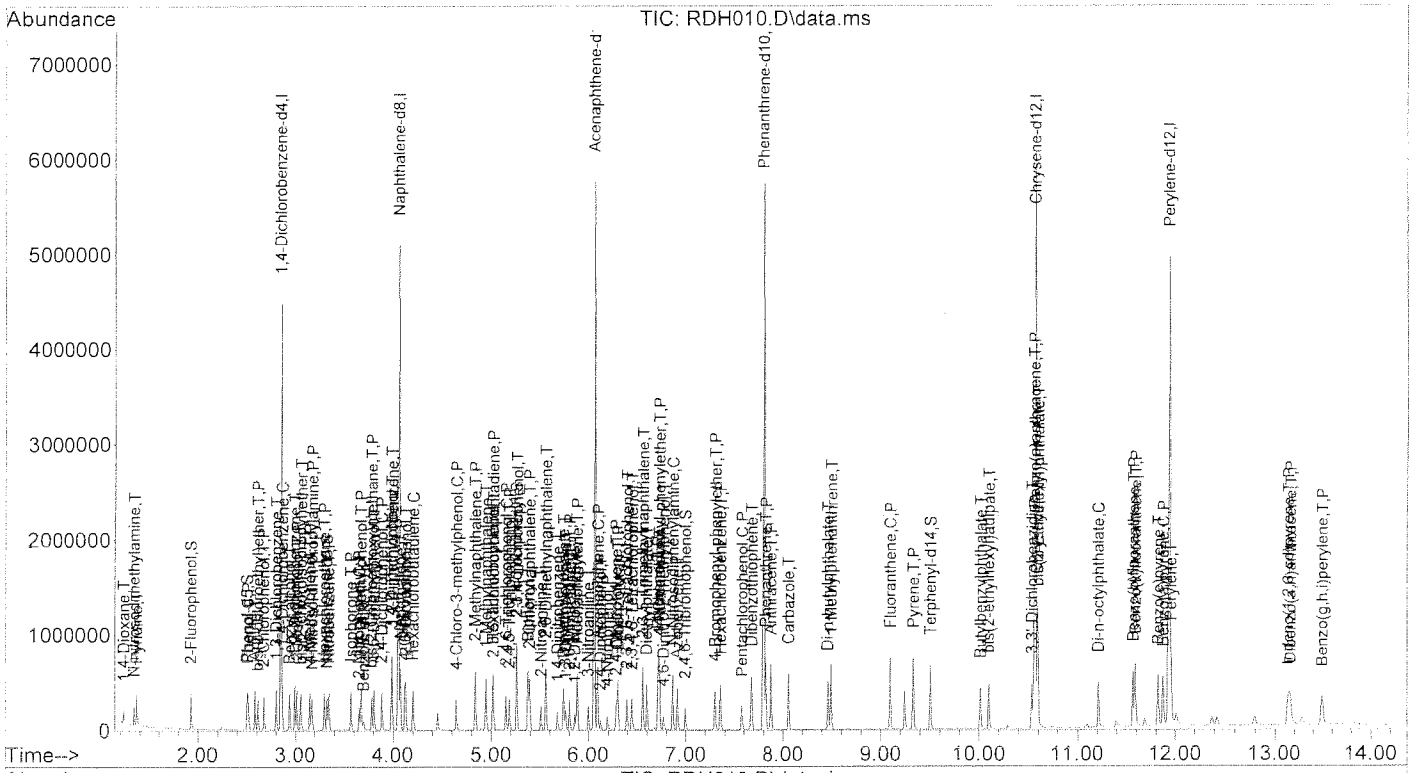
(#) = qualifier out of range (m) = manual integration (+) = signals summed

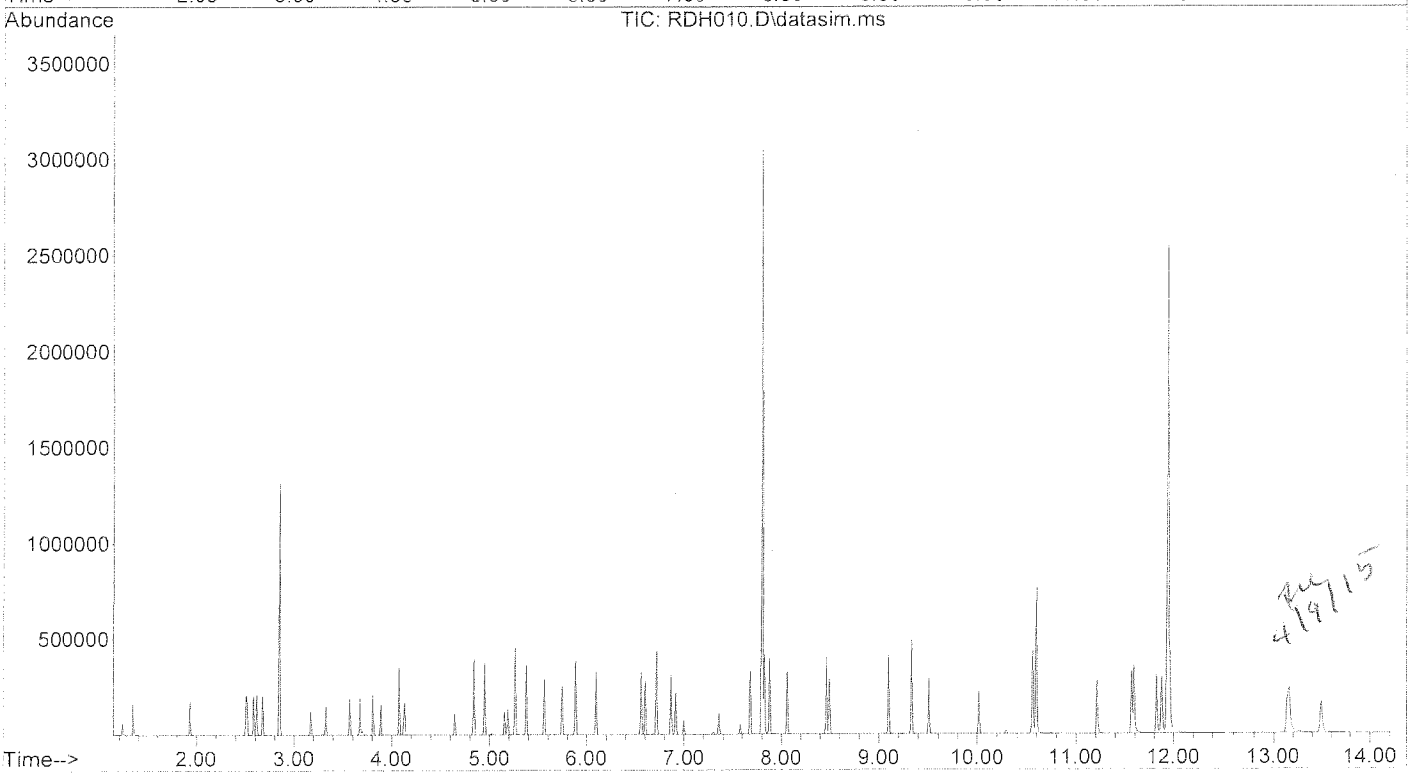
4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH010.D
Acq On : 3 Apr 2015 11:43
Sample : SVE7D038
Misc : 4PPM
Integrator: RTE
Quant Time: Apr 03 12:53:42 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 10
Operator: RZhou
Inst : E7
Multiplr: 1.00





RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH009.D
Acq On : 3 Apr 2015 11:24
Sample : SVE7D037
Misc : 10PPM
Integrator: RTE
Quant Time: Apr 03 12:49:30 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	535024	40.00	ppm	0.00
21) Naphthalene-d8	4.058	136	2009700	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1220031	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2137658	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2322556	40.00	ppm	0.00
97) Perylene-d12	11.939	264	2118965	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	161089	10.23	ppm	0.00
Spiked Amount 30.000			Recovery	=	34.10%	
6) Phenol-d5	2.501	99	196572	10.40	ppm	0.00
Spiked Amount 30.000			Recovery	=	34.67%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.328	82	183941	10.08	ppm	0.00
Spiked Amount 10.000			Recovery	=	100.80%	
46) 2-Fluorobiphenyl	5.266	172	460063	9.68	ppm	0.00
Spiked Amount 10.000			Recovery	=	96.80%	
75) 2,4,6-Tribromophenol	7.000	330	57801	9.95	ppm	0.00
Spiked Amount 30.000			Recovery	=	33.17%	
90) Terphenyl-d14	9.507	244	494057	10.03	ppm	0.00
Spiked Amount 10.000			Recovery	=	100.30%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.228	88	71224	11.10	ppm	91
3) N-nitrosodimethylamine	1.338	74	92814	10.28	ppm	99
4) Pyridine	1.367	79	165220	10.29	ppm	100
7) Phenol	2.512	94	197223	10.39	ppm	99
8) Aniline	2.579	93	248424	10.17	ppm	97
9) bis(2-chloroethyl)ether	2.611	93	153809	10.12	ppm	100
10) 2-Chlorophenol	2.673	128	167811	10.17	ppm	98
11) 1,3-Dichlorobenzene	2.805	146	208308	10.22	ppm	100
13) 1,4-Dichlorobenzene	2.863	146	217159	10.27	ppm	100
14) Benzyl alcohol	2.939	108	109521	10.33	ppm	100
15) 1,2-Dichlorobenzene	2.992	146	207162	10.35	ppm	98
16) 2-Methylphenol	3.016	107	132002	10.26	ppm	100
17) bis(2-chloroisopropyl)...	3.059	45	361614	10.31	ppm	100
18) 4-Methylphenol	3.150	107	175179	10.37	ppm	97
19) N-Nitroso-di-n-propyla...	3.174	70	114611	10.13	ppm	100
20) Hexachloroethane	3.299	117	98953	10.44	ppm	97
23) Nitrobenzene	3.347	77	196808	10.18	ppm	98
24) Isophorone	3.572	82	373874	10.21	ppm	99
25) 2-Nitrophenol	3.654	139	83810	9.65	ppm	96
26) 2,4-Dimethylphenol	3.673	107	171662	9.93	ppm	98
27) Benzoic acid	3.721	105	104487	9.94	ppm	93
28) bis(2-Chloroethoxy)met...	3.783	93	208595	10.10	ppm	100
29) 3,5-Dimethylphenol	3.812	107	177634	8.93	ppm	97
30) 2,4-Dichlorophenol	3.889	162	159252	9.99	ppm	99
31) 1,2,4-Trichlorobenzene	3.990	180	197083	10.20	ppm	99
32) 3,4-Dimethylphenol	3.985	107	214987	10.11	ppm	99
33) Naphthalene	4.077	128	556789	10.13	ppm	100
34) 4-Chloroaniline	4.125	127	221342	10.08	ppm	99
35) 2,6-Dichlorophenol	4.130	162	161197	10.12	ppm	99

TM 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH009.D
Acq On : 3 Apr 2015 11:24
Sample : SVE7D037
Misc : 10PPM
Integrator: RTE
Quant Time: Apr 03 12:49:30 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Hexachlorobutadiene	4.207	225	125842	10.14	ppm		98
38) 4-Chloro-3-methylphenol	4.646	107	137521	10.02	ppm		97
39) 2-Methylnaphthalene	4.838	142	380146	10.00	ppm		100
40) 1-Methylnaphthalene	4.953	142	350101	10.09	ppm		99
42) Hexachlorocyclopentadiene	5.020	237	127372	9.80	ppm		98
43) 2,3,5-Trichlorophenol	5.025	196	109453	10.05	ppm		99
44) 2,4,6-Trichlorophenol	5.154	196	123025	10.05	ppm		100
45) 2,4,5-Trichlorophenol	5.188	196	123891	9.78	ppm		98
47) 2,3,4-Trichlorophenol	5.266	196	125920	10.30	ppm		99
48) Biphenyl	5.381	154	475069	10.02	ppm		99
49) 2-Chloronaphthalene	5.400	162	398883	10.04	ppm		100
50) 2-Nitroaniline	5.515	65	101090	10.02	ppm		99
51) 2,6-Dimethylnaphthalene	5.563	156	340365	10.12	ppm		100
52) 1,4-Dinitrobenzene	5.683	168	46237	9.60	ppm		96
53) Dimethylphthalate	5.746	163	449818	10.13	ppm		100
54) 1,3-Dinitrobenzene	5.770	168	56184	9.96	ppm		99
55) 2,6-Dinitrotoluene	5.809	165	92508	10.02	ppm		97
56) 1,2-Dinitrobenzene	5.867	168	34179	9.92	ppm	#	79
57) Acenaphthylene	5.886	152	634696	9.85	ppm		100
58) 3-Nitroaniline	6.001	138	90304	9.94	ppm		99
59) Acenaphthene	6.097	153	419584	10.17	ppm		99
60) 2,4-Dinitrophenol	6.126	184	37979	9.49	ppm		99
61) 4-Nitrophenol	6.198	109	45325	9.86	ppm		99
62) 2,4-Dinitrotoluene	6.289	165	117514	9.93	ppm		98
63) Dibenzofuran	6.303	168	537139	10.22	ppm		100
64) 2,3,5,6-Tetrachlorophenol	6.394	230	91938	10.03	ppm		99
65) 2,3,4,6-Tetrachlorophenol	6.447	232	107415	9.59	ppm		95
66) 2,3,5-Trimethylnaphtha...	6.557	170	366736	10.68	ppm		79
67) Diethylphthalate	6.604	149	426328	10.12	ppm		100
68) Fluorene	6.716	166	444443	10.14	ppm		99
69) 4-Chlorophenyl-phenyle...	6.730	204	225025	9.97	ppm		98
70) 4-Nitroaniline	6.735	138	83454	9.58	ppm		93
72) 4,6-Dinitro-2-methylph...	6.772	198	54083	9.29	ppm		98
73) N-Nitrosodiphenylamine	6.867	169	341881	10.04	ppm		96
74) Azobenzene	6.914	77	367827	10.13	ppm		100
76) 4-Bromophenyl-phenylether	7.303	248	131928	10.14	ppm		98
77) Hexachlorobenzene	7.355	284	144196	10.14	ppm		100
78) Pentachlorophenol	7.582	266	79003	10.11	ppm		96
79) Dibenzothiophene	7.681	184	622511	10.40	ppm		99
80) Phenanthrene	7.824	178	651102	10.20	ppm		100
82) Anthracene	7.878	178	675760	10.31	ppm		99
83) Carbazole	8.060	167	542616	10.13	ppm		99
84) Di-n-butylphthalate	8.462	149	673054	10.19	ppm		100
85) 1-Methylphenanthrene	8.496	192	461074	10.07	ppm		99
86) Fluoranthene	9.100	202	727318	10.12	ppm		99
89) Pyrene	9.335	202	783078	9.76	ppm		99
91) Butylbenzylphthalate	10.012	149	266173	10.00	ppm		99
92) bis(2-ethylhexyl)adipate	10.099	129	210440	9.87	ppm		97
93) 3,3'-Dichlorobenzidine	10.534	252	249140	10.26	ppm		100
94) Benzo(a)anthracene	10.558	228	690016	10.15	ppm		100
95) Chrysene	10.592	228	682786	10.17	ppm		100
96) bis(2-Ethylhexyl)phtha...	10.597	149	409075	10.03	ppm		100
98) Di-n-octylphthalate	11.213	149	647270	9.81	ppm		100
99) Benzo(b)fluoranthene	11.564	252	637359	9.92	ppm		99

TM 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH009.D
Acq On : 3 Apr 2015 11:24
Sample : SVE7D037
Misc : 10PPM
Integrator: RTE
Quant Time: Apr 03 12:49:30 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: RZhou
Inst : E7
Multiplr: 1.00

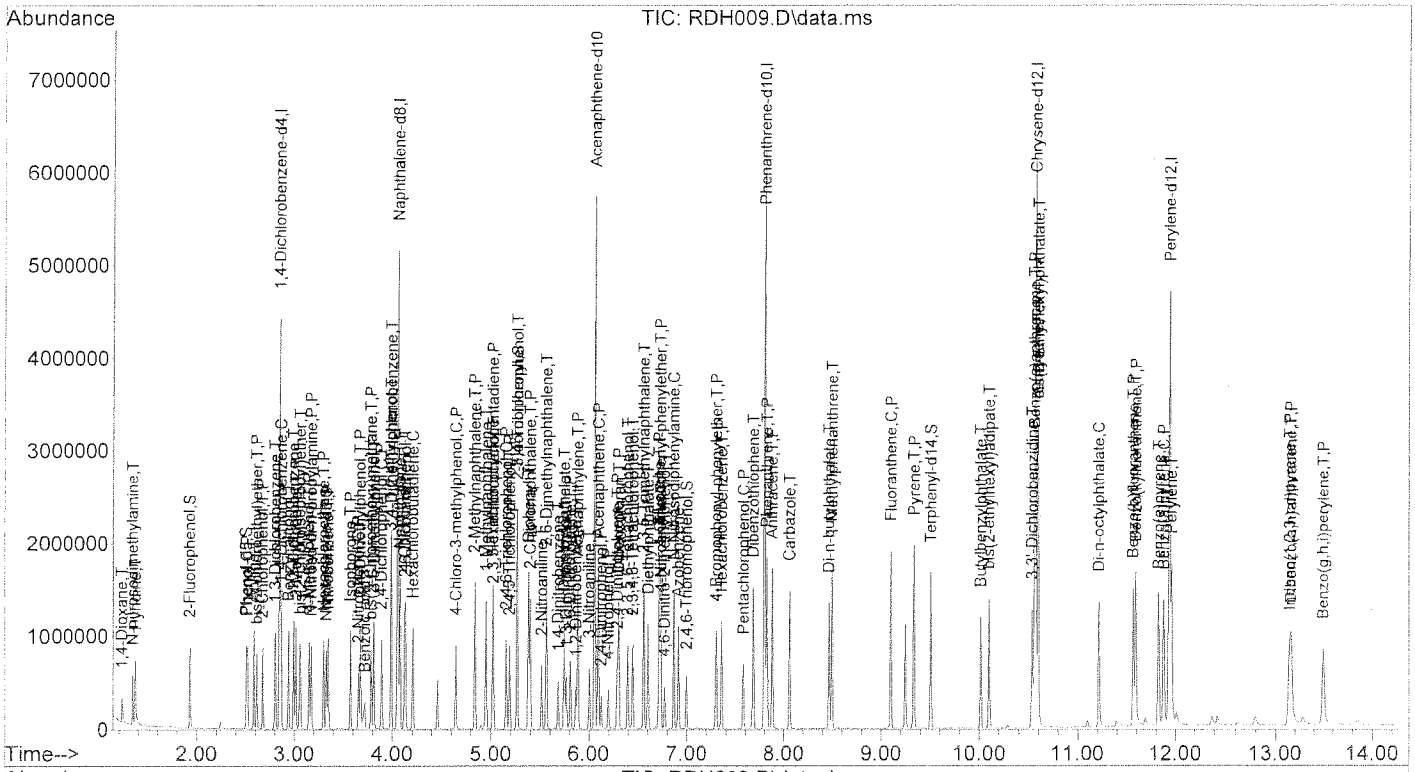
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) Benzo(k)fluoranthene	11.593	252	715764	10.09 ppm	99
101) Benzo(e)pyrene	11.827	252	603674	10.17 ppm	100
102) Benzo(a)pyrene	11.878	252	610090	9.76 ppm	96
103) Perylene	11.958	252	644726	10.21 ppm	99
104) Indeno(1,2,3-cd)pyrene	13.143	276	670878	9.97 ppm	100
105) Dibenzo(a,h)anthracene	13.157	278	563363	9.93 ppm	98
106) Benzo(g,h,i)perylene	13.497	276	593891	10.07 ppm	97

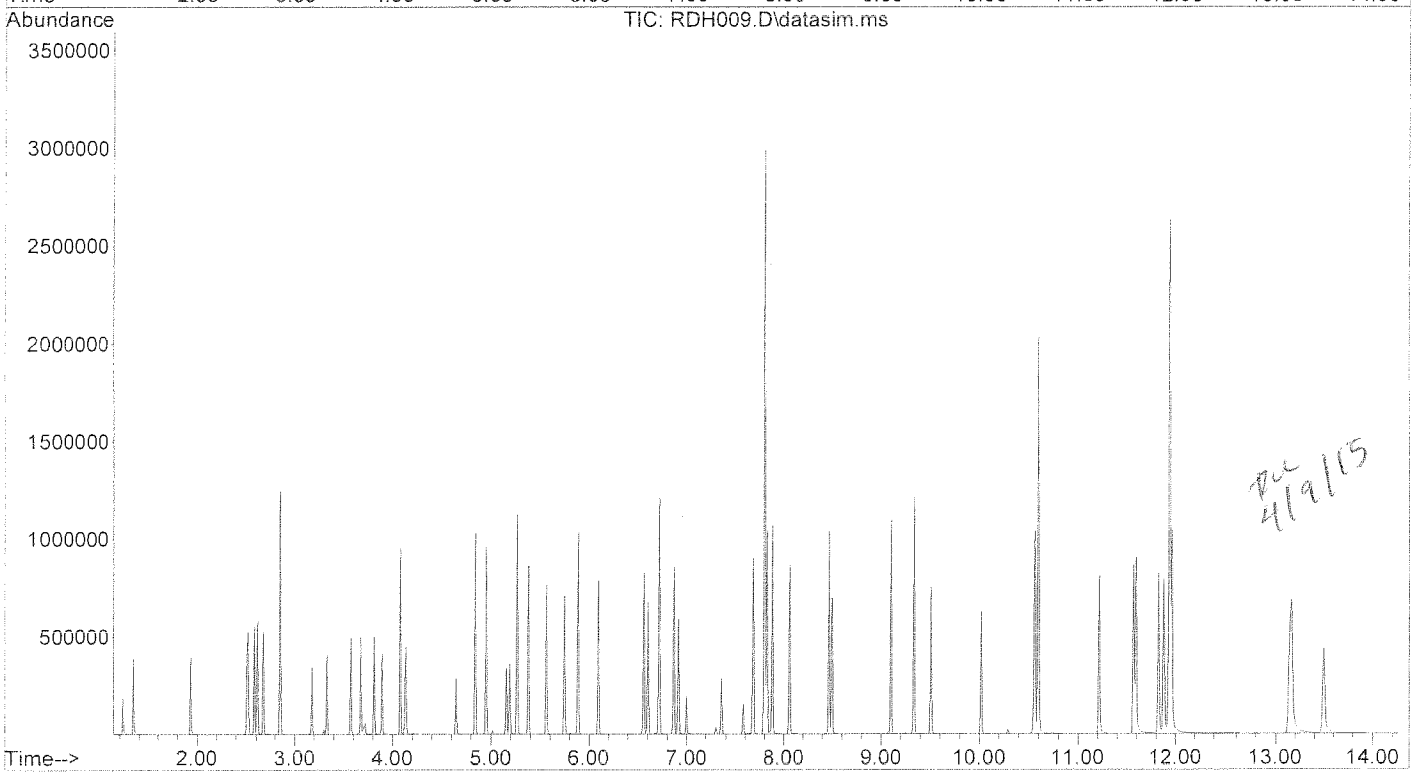
(#) = qualifier out of range (m) = manual integration (+) = signals summed

pa 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH009.D
Vial: 9
Acq On : 3 Apr 2015 11:24
Operator: RZhou
Sample : SVE7D037
Inst : E7
Misc : 10PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:30 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH008.D
Acq On : 3 Apr 2015 11:05
Sample : SVE7D036
Misc : 20PPM
Integrator: RTE
Quant Time: Apr 03 12:49:28 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 8
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	543780	40.00	ppm	0.00
21) Naphthalene-d8	4.058	136	2041343	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1242554	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2156231	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2290964	40.00	ppm	0.00
97) Perylene-d12	11.940	264	2112375	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	318614	19.91	ppm	0.00
Spiked Amount 30.000			Recovery	=	66.37%	
6) Phenol-d5	2.501	99	383395	19.97	ppm	0.00
Spiked Amount 30.000			Recovery	=	66.57%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.332	82	369546	19.93	ppm	0.00
Spiked Amount 10.000			Recovery	=	199.30%	
46) 2-Fluorobiphenyl	5.266	172	1022682	21.14	ppm	0.00
Spiked Amount 10.000			Recovery	=	211.40%	
75) 2,4,6-Tribromophenol	7.000	330	116875	19.94	ppm	0.00
Spiked Amount 30.000			Recovery	=	66.47%	
90) Terphenyl-d14	9.507	244	978483	20.14	ppm	0.00
Spiked Amount 10.000			Recovery	=	201.40%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.228	88	123279	18.91	ppm	98
3) N-nitrosodimethylamine	1.338	74	185641	20.23	ppm	96
4) Pyridine	1.362	79	328607	20.14	ppm	99
7) Phenol	2.517	94	388648	20.15	ppm	99
8) Aniline	2.579	93	496631	20.01	ppm	100
9) bis(2-chloroethyl)ether	2.611	93	309372	20.02	ppm	99
10) 2-Chlorophenol	2.673	128	338255	20.16	ppm	100
11) 1,3-Dichlorobenzene	2.805	146	414424	20.00	ppm	100
13) 1,4-Dichlorobenzene	2.863	146	426577	19.85	ppm	99
14) Benzyl alcohol	2.939	108	217556	20.19	ppm	99
15) 1,2-Dichlorobenzene	2.992	146	404129	19.86	ppm	100
16) 2-Methylphenol	3.016	107	264014	20.20	ppm	99
17) bis(2-chloroisopropyl)...	3.059	45	716572	20.10	ppm	100
18) 4-Methylphenol	3.155	107	342820	19.97	ppm	98
19) N-Nitroso-di-n-propyla...	3.179	70	233289	20.29	ppm	100
20) Hexachloroethane	3.299	117	195125	20.26	ppm	99
23) Nitrobenzene	3.347	77	393474	20.04	ppm	100
24) Isophorone	3.577	82	747366	20.10	ppm	99
25) 2-Nitrophenol	3.654	139	180326	20.44	ppm	99
26) 2,4-Dimethylphenol	3.678	107	343413	19.55	ppm	100
27) Benzoic acid	3.745	105	226391	18.82	ppm	98
28) bis(2-Chloroethoxy)met...	3.783	93	417993	19.93	ppm	99
29) 3,5-Dimethylphenol	3.812	107	415762	20.57	ppm	99
30) 2,4-Dichlorophenol	3.894	162	319790	19.76	ppm	97
31) 1,2,4-Trichlorobenzene	3.990	180	390185	19.89	ppm	100
32) 3,4-Dimethylphenol	3.990	107	430557	19.94	ppm	100
33) Naphthalene	4.077	128	1111328	19.90	ppm	100
34) 4-Chloroaniline	4.125	127	444964	19.94	ppm	99
35) 2,6-Dichlorophenol	4.135	162	324750	20.07	ppm	99

RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH008.D
Acq On : 3 Apr 2015 11:05
Sample : SVE7D036
Misc : 20PPM
Integrator: RTE
Quant Time: Apr 03 12:49:28 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 8
Operator: RZhou
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36)	Hexachlorobutadiene	4.207	225	251872	19.97	ppm	99
38)	4-Chloro-3-methylphenol	4.646	107	280999	20.15	ppm	99
39)	2-Methylnaphthalene	4.838	142	767604	19.89	ppm	99
40)	1-Methylnaphthalene	4.953	142	699212	19.83	ppm	99
42)	Hexachlorocyclopentadiene	5.020	237	266729	20.16	ppm	99
43)	2,3,5-Trichlorophenol	5.025	196	225822	20.36	ppm	99
44)	2,4,6-Trichlorophenol	5.154	196	254831	20.45	ppm	98
45)	2,4,5-Trichlorophenol	5.193	196	259183	20.09	ppm	98
47)	2,3,4-Trichlorophenol	5.266	196	248223	19.93	ppm	99
48)	Biphenyl	5.381	154	970639	20.11	ppm	100
49)	2-Chloronaphthalene	5.400	162	807730	19.96	ppm	99
50)	2-Nitroaniline	5.520	65	208194	20.27	ppm	99
51)	2,6-Dimethylnaphthalene	5.563	156	684969	19.99	ppm	100
52)	1,4-Dinitrobenzene	5.688	168	99080	20.21	ppm	96
53)	Dimethylphthalate	5.751	163	898727	19.87	ppm	100
54)	1,3-Dinitrobenzene	5.770	168	113227	19.71	ppm	98
55)	2,6-Dinitrotoluene	5.814	165	186600	19.85	ppm	99
56)	1,2-Dinitrobenzene	5.872	168	71586	20.41	ppm	93
57)	Acenaphthylene	5.891	152	1300158	19.81	ppm	99
58)	3-Nitroaniline	6.006	138	185159	20.01	ppm	100
59)	Acenaphthene	6.097	153	836877	19.92	ppm	99
60)	2,4-Dinitrophenol	6.131	184	89166	18.95	ppm	98
61)	4-Nitrophenol	6.203	109	93897	20.06	ppm	97
62)	2,4-Dinitrotoluene	6.294	165	243315	20.18	ppm	99
63)	Dibenzofuran	6.303	168	1079669	20.16	ppm	100
64)	2,3,5,6-Tetrachlorophenol	6.395	230	185935	19.92	ppm	99
65)	2,3,4,6-Tetrachlorophenol	6.447	232	226898	19.88	ppm	99
66)	2,3,5-Trimethylnaphtha...	6.561	170	739438	21.15	ppm	78
67)	Diethylphthalate	6.604	149	855850	19.95	ppm	99
68)	Fluorene	6.716	166	893750	20.03	ppm	99
69)	4-Chlorophenyl-phenyle...	6.730	204	453954	19.74	ppm	99
70)	4-Nitroaniline	6.740	138	177155	19.97	ppm	99
72)	4,6-Dinitro-2-methylph...	6.777	198	132564	19.63	ppm	98
73)	N-Nitrosodiphenylamine	6.871	169	682717	19.87	ppm	86
74)	Azobenzene	6.919	77	739634	20.20	ppm	99
76)	4-Bromophenyl-phenylether	7.303	248	267890	20.42	ppm	98
77)	Hexachlorobenzene	7.355	284	284435	19.83	ppm	99
78)	Pentachlorophenol	7.582	266	159613	20.25	ppm	99
79)	Dibenzothiophene	7.681	184	1220792	20.22	ppm	100
80)	Phenanthrene	7.824	178	1281608	19.91	ppm	100
82)	Anthracene	7.883	178	1324955	20.03	ppm	100
83)	Carbazole	8.060	167	1069274	19.79	ppm	99
84)	Di-n-butylphthalate	8.467	149	1342931	20.16	ppm	100
85)	1-Methylphenanthrene	8.496	192	915139	19.81	ppm	100
86)	Fluoranthene	9.104	202	1447800	19.98	ppm	100
89)	Pyrene	9.336	202	1651780	20.88	ppm	98
91)	Butylbenzylphthalate	10.017	149	541896	20.63	ppm	99
92)	bis(2-ethylhexyl)adipate	10.104	129	443849	21.11	ppm	99
93)	3,3'-Dichlorobenzidine	10.539	252	486147	20.29	ppm	99
94)	Benzo(a)anthracene	10.563	228	1341711	20.02	ppm	99
95)	Chrysene	10.597	228	1325225	20.01	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.597	149	835933	20.78	ppm	100
98)	Di-n-octylphthalate	11.214	149	1342110	20.41	ppm	100
99)	Benzo(b)fluoranthene	11.574	252	1268735	19.80	ppm	99

Jm 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH008.D
Vial: 8
Acq On : 3 Apr 2015 11:05
Operator: RZhou
Sample : SVE7D036
Inst : E7
Misc : 20PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:28 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.598	252	1421851	20.10	ppm	100
101) Benzo(e)pyrene	11.832	252	1190186	20.11	ppm	100
102) Benzo(a)pyrene	11.883	252	1249206	20.04	ppm	97
103) Perylene	11.968	252	1259792	20.02	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.148	276	1346818	20.07	ppm	99
105) Dibenzo(a,h)anthracene	13.167	278	1130711	20.00	ppm	98
106) Benzo(g,h,i)perylene	13.507	276	1176323	20.01	ppm	100

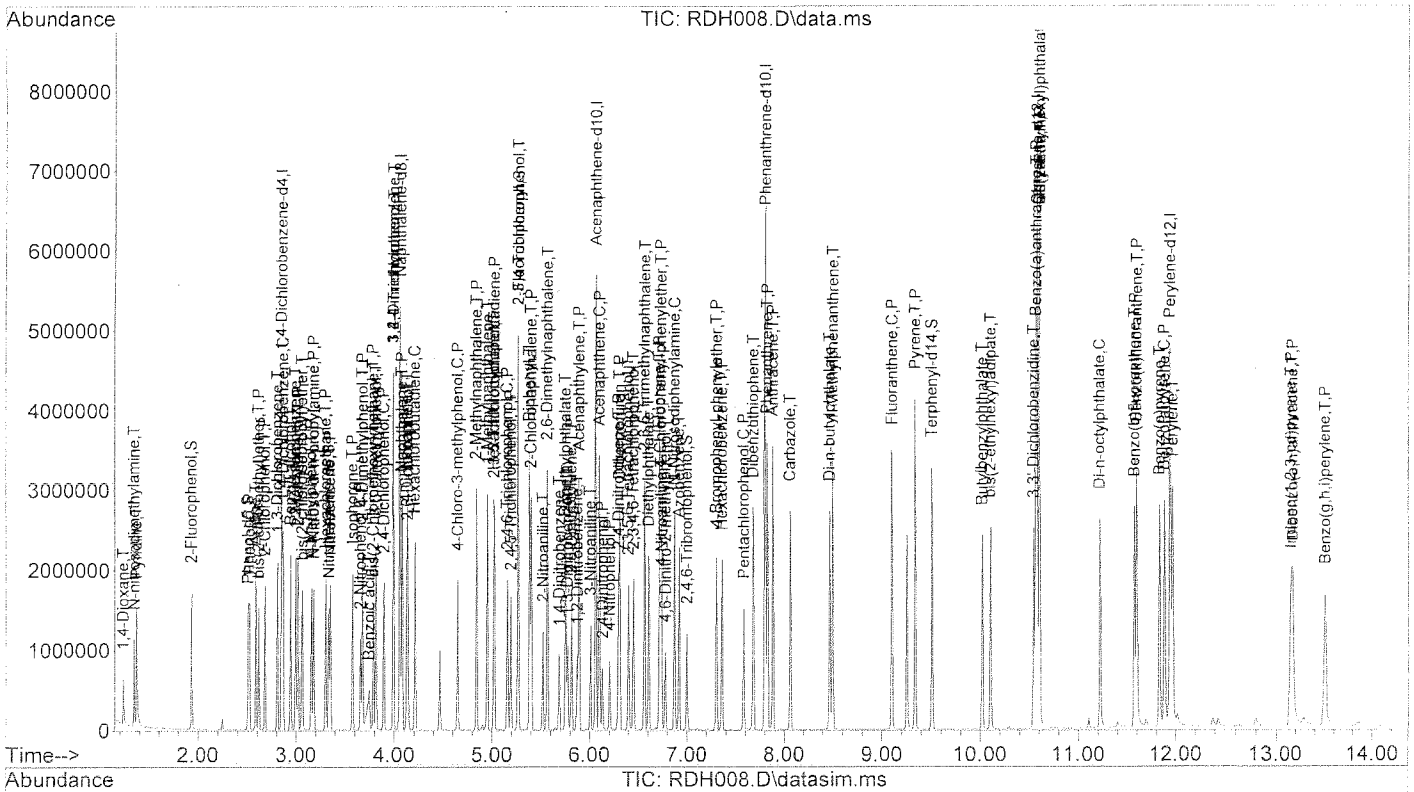
(#) = qualifier out of range (m) = manual integration (+) = signals summed

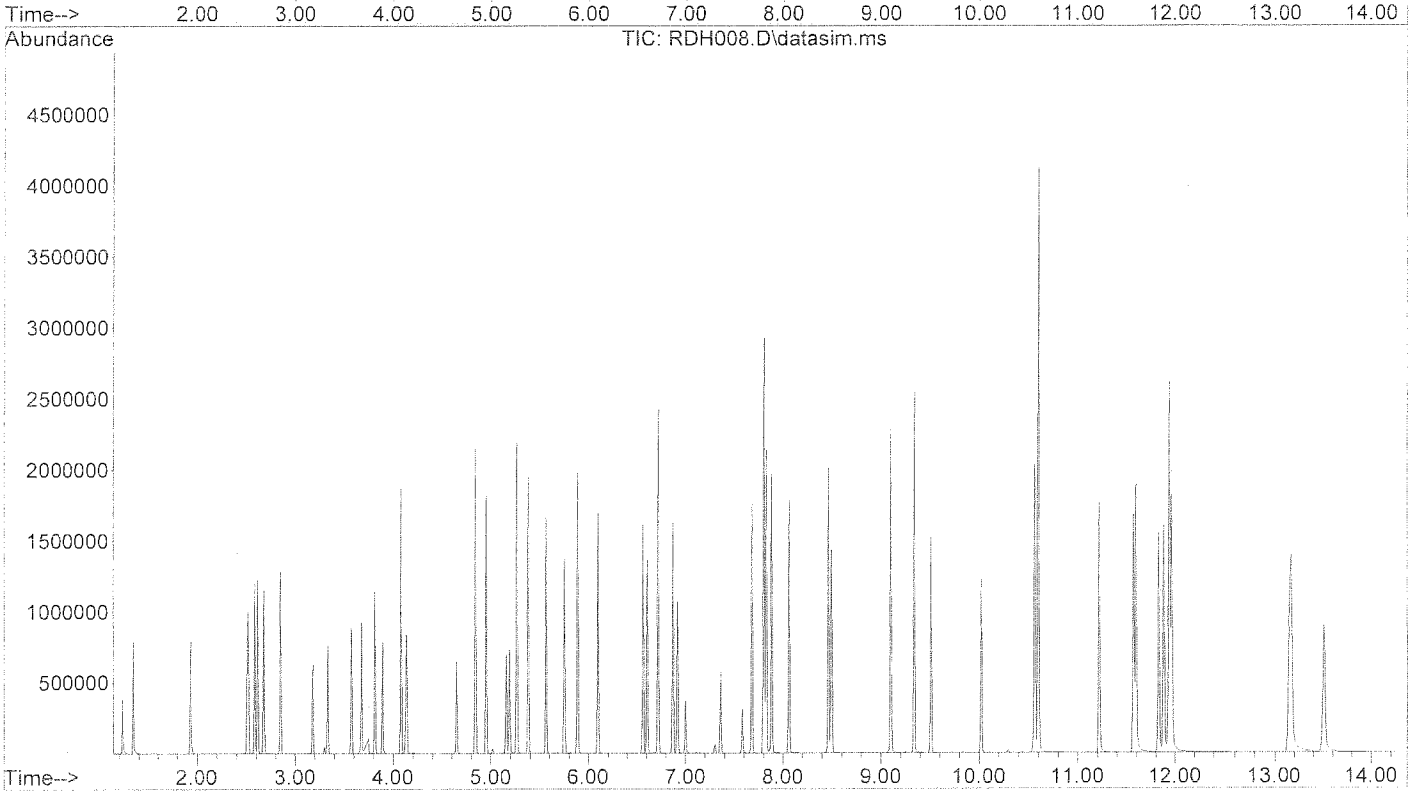
RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH008.D
Acq On : 3 Apr 2015 11:05
Sample : SVE7D036
Misc : 20PPM
Integrator: RTE
Quant Time: Apr 03 12:49:28 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 8
Operator: RZhou
Inst : E7
Multiplr: 1.00





4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH007.D
Acq On : 3 Apr 2015 10:46
Sample : SVE7D035
Misc : 25PPM
Integrator: RTE
Quant Time: Apr 03 12:49:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 7
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	567854	40.00	ppm	0.00
21) Naphthalene-d8	4.058	136	2117278	40.00	ppm	0.00
41) Acenaphthene-d10	6.064	164	1301658	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2320209	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2507024	40.00	ppm	0.00
97) Perylene-d12	11.939	264	2285835	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	403516	24.15	ppm	0.00
Spiked Amount 30.000			Recovery =	80.50%		
6) Phenol-d5	2.506	99	478481	23.86	ppm	0.00
Spiked Amount 30.000			Recovery =	79.53%		
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery =	0.00%		
22) Nitrobenzene-d5	3.332	82	467831	24.33	ppm	0.00
Spiked Amount 10.000			Recovery =	243.30%		
46) 2-Fluorobiphenyl	5.265	172	1314049	25.92	ppm	0.00
Spiked Amount 10.000			Recovery =	259.20%		
75) 2,4,6-Tribromophenol	6.999	330	155904	24.71	ppm	0.00
Spiked Amount 30.000			Recovery =	82.37%		
90) Terphenyl-d14	9.507	244	1282796	24.13	ppm	0.00
Spiked Amount 10.000			Recovery =	241.30%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	152977	22.47	ppm	100
3) N-nitrosodimethylamine	1.338	74	234594	24.48	ppm	100
4) Pyridine	1.367	79	422912	24.82	ppm	100
7) Phenol	2.517	94	486956	24.17	ppm	100
8) Aniline	2.584	93	636715	24.57	ppm	100
9) bis(2-chloroethyl)ether	2.611	93	388271	24.06	ppm	100
10) 2-Chlorophenol	2.673	128	425262	24.27	ppm	100
11) 1,3-Dichlorobenzene	2.805	146	528265	24.41	ppm	100
13) 1,4-Dichlorobenzene	2.863	146	546549	24.35	ppm	100
14) Benzyl alcohol	2.939	108	276308	24.56	ppm	100
15) 1,2-Dichlorobenzene	2.992	146	518913	24.43	ppm	100
16) 2-Methylphenol	3.016	107	330722	24.23	ppm	100
17) bis(2-chloroisopropyl)...	3.059	45	899606	24.16	ppm	100
18) 4-Methylphenol	3.155	107	430250	24.01	ppm	100
19) N-Nitroso-di-n-propyla...	3.179	70	295544	24.61	ppm	100
20) Hexachloroethane	3.299	117	244531	24.32	ppm	100
23) Nitrobenzene	3.351	77	496414	24.37	ppm	100
24) Isophorone	3.577	82	960172	24.90	ppm	100
25) 2-Nitrophenol	3.658	139	229731	25.11	ppm	100
26) 2,4-Dimethylphenol	3.678	107	437266	24.00	ppm	100
27) Benzoic acid	3.754	105	316208	24.62	ppm	100
28) bis(2-Chloroethoxy)met...	3.788	93	531466	24.43	ppm	100
29) 3,5-Dimethylphenol	3.816	107	525208	25.06	ppm	100
30) 2,4-Dichlorophenol	3.893	162	414718	24.70	ppm	100
31) 1,2,4-Trichlorobenzene	3.995	180	498602	24.50	ppm	100
32) 3,4-Dimethylphenol	3.990	107	544780	24.32	ppm	100
33) Naphthalene	4.082	128	1409943	24.34	ppm	100
34) 4-Chloroaniline	4.130	127	566549	24.48	ppm	100
35) 2,6-Dichlorophenol	4.135	162	408845	24.37	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH007.D
Acq On : 3 Apr 2015 10:46
Sample : SVE7D035
Misc : 25PPM
Integrator: RTE
Quant Time: Apr 03 12:49:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 7
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Hexachlorobutadiene	4.207	225	317708	24.29	ppm	100
38) 4-Chloro-3-methylphenol	4.646	107	360391	24.92	ppm	100
39) 2-Methylnaphthalene	4.842	142	974691	24.34	ppm	100
40) 1-Methylnaphthalene	4.953	142	890854	24.36	ppm	100
42) Hexachlorocyclopentadiene	5.020	237	343697	24.79	ppm	100
43) 2,3,5-Trichlorophenol	5.024	196	290833	25.03	ppm	100
44) 2,4,6-Trichlorophenol	5.154	196	317662	24.33	ppm	100
45) 2,4,5-Trichlorophenol	5.193	196	334773	24.78	ppm	100
47) 2,3,4-Trichlorophenol	5.265	196	321239	24.62	ppm	100
48) Biphenyl	5.381	154	1226155	24.25	ppm	100
49) 2-Chloronaphthalene	5.400	162	1031886	24.34	ppm	100
50) 2-Nitroaniline	5.520	65	268685	24.97	ppm	100
51) 2,6-Dimethylnaphthalene	5.568	156	869326	24.22	ppm	100
52) 1,4-Dinitrobenzene	5.688	168	131027	25.51	ppm	100
53) Dimethylphthalate	5.756	163	1161210	24.50	ppm	100
54) 1,3-Dinitrobenzene	5.775	168	150132	24.94	ppm	100
55) 2,6-Dinitrotoluene	5.818	165	243931	24.77	ppm	100
56) 1,2-Dinitrobenzene	5.876	168	89857	24.45	ppm	100
57) Acenaphthylene	5.891	152	1653745	24.05	ppm	100
58) 3-Nitroaniline	6.011	138	241567	24.92	ppm	100
59) Acenaphthene	6.097	153	1062186	24.13	ppm	100
60) 2,4-Dinitrophenol	6.131	184	122837	24.21	ppm	99
61) 4-Nitrophenol	6.203	109	125419	25.58	ppm	100
62) 2,4-Dinitrotoluene	6.294	165	315143	24.95	ppm	100
63) Dibenzofuran	6.308	168	1358502	24.22	ppm	100
64) 2,3,5,6-Tetrachlorophenol	6.399	230	242273	24.78	ppm	100
65) 2,3,4,6-Tetrachlorophenol	6.447	232	289660	24.23	ppm	100
66) 2,3,5-Trimethylnaphtha...	6.561	170	825960	22.55	ppm	100
67) Diethylphthalate	6.608	149	1109399	24.68	ppm	100
68) Fluorene	6.721	166	1138226	24.35	ppm	100
69) 4-Chlorophenyl-phenyle...	6.730	204	591656	24.56	ppm	100
70) 4-Nitroaniline	6.744	138	234267	25.21	ppm	100
72) 4,6-Dinitro-2-methylph...	6.782	198	177190	23.89	ppm	100
73) N-Nitrosodiphenylamine	6.871	169	951336	25.73	ppm	100
74) Azobenzene	6.919	77	957359	24.29	ppm	100
76) 4-Bromophenyl-phenylether	7.303	248	342154	24.24	ppm	100
77) Hexachlorobenzene	7.359	284	372728	24.15	ppm	100
78) Pentachlorophenol	7.581	266	216502	25.53	ppm	100
79) Dibenzothiophene	7.685	184	1583159	24.37	ppm	100
80) Phenanthrene	7.828	178	1668185	24.08	ppm	100
82) Anthracene	7.883	178	1700073	23.89	ppm	100
83) Carbazole	8.064	167	1414830	24.34	ppm	100
84) Di-n-butylphthalate	8.467	149	1757096	24.52	ppm	100
85) 1-Methylphenanthrene	8.496	192	1201880	24.18	ppm	100
86) Fluoranthene	9.104	202	1901132	24.38	ppm	100
89) Pyrene	9.335	202	2035982	23.52	ppm	100
91) Butylbenzylphthalate	10.016	149	717882	24.98	ppm	100
92) bis(2-ethylhexyl)adipate	10.099	129	573864	24.94	ppm	100
93) 3,3'-Dichlorobenzidine	10.539	252	648228	24.72	ppm	100
94) Benzo(a)anthracene	10.558	228	1781666	24.29	ppm	100
95) Chrysene	10.597	228	1741960	24.03	ppm	100
96) bis(2-Ethylhexyl)phtha...	10.597	149	1087652	24.70	ppm	100
98) Di-n-octylphthalate	11.218	149	1780999	25.03	ppm	100
99) Benzo(b)fluoranthene	11.573	252	1691763	24.40	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH007.D
Acq On : 3 Apr 2015 10:46
Sample : SVE7D035
Misc : 25PPM
Integrator: RTE
Quant Time: Apr 03 12:49:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 7
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.598	252	1848642	24.16	ppm	100
101) Benzo(e)pyrene	11.832	252	1541233	24.06	ppm	100
102) Benzo(a)pyrene	11.883	252	1669449	24.75	ppm	100
103) Perylene	11.968	252	1653348	24.28	ppm	100
104) Indeno(1,2,3-cd)pyrene	13.147	276	1770599	24.38	ppm	100
105) Dibenzo(a,h)anthracene	13.172	278	1500389	24.52	ppm	100
106) Benzo(g,h,i)perylene	13.511	276	1542646	24.25	ppm	100

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

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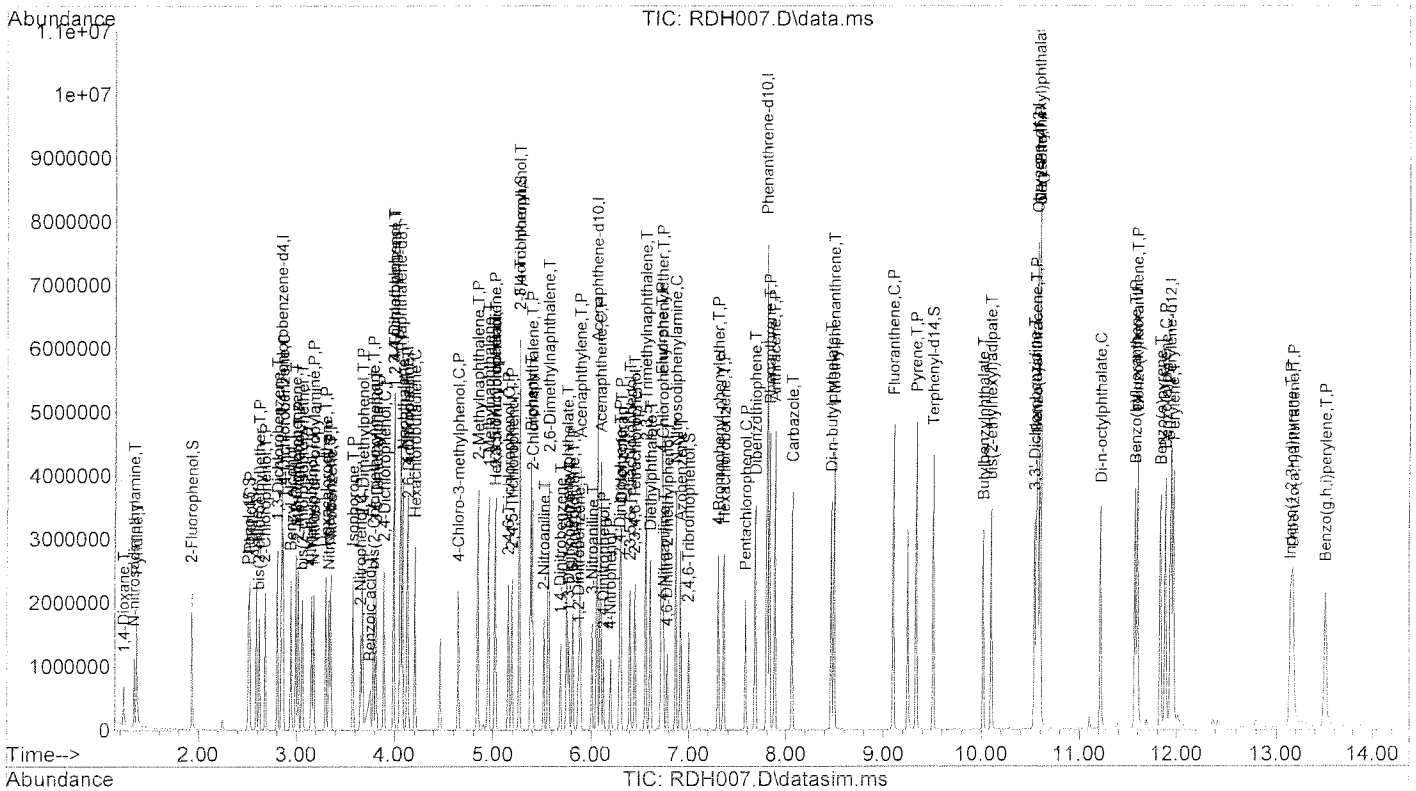
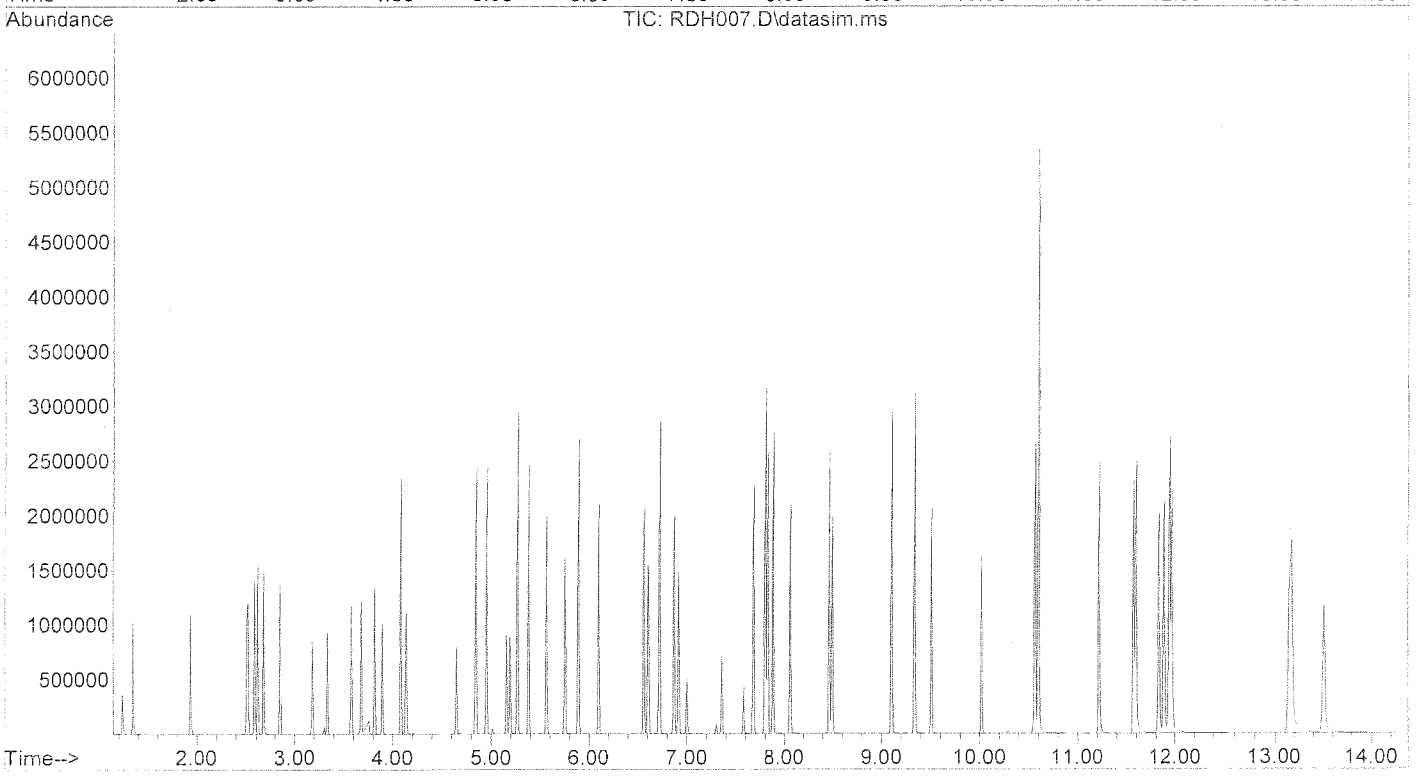
Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH007.D
Vial: 7
Acq On : 3 Apr 2015 10:46
Operator: RZhou
Sample : SVE7D035
Inst : E7
Misc : 25PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH006.D
Acq On : 3 Apr 2015 10:27
Sample : SVE7D034
Misc : 40PPM
Integrator: RTE
Quant Time: Apr 03 12:49:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 6
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	564861	40.00	ppm	0.00
21) Naphthalene-d8	4.057	136	2073381	40.00	ppm	0.00
41) Acenaphthene-d10	6.064	164	1275998	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2237485	40.00	ppm	0.00
87) Chrysene-d12	10.578	240	2398598	40.00	ppm	0.00
97) Perylene-d12	11.944	264	2162744	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	649121	39.05	ppm	0.00
Spiked Amount 30.000			Recovery	=	130.17%	
6) Phenol-d5	2.506	99	773662	38.79	ppm	0.00
Spiked Amount 30.000			Recovery	=	129.30%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.332	82	767980	40.79	ppm	0.00
Spiked Amount 10.000			Recovery	=	407.90%	
46) 2-Fluorobiphenyl	5.270	172	1869718	37.63	ppm	0.00
Spiked Amount 10.000			Recovery	=	376.30%	
75) 2,4,6-Tribromophenol	7.004	330	255138	41.94	ppm	0.00
Spiked Amount 30.000			Recovery	=	139.80%	
90) Terphenyl-d14	9.511	244	2072938	40.76	ppm	0.00
Spiked Amount 10.000			Recovery	=	407.60%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	240065	35.44	ppm	98
3) N-nitrosodimethylamine	1.338	74	372233	39.05	ppm	96
4) Pyridine	1.367	79	690431	40.73	ppm	100
7) Phenol	2.517	94	805587	40.20	ppm	99
8) Aniline	2.584	93	1032545	40.05	ppm	100
9) bis(2-chloroethyl)ether	2.616	93	638727	39.79	ppm	99
10) 2-Chlorophenol	2.678	128	703481	40.37	ppm	100
11) 1,3-Dichlorobenzene	2.805	146	852047	39.58	ppm	100
13) 1,4-Dichlorobenzene	2.862	146	886926	39.72	ppm	99
14) Benzyl alcohol	2.944	108	446884	39.93	ppm	99
15) 1,2-Dichlorobenzene	2.992	146	829423	39.25	ppm	99
16) 2-Methylphenol	3.021	107	541786	39.90	ppm	98
17) bis(2-chloroisopropyl)...	3.064	45	1448257	39.10	ppm	100
18) 4-Methylphenol	3.160	107	707222	39.67	ppm	99
19) N-Nitroso-di-n-propyla...	3.184	70	479553	40.14	ppm	100
20) Hexachloroethane	3.299	117	380461	38.03	ppm	96
23) Nitrobenzene	3.351	77	809743	40.59	ppm	100
24) Isophorone	3.582	82	1567630	41.51	ppm	94
25) 2-Nitrophenol	3.658	139	378697	42.26	ppm	95
26) 2,4-Dimethylphenol	3.677	107	716607	40.17	ppm	98
27) Benzoic acid	3.783	105	538783	41.28	ppm	99
28) bis(2-Chloroethoxy)met...	3.788	93	856607	40.20	ppm	100
29) 3,5-Dimethylphenol	3.816	107	866941	42.24	ppm	99
30) 2,4-Dichlorophenol	3.893	162	670934	40.81	ppm	99
31) 1,2,4-Trichlorobenzene	3.995	180	792480	39.76	ppm	100
32) 3,4-Dimethylphenol	3.995	107	894648	40.79	ppm	99
33) Naphthalene	4.082	128	2293075	40.43	ppm	100
34) 4-Chloroaniline	4.130	127	930607	41.06	ppm	100
35) 2,6-Dichlorophenol	4.139	162	669835	40.76	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH006.D
Acq On : 3 Apr 2015 10:27
Sample : SVE7D034
Misc : 40PPM
Integrator: RTE
Quant Time: Apr 03 12:49:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 6
Operator: RZhou
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
36)	Hexachlorobutadiene	4.207	225	517014	40.36 ppm	98
38)	4-Chloro-3-methylphenol	4.651	107	585128	41.31 ppm	99
39)	2-Methylnaphthalene	4.842	142	1593009	40.63 ppm	100
40)	1-Methylnaphthalene	4.957	142	1456710	40.68 ppm	98
42)	Hexachlorocyclopentadiene	5.020	237	563759	41.49 ppm	100
43)	2,3,5-Trichlorophenol	5.029	196	486877	42.75 ppm	99
44)	2,4,6-Trichlorophenol	5.159	196	525265	41.05 ppm	100
45)	2,4,5-Trichlorophenol	5.193	196	559085	42.21 ppm	99
47)	2,3,4-Trichlorophenol	5.270	196	518666	40.55 ppm	100
48)	Biphenyl	5.386	154	1990564	40.15 ppm	100
49)	2-Chloronaphthalene	5.405	162	1684156	40.53 ppm	100
50)	2-Nitroaniline	5.525	65	438115	41.54 ppm	98
51)	2,6-Dimethylnaphthalene	5.568	156	1407357	40.00 ppm	99
52)	1,4-Dinitrobenzene	5.693	168	220172	43.73 ppm	87
53)	Dimethylphthalate	5.760	163	1881942	40.51 ppm	100
54)	1,3-Dinitrobenzene	5.780	168	246953	41.85 ppm	100
55)	2,6-Dinitrotoluene	5.823	165	399944	41.44 ppm	97
56)	1,2-Dinitrobenzene	5.881	168	149646	41.54 ppm	95
57)	Acenaphthylene	5.895	152	2934332	43.54 ppm	96
58)	3-Nitroaniline	6.016	138	395806	41.65 ppm	98
59)	Acenaphthene	6.102	153	1748860	40.53 ppm	99
60)	2,4-Dinitrophenol	6.135	184	218535	42.11 ppm	96
61)	4-Nitrophenol	6.212	109	199798	41.57 ppm	95
62)	2,4-Dinitrotoluene	6.298	165	513160	41.45 ppm	99
63)	Dibenzofuran	6.308	168	2181783	39.67 ppm	100
64)	2,3,5,6-Tetrachlorophenol	6.399	230	395740	41.29 ppm	99
65)	2,3,4,6-Tetrachlorophenol	6.452	232	471676	40.24 ppm	98
66)	2,3,5-Trimethylnaphtha...	6.561	170	1459493	40.66 ppm	90
67)	Diethylphthalate	6.608	149	1769651	40.16 ppm	99
68)	Fluorene	6.721	166	1843211	40.23 ppm	100
69)	4-Chlorophenyl-phenyle...	6.730	204	948999	40.19 ppm	100
70)	4-Nitroaniline	6.749	138	382294	41.96 ppm	99
72)	4,6-Dinitro-2-methylph...	6.786	198	312878	42.04 ppm	96
73)	N-Nitrosodiphenylamine	6.876	169	1435167	40.25 ppm	95
74)	Azobenzene	6.923	77	1552599	40.85 ppm	100
76)	4-Bromophenyl-phenylether	7.307	248	548466	40.29 ppm	99
77)	Hexachlorobenzene	7.359	284	590716	39.70 ppm	99
78)	Pentachlorophenol	7.586	266	346837	42.41 ppm	98
79)	Dibenzothiophene	7.685	184	2551906	40.73 ppm	99
80)	Phenanthrene	7.828	178	2694176	40.34 ppm	100
82)	Anthracene	7.887	178	2780365	40.51 ppm	99
83)	Carbazole	8.064	167	2298640	41.00 ppm	100
84)	Di-n-butylphthalate	8.466	149	2828962	40.94 ppm	99
85)	1-Methylphenanthrene	8.500	192	1942753	40.52 ppm	100
86)	Fluoranthene	9.104	202	3065802	40.77 ppm	100
89)	Pyrene	9.340	202	3460010	41.77 ppm	98
91)	Butylbenzylphthalate	10.021	149	1142021	41.53 ppm	99
92)	bis(2-ethylhexyl)adipate	10.104	129	912886	41.46 ppm	99
93)	3,3'-Dichlorobenzidine	10.544	252	1027795	40.97 ppm	100
94)	Benzo(a)anthracene	10.563	228	2809982	40.04 ppm	100
95)	Chrysene	10.602	228	2763021	39.84 ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.602	149	1740188	41.31 ppm	100
98)	Di-n-octylphthalate	11.218	149	2888363	42.90 ppm	100
99)	Benzo(b)fluoranthene	11.574	252	2739022	41.75 ppm	99

mq 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH006.D
Acq On : 3 Apr 2015 10:27
Sample : SVE7D034
Misc : 40PPM
Integrator: RTE
Quant Time: Apr 03 12:49:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 6
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.603	252	2888650	39.89	ppm	100
101) Benzo(e)pyrene	11.836	252	2462042	40.62	ppm	100
102) Benzo(a)pyrene	11.888	252	2668857	41.82	ppm	100
103) Perylene	11.972	252	2601297	40.38	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.157	276	2815377	40.98	ppm	98
105) Dibenzo(a,h)anthracene	13.177	278	2412545	41.68	ppm	99
106) Benzo(g,h,i)perylene	13.521	276	2492206	41.41	ppm	100

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

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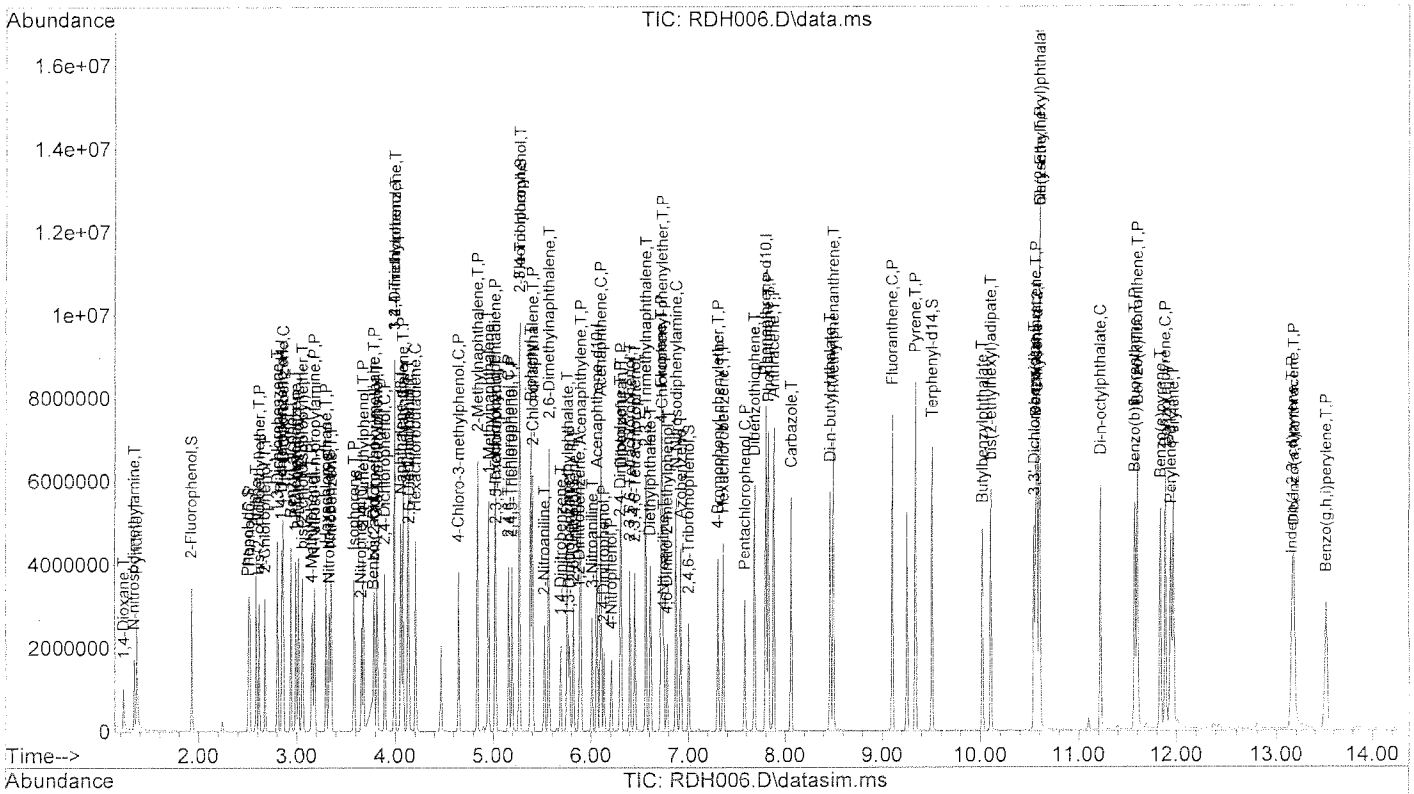
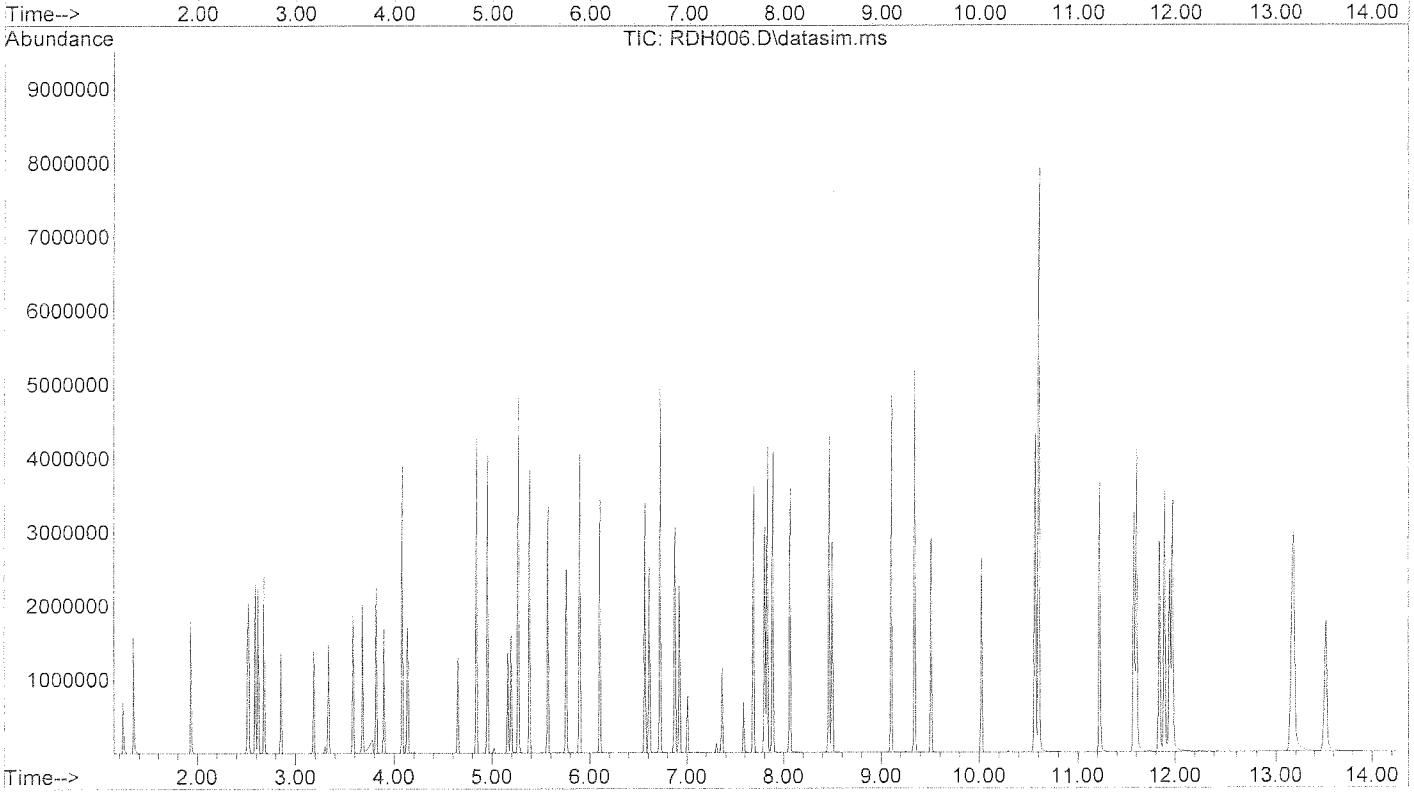
Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH006.D
Acq On : 3 Apr 2015 10:27
Sample : SVE7D034
Misc : 40PPM
Integrator: RTE
Quant Time: Apr 03 12:49:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 6
Operator: RZhou
Inst : E7
Multiplr: 1.00





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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH005.D
Acq On : 3 Apr 2015 10:08
Sample : SVE7D033
Misc : 50PPM
Integrator: RTE
Quant Time: Apr 03 12:49:22 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 5
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	541281	40.00	ppm	0.00
21) Naphthalene-d8	4.057	136	2013141	40.00	ppm	0.00
41) Acenaphthene-d10	6.064	164	1228017	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2161365	40.00	ppm	0.00
87) Chrysene-d12	10.577	240	2351580	40.00	ppm	0.00
97) Perylene-d12	11.944	264	2118519	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	787646	49.44	ppm	0.00
Spiked Amount 30.000			Recovery	=	164.80%	
6) Phenol-d5	2.511	99	942176	49.29	ppm	0.00
Spiked Amount 30.000			Recovery	=	164.30%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.337	82	918639	50.25	ppm	0.00
Spiked Amount 10.000			Recovery	=	502.50%	
46) 2-Fluorobiphenyl	5.270	172	2473953	51.73	ppm	0.00
Spiked Amount 10.000			Recovery	=	517.30%	
75) 2,4,6-Tribromophenol	7.004	330	305922	52.06	ppm	0.00
Spiked Amount 30.000			Recovery	=	173.53%	
90) Terphenyl-d14	9.511	244	2502865	50.20	ppm	0.00
Spiked Amount 10.000			Recovery	=	502.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	301539	46.46	ppm	100
3) N-nitrosodimethylamine	1.343	74	462519	50.64	ppm	97
4) Pyridine	1.367	79	844881	52.02	ppm	99
7) Phenol	2.522	94	977229	50.89	ppm	99
8) Aniline	2.584	93	1255043	50.80	ppm	100
9) bis(2-chloroethyl)ether	2.616	93	767974	49.92	ppm	99
10) 2-Chlorophenol	2.678	128	841474	50.39	ppm	99
11) 1,3-Dichlorobenzene	2.805	146	1030654	49.97	ppm	99
13) 1,4-Dichlorobenzene	2.862	146	1061368	49.60	ppm	100
14) Benzyl alcohol	2.944	108	539538	50.31	ppm	98
15) 1,2-Dichlorobenzene	2.997	146	1013656	50.05	ppm	100
16) 2-Methylphenol	3.021	107	651654	50.08	ppm	98
17) bis(2-chloroisopropyl)...	3.064	45	1738942	49.00	ppm	99
18) 4-Methylphenol	3.160	107	867075	50.75	ppm	98
19) N-Nitroso-di-n-propyla...	3.188	70	575471	50.27	ppm	99
20) Hexachloroethane	3.299	117	476272	49.69	ppm	97
23) Nitrobenzene	3.356	77	965924	49.87	ppm	100
24) Isophorone	3.586	82	1891793	51.59	ppm	95
25) 2-Nitrophenol	3.658	139	446076	51.27	ppm	97
26) 2,4-Dimethylphenol	3.682	107	944396	54.53	ppm	99
27) Benzoic acid	3.792	105	646379	50.51	ppm	97
28) bis(2-Chloroethoxy)met...	3.788	93	1042135	50.38	ppm	100
29) 3,5-Dimethylphenol	3.821	107	1012965	50.83	ppm	97
30) 2,4-Dichlorophenol	3.898	162	819650	51.35	ppm	99
31) 1,2,4-Trichlorobenzene	3.995	180	960649	49.65	ppm	100
32) 3,4-Dimethylphenol	3.995	107	1071714	50.32	ppm	100
33) Naphthalene	4.082	128	2770804	50.31	ppm	100
34) 4-Chloroaniline	4.135	127	1124346	51.09	ppm	100
35) 2,6-Dichlorophenol	4.139	162	807749	50.63	ppm	99

RW 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH005.D
Acq On : 3 Apr 2015 10:08
Sample : SVE7D033
Misc : 50PPM
Integrator: RTE
Quant Time: Apr 03 12:49:22 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 5
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
36) Hexachlorobutadiene	4.207	225	620127	49.86 ppm	98
38) 4-Chloro-3-methylphenol	4.651	107	710543	51.66 ppm	100
39) 2-Methylnaphthalene	4.842	142	1923367	50.52 ppm	100
40) 1-Methylnaphthalene	4.957	142	1765876	50.79 ppm	99
42) Hexachlorocyclopentadiene	5.020	237	671232	51.33 ppm	100
43) 2,3,5-Trichlorophenol	5.029	196	581939	53.09 ppm	99
44) 2,4,6-Trichlorophenol	5.159	196	633984	51.48 ppm	100
45) 2,4,5-Trichlorophenol	5.193	196	669838	52.55 ppm	99
47) 2,3,4-Trichlorophenol	5.270	196	630704	51.23 ppm	100
48) Biphenyl	5.386	154	2416846	50.66 ppm	100
49) 2-Chloronaphthalene	5.405	162	2026977	50.68 ppm	100
50) 2-Nitroaniline	5.525	65	527461	51.96 ppm	99
51) 2,6-Dimethylnaphthalene	5.568	156	1712919	50.58 ppm	100
52) 1,4-Dinitrobenzene	5.693	168	258585	53.36 ppm	98
53) Dimethylphthalate	5.760	163	2249347	50.31 ppm	99
54) 1,3-Dinitrobenzene	5.784	168	299425	52.73 ppm	98
55) 2,6-Dinitrotoluene	5.823	165	476800	51.33 ppm	98
56) 1,2-Dinitrobenzene	5.881	168	176073	50.79 ppm	97
57) Acenaphthylene	5.895	152	3234160	49.86 ppm	100
58) 3-Nitroaniline	6.016	138	472776	51.70 ppm	100
59) Acenaphthene	6.102	153	2089816	50.32 ppm	99
60) 2,4-Dinitrophenol	6.135	184	251391	49.90 ppm	96
61) 4-Nitrophenol	6.212	109	242052	52.32 ppm	97
62) 2,4-Dinitrotoluene	6.303	165	614346	51.56 ppm	98
63) Dibenzofuran	6.308	168	2603013	49.18 ppm	100
64) 2,3,5,6-Tetrachlorophenol	6.399	230	473933	51.38 ppm	100
65) 2,3,4,6-Tetrachlorophenol	6.452	232	626651	55.56 ppm	99
66) 2,3,5-Trimethylnaphtha...	6.566	170	1742107	50.43 ppm	81
67) Diethylphthalate	6.613	149	2127500	50.17 ppm	100
68) Fluorene	6.725	166	2182734	49.50 ppm	100
69) 4-Chlorophenyl-phenyle...	6.735	204	1127980	49.63 ppm	100
70) 4-Nitroaniline	6.753	138	458583	52.30 ppm	99
72) 4,6-Dinitro-2-methylph...	6.786	198	360802	49.80 ppm	95
73) N-Nitrosodiphenylamine	6.876	169	1700927	49.39 ppm	94
74) Azobenzene	6.923	77	1854495	50.52 ppm	100
76) 4-Bromophenyl-phenylether	7.307	248	655746	49.87 ppm	99
77) Hexachlorobenzene	7.359	284	708533	49.29 ppm	100
78) Pentachlorophenol	7.586	266	419525	53.10 ppm	97
79) Dibenzothiophene	7.685	184	3093304	51.11 ppm	97
80) Phenanthrene	7.833	178	3205706	49.68 ppm	100
82) Anthracene	7.887	178	3359591	50.67 ppm	100
83) Carbazole	8.068	167	2730589	50.42 ppm	100
84) Di-n-butylphthalate	8.466	149	3449242	51.67 ppm	100
85) 1-Methylphenanthrene	8.500	192	2353147	50.81 ppm	99
86) Fluoranthene	9.104	202	3702794	50.98 ppm	99
89) Pyrene	9.340	202	4236064	52.16 ppm	98
91) Butylbenzylphthalate	10.016	149	1421536	52.73 ppm	100
92) bis(2-ethylhexyl)adipate	10.103	129	1122797	52.02 ppm	100
93) 3,3'-Dichlorobenzidine	10.543	252	1258888	51.18 ppm	99
94) Benzo(a)anthracene	10.563	228	3440114	50.00 ppm	99
95) Chrysene	10.602	228	3329917	48.98 ppm	100
96) bis(2-Ethylhexyl)phtha...	10.597	149	2129367	51.56 ppm	100
98) Di-n-octylphthalate	11.218	149	3558124	53.95 ppm	100
99) Benzo(b)fluoranthene	11.578	252	3337020	51.93 ppm	100

TM 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH005.D
Acq On : 3 Apr 2015 10:08
Sample : SVE7D033
Misc : 50PPM
Integrator: RTE
Quant Time: Apr 03 12:49:22 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 5
Operator: RZhou
Inst : E7
Multiplr: 1.00

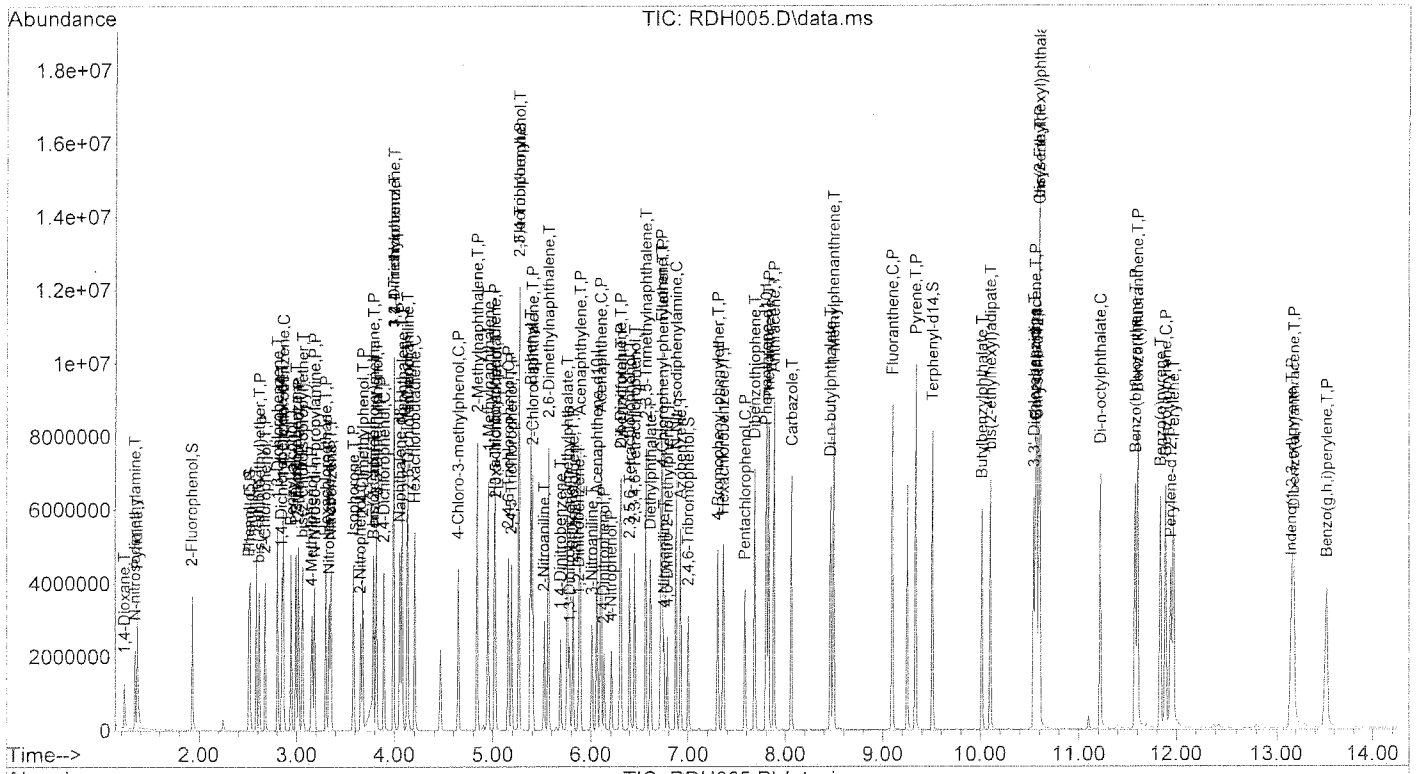
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.602	252	3600999	50.77	ppm	100
101) Benzo(e)pyrene	11.836	252	3033162	51.09	ppm	100
102) Benzo(a)pyrene	11.892	252	3303527	52.85	ppm	99
103) Perylene	11.972	252	3181077	50.41	ppm	98
104) Indeno(1,2,3-cd)pyrene	13.157	276	3495307	51.93	ppm	99
105) Dibenzo(a,h)anthracene	13.181	278	2976468	52.49	ppm	99
106) Benzo(g,h,i)perylene	13.526	276	3041480	51.59	ppm	100

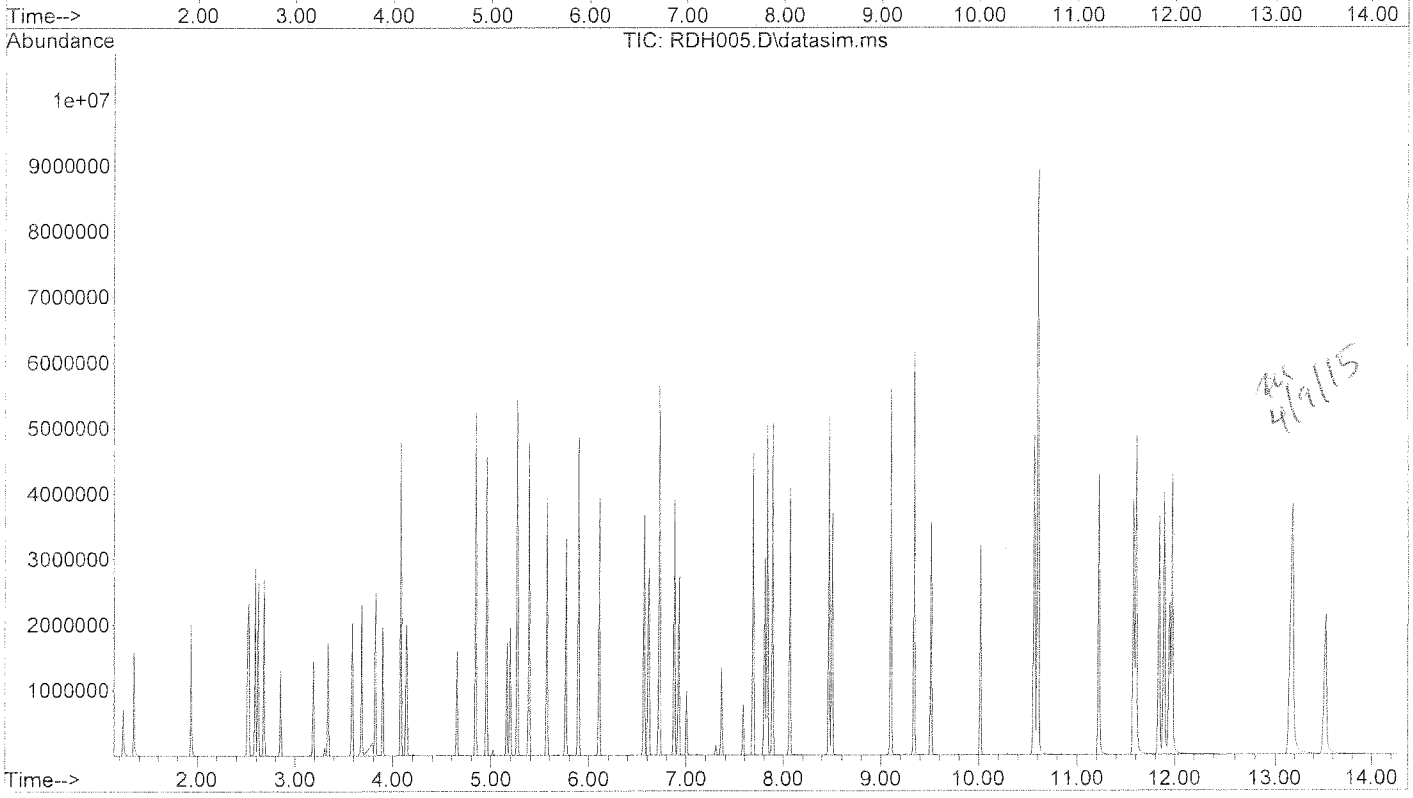
(#) = qualifier out of range (m) = manual integration (+) = signals summed

4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH005.D
Vial: 5
Acq On : 3 Apr 2015 10:08
Operator: RZhou
Sample : SVE7D033
Inst : E7
Misc : 50PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:22 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH004.D
Vial: 4
Acq On : 3 Apr 2015 9:49
Operator: RZhou
Sample : SVE7D032
Inst : E7
Misc : 80PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 17:10:43 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	504151	40.00	ppm	0.00
21) Naphthalene-d8	4.053	136	1863603	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1050881	40.00	ppm	0.00
71) Phenanthrene-d10	7.797	188	1831349	40.00	ppm	0.00
87) Chrysene-d12	10.568	240	2011846	40.00	ppm	0.00
97) Perylene-d12	11.935	264	1833822	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
6) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
46) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
90) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
Target Compounds						Qvalue
4) Pyridine	1.362	79	1166959	77.14	ppm	97
27) Benzoic acid	3.797	105	964807	80.15	ppm	97

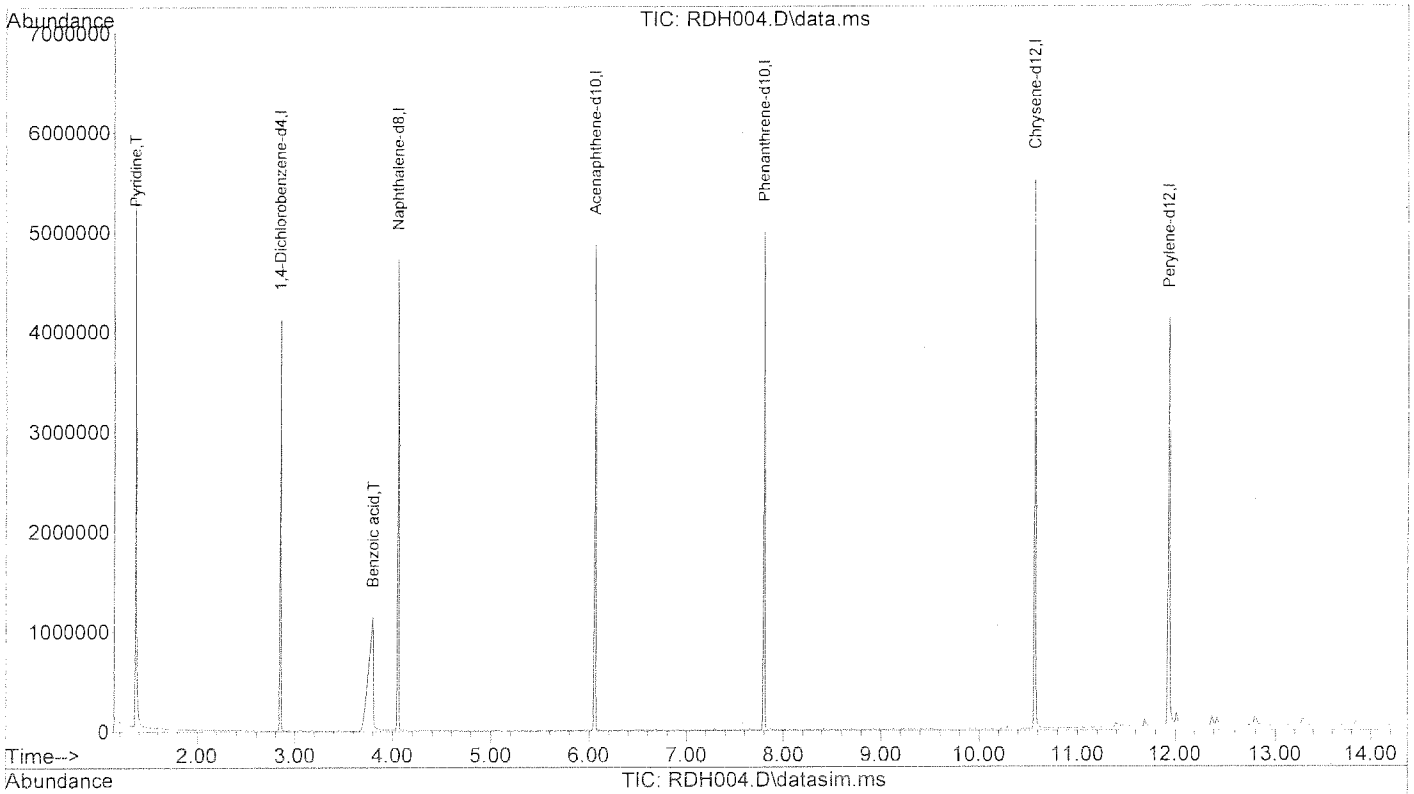
(#) = qualifier out of range (m) = manual integration (+) = signals summed

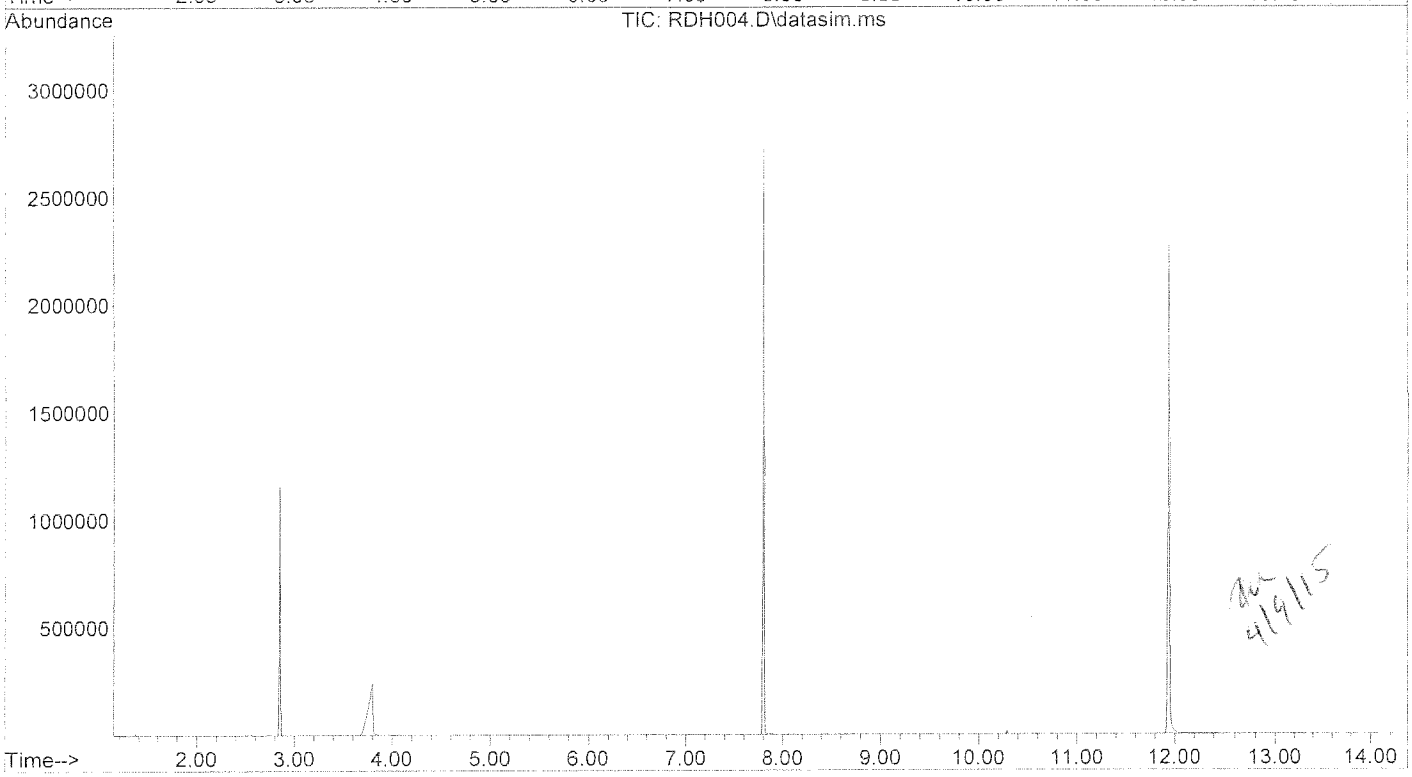
RR 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH004.D
Acq On : 3 Apr 2015 9:49
Sample : SVE7D032
Misc : 80PPM
Integrator: RTE
Quant Time: Apr 03 17:10:43 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 4
Operator: RZhou
Inst : E7
Multiplr: 1.00





4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH003.D
Acq On : 3 Apr 2015 9:30
Sample : SVE7D031
Misc : 100PPM
Integrator: RTE
Quant Time: Apr 03 17:10:11 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 3
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	517430	40.00	ppm	0.00
21) Naphthalene-d8	4.058	136	1930059	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1104062	40.00	ppm	0.00
71) Phenanthrene-d10	7.796	188	1925784	40.00	ppm	0.00
87) Chrysene-d12	10.568	240	2143208	40.00	ppm	0.00
97) Perylene-d12	11.939	264	1957813	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
6) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
46) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
90) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
Target Compounds						Qvalue
4) Pyridine	1.367	79	1511647	97.36	ppm	97
27) Benzoic acid	3.817	105	1246954	99.51	ppm	98

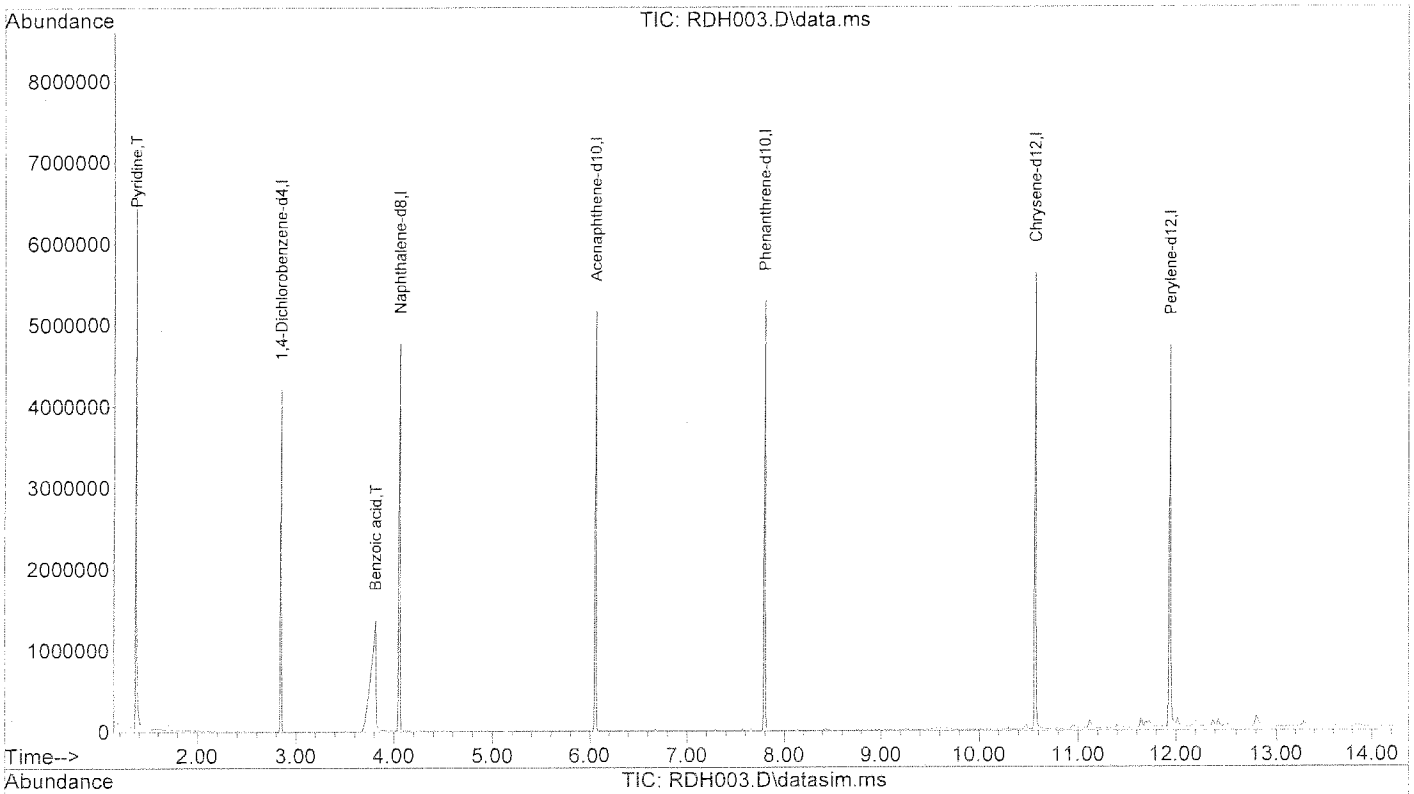
(#) = qualifier out of range (m) = manual integration (+) = signals summed

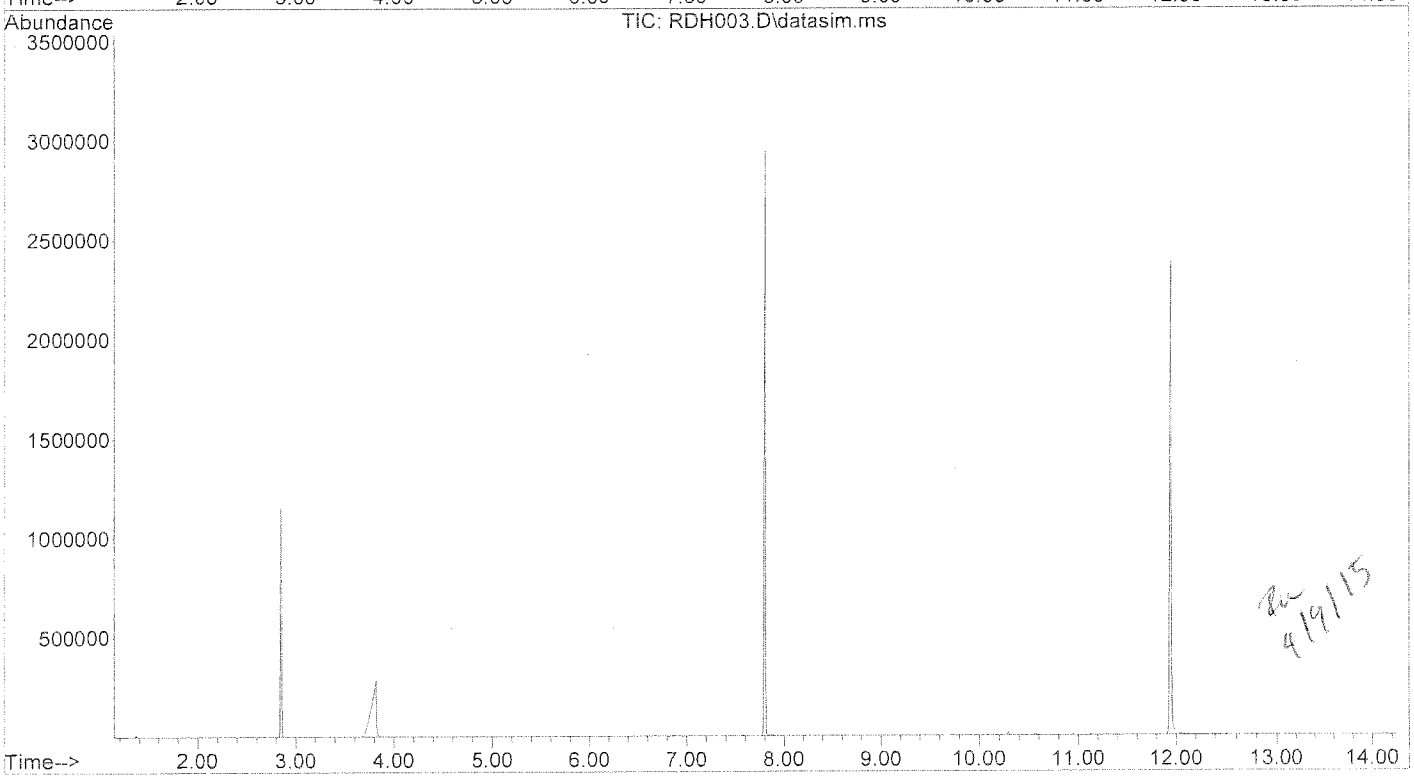
RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH003.D
Acq On : 3 Apr 2015 9:30
Sample : SVE7D031
Misc : 100PPM
Integrator: RTE
Quant Time: Apr 03 17:10:11 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 3
Operator: RZhou
Inst : E7
Multiplr: 1.00





9/9/15

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E4
IC Beginning DateTime :07/13/15 17:35
Spike Amount :25 PPM
CC/CV File :RGJ149
IC File :RGJ140

Column Spec :ZB-SEMIVOA ID :0.18MM
IC Ending DateTime :07/13/15 19:53
HPChem Method :SVE4G13
Date_Time :07/13/15 21:50

M IDX	Parameters	CC Con	CC% D	CC Resp	CCRRF	AVRRF	CC Rtm	AVRtm	% RSD	Co X0	Co X1	Co X2	Co Cor
1	1,4-Dichlorobenzene-d4	40.000	0	402978	1	1	3.010	3.010	0				
2	1,4-Dioxane	22.348	-10.6	130154	0.517	0.578	1.352	1.352	5.02				
3	N-nitrosodimethylamine	27.395	9.6	226800	0.900	0.822	1.467	1.467	1.88				
4	Pyridine	27.181	8.7	409432	1.626	1.495	1.496	1.491	2.39				
5	2-Fluorophenol	24.578	-1.7	322263	1.281	1.303	2.065	2.062	2.02				
6	Phenol-d5	24.398	-2.4	387677	1.539	1.577	2.654	2.651	1.38				
7	Phenol	26.125	4.5	412212	1.637	1.566	2.664	2.664	1.65				
8	Aniline	26.435	5.7	544105	2.160	2.043	2.732	2.736	2.00				
9	bis(2-chloroethyl)ether	24.450	-2.2	314826	1.250	1.278	2.764	2.765	1.81				
10	2-Chlorophenol	25.867	3.5	317503	1.275	1.228	2.831	2.831	5.33				
11	1,3-Dichlorobenzene	26.599	6.4	421735	1.674	1.574	2.962	2.964	2.04				
12	1,2-Dichlorobenzene-d4												
13	1,4-Dichlorobenzene	26.544	6.2	427700	1.698	1.599	3.025	3.025	3.00				
14	Benzyl alcohol	28.988	16.0	254133	1.009	0.870	3.102	3.101	2.34				
15	1,2-Dichlorobenzene	25.891	3.6	399056	1.584	1.530	3.159	3.159	2.64				
16	2-Methylphenol	27.475	5.9	284884	1.131	1.068	3.178	3.176	3.18				
17	bis(2-chloroisopropyl)ether	23.976	-4.1	616518	2.448	2.552	3.221	3.223	6.09				
18	4-Methylphenol	27.156	8.6	384341	1.526	1.405	3.317	3.318	1.56				
19	N-Nitroso-di-n-propylamine	25.016	0.1	256120	1.017	1.016	3.346	3.342	4.02				
20	Hexachloroethane	25.153	0.6	160583	0.638	0.634	3.471	3.471	2.15				
21	Naphthalene-d8	40.000	0	1499259	1	1	4.239	4.240	0				
22	Nitrobenzene-d5	7.937	-68.3	127618	0.136	0.429	3.499	3.501	1.42				
23	Nitrobenzene	24.690	-1.2	407481	0.435	0.440	3.519	3.520	3.22				
24	Isophorone	25.125	0.5	764356	0.816	0.812	3.749	3.750	4.10				
25	2-Nitrophenol	26.312	5.5	177276	0.189	0.186	3.829	3.832	2.76				
26	2,4-Dimethylphenol	26.871	7.5	367582	0.392	0.365	3.847	3.846	2.68				
27	Benzoic acid	25.535	2.1	239077	0.255	0.250	3.921	3.929	11.90				
28	bis(2-Chloroethoxy)methane	25.091	0.4	417627	0.446	0.444	3.960	3.959	2.49				
29	2,5-Dimethylphenol	27.246	9.0	417407	0.445	0.409	3.984	3.984	4.30				
30	2,4-Dichlorophenol	27.494	10.0	354546	0.378	0.344	4.070	4.069	5.37				
31	3,4-Dimethylphenol	26.991	8.0	454148	0.485	0.449	4.167	4.165	2.94				
32	1,2,4-Trichlorobenzene	26.526	6.1	375066	0.400	0.377	4.171	4.173	3.44				
33	Naphthalene	24.979	-0.1	1031457	1.101	1.102	4.263	4.264	3.69				
34	4-Chloroaniline	25.892	3.6	427590	0.456	0.441	4.307	4.307	2.83				
35	2,6-Dichlorophenol	27.077	8.3	312235	0.333	0.308	4.316	4.316	1.84				
36	Hexachlorobutadiene	26.038	4.2	249387	0.266	0.256	4.389	4.389	4.02				
37	Hydroquinone												
38	4-Chloro-3-methylphenol	26.931	7.7	296280	0.316	0.294	4.827	4.829	2.27				
39	2-Methylnaphthalene	25.797	3.2	728685	0.778	0.754	5.034	5.032	2.35				
40	1-Methylnaphthalene	26.815	7.3	683244	0.729	0.680	5.144	5.142	2.77				
41	Acenaphthene-d10	40.000	0	920036	1	1	6.265	6.265	0				
42	Hexachlorocyclopentadiene	22.622	-9.5	229217	0.399	0.441	5.211	5.212	2.69				
43	2,3,5-Trichlorophenol	29.401	17.6	243389	0.423	0.360	5.216	5.217	5.48				
44	2,4,6-Trichlorophenol	27.113	8.5	241415	0.420	0.387	5.350	5.349	2.72				
45	2,4,5-Trichlorophenol	27.152	8.5	251203	0.437	0.402	5.384	5.385	3.20				
46	2-Fluorobiphenyl	7.950	-68.2	574507	0.477	1.500	5.457	5.460	3.20				
47	2,3,4-Trichlorophenol	26.177	4.7	205911	0.358	0.342	5.461	5.463	4.15				
48	Biphenyl	25.480	1.9	921122	1.602	1.572	5.577	5.579	2.99				
49	2-Chloronaphthalene	26.872	7.5	805125	1.400	1.303	5.601	5.600	3.41				
50	2-Nitroaniline	25.832	3.3	203349	0.354	0.342	5.716	5.715	1.64				
51	2,6-Dimethylnaphthalene	29.436	5.7	658005	1.144	1.082	5.764	5.765	3.65				
52	1,4-Dinitrobenzene	29.661	9.6	101614	0.177	0.162	5.884	5.883	6.34				
53	Dimethylphthalate	26.262	5.0	836718	1.455	1.385	5.947	5.948	1.63				
54	1,3-Dinitrobenzene	26.695	6.8	116914	0.203	0.190	5.971	5.970	2.53				
55	2,6-Dinitrotoluene	25.065	0.3	179259	0.312	0.311	6.010	6.010	1.37				
56	1,2-Dinitrobenzene	26.625	6.5	70656	0.123	0.115	6.072	6.071	2.16				
57	Acenaphthylene	24.414	-2.3	1135651	1.975	2.022	6.096	6.095	4.93				
58	3-Nitroaniline	25.407	1.6	175553	0.305	0.300	6.207	6.208	2.74				
59	Acenaphthene	27.045	-0.2	766243	1.333	1.336	6.303	6.304	3.19				
60	2,4-Dinitrophenol	24.232	-10.7	66103	0.115	0.118	6.332	6.331	18.77	-0.0071	0.1414		0.9992
61	4-Nitrophenol	27.229	8.9	97837	0.170	0.156	6.394	6.396	5.05				
62	2,4-Dinitrotoluene	24.521	-1.9	227096	0.395	0.403	6.495	6.494	2.94				
63	Dibenzofuran	26.458	5.8	1038804	1.807	1.707	6.514	6.512	3.13				
64	2,3,5,6-Tetrachlorophenol	24.716	-1.1	165516	0.288	0.291	6.600	6.602	3.78				
65	2,3,4,6-Tetrachlorophenol	27.144	4.6	239533	0.417	0.398	6.653	6.655	3.22				
66	2,3,5-Trimethylnaphthalene	29.237	8.9	637490	1.109	1.018	6.767	6.767	2.14				
67	Diethylphthalate	26.294	5.2	842862	1.466	1.394	6.804	6.804	2.21				
68	Fluorene	28.199	0.8	816985	1.421	1.410	6.926	6.926	2.45				
69	4-Chlorophenyl-phenylether	25.127	0.5	424734	0.739	0.735	6.936	6.934	2.18				
70	4-Nitroaniline	25.294	1.2	171247	0.298	0.294	6.945	6.943	5.98				
71	Phenanthrene-d10	40.000	0	1609594	1	1	8.004	8.002	0				
72	4,6-Dinitro-2-methylphenol	25.133	0.5	119885	0.119	0.109	6.982	6.979	17.58	-0.0057	0.1275		0.9998
73	N-Nitrosodiphenylamine	24.671	-1.3	621855	0.618	0.626	7.072	7.072	2.55				
74	Azobenzene	26.292	5.2	783646	0.779	0.741	7.120	7.121	3.66				
75	2,4,6-Tribromophenol	24.095	-3.6	104138	0.104	0.107	7.205	7.204	3.87				
76	4-Bromophenyl-phenylether	26.012	4.0	258868	0.257	0.247	7.504	7.504	1.39				
77	Hexachlorobenzene	25.632	2.5	268691	0.267	0.261	7.560	7.560	1.96				
78	Pentachlorophenol	26.388	5.6	148775	0.148	0.140	7.782	7.782	5.91				
79	Dibenzothiophene	28.458	13.8	1197467	1.190	1.046	7.886	7.885	4.03				
80	Phenanthrene	25.648	2.6	1216377	1.209	1.179	8.028	8.028	3.74				
81	Dinoseb												
82	Anthracene	24.395	-2.4	1183096	1.176	1.205	8.084	8.085	3.14				
83	Carbazole	25.782	3.1	1006591	1.001	0.970	8.258	8.261	2.44				
84	Di-n-butylphthalate	26.728	6.9	1334984	1.327	1.241	8.654	8.657	2.21				
85	1-Methylphenanthrene	26.048	4.2	863507	0.858	0.824	8.698	8.698	2.67				
86	Fluoranthene	25.243	1.0	1311054	1.303	1.291	9.306	9.306	1.89				
87	Chrysene-d12	40.000	0	1750677	1	1	10.785	10.784	0				
88	Benzidine												
89	Pyrene	24.112	-3.6	1354562	1.238	1.284	9.542	9.542	2.66				
90	Terphenyl-d14	7.449	-70.2	282903	0.259	0.868	9.707	9.709	2.07				
91	Butylbenzylphthalate	26.909	7.6	542006	0.495	0.460	10.213	10.216	7.06				
92	bis(2-ethylhexyl)adipate	26.214	4.9	418405	0.382	0.365	10.295	10.297	7.10				
93	3,3'-Dichlorobenzidine	25.760	3.0	416335	0.381	0.369	10.741	10.743	6.59				
94	Benzo(a)anthracene	24.371	-2.5	1270162	1.161	1.191	10.771	10.772	1.95				
95	Chrysene	24.757	-1.0	1249606	1.142	1.153	10.810	10.810	2.83				
96	bis(2-Ethylhexyl)phthalate	26.530	6.1	809854	0.740	0.697	10.795	10.799	4.18				
97	Perylene-d12	40.000	0	1566782	1	1	12.212	12.212	0				
98	Di-n-octylphthalate	27.766	11.1	1355601	1.384	1.246	11.421	11.422	10.69				
99	Benzo(b)fluoranthene	25.491	2.0	1188711	1.214	1.191	11.805	11.807	3.46				
100	Benzo(k)fluoranthene	24.804	-0.8	1227051	1.253	1.263	11.834	11.835	3.74				
101	Benzo(e)pyrene	26.357	5.4	1099867	1.123	1.062	12.090	12.091	5.07				
102	Benzo(a)pyrene	24.937	-0.3	1120255	1.144	1.147	12.148	12.150	3.32				
103	Perylene	26.712	6.8	1131080	1.155	1.081	12.236	12.241	2.54				
104	Indeno(1,2,3-cd)pyrene	26.087	4.3	1354960	1.384	1.326	13.552	13.552	4.61				
105	Dibenzo(a,h)anthracene	25.396	1.6	1103490	1.127	1.109	13.576	13.576	5.28				
106	Benzo(g,h,i)perylene	25.417	1.7	1184402	1.210	1.190	13.955	13.956	3.14				

7/17/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G~~144~~131 PM 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Min. RRF : 0.050 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	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	96	0.00	
2	T	1,4-Dioxane	25.000	22.348	10.6	86	0.00	
3	T	N-nitrosodimethylamine	25.000	27.395	-9.6	104	0.00	
4	T	Pyridine	25.000	27.181	-8.7	105	0.00	
5	S	2-Fluorophenol	25.000	24.578	1.7	93	0.00	
6	S	Phenol-d5	25.000	24.398	2.4	93	0.00	
7	C,P	Phenol	25.000	26.125	-4.5	100	0.00	
8	T	Aniline	25.000	26.435	-5.7	100	0.00	
9	T,P	bis(2-chloroethyl)ether	25.000	24.450	2.2	93	0.00	
10	T,P	2-Chlorophenol	25.000	25.867	-3.5	92	0.00	
11	T	1,3-Dichlorobenzene	25.000	26.599	-6.4	101	0.00	
12	S	1,2-Dichlorobenzene-d4	25.000	0.000	100.0#	0	0.00	
13	C	1,4-Dichlorobenzene	25.000	26.544	-6.2	102	0.00	
14	T	Benzyl alcohol	25.000	28.988	-16.0	110	0.00	
15	T	1,2-Dichlorobenzene	25.000	25.891	-3.6	100	0.00	
16	T,P	2-Methylphenol	25.000	26.475	-5.9	102	0.00	
17	T	bis(2-chloroisopropyl)ether	25.000	23.976	4.1	84	0.00	
18	T,P	4-Methylphenol	25.000	27.156	-8.6	105	0.00	
19	P,P	N-Nitroso-di-n-propylamine	25.000	25.016	-0.1	98	0.00	
20	T,P	Hexachloroethane	25.000	25.153	-0.6	96	0.00	
21	I	Naphthalene-d8	40.000	40.000	0.0	97	0.00	
22	S	Nitrobenzene-d5 8.33	~~25~~.000	7.937	4.7 ~~68~~.3#	~~30~~ 90	0.00	
23	T,P	Nitrobenzene	25.000	24.690	1.2	95	0.00	
24	T,P	Isophorone	25.000	25.125	-0.5	96	0.00	
25	C,P	2-Nitrophenol	25.000	26.312	-5.2	99	0.00	
26	T,P	2,4-Dimethylphenol	25.000	26.871	-7.5	103	0.00	
27	T	Benzoic acid	25.000	25.535	-2.1	96	0.00	
28	T,P	bis(2-Chloroethoxy)methane	25.000	25.091	-0.4	95	0.00	
29	T	3,5-Dimethylphenol	25.000	27.246	-9.0	102	0.00	
30	C,P	2,4-Dichlorophenol	25.000	27.494	-10.0	102	0.00	
31	T	3,4-Dimethylphenol	25.000	26.991	-8.0	104	0.00	KV
32	T	1,2,4-Trichlorobenzene	25.000	26.526	-6.1	102	0.00	
33	T,P	Naphthalene	25.000	24.979	0.1	96	0.00	7/15/15
34	T	4-Chloroaniline	25.000	25.892	-3.6	99	0.00	
35	T	2,6-Dichlorophenol	25.000	27.077	-8.3	104	0.00	
36	C	Hexachlorobutadiene	25.000	26.038	-4.2	100	0.00	
37	T	Hydroquinone	25.000	0.000	100.0#	0	0.00	
38	C,P	4-Chloro-3-methylphenol	25.000	26.930	-7.7	101	0.00	
39	T,P	2-Methylnaphthalene	25.000	25.794	-3.2	99	0.00	
40	T	1-Methylnaphthalene	25.000	26.815	-7.3	103	0.00	
41	I	Acenaphthene-d10	40.000	40.000	0.0	99	0.00	
42	P	Hexachlorocyclopentadiene	25.000	22.622	9.5	86	0.00	
43	T	2,3,5-Trichlorophenol	25.000	29.401	-17.6	115	0.00	
44	C,P	2,4,6-Trichlorophenol	25.000	27.113	-8.5	104	0.00	
45	T,P	2,4,5-Trichlorophenol	25.000	27.152	-8.6	104	0.00	
46	S	2-Fluorobiphenyl 8.33	~~25~~.000	7.950	4.5 ~~68~~.2#	~~31~~ 93	0.00	7/17/15
47	T	2,3,4-Trichlorophenol	25.000	26.177	-4.7	105	0.00	
48	T	Biphenyl	25.000	25.480	-1.9	104	0.00	
49	T,P	2-Chloronaphthalene	25.000	26.872	-7.5	108	0.00	

Evaluate Continuing Calibration Report

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G1~~44~~ 131 pm 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Min. RRF : 0.050 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	T	2-Nitroaniline	25.000	25.832	-3.3	100	0.00
51	T	2,6-Dimethylnaphthalene	25.000	26.436	-5.7	105	0.00
52	T	1,4-Dinitrobenzene	25.000	26.661	-6.6	100	0.00
53	T	Dimethylphthalate	25.000	26.262	-5.0	103	0.00
54	T	1,3-Dinitrobenzene	25.000	26.695	-6.8	103	0.00
55	T,P	2,6-Dinitrotoluene	25.000	25.065	-0.3	98	0.00
56	T	1,2-Dinitrobenzene	25.000	26.625	-6.5	103	0.00
57	T,P	Acenaphthylene	25.000	24.414	2.3	89	0.00
58	T	3-Nitroaniline	25.000	25.407	-1.6	97	0.00
59	C,P	Acenaphthene	25.000	24.945	0.2	98	0.00
60	P	2,4-Dinitrophenol	25.000	22.327	10.7	86	0.00
61	P	4-Nitrophenol	25.000	27.229	-8.9	103	0.00
62	T,P	2,4-Dinitrotoluene	25.000	24.521	1.9	94	0.00
63	T,P	Dibenzofuran	25.000	26.458	-5.8	104	0.00
64	T	2,3,5,6-Tetrachlorophenol	25.000	24.716	1.1	93	0.00
65	T	2,3,4,6-Tetrachlorophenol	25.000	26.144	-4.6	101	0.00
66	T	2,3,5-Trimethylnaphthalene	25.000	27.231	-8.9	107	0.00
67	T	Diethylphthalate	25.000	26.294	-5.2	102	0.00
68	T,P	Fluorene	25.000	25.199	-0.8	99	0.00
69	T,P	4-Chlorophenyl-phenylether	25.000	25.127	-0.5	98	0.00
70	T	4-Nitroaniline	25.000	25.294	-1.2	94	0.00
71	I	Phenanthrene-d10	40.000	40.000	0.0	98	0.00
72	T	4,6-Dinitro-2-methylphenol	25.000	25.133	-0.5	99	0.00
73	C	N-Nitrosodiphenylamine	25.000	24.671	1.3	96	0.00
74	T	Azobenzene	25.000	26.292	-5.2	103	0.00
75	S	2,4,6-Tribromophenol	25.000	24.095	3.6	93	0.00
76	T,P	4-Bromophenyl-phenylether	25.000	26.012	-4.0	101	0.00
77	T,P	Hexachlorobenzene	25.000	25.632	-2.5	100	0.00
78	C,P	Pentachlorophenol	25.000	26.388	-5.6	101	0.00
79	T	Dibenzothiophene	25.000	28.458	-13.8	115	0.00
80	T,P	Phenanthrene	25.000	25.648	-2.6	100	0.00
81	T	Dinoseb	25.000	0.000	100.0#	0	0.00
82	T,P	Anthracene	25.000	24.395	2.4	95	0.00
83	T	Carbazole	25.000	25.782	-3.1	99	0.00
84	T	Di-n-butylphthalate	25.000	26.728	-6.9	102	0.00
85	T	1-Methylphenanthrene	25.000	26.048	-4.2	102	0.00
86	C,P	Fluoranthene	25.000	25.242	-1.0	99	0.00
87	I	Chrysene-d12	40.000	40.000	0.0	101	0.00
88	T	Benzidine	25.000	0.000	100.0#	0	0.00
89	T,P	Pyrene	25.000	24.112	3.6	97	0.00
90	S	Terphenyl-d14 8.33	~~25~~.000	7.449	10.6 ~~70~~.2#	~~29~~ 87	0.00 KV 7/15/15
91	T	Butylbenzylphthalate	25.000	26.909	-7.6	102	0.00
92	T	bis(2-ethylhexyl)adipate	25.000	26.214	-4.9	99	0.00
93	T	3,3'-Dichlorobenzidine	25.000	25.760	-3.0	98	0.00
94	T,P	Benzo(a)anthracene	25.000	24.371	2.5	98	0.00
95	T,P	Chrysene	25.000	24.757	1.0	99	0.00
96	T	bis(2-Ethylhexyl)phthalate	25.000	26.530	-6.1	102	0.00 pm 7/17/15
97	I	Perylene-d12	40.000	40.000	0.0	102	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G1~~44~~ 131 RU 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Min. RRF : 0.050 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)
98	C	Di-n-octylphthalate	25.000	27.766	-11.1	103	0.00
99	T,P	Benzo(b)fluoranthene	25.000	25.491	-2.0	101	0.00
100	T,P	Benzo(k)fluoranthene	25.000	24.804	0.8	97	0.00
101	T	Benzo(e)pyrene	25.000	26.357	-5.4	105	0.00
102	C,P	Benzo(a)pyrene	25.000	24.937	0.3	97	0.00
103	T	Perylene	25.000	26.712	-6.8	106	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	25.000	26.087	-4.3	101	0.00
105	T,P	Dibenzo(a,h)anthracene	25.000	25.396	-1.6	99	0.00
106	T,P	Benzo(g,h,i)perylene	25.000	25.417	-1.7	98	0.00

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

RU 7/17/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G1~~44~~ 131 pm 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	96	0.00
2	T	1,4-Dioxane	0.578	0.517	10.6	86	0.00
3	T	N-nitrosodimethylamine	0.822	0.900	-9.5	104	0.00
4	T	Pyridine	1.495	1.626	-8.8	105	0.00
5	S	2-Fluorophenol	1.303	1.281	1.7	93	0.00
6	S	Phenol-d5	1.577	1.539	2.4	93	0.00
7	C,P	Phenol	1.566	1.637	-4.5	100	0.00
8	T	Aniline	2.043	2.160	-5.7	100	0.00
9	T,P	bis(2-chloroethyl)ether	1.278	1.250	2.2	93	0.00
10	T,P	2-Chlorophenol	1.328	1.375	-3.5	92	0.00
11	T	1,3-Dichlorobenzene	1.574	1.674	-6.4	101	0.00
12	S	1,2-Dichlorobenzene-d4	0.000	0.000#	0.0	0#	0.00
13	C	1,4-Dichlorobenzene	1.599	1.698	-6.2	102	0.00
14	T	Benzyl alcohol	0.870	1.009	-16.0	110	0.00
15	T	1,2-Dichlorobenzene	1.530	1.584	-3.5	100	0.00
16	T,P	2-Methylphenol	1.068	1.131	-5.9	102	0.00
17	T	bis(2-chloroisopropyl)ether	2.552	2.448	4.1	84	0.00
18	T,P	4-Methylphenol	1.405	1.526	-8.6	105	0.00
19	P,P	N-Nitroso-di-n-propylamine	1.016	1.017	-0.1	98	0.00
20	T,P	Hexachloroethane	0.634	0.638	-0.6	96	0.00
21	I	Naphthalene-d8	1.000	1.000	0.0	97	0.00
22	S	Nitrobenzene-d5	0.429	~~0.136~~ 0.408	~~68.3#~~	~~30#~~ 90	0.00
23	T,P	Nitrobenzene	0.440	0.435 -4.9	1.1	95	0.00
24	T,P	Isophorone	0.812	0.816	-0.5	96	0.00
25	C,P	2-Nitrophenol	0.180	0.189	-5.0	99	0.00
26	T,P	2,4-Dimethylphenol	0.365	0.392	-7.4	103	0.00
27	T	Benzoic acid	0.250	0.255	-2.0	96	0.00
28	T,P	bis(2-Chloroethoxy)methane	0.444	0.446	-0.5	95	0.00
29	T	3,5-Dimethylphenol	0.409	0.445	-8.8	102	0.00
30	C,P	2,4-Dichlorophenol	0.344	0.378	-9.9	102	0.00
31	T	3,4-Dimethylphenol	0.449	0.485	-8.0	104	0.00
32	T	1,2,4-Trichlorobenzene	0.377	0.400	-6.1	102	0.00
33	T,P	Naphthalene	1.102	1.101	0.1	96	0.00
34	T	4-Chloroaniline	0.441	0.456	-3.4	99	0.00
35	T	2,6-Dichlorophenol	0.308	0.333	-8.1	104	0.00
36	C	Hexachlorobutadiene	0.256	0.266	-3.9	100	0.00
37	T	Hydroquinone	0.000	0.000#	0.0	0#	0.00
38	C,P	4-Chloro-3-methylphenol	0.294	0.316	-7.5	101	0.00
39	T,P	2-Methylnaphthalene	0.754	0.778	-3.2	99	0.00
40	T	1-Methylnaphthalene	0.680	0.729	-7.2	103	0.00
41	I	Acenaphthene-d10	1.000	1.000	0.0	99	0.00
42	P	Hexachlorocyclopentadiene	0.441	0.399	9.5	86	0.00
43	T	2,3,5-Trichlorophenol	0.360	0.423	-17.5	115	0.00
44	C,P	2,4,6-Trichlorophenol	0.387	0.420	-8.5	104	0.00
45	T,P	2,4,5-Trichlorophenol	0.402	0.437	-8.7	104	0.00
46	S	2-Fluorobiphenyl	1.500	~~0.477~~ 1.431	~~68.2#~~	~~31#~~	0.00
47	T	2,3,4-Trichlorophenol	0.342	0.358	-4.7	105 93	0.00
48	T	Biphenyl	1.572	1.602 6.9	-1.9	104	0.00
49	T,P	2-Chloronaphthalene	1.303	1.400	-7.4	108	0.00

KV 7/15/15

pm 7/17/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G1~~44~~ 131 m 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Min. RRF : 0.050 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	T	2-Nitroaniline	0.342	0.354	-3.5	100	0.00
51	T	2,6-Dimethylnaphthalene	1.082	1.144	-5.7	105	0.00
52	T	1,4-Dinitrobenzene	0.166	0.177	-6.6	100	0.00
53	T	Dimethylphthalate	1.385	1.455	-5.1	103	0.00
54	T	1,3-Dinitrobenzene	0.190	0.203	-6.8	103	0.00
55	T,P	2,6-Dinitrotoluene	0.311	0.312	-0.3	98	0.00
56	T	1,2-Dinitrobenzene	0.115	0.123	-7.0	103	0.00
57	T,P	Acenaphthylene	2.022	1.975	2.3	89	0.00
58	T	3-Nitroaniline	0.300	0.305	-1.7	97	0.00
59	C,P	Acenaphthene	1.336	1.333	0.2	98	0.00
60	P	2,4-Dinitrophenol	0.119	0.115	3.4	86	0.00
61	P	4-Nitrophenol	0.156	0.170	-9.0	103	0.00
62	T,P	2,4-Dinitrotoluene	0.403	0.395	2.0	94	0.00
63	T,P	Dibenzofuran	1.707	1.807	-5.9	104	0.00
64	T	2,3,5,6-Tetrachlorophenol	0.291	0.288	1.0	93	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.398	0.417	-4.8	101	0.00
66	T	2,3,5-Trimethylnaphthalene	1.018	1.109	-8.9	107	0.00
67	T	Diethylphthalate	1.394	1.466	-5.2	102	0.00
68	T,P	Fluorene	1.410	1.421	-0.8	99	0.00
69	T,P	4-Chlorophenyl-phenylether	0.735	0.739	-0.5	98	0.00
70	T	4-Nitroaniline	0.294	0.298	-1.4	94	0.00
71	I	Phenanthrene-d10	1.000	1.000	0.0	98	0.00
72	T	4,6-Dinitro-2-methylphenol	0.109	0.119	-9.2	99	0.00
73	C	N-Nitrosodiphenylamine	0.626	0.618	1.3	96	0.00
74	T	Azobenzene	0.741	0.779	-5.1	103	0.00
75	S	2,4,6-Tribromophenol	0.107	0.104	2.8	93	0.00
76	T,P	4-Bromophenyl-phenylether	0.247	0.257	-4.0	101	0.00
77	T,P	Hexachlorobenzene	0.261	0.267	-2.3	100	0.00
78	C,P	Pentachlorophenol	0.140	0.148	-5.7	101	0.00
79	T	Dibenzothiophene	1.046	1.190	-13.8	115	0.00
80	T,P	Phenanthrene	1.179	1.209	-2.5	100	0.00
81	T	Dinoseb	0.000	0.000#	0.0	0#	0.00
82	T,P	Anthracene	1.205	1.176	2.4	95	0.00
83	T	Carbazole	0.970	1.001	-3.2	99	0.00
84	T	Di-n-butylphthalate	1.241	1.327	-6.9	102	0.00
85	T	1-Methylphenanthrene	0.824	0.858	-4.1	102	0.00
86	C,P	Fluoranthene	1.291	1.303	-0.9	99	0.00
87	I	Chrysene-d12	1.000	1.000	0.0	101	0.00
88	T	Benzidine	0.000	0.000#	0.0	0#	0.00
89	T,P	Pyrene	1.284	1.238	3.6	97	0.00 KV
90	S	Terphenyl-d14	0.868	~~0.259~~ .777	~~70.2~~#	~~29~~#	0.00
91	T	Butylbenzylphthalate	0.460	0.495 10.5	-7.6	102 87	0.00 7/15/15
92	T	bis(2-ethylhexyl)adipate	0.365	0.382	-4.7	99	0.00
93	T	3,3'-Dichlorobenzidine	0.369	0.381	-3.3	98	0.00
94	T,P	Benzo(a)anthracene	1.191	1.161	2.5	98	0.00
95	T,P	Chrysene	1.153	1.142	1.0	99	0.00
96	T	bis(2-Ethylhexyl)phthalate	0.697	0.740	-6.2	102	0.00 7/17/15
97	I	Perylene-d12	1.000	1.000	0.0	102	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G~~144~~ 131 pu 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Min. RRF : 0.050 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)
98	C	Di-n-octylphthalate	1.246	1.384	-11.1	103	0.00
99	T,P	Benzo(b)fluoranthene	1.191	1.214	-1.9	101	0.00
100	T,P	Benzo(k)fluoranthene	1.263	1.253	0.8	97	0.00
101	T	Benzo(e)pyrene	1.065	1.123	-5.4	105	0.00
102	C,P	Benzo(a)pyrene	1.147	1.144	0.3	97	0.00
103	T	Perylene	1.081	1.155	-6.8	106	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	1.326	1.384	-4.4	101	0.00
105	T,P	Dibenzo(a,h)anthracene	1.109	1.127	-1.6	99	0.00
106	T,P	Benzo(g,h,i)perylene	1.190	1.210	-1.7	98	0.00

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

pu 7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G~~144~~ 131 RM 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	402978	40.00	ppm	0.00
21) Naphthalene-d8	4.239	136	1499259	40.00	ppm	0.00
41) Acenaphthene-d10	6.265	164	920036	40.00	ppm	0.00
71) Phenanthrene-d10	8.004	188	1609594	40.00	ppm	0.00
87) Chrysene-d12	10.785	240	1750677	40.00	ppm	0.00
97) Perylene-d12	12.212	264	1566782	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.065	112	322563	24.58	ppm	0.00
Spiked Amount 30.000			Recovery	=	81.93%	
6) Phenol-d5	2.654	99	387677	24.40	ppm	0.00
Spiked Amount 30.000			Recovery	=	81.33%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.499	82	127618	7.94	ppm	0.00
Spiked Amount 10.000			Recovery	=	79.40%	
46) 2-Fluorobiphenyl	5.456	172	274207	7.95	ppm	0.00
Spiked Amount 10.000			Recovery	=	79.50%	
75) 2,4,6-Tribromophenol	7.205	330	104138	24.09	ppm	0.00
Spiked Amount 30.000			Recovery	=	80.30%	
90) Terphenyl-d14	9.707	244	282903	7.45	ppm	0.00
Spiked Amount 10.000			Recovery	=	74.50%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.352	88	130154	22.35	ppm	97
3) N-nitrosodimethylamine	1.467	74	226800	27.40	ppm	98
4) Pyridine	1.496	79	409432	27.18	ppm	100
7) Phenol	2.665	94	412212	26.13	ppm	99
8) Aniline	2.732	93	544105	26.44	ppm	99
9) bis(2-chloroethyl)ether	2.764	93	314826	24.45	ppm	99
10) 2-Chlorophenol	2.831	128	346203	25.87	ppm	93
11) 1,3-Dichlorobenzene	2.962	146	421735	26.60	ppm	99
13) 1,4-Dichlorobenzene	3.025	146	427700	26.54	ppm	99
14) Benzyl alcohol	3.102	108	254133	28.99	ppm	99
15) 1,2-Dichlorobenzene	3.159	146	399056	25.89	ppm	99
16) 2-Methylphenol	3.178	107	284884	26.48	ppm	92
17) bis(2-chloroisopropyl)...	3.222	45	616518	23.98	ppm	98
18) 4-Methylphenol	3.317	107	384341	27.16	ppm	100
19) N-Nitroso-di-n-propyla...	3.346	70	256120	25.02	ppm	97
20) Hexachloroethane	3.471	117	160583	25.15	ppm	97
23) Nitrobenzene	3.519	77	407481	24.69	ppm	98
24) Isophorone	3.749	82	764526	25.13	ppm	94
25) 2-Nitrophenol	3.830	139	177276	26.31	ppm	98
26) 2,4-Dimethylphenol	3.849	107	367582	26.87	ppm	99
27) Benzoic acid	3.921	105	239077	25.54	ppm	100
28) bis(2-Chloroethoxy)met...	3.960	93	417627	25.09	ppm	100
29) 3,5-Dimethylphenol	3.984	107	417407	27.25	ppm	99
30) 2,4-Dichlorophenol	4.070	162	354546	27.49	ppm	90
31) 3,4-Dimethylphenol	4.167	107	454148	26.99	ppm	98
32) 1,2,4-Trichlorobenzene	4.171	180	375066	26.53	ppm	100
33) Naphthalene	4.263	128	1031457	24.98	ppm	100
34) 4-Chloroaniline	4.307	127	427590	25.89	ppm	100
35) 2,6-Dichlorophenol	4.316	162	312235	27.08	ppm	99
36) Hexachlorobutadiene	4.389	225	249387	26.04	ppm	99

7/17/15

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G1~~44~~ 14 TM 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 4-Chloro-3-methylphenol	4.827	107	296280	26.93	ppm	100
39) 2-Methylnaphthalene	5.033	142	728685	25.79	ppm	98
40) 1-Methylnaphthalene	5.144	142	683244	26.81	ppm	99
42) Hexachlorocyclopentadiene	5.211	237	229217	22.62	ppm	99
43) 2,3,5-Trichlorophenol	5.216	196	243389	29.40	ppm	93
44) 2,4,6-Trichlorophenol	5.350	196	241415	27.11	ppm	100
45) 2,4,5-Trichlorophenol	5.384	196	251203	27.15	ppm	99
47) 2,3,4-Trichlorophenol	5.461	196	205911	26.18	ppm	99
48) Biphenyl	5.577	154	921122	25.48	ppm	99
49) 2-Chloronaphthalene	5.601	162	805125	26.87	ppm	95
50) 2-Nitroaniline	5.716	65	203349	25.83	ppm	99
51) 2,6-Dimethylnaphthalene	5.764	156	658005	26.44	ppm	100
52) 1,4-Dinitrobenzene	5.884	168	101614	26.66	ppm	99
53) Dimethylphthalate	5.947	163	836718	26.26	ppm	100
54) 1,3-Dinitrobenzene	5.971	168	116914	26.70	ppm	98
55) 2,6-Dinitrotoluene	6.010	165	179259	25.07	ppm	99
56) 1,2-Dinitrobenzene	6.072	168	70656	26.62	ppm	95
57) Acenaphthylene	6.096	152	1135651	24.41	ppm	96
58) 3-Nitroaniline	6.207	138	175553	25.41	ppm	99
59) Acenaphthene	6.303	153	766463	24.94	ppm	99
60) 2,4-Dinitrophenol	6.332	184	66103	22.33	ppm	99
61) 4-Nitrophenol	6.394	109	97837	27.23	ppm	98
62) 2,4-Dinitrotoluene	6.495	165	227096	24.52	ppm	98
63) Dibenzofuran	6.514	168	1038804	26.46	ppm	99
64) 2,3,5,6-Tetrachlorophenol	6.600	230	165516	24.72	ppm	98
65) 2,3,4,6-Tetrachlorophenol	6.653	232	239533	26.14	ppm	99
66) 2,3,5-Trimethylnaphtha...	6.767	170	637490	27.23	ppm	99
67) Diethylphthalate	6.804	149	842865	26.29	ppm	100
68) Fluorene	6.926	166	816985	25.20	ppm	100
69) 4-Chlorophenyl-phenyle...	6.936	204	424734	25.13	ppm	100
70) 4-Nitroaniline	6.945	138	171247	25.29	ppm	94
72) 4,6-Dinitro-2-methylph...	6.982	198	119885	25.13	ppm	98
73) N-Nitrosodiphenylamine	7.072	169	621855	24.67	ppm	99
74) Azobenzene	7.120	77	783646	26.29	ppm	100
76) 4-Bromophenyl-phenylether	7.504	248	258868	26.01	ppm	97
77) Hexachlorobenzene	7.560	284	268691	25.63	ppm	98
78) Pentachlorophenol	7.782	266	148775	26.39	ppm	97
79) Dibenzothiophene	7.886	184	1197467	28.46	ppm	96
80) Phenanthrene	8.028	178	1216377	25.65	ppm	100
82) Anthracene	8.084	178	1183096	24.39	ppm	100
83) Carbazole	8.258	167	1006591	25.78	ppm	100
84) Di-n-butylphthalate	8.654	149	1334984	26.73	ppm	99
85) 1-Methylphenanthrene	8.698	192	863507	26.05	ppm	99
86) Fluoranthene	9.306	202	1311054	25.24	ppm	100
89) Pyrene	9.542	202	1354562	24.11	ppm	100
91) Butylbenzylphthalate	10.213	149	542006	26.91	ppm	100
92) bis(2-ethylhexyl)adipate	10.295	129	418405	26.21	ppm	100
93) 3,3'-Dichlorobenzidine	10.742	252	416335	25.76	ppm	98
94) Benzo(a)anthracene	10.771	228	1270162	24.37	ppm	100
95) Chrysene	10.810	228	1249606	24.76	ppm	99
96) bis(2-Ethylhexyl)phtha...	10.795	149	809854	26.53	ppm	99
98) Di-n-octylphthalate	11.421	149	1355601	27.77	ppm	100
99) Benzo(b)fluoranthene	11.805	252	1188711	25.49	ppm	100
100) Benzo(k)fluoranthene	11.834	252	1227051	24.80	ppm	99
101) Benzo(e)pyrene	12.090	252	1099867	26.36	ppm	100

7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G1~~44~~ m 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) Benzo(a)pyrene	12.148	252	1120255	24.94	ppm	99
103) Perylene	12.236	252	1131080	26.71	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.552	276	1354960	26.09	ppm	100
105) Dibenzo(a,h)anthracene	13.576	278	1103490	25.40	ppm	99
106) Benzo(g,h,i)perylene	13.955	276	1184402	25.42	ppm	100

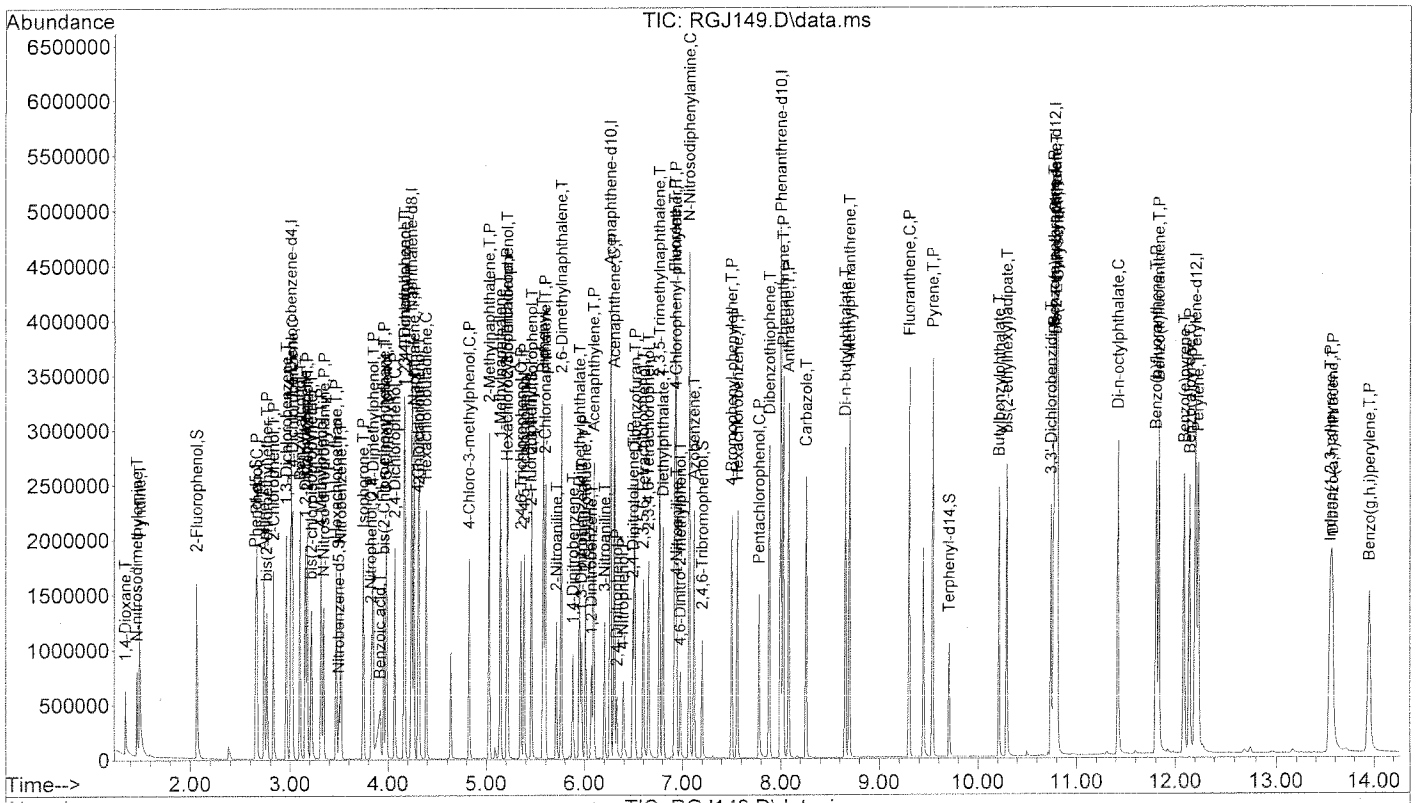
(#) = qualifier out of range (m) = manual integration (+) = signals summed

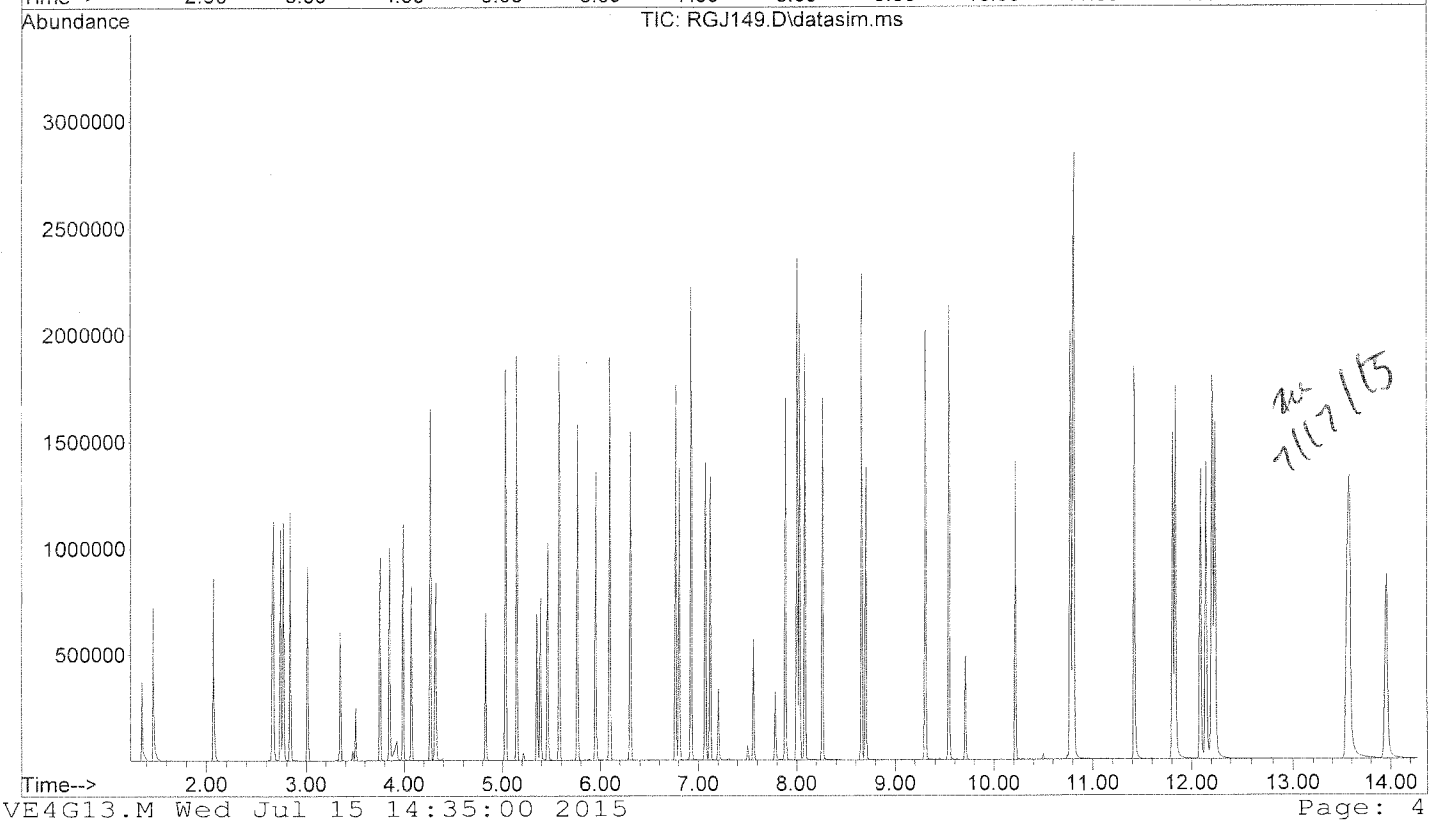
m 7/17/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15G13\RGJ149.D
Acq On : 13 Jul 2015 21:50
Sample : ISVE4G1~~44~~ 131 m 9/8/15
Misc : ICVPPM
Integrator: RTE
Quant Time: Jul 15 14:34:00 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 24
Operator: KVu
Inst : E4
Multiplr: 1.00





m 7/17/15

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CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E7
IC Beginning DateTime :04/03/15 09:30
Sptke Amount :25 PPM
CC/CV File :RDH016
IC File :RDH007

Column Spec :ZB-SemiVoa ID :0.18MM
IC Ending DateTime :04/03/15 11:43
HPChem Method :SVEZD03
Date_Time :04/03/15 14:02

M IDX	Parameters	CC_Con	CC% D	CC_Resp	CCRRF	AVRRF	CC_Rtm	AVRtm	% RSD	Co X0	Co X1	Co X2	Co Cor
1	1,4-Dichlorobenzene-d4	40.000	0	600353	1	1	2.845	2.848	0				
2	1,4-Dioxane	22.887	-8.5	164751	0.439	0.480	1.228	1.231	13.89				
3	N-nitrosodimethylamine	24.307	-2.8	246245	0.656	0.675	1.338	1.339	2.07				
4	Pyridine	25.457	1.8	458612	1.222	1.200	1.367	1.366	2.81				
5	2-Fluorophenol	24.786	-0.9	437928	1.167	1.177	1.927	1.927	3.15				
6	Phenol-d5	24.786	-0.9	527438	1.400	1.416	2.506	2.504	3.86				
7	Phenol	24.144	-3.4	514206	1.370	1.419	2.517	2.516	4.23				
8	Aniline	23.964	-4.1	656652	1.750	1.826	2.579	2.582	1.53				
9	bis(2-chloroethyl)ether	22.426	-10.3	382641	1.020	1.137	2.611	2.612	2.28				
10	2-Chlorophenol	27.108	8.4	502088	1.338	1.234	2.673	2.675	1.73				
11	1,3-Dichlorobenzene	24.514	-1.9	560848	1.495	1.524	2.802	2.805	1.61				
12	1,2-Dichlorobenzene-d4												
13	1,4-Dichlorobenzene	25.001	0.0	593317	1.581	1.581	2.859	2.862	2.02				
14	Benzyl alcohol	24.230	-3.1	288193	0.768	0.792	2.941	2.941	2.21				
15	1,2-Dichlorobenzene	24.315	-2.7	546144	1.456	1.497	2.989	2.993	2.15				
16	2-Methylphenol	25.329	1.3	365531	0.974	0.962	3.018	3.018	1.88				
17	bis(2-chloroisopropyl)ether	22.337	-10.7	879291	2.343	2.623	3.061	3.061	3.05				
18	4-Methylphenol	24.837	-0.7	470603	1.254	1.262	3.157	3.155	2.56				
19	N-Nitroso-di-n-propylamine	23.211	-7.2	294689	0.785	0.846	3.181	3.180	1.48				
20	Hexachloroethane	23.401	-6.4	248796	0.663	0.708	3.296	3.299	3.46				
21	Naphthalene-d8	40.000	0	2230730	1	1	4.055	4.057	0				
22	Nitrobenzene-d5	8.163	-2.0	165353	0.356	0.363	3.329	3.332	1.55				
23	Nitrobenzene	22.359	-10.6	479844	0.344	0.385	3.349	3.350	1.57				
24	Isophorone	23.071	-7.7	937406	0.672	0.729	3.574	3.578	4.77				
25	2-Nitrophenol	25.205	0.8	242998	0.174	0.173	3.655	3.656	4.68				
26	2,4-Dimethylphenol	24.357	-2.6	472446	0.335	0.344	3.674	3.677	4.69				
27	Benzoic acid	23.936	-4.3	323037	0.232	0.230	3.761	3.764	18.47	-0.0140	0.2653		0.9997
28	bis(2-Chloroethoxy)methane	22.219	-11.1	509331	0.365	0.411	3.785	3.785	1.21				
29	3,5-Dimethylphenol	25.584	2.3	564973	0.405	0.396	3.813	3.814	5.61				
30	2,4-Dichlorophenol	24.504	-2.0	433420	0.311	0.317	3.891	3.893	1.97				
31	1,2,4-Trichlorobenzene	25.291	1.2	542291	0.389	0.384	3.992	3.992	1.59				
32	3,4-Dimethylphenol	25.226	0.6	595273	0.427	0.423	3.992	3.990	1.65				
33	Naphthalene	23.760	-5.0	1450056	1.040	1.094	4.079	4.079	1.44				
34	4-Chloroaniline	23.546	-5.8	574136	0.412	0.437	4.127	4.127	2.33				
35	2,6-Dichlorophenol	24.717	-1.1	436978	0.313	0.317	4.137	4.135	1.20				
36	Hexachlorobutadiene	24.272	-2.9	334522	0.240	0.247	4.204	4.207	1.54				
37	Hydroquinone												
38	4-Chloro-3-methylphenol	24.939	-0.2	380059	0.273	0.273	4.648	4.648	3.85				
39	2-Methylnaphthalene	24.478	-2.1	1032571	0.741	0.756	4.840	4.840	1.49				
40	1-Methylnaphthalene	27.131	8.5	1045328	0.750	0.691	4.955	4.953	1.66				
41	Acenaphthene-d10	40.000	0	1326618	1	1	6.061	6.061	0				
42	Hexachlorocyclopentadiene	21.996	-12.0	327152	0.375	0.426	5.022	5.020	3.00				
43	2,3,5-Trichlorophenol	27.312	9.2	340460	0.390	0.357	5.026	5.026	8.12				
44	2,4,6-Trichlorophenol	25.581	2.3	358295	0.410	0.401	5.156	5.156	3.48				
45	2,4,5-Trichlorophenol	24.746	-1.0	358758	0.411	0.415	5.190	5.191	5.03				
46	2-Fluorobiphenyl	7.633	-8.4	415118	1.427	1.558	5.263	5.266	4.84				
47	2,3,4-Trichlorophenol	22.032	-11.9	308461	0.353	0.401	5.268	5.267	2.94				
48	Biphenyl	24.764	-0.9	1343710	1.539	1.554	5.383	5.382	1.52				
49	2-Chloronaphthalene	25.816	3.3	1174237	1.345	1.303	5.405	5.401	1.45				
50	2-Nitroaniline	23.243	-7.0	268329	0.307	0.331	5.522	5.520	4.85				
51	2,6-Dimethylnaphthalene	24.903	-0.4	959143	1.099	1.103	5.565	5.565	1.63				
52	1,4-Dinitrobenzene	24.819	-0.7	136784	0.157	0.158	5.690	5.688	8.74				
53	Dimethylphthalate	23.558	-5.8	1197930	1.372	1.456	5.753	5.753	1.28				
54	1,3-Dinitrobenzene	25.324	1.3	163544	0.187	0.185	5.777	5.774	4.85				
55	2,6-Dinitrotoluene	22.244	-11.0	232003	0.266	0.303	5.816	5.816	2.99				
56	1,2-Dinitrobenzene	24.186	-3.3	95364	0.109	0.113	5.874	5.873	3.06				
57	Acenaphthylene	25.930	3.7	1912703	2.191	2.113	5.893	5.891	4.50				
58	3-Nitroaniline	22.796	-8.8	237103	0.272	0.298	6.009	6.009	3.82				
59	Acenaphthene	23.968	-4.1	1132043	1.297	1.353	6.100	6.099	1.86				
60	2,4-Dinitrophenol	21.435	-14.3	115134	0.132	0.141	6.133	6.131	21.16	-0.0096	0.1718		0.9984
61	4-Nitrophenol	24.405	-2.4	128400	0.147	0.151	6.205	6.204	5.29				
62	2,4-Dinitrotoluene	21.990	-12.0	298006	0.341	0.388	6.296	6.294	3.72				
63	Dibenzofuran	23.839	-4.6	1434904	1.644	1.724	6.306	6.306	3.55				
64	2,3,5,6-Tetrachlorophenol	23.756	-5.0	249213	0.286	0.300	6.397	6.397	2.97				
65	2,3,4,6-Tetrachlorophenol	23.303	-6.8	298933	0.342	0.367	6.450	6.449	5.76				
66	2,3,5-Trimethylnaphthalene	26.553	6.2	1043292	1.195	1.125	6.564	6.561	6.44				
67	Diethylphthalate	23.271	-6.6	1123320	1.286	1.381	6.606	6.606	0.84				
68	Fluorene	23.356	-6.6	1171374	1.342	1.436	6.718	6.719	1.57				
69	4-Chlorophenyl-phenylether	22.135	-11.5	572094	0.655	0.740	6.733	6.730	1.94				
70	4-Nitroaniline	23.528	-5.9	234604	0.269	0.286	6.742	6.742	4.47				
71	Phenanthrene-d10	40.000	0	2398781	1	1	7.804	7.799	0				
72	4,6-Dinitro-2-methylphenol	24.716	-1.1	190098	0.127	0.117	6.779	6.779	18.96	-0.0072	0.1399		0.9984
73	N-Nitrosodiphenylamine	23.769	-4.9	908489	0.606	0.637	6.874	6.871	1.75				
74	Azobenzene	24.057	-3.8	980153	0.654	0.679	6.921	6.919	2.16				
75	2,4,6-Tribromophenol	26.094	4.4	170178	0.114	0.109	7.002	7.000	4.26				
76	4-Bromophenyl-phenylether	22.756	-9.0	332072	0.221	0.243	7.305	7.304	1.87				
77	Hexachlorobenzene	23.823	-4.7	380056	0.253	0.266	7.357	7.357	2.87				
78	Pentachlorophenol	24.424	-2.3	214153	0.143	0.146	7.584	7.583	8.50				
79	Dibenzothiophene	24.928	-0.3	1674609	1.117	1.120	7.683	7.683	3.87				
80	Phenanthrene	24.037	-3.9	1721251	1.148	1.194	7.826	7.827	2.11				
81	Dinoseb												
82	Anthracene	23.032	-7.9	1694803	1.130	1.227	7.885	7.883	2.62				
83	Carbazole	24.433	-2.3	1468406	0.979	1.002	8.066	8.062	1.89				
84	Di-n-butylphthalate	23.600	-5.6	1748494	1.166	1.235	8.469	8.465	3.67				
85	1-Methylphenanthrene	25.123	0.5	1291242	0.861	0.857	8.498	8.497	1.84				
86	Fluoranthene	24.135	-3.5	1945615	1.298	1.344	9.102	9.103	2.09				
87	Chrysene-d12	40.000	0	2553528	1	1	10.576	10.572	0				
88	Benzidine												
89	Pyrene	23.369	-6.5	2060819	1.291	1.381	9.338	9.337	4.93				
90	Terphenyl-d14	8.097	-2.8	438387	0.824	0.848	9.509	9.508	1.81				
91	Butylbenzylphthalate	23.902	-4.4	699704	0.438	0.459	10.019	10.016	6.43				
92	bis(2-ethylhexyl)adipate	25.241	1.0	591607	0.371	0.367	10.106	10.101	6.31				
93	3,3'-Dichlorobenzidine	22.062	-11.8	589247	0.369	0.418	10.542	10.539	4.00				
94	Benzo(a)anthracene	23.577	-5.7	1761410	1.104	1.170	10.566	10.561	1.53				
95	Chrysene	22.554	-9.8	1665154	1.043	1.157	10.600	10.597	2.95				
96	bis(2-Ethylhexyl)phthalate	24.449	-2.2	1096511	0.687	0.703	10.600	10.598	4.99				
97	Perylene-d12	40.000	0	2319642	1	1	11.946	11.940	0				
98	Di-n-octylphthalate	23.815	-4.7	1719749	1.186	1.245	11.221	11.216	8.50				
99	Benzo(b)fluoranthene	23.230	-7.1	1634368	1.127	1.213	11.576	11.572	3.40				
100	Benzo(k)fluoranthene	25.912	3.6	2012398	1.388	1.339	11.601	11.598	1.76				
101	Benzo(e)pyrene	27.801	-0.8	1615222	1.112	1.121	11.838	11.832	2.41				
102	Benzo(a)pyrene	23.291	-6.8	1592612	1.096	1.180	11.890	11.884	4.70				
103	Perylene	20.620	-17.5	1424819	0.983	1.192	11.969	11.966	1.77				
104	Indeno(1,2,3-cd)pyrene	24.674	-1.3	1818289	1.254	1.271	13.157	13.148	2.90				
105	Dibenzo(a,h)anthracene	24.256	-3.0	1505986	1.039	1.071	13.176	13.169	4.24				
106	Benzo(g,h,i)perylene	23.986	-4.1	1548288	1.068	1.113	13.516	13.510	3.23				

JL 4/9/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 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	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	106	0.00
2	T	1,4-Dioxane	25.000	22.887	8.5	108	0.00
3	T	N-nitrosodimethylamine	25.000	24.307	2.8	105	0.00
4	T	Pyridine	25.000	25.457	-1.8	108	0.00
5	S	2-Fluorophenol	25.000	24.786	0.9	109	0.00
6	S	Phenol-d5	25.000	24.786	0.9	110	0.00
7	C,P	Phenol	25.000	24.144	3.4	106	0.00
8	T	Aniline	25.000	23.964	4.1	103	0.00
9	T,P	bis(2-chloroethyl)ether	25.000	22.426	10.3	99	0.00
10	T,P	2-Chlorophenol	25.000	27.107	-8.4	118	0.00
11	T	1,3-Dichlorobenzene	25.000	24.514	1.9	106	0.00
12	S	1,2-Dichlorobenzene-d4	25.000	0.000	100.0#	0	-2.99#
13	C	1,4-Dichlorobenzene	25.000	25.001	-0.0	109	0.00
14	T	Benzyl alcohol	25.000	24.230	3.1	104	0.00
15	T	1,2-Dichlorobenzene	25.000	24.315	2.7	105	0.00
16	T,P	2-Methylphenol	25.000	25.329	-1.3	111	0.00
17	T	bis(2-chloroisopropyl)ether	25.000	22.337	10.7	98	0.00
18	T,P	4-Methylphenol	25.000	24.837	0.7	109	0.00
19	P,P	N-Nitroso-di-n-propylamine	25.000	23.211	7.2	100	0.00
20	T,P	Hexachloroethane	25.000	23.401	6.4	102	0.00
21	I	Naphthalene-d8	40.000	40.000	0.0	105	0.00
22	S	Nitrobenzene-d5	8.333 ~~25.000~~	8.163	2.0 ~~67.3#~~	~~35~~ 105	0.00
23	T,P	Nitrobenzene	DJ 4/7/15 25.000	22.359	DJ 4/7/15 10.6	97 DJ 4/7/15	0.00
24	T,P	Isophorone	25.000	23.071	7.7	98	0.00
25	C,P	2-Nitrophenol	25.000	25.205	-0.8	106	0.00
26	T,P	2,4-Dimethylphenol	25.000	24.356	2.6	107	0.00
27	T	Benzoic acid	25.000	23.936	4.3	102	0.00
28	T,P	bis(2-Chloroethoxy)methane	25.000	22.219	11.1	96	0.00
29	T	3,5-Dimethylphenol	25.000	25.584	-2.3	108	0.00
30	C,P	2,4-Dichlorophenol	25.000	24.504	2.0	105	0.00
31	T	1,2,4-Trichlorobenzene	25.000	25.291	-1.2	109	0.00
32	T	3,4-Dimethylphenol	25.000	25.226	-0.9	109	0.00
33	T.P	Naphthalene	25.000	23.760	5.0	103	0.00
34	T	4-Chloroaniline	25.000	23.546	5.8	101	0.00
35	T	2,6-Dichlorophenol	25.000	24.717	1.1	107	0.00
36	C	Hexachlorobutadiene	25.000	24.272	2.9	105	0.00
37	T	Hydroquinone	25.000	0.000	100.0#	0	0.00
38	C,P	4-Chloro-3-methylphenol	25.000	24.939	0.2	105	0.00
39	T,P	2-Methylnaphthalene	25.000	24.478	2.1	106	0.00
40	T	1-Methylnaphthalene	25.000	27.131	-8.5	117	0.00
41	I	Acenaphthene-d10	40.000	40.000	0.0	107	0.00
42	P	Hexachlorocyclopentadiene	25.000	21.996	12.0	95	0.00
43	T	2,3,5-Trichlorophenol	25.000	27.312	-9.2	117	0.00
44	C,P	2,4,6-Trichlorophenol	25.000	25.581	-2.3	113	0.00
45	T,P	2,4,5-Trichlorophenol	25.000	24.746	1.0	107	0.00
46	S	2-Fluorobiphenyl	8.333 ~~25.000~~	7.633	8.4 ~~69.5#~~	~~32~~ 96	0.00
47	T	2,3,4-Trichlorophenol	DJ 4/7/15 25.000	22.032	DJ 4/7/15 11.9	96 DJ 4/7/15	0.00
48	T	Biphenyl	25.000	24.764	0.9	110	0.00

RZ 4/9/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 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)
49	T,P	2-Chloronaphthalene	25.000	25.816	-3.3	114	0.00
50	T	2-Nitroaniline	25.000	23.243	7.0	100	0.00
51	T	2,6-Dimethylnaphthalene	25.000	24.903	0.4	110	0.00
52	T	1,4-Dinitrobenzene	25.000	24.819	0.7	104	0.00
53	T	Dimethylphthalate	25.000	23.558	5.8	103	0.00
54	T	1,3-Dinitrobenzene	25.000	25.324	-1.3	109	0.00
55	T,P	2,6-Dinitrotoluene	25.000	22.244	11.0	96	0.00
56	T	1,2-Dinitrobenzene	25.000	24.186	3.3	106	0.00
57	T,P	Acenaphthylene	25.000	25.929	-3.7	116	0.00
58	T	3-Nitroaniline	25.000	22.796	8.8	98	0.00
59	C,P	Acenaphthene	25.000	23.967	4.1	107	0.00
60	P	2,4-Dinitrophenol	25.000	21.435	14.3	94	0.00
61	P	4-Nitrophenol	25.000	24.405	2.4	102	0.00
62	T,P	2,4-Dinitrotoluene	25.000	21.990	12.0	95	0.00
63	T,P	Dibenzofuran	25.000	23.839	4.6	106	0.00
64	T	2,3,5,6-Tetrachlorophenol	25.000	23.755	5.0	103	0.00
65	T	2,3,4,6-Tetrachlorophenol	25.000	23.303	6.8	103	0.00
66	T	2,3,5-Trimethylnaphthalene	25.000	26.553	-6.2	126	0.00
67	T	Diethylphthalate	25.000	23.271	6.9	101	0.00
68	T,P	Fluorene	25.000	23.356	6.6	103	0.00
69	T,P	4-Chlorophenyl-phenylether	25.000	22.135	11.5	97	0.00
70	T	4-Nitroaniline	25.000	23.528	5.9	100	0.00
71	I	Phenanthrene-d10	40.000	40.000	0.0	103	0.00
72	T	4,6-Dinitro-2-methylphenol	25.000	24.716	1.1	107	0.00
73	C	N-Nitrosodiphenylamine	25.000	23.769	4.9	95	0.00
74	T	Azobenzene	25.000	24.057	3.8	102	0.00
75	S	2,4,6-Tribromophenol	25.000	26.094	-4.4	109	0.00
76	T,P	4-Bromophenyl-phenylether	25.000	22.756	9.0	97	0.00
77	T,P	Hexachlorobenzene	25.000	23.823	4.7	102	0.00
78	C,P	Pentachlorophenol	25.000	24.424	2.3	99	0.00
79	T	Dibenzothiophene	25.000	24.929	0.3	106	0.00
80	T,P	Phenanthrene	25.000	24.037	3.9	103	0.00
81	T	Dinoseb	25.000	0.000	100.0#	0	0.00
82	T,P	Anthracene	25.000	23.032	7.9	100	0.00
83	T	Carbazole	25.000	24.433	2.3	104	0.00
84	T	Di-n-butylphthalate	25.000	23.600	5.6	100	0.00
85	T	1-Methylphenanthrene	25.000	25.123	-0.5	107	0.00
86	C,P	Fluoranthene	25.000	24.135	3.5	102	0.00
87	I	Chrysene-d12	40.000	40.000	0.0	102	0.00
88	T	Benzidine	25.000	0.000	100.0#	0	0.00
89	T,P	Pyrene	25.000	23.369	6.5	101	0.00
90	S	Terphenyl-d14	8.333 ~~25.000~~	8.097	2.8 ~~67.6#~~	~~34~~ 102	0.00
91	T	Butylbenzylphthalate	DJ 4/7/15 25.000	23.902	DJ 4/7/15 4.4	97 DJ 4/7/15	0.00
92	T	bis(2-ethylhexyl)adipate	25.000	25.241	-1.0	103	0.00
93	T	3,3'-Dichlorobenzidine	25.000	22.062	11.8	91	0.00
94	T,P	Benzo(a)anthracene	25.000	23.577	5.7	99	0.00
95	T,P	Chrysene	25.000	22.554	9.8	96	0.00
96	T	bis(2-Ethylhexyl)phthalate	25.000	24.449	2.2	101	0.00

JL 4/9/15

549

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 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)
97	I	Perylene-d12	40.000	40.000	0.0	101	0.00
98	C	Di-n-octylphthalate	25.000	23.815	4.7	97	0.00
99	T,P	Benzo(b)fluoranthene	25.000	23.230	7.1	97	0.00
100	T,P	Benzo(k)fluoranthene	25.000	25.912	-3.6	109	0.00
101	T	Benzo(e)pyrene	25.000	24.801	0.8	105	0.00
102	C,P	Benzo(a)pyrene	25.000	23.291	6.8	95	0.00
103	T	Perylene	25.000	20.620	17.5	86	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	25.000	24.674	1.3	103	0.00
105	T,P	Dibenzo(a,h)anthracene	25.000	24.256	3.0	100	0.00
106	T,P	Benzo(g,h,i)perylene	25.000	23.986	4.1	100	0.00

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

TW 4/9/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00
2	T	1,4-Dioxane	0.480	0.439	8.5	108	0.00
3	T	N-nitrosodimethylamine	0.675	0.656	2.8	105	0.00
4	T	Pyridine	1.200	1.222	-1.8	108	0.00
5	S	2-Fluorophenol	1.177	1.167	0.8	109	0.00
6	S	Phenol-d5	1.412	1.400	0.8	110	0.00
7	C,P	Phenol	1.419	1.370	3.5	106	0.00
8	T	Aniline	1.826	1.750	4.2	103	0.00
9	T,P	bis(2-chloroethyl)ether	1.137	1.020	10.3	99	0.00
10	T,P	2-Chlorophenol	1.234	1.338	-8.4	118	0.00
11	T	1,3-Dichlorobenzene	1.524	1.495	1.9	106	0.00
12	S	1,2-Dichlorobenzene-d4	0.000	0.000#	0.0	0#	-2.99#
13	C	1,4-Dichlorobenzene	1.581	1.581	0.0	109	0.00
14	T	Benzyl alcohol	0.792	0.768	3.0	104	0.00
15	T	1,2-Dichlorobenzene	1.497	1.456	2.7	105	0.00
16	T,P	2-Methylphenol	0.962	0.974	-1.2	111	0.00
17	T	bis(2-chloroisopropyl)ether	2.623	2.343	10.7	98	0.00
18	T,P	4-Methylphenol	1.262	1.254	0.6	109	0.00
19	P,P	N-Nitroso-di-n-propylamine	0.846	0.785	7.2	100	0.00
20	T,P	Hexachloroethane	0.708	0.663	6.4	102	0.00
21	I	Naphthalene-d8	1.000	1.000	0.0	105	0.00
22	S	Nitrobenzene-d5	0.363	~~0.119~~ 0.356	~~67.2#~~ 1.9	~~35#~~ 105	0.00
23	T,P	Nitrobenzene	0.385	0.344 DJ 4/7/15	10.6	97 DJ 4/7/15	0.00
24	T,P	Isophorone	0.729	0.672	7.8	98	0.00
25	C,P	2-Nitrophenol	0.173	0.174	-0.6	106	0.00
26	T,P	2,4-Dimethylphenol	0.344	0.335	2.6	107	0.00
27	T	Benzoic acid	0.230	0.232	-0.9	102	0.00
28	T,P	bis(2-Chloroethoxy)methane	0.411	0.365	11.2	96	0.00
29	T	3,5-Dimethylphenol	0.396	0.405	-2.3	108	0.00
30	C,P	2,4-Dichlorophenol	0.317	0.311	1.9	105	0.00
31	T	1,2,4-Trichlorobenzene	0.384	0.389	-1.3	109	0.00
32	T	3,4-Dimethylphenol	0.423	0.427	-0.9	109	0.00
33	T.P	Naphthalene	1.094	1.040	4.9	103	0.00
34	T	4-Chloroaniline	0.437	0.412	5.7	101	0.00
35	T	2,6-Dichlorophenol	0.317	0.313	1.3	107	0.00
36	C	Hexachlorobutadiene	0.247	0.240	2.8	105	0.00
37	T	Hydroquinone	0.000	0.000#	0.0	0#	0.00
38	C,P	4-Chloro-3-methylphenol	0.273	0.273	0.0	105	0.00
39	T,P	2-Methylnaphthalene	0.756	0.741	2.0	106	0.00
40	T	1-Methylnaphthalene	0.691	0.750	-8.5	117	0.00
41	I	Acenaphthene-d10	1.000	1.000	0.0	107	0.00
42	P	Hexachlorocyclopentadiene	0.426	0.375	12.0	95	0.00
43	T	2,3,5-Trichlorophenol	0.357	0.390	-9.2	117	0.00
44	C,P	2,4,6-Trichlorophenol	0.401	0.410	-2.2	113	0.00
45	T,P	2,4,5-Trichlorophenol	0.415	0.411	1.0	107	0.00
46	S	2-Fluorobiphenyl	1.558	~~0.476~~ 1.427	~~69.4#~~ 8.4	~~32#~~ 96	0.00
47	T	2,3,4-Trichlorophenol	0.401	0.353 DJ 4/7/15	12.0	96 DJ 4/7/15	0.00
48	T	Biphenyl	1.554	1.539	1.0	110	0.00

JC 4/9/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 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)
49	T,P	2-Chloronaphthalene	1.303	1.345	-3.2	114	0.00
50	T	2-Nitroaniline	0.331	0.307	7.3	100	0.00
51	T	2,6-Dimethylnaphthalene	1.103	1.099	0.4	110	0.00
52	T	1,4-Dinitrobenzene	0.158	0.157	0.6	104	0.00
53	T	Dimethylphthalate	1.456	1.372	5.8	103	0.00
54	T	1,3-Dinitrobenzene	0.185	0.187	-1.1	109	0.00
55	T,P	2,6-Dinitrotoluene	0.303	0.269	11.2	96	0.00
56	T	1,2-Dinitrobenzene	0.113	0.109	3.5	106	0.00
57	T,P	Acenaphthylene	2.113	2.191	-3.7	116	0.00
58	T	3-Nitroaniline	0.298	0.272	8.7	98	0.00
59	C,P	Acenaphthene	1.353	1.297	4.1	107	0.00
60	P	2,4-Dinitrophenol	0.141	0.132	6.4	94	0.00
61	P	4-Nitrophenol	0.151	0.147	2.6	102	0.00
62	T,P	2,4-Dinitrotoluene	0.388	0.341	12.1	95	0.00
63	T,P	Dibenzofuran	1.724	1.644	4.6	106	0.00
64	T	2,3,5,6-Tetrachlorophenol	0.300	0.286	4.7	103	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.367	0.342	6.8	103	0.00
66	T	2,3,5-Trimethylnaphthalene	1.125	1.195	-6.2	126	0.00
67	T	Diethylphthalate	1.381	1.286	6.9	101	0.00
68	T,P	Fluorene	1.436	1.342	6.5	103	0.00
69	T,P	4-Chlorophenyl-phenylether	0.740	0.655	11.5	97	0.00
70	T	4-Nitroaniline	0.286	0.269	5.9	100	0.00
71	I	Phenanthrene-d10	1.000	1.000	0.0	103	0.00
72	T	4,6-Dinitro-2-methylphenol	0.117	0.127	-8.5	107	0.00
73	C	N-Nitrosodiphenylamine	0.637	0.606	4.9	95	0.00
74	T	Azobenzene	0.679	0.654	3.7	102	0.00
75	S	2,4,6-Tribromophenol	0.109	0.114	-4.6	109	0.00
76	T,P	4-Bromophenyl-phenylether	0.243	0.221	9.1	97	0.00
77	T,P	Hexachlorobenzene	0.266	0.253	4.9	102	0.00
78	C,P	Pentachlorophenol	0.146	0.143	2.1	99	0.00
79	T	Dibenzothiophene	1.120	1.117	0.3	106	0.00
80	T,P	Phenanthrene	1.194	1.148	3.9	103	0.00
81	T	Dinoseb	0.000	0.000#	0.0	0#	0.00
82	T,P	Anthracene	1.227	1.130	7.9	100	0.00
83	T	Carbazole	1.002	0.979	2.3	104	0.00
84	T	Di-n-butylphthalate	1.235	1.166	5.6	100	0.00
85	T	1-Methylphenanthrene	0.857	0.861	-0.5	107	0.00
86	C,P	Fluoranthene	1.344	1.298	3.4	102	0.00
87	I	Chrysene-d12	1.000	1.000	0.0	102	0.00
88	T	Benzidine	0.000	0.000#	0.0	0#	0.00
89	T,P	Pyrene	1.381	1.291	6.5	101	0.00
90	S	Terphenyl-d14	0.848	~~0.2750~~ 0.824	~~2.867.6#~~ 2.8	~~34#~~ 102	0.00
91	T	Butylbenzylphthalate	0.459	0.438 DJ 4/7/15	4.6	97 DJ 4/7/15	0.00
92	T	bis(2-ethylhexyl)adipate	0.367	0.371	-1.1	103	0.00
93	T	3,3'-Dichlorobenzidine	0.418	0.369	11.7	91	0.00
94	T,P	Benzo(a)anthracene	1.170	1.104	5.6	99	0.00
95	T,P	Chrysene	1.157	1.043	9.9	96	0.00
96	T	bis(2-Ethylhexyl)phthalate	0.703	0.687	2.3	101	0.00

RZ 4/9/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D
Vial: 16
Acq On : 3 Apr 2015 14:02
Operator: RZhou
Sample : ISVE7D031
Inst : E7
Misc : ICV
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
97	I	Perylene-d12	1.000	1.000	0.0	101	0.00
98	C	Di-n-octylphthalate	1.245	1.186	4.7	97	0.00
99	T,P	Benzo(b)fluoranthene	1.213	1.127	7.1	97	0.00
100	T,P	Benzo(k)fluoranthene	1.339	1.388	-3.7	109	0.00
101	T	Benzo(e)pyrene	1.121	1.112	0.8	105	0.00
102	C,P	Benzo(a)pyrene	1.180	1.099	6.9	95	0.00
103	T	Perylene	1.192	0.983	17.5	86	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	1.271	1.254	1.3	103	0.00
105	T,P	Dibenzo(a,h)anthracene	1.071	1.039	3.0	100	0.00
106	T,P	Benzo(g,h,i)perylene	1.113	1.068	4.0	100	0.00

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

RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH016.D
Vial: 16
Acq On : 3 Apr 2015 14:02
Operator: RZhou
Sample : ISVE7D031
Inst : E7
Misc : ICV
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	600353	40.00	ppm	0.00
21) Naphthalene-d8	4.055	136	2230730	40.00	ppm	0.00
41) Acenaphthene-d10	6.061	164	1396618	40.00	ppm	0.00
71) Phenanthrene-d10	7.804	188	2398781	40.00	ppm	0.00
87) Chrysene-d12	10.576	240	2553528	40.00	ppm	0.00
97) Perylene-d12	11.946	264	2319642	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	437928	24.79	ppm	0.00
Spiked Amount 30.000			Recovery	=	82.63%	
6) Phenol-d5	2.506	99	525438	24.79	ppm	0.00
Spiked Amount 30.000			Recovery	=	82.63%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.329	82	165353	8.16	ppm	0.00
Spiked Amount 10.000			Recovery	=	81.60%	
46) 2-Fluorobiphenyl	5.263	172	415118	7.63	ppm	0.00
Spiked Amount 10.000			Recovery	=	76.30%	
75) 2,4,6-Tribromophenol	7.002	330	170178	26.09	ppm	0.00
Spiked Amount 30.000			Recovery	=	86.97%	
90) Terphenyl-d14	9.509	244	438387	8.10	ppm	0.00
Spiked Amount 10.000			Recovery	=	81.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.228	88	164751	22.89	ppm	95
3) N-nitrosodimethylamine	1.338	74	246245	24.31	ppm	97
4) Pyridine	1.367	79	458612	25.46	ppm	98
7) Phenol	2.517	94	514206	24.14	ppm	100
8) Aniline	2.579	93	656652	23.96	ppm	98
9) bis(2-chloroethyl)ether	2.610	93	382641	22.43	ppm	98
10) 2-Chlorophenol	2.673	128	502088	27.11	ppm	100
11) 1,3-Dichlorobenzene	2.802	146	560848	24.51	ppm	99
13) 1,4-Dichlorobenzene	2.860	146	593317	25.00	ppm	99
14) Benzyl alcohol	2.941	108	288193	24.23	ppm	100
15) 1,2-Dichlorobenzene	2.989	146	546144	24.32	ppm	99
16) 2-Methylphenol	3.018	107	365531	25.33	ppm	99
17) bis(2-chloroisopropyl)...	3.061	45	879291	22.34	ppm	99
18) 4-Methylphenol	3.157	107	470603	24.84	ppm	97
19) N-Nitroso-di-n-propyla...	3.181	70	294689	23.21	ppm	99
20) Hexachloroethane	3.296	117	248796	23.40	ppm	99
23) Nitrobenzene	3.348	77	479844	22.36	ppm	100
24) Isophorone	3.574	82	937406	23.07	ppm	93
25) 2-Nitrophenol	3.655	139	242998	25.21	ppm	98
26) 2,4-Dimethylphenol	3.675	107	467446	24.36	ppm	99
27) Benzoic acid	3.761	105	323039	23.94	ppm	97
28) bis(2-Chloroethoxy)met...	3.785	93	509331	22.22	ppm	100
29) 3,5-Dimethylphenol	3.813	107	564973	25.58	ppm	97
30) 2,4-Dichlorophenol	3.890	162	433420	24.50	ppm	98
31) 1,2,4-Trichlorobenzene	3.992	180	542291	25.29	ppm	99
32) 3,4-Dimethylphenol	3.992	107	595273	25.23	ppm	99
33) Naphthalene	4.079	128	1450056	23.76	ppm	100
34) 4-Chloroaniline	4.127	127	574136	23.55	ppm	99
35) 2,6-Dichlorophenol	4.137	162	436978	24.72	ppm	99

4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Hexachlorobutadiene	4.204	225	334522	24.27	ppm	99
38) 4-Chloro-3-methylphenol	4.648	107	380059	24.94	ppm	99
39) 2-Methylnaphthalene	4.840	142	1032571	24.48	ppm	99
40) 1-Methylnaphthalene	4.955	142	1045328	27.13	ppm	100
42) Hexachlorocyclopentadiene	5.022	237	327152	22.00	ppm	100
43) 2,3,5-Trichlorophenol	5.026	196	340460	27.31	ppm	95
44) 2,4,6-Trichlorophenol	5.156	196	358295	25.58	ppm	98
45) 2,4,5-Trichlorophenol	5.190	196	358758	24.75	ppm	99
47) 2,3,4-Trichlorophenol	5.268	196	308461	22.03	ppm	100
48) Biphenyl	5.383	154	1343710	24.76	ppm	100
49) 2-Chloronaphthalene	5.402	162	1174237	25.82	ppm	95
50) 2-Nitroaniline	5.522	65	268329	23.24	ppm	99
51) 2,6-Dimethylnaphthalene	5.565	156	959143	24.90	ppm	100
52) 1,4-Dinitrobenzene	5.690	168	136784	24.82	ppm	100
53) Dimethylphthalate	5.753	163	1197930	23.56	ppm	100
54) 1,3-Dinitrobenzene	5.777	168	163544	25.32	ppm	98
55) 2,6-Dinitrotoluene	5.816	165	235003	22.24	ppm	98
56) 1,2-Dinitrobenzene	5.874	168	95364	24.19	ppm	98
57) Acenaphthylene	5.893	152	1912703	25.93	ppm	97
58) 3-Nitroaniline	6.009	138	237103	22.80	ppm	97
59) Acenaphthene	6.100	153	1132043	23.97	ppm	100
60) 2,4-Dinitrophenol	6.133	184	115134	21.43	ppm	98
61) 4-Nitrophenol	6.205	109	128400	24.40	ppm	99
62) 2,4-Dinitrotoluene	6.296	165	298006	21.99	ppm	97
63) Dibenzofuran	6.306	168	1434904	23.84	ppm	100
64) 2,3,5,6-Tetrachlorophenol	6.397	230	249213	23.76	ppm	99
65) 2,3,4,6-Tetrachlorophenol	6.450	232	298933	23.30	ppm	99
66) 2,3,5-Trimethylnaphtha...	6.564	170	1043292	26.55	ppm	79
67) Diethylphthalate	6.606	149	1122320	23.27	ppm	100
68) Fluorene	6.718	166	1171374	23.36	ppm	100
69) 4-Chlorophenyl-phenyle...	6.733	204	572094	22.13	ppm	99
70) 4-Nitroaniline	6.742	138	234604	23.53	ppm	98
72) 4,6-Dinitro-2-methylph...	6.779	198	190098	24.72	ppm	94
73) N-Nitrosodiphenylamine	6.874	169	908489	23.77	ppm	86
74) Azobenzene	6.921	77	980153	24.06	ppm	100
76) 4-Bromophenyl-phenylether	7.305	248	332072	22.76	ppm	100
77) Hexachlorobenzene	7.357	284	380056	23.82	ppm	100
78) Pentachlorophenol	7.584	266	214153	24.42	ppm	97
79) Dibenzothiophene	7.683	184	1674609	24.93	ppm	100
80) Phenanthrene	7.826	178	1721251	24.04	ppm	100
82) Anthracene	7.885	178	1694803	23.03	ppm	100
83) Carbazole	8.066	167	1468406	24.43	ppm	100
84) Di-n-butylphthalate	8.469	149	1748494	23.60	ppm	100
85) 1-Methylphenanthrene	8.498	192	1291242	25.12	ppm	99
86) Fluoranthene	9.102	202	1945615	24.14	ppm	100
89) Pyrene	9.338	202	2060819	23.37	ppm	99
91) Butylbenzylphthalate	10.019	149	699704	23.90	ppm	99
92) bis(2-ethylhexyl)adipate	10.106	129	591607	25.24	ppm	99
93) 3,3'-Dichlorobenzidine	10.542	252	589247	22.06	ppm	100
94) Benzo(a)anthracene	10.566	228	1761410	23.58	ppm	100
95) Chrysene	10.600	228	1665154	22.55	ppm	99
96) bis(2-Ethylhexyl)phtha...	10.600	149	1096511	24.45	ppm	100
98) Di-n-octylphthalate	11.221	149	1719749	23.82	ppm	100
99) Benzo(b)fluoranthene	11.577	252	1634368	23.23	ppm	99

RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH016.D
Vial: 16
Acq On : 3 Apr 2015 14:02
Operator: RZhou
Sample : ISVE7D031
Inst : E7
Misc : ICV
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.601	252	2012398	25.91	ppm	97
101) Benzo(e)pyrene	11.838	252	1612222	24.80	ppm	100
102) Benzo(a)pyrene	11.890	252	1594012	23.29	ppm	100
103) Perylene	11.970	252	1424819	20.62	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.157	276	1818289	24.67	ppm	98
105) Dibenzo(a,h)anthracene	13.176	278	1505986	24.26	ppm	99
106) Benzo(g,h,i)perylene	13.516	276	1548288	23.99	ppm	100

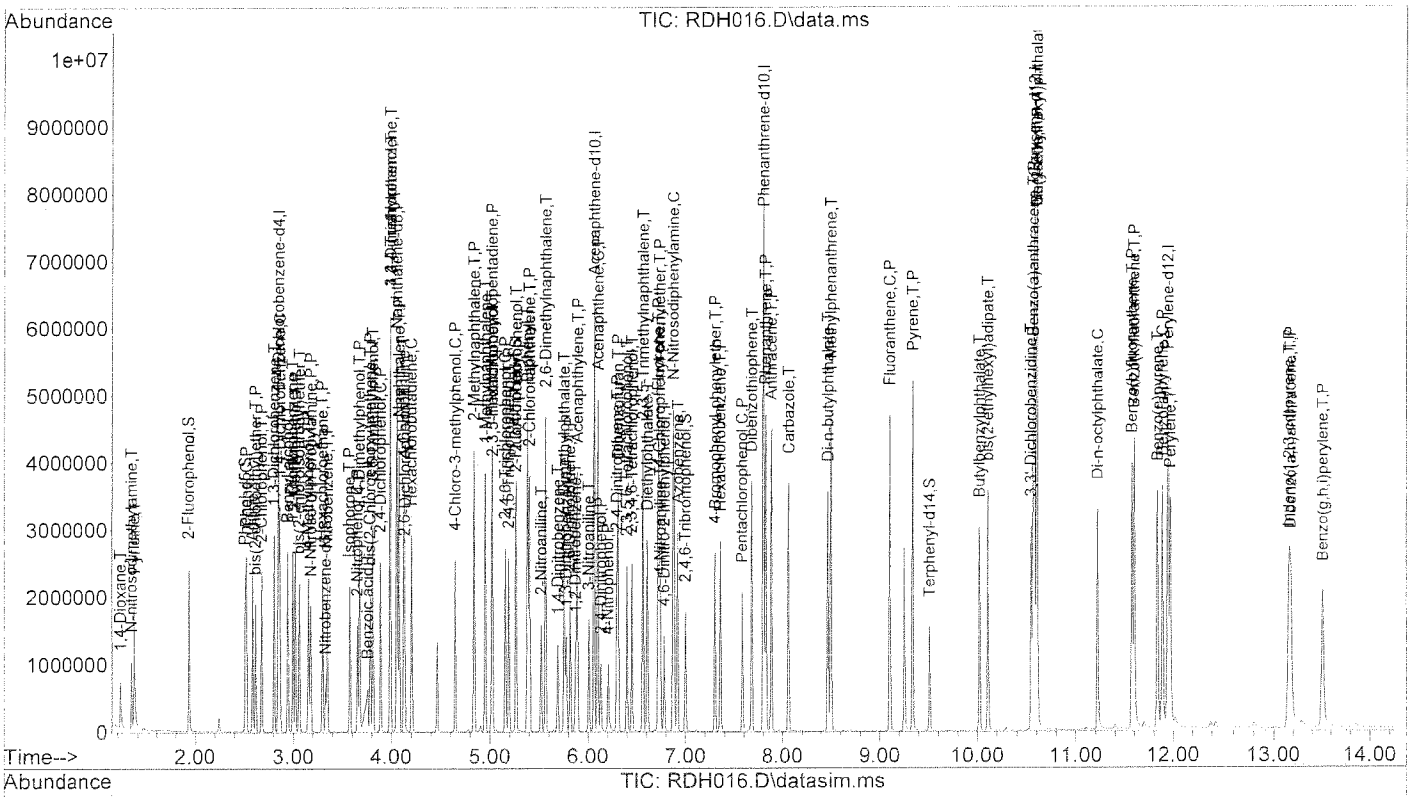
(#) = qualifier out of range (m) = manual integration (+) = signals summed

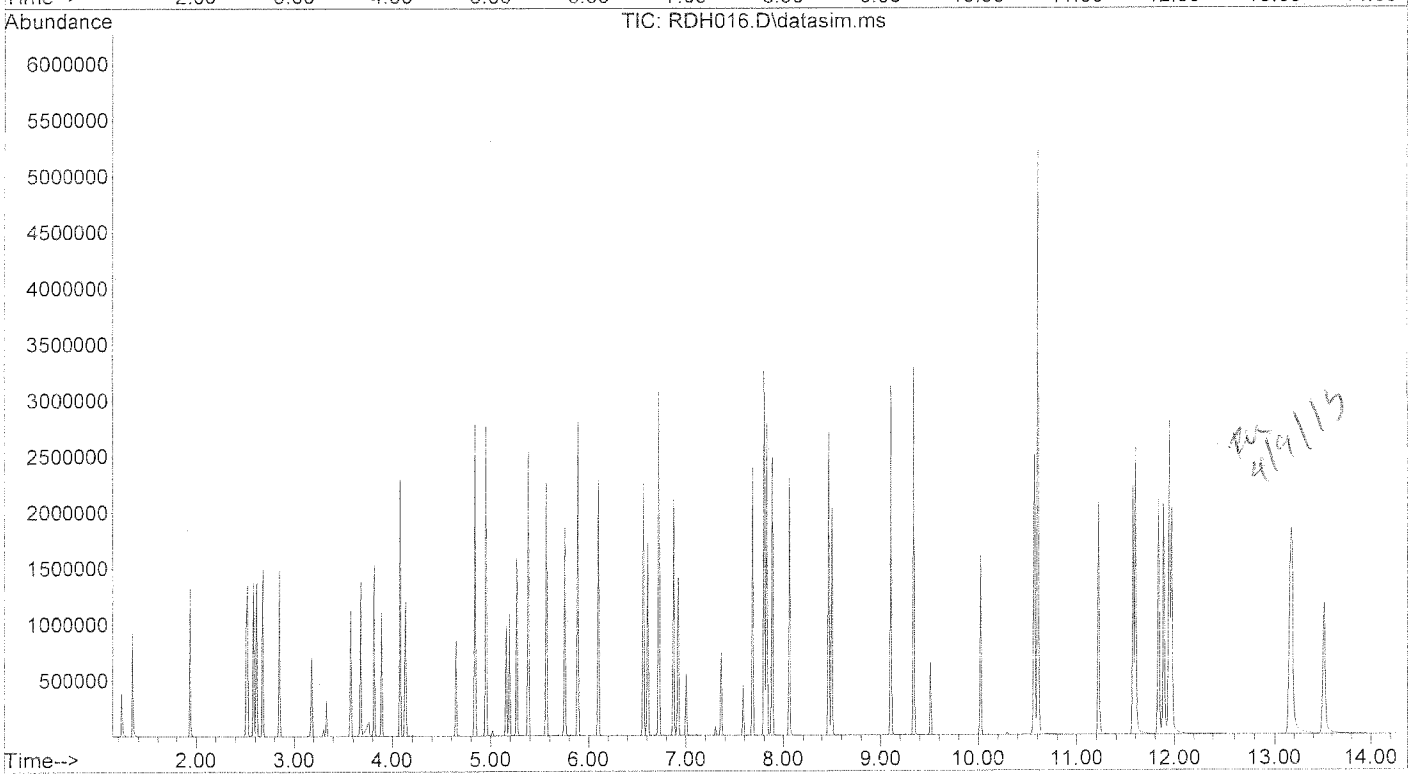
4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00





DAILY CALIBRATIONS

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RIJ473
Instrument ID: TOE4

Project: CANNON AFB PBR
SDG No.: 15I185
DFTPP Injection Date: 09/24/15
DFTPP Injection Time: 11:12

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	50.10
68	Less than 2% of mass 69	0.61(1.4)1
69	% of mass 198	44.11
70	Less than 2% of mass 69	0.30(0.7)1
127	10.0 - 80.0% of mass 198	47.49
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.86
275	10.0 - 60.0% of mass 198	24.09
365	Greater than 1.00% of mass 198	2.89
441	Present, but less than 24% of mass 442	11.68(15.6)2
442	Greater than 50% of mass 198	74.76
443	15.0 - 24.0% of mass 442	14.38(19.2)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD025	CSVE4G1396	RIJ474	09/24/15	11:23
2	LCS1S	SVI038SL	RIJ481	09/24/15	13:39
3	LCD1S	SVI038SC	RIJ482	09/24/15	13:58
4	MBLK1S	SVI038SB	RIJ487	09/24/15	15:35

FORM V SV OLM03.0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RGJ140
Instrument ID: TOE4

Project:CANNON AFB PBR
SDG No.: 15I185
Date Analyzed: 07/13/15
Time Analyzed: 18:54

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	418611	3.01	1549894	4.24	929511	6.26
UPPER LIMIT	837222	3.51	3099788	4.74	1859022	6.76
LOWER LIMIT	209306	2.51	774947	3.74	464756	5.76
SAMPLE ID						
1 SSTD025	358001	3.01	1340559	4.24	835487	6.26
2 LCS1S	395829	3.01	1456709	4.24	910723	6.26
3 LCD1S	372949	3.01	1383615	4.24	852228	6.26
4 MBLK1S	379724	3.01	1371795	4.23	827390	6.26

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

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

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RGJ140
Instrument ID: TOE4

Project:CANNON AFB PBR
SDG No.: 15I185
Date Analyzed: 07/13/15
Time Analyzed: 18:54

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1635650	8.00	1728950	10.79	1540741	12.21
	UPPER LIMIT	3271300	8.50	3457900	11.29	3081482	12.71
	LOWER LIMIT	817825	7.50	864475	10.29	770371	11.71
	SAMPLE ID						
1	SSTD025	1521086	8.00	1580620	10.80	1358635	12.23
2	LCS1S	1777574	8.00	2071442	10.79	1824192	12.23
3	LCD1S	1599856	8.00	1839631	10.79	1632652	12.23
4	MBLK1S	1463035	8.00	1621705	10.79	1424893	12.23

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

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

FORM VIII SV-2

OLM02.0

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E4
IC Beginning DateTime :07/13/15 17:35
Spike Amount :25 PPM
CC/CV File :RIJ474
IC File :RGJ140

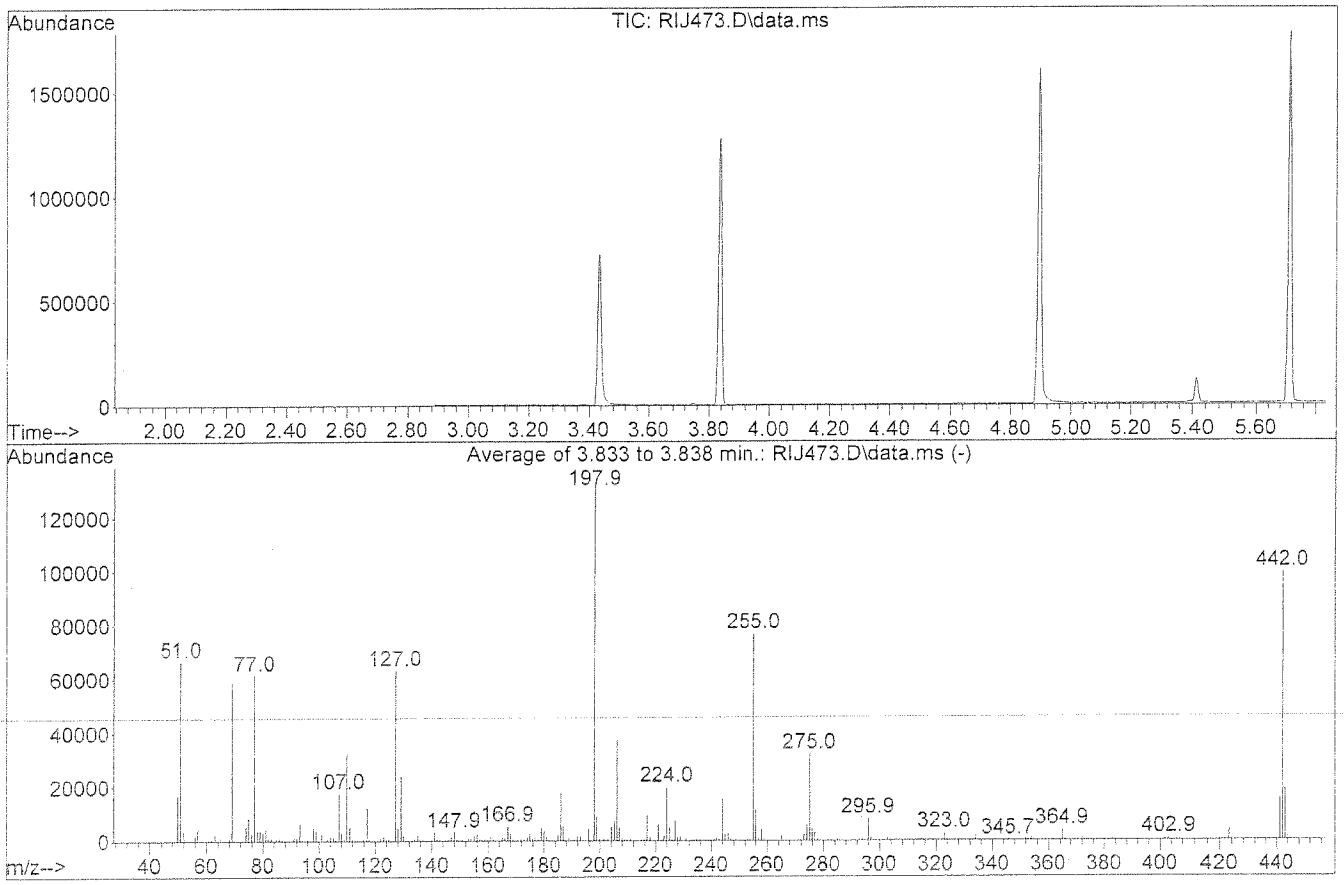
Column Spec :ZB-SEMIVOA ID :0.18MM
IC Ending DateTime :07/13/15 19:53
HPChem Method :SVE4G13
Date_Time :09/24/15 11:23

M IDX	Parameters	CC Con	CC% D	CC Resp	CCRRF	AVRRF	CC Rtm	AVRtm	% RSD	Co X0	Co X1	Co X2	Co Cor
1	1,4-Dichlorobenzene-d4	40.000	0	358001	1	1	3.010	3.010	0				
2	1,4-Dioxane	22.866	-8.2	118308	0.529	0.578	1.352	1.352	5.02				
3	N-nitrosodimethylamine	23.635	-5.5	173827	0.777	0.822	1.462	1.467	1.88				
4	Pyridine	23.049	-7.8	308440	1.378	1.495	1.491	1.491	2.35				
5	2-Fluorophenol	24.083	-3.7	280794	1.255	1.303	2.065	2.062	2.02				
6	Phenol-d5	24.625	-1.5	347614	1.554	1.577	2.659	2.651	1.38				
7	Phenol	24.968	-0.1	349979	1.564	1.566	2.670	2.664	1.65				
8	Aniline	24.834	-0.7	454087	2.029	2.043	2.737	2.736	2.00				
9	bis(2-chloroethyl)ether	24.277	-2.9	277709	1.241	1.278	2.764	2.765	1.81				
10	2-Chlorophenol	24.483	-2.1	291100	1.301	1.328	2.831	2.831	5.33				
11	1,3-Dichlorobenzene	25.006	0.0	352219	1.574	1.574	2.962	2.964	2.04				
12	1,2-Dichlorobenzene-d4												
13	1,4-Dichlorobenzene	25.242	1.0	361328	1.615	1.599	3.025	3.025	3.00				
14	Benzyl alcohol	25.148	0.6	195862	0.875	0.870	3.102	3.101	2.34				
15	1,2-Dichlorobenzene	25.384	1.5	347569	1.553	1.530	3.156	3.159	2.64				
16	2-Methylphenol	25.481	1.9	243586	1.089	1.068	3.183	3.176	3.18				
17	bis(2-chloroisopropyl)ether	25.083	0.3	572998	2.561	2.552	3.221	3.223	6.09				
18	4-Methylphenol	25.396	1.6	319312	1.427	1.405	3.322	3.316	1.57				
19	N-Nitroso-di-n-propylamine	25.237	0.9	229547	1.026	1.016	3.341	3.342	4.05				
20	Hexachloroethane	24.950	-0.2	141506	0.632	0.634	3.466	3.471	2.15				
21	Naphthalene-d8	40.000	0	1340559	1	1	4.239	4.240	0				
22	Nitrobenzene-d5	24.790	-0.8	356381	0.425	0.429	3.504	3.501	1.42				
23	Nitrobenzene	25.243	1.0	372509	0.445	0.440	3.523	3.520	3.22				
24	Isophorone	25.937	3.7	705669	0.842	0.812	3.749	3.750	4.10				
25	2-Nitrophenol	27.132	8.5	163452	0.195	0.180	3.830	3.832	2.76				
26	2,4-Dimethylphenol	25.925	3.7	317068	0.378	0.365	3.854	3.846	2.68				
27	Benzoic acid	26.737	6.9	223827	0.267	0.250	3.945	3.929	11.90				
28	bis(2-Chloroethoxy)methane	25.073	0.3	373143	0.445	0.444	3.955	3.959	2.49				
29	3,5-Dimethylphenol	26.995	8.0	369786	0.441	0.409	3.993	3.984	4.30				
30	2,4-Dichlorophenol	23.282	-6.9	268450	0.320	0.344	4.075	4.069	5.37				
31	3,4-Dimethylphenol	25.879	3.5	389338	0.465	0.449	4.171	4.165	2.94				
32	1,2,4-Trichlorobenzene	24.925	-0.3	315122	0.376	0.377	4.171	4.173	3.44				
33	Naphthalene	25.050	0.2	924890	1.104	1.102	4.263	4.264	3.68				
34	4-Chloroaniline	25.254	1.0	372912	0.445	0.441	4.311	4.307	2.83				
35	2,6-Dichlorophenol	25.867	3.5	266701	0.318	0.308	4.321	4.316	1.84				
36	Hexachlorobutadiene	25.148	0.6	215367	0.257	0.256	4.384	4.389	4.02				
37	Hydroquinone												
38	4-Chloro-3-methylphenol	26.601	6.4	261680	0.312	0.294	4.837	4.829	2.27				
39	2-Methylnaphthalene	24.474	-2.1	618210	0.738	0.754	5.029	5.032	2.35				
40	1-Methylnaphthalene	24.756	-1.0	564019	0.673	0.680	5.144	5.146	2.77				
41	Acenaphthene-d10	40.000	0	835487	1	1	6.264	6.265	0				
42	Hexachlorocyclopentadiene	23.900	-4.4	219919	0.421	0.441	5.206	5.212	2.69				
43	2,3,5-Trichlorophenol	28.653	14.6	215402	0.413	0.360	5.220	5.217	5.48				
44	2,4,6-Trichlorophenol	26.186	4.7	211737	0.405	0.387	5.350	5.349	2.72				
45	2,4,5-Trichlorophenol	25.828	3.3	216990	0.416	0.402	5.389	5.385	3.20				
46	2-Fluorobiphenyl	27.836	11.3	871831	1.670	1.500	5.456	5.460	3.20				
47	2,3,4-Trichlorophenol	28.364	13.5	202608	0.388	0.342	5.466	5.463	4.15				
48	Biphenyl	23.579	-5.7	774073	1.482	1.572	5.577	5.579	9.99				
49	2-Chloronaphthalene	26.434	5.7	719225	1.377	1.303	5.601	5.600	3.41				
50	2-Nitroaniline	26.563	6.3	189882	0.364	0.342	5.716	5.715	1.64				
51	2,6-Dimethylnaphthalene	25.194	0.8	569455	1.091	1.082	5.759	5.765	3.65				
52	1,4-Dinitrobenzene	25.467	1.9	88142	0.169	0.166	5.889	5.883	6.34				
53	Dimethylphthalate	26.495	6.0	766570	1.468	1.385	5.947	5.948	1.63				
54	1,3-Dinitrobenzene	25.351	1.4	100823	0.193	0.190	5.976	5.970	2.33				
55	2,6-Dinitrotoluene	24.952	-0.2	162053	0.310	0.311	6.014	6.010	1.37				
56	1,2-Dinitrobenzene	26.189	4.8	63114	0.121	0.115	6.077	6.071	2.16				
57	Acenaphthylene	27.282	9.1	1152406	2.207	2.022	6.091	6.095	4.93				
58	3-Nitroaniline	25.509	2.0	160058	0.307	0.300	6.212	6.208	2.74				
59	Acenaphthene	24.478	-2.1	683004	1.308	1.336	6.303	6.304	3.19				
60	2,4-Dinitrophenol	26.975	7.9	73752	0.141	0.119	6.336	6.331	18.77	-0.0071	0.1414		0.9992
61	4-Nitrophenol	26.277	5.1	85741	0.164	0.156	6.418	6.396	5.05				
62	2,4-Dinitrotoluene	25.330	1.3	213030	0.408	0.403	6.499	6.494	2.94				
63	Dibenzofuran	25.090	0.4	894553	1.713	1.707	6.509	6.512	3.13				
64	2,3,5,6-Tetrachlorophenol	25.317	1.3	153960	0.295	0.291	6.605	6.602	3.78				
65	2,3,4,6-Tetrachlorophenol	24.833	-0.7	206619	0.396	0.398	6.657	6.655	3.22				
66	2,3,5-Trimethylnaphthalene	25.446	1.8	540960	1.036	1.018	6.767	6.767	2.14				
67	Diethylphthalate	27.429	9.7	798452	1.529	1.394	6.799	6.804	2.21				
68	Fluorene	25.292	1.2	744650	1.426	1.410	6.926	6.926	2.45				
69	4-Chlorophenyl-phenylether	25.094	0.4	385196	0.738	0.735	6.931	6.934	2.18				
70	4-Nitroaniline	25.107	0.4	154356	0.296	0.294	6.950	6.943	5.98				
71	Phenanthrene-d10	40.000	0	1521086	1	1	8.004	8.002	0				
72	4,6-Dinitro-2-methylphenol	26.554	6.2	120185	0.126	0.109	6.987	6.979	17.58	-0.0057	0.1275		0.9998
73	N-Nitrosodiphenylamine	25.223	0.9	600812	0.632	0.626	7.072	7.072	2.55				
74	Azobenzene	23.607	-5.6	664903	0.699	0.741	7.119	7.121	3.69				
75	2,4,6-Tribromophenol	24.166	-3.3	98702	0.104	0.107	7.205	7.204	3.87				
76	4-Bromophenyl-phenylether	23.962	-4.2	225350	0.237	0.247	7.499	7.504	1.39				
77	Hexachlorobenzene	24.114	-3.5	238882	0.251	0.261	7.560	7.560	1.96				
78	Pentachlorophenol	24.453	-2.2	130287	0.137	0.140	7.787	7.782	5.91				
79	Dibenzothiophene	25.980	3.9	1033073	1.087	1.046	7.886	7.885	4.03				
80	Phenanthrene	24.364	-2.5	1091958	1.149	1.179	8.028	8.028	3.74				
81	Dinoseb												
82	Anthracene	24.516	-1.9	1123591	1.182	1.205	8.084	8.085	3.14				
83	Carbazole	24.550	-1.8	905815	0.953	0.970	8.262	8.261	2.44				
84	Di-n-butylphthalate	24.737	-1.1	1167579	1.228	1.241	8.654	8.657	2.21				
85	1-Methylphenanthrene	24.319	-2.7	761839	0.801	0.824	8.698	8.698	2.67				
86	Fluoranthene	25.633	2.5	1258111	1.323	1.291	9.311	9.306	1.89				
87	Chrysene-d12	40.000	0	1580620	1	1	10.795	10.784	0				
88	Benzidine												
89	Pyrene	27.252	9.0	1382225	1.399	1.284	9.547	9.542	2.66				
90	Terphenyl-d14	25.757	3.0	883229	0.894	0.868	9.711	9.709	2.07				
91	Butylbenzylphthalate	28.106	12.4	511110	0.517	0.460	10.218	10.216	7.06				
92	bis(2-ethylhexyl)adipate	27.913	11.7	402248	0.407	0.365	10.295	10.297	7.10				
93	3,3'-Dichlorobenzidine	27.705	10.8	404262	0.409	0.369	10.756	10.743	6.59				
94	Benzo(a)anthracene	25.362	1.4	1193421	1.208	1.191	10.786	10.772	1.95				
95	Chrysene	25.106	0.4	1144118	1.158	1.153	10.820	10.810	2.83				
96	bis(2-Ethylhexyl)phthalate	26.954	7.8	742890	0.752	0.697	10.795	10.799	4.18				
97	Perylene-d12	40.000	0	1358635	1	1	12.231	12.212	0				
98	Di-n-octylphthalate	29.517	18.1	1249620	1.472	1.246	11.421	11.422	10.69				
99	Benzo(b)fluoranthene	27.532	10.1	1113346	1.311	1.191	11.825	11.807	3.46				
100	Benzo(k)fluoranthene	24.765	-2.2	1049373	1.236	1.263	11.853	11.835	2.74				
101	Benzo(e)pyrene	25.554	2.5	924706	1.089	1.065	12.110	12.091	2.07				
102	Benzo(a)pyrene	26.186	4.7	1020097	1.201	1.147	12.168	12.150	3.32				
103	Perylene	25.714	2.9	944171	1.112	1.081	12.260	12.241	2.54				
104	Indeno(1,2,3-cd)pyrene	25.720	2.9	1158424	1.364	1.326	13.582	13.552	4.61				
105	Dibenzo(a,h)anthracene	26.017	4.1	980259	1.154	1.109	13.601	13.576	5.28				
106	Benzo(g,h,i)perylene	24.294	-2.8	981679	1.156	1.190	13.989	13.956	3.14				

Data Path : D:\DATA\15I24\
Data File : RIJ473.D
Acq On : 24 Sep 2015 11:12
Operator : KVu
Sample : DFTE4G1396
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP 8270D
Last Update : Wed Jul 15 10:38:35 2015



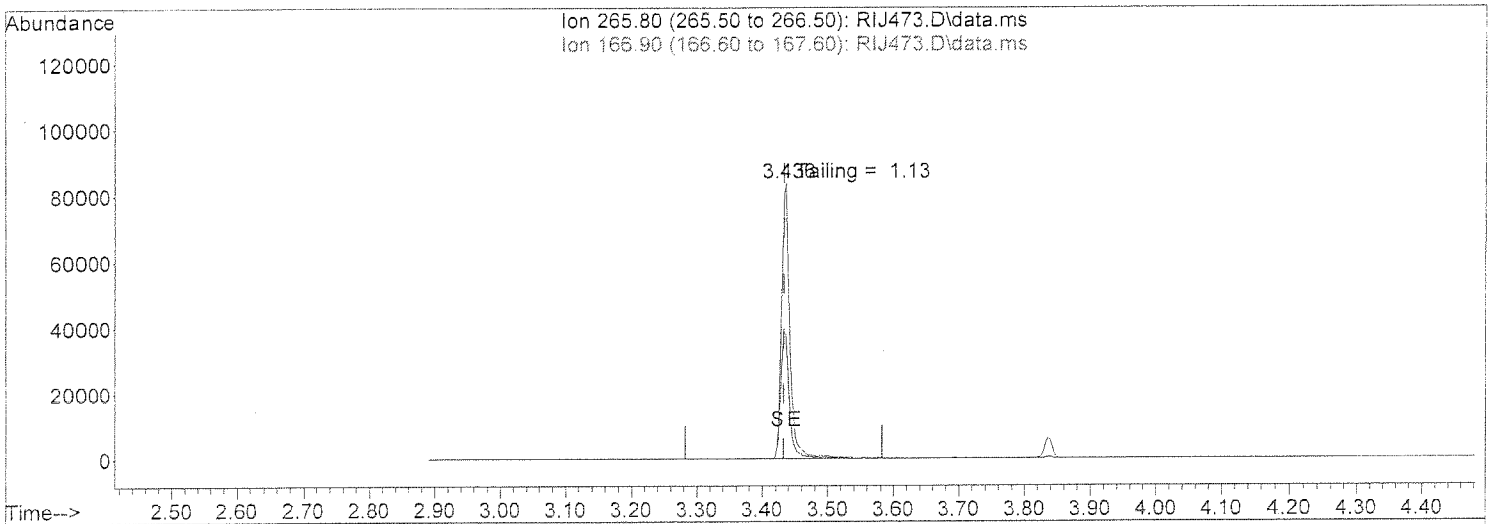
AutoFind: Scans 336, 337, 338; Background Corrected with Scan 328

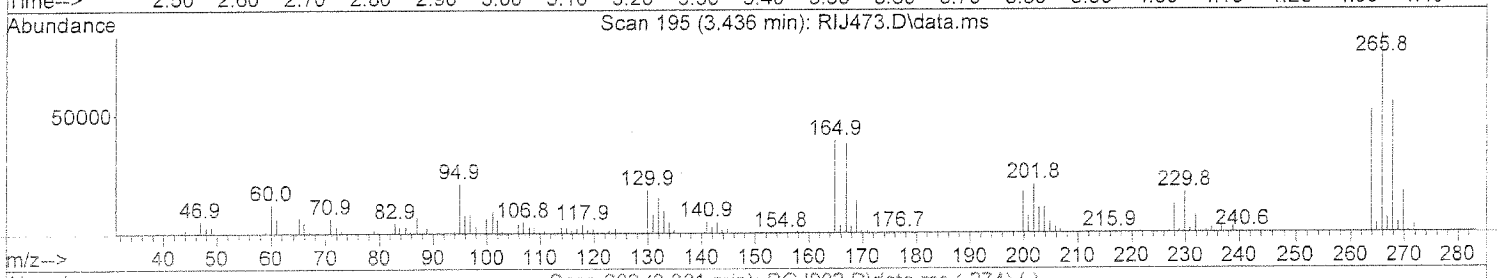
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	50.1	66629	PASS
68	69	0.00	2	1.4	811	PASS
69	198	0.00	100	44.1	58659	PASS
70	69	0.00	2	0.7	398	PASS
127	198	10	80	47.5	63149	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	132979	PASS
199	198	5	9	6.9	9122	PASS
275	198	10	60	24.1	32040	PASS
365	198	1	100	2.9	3841	PASS
441	442	0.01	24	15.6	15531	PASS
442	198	50	100	74.8	99421	PASS
443	442	15	24	19.2	19126	PASS

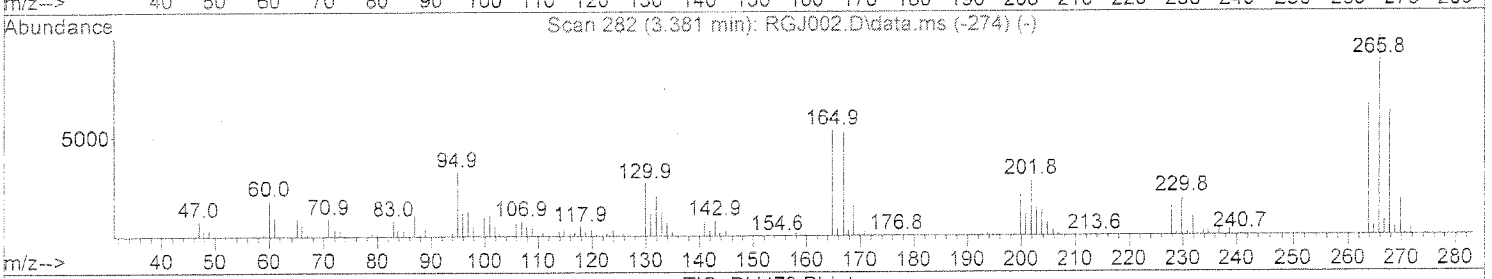
Quantitation Report (Qedit)

Data File : D:\DATA\15I24\RIJ473.D
Acq On : 24 Sep 2015 11:12
Sample : DFTE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:20:50 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP 8270D
QLast Update : Wed Jul 15 10:38:35 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E4
Multiplr: 1.00







TIC: RIJ473.D\data.ms

(1) Pentachlorophenol (T)

3.436min (+0.003) 47.37 ppm

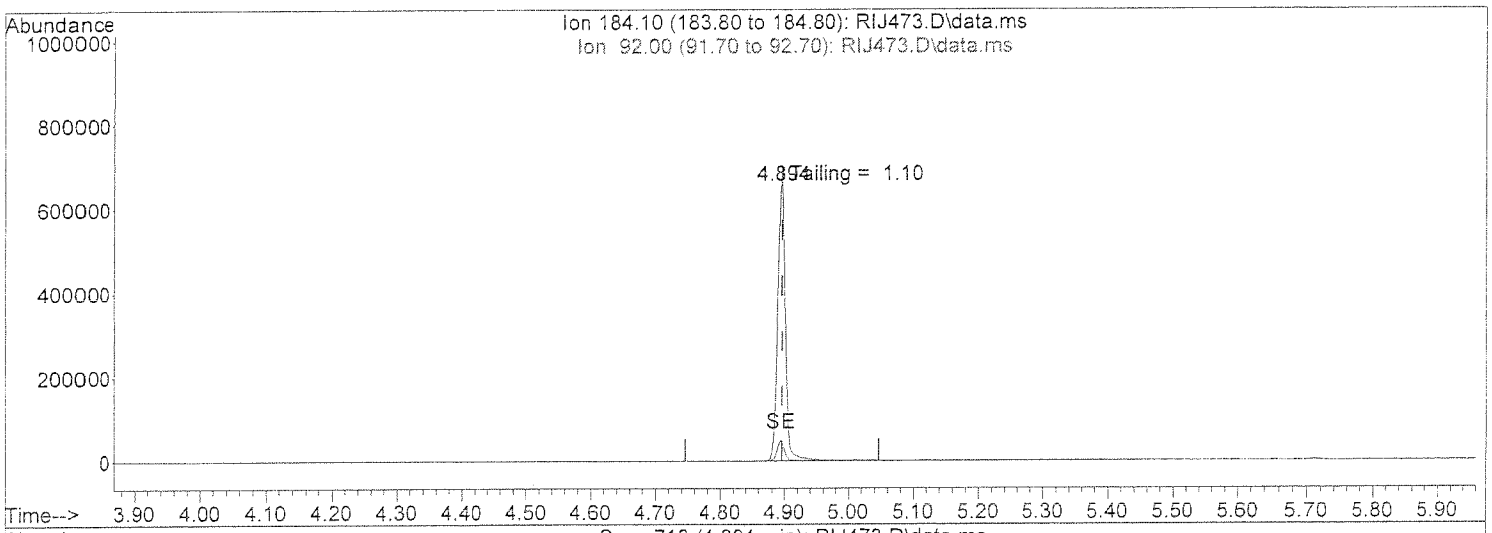
response 73085

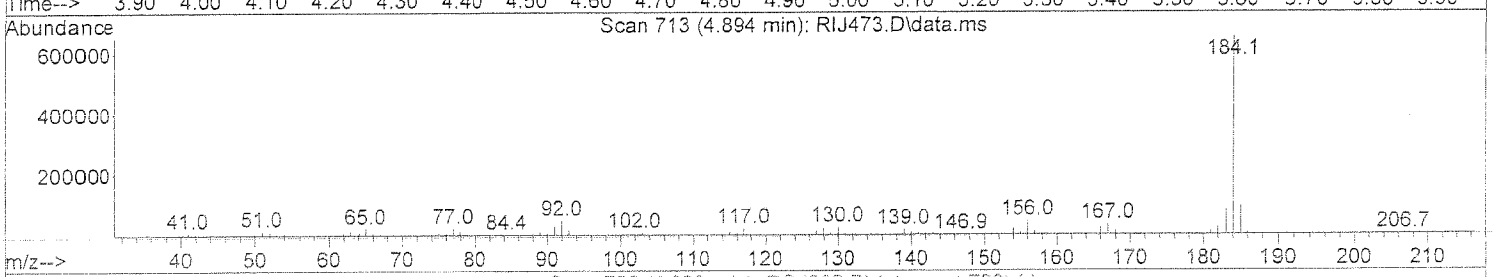
Ion	Exp%	Act%
265.80	100	100
166.90	46.10	47.49
0.00	0.00	0.00
0.00	0.00	0.00

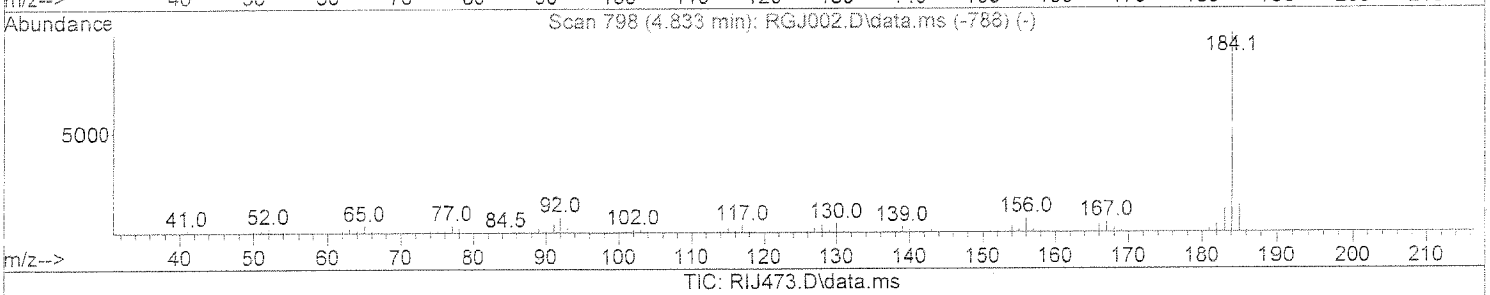
Quantitation Report (Qedit)

Data File : D:\DATA\15I24\RIJ473.D
Acq On : 24 Sep 2015 11:12
Sample : DFTE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:20:50 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP 8270D
QLast Update : Wed Jul 15 10:38:35 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E4
Multiplr: 1.00







TIC: RIJ473.D\data.ms

(3) Benzidine (T)

4.894min (-0.003) 64.62 ppm

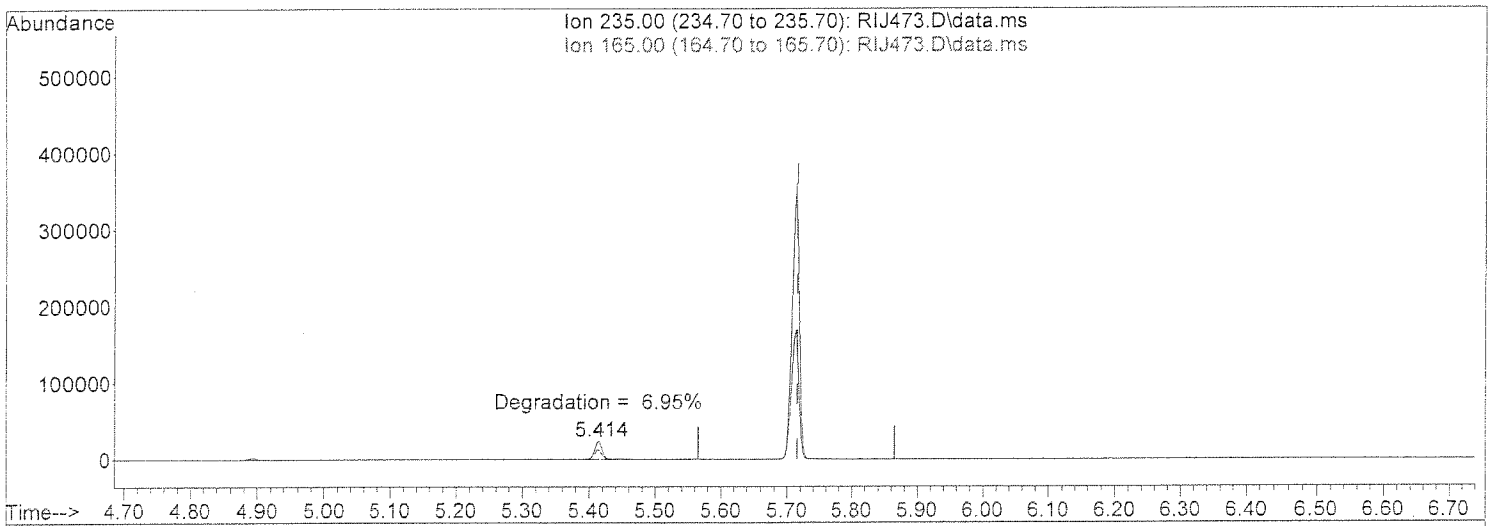
response 571548

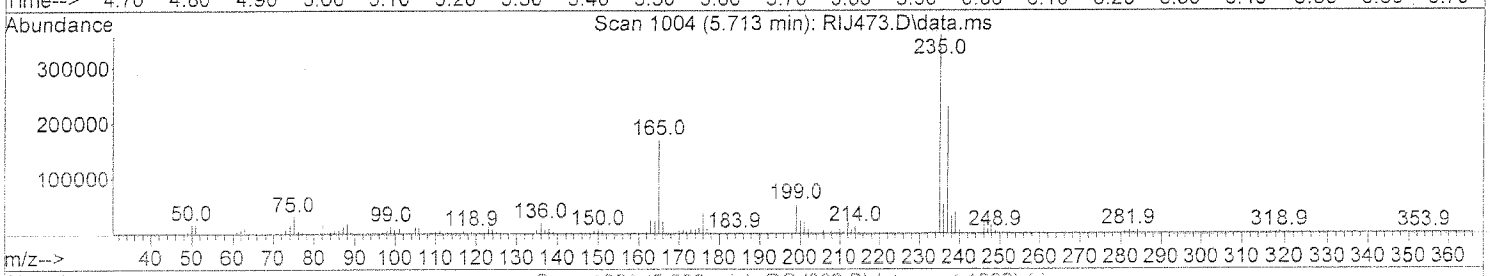
Ion	Exp%	Act%
184.10	100	100
92.00	8.10	7.12
0.00	0.00	0.00
0.00	0.00	0.00

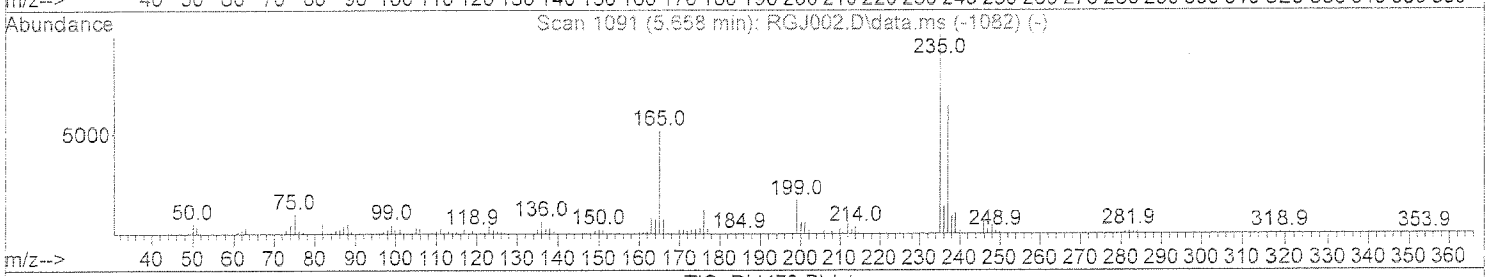
Quantitation Report (Qedit)

Data File : D:\DATA\15I24\RIJ473.D
Acq On : 24 Sep 2015 11:12
Sample : DFTE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:20:50 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP 8270D
QLast Update : Wed Jul 15 10:38:35 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E4
Multiplr: 1.00







TIC: RIJ473.D\data.ms

(6) DDT (T)

5.713min (-0.003) 64.45 ppm

response 271423

Ion	Exp%	Act%
235.00	100	100
165.00	48.00	48.71
0.00	0.00	0.00
0.00	0.00	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Min. RRF : 0.050 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	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	86	0.00
2	T	1,4-Dioxane	25.000	22.866	8.5	78	0.00
3	T	N-nitrosodimethylamine	25.000	23.635	5.5	80	0.00
4	T	Pyridine	25.000	23.049	7.8	79	0.00
5	S	2-Fluorophenol	25.000	24.083	3.7	81	0.00
6	S	Phenol-d5	25.000	24.625	1.5	84	0.00
7	C,P	Phenol	25.000	24.968	0.1	85	0.00
8	T	Aniline	25.000	24.834	0.7	84	0.00
9	T,P	bis(2-chloroethyl)ether	25.000	24.277	2.9	82	0.00
10	T,P	2-Chlorophenol	25.000	24.483	2.1	77	0.00
11	T	1,3-Dichlorobenzene	25.000	25.005	-0.0	85	0.00
12	S	1,2-Dichlorobenzene-d4	25.000	0.000	100.0#	0	0.00
13	C	1,4-Dichlorobenzene	25.000	25.242	-1.0	87	0.00
14	T	Benzyl alcohol	25.000	25.148	-0.6	85	0.00
15	T	1,2-Dichlorobenzene	25.000	25.384	-1.5	87	0.00
16	T,P	2-Methylphenol	25.000	25.481	-1.9	87	0.00
17	T	bis(2-chloroisopropyl)ether	25.000	25.083	-0.3	78	0.00
18	T,P	4-Methylphenol	25.000	25.396	-1.6	87	0.00
19	P,P	N-Nitroso-di-n-propylamine	25.000	25.237	-0.9	88	0.00
20	T,P	Hexachloroethane	25.000	24.950	0.2	85	0.00
21	I	Naphthalene-d8	40.000	40.000	0.0	86	0.00
22	S	Nitrobenzene-d5	25.000	24.790	0.8	85	0.00
23	T,P	Nitrobenzene	25.000	25.243	-1.0	87	0.00
24	T,P	Isophorone	25.000	25.937	-3.7	88	0.00
25	C,P	2-Nitrophenol	25.000	27.132	-8.5	91	0.00
26	T,P	2,4-Dimethylphenol	25.000	25.922	-3.7	89	0.00
27	T	Benzoic acid	25.000	26.737	-6.9	90	0.02
28	T,P	bis(2-Chloroethoxy)methane	25.000	25.072	-0.3	85	0.00
29	T	3,5-Dimethylphenol	25.000	26.995	-8.0	90	0.00
30	C,P	2,4-Dichlorophenol	25.000	23.282	6.9	78	0.00
31	T	3,4-Dimethylphenol	25.000	25.879	-3.5	89	0.00
32	T	1,2,4-Trichlorobenzene	25.000	24.925	0.3	86	0.00
33	T,P	Naphthalene	25.000	25.050	-0.2	87	0.00
34	T	4-Chloroaniline	25.000	25.254	-1.0	86	0.00
35	T	2,6-Dichlorophenol	25.000	25.867	-3.5	88	0.00
36	C	Hexachlorobutadiene	25.000	25.148	-0.6	86	0.00
37	T	Hydroquinone	25.000	0.000	100.0#	0	0.00
38	C,P	4-Chloro-3-methylphenol	25.000	26.601	-6.4	90	0.00
39	T,P	2-Methylnaphthalene	25.000	24.474	2.1	84	0.00
40	T	1-Methylnaphthalene	25.000	24.756	1.0	85	0.00
41	I	Acenaphthene-d10	40.000	40.000	0.0	90	0.00
42	P	Hexachlorocyclopentadiene	25.000	23.900	4.4	83	0.00
43	T	2,3,5-Trichlorophenol	25.000	28.653	-14.6	101	0.00
44	C,P	2,4,6-Trichlorophenol	25.000	26.186	-4.7	91	0.00
45	T,P	2,4,5-Trichlorophenol	25.000	25.828	-3.3	90	0.00
46	S	2-Fluorobiphenyl	25.000	27.836	-11.3	99	0.00
47	T	2,3,4-Trichlorophenol	25.000	28.364	-13.5	103	0.00
48	T	Biphenyl	25.000	23.579	5.7	87	0.00
49	T,P	2-Chloronaphthalene	25.000	26.435	-5.7	97	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Min. RRF : 0.050 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	T	2-Nitroaniline	25.000	26.563	-6.3	94	0.00
51	T	2,6-Dimethylnaphthalene	25.000	25.194	-0.8	91	0.00
52	T	1,4-Dinitrobenzene	25.000	25.467	-1.9	87	0.00
53	T	Dimethylphthalate	25.000	26.495	-6.0	94	0.00
54	T	1,3-Dinitrobenzene	25.000	25.351	-1.4	89	0.00
55	T,P	2,6-Dinitrotoluene	25.000	24.952	0.2	88	0.00
56	T	1,2-Dinitrobenzene	25.000	26.189	-4.8	92	0.00
57	T,P	Acenaphthylene	25.000	27.282	-9.1	91	0.00
58	T	3-Nitroaniline	25.000	25.509	-2.0	89	0.00
59	C,P	Acenaphthene	25.000	24.478	2.1	87	0.00
60	P	2,4-Dinitrophenol	25.000	26.975	-7.9	96	0.00
61	P	4-Nitrophenol	25.000	26.277	-5.1	90	0.02
62	T,P	2,4-Dinitrotoluene	25.000	25.330	-1.3	88	0.00
63	T,P	Dibenzofuran	25.000	25.090	-0.4	89	0.00
64	T	2,3,5,6-Tetrachlorophenol	25.000	25.317	-1.3	87	0.00
65	T	2,3,4,6-Tetrachlorophenol	25.000	24.833	0.7	87	0.00
66	T	2,3,5-Trimethylnaphthalene	25.000	25.446	-1.8	90	0.00
67	T	Diethylphthalate	25.000	27.429	-9.7	97	0.00
68	T,P	Fluorene	25.000	25.292	-1.2	90	0.00
69	T,P	4-Chlorophenyl-phenylether	25.000	25.094	-0.4	88	0.00
70	T	4-Nitroaniline	25.000	25.107	-0.4	85	0.00
71	I	Phenanthrene-d10	40.000	40.000	0.0	93	0.00
72	T	4,6-Dinitro-2-methylphenol	25.000	26.554	-6.2	100	0.00
73	C	N-Nitrosodiphenylamine	25.000	25.223	-0.9	93	0.00
74	T	Azobenzene	25.000	23.607	5.6	87	0.00
75	S	2,4,6-Tribromophenol	25.000	24.166	3.3	88	0.00
76	T,P	4-Bromophenyl-phenylether	25.000	23.962	4.2	88	0.00
77	T,P	Hexachlorobenzene	25.000	24.114	3.5	89	0.00
78	C,P	Pentachlorophenol	25.000	24.453	2.2	89	0.00
79	T	Dibenzothiophene	25.000	25.980	-3.9	99	0.00
80	T,P	Phenanthrene	25.000	24.364	2.5	90	0.00
81	T	Dinoseb	25.000	0.000	100.0#	0	0.00
82	T,P	Anthracene	25.000	24.516	1.9	90	0.00
83	T	Carbazole	25.000	24.550	1.8	89	0.00
84	T	Di-n-butylphthalate	25.000	24.737	1.1	90	0.00
85	T	1-Methylphenanthrene	25.000	24.319	2.7	90	0.00
86	C,P	Fluoranthene	25.000	25.633	-2.5	95	0.00
87	I	Chrysene-d12	40.000	40.000	0.0	91	0.00
88	T	Benzidine	25.000	0.000	100.0#	0	0.00
89	T,P	Pyrene	25.000	27.252	-9.0	99	0.00
90	S	Terphenyl-d14	25.000	25.757	-3.0	91	0.00
91	T	Butylbenzylphthalate	25.000	28.106	-12.4	96	0.00
92	T	bis(2-ethylhexyl)adipate	25.000	27.913	-11.7	96	0.00
93	T	3,3'-Dichlorobenzidine	25.000	27.705	-10.8	95	0.01
94	T,P	Benzo(a)anthracene	25.000	25.362	-1.4	92	0.01
95	T,P	Chrysene	25.000	25.106	-0.4	91	0.00
96	T	bis(2-Ethylhexyl)phthalate	25.000	26.954	-7.8	93	0.00
97	I	Perylene-d12	40.000	40.000	0.0	88	0.02

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Min. RRF : 0.050 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)
98	C	Di-n-octylphthalate	25.000	29.517	-18.1	95	0.00
99	T,P	Benzo(b)fluoranthene	25.000	27.532	-10.1	94	0.02
100	T,P	Benzo(k)fluoranthene	25.000	24.463	2.1	83	0.02
101	T	Benzo(e)pyrene	25.000	25.554	-2.2	88	0.02
102	C,P	Benzo(a)pyrene	25.000	26.186	-4.7	88	0.02
103	T	Perylene	25.000	25.714	-2.9	89	0.02
104	T,P	Indeno(1,2,3-cd)pyrene	25.000	25.720	-2.9	87	0.03
105	T,P	Dibenzo(a,h)anthracene	25.000	26.016	-4.1	88	0.02
106	T,P	Benzo(g,h,i)perylene	25.000	24.294	2.8	82	0.03

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

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	86	0.00
2	T	1,4-Dioxane	0.578	0.529	8.5	78	0.00
3	T	N-nitrosodimethylamine	0.822	0.777	5.5	80	0.00
4	T	Pyridine	1.495	1.378	7.8	79	0.00
5	S	2-Fluorophenol	1.303	1.255	3.7	81	0.00
6	S	Phenol-d5	1.577	1.554	1.5	84	0.00
7	C,P	Phenol	1.566	1.564	0.1	85	0.00
8	T	Aniline	2.043	2.029	0.7	84	0.00
9	T,P	bis(2-chloroethyl)ether	1.278	1.241	2.9	82	0.00
10	T,P	2-Chlorophenol	1.328	1.301	2.0	77	0.00
11	T	1,3-Dichlorobenzene	1.574	1.574	0.0	85	0.00
12	S	1,2-Dichlorobenzene-d4	0.000	0.000#	0.0	0#	0.00
13	C	1,4-Dichlorobenzene	1.599	1.615	-1.0	87	0.00
14	T	Benzyl alcohol	0.870	0.875	-0.6	85	0.00
15	T	1,2-Dichlorobenzene	1.530	1.553	-1.5	87	0.00
16	T,P	2-Methylphenol	1.068	1.089	-2.0	87	0.00
17	T	bis(2-chloroisopropyl)ether	2.552	2.561	-0.4	78	0.00
18	T,P	4-Methylphenol	1.405	1.427	-1.6	87	0.00
19	P,P	N-Nitroso-di-n-propylamine	1.016	1.026	-1.0	88	0.00
20	T,P	Hexachloroethane	0.634	0.632	0.3	85	0.00
21	I	Naphthalene-d8	1.000	1.000	0.0	86	0.00
22	S	Nitrobenzene-d5	0.429	0.425	0.9	85	0.00
23	T,P	Nitrobenzene	0.440	0.445	-1.1	87	0.00
24	T,P	Isophorone	0.812	0.842	-3.7	88	0.00
25	C,P	2-Nitrophenol	0.180	0.195	-8.3	91	0.00
26	T,P	2,4-Dimethylphenol	0.365	0.378	-3.6	89	0.00
27	T	Benzoic acid	0.250	0.267	-6.8	90	0.02
28	T,P	bis(2-Chloroethoxy)methane	0.444	0.445	-0.2	85	0.00
29	T	3,5-Dimethylphenol	0.409	0.441	-7.8	90	0.00
30	C,P	2,4-Dichlorophenol	0.344	0.320	7.0	78	0.00
31	T	3,4-Dimethylphenol	0.449	0.465	-3.6	89	0.00
32	T	1,2,4-Trichlorobenzene	0.377	0.376	0.3	86	0.00
33	T,P	Naphthalene	1.102	1.104	-0.2	87	0.00
34	T	4-Chloroaniline	0.441	0.445	-0.9	86	0.00
35	T	2,6-Dichlorophenol	0.308	0.318	-3.2	88	0.00
36	C	Hexachlorobutadiene	0.256	0.257	-0.4	86	0.00
37	T	Hydroquinone	0.000	0.000#	0.0	0#	0.00
38	C,P	4-Chloro-3-methylphenol	0.294	0.312	-6.1	90	0.00
39	T,P	2-Methylnaphthalene	0.754	0.738	2.1	84	0.00
40	T	1-Methylnaphthalene	0.680	0.673	1.0	85	0.00
41	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00
42	P	Hexachlorocyclopentadiene	0.441	0.421	4.5	83	0.00
43	T	2,3,5-Trichlorophenol	0.360	0.413	-14.7	101	0.00
44	C,P	2,4,6-Trichlorophenol	0.387	0.405	-4.7	91	0.00
45	T,P	2,4,5-Trichlorophenol	0.402	0.416	-3.5	90	0.00
46	S	2-Fluorobiphenyl	1.500	1.670	-11.3	99	0.00
47	T	2,3,4-Trichlorophenol	0.342	0.388	-13.5	103	0.00
48	T	Biphenyl	1.572	1.482	5.7	87	0.00
49	T,P	2-Chloronaphthalene	1.303	1.377	-5.7	97	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Min. RRF : 0.050 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	T	2-Nitroaniline	0.342	0.364	-6.4	94	0.00
51	T	2,6-Dimethylnaphthalene	1.082	1.091	-0.8	91	0.00
52	T	1,4-Dinitrobenzene	0.166	0.169	-1.8	87	0.00
53	T	Dimethylphthalate	1.385	1.468	-6.0	94	0.00
54	T	1,3-Dinitrobenzene	0.190	0.193	-1.6	89	0.00
55	T,P	2,6-Dinitrotoluene	0.311	0.310	0.3	88	0.00
56	T	1,2-Dinitrobenzene	0.115	0.121	-5.2	92	0.00
57	T,P	Acenaphthylene	2.022	2.207	-9.1	91	0.00
58	T	3-Nitroaniline	0.300	0.307	-2.3	89	0.00
59	C,P	Acenaphthene	1.336	1.308	2.1	87	0.00
60	P	2,4-Dinitrophenol	0.119	0.141	-18.5	96	0.00
61	P	4-Nitrophenol	0.156	0.164	-5.1	90	0.02
62	T,P	2,4-Dinitrotoluene	0.403	0.408	-1.2	88	0.00
63	T,P	Dibenzofuran	1.707	1.713	-0.4	89	0.00
64	T	2,3,5,6-Tetrachlorophenol	0.291	0.295	-1.4	87	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.398	0.396	0.5	87	0.00
66	T	2,3,5-Trimethylnaphthalene	1.018	1.036	-1.8	90	0.00
67	T	Diethylphthalate	1.394	1.529	-9.7	97	0.00
68	T,P	Fluorene	1.410	1.426	-1.1	90	0.00
69	T,P	4-Chlorophenyl-phenylether	0.735	0.738	-0.4	88	0.00
70	T	4-Nitroaniline	0.294	0.296	-0.7	85	0.00
71	I	Phenanthrene-d10	1.000	1.000	0.0	93	0.00
72	T	4,6-Dinitro-2-methylphenol	0.109	0.126	-15.6	100	0.00
73	C	N-Nitrosodiphenylamine	0.626	0.632	-1.0	93	0.00
74	T	Azobenzene	0.741	0.699	5.7	87	0.00
75	S	2,4,6-Tribromophenol	0.107	0.104	2.8	88	0.00
76	T,P	4-Bromophenyl-phenylether	0.247	0.237	4.0	88	0.00
77	T,P	Hexachlorobenzene	0.261	0.251	3.8	89	0.00
78	C,P	Pentachlorophenol	0.140	0.137	2.1	89	0.00
79	T	Dibenzothiophene	1.046	1.087	-3.9	99	0.00
80	T,P	Phenanthrene	1.179	1.149	2.5	90	0.00
81	T	Dinoseb	0.000	0.000#	0.0	0#	0.00
82	T,P	Anthracene	1.205	1.182	1.9	90	0.00
83	T	Carbazole	0.970	0.953	1.8	89	0.00
84	T	Di-n-butylphthalate	1.241	1.228	1.0	90	0.00
85	T	1-Methylphenanthrene	0.824	0.801	2.8	90	0.00
86	C,P	Fluoranthene	1.291	1.323	-2.5	95	0.00
87	I	Chrysene-d12	1.000	1.000	0.0	91	0.00
88	T	Benzidine	0.000	0.000#	0.0	0#	0.00
89	T,P	Pyrene	1.284	1.399	-9.0	99	0.00
90	S	Terphenyl-d14	0.868	0.894	-3.0	91	0.00
91	T	Butylbenzylphthalate	0.460	0.517	-12.4	96	0.00
92	T	bis(2-ethylhexyl)adipate	0.365	0.407	-11.5	96	0.00
93	T	3,3'-Dichlorobenzidine	0.369	0.409	-10.8	95	0.01
94	T,P	Benzo(a)anthracene	1.191	1.208	-1.4	92	0.01
95	T,P	Chrysene	1.153	1.158	-0.4	91	0.00
96	T	bis(2-Ethylhexyl)phthalate	0.697	0.752	-7.9	93	0.00
97	I	Perylene-d12	1.000	1.000	0.0	88	0.02

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Min. RRF : 0.050 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)
98	C	Di-n-octylphthalate	1.246	1.472	-18.1	95	0.00
99	T,P	Benzo(b)fluoranthene	1.191	1.311	-10.1	94	0.02
100	T,P	Benzo(k)fluoranthene	1.263	1.236	2.1	83	0.02
101	T	Benzo(e)pyrene	1.065	1.089	-2.3	88	0.02
102	C,P	Benzo(a)pyrene	1.147	1.201	-4.7	88	0.02
103	T	Perylene	1.081	1.112	-2.9	89	0.02
104	T,P	Indeno(1,2,3-cd)pyrene	1.326	1.364	-2.9	87	0.03
105	T,P	Dibenzo(a,h)anthracene	1.109	1.154	-4.1	88	0.02
106	T,P	Benzo(g,h,i)perylene	1.190	1.156	2.9	82	0.03

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

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.010	152	358001	40.00	ppm	0.00
21) Naphthalene-d8	4.239	136	1340559	40.00	ppm	0.00
41) Acenaphthene-d10	6.264	164	835487	40.00	ppm	0.00
71) Phenanthrene-d10	8.004	188	1521086	40.00	ppm	0.00
87) Chrysene-d12	10.795	240	1580620	40.00	ppm	0.00
97) Perylene-d12	12.231	264	1358635	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	2.065	112	280794	24.08	ppm	0.00
Spiked Amount 30.000			Recovery = 80.27%			
6) Phenol-d5	2.659	99	347614	24.62	ppm	0.00
Spiked Amount 30.000			Recovery = 82.07%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.504	82	356381	24.79	ppm	0.00
Spiked Amount 10.000			Recovery = 247.90%			
46) 2-Fluorobiphenyl	5.456	172	871831	27.84	ppm	0.00
Spiked Amount 10.000			Recovery = 278.40%			
75) 2,4,6-Tribromophenol	7.205	330	98702	24.17	ppm	0.00
Spiked Amount 30.000			Recovery = 80.57%			
90) Terphenyl-d14	9.711	244	883229	25.76	ppm	0.00
Spiked Amount 10.000			Recovery = 257.60%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.352	88	118308	22.87	ppm	93
3) N-nitrosodimethylamine	1.462	74	173827	23.63	ppm	85
4) Pyridine	1.491	79	308440	23.05	ppm	89
7) Phenol	2.670	94	349979	24.97	ppm	97
8) Aniline	2.737	93	454087	24.83	ppm	97
9) bis(2-chloroethyl)ether	2.764	93	277709	24.28	ppm	94
10) 2-Chlorophenol	2.831	128	291100	24.48	ppm	90
11) 1,3-Dichlorobenzene	2.962	146	352219	25.01	ppm	99
13) 1,4-Dichlorobenzene	3.025	146	361328	25.24	ppm	96
14) Benzyl alcohol	3.102	108	195862	25.15	ppm	99
15) 1,2-Dichlorobenzene	3.159	146	347569	25.38	ppm	97
16) 2-Methylphenol	3.183	107	243586	25.48	ppm	92
17) bis(2-chloroisopropyl)...	3.221	45	572998	25.08	ppm	100
18) 4-Methylphenol	3.322	107	319312	25.40	ppm	94
19) N-Nitroso-di-n-propyla...	3.341	70	229547	25.24	ppm	91
20) Hexachloroethane	3.466	117	141506	24.95	ppm	98
23) Nitrobenzene	3.523	77	372509	25.24	ppm	99
24) Isophorone	3.749	82	705669	25.94	ppm	100
25) 2-Nitrophenol	3.830	139	163452	27.13	ppm	83
26) 2,4-Dimethylphenol	3.854	107	317068	25.92	ppm	97
27) Benzoic acid	3.945	105	223827	26.74	ppm	99
28) bis(2-Chloroethoxy)met...	3.955	93	373143	25.07	ppm	100
29) 3,5-Dimethylphenol	3.993	107	369786	27.00	ppm	97
30) 2,4-Dichlorophenol	4.075	162	268450	23.28	ppm	99
31) 3,4-Dimethylphenol	4.171	107	389338	25.88	ppm	99
32) 1,2,4-Trichlorobenzene	4.171	180	315122	24.93	ppm	98
33) Naphthalene	4.263	128	924890	25.05	ppm	100
34) 4-Chloroaniline	4.311	127	372912	25.25	ppm	100
35) 2,6-Dichlorophenol	4.321	162	266701	25.87	ppm	99
36) Hexachlorobutadiene	4.384	225	215367	25.15	ppm	99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38)	4-Chloro-3-methylphenol	4.837	107	261680	26.60	ppm		100
39)	2-Methylnaphthalene	5.029	142	618210	24.47	ppm		93
40)	1-Methylnaphthalene	5.144	142	564019	24.76	ppm		95
42)	Hexachlorocyclopentadiene	5.206	237	219919	23.90	ppm		99
43)	2,3,5-Trichlorophenol	5.220	196	215402	28.65	ppm		100
44)	2,4,6-Trichlorophenol	5.350	196	211737	26.19	ppm		97
45)	2,4,5-Trichlorophenol	5.389	196	216990	25.83	ppm		94
47)	2,3,4-Trichlorophenol	5.466	196	202608	28.36	ppm		100
48)	Biphenyl	5.577	154	774073	23.58	ppm		99
49)	2-Chloronaphthalene	5.601	162	719225	26.43	ppm		95
50)	2-Nitroaniline	5.716	65	189882	26.56	ppm		96
51)	2,6-Dimethylnaphthalene	5.759	156	569455	25.19	ppm		100
52)	1,4-Dinitrobenzene	5.889	168	88142	25.47	ppm		98
53)	Dimethylphthalate	5.947	163	766570	26.49	ppm		99
54)	1,3-Dinitrobenzene	5.976	168	100823	25.35	ppm		77
55)	2,6-Dinitrotoluene	6.014	165	162053	24.95	ppm		99
56)	1,2-Dinitrobenzene	6.077	168	63114	26.19	ppm	#	76
57)	Acenaphthylene	6.091	152	1152406	27.28	ppm		99
58)	3-Nitroaniline	6.212	138	160058	25.51	ppm		95
59)	Acenaphthene	6.303	153	683004	24.48	ppm		96
60)	2,4-Dinitrophenol	6.336	184	73752	26.98	ppm		99
61)	4-Nitrophenol	6.418	109	85741	26.28	ppm		96
62)	2,4-Dinitrotoluene	6.499	165	213030	25.33	ppm		99
63)	Dibenzofuran	6.509	168	894553	25.09	ppm		98
64)	2,3,5,6-Tetrachlorophenol	6.605	230	153960	25.32	ppm		98
65)	2,3,4,6-Tetrachlorophenol	6.657	232	206619	24.83	ppm		97
66)	2,3,5-Trimethylnaphtha...	6.767	170	540960	25.45	ppm		97
67)	Diethylphthalate	6.799	149	798452	27.43	ppm		98
68)	Fluorene	6.926	166	744650	25.29	ppm		99
69)	4-Chlorophenyl-phenyle...	6.931	204	385196	25.09	ppm		99
70)	4-Nitroaniline	6.950	138	154356	25.11	ppm		95
72)	4,6-Dinitro-2-methylph...	6.987	198	120185	26.55	ppm		99
73)	N-Nitrosodiphenylamine	7.072	169	600812	25.22	ppm		96
74)	Azobenzene	7.119	77	664903	23.61	ppm		99
76)	4-Bromophenyl-phenylether	7.499	248	225350	23.96	ppm		98
77)	Hexachlorobenzene	7.560	284	238882	24.11	ppm		99
78)	Pentachlorophenol	7.787	266	130287	24.45	ppm		99
79)	Dibenzothiophene	7.886	184	1033073	25.98	ppm		97
80)	Phenanthrene	8.028	178	1091958	24.36	ppm		99
82)	Anthracene	8.084	178	1123591	24.52	ppm		99
83)	Carbazole	8.263	167	905815	24.55	ppm		99
84)	Di-n-butylphthalate	8.654	149	1167579	24.74	ppm		98
85)	1-Methylphenanthrene	8.698	192	761839	24.32	ppm		98
86)	Fluoranthene	9.311	202	1258111	25.63	ppm		99
89)	Pyrene	9.547	202	1382225	27.25	ppm		97
91)	Butylbenzylphthalate	10.218	149	511110	28.11	ppm		98
92)	bis(2-ethylhexyl)adipate	10.295	129	402248	27.91	ppm		93
93)	3,3'-Dichlorobenzidine	10.756	252	404262	27.70	ppm		98
94)	Benzo(a)anthracene	10.786	228	1193421	25.36	ppm		90
95)	Chrysene	10.820	228	1144118	25.11	ppm		100
96)	bis(2-Ethylhexyl)phtha...	10.795	149	742890	26.95	ppm		100
98)	Di-n-octylphthalate	11.421	149	1249620	29.52	ppm		98
99)	Benzo(b)fluoranthene	11.824	252	1113346	27.53	ppm		99
100)	Benzo(k)fluoranthene	11.853	252	1049373	24.46	ppm		97
101)	Benzo(e)pyrene	12.110	252	924706	25.55	ppm		99

Quantitation Report (QT Reviewed)

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Acq On : 24 Sep 2015 11:23
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Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00

Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

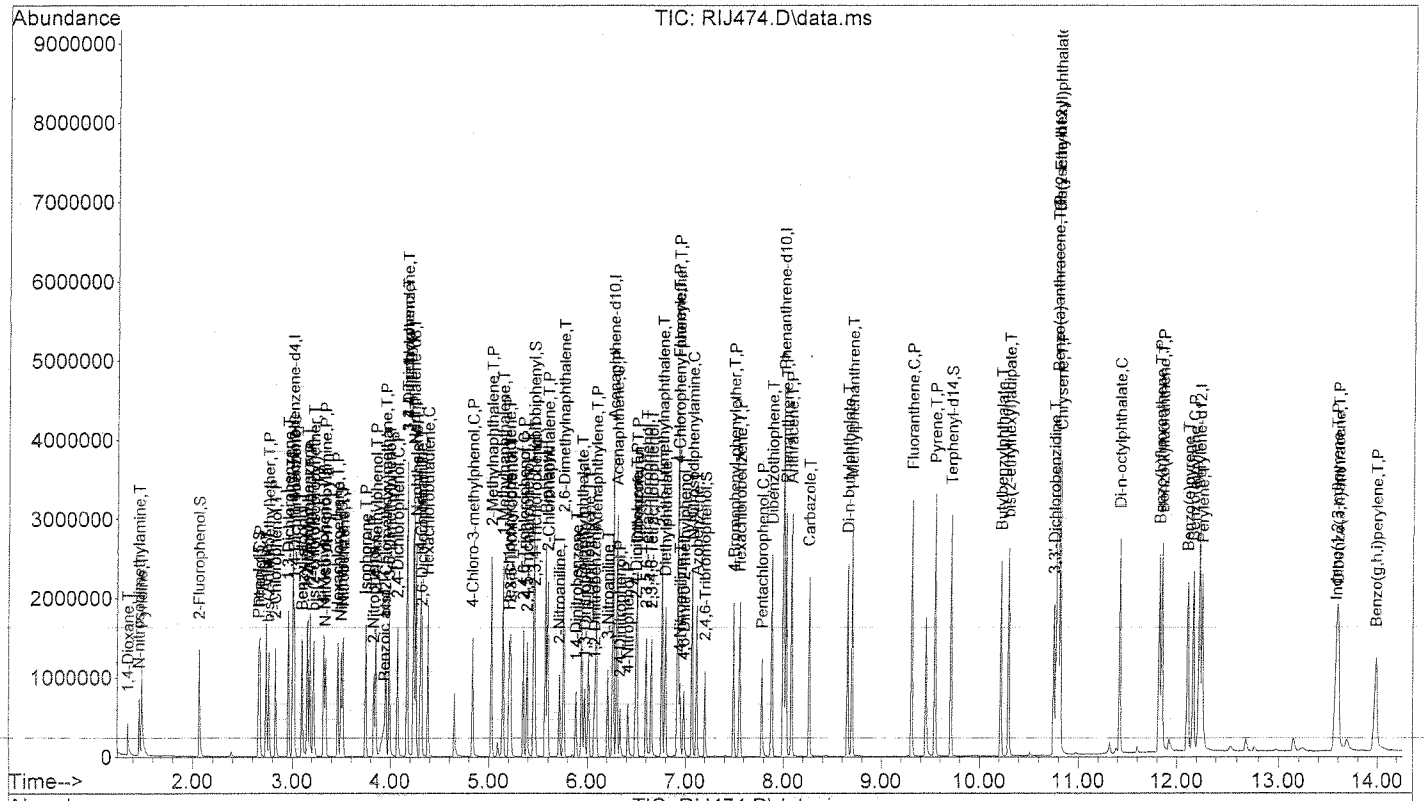
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) Benzo(a)pyrene	12.168	252	1020097	26.19 ppm	99
103) Perylene	12.260	252	944171	25.71 ppm	99
104) Indeno(1,2,3-cd)pyrene	13.582	276	1158424	25.72 ppm	100
105) Dibenzo(a,h)anthracene	13.601	278	980259	26.02 ppm	100
106) Benzo(g,h,i)perylene	13.989	276	981679	24.29 ppm	99

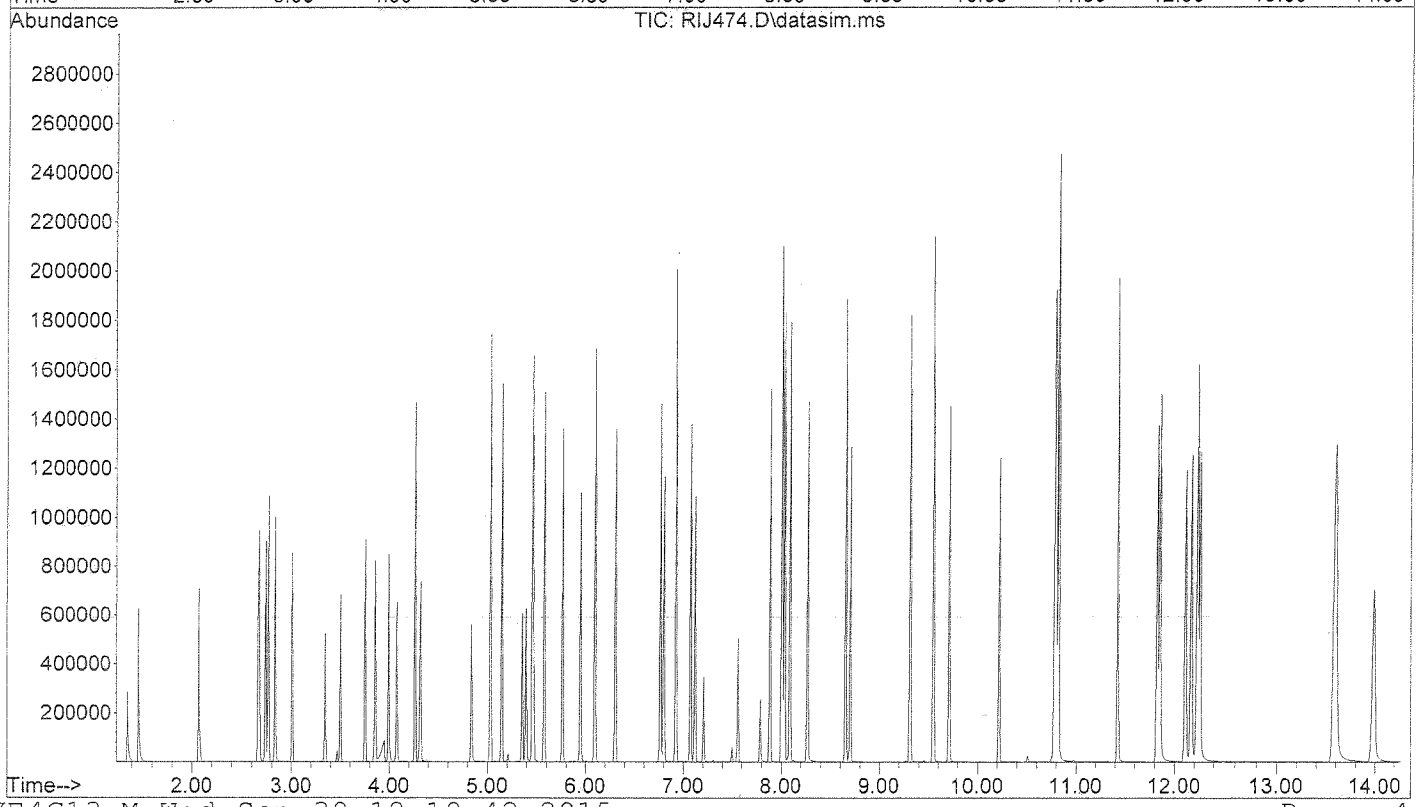
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIJ474.D
Acq On : 24 Sep 2015 11:23
Sample : CSVE4G1396
Misc :
Integrator: RTE
Quant Time: Sep 24 11:37:50 2015
Quant Results File: SVE4G13.RES
Quant Method : C:\msdchem\1\METHODS\SVE4G13.M
Quant Title : SEMIVOLATILES
QLast Update : Wed Jul 15 11:03:28 2015
Response via : Initial Calibration
DataAcq Meth:SVE4G13S.M

Vial: 3
Operator: KVu
Inst : E4
Multiplr: 1.00





5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RIH529
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 15I185
DFTPP Injection Date: 09/24/15
DFTPP Injection Time: 10:08

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	42.36
68	Less than 2% of mass 69	0.38(1.0)1
69	% of mass 198	37.02
70	Less than 2% of mass 69	0.15(0.4)1
127	10.0 - 80.0% of mass 198	47.41
197	Less than 2.0% of mass 198	0.16
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	7.17
275	10.0 - 60.0% of mass 198	24.61
365	Greater than 1.00% of mass 198	2.66
441	Present, but less than 24% of mass 442	12.47(16.0)2
442	Greater than 50% of mass 198	77.75
443	15.0 - 24.0% of mass 442	14.45(18.6)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD025	CSVE7D03120	RIH530	09/24/15	10:19
2	CAFB-FT006-BKF-001	I185-01	RIH553	09/24/15	17:40
3	CAFB-FT006-BKF-002	I185-02	RIH554	09/24/15	17:59
4	CAFB-FT006-BKF-003	I185-03	RIH555	09/24/15	18:18

FORM V SV OLM03.0

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH007
Instrument ID: TOE7

Project:CANNON AFB PBR
SDG No.: 15I185
Date Analyzed: 04/03/15
Time Analyzed: 10:46

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	567854	2.85	2117278	4.06	1301658	6.06
	UPPER LIMIT	1135708	3.35	4234556	4.56	2603316	6.56
	LOWER LIMIT	283927	2.35	1058639	3.56	650829	5.56
	SAMPLE ID						
1	SSTD025	755627	2.85	2910305	4.06	1783655	6.07
2	CAFB-FT006-BKF-001	478093	2.85	1793997	4.05	1102416	6.06
3	CAFB-FT006-BKF-002	487088	2.85	1814146	4.05	1075808	6.06
4	CAFB-FT006-BKF-003	460819	2.85	1717979	4.05	1049988	6.06

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

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

FORM VIII SV-1

OLM02.0

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH007
Instrument ID: TOE7

Project:CANNON AFB PBR
SDG No.: 15I185
Date Analyzed: 04/03/15
Time Analyzed: 10:46

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	2320209	7.80	2507024	10.57	2285835	11.94
	UPPER LIMIT	4640418	8.30	5014048	11.07	4571670	12.44
	LOWER LIMIT	1160105	7.30	1253512	10.07	1142918	11.44
	SAMPLE ID						
1	SSTD025	3159198	7.81	3467985	10.59	3154819	11.96
2	CAFB-FT006-BKF-001	1908621	7.81	2090507	10.58	1836635	11.95
3	CAFB-FT006-BKF-002	1955679	7.81	2231915	10.58	1993104	11.95
4	CAFB-FT006-BKF-003	1822012	7.81	2030423	10.58	1794120	11.95

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

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

FORM VIII SV-2

OLM02.0

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E7
IC Beginning DateTime :04/03/15 09:30
Spike Amount :25 PPM
CC/CV File :RIH530
IC File :RDH007

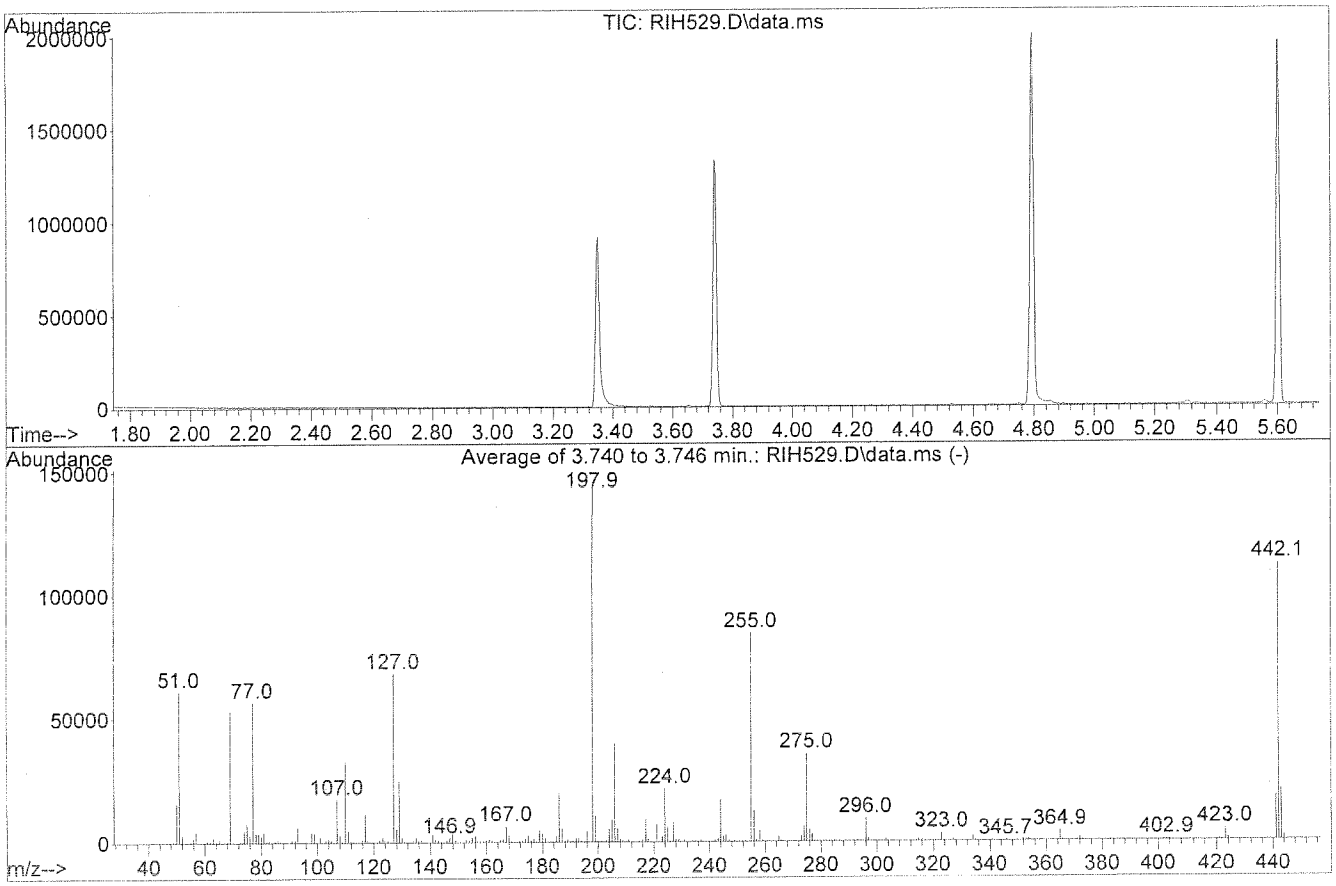
Column Spec :ZB-SEMIVOA ID :0.18MM
IC Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03
Date_Time :09/24/15 10:19

M IDX	Parameters	CC Con	CC% D	CC Resp	CCRRF	AVRRF	CC Rtm	AVRtm	% RSD	Co X0	Co X1	Co X2	Co Cor
1	1,4-Dichlorobenzene-d4	40.000	0	755627	1	1	2.850	2.848	0				
2	1,4-Dioxane	22.338	-10.6	202384	0.429	0.480	1.228	1.231	13.89				
3	N-nitrosodimethylamine	22.735	-9.1	289897	0.614	0.675	1.338	1.339	9.07				
4	Pyridine	23.158	-7.4	525098	1.112	1.200	1.362	1.366	8.81				
5	2-Fluorophenol	25.365	1.5	564062	1.194	1.177	1.932	1.927	3.15				
6	Phenol-d5	25.664	2.7	684778	1.450	1.412	2.517	2.504	3.86				
7	Phenol	23.514	-5.9	630299	1.335	1.419	2.527	2.516	2.95				
8	Aniline	23.541	-5.8	811926	1.719	1.826	2.585	2.582	1.53				
9	bis(2-chloroethyl)ether	23.483	-6.1	504301	1.068	1.137	2.611	2.612	2.28				
10	2-Chlorophenol	27.994	12.0	632622	1.382	1.234	2.678	2.675	1.73				
11	1,3-Dichlorobenzene	24.227	-3.1	697621	1.477	1.524	2.802	2.805	1.61				
12	1,2-Dichlorobenzene-d4												
13	1,4-Dichlorobenzene	24.466	-2.1	730792	1.547	1.581	2.865	2.862	2.02				
14	Benzyl alcohol	23.764	-4.9	355760	0.753	0.792	2.946	2.941	2.21				
15	1,2-Dichlorobenzene	24.292	-2.8	686745	1.454	1.497	2.994	2.993	2.15				
16	2-Methylphenol	24.855	-0.6	451465	0.956	0.962	3.028	3.018	1.88				
17	bis(2-chloroisopropyl)ether	20.443	-18.2	1012896	2.145	2.623	3.061	3.061	3.05				
18	4-Methylphenol	24.719	-1.1	589503	1.248	1.262	3.171	3.155	2.56				
19	N-Nitroso-di-n-propylamine	24.437	-2.3	390500	0.827	0.846	3.186	3.180	1.48				
20	Hexachloroethane	20.774	-16.9	277991	0.589	0.708	3.296	3.299	3.46				
21	Naphthalene-d8	40.000	0	2910305	1	1	4.060	4.057	0				
22	Nitrobenzene-d5	25.318	1.3	669116	0.368	0.363	3.334	3.332	1.55				
23	Nitrobenzene	22.893	-8.4	640964	0.352	0.385	3.353	3.350	1.57				
24	Isophorone	23.731	-5.1	1257956	0.692	0.729	3.584	3.578	4.77				
25	2-Nitrophenol	26.149	4.6	328896	0.181	0.173	3.660	3.656	4.68				
26	2,4-Dimethylphenol	23.823	-4.7	596492	0.328	0.344	3.684	3.677	4.69				
27	Benzoic acid	21.708	-13.2	378442	0.208	0.230	3.799	3.764	18.47	-0.0140	0.2653		0.9997
28	bis(2-Chloroethoxy)methane	23.051	-7.8	689354	0.379	0.411	3.785	3.785	1.21				
29	3,5-Dimethylphenol	25.446	1.8	733112	0.403	0.396	3.828	3.814	5.81				
30	2,4-Dichlorophenol	24.985	-0.1	576557	0.317	0.317	3.905	3.893	1.97				
31	1,2,4-Trichlorobenzene	24.116	-3.5	674605	0.371	0.384	3.992	3.992	1.59				
32	3,4-Dimethylphenol	24.799	-0.8	763492	0.420	0.423	4.006	3.990	1.65				
33	Naphthalene	24.325	-2.7	1936748	1.065	1.094	4.084	4.079	1.44				
34	4-Chloroaniline	25.073	0.3	797616	0.439	0.437	4.137	4.127	2.33				
35	2,6-Dichlorophenol	24.831	-0.7	572736	0.315	0.317	4.142	4.135	1.20				
36	Hexachlorobutadiene	23.647	-5.4	425188	0.234	0.247	4.204	4.207	1.54				
37	Hydroquinone												
38	4-Chloro-3-methylphenol	26.094	4.4	518791	0.285	0.273	4.667	4.648	3.85				
39	2-Methylnaphthalene	24.480	-2.1	1347260	0.741	0.756	4.844	4.840	1.49				
40	1-Methylnaphthalene	24.592	-1.6	1236176	0.680	0.691	4.955	4.953	1.66				
41	Acenaphthene-d10	40.000	0	1783655	1	1	6.070	6.061	0				
42	Hexachlorocyclopentadiene	20.652	-17.4	392281	0.352	0.426	5.017	5.020	3.00				
43	2,3,5-Trichlorophenol	25.512	2.0	406152	0.364	0.357	5.041	5.026	8.12				
44	2,4,6-Trichlorophenol	24.710	-1.2	442008	0.396	0.401	5.166	5.156	3.48				
45	2,4,5-Trichlorophenol	25.070	0.3	464169	0.416	0.415	5.209	5.191	5.03				
46	2-Fluorobiphenyl	28.639	14.6	1989241	1.784	1.558	5.267	5.266	4.84				
47	2,3,4-Trichlorophenol	25.157	0.6	449818	0.404	0.401	5.285	5.267	2.24				
48	Biphenyl	26.182	4.7	1814399	1.628	1.554	5.388	5.382	1.52				
49	2-Chloronaphthalene	26.721	6.9	1552225	1.392	1.303	5.407	5.401	1.47				
50	2-Nitroaniline	23.454	-6.3	345368	0.310	0.331	5.531	5.520	4.85				
51	2,6-Dimethylnaphthalene	24.080	-3.7	1184448	1.062	1.103	5.570	5.565	1.63				
52	1,4-Dinitrobenzene	26.573	6.3	187052	0.168	0.158	5.704	5.688	8.74				
53	Dimethylphthalate	24.178	-3.3	1570177	1.409	1.456	5.762	5.753	1.28				
54	1,3-Dinitrobenzene	22.410	-10.4	184826	0.166	0.185	5.704	5.774	4.85				
55	2,6-Dinitrotoluene	25.111	0.4	338803	0.304	0.303	5.830	5.816	2.99				
56	1,2-Dinitrobenzene	28.244	13.0	142226	0.128	0.113	5.893	5.873	3.06				
57	Acenaphthylene	26.253	5.0	2473258	2.219	2.113	5.897	5.891	4.50				
58	3-Nitroaniline	25.810	3.2	343847	0.308	0.298	6.027	6.009	3.82				
59	Acenaphthene	24.384	-2.5	1470891	1.319	1.353	6.109	6.099	1.86				
60	2,4-Dinitrophenol	24.465	-2.1	170259	0.153	0.141	6.157	6.131	21.16	-0.0096	0.1718		0.9984
61	4-Nitrophenol	24.610	-1.6	165364	0.148	0.151	6.243	6.204	5.29				
62	2,4-Dinitrotoluene	25.778	3.1	446149	0.400	0.388	6.315	6.294	3.72				
63	Dibenzofuran	24.174	-3.3	1858277	1.667	1.724	6.315	6.306	2.25				
64	2,3,5,6-Tetrachlorophenol	24.044	-3.8	322137	0.289	0.300	6.411	6.397	2.97				
65	2,3,4,6-Tetrachlorophenol	26.780	7.1	438734	0.394	0.367	6.463	6.449	5.76				
66	2,3,5-Trimethylnaphthalene	22.317	-10.7	1119878	1.005	1.125	6.568	6.561	6.44				
67	Diethylphthalate	24.417	-2.3	1503942	1.349	1.381	6.610	6.606	0.84				
68	Fluorene	24.528	-1.9	1571028	1.409	1.436	6.727	6.719	1.57				
69	4-Chlorophenyl-phenylether	24.267	-2.9	801030	0.719	0.740	6.732	6.730	1.94				
70	4-Nitroaniline	26.852	7.4	341951	0.307	0.286	6.765	6.742	4.47				
71	Phenanthrene-d10	40.000	0	3159128	1	1	7.812	7.799	0				
72	4,6-Dinitro-2-methylphenol	25.901	3.6	263451	0.133	0.117	6.802	6.779	18.96	-0.0072	0.1399		0.9984
73	N-Nitrosodiphenylamine	24.398	-2.4	1228141	0.622	0.637	6.878	6.871	1.75				
74	Azobenzene	22.812	-8.8	1224034	0.620	0.679	6.925	6.919	2.16				
75	2,4,6-Tribromophenol	28.038	12.2	240826	0.122	0.109	7.016	7.000	4.26				
76	4-Bromophenyl-phenylether	24.069	-3.7	462577	0.234	0.243	7.309	7.304	1.87				
77	Hexachlorobenzene	24.522	-3.6	495687	0.251	0.266	7.370	7.357	2.87				
78	Pentachlorophenol	23.003	-8.0	265625	0.135	0.146	7.602	7.583	8.30				
79	Dibenzothiophene	24.574	-1.7	2174121	1.101	1.120	7.692	7.683	3.87				
80	Phenanthrene	24.125	-3.5	2275200	1.152	1.194	7.839	7.827	2.11				
81	Dinoseb												
82	Anthracene	24.377	-2.5	2362436	1.196	1.227	7.893	7.883	2.62				
83	Carbazole	24.773	-0.9	1960799	0.993	1.002	8.079	8.062	1.89				
84	Di-n-butylphthalate	25.321	1.3	2470781	1.251	1.235	8.464	8.465	3.67				
85	1-Methylphenanthrene	24.184	-3.3	1636960	0.829	0.857	8.507	8.497	1.84				
86	Fluoranthene	24.873	-0.5	2640637	1.337	1.344	9.116	9.103	2.09				
87	Chrysene-d12	40.000	0	3467985	1	1	10.590	10.572	0				
88	Benzidine												
89	Pyrene	24.651	-1.4	2952458	1.362	1.381	9.352	9.337	4.93				
90	Terphenyl-d14	27.028	8.1	1987395	0.917	0.848	9.513	9.508	1.81				
91	Butylbenzylphthalate	27.447	9.8	1091203	0.503	0.459	10.018	10.016	6.43				
92	bis(2-ethylhexyl)adipate	27.392	9.6	871920	0.402	0.367	10.097	10.101	6.31				
93	3,3'-Dichlorobenzidine	26.055	4.2	945134	0.436	0.418	10.551	10.539	4.00				
94	Benzo(a)anthracene	25.098	0.4	2546473	1.175	1.170	10.575	10.561	1.53				
95	Chrysene	24.731	-1.1	2478769	1.144	1.157	10.614	10.597	2.95				
96	bis(2-Ethylhexyl)phthalate	27.122	8.5	1651960	0.762	0.703	10.590	10.598	4.99				
97	Perylene-d12	40.000	0	3154819	1	1	11.961	11.940	0				
98	Di-n-octylphthalate	28.818	15.3	2830294	1.435	1.245	11.211	11.216	8.50				
99	Benzo(b)fluoranthene	26.578	6.3	2543226	1.290	1.213	11.591	11.572	3.40				
100	Benzo(k)fluoranthene	23.607	-5.6	2493536	1.265	1.339	11.615	11.598	1.76				
101	Benzo(e)pyrene	24.940	-0.2	2327654	1.118	1.121	11.848	11.832	2.41				
102	Benzo(a)pyrene	26.040	4.6	2423880	1.229	1.180	11.900	11.884	4.70				
103	Perylene	24.053	-3.8	2260505	1.146	1.192	11.984	11.966	1.77				
104	Indeno(1,2,3-cd)pyrene	26.181	4.7	2623937	1.331	1.271	13.176	13.148	2.90				
105	Dibenzo(a,h)anthracene	26.662	6.6	2251425	1.142	1.071	13.190	13.169	4.24				
106	Benzo(g,h,i)perylene	25.516	2.1	2240109	1.136	1.113	13.549	13.510	3.23				

Data Path : D:\DATA\15I24\
Data File : RIH529.D
Acq On : 24 Sep 2015 10:08
Operator : KVu
Sample : DFTE7D03120
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Mon Apr 06 08:19:55 2015



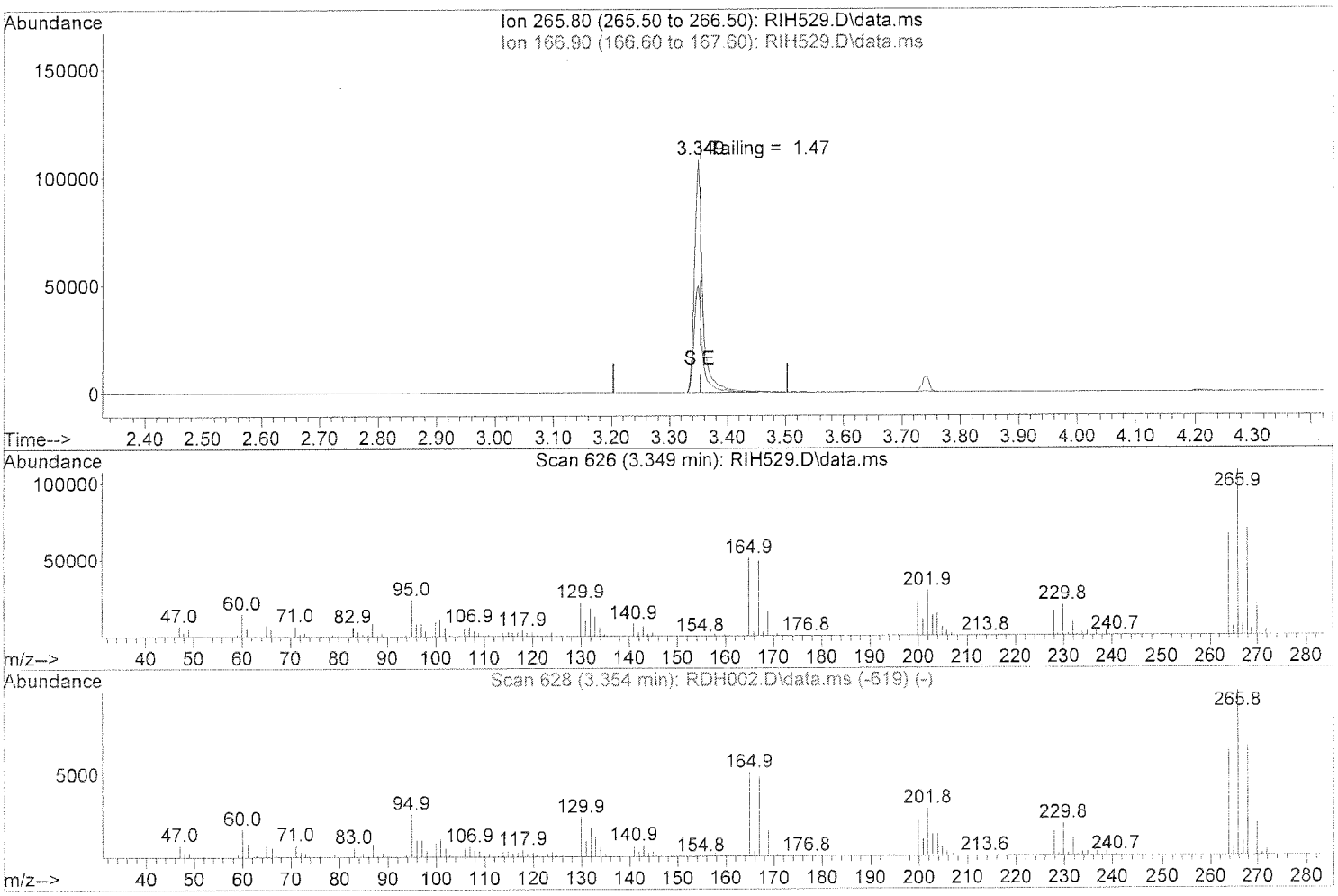
AutoFind: Scans 765, 766, 767; Background Corrected with Scan 756

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	42.4	61052	PASS
68	69	0.00	2	1.0	546	PASS
69	198	0.00	100	37.0	53347	PASS
70	69	0.00	2	0.4	211	PASS
127	198	10	80	47.4	68328	PASS
197	198	0.00	2	0.2	224	PASS
198	198	100	100	100.0	144120	PASS
199	198	5	9	7.2	10334	PASS
275	198	10	60	24.6	35472	PASS
365	198	1	100	2.7	3833	PASS
441	442	0.01	24	16.0	17972	PASS
442	198	50	100	77.7	112048	PASS
443	442	15	24	18.6	20821	PASS

Quantitation Report (Qedit)

Data File : D:\DATA\15I24\RIH529.D
Acq On : 24 Sep 2015 10:08
Sample : DFTE7D03120
Misc :
Integrator: RTE
Quant Time: Sep 24 10:26:26 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RIH529.D\data.ms

(1) Pentachlorophenol (T)

3.349min (-0.005) 43.10 ppm

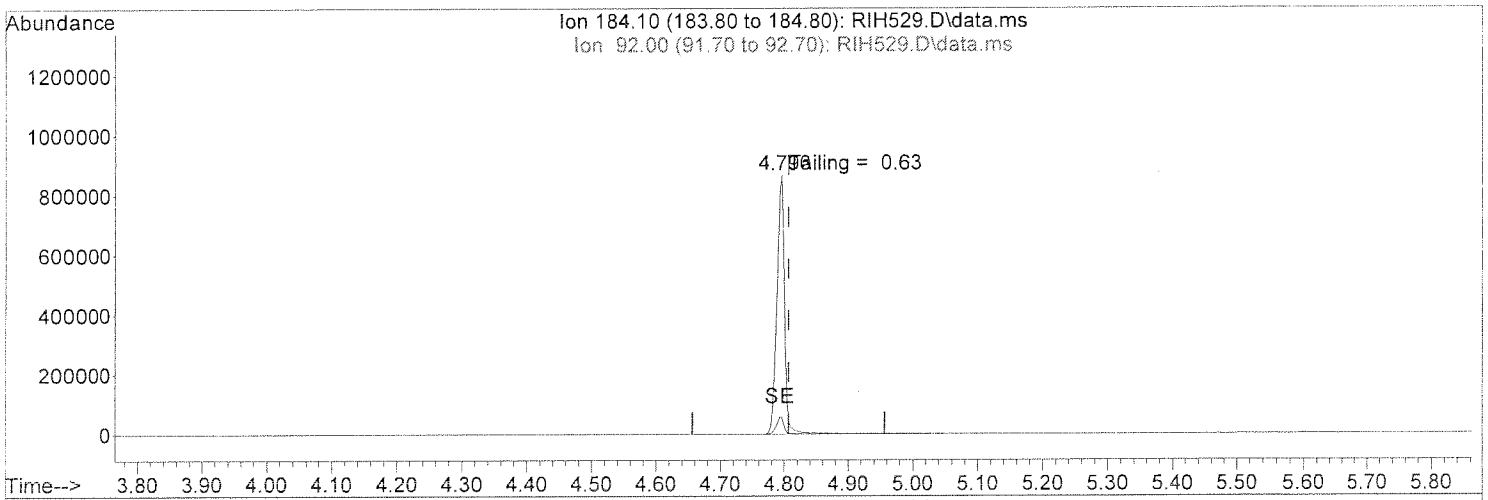
response 107784

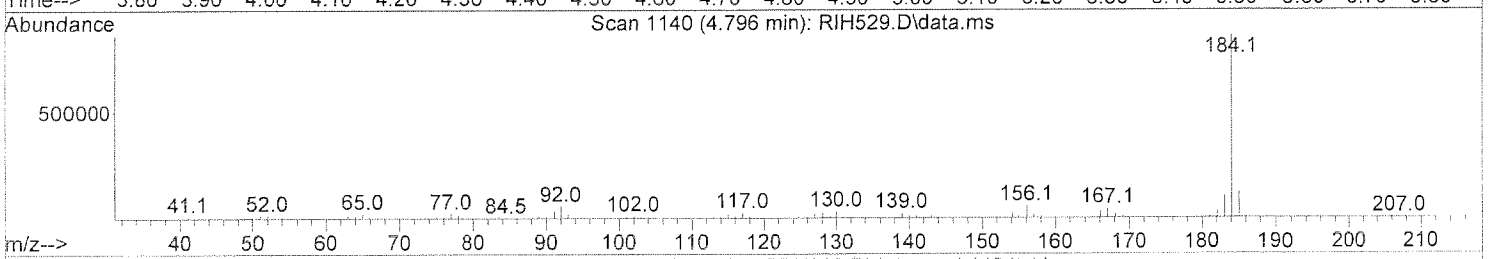
Ion	Exp%	Act%
265.80	100	100
166.90	46.90	47.11
0.00	0.00	0.00
0.00	0.00	0.00

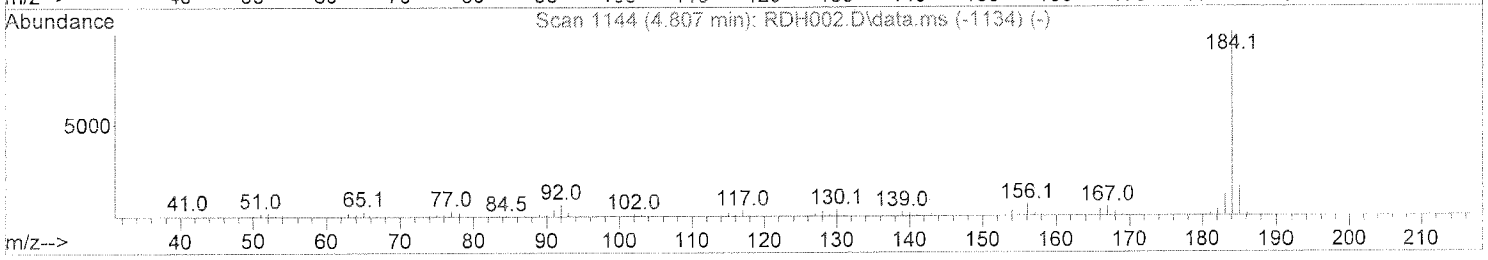
Quantitation Report (Qedit)

Data File : D:\DATA\15I24\RIH529.D
Acq On : 24 Sep 2015 10:08
Sample : DFTE7D03120
Misc :
Integrator: RTE
Quant Time: Sep 24 10:26:26 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RIH529.D\data.ms

(3) Benzidine (T)

4.796min (-0.011) 43.55 ppm

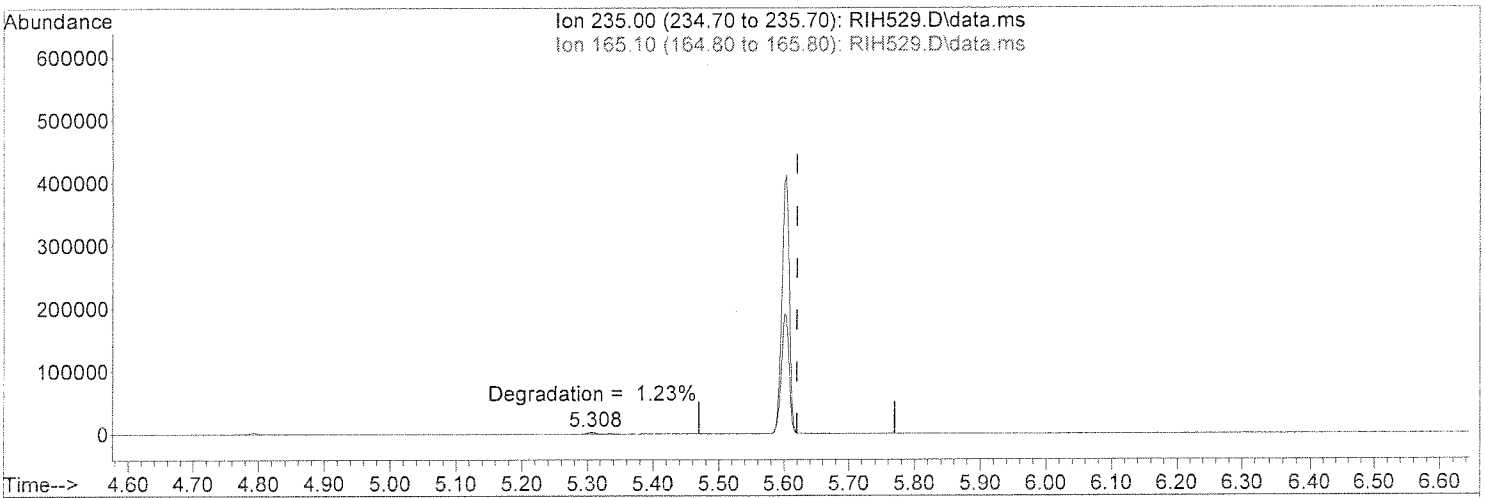
response 731075

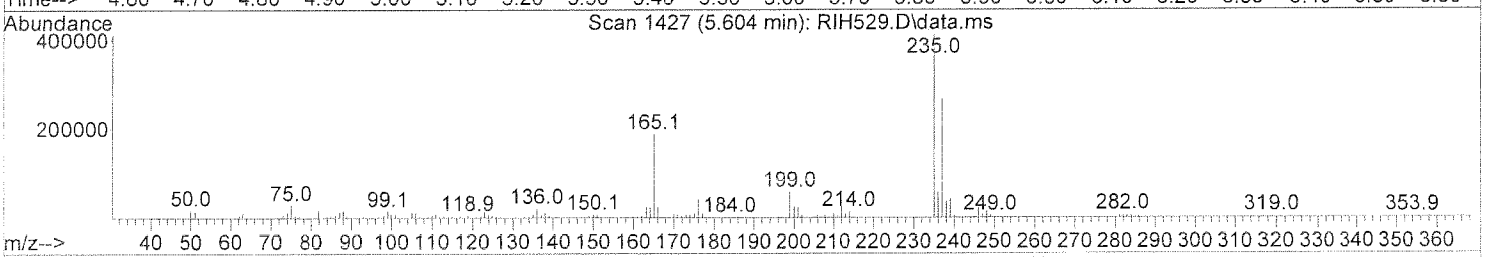
Ion	Exp%	Act%
184.10	100	100
92.00	6.60	6.49
0.00	0.00	0.00
0.00	0.00	0.00

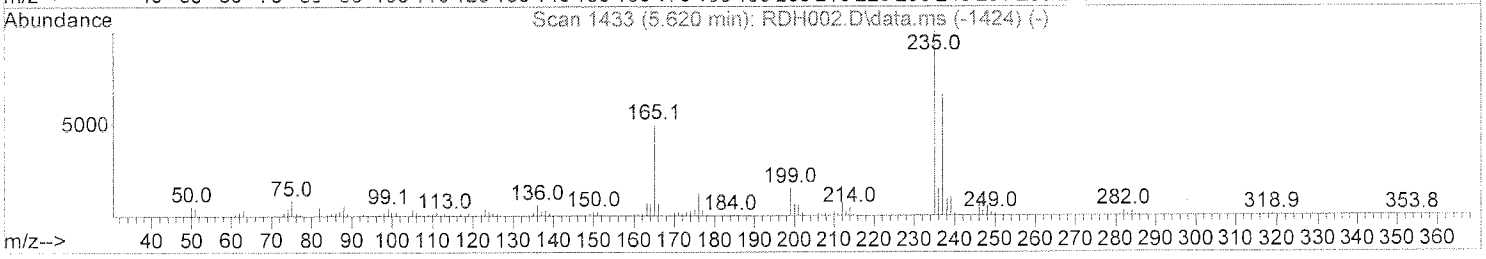
Quantitation Report (Qedit)

Data File : D:\DATA\15I24\RIH529.D
Acq On : 24 Sep 2015 10:08
Sample : DFTE7D03120
Misc :
Integrator: RTE
Quant Time: Sep 24 10:26:26 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RIH529.D\data.ms

(6) DDT (T)

5.604min (-0.017) 46.46 ppm

response 336534

Ion	Exp%	Act%
235.00	100	100
165.10	49.20	47.53
0.00	0.00	0.00
0.00	0.00	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIH530.D Vial: 3
Acq On : 24 Sep 2015 10:19 Operator: KVu
Sample : CSVE7D03120 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	133	0.00
2	T	1,4-Dioxane	25.000	22.338	10.6	132	0.00
3	T	N-nitrosodimethylamine	25.000	22.735	9.1	124	0.00
4	T	Pyridine	25.000	23.158	7.4	124	0.00
5	S	2-Fluorophenol	25.000	25.364	-1.5	140	0.00
6	S	Phenol-d5	25.000	25.664	-2.7	143	0.01
7	C,P	Phenol	25.000	23.514	5.9	129	0.01
8	T	Aniline	25.000	23.541	5.8	128	0.00
9	T,P	bis(2-chloroethyl)ether	25.000	23.483	6.1	130	0.00
10	T,P	2-Chlorophenol	25.000	27.994	-12.0	153	0.00
11	T	1,3-Dichlorobenzene	25.000	24.227	3.1	132	0.00
12	S	1,2-Dichlorobenzene-d4	25.000	0.000	100.0#	0	-2.99#
13	C	1,4-Dichlorobenzene	25.000	24.466	2.1	134	0.00
14	T	Benzyl alcohol	25.000	23.764	4.9	129	0.00
15	T	1,2-Dichlorobenzene	25.000	24.292	2.8	132	0.00
16	T,P	2-Methylphenol	25.000	24.855	0.6	137	0.01
17	T	bis(2-chloroisopropyl)ether	25.000	20.443	18.2	113	0.00
18	T,P	4-Methylphenol	25.000	24.718	1.1	137	0.02
19	P,P	N-Nitroso-di-n-propylamine	25.000	24.437	2.3	132	0.00
20	T,P	Hexachloroethane	25.000	20.774	16.9	114	0.00
21	I	Naphthalene-d8	40.000	40.000	0.0	137	0.00
22	S	Nitrobenzene-d5	25.000	25.318	-1.3	143	0.00
23	T,P	Nitrobenzene	25.000	22.893	8.4	129	0.00
24	T,P	Isophorone	25.000	23.731	5.1	131	0.00
25	C,P	2-Nitrophenol	25.000	26.149	-4.6	143	0.00
26	T,P	2,4-Dimethylphenol	25.000	23.823	4.7	136	0.00
27	T	Benzoic acid	25.000	21.708	13.2	120	0.05
28	T,P	bis(2-Chloroethoxy)methane	25.000	23.051	7.8	130	0.00
29	T	3,5-Dimethylphenol	25.000	25.446	-1.8	140	0.01
30	C,P	2,4-Dichlorophenol	25.000	24.985	0.1	139	0.01
31	T	1,2,4-Trichlorobenzene	25.000	24.116	3.5	135	0.00
32	T	3,4-Dimethylphenol	25.000	24.799	0.8	140	0.02
33	T.P	Naphthalene	25.000	24.325	2.7	137	0.00
34	T	4-Chloroaniline	25.000	25.073	-0.3	141	0.00
35	T	2,6-Dichlorophenol	25.000	24.831	0.7	140	0.00
36	C	Hexachlorobutadiene	25.000	23.647	5.4	134	0.00
37	T	Hydroquinone	25.000	0.000	100.0#	0	0.00
38	C,P	4-Chloro-3-methylphenol	25.000	26.094	-4.4	144	0.02
39	T,P	2-Methylnaphthalene	25.000	24.481	2.1	138	0.00
40	T	1-Methylnaphthalene	25.000	24.592	1.6	139	0.00
41	I	Acenaphthene-d10	40.000	40.000	0.0	137	0.00
42	P	Hexachlorocyclopentadiene	25.000	20.652	17.4	114	0.00
43	T	2,3,5-Trichlorophenol	25.000	25.512	-2.0	140	0.02
44	C,P	2,4,6-Trichlorophenol	25.000	24.710	1.2	139	0.01
45	T,P	2,4,5-Trichlorophenol	25.000	25.070	-0.3	139	0.02
46	S	2-Fluorobiphenyl	25.000	28.639	-14.6	151	0.00
47	T	2,3,4-Trichlorophenol	25.000	25.157	-0.6	140	0.02
48	T	Biphenyl	25.000	26.182	-4.7	148	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIH530.D Vial: 3
Acq On : 24 Sep 2015 10:19 Operator: KVu
Sample : CSVE7D03120 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
49	T,P	2-Chloronaphthalene	25.000	26.721	-6.9	150	0.00
50	T	2-Nitroaniline	25.000	23.424	6.3	129	0.01
51	T	2,6-Dimethylnaphthalene	25.000	24.080	3.7	136	0.00
52	T	1,4-Dinitrobenzene	25.000	26.575	-6.3	143	0.02
53	T	Dimethylphthalate	25.000	24.178	3.3	135	0.00
54	T	1,3-Dinitrobenzene	25.000	22.409	10.4	123	-0.07
55	T,P	2,6-Dinitrotoluene	25.000	25.110	-0.4	139	0.01
56	T	1,2-Dinitrobenzene	25.000	28.244	-13.0	158	0.02
57	T,P	Acenaphthylene	25.000	26.253	-5.0	150	0.00
58	T	3-Nitroaniline	25.000	25.810	-3.2	142	0.02
59	C,P	Acenaphthene	25.000	24.384	2.5	138	0.01
60	P	2,4-Dinitrophenol	25.000	24.465	2.1	139	0.03
61	P	4-Nitrophenol	25.000	24.610	1.6	132	0.04
62	T,P	2,4-Dinitrotoluene	25.000	25.778	-3.1	142	0.02
63	T,P	Dibenzofuran	25.000	24.174	3.3	137	0.00
64	T	2,3,5,6-Tetrachlorophenol	25.000	24.044	3.8	133	0.01
65	T	2,3,4,6-Tetrachlorophenol	25.000	26.780	-7.1	151	0.02
66	T	2,3,5-Trimethylnaphthalene	25.000	22.317	10.7	136	0.00
67	T	Diethylphthalate	25.000	24.417	2.3	136	0.00
68	T,P	Fluorene	25.000	24.528	1.9	138	0.00
69	T,P	4-Chlorophenyl-phenylether	25.000	24.267	2.9	135	0.00
70	T	4-Nitroaniline	25.000	26.852	-7.4	146	0.02
71	I	Phenanthrene-d10	40.000	40.000	0.0	136	0.01
72	T	4,6-Dinitro-2-methylphenol	25.000	25.901	-3.6	149	0.02
73	C	N-Nitrosodiphenylamine	25.000	24.398	2.4	129	0.00
74	T	Azobenzene	25.000	22.812	8.8	128	0.00
75	S	2,4,6-Tribromophenol	25.000	28.038	-12.2	154	0.02
76	T,P	4-Bromophenyl-phenylether	25.000	24.069	3.7	135	0.00
77	T,P	Hexachlorobenzene	25.000	23.592	5.6	133	0.01
78	C,P	Pentachlorophenol	25.000	23.003	8.0	123	0.02
79	T	Dibenzothiophene	25.000	24.574	1.7	137	0.00
80	T,P	Phenanthrene	25.000	24.125	3.5	136	0.01
81	T	Dinoseb	25.000	0.000	100.0#	0	0.00
82	T,P	Anthracene	25.000	24.377	2.5	139	0.01
83	T	Carbazole	25.000	24.773	0.9	139	0.02
84	T	Di-n-butylphthalate	25.000	25.321	-1.3	141	0.00
85	T	1-Methylphenanthrene	25.000	24.184	3.3	136	0.01
86	C,P	Fluoranthene	25.000	24.873	0.5	139	0.01
87	I	Chrysene-d12	40.000	40.000	0.0	138	0.02
88	T	Benzidine	25.000	0.000	100.0#	0	0.00
89	T,P	Pyrene	25.000	24.651	1.4	145	0.02
90	S	Terphenyl-d14	25.000	27.028	-8.1	155	0.00
91	T	Butylbenzylphthalate	25.000	27.447	-9.8	152	0.00
92	T	bis(2-ethylhexyl)adipate	25.000	27.392	-9.6	152	0.00
93	T	3,3'-Dichlorobenzidine	25.000	26.055	-4.2	146	0.01
94	T,P	Benzo(a)anthracene	25.000	25.098	-0.4	143	0.02
95	T,P	Chrysene	25.000	24.731	1.1	142	0.02
96	T	bis(2-Ethylhexyl)phthalate	25.000	27.122	-8.5	152	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIH530.D Vial: 3
Acq On : 24 Sep 2015 10:19 Operator: KVu
Sample : CSVE7D03120 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
97	I	Perylene-d12	40.000	40.000	0.0	138	0.02
98	C	Di-n-octylphthalate	25.000	28.818	-15.3	159	0.00
99	T,P	Benzo(b)fluoranthene	25.000	26.578	-6.3	150	0.02
100	T,P	Benzo(k)fluoranthene	25.000	23.607	5.6	135	0.02
101	T	Benzo(e)pyrene	25.000	24.940	0.2	143	0.02
102	C,P	Benzo(a)pyrene	25.000	26.040	-4.2	145	0.02
103	T	Perylene	25.000	24.053	3.8	137	0.02
104	T,P	Indeno(1,2,3-cd)pyrene	25.000	26.181	-4.7	148	0.03
105	T,P	Dibenzo(a,h)anthracene	25.000	26.662	-6.6	150	0.02
106	T,P	Benzo(g,h,i)perylene	25.000	25.516	-2.1	145	0.04

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

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIH530.D Vial: 3
Acq On : 24 Sep 2015 10:19 Operator: KVu
Sample : CSVE7D03120 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	133	0.00
2	T	1,4-Dioxane	0.480	0.429	10.6	132	0.00
3	T	N-nitrosodimethylamine	0.675	0.614	9.0	124	0.00
4	T	Pyridine	1.200	1.112	7.3	124	0.00
5	S	2-Fluorophenol	1.177	1.194	-1.4	140	0.00
6	S	Phenol-d5	1.412	1.450	-2.7	143	0.01
7	C,P	Phenol	1.419	1.335	5.9	129	0.01
8	T	Aniline	1.826	1.719	5.9	128	0.00
9	T,P	bis(2-chloroethyl)ether	1.137	1.068	6.1	130	0.00
10	T,P	2-Chlorophenol	1.234	1.382	-12.0	153	0.00
11	T	1,3-Dichlorobenzene	1.524	1.477	3.1	132	0.00
12	S	1,2-Dichlorobenzene-d4	0.000	0.000#	0.0	0#	-2.99#
13	C	1,4-Dichlorobenzene	1.581	1.547	2.2	134	0.00
14	T	Benzyl alcohol	0.792	0.753	4.9	129	0.00
15	T	1,2-Dichlorobenzene	1.497	1.454	2.9	132	0.00
16	T,P	2-Methylphenol	0.962	0.956	0.6	137	0.01
17	T	bis(2-chloroisopropyl)ether	2.623	2.145	18.2	113	0.00
18	T,P	4-Methylphenol	1.262	1.248	1.1	137	0.02
19	P,P	N-Nitroso-di-n-propylamine	0.846	0.827	2.2	132	0.00
20	T,P	Hexachloroethane	0.708	0.589	16.8	114	0.00
21	I	Naphthalene-d8	1.000	1.000	0.0	137	0.00
22	S	Nitrobenzene-d5	0.363	0.368	-1.4	143	0.00
23	T,P	Nitrobenzene	0.385	0.352	8.6	129	0.00
24	T,P	Isophorone	0.729	0.692	5.1	131	0.00
25	C,P	2-Nitrophenol	0.173	0.181	-4.6	143	0.00
26	T,P	2,4-Dimethylphenol	0.344	0.328	4.7	136	0.00
27	T	Benzoic acid	0.230	0.208	9.6	120	0.05
28	T,P	bis(2-Chloroethoxy)methane	0.411	0.379	7.8	130	0.00
29	T	3,5-Dimethylphenol	0.396	0.403	-1.8	140	0.01
30	C,P	2,4-Dichlorophenol	0.317	0.317	0.0	139	0.01
31	T	1,2,4-Trichlorobenzene	0.384	0.371	3.4	135	0.00
32	T	3,4-Dimethylphenol	0.423	0.420	0.7	140	0.02
33	T.P	Naphthalene	1.094	1.065	2.7	137	0.00
34	T	4-Chloroaniline	0.437	0.439	-0.5	141	0.00
35	T	2,6-Dichlorophenol	0.317	0.315	0.6	140	0.00
36	C	Hexachlorobutadiene	0.247	0.234	5.3	134	0.00
37	T	Hydroquinone	0.000	0.000#	0.0	0#	0.00
38	C,P	4-Chloro-3-methylphenol	0.273	0.285	-4.4	144	0.02
39	T,P	2-Methylnaphthalene	0.756	0.741	2.0	138	0.00
40	T	1-Methylnaphthalene	0.691	0.680	1.6	139	0.00
41	I	Acenaphthene-d10	1.000	1.000	0.0	137	0.00
42	P	Hexachlorocyclopentadiene	0.426	0.352	17.4	114	0.00
43	T	2,3,5-Trichlorophenol	0.357	0.364	-2.0	140	0.02
44	C,P	2,4,6-Trichlorophenol	0.401	0.396	1.2	139	0.01
45	T,P	2,4,5-Trichlorophenol	0.415	0.416	-0.2	139	0.02
46	S	2-Fluorobiphenyl	1.558	1.784	-14.5	151	0.00
47	T	2,3,4-Trichlorophenol	0.401	0.404	-0.7	140	0.02
48	T	Biphenyl	1.554	1.628	-4.8	148	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIH530.D Vial: 3
Acq On : 24 Sep 2015 10:19 Operator: KVu
Sample : CSVE7D03120 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
49	T,P	2-Chloronaphthalene	1.303	1.392	-6.8	150	0.00
50	T	2-Nitroaniline	0.331	0.310	6.3	129	0.01
51	T	2,6-Dimethylnaphthalene	1.103	1.062	3.7	136	0.00
52	T	1,4-Dinitrobenzene	0.158	0.168	-6.3	143	0.02
53	T	Dimethylphthalate	1.456	1.409	3.2	135	0.00
54	T	1,3-Dinitrobenzene	0.185	0.166	10.3	123	-0.07
55	T,P	2,6-Dinitrotoluene	0.303	0.304	-0.3	139	0.01
56	T	1,2-Dinitrobenzene	0.113	0.128	-13.3	158	0.02
57	T,P	Acenaphthylene	2.113	2.219	-5.0	150	0.00
58	T	3-Nitroaniline	0.298	0.308	-3.4	142	0.02
59	C,P	Acenaphthene	1.353	1.319	2.5	138	0.01
60	P	2,4-Dinitrophenol	0.141	0.153	-8.5	139	0.03
61	P	4-Nitrophenol	0.151	0.148	2.0	132	0.04
62	T,P	2,4-Dinitrotoluene	0.388	0.400	-3.1	142	0.02
63	T,P	Dibenzofuran	1.724	1.667	3.3	137	0.00
64	T	2,3,5,6-Tetrachlorophenol	0.300	0.289	3.7	133	0.01
65	T	2,3,4,6-Tetrachlorophenol	0.367	0.394	-7.4	151	0.02
66	T	2,3,5-Trimethylnaphthalene	1.125	1.005	10.7	136	0.00
67	T	Diethylphthalate	1.381	1.349	2.3	136	0.00
68	T,P	Fluorene	1.436	1.409	1.9	138	0.00
69	T,P	4-Chlorophenyl-phenylether	0.740	0.719	2.8	135	0.00
70	T	4-Nitroaniline	0.286	0.307	-7.3	146	0.02
71	I	Phenanthrene-d10	1.000	1.000	0.0	136	0.01
72	T	4,6-Dinitro-2-methylphenol	0.117	0.133	-13.7	149	0.02
73	C	N-Nitrosodiphenylamine	0.637	0.622	2.4	129	0.00
74	T	Azobenzene	0.679	0.620	8.7	128	0.00
75	S	2,4,6-Tribromophenol	0.109	0.122	-11.9	154	0.02
76	T,P	4-Bromophenyl-phenylether	0.243	0.234	3.7	135	0.00
77	T,P	Hexachlorobenzene	0.266	0.251	5.6	133	0.01
78	C,P	Pentachlorophenol	0.146	0.135	7.5	123	0.02
79	T	Dibenzothiophene	1.120	1.101	1.7	137	0.00
80	T,P	Phenanthrene	1.194	1.152	3.5	136	0.01
81	T	Dinoseb	0.000	0.000#	0.0	0#	0.00
82	T,P	Anthracene	1.227	1.196	2.5	139	0.01
83	T	Carbazole	1.002	0.993	0.9	139	0.02
84	T	Di-n-butylphthalate	1.235	1.251	-1.3	141	0.00
85	T	1-Methylphenanthrene	0.857	0.829	3.3	136	0.01
86	C,P	Fluoranthene	1.344	1.337	0.5	139	0.01
87	I	Chrysene-d12	1.000	1.000	0.0	138	0.02
88	T	Benzidine	0.000	0.000#	0.0	0#	0.00
89	T,P	Pyrene	1.381	1.362	1.4	145	0.02
90	S	Terphenyl-d14	0.848	0.917	-8.1	155	0.00
91	T	Butylbenzylphthalate	0.459	0.503	-9.6	152	0.00
92	T	bis(2-ethylhexyl)adipate	0.367	0.402	-9.5	152	0.00
93	T	3,3'-Dichlorobenzidine	0.418	0.436	-4.3	146	0.01
94	T,P	Benzo(a)anthracene	1.170	1.175	-0.4	143	0.02
95	T,P	Chrysene	1.157	1.144	1.1	142	0.02
96	T	bis(2-Ethylhexyl)phthalate	0.703	0.762	-8.4	152	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15I24\RIH530.D Vial: 3
Acq On : 24 Sep 2015 10:19 Operator: KVu
Sample : CSVE7D03120 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
97	I	Perylene-d12	1.000	1.000	0.0	138	0.02
98	C	Di-n-octylphthalate	1.245	1.435	-15.3	159	0.00
99	T,P	Benzo(b)fluoranthene	1.213	1.290	-6.3	150	0.02
100	T,P	Benzo(k)fluoranthene	1.339	1.265	5.5	135	0.02
101	T	Benzo(e)pyrene	1.121	1.118	0.3	143	0.02
102	C,P	Benzo(a)pyrene	1.180	1.229	-4.2	145	0.02
103	T	Perylene	1.192	1.146	3.9	137	0.02
104	T,P	Indeno(1,2,3-cd)pyrene	1.271	1.331	-4.7	148	0.03
105	T,P	Dibenzo(a,h)anthracene	1.071	1.142	-6.6	150	0.02
106	T,P	Benzo(g,h,i)perylene	1.113	1.136	-2.1	145	0.04

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

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIH530.D
Vial: 3
Acq On : 24 Sep 2015 10:19
Operator: KVu
Sample : CSVE7D03120
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.850	152	755627	40.00	ppm	0.00
21) Naphthalene-d8	4.059	136	2910305	40.00	ppm	0.00
41) Acenaphthene-d10	6.070	164	1783655	40.00	ppm	0.00
71) Phenanthrene-d10	7.812	188	3159198	40.00	ppm	0.01
87) Chrysene-d12	10.590	240	3467985	40.00	ppm	0.02
97) Perylene-d12	11.961	264	3154819	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	1.932	112	564062	25.36	ppm	0.00
Spiked Amount 30.000			Recovery = 84.53%			
6) Phenol-d5	2.517	99	684778	25.66	ppm	0.01
Spiked Amount 30.000			Recovery = 85.53%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.334	82	669116	25.32	ppm	0.00
Spiked Amount 10.000			Recovery = 253.20%			
46) 2-Fluorobiphenyl	5.267	172	1989241	28.64	ppm	0.00
Spiked Amount 10.000			Recovery = 286.40%			
75) 2,4,6-Tribromophenol	7.016	330	240826	28.04	ppm	0.02
Spiked Amount 30.000			Recovery = 93.47%			
90) Terphenyl-d14	9.513	244	1987395	27.03	ppm	0.00
Spiked Amount 10.000			Recovery = 270.30%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.228	88	202384	22.34	ppm	85
3) N-nitrosodimethylamine	1.338	74	289897	22.74	ppm	99
4) Pyridine	1.362	79	525098	23.16	ppm	86
7) Phenol	2.527	94	630299	23.51	ppm	98
8) Aniline	2.585	93	811926	23.54	ppm	99
9) bis(2-chloroethyl)ether	2.611	93	504301	23.48	ppm	88
10) 2-Chlorophenol	2.678	128	652622	27.99	ppm	87
11) 1,3-Dichlorobenzene	2.802	146	697621	24.23	ppm	99
13) 1,4-Dichlorobenzene	2.864	146	730792	24.47	ppm	100
14) Benzyl alcohol	2.946	108	355760	23.76	ppm	96
15) 1,2-Dichlorobenzene	2.994	146	686745	24.29	ppm	99
16) 2-Methylphenol	3.028	107	451465	24.86	ppm	99
17) bis(2-chloroisopropyl)...	3.061	45	1012896	20.44	ppm	93
18) 4-Methylphenol	3.171	107	589503	24.72	ppm	99
19) N-Nitroso-di-n-propyla...	3.186	70	390500	24.44	ppm	92
20) Hexachloroethane	3.296	117	277991	20.77	ppm	97
23) Nitrobenzene	3.353	77	640964	22.89	ppm	96
24) Isophorone	3.584	82	1257956	23.73	ppm	90
25) 2-Nitrophenol	3.660	139	328896	26.15	ppm	92
26) 2,4-Dimethylphenol	3.684	107	596492	23.82	ppm	99
27) Benzoic acid	3.799	105	378442	21.71	ppm	95
28) bis(2-Chloroethoxy)met...	3.785	93	689354	23.05	ppm	100
29) 3,5-Dimethylphenol	3.828	107	733112	25.45	ppm	99
30) 2,4-Dichlorophenol	3.905	162	576557	24.98	ppm	99
31) 1,2,4-Trichlorobenzene	3.992	180	674605	24.12	ppm	99
32) 3,4-Dimethylphenol	4.006	107	763492	24.80	ppm	99
33) Naphthalene	4.084	128	1936748	24.32	ppm	100
34) 4-Chloroaniline	4.137	127	797616	25.07	ppm	100
35) 2,6-Dichlorophenol	4.142	162	572736	24.83	ppm	99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIH530.D Vial: 3
Acq On : 24 Sep 2015 10:19 Operator: KVu
Sample : CSVE7D03120 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Hexachlorobutadiene	4.204	225	425188	23.65	ppm		98
38) 4-Chloro-3-methylphenol	4.667	107	518791	26.09	ppm		96
39) 2-Methylnaphthalene	4.844	142	1347260	24.48	ppm		100
40) 1-Methylnaphthalene	4.955	142	1236176	24.59	ppm		100
42) Hexachlorocyclopentadiene	5.017	237	392281	20.65	ppm		99
43) 2,3,5-Trichlorophenol	5.041	196	406152	25.51	ppm		99
44) 2,4,6-Trichlorophenol	5.166	196	442008	24.71	ppm		100
45) 2,4,5-Trichlorophenol	5.209	196	464169	25.07	ppm		99
47) 2,3,4-Trichlorophenol	5.282	196	449818	25.16	ppm		95
48) Biphenyl	5.388	154	1814399	26.18	ppm		95
49) 2-Chloronaphthalene	5.407	162	1552225	26.72	ppm		100
50) 2-Nitroaniline	5.531	65	345368	23.42	ppm		93
51) 2,6-Dimethylnaphthalene	5.570	156	1184448	24.08	ppm		100
52) 1,4-Dinitrobenzene	5.704	168	187052	26.58	ppm		91
53) Dimethylphthalate	5.762	163	1570177	24.18	ppm		100
54) 1,3-Dinitrobenzene	5.704	168	184826	22.41	ppm		85
55) 2,6-Dinitrotoluene	5.830	165	338803	25.11	ppm		95
56) 1,2-Dinitrobenzene	5.893	168	142226	28.24	ppm	#	78
57) Acenaphthylene	5.897	152	2473258	26.25	ppm		96
58) 3-Nitroaniline	6.027	138	342847	25.81	ppm		96
59) Acenaphthene	6.109	153	1470891	24.38	ppm		99
60) 2,4-Dinitrophenol	6.157	184	170259	24.47	ppm		100
61) 4-Nitrophenol	6.243	109	165364	24.61	ppm		98
62) 2,4-Dinitrotoluene	6.315	165	446149	25.78	ppm		96
63) Dibenzofuran	6.315	168	1858277	24.17	ppm		100
64) 2,3,5,6-Tetrachlorophenol	6.411	230	322137	24.04	ppm		100
65) 2,3,4,6-Tetrachlorophenol	6.463	232	438734	26.78	ppm		100
66) 2,3,5-Trimethylnaphtha...	6.568	170	1119878	22.32	ppm		89
67) Diethylphthalate	6.610	149	1503942	24.42	ppm		99
68) Fluorene	6.727	166	1571028	24.53	ppm		100
69) 4-Chlorophenyl-phenyle...	6.732	204	801030	24.27	ppm		99
70) 4-Nitroaniline	6.765	138	341951	26.85	ppm		95
72) 4,6-Dinitro-2-methylph...	6.802	198	263451	25.90	ppm		93
73) N-Nitrosodiphenylamine	6.878	169	1228141	24.40	ppm		95
74) Azobenzene	6.925	77	1224034	22.81	ppm		97
76) 4-Bromophenyl-phenylether	7.309	248	462577	24.07	ppm		98
77) Hexachlorobenzene	7.370	284	495684	23.59	ppm		100
78) Pentachlorophenol	7.602	266	265625	23.00	ppm		97
79) Dibenzothiophene	7.692	184	2174121	24.57	ppm		97
80) Phenanthrene	7.839	178	2275200	24.13	ppm		100
82) Anthracene	7.893	178	2362436	24.38	ppm		100
83) Carbazole	8.079	167	1960799	24.77	ppm		100
84) Di-n-butylphthalate	8.464	149	2470781	25.32	ppm		100
85) 1-Methylphenanthrene	8.507	192	1636960	24.18	ppm		99
86) Fluoranthene	9.116	202	2640637	24.87	ppm		99
89) Pyrene	9.352	202	2952458	24.65	ppm		99
91) Butylbenzylphthalate	10.018	149	1091203	27.45	ppm		96
92) bis(2-ethylhexyl)adipate	10.097	129	871920	27.39	ppm		87
93) 3,3'-Dichlorobenzidine	10.551	252	945134	26.06	ppm		99
94) Benzo(a)anthracene	10.575	228	2546473	25.10	ppm		90
95) Chrysene	10.614	228	2479769	24.73	ppm		99
96) bis(2-Ethylhexyl)phtha...	10.590	149	1651960	27.12	ppm		100
98) Di-n-octylphthalate	11.211	149	2830294	28.82	ppm		100
99) Benzo(b)fluoranthene	11.591	252	2543226	26.58	ppm		100

Quantitation Report (QT Reviewed)

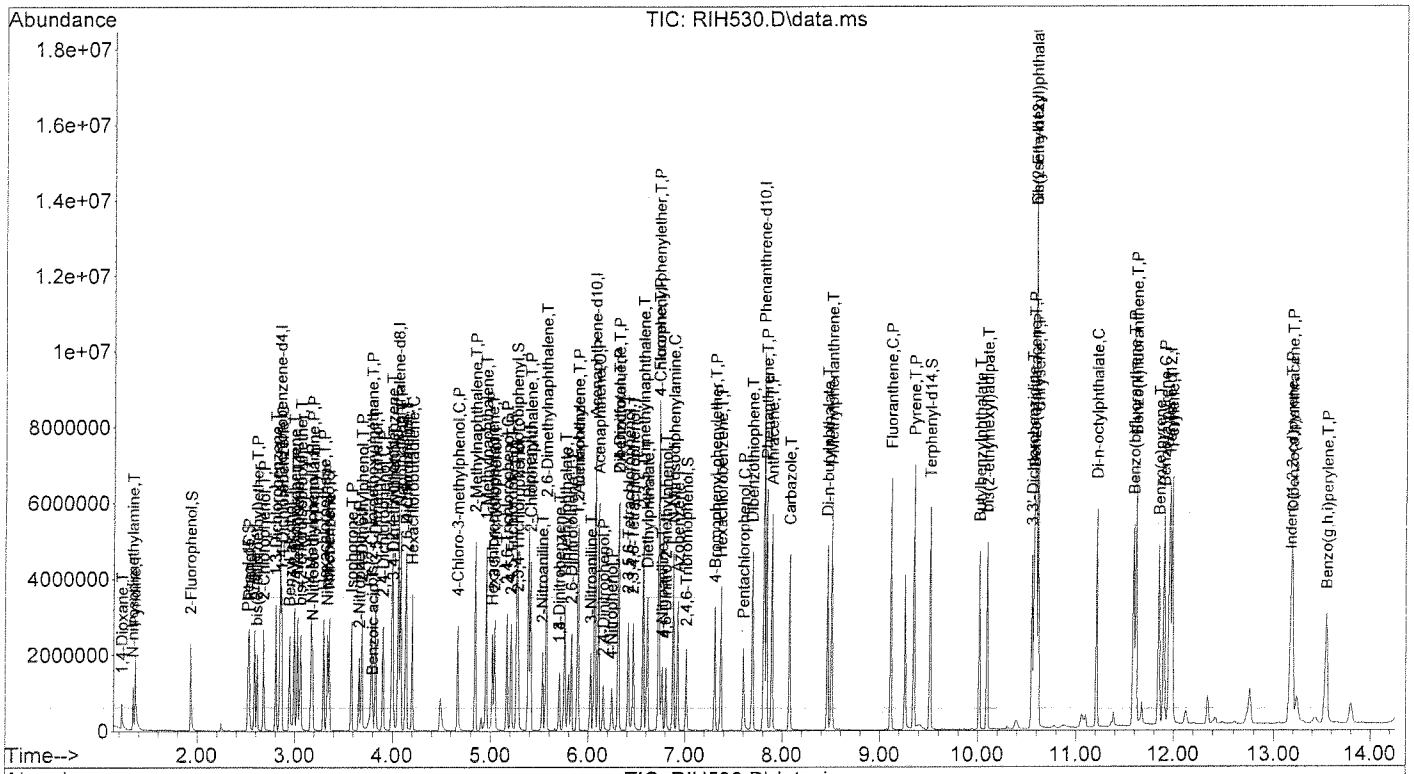
Data File : D:\DATA\15I24\RIH530.D Vial: 3
Acq On : 24 Sep 2015 10:19 Operator: KVu
Sample : CSVE7D03120 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

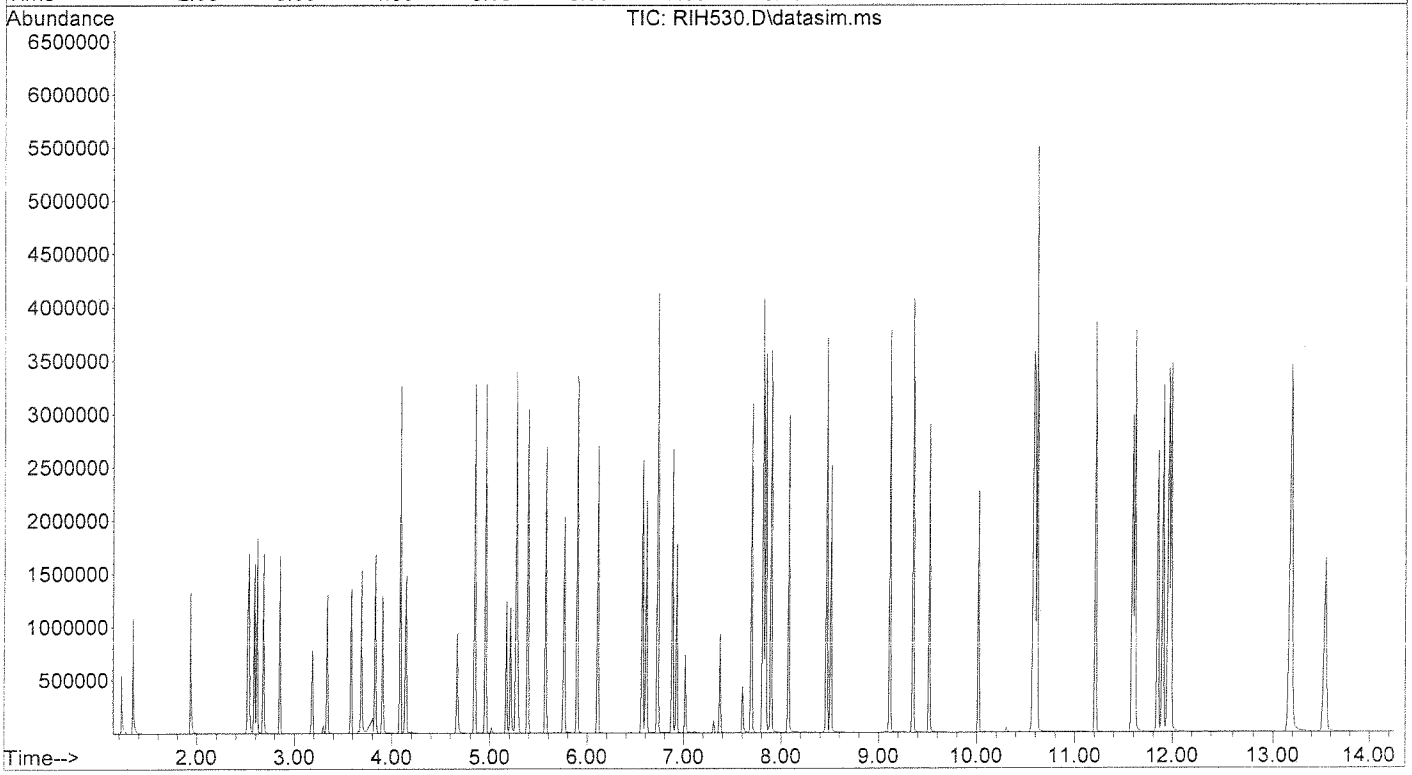
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) Benzo(k)fluoranthene	11.615	252	2493536	23.61 ppm	99
101) Benzo(e)pyrene	11.848	252	2204954	24.94 ppm	98
102) Benzo(a)pyrene	11.900	252	2423880	26.04 ppm	98
103) Perylene	11.984	252	2260505	24.05 ppm	97
104) Indeno(1,2,3-cd)pyrene	13.176	276	2623937	26.18 ppm	100
105) Dibenzo(a,h)anthracene	13.190	278	2251425	26.66 ppm	97
106) Benzo(g,h,i)perylene	13.549	276	2240109	25.52 ppm	99

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

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15I24\RIH530.D
Vial: 3
Acq On : 24 Sep 2015 10:19
Operator: KVu
Sample : CSVE7D03120
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Sep 24 10:32:46 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-CLPSVOA ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE7-014

Method File: SVE7D03S Tune File: DFTPP Start Date/Time: 4/3/15 9:19 End Date/Time: 4/3/15 16:34

ANALYTICAL BATCH: SVE7D03S

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RDH001	IBE7D0301				
	2	DFTE7D0301				
NA	3	SVE7D031	NA	NA	NA	100 ppm
	4	2				80
	5	3				50
	6	4				40
	7	5				25
	8	6				20
	9	7				10
	10	8				4
	11	9				2
	12	10				0.5
	13	11				0.15
	14	12				0.075
	15	13				0.050
	16	ISVE7D031				
	17	SVE7D03A1				100 ppm
	18	A2				80
	19	A3				50
	20	A4				40
	21	A5				25
	22	A6				10
	23	A7				4
	24	ISVE7D03A1				

RZ 4/3/15

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	4/3/15
ICAL ID	SVE7D03/03A/035

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-01-03	50
INT. STD.	SS2B-12-03-01	2000
ICV 8270-Sim	SS2C-14-03-02	25
DCC 8270-SimICAL	02-01	0.05-50
BENZIDINE ICAL	02-03	4-100
APP 9	NA	NA
APP 9 ADD	NA	NA
Benzidine ICV	SS2C-14-03-01	25
8270-Sim ICAL	02-02	80-100
Solvent	ID	
CH_2Cl_2	54184	
DATA FILE	15D03	

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Comments: Syringe ID: 499266-1

Analyzed By: RZ

Date Disposed: NA

Disposed By: NA

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-CLPSVOA ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE4-018

Method File: SVE4G135 Tune File: DFTPP Start Date/Time: 7/13/15 14:49 End Date/Time: 7/13/15 0:26

ANALYTICAL BATCH: SVE4G135

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RGJ 126	ZBE4G130/				
	127	DFTE4G130/				
NA	128	SVE4G13A1	NA	NA	NA	100 ppm
	129	A2				80
	130	A3				50
	131	A4				40
	132	A5				25
	133	A6				10
	134	A7				4
	135	ISVE4G13A1				
	136	SVE4G13 1				100 ppm
	137	2				80
	138	3				50
	139	4				40
	140	5				25
	141	6				20
	142	7				10
	143	8				4
	144	9				2
	145	10				0.5
	146	11				0.5
	147	12				0.075
	148	13				0.050
	149	ISVE4G ~~14~~	131			Pu 9/8/15
	150	SVE4G13C1				140 ppm
	151	C2				120
	152	C3				100
	153	C4				80
	154	C5				50
	155	C6				40
	156	C7				20
	157	ISVE4G13C1				

Instrument No:	E4
INITIAL CALIBRATION REFERENCE	
Date	7/13/15
ICAL ID	SVE4G13/13A/13S/13C

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-06-02	50
INT. STD.	SS2B-12-05-03	2000
ICV 8270-SIM	SS2C-14-09-03	25
DCC 8270-SIM	SS2C-14-06-03	25
BENZIDINE ICAL	SS2C-14-09-01	4-100
APP 9 ADD ICAL	SS2C-14-10-01	20-140
APP 9 ADD ICV	SS2C-14-10-02	50
8270-SIM ICAL	SS2C-14-08-02	0.05-50
8270-SIM ICAL	SS2C-14-08-03	80-100
Solvent	ID	
CH_2Cl_2	5075	
DATA FILE	15G13	

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE4	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-1 ☐

Comments: Benzidine ICV: SS2C-14-09-02, 25ppm

Analyzed By: EZ/KV

Date Disposed: NA

Disposed By: NA

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-CLPSVOA ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐

Book #: AE4-018

Method File: SVE4G13S Tune File: DFTPP Start Date/Time: 9/24/15 11:12 End Date/Time: 9/24/15 22:25

ANALYTICAL BATCH: OSVE4G1396

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RIJ472	IBE4G1396				
	473	DFTE4G1396				
	474	CSVE4G1396				
	475	CSVE4G13A96				Ben
SVI0375	476	SVI0375B		X		
	477	SL				
	478	SC				
	479	15I162-05M				
	480	05S				
SVI0385	481	SVI0385L				
	482	SC				
	483	15I162-22M				
	484	22S				
	485	22				
	486	23				
SVI0385	487	SVI0385B				
SVI0375	488	15I162-01				
	489	02				
	490	03				
	491	04				
	492	05				
	493	06				
	494	07				
	495	08				
	496	09				
	497	10				
	498	12				
	499	13				
	500	14				
	501	15				
	502	16				
	503	17				

Instrument No:	E4
INITIAL CALIBRATION REFERENCE	
Date	7/13/15
ICAL ID	SVE4G13/13S/13A

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-12-03	50
INT. STD.	SS2B-12-09-03	2000
ICV		
DCC	SS2C-14-08-02	25
BENZIDINE	09-01	25
APP 9		
APP 9 ADD		

Solvent	ID
CH_2Cl_2	JJ075
DATA FILE	15724

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE4	9/25/15

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-2 ☐

Comments:

Analyzed By: KV

Date Disposed: 9/25/15

Disposed By: KV

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☐ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-CLPSVOA ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE4-018

Method File: Tune File: Start Date/Time: 9/24/15 11:12 End Date/Time: 9/24/15 22:25

ANALYTICAL BATCH: CSVE4G1356

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
SVI0375	RIJ504	15I162-18	1	✓		
↓	505	19	↓	↓		
	506	20				
	507	21				
	508	CSVE4G1347				
					✓	9/25/15

Instrument No:	E4
INITIAL CALIBRATION REFERENCE	
Date	7/13/15
ICAL ID	SVE4G13/135/137
Standards	
Name	ID / Conc. (mg/L)
DFTPP	SS2C-14-12-03 / 50
INT. STD.	SS2B-12-08-03 / 2000
ICV	
DCC	SS2C-12-08-02 / 25
BENZIDINE	↓ 08-01 / 25
APP 9	
APP 9 ADD	
Solvent	ID
CH_2Cl_2	55075
DATA FILE	15I24
Electronic Data Archival	
Location	Date
HPCHEM_SVOA/TOE4	9/25/15

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO90-01

Syringe ID: ☑ 499766-2 ☐

Comments:

Analyzed By: KV

Date Disposed: 9/25/15

Disposed By: KV

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-CLPSVOA ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐

Method File: SVE7D03S Tune File: DFTPP Start Date/Time: 9/24/15 10:08 End Date/Time: 9/24/15 20:53 Book #: AE7-014

ANALYTICAL BATCH: CSVE7D03120

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RIH528	IBE7D03120				
	529	DFTE7D03120				
	530	CSVE7D03120				
	531	CSVE7D03A120				Ben
SVI031W	532	SVI031WB	1		X	
	533	WL				
	534	WC				
	535	15I138-06M				
	536	06S				
	537	15I133-01				
	538	15I075-01R				
	539	15I138-01				
	540	02				
	541	03				
	542	04				
	543	05				
	544	06				
	545	07				
	546	08				
	547	09				
	548	10				
	549	15I186-01	2			Dark Color
SVI038S	550	15I152-17	1	X		
	551	22				
	552	23				
	553	15I185-01				
	554	02				
	555	03				
	556	15I187-03	2			*
	557	15I210-03	2			*
	558	04	2			*
	559	15I232-01	1			

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	4/3/15
ICAL ID	SVE7D03/035

Standards		
Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-12-03	50
INT. STD.	SS2B-12-09-03	2000
ICV		
DCC	SS2C-14-08-02	25
BENZIDINE	09-01	25
APP 9		
APP 9 ADD		

Solvent	ID
CH_2Cl_2	55075
DATA FILE	15I24

Electronic Data Archival	
Location	Date
HPCHEM_SVOA/TOE7	9/25/15

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-2 ☐

Comments: *Dark Color

Analyzed By: KV

Date Disposed: 9/25/15

Disposed By: KV

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-CLPSVOA ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE7-014

Method File: SVE7D035 Tune File: DFTPP Start Date/Time: 9/24/15 10:08 End Date/Time: 9/24/15 20:53

ANALYTICAL BATCH: CSVE7D03120

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
SVI0385	RIH560	15I232-02	1	X		
↓	561	15I265-01	↓	↓		
	562	15I575-01				
	563	CSVE7D03121				+
	564	121A				++
	565	121B				++

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	4/3/15
ICAL ID	SVE7D03/03S

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-12-03	50
INT. STD.	CS2B-12-09-03	2000
ICV		
DCC	SS2C-14-08-02	25
BENZIDINE	↓ 09-01	25
APP 9		
APP 9 ADD		

Solvent	ID
CH_2Cl_2	55675
DATA FILE	15I24

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	9/25/15

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01 Syringe ID: ☑ 499766-2 ☐

Comments: + 3 Analytes > 50%
++ Changed liner run
2 DCC

Analyzed By: KV
Date Disposed: 9/25/15
Disposed By: KV

This page is checked during data review.

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG for SEMIVOLATILES

SOP	Rev. #
☐ EMAX-3520	5
☐ EMAX-3540	2
☐ EMAX-3546	0
☑ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-625	1

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

Book #: ESV-087

Preparation Batch: SVI038S

Matrix: Soil

Micropipette ID: PE00-03 (1000 µL)

Micropipette ID: PE99A-01 (200 µL)

Standards	ID	Amount Added (ml)
Surrogate	SS2A-13-01-10	0.4
LCS/MS { Full List	SS2A-13-01-07	0.2
LCS/MS } 3-Comp.	SS2B-12-10-01	0.2
LCS/MS		
LCS/MS		

Reagent	Lot# / ID
CH_2Cl_2	55075
Na_2SO_4	SW1B-001-01-22
H_2SO_4	-
NaOH	-
Silica Sand	SW1B-002-09-09
Silica Gel	-
Reagent Water	-
Residual Chlorine Strip	-
pH Strip	-
Filter Paper	9653007B

Lab Sample ID	Sonicator #	Cell #	Concentrator #
SVI038→SB	4	N/A	1
-SL	6		1
-SC	6		1
I152→17	4		1
-22	6		1
-23	6		1
I162→22	4		2
-22M	6		2
-22S	6		2
-23	4		2
I185→01	6		2
-02	6		2
-03	4		3
I187→03	6		3
I210→02	6		3
-04	4		3
I232→01	6		3
-02	6		4
I265→01	4		4
I575→01	4		4

TUNING	
Sonicator #	Reading
4	50%
6	60%

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1	35	35
2	35	35
3	35	35
4	35	35
5		
6		
8		

Thermometer ID = SVOC-T1

Prepared By: [illegible] Witnessed By: ML

Standard Added By: [illegible] Checked By: ML

Extract Received By: MV 9/24/15 Location: SE01 # 17

Disposed By: Disposed On:

FileID: SVI038S

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR SEMIVOLATILES

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
15SVI038S01	SVI038SB	30	g	9/23/15 11:56	2	30	2	1	
15SVI038S02	SVI038SL	30	g	9/23/15 11:56	2	30	2	1	
15SVI038S03	SVI038SC	30	g	9/23/15 11:56	2	30	2	1	
15SVI038S04	I152-17	30.02	g	9/23/15 11:59	2	30	2	1	amber
15SVI038S05	I152-22	30.01	g	9/23/15 11:59	2	30	2	1	yellow
15SVI038S06	I152-23	30	g	9/23/15 12:02	2	30	2	1	yellow
15SVI038S07	I162-22	30.01	g	9/23/15 12:02	2	30	2	1	clear
15SVI038S08	I162-22M	30	g	9/23/15 12:04	2	30	2	1	clear
15SVI038S09	I162-22S	30	g	9/23/15 12:04	2	30	2	1	clear
15SVI038S10	I162-23	30.02	g	9/23/15 12:06	2	30	2	1	clear
15SVI038S11	I185-01	30	g	9/23/15 12:06	2	30	2	1	clear
15SVI038S12	I185-02	30.03	g	9/23/15 12:07	2	30	2	1	clear
15SVI038S13	I185-03	30	g	9/23/15 12:07	2	30	2	1	clear
15SVI038S14	I187-03	30.01	g	9/23/15 12:08	2	30	2	1	black
15SVI038S15	I210-03	30.02	g	9/23/15 12:09	2	30	2	1	black
15SVI038S16	I210-04	30	g	9/23/15 12:09	2	30	2	1	black
15SVI038S17	I232-01	30.02	g	9/23/15 12:10	2	30	2	1	brown
15SVI038S18	I232-02	30.02	g	9/23/15 12:12	2	30	2	1	yellow
15SVI038S19	I265-01	30.03	g	9/23/15 12:12	2	30	2	1	yellow
15SVI038S20	I575-01	30.02	g	9/23/15 12:17	2	30	2	1	orange

Balance ID: 10304418. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 9/23/15 18:12 ☐ pHAdj(≤2) @

Prepared By: JVille

☑ Extraction Ended @ 9/23/15 20:40 ☐ pHAdj(≥11) @

Checked By: ML

Comments:

Date 9/23/15

SOP EMAX-3550 Rev. 4

SEMI VOLATILE ORGANICS TCLP

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 12:30
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	10/01/15 13:37
Lab Samp ID:	I185-04	Dilution Factor:	10
Lab File ID:	RJH011	Matrix :	LEACHATE
Ext Btch ID:	SVI044W	% Moisture :	NA
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	447	600.0	74.5	40-125
2-FLUOROBIPHENYL	154	200.0	77.1	50-110
2-FLUOROPHENOL	248	600.0	41.4	20-110
NITROBENZENE-D5	159	200.0	79.4	40-110
PHENOL-D5	363	600.0	60.5	10-115
TERPHENYL-D14	153	200.0	76.4	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 09/23/15 15:30

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH011.D Vial: 11
Acq On : 1 Oct 2015 13:37 Operator: KVu
Sample : 15I185-04 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 14 11:02:11 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	560856	40.00	ppm	0.00
21) Naphthalene-d8	4.050	136	2060236	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	1297817	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	2352288	40.00	ppm	0.00
87) Chrysene-d12	10.575	240	2626751	40.00	ppm	0.00
97) Perylene-d12	11.947	264	2313968	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	205004	12.42	ppm	0.00
Spiked Amount 30.000			Recovery	=	41.40%	
6) Phenol-d5	2.501	99	359289	18.14	ppm	0.00
Spiked Amount 30.000			Recovery	=	60.47%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.325	82	148632	7.94	ppm	0.00
Spiked Amount 10.000			Recovery	=	79.40%	
46) 2-Fluorobiphenyl	5.258	172	389555	7.71	ppm	0.00
Spiked Amount 10.000			Recovery	=	77.10%	
75) 2,4,6-Tribromophenol	6.997	330	142847	22.34	ppm	0.00
Spiked Amount 30.000			Recovery	=	74.47%	
90) Terphenyl-d14	9.509	244	425651	7.64	ppm	0.00
Spiked Amount 10.000			Recovery	=	76.40%	

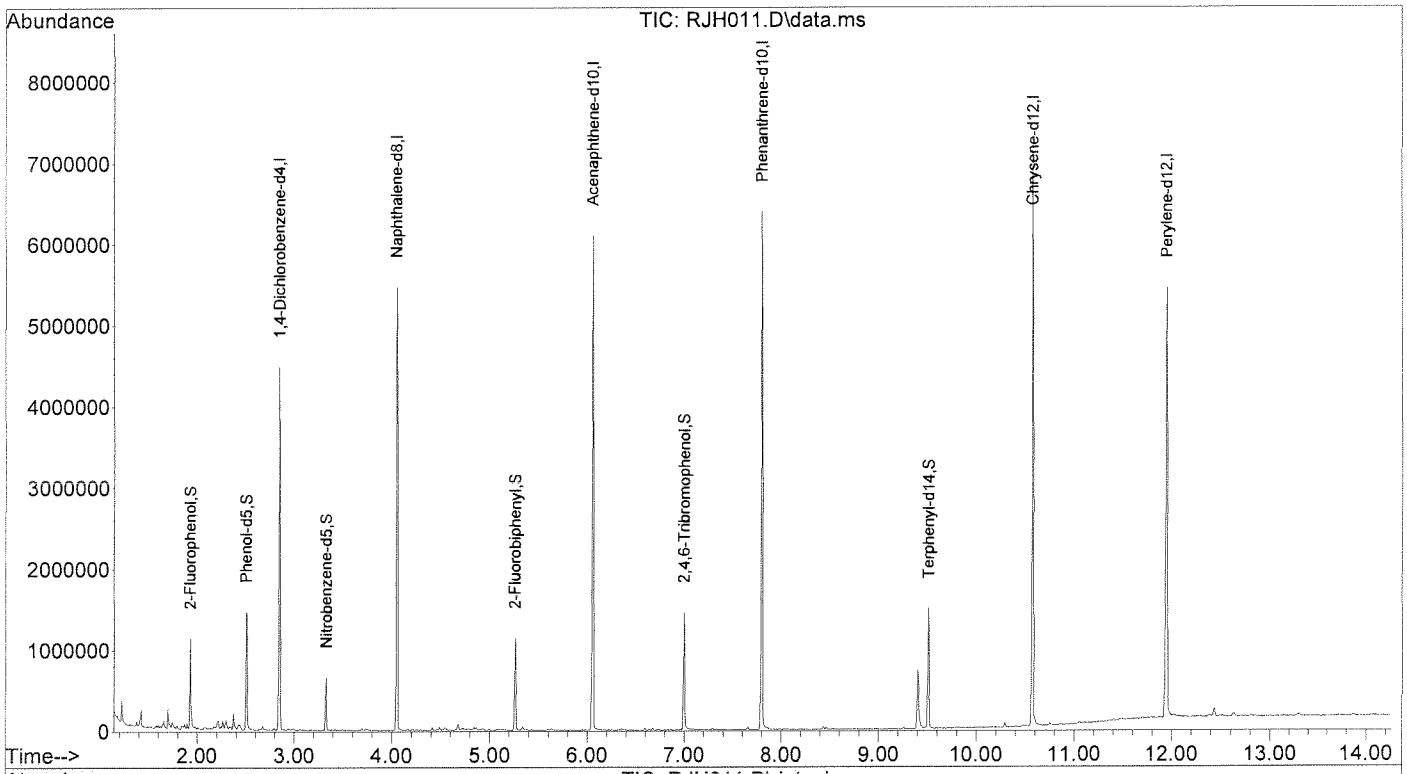
Target Compounds Qvalue

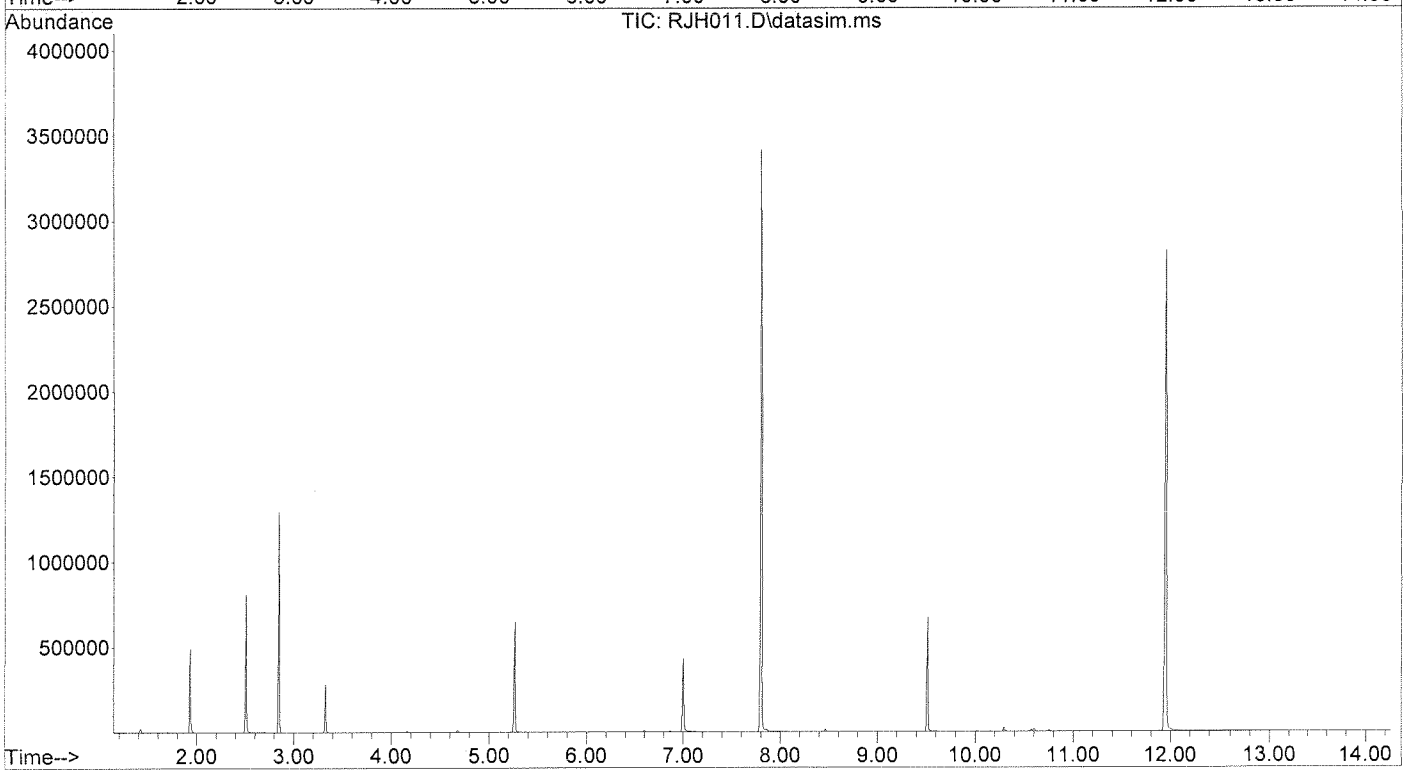
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH011.D
Acq On : 1 Oct 2015 13:37
Sample : 15I185-04
Misc :
Integrator: RTE
Quant Time: Oct 14 11:02:11 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 11
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 12:30
Sample ID:	CAFB-FT006-WC2-002	Date Analyzed:	10/01/15 13:56
Lab Samp ID:	I185-05	Dilution Factor:	10
Lab File ID:	RJH012	Matrix :	LEACHATE
Ext Btch ID:	SVI044W	% Moisture :	NA
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	474	600.0	79.1	40-125
2-FLUOROBIPHENYL	160	200.0	80.0	50-110
2-FLUOROPHENOL	395	600.0	65.8	20-110
NITROBENZENE-D5	170	200.0	85.0	40-110
PHENOL-D5	473	600.0	78.8	10-115
TERPHENYL-D14	153	200.0	76.5	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 09/23/15 15:30

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH012.D Vial: 12
Acq On : 1 Oct 2015 13:56 Operator: KVu
Sample : 15I185-05 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 14 11:02:25 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	552479	40.00	ppm	0.00
21) Naphthalene-d8	4.050	136	2029072	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	1276992	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	2307578	40.00	ppm	0.00
87) Chrysene-d12	10.575	240	2592079	40.00	ppm	0.00
97) Perylene-d12	11.947	264	2267199	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	320730	19.73	ppm	0.00
Spiked Amount 30.000			Recovery = 65.77%			
6) Phenol-d5	2.506	99	460939	23.63	ppm	0.00
Spiked Amount 30.000			Recovery = 78.77%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.325	82	156608	8.50	ppm	0.00
Spiked Amount 10.000			Recovery = 85.00%			
46) 2-Fluorobiphenyl	5.258	172	397602	8.00	ppm	0.00
Spiked Amount 10.000			Recovery = 80.00%			
75) 2,4,6-Tribromophenol	6.997	330	148827	23.72	ppm	0.00
Spiked Amount 30.000			Recovery = 79.07%			
90) Terphenyl-d14	9.509	244	420328	7.65	ppm	0.00
Spiked Amount 10.000			Recovery = 76.50%			

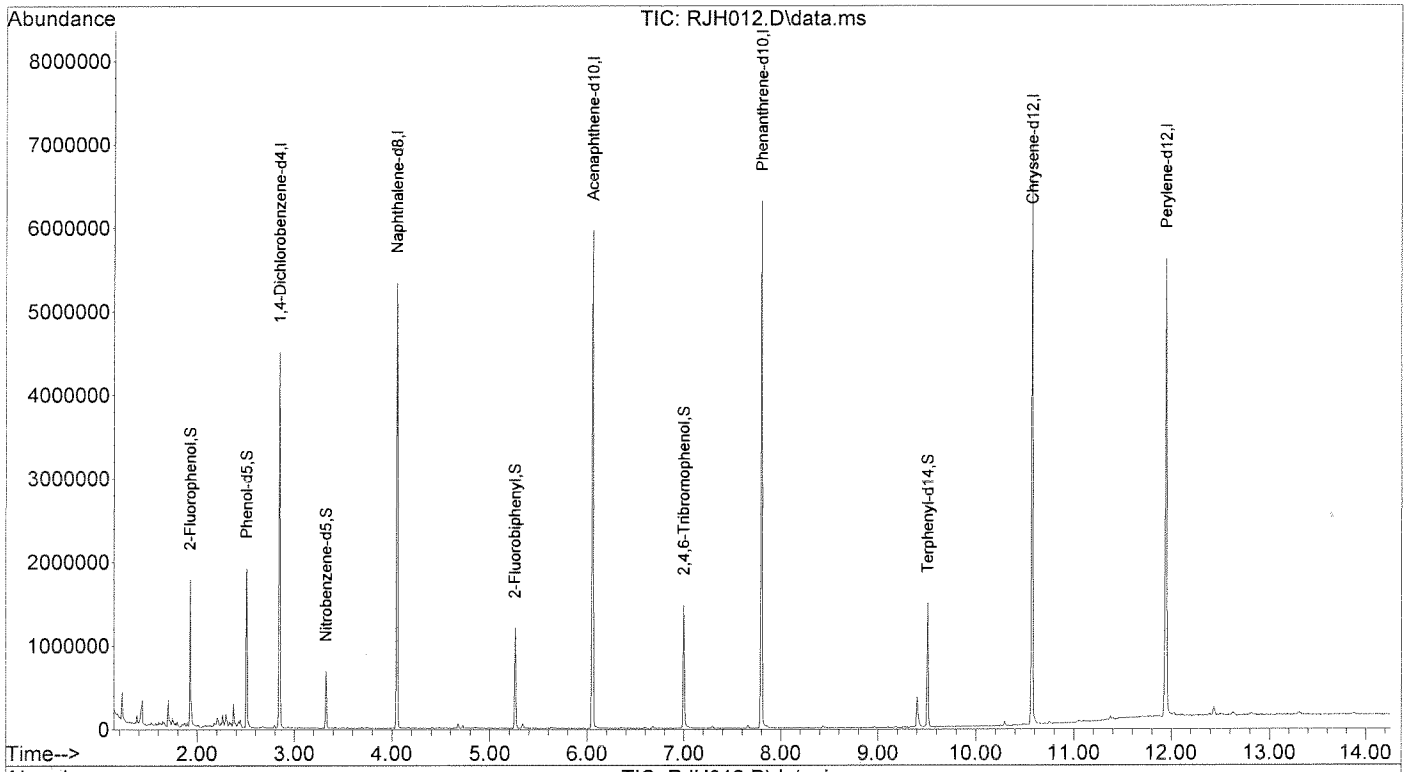
Target Compounds Qvalue

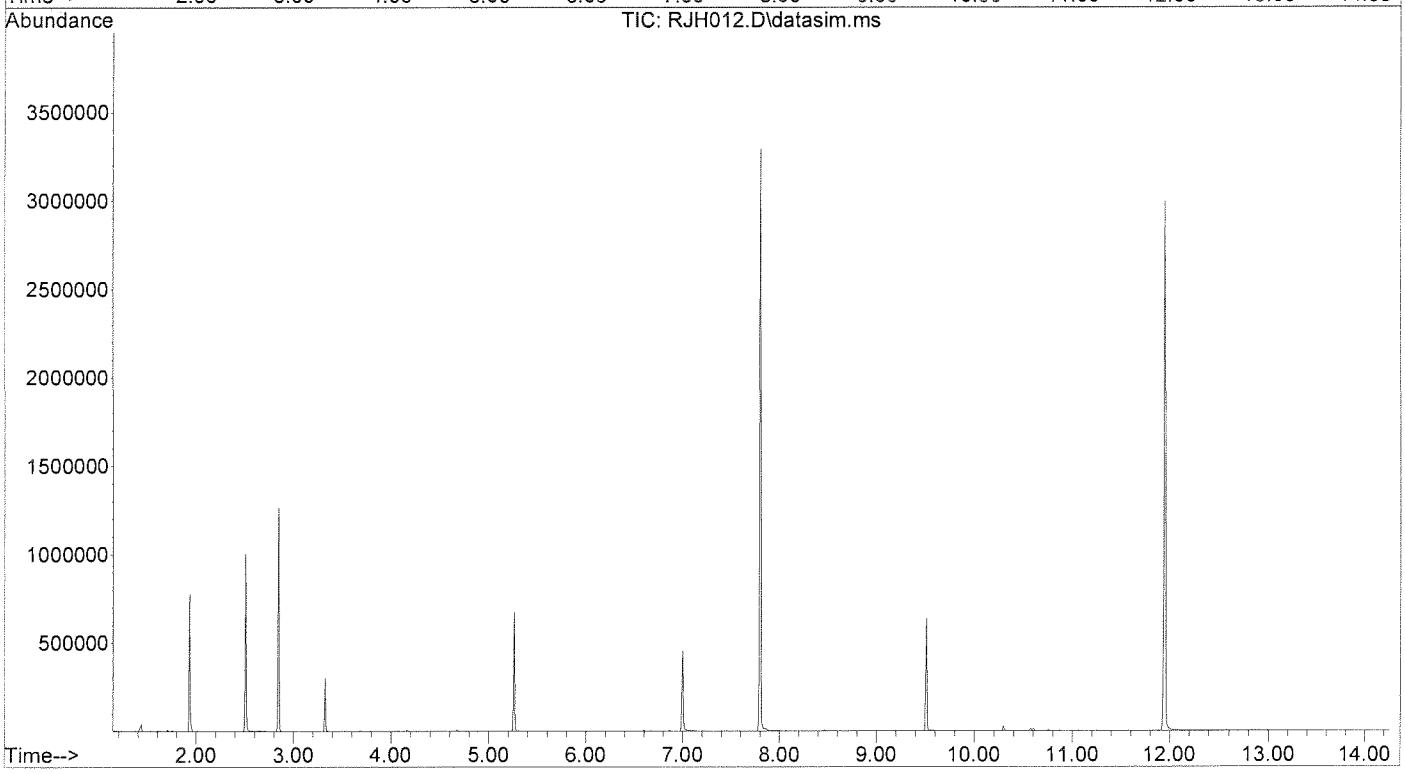
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH012.D
Acq On : 1 Oct 2015 13:56
Sample : 15I185-05
Misc :
Integrator: RTE
Quant Time: Oct 14 11:02:25 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 12
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 151185	Date Extracted:	09/25/15 12:30
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	10/01/15 14:15
Lab Samp ID:	I185-06	Dilution Factor:	10
Lab File ID:	RJH013	Matrix :	LEACHATE
Ext Btch ID:	SVI044W	% Moisture :	NA
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	502	600.0	83.7	40-125
2-FLUOROBIPHENYL	165	200.0	82.7	50-110
2-FLUOROPHENOL	387	600.0	64.5	20-110
NITROBENZENE-D5	170	200.0	84.9	40-110
PHENOL-D5	464	600.0	77.4	10-115
TERPHENYL-D14	164	200.0	81.9	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 09/23/15 15:30

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH013.D Vial: 13
Acq On : 1 Oct 2015 14:15 Operator: KVu
Sample : 15I185-06 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 14 11:02:36 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

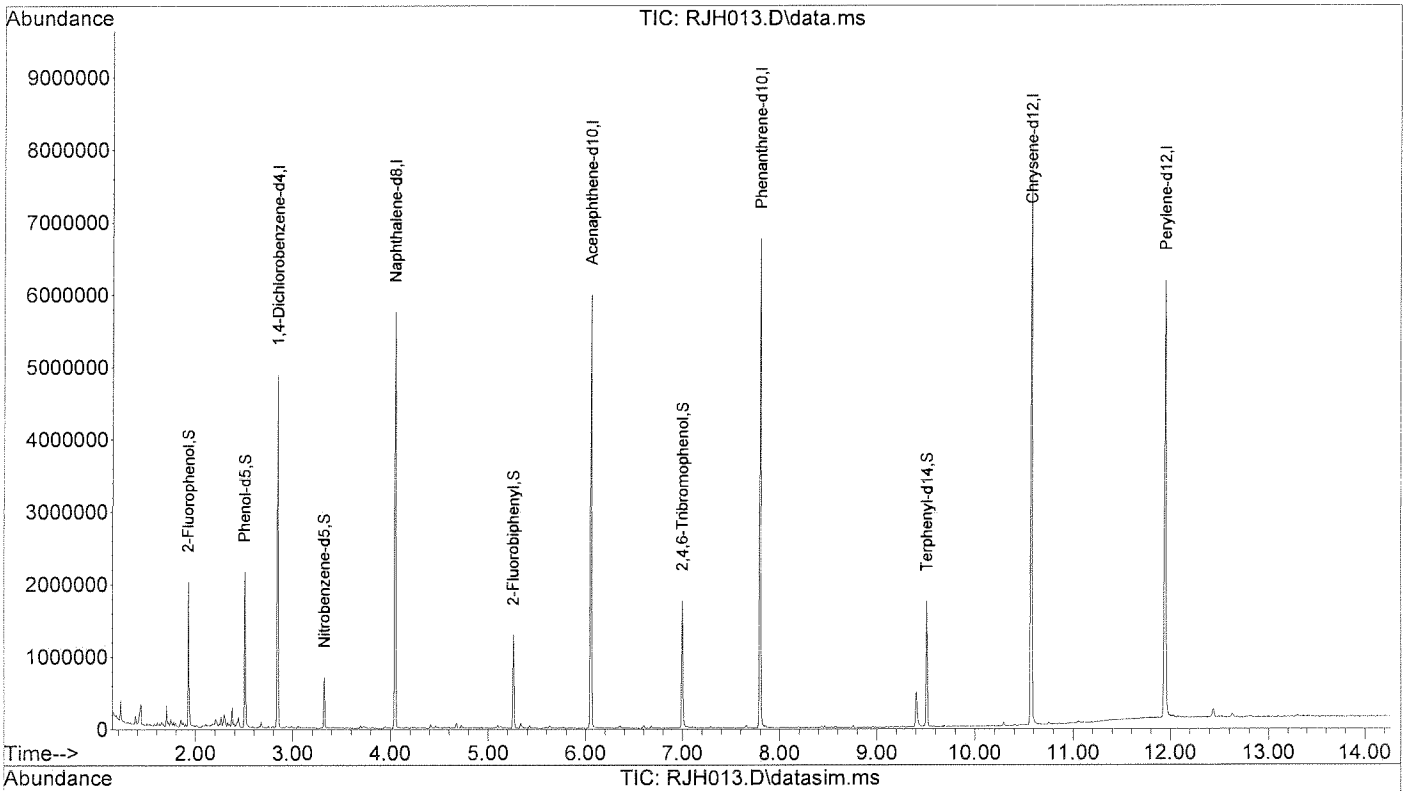
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	575479	40.00	ppm	0.00
21) Naphthalene-d8	4.050	136	2100658	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	1285702	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	2565561	40.00	ppm	0.00
87) Chrysene-d12	10.575	240	2949716	40.00	ppm	0.00
97) Perylene-d12	11.946	264	2678070	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	327759	19.35	ppm	0.00
Spiked Amount 30.000			Recovery	=	64.50%	
6) Phenol-d5	2.506	99	471932	23.22	ppm	0.00
Spiked Amount 30.000			Recovery	=	77.40%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.325	82	161897	8.49	ppm	0.00
Spiked Amount 10.000			Recovery	=	84.90%	
46) 2-Fluorobiphenyl	5.258	172	414299	8.27	ppm	0.00
Spiked Amount 10.000			Recovery	=	82.70%	
75) 2,4,6-Tribromophenol	6.996	330	175238	25.12	ppm	0.00
Spiked Amount 30.000			Recovery	=	83.73%	
90) Terphenyl-d14	9.508	244	512093	8.19	ppm	0.00
Spiked Amount 10.000			Recovery	=	81.90%	

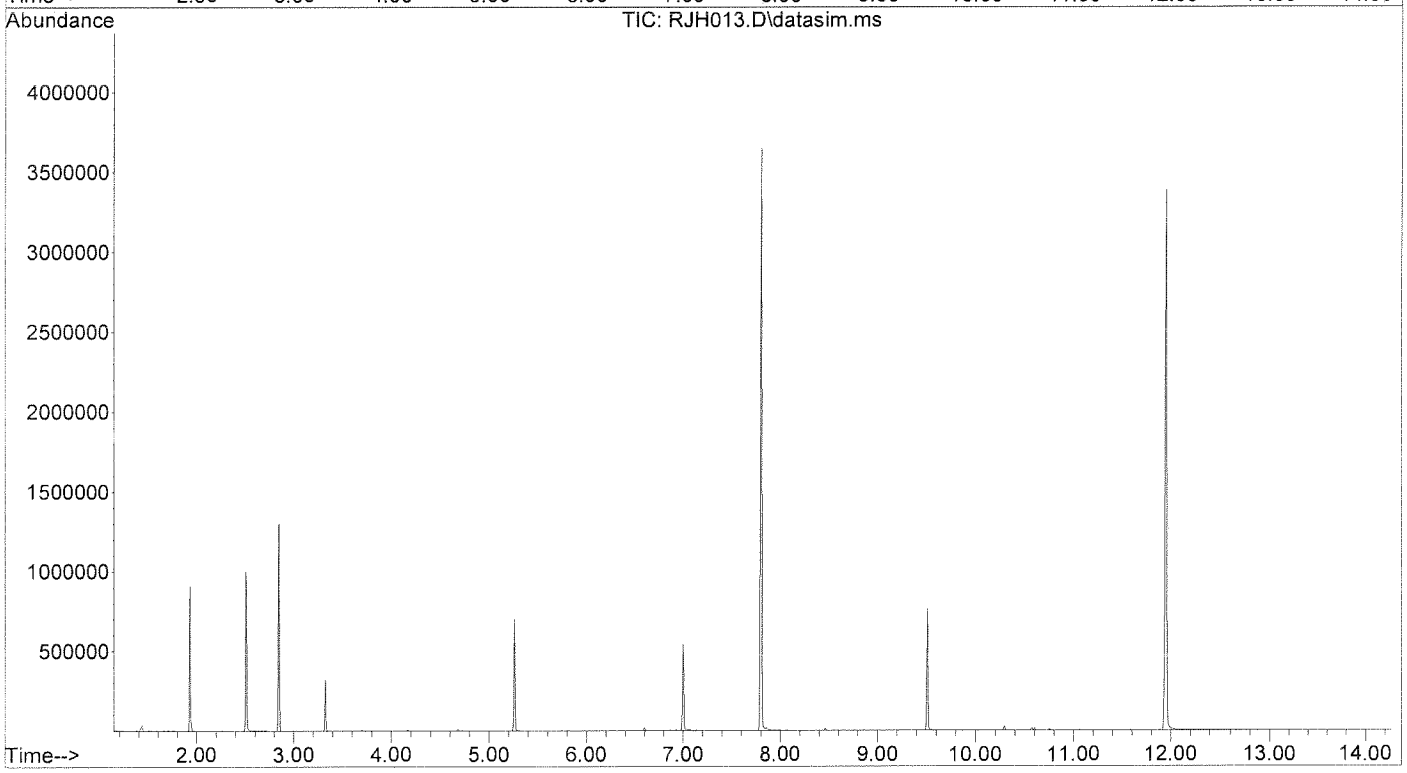
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH013.D Vial: 13
Acq On : 1 Oct 2015 14:15 Operator: KVu
Sample : 15I185-06 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 14 11:02:36 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





QC SUMMARIES

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 151185	Date Extracted:	09/25/15 12:30
Sample ID:	MBLK1W	Date Analyzed:	10/01/15 12:20
Lab Samp ID:	SVI044WB	Dilution Factor:	1
Lab File ID:	RJH007	Matrix	: WATER
Ext Btch ID:	SVI044W	% Moisture	: NA
Calib. Ref.:	RDH007	Instrument ID	: T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	10	2.5	5.0
2,4,6-TRICHLOROPHENOL	ND	10	2.5	5.0
2,4-DINITROTOLUENE	ND	10	2.5	5.0
2-METHYLPHENOL	ND	10	2.5	5.0
4-METHYLPHENOL (1)	ND	10	2.5	5.0
HEXACHLOROBENZENE	ND	10	2.5	5.0
HEXACHLOROBUTADIENE	ND	10	2.5	5.0
HEXACHLOROETHANE	ND	10	2.5	5.0
NITROBENZENE	ND	10	2.5	5.0
PENTACHLOROPHENOL	ND	20	2.5	5.0
PYRIDINE	ND	40	11	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	45.8	60.00	76.3	40-125
2-FLUOROBIPHENYL	13.7	20.00	68.4	50-110
2-FLUOROPHENOL	34.2	60.00	56.9	20-110
NITROBENZENE-D5	16.6	20.00	83.1	40-110
PHENOL-D5	44.7	60.00	74.5	10-115
TERPHENYL-D14	15.2	20.00	75.8	50-135

(1): Cannot be separated from 3-Methylphenol

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 12:30
Sample ID:	MBLK2W	Date Analyzed:	10/01/15 13:18
Lab Samp ID:	TXI007SB	Dilution Factor:	10
Lab File ID:	RJH010	Matrix :	LEACHATE
Ext Btch ID:	SVI044W	% Moisture :	NA
Calib. Ref.:	RDH007	Instrument ID :	T-OE7

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	481	600.0	80.1	40-125
2-FLUOROBIPHENYL	160	200.0	80.2	50-110
2-FLUOROPHENOL	353	600.0	58.9	20-110
NITROBENZENE-D5	167	200.0	83.6	40-110
PHENOL-D5	459	600.0	76.5	10-115
TERPHENYL-D14	155	200.0	77.6	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 09/23/15 15:30

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/3520C/8270D

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	SVI044WB	SVI044WL	SVI044WC		
LAB FILE ID:	RJH007	RJH008	RJH009		
DATE EXTRACTED:	09/25/1512:30	09/25/1512:30	09/25/1512:30	DATE COLLECTED:	NA
DATE ANALYZED:	10/01/1512:20	10/01/1512:40	10/01/1512:59	DATE RECEIVED:	09/25/15
PREP. BATCH:	SVI044W	SVI044W	SVI044W		
CALIB. REF:	RDH007	RDH007	RDH007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
2,4,5-Trichlorophenol	ND	40.0	23.8	59	40.0	34.8	87	38*	50-110	30
2,4,6-Trichlorophenol	ND	40.0	23.8	60	40.0	35.4	89	39*	50-115	30
2,4-Dinitrotoluene	ND	40.0	30.9	77	40.0	30.6	77	1	50-120	30
2-Methylphenol	ND	40.0	22.1	55	40.0	31.0	77	34*	40-110	30
4-Methylphenol	ND	40.0	23.1	58	40.0	33.0	82	35*	30-110	30
Hexachlorobenzene	ND	40.0	30.9	77	40.0	31.3	78	1	50-110	30
Hexachlorobutadiene	ND	40.0	27.2	68	40.0	31.7	79	15	25-105	30
Hexachloroethane	ND	40.0	19.8	50	40.0	22.8	57	14	30-100	30
Nitrobenzene	ND	40.0	25.8	65	40.0	29.7	74	14	45-110	30
Pentachlorophenol	ND	40.0	25.7	64	40.0	33.6	84	27	40-115	30
Pyridine	ND	80.0	43.5	54	80.0	56.1	70	25	30-160	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	60.0	35.3	59	60.0	50.7	84	40-125
2-Fluorobiphenyl	20.0	11.8	59	20.0	14.5	73	50-110
2-Fluorophenol	60.0	16.0	27	60.0	33.7	56	20-110
Nitrobenzene-d5	20.0	12.5	63	20.0	16.1	80	40-110
Phenol-d5	60.0	26.6	44	60.0	44.3	74	10-115
Terphenyl-d14	20.0	14.9	75	20.0	15.3	77	50-135

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH007.D Vial: 7
Acq On : 1 Oct 2015 12:20 Operator: KVu
Sample : SVI044WB Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 14 10:58:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	518477	40.00	ppm	0.00
21) Naphthalene-d8	4.050	136	1944860	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	1217249	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	2194523	40.00	ppm	0.00
87) Chrysene-d12	10.580	240	2402599	40.00	ppm	0.00
97) Perylene-d12	11.951	264	2190160	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	260684	17.08	ppm	0.00
Spiked Amount 30.000			Recovery = 56.93%			
6) Phenol-d5	2.506	99	409296	22.36	ppm	0.00
Spiked Amount 30.000			Recovery = 74.53%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.325	82	146679	8.30	ppm	0.00
Spiked Amount 10.000			Recovery = 83.00%			
46) 2-Fluorobiphenyl	5.263	172	324029	6.84	ppm	0.00
Spiked Amount 10.000			Recovery = 68.40%			
75) 2,4,6-Tribromophenol	7.002	330	136491	22.88	ppm	0.00
Spiked Amount 30.000			Recovery = 76.27%			
90) Terphenyl-d14	9.513	244	385894	7.58	ppm	0.00
Spiked Amount 10.000			Recovery = 75.80%			

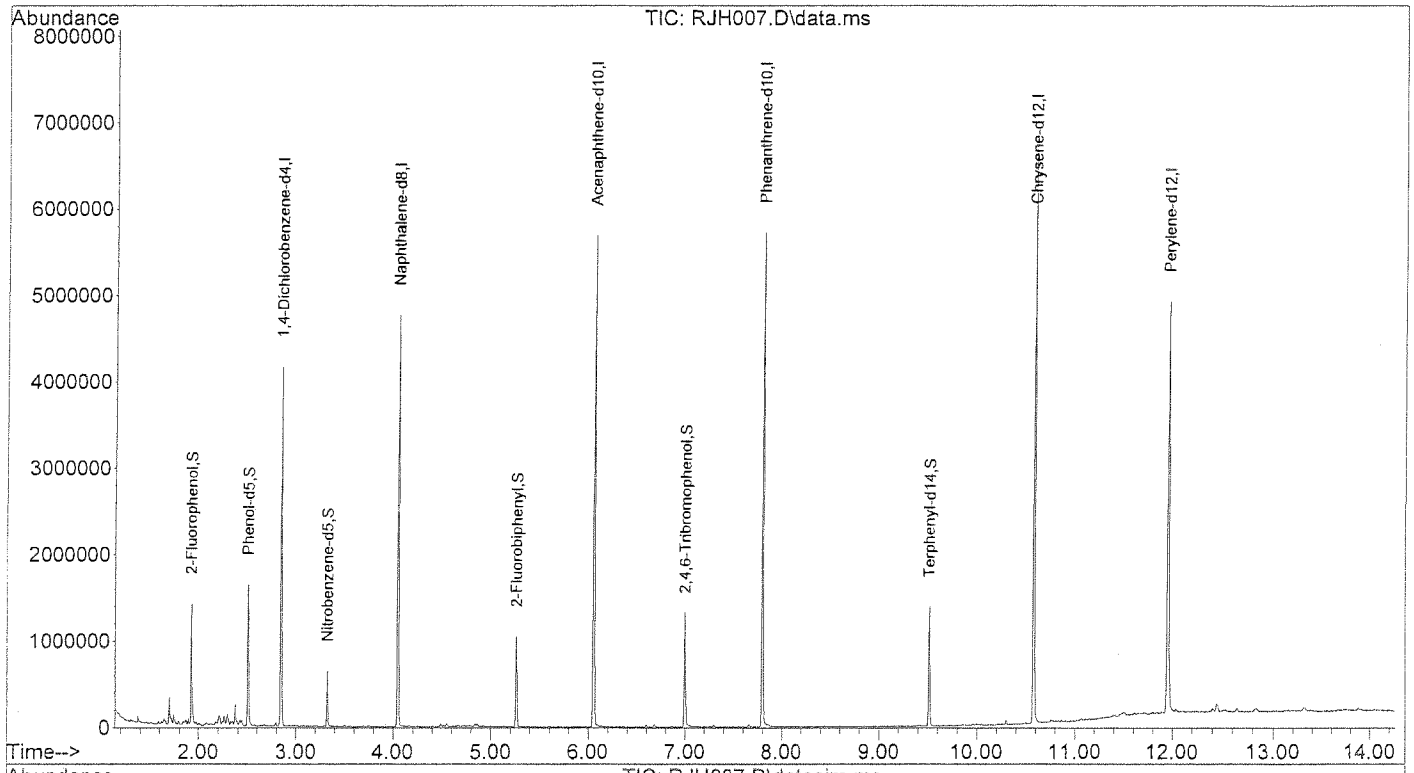
Target Compounds Qvalue

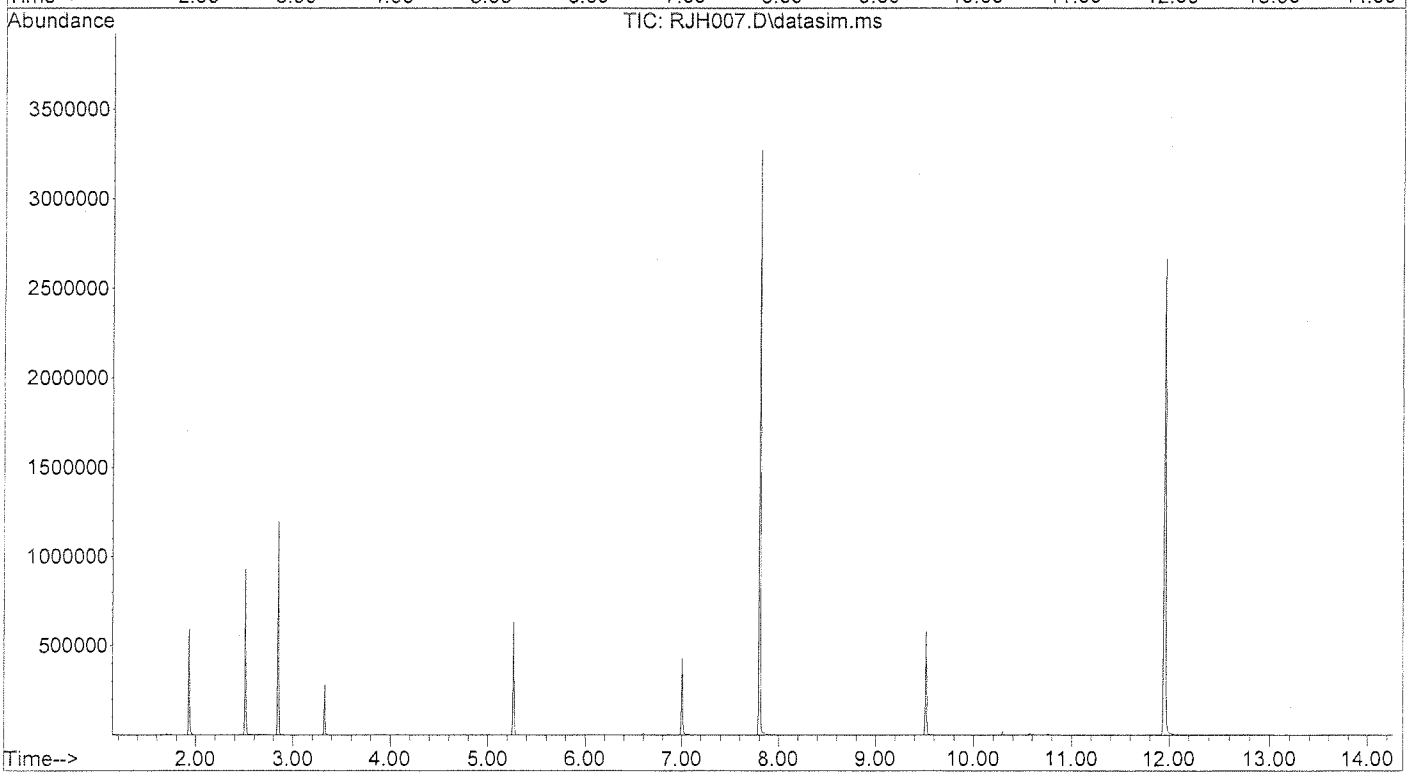
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH007.D
Acq On : 1 Oct 2015 12:20
Sample : SVI044WB
Misc :
Integrator: RTE
Quant Time: Oct 14 10:58:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 7
Operator: KVu
Inst : E7
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH008.D
Acq On : 1 Oct 2015 12:40
Sample : SVI044WL
Misc :
Integrator: RTE
Quant Time: Oct 14 10:58:59 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 8
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	562170	40.00	ppm	0.00
21) Naphthalene-d8	4.055	136	2083513	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	1316068	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	2362968	40.00	ppm	0.00
87) Chrysene-d12	10.579	240	2646624	40.00	ppm	0.00
97) Perylene-d12	11.951	264	2329033	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	132595	8.01	ppm	0.00
Spiked Amount 30.000			Recovery = 26.70%			
6) Phenol-d5	2.506	99	263931	13.30	ppm	0.00
Spiked Amount 30.000			Recovery = 44.33%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.325	82	118713	6.27	ppm	0.00
Spiked Amount 10.000			Recovery = 62.70%			
46) 2-Fluorobiphenyl	5.258	172	301989	5.89	ppm	0.00
Spiked Amount 10.000			Recovery = 58.90%			
75) 2,4,6-Tribromophenol	7.001	330	113523	17.67	ppm	0.00
Spiked Amount 30.000			Recovery = 58.90%			
90) Terphenyl-d14	9.513	244	419129	7.47	ppm	0.00
Spiked Amount 10.000			Recovery = 74.70%			
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.333	74	116225	12.25	ppm	89
4) Pyridine	1.362	79	366550	21.73	ppm	93
7) Phenol	2.517	94	192029	9.63	ppm	86
8) Aniline	2.579	93	322072	12.55	ppm	96
9) bis(2-chloroethyl)ether	2.605	93	183507	11.49	ppm	100
10) 2-Chlorophenol	2.673	128	169975	9.80	ppm	94
11) 1,3-Dichlorobenzene	2.797	146	245646	11.47	ppm	96
13) 1,4-Dichlorobenzene	2.860	146	260136	11.71	ppm	94
14) Benzyl alcohol	2.936	108	152433	13.69	ppm	91
15) 1,2-Dichlorobenzene	2.989	146	243030	11.55	ppm	96
16) 2-Methylphenol	3.018	107	149114	11.03	ppm	97
17) bis(2-chloroisopropyl)...	3.051	45	409894	11.12	ppm	97
18) 4-Methylphenol	3.152	107	204495	11.53	ppm	96
19) N-Nitroso-di-n-propyla...	3.171	70	167531	14.09	ppm	96
20) Hexachloroethane	3.291	117	98630	9.91	ppm	98
23) Nitrobenzene	3.344	77	258899	12.92	ppm	95
24) Isophorone	3.569	82	495814	13.07	ppm	98
25) 2-Nitrophenol	3.651	139	102273	11.36	ppm	98
26) 2,4-Dimethylphenol	3.675	107	246158	13.73	ppm	91
27) Benzoic acid	3.746	105	242010	19.62	ppm	98
28) bis(2-Chloroethoxy)met...	3.780	93	270189	12.62	ppm	100
29) 3,5-Dimethylphenol	3.814	107	265169	12.86	ppm	94
30) 2,4-Dichlorophenol	3.890	162	169576	10.26	ppm	96
31) 1,2,4-Trichlorobenzene	3.987	180	265544	13.26	ppm	100
32) 3,4-Dimethylphenol	3.987	107	295183	13.39	ppm	93
33) Naphthalene	4.074	128	714885	12.54	ppm	100
34) 4-Chloroaniline	4.122	127	303860	13.34	ppm	98
35) 2,6-Dichlorophenol	4.132	162	170291	10.31	ppm	97
36) Hexachlorobutadiene	4.199	225	175135	13.61	ppm	98

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH008.D Vial: 8
Acq On : 1 Oct 2015 12:40 Operator: KVu
Sample : SVI044WL Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 14 10:58:59 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

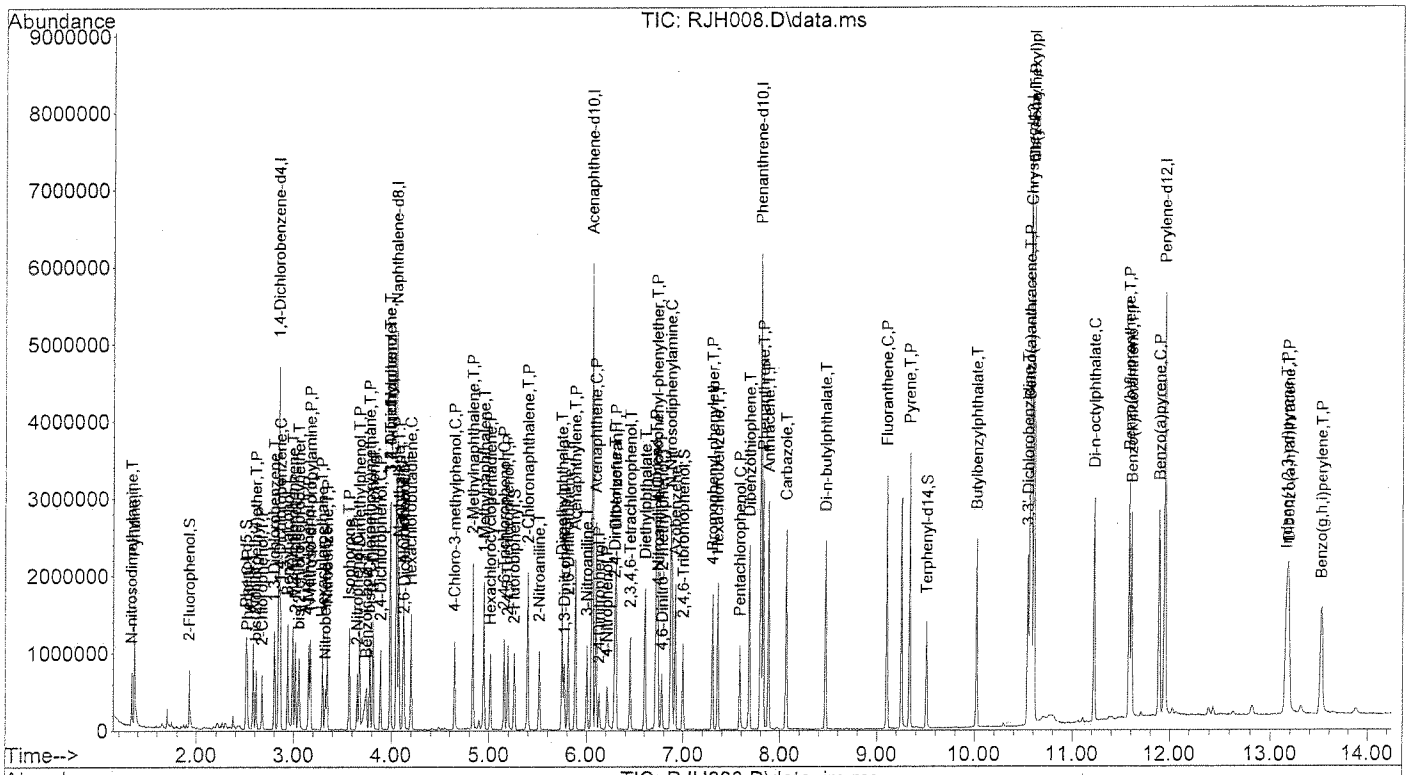
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38)	4-Chloro-3-methylphenol	4.648	107	186695	13.12	ppm	96
39)	2-Methylnaphthalene	4.835	142	507521	12.88	ppm	98
40)	1-Methylnaphthalene	4.950	142	487788	13.55	ppm	98
42)	Hexachlorocyclopentadiene	5.012	237	163926	11.70	ppm	97
44)	2,4,6-Trichlorophenol	5.151	196	157326	11.92	ppm	99
45)	2,4,5-Trichlorophenol	5.190	196	162290	11.88	ppm	98
49)	2-Chloronaphthalene	5.397	162	548074	12.79	ppm	97
50)	2-Nitroaniline	5.512	65	189439	17.41	ppm	99
53)	Dimethylphthalate	5.748	163	722359	15.07	ppm	100
54)	1,3-Dinitrobenzene	5.772	168	94125	15.47	ppm	93
55)	2,6-Dinitrotoluene	5.810	165	147618	14.83	ppm	94
57)	Acenaphthylene	5.883	152	1006526	14.48	ppm	96
58)	3-Nitroaniline	6.003	138	145307	14.83	ppm	96
59)	Acenaphthene	6.094	153	616180	13.84	ppm	100
60)	2,4-Dinitrophenol	6.128	184	53979	11.79	ppm	96
61)	4-Nitrophenol	6.209	109	90414	18.24	ppm	84
62)	2,4-Dinitrotoluene	6.291	165	197157	15.44	ppm	91
63)	Dibenzofuran	6.300	168	823281	14.51	ppm	94
65)	2,3,4,6-Tetrachlorophenol	6.449	232	149813	12.39	ppm	98
67)	Diethylphthalate	6.605	149	738375	16.25	ppm	99
68)	Fluorene	6.713	166	702269	14.86	ppm	99
69)	4-Chlorophenyl-phenyle...	6.727	204	384364	15.78	ppm	99
70)	4-Nitroaniline	6.737	138	150365	16.00	ppm	95
72)	4,6-Dinitro-2-methylph...	6.779	198	95567	13.62	ppm	96
73)	N-Nitrosodiphenylamine	6.868	169	653770	17.36	ppm	95
74)	Azobenzene	6.916	77	619113	15.43	ppm	99
76)	4-Bromophenyl-phenylether	7.300	248	221010	15.37	ppm	98
77)	Hexachlorobenzene	7.356	284	243176	15.47	ppm	98
78)	Pentachlorophenol	7.583	266	111125	12.87	ppm	95
79)	Dibenzothiophene	7.682	184	1039037	15.70	ppm	98
80)	Phenanthrene	7.825	178	1105558	15.67	ppm	99
82)	Anthracene	7.880	178	1100485	15.18	ppm	99
83)	Carbazole	8.061	167	1005367	16.98	ppm	99
84)	Di-n-butylphthalate	8.468	149	1239853	16.99	ppm	99
86)	Fluoranthene	9.101	202	1295094	16.31	ppm	100
89)	Pyrene	9.337	202	1379661	15.09	ppm	97
91)	Butylbenzylphthalate	10.022	149	556381	18.34	ppm	96
93)	3,3'-Dichlorobenzidine	10.545	252	482787	17.44	ppm	98
94)	Benzo(a)anthracene	10.565	228	1317285	17.01	ppm	97
95)	Chrysene	10.604	228	1320991	17.26	ppm	98
96)	bis(2-Ethylhexyl)phtha...	10.604	149	842003	18.11	ppm	99
98)	Di-n-octylphthalate	11.225	149	1403120	19.35	ppm	100
99)	Benzo(b)fluoranthene	11.580	252	1209564	17.12	ppm	97
100)	Benzo(k)fluoranthene	11.605	252	1042414	13.37	ppm	99
102)	Benzo(a)pyrene	11.890	252	1191029	17.33	ppm	99
104)	Indeno(1,2,3-cd)pyrene	13.160	276	1302593	17.60	ppm	95
105)	Dibenzo(a,h)anthracene	13.180	278	1070993	17.18	ppm	97
106)	Benzo(g,h,i)perylene	13.520	276	1078142	16.63	ppm	97

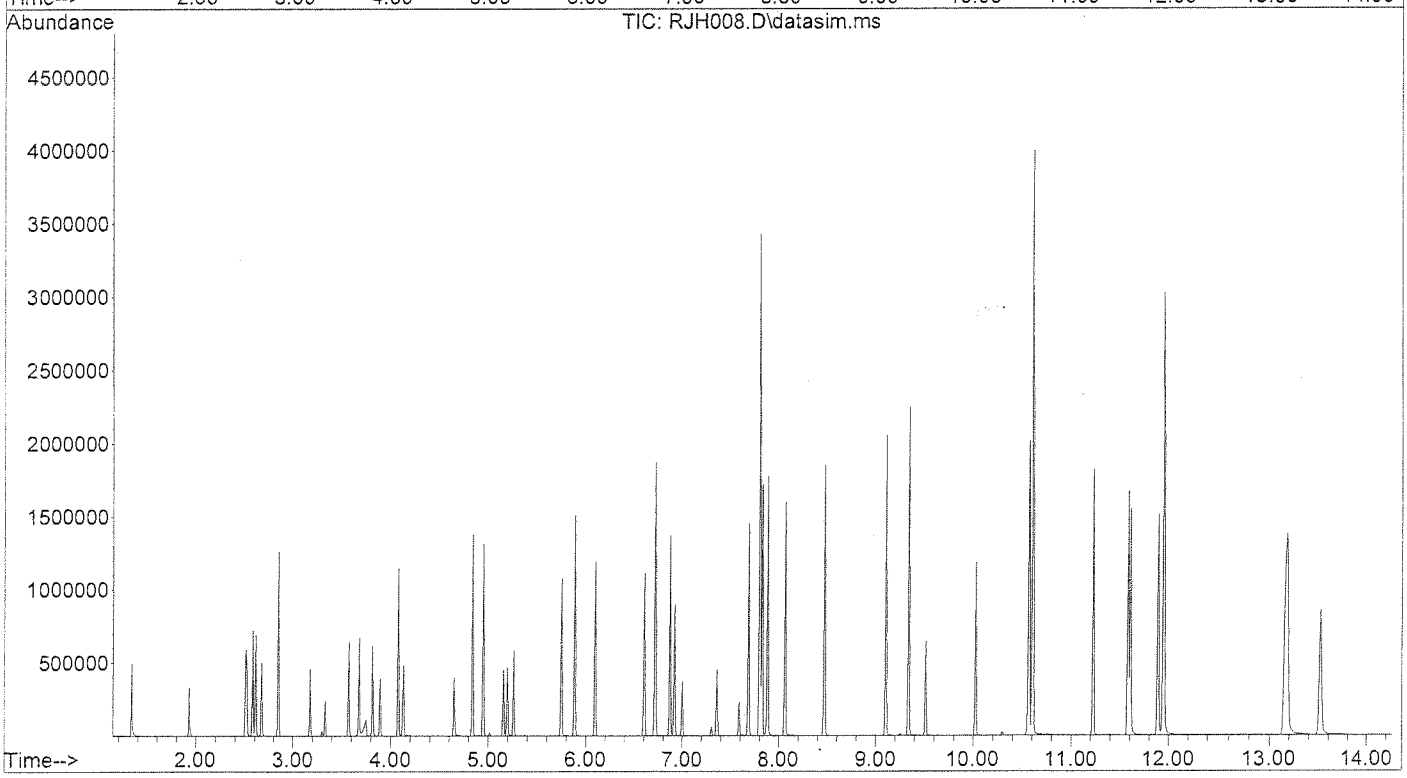
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH008.D
Acq On : 1 Oct 2015 12:40
Sample : SVI044WL
Misc :
Integrator: RTE
Quant Time: Oct 14 10:58:59 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 8
Operator: KVu
Inst : E7
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH009.D
Acq On : 1 Oct 2015 12:59
Sample : SVI044WC
Misc :
Integrator: RTE
Quant Time: Oct 14 10:59:25 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	564771	40.00	ppm	0.00
21) Naphthalene-d8	4.050	136	2087299	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	1308055	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	2352112	40.00	ppm	0.00
87) Chrysene-d12	10.580	240	2609680	40.00	ppm	0.00
97) Perylene-d12	11.951	264	2304147	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	280236	16.86	ppm	0.00
Spiked Amount 30.000			Recovery = 56.20%			
6) Phenol-d5	2.506	99	441661	22.15	ppm	0.00
Spiked Amount 30.000			Recovery = 73.83%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.325	82	152238	8.03	ppm	0.00
Spiked Amount 10.000			Recovery = 80.30%			
46) 2-Fluorobiphenyl	5.258	172	370309	7.27	ppm	0.00
Spiked Amount 10.000			Recovery = 72.70%			
75) 2,4,6-Tribromophenol	7.001	330	161952	25.33	ppm	0.00
Spiked Amount 30.000			Recovery = 84.43%			
90) Terphenyl-d14	9.509	244	423757	7.66	ppm	0.00
Spiked Amount 10.000			Recovery = 76.60%			
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.334	74	140045	14.69	ppm	91
4) Pyridine	1.362	79	475368	28.05	ppm	94
7) Phenol	2.517	94	290184	14.48	ppm	84
8) Aniline	2.579	93	366917	14.23	ppm	95
9) bis(2-chloroethyl)ether	2.611	93	210462	13.11	ppm	97
10) 2-Chlorophenol	2.673	128	273925	15.72	ppm	93
11) 1,3-Dichlorobenzene	2.797	146	280621	13.04	ppm	94
13) 1,4-Dichlorobenzene	2.860	146	300367	13.45	ppm	97
14) Benzyl alcohol	2.937	108	171068	15.29	ppm	91
15) 1,2-Dichlorobenzene	2.989	146	281152	13.31	ppm	95
16) 2-Methylphenol	3.018	107	210391	15.50	ppm	97
17) bis(2-chloroisopropyl)...	3.056	45	468379	12.65	ppm	96
18) 4-Methylphenol	3.152	107	293777	16.48	ppm	96
19) N-Nitroso-di-n-propyla...	3.171	70	188122	15.75	ppm	97
20) Hexachloroethane	3.296	117	114076	11.41	ppm	96
23) Nitrobenzene	3.344	77	297755	14.83	ppm	96
24) Isophorone	3.569	82	542959	14.28	ppm	99
25) 2-Nitrophenol	3.651	139	155769	17.27	ppm	99
26) 2,4-Dimethylphenol	3.675	107	298070	16.60	ppm	91
27) Benzoic acid	3.761	105	387533	30.09	ppm	97
28) bis(2-Chloroethoxy)met...	3.780	93	304879	14.21	ppm	99
29) 3,5-Dimethylphenol	3.814	107	344407	16.67	ppm	95
30) 2,4-Dichlorophenol	3.891	162	258598	15.62	ppm	95
31) 1,2,4-Trichlorobenzene	3.987	180	298314	14.87	ppm	99
32) 3,4-Dimethylphenol	3.987	107	376061	17.03	ppm	94
33) Naphthalene	4.074	128	808084	14.15	ppm	100
34) 4-Chloroaniline	4.122	127	342024	14.99	ppm	98
35) 2,6-Dichlorophenol	4.132	162	259378	15.68	ppm	96
36) Hexachlorobutadiene	4.200	225	204693	15.87	ppm	99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH009.D
Acq On : 1 Oct 2015 12:59
Sample : SVI044WC
Misc :
Integrator: RTE
Quant Time: Oct 14 10:59:25 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00

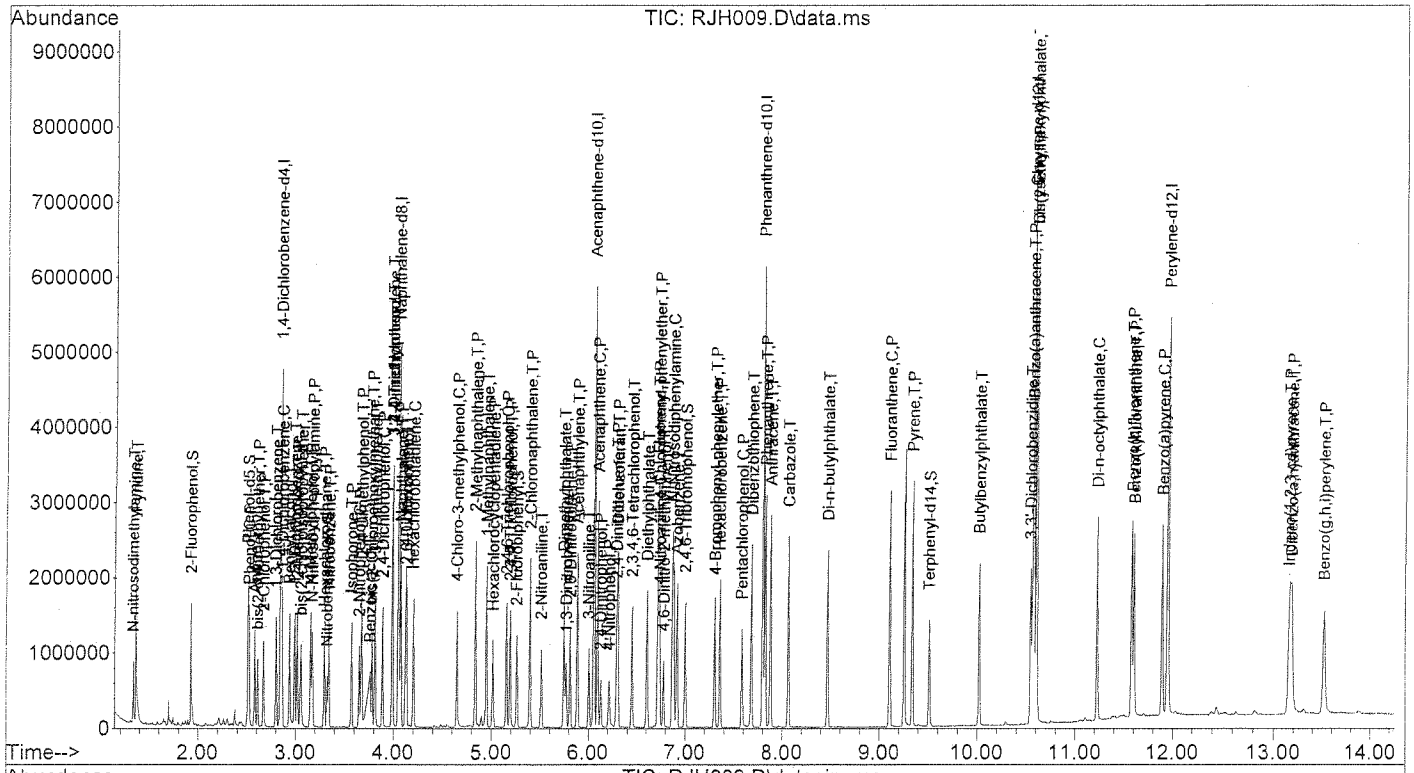
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38)	4-Chloro-3-methylphenol	4.648	107	254341	17.84	ppm	95
39)	2-Methylnaphthalene	4.835	142	577614	14.63	ppm	99
40)	1-Methylnaphthalene	4.950	142	547065	15.17	ppm	98
42)	Hexachlorocyclopentadiene	5.017	237	189588	13.61	ppm	100
44)	2,4,6-Trichlorophenol	5.156	196	232419	17.72	ppm	99
45)	2,4,5-Trichlorophenol	5.190	196	236401	17.41	ppm	98
47)	2,3,4-Trichlorophenol	5.190	196	236401	18.03	ppm	95
49)	2-Chloronaphthalene	5.397	162	598708	14.05	ppm	96
50)	2-Nitroaniline	5.512	65	193179	17.87	ppm	92
53)	Dimethylphthalate	5.748	163	737801	15.49	ppm	100
54)	1,3-Dinitrobenzene	5.772	168	93972	15.54	ppm	96
55)	2,6-Dinitrotoluene	5.811	165	144451	14.60	ppm	91
57)	Acenaphthylene	5.883	152	1093038	15.82	ppm	96
58)	3-Nitroaniline	6.003	138	144762	14.86	ppm	95
59)	Acenaphthene	6.094	153	662319	14.97	ppm	99
60)	2,4-Dinitrophenol	6.128	184	74864	15.57	ppm	97
61)	4-Nitrophenol	6.214	109	100011	20.30	ppm	88
62)	2,4-Dinitrotoluene	6.291	165	194495	15.32	ppm	92
63)	Dibenzofuran	6.301	168	886890	15.73	ppm	95
65)	2,3,4,6-Tetrachlorophenol	6.449	232	201635	16.78	ppm	98
67)	Diethylphthalate	6.606	149	729673	16.15	ppm	99
68)	Fluorene	6.718	166	727381	15.49	ppm	99
69)	4-Chlorophenyl-phenyle...	6.728	204	399175	16.49	ppm	99
70)	4-Nitroaniline	6.737	138	144919	15.52	ppm	91
72)	4,6-Dinitro-2-methylph...	6.779	198	117367	16.32	ppm	93
73)	N-Nitrosodiphenylamine	6.869	169	654319	17.46	ppm	92
74)	Azobenzene	6.916	77	626752	15.69	ppm	99
76)	4-Bromophenyl-phenylether	7.305	248	221691	15.49	ppm	100
77)	Hexachlorobenzene	7.356	284	245154	15.67	ppm	98
78)	Pentachlorophenol	7.583	266	144553	16.81	ppm	98
79)	Dibenzothiophene	7.682	184	955487	14.51	ppm	95
80)	Phenanthrene	7.825	178	1079337	15.37	ppm	99
82)	Anthracene	7.880	178	1098530	15.22	ppm	100
83)	Carbazole	8.061	167	957447	16.25	ppm	99
84)	Di-n-butylphthalate	8.468	149	1169166	16.09	ppm	99
86)	Fluoranthene	9.101	202	1224047	15.49	ppm	99
89)	Pyrene	9.337	202	1306950	14.50	ppm	98
91)	Butylbenzylphthalate	10.023	149	505913	16.91	ppm	97
93)	3,3'-Dichlorobenzidine	10.541	252	447608	16.40	ppm	100
94)	Benzo(a)anthracene	10.565	228	1234900	16.17	ppm	97
95)	Chrysene	10.604	228	1220385	16.17	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.604	149	773513	16.88	ppm	98
98)	Di-n-octylphthalate	11.226	149	1283334	17.89	ppm	99
99)	Benzo(b)fluoranthene	11.581	252	1137645	16.28	ppm	97
100)	Benzo(k)fluoranthene	11.605	252	928571	12.04	ppm	98
102)	Benzo(a)pyrene	11.890	252	1092892	16.08	ppm	98
104)	Indeno(1,2,3-cd)pyrene	13.156	276	1210805	16.54	ppm	95
105)	Dibenzo(a,h)anthracene	13.180	278	1008552	16.35	ppm	98
106)	Benzo(g,h,i)perylene	13.520	276	994589	15.51	ppm	97

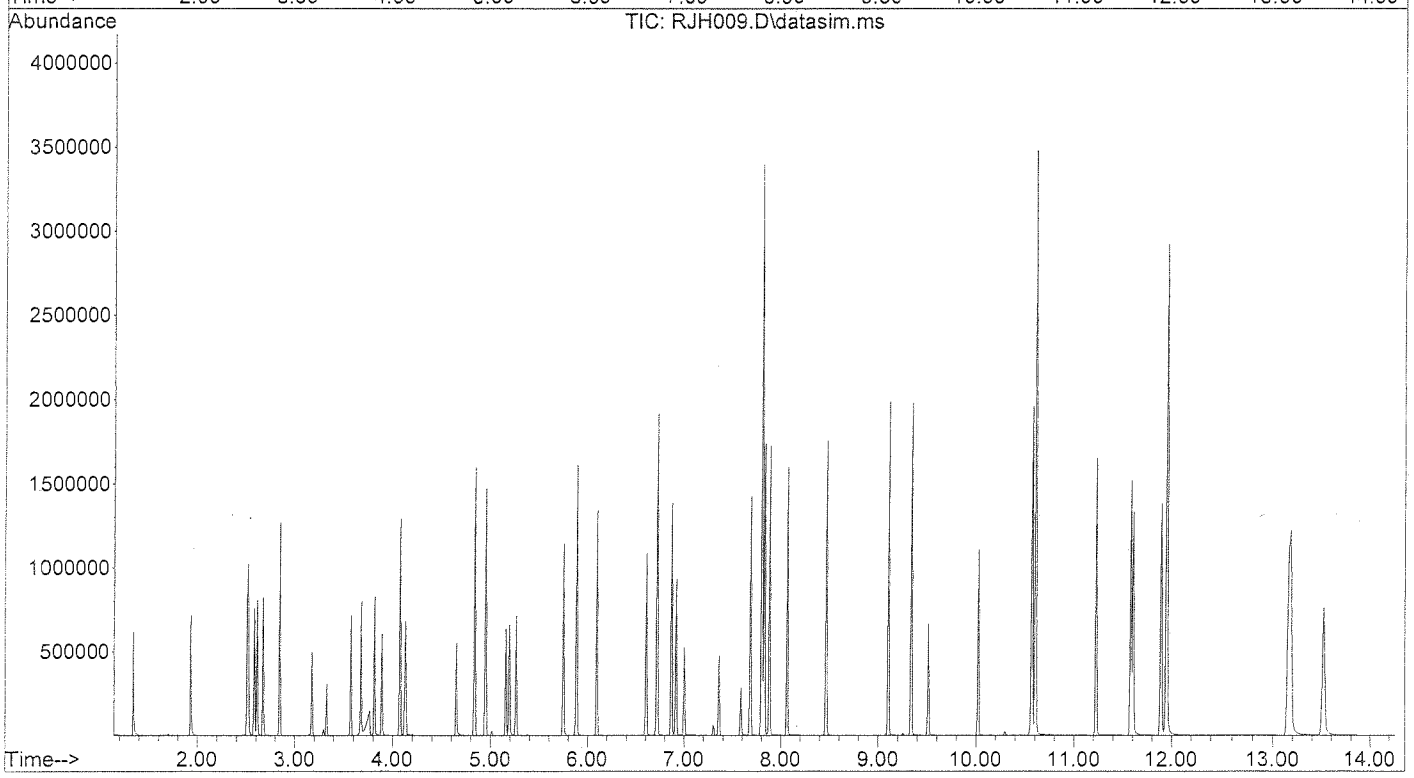
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH009.D
Acq On : 1 Oct 2015 12:59
Sample : SVI044WC
Misc :
Integrator: RTE
Quant Time: Oct 14 10:59:25 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH010.D Vial: 10
Acq On : 1 Oct 2015 13:18 Operator: KVu
Sample : TXI007SB Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 14 10:59:50 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	542258	40.00	ppm	0.00
21) Naphthalene-d8	4.050	136	2006144	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	1241746	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	2263285	40.00	ppm	0.00
87) Chrysene-d12	10.575	240	2528258	40.00	ppm	0.00
97) Perylene-d12	11.946	264	2238929	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	281782	17.66	ppm	0.00
Spiked Amount 30.000			Recovery = 58.87%			
6) Phenol-d5	2.506	99	439543	22.96	ppm	0.00
Spiked Amount 30.000			Recovery = 76.53%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.325	82	152281	8.36	ppm	0.00
Spiked Amount 10.000			Recovery = 83.60%			
46) 2-Fluorobiphenyl	5.258	172	387835	8.02	ppm	0.00
Spiked Amount 10.000			Recovery = 80.20%			
75) 2,4,6-Tribromophenol	6.997	330	147882	24.03	ppm	0.00
Spiked Amount 30.000			Recovery = 80.10%			
90) Terphenyl-d14	9.508	244	415976	7.76	ppm	0.00
Spiked Amount 10.000			Recovery = 77.60%			

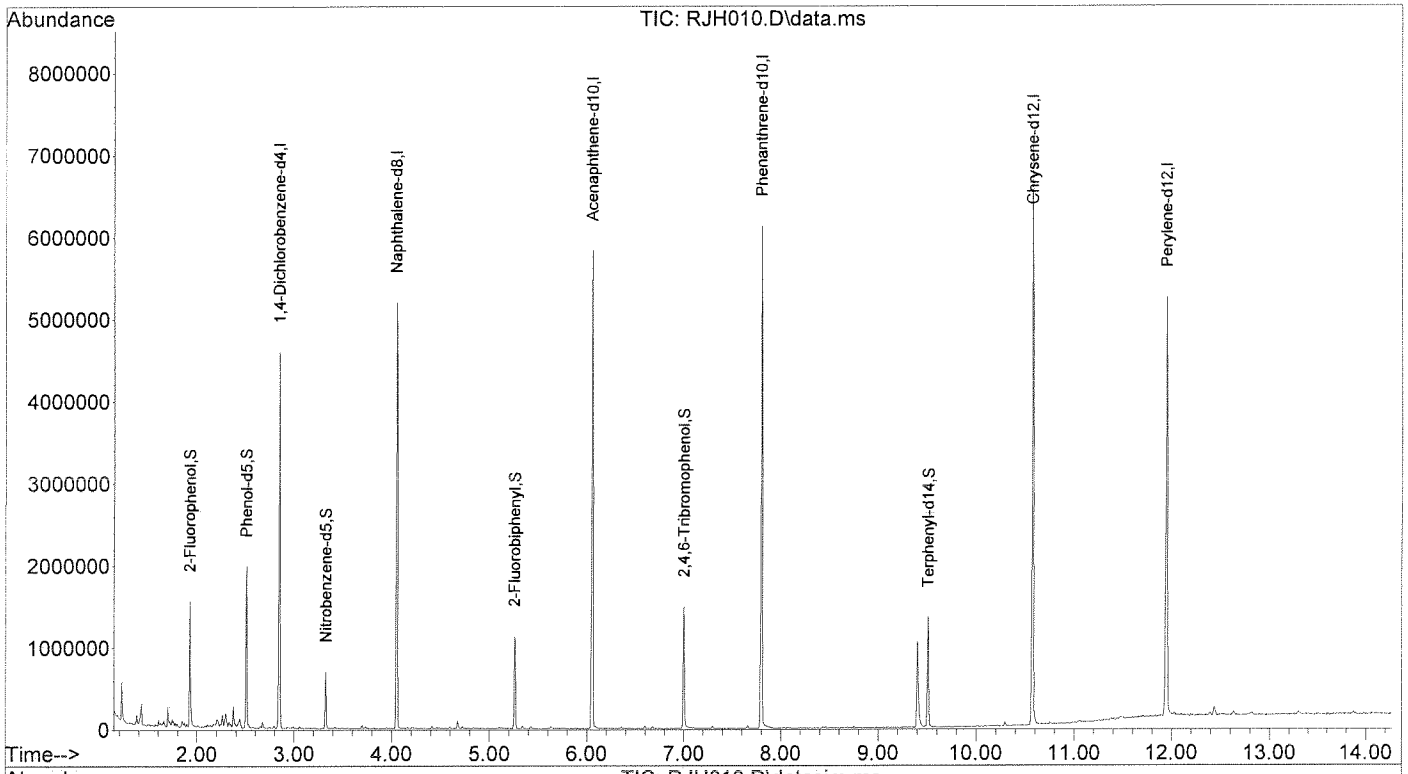
Target Compounds Qvalue

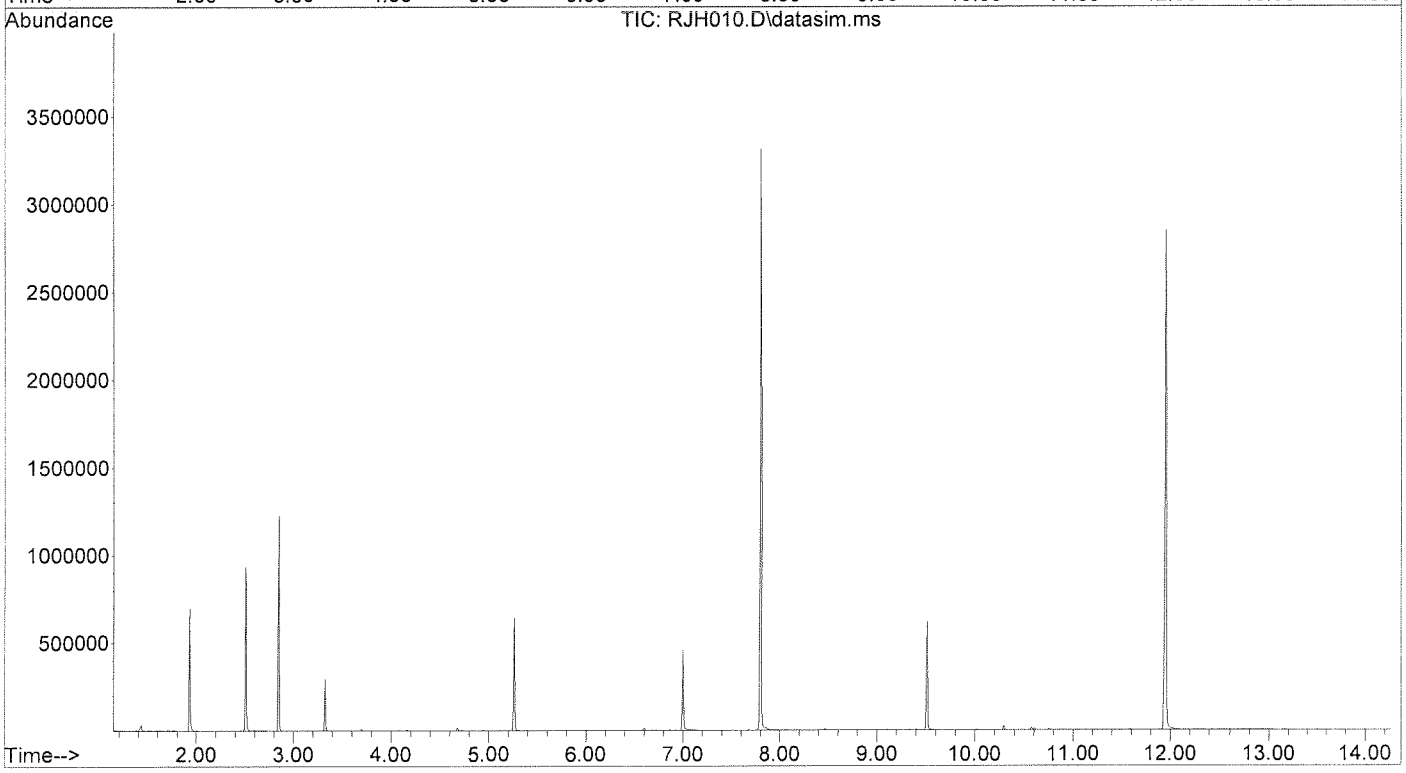
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH010.D
Acq On : 1 Oct 2015 13:18
Sample : TXI007SB
Misc :
Integrator: RTE
Quant Time: Oct 14 10:59:50 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 10
Operator: KVu
Inst : E7
Multiplr: 1.00





INITIAL CALIBRATIONS

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH002
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 15I185
DFTPP Injection Date: 04/03/15
DFTPP Injection Time: 09:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	50.98
68	Less than 2% of mass 69	0.54(1.3)1
69	% of mass 198	41.45
70	Less than 2% of mass 69	0.16(0.4)1
127	10.0 - 80.0% of mass 198	49.43
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.98
275	10.0 - 60.0% of mass 198	24.60
365	Greater than 1.00% of mass 198	2.60
441	Present, but less than 24% of mass 442	11.80(16.0)2
442	Greater than 50% of mass 198	73.74
443	15.0 - 24.0% of mass 442	14.55(19.7)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD100	SVE7D031	RDH003	04/03/15	09:30
2	SSTD080	SVE7D032	RDH004	04/03/15	09:49
3	SSTD050	SVE7D033	RDH005	04/03/15	10:08
4	SSTD040	SVE7D034	RDH006	04/03/15	10:27
5	SSTD025	SVE7D035	RDH007	04/03/15	10:46
6	SSTD020	SVE7D036	RDH008	04/03/15	11:05
7	SSTD010	SVE7D037	RDH009	04/03/15	11:24
8	SSTD004	SVE7D038	RDH010	04/03/15	11:43
9	SSTD025	ISVE7D031	RDH016	04/03/15	14:02

FORM V SV OLM03.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :E7
Beginning DateTime :04/03/15 09:30
Spike Units :PPM
IC File :RDH007

Column Spec :ZB-SemiVoa ID :0.18MM
Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03

IDX	Parameters	4 11:43 RDH010	10 11:24 RDH009	20 11:05 RDH008	25 10:46 RDH007	40 10:27 RDH006	50 10:08 RDH005	80 09:49 RDH004	100 09:30 RDH003	Av_RRF	% RSD	Av_Rt_M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	0	2.8481
2	1,4-Dioxane	0.590	0.532	0.453	0.431	0.425	0.446	------	------	0.480	13.88	1.2397
3	N-nitrosodimethylamine	0.670	0.694	0.683	0.681	0.652	0.684	------	------	0.675	2.07	1.3321
4	Pyridine	1.170	1.235	1.209	1.192	1.222	1.249	1.157	1.169	1.200	2.81	1.3858
5	2-Fluorophenol	1.237	1.204	1.172	1.137	1.149	1.164	------	------	1.172	3.45	1.2271
6	Phenol-d5	1.485	1.420	1.410	1.348	1.370	1.393	------	------	1.412	3.86	2.2045
7	Phenol	1.368	1.474	1.429	1.372	1.426	1.444	------	------	1.419	2.95	2.2158
8	Aniline	1.794	1.857	1.827	1.794	1.828	1.855	------	------	1.826	1.53	2.5819
9	bis(2-chloroethyl)ether	1.173	1.150	1.138	1.094	1.131	1.135	------	------	1.137	2.28	2.6123
10	2-Chlorophenol	1.218	1.255	1.244	1.198	1.245	1.247	------	------	1.234	1.73	2.6748
11	1,3-Dichlorobenzene	1.544	1.557	1.524	1.488	1.508	1.523	------	------	1.524	1.61	2.8049
12	1,2-Dichlorobenzene-d4	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
13	1,4-Dichlorobenzene	1.616	1.624	1.569	1.540	1.570	1.569	------	------	1.581	2.02	2.8625
14	Benzyl alcohol	0.788	0.819	0.800	0.779	0.791	0.787	------	------	0.782	2.21	2.8406
15	1,2-Dichlorobenzene	1.512	1.542	1.499	1.492	1.468	1.468	------	------	1.497	2.15	2.8626
16	2-Methylphenol	0.957	0.987	0.971	0.932	0.937	0.963	------	------	0.955	1.88	3.0177
17	bis(2-chloroisopropyl)ether	2.729	2.704	2.639	2.593	2.564	2.570	------	------	2.623	3.05	3.0661
18	4-Methylphenol	1.258	1.310	1.261	1.215	1.272	1.282	------	------	1.262	2.26	3.1521
19	N-Nitroso-di-n-propylamine	0.828	0.857	0.858	0.833	0.849	0.851	------	------	0.846	1.48	3.1728
20	Hexachloroethane	0.726	0.740	0.718	0.689	0.674	0.704	------	------	0.708	3.46	3.2987
21	Naphthalene-d8	1	1	1	1	1	1	1	1	1	0	4.0569
22	Nitrobenzene-d5	0.362	0.366	0.362	0.354	0.370	0.365	------	------	0.363	1.55	3.3315
23	Nitrobenzene	0.382	0.392	0.386	0.375	0.391	0.387	------	------	0.385	1.57	3.3499
24	Isophorone	0.762	0.744	0.732	0.726	0.756	0.752	------	------	0.729	4.77	3.5777
25	2-Nitrophenol	0.160	0.167	0.177	0.174	0.183	0.177	------	------	0.173	4.68	3.6560
26	2,4-Dimethylphenol	0.335	0.342	0.336	0.330	0.346	0.375	------	------	0.347	4.69	3.6767
27	Benzoic acid	0.232	0.208	0.223	0.238	0.260	0.257	0.259	0.258	0.230	18.27	3.7638
28	bis(2-Chloroethoxy)methane	0.713	0.717	0.710	0.702	0.713	0.714	------	------	0.711	1.51	3.7853
29	2,5-Dimethylphenol	0.397	0.415	0.407	0.397	0.418	0.403	------	------	0.396	2.61	3.8171
30	2,4-Dichlorophenol	0.310	0.317	0.313	0.313	0.324	0.329	------	------	0.317	1.57	3.8359
31	1,2,4-Trichlorobenzene	0.322	0.326	0.385	0.372	0.392	0.382	------	------	0.364	1.32	3.8668
32	3,4-Dimethylphenol	0.420	0.428	0.426	0.412	0.431	0.426	------	------	0.425	1.65	3.8822
33	Naphthalene	1.096	1.108	1.089	1.065	1.106	1.101	------	------	1.094	1.44	4.0722
34	4-Chloroaniline	0.423	0.441	0.436	0.428	0.449	0.447	------	------	0.437	2.33	4.1274
35	2,6-Dichlorophenol	0.310	0.321	0.318	0.309	0.323	0.321	------	------	0.317	1.90	4.1347
36	Hexachlorobutadiene	0.250	0.250	0.247	0.240	0.249	0.246	------	------	0.247	1.54	4.2071
37	Hydroquinone	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
38	4-Chloro-3-methylphenol	0.254	0.274	0.275	0.272	0.282	0.282	------	------	0.273	3.85	4.6476
39	2-Methylnaphthalene	0.761	0.757	0.752	0.737	0.768	0.764	------	------	0.756	1.49	4.8400
40	1-Methylnaphthalene	0.686	0.697	0.685	0.673	0.703	0.702	------	------	0.691	1.66	4.9534
41	Acenaphthene-d10	1	1	1	1	1	1	1	1	1	0	6.0606
42	Hexachlorocyclopentadiene	0.407	0.418	0.429	0.422	0.442	0.437	------	------	0.426	3.00	5.0197
43	2,3,5-Trichlorophenol	0.307	0.358	0.323	0.357	0.345	0.336	------	------	0.339	8.12	5.0261
44	2,4,6-Trichlorophenol	0.378	0.403	0.414	0.390	0.415	0.413	------	------	0.401	3.48	5.1590
45	2,4,5-Trichlorophenol	0.386	0.408	0.412	0.412	0.428	0.436	------	------	0.415	2.83	5.1814
46	2-Fluorobiphenyl	1.429	1.508	1.646	1.615	1.682	1.612	------	------	1.558	5.87	5.2693
47	2,3,4-Trichlorophenol	0.381	0.413	0.400	0.395	0.406	0.411	------	------	0.401	2.24	5.2871
48	Biphenyl	1.563	1.558	1.562	1.507	1.560	1.574	------	------	1.554	1.52	5.3824
49	2-Chloronaphthalene	1.300	1.308	1.300	1.268	1.320	1.320	------	------	1.303	1.47	5.4008
50	2-Nitroaniline	0.300	0.331	0.335	0.330	0.343	0.344	------	------	0.331	4.85	5.5199
51	2,6-Dimethylnaphthalene	1.113	1.116	1.103	1.069	1.103	1.116	------	------	1.103	1.63	5.5654
52	1,4-Dinitrobenzene	0.134	0.152	0.159	0.161	0.173	0.168	------	------	0.158	8.74	5.6880
53	Dimethylphthalate	1.450	1.475	1.447	1.427	1.475	1.465	------	------	1.456	1.28	5.7532
54	1,3-Dinitrobenzene	0.170	0.184	0.185	0.185	0.197	0.195	------	------	0.185	4.85	5.7741
55	2,6-Dinitrotoluene	0.288	0.303	0.300	0.300	0.313	0.311	------	------	0.303	3.89	5.8158
56	1,2-Dinitrobenzene	0.108	0.112	0.115	0.110	0.117	0.115	------	------	0.113	3.06	5.8730
57	Acenaphthylene	2.063	2.081	2.093	2.033	2.100	2.107	------	------	2.113	1.50	5.8906
58	3-Nitroaniline	0.278	0.296	0.279	0.307	0.310	0.309	------	------	0.298	3.82	5.9085
59	Acenaphthene	1.326	1.376	1.347	1.309	1.371	1.367	------	------	1.353	1.86	5.9389
60	2,4-Dinitrophenol	0.090	0.125	0.144	0.121	0.171	0.164	------	------	0.141	21.16	5.9302
61	4-Nitrophenol	0.136	0.149	0.151	0.154	0.157	0.158	------	------	0.151	5.22	6.2042
62	2,4-Dinitrotoluene	0.362	0.385	0.392	0.387	0.402	0.400	------	------	0.388	3.72	6.2937
63	Dibenzofuran	1.769	1.761	1.738	1.670	1.710	1.698	------	------	1.724	2.25	6.3057
64	2,3,5,6-Tetrachlorophenol	0.285	0.301	0.299	0.298	0.310	0.309	------	------	0.300	2.97	6.3967
65	2,3,4,6-Tetrachlorophenol	0.353	0.352	0.365	0.356	0.370	0.408	------	------	0.367	5.76	6.4487
66	2,3,5-Trimethylnaphthalene	1.065	1.202	1.190	1.015	1.144	1.135	------	------	1.125	6.44	6.5605
67	Diethylphthalate	1.376	1.398	1.378	1.364	1.387	1.386	------	------	1.381	0.84	6.6059
68	Fluorene	1.427	1.427	1.439	1.399	1.425	1.422	------	------	1.436	1.57	6.7192
69	4-Chlorophenyl-phenylether	0.727	0.738	0.731	0.727	0.742	0.735	------	------	0.740	1.94	6.7301
70	4-Nitroaniline	0.268	0.274	0.285	0.288	0.300	0.299	------	------	0.286	4.47	6.7418
71	Phenanthrene-d10	1	1	1	1	1	1	1	1	1	0	7.7993
72	4,6-Dinitro-2-methylphenol	0.080	0.101	0.123	0.122	0.140	0.134	------	------	0.117	18.96	6.7773
73	N-Nitrosodiphenylamine	0.624	0.640	0.633	0.656	0.641	0.630	------	------	0.637	1.75	6.8783
74	Azobenzene	0.662	0.688	0.686	0.660	0.694	0.686	------	------	0.679	2.16	6.9188
75	2,4,6-Tribromophenol	0.101	0.108	0.108	0.108	0.114	0.113	------	------	0.109	4.26	7.0002
76	4-Bromophenyl-phenylether	0.241	0.247	0.248	0.236	0.245	0.243	------	------	0.243	1.87	7.3044
77	Hexachlorobenzene	0.279	0.270	0.264	0.257	0.264	0.262	------	------	0.266	2.87	7.3571
78	Pentachlorophenol	0.122	0.148	0.148	0.149	0.155	0.155	------	------	0.146	8.50	7.5830
79	Dibenzothiophene	1.047	1.165	1.132	1.092	1.141	1.145	------	------	1.120	3.87	7.6829
80	Phenanthrene	1.216	1.218	1.189	1.150	1.204	1.187	------	------	1.164	2.11	7.8267
81	Dinoseb	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
82	Anthracene	1.210	1.264	1.229	1.172	1.243	1.244	------	------	1.227	2.62	7.8826
83	Carbazole	0.699	0.694	0.662	0.676	0.697	0.677	------	------	0.682	1.86	8.0624
84	Di-n-butylphthalate	1.133	1.158	1.172	1.126	1.164	1.177	------	------	1.135	3.67	8.4229
85	1-Methylphenanthrene	0.863	0.863	0.842	0.829	0.868	0.871	------	------	0.857	2.88	8.4871
86	Fluoranthene	1.310	1.361	1.343	1.311	1.370	1.371	------	------	1.344	2.02	8.1026
87	Chrysene-d12	1	1	1	1	1	1	1	1	1	0	10.3720
88	Benzidine	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
89	Pyrene	1.315	1.349	1.442	1.299	1.443	1.441	------	------	1.381	4.93	8.3389
90	Terphenyl-d14	0.849	0.851	0.854	0.819	0.864	0.851	------	------	0.848	1.81	9.5081
91	Butylbenzylphthalate	0.402	0.458	0.473	0.458	0.476	0.484	------	------	0.459	6.43	10.0164
92	bis(2-ethylhexyl)adipate	0.324	0.362	0.387	0.366	0.381	0.382	------	------	0.367	6.31	10.1014
93	3,3'-Dichlorobenzidine	0.386	0.426	0.424	0.412	0.428	0.428	------	------	0.418	4.00	10.5386
94	Benzo(a)anthracene	1.183	1.188	1.171	1.137	1.172	1.170	------	------	1.170	1.53	10.5605
95	Chrysene	1.210	1.196	1.157	1.172	1.155	1.133	------	------	1.157	2.95	10.5970
96	bis(2-Ethylhexyl)phthalate	0.637	0.705	0.730	0.694	0.726	0.724	------	------	0.703	4.99	10.5978
97	Perylene-d12	1	1	1	1	1	1	1	1	1	0	11.9200
98	Di-n-octylphthalate	1.053	1.222	1.271	1.247	1.339	1.344	------	------	1.245	8.50	11.2758
99	Benzo(b)fluoranthene	1.164	1.203	1.201	1.184	1.299	1.260	------	------	1.213	3.40	11.5677
100	Benzo(k)fluoranthene	1.349	1.351	1.349	1.294	1.336	1.360	------	------	1.339	1.79	11.5776
101	Benzo(e)pyrene	1.097	1.140	1.127	1.079	1.138	1.145	------	------	1.121	2.41	11.8342
102	Benzo(a)pyrene	1.097	1.152	1.183	1.169	1.234	1.247	------	------	1.180	4.70	11.8839
103	Perylene	1.178	1.217	1.193	1.157	1.203	1.201	------	------	1.192	1.77	11.9660
104	Indeno(1,2,3-cd)pyrene	1.222	1.266	1.275	1.239	1.302	1.320	------	------	1.271	2.90	13.1482
105	Dibenzo(a,h)anthracene	1.000	1.063	1.071	1.050	1.116	1.124	------	------	1.071	4.24	13.1693
106	Benzo(g,h,i)perylene	1.063	1.121	1.114	1.080	1.152	1.149	------	------	1.113	3.23	13.5098

Ave_%RSD : 3.8 Max_%RSD : 21.2

Use Least Square Linear Regression with weighting factor of inverse concentration
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCE
27	Benzoic acid	-0.01396	0.26532	0.9927
60	2,4-Dinitrophenol	-0.00964	0.17184	0.9984
72	4,6-Dinitro-2-methylphenol	-0.00717	0.13985	0.9984

TM 4/9/15

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR(%REC)

Instrument ID :E7
Beginning DateTime :04/03/15 09:30
Spike Units :PPM
IC File :RDH007

Column Spec :ZB-SemiVoa ID :0.18MM
Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03

IDX	Parameters	4 11:43 RDH010	10 11:24 RDH009	20 11:05 RDH008	25 10:46 RDH007	40 10:27 RDH006	50 10:08 RDH005	80 09:49 RDH004	100 09:30 RDH003	AvDRec	% RSD	Av Rt M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	0	2.8481
2	1,4-Dioxane	123	111	94	90	89	93	------	------	11.4	13.89	1.2314
3	N-nitrosodimethylamine	99	103	101	98	98	101	------	------	1.8	2.07	1.3391
4	Pyridine	97	103	101	99	102	104	96	97	2.4	2.81	1.3658
5	2-Fluorophenol	105	102	100	97	98	99	------	------	2.4	3.15	1.9271
6	Phenol-d5	105	104	100	95	97	99	------	------	3	3.86	2.5045
7	Phenol	96	104	101	97	100	102	------	------	2.3	2.95	2.5158
8	Aniline	98	102	100	98	100	102	------	------	1.2	1.53	2.5819
9	bis(2-chloroethyl)ether	103	101	100	96	99	100	------	------	1.5	2.28	2.6123
10	2-Chlorophenol	99	102	101	97	101	101	------	------	1.4	1.73	2.6748
11	1,3-Dichlorobenzene	101	102	100	98	99	100	------	------	1.2	1.61	2.8049
12	1,2-Dichlorobenzene-d4	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
13	1,4-Dichlorobenzene	102	103	99	97	99	99	------	------	1.6	2.02	2.8625
14	Benzyl alcohol	97	103	101	98	100	101	------	------	1.6	2.21	2.9409
15	1,2-Dichlorobenzene	101	103	99	98	98	100	------	------	1.6	2.15	2.9929
16	2-Methylphenol	99	103	101	97	100	100	------	------	1.3	1.88	3.0177
17	bis(2-chloroisopropyl)ether	104	103	100	97	98	98	------	------	2.5	3.05	3.0609
18	4-Methylphenol	100	104	100	96	99	102	------	------	1.8	2.56	3.1551
19	N-Nitroso-di-n-propylamine	98	101	101	98	100	101	------	------	1.2	1.48	3.1798
20	Hexachloroethane	103	105	101	97	95	99	------	------	2.8	3.46	3.2987
21	Naphthalene-d8	1	1	1	1	1	1	1	1	1	0	4.0569
22	Nitrobenzene-d5	100	101	100	98	102	101	------	------	1.1	1.55	3.3315
23	Nitrobenzene	99	102	100	97	102	100	------	------	1.2	1.57	3.3499
24	Isophorone	91	102	100	100	104	103	------	------	3.5	4.77	3.5777
25	2-Nitrophenol	92	97	102	101	106	102	------	------	3.7	4.68	3.6560
26	2,4-Dimethylphenol	97	99	98	96	101	109	------	------	3.2	4.69	3.6767
27	Benzoic acid	104	99	94	98	103	101	100	100	2.1	3.05	3.7638
28	bis(2-Chloroethoxy)methane	100	101	100	98	100	101	------	------	.9	1.21	3.7853
29	2,5-Dimethylphenol	100	89	103	100	106	102	------	------	3.5	5.61	3.8141
30	2,4-Dichlorophenol	98	100	99	99	102	103	------	------	1.6	1.97	3.8926
31	1,2,4-Trichlorobenzene	102	102	99	98	99	99	------	------	1.3	1.59	3.9923
32	3,4-Dimethylphenol	99	101	100	97	102	101	------	------	1.2	1.65	3.9859
33	Naphthalene	100	101	100	97	101	101	------	------	1.1	1.44	4.0792
34	4-Chloroaniline	97	101	100	98	103	102	------	------	1.9	2.33	4.1274
35	2,6-Dichlorophenol	98	101	100	97	102	101	------	------	1.6	1.90	4.1347
36	Hexachlorobutadiene	101	101	100	97	101	100	------	------	1.1	1.54	4.2071
37	Hydroquinone	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
38	4-Chloro-3-methylphenol	93	100	101	100	103	103	------	------	2.5	3.85	4.6476
39	2-Methylnaphthalene	101	100	99	97	102	101	------	------	1.1	1.49	4.8400
40	1-Methylnaphthalene	99	101	99	97	102	102	------	------	1.4	1.66	4.9534
41	Acenaphthene-d10	1	1	1	1	1	1	1	1	1	0	6.0606
42	Hexachlorocyclopentadiene	96	98	101	99	104	103	------	------	2.4	3.00	5.0197
43	2,3,5-Trichlorophenol	85	101	102	100	107	106	------	------	5.1	8.12	5.0261
44	2,4,6-Trichlorophenol	94	100	102	97	103	103	------	------	2.8	3.48	5.1560
45	2,4,5-Trichlorophenol	92	98	100	99	106	105	------	------	3.7	5.03	5.1914
46	2-Fluorobiphenyl	96	97	106	104	94	103	------	------	4.3	7.87	5.2613
47	2,3,4-Trichlorophenol	95	103	100	99	101	102	------	------	2.2	2.24	5.2671
48	Biphenyl	101	100	101	97	100	101	------	------	1	1.52	5.3824
49	2-Chloronaphthalene	100	100	100	97	101	101	------	------	1	1.47	5.4008
50	2-Nitroaniline	91	100	101	100	104	104	------	------	3.1	4.85	5.5199
51	2,6-Dimethylnaphthalene	101	101	100	97	100	101	------	------	1.1	1.63	5.5654
52	1,4-Dinitrobenzene	85	96	101	102	109	106	------	------	6.2	8.74	5.6880
53	Dimethylphthalate	100	101	99	98	101	101	------	------	1	1.28	5.7532
54	1,3-Dinitrobenzene	92	99	98	100	105	105	------	------	3.4	4.85	5.7741
55	2,6-Dinitrotoluene	95	100	99	99	103	103	------	------	2.1	2.99	5.8158
56	1,2-Dinitrobenzene	96	99	102	97	104	102	------	------	2.5	3.06	5.8730
57	Acenaphthylene	98	98	99	96	109	100	------	------	3	4.50	5.8906
58	3-Nitroaniline	93	98	100	100	104	103	------	------	2.5	3.82	6.0085
59	Acenaphthene	100	102	100	97	101	101	------	------	1.3	1.86	6.0988
60	2,4-Dinitrophenol	108	95	95	97	105	100	------	------	4.6	5.78	6.1307
61	4-Nitrophenol	90	99	100	102	104	105	------	------	3.6	5.62	6.2042
62	2,4-Dinitrotoluene	93	99	101	100	104	103	------	------	2.6	3.72	6.2937
63	Dibenzofuran	103	102	101	97	99	98	------	------	1.9	2.25	6.3057
64	2,3,5,6-Tetrachlorophenol	95	100	100	99	103	103	------	------	2.1	2.97	6.3967
65	2,3,4,6-Tetrachlorophenol	96	96	99	97	101	111	------	------	3.9	5.76	6.4487
66	2,3,5-Trimethylnaphthalene	95	107	106	90	102	101	------	------	5.1	6.44	6.5605
67	Diethylphthalate	100	101	100	99	100	100	------	------	.6	0.84	6.6059
68	Fluorene	101	101	100	97	101	99	------	------	1.2	1.57	6.7192
69	4-Chlorophenyl-phenylether	104	100	99	98	101	99	------	------	1.4	1.94	6.7301
70	4-Nitroaniline	94	96	100	101	105	105	------	------	3.5	4.47	6.7418
71	Phenanthrene-d10	1	1	1	1	1	1	1	1	1	0	7.7993
72	4,6-Dinitro-2-methylphenol	109	93	98	96	105	100	------	------	4.6	5.93	6.7793
73	N-Nitrosodiphenylamine	98	100	99	103	101	99	------	------	1.3	1.75	6.8713
74	Azobenzene	97	101	101	97	102	101	------	------	1.8	2.16	6.9188
75	2,4,6-Tribromophenol	93	99	99	99	105	104	------	------	3.1	4.26	7.0002
76	4-Bromophenyl-phenylether	99	102	102	97	101	100	------	------	1.4	1.87	7.3044
77	Hexachlorobenzene	105	103	99	97	99	98	------	------	2.1	2.87	7.3571
78	Pentachlorophenol	84	101	101	102	106	106	------	------	5.6	8.50	7.5830
79	Dibenzothiophene	93	104	101	98	102	102	------	------	3	3.87	7.6829
80	Phenanthrene	102	102	100	96	101	99	------	------	1.6	2.11	7.8267
81	Dinoseb	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
82	Anthracene	99	103	100	96	101	101	------	------	2	2.62	7.8826
83	Carbazole	99	101	99	97	102	101	------	------	1.5	1.89	8.0624
84	Di-n-butylphthalate	94	102	101	98	102	103	------	------	2.8	3.67	8.4649
85	1-Methylphenanthrene	101	101	99	97	101	102	------	------	1.4	1.84	8.4971
86	Fluoranthene	97	101	100	98	102	102	------	------	1.7	2.09	8.1026
87	Chrysene-d12	1	1	1	1	1	1	1	1	1	0	10.5750
88	Benzidine	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
89	Pyrene	95	98	104	94	104	104	------	------	4.4	4.93	9.3369
90	Terphenyl-d14	100	100	101	97	102	100	------	------	1.1	1.81	9.5081
91	Butylbenzylphthalate	88	100	103	100	104	105	------	------	4.2	6.43	10.0164
92	bis(2-ethylhexyl)adipate	88	99	105	100	104	104	------	------	4.5	6.31	10.1014
93	3,3'-Dichlorobenzidine	92	103	101	99	102	102	------	------	2.9	4.00	10.5386
94	Benzo(a)anthracene	101	102	100	97	100	100	------	------	1	1.53	10.5605
95	Chrysene	105	102	100	96	100	98	------	------	2.1	2.95	10.5970
96	bis(2-Ethylhexyl)phthalate	91	100	104	99	103	103	------	------	3.5	4.99	10.5978
97	Perylene-d12	1	1	1	1	1	1	1	1	1	0	11.9400
98	Di-n-octylphthalate	85	98	102	100	107	108	------	------	5.8	8.50	11.2158
99	Benzo(b)fluoranthene	96	99	99	98	104	104	------	------	2.7	3.40	11.5719
100	Benzo(k)fluoranthene	101	101	101	97	100	102	------	------	1.5	1.76	11.5976
101	Benzo(e)pyrene	98	102	101	96	102	102	------	------	2	2.41	11.8313
102	Benzo(a)pyrene	93	98	100	99	105	106	------	------	3.5	4.70	11.8839
103	Perylene	99	102	100	97	101	101	------	------	1.3	1.77	11.9660
104	Indeno(1,2,3-cd)pyrene	96	100	100	97	102	104	------	------	2.2	2.90	13.1482
105	Dibenzo(a,h)anthracene	93	99	100	98	104	105	------	------	3.1	4.24	13.1693
106	Benzo(g,h,i)perylene	96	101	100	97	104	103	------	------	2.5	3.23	13.5098

TW 4/9/15

Compound List Report E7

Method Path : C:\msdchem\1\METHODS\
Method File : SVE7D03.M
Title : SEMIVOLATILES
Last Update : Fri Apr 03 12:48:46 2015
Response Via : Initial Calibration

Total Cpnds : 106

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dichlorobenzene-d4	152	2.848	1.000	A	1	A	B
2	T	1,4-Dioxane	88	1.233	0.433	A	1	A	B
3	T	N-nitrosodimethylamine	74	1.338	0.470	A	1	A	B
4	T	Pyridine	79	1.367	0.480	A	1	A	B
5	S	2-Fluorophenol	112	1.927	0.677	A	1	A	B
6	S	Phenol-d5	99	2.506	0.880	A	1	A	B
7	C,P	Phenol	94	2.517	0.884	A	1	A	B
8	T	Aniline	93	2.584	0.907	A	1	A	B
9	T	bis(2-chloroethyl)ether	93	2.611	0.917	A	1	A	B
10	T	2-Chlorophenol	128	2.673	0.939	A	1	A	B
11	T	1,3-Dichlorobenzene	146	2.805	0.985	A	1	A	B
12	S	1,2-Dichlorobenzene-d4	152	2.989	1.050	A	1	A	B
13	C	1,4-Dichlorobenzene	146	2.863	1.005	A	1	A	B
14	T	Benzyl alcohol	108	2.939	1.032	A	1	A	B
15	T	1,2-Dichlorobenzene	146	2.992	1.051	A	1	A	B
16	T	2-Methylphenol	107	3.016	1.059	A	1	A	B
17	T	bis(2-chloroisopropyl)ether	45	3.059	1.074	A	1	A	B
18	T	4-Methylphenol	107	3.155	1.108	A	1	A	B
19	P,P	N-Nitroso-di-n-propylamine	70	3.179	1.116	A	1	A	B
20	T	Hexachloroethane	117	3.299	1.158	A	1	A	B
21	I	Naphthalene-d8	136	4.058	1.000	A	1	A	B
22	S	Nitrobenzene-d5	82	3.332	0.821	A	1	A	B
23	T	Nitrobenzene	77	3.351	0.826	A	1	A	B
24	T	Isophorone	82	3.577	0.881	A	1	A	B
25	C,P	2-Nitrophenol	139	3.658	0.901	A	1	A	B
26	T	2,4-Dimethylphenol	107	3.678	0.906	A	1	A	B
27	T	Benzoic acid	105	3.754	0.925	L	1	A	B
28	T	bis(2-Chloroethoxy)methane	93	3.788	0.933	A	1	A	B
29	T	3,5-Dimethylphenol	107	3.816	0.940	A	1	A	B
30	C,P	2,4-Dichlorophenol	162	3.893	0.959	A	1	A	B
31	T	1,2,4-Trichlorobenzene	180	3.995	0.984	A	1	A	B
32	T	3,4-Dimethylphenol	107	3.990	0.983	A	1	A	B
33	T	Naphthalene	128	4.082	1.006	A	1	A	B
34	T	4-Chloroaniline	127	4.130	1.018	A	1	A	B
35	T	2,6-Dichlorophenol	162	4.135	1.019	A	1	A	B
36	C	Hexachlorobutadiene	225	4.207	1.037	A	1	A	B
37	T	Hydroquinone	110	0.000	0.000	A	1	A	B
38	C,P	4-Chloro-3-methylphenol	107	4.646	1.145	A	1	A	B
39	T	2-Methylnaphthalene	142	4.842	1.193	A	1	A	B
40	T	1-Methylnaphthalene	142	4.953	1.221	A	1	A	B
41	I	Acenaphthene-d10	164	6.064	1.000	A	1	A	B
42	P	Hexachlorocyclopentadiene	237	5.020	0.828	A	1	A	B
43	T	2,3,5-Trichlorophenol	196	5.024	0.828	A	1	A	B
44	C,P	2,4,6-Trichlorophenol	196	5.154	0.850	A	1	A	B
45	T	2,4,5-Trichlorophenol	196	5.193	0.856	A	1	A	B
46	S	2-Fluorobiphenyl	172	5.265	0.868	A	1	A	B
47	T	2,3,4-Trichlorophenol	196	5.265	0.868	A	1	A	B
48	T	Biphenyl	154	5.381	0.887	A	1	A	B
49	T	2-Chloronaphthalene	162	5.400	0.891	A	1	A	B
50	T	2-Nitroaniline	65	5.520	0.910	A	1	A	B
51	T	2,6-Dimethylnaphthalene	156	5.568	0.918	A	1	A	B
52	T	1,4-Dinitrobenzene	168	5.688	0.938	A	1	A	B
53	T	Dimethylphthalate	163	5.756	0.949	A	1	A	B
54	T	1,3-Dinitrobenzene	168	5.775	0.952	A	1	A	B

55	T	2,6-Dinitrotoluene	165	5.818	0.959	A	1	A	B
56	T	1,2-Dinitrobenzene	168	5.876	0.969	A	1	A	B
57	T	Acenaphthylene	152	5.891	0.971	A	1	A	B
58	T	3-Nitroaniline	138	6.011	0.991	A	1	A	B
59	C,P	Acenaphthene	153	6.097	1.005	A	1	A	B
60	P	2,4-Dinitrophenol	184	6.131	1.011	L	1	A	B
61	P	4-Nitrophenol	109	6.203	1.023	A	1	A	B
62	T	2,4-Dinitrotoluene	165	6.294	1.038	A	1	A	B
63	T	Dibenzofuran	168	6.308	1.040	A	1	A	B
64	T	2,3,5,6-Tetrachlorophenol	230	6.399	1.055	A	1	A	B
65	T	2,3,4,6-Tetrachlorophenol	232	6.447	1.063	A	1	A	B
66	T	2,3,5-Trimethylnaphthalene	170	6.561	1.082	A	1	A	B
67	T	Diethylphthalate	149	6.608	1.090	A	1	A	B
68	T	Fluorene	166	6.721	1.108	A	1	A	B
69	T	4-Chlorophenyl-phenylether	204	6.730	1.110	A	1	A	B
70	T	4-Nitroaniline	138	6.744	1.112	A	1	A	B
71	I	Phenanthrene-d10	188	7.801	1.000	A	1	A	B
72	T	4,6-Dinitro-2-methylphenol	198	6.782	0.869	L	1	A	B
73	C	N-Nitrosodiphenylamine	169	6.871	0.881	A	1	A	B
74	T	Azobenzene	77	6.919	0.887	A	1	A	B
75	S	2,4,6-Tribromophenol	330	6.999	0.897	A	1	A	B
76	T	4-Bromophenyl-phenylether	248	7.303	0.936	A	1	A	B
77	T	Hexachlorobenzene	284	7.359	0.943	A	1	A	B
78	C,P	Pentachlorophenol	266	7.581	0.972	A	1	A	B
79	T	Dibenzothiophene	184	7.685	0.985	A	1	A	B
80	T	Phenanthrene	178	7.828	1.003	A	1	A	B
81	T	Dinoseb	211	0.000	0.000	A	1	A	B
82	T	Anthracene	178	7.883	1.011	A	1	A	B
83	T	Carbazole	167	8.064	1.034	A	1	A	B
84	T	Di-n-butylphthalate	149	8.467	1.085	A	1	A	B
85	T	1-Methylphenanthrene	192	8.496	1.089	A	1	A	B
86	C,P	Fluoranthene	202	9.104	1.167	A	1	A	B
87	I	Chrysene-d12	240	10.573	1.000	A	1	A	B
88	T	Benzidine	184	0.000	0.000	A	1	A	B
89	T	Pyrene	202	9.335	0.883	A	1	A	B
90	S	Terphenyl-d14	244	9.507	0.899	A	1	A	B
91	T	Butylbenzylphthalate	149	10.016	0.947	A	1	A	B
92	T	bis(2-ethylhexyl)adipate	129	10.099	0.955	A	1	A	B
93	T	3,3'-Dichlorobenzidine	252	10.539	0.997	A	1	A	B
94	T	Benzo(a)anthracene	228	10.558	0.999	A	1	A	B
95	T	Chrysene	228	10.597	1.002	A	1	A	B
96	T	bis(2-Ethylhexyl)phthalate	149	10.597	1.002	A	1	A	B
97	I	Perylene-d12	264	11.939	1.000	A	1	A	B
98	C	Di-n-octylphthalate	149	11.218	0.940	A	1	A	B
99	T	Benzo(b)fluoranthene	252	11.573	0.969	A	1	A	B
100	T	Benzo(k)fluoranthene	252	11.598	0.971	A	1	A	B
101	T	Benzo(e)pyrene	252	11.832	0.991	A	1	A	B
102	C,P	Benzo(a)pyrene	252	11.883	0.995	A	1	A	B
103	T	Perylene	252	11.968	1.002	A	1	A	B
104	T	Indeno(1,2,3-cd)pyrene	276	13.147	1.101	A	1	A	B
105	T	Dibenzo(a,h)anthracene	278	13.172	1.103	A	1	A	B
106	T	Benzo(g,h,i)perylene	276	13.511	1.132	A	1	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

PK 4/9/15

SVE7D03.M Fri Apr 03 17:13:29 2015

Quantitation Limit from Lowest Initial Calibration Concentration

Instrument ID :E7
Beginning DateTime :04/03/15 09:30
IC File :RDH007

Column Spec :ZB-SemiVoa ID :0.18MM
Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03

WATER Init. Vol. (ml) : 1000
SOIL Init. Weight (gm) : 30

Final Vol. (ml) : 2
Final Vol. (ml) : 2

IDX	Parameters	ON COL MG/L	WATER UG/L	SOIL MG/KG	R FILE
1	1,4-Dichlorobenzene-d4	IntSTD	IntSTD	IntSTD	IntSTD
2	1,4-Dioxane	4	8	.2667	RDH010
3	N-nitrosodimethylamine	4	8	.2667	RDH010
4	Pyridine	4	8	.2667	RDH010
5	2-Fluorophenol	4	8	.2667	RDH010
6	Phenol-d5	4	8	.2667	RDH010
7	Phenol	4	8	.2667	RDH010
8	Aniline	4	8	.2667	RDH010
9	bis(2-chloroethyl)ether	4	8	.2667	RDH010
10	2-Chlorophenol	4	8	.2667	RDH010
11	1,3-Dichlorobenzene	4	8	.2667	RDH010
12	1,2-Dichlorobenzene-d4	NA	NA	NA	NA
13	1,4-Dichlorobenzene	4	8	.2667	RDH010
14	Benzyl alcohol	4	8	.2667	RDH010
15	1,2-Dichlorobenzene	4	8	.2667	RDH010
16	2-Methylphenol	4	8	.2667	RDH010
17	bis(2-chloroisopropyl)ether	4	8	.2667	RDH010
18	4-Methylphenol	4	8	.2667	RDH010
19	N-Nitroso-di-n-propylamine	4	8	.2667	RDH010
20	Hexachloroethane	4	8	.2667	RDH010
21	Naphthalene-d8	IntSTD	IntSTD	IntSTD	IntSTD
22	Nitrobenzene-d5	4	8	.2667	RDH010
23	Nitrobenzene	4	8	.2667	RDH010
24	Isophorone	4	8	.2667	RDH010
25	2-Nitrophenol	4	8	.2667	RDH010
26	2,4-Dimethylphenol	4	8	.2667	RDH010
27	Benzoic acid	4	8	.2667	RDH010
28	bis(2-Chloroethoxy)methane	4	8	.2667	RDH010
29	3,5-Dimethylphenol	4	8	.2667	RDH010
30	2,4-Dichlorophenol	4	8	.2667	RDH010
31	1,2,4-Trichlorobenzene	4	8	.2667	RDH010
32	3,4-Dimethylphenol	4	8	.2667	RDH010
33	Naphthalene	4	8	.2667	RDH010
34	4-Chloroaniline	4	8	.2667	RDH010
35	2,6-Dichlorophenol	4	8	.2667	RDH010
36	Hexachlorobutadiene	4	8	.2667	RDH010
37	Hydroquinone	NA	NA	NA	NA
38	4-Chloro-3-methylphenol	4	8	.2667	RDH010
39	2-Methylnaphthalene	4	8	.2667	RDH010
40	1-Methylnaphthalene	4	8	.2667	RDH010
41	Acenaphthene-d10	IntSTD	IntSTD	IntSTD	IntSTD
42	Hexachlorocyclopentadiene	4	8	.2667	RDH010
43	2,3,5-Trichlorophenol	4	8	.2667	RDH010
44	2,4,6-Trichlorophenol	4	8	.2667	RDH010
45	2,4,5-Trichlorophenol	4	8	.2667	RDH010
46	2-Fluorobiphenyl	4	8	.2667	RDH010
47	2,3,4-Trichlorophenol	4	8	.2667	RDH010
48	Biphenyl	4	8	.2667	RDH010
49	2-Chloronaphthalene	4	8	.2667	RDH010
50	2-Nitroaniline	4	8	.2667	RDH010
51	2,6-Dimethylnaphthalene	4	8	.2667	RDH010
52	1,4-Dinitrobenzene	4	8	.2667	RDH010
53	Dimethylphthalate	4	8	.2667	RDH010
54	1,3-Dinitrobenzene	4	8	.2667	RDH010
55	2,6-Dinitrotoluene	4	8	.2667	RDH010
56	1,2-Dinitrobenzene	4	8	.2667	RDH010
57	Acenaphthylene	4	8	.2667	RDH010
58	3-Nitroaniline	4	8	.2667	RDH010
59	Acenaphthene	4	8	.2667	RDH010
60	2,4-Dinitrophenol	4	8	.2667	RDH010
61	4-Nitrophenol	4	8	.2667	RDH010
62	2,4-Dinitrotoluene	4	8	.2667	RDH010
63	Dibenzofuran	4	8	.2667	RDH010
64	2,3,5,6-Tetrachlorophenol	4	8	.2667	RDH010
65	2,3,4,6-Tetrachlorophenol	4	8	.2667	RDH010
66	2,3,5-Trimethylnaphthalene	4	8	.2667	RDH010
67	Diethylphthalate	4	8	.2667	RDH010
68	Fluorene	4	8	.2667	RDH010
69	4-Chlorophenyl-phenylether	4	8	.2667	RDH010
70	4-Nitroaniline	4	8	.2667	RDH010
71	Phenanthrene-d10	IntSTD	IntSTD	IntSTD	IntSTD
72	4,6-Dinitro-2-methylphenol	4	8	.2667	RDH010
73	N-Nitrosodiphenylamine	4	8	.2667	RDH010
74	Azobenzene	4	8	.2667	RDH010
75	2,4,6-Tribromophenol	4	8	.2667	RDH010
76	4-Bromophenyl-phenylether	4	8	.2667	RDH010
77	Hexachlorobenzene	4	8	.2667	RDH010
78	Pentachlorophenol	4	8	.2667	RDH010
79	Dibenzothiophene	4	8	.2667	RDH010
80	Phenanthrene	4	8	.2667	RDH010
81	Dinoseb	NA	NA	NA	NA
82	Anthracene	4	8	.2667	RDH010
83	Carbazole	4	8	.2667	RDH010
84	Di-n-butylphthalate	4	8	.2667	RDH010
85	1-Methylphenanthrene	4	8	.2667	RDH010
86	Fluoranthene	4	8	.2667	RDH010
87	Chrysene-d12	IntSTD	IntSTD	IntSTD	IntSTD
88	Benzidine	NA	NA	NA	NA
89	Pyrene	4	8	.2667	RDH010
90	Terphenyl-d14	4	8	.2667	RDH010
91	Butylbenzylphthalate	4	8	.2667	RDH010
92	bis(2-ethylhexyl)adipate	4	8	.2667	RDH010
93	3,3'-Dichlorobenzidine	4	8	.2667	RDH010
94	Benzo(a)anthracene	4	8	.2667	RDH010
95	Chrysene	4	8	.2667	RDH010
96	bis(2-Ethylhexyl)phthalate	4	8	.2667	RDH010
97	Perylene-d12	IntSTD	IntSTD	IntSTD	IntSTD
98	Di-n-octylphthalate	4	8	.2667	RDH010
99	Benzo(b)fluoranthene	4	8	.2667	RDH010
100	Benzo(k)fluoranthene	4	8	.2667	RDH010
101	Benzo(e)pyrene	4	8	.2667	RDH010
102	Benzo(a)pyrene	4	8	.2667	RDH010
103	Perylene	4	8	.2667	RDH010
104	Indeno(1,2,3-cd)pyrene	4	8	.2667	RDH010
105	Dibenzo(a,h)anthracene	4	8	.2667	RDH010
106	Benzo(g,h,i)perylene	4	8	.2667	RDH010

mu 4/9/15

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH007
Instrument ID: TOE7

Project:ICAL
SDG No.:CAL\8270\2015
Date Analyzed: 04/03/15
Time Analyzed: 10:46

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	567854	2.85	2117278	4.06	1301658	6.06
	UPPER LIMIT	1135708	3.35	4234556	4.56	2603316	6.56
	LOWER LIMIT	283927	2.35	1058639	3.56	650829	5.56
	SAMPLE ID						
1	SVE7D031	517430	2.85	1930059	4.06	1104062	6.06
2	SVE7D032	504151	2.85	1863603	4.05	1050881	6.06
3	SVE7D033	541281	2.85	2013141	4.06	1228017	6.06
4	SVE7D034	564861	2.85	2073381	4.06	1275998	6.06
5	SVE7D036	543780	2.85	2041343	4.06	1242554	6.06
6	SVE7D037	535024	2.85	2009700	4.06	1220031	6.06
7	SVE7D038	540431	2.85	1989051	4.06	1200151	6.06
8	ISVE7D031	600353	2.85	2230730	4.05	1396618	6.06

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

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

FORM VIII SV-1 OLM02.0

4/9/15

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH007
Instrument ID: TOE7

Project:ICAL
SDG No.:CAL\8270\2015
Date Analyzed: 04/03/15
Time Analyzed: 10:46

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	2320209	7.80	2507024	10.57	2285835	11.94
	UPPER LIMIT	4640418	8.30	5014048	11.07	4571670	12.44
	LOWER LIMIT	1160105	7.30	1253512	10.07	1142918	11.44
	SAMPLE ID						
1	SVE7D031	1925784	7.80	2143208	10.57	1957813	11.94
2	SVE7D032	1831349	7.80	2011846	10.57	1833822	11.93
3	SVE7D033	2161365	7.80	2351580	10.58	2118519	11.94
4	SVE7D034	2237485	7.80	2398598	10.58	2162744	11.94
5	SVE7D036	2156231	7.80	2290964	10.57	2112375	11.94
6	SVE7D037	2137658	7.80	2322556	10.57	2118965	11.94
7	SVE7D038	2137463	7.80	2287636	10.57	2063620	11.94
8	ISVE7D031	2398781	7.80	2553528	10.58	2319642	11.95

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

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

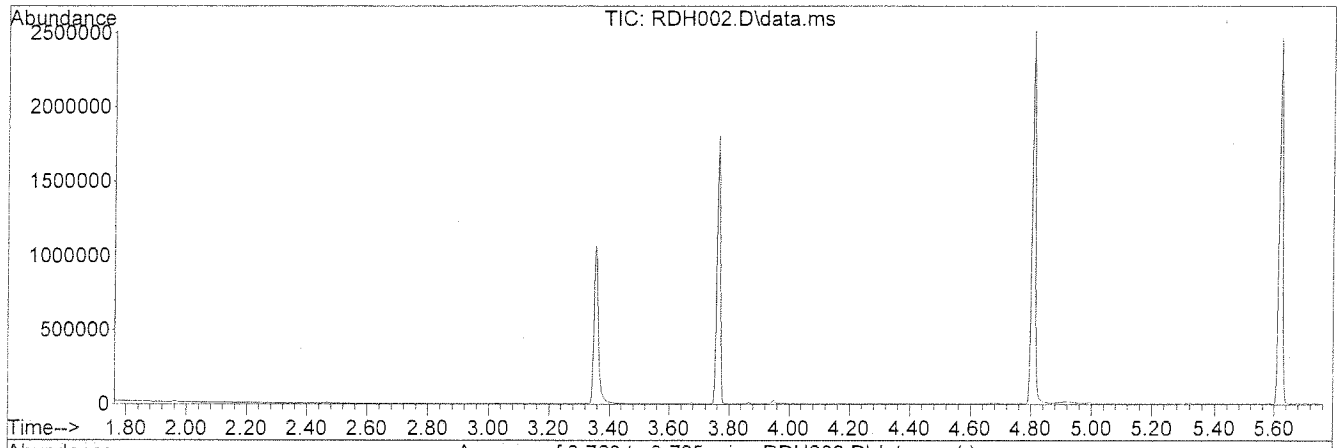
FORM VIII SV-2 OLM02.0

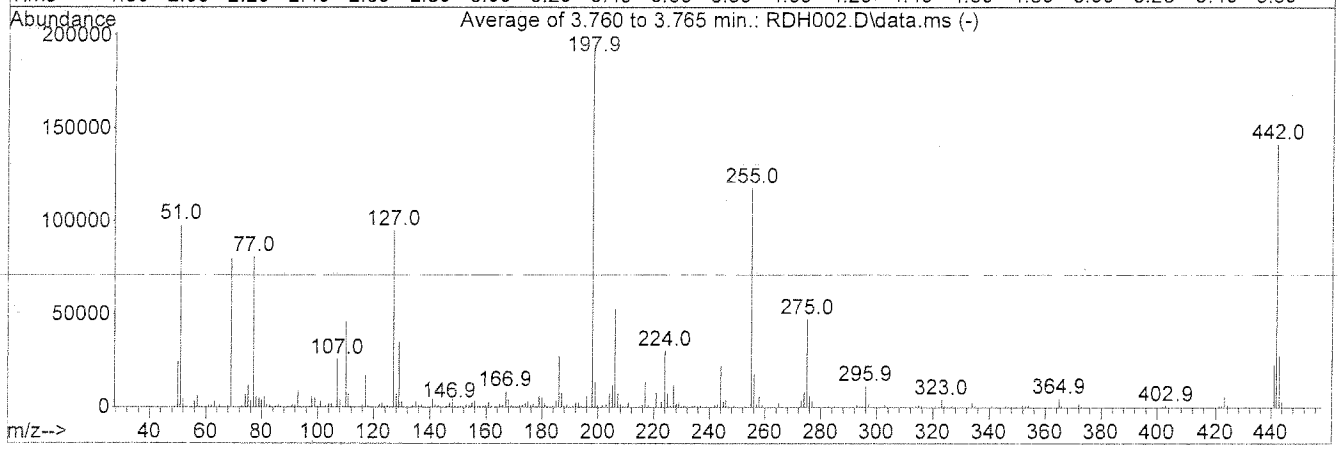
4/9/15

Data Path : D:\DATA\15D03\
Data File : RDH002.D
Acq On : 3 Apr 2015 9:19
Operator : RZhou
Sample : DFTE7D0301
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Mon Apr 06 08:19:55 2015





AutoFind: Scans 772, 773, 774; Background Corrected with Scan 764

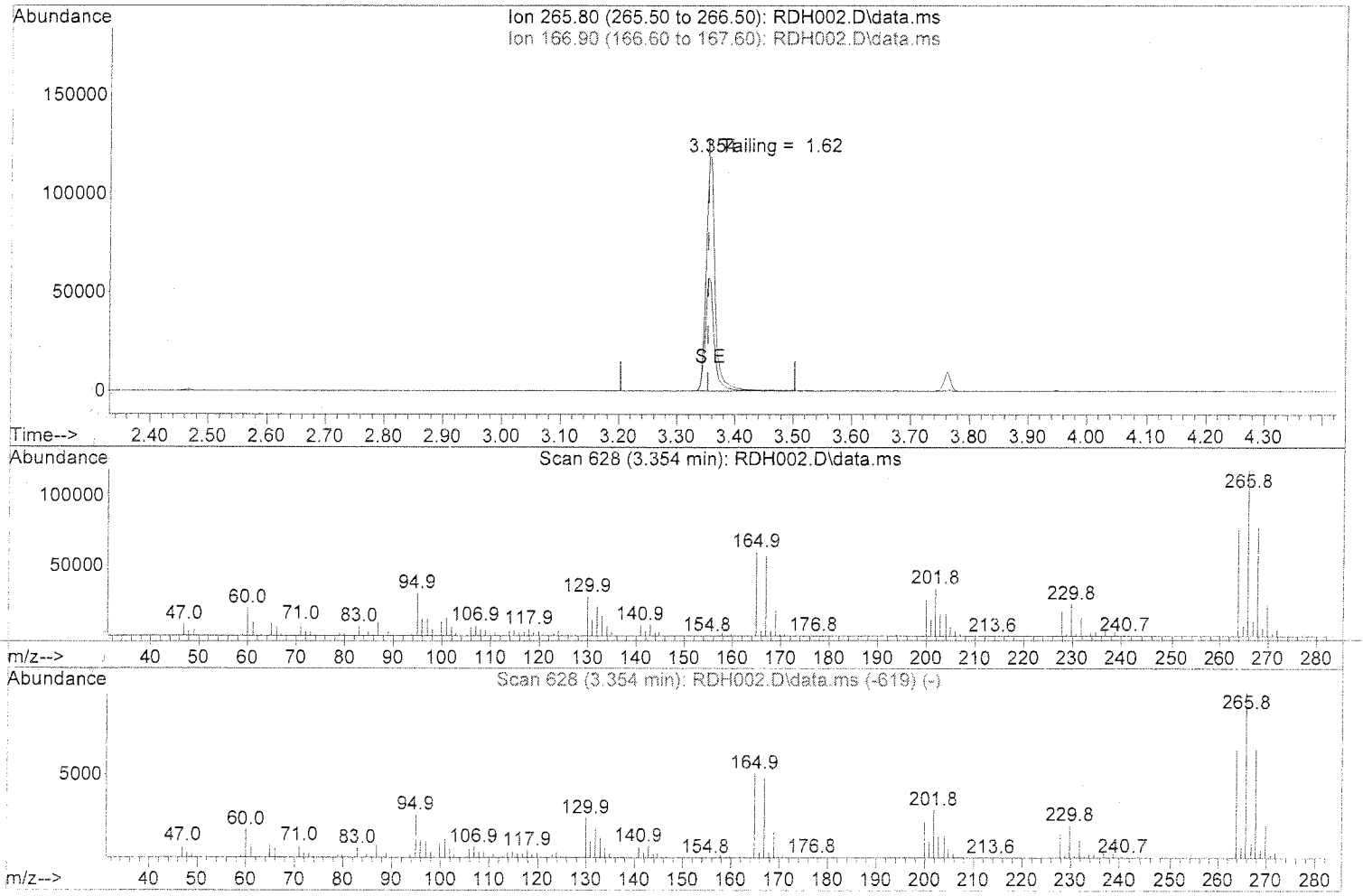
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	51.0	97884	PASS
68	69	0.00	2	1.3	1040	PASS
69	198	0.00	100	41.5	79597	PASS
70	69	0.00	2	0.4	314	PASS
127	198	10	80	49.4	94912	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	192021	PASS
199	198	5	9	7.0	13395	PASS
275	198	10	60	24.6	47245	PASS
365	198	1	100	2.6	4989	PASS
441	442	0.01	24	16.0	22667	PASS
442	198	50	100	73.7	141603	PASS
443	442	15	24	19.7	27931	PASS

RZ 4/9/15

Quantitation Report (Qedit)

Data File : D:\DATA\15D03\RDH002.D
Acq On : 3 Apr 2015 9:19
Sample : DFTE7D0301
Misc :
Integrator: RTE
Quant Time: Apr 06 08:19:57 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: RZhou
Inst : E7
Multiplr: 1.00



TIC: RDH002.D\data.ms

(1) Pentachlorophenol (T)

3.354min (+0.000) 50.00 ppm

response 125025

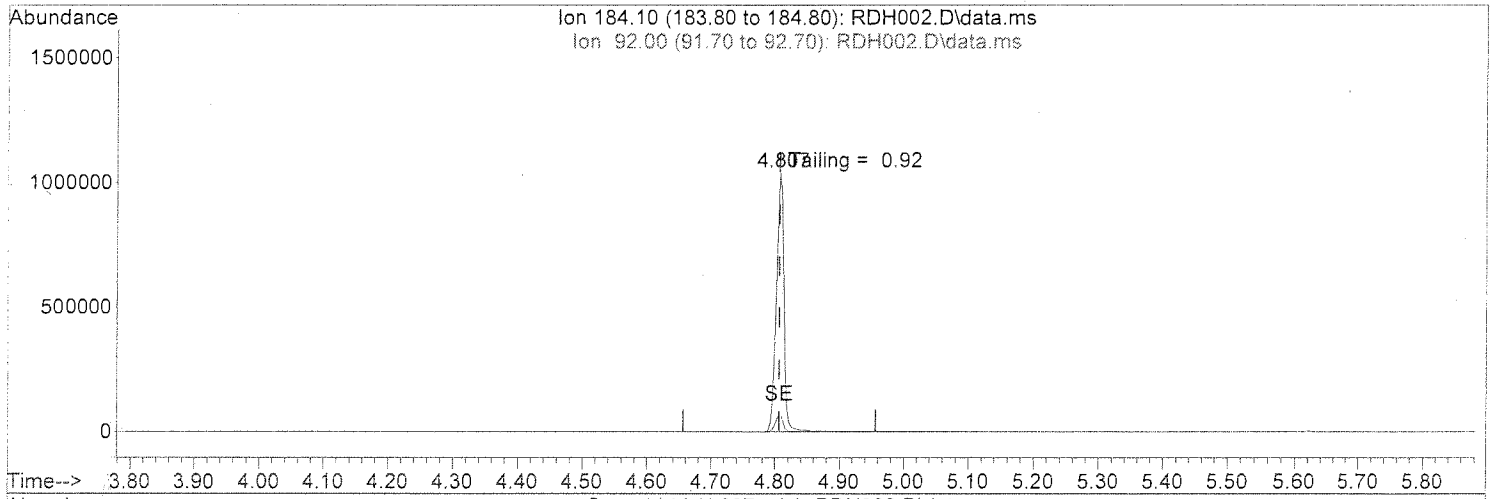
Ion	Exp%	Act%
265.80	100	100
166.90	46.90	46.90
0.00	0.00	0.00
0.00	0.00	0.00

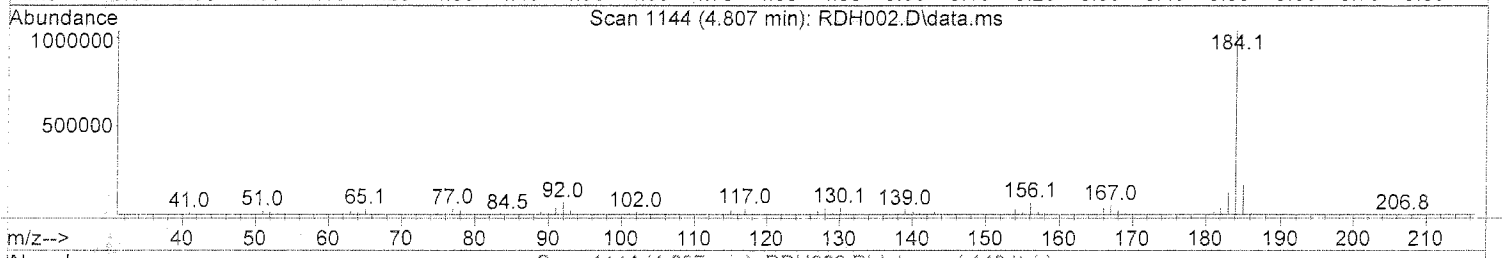
4/9/15

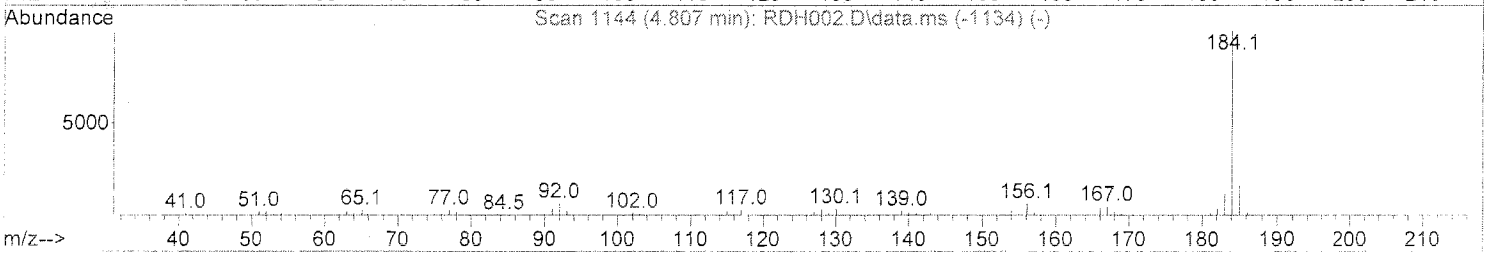
Quantitation Report (Qedit)

Data File : D:\DATA\15D03\RDH002.D
Acq On : 3 Apr 2015 9:19
Sample : DFTE7D0301
Misc :
Integrator: RTE
Quant Time: Apr 06 08:19:57 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: RZhou
Inst : E7
Multiplr: 1.00







TIC: RDH002.D\data.ms

(3) Benzidine (T)

4.807min (0.000) 50.00 ppm

response 839412

Ion	Exp%	Act%
184.10	100	100
92.00	6.60	6.59
0.00	0.00	0.00
0.00	0.00	0.00

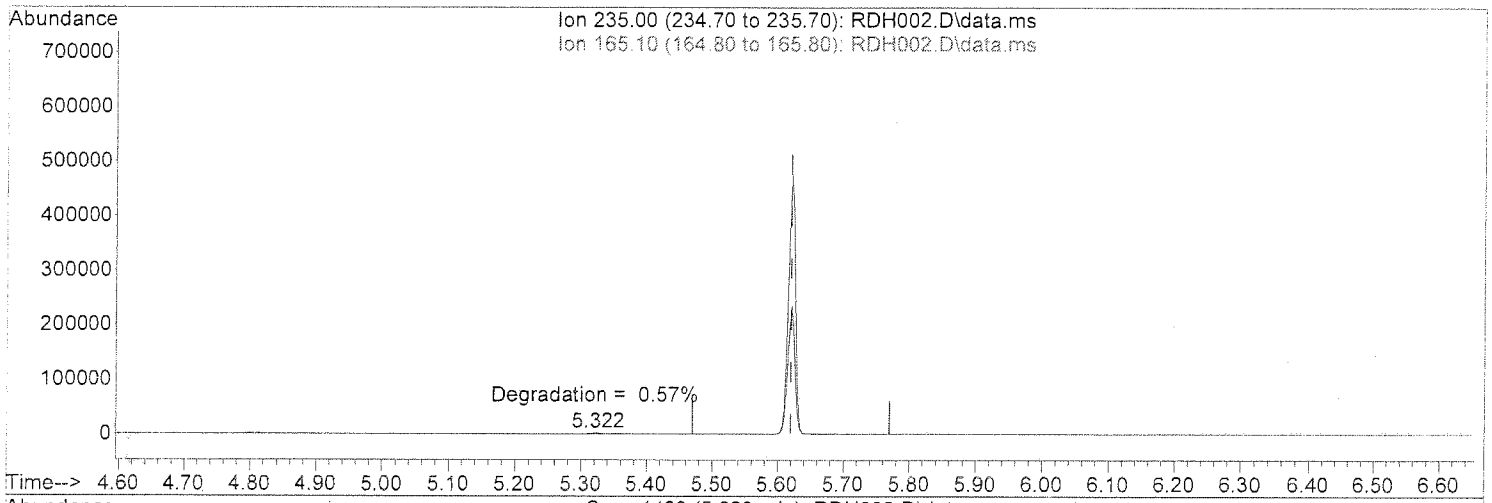
4/9/15

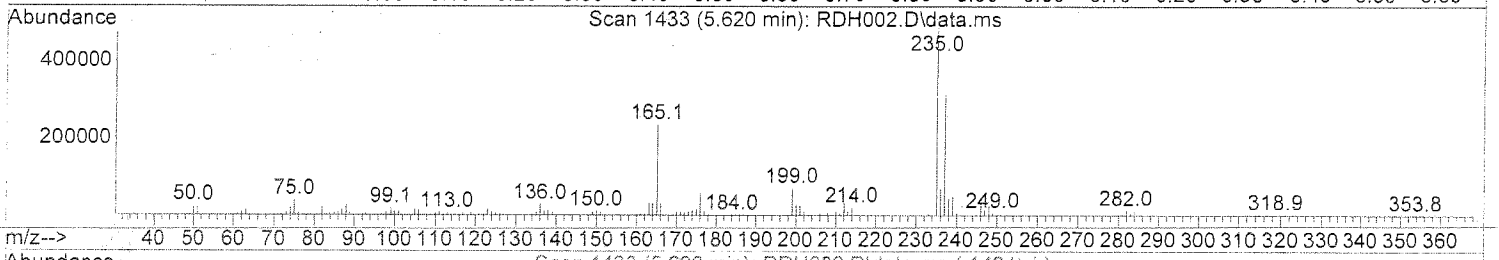
D41

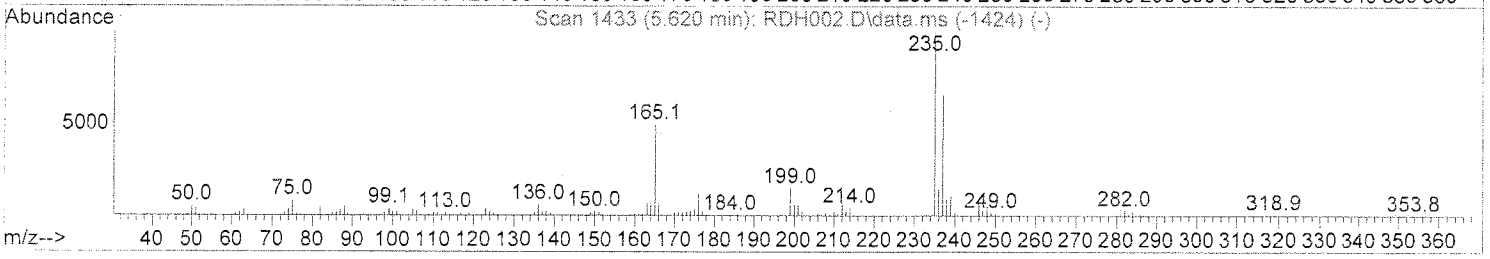
Quantitation Report (Qedit)

Data File : D:\DATA\15D03\RDH002.D
Acq On : 3 Apr 2015 9:19
Sample : DFTE7D0301
Misc :
Integrator: RTE
Quant Time: Apr 06 08:19:57 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: RZhou
Inst : E7
Multiplr: 1.00







TIC: RDH002.D\data.ms

(6) DDT (T)

5.620min (0.000) 50.00 ppm

response 362143

Ion	Exp%	Act%
235.00	100	100
165.10	49.20	49.18
0.00	0.00	0.00
0.00	0.00	0.00

RW 4/9/15

512

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH010.D
Acq On : 3 Apr 2015 11:43
Sample : SVE7D038
Misc : 4PPM
Integrator: RTE
Quant Time: Apr 03 12:53:42 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 10
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	540431	40.00	ppm	0.00
21) Naphthalene-d8	4.057	136	1989051	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1200151	40.00	ppm	0.00
71) Phenanthrene-d10	7.796	188	2137463	40.00	ppm	0.00
87) Chrysene-d12	10.568	240	2287636	40.00	ppm	0.00
97) Perylene-d12	11.939	264	2063620	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	66841	4.20	ppm	0.00
Spiked Amount 30.000			Recovery	=	14.00%	
6) Phenol-d5	2.501	99	80231	4.20	ppm	0.00
Spiked Amount 30.000			Recovery	=	14.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.327	82	72067	3.99	ppm	0.00
Spiked Amount 10.000			Recovery	=	39.90%	
46) 2-Fluorobiphenyl	5.261	172	179939	3.85	ppm	0.00
Spiked Amount 10.000			Recovery	=	38.50%	
75) 2,4,6-Tribromophenol	6.995	330	21626	3.72	ppm	0.00
Spiked Amount 30.000			Recovery	=	12.40%	
90) Terphenyl-d14	9.506	244	194250	4.00	ppm	0.00
Spiked Amount 10.000			Recovery	=	40.00%	

Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	31890	4.92	ppm	80
3) N-nitrosodimethylamine	1.338	74	36191	3.97	ppm	96
4) Pyridine	1.367	79	63242	3.90	ppm	99
7) Phenol	2.511	94	73904	3.85	ppm	98
8) Aniline	2.579	93	96932	3.93	ppm	99
9) bis(2-chloroethyl)ether	2.610	93	63405	4.13	ppm	98
10) 2-Chlorophenol	2.673	128	65851	3.95	ppm	99
11) 1,3-Dichlorobenzene	2.805	146	83453	4.05	ppm	99
13) 1,4-Dichlorobenzene	2.862	146	87323	4.09	ppm	99
14) Benzyl alcohol	2.939	108	41550	3.88	ppm	98
15) 1,2-Dichlorobenzene	2.992	146	81893	4.05	ppm	98
16) 2-Methylphenol	3.016	107	51725	3.98	ppm	100
17) bis(2-chloroisopropyl)...	3.059	45	147484	4.16	ppm	100
18) 4-Methylphenol	3.150	107	68005	3.99	ppm	99
19) N-Nitroso-di-n-propyla...	3.174	70	44768	3.92	ppm	95
20) Hexachloroethane	3.299	117	39252	4.10	ppm	99
23) Nitrobenzene	3.347	77	76019	3.97	ppm	97
24) Isophorone	3.572	82	131591	3.63	ppm	97
25) 2-Nitrophenol	3.653	139	31869	3.71	ppm	92
26) 2,4-Dimethylphenol	3.673	107	66701	3.90	ppm	96
27) Benzoic acid	3.701	105	27156	4.16	ppm	79
28) bis(2-Chloroethoxy)met...	3.783	93	82074	4.02	ppm	99
29) 3,5-Dimethylphenol	3.807	107	79055	4.01	ppm	97
30) 2,4-Dichlorophenol	3.888	162	61662	3.91	ppm	98
31) 1,2,4-Trichlorobenzene	3.990	180	77885	4.07	ppm	99
32) 3,4-Dimethylphenol	3.985	107	83550	3.97	ppm	97
33) Naphthalene	4.077	128	218068	4.01	ppm	100
34) 4-Chloroaniline	4.120	127	84167	3.87	ppm	97
35) 2,6-Dichlorophenol	4.130	162	61668	3.91	ppm	97

RW 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH010.D
Acq On : 3 Apr 2015 11:43
Sample : SVE7D038
Misc : 4PPM
Integrator: RTE
Quant Time: Apr 03 12:53:42 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 10
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Hexachlorobutadiene	4.207	225	49661	4.04	ppm		98
38) 4-Chloro-3-methylphenol	4.646	107	50451	3.71	ppm		98
39) 2-Methylnaphthalene	4.838	142	151273	4.02	ppm		100
40) 1-Methylnaphthalene	4.948	142	136431	3.97	ppm		99
42) Hexachlorocyclopentadiene	5.020	237	48894	3.83	ppm		96
43) 2,3,5-Trichlorophenol	5.024	196	36200	3.38	ppm		93
44) 2,4,6-Trichlorophenol	5.154	196	45398	3.77	ppm		98
45) 2,4,5-Trichlorophenol	5.188	196	45832	3.68	ppm		99
47) 2,3,4-Trichlorophenol	5.265	196	45758	3.80	ppm		96
48) Biphenyl	5.381	154	187572	4.02	ppm		99
49) 2-Chloronaphthalene	5.395	162	155974	3.99	ppm		100
50) 2-Nitroaniline	5.515	65	36016	3.63	ppm		97
51) 2,6-Dimethylnaphthalene	5.563	156	133534	4.03	ppm		99
52) 1,4-Dinitrobenzene	5.683	168	16076	3.39	ppm		74
53) Dimethylphthalate	5.746	163	173962	3.98	ppm		99
54) 1,3-Dinitrobenzene	5.765	168	20423	3.68	ppm		97
55) 2,6-Dinitrotoluene	5.809	165	34558	3.81	ppm		100
56) 1,2-Dinitrobenzene	5.862	168	12945	3.82	ppm	#	73
57) Acenaphthylene	5.886	152	247611	3.91	ppm		98
58) 3-Nitroaniline	6.001	138	33380	3.73	ppm		97
59) Acenaphthene	6.097	153	162773	4.01	ppm		100
60) 2,4-Dinitrophenol	6.126	184	10784	4.34	ppm		99
61) 4-Nitrophenol	6.198	109	16315	3.61	ppm		96
62) 2,4-Dinitrotoluene	6.284	165	43462	3.73	ppm		97
63) Dibenzofuran	6.303	168	212315	4.10	ppm		99
64) 2,3,5,6-Tetrachlorophenol	6.394	230	34249	3.80	ppm		99
65) 2,3,4,6-Tetrachlorophenol	6.447	232	42377	3.84	ppm		100
66) 2,3,5-Trimethylnaphtha...	6.556	170	127868	3.79	ppm		87
67) Diethylphthalate	6.599	149	165129	3.98	ppm		99
68) Fluorene	6.716	166	174874	4.06	ppm		99
69) 4-Chlorophenyl-phenyle...	6.725	204	92079	4.15	ppm		99
70) 4-Nitroaniline	6.730	138	32215	3.76	ppm		95
72) 4,6-Dinitro-2-methylph...	6.772	198	17179	4.35	ppm		95
73) N-Nitrosodiphenylamine	6.866	169	133406	3.92	ppm		93
74) Azobenzene	6.914	77	141395	3.89	ppm		99
76) 4-Bromophenyl-phenylether	7.303	248	51492	3.96	ppm		100
77) Hexachlorobenzene	7.355	284	59680	4.20	ppm		99
78) Pentachlorophenol	7.581	266	26031	3.33	ppm		97
79) Dibenzothiophene	7.681	184	223720	3.74	ppm		97
80) Phenanthrene	7.824	178	259984	4.07	ppm		100
82) Anthracene	7.878	178	258722	3.95	ppm		99
83) Carbazole	8.059	167	212084	3.96	ppm		100
84) Di-n-butylphthalate	8.461	149	246877	3.74	ppm		100
85) 1-Methylphenanthrene	8.495	192	184372	4.03	ppm		100
86) Fluoranthene	9.099	202	279946	3.90	ppm		99
89) Pyrene	9.335	202	300805	3.81	ppm		100
91) Butylbenzylphthalate	10.016	149	91958	3.51	ppm		95
92) bis(2-ethylhexyl)adipate	10.099	129	74161	3.53	ppm		94
93) 3,3'-Dichlorobenzidine	10.534	252	88389	3.69	ppm		97
94) Benzo(a)anthracene	10.558	228	270641	4.04	ppm		99
95) Chrysene	10.592	228	276770	4.18	ppm		99
96) bis(2-Ethylhexyl)phtha...	10.597	149	145687	3.63	ppm		99
98) Di-n-octylphthalate	11.213	149	217303	3.38	ppm		100
99) Benzo(b)fluoranthene	11.568	252	240254	3.84	ppm		99

rw 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH010.D
Acq On : 3 Apr 2015 11:43
Sample : SVE7D038
Misc : 4PPM
Integrator: RTE
Quant Time: Apr 03 12:53:42 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 10
Operator: RZhou
Inst : E7
Multiplr: 1.00

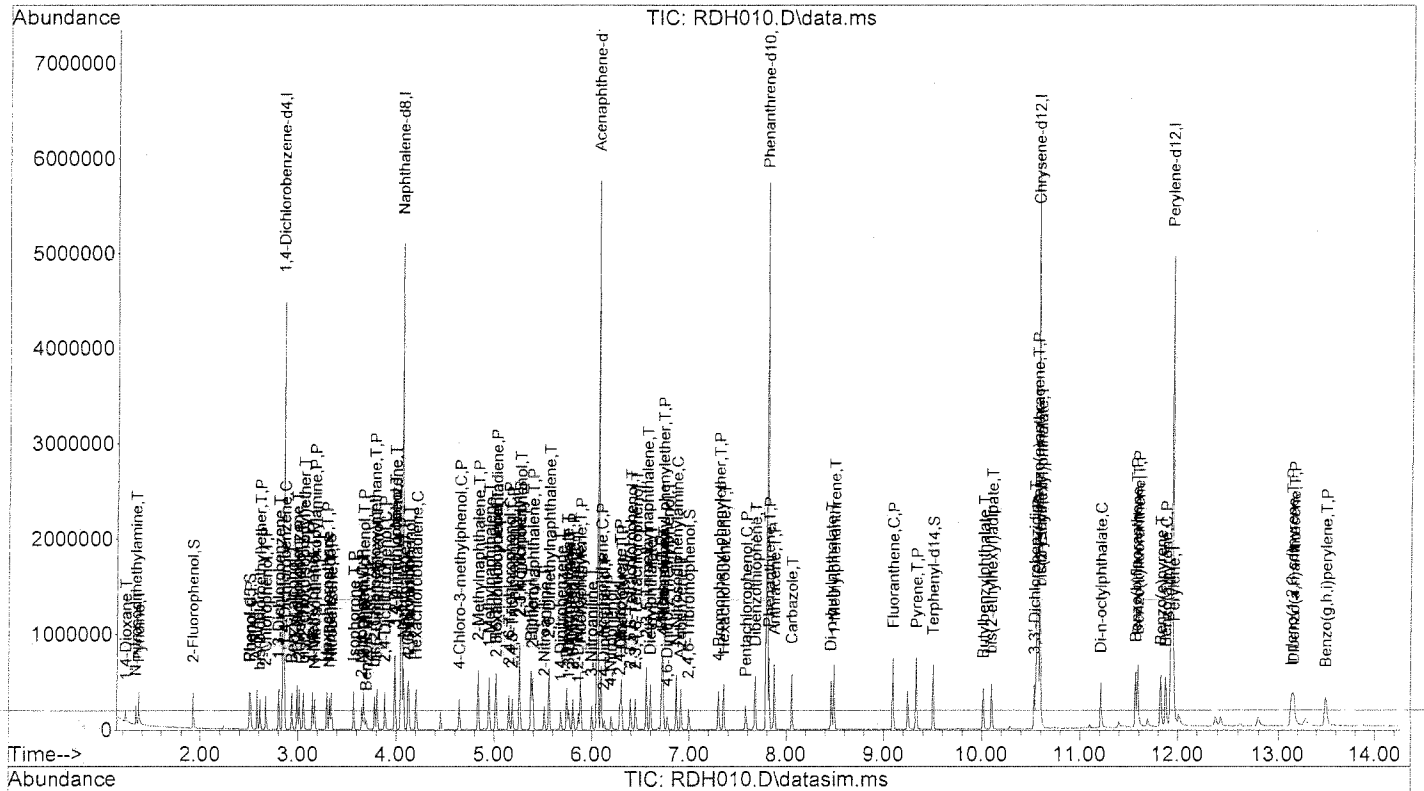
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.593	252	278312	4.03	ppm	99
101) Benzo(e)pyrene	11.827	252	226333	3.91	ppm	99
102) Benzo(a)pyrene	11.878	252	226299	3.72	ppm	94
103) Perylene	11.958	252	243150	3.96	ppm	96
104) Indeno(1,2,3-cd)pyrene	13.138	276	252143	3.85	ppm	100
105) Dibenzo(a,h)anthracene	13.162	278	206389	3.74	ppm	96
106) Benzo(g,h,i)perylene	13.497	276	219402	3.82	ppm	91

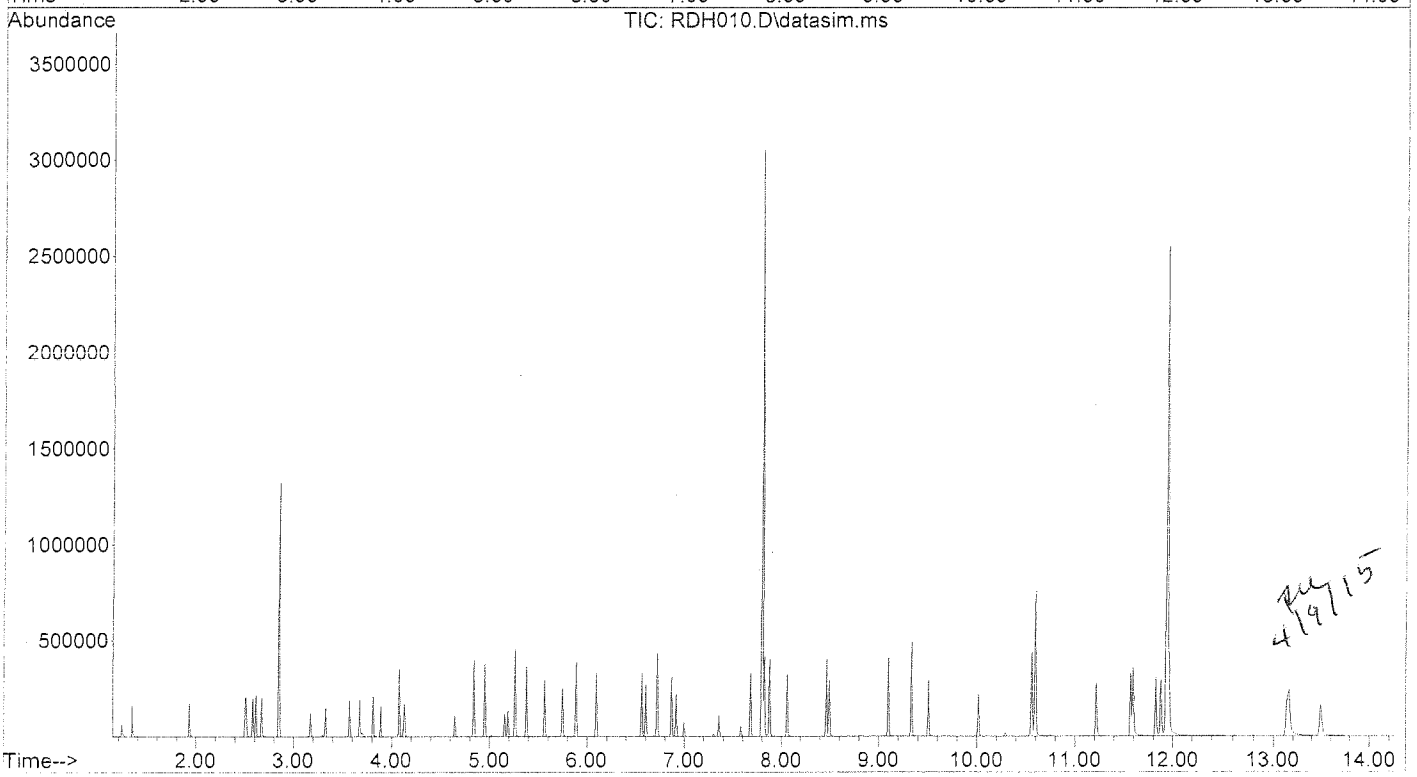
(#) = qualifier out of range (m) = manual integration (+) = signals summed

4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH010.D
Vial: 10
Acq On : 3 Apr 2015 11:43
Operator: RZhou
Sample : SVE7D038
Inst : E7
Misc : 4PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:53:42 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH009.D
Acq On : 3 Apr 2015 11:24
Sample : SVE7D037
Misc : 10PPM
Integrator: RTE
Quant Time: Apr 03 12:49:30 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	535024	40.00	ppm	0.00
21) Naphthalene-d8	4.058	136	2009700	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1220031	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2137658	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2322556	40.00	ppm	0.00
97) Perylene-d12	11.939	264	2118965	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	161089	10.23	ppm	0.00
Spiked Amount 30.000			Recovery = 34.10%			
6) Phenol-d5	2.501	99	196572	10.40	ppm	0.00
Spiked Amount 30.000			Recovery = 34.67%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.328	82	183941	10.08	ppm	0.00
Spiked Amount 10.000			Recovery = 100.80%			
46) 2-Fluorobiphenyl	5.266	172	460063	9.68	ppm	0.00
Spiked Amount 10.000			Recovery = 96.80%			
75) 2,4,6-Tribromophenol	7.000	330	57801	9.95	ppm	0.00
Spiked Amount 30.000			Recovery = 33.17%			
90) Terphenyl-d14	9.507	244	494057	10.03	ppm	0.00
Spiked Amount 10.000			Recovery = 100.30%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.228	88	71224	11.10	ppm	91
3) N-nitrosodimethylamine	1.338	74	92814	10.28	ppm	99
4) Pyridine	1.367	79	165220	10.29	ppm	100
7) Phenol	2.512	94	197223	10.39	ppm	99
8) Aniline	2.579	93	248424	10.17	ppm	97
9) bis(2-chloroethyl)ether	2.611	93	153809	10.12	ppm	100
10) 2-Chlorophenol	2.673	128	167811	10.17	ppm	98
11) 1,3-Dichlorobenzene	2.805	146	208308	10.22	ppm	100
13) 1,4-Dichlorobenzene	2.863	146	217159	10.27	ppm	100
14) Benzyl alcohol	2.939	108	109521	10.33	ppm	100
15) 1,2-Dichlorobenzene	2.992	146	207162	10.35	ppm	98
16) 2-Methylphenol	3.016	107	132002	10.26	ppm	100
17) bis(2-chloroisopropyl)...	3.059	45	361614	10.31	ppm	100
18) 4-Methylphenol	3.150	107	175179	10.37	ppm	97
19) N-Nitroso-di-n-propyla...	3.174	70	114611	10.13	ppm	100
20) Hexachloroethane	3.299	117	98953	10.44	ppm	97
23) Nitrobenzene	3.347	77	196808	10.18	ppm	98
24) Isophorone	3.572	82	373874	10.21	ppm	99
25) 2-Nitrophenol	3.654	139	83810	9.65	ppm	96
26) 2,4-Dimethylphenol	3.673	107	171662	9.93	ppm	98
27) Benzoic acid	3.721	105	104487	9.94	ppm	93
28) bis(2-Chloroethoxy)met...	3.783	93	208595	10.10	ppm	100
29) 3,5-Dimethylphenol	3.812	107	177634	8.93	ppm	97
30) 2,4-Dichlorophenol	3.889	162	159252	9.99	ppm	99
31) 1,2,4-Trichlorobenzene	3.990	180	197083	10.20	ppm	99
32) 3,4-Dimethylphenol	3.985	107	214987	10.11	ppm	99
33) Naphthalene	4.077	128	556789	10.13	ppm	100
34) 4-Chloroaniline	4.125	127	221342	10.08	ppm	99
35) 2,6-Dichlorophenol	4.130	162	161197	10.12	ppm	99

m 4/9/15

047

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH009.D
Acq On : 3 Apr 2015 11:24
Sample : SVE7D037
Misc : 10PPM
Integrator: RTE
Quant Time: Apr 03 12:49:30 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Hexachlorobutadiene	4.207	225	125842	10.14	ppm		98
38) 4-Chloro-3-methylphenol	4.646	107	137521	10.02	ppm		97
39) 2-Methylnaphthalene	4.838	142	380146	10.00	ppm		100
40) 1-Methylnaphthalene	4.953	142	350101	10.09	ppm		99
42) Hexachlorocyclopentadiene	5.020	237	127372	9.80	ppm		98
43) 2,3,5-Trichlorophenol	5.025	196	109453	10.05	ppm		99
44) 2,4,6-Trichlorophenol	5.154	196	123025	10.05	ppm		100
45) 2,4,5-Trichlorophenol	5.188	196	123891	9.78	ppm		98
47) 2,3,4-Trichlorophenol	5.266	196	125920	10.30	ppm		99
48) Biphenyl	5.381	154	475069	10.02	ppm		99
49) 2-Chloronaphthalene	5.400	162	398883	10.04	ppm		100
50) 2-Nitroaniline	5.515	65	101090	10.02	ppm		99
51) 2,6-Dimethylnaphthalene	5.563	156	340365	10.12	ppm		100
52) 1,4-Dinitrobenzene	5.683	168	46237	9.60	ppm		96
53) Dimethylphthalate	5.746	163	449818	10.13	ppm		100
54) 1,3-Dinitrobenzene	5.770	168	56184	9.96	ppm		99
55) 2,6-Dinitrotoluene	5.809	165	92508	10.02	ppm		97
56) 1,2-Dinitrobenzene	5.867	168	34179	9.92	ppm	#	79
57) Acenaphthylene	5.886	152	634696	9.85	ppm		100
58) 3-Nitroaniline	6.001	138	90304	9.94	ppm		99
59) Acenaphthene	6.097	153	419584	10.17	ppm		99
60) 2,4-Dinitrophenol	6.126	184	37979	9.49	ppm		99
61) 4-Nitrophenol	6.198	109	45325	9.86	ppm		99
62) 2,4-Dinitrotoluene	6.289	165	117514	9.93	ppm		98
63) Dibenzofuran	6.303	168	537139	10.22	ppm		100
64) 2,3,5,6-Tetrachlorophenol	6.394	230	91938	10.03	ppm		99
65) 2,3,4,6-Tetrachlorophenol	6.447	232	107415	9.59	ppm		95
66) 2,3,5-Trimethylnaphtha...	6.557	170	366736	10.68	ppm		79
67) Diethylphthalate	6.604	149	426328	10.12	ppm		100
68) Fluorene	6.716	166	444443	10.14	ppm		99
69) 4-Chlorophenyl-phenyle...	6.730	204	225025	9.97	ppm		98
70) 4-Nitroaniline	6.735	138	83454	9.58	ppm		93
72) 4,6-Dinitro-2-methylph...	6.772	198	54083	9.29	ppm		98
73) N-Nitrosodiphenylamine	6.867	169	341881	10.04	ppm		96
74) Azobenzene	6.914	77	367827	10.13	ppm		100
76) 4-Bromophenyl-phenylether	7.303	248	131928	10.14	ppm		98
77) Hexachlorobenzene	7.355	284	144196	10.14	ppm		100
78) Pentachlorophenol	7.582	266	79003	10.11	ppm		96
79) Dibenzothiophene	7.681	184	622511	10.40	ppm		99
80) Phenanthrene	7.824	178	651102	10.20	ppm		100
82) Anthracene	7.878	178	675760	10.31	ppm		99
83) Carbazole	8.060	167	542616	10.13	ppm		99
84) Di-n-butylphthalate	8.462	149	673054	10.19	ppm		100
85) 1-Methylphenanthrene	8.496	192	461074	10.07	ppm		99
86) Fluoranthene	9.100	202	727318	10.12	ppm		99
89) Pyrene	9.335	202	783078	9.76	ppm		99
91) Butylbenzylphthalate	10.012	149	266173	10.00	ppm		99
92) bis(2-ethylhexyl)adipate	10.099	129	210440	9.87	ppm		97
93) 3,3'-Dichlorobenzidine	10.534	252	249140	10.26	ppm		100
94) Benzo(a)anthracene	10.558	228	690016	10.15	ppm		100
95) Chrysene	10.592	228	682786	10.17	ppm		100
96) bis(2-Ethylhexyl)phtha...	10.597	149	409075	10.03	ppm		100
98) Di-n-octylphthalate	11.213	149	647270	9.81	ppm		100
99) Benzo(b)fluoranthene	11.564	252	637359	9.92	ppm		99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH009.D
Acq On : 3 Apr 2015 11:24
Sample : SVE7D037
Misc : 10PPM
Integrator: RTE
Quant Time: Apr 03 12:49:30 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.593	252	715764	10.09	ppm	99
101) Benzo(e)pyrene	11.827	252	603674	10.17	ppm	100
102) Benzo(a)pyrene	11.878	252	610090	9.76	ppm	96
103) Perylene	11.958	252	644726	10.21	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.143	276	670878	9.97	ppm	100
105) Dibenzo(a,h)anthracene	13.157	278	563363	9.93	ppm	98
106) Benzo(g,h,i)perylene	13.497	276	593891	10.07	ppm	97

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

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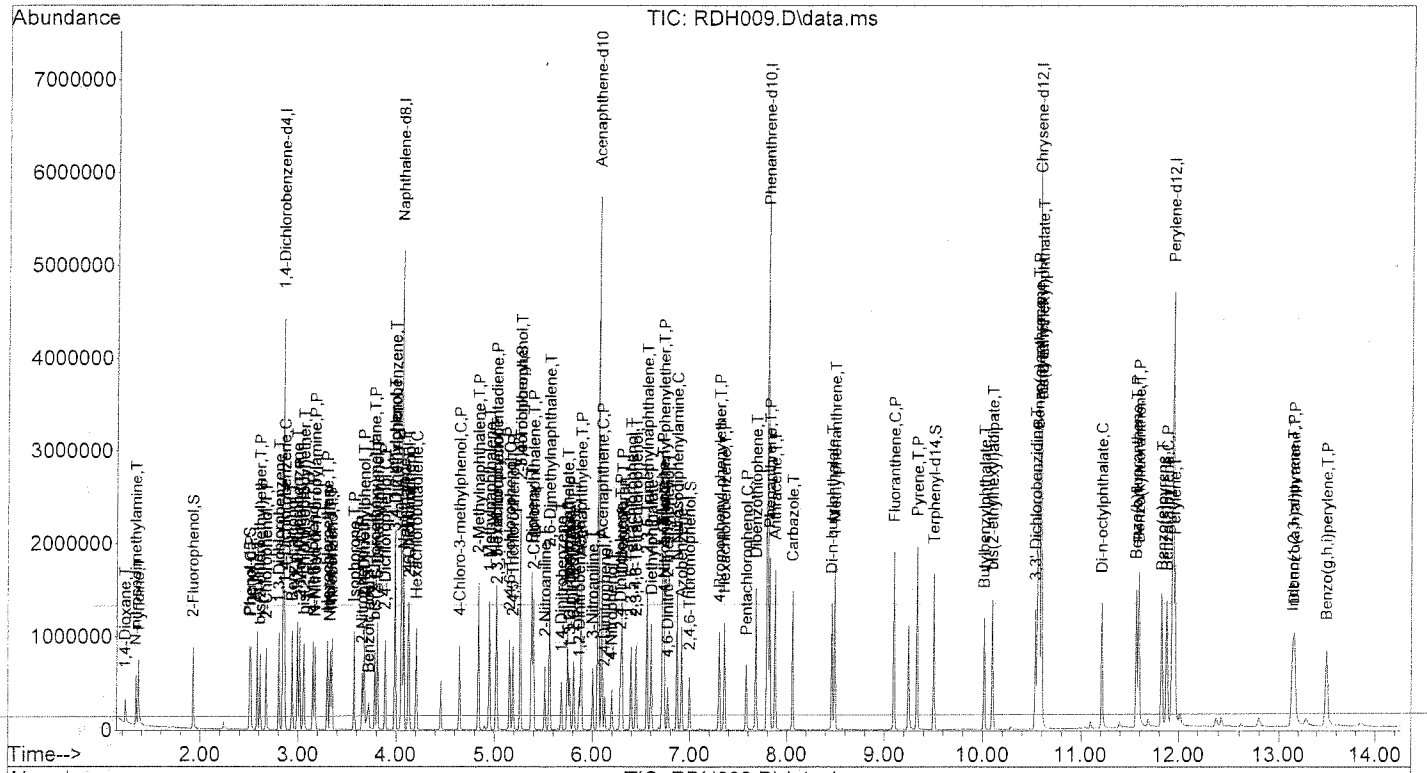
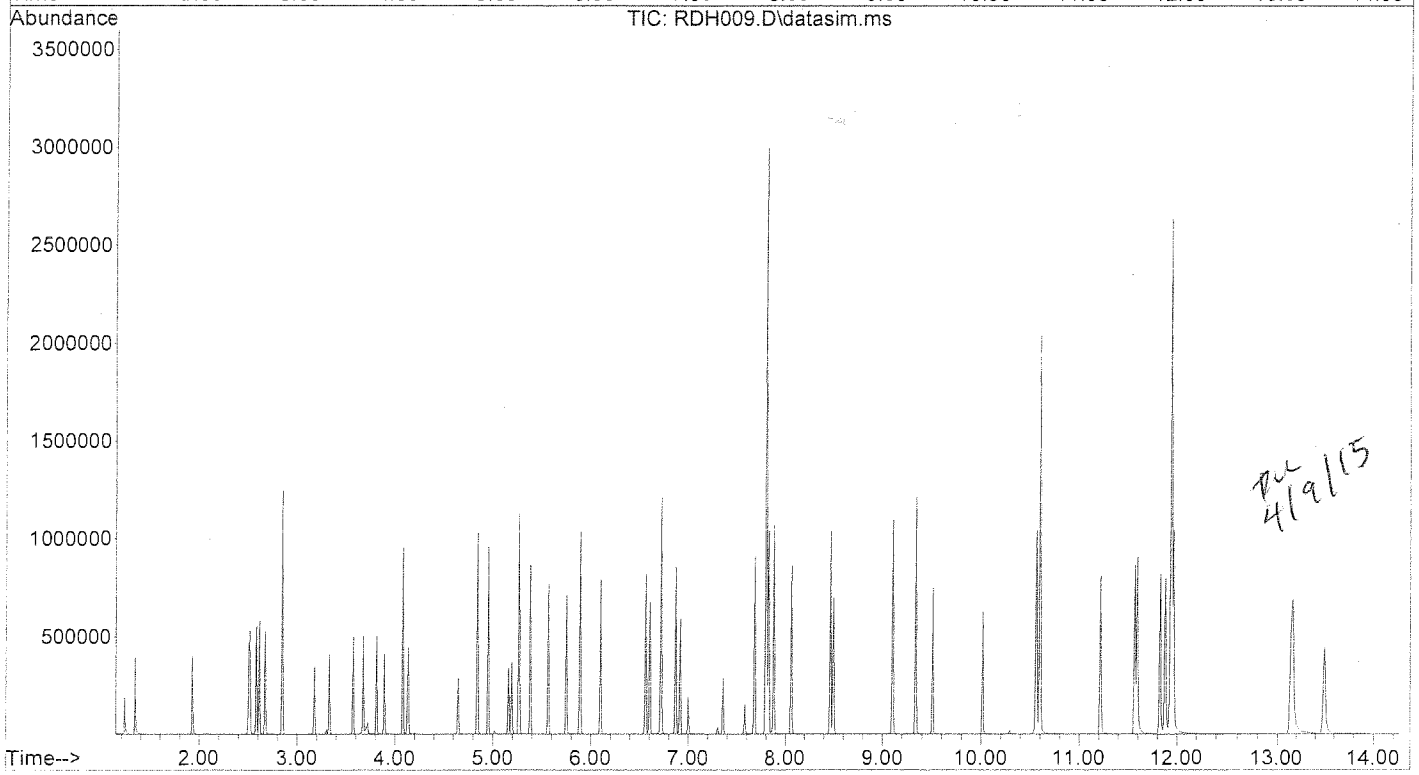
Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH009.D
Acq On : 3 Apr 2015 11:24
Sample : SVE7D037
Misc : 10PPM
Integrator: RTE
Quant Time: Apr 03 12:49:30 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 9
Operator: RZhou
Inst : E7
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH008.D Vial: 8
Acq On : 3 Apr 2015 11:05 Operator: RZhou
Sample : SVE7D036 Inst : E7
Misc : 20PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:28 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	543780	40.00	ppm	0.00
21) Naphthalene-d8	4.058	136	2041343	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1242554	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2156231	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2290964	40.00	ppm	0.00
97) Perylene-d12	11.940	264	2112375	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	318614	19.91	ppm	0.00
Spiked Amount 30.000			Recovery = 66.37%			
6) Phenol-d5	2.501	99	383395	19.97	ppm	0.00
Spiked Amount 30.000			Recovery = 66.57%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.332	82	369546	19.93	ppm	0.00
Spiked Amount 10.000			Recovery = 199.30%			
46) 2-Fluorobiphenyl	5.266	172	1022682	21.14	ppm	0.00
Spiked Amount 10.000			Recovery = 211.40%			
75) 2,4,6-Tribromophenol	7.000	330	116875	19.94	ppm	0.00
Spiked Amount 30.000			Recovery = 66.47%			
90) Terphenyl-d14	9.507	244	978483	20.14	ppm	0.00
Spiked Amount 10.000			Recovery = 201.40%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.228	88	123279	18.91	ppm	98
3) N-nitrosodimethylamine	1.338	74	185641	20.23	ppm	96
4) Pyridine	1.362	79	328607	20.14	ppm	99
7) Phenol	2.517	94	388648	20.15	ppm	99
8) Aniline	2.579	93	496631	20.01	ppm	100
9) bis(2-chloroethyl)ether	2.611	93	309372	20.02	ppm	99
10) 2-Chlorophenol	2.673	128	338255	20.16	ppm	100
11) 1,3-Dichlorobenzene	2.805	146	414424	20.00	ppm	100
13) 1,4-Dichlorobenzene	2.863	146	426577	19.85	ppm	99
14) Benzyl alcohol	2.939	108	217556	20.19	ppm	99
15) 1,2-Dichlorobenzene	2.992	146	404129	19.86	ppm	100
16) 2-Methylphenol	3.016	107	264014	20.20	ppm	99
17) bis(2-chloroisopropyl)...	3.059	45	716572	20.10	ppm	100
18) 4-Methylphenol	3.155	107	342820	19.97	ppm	98
19) N-Nitroso-di-n-propyla...	3.179	70	233289	20.29	ppm	100
20) Hexachloroethane	3.299	117	195125	20.26	ppm	99
23) Nitrobenzene	3.347	77	393474	20.04	ppm	100
24) Isophorone	3.577	82	747366	20.10	ppm	99
25) 2-Nitrophenol	3.654	139	180326	20.44	ppm	99
26) 2,4-Dimethylphenol	3.678	107	343413	19.55	ppm	100
27) Benzoic acid	3.745	105	226391	18.82	ppm	98
28) bis(2-Chloroethoxy)met...	3.783	93	417993	19.93	ppm	99
29) 3,5-Dimethylphenol	3.812	107	415762	20.57	ppm	99
30) 2,4-Dichlorophenol	3.894	162	319790	19.76	ppm	97
31) 1,2,4-Trichlorobenzene	3.990	180	390185	19.89	ppm	100
32) 3,4-Dimethylphenol	3.990	107	430557	19.94	ppm	100
33) Naphthalene	4.077	128	1111328	19.90	ppm	100
34) 4-Chloroaniline	4.125	127	444964	19.94	ppm	99
35) 2,6-Dichlorophenol	4.135	162	324750	20.07	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH008.D
Acq On : 3 Apr 2015 11:05
Sample : SVE7D036
Misc : 20PPM
Integrator: RTE
Quant Time: Apr 03 12:49:28 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 8
Operator: RZhou
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36)	Hexachlorobutadiene	4.207	225	251872	19.97	ppm	99
38)	4-Chloro-3-methylphenol	4.646	107	280999	20.15	ppm	99
39)	2-Methylnaphthalene	4.838	142	767604	19.89	ppm	99
40)	1-Methylnaphthalene	4.953	142	699212	19.83	ppm	99
42)	Hexachlorocyclopentadiene	5.020	237	266729	20.16	ppm	99
43)	2,3,5-Trichlorophenol	5.025	196	225822	20.36	ppm	99
44)	2,4,6-Trichlorophenol	5.154	196	254831	20.45	ppm	98
45)	2,4,5-Trichlorophenol	5.193	196	259183	20.09	ppm	98
47)	2,3,4-Trichlorophenol	5.266	196	248223	19.93	ppm	99
48)	Biphenyl	5.381	154	970639	20.11	ppm	100
49)	2-Chloronaphthalene	5.400	162	807730	19.96	ppm	99
50)	2-Nitroaniline	5.520	65	208194	20.27	ppm	99
51)	2,6-Dimethylnaphthalene	5.563	156	684969	19.99	ppm	100
52)	1,4-Dinitrobenzene	5.688	168	99080	20.21	ppm	96
53)	Dimethylphthalate	5.751	163	898727	19.87	ppm	100
54)	1,3-Dinitrobenzene	5.770	168	113227	19.71	ppm	98
55)	2,6-Dinitrotoluene	5.814	165	186600	19.85	ppm	99
56)	1,2-Dinitrobenzene	5.872	168	71586	20.41	ppm	93
57)	Acenaphthylene	5.891	152	1300158	19.81	ppm	99
58)	3-Nitroaniline	6.006	138	185159	20.01	ppm	100
59)	Acenaphthene	6.097	153	836877	19.92	ppm	99
60)	2,4-Dinitrophenol	6.131	184	89166	18.95	ppm	98
61)	4-Nitrophenol	6.203	109	93897	20.06	ppm	97
62)	2,4-Dinitrotoluene	6.294	165	243315	20.18	ppm	99
63)	Dibenzofuran	6.303	168	1079669	20.16	ppm	100
64)	2,3,5,6-Tetrachlorophenol	6.395	230	185935	19.92	ppm	99
65)	2,3,4,6-Tetrachlorophenol	6.447	232	226898	19.88	ppm	99
66)	2,3,5-Trimethylnaphtha...	6.561	170	739438	21.15	ppm	78
67)	Diethylphthalate	6.604	149	855850	19.95	ppm	99
68)	Fluorene	6.716	166	893750	20.03	ppm	99
69)	4-Chlorophenyl-phenyle...	6.730	204	453954	19.74	ppm	99
70)	4-Nitroaniline	6.740	138	177155	19.97	ppm	99
72)	4,6-Dinitro-2-methylph...	6.777	198	132564	19.63	ppm	98
73)	N-Nitrosodiphenylamine	6.871	169	682717	19.87	ppm	86
74)	Azobenzene	6.919	77	739634	20.20	ppm	99
76)	4-Bromophenyl-phenylether	7.303	248	267890	20.42	ppm	98
77)	Hexachlorobenzene	7.355	284	284435	19.83	ppm	99
78)	Pentachlorophenol	7.582	266	159613	20.25	ppm	99
79)	Dibenzothiophene	7.681	184	1220792	20.22	ppm	100
80)	Phenanthrene	7.824	178	1281608	19.91	ppm	100
82)	Anthracene	7.883	178	1324955	20.03	ppm	100
83)	Carbazole	8.060	167	1069274	19.79	ppm	99
84)	Di-n-butylphthalate	8.467	149	1342931	20.16	ppm	100
85)	1-Methylphenanthrene	8.496	192	915139	19.81	ppm	100
86)	Fluoranthene	9.104	202	1447800	19.98	ppm	100
89)	Pyrene	9.336	202	1651780	20.88	ppm	98
91)	Butylbenzylphthalate	10.017	149	541896	20.63	ppm	99
92)	bis(2-ethylhexyl)adipate	10.104	129	443849	21.11	ppm	99
93)	3,3'-Dichlorobenzidine	10.539	252	486147	20.29	ppm	99
94)	Benzo(a)anthracene	10.563	228	1341711	20.02	ppm	99
95)	Chrysene	10.597	228	1325225	20.01	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.597	149	835933	20.78	ppm	100
98)	Di-n-octylphthalate	11.214	149	1342110	20.41	ppm	100
99)	Benzo(b)fluoranthene	11.574	252	1268735	19.80	ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH008.D Vial: 8
Acq On : 3 Apr 2015 11:05 Operator: RZhou
Sample : SVE7D036 Inst : E7
Misc : 20PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:28 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

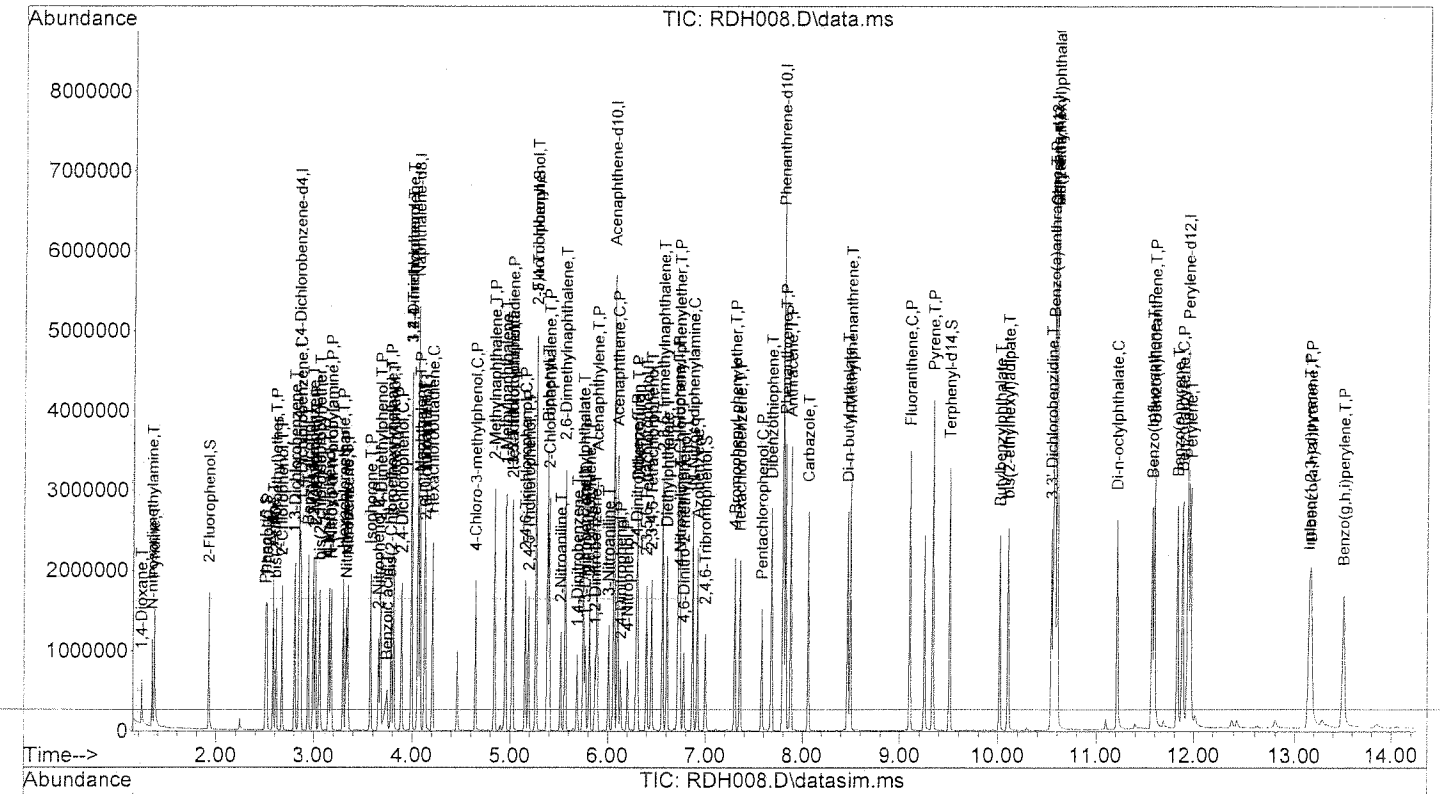
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.598	252	1421851	20.10	ppm	100
101) Benzo(e)pyrene	11.832	252	1190186	20.11	ppm	100
102) Benzo(a)pyrene	11.883	252	1249206	20.04	ppm	97
103) Perylene	11.968	252	1259792	20.02	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.148	276	1346818	20.07	ppm	99
105) Dibenzo(a,h)anthracene	13.167	278	1130711	20.00	ppm	98
106) Benzo(g,h,i)perylene	13.507	276	1176323	20.01	ppm	100

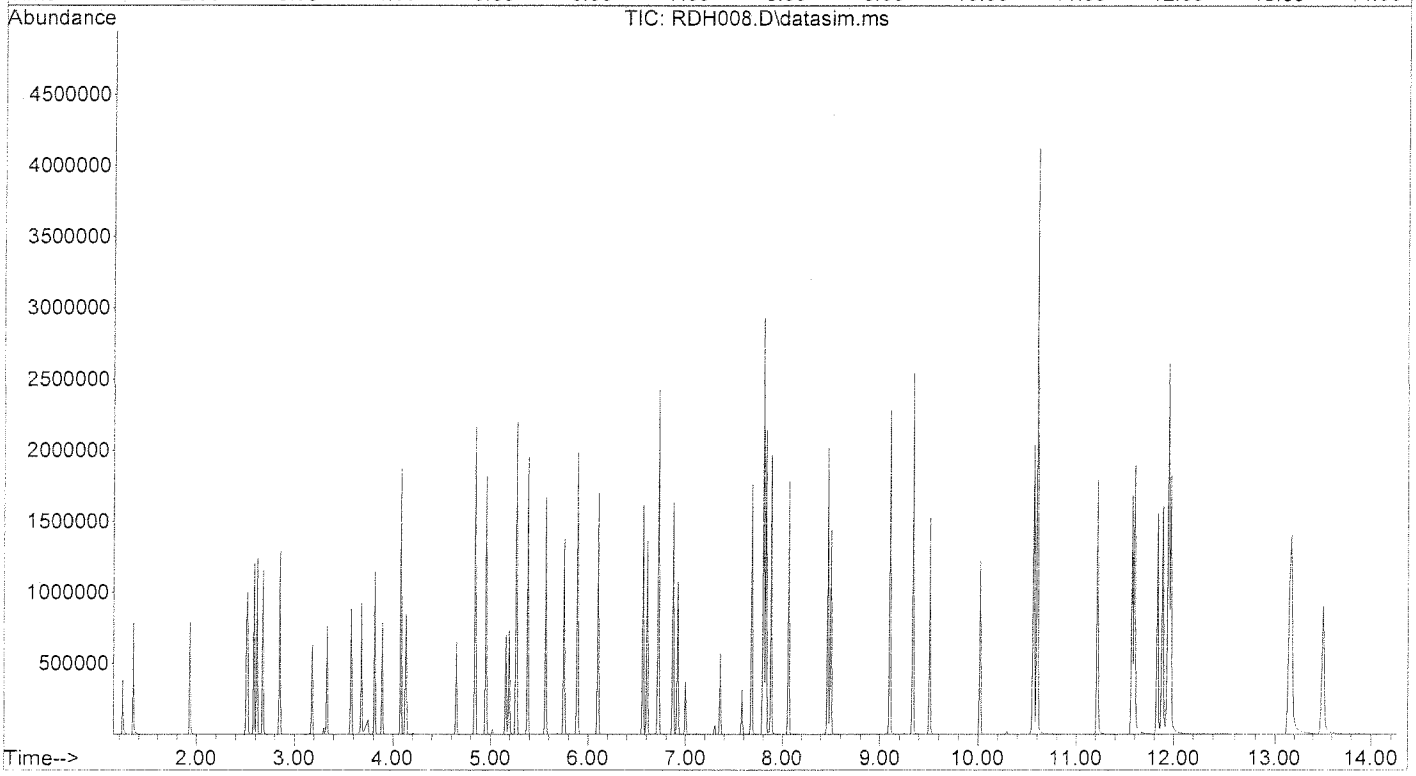
(#) = qualifier out of range (m) = manual integration (+) = signals summed

RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH008.D
Vial: 8
Acq On : 3 Apr 2015 11:05
Operator: RZhou
Sample : SVE7D036
Inst : E7
Misc : 20PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:28 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





JW 4/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH007.D Vial: 7
Acq On : 3 Apr 2015 10:46 Operator: RZhou
Sample : SVE7D035 Inst : E7
Misc : 25PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	567854	40.00	ppm	0.00
21) Naphthalene-d8	4.058	136	2117278	40.00	ppm	0.00
41) Acenaphthene-d10	6.064	164	1301658	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2320209	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2507024	40.00	ppm	0.00
97) Perylene-d12	11.939	264	2285835	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	403516	24.15	ppm	0.00
Spiked Amount 30.000			Recovery = 80.50%			
6) Phenol-d5	2.506	99	478481	23.86	ppm	0.00
Spiked Amount 30.000			Recovery = 79.53%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.332	82	467831	24.33	ppm	0.00
Spiked Amount 10.000			Recovery = 243.30%			
46) 2-Fluorobiphenyl	5.265	172	1314049	25.92	ppm	0.00
Spiked Amount 10.000			Recovery = 259.20%			
75) 2,4,6-Tribromophenol	6.999	330	155904	24.71	ppm	0.00
Spiked Amount 30.000			Recovery = 82.37%			
90) Terphenyl-d14	9.507	244	1282796	24.13	ppm	0.00
Spiked Amount 10.000			Recovery = 241.30%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	152977	22.47	ppm	100
3) N-nitrosodimethylamine	1.338	74	234594	24.48	ppm	100
4) Pyridine	1.367	79	422912	24.82	ppm	100
7) Phenol	2.517	94	486956	24.17	ppm	100
8) Aniline	2.584	93	636715	24.57	ppm	100
9) bis(2-chloroethyl)ether	2.611	93	388271	24.06	ppm	100
10) 2-Chlorophenol	2.673	128	425262	24.27	ppm	100
11) 1,3-Dichlorobenzene	2.805	146	528265	24.41	ppm	100
13) 1,4-Dichlorobenzene	2.863	146	546549	24.35	ppm	100
14) Benzyl alcohol	2.939	108	276308	24.56	ppm	100
15) 1,2-Dichlorobenzene	2.992	146	518913	24.43	ppm	100
16) 2-Methylphenol	3.016	107	330722	24.23	ppm	100
17) bis(2-chloroisopropyl)...	3.059	45	899606	24.16	ppm	100
18) 4-Methylphenol	3.155	107	430250	24.01	ppm	100
19) N-Nitroso-di-n-propyla...	3.179	70	295544	24.61	ppm	100
20) Hexachloroethane	3.299	117	244531	24.32	ppm	100
23) Nitrobenzene	3.351	77	496414	24.37	ppm	100
24) Isophorone	3.577	82	960172	24.90	ppm	100
25) 2-Nitrophenol	3.658	139	229731	25.11	ppm	100
26) 2,4-Dimethylphenol	3.678	107	437266	24.00	ppm	100
27) Benzoic acid	3.754	105	316208	24.62	ppm	100
28) bis(2-Chloroethoxy)met...	3.788	93	531466	24.43	ppm	100
29) 3,5-Dimethylphenol	3.816	107	525208	25.06	ppm	100
30) 2,4-Dichlorophenol	3.893	162	414718	24.70	ppm	100
31) 1,2,4-Trichlorobenzene	3.995	180	498602	24.50	ppm	100
32) 3,4-Dimethylphenol	3.990	107	544780	24.32	ppm	100
33) Naphthalene	4.082	128	1409943	24.34	ppm	100
34) 4-Chloroaniline	4.130	127	566549	24.48	ppm	100
35) 2,6-Dichlorophenol	4.135	162	408845	24.37	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH007.D
Acq On : 3 Apr 2015 10:46
Sample : SVE7D035
Misc : 25PPM
Integrator: RTE
Quant Time: Apr 03 12:49:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 7
Operator: RZhou
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36)	Hexachlorobutadiene	4.207	225	317708	24.29	ppm	100
38)	4-Chloro-3-methylphenol	4.646	107	360391	24.92	ppm	100
39)	2-Methylnaphthalene	4.842	142	974691	24.34	ppm	100
40)	1-Methylnaphthalene	4.953	142	890854	24.36	ppm	100
42)	Hexachlorocyclopentadiene	5.020	237	343697	24.79	ppm	100
43)	2,3,5-Trichlorophenol	5.024	196	290833	25.03	ppm	100
44)	2,4,6-Trichlorophenol	5.154	196	317662	24.33	ppm	100
45)	2,4,5-Trichlorophenol	5.193	196	334773	24.78	ppm	100
47)	2,3,4-Trichlorophenol	5.265	196	321239	24.62	ppm	100
48)	Biphenyl	5.381	154	1226155	24.25	ppm	100
49)	2-Chloronaphthalene	5.400	162	1031886	24.34	ppm	100
50)	2-Nitroaniline	5.520	65	268685	24.97	ppm	100
51)	2,6-Dimethylnaphthalene	5.568	156	869326	24.22	ppm	100
52)	1,4-Dinitrobenzene	5.688	168	131027	25.51	ppm	100
53)	Dimethylphthalate	5.756	163	1161210	24.50	ppm	100
54)	1,3-Dinitrobenzene	5.775	168	150132	24.94	ppm	100
55)	2,6-Dinitrotoluene	5.818	165	243931	24.77	ppm	100
56)	1,2-Dinitrobenzene	5.876	168	89857	24.45	ppm	100
57)	Acenaphthylene	5.891	152	1653745	24.05	ppm	100
58)	3-Nitroaniline	6.011	138	241567	24.92	ppm	100
59)	Acenaphthene	6.097	153	1062186	24.13	ppm	100
60)	2,4-Dinitrophenol	6.131	184	122837	24.21	ppm	99
61)	4-Nitrophenol	6.203	109	125419	25.58	ppm	100
62)	2,4-Dinitrotoluene	6.294	165	315143	24.95	ppm	100
63)	Dibenzofuran	6.308	168	1358502	24.22	ppm	100
64)	2,3,5,6-Tetrachlorophenol	6.399	230	242273	24.78	ppm	100
65)	2,3,4,6-Tetrachlorophenol	6.447	232	289660	24.23	ppm	100
66)	2,3,5-Trimethylnaphtha...	6.561	170	825960	22.55	ppm	100
67)	Diethylphthalate	6.608	149	1109399	24.68	ppm	100
68)	Fluorene	6.721	166	1138226	24.35	ppm	100
69)	4-Chlorophenyl-phenyle...	6.730	204	591656	24.56	ppm	100
70)	4-Nitroaniline	6.744	138	234267	25.21	ppm	100
72)	4,6-Dinitro-2-methylph...	6.782	198	177190	23.89	ppm	100
73)	N-Nitrosodiphenylamine	6.871	169	951336	25.73	ppm	100
74)	Azobenzene	6.919	77	957359	24.29	ppm	100
76)	4-Bromophenyl-phenylether	7.303	248	342154	24.24	ppm	100
77)	Hexachlorobenzene	7.359	284	372728	24.15	ppm	100
78)	Pentachlorophenol	7.581	266	216502	25.53	ppm	100
79)	Dibenzothiophene	7.685	184	1583159	24.37	ppm	100
80)	Phenanthrene	7.828	178	1668185	24.08	ppm	100
82)	Anthracene	7.883	178	1700073	23.89	ppm	100
83)	Carbazole	8.064	167	1414830	24.34	ppm	100
84)	Di-n-butylphthalate	8.467	149	1757096	24.52	ppm	100
85)	1-Methylphenanthrene	8.496	192	1201880	24.18	ppm	100
86)	Fluoranthene	9.104	202	1901132	24.38	ppm	100
89)	Pyrene	9.335	202	2035982	23.52	ppm	100
91)	Butylbenzylphthalate	10.016	149	717882	24.98	ppm	100
92)	bis(2-ethylhexyl)adipate	10.099	129	573864	24.94	ppm	100
93)	3,3'-Dichlorobenzidine	10.539	252	648228	24.72	ppm	100
94)	Benzo(a)anthracene	10.558	228	1781666	24.29	ppm	100
95)	Chrysene	10.597	228	1741960	24.03	ppm	100
96)	bis(2-Ethylhexyl)phtha...	10.597	149	1087652	24.70	ppm	100
98)	Di-n-octylphthalate	11.218	149	1780999	25.03	ppm	100
99)	Benzo(b)fluoranthene	11.573	252	1691763	24.40	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH007.D Vial: 7
Acq On : 3 Apr 2015 10:46 Operator: RZhou
Sample : SVE7D035 Inst : E7
Misc : 25PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.598	252	1848642	24.16	ppm	100
101) Benzo(e)pyrene	11.832	252	1541233	24.06	ppm	100
102) Benzo(a)pyrene	11.883	252	1669449	24.75	ppm	100
103) Perylene	11.968	252	1653348	24.28	ppm	100
104) Indeno(1,2,3-cd)pyrene	13.147	276	1770599	24.38	ppm	100
105) Dibenzo(a,h)anthracene	13.172	278	1500389	24.52	ppm	100
106) Benzo(g,h,i)perylene	13.511	276	1542646	24.25	ppm	100

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

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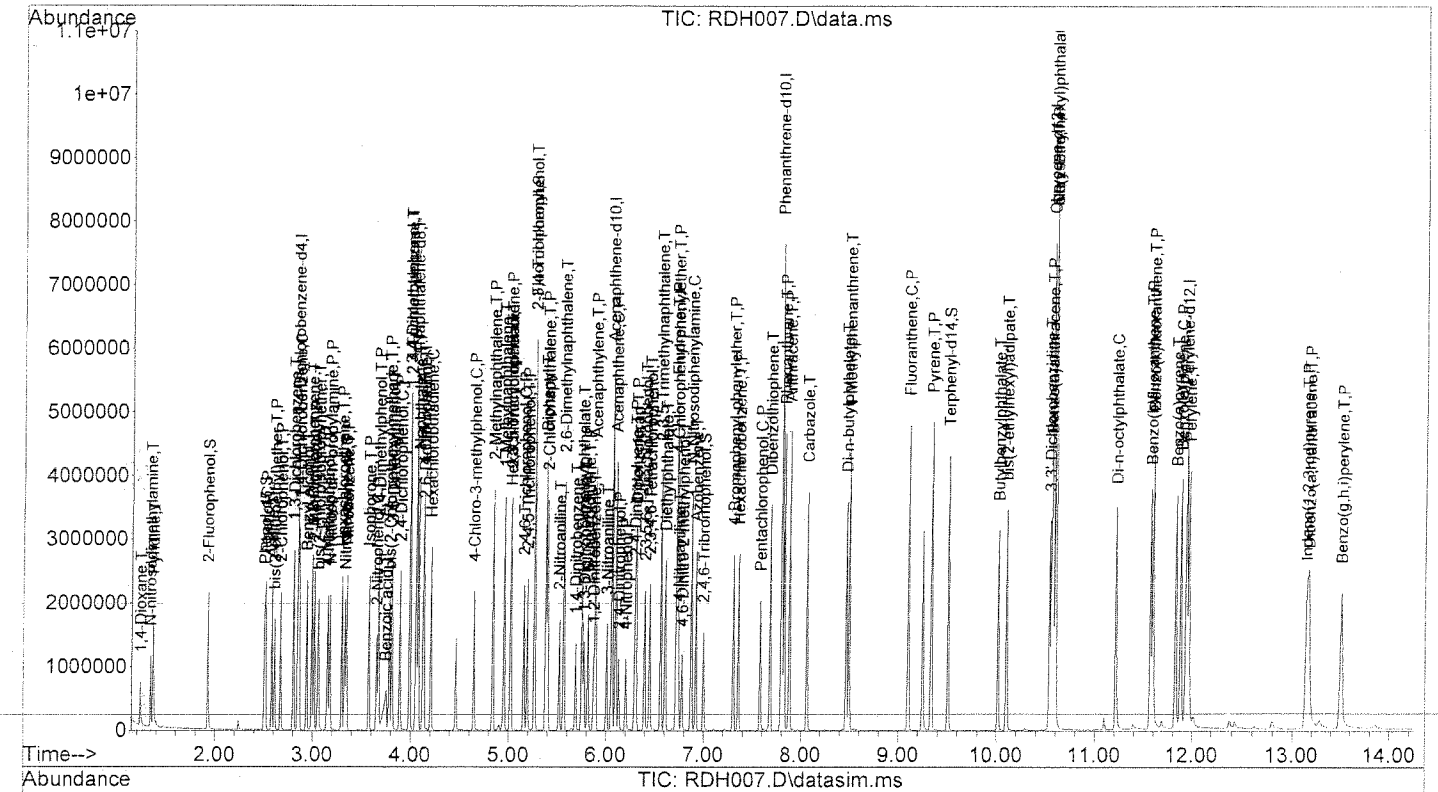
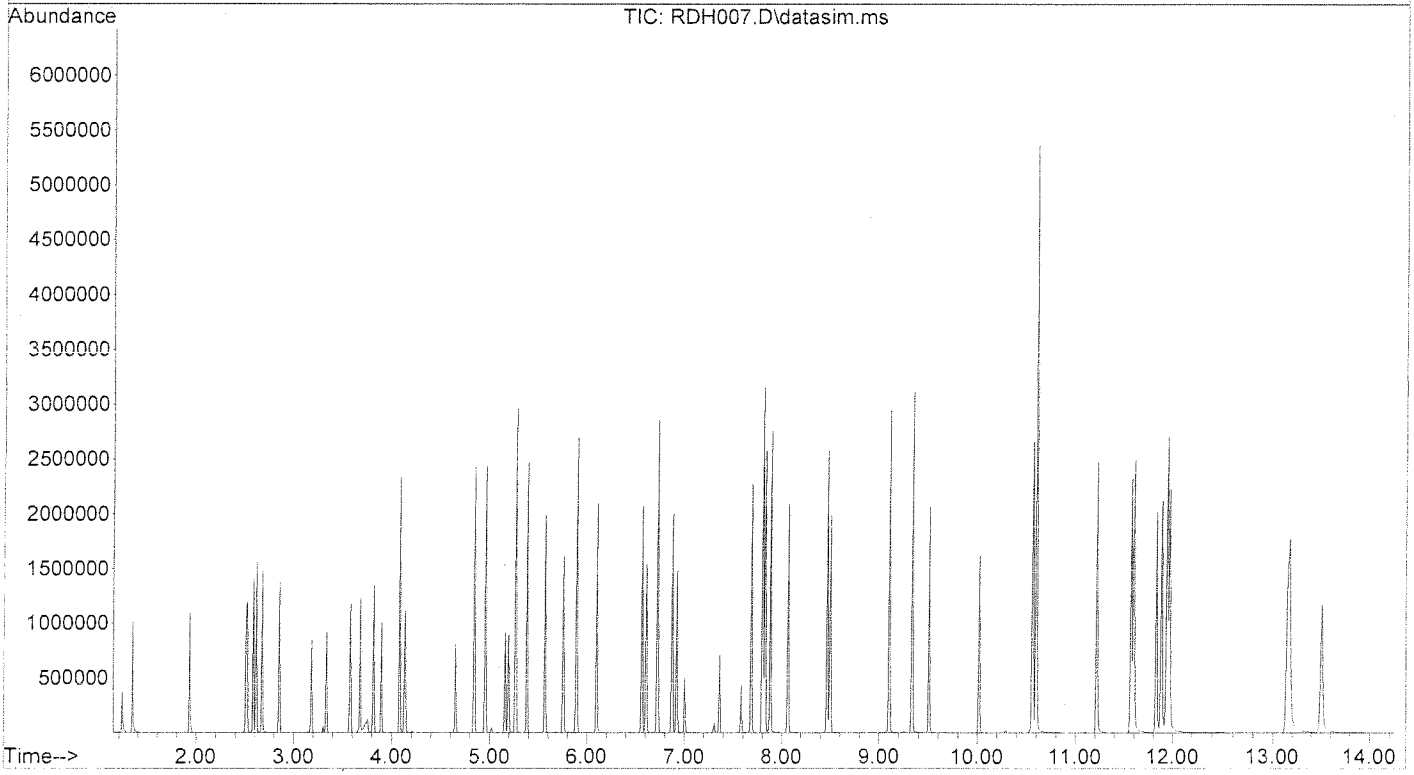
Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH007.D
Vial: 7
Acq On : 3 Apr 2015 10:46
Operator: RZhou
Sample : SVE7D035
Inst : E7
Misc : 25PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:26 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH006.D
Acq On : 3 Apr 2015 10:27
Sample : SVE7D034
Misc : 40PPM
Integrator: RTE
Quant Time: Apr 03 12:49:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 6
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	564861	40.00	ppm	0.00
21) Naphthalene-d8	4.057	136	2073381	40.00	ppm	0.00
41) Acenaphthene-d10	6.064	164	1275998	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2237485	40.00	ppm	0.00
87) Chrysene-d12	10.578	240	2398598	40.00	ppm	0.00
97) Perylene-d12	11.944	264	2162744	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	649121	39.05	ppm	0.00
Spiked Amount 30.000			Recovery = 130.17%			
6) Phenol-d5	2.506	99	773662	38.79	ppm	0.00
Spiked Amount 30.000			Recovery = 129.30%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.332	82	767980	40.79	ppm	0.00
Spiked Amount 10.000			Recovery = 407.90%			
46) 2-Fluorobiphenyl	5.270	172	1869718	37.63	ppm	0.00
Spiked Amount 10.000			Recovery = 376.30%			
75) 2,4,6-Tribromophenol	7.004	330	255138	41.94	ppm	0.00
Spiked Amount 30.000			Recovery = 139.80%			
90) Terphenyl-d14	9.511	244	2072938	40.76	ppm	0.00
Spiked Amount 10.000			Recovery = 407.60%			

Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	240065	35.44	ppm	98
3) N-nitrosodimethylamine	1.338	74	372233	39.05	ppm	96
4) Pyridine	1.367	79	690431	40.73	ppm	100
7) Phenol	2.517	94	805587	40.20	ppm	99
8) Aniline	2.584	93	1032545	40.05	ppm	100
9) bis(2-chloroethyl)ether	2.616	93	638727	39.79	ppm	99
10) 2-Chlorophenol	2.678	128	703481	40.37	ppm	100
11) 1,3-Dichlorobenzene	2.805	146	852047	39.58	ppm	100
13) 1,4-Dichlorobenzene	2.862	146	886926	39.72	ppm	99
14) Benzyl alcohol	2.944	108	446884	39.93	ppm	99
15) 1,2-Dichlorobenzene	2.992	146	829423	39.25	ppm	99
16) 2-Methylphenol	3.021	107	541786	39.90	ppm	98
17) bis(2-chloroisopropyl)...	3.064	45	1448257	39.10	ppm	100
18) 4-Methylphenol	3.160	107	707222	39.67	ppm	99
19) N-Nitroso-di-n-propyla...	3.184	70	479553	40.14	ppm	100
20) Hexachloroethane	3.299	117	380461	38.03	ppm	96
23) Nitrobenzene	3.351	77	809743	40.59	ppm	100
24) Isophorone	3.582	82	1567630	41.51	ppm	94
25) 2-Nitrophenol	3.658	139	378697	42.26	ppm	95
26) 2,4-Dimethylphenol	3.677	107	716607	40.17	ppm	98
27) Benzoic acid	3.783	105	538783	41.28	ppm	99
28) bis(2-Chloroethoxy)met...	3.788	93	856607	40.20	ppm	100
29) 3,5-Dimethylphenol	3.816	107	866941	42.24	ppm	99
30) 2,4-Dichlorophenol	3.893	162	670934	40.81	ppm	99
31) 1,2,4-Trichlorobenzene	3.995	180	792480	39.76	ppm	100
32) 3,4-Dimethylphenol	3.995	107	894648	40.79	ppm	99
33) Naphthalene	4.082	128	2293075	40.43	ppm	100
34) 4-Chloroaniline	4.130	127	930607	41.06	ppm	100
35) 2,6-Dichlorophenol	4.139	162	669835	40.76	ppm	99

m 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH006.D Vial: 6
Acq On : 3 Apr 2015 10:27 Operator: RZhou
Sample : SVE7D034 Inst : E7
Misc : 40PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
36) Hexachlorobutadiene	4.207	225	517014	40.36 ppm	98
38) 4-Chloro-3-methylphenol	4.651	107	585128	41.31 ppm	99
39) 2-Methylnaphthalene	4.842	142	1593009	40.63 ppm	100
40) 1-Methylnaphthalene	4.957	142	1456710	40.68 ppm	98
42) Hexachlorocyclopentadiene	5.020	237	563759	41.49 ppm	100
43) 2,3,5-Trichlorophenol	5.029	196	486877	42.75 ppm	99
44) 2,4,6-Trichlorophenol	5.159	196	525265	41.05 ppm	100
45) 2,4,5-Trichlorophenol	5.193	196	559085	42.21 ppm	99
47) 2,3,4-Trichlorophenol	5.270	196	518666	40.55 ppm	100
48) Biphenyl	5.386	154	1990564	40.15 ppm	100
49) 2-Chloronaphthalene	5.405	162	1684156	40.53 ppm	100
50) 2-Nitroaniline	5.525	65	438115	41.54 ppm	98
51) 2,6-Dimethylnaphthalene	5.568	156	1407357	40.00 ppm	99
52) 1,4-Dinitrobenzene	5.693	168	220172	43.73 ppm	87
53) Dimethylphthalate	5.760	163	1881942	40.51 ppm	100
54) 1,3-Dinitrobenzene	5.780	168	246953	41.85 ppm	100
55) 2,6-Dinitrotoluene	5.823	165	399944	41.44 ppm	97
56) 1,2-Dinitrobenzene	5.881	168	149646	41.54 ppm	95
57) Acenaphthylene	5.895	152	2934332	43.54 ppm	96
58) 3-Nitroaniline	6.016	138	395806	41.65 ppm	98
59) Acenaphthene	6.102	153	1748860	40.53 ppm	99
60) 2,4-Dinitrophenol	6.135	184	218535	42.11 ppm	96
61) 4-Nitrophenol	6.212	109	199798	41.57 ppm	95
62) 2,4-Dinitrotoluene	6.298	165	513160	41.45 ppm	99
63) Dibenzofuran	6.308	168	2181783	39.67 ppm	100
64) 2,3,5,6-Tetrachlorophenol	6.399	230	395740	41.29 ppm	99
65) 2,3,4,6-Tetrachlorophenol	6.452	232	471676	40.24 ppm	98
66) 2,3,5-Trimethylnaphtha...	6.561	170	1459493	40.66 ppm	90
67) Diethylphthalate	6.608	149	1769651	40.16 ppm	99
68) Fluorene	6.721	166	1843211	40.23 ppm	100
69) 4-Chlorophenyl-phenyle...	6.730	204	948999	40.19 ppm	100
70) 4-Nitroaniline	6.749	138	382294	41.96 ppm	99
72) 4,6-Dinitro-2-methylph...	6.786	198	312878	42.04 ppm	96
73) N-Nitrosodiphenylamine	6.876	169	1435167	40.25 ppm	95
74) Azobenzene	6.923	77	1552599	40.85 ppm	100
76) 4-Bromophenyl-phenylether	7.307	248	548466	40.29 ppm	99
77) Hexachlorobenzene	7.359	284	590716	39.70 ppm	99
78) Pentachlorophenol	7.586	266	346837	42.41 ppm	98
79) Dibenzothiophene	7.685	184	2551906	40.73 ppm	99
80) Phenanthrene	7.828	178	2694176	40.34 ppm	100
82) Anthracene	7.887	178	2780365	40.51 ppm	99
83) Carbazole	8.064	167	2298640	41.00 ppm	100
84) Di-n-butylphthalate	8.466	149	2828962	40.94 ppm	99
85) 1-Methylphenanthrene	8.500	192	1942753	40.52 ppm	100
86) Fluoranthene	9.104	202	3065802	40.77 ppm	100
89) Pyrene	9.340	202	3460010	41.77 ppm	98
91) Butylbenzylphthalate	10.021	149	1142021	41.53 ppm	99
92) bis(2-ethylhexyl)adipate	10.104	129	912886	41.46 ppm	99
93) 3,3'-Dichlorobenzidine	10.544	252	1027795	40.97 ppm	100
94) Benzo(a)anthracene	10.563	228	2809982	40.04 ppm	100
95) Chrysene	10.602	228	2763021	39.84 ppm	99
96) bis(2-Ethylhexyl)phtha...	10.602	149	1740188	41.31 ppm	100
98) Di-n-octylphthalate	11.218	149	2888363	42.90 ppm	100
99) Benzo(b)fluoranthene	11.574	252	2739022	41.75 ppm	99

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH006.D
Vial: 6
Acq On : 3 Apr 2015 10:27
Operator: RZhou
Sample : SVE7D034
Inst : E7
Misc : 40PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.603	252	2888650	39.89	ppm	100
101) Benzo(e)pyrene	11.836	252	2462042	40.62	ppm	100
102) Benzo(a)pyrene	11.888	252	2668857	41.82	ppm	100
103) Perylene	11.972	252	2601297	40.38	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.157	276	2815377	40.98	ppm	98
105) Dibenzo(a,h)anthracene	13.177	278	2412545	41.68	ppm	99
106) Benzo(g,h,i)perylene	13.521	276	2492206	41.41	ppm	100

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

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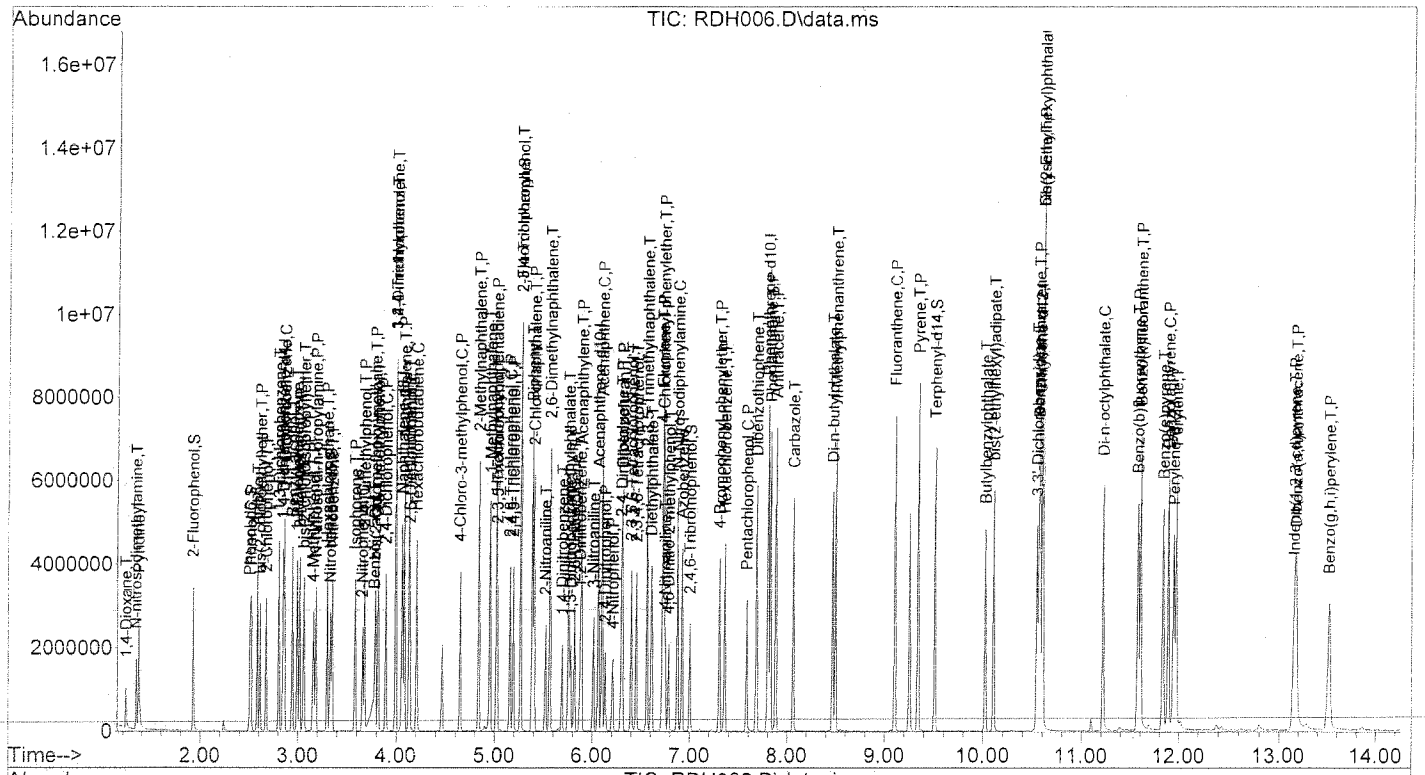
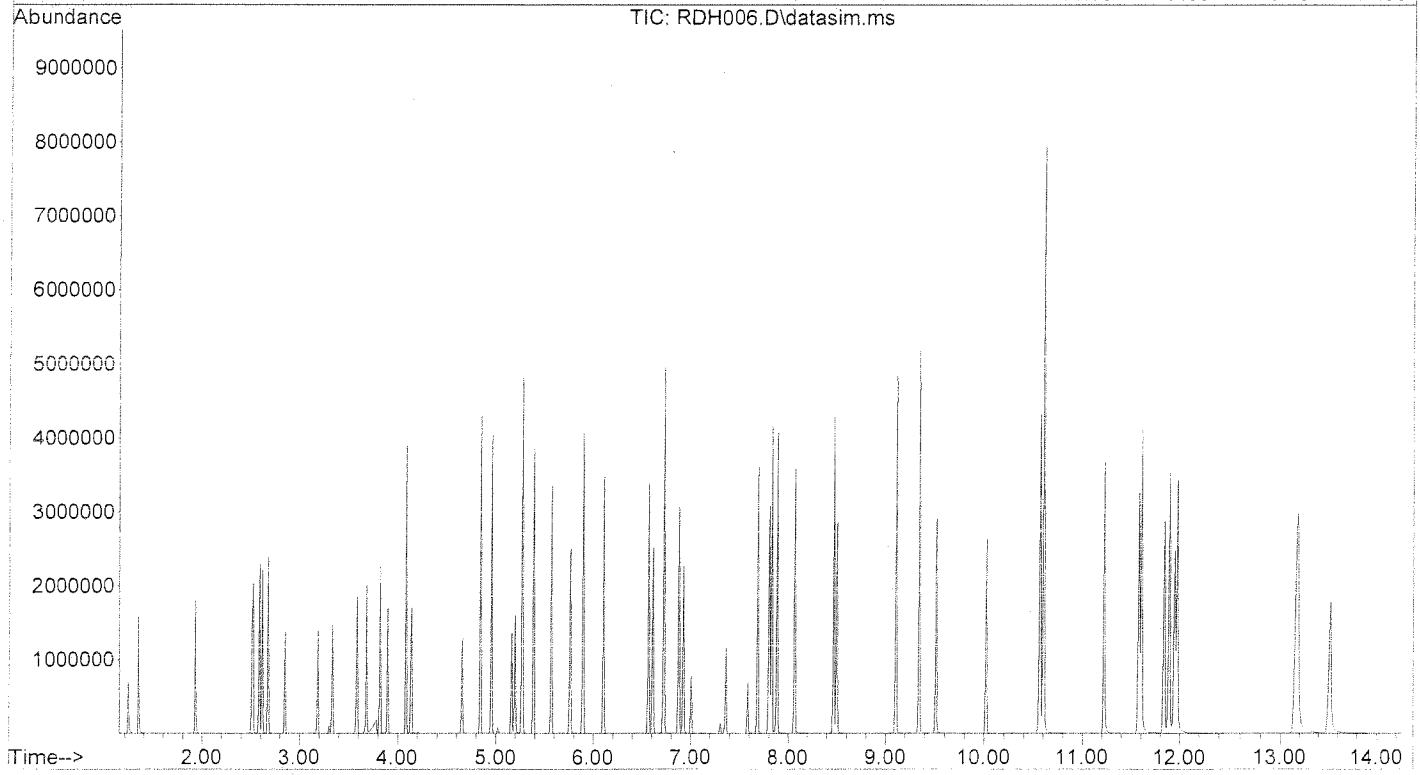
Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH006.D
Vial: 6
Acq On : 3 Apr 2015 10:27
Operator: RZhou
Sample : SVE7D034
Inst : E7
Misc : 40PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:24 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH005.D
Acq On : 3 Apr 2015 10:08
Sample : SVE7D033
Misc : 50PPM
Integrator: RTE
Quant Time: Apr 03 12:49:22 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 5
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	541281	40.00	ppm	0.00
21) Naphthalene-d8	4.057	136	2013141	40.00	ppm	0.00
41) Acenaphthene-d10	6.064	164	1228017	40.00	ppm	0.00
71) Phenanthrene-d10	7.801	188	2161365	40.00	ppm	0.00
87) Chrysene-d12	10.577	240	2351580	40.00	ppm	0.00
97) Perylene-d12	11.944	264	2118519	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	787646	49.44	ppm	0.00
Spiked Amount 30.000			Recovery = 164.80%			
6) Phenol-d5	2.511	99	942176	49.29	ppm	0.00
Spiked Amount 30.000			Recovery = 164.30%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.337	82	918639	50.25	ppm	0.00
Spiked Amount 10.000			Recovery = 502.50%			
46) 2-Fluorobiphenyl	5.270	172	2473953	51.73	ppm	0.00
Spiked Amount 10.000			Recovery = 517.30%			
75) 2,4,6-Tribromophenol	7.004	330	305922	52.06	ppm	0.00
Spiked Amount 30.000			Recovery = 173.53%			
90) Terphenyl-d14	9.511	244	2502865	50.20	ppm	0.00
Spiked Amount 10.000			Recovery = 502.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	301539	46.46	ppm	100
3) N-nitrosodimethylamine	1.343	74	462519	50.64	ppm	97
4) Pyridine	1.367	79	844881	52.02	ppm	99
7) Phenol	2.522	94	977229	50.89	ppm	99
8) Aniline	2.584	93	1255043	50.80	ppm	100
9) bis(2-chloroethyl)ether	2.616	93	767974	49.92	ppm	99
10) 2-Chlorophenol	2.678	128	841474	50.39	ppm	99
11) 1,3-Dichlorobenzene	2.805	146	1030654	49.97	ppm	99
13) 1,4-Dichlorobenzene	2.862	146	1061368	49.60	ppm	100
14) Benzyl alcohol	2.944	108	539538	50.31	ppm	98
15) 1,2-Dichlorobenzene	2.997	146	1013656	50.05	ppm	100
16) 2-Methylphenol	3.021	107	651654	50.08	ppm	98
17) bis(2-chloroisopropyl)...	3.064	45	1738942	49.00	ppm	99
18) 4-Methylphenol	3.160	107	867075	50.75	ppm	98
19) N-Nitroso-di-n-propyla...	3.188	70	575471	50.27	ppm	99
20) Hexachloroethane	3.299	117	476272	49.69	ppm	97
23) Nitrobenzene	3.356	77	965924	49.87	ppm	100
24) Isophorone	3.586	82	1891793	51.59	ppm	95
25) 2-Nitrophenol	3.658	139	446076	51.27	ppm	97
26) 2,4-Dimethylphenol	3.682	107	944396	54.53	ppm	99
27) Benzoic acid	3.792	105	646379	50.51	ppm	97
28) bis(2-Chloroethoxy)met...	3.788	93	1042135	50.38	ppm	100
29) 3,5-Dimethylphenol	3.821	107	1012965	50.83	ppm	97
30) 2,4-Dichlorophenol	3.898	162	819650	51.35	ppm	99
31) 1,2,4-Trichlorobenzene	3.995	180	960649	49.65	ppm	100
32) 3,4-Dimethylphenol	3.995	107	1071714	50.32	ppm	100
33) Naphthalene	4.082	128	2770804	50.31	ppm	100
34) 4-Chloroaniline	4.135	127	1124346	51.09	ppm	100
35) 2,6-Dichlorophenol	4.139	162	807749	50.63	ppm	99

RW 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH005.D
Acq On : 3 Apr 2015 10:08
Sample : SVE7D033
Misc : 50PPM
Integrator: RTE
Quant Time: Apr 03 12:49:22 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 5
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Hexachlorobutadiene	4.207	225	620127	49.86	ppm	98
38) 4-Chloro-3-methylphenol	4.651	107	710543	51.66	ppm	100
39) 2-Methylnaphthalene	4.842	142	1923367	50.52	ppm	100
40) 1-Methylnaphthalene	4.957	142	1765876	50.79	ppm	99
42) Hexachlorocyclopentadiene	5.020	237	671232	51.33	ppm	100
43) 2,3,5-Trichlorophenol	5.029	196	581939	53.09	ppm	99
44) 2,4,6-Trichlorophenol	5.159	196	633984	51.48	ppm	100
45) 2,4,5-Trichlorophenol	5.193	196	669838	52.55	ppm	99
47) 2,3,4-Trichlorophenol	5.270	196	630704	51.23	ppm	100
48) Biphenyl	5.386	154	2416846	50.66	ppm	100
49) 2-Chloronaphthalene	5.405	162	2026977	50.68	ppm	100
50) 2-Nitroaniline	5.525	65	527461	51.96	ppm	99
51) 2,6-Dimethylnaphthalene	5.568	156	1712919	50.58	ppm	100
52) 1,4-Dinitrobenzene	5.693	168	258585	53.36	ppm	98
53) Dimethylphthalate	5.760	163	2249347	50.31	ppm	99
54) 1,3-Dinitrobenzene	5.784	168	299425	52.73	ppm	98
55) 2,6-Dinitrotoluene	5.823	165	476800	51.33	ppm	98
56) 1,2-Dinitrobenzene	5.881	168	176073	50.79	ppm	97
57) Acenaphthylene	5.895	152	3234160	49.86	ppm	100
58) 3-Nitroaniline	6.016	138	472776	51.70	ppm	100
59) Acenaphthene	6.102	153	2089816	50.32	ppm	99
60) 2,4-Dinitrophenol	6.135	184	251391	49.90	ppm	96
61) 4-Nitrophenol	6.212	109	242052	52.32	ppm	97
62) 2,4-Dinitrotoluene	6.303	165	614346	51.56	ppm	98
63) Dibenzofuran	6.308	168	2603013	49.18	ppm	100
64) 2,3,5,6-Tetrachlorophenol	6.399	230	473933	51.38	ppm	100
65) 2,3,4,6-Tetrachlorophenol	6.452	232	626651	55.56	ppm	99
66) 2,3,5-Trimethylnaphtha...	6.566	170	1742107	50.43	ppm	81
67) Diethylphthalate	6.613	149	2127500	50.17	ppm	100
68) Fluorene	6.725	166	2182734	49.50	ppm	100
69) 4-Chlorophenyl-phenyle...	6.735	204	1127980	49.63	ppm	100
70) 4-Nitroaniline	6.753	138	458583	52.30	ppm	99
72) 4,6-Dinitro-2-methylph...	6.786	198	360802	49.80	ppm	95
73) N-Nitrosodiphenylamine	6.876	169	1700927	49.39	ppm	94
74) Azobenzene	6.923	77	1854495	50.52	ppm	100
76) 4-Bromophenyl-phenylether	7.307	248	655746	49.87	ppm	99
77) Hexachlorobenzene	7.359	284	708533	49.29	ppm	100
78) Pentachlorophenol	7.586	266	419525	53.10	ppm	97
79) Dibenzothiophene	7.685	184	3093304	51.11	ppm	97
80) Phenanthrene	7.833	178	3205706	49.68	ppm	100
82) Anthracene	7.887	178	3359591	50.67	ppm	100
83) Carbazole	8.068	167	2730589	50.42	ppm	100
84) Di-n-butylphthalate	8.466	149	3449242	51.67	ppm	100
85) 1-Methylphenanthrene	8.500	192	2353147	50.81	ppm	99
86) Fluoranthene	9.104	202	3702794	50.98	ppm	99
89) Pyrene	9.340	202	4236064	52.16	ppm	98
91) Butylbenzylphthalate	10.016	149	1421536	52.73	ppm	100
92) bis(2-ethylhexyl)adipate	10.103	129	1122797	52.02	ppm	100
93) 3,3'-Dichlorobenzidine	10.543	252	1258888	51.18	ppm	99
94) Benzo(a)anthracene	10.563	228	3440114	50.00	ppm	99
95) Chrysene	10.602	228	3329917	48.98	ppm	100
96) bis(2-Ethylhexyl)phtha...	10.597	149	2129367	51.56	ppm	100
98) Di-n-octylphthalate	11.218	149	3558124	53.95	ppm	100
99) Benzo(b)fluoranthene	11.578	252	3337020	51.93	ppm	100

mu 4/9/15

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH005.D
Acq On : 3 Apr 2015 10:08
Sample : SVE7D033
Misc : 50PPM
Integrator: RTE
Quant Time: Apr 03 12:49:22 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 5
Operator: RZhou
Inst : E7
Multiplr: 1.00

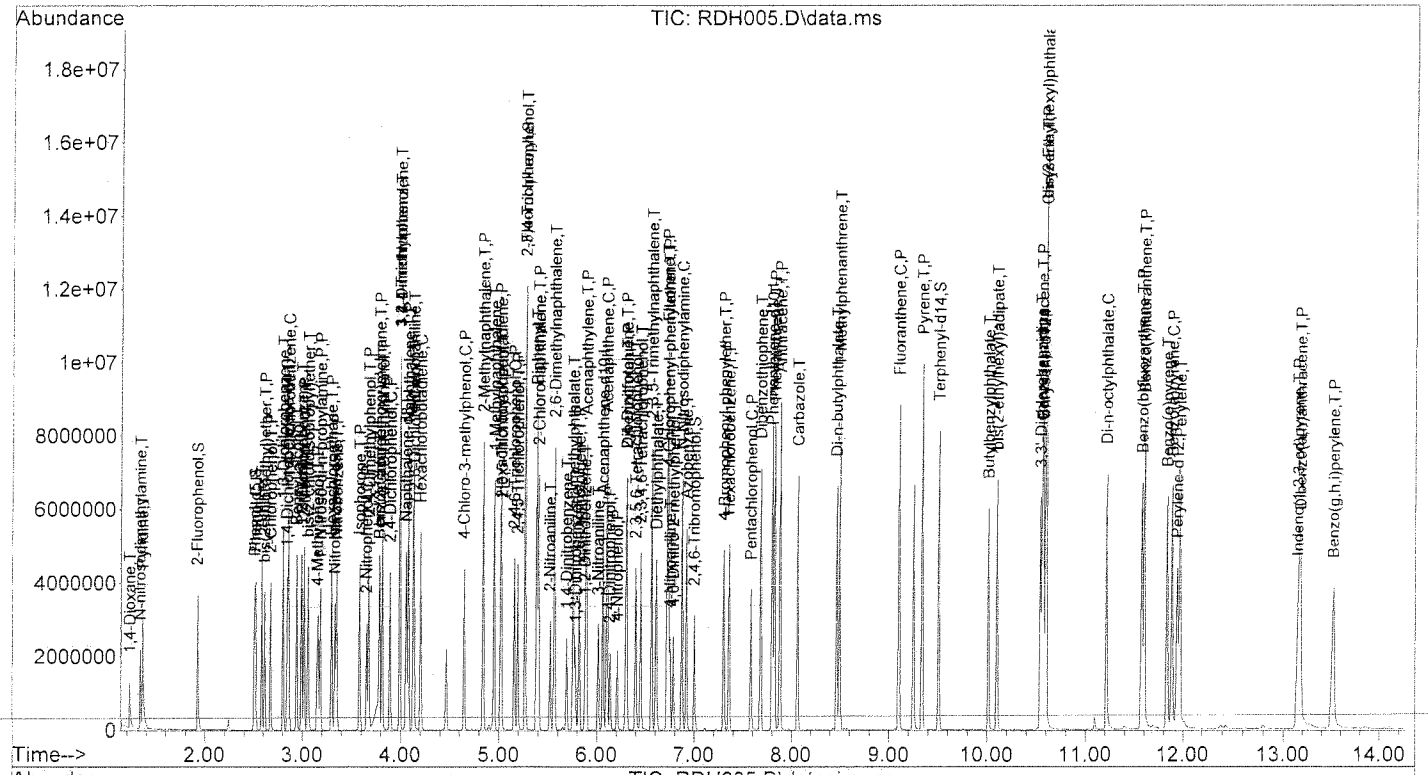
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.602	252	3600999	50.77	ppm	100
101) Benzo(e)pyrene	11.836	252	3033162	51.09	ppm	100
102) Benzo(a)pyrene	11.892	252	3303527	52.85	ppm	99
103) Perylene	11.972	252	3181077	50.41	ppm	98
104) Indeno(1,2,3-cd)pyrene	13.157	276	3495307	51.93	ppm	99
105) Dibenzo(a,h)anthracene	13.181	278	2976468	52.49	ppm	99
106) Benzo(g,h,i)perylene	13.526	276	3041480	51.59	ppm	100

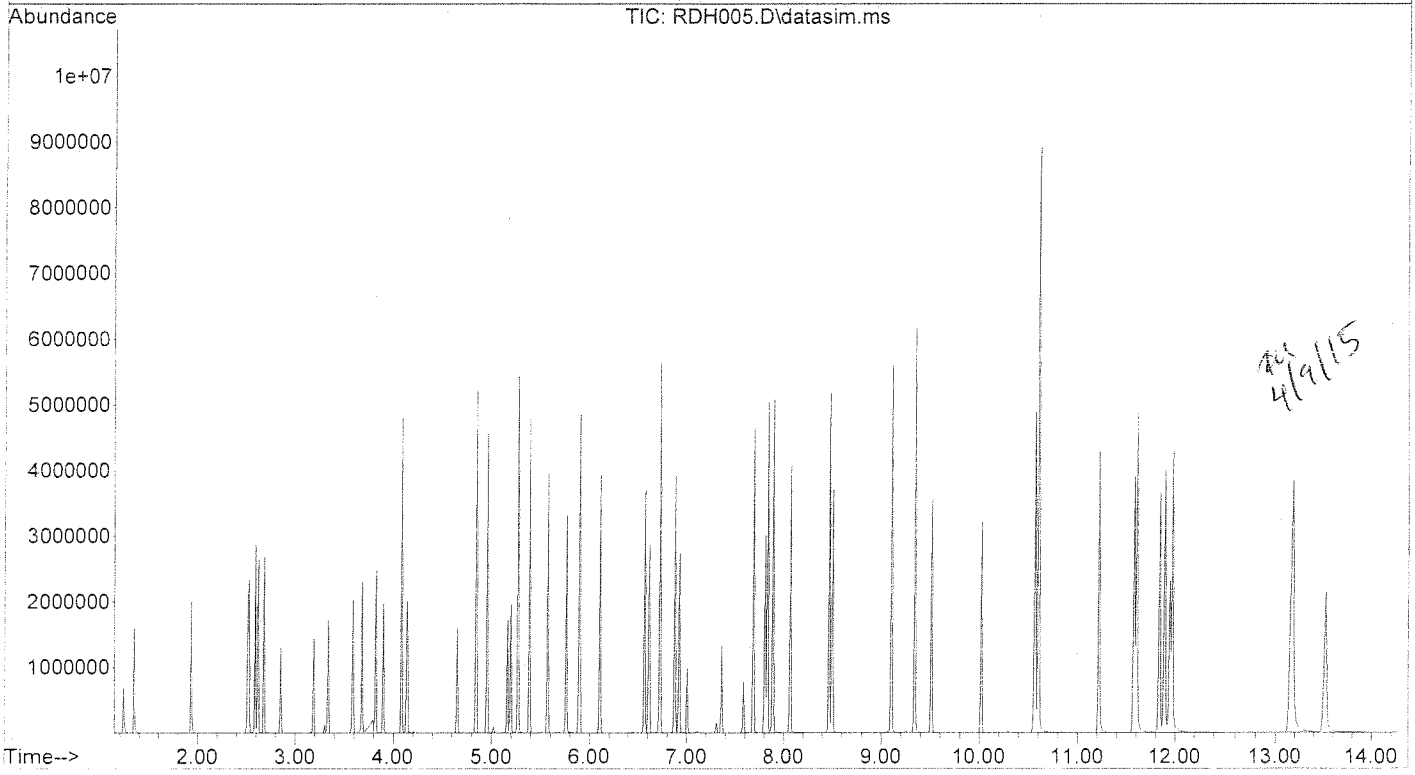
(#) = qualifier out of range (m) = manual integration (+) = signals summed

4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH005.D
Vial: 5
Acq On : 3 Apr 2015 10:08
Operator: RZhou
Sample : SVE7D033
Inst : E7
Misc : 50PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 12:49:22 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH004.D
Acq On : 3 Apr 2015 9:49
Sample : SVE7D032
Misc : 80PPM
Integrator: RTE
Quant Time: Apr 03 17:10:43 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 4
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	504151	40.00	ppm	0.00
21) Naphthalene-d8	4.053	136	1863603	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1050881	40.00	ppm	0.00
71) Phenanthrene-d10	7.797	188	1831349	40.00	ppm	0.00
87) Chrysene-d12	10.568	240	2011846	40.00	ppm	0.00
97) Perylene-d12	11.935	264	1833822	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
6) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
46) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
90) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
Target Compounds						Qvalue
4) Pyridine	1.362	79	1166959	77.14	ppm	97
27) Benzoic acid	3.797	105	964807	80.15	ppm	97

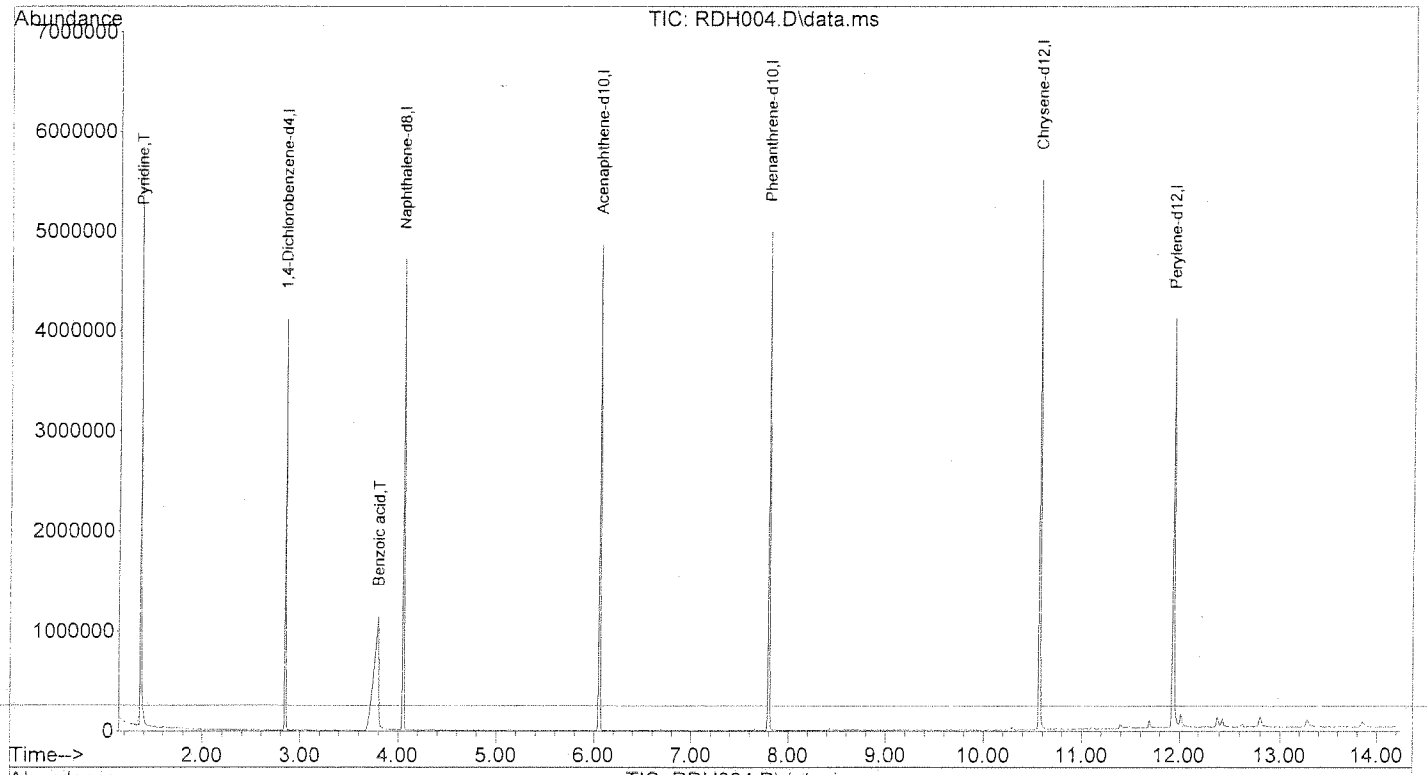
(#) = qualifier out of range (m) = manual integration (+) = signals summed

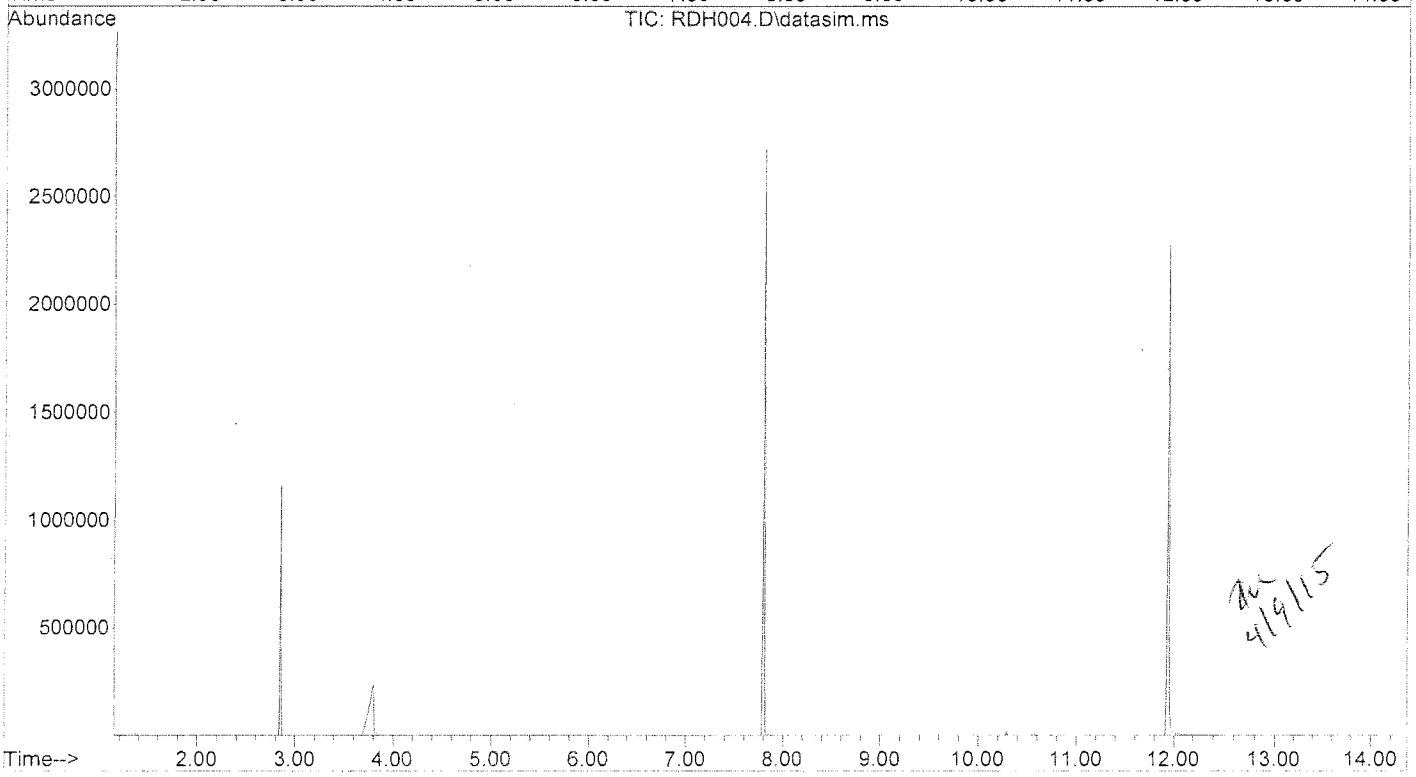
RC 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH004.D
Acq On : 3 Apr 2015 9:49
Sample : SVE7D032
Misc : 80PPM
Integrator: RTE
Quant Time: Apr 03 17:10:43 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 4
Operator: RZhou
Inst : E7
Multiplr: 1.00





AC 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH003.D
Acq On : 3 Apr 2015 9:30
Sample : SVE7D031
Misc : 100PPM
Integrator: RTE
Quant Time: Apr 03 17:10:11 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 3
Operator: RZhou
Inst : E7
Multiplr: 1.00

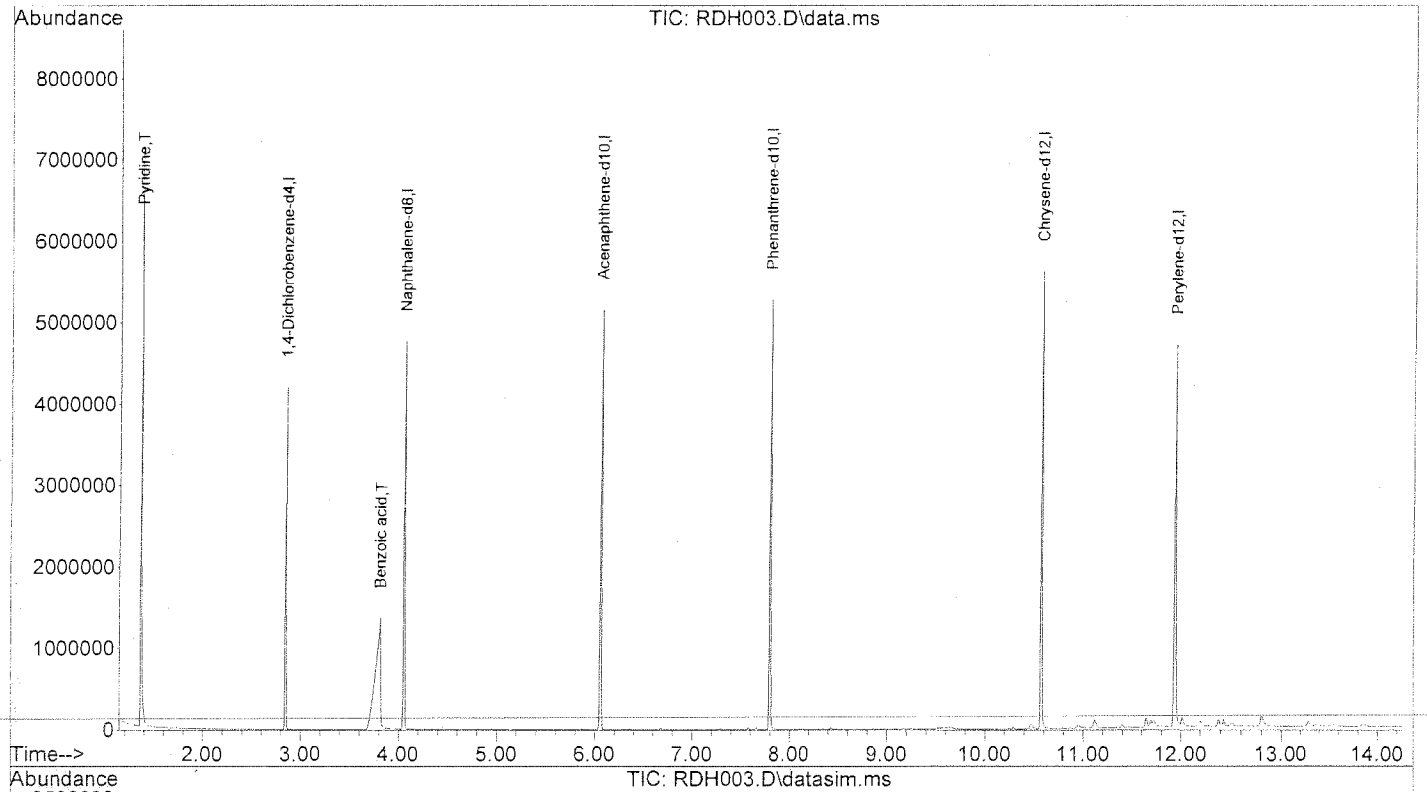
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	517430	40.00	ppm	0.00
21) Naphthalene-d8	4.058	136	1930059	40.00	ppm	0.00
41) Acenaphthene-d10	6.059	164	1104062	40.00	ppm	0.00
71) Phenanthrene-d10	7.796	188	1925784	40.00	ppm	0.00
87) Chrysene-d12	10.568	240	2143208	40.00	ppm	0.00
97) Perylene-d12	11.939	264	1957813	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
6) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
46) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
90) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
Target Compounds						Qvalue
4) Pyridine	1.367	79	1511647	97.36	ppm	97
27) Benzoic acid	3.817	105	1246954	99.51	ppm	98

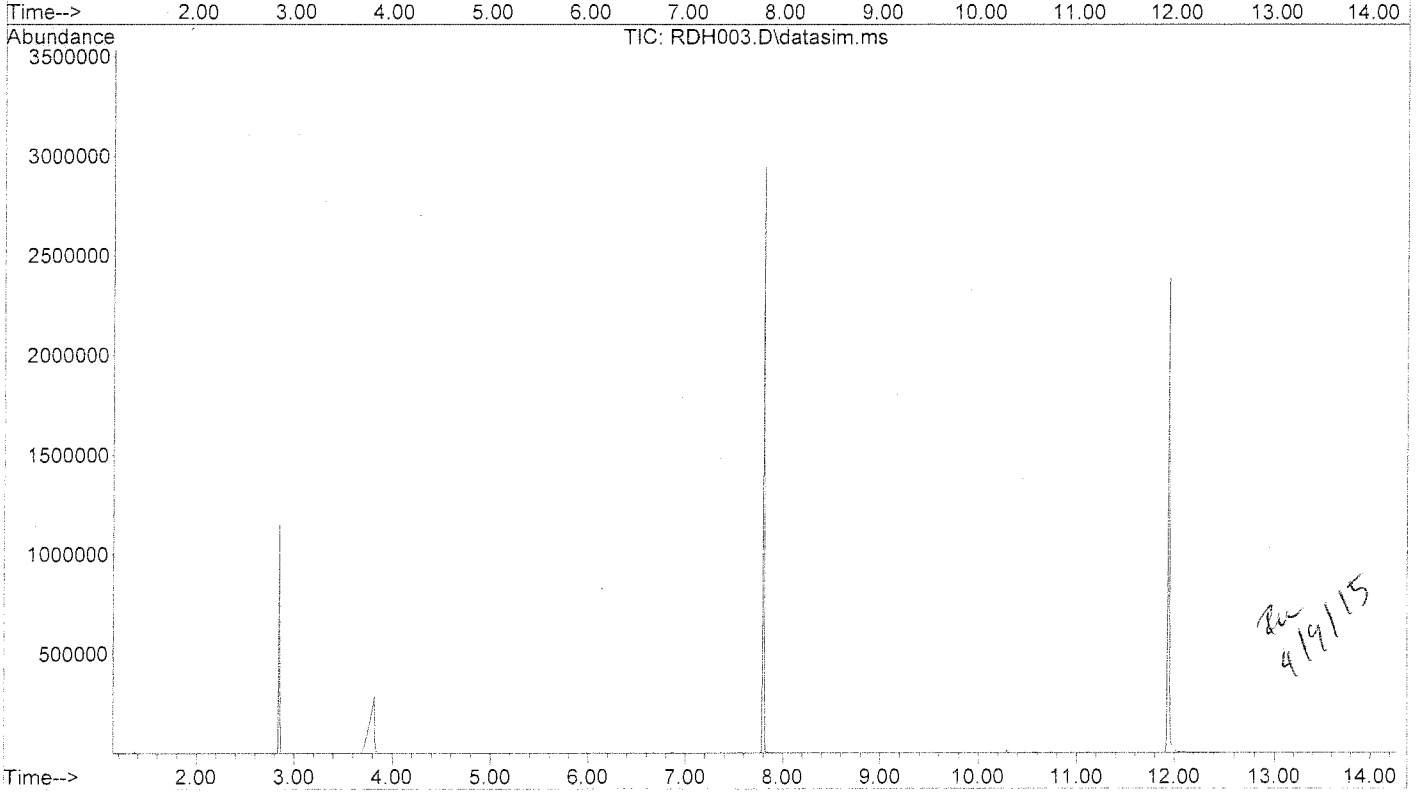
(#) = qualifier out of range (m) = manual integration (+) = signals summed

RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH003.D
Vial: 3
Acq On : 3 Apr 2015 9:30
Operator: RZhou
Sample : SVE7D031
Inst : E7
Misc : 100PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 03 17:10:11 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





RW 4/9/15

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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E7
IC Beginning DateTime :04/03/15 09:30
Spike Amount :25 PPM
CC/CV File :RDH016
IC File :RDH007

Column Spec :ZB-SemiVoa ID :0.18MM
IC Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03
Date_Time :04/03/15 14:02

M IDX	Parameters	CC Con	CC% D	CC Resp	CCRRF	AVRRF	CC Rtm	AVRtm	% RSD	Co X0	Co X1	Co X2	Co Cor
1	1,4-Dichlorobenzene-d4	40.000	0	600353	1	1	2.845	2.848	0				
2	1,4-Dioxane	22.887	-8.5	164751	0.439	0.480	1.228	1.231	13.89				
3	N-nitrosodimethylamine	24.307	-2.8	246245	0.656	0.675	1.338	1.339	2.07				
4	Pyridine	25.457	1.8	458612	1.222	1.200	1.367	1.366	2.81				
5	2-Fluorophenol	24.786	-0.9	437928	1.167	1.177	1.927	1.927	3.15				
6	Phenol-d5	24.786	-0.9	525438	1.400	1.412	2.506	2.504	3.86				
7	Phenol	24.144	-3.4	514206	1.370	1.419	2.517	2.516	2.95				
8	Aniline	23.964	-4.1	656652	1.750	1.826	2.579	2.582	1.53				
9	bis(2-chloroethyl)ether	22.426	-10.3	382641	1.020	1.137	2.611	2.612	2.28				
10	2-Chlorophenol	27.108	8.4	502088	1.338	1.234	2.673	2.675	1.73				
11	1,3-Dichlorobenzene	24.514	-1.9	560848	1.495	1.524	2.802	2.805	1.61				
12	1,2-Dichlorobenzene-d4												
13	1,4-Dichlorobenzene	25.001	0.0	593317	1.581	1.581	2.859	2.862	2.02				
14	Benzyl alcohol	24.230	-3.1	288193	0.768	0.792	2.941	2.941	2.21				
15	1,2-Dichlorobenzene	24.315	-2.7	546144	1.456	1.497	2.989	2.993	2.15				
16	2-Methylphenol	25.329	1.3	365531	0.974	0.962	3.018	3.018	1.88				
17	bis(2-chloroisopropyl)ether	22.337	-10.7	872291	2.323	2.223	3.061	3.061	3.05				
18	4-Methylphenol	24.837	-0.7	470603	1.254	1.262	3.157	3.155	2.56				
19	N-Nitroso-di-n-propylamine	23.211	-7.2	294689	0.785	0.846	3.181	3.180	1.48				
20	Hexachloroethane	23.401	-6.4	248796	0.663	0.708	3.296	3.299	3.46				
21	Naphthalene-d8	40.000	0	2230730	1	1	4.055	4.057	0				
22	Nitrobenzene-d5	8.163	-2.0	165353	0.356	0.363	3.329	3.332	1.55				
23	Nitrobenzene	22.359	-10.6	479842	0.344	0.385	3.349	3.350	1.57				
24	Isophorone	25.071	-7.7	937406	0.672	0.729	3.574	3.576	4.77				
25	2-Nitrophenol	25.205	0.8	242998	0.174	0.173	3.655	3.656	4.68				
26	2,4-Dimethylphenol	24.357	-2.6	467446	0.335	0.344	3.674	3.677	4.69				
27	Benzoic acid	23.936	-4.3	323039	0.232	0.230	3.761	3.764	18.47	-0.0140	0.2653		0.9997
28	bis(2-Chloroethoxy)methane	22.219	-11.1	509331	0.365	0.411	3.785	3.785	1.21				
29	2,5-Dimethylphenol	25.584	2.3	564973	0.405	0.396	3.813	3.814	5.61				
30	2,4-Dichlorophenol	27.507	-2.0	433420	0.311	0.317	3.891	3.893	1.97				
31	1,2,4-Trichlorobenzene	25.291	1.3	473391	0.389	0.384	3.992	3.993	1.59				
32	3,4-Dimethylphenol	25.226	0.9	595273	0.427	0.423	3.992	3.990	1.69				
33	Naphthalene	23.760	-5.0	1450056	1.040	1.094	4.079	4.079	1.44				
34	4-Chloroaniline	23.546	-5.8	574136	0.412	0.437	4.127	4.127	2.33				
35	2,6-Dichlorophenol	24.717	-1.1	436978	0.313	0.317	4.137	4.135	1.90				
36	Hexachlorobutadiene	24.272	-2.9	334522	0.240	0.247	4.204	4.207	1.54				
37	Hydroquinone												
38	4-Chloro-3-methylphenol	24.939	-0.2	380059	0.273	0.273	4.648	4.648	3.85				
39	2-Methylnaphthalene	24.478	-2.1	1032571	0.741	0.756	4.840	4.840	1.49				
40	1-Methylnaphthalene	27.131	8.5	1045328	0.750	0.691	4.955	4.953	1.66				
41	Acenaphthene-d10	40.000	0	1396618	1	1	6.061	6.061	0				
42	Hexachlorocyclopentadiene	21.996	-12.0	327152	0.375	0.426	5.022	5.020	3.00				
43	2,3,5-Trichlorophenol	27.312	9.2	340460	0.390	0.357	5.026	5.026	8.12				
44	2,4,6-Trichlorophenol	25.581	2.3	358295	0.410	0.401	5.156	5.156	3.48				
45	2,4,5-Trichlorophenol	24.746	-1.0	358758	0.411	0.415	5.190	5.191	5.03				
46	2-Fluorobiphenyl	7.633	-8.4	415118	1.427	1.558	5.263	5.266	4.84				
47	2,3,4-Trichlorophenol	22.032	-11.9	308461	0.353	0.401	5.268	5.267	2.94				
48	Biphenyl	24.764	-0.9	1343710	1.539	1.554	5.383	5.382	1.52				
49	2-Chloronaphthalene	25.816	3.3	1174237	1.345	1.303	5.402	5.401	1.47				
50	2-Nitroaniline	23.243	-7.0	268329	0.307	0.331	5.522	5.520	4.85				
51	2,6-Dimethylnaphthalene	24.903	-0.4	959143	1.099	1.103	5.565	5.565	1.63				
52	1,4-Dinitrobenzene	24.819	-0.6	136784	0.157	0.158	5.680	5.688	8.74				
53	Dimethylphthalate	23.558	-5.8	1197930	1.372	1.456	5.753	5.753	1.88				
54	1,3-Dinitrobenzene	25.324	1.3	163544	0.187	0.185	5.777	5.774	4.85				
55	2,6-Dinitrotoluene	22.244	-11.0	235003	0.269	0.303	5.816	5.816	2.99				
56	1,2-Dinitrobenzene	24.186	-3.3	95364	0.109	0.113	5.874	5.873	3.06				
57	Acenaphthylene	25.930	3.7	1912703	2.191	2.113	5.893	5.891	4.50				
58	3-Nitroaniline	22.796	-8.8	237103	0.272	0.298	6.009	6.009	3.82				
59	Acenaphthene	23.768	-4.1	1136045	1.297	1.353	6.100	6.099	1.86				
60	2,4-Dinitrophenol	21.435	-14.3	115134	0.132	0.141	6.133	6.131	21.16	-0.0096	0.1718		0.9984
61	4-Nitrophenol	24.405	-2.4	128400	0.147	0.151	6.205	6.204	5.29				
62	2,4-Dinitrotoluene	21.990	-12.0	298006	0.341	0.388	6.296	6.294	3.72				
63	Dibenzofuran	23.839	-4.6	1434904	1.644	1.724	6.306	6.306	2.25				
64	2,3,5,6-Tetrachlorophenol	23.756	-5.0	249213	0.286	0.300	6.397	6.397	2.07				
65	2,3,4,6-Tetrachlorophenol	23.303	-6.8	298833	0.342	0.367	6.450	6.449	5.76				
66	2,3,5-Trimethylnaphthalene	26.253	6.6	1043292	1.195	1.125	6.564	6.561	6.44				
67	Diethylphthalate	23.271	-6.9	1122320	1.286	1.381	6.606	6.606	0.84				
68	Fluorene	23.356	-6.6	1171374	1.342	1.436	6.718	6.719	1.37				
69	4-Chlorophenyl-phenylether	22.135	-11.5	572094	0.655	0.740	6.733	6.730	1.94				
70	4-Nitroaniline	23.528	-5.9	234604	0.269	0.286	6.742	6.742	4.47				
71	Phenanthrene-d10	40.000	0	2398781	1	1	7.804	7.799	0				
72	4,6-Dinitro-2-methylphenol	24.716	-1.1	190098	0.127	0.117	6.779	6.779	18.96	-0.0072	0.1399		0.9984
73	N-Nitrosodiphenylamine	23.769	-4.9	908489	0.606	0.637	6.874	6.871	1.75				
74	Azobenzene	24.057	-3.8	980153	0.654	0.679	6.921	6.919	2.16				
75	2,4,6-Tribromophenol	26.094	4.4	170178	0.114	0.109	7.002	7.000	4.26				
76	4-Bromophenyl-phenylether	22.756	-9.0	332072	0.221	0.243	7.305	7.304	1.87				
77	Hexachlorobenzene	23.823	-4.7	380056	0.253	0.266	7.357	7.357	2.87				
78	Pentachlorophenol	24.464	-2.3	214153	0.143	0.146	7.584	7.583	8.50				
79	Dibenzothiophene	24.928	-0.3	1674609	1.117	1.120	7.683	7.683	3.87				
80	Phenanthrene	24.037	-3.9	1721251	1.148	1.194	7.826	7.827	2.11				
81	Dinoseb												
82	Anthracene	23.032	-7.9	1694803	1.130	1.227	7.885	7.883	2.62				
83	Carbazole	24.233	-2.3	1468406	0.979	1.002	8.066	8.062	1.89				
84	Di-n-butylphthalate	23.600	-5.6	1748494	1.166	1.235	8.469	8.465	3.67				
85	1-Methylphenanthrene	25.123	0.2	1291242	0.861	0.857	8.488	8.487	1.84				
86	Fluoranthene	24.135	-3.5	1943615	1.298	1.344	9.102	9.103	2.09				
87	Chrysene-d12	40.000	0	2553528	1	1	10.576	10.572	0				
88	Benzidine												
89	Pyrene	23.369	-6.5	2060819	1.291	1.381	9.338	9.337	4.93				
90	Terphenyl-d14	8.097	-2.8	438387	0.824	0.848	9.509	9.508	1.81				
91	Butylbenzylphthalate	23.902	-4.4	699704	0.438	0.459	10.019	10.016	6.43				
92	bis(2-ethylhexyl)adipate	25.241	1.0	591607	0.371	0.367	10.106	10.101	6.31				
93	3,3'-Dichlorobenzidine	22.062	-11.8	589247	0.369	0.418	10.542	10.539	4.00				
94	Benzo(a)anthracene	23.577	-5.7	1761410	1.104	1.170	10.566	10.561	1.33				
95	Chrysene	22.554	-9.8	1665154	1.043	1.157	10.600	10.597	2.95				
96	bis(2-Ethylhexyl)phthalate	24.449	-2.2	1096511	0.687	0.703	10.600	10.598	4.99				
97	Perylene-d12	40.000	0	2319642	1	1	11.946	11.940	0				
98	Di-n-octylphthalate	23.815	-4.7	1719946	1.186	1.245	11.221	11.216	8.50				
99	Benzo(b)fluoranthene	23.230	-7.1	1634368	1.127	1.213	11.576	11.578	3.40				
100	Benzo(k)fluoranthene	25.912	3.6	2012398	1.388	1.339	11.601	11.598	1.76				
101	Benzo(e)pyrene	24.801	-0.8	1612222	1.112	1.121	11.838	11.832	2.41				
102	Benzo(a)pyrene	23.291	-6.8	1594012	1.099	1.180	11.890	11.884	4.70				
103	Perylene	20.620	-17.5	1424819	0.983	1.192	11.969	11.966	1.77				
104	Indeno(1,2,3-cd)pyrene	24.674	-1.3	1818289	1.254	1.271	13.157	13.148	2.90				
105	Dibenzo(a,h)anthracene	24.236	-3.0	1505986	1.039	1.071	13.176	13.169	4.24				
106	Benzo(g,h,i)perylene	23.986	-4.1	1548288	1.068	1.113	13.516	13.510	3.23				

JW 4/9/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D Vial: 16
Acq On : 3 Apr 2015 14:02 Operator: RZhou
Sample : ISVE7D031 Inst : E7
Misc : ICV Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	106	0.00
2	T	1,4-Dioxane	25.000	22.887	8.5	108	0.00
3	T	N-nitrosodimethylamine	25.000	24.307	2.8	105	0.00
4	T	Pyridine	25.000	25.457	-1.8	108	0.00
5	S	2-Fluorophenol	25.000	24.786	0.9	109	0.00
6	S	Phenol-d5	25.000	24.786	0.9	110	0.00
7	C,P	Phenol	25.000	24.144	3.4	106	0.00
8	T	Aniline	25.000	23.964	4.1	103	0.00
9	T,P	bis(2-chloroethyl)ether	25.000	22.426	10.3	99	0.00
10	T,P	2-Chlorophenol	25.000	27.107	-8.4	118	0.00
11	T	1,3-Dichlorobenzene	25.000	24.514	1.9	106	0.00
12	S	1,2-Dichlorobenzene-d4	25.000	0.000	100.0#	0	-2.99#
13	C	1,4-Dichlorobenzene	25.000	25.001	-0.0	109	0.00
14	T	Benzyl alcohol	25.000	24.230	3.1	104	0.00
15	T	1,2-Dichlorobenzene	25.000	24.315	2.7	105	0.00
16	T,P	2-Methylphenol	25.000	25.329	-1.3	111	0.00
17	T	bis(2-chloroisopropyl)ether	25.000	22.337	10.7	98	0.00
18	T,P	4-Methylphenol	25.000	24.837	0.7	109	0.00
19	P,P	N-Nitroso-di-n-propylamine	25.000	23.211	7.2	100	0.00
20	T,P	Hexachloroethane	25.000	23.401	6.4	102	0.00
21	I	Naphthalene-d8	40.000	40.000	0.0	105	0.00
22	S	Nitrobenzene-d5	8.333 ~~25.000~~	8.163	2.0 ~~67.3#~~	~~35~~ 105	0.00
23	T,P	Nitrobenzene	DJ 4/7/15 25.000	22.359	DJ 4/7/15 10.6	97 DJ 4/7/15	0.00
24	T,P	Isophorone	25.000	23.071	7.7	98	0.00
25	C,P	2-Nitrophenol	25.000	25.205	-0.8	106	0.00
26	T,P	2,4-Dimethylphenol	25.000	24.356	2.6	107	0.00
27	T	Benzoic acid	25.000	23.936	4.3	102	0.00
28	T,P	bis(2-Chloroethoxy)methane	25.000	22.219	11.1	96	0.00
29	T	3,5-Dimethylphenol	25.000	25.584	-2.3	108	0.00
30	C,P	2,4-Dichlorophenol	25.000	24.504	2.0	105	0.00
31	T	1,2,4-Trichlorobenzene	25.000	25.291	-1.2	109	0.00
32	T	3,4-Dimethylphenol	25.000	25.226	-0.9	109	0.00
33	T.P	Naphthalene	25.000	23.760	5.0	103	0.00
34	T	4-Chloroaniline	25.000	23.546	5.8	101	0.00
35	T	2,6-Dichlorophenol	25.000	24.717	1.1	107	0.00
36	C	Hexachlorobutadiene	25.000	24.272	2.9	105	0.00
37	T	Hydroquinone	25.000	0.000	100.0#	0	0.00
38	C,P	4-Chloro-3-methylphenol	25.000	24.939	0.2	105	0.00
39	T,P	2-Methylnaphthalene	25.000	24.478	2.1	106	0.00
40	T	1-Methylnaphthalene	25.000	27.131	-8.5	117	0.00
41	I	Acenaphthene-d10	40.000	40.000	0.0	107	0.00
42	P	Hexachlorocyclopentadiene	25.000	21.996	12.0	95	0.00
43	T	2,3,5-Trichlorophenol	25.000	27.312	-9.2	117	0.00
44	C,P	2,4,6-Trichlorophenol	25.000	25.581	-2.3	113	0.00
45	T,P	2,4,5-Trichlorophenol	25.000	24.746	1.0	107	0.00
46	S	2-Fluorobiphenyl	8.333 ~~25.000~~	7.633	8.4 ~~69.5#~~	~~32~~ 96	0.00
47	T	2,3,4-Trichlorophenol	DJ 4/7/15 25.000	22.032	DJ 4/7/15 11.9	96 DJ 4/7/15	0.00
48	T	Biphenyl	25.000	24.764	0.9	110	0.00

TW 4/14/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 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)
49	T,P	2-Chloronaphthalene	25.000	25.816	-3.3	114	0.00
50	T	2-Nitroaniline	25.000	23.243	7.0	100	0.00
51	T	2,6-Dimethylnaphthalene	25.000	24.903	0.4	110	0.00
52	T	1,4-Dinitrobenzene	25.000	24.819	0.7	104	0.00
53	T	Dimethylphthalate	25.000	23.558	5.8	103	0.00
54	T	1,3-Dinitrobenzene	25.000	25.324	-1.3	109	0.00
55	T,P	2,6-Dinitrotoluene	25.000	22.244	11.0	96	0.00
56	T	1,2-Dinitrobenzene	25.000	24.186	3.3	106	0.00
57	T,P	Acenaphthylene	25.000	25.929	-3.7	116	0.00
58	T	3-Nitroaniline	25.000	22.796	8.8	98	0.00
59	C,P	Acenaphthene	25.000	23.967	4.1	107	0.00
60	P	2,4-Dinitrophenol	25.000	21.435	14.3	94	0.00
61	P	4-Nitrophenol	25.000	24.405	2.4	102	0.00
62	T,P	2,4-Dinitrotoluene	25.000	21.990	12.0	95	0.00
63	T,P	Dibenzofuran	25.000	23.839	4.6	106	0.00
64	T	2,3,5,6-Tetrachlorophenol	25.000	23.755	5.0	103	0.00
65	T	2,3,4,6-Tetrachlorophenol	25.000	23.303	6.8	103	0.00
66	T	2,3,5-Trimethylnaphthalene	25.000	26.553	-6.2	126	0.00
67	T	Diethylphthalate	25.000	23.271	6.9	101	0.00
68	T,P	Fluorene	25.000	23.356	6.6	103	0.00
69	T,P	4-Chlorophenyl-phenylether	25.000	22.135	11.5	97	0.00
70	T	4-Nitroaniline	25.000	23.528	5.9	100	0.00
71	I	Phenanthrene-d10	40.000	40.000	0.0	103	0.00
72	T	4,6-Dinitro-2-methylphenol	25.000	24.716	1.1	107	0.00
73	C	N-Nitrosodiphenylamine	25.000	23.769	4.9	95	0.00
74	T	Azobenzene	25.000	24.057	3.8	102	0.00
75	S	2,4,6-Tribromophenol	25.000	26.094	-4.4	109	0.00
76	T,P	4-Bromophenyl-phenylether	25.000	22.756	9.0	97	0.00
77	T,P	Hexachlorobenzene	25.000	23.823	4.7	102	0.00
78	C,P	Pentachlorophenol	25.000	24.424	2.3	99	0.00
79	T	Dibenzothiophene	25.000	24.929	0.3	106	0.00
80	T,P	Phenanthrene	25.000	24.037	3.9	103	0.00
81	T	Dinoseb	25.000	0.000	100.0#	0	0.00
82	T,P	Anthracene	25.000	23.032	7.9	100	0.00
83	T	Carbazole	25.000	24.433	2.3	104	0.00
84	T	Di-n-butylphthalate	25.000	23.600	5.6	100	0.00
85	T	1-Methylphenanthrene	25.000	25.123	-0.5	107	0.00
86	C,P	Fluoranthene	25.000	24.135	3.5	102	0.00
87	I	Chrysene-d12	40.000	40.000	0.0	102	0.00
88	T	Benzidine	25.000	0.000	100.0#	0	0.00
89	T,P	Pyrene	25.000	23.369	6.5	101	0.00
90	S	Terphenyl-d14	8.333 ~~25.000~~	8.097	2.8 ~~67.6#~~	~~34~~ 102	0.00
91	T	Butylbenzylphthalate	DJ 4/7/15 25.000	23.902	DJ 4/7/15 4.4	97 DJ 4/7/15	0.00
92	T	bis(2-ethylhexyl)adipate	25.000	25.241	-1.0	103	0.00
93	T	3,3'-Dichlorobenzidine	25.000	22.062	11.8	91	0.00
94	T,P	Benzo(a)anthracene	25.000	23.577	5.7	99	0.00
95	T,P	Chrysene	25.000	22.554	9.8	96	0.00
96	T	bis(2-Ethylhexyl)phthalate	25.000	24.449	2.2	101	0.00

RW 4/9/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D Vial: 16
Acq On : 3 Apr 2015 14:02 Operator: RZhou
Sample : ISVE7D031 Inst : E7
Misc : ICV Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
97	I	Perylene-d12	40.000	40.000	0.0	101	0.00
98	C	Di-n-octylphthalate	25.000	23.815	4.7	97	0.00
99	T,P	Benzo(b)fluoranthene	25.000	23.230	7.1	97	0.00
100	T,P	Benzo(k)fluoranthene	25.000	25.912	-3.6	109	0.00
101	T	Benzo(e)pyrene	25.000	24.801	0.8	105	0.00
102	C,P	Benzo(a)pyrene	25.000	23.291	6.8	95	0.00
103	T	Perylene	25.000	20.620	17.5	86	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	25.000	24.674	1.3	103	0.00
105	T,P	Dibenzo(a,h)anthracene	25.000	24.256	3.0	100	0.00
106	T,P	Benzo(g,h,i)perylene	25.000	23.986	4.1	100	0.00

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

RW 4/9/15

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D Vial: 16
Acq On : 3 Apr 2015 14:02 Operator: RZhou
Sample : ISVE7D031 Inst : E7
Misc : ICV Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00
2	T	1,4-Dioxane	0.480	0.439	8.5	108	0.00
3	T	N-nitrosodimethylamine	0.675	0.656	2.8	105	0.00
4	T	Pyridine	1.200	1.222	-1.8	108	0.00
5	S	2-Fluorophenol	1.177	1.167	0.8	109	0.00
6	S	Phenol-d5	1.412	1.400	0.8	110	0.00
7	C,P	Phenol	1.419	1.370	3.5	106	0.00
8	T	Aniline	1.826	1.750	4.2	103	0.00
9	T,P	bis(2-chloroethyl)ether	1.137	1.020	10.3	99	0.00
10	T,P	2-Chlorophenol	1.234	1.338	-8.4	118	0.00
11	T	1,3-Dichlorobenzene	1.524	1.495	1.9	106	0.00
12	S	1,2-Dichlorobenzene-d4	0.000	0.000#	0.0	0#	-2.99#
13	C	1,4-Dichlorobenzene	1.581	1.581	0.0	109	0.00
14	T	Benzyl alcohol	0.792	0.768	3.0	104	0.00
15	T	1,2-Dichlorobenzene	1.497	1.456	2.7	105	0.00
16	T,P	2-Methylphenol	0.962	0.974	-1.2	111	0.00
17	T	bis(2-chloroisopropyl)ether	2.623	2.343	10.7	98	0.00
18	T,P	4-Methylphenol	1.262	1.254	0.6	109	0.00
19	P,P	N-Nitroso-di-n-propylamine	0.846	0.785	7.2	100	0.00
20	T,P	Hexachloroethane	0.708	0.663	6.4	102	0.00
21	I	Naphthalene-d8	1.000	1.000	0.0	105	0.00
22	S	Nitrobenzene-d5	0.363	~~0.119~~ 0.356	~~67.2#~~ 1.9	~~35#~~ 105	0.00
23	T,P	Nitrobenzene	0.385	0.344 DJ 4/7/15	10.6	97 DJ 4/7/15	0.00
24	T,P	Isophorone	0.729	0.672	7.8	98	0.00
25	C,P	2-Nitrophenol	0.173	0.174	-0.6	106	0.00
26	T,P	2,4-Dimethylphenol	0.344	0.335	2.6	107	0.00
27	T	Benzoic acid	0.230	0.232	-0.9	102	0.00
28	T,P	bis(2-Chloroethoxy)methane	0.411	0.365	11.2	96	0.00
29	T	3,5-Dimethylphenol	0.396	0.405	-2.3	108	0.00
30	C,P	2,4-Dichlorophenol	0.317	0.311	1.9	105	0.00
31	T	1,2,4-Trichlorobenzene	0.384	0.389	-1.3	109	0.00
32	T	3,4-Dimethylphenol	0.423	0.427	-0.9	109	0.00
33	T.P	Naphthalene	1.094	1.040	4.9	103	0.00
34	T	4-Chloroaniline	0.437	0.412	5.7	101	0.00
35	T	2,6-Dichlorophenol	0.317	0.313	1.3	107	0.00
36	C	Hexachlorobutadiene	0.247	0.240	2.8	105	0.00
37	T	Hydroquinone	0.000	0.000#	0.0	0#	0.00
38	C,P	4-Chloro-3-methylphenol	0.273	0.273	0.0	105	0.00
39	T,P	2-Methylnaphthalene	0.756	0.741	2.0	106	0.00
40	T	1-Methylnaphthalene	0.691	0.750	-8.5	117	0.00
41	I	Acenaphthene-d10	1.000	1.000	0.0	107	0.00
42	P	Hexachlorocyclopentadiene	0.426	0.375	12.0	95	0.00
43	T	2,3,5-Trichlorophenol	0.357	0.390	-9.2	117	0.00
44	C,P	2,4,6-Trichlorophenol	0.401	0.410	-2.2	113	0.00
45	T,P	2,4,5-Trichlorophenol	0.415	0.411	1.0	107	0.00
46	S	2-Fluorobiphenyl	1.558	~~0.476~~ 1.427	~~69.4#~~ 8.4	~~32#~~ 96	0.00
47	T	2,3,4-Trichlorophenol	0.401	0.353 DJ 4/7/15	12.0	96 DJ 4/7/15	0.00
48	T	Biphenyl	1.554	1.539	1.0	110	0.00

4/9/15

BTG

Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D Vial: 16
Acq On : 3 Apr 2015 14:02 Operator: RZhou
Sample : ISVE7D031 Inst : E7
Misc : ICV Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
49	T,P	2-Chloronaphthalene	1.303	1.345	-3.2	114	0.00
50	T	2-Nitroaniline	0.331	0.307	7.3	100	0.00
51	T	2,6-Dimethylnaphthalene	1.103	1.099	0.4	110	0.00
52	T	1,4-Dinitrobenzene	0.158	0.157	0.6	104	0.00
53	T	Dimethylphthalate	1.456	1.372	5.8	103	0.00
54	T	1,3-Dinitrobenzene	0.185	0.187	-1.1	109	0.00
55	T,P	2,6-Dinitrotoluene	0.303	0.269	11.2	96	0.00
56	T	1,2-Dinitrobenzene	0.113	0.109	3.5	106	0.00
57	T,P	Acenaphthylene	2.113	2.191	-3.7	116	0.00
58	T	3-Nitroaniline	0.298	0.272	8.7	98	0.00
59	C,P	Acenaphthene	1.353	1.297	4.1	107	0.00
60	P	2,4-Dinitrophenol	0.141	0.132	6.4	94	0.00
61	P	4-Nitrophenol	0.151	0.147	2.6	102	0.00
62	T,P	2,4-Dinitrotoluene	0.388	0.341	12.1	95	0.00
63	T,P	Dibenzofuran	1.724	1.644	4.6	106	0.00
64	T	2,3,5,6-Tetrachlorophenol	0.300	0.286	4.7	103	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.367	0.342	6.8	103	0.00
66	T	2,3,5-Trimethylnaphthalene	1.125	1.195	-6.2	126	0.00
67	T	Diethylphthalate	1.381	1.286	6.9	101	0.00
68	T,P	Fluorene	1.436	1.342	6.5	103	0.00
69	T,P	4-Chlorophenyl-phenylether	0.740	0.655	11.5	97	0.00
70	T	4-Nitroaniline	0.286	0.269	5.9	100	0.00
71	I	Phenanthrene-d10	1.000	1.000	0.0	103	0.00
72	T	4,6-Dinitro-2-methylphenol	0.117	0.127	-8.5	107	0.00
73	C	N-Nitrosodiphenylamine	0.637	0.606	4.9	95	0.00
74	T	Azobenzene	0.679	0.654	3.7	102	0.00
75	S	2,4,6-Tribromophenol	0.109	0.114	-4.6	109	0.00
76	T,P	4-Bromophenyl-phenylether	0.243	0.221	9.1	97	0.00
77	T,P	Hexachlorobenzene	0.266	0.253	4.9	102	0.00
78	C,P	Pentachlorophenol	0.146	0.143	2.1	99	0.00
79	T	Dibenzothiophene	1.120	1.117	0.3	106	0.00
80	T,P	Phenanthrene	1.194	1.148	3.9	103	0.00
81	T	Dinoseb	0.000	0.000#	0.0	0#	0.00
82	T,P	Anthracene	1.227	1.130	7.9	100	0.00
83	T	Carbazole	1.002	0.979	2.3	104	0.00
84	T	Di-n-butylphthalate	1.235	1.166	5.6	100	0.00
85	T	1-Methylphenanthrene	0.857	0.861	-0.5	107	0.00
86	C,P	Fluoranthene	1.344	1.298	3.4	102	0.00
87	I	Chrysene-d12	1.000	1.000	0.0	102	0.00
88	T	Benzidine	0.000	0.000#	0.0	0#	0.00
89	T,P	Pyrene	1.381	1.291	6.5	101	0.00
90	S	Terphenyl-d14	0.848	~~0.275~~ 0.824	~~2.867.6#~~ 2.8	~~34#~~ 102	0.00
91	T	Butylbenzylphthalate	0.459	0.438	4.6	97	0.00
92	T	bis(2-ethylhexyl)adipate	0.367	0.371	-1.1	103	0.00
93	T	3,3'-Dichlorobenzidine	0.418	0.369	11.7	91	0.00
94	T,P	Benzo(a)anthracene	1.170	1.104	5.6	99	0.00
95	T,P	Chrysene	1.157	1.043	9.9	96	0.00
96	T	bis(2-Ethylhexyl)phthalate	0.703	0.687	2.3	101	0.00

RD 4/7/15 RD 4/7/15 RD 4/7/15

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Evaluate Continuing Calibration Report

Data File : D:\DATA\15D03\RDH016.D Vial: 16
Acq On : 3 Apr 2015 14:02 Operator: RZhou
Sample : ISVE7D031 Inst : E7
Misc : ICV Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
97	I	Perylene-d12	1.000	1.000	0.0	101	0.00
98	C	Di-n-octylphthalate	1.245	1.186	4.7	97	0.00
99	T,P	Benzo(b)fluoranthene	1.213	1.127	7.1	97	0.00
100	T,P	Benzo(k)fluoranthene	1.339	1.388	-3.7	109	0.00
101	T	Benzo(e)pyrene	1.121	1.112	0.8	105	0.00
102	C,P	Benzo(a)pyrene	1.180	1.099	6.9	95	0.00
103	T	Perylene	1.192	0.983	17.5	86	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	1.271	1.254	1.3	103	0.00
105	T,P	Dibenzo(a,h)anthracene	1.071	1.039	3.0	100	0.00
106	T,P	Benzo(g,h,i)perylene	1.113	1.068	4.0	100	0.00

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

TW 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH016.D
Acq On : 3 Apr 2015 14:02
Sample : ISVE7D031
Misc : ICV
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 16
Operator: RZhou
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	600353	40.00	ppm	0.00
21) Naphthalene-d8	4.055	136	2230730	40.00	ppm	0.00
41) Acenaphthene-d10	6.061	164	1396618	40.00	ppm	0.00
71) Phenanthrene-d10	7.804	188	2398781	40.00	ppm	0.00
87) Chrysene-d12	10.576	240	2553528	40.00	ppm	0.00
97) Perylene-d12	11.946	264	2319642	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	437928	24.79	ppm	0.00
Spiked Amount 30.000			Recovery = 82.63%			
6) Phenol-d5	2.506	99	525438	24.79	ppm	0.00
Spiked Amount 30.000			Recovery = 82.63%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.329	82	165353	8.16	ppm	0.00
Spiked Amount 10.000			Recovery = 81.60%			
46) 2-Fluorobiphenyl	5.263	172	415118	7.63	ppm	0.00
Spiked Amount 10.000			Recovery = 76.30%			
75) 2,4,6-Tribromophenol	7.002	330	170178	26.09	ppm	0.00
Spiked Amount 30.000			Recovery = 86.97%			
90) Terphenyl-d14	9.509	244	438387	8.10	ppm	0.00
Spiked Amount 10.000			Recovery = 81.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.228	88	164751	22.89	ppm	95
3) N-nitrosodimethylamine	1.338	74	246245	24.31	ppm	97
4) Pyridine	1.367	79	458612	25.46	ppm	98
7) Phenol	2.517	94	514206	24.14	ppm	100
8) Aniline	2.579	93	656652	23.96	ppm	98
9) bis(2-chloroethyl)ether	2.610	93	382641	22.43	ppm	98
10) 2-Chlorophenol	2.673	128	502088	27.11	ppm	100
11) 1,3-Dichlorobenzene	2.802	146	560848	24.51	ppm	99
13) 1,4-Dichlorobenzene	2.860	146	593317	25.00	ppm	99
14) Benzyl alcohol	2.941	108	288193	24.23	ppm	100
15) 1,2-Dichlorobenzene	2.989	146	546144	24.32	ppm	99
16) 2-Methylphenol	3.018	107	365531	25.33	ppm	99
17) bis(2-chloroisopropyl)...	3.061	45	879291	22.34	ppm	99
18) 4-Methylphenol	3.157	107	470603	24.84	ppm	97
19) N-Nitroso-di-n-propyla...	3.181	70	294689	23.21	ppm	99
20) Hexachloroethane	3.296	117	248796	23.40	ppm	99
23) Nitrobenzene	3.348	77	479844	22.36	ppm	100
24) Isophorone	3.574	82	937406	23.07	ppm	93
25) 2-Nitrophenol	3.655	139	242998	25.21	ppm	98
26) 2,4-Dimethylphenol	3.675	107	467446	24.36	ppm	99
27) Benzoic acid	3.761	105	323039	23.94	ppm	97
28) bis(2-Chloroethoxy)met...	3.785	93	509331	22.22	ppm	100
29) 3,5-Dimethylphenol	3.813	107	564973	25.58	ppm	97
30) 2,4-Dichlorophenol	3.890	162	433420	24.50	ppm	98
31) 1,2,4-Trichlorobenzene	3.992	180	542291	25.29	ppm	99
32) 3,4-Dimethylphenol	3.992	107	595273	25.23	ppm	99
33) Naphthalene	4.079	128	1450056	23.76	ppm	100
34) 4-Chloroaniline	4.127	127	574136	23.55	ppm	99
35) 2,6-Dichlorophenol	4.137	162	436978	24.72	ppm	99

RZ 4/9/15

STS

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH016.D Vial: 16
Acq On : 3 Apr 2015 14:02 Operator: RZhou
Sample : ISVE7D031 Inst : E7
Misc : ICV Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36)	Hexachlorobutadiene	4.204	225	334522	24.27	ppm	99
38)	4-Chloro-3-methylphenol	4.648	107	380059	24.94	ppm	99
39)	2-Methylnaphthalene	4.840	142	1032571	24.48	ppm	99
40)	1-Methylnaphthalene	4.955	142	1045328	27.13	ppm	100
42)	Hexachlorocyclopentadiene	5.022	237	327152	22.00	ppm	100
43)	2,3,5-Trichlorophenol	5.026	196	340460	27.31	ppm	95
44)	2,4,6-Trichlorophenol	5.156	196	358295	25.58	ppm	98
45)	2,4,5-Trichlorophenol	5.190	196	358758	24.75	ppm	99
47)	2,3,4-Trichlorophenol	5.268	196	308461	22.03	ppm	100
48)	Biphenyl	5.383	154	1343710	24.76	ppm	100
49)	2-Chloronaphthalene	5.402	162	1174237	25.82	ppm	95
50)	2-Nitroaniline	5.522	65	268329	23.24	ppm	99
51)	2,6-Dimethylnaphthalene	5.565	156	959143	24.90	ppm	100
52)	1,4-Dinitrobenzene	5.690	168	136784	24.82	ppm	100
53)	Dimethylphthalate	5.753	163	1197930	23.56	ppm	100
54)	1,3-Dinitrobenzene	5.777	168	163544	25.32	ppm	98
55)	2,6-Dinitrotoluene	5.816	165	235003	22.24	ppm	98
56)	1,2-Dinitrobenzene	5.874	168	95364	24.19	ppm	98
57)	Acenaphthylene	5.893	152	1912703	25.93	ppm	97
58)	3-Nitroaniline	6.009	138	237103	22.80	ppm	97
59)	Acenaphthene	6.100	153	1132043	23.97	ppm	100
60)	2,4-Dinitrophenol	6.133	184	115134	21.43	ppm	98
61)	4-Nitrophenol	6.205	109	128400	24.40	ppm	99
62)	2,4-Dinitrotoluene	6.296	165	298006	21.99	ppm	97
63)	Dibenzofuran	6.306	168	1434904	23.84	ppm	100
64)	2,3,5,6-Tetrachlorophenol	6.397	230	249213	23.76	ppm	99
65)	2,3,4,6-Tetrachlorophenol	6.450	232	298933	23.30	ppm	99
66)	2,3,5-Trimethylnaphtha...	6.564	170	1043292	26.55	ppm	79
67)	Diethylphthalate	6.606	149	1122320	23.27	ppm	100
68)	Fluorene	6.718	166	1171374	23.36	ppm	100
69)	4-Chlorophenyl-phenyle...	6.733	204	572094	22.13	ppm	99
70)	4-Nitroaniline	6.742	138	234604	23.53	ppm	98
72)	4,6-Dinitro-2-methylph...	6.779	198	190098	24.72	ppm	94
73)	N-Nitrosodiphenylamine	6.874	169	908489	23.77	ppm	86
74)	Azobenzene	6.921	77	980153	24.06	ppm	100
76)	4-Bromophenyl-phenylether	7.305	248	332072	22.76	ppm	100
77)	Hexachlorobenzene	7.357	284	380056	23.82	ppm	100
78)	Pentachlorophenol	7.584	266	214153	24.42	ppm	97
79)	Dibenzothiophene	7.683	184	1674609	24.93	ppm	100
80)	Phenanthrene	7.826	178	1721251	24.04	ppm	100
82)	Anthracene	7.885	178	1694803	23.03	ppm	100
83)	Carbazole	8.066	167	1468406	24.43	ppm	100
84)	Di-n-butylphthalate	8.469	149	1748494	23.60	ppm	100
85)	1-Methylphenanthrene	8.498	192	1291242	25.12	ppm	99
86)	Fluoranthene	9.102	202	1945615	24.14	ppm	100
89)	Pyrene	9.338	202	2060819	23.37	ppm	99
91)	Butylbenzylphthalate	10.019	149	699704	23.90	ppm	99
92)	bis(2-ethylhexyl)adipate	10.106	129	591607	25.24	ppm	99
93)	3,3'-Dichlorobenzidine	10.542	252	589247	22.06	ppm	100
94)	Benzo(a)anthracene	10.566	228	1761410	23.58	ppm	100
95)	Chrysene	10.600	228	1665154	22.55	ppm	99
96)	bis(2-Ethylhexyl)phtha...	10.600	149	1096511	24.45	ppm	100
98)	Di-n-octylphthalate	11.221	149	1719749	23.82	ppm	100
99)	Benzo(b)fluoranthene	11.577	252	1634368	23.23	ppm	99

RZ 4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH016.D
Vial: 16
Acq On : 3 Apr 2015 14:02
Operator: RZhou
Sample : ISVE7D031
Inst : E7
Misc : ICV
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

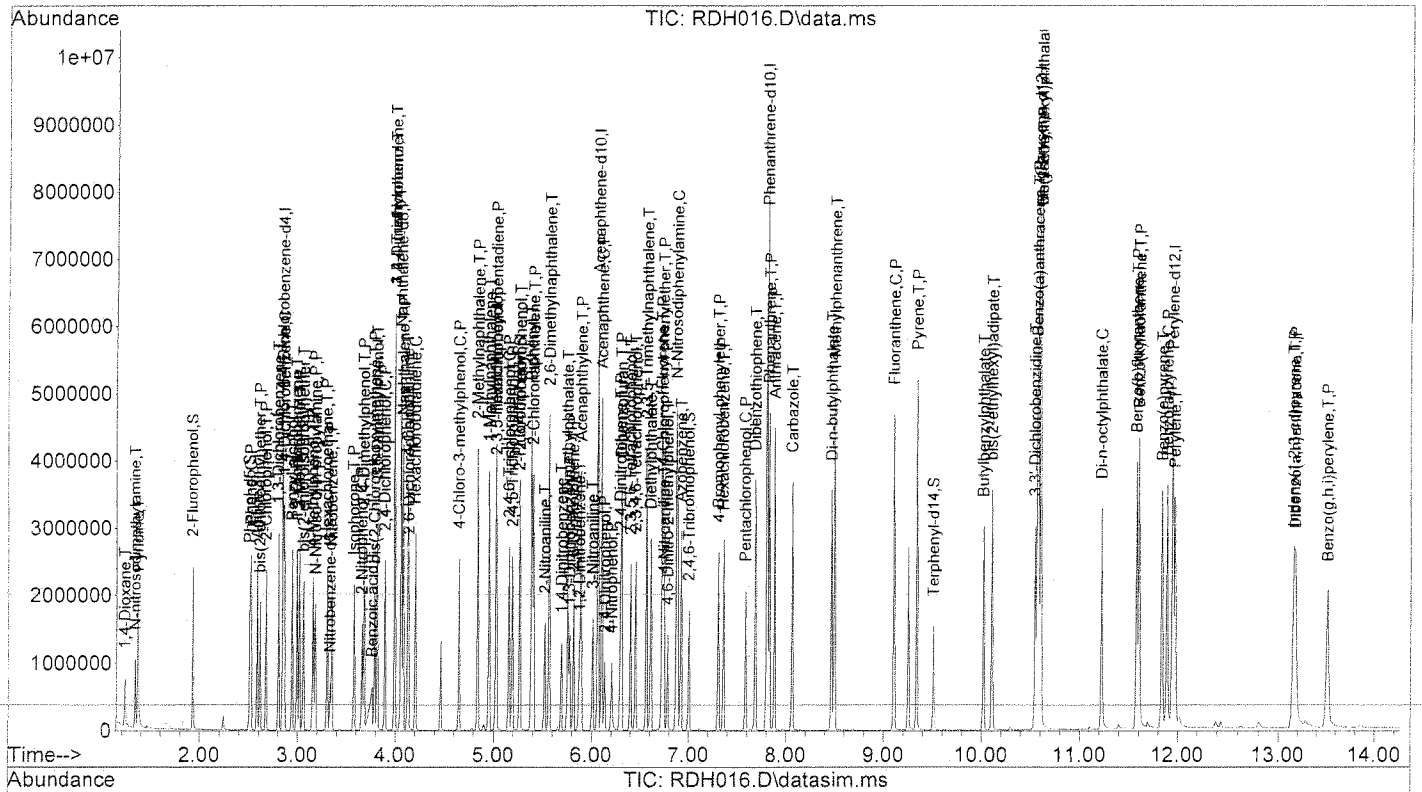
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.601	252	2012398	25.91	ppm	97
101) Benzo(e)pyrene	11.838	252	1612222	24.80	ppm	100
102) Benzo(a)pyrene	11.890	252	1594012	23.29	ppm	100
103) Perylene	11.970	252	1424819	20.62	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.157	276	1818289	24.67	ppm	98
105) Dibenzo(a,h)anthracene	13.176	278	1505986	24.26	ppm	99
106) Benzo(g,h,i)perylene	13.516	276	1548288	23.99	ppm	100

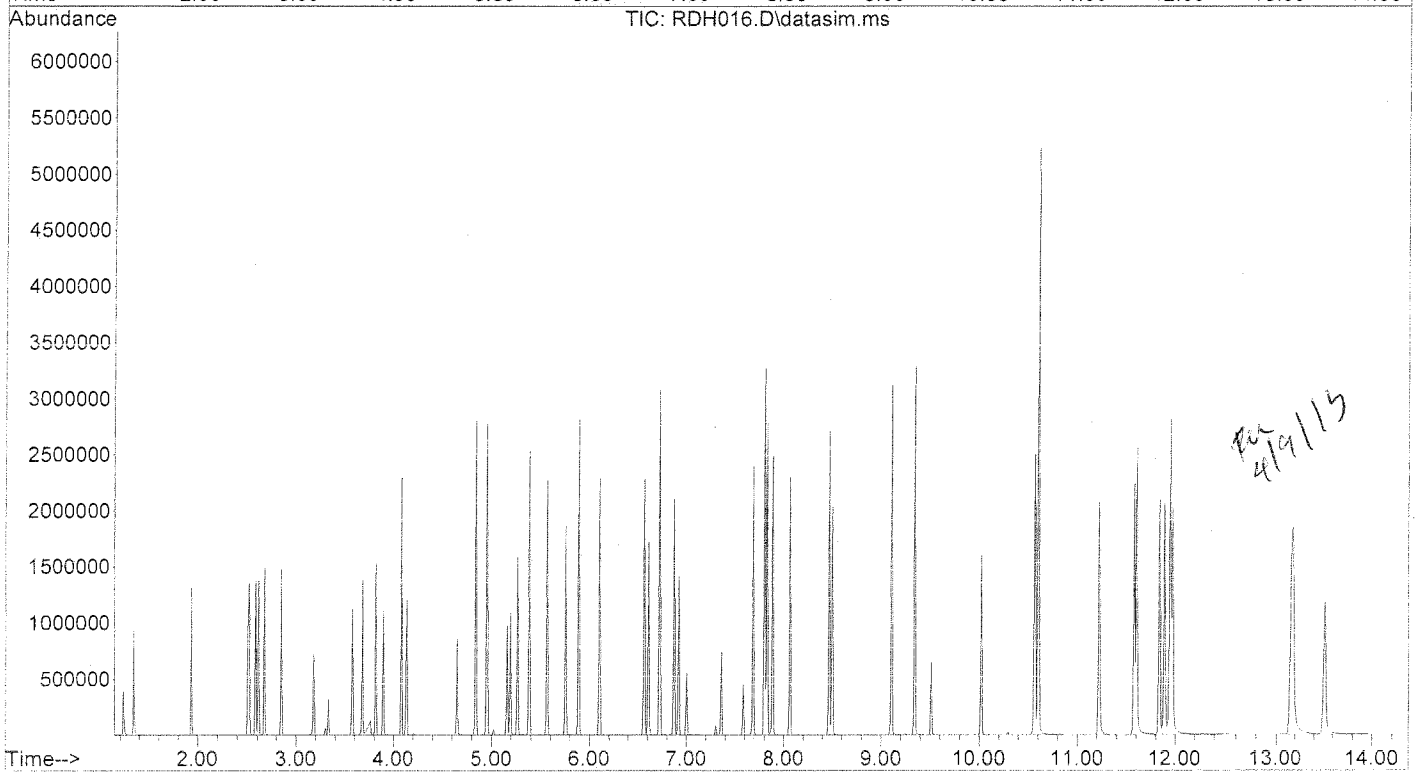
(#) = qualifier out of range (m) = manual integration (+) = signals summed

4/9/15

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15D03\RDH016.D
Vial: 16
Acq On : 3 Apr 2015 14:02
Operator: RZhou
Sample : ISVE7D031
Inst : E7
Misc : ICV
Multiplr: 1.00
Integrator: RTE
Quant Time: Apr 07 13:13:49 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M





RZ 4/9/15

082

DAILY CALIBRATIONS

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJH002
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 15I185
DFTPP Injection Date: 10/01/15
DFTPP Injection Time: 10:02

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	45.73
68	Less than 2% of mass 69	0.75(1.9)1
69	% of mass 198	39.15
70	Less than 2% of mass 69	0.15(0.4)1
127	10.0 - 80.0% of mass 198	47.19
197	Less than 2.0% of mass 198	0.24
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.65
275	10.0 - 60.0% of mass 198	24.23
365	Greater than 1.00% of mass 198	2.54
441	Present, but less than 24% of mass 442	8.99(16.6)2
442	Greater than 50% of mass 198	54.31
443	15.0 - 24.0% of mass 442	10.90(20.1)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD025	CSVE7D03130	RJH003	10/01/15	10:59
2	MBLK1W	SVI044WB	RJH007	10/01/15	12:20
3	LCS1W	SVI044WL	RJH008	10/01/15	12:40
4	LCD1W	SVI044WC	RJH009	10/01/15	12:59
5	MBLK2W	TXI007SB	RJH010	10/01/15	13:18
6	CAFB-FT006-WC1-002	I185-04	RJH011	10/01/15	13:37
7	CAFB-FT006-WC2-002	I185-05	RJH012	10/01/15	13:56
8	CAFB-FT006-WC3-002	I185-06	RJH013	10/01/15	14:15

FORM V SV OLM03.0

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH007
Instrument ID: TOE7

Project:CANNON AFB PBR
SDG No.: 15I185
Date Analyzed: 04/03/15
Time Analyzed: 10:46

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	567854	2.85	2117278	4.06	1301658	6.06
UPPER LIMIT	1135708	3.35	4234556	4.56	2603316	6.56
LOWER LIMIT	283927	2.35	1058639	3.56	650829	5.56
SAMPLE ID						
1 SSTD025	554168	2.85	2071119	4.05	1329751	6.06
2 MBLK1W	518477	2.85	1944860	4.05	1217249	6.06
3 LCS1W	562170	2.85	2083513	4.05	1316068	6.06
4 LCD1W	564771	2.85	2087299	4.05	1308055	6.06
5 MBLK2W	542258	2.85	2006144	4.05	1241746	6.06
6 CAFB-FT006-WC1-002	560856	2.85	2060236	4.05	1297817	6.06
7 CAFB-FT006-WC2-002	552479	2.85	2029072	4.05	1276992	6.06
8 CAFB-FT006-WC3-002	575479	2.85	2100658	4.05	1285702	6.06

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

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

FORM VIII SV-1

OLM02.0

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RDH007
Instrument ID: TOE7

Project:CANNON AFB PBR
SDG No.: 15I185
Date Analyzed: 04/03/15
Time Analyzed: 10:46

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	2320209	7.80	2507024	10.57	2285835	11.94
	UPPER LIMIT	4640418	8.30	5014048	11.07	4571670	12.44
	LOWER LIMIT	1160105	7.30	1253512	10.07	1142918	11.44
	SAMPLE ID						
1	SSTD025	2420930	7.80	2688653	10.58	2356269	11.95
2	MBLK1W	2194523	7.80	2402599	10.58	2190160	11.95
3	LCS1W	2362968	7.80	2646624	10.58	2329033	11.95
4	LCD1W	2352112	7.80	2609680	10.58	2304147	11.95
5	MBLK2W	2263285	7.80	2528258	10.57	2238929	11.95
6	CAFB-FT006-WC1-002	2352288	7.80	2626751	10.58	2313968	11.95
7	CAFB-FT006-WC2-002	2307578	7.80	2592079	10.57	2267199	11.95
8	CAFB-FT006-WC3-002	2565561	7.80	2949716	10.57	2678070	11.95

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

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

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E7
IC Beginning DateTime :04/03/15 09:30
SpTke Amount :25 PPM
CC/CV File :RJH003
IC File :RDH007

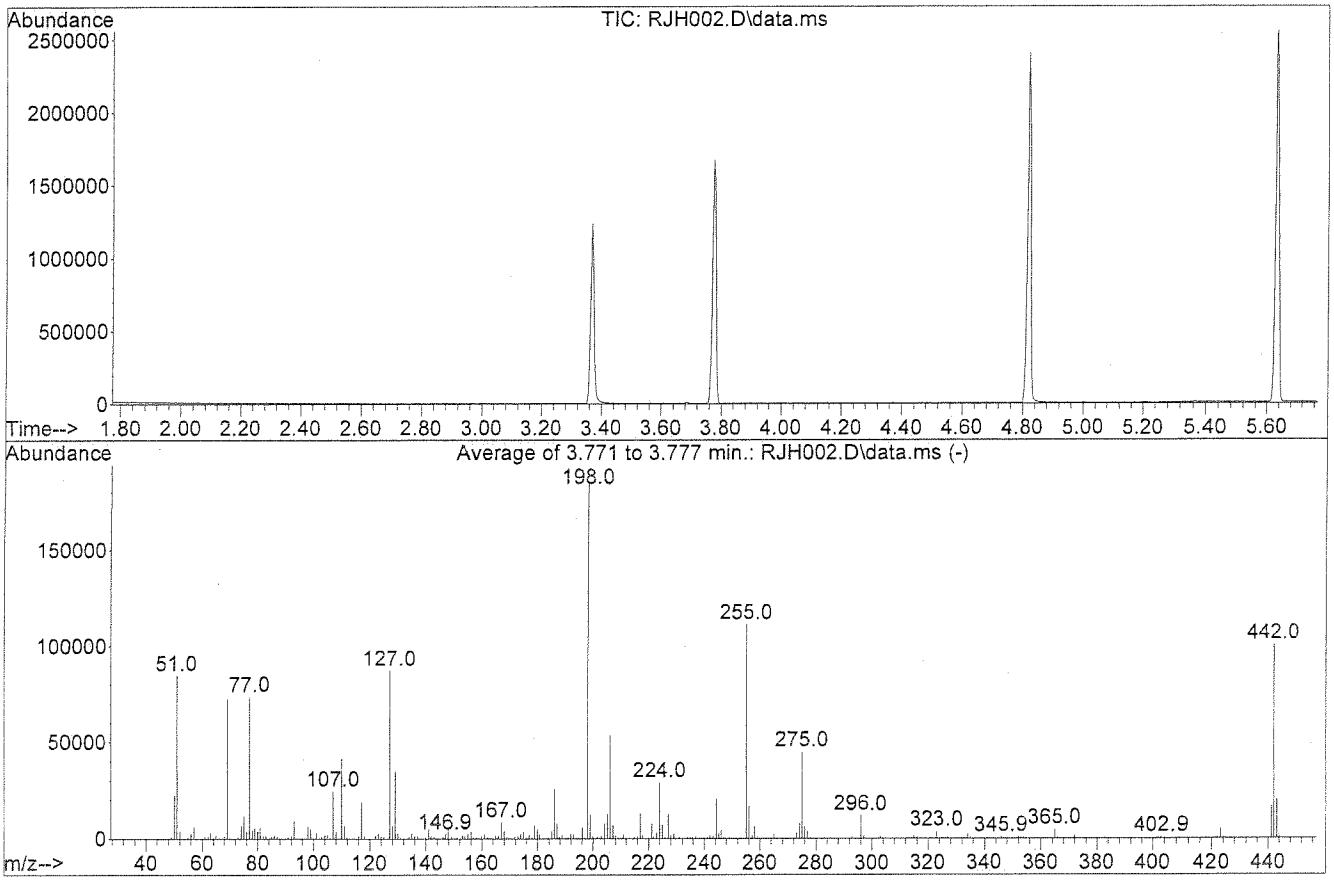
Column Spec :ZB-SEMIVOA ID :0.18MM
IC Ending DateTime :04/03/15 11:43
HPChem Method :SVE7D03
Date_Time :10/01/15 10:59

M IDX	Parameters	CC Con	CC% D	CC Resp	CCRRF	AVRRF	CC Rtm	AVRtm	% RSD	Co X0	Co X1	Co X2	Co Cor
1	1,4-Dichlorobenzene-d4	40.000	0	554168	1	1	2.845	2.848	0				
2	1,4-Dioxane	23.238	-7.0	154408	0.446	0.480	1.224	1.231	13.89				
3	N-nitrosodimethylamine	24.290	-2.8	227147	0.656	0.675	1.334	1.339	2.07				
4	Pyridine	24.330	-2.7	404591	1.168	1.200	1.362	1.366	2.81				
5	2-Fluorophenol	25.309	1.2	412780	1.192	1.177	1.927	1.927	3.15				
6	Phenol-d5	25.039	0.2	489968	1.415	1.412	2.506	2.504	3.86				
7	Phenol	24.673	-1.3	485046	1.400	1.419	2.517	2.516	2.95				
8	Aniline	24.065	-3.7	608688	1.757	1.826	2.579	2.582	1.53				
9	bis(2-chloroethyl)ether	24.207	-3.2	381254	1.101	1.137	2.611	2.612	2.28				
10	2-Chlorophenol	27.758	11.0	474592	1.370	1.234	2.673	2.675	1.73				
11	1,3-Dichlorobenzene	24.366	-2.5	514574	1.486	1.524	2.802	2.805	1.61				
12	1,2-Dichlorobenzene-d4												
13	1,4-Dichlorobenzene	24.333	-2.7	533050	1.539	1.581	2.860	2.862	2.02				
14	Benzyl alcohol	24.877	-0.6	272769	0.788	0.792	2.941	2.941	2.21				
15	1,2-Dichlorobenzene	24.216	-3.1	502074	1.450	1.497	2.989	2.993	2.15				
16	2-Methylphenol	25.387	1.5	338188	0.976	0.962	3.018	3.018	1.88				
17	bis(2-chloroisopropyl)ether	22.378	-10.5	813131	2.348	2.623	3.056	3.061	3.05				
18	4-Methylphenol	25.224	0.9	441184	1.274	1.262	3.157	3.155	2.56				
19	N-Nitroso-di-n-propylamine	26.353	5.3	308498	0.891	0.846	3.176	3.180	1.48				
20	Hexachloroethane	21.636	-13.5	212338	0.613	0.708	3.296	3.299	3.46				
21	Naphthalene-d8	40.000	0	2071119	1	1	4.055	4.057	0				
22	Nitrobenzene-d5	28.130	12.5	529079	0.409	0.363	3.330	3.332	1.55				
23	Nitrobenzene	26.444	5.8	526899	0.407	0.385	3.349	3.350	1.57				
24	Isophorone	25.877	3.5	976178	0.754	0.729	3.574	3.578	4.77				
25	2-Nitrophenol	27.816	11.3	248982	0.192	0.173	3.651	3.656	4.68				
26	2,4-Dimethylphenol	25.255	3.8	462476	0.357	0.344	3.680	3.677	4.69				
27	Benzoic acid	25.284	1.1	318439	0.246	0.230	3.761	3.764	18.47	-0.0140	0.2653		0.9997
28	bis(2-Chloroethoxy)methane	24.359	-2.6	518424	0.400	0.411	3.785	3.785	1.21				
29	3,5-Dimethylphenol	26.345	5.4	540154	0.417	0.396	3.819	3.814	5.61				
30	2,4-Dichlorophenol	25.307	1.2	415597	0.321	0.317	3.891	3.893	1.97				
31	1,2,4-Trichlorobenzene	26.343	5.4	524427	0.405	0.384	3.987	3.992	1.59				
32	3,4-Dimethylphenol	26.769	7.1	586488	0.453	0.423	3.992	3.990	1.65				
33	Naphthalene	24.425	-2.3	1383950	1.069	1.024	4.074	4.079	1.44				
34	4-Chloroaniline	24.753	-1.0	560398	0.433	0.437	4.127	4.127	2.33				
35	2,6-Dichlorophenol	25.567	2.3	419658	0.324	0.317	4.132	4.135	1.90				
36	Hexachlorobutadiene	27.968	11.9	357873	0.276	0.247	4.204	4.207	1.54				
37	Hydroquinone												
38	4-Chloro-3-methylphenol	27.218	8.9	385107	0.298	0.273	4.653	4.648	3.85				
39	2-Methylnaphthalene	24.674	-1.3	966346	0.747	0.756	4.840	4.840	1.49				
40	1-Methylnaphthalene	24.306	-2.8	869472	0.672	0.691	4.950	4.953	1.66				
41	Acenaphthene-d10	40.000	0	1329751	1	1	6.061	6.061	0				
42	Hexachlorocyclopentadiene	26.510	6.0	375413	0.452	0.426	5.017	5.020	3.00				
43	2,3,5-Trichlorophenol	27.710	10.8	328886	0.396	0.357	5.027	5.026	8.12				
44	2,4,6-Trichlorophenol	26.535	6.1	353869	0.426	0.401	5.156	5.156	3.48				
45	2,4,5-Trichlorophenol	26.379	5.5	364123	0.438	0.415	5.195	5.191	5.03				
46	2-Fluorobiphenyl	27.832	11.3	1441231	1.734	1.558	5.263	5.266	4.84				
47	2,3,4-Trichlorophenol	25.885	3.5	345054	0.415	0.401	5.267	5.267	2.94				
48	Biphenyl	22.706	-9.2	1173047	1.411	1.554	5.378	5.382	1.52				
49	2-Chloronaphthalene	23.239	-7.0	1006393	1.211	1.303	5.397	5.401	1.47				
50	2-Nitroaniline	28.680	14.7	315244	0.379	0.331	5.517	5.520	4.85				
51	2,6-Dimethylnaphthalene	23.445	-6.2	859741	1.034	1.103	5.565	5.565	1.93				
52	1,4-Dinitrobenzene	25.596	2.4	134312	0.162	0.158	5.690	5.688	8.74				
53	Dimethylphthalate	24.729	-1.1	1197272	1.441	1.456	5.753	5.753	1.28				
54	1,3-Dinitrobenzene	24.191	-3.2	148743	0.179	0.185	5.777	5.774	4.85				
55	2,6-Dinitrotoluene	25.331	1.3	254799	0.307	0.303	5.815	5.816	2.99				
56	1,2-Dinitrobenzene	24.191	-3.2	90819	0.109	0.113	5.873	5.873	3.06				
57	Acenaphthylene	23.064	-7.7	1619881	1.949	2.113	5.888	5.891	4.50				
58	3-Nitroaniline	23.225	-7.1	229995	0.277	0.298	6.008	6.009	3.82				
59	Acenaphthene	23.679	-5.3	1064860	1.281	1.353	6.099	6.099	1.86				
60	2,4-Dinitrophenol	22.199	-11.2	113985	0.137	0.141	6.133	6.131	21.16	-0.0096	0.1718		0.9984
61	4-Nitrophenol	28.617	14.5	143354	0.172	0.151	6.214	6.204	5.29				
62	2,4-Dinitrotoluene	25.443	1.8	328295	0.395	0.388	6.296	6.294	3.72				
63	Dibenzofuran	24.506	-2.0	1404425	1.690	1.724	6.305	6.306	2.25				
64	2,3,5,6-Tetrachlorophenol	27.110	8.4	270785	0.326	0.300	6.401	6.397	5.65				
65	2,3,4,6-Tetrachlorophenol	25.636	2.5	313119	0.377	0.367	6.454	6.449	5.76				
66	2,3,5-Trimethylnaphthalene	21.490	-14.0	803964	0.967	1.125	6.563	6.561	6.44				
67	Diethylphthalate	25.450	1.8	1168648	1.406	1.381	6.606	6.606	0.84				
68	Fluorene	24.668	-1.3	1177933	1.417	1.436	6.718	6.719	1.57				
69	4-Chlorophenyl-phenylether	25.522	2.1	628077	0.756	0.740	6.727	6.730	1.94				
70	4-Nitroaniline	23.817	-4.7	226115	0.272	0.286	6.745	6.742	4.47				
71	Phenanthrene-d10	40.000	0	2420930	1	1	7.803	7.799	0				
72	4,6-Dinitro-2-methylphenol	21.270	-14.9	162684	0.108	0.117	6.779	6.779	18.96	-0.0072	0.1399		0.9984
73	N-Nitrosodiphenylamine	25.638	2.6	988964	0.654	0.637	6.873	6.871	1.75				
74	Azobenzene	23.691	-5.2	974149	0.644	0.679	6.921	6.919	2.16				
75	2,4,6-Tribromophenol	26.258	5.0	172834	0.114	0.109	7.001	7.000	4.26				
76	4-Bromophenyl-phenylether	24.074	-3.7	354560	0.234	0.243	7.305	7.304	1.87				
77	Hexachlorobenzene	24.674	-1.3	397260	0.263	0.266	7.357	7.357	2.87				
78	Pentachlorophenol	25.386	1.5	224640	0.148	0.146	7.588	7.583	8.50				
79	Dibenzothiophene	23.834	-4.7	1615876	1.068	1.120	7.682	7.683	3.87				
80	Phenanthrene	23.211	-7.2	1677419	1.109	1.194	7.830	7.827	2.11				
81	Dinoseb												
82	Anthracene	22.641	-9.4	1681444	1.111	1.227	7.884	7.883	2.62				
83	Carbazole	23.154	-7.4	1404380	0.928	1.002	8.066	8.062	1.89				
84	Di-n-butylphthalate	25.006	0.0	1869783	1.236	1.235	8.468	8.465	3.67				
85	1-Methylphenanthrene	23.081	-7.7	1197234	0.791	0.857	8.497	8.497	1.84				
86	Fluoranthene	23.637	-5.5	1923036	1.271	1.344	9.106	9.103	2.09				
87	Chrysene-d12	40.000	0	2688653	1	1	10.580	10.572	0				
88	Benzidine												
89	Pyrene	21.794	-12.8	2023642	1.204	1.381	9.342	9.337	4.93				
90	Terphenyl-d14	24.117	-3.5	1374823	0.818	0.848	9.513	9.508	1.81				
91	Butylbenzylphthalate	27.091	8.4	835026	0.497	0.459	10.023	10.016	6.43				
92	bis(2-ethylhexyl)adipate	24.369	-2.5	601391	0.358	0.367	10.110	10.101	6.31				
93	3,3'-Dichlorobenzidine	24.112	-3.6	678088	0.404	0.418	10.546	10.539	4.00				
94	Benzo(a)anthracene	24.576	-1.7	1923193	1.150	1.170	10.570	10.561	1.53				
95	Chrysene	23.840	-4.6	1853304	1.103	1.157	10.604	10.597	2.95				
96	bis(2-Ethylhexyl)phthalate	26.463	5.9	1249611	0.744	0.703	10.609	10.598	4.99				
97	Perylene-d12	40.000	0	2356269	1	1	11.951	11.940	0				
98	Di-n-octylphthalate	28.741	15.0	2108194	1.432	1.245	11.226	11.216	8.50				
99	Benzo(b)fluoranthene	25.383	1.5	1814064	1.232	1.213	11.581	11.572	3.40				
100	Benzo(k)fluoranthene	22.251	-11.0	1795385	1.192	1.339	11.610	11.598	1.76				
101	Benzo(e)pyrene	23.875	-4.2	1576510	1.071	1.121	11.844	11.832	2.41				
102	Benzo(a)pyrene	24.869	-0.5	1728891	1.174	1.180	11.895	11.884	4.20				
103	Perylene	22.997	-8.0	1614161	1.096	1.192	11.979	11.966	1.77				
104	Indeno(1,2,3-cd)pyrene	24.367	-2.5	1824017	1.239	1.271	13.166	13.148	2.90				
105	Dibenzo(a,h)anthracene	24.243	-1.4	1554218	1.055	1.071	13.185	13.169	4.24				
106	Benzo(g,h,i)perylene	23.774	-4.9	1558829	1.059	1.113	13.530	13.510	3.23				

Data Path : D:\DATA\15J01\
Data File : RJH002.D
Acq On : 1 Oct 2015 10:02
Operator : KVu
Sample : DFTE7D03130
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Mon Apr 06 08:19:55 2015



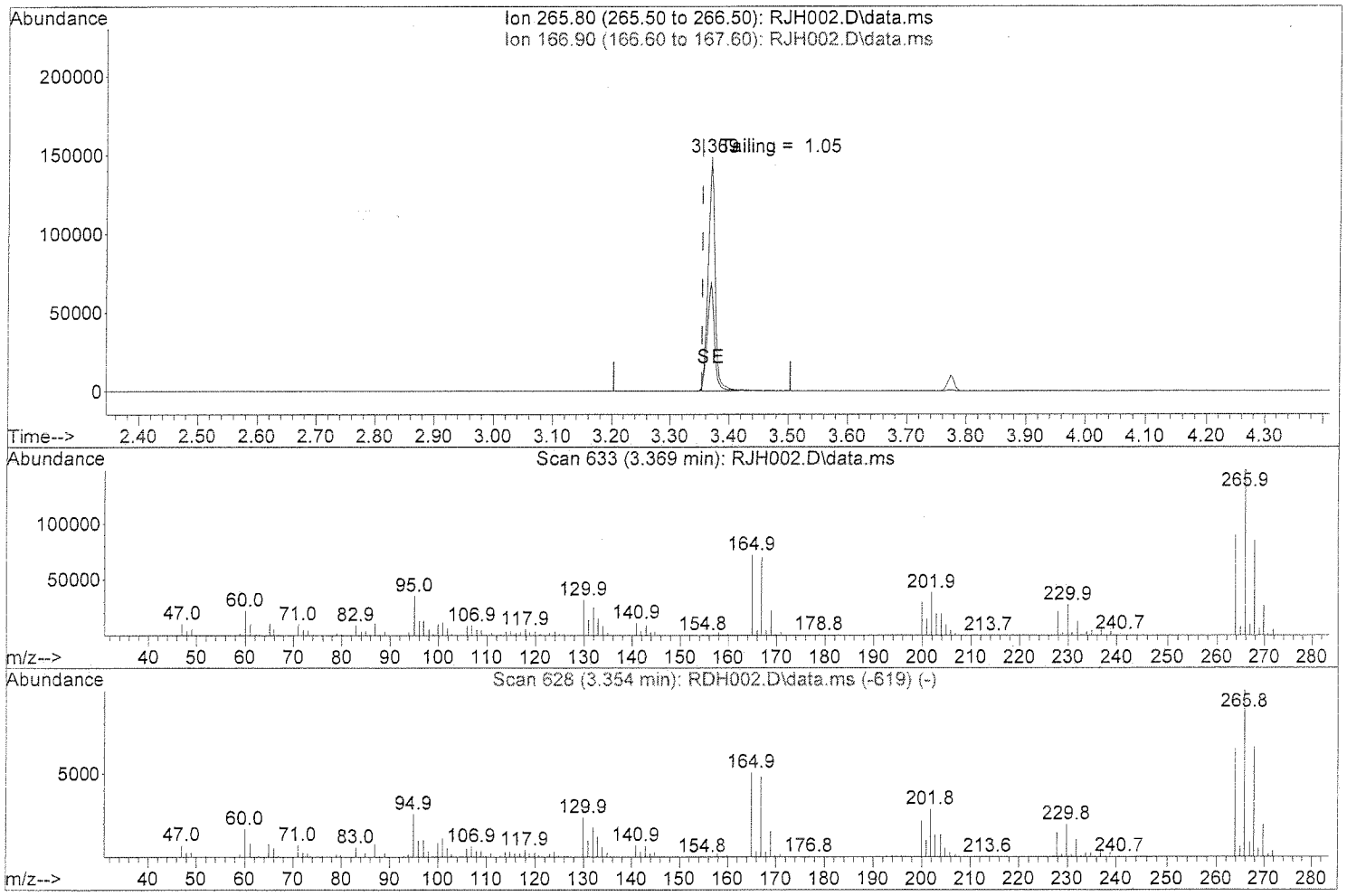
AutoFind: Scans 776, 777, 778; Background Corrected with Scan 767

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	45.7	84731	PASS
68	69	0.00	2	1.9	1394	PASS
69	198	0.00	100	39.1	72528	PASS
70	69	0.00	2	0.4	275	PASS
127	198	10	80	47.2	87427	PASS
197	198	0.00	2	0.2	444	PASS
198	198	100	100	100.0	185280	PASS
199	198	5	9	6.7	12324	PASS
275	198	10	60	24.2	44896	PASS
365	198	1	100	2.5	4702	PASS
441	442	0.01	24	16.6	16661	PASS
442	198	50	100	54.3	100632	PASS
443	442	15	24	20.1	20198	PASS

Quantitation Report (Qedit)

Data File : D:\DATA\15J01\RJH002.D
Acq On : 1 Oct 2015 10:02
Sample : DFTE7D03130
Misc :
Integrator: RTE
Quant Time: Oct 01 10:08:45 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RJH002.D\data.ms

(1) Pentachlorophenol (T)

3.369min (+0.015) 48.31 ppm

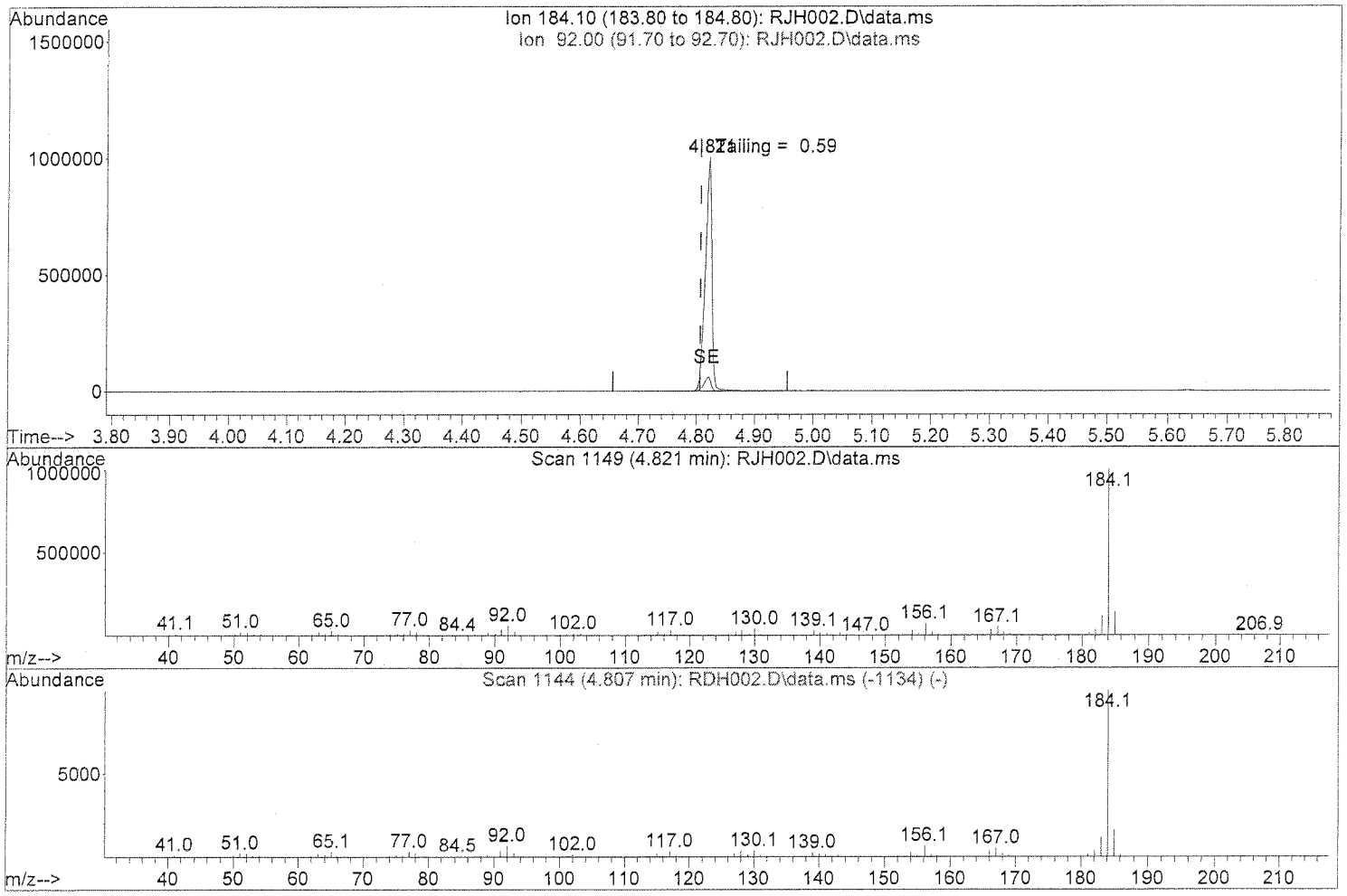
response 120795

Ion	Exp%	Act%
265.80	100	100
166.90	46.90	47.76
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\15J01\RJH002.D
Acq On : 1 Oct 2015 10:02
Sample : DFTE7D03130
Misc :
Integrator: RTE
Quant Time: Oct 01 10:08:45 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RJH002.D\data.ms

(3) Benzidine (T)

4.821min (+0.014) 47.17 ppm

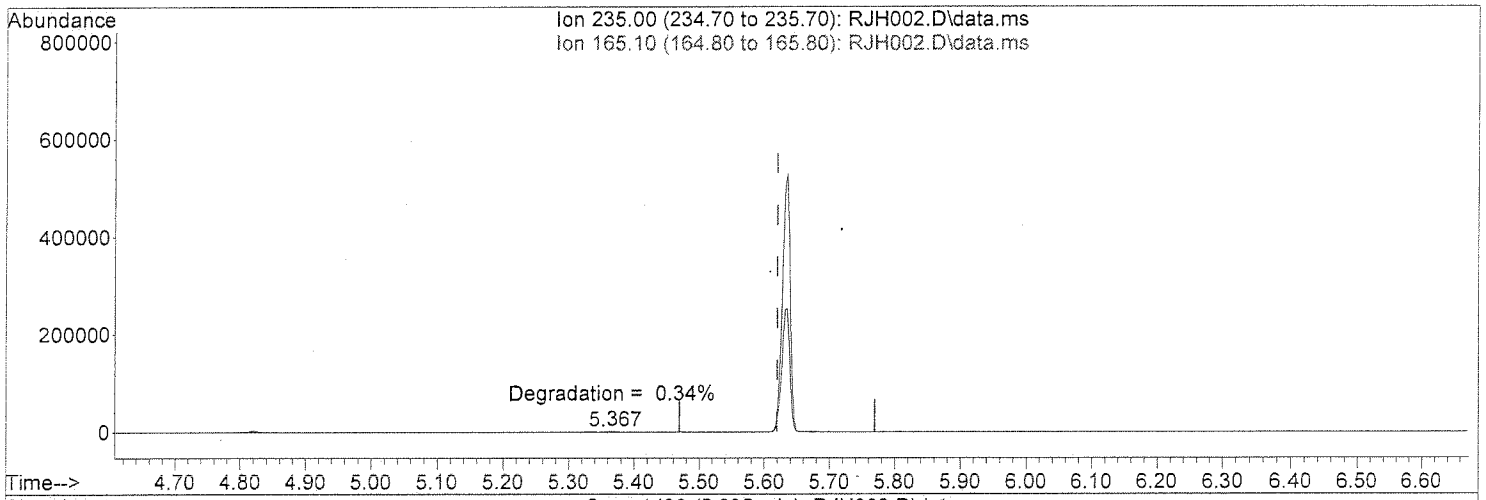
response 791927

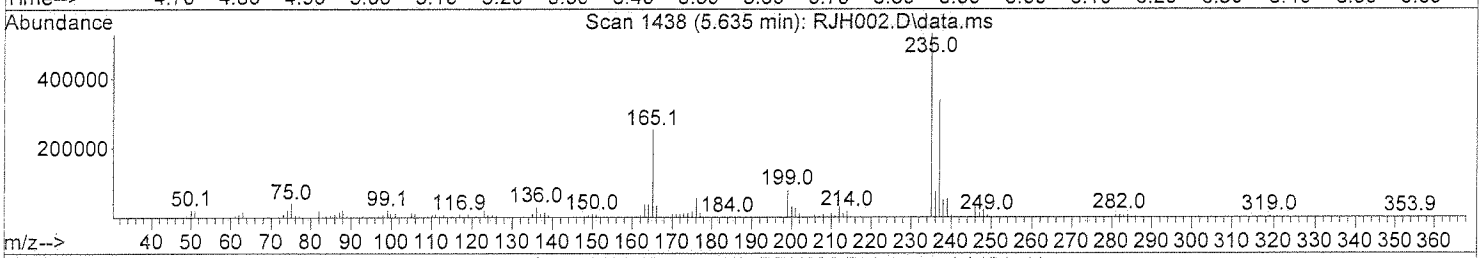
Ion	Exp%	Act%
184.10	100	100
92.00	6.60	6.03
0.00	0.00	0.00
0.00	0.00	0.00

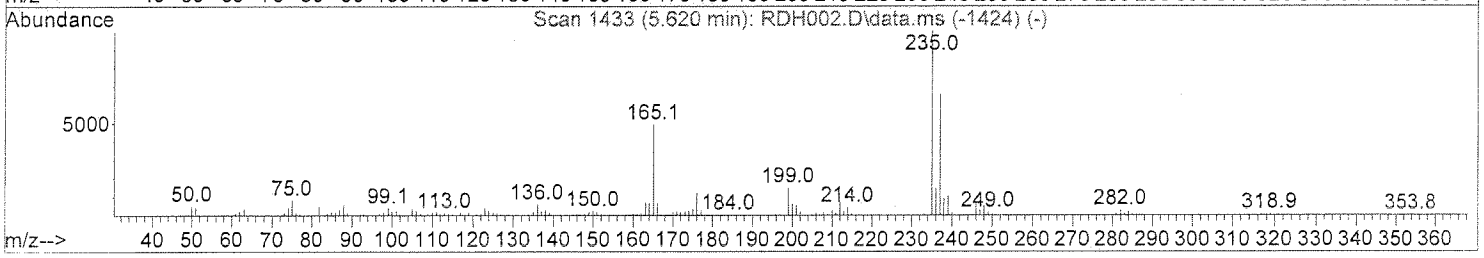
Quantitation Report (Qedit)

Data File : D:\DATA\15J01\RJH002.D
Acq On : 1 Oct 2015 10:02
Sample : DFTE7D03130
Misc :
Integrator: RTE
Quant Time: Oct 01 10:08:45 2015
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Mon Apr 06 08:19:55 2015
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RJH002.D\data.ms

(6) DDT (T)

5.635min (+0.014) 60.25 ppm

response 436363

Ion	Exp%	Act%
235.00	100	100
165.10	49.20	48.53
0.00	0.00	0.00
0.00	0.00	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15J01\RJH003.D Vial: 3
Acq On : 1 Oct 2015 10:59 Operator: KVu
Sample : CSVE7D03130 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	98	0.00
2	T	1,4-Dioxane	25.000	23.238	7.0	101	0.00
3	T	N-nitrosodimethylamine	25.000	24.290	2.8	97	0.00
4	T	Pyridine	25.000	24.330	2.7	96	0.00
5	S	2-Fluorophenol	25.000	25.309	-1.2	102	0.00
6	S	Phenol-d5	25.000	25.039	-0.2	102	0.00
7	C,P	Phenol	25.000	24.673	1.3	100	0.00
8	T	Aniline	25.000	24.064	3.7	96	0.00
9	T,P	bis(2-chloroethyl)ether	25.000	24.207	3.2	98	0.00
10	T,P	2-Chlorophenol	25.000	27.758	-11.0	112	0.00
11	T	1,3-Dichlorobenzene	25.000	24.366	2.5	97	0.00
12	S	1,2-Dichlorobenzene-d4	25.000	0.000	100.0#	0	-2.99#
13	C	1,4-Dichlorobenzene	25.000	24.333	2.7	98	0.00
14	T	Benzyl alcohol	25.000	24.844	0.6	99	0.00
15	T	1,2-Dichlorobenzene	25.000	24.216	3.1	97	0.00
16	T,P	2-Methylphenol	25.000	25.387	-1.5	102	0.00
17	T	bis(2-chloroisopropyl)ether	25.000	22.378	10.5	90	0.00
18	T,P	4-Methylphenol	25.000	25.224	-0.9	103	0.00
19	P,P	N-Nitroso-di-n-propylamine	25.000	26.323	-5.3	104	0.00
20	T,P	Hexachloroethane	25.000	21.636	13.5	87	0.00
21	I	Naphthalene-d8	40.000	40.000	0.0	98	0.00
22	S	Nitrobenzene-d5	25.000	28.130	-12.5	113	0.00
23	T,P	Nitrobenzene	25.000	26.444	-5.8	106	0.00
24	T,P	Isophorone	25.000	25.877	-3.5	102	0.00
25	C,P	2-Nitrophenol	25.000	27.816	-11.3	108	0.00
26	T,P	2,4-Dimethylphenol	25.000	25.955	-3.8	106	0.00
27	T	Benzoic acid	25.000	25.284	-1.1	101	0.00
28	T,P	bis(2-Chloroethoxy)methane	25.000	24.359	2.6	98	0.00
29	T	3,5-Dimethylphenol	25.000	26.345	-5.4	103	0.00
30	C,P	2,4-Dichlorophenol	25.000	25.307	-1.2	100	0.00
31	T	1,2,4-Trichlorobenzene	25.000	26.343	-5.4	105	0.00
32	T	3,4-Dimethylphenol	25.000	26.769	-7.1	108	0.00
33	T.P	Naphthalene	25.000	24.425	2.3	98	0.00
34	T	4-Chloroaniline	25.000	24.753	1.0	99	0.00
35	T	2,6-Dichlorophenol	25.000	25.567	-2.3	103	0.00
36	C	Hexachlorobutadiene	25.000	27.968	-11.9	113	0.00
37	T	Hydroquinone	25.000	0.000	100.0#	0	0.00
38	C,P	4-Chloro-3-methylphenol	25.000	27.218	-8.9	107	0.00
39	T,P	2-Methylnaphthalene	25.000	24.674	1.3	99	0.00
40	T	1-Methylnaphthalene	25.000	24.306	2.8	98	0.00
41	I	Acenaphthene-d10	40.000	40.000	0.0	102	0.00
42	P	Hexachlorocyclopentadiene	25.000	26.510	-6.0	109	0.00
43	T	2,3,5-Trichlorophenol	25.000	27.710	-10.8	113	0.00
44	C,P	2,4,6-Trichlorophenol	25.000	26.535	-6.1	111	0.00
45	T,P	2,4,5-Trichlorophenol	25.000	26.379	-5.5	109	0.00
46	S	2-Fluorobiphenyl	25.000	27.832	-11.3	110	0.00
47	T	2,3,4-Trichlorophenol	25.000	25.885	-3.5	107	0.00
48	T	Biphenyl	25.000	22.706	9.2	96	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15J01\RJH003.D
Acq On : 1 Oct 2015 10:59
Sample : CSVE7D03130
Misc :
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 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)
49	T,P	2-Chloronaphthalene	25.000	23.239	7.0	98	0.00
50	T	2-Nitroaniline	25.000	28.680	-14.7	117	0.00
51	T	2,6-Dimethylnaphthalene	25.000	23.445	6.2	99	0.00
52	T	1,4-Dinitrobenzene	25.000	25.596	-2.4	103	0.00
53	T	Dimethylphthalate	25.000	24.729	1.1	103	0.00
54	T	1,3-Dinitrobenzene	25.000	24.191	3.2	99	0.00
55	T,P	2,6-Dinitrotoluene	25.000	25.331	-1.3	104	0.00
56	T	1,2-Dinitrobenzene	25.000	24.191	3.2	101	0.00
57	T,P	Acenaphthylene	25.000	23.064	7.7	98	0.00
58	T	3-Nitroaniline	25.000	23.225	7.1	95	0.00
59	C,P	Acenaphthene	25.000	23.679	5.3	100	0.00
60	P	2,4-Dinitrophenol	25.000	22.199	11.2	93	0.00
61	P	4-Nitrophenol	25.000	28.617	-14.5	114	0.01
62	T,P	2,4-Dinitrotoluene	25.000	25.443	-1.8	104	0.00
63	T,P	Dibenzofuran	25.000	24.506	2.0	103	0.00
64	T	2,3,5,6-Tetrachlorophenol	25.000	27.110	-8.4	112	0.00
65	T	2,3,4,6-Tetrachlorophenol	25.000	25.636	-2.5	108	0.00
66	T	2,3,5-Trimethylnaphthalene	25.000	21.490	14.0	97	0.00
67	T	Diethylphthalate	25.000	25.450	-1.8	105	0.00
68	T,P	Fluorene	25.000	24.668	1.3	103	0.00
69	T,P	4-Chlorophenyl-phenylether	25.000	25.523	-2.1	106	0.00
70	T	4-Nitroaniline	25.000	23.817	4.7	97	0.00
71	I	Phenanthrene-d10	40.000	40.000	0.0	104	0.00
72	T	4,6-Dinitro-2-methylphenol	25.000	21.270	14.9	92	0.00
73	C	N-Nitrosodiphenylamine	25.000	25.637	-2.5	104	0.00
74	T	Azobenzene	25.000	23.691	5.2	102	0.00
75	S	2,4,6-Tribromophenol	25.000	26.258	-5.0	111	0.00
76	T,P	4-Bromophenyl-phenylether	25.000	24.074	3.7	104	0.00
77	T,P	Hexachlorobenzene	25.000	24.673	1.3	107	0.00
78	C,P	Pentachlorophenol	25.000	25.386	-1.5	104	0.00
79	T	Dibenzothiophene	25.000	23.834	4.7	102	0.00
80	T,P	Phenanthrene	25.000	23.211	7.2	101	0.00
81	T	Dinoseb	25.000	0.000	100.0#	0	0.00
82	T,P	Anthracene	25.000	22.641	9.4	99	0.00
83	T	Carbazole	25.000	23.154	7.4	99	0.00
84	T	Di-n-butylphthalate	25.000	25.006	-0.0	106	0.00
85	T	1-Methylphenanthrene	25.000	23.081	7.7	100	0.00
86	C,P	Fluoranthene	25.000	23.637	5.5	101	0.00
87	I	Chrysene-d12	40.000	40.000	0.0	107	0.00
88	T	Benzidine	25.000	0.000	100.0#	0	0.00
89	T,P	Pyrene	25.000	21.794	12.8	99	0.00
90	S	Terphenyl-d14	25.000	24.117	3.5	107	0.00
91	T	Butylbenzylphthalate	25.000	27.091	-8.4	116	0.00
92	T	bis(2-ethylhexyl)adipate	25.000	24.369	2.5	105	0.01
93	T	3,3'-Dichlorobenzidine	25.000	24.112	3.6	105	0.00
94	T,P	Benzo(a)anthracene	25.000	24.576	1.7	109	0.01
95	T,P	Chrysene	25.000	23.840	4.6	106	0.00
96	T	bis(2-Ethylhexyl)phthalate	25.000	26.463	-5.9	115	0.01

Evaluate Continuing Calibration Report

Data File : D:\DATA\15J01\RJH003.D Vial: 3
Acq On : 1 Oct 2015 10:59 Operator: KVu
Sample : CSVE7D03130 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
97	I	Perylene-d12	40.000	40.000	0.0	103	0.01
98	C	Di-n-octylphthalate	25.000	28.741	-15.0	118	0.00
99	T,P	Benzo(b)fluoranthene	25.000	25.383	-1.5	107	0.00
100	T,P	Benzo(k)fluoranthene	25.000	22.251	11.0	95	0.01
101	T	Benzo(e)pyrene	25.000	23.875	4.5	102	0.01
102	C,P	Benzo(a)pyrene	25.000	24.869	0.5	104	0.01
103	T	Perylene	25.000	22.997	8.0	98	0.01
104	T,P	Indeno(1,2,3-cd)pyrene	25.000	24.367	2.5	103	0.02
105	T,P	Dibenzo(a,h)anthracene	25.000	24.644	1.4	104	0.01
106	T,P	Benzo(g,h,i)perylene	25.000	23.774	4.9	101	0.02

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

Evaluate Continuing Calibration Report

Data File : D:\DATA\15J01\RJH003.D
Acq On : 1 Oct 2015 10:59
Sample : CSVE7D03130
Misc :
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00
2	T	1,4-Dioxane	0.480	0.446	7.1	101	0.00
3	T	N-nitrosodimethylamine	0.675	0.656	2.8	97	0.00
4	T	Pyridine	1.200	1.168	2.7	96	0.00
5	S	2-Fluorophenol	1.177	1.192	-1.3	102	0.00
6	S	Phenol-d5	1.412	1.415	-0.2	102	0.00
7	C,P	Phenol	1.419	1.400	1.3	100	0.00
8	T	Aniline	1.826	1.757	3.8	96	0.00
9	T,P	bis(2-chloroethyl)ether	1.137	1.101	3.2	98	0.00
10	T,P	2-Chlorophenol	1.234	1.370	-11.0	112	0.00
11	T	1,3-Dichlorobenzene	1.524	1.486	2.5	97	0.00
12	S	1,2-Dichlorobenzene-d4	0.000	0.000#	0.0	0#	-2.99#
13	C	1,4-Dichlorobenzene	1.581	1.539	2.7	98	0.00
14	T	Benzyl alcohol	0.792	0.788	0.5	99	0.00
15	T	1,2-Dichlorobenzene	1.497	1.450	3.1	97	0.00
16	T,P	2-Methylphenol	0.962	0.976	-1.5	102	0.00
17	T	bis(2-chloroisopropyl)ether	2.623	2.348	10.5	90	0.00
18	T,P	4-Methylphenol	1.262	1.274	-1.0	103	0.00
19	P,P	N-Nitroso-di-n-propylamine	0.846	0.891	-5.3	104	0.00
20	T,P	Hexachloroethane	0.708	0.613	13.4	87	0.00
21	I	Naphthalene-d8	1.000	1.000	0.0	98	0.00
22	S	Nitrobenzene-d5	0.363	0.409	-12.7	113	0.00
23	T,P	Nitrobenzene	0.385	0.407	-5.7	106	0.00
24	T,P	Isophorone	0.729	0.754	-3.4	102	0.00
25	C,P	2-Nitrophenol	0.173	0.192	-11.0	108	0.00
26	T,P	2,4-Dimethylphenol	0.344	0.357	-3.8	106	0.00
27	T	Benzoic acid	0.230	0.246	-7.0	101	0.00
28	T,P	bis(2-Chloroethoxy)methane	0.411	0.400	2.7	98	0.00
29	T	3,5-Dimethylphenol	0.396	0.417	-5.3	103	0.00
30	C,P	2,4-Dichlorophenol	0.317	0.321	-1.3	100	0.00
31	T	1,2,4-Trichlorobenzene	0.384	0.405	-5.5	105	0.00
32	T	3,4-Dimethylphenol	0.423	0.453	-7.1	108	0.00
33	T.P	Naphthalene	1.094	1.069	2.3	98	0.00
34	T	4-Chloroaniline	0.437	0.433	0.9	99	0.00
35	T	2,6-Dichlorophenol	0.317	0.324	-2.2	103	0.00
36	C	Hexachlorobutadiene	0.247	0.276	-11.7	113	0.00
37	T	Hydroquinone	0.000	0.000#	0.0	0#	0.00
38	C,P	4-Chloro-3-methylphenol	0.273	0.298	-9.2	107	0.00
39	T,P	2-Methylnaphthalene	0.756	0.747	1.2	99	0.00
40	T	1-Methylnaphthalene	0.691	0.672	2.7	98	0.00
41	I	Acenaphthene-d10	1.000	1.000	0.0	102	0.00
42	P	Hexachlorocyclopentadiene	0.426	0.452	-6.1	109	0.00
43	T	2,3,5-Trichlorophenol	0.357	0.396	-10.9	113	0.00
44	C,P	2,4,6-Trichlorophenol	0.401	0.426	-6.2	111	0.00
45	T,P	2,4,5-Trichlorophenol	0.415	0.438	-5.5	109	0.00
46	S	2-Fluorobiphenyl	1.558	1.734	-11.3	110	0.00
47	T	2,3,4-Trichlorophenol	0.401	0.415	-3.5	107	0.00
48	T	Biphenyl	1.554	1.411	9.2	96	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\15J01\RJH003.D Vial: 3
Acq On : 1 Oct 2015 10:59 Operator: KVu
Sample : CSVE7D03130 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
49	T,P	2-Chloronaphthalene	1.303	1.211	7.1	98	0.00
50	T	2-Nitroaniline	0.331	0.379	-14.5	117	0.00
51	T	2,6-Dimethylnaphthalene	1.103	1.034	6.3	99	0.00
52	T	1,4-Dinitrobenzene	0.158	0.162	-2.5	103	0.00
53	T	Dimethylphthalate	1.456	1.441	1.0	103	0.00
54	T	1,3-Dinitrobenzene	0.185	0.179	3.2	99	0.00
55	T,P	2,6-Dinitrotoluene	0.303	0.307	-1.3	104	0.00
56	T	1,2-Dinitrobenzene	0.113	0.109	3.5	101	0.00
57	T,P	Acenaphthylene	2.113	1.949	7.8	98	0.00
58	T	3-Nitroaniline	0.298	0.277	7.0	95	0.00
59	C,P	Acenaphthene	1.353	1.281	5.3	100	0.00
60	P	2,4-Dinitrophenol	0.141	0.137	2.8	93	0.00
61	P	4-Nitrophenol	0.151	0.172	-13.9	114	0.01
62	T,P	2,4-Dinitrotoluene	0.388	0.395	-1.8	104	0.00
63	T,P	Dibenzofuran	1.724	1.690	2.0	103	0.00
64	T	2,3,5,6-Tetrachlorophenol	0.300	0.326	-8.7	112	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.367	0.377	-2.7	108	0.00
66	T	2,3,5-Trimethylnaphthalene	1.125	0.967	14.0	97	0.00
67	T	Diethylphthalate	1.381	1.406	-1.8	105	0.00
68	T,P	Fluorene	1.436	1.417	1.3	103	0.00
69	T,P	4-Chlorophenyl-phenylether	0.740	0.756	-2.2	106	0.00
70	T	4-Nitroaniline	0.286	0.272	4.9	97	0.00
71	I	Phenanthrene-d10	1.000	1.000	0.0	104	0.00
72	T	4,6-Dinitro-2-methylphenol	0.117	0.108	7.7	92	0.00
73	C	N-Nitrosodiphenylamine	0.637	0.654	-2.7	104	0.00
74	T	Azobenzene	0.679	0.644	5.2	102	0.00
75	S	2,4,6-Tribromophenol	0.109	0.114	-4.6	111	0.00
76	T,P	4-Bromophenyl-phenylether	0.243	0.234	3.7	104	0.00
77	T,P	Hexachlorobenzene	0.266	0.263	1.1	107	0.00
78	C,P	Pentachlorophenol	0.146	0.148	-1.4	104	0.00
79	T	Dibenzothiophene	1.120	1.068	4.6	102	0.00
80	T,P	Phenanthrene	1.194	1.109	7.1	101	0.00
81	T	Dinoseb	0.000	0.000#	0.0	0#	0.00
82	T,P	Anthracene	1.227	1.111	9.5	99	0.00
83	T	Carbazole	1.002	0.928	7.4	99	0.00
84	T	Di-n-butylphthalate	1.235	1.236	-0.1	106	0.00
85	T	1-Methylphenanthrene	0.857	0.791	7.7	100	0.00
86	C,P	Fluoranthene	1.344	1.271	5.4	101	0.00
87	I	Chrysene-d12	1.000	1.000	0.0	107	0.00
88	T	Benzidine	0.000	0.000#	0.0	0#	0.00
89	T,P	Pyrene	1.381	1.204	12.8	99	0.00
90	S	Terphenyl-d14	0.848	0.818	3.5	107	0.00
91	T	Butylbenzylphthalate	0.459	0.497	-8.3	116	0.00
92	T	bis(2-ethylhexyl)adipate	0.367	0.358	2.5	105	0.01
93	T	3,3'-Dichlorobenzidine	0.418	0.404	3.3	105	0.00
94	T,P	Benzo(a)anthracene	1.170	1.150	1.7	109	0.01
95	T,P	Chrysene	1.157	1.103	4.7	106	0.00
96	T	bis(2-Ethylhexyl)phthalate	0.703	0.744	-5.8	115	0.01

Evaluate Continuing Calibration Report

Data File : D:\DATA\15J01\RJH003.D Vial: 3
Acq On : 1 Oct 2015 10:59 Operator: KVu
Sample : CSVE7D03130 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Min. RRF : 0.050 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)
97	I	Perylene-d12	1.000	1.000	0.0	103	0.01
98	C	Di-n-octylphthalate	1.245	1.432	-15.0	118	0.00
99	T,P	Benzo(b)fluoranthene	1.213	1.232	-1.6	107	0.00
100	T,P	Benzo(k)fluoranthene	1.339	1.192	11.0	95	0.01
101	T	Benzo(e)pyrene	1.121	1.071	4.5	102	0.01
102	C,P	Benzo(a)pyrene	1.180	1.174	0.5	104	0.01
103	T	Perylene	1.192	1.096	8.1	98	0.01
104	T,P	Indeno(1,2,3-cd)pyrene	1.271	1.239	2.5	103	0.02
105	T,P	Dibenzo(a,h)anthracene	1.071	1.055	1.5	104	0.01
106	T,P	Benzo(g,h,i)perylene	1.113	1.059	4.9	101	0.02

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

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH003.D Vial: 3
Acq On : 1 Oct 2015 10:59 Operator: KVu
Sample : CSVE7D03130 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	554168	40.00	ppm	0.00
21) Naphthalene-d8	4.055	136	2071119	40.00	ppm	0.00
41) Acenaphthene-d10	6.061	164	1329751	40.00	ppm	0.00
71) Phenanthrene-d10	7.803	188	2420930	40.00	ppm	0.00
87) Chrysene-d12	10.580	240	2688653	40.00	ppm	0.00
97) Perylene-d12	11.951	264	2356269	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	412780	25.31	ppm	0.00
Spiked Amount 30.000			Recovery	=	84.37%	
6) Phenol-d5	2.506	99	489968	25.04	ppm	0.00
Spiked Amount 30.000			Recovery	=	83.47%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.330	82	529079	28.13	ppm	0.00
Spiked Amount 10.000			Recovery	=	281.30%	
46) 2-Fluorobiphenyl	5.263	172	1441231	27.83	ppm	0.00
Spiked Amount 10.000			Recovery	=	278.30%	
75) 2,4,6-Tribromophenol	7.001	330	172834	26.26	ppm	0.00
Spiked Amount 30.000			Recovery	=	87.53%	
90) Terphenyl-d14	9.513	244	1374823	24.12	ppm	0.00
Spiked Amount 10.000			Recovery	=	241.20%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.224	88	154408	23.24	ppm	95
3) N-nitrosodimethylamine	1.334	74	227147	24.29	ppm	86
4) Pyridine	1.362	79	404591	24.33	ppm	96
7) Phenol	2.517	94	485046	24.67	ppm	92
8) Aniline	2.579	93	608688	24.06	ppm	96
9) bis(2-chloroethyl)ether	2.611	93	381254	24.21	ppm	99
10) 2-Chlorophenol	2.673	128	474592	27.76	ppm	98
11) 1,3-Dichlorobenzene	2.802	146	514574	24.37	ppm	95
13) 1,4-Dichlorobenzene	2.860	146	533050	24.33	ppm	96
14) Benzyl alcohol	2.941	108	272769	24.84	ppm	93
15) 1,2-Dichlorobenzene	2.989	146	502074	24.22	ppm	96
16) 2-Methylphenol	3.018	107	338188	25.39	ppm	98
17) bis(2-chloroisopropyl)...	3.057	45	813131	22.38	ppm	97
18) 4-Methylphenol	3.157	107	441184	25.22	ppm	100
19) N-Nitroso-di-n-propyla...	3.176	70	308498	26.32	ppm	99
20) Hexachloroethane	3.296	117	212338	21.64	ppm	93
23) Nitrobenzene	3.349	77	526899	26.44	ppm	97
24) Isophorone	3.574	82	976178	25.88	ppm	96
25) 2-Nitrophenol	3.651	139	248982	27.82	ppm	99
26) 2,4-Dimethylphenol	3.680	107	462479	25.95	ppm	91
27) Benzoic acid	3.761	105	318439	25.28	ppm	98
28) bis(2-Chloroethoxy)met...	3.785	93	518424	24.36	ppm	99
29) 3,5-Dimethylphenol	3.819	107	540154	26.34	ppm	93
30) 2,4-Dichlorophenol	3.891	162	415597	25.31	ppm	95
31) 1,2,4-Trichlorobenzene	3.987	180	524427	26.34	ppm	100
32) 3,4-Dimethylphenol	3.992	107	586488	26.77	ppm	94
33) Naphthalene	4.074	128	1383950	24.42	ppm	99
34) 4-Chloroaniline	4.127	127	560398	24.75	ppm	100
35) 2,6-Dichlorophenol	4.132	162	419658	25.57	ppm	97

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH003.D Vial: 3
Acq On : 1 Oct 2015 10:59 Operator: KVu
Sample : CSVE7D03130 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Hexachlorobutadiene	4.204	225	357873	27.97	ppm	99
38) 4-Chloro-3-methylphenol	4.653	107	385107	27.22	ppm	97
39) 2-Methylnaphthalene	4.840	142	966346	24.67	ppm	100
40) 1-Methylnaphthalene	4.950	142	869472	24.31	ppm	98
42) Hexachlorocyclopentadiene	5.017	237	375413	26.51	ppm	99
43) 2,3,5-Trichlorophenol	5.027	196	328886	27.71	ppm	93
44) 2,4,6-Trichlorophenol	5.156	196	353869	26.54	ppm	99
45) 2,4,5-Trichlorophenol	5.195	196	364123	26.38	ppm	99
47) 2,3,4-Trichlorophenol	5.267	196	345054	25.89	ppm	98
48) Biphenyl	5.378	154	1173047	22.71	ppm	100
49) 2-Chloronaphthalene	5.397	162	1006393	23.24	ppm	96
50) 2-Nitroaniline	5.517	65	315244	28.68	ppm	89
51) 2,6-Dimethylnaphthalene	5.565	156	859741	23.44	ppm	99
52) 1,4-Dinitrobenzene	5.690	168	134312	25.60	ppm	98
53) Dimethylphthalate	5.753	163	1197272	24.73	ppm	99
54) 1,3-Dinitrobenzene	5.777	168	148743	24.19	ppm	91
55) 2,6-Dinitrotoluene	5.815	165	254799	25.33	ppm	96
56) 1,2-Dinitrobenzene	5.873	168	90819	24.19	ppm	94
57) Acenaphthylene	5.888	152	1619881	23.06	ppm	99
58) 3-Nitroaniline	6.008	138	229995	23.22	ppm	95
59) Acenaphthene	6.099	153	1064860	23.68	ppm	100
60) 2,4-Dinitrophenol	6.133	184	113985	22.20	ppm	95
61) 4-Nitrophenol	6.214	109	143354	28.62	ppm	88
62) 2,4-Dinitrotoluene	6.296	165	328295	25.44	ppm	93
63) Dibenzofuran	6.305	168	1404425	24.51	ppm	96
64) 2,3,5,6-Tetrachlorophenol	6.401	230	270785	27.11	ppm	100
65) 2,3,4,6-Tetrachlorophenol	6.454	232	313119	25.64	ppm	99
66) 2,3,5-Trimethylnaphtha...	6.563	170	803964	21.49	ppm	95
67) Diethylphthalate	6.606	149	1168648	25.45	ppm	100
68) Fluorene	6.718	166	1177933	24.67	ppm	99
69) 4-Chlorophenyl-phenyle...	6.728	204	628077	25.52	ppm	100
70) 4-Nitroaniline	6.742	138	226115	23.82	ppm	97
72) 4,6-Dinitro-2-methylph...	6.779	198	162684	21.27	ppm	92
73) N-Nitrosodiphenylamine	6.873	169	988964	25.64	ppm	92
74) Azobenzene	6.921	77	974149	23.69	ppm	100
76) 4-Bromophenyl-phenylether	7.305	248	354560	24.07	ppm	99
77) Hexachlorobenzene	7.356	284	397260	24.67	ppm	99
78) Pentachlorophenol	7.588	266	224640	25.39	ppm	96
79) Dibenzothiophene	7.682	184	1615876	23.83	ppm	98
80) Phenanthrene	7.830	178	1677419	23.21	ppm	99
82) Anthracene	7.884	178	1681444	22.64	ppm	99
83) Carbazole	8.066	167	1404380	23.15	ppm	97
84) Di-n-butylphthalate	8.468	149	1869783	25.01	ppm	100
85) 1-Methylphenanthrene	8.497	192	1197234	23.08	ppm	96
86) Fluoranthene	9.106	202	1923036	23.64	ppm	98
89) Pyrene	9.342	202	2023642	21.79	ppm	99
91) Butylbenzylphthalate	10.023	149	835026	27.09	ppm	97
92) bis(2-ethylhexyl)adipate	10.110	129	601391	24.37	ppm	97
93) 3,3'-Dichlorobenzidine	10.546	252	678088	24.11	ppm	99
94) Benzo(a)anthracene	10.570	228	1933193	24.58	ppm	97
95) Chrysene	10.604	228	1853304	23.84	ppm	100
96) bis(2-Ethylhexyl)phtha...	10.609	149	1249611	26.46	ppm	99
98) Di-n-octylphthalate	11.226	149	2108194	28.74	ppm	99
99) Benzo(b)fluoranthene	11.581	252	1814064	25.38	ppm	97

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH003.D Vial: 3
Acq On : 1 Oct 2015 10:59 Operator: KVu
Sample : CSVE7D03130 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

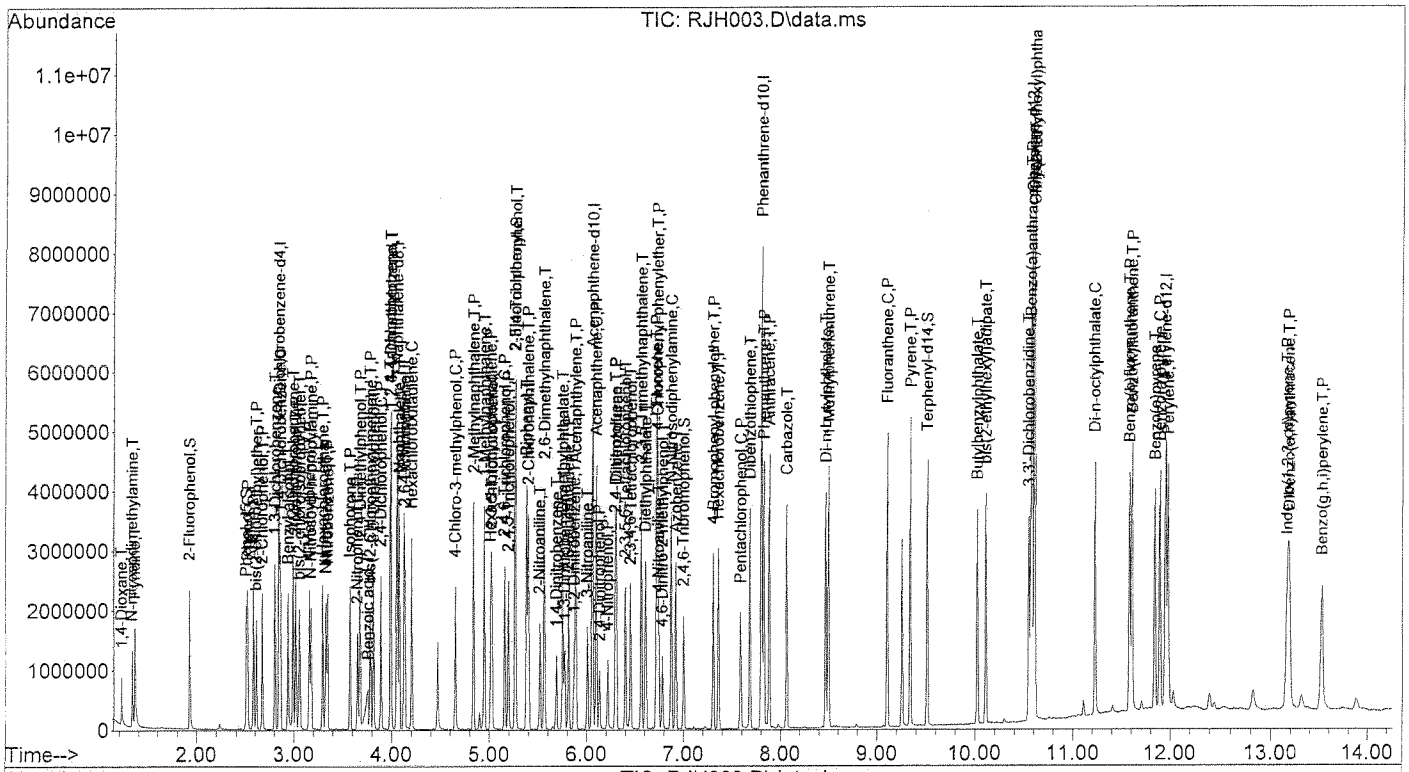
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.610	252	1755385	22.25	ppm	97
101) Benzo(e)pyrene	11.843	252	1576510	23.87	ppm	97
102) Benzo(a)pyrene	11.895	252	1728891	24.87	ppm	98
103) Perylene	11.979	252	1614161	23.00	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.166	276	1824017	24.37	ppm	95
105) Dibenzo(a,h)anthracene	13.185	278	1554218	24.64	ppm	100
106) Benzo(g,h,i)perylene	13.530	276	1558829	23.77	ppm	96

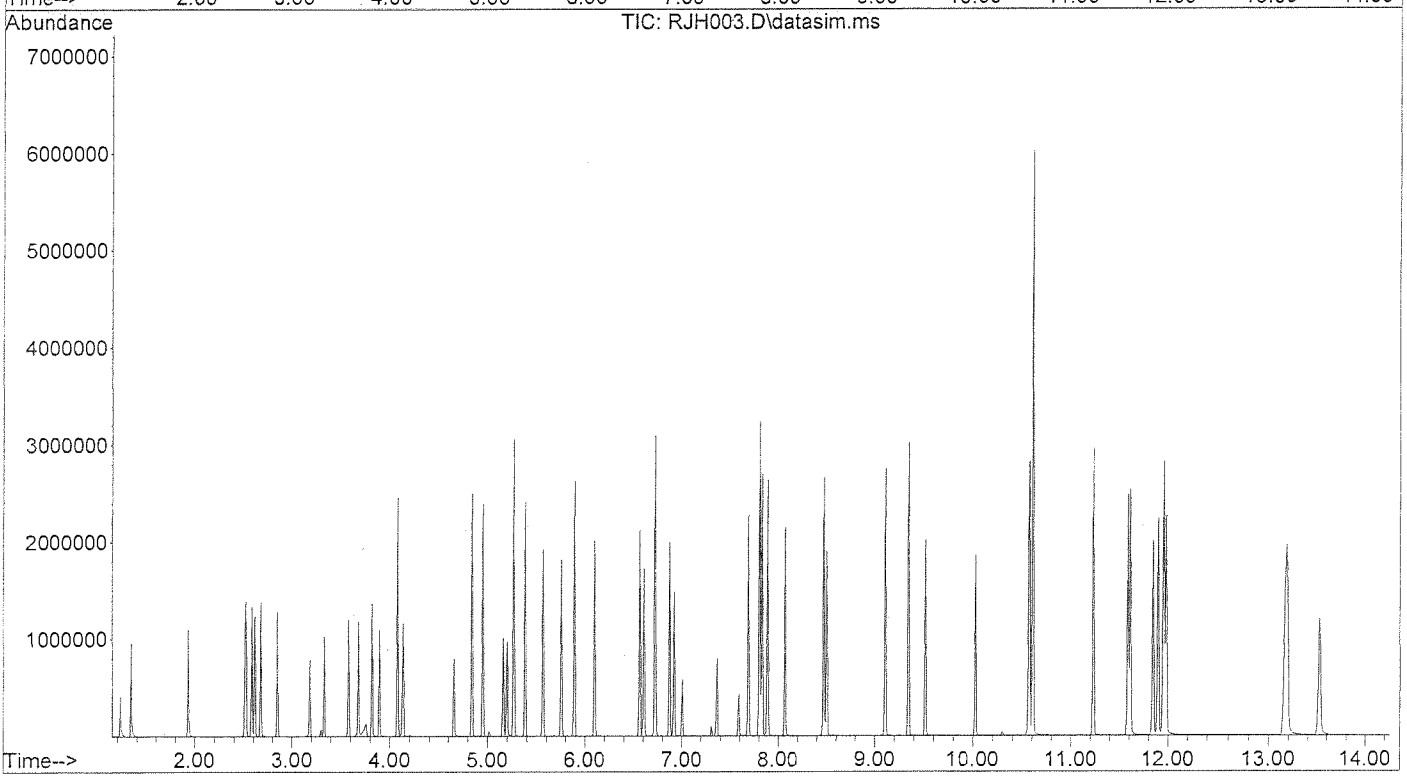
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\15J01\RJH003.D
Acq On : 1 Oct 2015 10:59
Sample : CSVE7D03130
Misc :
Integrator: RTE
Quant Time: Oct 01 11:14:40 2015
Quant Results File: SVE7D03.RES
Quant Method : C:\msdchem\1\METHODS\SVE7D03.M
Quant Title : SEMIVOLATILES
QLast Update : Fri Apr 03 12:48:46 2015
Response via : Initial Calibration
DataAcq Meth:SVE7D03S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00





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ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-CLPSVOA ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE7-014

Method File: SVE7D03S Tune File: DFTPP Start Date/Time: 4/3/15 9:19 End Date/Time: 4/3/15 16:34

ANALYTICAL BATCH: SVE7D03S

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RDH001	IBE7D0301				
	2	DFTE7D0301				
NA	3	SVE7D031	NA	NA	NA	100 ppm
	4	2				80
	5	3				50
	6	4				40
	7	5				25
	8	6				20
	9	7				10
	10	8				4
	11	9				2
	12	10				0.5
	13	11				0.15
	14	12				0.075
	15	13				0.050
	16	ISVE7D031				
	17	SVE7D03A1				100 ppm
	18	A2				80
	19	A3				50
	20	A4				40
	21	A5				25
	22	A6				10
	23	A7				4
	24	ISVE7D03A1				

RW 4/3/15

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	4/3/15
ICAL ID	SVE7D03/03A/03S

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-01-03	50
INT. STD.	SS2B-12-03-01	2000
ICV 8270-Sim	SS2C-14-03-02	25
DCC 8270-SimICAL	02-01	0.05-50
BENZIDINE ICAL	02-03	4-100
APP 9	NA	NA
APP 9 ADD	NA	NA
Benzidine ICV	SS2C-14-03-01	25
8270-Sim ICAL	02-02	80-100
Solvent	ID	
CH_2Cl_2	54184	
DATA FILE	15D03	

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Comments: Syringe ID: 499766-1

Analyzed By: RZ

Date Disposed: NA

Disposed By: NA

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-CLPSVOA ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE7-014

Method File: SVE7D03S Tune File: DFTPP Start Date/Time: 10/1/15 10:02 End Date/Time: 10/1/15 18:25

ANALYTICAL BATCH: CSVE7D03130

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RJH001	IBE7D03130				
	2	DFTE7D03130				
	3	CSVE7D03130				
	4	CSVE7D03A130				Ben
	5	CSVE7D06B130				App9
	6	CSVE7D06C130				Add
SVI044WJ	7	SVI044WB	1		X	
	8	WL				
	9	WC				
	10	TXI007SB				
	11	15I185-04				
	12	05				
	13	06				
	14	TXI008SB				
	15	15I200-01				
SVI052W	16	SVI052WB	1		X	
	17	WL				
	18	WC				
	19	15I186-01				
	20	08				
	21	09				
	22	10				
	23	11				
	24	12				
	25	13				
	26	CSVE7D03131				
						KW 10/2/15

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	4/3/15
ICAL ID	SVE7D03/035/03A
Standards	06B/06C
Name / ID / Conc. (mg/L)	
DFTPP	SS2C-14-12-03 / 50
INT. STD.	SS2B-12-09-03 / 2000
ICV	
DCC	SS2C-14-08-02 / 25
BENZIDINE	↓ 09-01 / 25
APP 9	
APP 9 ADD	
Solvent	ID
CH_2Cl_2	55075
DATA FILE	15J01
Electronic Data Archival	
Location	Date
HPCHEM_SVOA/TOE7	10/6/15

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-2 ☐

Comments:

Analyzed By: KW

Date Disposed: 10/2/15

Disposed By: KW

This page is checked during data review.

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG *for* SEMIVOLATILES

SOP	Rev. #
☑ EMAX-3520	5
☐ EMAX-3540	2
☐ EMAX-3546	0
☐ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-625	1

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

Book #: ESV-087
Preparation Batch: SVI044W
Matrix: WATER/TCLP EXTRACT
Micropipette ID: 200µl: PE97A-01
Micropipette ID:

Standards	ID	Amount Added (ml)
Surrogate	SS2A-06-422	0.4
LCS/MS (FULL VOA)	SS2A-13-01-07	0.2
LCS/MS (3 comp)	SS2B-12-10-01	0.2
LCS/MS		
LCS/MS		

Reagent	Lot# / ID
CH_2Cl_2	55163
Na_2SO_4	SWIB-003-03-24
H_2SO_4	3113122
NaOH	SPVB-08-30-02
Silica Sand	
Silica Gel	
Reagent Water	SWIA-005-14-19
Residual Chlorine Strip	5190
pH Strip	HC554612
Filter Paper	9664849 A

Lab Sample ID	Sonicator #	Cell #	Concentrator #
SVI044WB			1
WL *▲			1
WC *▲			1
TXI007SB			1
I185-04			1
-05			1
-06			2
TXI008SB			2
I200-01			2
I247-01			2
-02			2
-04			2
-05			3
-06			3
-06M *▲			3
-06S *▲			3
-07			3

TUNING	
Sonicator #	Reading

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1	35	35
2	35	35
3	35	35
4		
5		
6		
8		

Thermometer ID = SVOC-T1

Prepared By: JM Witnessed By: MY
Standard Added By: JM Checked By: ML
Extract Received By: RL 9/28/15 Location: SE01-~~B~~ ML/8
Disposed By: Disposed On:

TOD

FileID: SVI044W

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR SEMIVOLATILES

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
15SVI044W01	SVI044WB	1000	ml	9/25/15 15:44	2	1000	2	1	
15SVI044W02	SVI044WL	1000	ml	9/25/15 15:44	2	1000	2	1	Full list + 3 Compounds,low extract vol. abt. 40ml or
15SVI044W03	SVI044WC	1000	ml	9/25/15 15:44	2	1000	2	1	Full list + 3 Compounds
15SVI044W04	TXI007SB	100	ml	9/25/15 15:44	2	1000	2	10	TCLP Extract
15SVI044W05	I185-04	100	ml	9/25/15 15:44	2	1000	2	10	TCLP Extract
15SVI044W06	I185-05	100	ml	9/25/15 15:44	2	1000	2	10	TCLP Extract
15SVI044W07	I185-06	100	ml	9/25/15 15:44	2	1000	2	10	TCLP Extract
15SVI044W08	TXI008SB	100	ml	9/25/15 15:44	2	1000	2	10	pH < 2, TCLP Extract
15SVI044W09	I200-01	100	ml	9/25/15 15:44	2	1000	2	10	TCLP Extract
15SVI044W10	I247-01	960	ml	9/25/15 15:44	2	1000	2	1.04	Light Yellow,very thick white ppt. after basify
15SVI044W11	I247-02	930	ml	9/25/15 15:44	2	1000	2	1.08	very thick white ppt. after basify
15SVI044W12	I247-04	970	ml	9/25/15 15:44	2	1000	2	1.03	
15SVI044W13	I247-05	890	ml	9/25/15 15:44	2	1000	2	1.12	
15SVI044W14	I247-06	900	ml	9/25/15 15:44	2	1000	2	1.11	very thick white ppt. after basify
15SVI044W15	I247-06M	940	ml	9/25/15 15:45	2	1000	2	1.06	Full list + 3 Compounds,very thick white ppt. after b
15SVI044W16	I247-06S	1000	ml	9/25/15 15:45	2	1000	2	1	Full list + 3 Compounds,very thick white ppt. after b
15SVI044W17	I247-07	960	ml	9/25/15 15:45	2	1000	2	1.04	Light yellow with bubbles.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 9/25/15 12:30 ☑ pHAdj(≤2) @ 9/25/15 12:30 Prepared By: JMuert

☑ Extraction Ended @ 9/27/15 3:45 ☑ pHAdj(≥11) @ 9/26/15 9:45 Checked By: ML

Comments: Volume entered after extraction started, pH 5 - 7, Cl not detected. Date 9/27/15

SOP EMAX-3520 Rev. 5

TGT

EMAX LABORATORIES, INC.

FileID: TXI007S

TCLP EXTRACTION LOG

Determination of TLCP Solution							Determination of TCLP Extract Filtration			Determination of % solids for aqueos phase			
LabSampleID	Phase(s)	Aliquot	Sample pH	HCl	pH	TCLPSolnReq'd	(ml)	(g)	Pressure	WtS(g)	WtF(g)	WtDFS(g)	% Solids
TXI007SB							100						
I185-04	1	5	9.52	3.5	2.5	#1	100	98.78	Vacuum				
I185-05	1	5	9.46	3.5	1.5	#1	100	98.19	Vacuum				
I185-06	1	5.02	8.56	3.5	1.66	#1	100	98.67	Vacuum				

Calibration of pH Meter			InstrumentID: 96
BufferID	Value	Reading	DateTime
SP1A-05-02-01	4	4.01	9/23/15 12:23
SP1A-05-02-02	7	7	9/23/15 12:22
SW1A-005-12-24	CalVer 5	5.05	9/23/15 12:24
SP1A-05-02-01	4	4.01	9/24/15 13:55
SP1A-05-02-02	7	7	9/24/15 13:42
SW1A-005-12-24	CalVer 5	5.05	9/24/15 13:56
ID	Reagent	Desc	Expiration Date
SP1A-05-02-04	HCl	1N	03/04/16
SW1A-005-11-08	HNO_3	Conc	08/19/16
SP1B-08-31-03	TCLP Soln	#1	03/17/16
	TCLP Soln		
Rotary Agitator #	Criteria	rpm	DateTime
1	30 ± 2 rpm	30	9/23/15 12:25
	30 ± 2 rpm		
Thermostat Setting:		Thermometer ID:	122273404
TCLP Room Temperature	Criteria	Rdg	DateTime
Room Temp (°C) High	23 ± 2 °C	24.4	9/24/15 9:28
Room Temp (°C) Low	23 ± 2 °C	22.5	9/23/15 17:48
Pipette ID	PE04-03		
CONCENTRATOR (WATER BATH)			
Concentrator #	Temp Setting	Thermometer Rdg	Thermometer ID
6	50	50	SVOC-T1
Filter ID/Lot #	103013/ 062513		
pH strip Lot#	HC554612		

Legend:

WtS = weight of sample

WtF = weight of filter

WtDFS = weight of dried filter + solids

Prepared By: DFelic/MLyudm

Checked By: ML

Date 9/24/15

FileID: TXI007S

EMAX LABORATORIES, INC.

TCLP EXTRACTION LOG

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	TCLPSoln	TCLPVol	Exrtract pH	Preservation	Comments
15TXI007S01	TXI0075B	0	g	9/23/15 10:52		2000		HNO_3	
15TXI007S02	I185-04	100	g	9/23/15 10:53	#1	2000	5.22	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)
15TXI007S03	I185-05	100.01	g	9/23/15 10:58	#1	2000	4.93	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)
15TXI007S04	I185-06	100.02	g	9/23/15 11:01	#1	2000	5	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)

☑ DateTimeStarted 9/23/2015 15:30 ☑ Thermometer Reset on 9/23/2015 15:30 Balance ID: 10203192. Calibration check was verified prior to use.

☑ DateTimeEnded 9/24/2015 9:30 Note: Sample preserved with HNO_3 is for metals analysis. MS/MSD were spiked prio Prepared By: DFelic/MLyudm

Extract Location: Metals Received By: SP 9/24/15 Checked By: ML

Comment: Hp: 11 Date 9/24/15

PESTICIDES TCLP

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	10/03/15 21:41
Lab Samp ID:	I185-04	Dilution Factor:	10
Lab File ID:	RJ03019A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND)|ND	1.0	0.050	0.10
HEPTACHLOR	(ND)|ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND)|ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND)|ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND)|ND	1.0	0.050	0.10
ENDRIN	(ND)|ND	1.0	0.080	0.10
METHOXYCHLOR	(ND)|ND	10	0.50	1.0
TOXAPHENE	(ND)|ND	20	2.5	5.0

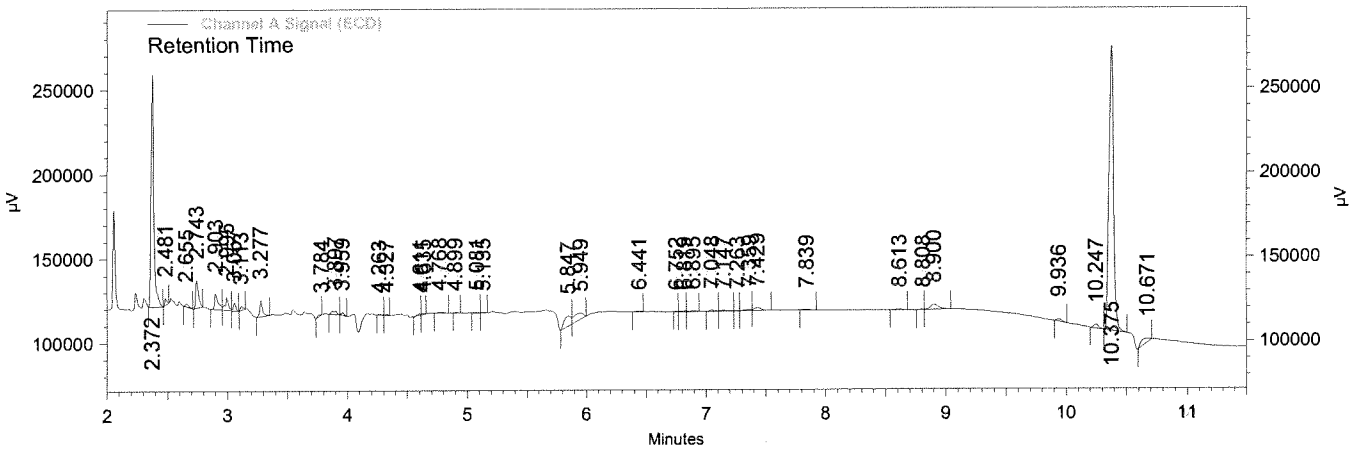
SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	3.819|(4.257)	4.000	95.5|(106)	25-140
DECACHLOROBIPHENYL	3.361|(3.484)	4.000	84.0|(87.1)	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 09/23/15 15:30

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: I185-04
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03019.dat
User: LErmol
Acquired: 10/03/15 21:41:24
Printed: 10/14/15 17:18:07

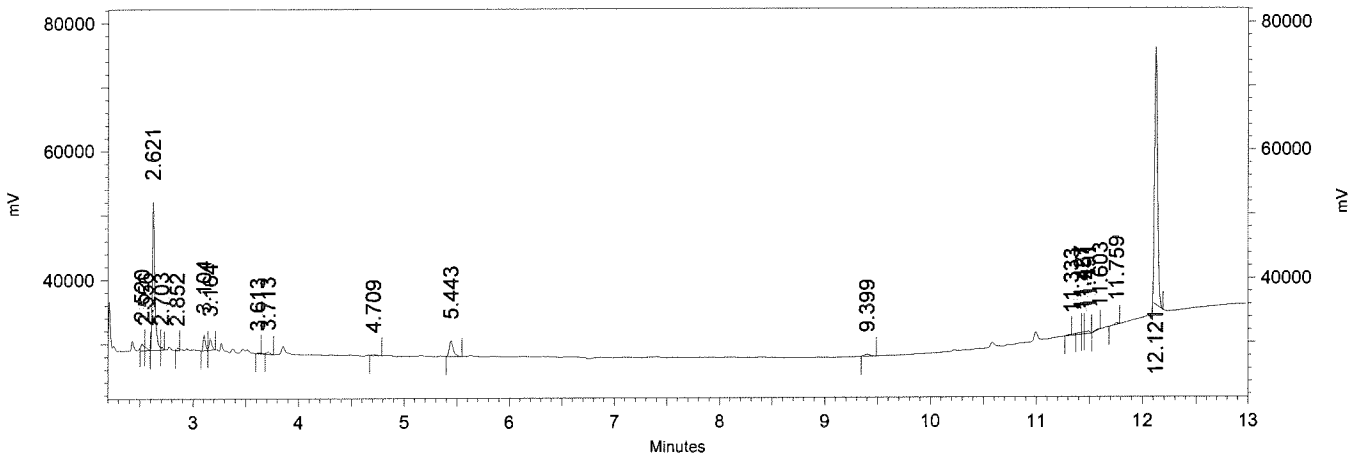


Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.372	11405271	298670.2	38.187	BB
alpha-BHC	2.692				0.000 BDL	
gamma-BHC	2.877				0.000 BDL	
beta-BHC	2.925				0.000 BDL	
delta-BHC	3.033				0.000 BDL	
Heptachlor	3.161				0.000 BDL	
Aldrin	3.361				0.000 BDL	
Heptachlor Epoxide	3.823				0.000 BDL	
gamma-Chlordane	3.931				0.000 BDL	
alpha-Chlordane	4.053				0.000 BDL	
DDE	4.123				0.000 BDL	
Endosulfan I	4.188				0.000 BDL	
Dieldrin	4.441				0.000 BDL	
Endrin	4.716				0.000 BDL	
DDD	4.808				0.000 BDL	
Endosulfan II	5.011				0.000 BDL	
DDT	5.207				0.000 BDL	
Endrin aldehyde	5.669				0.000 BDL	
Methoxychlor	6.113				0.000 BDL	
Endosulfan Sulfate	6.529				0.000 BDL	
Endrin Ketone	7.176				0.000 BDL	
DCB	10.372	10.375	24631729	732918.4	33.608	VI

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: I185-04
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03019.dat
User: LErmol
Acquired: 10/03/15 21:41:24
Printed: 10/14/15 17:18:07



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.621	1946040	45709.2	42.574	BV
alpha-BHC	2.999				0.000 BDL	
gamma-BHC	3.233				0.000 BDL	
beta-BHC	3.280				0.000 BDL	
delta-BHC	3.503				0.000 BDL	
Heptachlor	3.567				0.000 BDL	
Aldrin	3.849				0.000 BDL	
Heptachlor Epoxide	4.433				0.000 BDL	
gamma-Chlordane	4.664				0.000 BDL	
alpha-Chlordane	4.861				0.000 BDL	
Endosulfan I	4.951				0.000 BDL	
DDE	5.092				0.000 BDL	
Dieldrin	5.375				0.000 BDL	
Endrin	5.929				0.000 BDL	
DDD	6.168				0.000 BDL	
Endosulfan II	6.376				0.000 BDL	
DDT	6.924				0.000 BDL	
Endrin Aldehyde	7.225				0.000 BDL	
Endosulfan Sulfate	8.064				0.000 BDL	
Methoxychlor	9.329				0.000 BDL	
Endrin Ketone	9.799				0.000 BDL	
DCB	12.119	12.121	4165092	119559.0	34.837	IB

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	CAFB-FT006-WC2-002	Date Analyzed:	10/03/15 22:01
Lab Samp ID:	I185-05	Dilution Factor:	10
Lab File ID:	RJ03020A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND)|ND	1.0	0.050	0.10
HEPTACHLOR	(ND)|ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND)|ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND)|ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND)|ND	1.0	0.050	0.10
ENDRIN	(ND)|ND	1.0	0.080	0.10
METHOXYCHLOR	(ND)|ND	10	0.50	1.0
TOXAPHENE	(ND)|ND	20	2.5	5.0

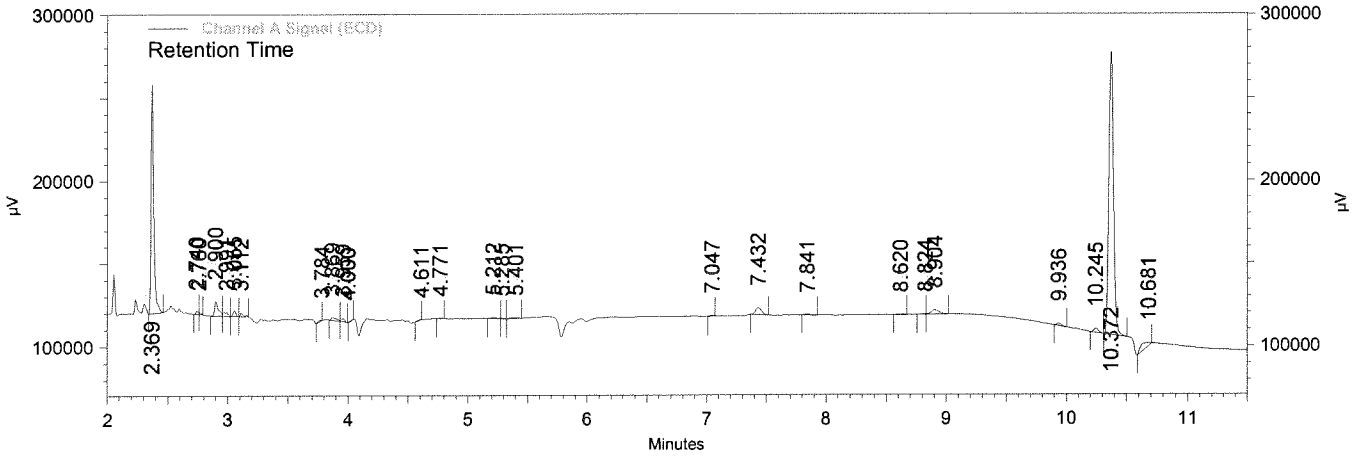
SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	3.786|(3.913)	4.000	94.6|(97.8)	25-140
DECACHLOROBIPHENYL	(3.417)|3.201	4.000	(85.4)|80.0	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 09/23/15 15:30

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: I185-05
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03020.dat
User: LErmol
Acquired: 10/03/15 22:01:39
Printed: 10/14/15 17:19:21

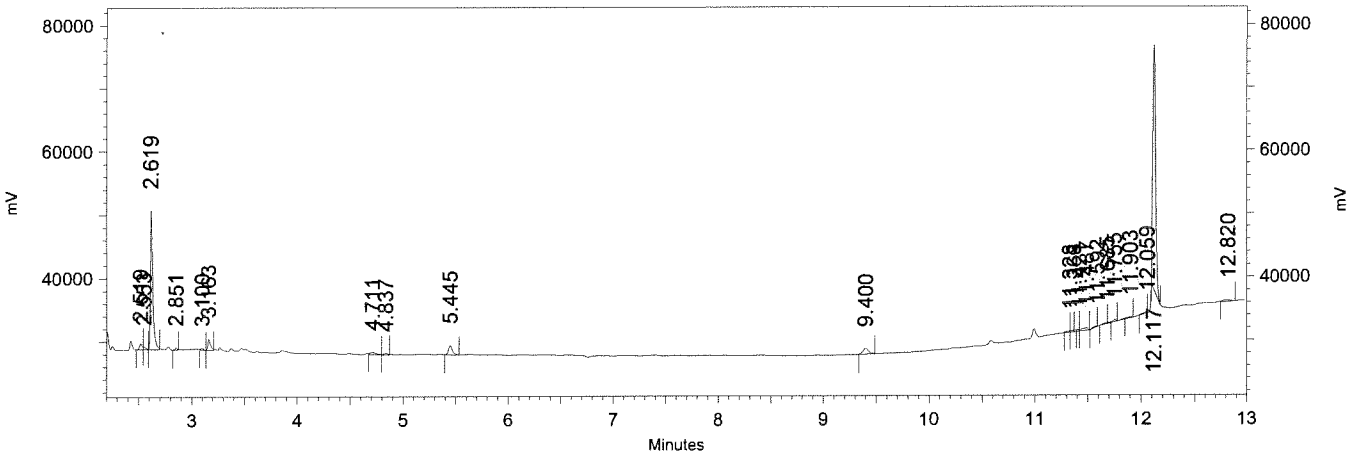


Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.369	11306829	298670.2	37.857	BB
alpha-BHC	2.692				0.000 BDL	
gamma-BHC	2.877				0.000 BDL	
beta-BHC	2.925				0.000 BDL	
delta-BHC	3.033				0.000 BDL	
Heptachlor	3.161				0.000 BDL	
Aldrin	3.361				0.000 BDL	
Heptachlor Epoxide	3.823				0.000 BDL	
gamma-Chlordane	3.931				0.000 BDL	
alpha-Chlordane	4.053				0.000 BDL	
DDE	4.123				0.000 BDL	
Endosulfan I	4.188				0.000 BDL	
Dieldrin	4.441				0.000 BDL	
Endrin	4.716				0.000 BDL	
DDD	4.808				0.000 BDL	
Endosulfan II	5.011				0.000 BDL	
DDT	5.207	5.212	97688	484257.7	0.202	SV
Endrin aldehyde	5.669				0.000 BDL	
Methoxychlor	6.113				0.000 BDL	
Endosulfan Sulfate	6.529				0.000 BDL	
Endrin Ketone	7.176				0.000 BDL	
DCB	10.372	10.372	25041462	732918.4	34.167	BI

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: I185-05
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03020.dat
User: LErmol
Acquired: 10/03/15 22:01:39
Printed: 10/14/15 17:19:21



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.619	1788843	45709.2	39.135	VS
alpha-BHC	2.999				0.000 BDL	
gamma-BHC	3.233				0.000 BDL	
beta-BHC	3.280				0.000 BDL	
delta-BHC	3.503				0.000 BDL	
Heptachlor	3.567				0.000 BDL	
Aldrin	3.849				0.000 BDL	
Heptachlor Epoxide	4.433				0.000 BDL	
gamma-Chlordane	4.664				0.000 BDL	
alpha-Chlordane	4.861				0.000 BDL	
Endosulfan I	4.951				0.000 BDL	
DDE	5.092				0.000 BDL	
Dieldrin	5.375				0.000 BDL	
Endrin	5.929				0.000 BDL	
DDD	6.168				0.000 BDL	
Endosulfan II	6.376				0.000 BDL	
DDT	6.924				0.000 BDL	
Endrin Aldehyde	7.225				0.000 BDL	
Endosulfan Sulfate	8.064				0.000 BDL	
Methoxychlor	9.329				0.000 BDL	
Endrin Ketone	9.799				0.000 BDL	
DCB	12.119	12.117	3826518	119559.0	32.005	IS

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	10/03/15 22:22
Lab Samp ID:	I185-06	Dilution Factor:	10
Lab File ID:	RJ03021A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND)|ND	1.0	0.050	0.10
HEPTACHLOR	(ND)|ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND)|ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND)|ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND)|ND	1.0	0.050	0.10
ENDRIN	(ND)|ND	1.0	0.080	0.10
METHOXYCHLOR	(ND)|ND	10	0.50	1.0
TOXAPHENE	(ND)|ND	20	2.5	5.0

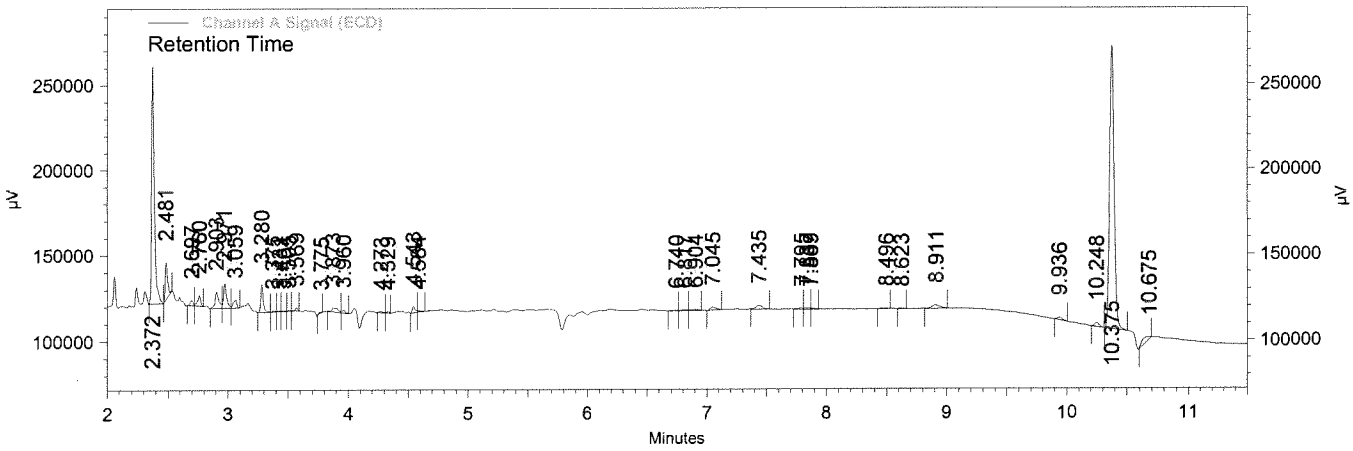
SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	3.847|(5.230)	4.000	96.2|(131)	25-140
DECACHLOROBIPHENYL	3.308|(3.503)	4.000	82.7|(87.6)	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 09/23/15 15:30

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: I185-06
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03021.dat
User: LErmol
Acquired: 10/03/15 22:22:07
Printed: 10/14/15 17:21:58

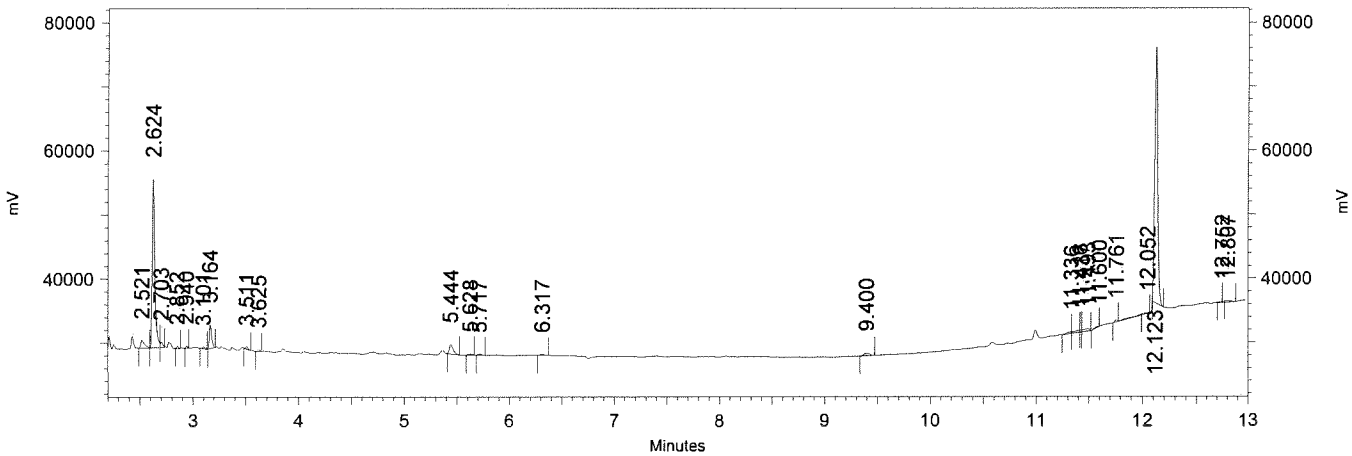


Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.372	11490011	298670.2	38.471	BB
alpha-BHC	2.692	2.697	255116	558424.8	0.457	BV
gamma-BHC	2.877				0.000 BDL	
beta-BHC	2.925				0.000 BDL	
delta-BHC	3.033				0.000 BDL	
Heptachlor	3.161				0.000 BDL	
Aldrin	3.361	3.375	62256	545687.8	0.114	BS
Heptachlor Epoxide	3.823				0.000 BDL	
gamma-Chlordane	3.931				0.000 BDL	
alpha-Chlordane	4.053				0.000 BDL	
DDE	4.123				0.000 BDL	
Endosulfan I	4.188				0.000 BDL	
Dieldrin	4.441				0.000 BDL	
Endrin	4.716				0.000 BDL	
DDD	4.808				0.000 BDL	
Endosulfan II	5.011				0.000 BDL	
DDT	5.207				0.000 BDL	
Endrin aldehyde	5.669				0.000 BDL	
Methoxychlor	6.113				0.000 BDL	
Endosulfan Sulfate	6.529				0.000 BDL	
Endrin Ketone	7.176				0.000 BDL	
DCB	10.372	10.375	24242050	732918.4	33.076	BI

EMAX Analytical Laboratories, Inc.

Sample ID: I185-06
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03021.dat
User: LErmol
Acquired: 10/03/15 22:22:07
Printed: 10/14/15 17:21:58



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.624	2390728	45709.2	52.303	BV
alpha-BHC	2.999				0.000 BDL	
gamma-BHC	3.233				0.000 BDL	
beta-BHC	3.280				0.000 BDL	
delta-BHC	3.503	3.511	29522	66499.8	0.444	vv
Heptachlor	3.567				0.000 BDL	
Aldrin	3.849				0.000 BDL	
Heptachlor Epoxide	4.433				0.000 BDL	
gamma-Chlordane	4.664				0.000 BDL	
alpha-Chlordane	4.861				0.000 BDL	
Endosulfan I	4.951				0.000 BDL	
DDE	5.092				0.000 BDL	
Dieldrin	5.375				0.000 BDL	
Endrin	5.929				0.000 BDL	
DDD	6.168				0.000 BDL	
Endosulfan II	6.376				0.000 BDL	
DDT	6.924				0.000 BDL	
Endrin Aldehyde	7.225				0.000 BDL	
Endosulfan Sulfate	8.064				0.000 BDL	
Methoxychlor	9.329				0.000 BDL	
Endrin Ketone	9.799				0.000 BDL	
DCB	12.119	12.123	4188469	119559.0	35.033	IS

QC SUMMARIES

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	MBLK1W	Date Analyzed:	10/03/15 20:20
Lab Samp ID:	CPI033WB	Dilution Factor:	1
Lab File ID:	RJ03015A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND) | ND	0.10	0.0050	0.010
HEPTACHLOR	(ND) | ND	0.10	0.0070	0.010
HEPTACHLOR EPOXIDE	(ND) | ND	0.10	0.0050	0.010
GAMMA-CHLORDANE	(ND) | ND	0.10	0.0050	0.010
ALPHA-CHLORDANE	(ND) | ND	0.10	0.0050	0.010
ENDRIN	(ND) | ND	0.10	0.0080	0.010
METHOXYCHLOR	(ND) | ND	1.0	0.050	0.10
TOXAPHENE	(ND) | ND	2.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.3565 | (0.3736)	0.4000	89.1 | (93.4)	25-140
DECACHLOROBIPHENYL	0.3388 | (0.3668)	0.4000	84.7 | (91.7)	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 17:24
Sample ID:	MBLK2W	Date Analyzed:	10/03/15 21:21
Lab Samp ID:	TXI007SB	Dilution Factor:	10
Lab File ID:	RJ03018A	Matrix :	WATER
Ext Btch ID:	CPI033W	% Moisture :	NA
Calib. Ref.:	RJ03013A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND) | ND	1.0	0.050	0.10
HEPTACHLOR	(ND) | ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND) | ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ENDRIN	(ND) | ND	1.0	0.080	0.10
METHOXYCHLOR	(ND) | ND	10	0.50	1.0
TOXAPHENE	(ND) | ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	3.574 | (3.656)	4.000	89.3 | (91.4)	25-140
DECACHLOROBIPHENYL	3.431 | (3.573)	4.000	85.8 | (89.3)	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 09/23/15 15:30

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/3520C/8081B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	CPI033WB	CPI033WL	CPI033WC		
LAB FILE ID:	RJ03015A	RJ03016A	RJ03017A		
DATE EXTRACTED:	09/25/1517:24	09/25/1517:24	09/25/1517:24	DATE COLLECTED:	NA
DATE ANALYZED:	10/03/1520:20	10/03/1520:40	10/03/1521:01	DATE RECEIVED:	09/25/15
PREP. BATCH:	CPI033W	CPI033W	CPI033W		
CALIB. REF:	RJ03013A	RJ03013A	RJ03013A		

ACCESSION:

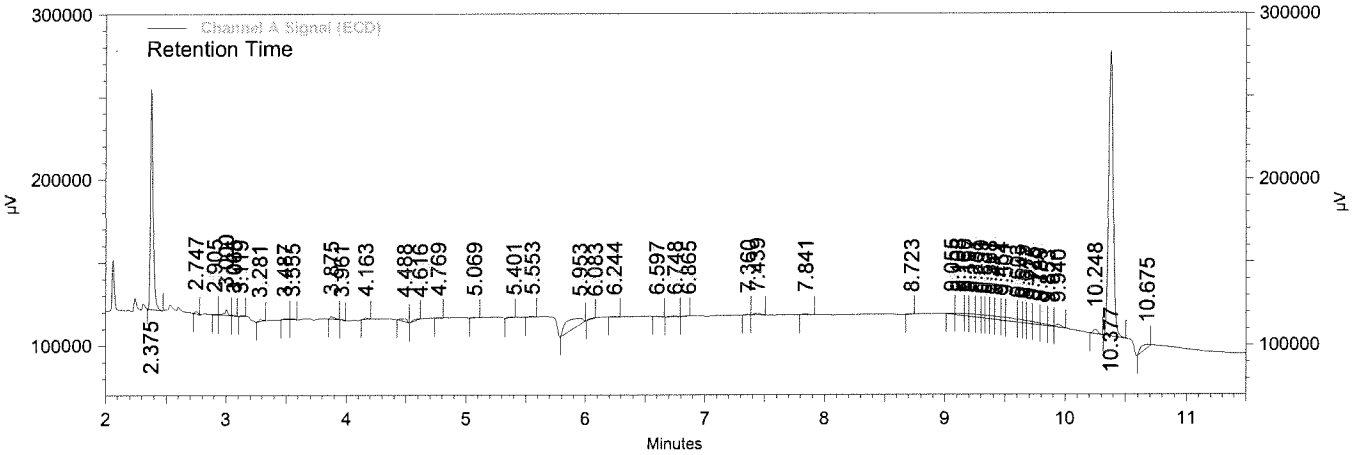
PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
gamma-BHC (Lindane)	(ND)|ND	0.200	(0.199)|0.222	(100)|111	0.200	(0.210)|0.235	(105)|118	(5)|6	25-135	30
Heptachlor	(ND)|ND	0.200	(0.208)|0.239	(104)|119	0.200	(0.223)|0.239	(112)|119	(7)|0	40-130	30
Heptachlor Epoxide	(ND)|ND	0.200	0.203|(0.223)	101|(112)	0.200	0.213|(0.235)	106|(118)	5|(5)	60-130	30
gamma-Chlordane	(ND)|ND	0.200	0.200|(0.218)	100|(109)	0.200	0.208|(0.228)	104|(114)	4|(4)	60-125	30
alpha-Chlordane	(ND)|ND	0.200	0.200|(0.210)	100|(105)	0.200	0.210|(0.221)	105|(110)	5|(5)	65-125	30
Endrin	(ND)|ND	0.200	0.222|(0.233)	111|(116)	0.200	0.227|(0.236)	114|(118)	2|(1)	55-135	30
Methoxychlor	(ND)|ND	2.00	1.98|(2.37)	99|(118)	2.00	2.06|(2.44)	103|(122)	4|(3)	55-150	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	0.4000	0.3612|(0.3767)	90.3|(94.2)	0.4000	0.3942|(0.4030)	98.5|(101)	25-140
Decachlorobiphenyl	0.4000	0.3335|(0.3656)	83.4|(91.4)	0.4000	0.3419|(0.3640)	85.5|(91.0)	30-135

QC DATA

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPI033WB
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03015.dat
User: LErmol
Acquired: 10/03/15 20:20:41
Printed: 10/14/15 17:25:48

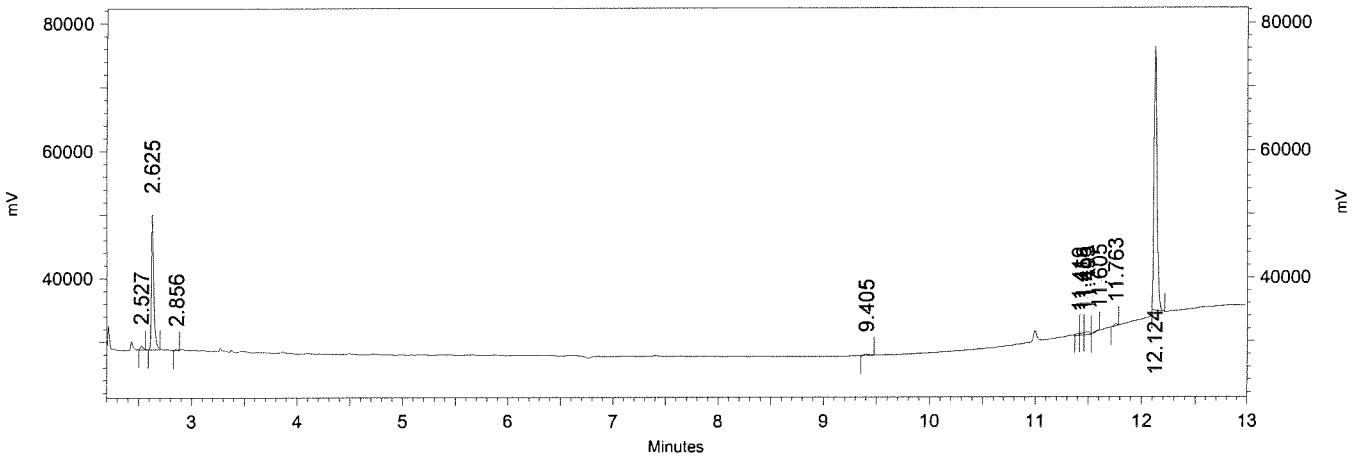


Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.375	10647373	298670.2	35.649	BB
alpha-BHC	2.692				0.000 BDL	
gamma-BHC	2.877				0.000 BDL	
beta-BHC	2.925				0.000 BDL	
delta-BHC	3.033				0.000 BDL	
Heptachlor	3.161				0.000 BDL	
Aldrin	3.361				0.000 BDL	
Heptachlor Epoxide	3.823				0.000 BDL	
gamma-Chlordane	3.931				0.000 BDL	
alpha-Chlordane	4.053				0.000 BDL	
DDE	4.123				0.000 BDL	
Endosulfan I	4.188				0.000 BDL	
Dieldrin	4.441				0.000 BDL	
Endrin	4.716				0.000 BDL	
DDD	4.808				0.000 BDL	
Endosulfan II	5.011				0.000 BDL	
DDT	5.207				0.000 BDL	
Endrin aldehyde	5.669				0.000 BDL	
Methoxychlor	6.113				0.000 BDL	
Endosulfan Sulfate	6.529				0.000 BDL	
Endrin Ketone	7.176				0.000 BDL	
DCB	10.372	10.377	24832430	732918.4	33.882	BI

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPI033WB
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03015.dat
User: LErmol
Acquired: 10/03/15 20:20:41
Printed: 10/14/15 17:25:48

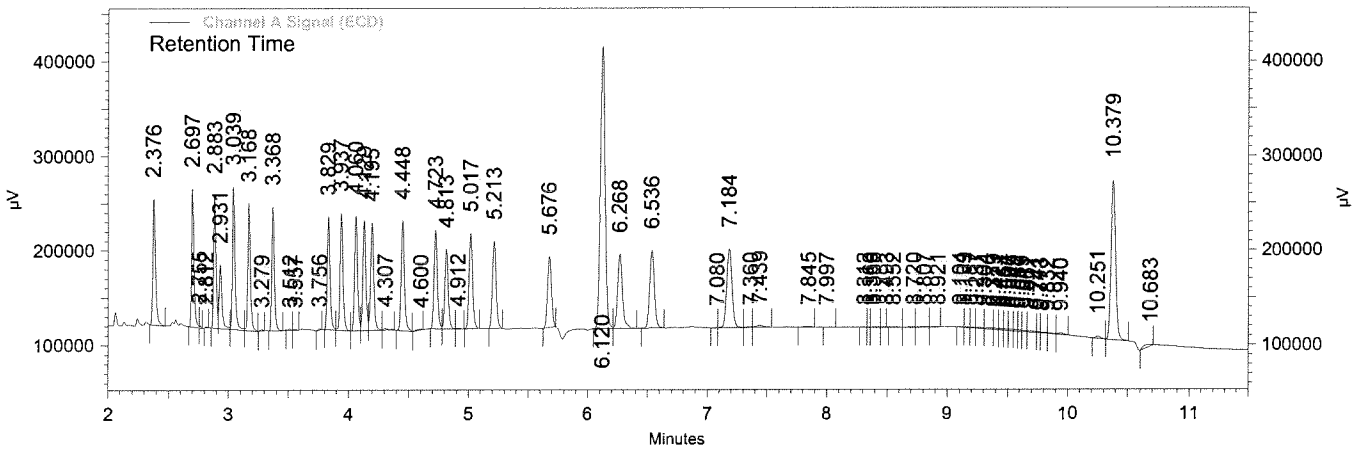


Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.625	1707862	45709.2	37.364	VS
alpha-BHC	2.999				0.000 BDL	
gamma-BHC	3.233				0.000 BDL	
beta-BHC	3.280				0.000 BDL	
delta-BHC	3.503				0.000 BDL	
Heptachlor	3.567				0.000 BDL	
Aldrin	3.849				0.000 BDL	
Heptachlor Epoxide	4.433				0.000 BDL	
gamma-Chlordane	4.664				0.000 BDL	
alpha-Chlordane	4.861				0.000 BDL	
Endosulfan I	4.951				0.000 BDL	
DDE	5.092				0.000 BDL	
Dieldrin	5.375				0.000 BDL	
Endrin	5.929				0.000 BDL	
DDD	6.168				0.000 BDL	
Endosulfan II	6.376				0.000 BDL	
DDT	6.924				0.000 BDL	
Endrin Aldehyde	7.225				0.000 BDL	
Endosulfan Sulfate	8.064				0.000 BDL	
Methoxychlor	9.329				0.000 BDL	
Endrin Ketone	9.799				0.000 BDL	
DCB	12.119	12.124	4385498	119559.0	36.681	IB

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPI033WL
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03016.dat
User: LErmol
Acquired: 10/03/15 20:40:51
Printed: 10/14/15 17:27:19



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.376	10786986	298670.2	36.117	BB
alpha-BHC	2.692	2.697	10948356	558424.8	19.606	BS
gamma-BHC	2.877	2.883	10381847	520675.9	19.939	IV
beta-BHC	2.925	2.931	5853359	272206.7	21.503	VV
delta-BHC	3.033	3.039	12121453	530749.0	22.838	VV
Heptachlor	3.161	3.168	10910492	523701.5	20.833	VB
Aldrin	3.361	3.368	10595882	545687.8	19.417	SV
Heptachlor Epoxide	3.823	3.829	10571394	521107.9	20.286	IV
gamma-Chlordane	3.931	3.937	11325479	565956.7	20.011	VB
alpha-Chlordane	4.053	4.060	11249857	562918.0	19.985	BV
DDE	4.123	4.129	11059885	525059.6	21.064	VV
Endosulfan I	4.188	4.195	11140548	579491.4	19.225	VV
Dieldrin	4.441	4.448	11752183	537322.7	21.872	IB
Endrin	4.716	4.723	10971728	494167.6	22.202	IV
DDD	4.808	4.813	8764326	402982.8	21.749	VV
Endosulfan II	5.011	5.017	11196742	521821.5	21.457	BI
DDT	5.207	5.213	10477291	484257.7	21.636	II
Endrin aldehyde	5.669	5.676	9428205	482149.6	19.555	BI
Methoxychlor	6.113	6.120	43949121	222073.4	197.904	SV
Endosulfan Sulfate	6.529	6.536	12296186	582391.3	21.113	SI
Endrin Ketone	7.176	7.184	13826541	646733.9	21.379	SV
DCB	10.372	10.379	24440105	732918.4	33.346	BI

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPI033WL
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03016.dat
User: LErmol
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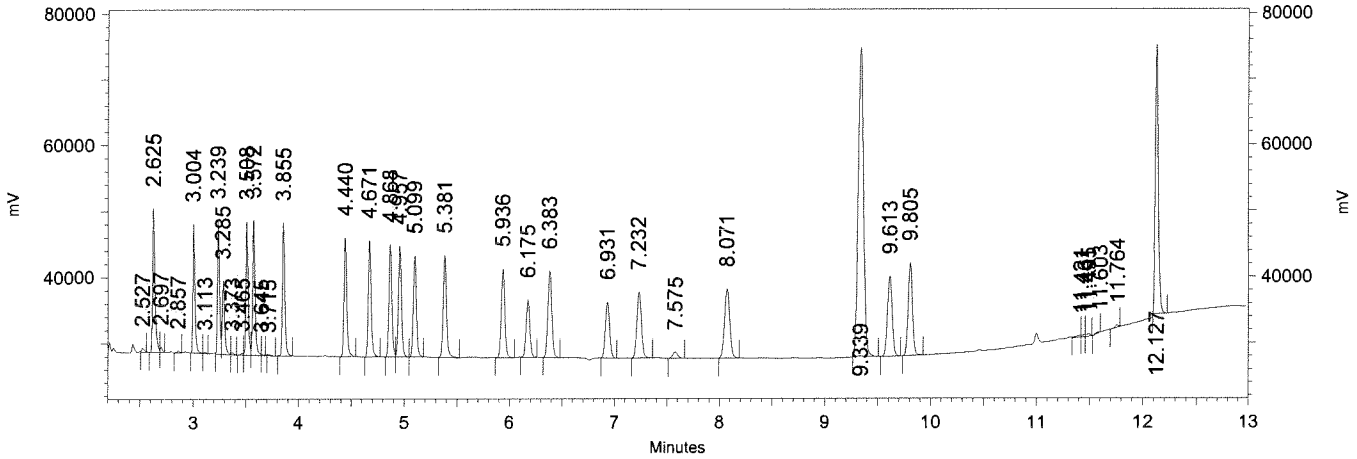
Printed: 10/14/15 17:27:19

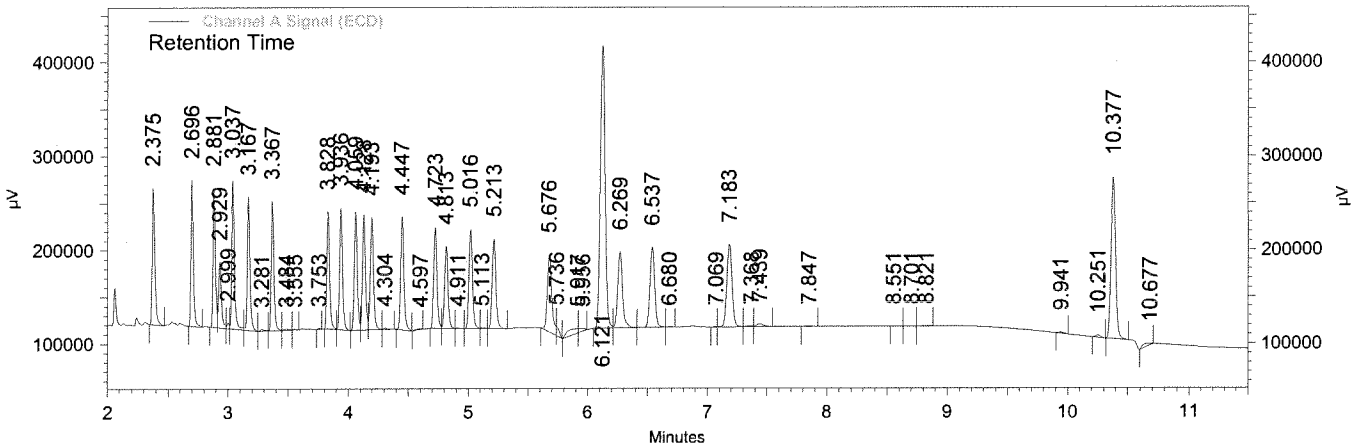


Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.625	1721894	45709.2	37.671	VV
alpha-BHC	2.999	3.004	1382287	65737.2	21.027	BV
gamma-BHC	3.233	3.239	1444716	65037.9	22.213	SV
beta-BHC	3.280	3.285	928771	40876.2	22.722	VV
delta-BHC	3.503	3.508	1556282	66499.8	23.403	VV
Heptachlor	3.567	3.572	1689381	70619.0	23.922	VS
Aldrin	3.849	3.855	1726329	78633.8	21.954	SS
Heptachlor Epoxide	4.433	4.440	1763718	79067.8	22.306	SS
gamma-Chlordane	4.664	4.671	1814360	83325.0	21.775	BB
alpha-Chlordane	4.861	4.868	1793378	85339.9	21.015	SV
Endosulfan I	4.951	4.957	1805601	83409.5	21.647	VB
DDE	5.092	5.099	1702954	79706.9	21.365	BS
Dieldrin	5.375	5.381	1823868	80273.9	22.721	BB
Endrin	5.929	5.936	1762340	75648.1	23.297	SB
DDD	6.168	6.175	1179895	52295.7	22.562	SS
Endosulfan II	6.376	6.383	1859725	79883.2	23.281	BS
DDT	6.924	6.931	1301067	59277.8	21.949	IS
Endrin Aldehyde	7.225	7.232	1658798	76982.9	21.548	BB
Endosulfan Sulfate	8.064	8.071	1969462	87221.1	22.580	IS
Methoxychlor	9.329	9.339	8782425	37038.4	237.117	IB
Endrin Ketone	9.799	9.805	2154607	96460.0	22.337	BB
DCB	12.119	12.127	4371726	119559.0	36.565	IB

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPI033WC
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03017.dat
User: LErmol
Acquired: 10/03/15 21:01:04
Printed: 10/14/15 17:29:22



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.375	11772636	298670.2	39.417	BB
alpha-BHC	2.692	2.696	11687155	558424.8	20.929	BI
gamma-BHC	2.877	2.881	10959677	520675.9	21.049	IV
beta-BHC	2.925	2.929	5977213	272206.7	21.958	VV
delta-BHC	3.033	3.037	12878596	530749.0	24.265	SV
Heptachlor	3.161	3.167	11664766	523701.5	22.274	VB
Aldrin	3.361	3.367	11337758	545687.8	20.777	VV
Heptachlor Epoxide	3.823	3.828	11084750	521107.9	21.272	IV
gamma-Chlordane	3.931	3.936	11790168	565956.7	20.832	VB
alpha-Chlordane	4.053	4.059	11849057	562918.0	21.049	BV
DDE	4.123	4.128	11610562	525059.6	22.113	VV
Endosulfan I	4.188	4.193	11700920	579491.4	20.192	VV
Dieldrin	4.441	4.447	12209143	537322.7	22.722	IB
Endrin	4.716	4.723	11218152	494167.6	22.701	IV
DDD	4.808	4.813	9192318	402982.8	22.811	VV
Endosulfan II	5.011	5.016	11848232	521821.5	22.706	BS
DDT	5.207	5.213	11222388	484257.7	23.174	VB
Endrin aldehyde	5.669	5.676	11845160	482149.6	24.567	BS
Methoxychlor	6.113	6.121	45776094	222073.4	206.130	SV
Endosulfan Sulfate	6.529	6.537	12830189	582391.3	22.030	VV
Endrin Ketone	7.176	7.183	14547546	646733.9	22.494	SV
DCB	10.372	10.377	25057058	732918.4	34.188	BI

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPI033WC
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03017.dat
User: LErmol
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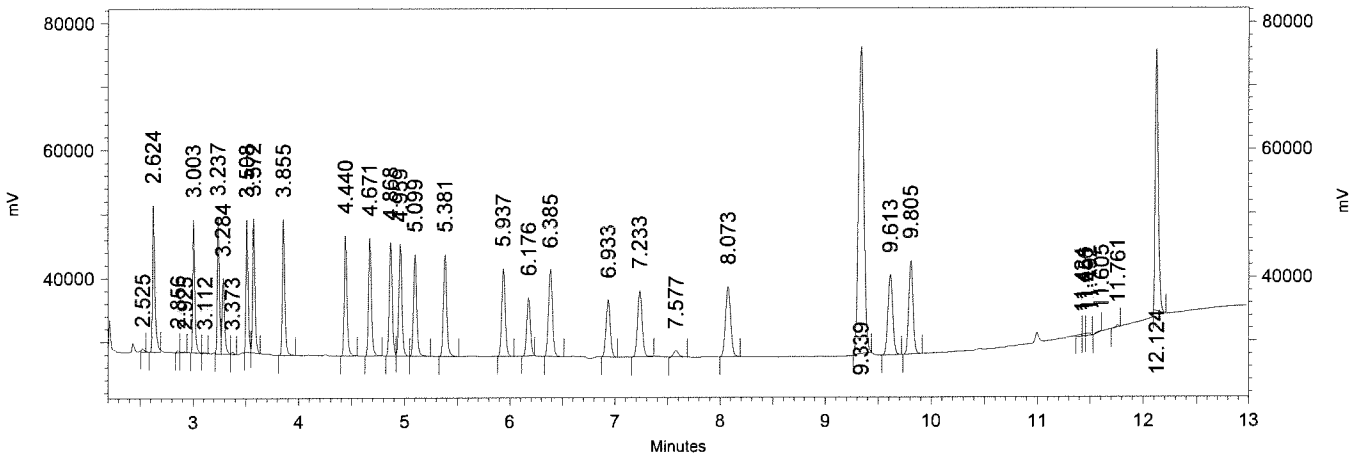
Printed: 10/14/15 17:29:22



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.624	1841996	45709.2	40.298	VS
alpha-BHC	2.999	3.003	1480555	65737.2	22.522	IV
gamma-BHC	3.233	3.237	1527829	65037.9	23.491	SV
beta-BHC	3.280	3.284	1025418	40876.2	25.086	VV
delta-BHC	3.503	3.508	1541393	66499.8	23.179	IV
Heptachlor	3.567	3.572	1685003	70619.0	23.860	VI
Aldrin	3.849	3.855	1833326	78633.8	23.315	SS
Heptachlor Epoxide	4.433	4.440	1856356	79067.8	23.478	SS
gamma-Chlordane	4.664	4.671	1898997	83325.0	22.790	BB
alpha-Chlordane	4.861	4.868	1884033	85339.9	22.077	BV
Endosulfan I	4.951	4.959	1898388	83409.5	22.760	VB
DDE	5.092	5.099	1807353	79706.9	22.675	BB
Dieldrin	5.375	5.381	1905785	80273.9	23.741	BS
Endrin	5.929	5.937	1788166	75648.1	23.638	BB
DDD	6.168	6.176	1200036	52295.7	22.947	SI
Endosulfan II	6.376	6.385	1950252	79883.2	24.414	IB
DDT	6.924	6.933	1367665	59277.8	23.072	IB
Endrin Aldehyde	7.225	7.233	1722718	76982.9	22.378	SB
Endosulfan Sulfate	8.064	8.073	2056615	87221.1	23.579	IS
Methoxychlor	9.329	9.339	9029792	37038.4	243.796	II
Endrin Ketone	9.799	9.805	2262376	96460.0	23.454	BS
DCB	12.119	12.124	4352150	119559.0	36.402	IB

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TXI007SB
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03018.dat
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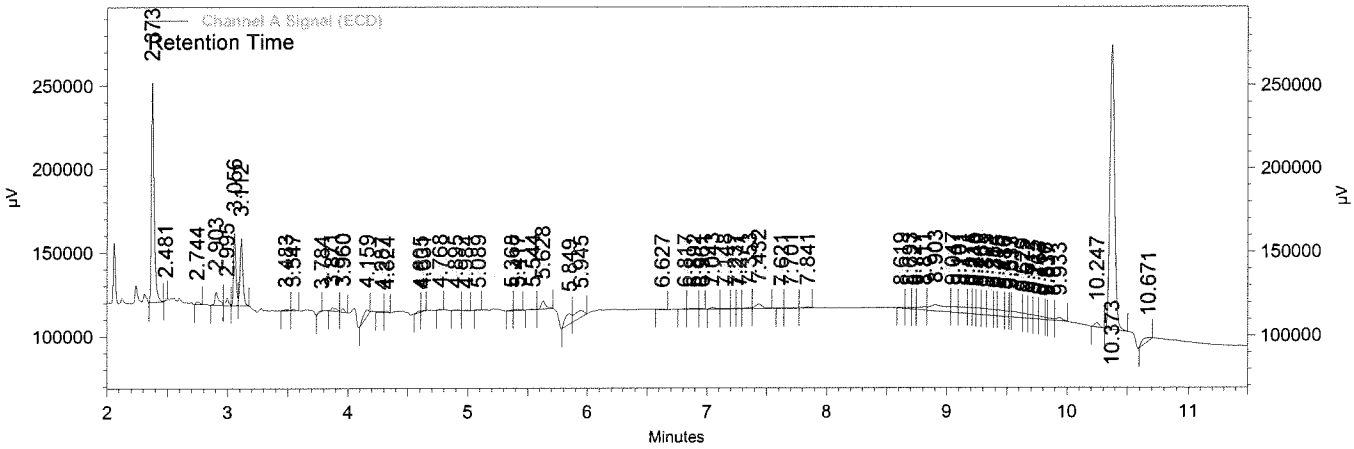
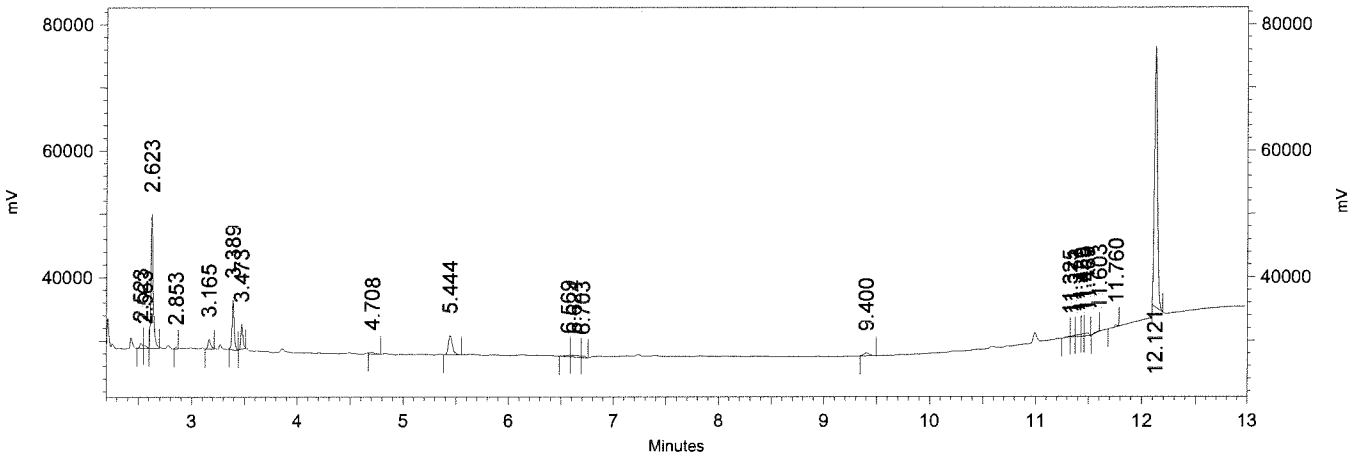


Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.373	10673379	298670.2	35.736	BB
alpha-BHC	2.692				0.000 BDL	
gamma-BHC	2.877				0.000 BDL	
beta-BHC	2.925				0.000 BDL	
delta-BHC	3.033				0.000 BDL	
Heptachlor	3.161				0.000 BDL	
Aldrin	3.361				0.000 BDL	
Heptachlor Epoxide	3.823				0.000 BDL	
gamma-Chlordane	3.931				0.000 BDL	
alpha-Chlordane	4.053				0.000 BDL	
DDE	4.123				0.000 BDL	
Endosulfan I	4.188				0.000 BDL	
Dieldrin	4.441				0.000 BDL	
Endrin	4.716				0.000 BDL	
DDD	4.808				0.000 BDL	
Endosulfan II	5.011				0.000 BDL	
DDT	5.207				0.000 BDL	
Endrin aldehyde	5.669				0.000 BDL	
Methoxychlor	6.113				0.000 BDL	
Endosulfan Sulfate	6.529				0.000 BDL	
Endrin Ketone	7.176				0.000 BDL	
DCB	10.372	10.373	25142407	732918.4	34.305	BI

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TXI007SB
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03018.dat
User: LErmol
Acquired: 10/03/15 21:21:14
Printed: 10/14/15 17:24:29



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.623	1671351	45709.2	36.565	VS
alpha-BHC	2.999				0.000 BDL	
gamma-BHC	3.233				0.000 BDL	
beta-BHC	3.280				0.000 BDL	
delta-BHC	3.503				0.000 BDL	
Heptachlor	3.567				0.000 BDL	
Aldrin	3.849				0.000 BDL	
Heptachlor Epoxide	4.433				0.000 BDL	
gamma-Chlordane	4.664				0.000 BDL	
alpha-Chlordane	4.861				0.000 BDL	
Endosulfan I	4.951				0.000 BDL	
DDE	5.092				0.000 BDL	
Dieldrin	5.375				0.000 BDL	
Endrin	5.929				0.000 BDL	
DDD	6.168				0.000 BDL	
Endosulfan II	6.376				0.000 BDL	
DDT	6.924				0.000 BDL	
Endrin Aldehyde	7.225				0.000 BDL	
Endosulfan Sulfate	8.064				0.000 BDL	
Methoxychlor	9.329				0.000 BDL	
Endrin Ketone	9.799				0.000 BDL	
DCB	12.119	12.121	4272172	119559.0	35.733	IB

INITIAL CALIBRATIONS

INITIAL CALIBRATION
METHOD 8081

Lab Name : EMAX Laboratories, Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
LFID & Datetime: RH26020A 08/26/15 19:26 RH26028A 08/26/15 22:08
LFID & Datetime: RH26021A 08/26/15 19:47 RH26029A 08/26/15 22:29
LFID & Datetime: RH26022A 08/26/15 20:07 RH26030A 08/26/15 22:49
LFID & Datetime: RH26023A 08/26/15 20:27 RH26031A 08/26/15 23:09
LFID & Datetime: RH26024A 08/26/15 20:47 RH26032A 08/26/15 23:30
LFID & Datetime: RH26025A 08/26/15 21:07 RH26033A 08/26/15 23:50
LFID & Datetime: RH26026A 08/26/15 21:28 RH26034A 08/27/15 00:10
LFID & Datetime: RH26027A 08/26/15 21:48 RH26035A 08/27/15 00:30
Conc Unit : ppb
Method Name : CPF9H26.met

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	4.00X	8.00X	16.00X	32.00X	48.00X	64.00X	MEAN	%RSD
alpha-BHC	1.25	560428	575474	585347	570819	569386	536591	551067	518285	558424.8	4.0
gamma-BHC	1.25	550885	558796	540885	535862	516101	494796	496056	472027	520675.9	5.9
beta-BHC	1.25	303242	302315	288774	283181	266274	248254	248908	236706	272206.7	9.5
delta-BHC	1.25	530732	552610	537732	544709	530896	515129	527652	506532	530749.0	2.8
Heptachlor	1.25	540735	596394	574634	548253	514237	481138	480551	453669	523701.5	9.5
Aldrin	1.25	605198	594561	566394	562213	533290	508519	509411	485916	545687.8	7.9
Heptachlor Epoxide	1.25	567376	591164	559389	545195	508819	476755	471796	448370	521107.9	10.0
gamma-Chlordane	1.25	608935	640625	597517	585868	548794	521902	522662	501352	565956.8	8.7
alpha-Chlordane	1.25	586948	643836	600582	588880	549716	520330	518121	494930	562918.0	9.0
DDE	2.50	547074	585341	550390	547621	514579	491189	491313	472969	525059.6	7.3
Endosulfan I	1.25	611332	666579	623304	609920	568615	533669	525001	497511	579491.4	10.0
Dieldrin	2.50	583011	589597	585908	567630	529926	497058	484527	460924	537322.7	9.5
Endrin	2.50	556190	563376	535837	523329	485027	446796	434116	408669	494167.6	12.0
DDD	2.50	399709	414554	408624	420029	406762	396320	395820	382045	402982.8	3.0
Endosulfan II	2.50	588916	589712	558914	552791	512297	475518	460584	435839	521821.5	11.4
DDT	2.50	543301	524077	502791	496238	470730	454433	448899	433593	484257.7	8.0
Endrin Aldehyde	2.50	548149	549199	529734	515553	472551	429251	419133	393627	482149.6	12.9
Methoxychlor	12.50	261254	263439	245410	234071	205810	178562	165967	0	222073.4	17.7
Endosulfan Sulfate	2.50	652416	660122	655348	615653	564224	522903	508489	479976	582391.4	12.5
Endrin Ketone	2.50	727908	732603	695729	688009	634457	586406	571725	537035	646733.9	11.6
Oxychlordane	1.25	516536	537177	529316	479497	451707	418745	407535	395433	466993.3	12.2
2,4'-DDE	1.25	357666	418454	412948	393075	371490	346232	339766	332112	371467.9	9.0
trans-Nonachlor	1.25	734096	735635	723850	662237	626336	584479	572711	559668	649876.5	11.5
2,4'-DDD	1.25	337742	337718	335905	317006	313222	297393	291716	286424	314640.7	6.7
2,4'-DDT	1.25	415802	422564	423732	395884	385351	365600	361439	355449	390727.7	7.2
cis-Nonachlor	1.25	798706	796662	781884	715830	688621	650266	641599	628640	712776.1	10.0
Mirex	1.25	662749	693252	685349	617258	581086	523953	503916	482083	593705.7	14.1

SURROGATE	X	1.00X	2.00X	4.00X	8.00X	16.00X	32.00X	48.00X	64.00X	MEAN	%RSD
TCX	1.25	313866	317159	296820	338682	317587	277718	280161	247369	298670.2	9.8
DCB	1.25	819514	829862	813992	807869	733256	654100	624719	580035	732918.4	13.7

mu 9/4/15

INITIAL CALIBRATION
METHOD 8081

Lab Name : EMAX Laboratories, Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
LFID & Datetime: RH26020B 08/26/15 19:26 RH26028B 08/26/15 22:08
LFID & Datetime: RH26021B 08/26/15 19:47 RH26029B 08/26/15 22:29
LFID & Datetime: RH26022B 08/26/15 20:07 RH26030B 08/26/15 22:49
LFID & Datetime: RH26023B 08/26/15 20:27 RH26031B 08/26/15 23:09
LFID & Datetime: RH26024B 08/26/15 20:47 RH26032B 08/26/15 23:30
LFID & Datetime: RH26025B 08/26/15 21:07 RH26033B 08/26/15 23:50
LFID & Datetime: RH26026B 08/26/15 21:28 RH26034B 08/27/15 00:10
LFID & Datetime: RH26027B 08/26/15 21:48 RH26035B 08/27/15 00:30
Conc Unit : ppb
Method Name : CPF9H26.met

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	4.00X	8.00X	16.00X	32.00X	48.00X	64.00X	MEAN	%RSD
alpha-BHC	1.25	67075	63590	59598	61645	63131	67378	71570	71910	65737.2	6.9
gamma-BHC	1.25	59850	62262	60409	62925	64488	67608	71642	71118	65037.9	7.1
beta-BHC	1.25	44373	44110	41248	41667	39812	38775	38921	38104	40876.2	5.9
delta-BHC	1.25	68670	65130	60405	61246	62725	67612	72985	73226	66499.8	7.5
Heptachlor	1.25	74774	73279	69204	69605	67754	68747	70983	70605	70619.0	3.4
Aldrin	1.25	83386	77783	73628	76274	75977	78422	82234	81366	78633.8	4.3
Heptachlor Epoxide	1.25	79438	82624	78654	79859	78149	77221	78811	77787	79067.8	2.1
gamma-Chlordane	1.25	92758	89504	80429	82574	79280	79180	81674	81201	83325.0	6.0
alpha-Chlordane	1.25	97129	93074	84613	83798	80370	80248	82254	81234	85339.9	7.4
DDE	2.50	82089	83335	76965	78054	76654	78414	81213	80931	79706.9	3.1
Endosulfan I	1.25	84530	88268	82924	83908	81266	81059	83086	82235	83409.5	2.8
Dieldrin	2.50	77632	80530	77342	79802	78487	81018	83878	83503	80273.9	3.1
Endrin	2.50	75779	78749	75759	76527	74121	74295	75597	74359	75648.1	2.0
DDD	2.50	49284	48995	47899	50260	50493	54271	57951	59213	52295.7	8.3
Endosulfan II	2.50	84231	84527	79857	80623	77132	77048	78283	77365	79883.2	3.8
DDT	2.50	53327	57459	56941	59767	58695	60858	63365	63811	59277.8	5.9
Endrin Aldehyde	2.50	82209	83297	79609	80259	75094	72576	72264	70554	76983.0	6.4
Methoxychlor	12.50	39004	39315	38352	38396	36153	34437	33611	0	37038.4	6.2
Endosulfan Sulfate	2.50	89370	94499	89510	90250	84688	83539	83885	82027	87221.1	4.9
Endrin Ketone	2.50	97553	101926	97918	99346	94875	93838	94239	91985	96460.0	3.4
Oxychlordane	1.25	82583	83061	83000	77226	75521	72871	73248	72945	77556.8	6.0
2,4'-DDE	1.25	60689	59194	59753	55414	54832	53790	54273	54566	56564.0	5.0
trans-Nonachlor	1.25	100915	102332	103866	95834	97068	95728	96411	96942	98637.1	3.3
2,4'-DDD	1.25	42890	43003	44207	41840	42362	42338	43572	44276	43061.1	2.1
2,4'-DDT	1.25	50475	51966	53442	51115	51687	51125	52372	52988	51896.2	1.9
cis-Nonachlor	1.25	112090	110540	110588	102722	102704	101365	103045	104117	105896.5	4.1
Mirex	1.25	107532	100078	104596	97419	94412	88550	86077	83938	95325.3	9.1
SURROGATE	X	1.00X	2.00X	4.00X	8.00X	16.00X	32.00X	48.00X	64.00X	MEAN	%RSD
TCX	1.25	45918	50036	49087	47513	45301	43478	42961	41379	45709.2	6.7
DCB	1.25	130735	133335	129620	129261	119231	110031	104858	99401	119559.0	11.1

pu 9-11-15

INITIAL CALIBRATION
METHOD 8081

Lab Name : EMAX Laboratories, Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Column : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
LFID & Datetime: RH26020A 08/26/15 19:26 RH26028A 08/26/15 22:08
LFID & Datetime: RH26021A 08/26/15 19:47 RH26029A 08/26/15 22:29
LFID & Datetime: RH26022A 08/26/15 20:07 RH26030A 08/26/15 22:49
LFID & Datetime: RH26023A 08/26/15 20:27 RH26031A 08/26/15 23:09
LFID & Datetime: RH26024A 08/26/15 20:47 RH26032A 08/26/15 23:30
LFID & Datetime: RH26025A 08/26/15 21:07 RH26033A 08/26/15 23:50
LFID & Datetime: RH26026A 08/26/15 21:28 RH26034A 08/27/15 00:10
LFID & Datetime: RH26027A 08/26/15 21:48 RH26035A 08/27/15 00:30

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	4.0X	8.0X	16.0X	32.0X	48.0X	64.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
alpha-BHC	2.711	2.717	2.719	2.717	2.712	2.712	2.713	2.720	2.715	2.695	2.735	0.020
gamma-BHC	2.897	2.904	2.905	2.904	2.899	2.899	2.900	2.907	2.902	2.880	2.924	0.022
beta-BHC	2.945	2.952	2.953	2.952	2.947	2.945	2.947	2.953	2.949	2.927	2.971	0.022
delta-BHC	3.053	3.060	3.061	3.061	3.056	3.055	3.056	3.064	3.058	3.037	3.079	0.021
Heptachlor	3.185	3.192	3.193	3.192	3.187	3.187	3.187	3.195	3.190	3.166	3.214	0.024
Aldrin	3.388	3.395	3.396	3.395	3.389	3.389	3.391	3.397	3.392	3.366	3.418	0.026
Heptachlor Epoxide	3.855	3.861	3.864	3.863	3.857	3.857	3.859	3.865	3.860	3.830	3.890	0.030
gamma-Chlordane	3.964	3.971	3.972	3.972	3.967	3.965	3.968	3.975	3.969	3.937	4.001	0.032
alpha-Chlordane	4.088	4.093	4.096	4.096	4.091	4.089	4.092	4.099	4.093	4.061	4.125	0.032
DDE	4.159	4.165	4.168	4.168	4.161	4.161	4.164	4.171	4.165	4.133	4.197	0.032
Endosulfan I	4.225	4.232	4.233	4.233	4.228	4.227	4.229	4.236	4.230	4.195	4.265	0.035
Dieldrin	4.481	4.488	4.491	4.489	4.485	4.484	4.487	4.493	4.487	4.455	4.519	0.032
Endrin	4.761	4.768	4.769	4.769	4.764	4.764	4.765	4.772	4.766	4.736	4.797	0.030
DDD	4.856	4.863	4.864	4.864	4.859	4.857	4.859	4.865	4.861	4.831	4.891	0.030
Endosulfan II	5.060	5.067	5.069	5.068	5.064	5.063	5.065	5.071	5.066	5.037	5.095	0.029
DDT	5.261	5.268	5.269	5.268	5.265	5.263	5.264	5.272	5.266	5.236	5.296	0.030
Endrin Aldehyde	5.732	5.737	5.741	5.739	5.735	5.733	5.736	5.741	5.737	5.705	5.769	0.032
Methoxychlor	6.185	6.192	6.195	6.193	6.189	6.187	6.189	6.196	6.190	6.152	6.228	0.038
Endosulfan Sulfate	6.605	6.612	6.615	6.612	6.609	6.608	6.611	6.617	6.611	6.575	6.647	0.036
Endrin Ketone	7.261	7.267	7.271	7.268	7.265	7.264	7.268	7.272	7.267	7.231	7.303	0.036
Oxychlordane	3.775	3.771	3.776	3.772	3.777	3.769	3.780	3.773	3.774	3.755	3.793	0.019
2,4'-DDE	3.845	3.841	3.847	3.843	3.848	3.840	3.851	3.844	3.845	3.823	3.867	0.022
trans-Nonachlor	4.076	4.072	4.077	4.075	4.079	4.072	4.081	4.075	4.076	4.053	4.099	0.023
2,4'-DDD	4.347	4.343	4.348	4.344	4.348	4.340	4.352	4.344	4.346	4.321	4.371	0.025
2,4'-DDT	4.639	4.636	4.640	4.636	4.641	4.632	4.644	4.637	4.638	4.615	4.661	0.023
cis-Nonachlor	4.811	4.807	4.812	4.808	4.813	4.804	4.816	4.809	4.810	4.788	4.832	0.022
Mirex	6.337	6.336	6.341	6.336	6.341	6.332	6.344	6.336	6.338	6.310	6.366	0.028
SURROGATE	1.0X	2.0X	4.0X	8.0X	16.0X	32.0X	48.0X	64.0X	RT	FROM	TO	WIDTH
TCX	2.389	2.395	2.396	2.395	2.389	2.389	2.389	2.396	2.392	2.372	2.412	0.020
DCB	10.437	10.444	10.444	10.444	10.437	10.436	10.441	10.445	10.441	10.391	10.491	0.050

RW 9-4-15

T36

INITIAL CALIBRATION
METHOD 8081

Lab Name : EMAX Laboratories, Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
LFID & Datetime: RH26020B 08/26/15 19:26 RH26028B 08/26/15 22:08
LFID & Datetime: RH26021B 08/26/15 19:47 RH26029B 08/26/15 22:29
LFID & Datetime: RH26022B 08/26/15 20:07 RH26030B 08/26/15 22:49
LFID & Datetime: RH26023B 08/26/15 20:27 RH26031B 08/26/15 23:09
LFID & Datetime: RH26024B 08/26/15 20:47 RH26032B 08/26/15 23:30
LFID & Datetime: RH26025B 08/26/15 21:07 RH26033B 08/26/15 23:50
LFID & Datetime: RH26026B 08/26/15 21:28 RH26034B 08/27/15 00:10
LFID & Datetime: RH26027B 08/26/15 21:48 RH26035B 08/27/15 00:30

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	4.0X	8.0X	16.0X	32.0X	48.0X	64.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
alpha-BHC	3.019	3.025	3.027	3.025	3.020	3.020	3.020	3.028	3.023	3.005	3.041	0.018
gamma-BHC	3.256	3.261	3.263	3.263	3.257	3.257	3.257	3.265	3.260	3.243	3.277	0.017
beta-BHC	3.303	3.309	3.311	3.311	3.304	3.304	3.304	3.311	3.307	3.290	3.324	0.017
delta-BHC	3.528	3.533	3.535	3.535	3.529	3.529	3.531	3.537	3.532	3.515	3.549	0.017
Heptachlor	3.593	3.599	3.601	3.600	3.595	3.595	3.595	3.603	3.598	3.580	3.616	0.018
Aldrin	3.880	3.885	3.887	3.887	3.881	3.881	3.883	3.889	3.884	3.865	3.903	0.019
Heptachlor Epoxide	4.472	4.477	4.480	4.480	4.475	4.475	4.475	4.481	4.477	4.454	4.500	0.023
gamma-Chlordane	4.705	4.711	4.713	4.713	4.708	4.708	4.708	4.716	4.710	4.689	4.731	0.021
alpha-Chlordane	4.905	4.909	4.912	4.912	4.908	4.907	4.908	4.915	4.910	4.891	4.928	0.018
DDE	5.140	5.144	5.148	5.147	5.143	5.141	5.143	5.149	5.144	5.128	5.160	0.016
Endosulfan I	4.997	5.001	5.004	5.004	5.000	4.999	5.000	5.007	5.002	4.983	5.021	0.019
Dieldrin	5.427	5.431	5.435	5.435	5.429	5.429	5.431	5.437	5.432	5.415	5.449	0.017
Endrin	5.991	5.993	5.997	5.996	5.992	5.992	5.993	6.000	5.994	5.974	6.014	0.020
DDD	6.233	6.236	6.241	6.239	6.235	6.235	6.236	6.241	6.237	6.218	6.256	0.019
Endosulfan II	6.443	6.447	6.451	6.449	6.445	6.445	6.447	6.453	6.447	6.425	6.469	0.022
DDT	7.001	7.004	7.008	7.005	7.001	7.001	7.003	7.009	7.004	6.980	7.028	0.024
Endrin Aldehyde	7.305	7.308	7.313	7.311	7.307	7.307	7.308	7.316	7.309	7.287	7.331	0.022
Methoxychlor	9.420	9.424	9.425	9.423	9.420	9.420	9.420	9.427	9.422	9.394	9.450	0.028
Endosulfan Sulfate	8.156	8.160	8.163	8.163	8.160	8.159	8.160	8.167	8.161	8.137	8.185	0.024
Endrin Ketone	9.872	9.877	9.879	9.879	9.873	9.875	9.876	9.881	9.877	9.847	9.906	0.030
Oxychlordane	4.369	4.365	4.371	4.367	4.372	4.364	4.375	4.368	4.369	4.349	4.389	0.020
2,4'-DDE	4.696	4.692	4.697	4.695	4.699	4.691	4.703	4.695	4.696	4.675	4.717	0.021
trans-Nonachlor	4.832	4.828	4.833	4.831	4.835	4.827	4.839	4.832	4.832	4.814	4.850	0.018
2,4'-DDD	5.485	5.481	5.487	5.484	5.488	5.479	5.492	5.484	5.485	5.467	5.503	0.018
2,4'-DDT	6.077	6.073	6.079	6.075	6.079	6.071	6.084	6.075	6.077	6.058	6.096	0.019
cis-Nonachlor	6.163	6.159	6.165	6.160	6.165	6.157	6.169	6.161	6.162	6.144	6.180	0.018
Mirex	9.689	9.688	9.693	9.688	9.693	9.684	9.696	9.689	9.690	9.666	9.714	0.024
SURROGATE	1.0X	2.0X	4.0X	8.0X	16.0X	32.0X	48.0X	64.0X	RT	FROM	TO	WIDTH
TCX	2.639	2.644	2.645	2.645	2.639	2.639	2.639	2.647	2.642	2.619	2.665	0.023
DCB	12.163	12.169	12.169	12.168	12.161	12.163	12.164	12.169	12.166	12.131	12.201	0.035

RW 9-4-15

PEM PEST BREAKDOWN CALCULATION
METHOD 8081

Lab Name : EMAX LABORATORIES, INC.
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.32UM 30MX0.32MMIDX0.25UM
PEM LFID & Datetime : RH26010A RH26010B 08/26/15 16:05

Base on AREA

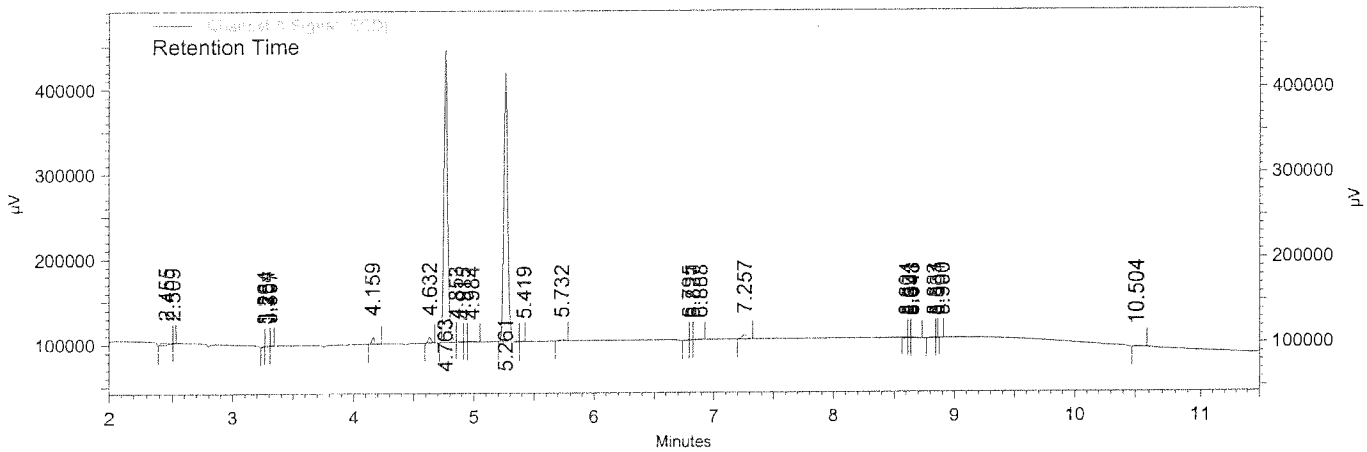
	AREA				% Breakdown				
LFID	DDD	DDE	DDT	TOTAL	DDD	DDE	TOTAL	QL	QCLIMIT
RH26010A	208141.0	778913.0	38714240.0	39701296.0	0.52	1.96	2.49		15
RH26010B	0.0	111062.0	5539419.0	5650481.0	0.00	1.97	1.97		15
LFID	ENDRIN	ENDRIN ALDEHYDE	ENDRIN KETONE	TOTAL	ENDRIN ALDEHYDE	ENDRIN KETONE	TOTAL	QL	QCLIMIT
RH26010A	38831016.0	188608.0	739109.0	39758732.0	0.47	1.86	2.33		15
RH26010B	6853633.0	22766.0	88890.0	6965289.0	0.33	1.28	1.60		15

9-4-15

T30

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: PEF9H2601
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26010.dat
User: ESanto
Acquired: 08/26/15 16:05:56
Printed: 08/28/15 16:25:46



Channel A Signal (ECD) Results

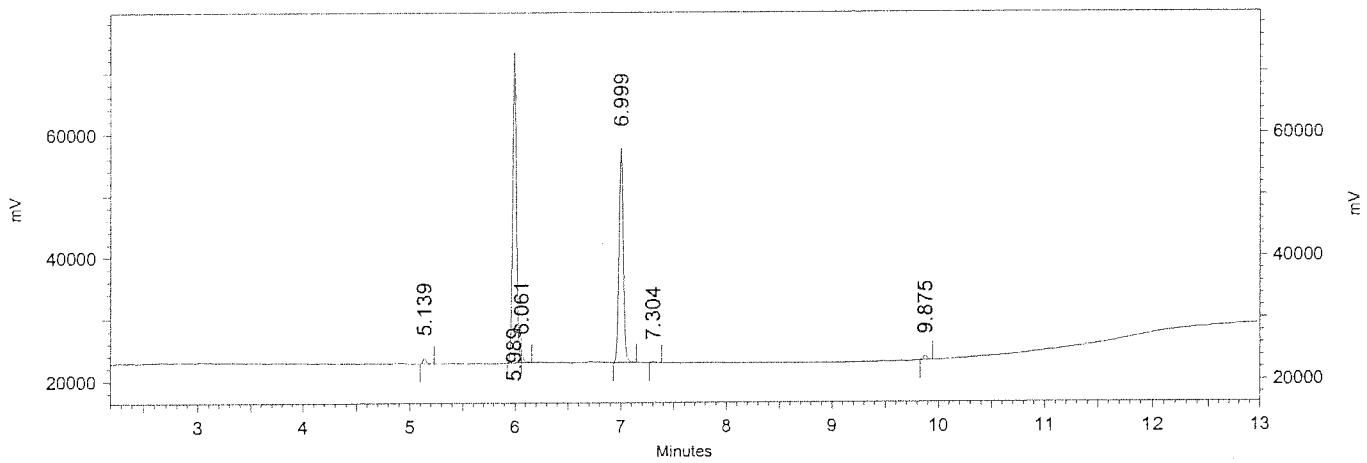
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389				0.000 BDL	
alpha-BHC	2.712				0.000 BDL	
gamma-BHC	2.899				0.000 BDL	
beta-BHC	2.947				0.000 BDL	
delta-BHC	3.056				0.000 BDL	
Heptachlor	3.187				0.000 BDL	
Aldrin	3.389				0.000 BDL	
Heptachlor Epoxide	3.857				0.000 BDL	
gamma-Chlordane	3.967				0.000 BDL	
alpha-Chlordane	4.091				0.000 BDL	
DDE	4.161	4.159	778913	525059.6	1.483	BB
Endosulfan I	4.228				0.000 BDL	
Dieldrin	4.485				0.000 BDL	
Endrin	4.764	4.763	38831018	494167.6	78.579	BS
DDD	4.859	4.853	208141	402982.8	0.517	SS
Endosulfan II	5.064				0.000 BDL	
DDT	5.265	5.261	38714242	484257.7	79.946	BB
Endrin aldehyde	5.735	5.732	188608	482149.6	0.391	SB
Methoxychlor	6.189				0.000 BDL	
Endosulfan Sulfate	6.609				0.000 BDL	
Endrin Ketone	7.265	7.257	739109	646733.9	1.143	BS
DCB	10.437				0.000 BDL	

RW 9-4-15

T39

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: PEF9H2601
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26010.dat
User: ESanto
Acquired: 08/26/15 16:05:56
Printed: 08/28/15 16:25:46



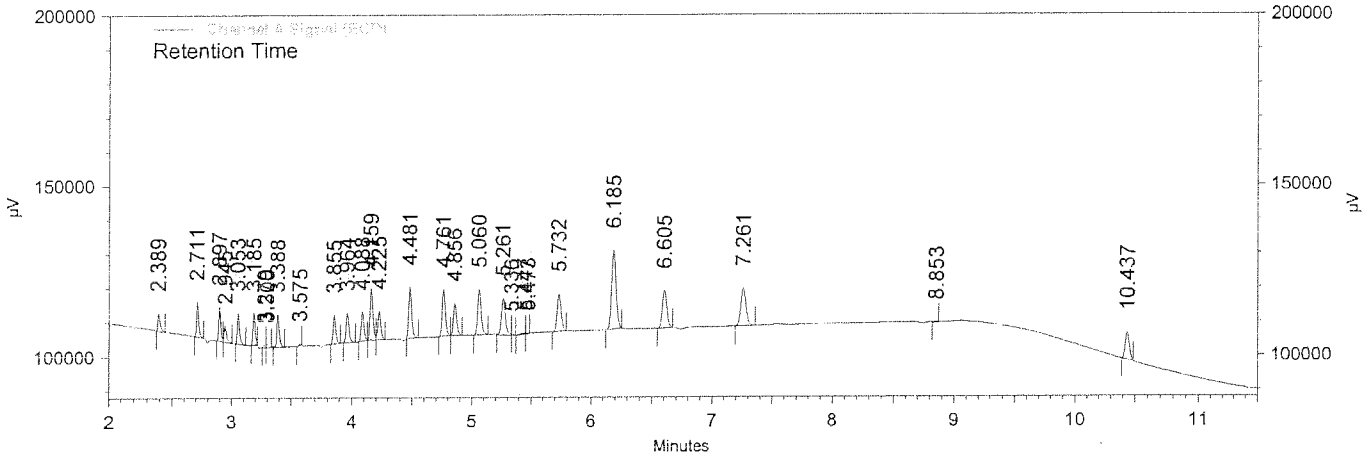
Channel B Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639				0.000 BDL	
alpha-BHC	3.020				0.000 BDL	
gamma-BHC	3.257				0.000 BDL	
beta-BHC	3.304				0.000 BDL	
delta-BHC	3.529				0.000 BDL	
Heptachlor	3.595				0.000 BDL	
Aldrin	3.881				0.000 BDL	
Heptachlor Epoxide	4.475				0.000 BDL	
gamma-Chlordane	4.708				0.000 BDL	
alpha-Chlordane	4.908				0.000 BDL	
Endosulfan I	5.000				0.000 BDL	
DDE	5.143	5.139	111062	79706.9	1.393	BS
Dieldrin	5.429				0.000 BDL	
Endrin	5.992	5.989	6853633	75648.1	90.599	BS
DDD	6.235				0.000 BDL	
Endosulfan II	6.445				0.000 BDL	
DDT	7.001	6.999	5539419	59277.8	93.448	BS
Endrin Aldehyde	7.307	7.304	22766	76982.9	0.296	BS
Endosulfan Sulfate	8.160				0.000 BDL	
Methoxychlor	9.420				0.000 BDL	
Endrin Ketone	9.873	9.875	88890	96460.0	0.922	BB
DCB	12.161				0.000 BDL	

RW 9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2601 (1.25/2.5/12.5ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26020.dat
User: ESanto
Acquired: 08/26/15 19:26:45
Printed: 08/28/15 12:54:10



Channel A Signal (ECD) Results

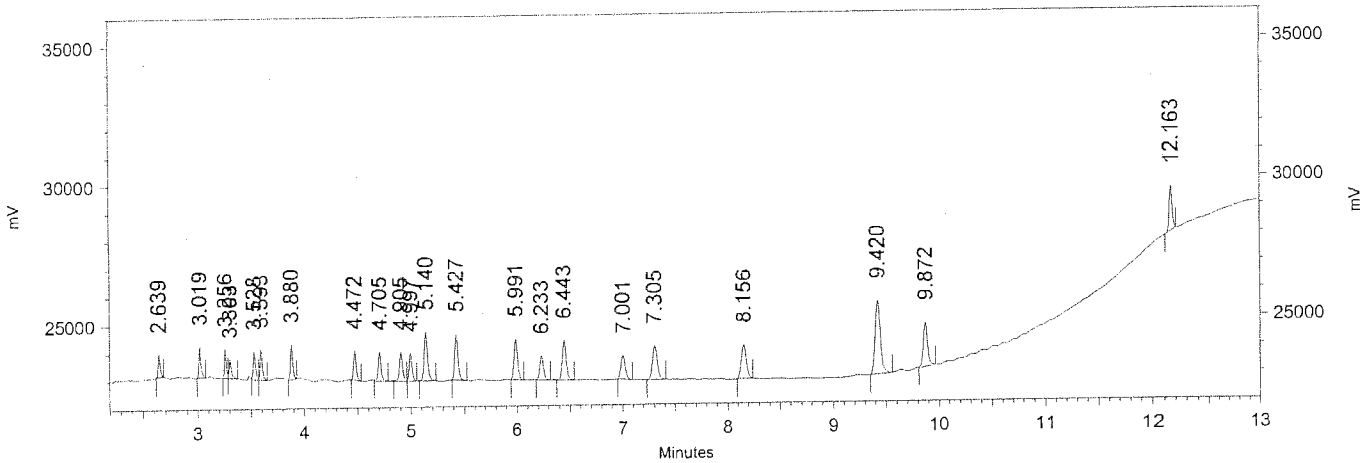
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.389	392332	298670.2	1.250 CAL	BS
alpha-BHC	2.712	2.711	700535	558424.8	1.250 CAL	BI
gamma-BHC	2.899	2.897	688606	520675.9	1.250 CAL	BV
beta-BHC	2.947	2.945	379053	272206.7	1.250 CAL	VS
delta-BHC	3.056	3.053	663415	530749.0	1.250 CAL	BS
Heptachlor	3.187	3.185	675919	523701.5	1.250 CAL	BI
Aldrin	3.389	3.388	756498	545687.8	1.250 CAL	VB
Heptachlor Epoxide	3.857	3.855	709220	521107.9	1.250 CAL	SI
gamma-Chlordane	3.967	3.964	761169	565956.7	1.250 CAL	SB
alpha-Chlordane	4.091	4.088	733685	562918.0	1.250 CAL	SI
DDE	4.161	4.159	1367686	525059.6	2.500 CAL	IV
Endosulfan I	4.228	4.225	764165	579491.4	1.250 CAL	VI
Dieldrin	4.485	4.481	1457528	537322.7	2.500 CAL	IB
Endrin	4.764	4.761	1390474	494167.6	2.500 CAL	BI
DDD	4.859	4.856	999272	402982.8	2.500 CAL	II
Endosulfan II	5.064	5.060	1472291	521821.5	2.500 CAL	BB
DDT	5.265	5.261	1358253	484257.7	2.500 CAL	SS
Endrin aldehyde	5.735	5.732	1370373	482149.6	2.500 CAL	SI
Methoxychlor	6.189	6.185	3265672	222073.4	12.500 CAL	BI
Endosulfan Sulfate	6.609	6.605	1631039	582391.3	2.500 CAL	BI
Endrin Ketone	7.265	7.261	1819769	646733.9	2.500 CAL	BB
DCB	10.437	10.437	1024393	732918.4	1.250 CAL	BI

RW 9-4-15

741

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2601 (1.25/2.5/12.5ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26020.dat
User: ESanto
Acquired: 08/26/15 19:26:45
Printed: 08/28/15 12:54:10



Channel B Signal (ECD) Results

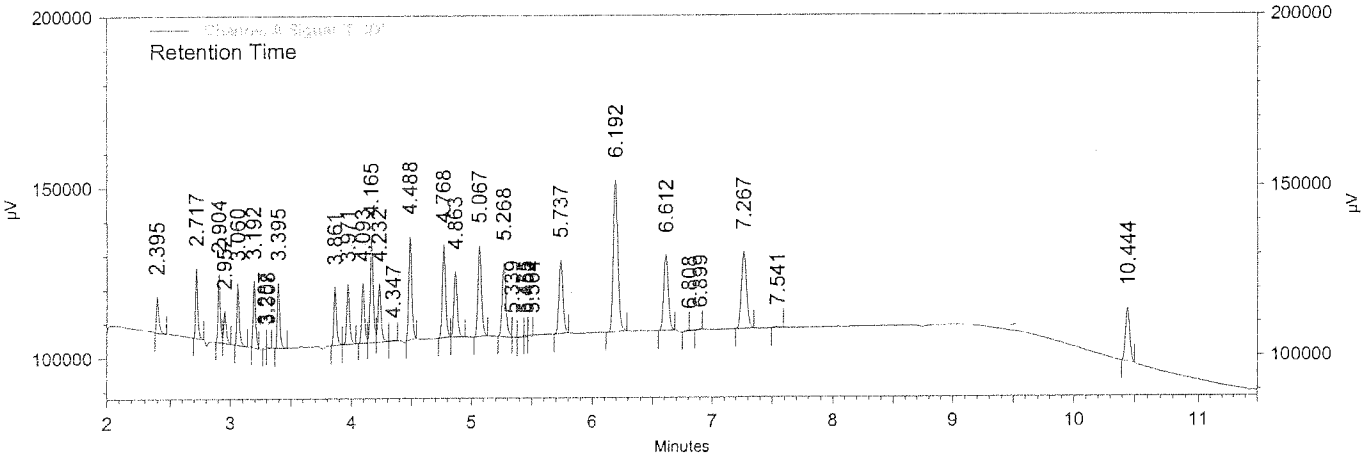
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.639	57397	45709.2	1.250 CAL	SS
alpha-BHC	3.020	3.019	83844	65737.2	1.250 CAL	IB
gamma-BHC	3.257	3.256	74813	65037.9	1.250 CAL	SV
beta-BHC	3.304	3.303	55466	40876.2	1.250 CAL	VB
delta-BHC	3.529	3.528	85838	66499.8	1.250 CAL	SV
Heptachlor	3.595	3.593	93468	70619.0	1.250 CAL	VB
Aldrin	3.881	3.880	104232	78633.8	1.250 CAL	SB
Heptachlor Epoxide	4.475	4.472	99298	79067.8	1.250 CAL	BB
gamma-Chlordane	4.708	4.705	115948	83325.0	1.250 CAL	SV
alpha-Chlordane	4.908	4.905	121411	85339.9	1.250 CAL	SV
Endosulfan I	5.000	4.997	105663	83409.5	1.250 CAL	VV
DDE	5.143	5.140	205223	79706.9	2.500 CAL	SS
Dieldrin	5.429	5.427	194081	80273.9	2.500 CAL	BB
Endrin	5.992	5.991	189447	75648.1	2.500 CAL	BB
DDD	6.235	6.233	123209	52295.7	2.500 CAL	SV
Endosulfan II	6.445	6.443	210578	79883.2	2.500 CAL	SB
DDT	7.001	7.001	133318	59277.8	2.500 CAL	BB
Endrin Aldehyde	7.307	7.305	205523	76982.9	2.500 CAL	SB
Endosulfan Sulfate	8.160	8.156	223424	87221.1	2.500 CAL	BS
Methoxychlor	9.420	9.420	487552	37038.4	12.500 CAL	BB
Endrin Ketone	9.873	9.872	243882	96460.0	2.500 CAL	SB
DCB	12.161	12.163	163419	119559.0	1.250 CAL	SI

AM 9-4-15

T42

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2602 (2.5/5/25ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26021.dat
User: ESanto
Acquired: 08/26/15 19:47:15
Printed: 08/28/15 12:56:00



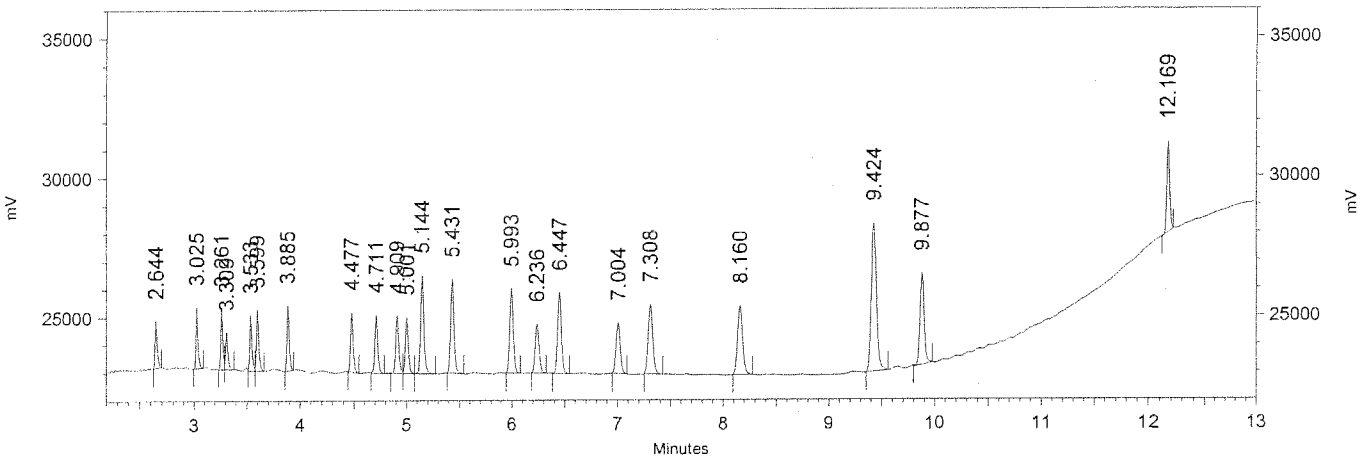
Channel A Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.395	792897	298670.2	2.500 CAL	BS
alpha-BHC	2.712	2.717	1438686	558424.8	2.500 CAL	BI
gamma-BHC	2.899	2.904	1396989	520675.9	2.500 CAL	BV
beta-BHC	2.947	2.952	755787	272206.7	2.500 CAL	VS
delta-BHC	3.056	3.060	1381524	530749.0	2.500 CAL	BS
Heptachlor	3.187	3.192	1490984	523701.5	2.500 CAL	II
Aldrin	3.389	3.395	1486403	545687.8	2.500 CAL	BB
Heptachlor Epoxide	3.857	3.861	1477909	521107.9	2.500 CAL	SV
gamma-Chlordane	3.967	3.971	1601562	565956.7	2.500 CAL	VV
alpha-Chlordane	4.091	4.093	1609591	562918.0	2.500 CAL	SV
DDE	4.161	4.165	2926704	525059.6	5.000 CAL	VV
Endosulfan I	4.228	4.232	1666447	579491.4	2.500 CAL	VV
Dieldrin	4.485	4.488	2947983	537322.7	5.000 CAL	II
Endrin	4.764	4.768	2816882	494167.6	5.000 CAL	BI
DDD	4.859	4.863	2072771	402982.8	5.000 CAL	IB
Endosulfan II	5.064	5.067	2948562	521821.5	5.000 CAL	SI
DDT	5.265	5.268	2620384	484257.7	5.000 CAL	BS
Endrin aldehyde	5.735	5.737	2745993	482149.6	5.000 CAL	SI
Methoxychlor	6.189	6.192	6585985	222073.4	25.000 CAL	SI
Endosulfan Sulfate	6.609	6.612	3300612	582391.3	5.000 CAL	BI
Endrin Ketone	7.265	7.267	3663015	646733.9	5.000 CAL	BI
DCB	10.437	10.444	2074655	732918.4	2.500 CAL	BI

RW
9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2602 (2.5/5/25ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26021.dat
User: ESanto
Acquired: 08/26/15 19:47:15
Printed: 08/28/15 12:56:00



Channel B Signal (ECD) Results

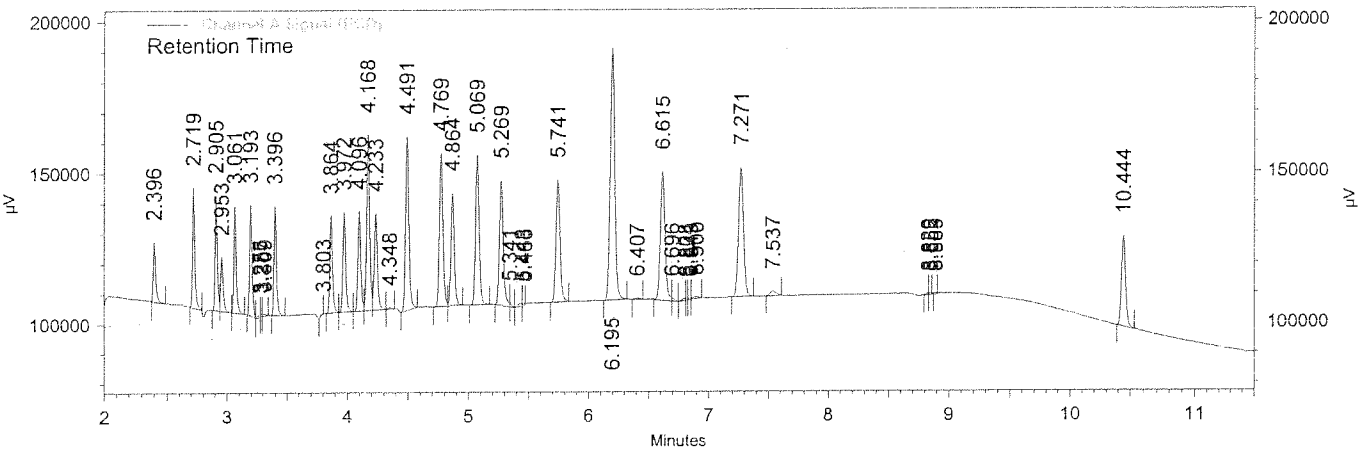
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.644	125090	45709.2	2.500 CAL	SI
alpha-BHC	3.020	3.025	158976	65737.2	2.500 CAL	BB
gamma-BHC	3.257	3.261	155655	65037.9	2.500 CAL	SV
beta-BHC	3.304	3.309	110274	40876.2	2.500 CAL	VB
delta-BHC	3.529	3.533	162825	66499.8	2.500 CAL	SV
Heptachlor	3.595	3.599	183198	70619.0	2.500 CAL	VB
Aldrin	3.881	3.885	194457	78633.8	2.500 CAL	SB
Heptachlor Epoxide	4.475	4.477	206561	79067.8	2.500 CAL	BB
gamma-Chlordane	4.708	4.711	223760	83325.0	2.500 CAL	SV
alpha-Chlordane	4.908	4.909	232684	85339.9	2.500 CAL	SV
Endosulfan I	5.000	5.001	220669	83409.5	2.500 CAL	VV
DDE	5.143	5.144	416675	79706.9	5.000 CAL	VB
Dieldrin	5.429	5.431	402651	80273.9	5.000 CAL	BB
Endrin	5.992	5.993	393744	75648.1	5.000 CAL	BB
DDD	6.235	6.236	244975	52295.7	5.000 CAL	BB
Endosulfan II	6.445	6.447	422633	79883.2	5.000 CAL	SB
DDT	7.001	7.004	287295	59277.8	5.000 CAL	BB
Endrin Aldehyde	7.307	7.308	416484	76982.9	5.000 CAL	BB
Endosulfan Sulfate	8.160	8.160	472494	87221.1	5.000 CAL	BB
Methoxychlor	9.420	9.424	982878	37038.4	25.000 CAL	BB
Endrin Ketone	9.873	9.877	509631	96460.0	5.000 CAL	SB
DCB	12.161	12.169	333338	119559.0	2.500 CAL	SI

9-4-15

744

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2603 (5/10/50ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26022.dat
User: ESanto
Acquired: 08/26/15 20:07:22
Printed: 08/28/15 12:56:36



Channel A Signal (ECD) Results

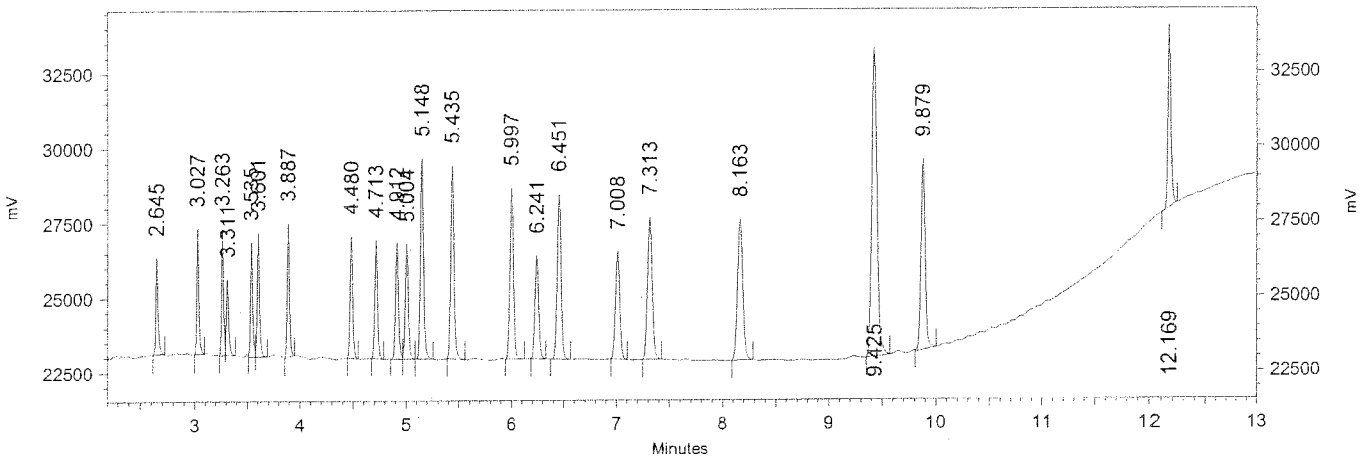
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.396	1484101	298670.2	5.000 CAL	SS
alpha-BHC	2.712	2.719	2926736	558424.8	5.000 CAL	BI
gamma-BHC	2.899	2.905	2704427	520675.9	5.000 CAL	BV
beta-BHC	2.947	2.953	1443870	272206.7	5.000 CAL	VB
delta-BHC	3.056	3.061	2688658	530749.0	5.000 CAL	BS
Heptachlor	3.187	3.193	2873172	523701.5	5.000 CAL	BB
Aldrin	3.389	3.396	2831968	545687.8	5.000 CAL	BB
Heptachlor Epoxide	3.857	3.864	2796943	521107.9	5.000 CAL	SV
gamma-Chlordane	3.967	3.972	2987585	565956.7	5.000 CAL	VV
alpha-Chlordane	4.091	4.096	3002908	562918.0	5.000 CAL	VV
DDE	4.161	4.168	5503900	525059.6	10.000 CAL	VV
Endosulfan I	4.228	4.233	3116520	579491.4	5.000 CAL	VV
Dieldrin	4.485	4.491	5859079	537322.7	10.000 CAL	BS
Endrin	4.764	4.769	5358369	494167.6	10.000 CAL	BV
DDD	4.859	4.864	4086236	402982.8	10.000 CAL	VB
Endosulfan II	5.064	5.069	5589138	521821.5	10.000 CAL	SB
DDT	5.265	5.269	5027907	484257.7	10.000 CAL	BS
Endrin aldehyde	5.735	5.741	5297338	482149.6	10.000 CAL	SS
Methoxychlor	6.189	6.195	12270516	222073.4	50.000 CAL	SS
Endosulfan Sulfate	6.609	6.615	6553477	582391.3	10.000 CAL	SS
Endrin Ketone	7.265	7.271	6957286	646733.9	10.000 CAL	BS
DCB	10.437	10.444	4069958	732918.4	5.000 CAL	BS

9-4-15

745

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2603 (5/10/50ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26022.dat
User: ESanto
Acquired: 08/26/15 20:07:22
Printed: 08/28/15 12:56:36



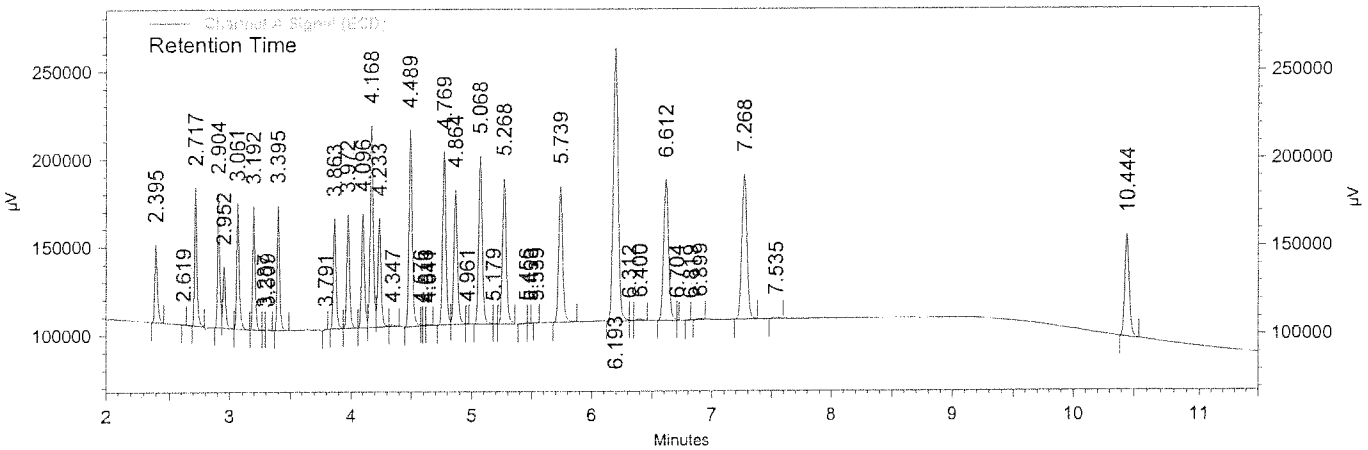
Channel B Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.645	245437	45709.2	5.000 CAL	BS
alpha-BHC	3.020	3.027	297992	65737.2	5.000 CAL	BB
gamma-BHC	3.257	3.263	302044	65037.9	5.000 CAL	SV
beta-BHC	3.304	3.311	206239	40876.2	5.000 CAL	VB
delta-BHC	3.529	3.535	302026	66499.8	5.000 CAL	SV
Heptachlor	3.595	3.601	346021	70619.0	5.000 CAL	VB
Aldrin	3.881	3.887	368142	78633.8	5.000 CAL	SB
Heptachlor Epoxide	4.475	4.480	393269	79067.8	5.000 CAL	BS
gamma-Chlordane	4.708	4.713	402146	83325.0	5.000 CAL	BB
alpha-Chlordane	4.908	4.912	423066	85339.9	5.000 CAL	SV
Endosulfan I	5.000	5.004	414619	83409.5	5.000 CAL	VV
DDE	5.143	5.148	769648	79706.9	10.000 CAL	VS
Dieldrin	5.429	5.435	773417	80273.9	10.000 CAL	BB
Endrin	5.992	5.997	757589	75648.1	10.000 CAL	SB
DDD	6.235	6.241	478987	52295.7	10.000 CAL	BB
Endosulfan II	6.445	6.451	798568	79883.2	10.000 CAL	SB
DDT	7.001	7.008	569409	59277.8	10.000 CAL	BS
Endrin Aldehyde	7.307	7.313	796094	76982.9	10.000 CAL	BB
Endosulfan Sulfate	8.160	8.163	895104	87221.1	10.000 CAL	BB
Methoxychlor	9.420	9.425	1917602	37038.4	50.000 CAL	BB
Endrin Ketone	9.873	9.879	979178	96460.0	10.000 CAL	SB
DCB	12.161	12.169	648102	119559.0	5.000 CAL	SB

ae
9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2604 (10/20/100ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26023.dat
User: ESanto
Acquired: 08/26/15 20:27:30
Printed: 08/28/15 12:56:53



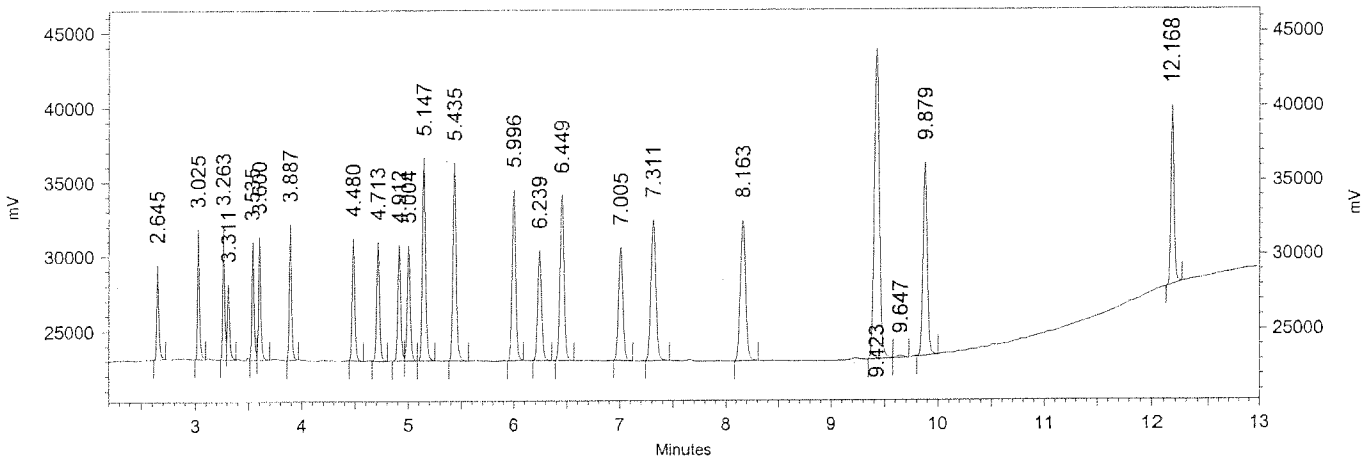
Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.395	3386822	298670.2	10.000 CAL	BI
alpha-BHC	2.712	2.717	5708192	558424.8	10.000 CAL	VI
gamma-BHC	2.899	2.904	5358620	520675.9	10.000 CAL	BV
beta-BHC	2.947	2.952	2831805	272206.7	10.000 CAL	VB
delta-BHC	3.056	3.061	5447094	530749.0	10.000 CAL	BB
Heptachlor	3.187	3.192	5482534	523701.5	10.000 CAL	BV
Aldrin	3.389	3.395	5622128	545687.8	10.000 CAL	BS
Heptachlor Epoxide	3.857	3.863	5451952	521107.9	10.000 CAL	BV
gamma-Chlordane	3.967	3.972	5858676	565956.7	10.000 CAL	VV
alpha-Chlordane	4.091	4.096	5888804	562918.0	10.000 CAL	VV
DDE	4.161	4.168	10952417	525059.6	20.000 CAL	VV
Endosulfan I	4.228	4.233	6099199	579491.4	10.000 CAL	VV
Dieldrin	4.485	4.489	11352601	537322.7	20.000 CAL	BS
Endrin	4.764	4.769	10466586	494167.6	20.000 CAL	BV
DDD	4.859	4.864	8400586	402982.8	20.000 CAL	VV
Endosulfan II	5.064	5.068	11055815	521821.5	20.000 CAL	BS
DDT	5.265	5.268	9924763	484257.7	20.000 CAL	VS
Endrin aldehyde	5.735	5.739	10311053	482149.6	20.000 CAL	SS
Methoxychlor	6.189	6.193	23407128	222073.4	100.000 CAL	SS
Endosulfan Sulfate	6.609	6.612	12313054	582391.3	20.000 CAL	BS
Endrin Ketone	7.265	7.268	13760178	646733.9	20.000 CAL	BS
DCB	10.437	10.444	8078691	732918.4	10.000 CAL	BS

pw 9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2604 (10/20/100ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26023.dat
User: ESanto
Acquired: 08/26/15 20:27:30
Printed: 08/28/15 12:56:53



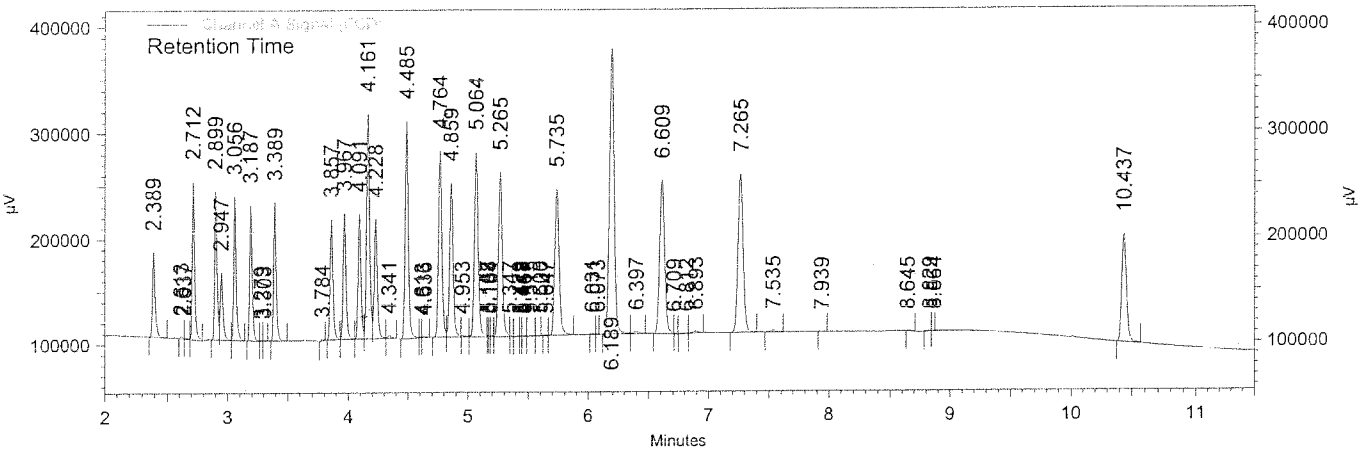
Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.645	475133	45709.2	10.000 CAL	BS
alpha-BHC	3.020	3.025	616450	65737.2	10.000 CAL	BB
gamma-BHC	3.257	3.263	629250	65037.9	10.000 CAL	SV
beta-BHC	3.304	3.311	416674	40876.2	10.000 CAL	VB
delta-BHC	3.529	3.535	612455	66499.8	10.000 CAL	SV
Heptachlor	3.595	3.600	696050	70619.0	10.000 CAL	VB
Aldrin	3.881	3.887	762739	78633.8	10.000 CAL	SB
Heptachlor Epoxide	4.475	4.480	798585	79067.8	10.000 CAL	BB
gamma-Chlordane	4.708	4.713	825737	83325.0	10.000 CAL	SB
alpha-Chlordane	4.908	4.912	837981	85339.9	10.000 CAL	SV
Endosulfan I	5.000	5.004	839083	83409.5	10.000 CAL	VB
DDE	5.143	5.147	1561083	79706.9	20.000 CAL	BS
Dieldrin	5.429	5.435	1596039	80273.9	20.000 CAL	BB
Endrin	5.992	5.996	1530534	75648.1	20.000 CAL	SS
DDD	6.235	6.239	1005200	52295.7	20.000 CAL	BS
Endosulfan II	6.445	6.449	1612469	79883.2	20.000 CAL	BB
DDT	7.001	7.005	1195334	59277.8	20.000 CAL	BB
Endrin Aldehyde	7.307	7.311	1605183	76982.9	20.000 CAL	BB
Endosulfan Sulfate	8.160	8.163	1805009	87221.1	20.000 CAL	BS
Methoxychlor	9.420	9.423	3839557	37038.4	100.000 CAL	BV
Endrin Ketone	9.873	9.879	1986920	96460.0	20.000 CAL	SB
DCB	12.161	12.168	1292610	119559.0	10.000 CAL	SB

RW
9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2605 (20/40/200ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26024.dat
User: ESanto
Acquired: 08/26/15 20:47:36
Printed: 08/28/15 12:57:09



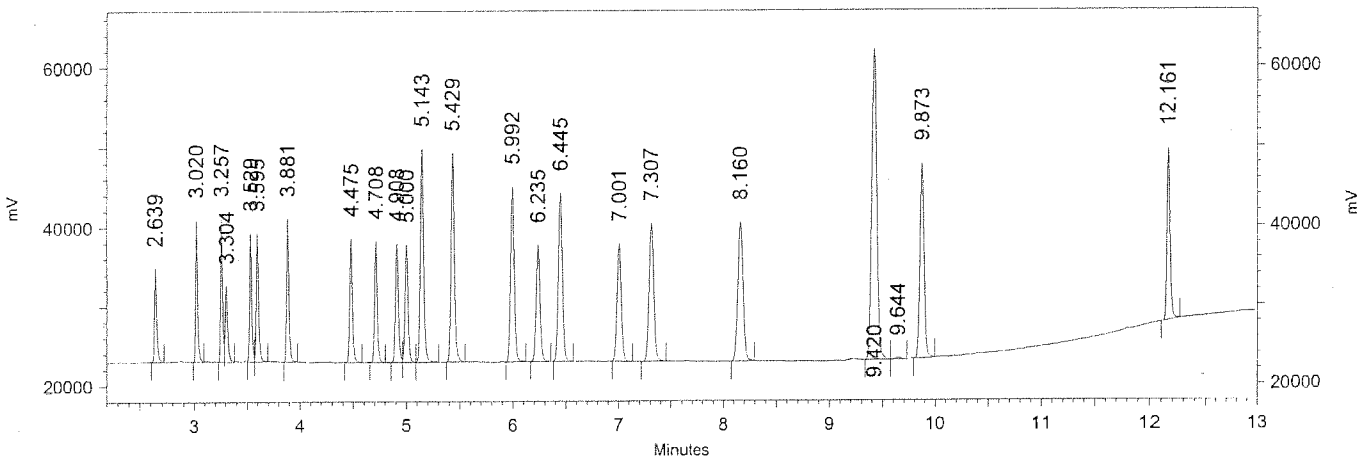
Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.389	6351732	298670.2	20.000 CAL	BS
alpha-BHC	2.712	2.712	11387717	558424.8	20.000 CAL	VI
gamma-BHC	2.899	2.899	10322025	520675.9	20.000 CAL	BV
beta-BHC	2.947	2.947	5325476	272206.7	20.000 CAL	VB
delta-BHC	3.056	3.056	10617925	530749.0	20.000 CAL	BS
Heptachlor	3.187	3.187	10284745	523701.5	20.000 CAL	BV
Aldrin	3.389	3.389	10665799	545687.8	20.000 CAL	BB
Heptachlor Epoxide	3.857	3.857	10176384	521107.9	20.000 CAL	SV
gamma-Chlordane	3.967	3.967	10975874	565956.7	20.000 CAL	VV
alpha-Chlordane	4.091	4.091	10994323	562918.0	20.000 CAL	VV
DDE	4.161	4.161	20583148	525059.6	40.000 CAL	VV
Endosulfan I	4.228	4.228	11372306	579491.4	20.000 CAL	VV
Dieldrin	4.485	4.485	21197047	537322.7	40.000 CAL	BV
Endrin	4.764	4.764	19401081	494167.6	40.000 CAL	BV
DDD	4.859	4.859	16270488	402982.8	40.000 CAL	VV
Endosulfan II	5.064	5.064	20491894	521821.5	40.000 CAL	VS
DDT	5.265	5.265	18829183	484257.7	40.000 CAL	VS
Endrin aldehyde	5.735	5.735	18902033	482149.6	40.000 CAL	VS
Methoxychlor	6.189	6.189	41161951	222073.4	200.000 CAL	VV
Endosulfan Sulfate	6.609	6.609	22568970	582391.3	40.000 CAL	BS
Endrin Ketone	7.265	7.265	25378279	646733.9	40.000 CAL	BB
DCB	10.437	10.437	14665116	732918.4	20.000 CAL	BS

RW 9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2605 (20/40/200ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26024.dat
User: ESanto
Acquired: 08/26/15 20:47:36
Printed: 08/28/15 12:57:09



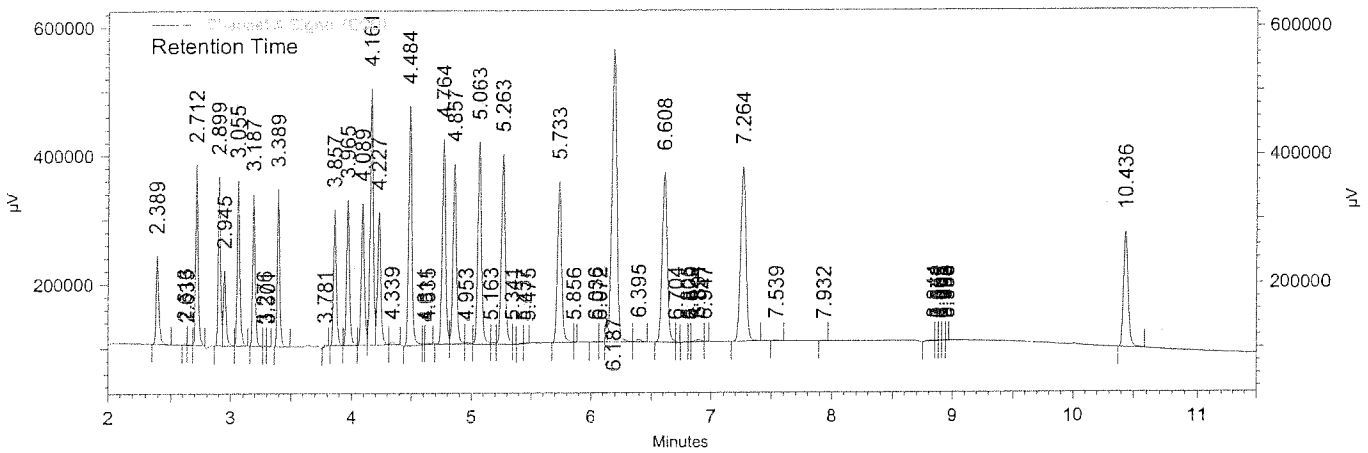
Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.639	906014	45709.2	20.000 CAL	BS
alpha-BHC	3.020	3.020	1262613	65737.2	20.000 CAL	IB
gamma-BHC	3.257	3.257	1289766	65037.9	20.000 CAL	SV
beta-BHC	3.304	3.304	796239	40876.2	20.000 CAL	VB
delta-BHC	3.529	3.529	1254492	66499.8	20.000 CAL	BV
Heptachlor	3.595	3.595	1355078	70619.0	20.000 CAL	VB
Aldrin	3.881	3.881	1519542	78633.8	20.000 CAL	SB
Heptachlor Epoxide	4.475	4.475	1562973	79067.8	20.000 CAL	SV
gamma-Chlordane	4.708	4.708	1585595	83325.0	20.000 CAL	SV
alpha-Chlordane	4.908	4.908	1607393	85339.9	20.000 CAL	SV
Endosulfan I	5.000	5.000	1625311	83409.5	20.000 CAL	VV
DDE	5.143	5.143	3066142	79706.9	40.000 CAL	VB
Dieldrin	5.429	5.429	3139466	80273.9	40.000 CAL	BS
Endrin	5.992	5.992	2964830	75648.1	40.000 CAL	BV
DDD	6.235	6.235	2019723	52295.7	40.000 CAL	SS
Endosulfan II	6.445	6.445	3085275	79883.2	40.000 CAL	BB
DDT	7.001	7.001	2347808	59277.8	40.000 CAL	BB
Endrin Aldehyde	7.307	7.307	3003759	76982.9	40.000 CAL	SB
Endosulfan Sulfate	8.160	8.160	3387526	87221.1	40.000 CAL	BS
Methoxychlor	9.420	9.420	7230600	37038.4	200.000 CAL	BV
Endrin Ketone	9.873	9.873	3794987	96460.0	40.000 CAL	SB
DCB	12.161	12.161	2384618	119559.0	20.000 CAL	IB

9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2606 (40/80/400ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26025.dat
User: ESanto
Acquired: 08/26/15 21:07:58
Printed: 08/28/15 12:57:28



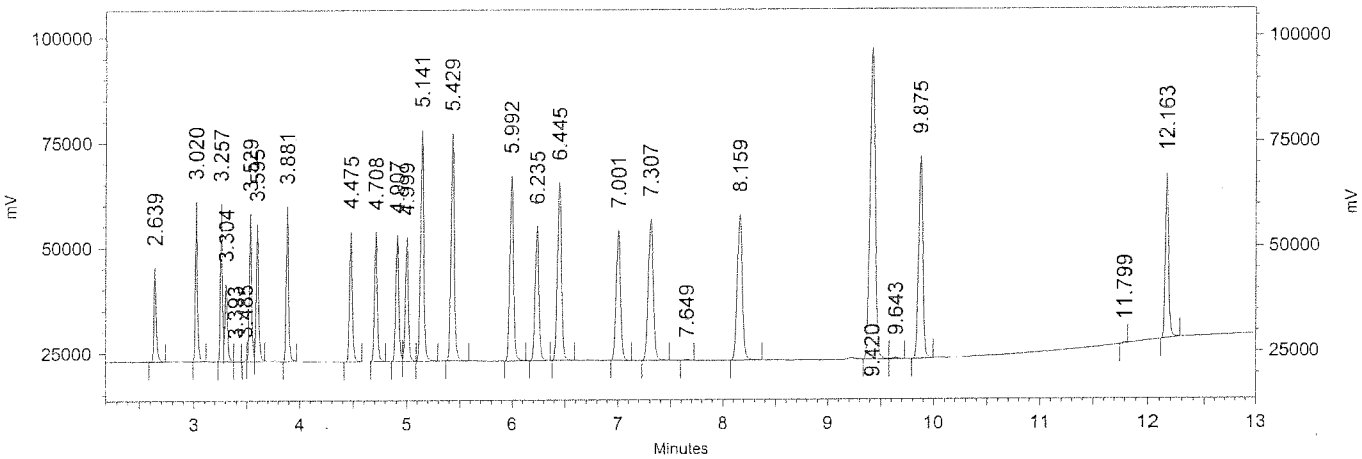
Channel A Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.389	11108726	298670.2	40.000 CAL	BS
alpha-BHC	2.712	2.712	21463628	558424.8	40.000 CAL	VI
gamma-BHC	2.899	2.899	19791829	520675.9	40.000 CAL	BV
beta-BHC	2.947	2.945	9930167	272206.7	40.000 CAL	VB
delta-BHC	3.056	3.055	20605155	530749.0	40.000 CAL	BS
Heptachlor	3.187	3.187	19245526	523701.5	40.000 CAL	BV
Aldrin	3.389	3.389	20340767	545687.8	40.000 CAL	BB
Heptachlor Epoxide	3.857	3.857	19070187	521107.9	40.000 CAL	BV
gamma-Chlordane	3.967	3.965	20876060	565956.7	40.000 CAL	VB
alpha-Chlordane	4.091	4.089	20813217	562918.0	40.000 CAL	BV
DDE	4.161	4.161	39295135	525059.6	80.000 CAL	VV
Endosulfan I	4.228	4.227	21346743	579491.4	40.000 CAL	VV
Dieldrin	4.485	4.484	39764653	537322.7	80.000 CAL	BV
Endrin	4.764	4.764	35743674	494167.6	80.000 CAL	BV
DDD	4.859	4.857	31705572	402982.8	80.000 CAL	VV
Endosulfan II	5.064	5.063	38041437	521821.5	80.000 CAL	VS
DDT	5.265	5.263	36354672	484257.7	80.000 CAL	VS
Endrin aldehyde	5.735	5.733	34340085	482149.6	80.000 CAL	BS
Methoxychlor	6.189	6.187	71424959	222073.4	400.000 CAL	VV
Endosulfan Sulfate	6.609	6.608	41832240	582391.3	80.000 CAL	BS
Endrin Ketone	7.265	7.264	46912500	646733.9	80.000 CAL	BB
DCB	10.437	10.436	26163984	732918.4	40.000 CAL	BI

9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2606 (40/80/400ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26025.dat
User: ESanto
Acquired: 08/26/15 21:07:58
Printed: 08/28/15 12:57:28



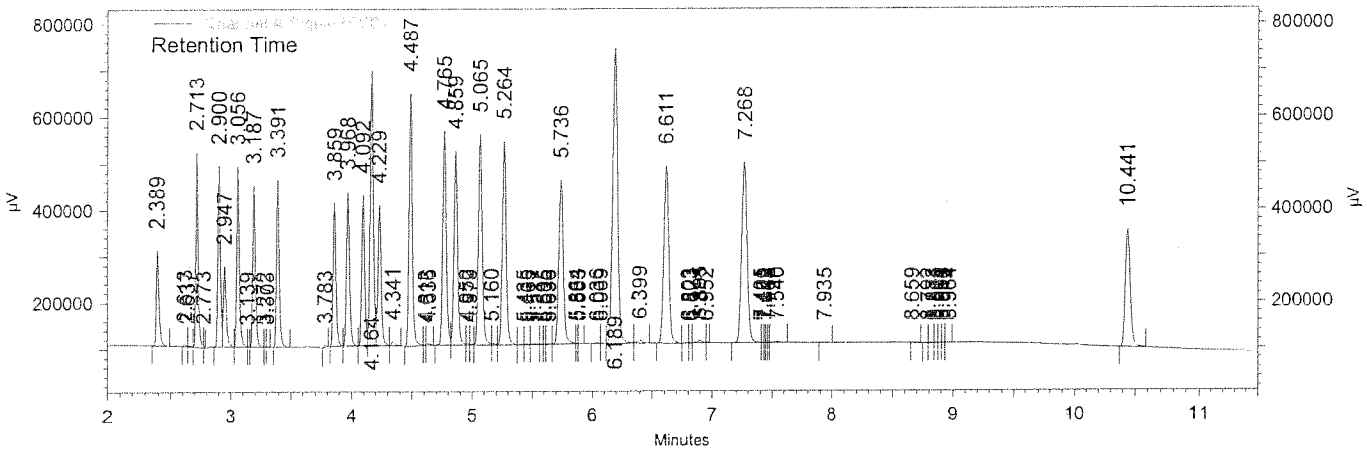
Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.639	1739122	45709.2	40.000 CAL	SB
alpha-BHC	3.020	3.020	2695118	65737.2	40.000 CAL	IB
gamma-BHC	3.257	3.257	2704333	65037.9	40.000 CAL	SV
beta-BHC	3.304	3.304	1550982	40876.2	40.000 CAL	VV
delta-BHC	3.529	3.529	2704474	66499.8	40.000 CAL	VV
Heptachlor	3.595	3.595	2749888	70619.0	40.000 CAL	VS
Aldrin	3.881	3.881	3136899	78633.8	40.000 CAL	SS
Heptachlor Epoxide	4.475	4.475	3088837	79067.8	40.000 CAL	SB
gamma-Chlordane	4.708	4.708	3167188	83325.0	40.000 CAL	SB
alpha-Chlordane	4.908	4.907	3209907	85339.9	40.000 CAL	SV
Endosulfan I	5.000	4.999	3242378	83409.5	40.000 CAL	VV
DDE	5.143	5.141	6273144	79706.9	80.000 CAL	VS
Dieldrin	5.429	5.429	6481415	80273.9	80.000 CAL	BB
Endrin	5.992	5.992	5943598	75648.1	80.000 CAL	BV
DDD	6.235	6.235	4341691	52295.7	80.000 CAL	SB
Endosulfan II	6.445	6.445	6163823	79883.2	80.000 CAL	BB
DDT	7.001	7.001	4868608	59277.8	80.000 CAL	BS
Endrin Aldehyde	7.307	7.307	5806096	76982.9	80.000 CAL	BB
Endosulfan Sulfate	8.160	8.159	6683132	87221.1	80.000 CAL	BB
Methoxychlor	9.420	9.420	13774876	37038.4	400.000 CAL	BV
Endrin Ketone	9.873	9.875	7507066	96460.0	80.000 CAL	SB
DCB	12.161	12.163	4401233	119559.0	40.000 CAL	SI

9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2607 (60/120/600ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26026.dat
User: ESanto
Acquired: 08/26/15 21:28:15
Printed: 08/28/15 12:57:47



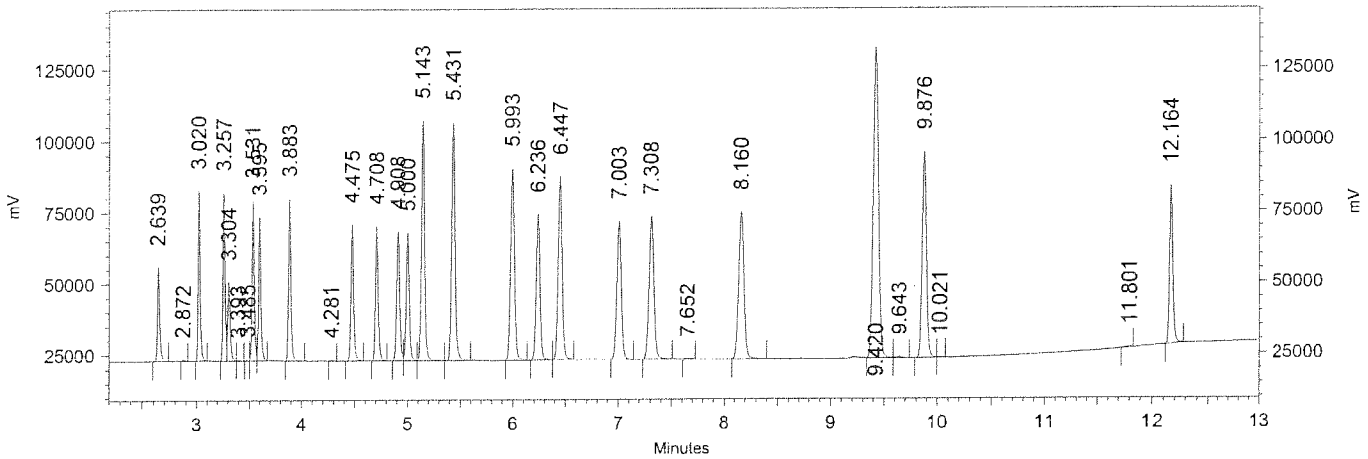
Channel A Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.389	16809666	298670.2	60.000 CAL	BS
alpha-BHC	2.712	2.713	33064044	558424.8	60.000 CAL	VS
gamma-BHC	2.899	2.900	29763333	520675.9	60.000 CAL	BV
beta-BHC	2.947	2.947	14934460	272206.7	60.000 CAL	VV
delta-BHC	3.056	3.056	31659146	530749.0	60.000 CAL	VS
Heptachlor	3.187	3.187	28833051	523701.5	60.000 CAL	VS
Aldrin	3.389	3.391	30564668	545687.8	60.000 CAL	BS
Heptachlor Epoxide	3.857	3.859	28307750	521107.9	60.000 CAL	SV
gamma-Chlordane	3.967	3.968	31359743	565956.7	60.000 CAL	VB
alpha-Chlordane	4.091	4.092	31087279	562918.0	60.000 CAL	BV
DDE	4.161	4.164	58957603	525059.6	120.000 CAL	VV
Endosulfan I	4.228	4.229	31500089	579491.4	60.000 CAL	VV
Dieldrin	4.485	4.487	58143296	537322.7	120.000 CAL	BV
Endrin	4.764	4.765	52093910	494167.6	120.000 CAL	BV
DDD	4.859	4.859	47498418	402982.8	120.000 CAL	VS
Endosulfan II	5.064	5.065	55270124	521821.5	120.000 CAL	VS
DDT	5.265	5.264	53867898	484257.7	120.000 CAL	VB
Endrin aldehyde	5.735	5.736	50295945	482149.6	120.000 CAL	VS
Methoxychlor	6.189	6.189	99580113	222073.4	600.000 CAL	VV
Endosulfan Sulfate	6.609	6.611	61018708	582391.3	120.000 CAL	BB
Endrin Ketone	7.265	7.268	68607017	646733.9	120.000 CAL	BS
DCB	10.437	10.441	37483166	732918.4	60.000 CAL	BI

RW 9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2607 (60/120/600ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26026.dat
User: ESanto
Acquired: 08/26/15 21:28:15
Printed: 08/28/15 12:57:47



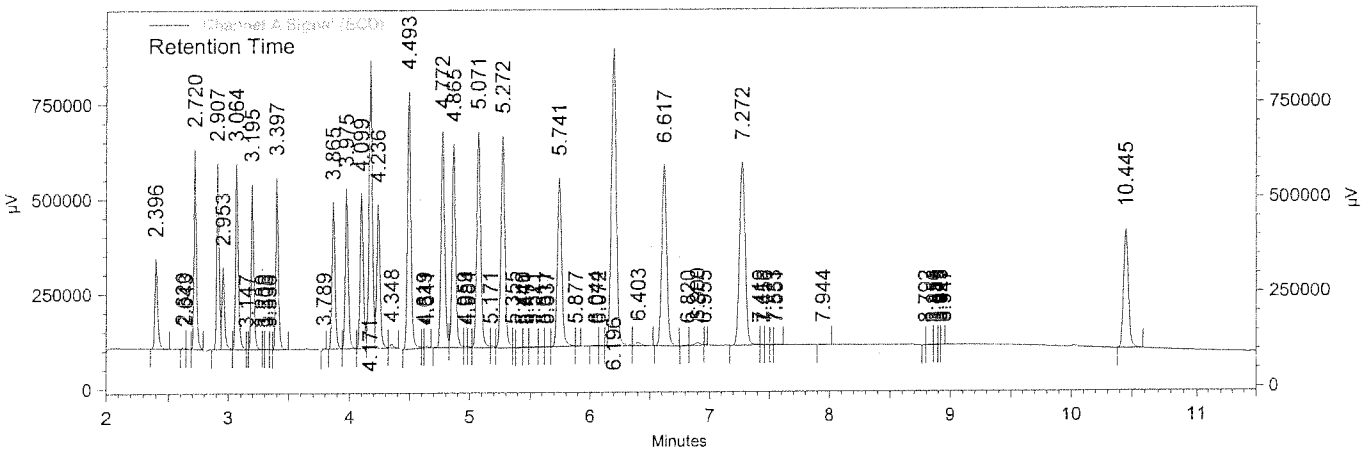
Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.639	2577687	45709.2	60.000 CAL	SB
alpha-BHC	3.020	3.020	4294210	65737.2	60.000 CAL	IS
gamma-BHC	3.257	3.257	4298516	65037.9	60.000 CAL	SV
beta-BHC	3.304	3.304	2335269	40876.2	60.000 CAL	VV
delta-BHC	3.529	3.531	4379077	66499.8	60.000 CAL	VV
Heptachlor	3.595	3.595	4258950	70619.0	60.000 CAL	VS
Aldrin	3.881	3.883	4934021	78633.8	60.000 CAL	BI
Heptachlor Epoxide	4.475	4.475	4728666	79067.8	60.000 CAL	SB
gamma-Chlordane	4.708	4.708	4900468	83325.0	60.000 CAL	SB
alpha-Chlordane	4.908	4.908	4935243	85339.9	60.000 CAL	BV
Endosulfan I	5.000	5.000	4985137	83409.5	60.000 CAL	VV
DDE	5.143	5.143	9745579	79706.9	120.000 CAL	VB
Dieldrin	5.429	5.431	10065305	80273.9	120.000 CAL	BB
Endrin	5.992	5.993	9071616	75648.1	120.000 CAL	BV
DDD	6.235	6.236	6954084	52295.7	120.000 CAL	SB
Endosulfan II	6.445	6.447	9393946	79883.2	120.000 CAL	BS
DDT	7.001	7.003	7603837	59277.8	120.000 CAL	BB
Endrin Aldehyde	7.307	7.308	8671735	76982.9	120.000 CAL	BB
Endosulfan Sulfate	8.160	8.160	10066193	87221.1	120.000 CAL	BB
Methoxychlor	9.420	9.420	20166884	37038.4	600.000 CAL	BV
Endrin Ketone	9.873	9.876	11308637	96460.0	120.000 CAL	SV
DCB	12.161	12.164	6291450	119559.0	60.000 CAL	SI

RW
9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2608 (80/160/800ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26027.dat
User: ESanto
Acquired: 08/26/15 21:48:37
Printed: 08/28/15 12:58:05



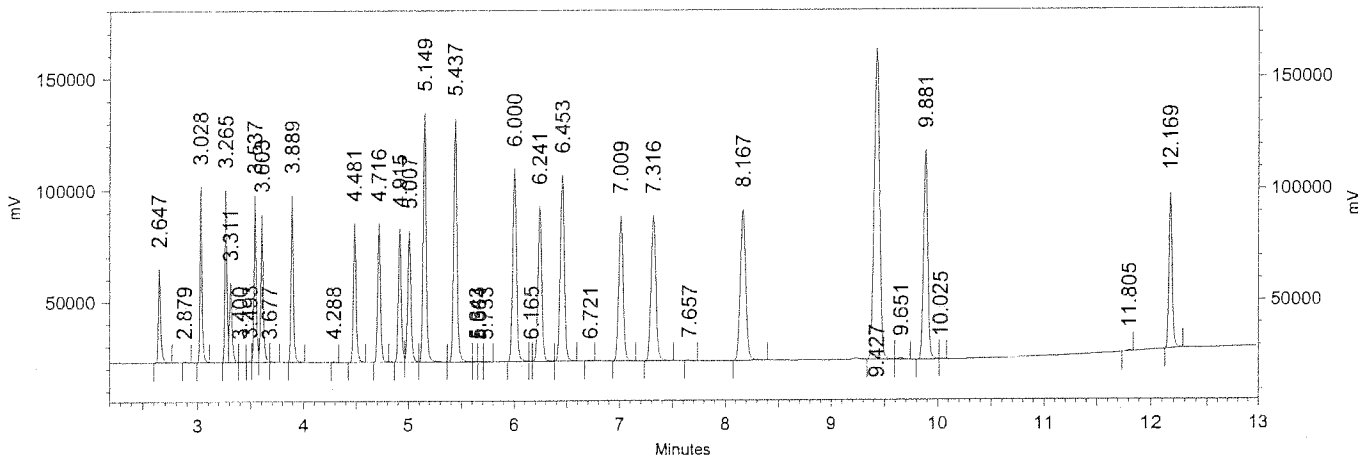
Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.396	19789525	298670.2	80.000 CAL	BS
alpha-BHC	2.712	2.720	41462824	558424.8	80.000 CAL	VI
gamma-BHC	2.899	2.907	37762158	520675.9	80.000 CAL	SV
beta-BHC	2.947	2.953	18936490	272206.7	80.000 CAL	VV
delta-BHC	3.056	3.064	40522530	530749.0	80.000 CAL	VS
Heptachlor	3.187	3.195	36293539	523701.5	80.000 CAL	VS
Aldrin	3.389	3.397	38873279	545687.8	80.000 CAL	BS
Heptachlor Epoxide	3.857	3.865	35869603	521107.9	80.000 CAL	BV
gamma-Chlordane	3.967	3.975	40108120	565956.7	80.000 CAL	VV
alpha-Chlordane	4.091	4.099	39594371	562918.0	80.000 CAL	VV
DDE	4.161	4.171	75675094	525059.6	160.000 CAL	VV
Endosulfan I	4.228	4.236	39800872	579491.4	80.000 CAL	VV
Dieldrin	4.485	4.493	73747790	537322.7	160.000 CAL	BV
Endrin	4.764	4.772	65387097	494167.6	160.000 CAL	BV
DDD	4.859	4.865	61127118	402982.8	160.000 CAL	VS
Endosulfan II	5.064	5.071	69734237	521821.5	160.000 CAL	VS
DDT	5.265	5.272	69374857	484257.7	160.000 CAL	VS
Endrin aldehyde	5.735	5.741	62980394	482149.6	160.000 CAL	VS
Methoxychlor	6.189	6.196	122393537	222073.4	0.000 CAL	VV
Endosulfan Sulfate	6.609	6.617	76796138	582391.3	160.000 CAL	BB
Endrin Ketone	7.265	7.272	85925538	646733.9	160.000 CAL	SS
DCB	10.437	10.445	46402805	732918.4	80.000 CAL	BI

9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CPF9H2608 (80/160/800ppb PEST ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26027.dat
User: ESanto
Acquired: 08/26/15 21:48:37
Printed: 08/28/15 12:58:05



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.647	3310299	45709.2	80.000 CAL	SB
alpha-BHC	3.020	3.028	5752764	65737.2	80.000 CAL	BS
gamma-BHC	3.257	3.265	5689475	65037.9	80.000 CAL	SV
beta-BHC	3.304	3.311	3048346	40876.2	80.000 CAL	VV
delta-BHC	3.529	3.537	5858094	66499.8	80.000 CAL	VV
Heptachlor	3.595	3.603	5648430	70619.0	80.000 CAL	VS
Aldrin	3.881	3.889	6509315	78633.8	80.000 CAL	BS
Heptachlor Epoxide	4.475	4.481	6222948	79067.8	80.000 CAL	SB
gamma-Chlordane	4.708	4.716	6496049	83325.0	80.000 CAL	SV
alpha-Chlordane	4.908	4.915	6498715	85339.9	80.000 CAL	VV
Endosulfan I	5.000	5.007	6578838	83409.5	80.000 CAL	VV
DDE	5.143	5.149	12948989	79706.9	160.000 CAL	VV
Dieldrin	5.429	5.437	13360473	80273.9	160.000 CAL	VV
Endrin	5.992	6.000	11897402	75648.1	160.000 CAL	BV
DDD	6.235	6.241	9474132	52295.7	160.000 CAL	SV
Endosulfan II	6.445	6.453	12378441	79883.2	160.000 CAL	VS
DDT	7.001	7.009	10209733	59277.8	160.000 CAL	BS
Endrin Aldehyde	7.307	7.316	11288705	76982.9	160.000 CAL	BB
Endosulfan Sulfate	8.160	8.167	13124348	87221.1	160.000 CAL	BB
Methoxychlor	9.420	9.427	25847597	37038.4	0.000 CAL	BV
Endrin Ketone	9.873	9.881	14717670	96460.0	160.000 CAL	SV
DCB	12.161	12.169	7952105	119559.0	80.000 CAL	SI

9-4-15

INITIAL CALIBRATION
METHOD EPA 8081

Lab Name : EMAX Laboratories, Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Column : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
LFID & Datetime: RH26011A 08/26/15 16:26
LFID & Datetime: RH26012A 08/26/15 16:46
LFID & Datetime: RH26013A 08/26/15 17:06
LFID & Datetime: RH26014A 08/26/15 17:26
LFID & Datetime: RH26015A 08/26/15 17:46
LFID & Datetime: RH26016A 08/26/15 18:06
LFID & Datetime: RH26017A 08/26/15 18:26
LFID & Datetime: RH26018A 08/26/15 18:46
Conc Unit : ppb
Method Name : TOF9H26.met

COMPOUND	CONC X	CALIBRATION FACTORS (AREA or HEIGHT)/UNIT 1.00X	2.00X	5.00X	10.00X	15.00X	20.00X	30.00X	40.00X	MEAN	%RSD
Toxaphene	50.00	492417	549509	485468	432490	427234	419016	405135	399468	451342.2	11.6

9-4-15

TST

INITIAL CALIBRATION
METHOD EPA 8081

Lab Name : EMAX Laboratories, Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Column : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
LFID & Datetime: RH26011B 08/26/15 16:26
LFID & Datetime: RH26012B 08/26/15 16:46
LFID & Datetime: RH26013B 08/26/15 17:06
LFID & Datetime: RH26014B 08/26/15 17:26
LFID & Datetime: RH26015B 08/26/15 17:46
LFID & Datetime: RH26016B 08/26/15 18:06
LFID & Datetime: RH26017B 08/26/15 18:26
LFID & Datetime: RH26018B 08/26/15 18:46
Conc Unit : ppb
Method Name : TOF9H26.met

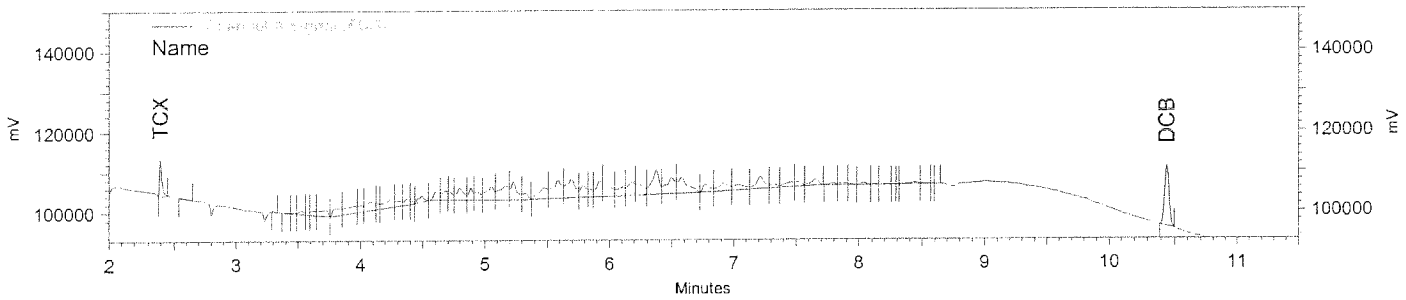
COMPOUND	CONC X	CALIBRATION FACTORS (AREA or HEIGHT)/UNIT 1.00X	2.00X	5.00X	10.00X	15.00X	20.00X	30.00X	40.00X	MEAN	%RSD
Toxaphene	50.00	37722	35199	35581	37239	38685	40316	40017	40222	38122.8	5.3

9-4-15

758

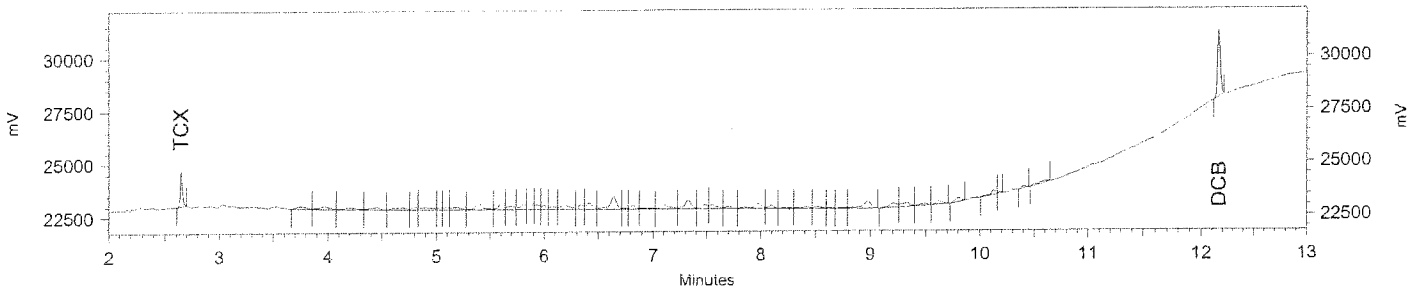
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TOF9H2601 (50/2.5ppb TOXA ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26011.dat
User: ESanto
Acquired: 08/26/15 16:26:00
Printed: 08/28/15 16:36:55



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.395	663485	285578.2	2.50 CAL	BI
DCB	10.439	10.441	1921779	700625.7	2.50 CAL	BI
Toxaphene			24620832	451342.2	50.00 CAL	



Channel B Signal (ECD) Results

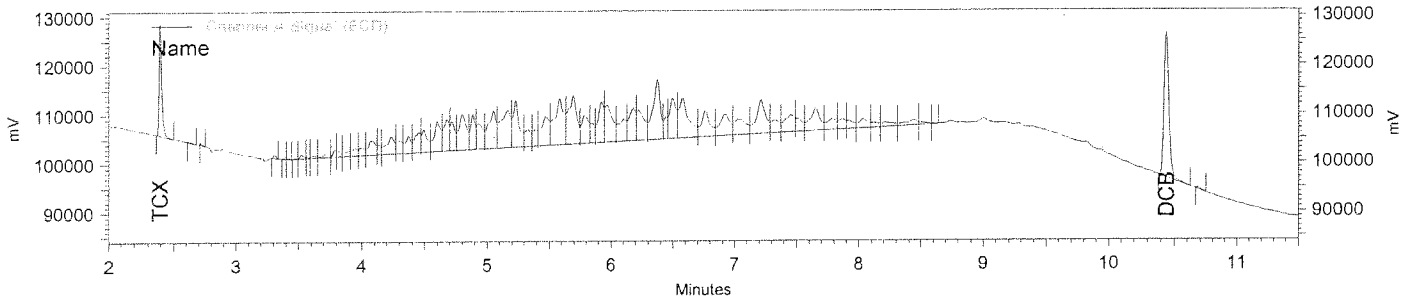
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.644	121794	44257.0	2.50 CAL	II
DCB	12.208	12.165	323042	113507.8	2.50 CAL	BI
Toxaphene			1886117	38122.8	50.00 CAL	

9-4-15

759

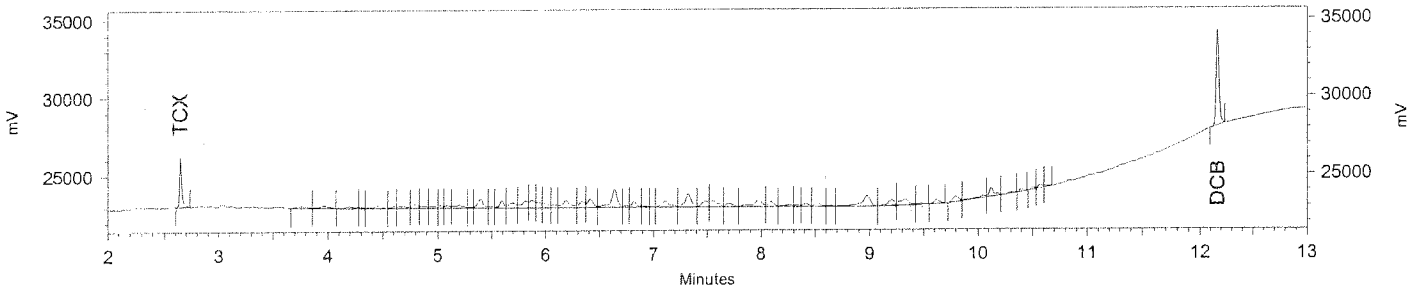
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TOF9H2602 (100/5ppb TOXA ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26012.dat
User: ESanto
Acquired: 08/26/15 16:46:01
Printed: 08/28/15 16:37:19



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.395	1727225	285578.2	5.00 CAL	BI
DCB	10.439	10.441	4210147	700625.7	5.00 CAL	BI
Toxaphene			54950914	451342.2	100.00 CAL	



Channel B Signal (ECD) Results

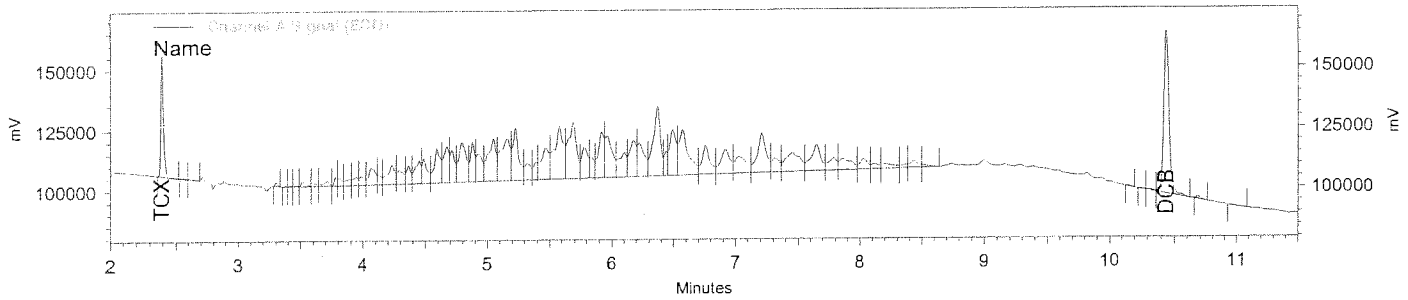
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.644	246579	44257.0	5.00 CAL	II
DCB	12.208	12.165	650763	113507.8	5.00 CAL	BB
Toxaphene			3519942	38122.8	100.00 CAL	

RW 9-4-15

760

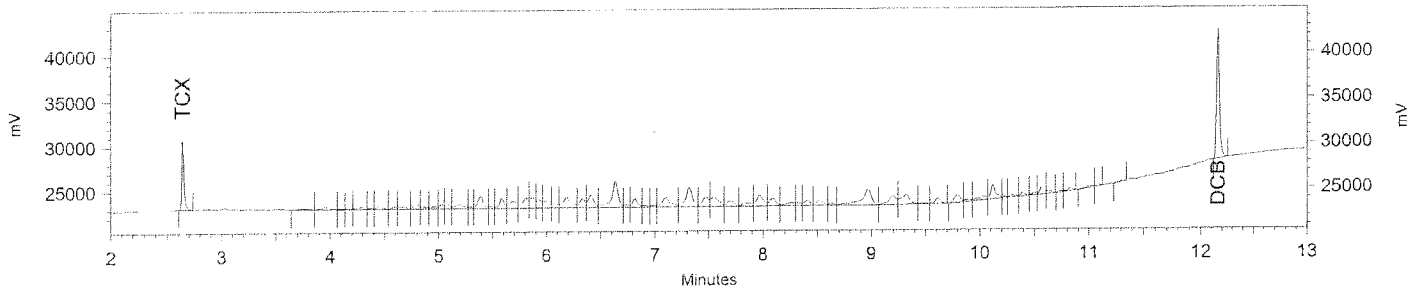
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TOF9H2603 (250/12.5ppb TOXA ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26013.dat
User: ESanto
Acquired: 08/26/15 17:06:00
Printed: 08/28/15 16:37:36



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.389	3860757	285578.2	12.50 CAL	BI
DCB	10.439	10.437	9834575	700625.7	12.50 CAL	VB
Toxaphene			121366907	451342.2	250.00 CAL	



Channel B Signal (ECD) Results

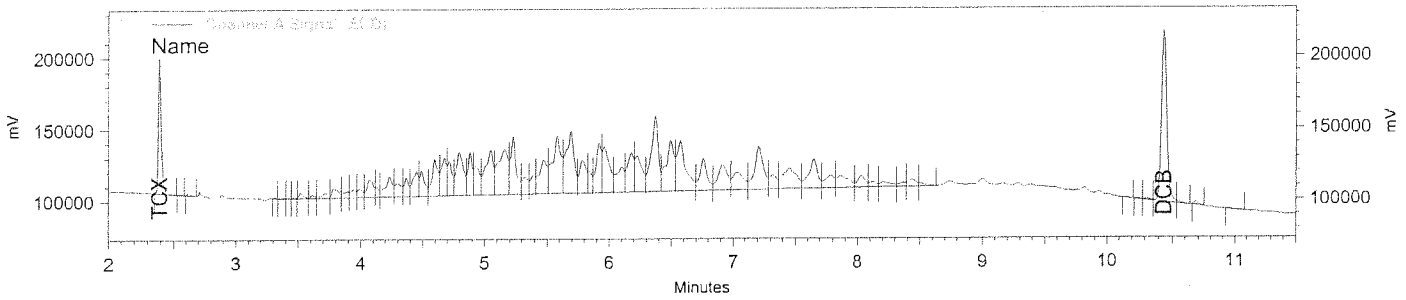
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.639	584796	44257.0	12.50 CAL	II
DCB	12.208	12.163	1551188	113507.8	12.50 CAL	IB
Toxaphene			8895372	38122.8	250.00 CAL	

9-4-15

T61

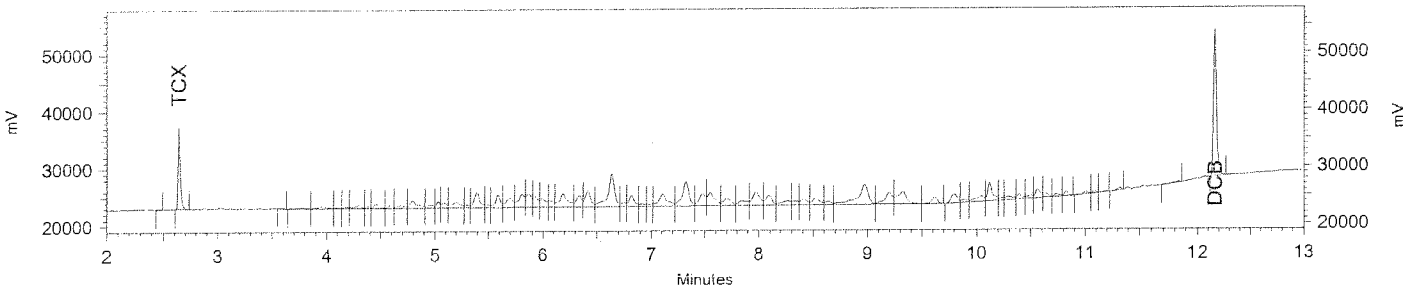
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TOF9H2604 (500/25ppb TOXA ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26014.dat
User: ESanto
Acquired: 08/26/15 17:26:04
Printed: 08/28/15 16:37:52



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.391	7547790	285578.2	25.00 CAL	BI
DCB	10.439	10.436	17690384	700625.7	25.00 CAL	VV
Toxaphene			216244907	451342.2	500.00 CAL	



Channel B Signal (ECD) Results

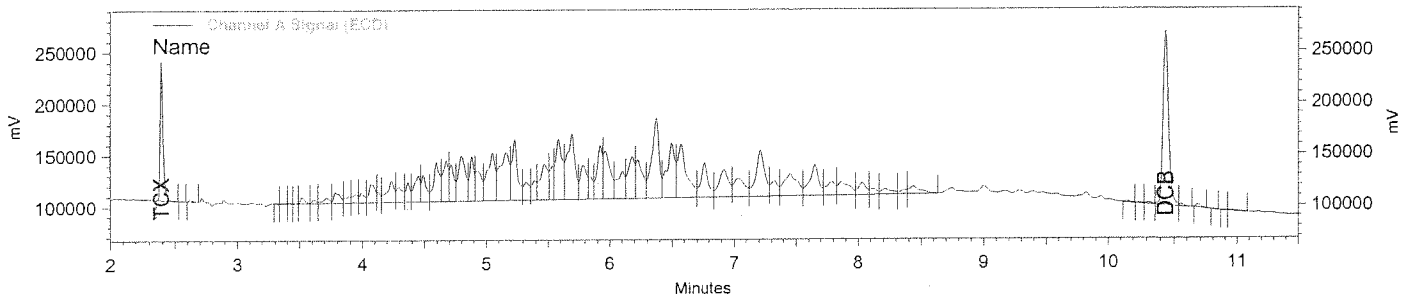
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.640	1090983	44257.0	25.00 CAL	II
DCB	12.208	12.161	2841726	113507.8	25.00 CAL	BB
Toxaphene			18619620	38122.8	500.00 CAL	

9-4-15

702

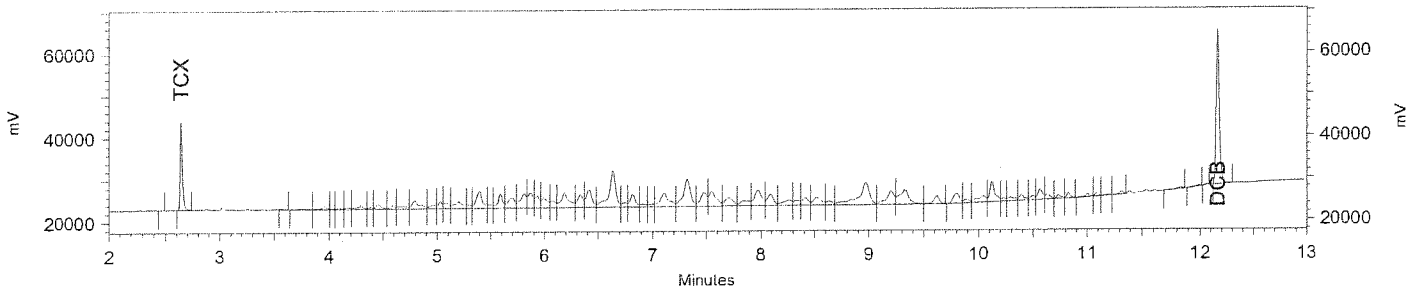
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TOF9H2605 (750/37.5ppb TOXA ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26015.dat
User: ESanto
Acquired: 08/26/15 17:46:06
Printed: 08/28/15 16:38:08



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.391	10938185	285578.2	37.50 CAL	BB
DCB	10.439	10.437	25419626	700625.7	37.50 CAL	VV
Toxaphene			320425594	451342.2	750.00 CAL	



Channel B Signal (ECD) Results

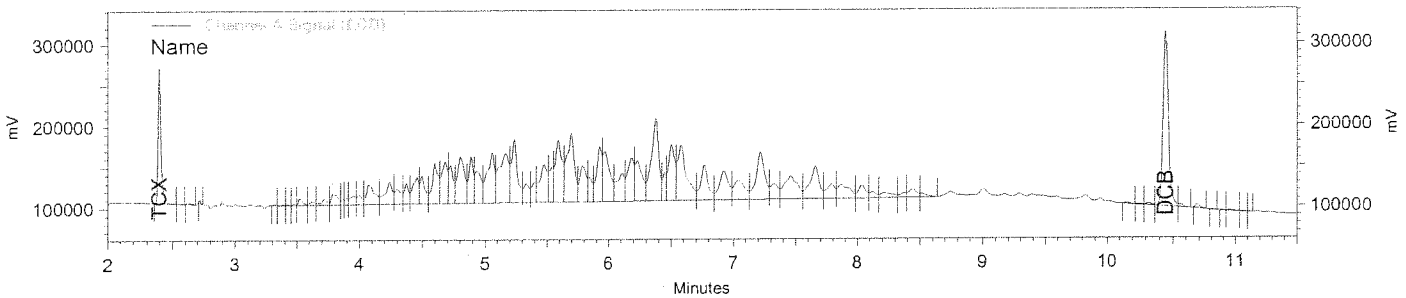
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.640	1615420	44257.0	37.50 CAL	II
DCB	12.208	12.163	4112550	113507.8	37.50 CAL	BB
Toxaphene			29013377	38122.8	750.00 CAL	

pw 9-4-15

TGS

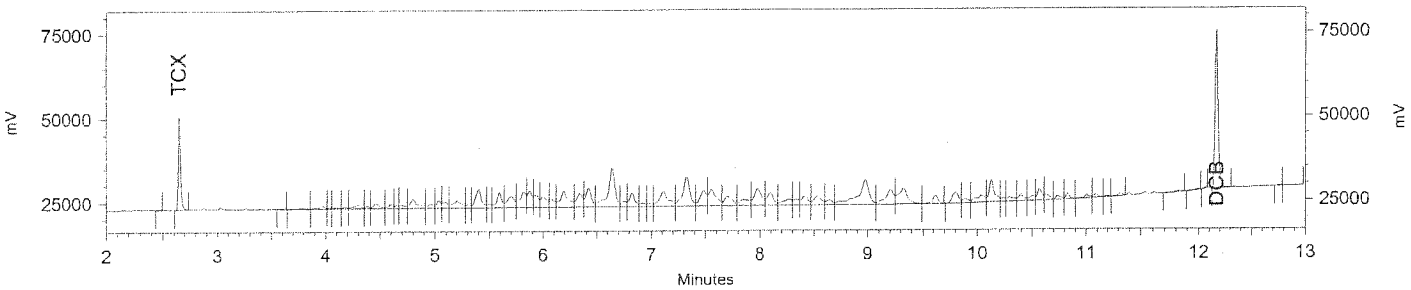
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TOF9H2606 (1000/50ppb TOXA ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26016.dat
User: ESanto
Acquired: 08/26/15 18:06:13
Printed: 08/28/15 16:38:25



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.395	13725152	285578.2	50.00 CAL	BI
DCB	10.439	10.441	32168664	700625.7	50.00 CAL	VV
Toxaphene			419016350	451342.2	1000.00 CAL	



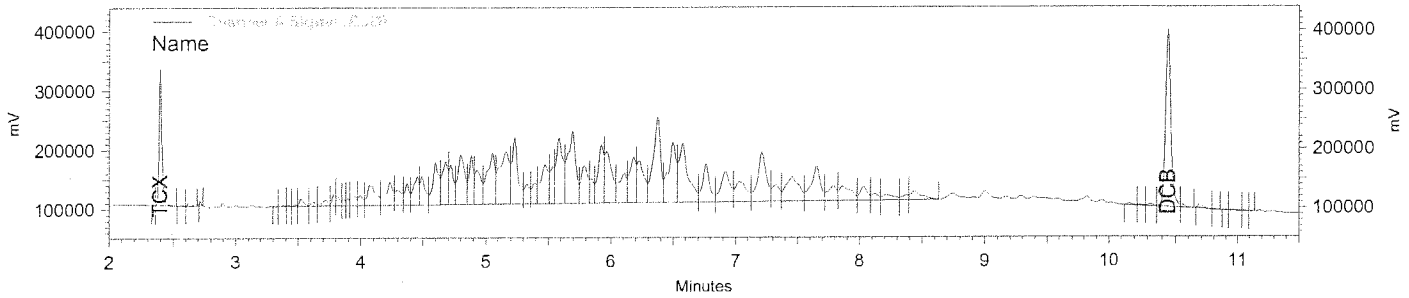
Channel B Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.644	2135759	44257.0	50.00 CAL	II
DCB	12.208	12.167	5301836	113507.8	50.00 CAL	BB
Toxaphene			40316396	38122.8	1000.00 CAL	

9-4-15

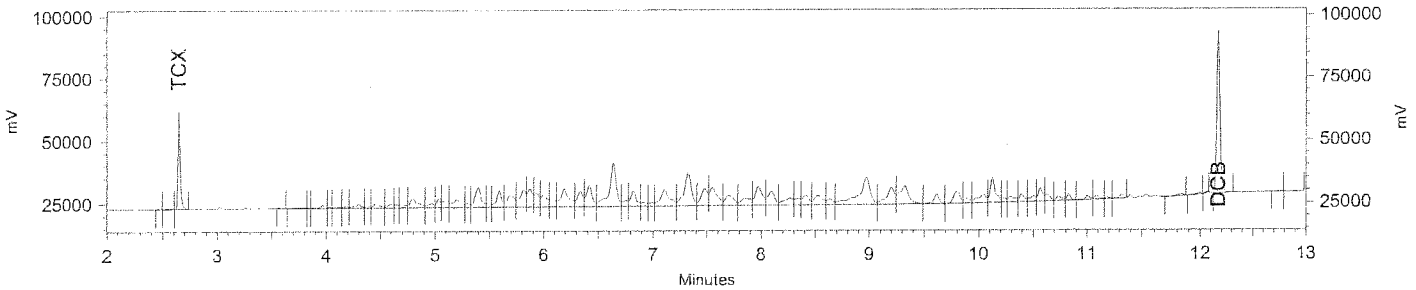
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TOF9H2607 (1500/75ppb TOXA ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26017.dat
User: ESanto
Acquired: 08/26/15 18:26:23
Printed: 08/28/15 16:38:40



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.393	19142154	285578.2	75.00 CAL	VI
DCB	10.439	10.441	45052271	700625.7	75.00 CAL	VV
Toxaphene			607702932	451342.2	1500.00 CAL	



Channel B Signal (ECD) Results

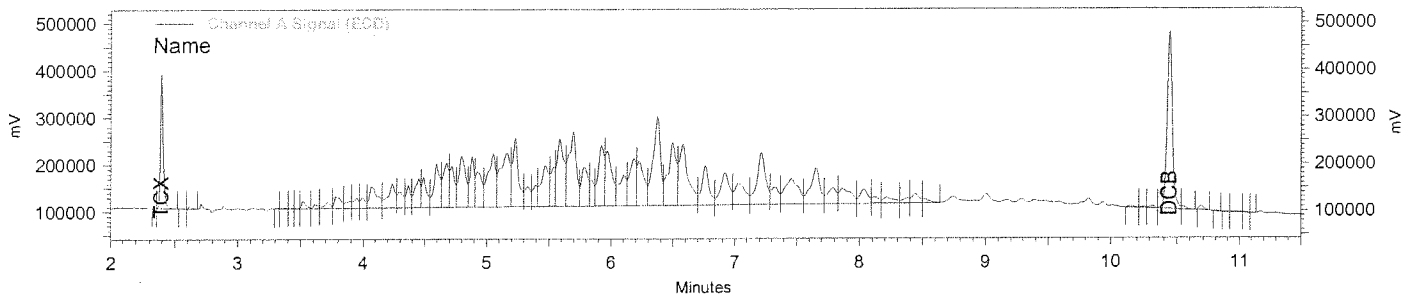
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.643	3033348	44257.0	75.00 CAL	II
DCB	12.208	12.167	7444662	113507.8	75.00 CAL	BB
Toxaphene			60026222	38122.8	1500.00 CAL	

pm 9-4-15

TGS

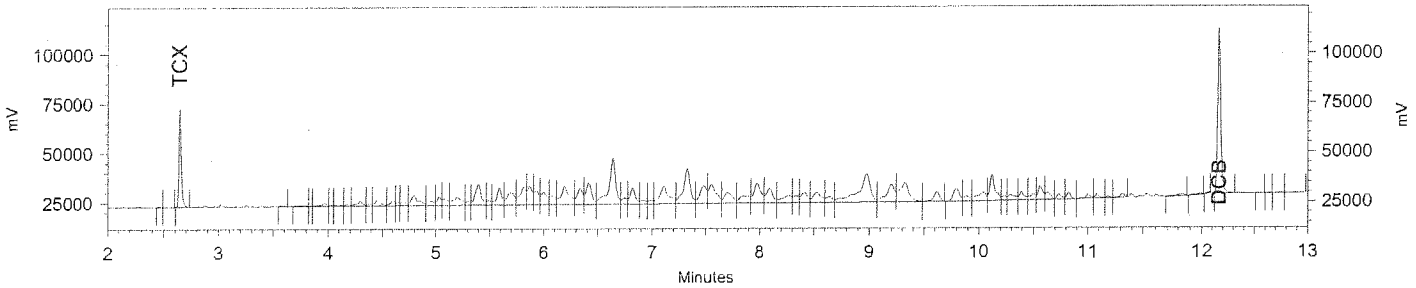
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: TOF9H2608 (2000/100ppb TOXA ICAL)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26018.dat
User: ESanto
Acquired: 08/26/15 18:46:35
Printed: 08/28/15 16:38:56



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.392	24159802	285578.2	100.00 CAL	VB
DCB	10.439	10.439	57795650	700625.7	100.00 CAL	VV
Toxaphene			798936733	451342.2	2000.00 CAL	



Channel B Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.640	3936192	44257.0	100.00 CAL	II
DCB	12.208	12.163	9596186	113507.8	100.00 CAL	BB
Toxaphene			80443480	38122.8	2000.00 CAL	

pw 9-4-15

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
METHOD 8081

Lab Name : EMAX Laboratories, Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
Mid Conc Init LFID & Datetime: RH26024A 08/26/2015 20:47
Mid Conc Init LFID & Datetime: RH26032A 08/26/2015 23:30
Conc Cont LFID & Datetime: RH26036A 08/27/2015 00:50
Conc Cont LFID & Datetime: RH26037A 08/27/2015 01:11
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
alpha-BHC	2.720	2.700	2.740	20.0	558424.8	11129906	19.93	-0		20
gamma-BHC	2.907	2.885	2.929	20.0	520675.9	10224927	19.64	-2		20
beta-BHC	2.953	2.931	2.975	20.0	272206.7	5407997	19.87	-1		20
delta-BHC	3.063	3.042	3.084	20.0	530749.0	10619004	20.01	0		20
Heptachlor	3.193	3.169	3.217	20.0	523701.5	10285245	19.64	-2		20
Aldrin	3.396	3.370	3.422	20.0	545687.8	10824726	19.84	-1		20
Heptachlor Epoxide	3.864	3.834	3.894	20.0	521107.9	10379940	19.92	-0		20
gamma-Chlordane	3.972	3.940	4.004	20.0	565956.8	11108218	19.63	-2		20
alpha-Chlordane	4.096	4.064	4.128	20.0	562918.0	11273831	20.03	0		20
DDE	4.168	4.136	4.200	20.0	525059.6	10879857	20.72	4		20
Endosulfan I	4.235	4.200	4.270	20.0	579491.4	11213344	19.35	-3		20
Dieldrin	4.491	4.459	4.523	20.0	537322.7	11325315	21.08	5		20
Endrin	4.769	4.739	4.799	20.0	494167.6	10583289	21.42	7		20
DDD	4.864	4.834	4.894	20.0	402982.8	8343699	20.70	4		20
Endosulfan II	5.069	5.040	5.098	20.0	521821.5	11383871	21.82	9		20
DDT	5.269	5.239	5.299	20.0	484257.7	10481999	21.65	8		20
Endrin Aldehyde	5.740	5.708	5.772	20.0	482149.6	10364914	21.50	7		20
Methoxychlor	6.193	6.155	6.231	200.0	222073.4	41979436	189.03	-5		20
Endosulfan Sulfate	6.613	6.577	6.649	20.0	582391.4	12429247	21.34	7		20
Endrin Ketone	7.271	7.235	7.307	20.0	646733.9	13582760	21.00	5		20
Oxychlordane	3.776	3.757	3.795	20.0	466993.3	11126144	23.83	19		20
2,4'-DDE	3.845	3.823	3.867	20.0	371467.9	7195813	19.37	-3		20
trans-Nonachlor	4.077	4.054	4.100	20.0	649876.5	12347129	19.00	-5		20
2,4'-DDD	4.347	4.322	4.372	20.0	314640.7	6787249	21.57	8		20
2,4'-DDT	4.639	4.616	4.662	20.0	390727.7	8946878	22.90	14		20
cis-Nonachlor	4.811	4.789	4.833	20.0	712776.1	13146563	18.44	-8		20
Mirex	6.339	6.311	6.367	20.0	593705.7	12208904	20.56	3		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
TCX	2.397	2.377	2.417	20.0	298670.2	6662785	22.31	12		20
DCB	10.445	10.395	10.495	20.0	732918.4	14774996	20.16	1		20

9-4-15

INITIAL CALIBRATION VERIFICATION
METHOD 8081

Lab Name : EMAX Laboratories, Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Column : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
Mid Conc Init LFID & Datetime: RH26024B 08/26/2015 20:47
Mid Conc Init LFID & Datetime: RH26032B 08/26/2015 23:30
Conc Cont LFID & Datetime: RH26036B 08/27/2015 00:50
Conc Cont LFID & Datetime: RH26037B 08/27/2015 01:11
CONC UNIT : ppb

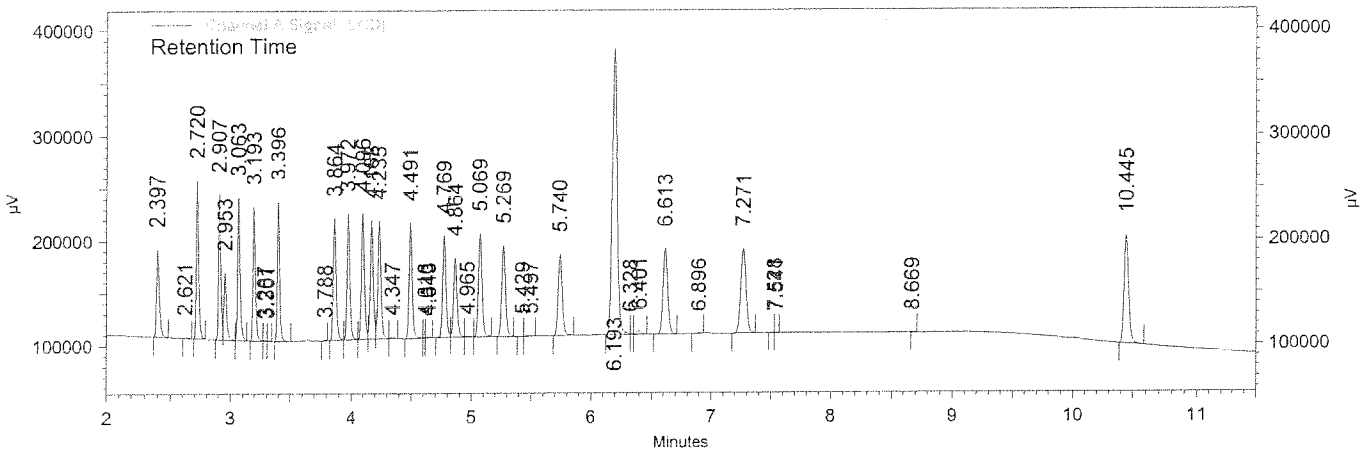
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
alpha-BHC	3.028	3.010	3.046	20.0	65737.2	1265294	19.25	-4		20
gamma-BHC	3.264	3.247	3.281	20.0	65037.9	1260691	19.38	-3		20
beta-BHC	3.311	3.294	3.328	20.0	40876.2	795258	19.45	-3		20
delta-BHC	3.536	3.519	3.553	20.0	66499.8	1244199	18.71	-6		20
Heptachlor	3.601	3.583	3.619	20.0	70619.0	1342952	19.02	-5		20
Aldrin	3.888	3.869	3.907	20.0	78633.8	1526019	19.41	-3		20
Heptachlor Epoxide	4.481	4.458	4.504	20.0	79067.8	1568038	19.83	-1		20
gamma-Chlordane	4.715	4.694	4.736	20.0	83325.0	1584124	19.01	-5		20
alpha-Chlordane	4.913	4.895	4.931	20.0	85339.9	1619011	18.97	-5		20
DDE	5.148	5.132	5.164	20.0	79706.9	1536422	19.28	-4		20
Endosulfan I	5.005	4.986	5.024	20.0	83409.5	1619319	19.41	-3		20
Dieldrin	5.435	5.418	5.452	20.0	80273.9	1546586	19.27	-4		20
Endrin	5.999	5.979	6.019	20.0	75648.1	1513043	20.00	0		20
DDD	6.240	6.221	6.259	20.0	52295.7	973615	18.62	-7		20
Endosulfan II	6.451	6.429	6.473	20.0	79883.2	1632479	20.44	2		20
DDT	7.008	6.984	7.032	20.0	59277.8	1153685	19.46	-3		20
Endrin Aldehyde	7.313	7.291	7.335	20.0	76983.0	1587822	20.63	3		20
Methoxychlor	9.427	9.399	9.455	200.0	37038.4	7302299	197.15	-1		20
Endosulfan Sulfate	8.165	8.141	8.189	20.0	87221.1	1794342	20.57	3		20
Endrin Ketone	9.881	9.851	9.911	20.0	96460.0	1942449	20.14	1		20
Oxychlordane	4.371	4.351	4.391	20.0	77556.8	1852431	23.89	19		20
2,4'-DDE	4.697	4.676	4.718	20.0	56564.0	1102179	19.49	-3		20
trans-Nonachlor	4.833	4.815	4.851	20.0	98637.1	1892697	19.19	-4		20
2,4'-DDD	5.487	5.469	5.505	20.0	43061.1	929847	21.59	8		20
2,4'-DDT	6.079	6.060	6.098	20.0	51896.2	1204947	23.22	16		20
cis-Nonachlor	6.165	6.147	6.183	20.0	105896.5	1931576	18.24	-9		20
Mirex	9.693	9.669	9.717	20.0	95325.3	1997229	20.95	5		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
TCX	2.647	2.624	2.670	20.0	45709.2	906653	19.83	-1		20
DCB	12.172	12.137	12.207	20.0	119559.0	2361723	19.75	-1		20

9-4-15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: ICPF9H2601 (20/200ppb PEST ICV)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26036.dat
User: ESanto
Acquired: 08/27/15 00:50:53
Printed: 08/28/15 12:58:30



Channel A Signal (ECD) Results

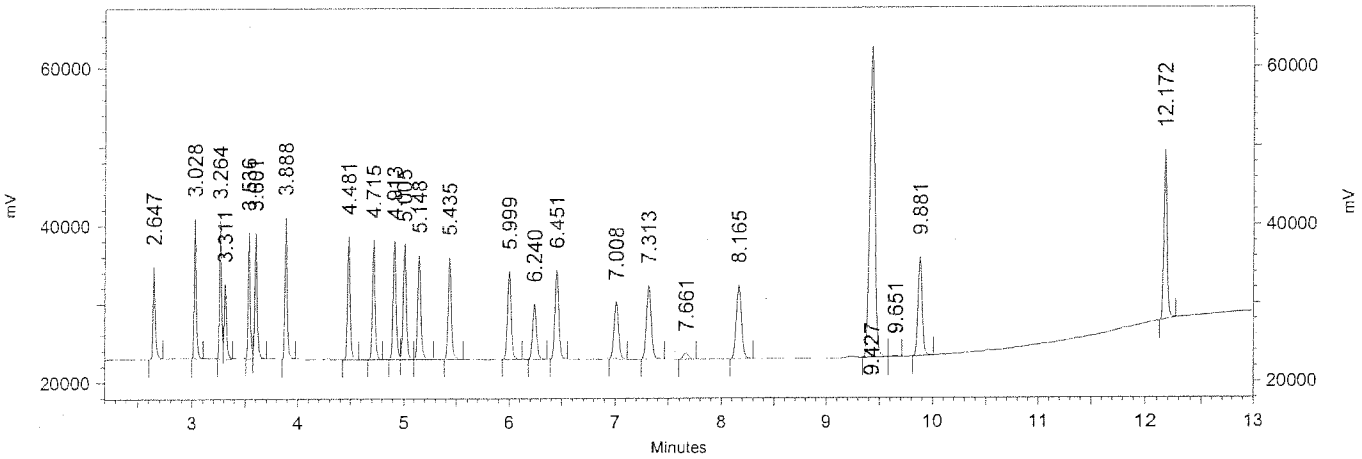
Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.389	2.397	6662785	298670.2	22.308	BS
alpha-BHC	2.712	2.720	11129906	558424.8	19.931	BI
gamma-BHC	2.899	2.907	10224927	520675.9	19.638	BV
beta-BHC	2.947	2.953	5407997	272206.7	19.867	VB
delta-BHC	3.056	3.063	10619004	530749.0	20.008	BS
Heptachlor	3.187	3.193	10285245	523701.5	19.640	BV
Aldrin	3.389	3.396	10824726	545687.8	19.837	BB
Heptachlor Epoxide	3.857	3.864	10379940	521107.9	19.919	BV
gamma-Chlordane	3.967	3.972	11108218	565956.7	19.627	VV
alpha-Chlordane	4.091	4.096	11273831	562918.0	20.027	VV
DDE	4.161	4.168	10879857	525059.6	20.721	VV
Endosulfan I	4.228	4.235	11213344	579491.4	19.350	VV
Dieldrin	4.485	4.491	11325315	537322.7	21.077	BV
Endrin	4.764	4.769	10583289	494167.6	21.416	SV
DDD	4.859	4.864	8343699	402982.8	20.705	VV
Endosulfan II	5.064	5.069	11383871	521821.5	21.816	VS
DDT	5.265	5.269	10481999	484257.7	21.645	BS
Endrin aldehyde	5.735	5.740	10364914	482149.6	21.497	BS
Methoxychlor	6.189	6.193	41979435	222073.4	189.034	SS
Endosulfan Sulfate	6.609	6.613	12429247	582391.3	21.342	SS
Endrin Ketone	7.265	7.271	13582760	646733.9	21.002	BS
DCB	10.437	10.445	14774996	732918.4	20.159	BI

9-4-15

770

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: ICPF9H2601 (20/200ppb PEST ICV)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26036.dat
User: ESanto
Acquired: 08/27/15 00:50:53
Printed: 08/28/15 12:58:30



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.639	2.647	906653	45709.2	19.835	SS
alpha-BHC	3.020	3.028	1265294	65737.2	19.248	BV
gamma-BHC	3.257	3.264	1260691	65037.9	19.384	SV
beta-BHC	3.304	3.311	795258	40876.2	19.455	VB
delta-BHC	3.529	3.536	1244199	66499.8	18.710	SV
Heptachlor	3.595	3.601	1342952	70619.0	19.017	VB
Aldrin	3.881	3.888	1526019	78633.8	19.407	SS
Heptachlor Epoxide	4.475	4.481	1568038	79067.8	19.832	SV
gamma-Chlordane	4.708	4.715	1584124	83325.0	19.011	SV
alpha-Chlordane	4.908	4.913	1619011	85339.9	18.971	SV
Endosulfan I	5.000	5.005	1619319	83409.5	19.414	VV
DDE	5.143	5.148	1536422	79706.9	19.276	VS
Dieldrin	5.429	5.435	1546586	80273.9	19.266	BB
Endrin	5.992	5.999	1513043	75648.1	20.001	SV
DDD	6.235	6.240	973615	52295.7	18.617	SS
Endosulfan II	6.445	6.451	1632479	79883.2	20.436	BB
DDT	7.001	7.008	1153685	59277.8	19.462	BB
Endrin Aldehyde	7.307	7.313	1587822	76982.9	20.626	BB
Endosulfan Sulfate	8.160	8.165	1794342	87221.1	20.572	BS
Methoxychlor	9.420	9.427	7302299	37038.4	197.155	BV
Endrin Ketone	9.873	9.881	1942449	96460.0	20.137	SB
DCB	12.161	12.172	2361723	119559.0	19.754	SB

9-4-15

INITIAL CALIBRATION VERIFICATION
METHOD EPA 8081

Lab Name : EMAX Laboratories, Inc.
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
Mid Conc Init LFID & Datetime: RH26014A 08/26/2015 17:26
Conc Cont LFID & Datetime: RH26019A 08/26/2015 19:06
CONC UNIT : PPB

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Toxaphene	0.000	0.000	0.000	500.0	451342.2	232816368	515.83	3		20

9-4-15

TT2

INITIAL CALIBRATION VERIFICATION
METHOD EPA 8081

Lab Name : EMAX Laboratories, Inc.
Instrument ID : F9 (PE CLARUS680 GC)
GC Column : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
Mid Conc Init LFID & Datetime: RH26014B 08/26/2015 17:26
Conc Cont LFID & Datetime: RH26019B 08/26/2015 19:06
CONC UNIT : PPB

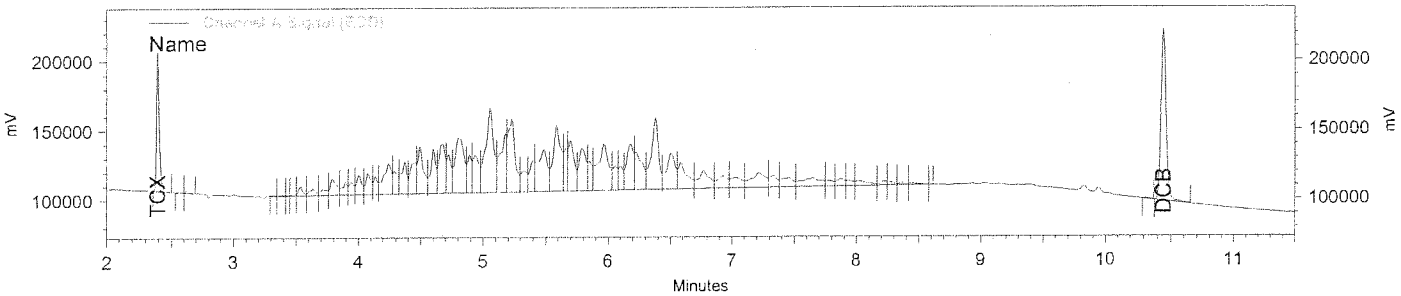
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Toxaphene	0.000	0.000	0.000	500.0	38122.8	20860964	547.20	9		20

mu 9-4-15

TTS

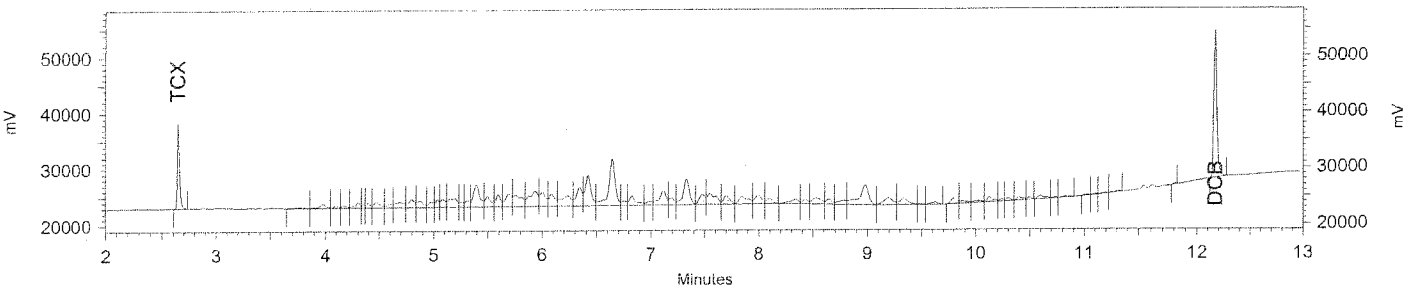
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: ITOF9H2601 (500/25ppb TOXA ICV)
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RH26\RH26019.dat
User: ESanto
Acquired: 08/26/15 19:06:39
Printed: 08/28/15 16:39:51



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.393	8027055	285578.2	28.11	BI
DCB	10.439	10.443	18179701	700625.7	25.95	BI
Toxaphene			232816370	451342.2	515.83	



Channel B Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.644	1168452	44257.0	26.40	II
DCB	12.208	12.167	2924600	113507.8	25.77	BB
Toxaphene			20860965	38122.8	547.20	

4-15

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DAILY CALIBRATIONS

PEM PEST BREAKDOWN CALCULATION
METHOD 8081

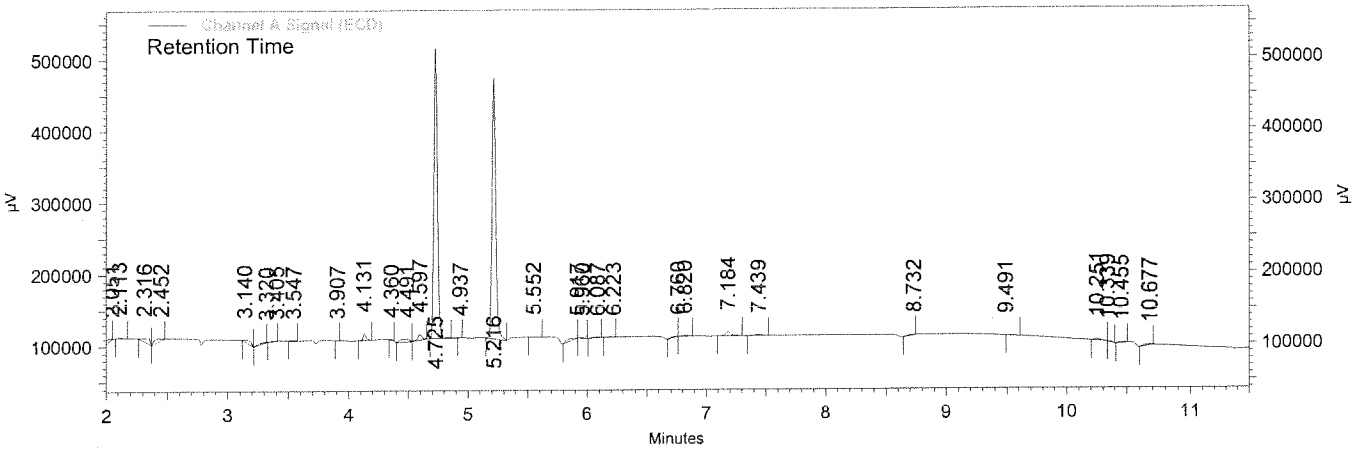
Lab Name : EMAX
Instrument ID : F9 (PE CLARUS680 GC)
GC Column : RTX-CLPESTICIDES RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.32UM 30MX0.32MMIDX0.25UM
PEM LFID & Datetime : RJ03003A RJ03003B 10/03/15 16:19

Base on AREA

	AREA				% Breakdown				
LFID	DDD	DDE	DDT	TOTAL	DDD	DDE	TOTAL	QL	QCLIMIT
RJ03003A	0.0	876906.0	43959648.0	44836552.0	0.00	1.96	1.96		15
RJ03003B	0.0	133299.0	6855841.0	6989140.0	0.00	1.91	1.91		15
LFID	ENDRIN	ENDRIN ALDEHYDE	ENDRIN KETONE	TOTAL	ENDRIN ALDEHYDE	ENDRIN KETONE	TOTAL	QL	QCLIMIT
RJ03003A	45070288.0	0.0	888663.0	45958952.0	0.00	1.93	1.93		15
RJ03003B	8581531.0	0.0	105745.0	8687276.0	0.00	1.22	1.22		15

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: PEF9H26101
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03003.dat
User: LErmol
Acquired: 10/03/15 16:19:57
Printed: 10/14/15 14:01:37

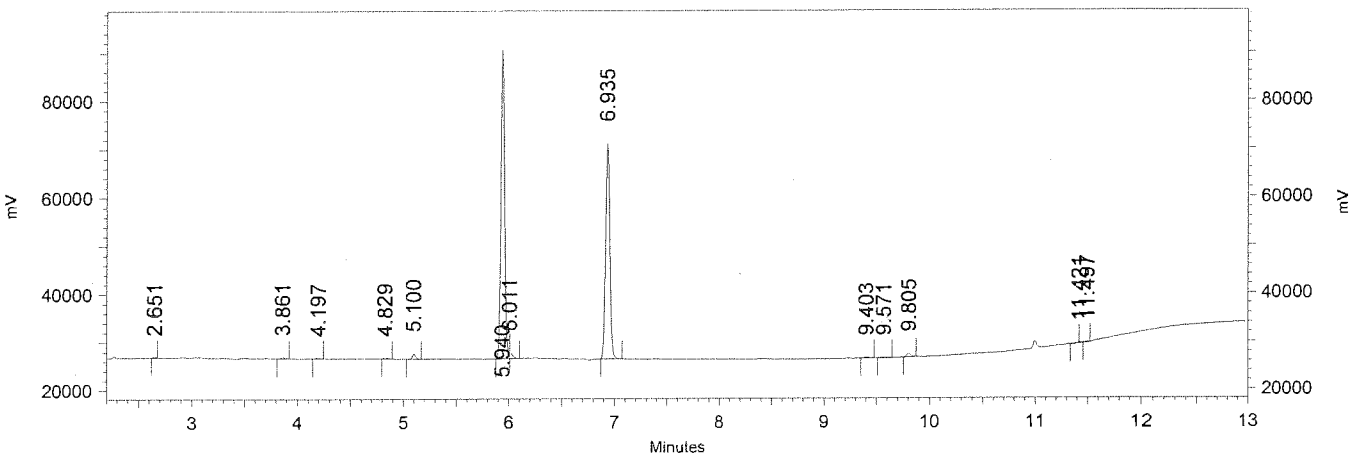


Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.376				0.000 BDL	
alpha-BHC	2.696				0.000 BDL	
gamma-BHC	2.881				0.000 BDL	
beta-BHC	2.928				0.000 BDL	
delta-BHC	3.036				0.000 BDL	
Heptachlor	3.165				0.000 BDL	
Aldrin	3.365				0.000 BDL	
Heptachlor Epoxide	3.825				0.000 BDL	
gamma-Chlordane	3.933				0.000 BDL	
alpha-Chlordane	4.055				0.000 BDL	
DDE	4.124	4.131	876906	525059.6	1.670	vv
Endosulfan I	4.191				0.000 BDL	
Dieldrin	4.443				0.000 BDL	
Endrin	4.717	4.725	45070286	494167.6	91.204	vv
DDD	4.808				0.000 BDL	
Endosulfan II	5.012				0.000 BDL	
DDT	5.208	5.216	43959647	484257.7	90.777	vv
Endrin aldehyde	5.672				0.000 BDL	
Methoxychlor	6.115				0.000 BDL	
Endosulfan Sulfate	6.531				0.000 BDL	
Endrin Ketone	7.177	7.184	888663	646733.9	1.374	vv
DCB	10.375				0.000 BDL	

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: PEF9H26101
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03003.dat
User: LErmol
Acquired: 10/03/15 16:19:57
Printed: 10/14/15 14:01:37



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.624				0.000 BDL	
alpha-BHC	3.003				0.000 BDL	
gamma-BHC	3.237				0.000 BDL	
beta-BHC	3.284				0.000 BDL	
delta-BHC	3.505				0.000 BDL	
Heptachlor	3.569				0.000 BDL	
Aldrin	3.852	3.861	33756	78633.8	0.429	SB
Heptachlor Epoxide	4.437				0.000 BDL	
gamma-Chlordane	4.668				0.000 BDL	
alpha-Chlordane	4.864				0.000 BDL	
Endosulfan I	4.955				0.000 BDL	
DDE	5.095	5.100	133299	79706.9	1.672	SS
Dieldrin	5.379				0.000 BDL	
Endrin	5.933	5.940	8581531	75648.1	113.440	BS
DDD	6.172				0.000 BDL	
Endosulfan II	6.380				0.000 BDL	
DDT	6.928	6.935	6855841	59277.8	115.656	IB
Endrin Aldehyde	7.229				0.000 BDL	
Endosulfan Sulfate	8.068				0.000 BDL	
Methoxychlor	9.335				0.000 BDL	
Endrin Ketone	9.804	9.805	105745	96460.0	1.096	BB
DCB	12.124				0.000 BDL	

CONTINUE CALIBRATION
METHOD 8081

Lab Name : EMAX Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
Mid Conc Init LFID & Datetime: RH26024A 08/26/2015 20:47
Conc Cont LFID & Datetime: RJ03013A 10/03/2015 19:40
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
alpha-BHC	2.692	2.672	2.712	20.0	558424.8	12013770	21.51	8		20
gamma-BHC	2.877	2.855	2.899	20.0	520675.9	11384589	21.86	9		20
beta-BHC	2.925	2.903	2.947	20.0	272206.7	5850259	21.49	7		20
delta-BHC	3.033	3.012	3.054	20.0	530749.0	12616889	23.77	19		20
Heptachlor	3.161	3.137	3.185	20.0	523701.5	11533113	22.02	10		20
Aldrin	3.361	3.335	3.387	20.0	545687.8	11514901	21.10	6		20
Heptachlor Epoxide	3.823	3.793	3.853	20.0	521107.9	10522299	20.19	1		20
gamma-Chlordane	3.931	3.899	3.963	20.0	565956.8	11732010	20.73	4		20
alpha-Chlordane	4.053	4.021	4.085	20.0	562918.0	11798281	20.96	5		20
DDE	4.123	4.091	4.155	40.0	525059.6	22295448	42.46	6		20
Endosulfan I	4.188	4.153	4.223	20.0	579491.4	11950274	20.62	3		20
Dieldrin	4.441	4.409	4.473	40.0	537322.7	23228952	43.23	8		20
Endrin	4.716	4.686	4.746	40.0	494167.6	21423844	43.35	8		20
DDD	4.808	4.778	4.838	40.0	402982.8	18196728	45.15	13		20
Endosulfan II	5.011	4.982	5.040	40.0	521821.5	21031562	40.30	1		20
DDT	5.207	5.177	5.237	40.0	484257.7	20294512	41.91	5		20
Endrin Aldehyde	5.669	5.637	5.701	40.0	482149.6	19171256	39.76	-1		20
Methoxychlor	6.113	6.075	6.151	200.0	222073.4	46513024	209.45	5		20
Endosulfan Sulfate	6.529	6.493	6.565	40.0	582391.4	23690876	40.68	2		20
Endrin Ketone	7.176	7.140	7.212	40.0	646733.9	27441166	42.43	6		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
TCX	2.371	2.351	2.391	20.0	298670.2	6719018	22.50	12		20
DCB	10.372	10.322	10.422	20.0	732918.4	13778319	18.80	-6		20

CONTINUE CALIBRATION
METHOD 8081

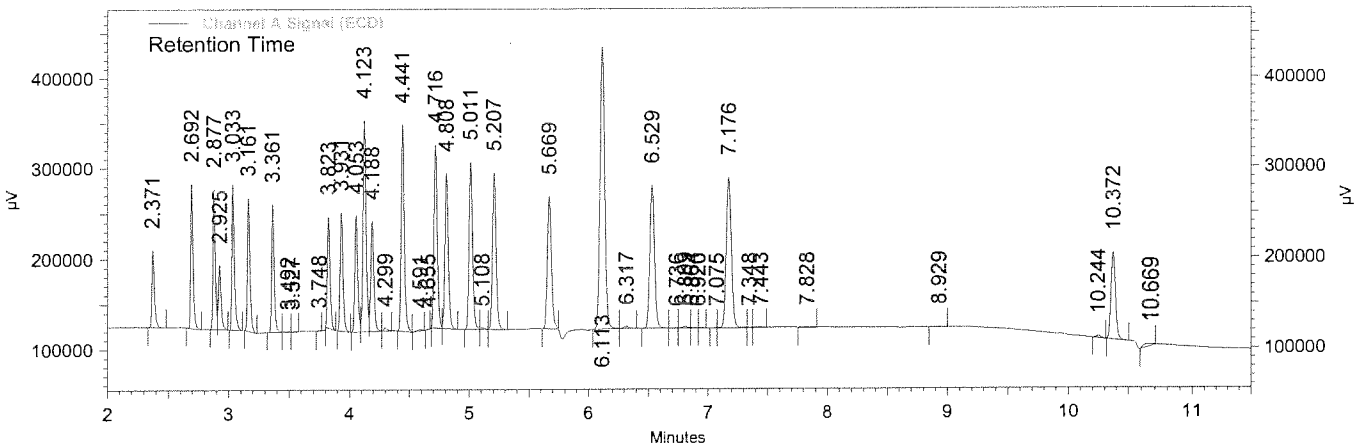
Lab Name : EMAX Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Column : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
Mid Conc Init LFID & Datetime: RH26024B 08/26/2015 20:47
Conc Cont LFID & Datetime: RJ03013B 10/03/2015 19:40
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS	
alpha-BHC	2.999	2.981	3.017	20.0	65737.2	1468978	22.35	12		20	
gamma-BHC	3.233	3.216	3.250	20.0	65037.9	1563829	24.05	20		20	
beta-BHC	3.280	3.263	3.297	20.0	40876.2	956844	23.41	17		20	
delta-BHC	3.503	3.486	3.520	20.0	66499.8	1574623	23.68	18		20	
Heptachlor	3.567	3.549	3.585	20.0	70619.0	1731306	24.52	23	*	20	
Aldrin	3.849	3.830	3.868	20.0	78633.8	1818149	23.12	16		20	
Heptachlor Epoxide	4.433	4.410	4.456	20.0	79067.8	1819936	23.02	15		20	
gamma-Chlordane	4.664	4.643	4.685	20.0	83325.0	1879824	22.56	13		20	
alpha-Chlordane	4.861	4.843	4.879	20.0	85339.9	1858617	21.78	9		20	
DDE	5.092	5.076	5.108	40.0	79706.9	3598226	45.14	13		20	
Endosulfan I	4.951	4.932	4.970	20.0	83409.5	1896894	22.74	14		20	
Dieldrin	5.375	5.358	5.392	40.0	80273.9	3845298	47.90	20		20	
Endrin	5.929	5.909	5.949	40.0	75648.1	3626243	47.94	20		20	
DDD	6.168	6.149	6.187	40.0	52295.7	2569153	49.13	23	*	20	NT
Endosulfan II	6.376	6.354	6.398	40.0	79883.2	3589401	44.93	12		20	
DDT	6.924	6.900	6.948	40.0	59277.8	2770583	46.74	17		20	
Endrin Aldehyde	7.225	7.203	7.247	40.0	76983.0	3328021	43.23	8		20	
Methoxychlor	9.329	9.301	9.357	200.0	37038.4	8905528	240.44	20		20	
Endosulfan Sulfate	8.064	8.040	8.088	40.0	87221.1	3873229	44.41	11		20	
Endrin Ketone	9.799	9.769	9.829	40.0	96460.0	4431616	45.94	15		20	

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
TCX	2.620	2.597	2.643	20.0	45709.2	997530	21.82	9		20
DCB	12.119	12.084	12.154	20.0	119559.0	2092531	17.50	-12		20

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CCPF9H26102
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03013.dat
User: LErmol
Acquired: 10/03/15 19:40:26
Printed: 10/14/15 15:44:50

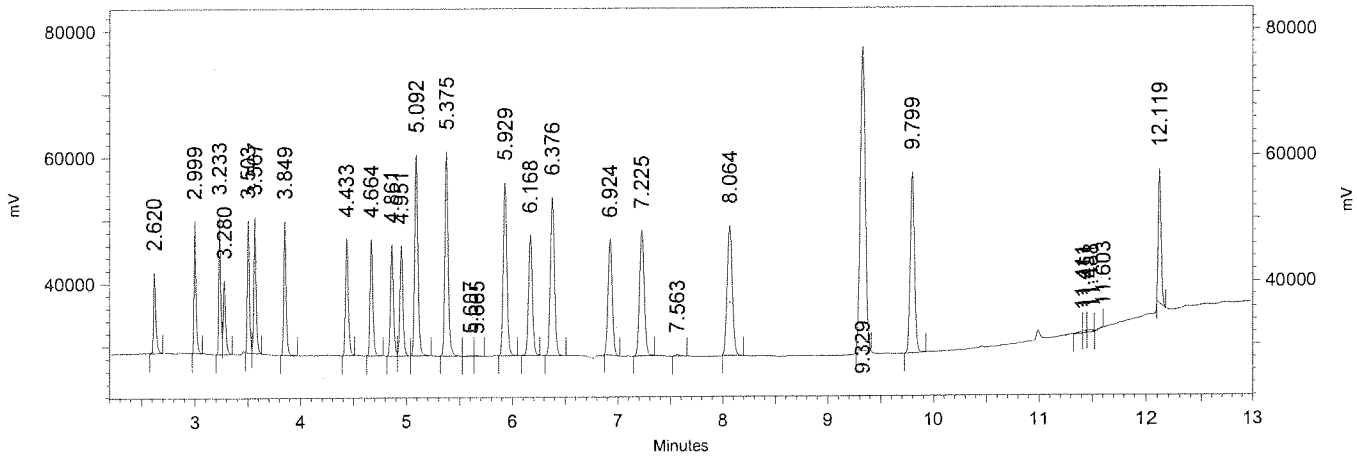


Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.371	6719018	298670.2	22.496	IB
alpha-BHC	2.692	2.692	12013770	558424.8	21.514	BB
gamma-BHC	2.877	2.877	11384589	520675.9	21.865	IV
beta-BHC	2.925	2.925	5850259	272206.7	21.492	VI
delta-BHC	3.033	3.033	12616889	530749.0	23.772	II
Heptachlor	3.161	3.161	11533113	523701.5	22.022	IB
Aldrin	3.361	3.361	11514901	545687.8	21.102	SV
Heptachlor Epoxide	3.823	3.823	10522299	521107.9	20.192	IB
gamma-Chlordane	3.931	3.931	11732010	565956.7	20.730	BB
alpha-Chlordane	4.053	4.053	11798281	562918.0	20.959	BV
DDE	4.123	4.123	22295448	525059.6	42.463	VV
Endosulfan I	4.188	4.188	11950274	579491.4	20.622	VV
Dieldrin	4.441	4.441	23228953	537322.7	43.231	IB
Endrin	4.716	4.716	21423843	494167.6	43.353	IV
DDD	4.808	4.808	18196727	402982.8	45.155	VS
Endosulfan II	5.011	5.011	21031562	521821.5	40.304	BV
DDT	5.207	5.207	20294513	484257.7	41.908	VB
Endrin aldehyde	5.669	5.669	19171256	482149.6	39.762	BI
Methoxychlor	6.113	6.113	46513025	222073.4	209.449	SV
Endosulfan Sulfate	6.529	6.529	23690875	582391.3	40.679	SV
Endrin Ketone	7.176	7.176	27441166	646733.9	42.430	SV
DCB	10.372	10.372	13778319	732918.4	18.799	BI

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CCPF9H26102
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03013.dat
User: LErmol
Acquired: 10/03/15 19:40:26
Printed: 10/14/15 15:44:50



Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.620	997530	45709.2	21.823	BS
alpha-BHC	2.999	2.999	1468978	65737.2	22.346	II
gamma-BHC	3.233	3.233	1563829	65037.9	24.045	SV
beta-BHC	3.280	3.280	956844	40876.2	23.408	VB
delta-BHC	3.503	3.503	1574623	66499.8	23.679	BV
Heptachlor	3.567	3.567	1731306	70619.0	24.516	VI
Aldrin	3.849	3.849	1818149	78633.8	23.122	BB
Heptachlor Epoxide	4.433	4.433	1819936	79067.8	23.017	SS
gamma-Chlordane	4.664	4.664	1879824	83325.0	22.560	BB
alpha-Chlordane	4.861	4.861	1858617	85339.9	21.779	BV
Endosulfan I	4.951	4.951	1896894	83409.5	22.742	VB
DDE	5.092	5.092	3598226	79706.9	45.143	BS
Dieldrin	5.375	5.375	3845298	80273.9	47.902	BB
Endrin	5.929	5.929	3626243	75648.1	47.936	BI
DDD	6.168	6.168	2569153	52295.7	49.127	BI
Endosulfan II	6.376	6.376	3589401	79883.2	44.933	BB
DDT	6.924	6.924	2770583	59277.8	46.739	IB
Endrin Aldehyde	7.225	7.225	3328021	76982.9	43.231	SS
Endosulfan Sulfate	8.064	8.064	3873229	87221.1	44.407	IS
Methoxychlor	9.329	9.329	8905528	37038.4	240.441	II
Endrin Ketone	9.799	9.799	4431616	96460.0	45.943	BB
DCB	12.119	12.119	2092531	119559.0	17.502	IB

CONTINUE CALIBRATION
METHOD EPA 8081

Lab Name : EMAX
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
Mid Conc Init LFID & Datetime: RH26014A 08/26/2015 17:26
Conc Cont LFID & Datetime: RJ03014A 10/03/2015 20:00
CONC UNIT : PPB

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Toxaphene	0.000	0.000	0.000	500.0	451342.2	232553568	515.25	3		20

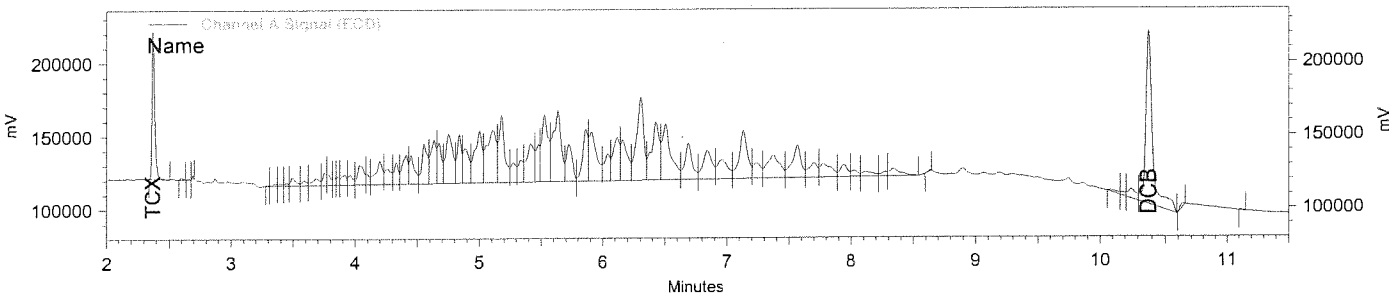
CONTINUE CALIBRATION
METHOD EPA 8081

Lab Name : EMAX
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
Mid Conc Init LFID & Datetime: RH26014B 08/26/2015 17:26
Conc Cont LFID & Datetime: RJ03014B 10/03/2015 20:00
CONC UNIT : PPB

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Toxaphene	0.000	0.000	0.000	500.0	38122.8	22421250	588.13	18		20

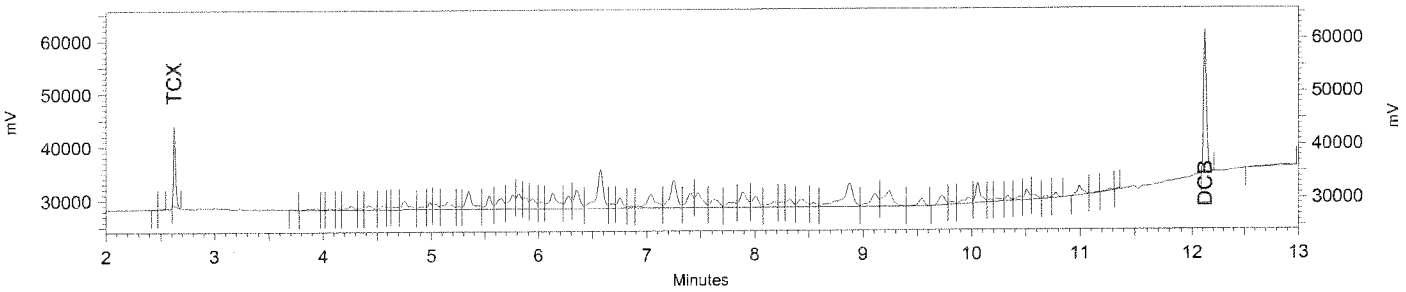
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CTOF9H26102
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03014.dat
User: LErmol
Acquired: 10/03/15 20:00:34
Printed: 10/14/15 15:45:12



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.372	8033691	285578.2	28.13	BB
DCB	10.439	10.375	22007349	700625.7	31.41	VB
Toxaphene			232553570	451342.2	515.25	



Channel B Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.621	1097697	44257.0	24.80	IB
DCB	12.208	12.123	2873358	113507.8	25.31	IB
Toxaphene			22421250	38122.8	588.13	

CONTINUE CALIBRATION
METHOD 8081

Lab Name : EMAX Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
Mid Conc Init LFID & Datetime: RH26024A 08/26/2015 20:47
Conc Cont LFID & Datetime: RJ03023A 10/03/2015 23:02
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
alpha-BHC	2.701	2.681	2.721	20.0	558424.8	11936682	21.38	7		20
gamma-BHC	2.887	2.865	2.909	20.0	520675.9	11330357	21.76	9		20
beta-BHC	2.935	2.913	2.957	20.0	272206.7	5974051	21.95	10		20
delta-BHC	3.043	3.022	3.064	20.0	530749.0	12473962	23.50	18		20
Heptachlor	3.172	3.148	3.196	20.0	523701.5	11411269	21.79	9		20
Aldrin	3.373	3.347	3.399	20.0	545687.8	11512563	21.10	5		20
Heptachlor Epoxide	3.835	3.805	3.865	20.0	521107.9	11121519	21.34	7		20
gamma-Chlordane	3.943	3.911	3.975	20.0	565956.8	11934392	21.09	5		20
alpha-Chlordane	4.064	4.032	4.096	20.0	562918.0	11761082	20.89	4		20
DDE	4.135	4.103	4.167	40.0	525059.6	22066888	42.03	5		20
Endosulfan I	4.200	4.165	4.235	20.0	579491.4	11989492	20.69	3		20
Dieldrin	4.453	4.421	4.485	40.0	537322.7	23482636	43.70	9		20
Endrin	4.728	4.698	4.758	40.0	494167.6	21367060	43.24	8		20
DDD	4.820	4.790	4.850	40.0	402982.8	17949180	44.54	11		20
Endosulfan II	5.023	4.994	5.052	40.0	521821.5	20933390	40.12	0		20
DDT	5.220	5.190	5.250	40.0	484257.7	20217996	41.75	4		20
Endrin Aldehyde	5.683	5.651	5.715	40.0	482149.6	19568972	40.59	1		20
Methoxychlor	6.128	6.090	6.166	200.0	222073.4	46619260	209.93	5		20
Endosulfan Sulfate	6.543	6.507	6.579	40.0	582391.4	24287552	41.70	4		20
Endrin Ketone	7.191	7.155	7.227	40.0	646733.9	27019292	41.78	4		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
TCX	2.380	2.360	2.400	20.0	298670.2	5533214	18.53	-7		20
DCB	10.384	10.334	10.434	20.0	732918.4	13286382	18.13	-9		20

CONTINUE CALIBRATION
METHOD 8081

Lab Name : EMAX Inc
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
Mid Conc Init LFID & Datetime: RH26024B 08/26/2015 20:47
Conc Cont LFID & Datetime: RJ03023B 10/03/2015 23:02
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
alpha-BHC	3.009	2.991	3.027	20.0	65737.2	1496121	22.76	14		20
gamma-BHC	3.244	3.227	3.261	20.0	65037.9	1582563	24.33	22	*	20
beta-BHC	3.291	3.274	3.308	20.0	40876.2	942081	23.05	15		20
delta-BHC	3.513	3.496	3.530	20.0	66499.8	1585869	23.85	19		20
Heptachlor	3.577	3.559	3.595	20.0	70619.0	1746103	24.73	24	*	20
Aldrin	3.861	3.842	3.880	20.0	78633.8	1835094	23.34	17		20
Heptachlor Epoxide	4.447	4.424	4.470	20.0	79067.8	1831739	23.17	16		20
gamma-Chlordane	4.677	4.656	4.698	20.0	83325.0	1892047	22.71	14		20
alpha-Chlordane	4.873	4.855	4.891	20.0	85339.9	1888406	22.13	11		20
DDE	5.105	5.089	5.121	40.0	79706.9	3616756	45.38	13		20
Endosulfan I	4.964	4.945	4.983	20.0	83409.5	1933373	23.18	16		20
Dieldrin	5.389	5.372	5.406	40.0	80273.9	3839140	47.83	20		20
Endrin	5.944	5.924	5.964	40.0	75648.1	3636348	48.07	20		20
DDD	6.183	6.164	6.202	40.0	52295.7	2578727	49.31	23	*	20 NT
Endosulfan II	6.391	6.369	6.413	40.0	79883.2	3635762	45.51	14		20
DDT	6.940	6.916	6.964	40.0	59277.8	2818572	47.55	19		20
Endrin Aldehyde	7.240	7.218	7.262	40.0	76983.0	3428057	44.53	11		20
Methoxychlor	9.345	9.317	9.373	200.0	37038.4	9136506	246.68	23	*	20
Endosulfan Sulfate	8.080	8.056	8.104	40.0	87221.1	3965425	45.46	14		20
Endrin Ketone	9.812	9.782	9.842	40.0	96460.0	4455071	46.19	15		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
TCX	2.629	2.606	2.652	20.0	45709.2	987417	21.60	8		20
DCB	12.131	12.096	12.166	20.0	119559.0	2482447	20.76	4		20

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CCPF9H26103
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03023.dat
User: LErmol
Acquired: 10/03/15 23:02:38
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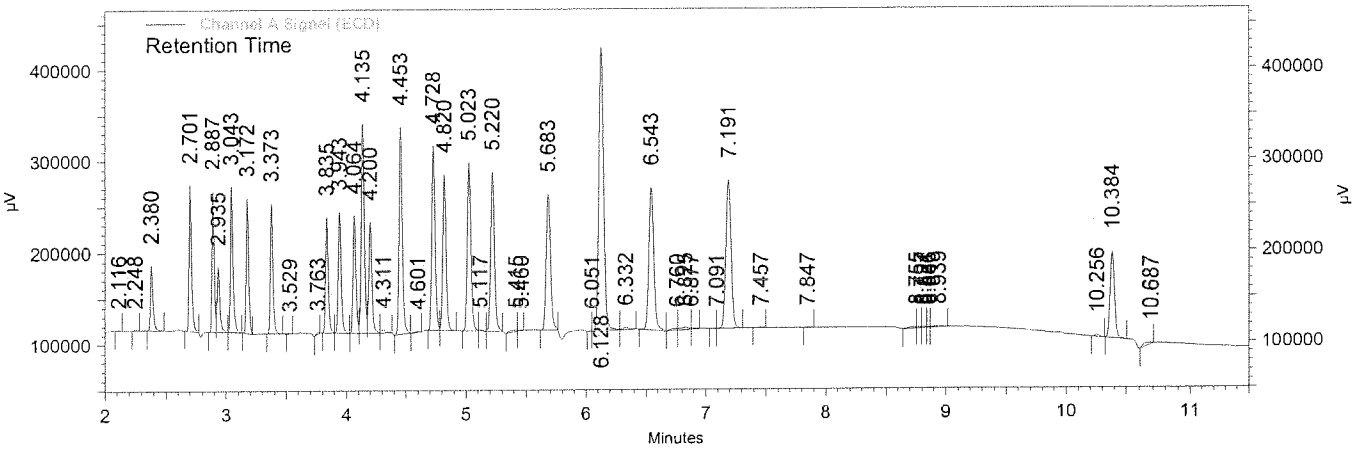

Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.371	2.380	5533214	298670.2	18.526	SS
alpha-BHC	2.692	2.701	11936682	558424.8	21.376	SI
gamma-BHC	2.877	2.887	11330357	520675.9	21.761	SV
beta-BHC	2.925	2.935	5974051	272206.7	21.947	VV
delta-BHC	3.033	3.043	12473962	530749.0	23.503	VI
Heptachlor	3.161	3.172	11411269	523701.5	21.790	IB
Aldrin	3.361	3.373	11512563	545687.8	21.097	SV
Heptachlor Epoxide	3.823	3.835	11121519	521107.9	21.342	IV
gamma-Chlordane	3.931	3.943	11934392	565956.7	21.087	VB
alpha-Chlordane	4.053	4.064	11761082	562918.0	20.893	BV
DDE	4.123	4.135	22066887	525059.6	42.027	VV
Endosulfan I	4.188	4.200	11989492	579491.4	20.690	VV
Dieldrin	4.441	4.453	23482637	537322.7	43.703	BB
Endrin	4.716	4.728	21367061	494167.6	43.238	IV
DDD	4.808	4.820	17949181	402982.8	44.541	VS
Endosulfan II	5.011	5.023	20933390	521821.5	40.116	BS
DDT	5.207	5.220	20217996	484257.7	41.750	VI
Endrin aldehyde	5.669	5.683	19568972	482149.6	40.587	BI
Methoxychlor	6.113	6.128	46619260	222073.4	209.927	SV
Endosulfan Sulfate	6.529	6.543	24287552	582391.3	41.703	SB
Endrin Ketone	7.176	7.191	27019292	646733.9	41.778	SB
DCB	10.372	10.384	13286382	732918.4	18.128	BI

Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CCPF9H26103
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\CPF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03023.dat
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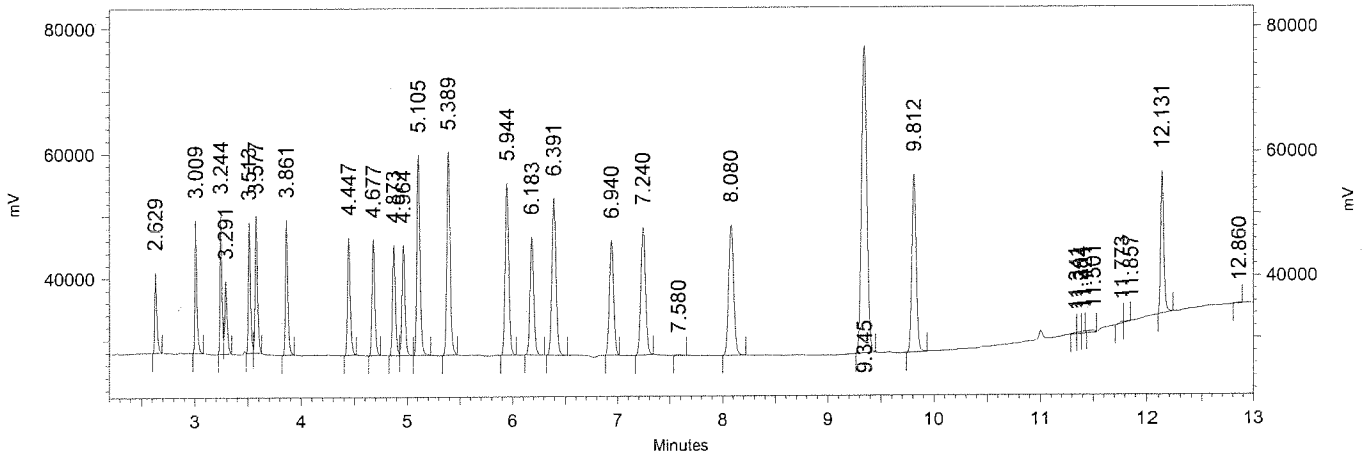


Channel B Signal
(ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration (ppb)	Integration Codes
TCX	2.620	2.629	987417	45709.2	21.602	II
alpha-BHC	2.999	3.009	1496121	65737.2	22.759	BI
gamma-BHC	3.233	3.244	1582563	65037.9	24.333	IV
beta-BHC	3.280	3.291	942081	40876.2	23.047	VI
delta-BHC	3.503	3.513	1585869	66499.8	23.848	IV
Heptachlor	3.567	3.577	1746103	70619.0	24.726	VI
Aldrin	3.849	3.861	1835094	78633.8	23.337	BI
Heptachlor Epoxide	4.433	4.447	1831739	79067.8	23.167	SI
gamma-Chlordane	4.664	4.677	1892047	83325.0	22.707	BI
alpha-Chlordane	4.861	4.873	1888406	85339.9	22.128	BV
Endosulfan I	4.951	4.964	1933373	83409.5	23.179	VB
DDE	5.092	5.105	3616756	79706.9	45.376	BS
Dieldrin	5.375	5.389	3839140	80273.9	47.826	BI
Endrin	5.929	5.944	3636348	75648.1	48.069	BI
DDD	6.168	6.183	2578727	52295.7	49.311	IB
Endosulfan II	6.376	6.391	3635762	79883.2	45.513	BB
DDT	6.924	6.940	2818572	59277.8	47.548	II
Endrin Aldehyde	7.225	7.240	3428057	76982.9	44.530	BI
Endosulfan Sulfate	8.064	8.080	3965425	87221.1	45.464	BB
Methoxychlor	9.329	9.345	9136506	37038.4	246.677	II
Endrin Ketone	9.799	9.812	4455071	96460.0	46.186	BB
DCB	12.119	12.131	2482447	119559.0	20.763	IB

CONTINUE CALIBRATION
METHOD EPA 8081

Lab Name : EMAX
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES
Column size ID : 30MX0.32MMIDX0.32UM
Mid Conc Init LFID & Datetime: RH26014A 08/26/2015 17:26
Conc Cont LFID & Datetime: RJ03024A 10/03/2015 23:22
CONC UNIT : PPB

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Toxaphene	0.000	0.000	0.000	500.0	451342.2	224910368	498.32	-0		20

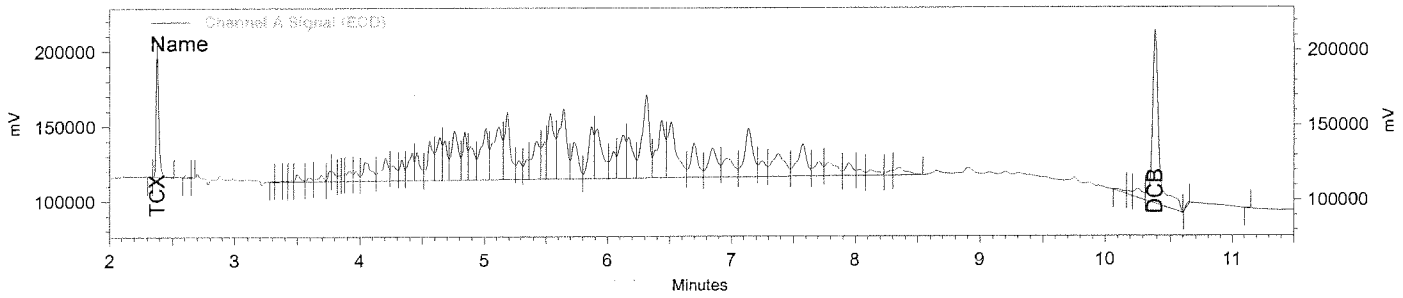
CONTINUE CALIBRATION
METHOD EPA 8081

Lab Name : EMAX
Instrument ID : F9 (PE CLARUS680 GC)
GC Columm : RTX-CLPESTICIDES2
Column size ID : 30MX0.32MMIDX0.25UM
Mid Conc Init LFID & Datetime: RH26014B 08/26/2015 17:26
Conc Cont LFID & Datetime: RJ03024B 10/03/2015 23:22
CONC UNIT : PPB

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Toxaphene	0.000	0.000	0.000	500.0	38122.8	22826910	598.77	20		20

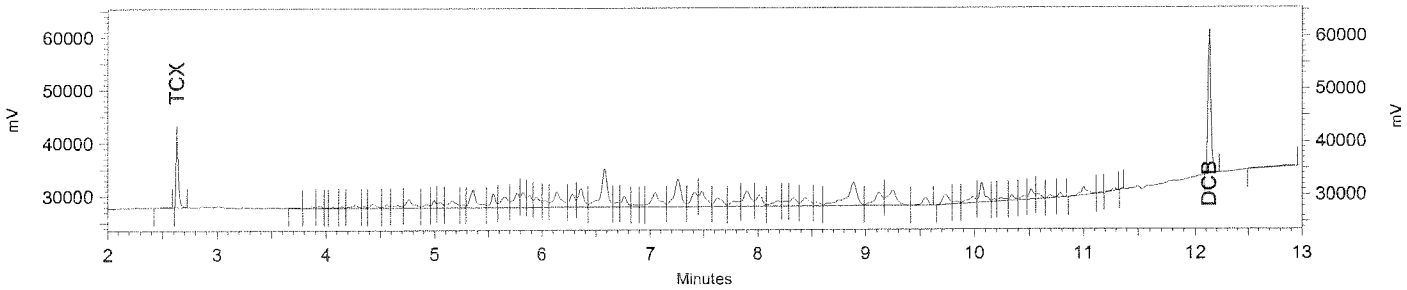
Pesticides by GC/ECD
EMAX Analytical Laboratories, Inc.

Sample ID: CTOF9H26103
Instrument ID: F9
Method Name: C:\EZChrom Elite\Enterprise\Projects\GCF9\Methods\TOF9H26.met
Data: C:\EZChrom Elite\Enterprise\Projects\GCF9\Data\RJ03\RJ03024.dat
User: LErmol
Acquired: 10/03/15 23:22:54
Printed: 10/14/15 17:46:47



Channel A Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.403	2.379	7026768	285578.2	24.61	VB
DCB	10.439	10.384	21946502	700625.7	31.32	VB
Toxaphene			224910370	451342.2	498.31	



Channel B Signal (ECD) Results

Name	Expected RT (mins)	Retention Time (mins)	Area	Average RF	ESTD concentration	Integration Codes
TCX	2.653	2.628	1169888	44257.0	26.43	IB
DCB	12.208	12.129	2971287	113507.8	26.18	IB
Toxaphene			22826910	38122.8	598.77	

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PESTICIDES

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

ICAL LEVEL PEST	ICAL LEVEL MIX 3	CONCENTRATION (ppb) PEST	CONCENTRATION (ppb) MIX 3
1	9	1.25/2.5/12.5	1.25/1.25
2	10	2.5/5/25	2.5/2.5
3	11	5/10/50	5/5
4	12	10/20/100	10/10
5	13	20/40/200	20/20
6	14	40/80/400	40/40
7	15	60/120/600	60/60
8	16	80/160/800	80/80

ICAL LEVEL TOXAPHENE	CONCENTRATION (ppb)
1	50/2.5
2	100/5
3	250/12.5
4	500/25
5	750/37.5
6	1000/50
7	1500/75
8	2000/100

ICAL LEVEL CHLORDANE	CONCENTRATION (ppb)
1	25/1.25
2	50/2.5
3	100/5
4	250/12.5
5	500/25
6	750/37.5
7	1000/50
8	1500/75

Book #: AF9-006

Instrument No.: F9

Analytical Sequence: RH26

Method File: CPF9H26, TOF9H26, CRF9H26, CPF9H26A, TOF9H26A

Analytical Batch: RH26011

SOP #	Rev. #
☑ EMAX-8081	8
☐ EMAX-8082	5
☐ EMAX-608	1

ICAL REFERENCE

ICAL ID	BATCH	DATE
CPF9H26	RH26	08-26-2015
TOF9H26	RH26	08-26-2015
CRF9H26	RH26	08-26-2015
CPF9H26A	RH26	08-26-2015
TOF9H26A	RH26	08-26-2015

STANDARDS ID		Conc (µg/L)
Hexane	SWA-005-14-05	N.A.
IB	SSIC-12-70-02	40/40
PEM	SSIC-12-81-01	100/100
PEST ICAL	SSIC-12-83-01	See comments
PEST ICV	SSIC-12-83-02	20/200
MIX 3 ICAL	SSIC-12-83-03	See comments
MIX 3 ICV	SSIC-12-84-01	20/20
TOXA ICAL	SSIC-12-82-01	See comments
TOXA ICV	SSIC-12-85-01	500/25
CHLO ICAL	SSIC-12-84-02	See comments
CHLO ICV	SSIC-12-84-03	500/25

Column	
	☐ A. Elite-CLP 1 B. Elite-CLP 2
	☑ A. STX CLPEST 1 B. STX CLPEST 2 / A. RTX CLPEST 1 B. STX CLPEST 2
	☐ A. ZB-MULTI RES 1 B. ZB-MULTI RES 2

ELECTRONIC DATA ARCHIVAL

Location	Date
☐ EZChrom Elite_PEST F9	

Analyzed By: [signature] Analysis Date: 08-26-2015

Disposed By: [signature] Disposal Date: 09-15-2015

This page is checked during data review

Sequence: RH26.seq

Run #	Status	Vial	Volume	Sample ID	Method	Filename	Multiplie	Description
1		1	1	PEST TEST	CPF9H17.met	RH26001.dat	1	
2		2	1	PEST TEST	CPF9H17.met	RH26002.dat	1	
3		3	1	IBF9H1704	CPF9H17.met	RH26003.dat	1	
4		4	1	PEF9H1704	CPF9H17.met	RH26004.dat	1	
5		5	1	CCPF9H1704	CPF9H17.met	RH26005.dat	1	
6		6	1	TOXA TEST	TOF9H17.met	RH26006.dat	1	
7		7	1	CHLO TEST	CPF9H17.met	RH26007.dat	1	
8		8	1	MIX3 TEST	CPF9H26.met	RH26008.dat	1	
9		9	1	IBF9H2601	CPF9H26.met	RH26009.dat	1	
10		10	1	PEF9H2601	CPF9H26.met	RH26010.dat	1	
11		11	1	TOF9H2601 (50/2.5ppb TOXA ICAL)	TOF9H26.met	RH26011.dat	1	
12		12	1	TOF9H2602 (100/5ppb TOXA ICAL)	TOF9H26.met	RH26012.dat	1	
13		13	1	TOF9H2603 (250/12.5ppb TOXA ICAL)	TOF9H26.met	RH26013.dat	1	
14		14	1	TOF9H2604 (500/25ppb TOXA ICAL)	TOF9H26.met	RH26014.dat	1	
15		15	1	TOF9H2605 (750/37.5ppb TOXA ICAL)	TOF9H26.met	RH26015.dat	1	
16		16	1	TOF9H2606 (1000/50ppb TOXA ICAL)	TOF9H26.met	RH26016.dat	1	
17		17	1	TOF9H2607 (1500/75ppb TOXA ICAL)	TOF9H26.met	RH26017.dat	1	
18		18	1	TOF9H2608 (2000/100ppb TOXA ICAL)	TOF9H26.met	RH26018.dat	1	
19		19	1	ITOF9H2601 (500/25ppb TOXA ICV)	TOF9H26.met	RH26019.dat	1	
20		20	1	CPF9H2601 (1.25/2.5/12.5ppb PEST ICAL)	CPF9H26.met	RH26020.dat	1	
21		21	1	CPF9H2602 (2.5/5/25ppb PEST ICAL)	CPF9H26.met	RH26021.dat	1	
22		22	1	CPF9H2603 (5/10/50ppb PEST ICAL)	CPF9H26.met	RH26022.dat	1	
23		23	1	CPF9H2604 (10/20/100ppb PEST ICAL)	CPF9H26.met	RH26023.dat	1	
24		24	1	CPF9H2605 (20/40/200ppb PEST ICAL)	CPF9H26.met	RH26024.dat	1	
25		25	1	CPF9H2606 (40/80/400ppb PEST ICAL)	CPF9H26.met	RH26025.dat	1	
26		26	1	CPF9H2607 (60/120/600ppb PEST ICAL)	CPF9H26.met	RH26026.dat	1	
27		27	1	CPF9H2608 (80/160/800ppb PEST ICAL)	CPF9H26.met	RH26027.dat	1	
28		28	1	CPF9H2609 (1.25/1.25ppb MIX3 ICAL)	CPF9H26.met	RH26028.dat	1	
29		29	1	CPF9H2610 (2.5/2.5ppb MIX3 ICAL)	CPF9H26.met	RH26029.dat	1	
30		30	1	CPF9H2611 (5/5ppb MIX3 ICAL)	CPF9H26.met	RH26030.dat	1	
31		31	1	CPF9H2612 (10/10ppb MIX3 ICAL)	CPF9H26.met	RH26031.dat	1	
32		32	1	CPF9H2613 (20/20ppb MIX3 ICAL)	CPF9H26.met	RH26032.dat	1	
33		33	1	CPF9H2614 (40/40ppb MIX3 ICAL)	CPF9H26.met	RH26033.dat	1	
34		34	1	CPF9H2615 (60/60ppb MIX3 ICAL)	CPF9H26.met	RH26034.dat	1	
35		35	1	CPF9H2616 (80/80ppb MIX3 ICAL)	CPF9H26.met	RH26035.dat	1	
36		36	1	ICPF9H2601 (20/200ppb PEST ICV)	CPF9H26.met	RH26036.dat	1	
37		37	1	ICPF9H2601A (20/20ppb MIX3 ICV)	CPF9H26.met	RH26037.dat	1	
38		38	1	CRF9H2601 (25/1.25ppb CHLO ICAL)	CRF9H26.met	RH26038.dat	1	
39		39	1	CRF9H2602 (50/2.5ppb CHLO ICAL)	CRF9H26.met	RH26039.dat	1	
40		40	1	CRF9H2603 (100/5ppb CHLO ICAL)	CRF9H26.met	RH26040.dat	1	
41		41	1	CRF9H2604 (250/12.5ppb CHLO ICAL)	CRF9H26.met	RH26041.dat	1	
42		42	1	CRF9H2605 (500/25ppb CHLO ICAL)	CRF9H26.met	RH26042.dat	1	
43		43	1	CRF9H2606 (750/37.5ppb CHLO ICAL)	CRF9H26.met	RH26043.dat	1	
44		44	1	CRF9H2607 (1000/50ppb CHLO ICAL)	CRF9H26.met	RH26044.dat	1	
45		45	1	CRF9H2608 (1500/75ppb CHLO ICAL)	CRF9H26.met	RH26045.dat	1	
46		46	1	ICRF9H2601 (500/25ppb CHLO ICV)	CRF9H26.met	RH26046.dat	1	
47		47	1	24F9H2601 (0.25ppb 2,4,5-TCP ICAL)	24F9H26.met	RH26047.dat	1	
48		48	1	24F9H2602 (0.5ppb 2,4,5-TCP ICAL)	24F9H26.met	RH26048.dat	1	
49		49	1	24F9H2603 (1ppb 2,4,5-TCP ICAL)	24F9H26.met	RH26049.dat	1	
50		50	1	24F9H2604 (2ppb 2,4,5-TCP ICAL)	24F9H26.met	RH26050.dat	1	
51		51	1	24F9H2605 (4ppb 2,4,5-TCP ICAL)	24F9H26.met	RH26051.dat	1	
52		52	1	24F9H2606 (8ppb 2,4,5-TCP ICAL)	24F9H26.met	RH26052.dat	1	
53		53	1	24F9H2607 (12ppb 2,4,5-TCP ICAL)	24F9H26.met	RH26053.dat	1	
54		54	1	24F9H2608 (20ppb 2,4,5-TCP ICAL)	24F9H26.met	RH26054.dat	1	
55		52	1	I24F9H2601 (8ppb 2,4,5-TCP ICV)	24F9H26.met	RH26055.dat	1	

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PESTICIDES

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #:	AF9-006
Instrument No.:	F9
Analytical Sequence:	RJ03
Method File:	CPF9H26, TOF9H26
Analytical Batch:	RJ03004

SOP #	Rev. #
☑ EMAX-8081	8
☐ EMAX-8082	5
☐ EMAX-608	1

ICAL REFERENCE

ICAL ID	BATCH	DATE
CPF9H26	RH26	08-26-2015
TOF9H26	RH26	08-26-2015

STANDARDS ID		Conc (µg/L)
Hexane	SWIA-005-14-05	N.A.
IB	SSIC-12-85-02	40/40
PEM	SSIC-12-81-01	100/100
PEST DCC	SSIC-12-86-03	20/40/200
TOXA DCC	SSIC-12-82-02	500/25

Column	☐ A. Elite-CLP 1 B. Elite-CLP 2
	☑ A. STX CLPEST 1 B. STX CLPEST 2 / A. RTX CLPEST 1 B. STX CLPEST 2
	☐ A. ZB-MULTI RES 1 B. ZB-MULTI RES 2

ELECTRONIC DATA ARCHIVAL

Location	Date
☐ EZChrom Elite_PEST F9	

Analyzed By: [signature] Analysis Date: 10-03-2015

Disposed By: Disposal Date:

This page is checked during data review

Sequence: RJ03.seq

Run #	Status	Vial	Volume	Sample ID	Method	Filename	Multiplie	Description
1		1	1	HEXANE RINSE	CPF9H26.met	RJ03001.dat	1	
2		2	1	IBF9H26101	CPF9H26.met	RJ03002.dat	1	
3		3	1	PEF9H26101	CPF9H26.met	RJ03003.dat	1	
4		4	1	CCPF9H26101	CPF9H26.met	RJ03004.dat	1	
5		5	1	CTOF9H26101	TOF9H26.met	RJ03005.dat	1	
6		6	1	CPI027WB	CPF9H26.met	RJ03006.dat	1	
7		7	1	CPI027WL	CPF9H26.met	RJ03007.dat	1	
8		8	1	CPI027WC	CPF9H26.met	RJ03008.dat	1	
9		9	1	TXI005SB	CPF9H26.met	RJ03009.dat	1	
10		10	1	I131-06	CPF9H26.met	RJ03010.dat	1	
11		11	1	I186-01	CPF9H26.met	RJ03011.dat	1	
12		12	1	IBF9H26102	CPF9H26.met	RJ03012.dat	1	
13		13	1	CCPF9H26102	CPF9H26.met	RJ03013.dat	1	
14		14	1	CTOF9H26102	TOF9H26.met	RJ03014.dat	1	
15		15	1	CPI033WB	CPF9H26.met	RJ03015.dat	1	
16		16	1	CPI033WL	CPF9H26.met	RJ03016.dat	1	
17		17	1	CPI033WC	CPF9H26.met	RJ03017.dat	1	
18		18	1	TXI007SB	CPF9H26.met	RJ03018.dat	1	
19		19	1	I185-04	CPF9H26.met	RJ03019.dat	1	
20		20	1	I185-05	CPF9H26.met	RJ03020.dat	1	
21		21	1	I185-06	CPF9H26.met	RJ03021.dat	1	
22		22	1	IBF9H26103	CPF9H26.met	RJ03022.dat	1	
23		23	1	CCPF9H26103	CPF9H26.met	RJ03023.dat	1	
24		24	1	CTOF9H26103	TOF9H26.met	RJ03024.dat	1	

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
PESTICIDES/PCBs

SOP	Rev. #
☐ EMAX-608	2
☑ EMAX-3520	5
☐ EMAX-3540	2
☐ EMAX-3546	0
☐ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-3620	2
☐ EMAX-3660	1
☐ EMAX-3665	2

Note: For samples, relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

Book #: ECP-078
Preparation Batch: CPI033W
Matrix: WATER ITCLP EXTRACT
Micropipette ID: 1000µl: PE00-03
Micropipette ID:

STANDARDS	ID	Amount Added (ml)
Surrogate	SSIC-14-69-01	0.4
LCS/MS PEST	SSIC-12-82-03	0.5
LCS/MS		
LCS/MS		

Reagents	Lot # / ID
CH_2Cl_2	55163
Hexane	54297
Acetone	–
Na_2SO_4	SWIB-003-03-19
H_2SO_4	
TBA Reagent	
Silica Sand	
Florisil & Eluting Solvent	
Isopropyl Alcohol	SPIA-07-01-10
Reagent Water	SWIA-005-14-19
Residual Chlorine Strip	5190
pH strip	HC554612
Hexane/Acetone Soln. (50:50)	
Filter Paper	966549 A

Lab Sample ID	Sonicator #	Cell #	Concentrator #
CPI033WB	N/A	N/A	3/5
WL	↓	↓	3/5
WC			3/5
IXI007SB			3/5
I185-04			4/6
-05			4/6
-06			4/6

Tuning	
Sonicator #	Reading

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1		
2		
3	35	35
4	35	35
5	60	60
6	60	60
7		
8		

Test Thermometer = SVOC-T1

Prepared By: JM
Witnessed By: [illegible]
Standard Added By: JM
Checked By: ML
Extract Received By: [illegible] 9/26/15
Location: SE02 #4A
Disposed By:
Disposed On:

FileID: CPI033W

EMAX

EXTRACTION LOG FOR PESTICIDES/PCBs

PrepBatchID	LabSampleID	Aliquot	Unit	Ve (ml)	EA	EVe (ml)	PF	FlorisilCleanup EMAX-3620	SulfurCleanup EMAX-3660	[1]AcidCleanup EMAX-3665	Comments
15CPI033W01	CPI033WB	1000	ml	10	1000	10	1				
15CPI033W02	CPI033WL	1000	ml	10	1000	10	1				
15CPI033W03	CPI033WC	1000	ml	10	1000	10	1				
15CPI033W04	TXI007SB	100	ml	10	1000	10	10				TCLP EXTRACT
15CPI033W05	I185-04	100	ml	10	1000	10	10				TCLP EXTRACT
15CPI033W06	I185-05	100	ml	10	1000	10	10				TCLP EXTRACT
15CPI033W07	I185-06	100	ml	10	1000	10	10				TCLP EXTRACT

☑ ExtractionStarted @ 9/25/2015 17:24

Ve=ExtractVolume EA= ExpectedAliquot EVe=ExpectedExtractVolume PF=(EA/Aliquot)(Ve/EVe)

☑ Extraction Ended @ 9/26/2015 11:25

Prepared By: JMuert

Comment: [1]Acid cleanup is only for PCB analysis.

Checked By: ML

pH 5-7,cl not detected.

Date 9/26/15

EMAX LABORATORIES, INC.

FileID: TXI007S

TCLP EXTRACTION LOG

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	TCLPSoln	TCLPVol	Exrtract pH	Preservation	Comments
15TXI007S01	TXI0075B	0	g	9/23/15 10:52		2000		HNO_3	
15TXI007S02	I185-04	100	g	9/23/15 10:53	#1	2000	5.22	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)
15TXI007S03	I185-05	100.01	g	9/23/15 10:58	#1	2000	4.93	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)
15TXI007S04	I185-06	100.02	g	9/23/15 11:01	#1	2000	5	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)

☑ DateTimeStarted 9/23/2015 15:30 ☑ Thermometer Reset on 9/23/2015 15:30 Balance ID: 10203192. Calibration check was verified prior to use.

☑ DateTimeEnded 9/24/2015 9:30 Note: Sample preserved with HNO_3 is for metals analysis. MS/MSD were spiked prio Prepared By: DFelic/MLyudm

Extract Location: Metals Received By: SP 9/24/15 Checked By: ML

Comment: 14:11 Date 9/24/15

EMAX LABORATORIES, INC.

FileID: TXI007S

TCLP EXTRACTION LOG

Determination of TLCP Solution							Determination of TCLP Extract Filtration			Determination of % solids for aqueos phase			
LabSampleID	Phase(s)	Aliquot	Sample pH	HCl	pH	TCLPSolnReq'd	(ml)	(g)	Pressure	WtS(g)	WtF(g)	WtDFS(g)	% Solids
TXI0075B							100						
I185-04	1	5	9.52	3.5	2.5	#1	100	98.78	Vacuum				
I185-05	1	5	9.46	3.5	1.5	#1	100	98.19	Vacuum				
I185-06	1	5.02	8.56	3.5	1.66	#1	100	98.67	Vacuum				

Calibration of pH Meter			InstrumentID: 96
BufferID	Value	Reading	DateTime
SP1A-05-02-01	4	4.01	9/23/15 12:23
SP1A-05-02-02	7	7	9/23/15 12:22
SW1A-005-12-24	CalVer 5	5.05	9/23/15 12:24
SP1A-05-02-01	4	4.01	9/24/15 13:55
SP1A-05-02-02	7	7	9/24/15 13:42
5W1A-005-12-24	CalVer 5	5.05	9/24/15 13:56
ID	Reagent	Desc	Expiration Date
SP1A-05-02-04	HCl	1N	03/04/16
SW1A-005-11-08	HNO_3	Conc	08/19/16
SP1B-08-31-03	TCLP Soln	#1	03/17/16
	TCLP Soln		
Rotary Agitator #	Criteria	rpm	DateTime
1	30 ± 2 rpm	30	9/23/15 12:25
	30 ± 2 rpm		
Thermostat Setting:		Thermometer ID:	122273404
TCLP Room Temperature	Criteria	Rdg	DateTime
Room Temp (°C) High	23 ± 2 °C	24.4	9/24/15 9:28
Room Temp (°C) Low	23 ± 2 °C	22.5	9/23/15 17:48
Pipette ID	PE04-03		
CONCENTRATOR (WATER BATH)			
Concentrator #	Temp Setting	Thermometer Rdg	Thermometer ID
6	50	50	5VOC-T1
Filter ID/Lot #	103013/ 062513		
pH strip Lot#	HC554612		

Legend:

WtS = weight of sample

WtF = weight of filter

WtDFS = weight of dried filter + solids

Prepared By: DFelic/MLyudm

Checked By: ML

Date 9/24/15

HERBICIDES TCLP

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	09/25/15 21:45
Lab Samp ID:	I185-04	Dilution Factor:	50
Lab File ID:	WI25008A	Matrix :	LEACHATE
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND)|ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	559.2|(589.4)	500.0	112|(118)	50-130

DateTime Leached: 09/23/15 15:30

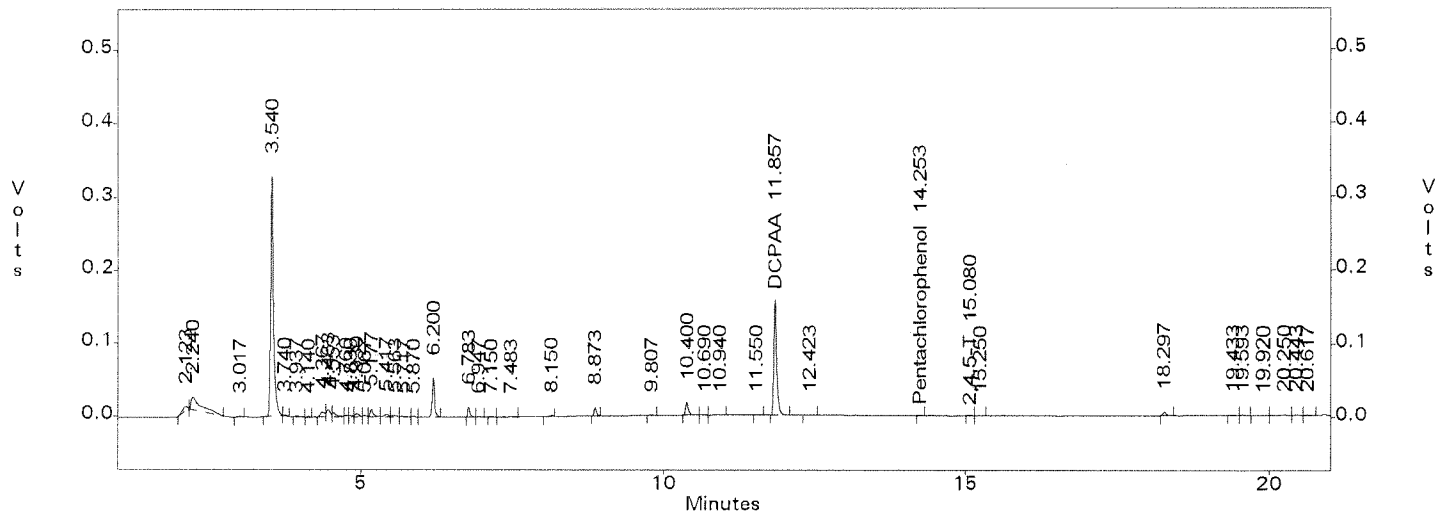
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.008
Method : c:\ezchrom\methods\he16g08.met
Sample ID : I185-04
Acquired : Sep 25, 2015 21:45:41
Printed : Sep 28, 2015 09:44:08
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.010	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	10.247	0.0	0.00	0.000	--
4-Nitrophenol	11.123	0.0	0.00	0.000	--
DCPAA	11.857	502070.0	448.93	1118.361	Bx
Dicamba	12.047	0.0	0.00	0.000	--
MCPP	12.137	0.0	0.00	0.000	--
MCPA	12.640	0.0	0.00	0.000	--
DCP	12.997	0.0	0.00	0.000	--
2,4-D	13.560	0.0	0.00	0.000	--
Pentachlorophenol	14.253	2228.0	5303.02	0.420	BV
Silvex	14.427	0.0	0.00	0.000	--
2,4,5-T	15.080	3446.0	2198.66	1.567	VV
Chloramben	15.323	0.0	0.00	0.000	--
Dinoseb	15.483	0.0	0.00	0.000	--
2,4-DB	15.653	0.0	0.00	0.000	--
Bentazon	16.560	0.0	0.00	0.000	--
Dacthal	16.837	0.0	0.00	0.000	--
Picloram	17.347	0.0	0.00	0.000	--
Acifluorfen	19.050	0.0	0.00	0.000	--

c:\ezchrom\chrom\wi25\wi25.008 -- Channel A



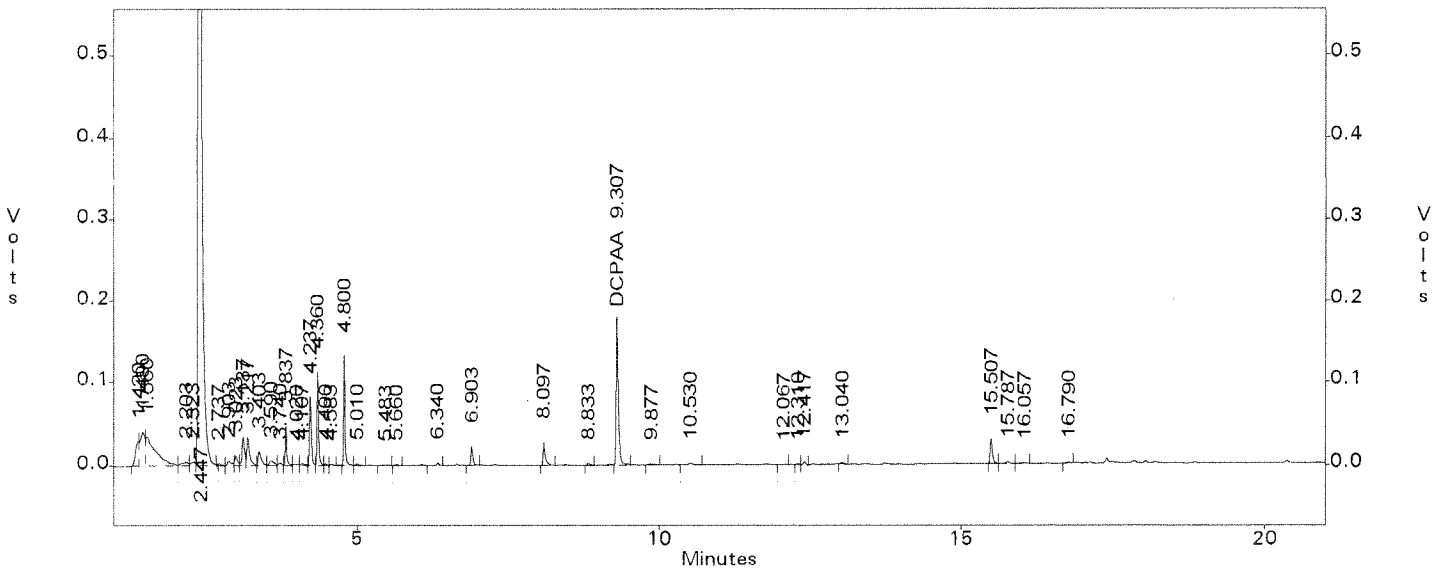
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.008
Method : c:\ezchrom\methods\he16g08.met
Sample ID : I185-04
Acquired : Sep 25, 2015 21:45:41
Printed : Sep 28, 2015 09:44:08
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.847	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	7.853	0.0	0.00	0.000	--
4-Nitrophenol	8.647	0.0	0.00	0.000	--
DCPAA	9.307	465362.0	394.76	1178.834	VV
Dicamba	9.560	0.0	0.00	0.000	--
MCPP	9.740	0.0	0.00	0.000	--
MCPA	10.047	0.0	0.00	0.000	--
DCP	10.477	0.0	0.00	0.000	--
2,4-D	10.863	0.0	0.00	0.000	--
Pentachlorophenol	11.327	0.0	0.00	0.000	--
Silvex	11.827	0.0	0.00	0.000	--
2,4,5-T	12.250	0.0	0.00	0.000	--
Chloramben	12.263	0.0	0.00	0.000	--
2,4-DB	12.833	0.0	0.00	0.000	--
Dinoseb	13.187	0.0	0.00	0.000	--
Bentazon	13.750	0.0	0.00	0.000	--
Dacthal	14.167	0.0	0.00	0.000	--
Picloram	14.207	0.0	0.00	0.000	--
Acifluorfen	16.437	0.0	0.00	0.000	--

c:\ezchrom\chrom\wi25\wi25.008 -- Channel B



METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	CAFB-FT006-WC2-002	Date Analyzed:	09/25/15 22:18
Lab Samp ID:	I185-05	Dilution Factor:	50
Lab File ID:	WI25009A	Matrix :	LEACHATE
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND)|ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	364.6|(376.3)	500.0	72.9|(75.3)	50-130

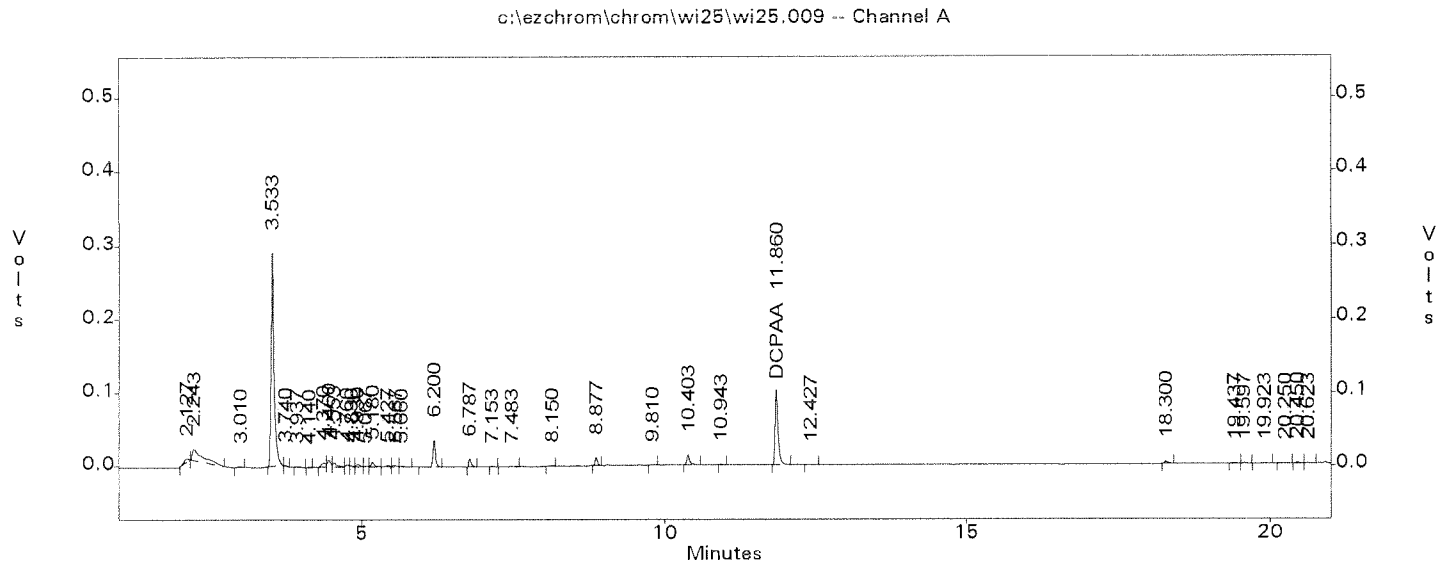
DateTime Leached: 09/23/15 15:30

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.009
Method : c:\ezchrom\methods\he16g08.met
Sample ID : I185-05
Acquired : Sep 25, 2015 22:18:36
Printed : Sep 28, 2015 09:44:21
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.010	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	10.247	0.0	0.00	0.000	--
4-Nitrophenol	11.123	0.0	0.00	0.000	--
DCPAA	11.860	327402.0	448.93	729.288	Bx
Dicamba	12.047	0.0	0.00	0.000	--
MCPP	12.137	0.0	0.00	0.000	--
MCPA	12.640	0.0	0.00	0.000	--
DCP	12.997	0.0	0.00	0.000	--
2,4-D	13.560	0.0	0.00	0.000	--
Pentachlorophenol	14.273	0.0	0.00	0.000	--
Silvex	14.427	0.0	0.00	0.000	--
2,4,5-T	15.067	0.0	0.00	0.000	--
Chloramben	15.323	0.0	0.00	0.000	--
Dinoseb	15.483	0.0	0.00	0.000	--
2,4-DB	15.653	0.0	0.00	0.000	--
Bentazon	16.560	0.0	0.00	0.000	--
Dacthal	16.837	0.0	0.00	0.000	--
Picloram	17.347	0.0	0.00	0.000	--
Acifluorfen	19.050	0.0	0.00	0.000	--



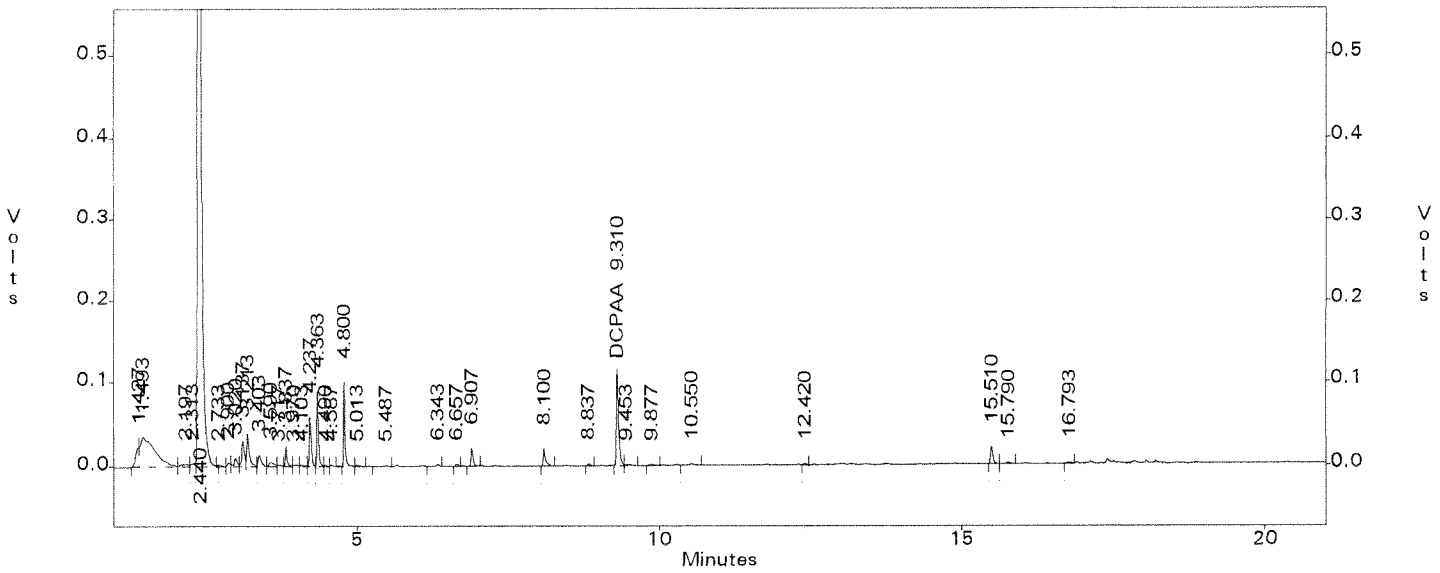
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.009
Method : c:\ezchrom\methods\he16g08.met
Sample ID : I185-05
Acquired : Sep 25, 2015 22:18:36
Printed : Sep 28, 2015 09:44:21
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.847	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	7.853	0.0	0.00	0.000	--
4-Nitrophenol	8.647	0.0	0.00	0.000	--
DCPAA	9.310	297123.0	394.76	752.658	VV
Dicamba	9.560	0.0	0.00	0.000	--
MCPP	9.740	0.0	0.00	0.000	--
MCPA	10.047	0.0	0.00	0.000	--
DCP	10.477	0.0	0.00	0.000	--
2,4-D	10.863	0.0	0.00	0.000	--
Pentachlorophenol	11.327	0.0	0.00	0.000	--
Silvex	11.827	0.0	0.00	0.000	--
2,4,5-T	12.250	0.0	0.00	0.000	--
Chloramben	12.263	0.0	0.00	0.000	--
2,4-DB	12.833	0.0	0.00	0.000	--
Dinoseb	13.187	0.0	0.00	0.000	--
Bentazon	13.750	0.0	0.00	0.000	--
Dacthal	14.167	0.0	0.00	0.000	--
Picloram	14.207	0.0	0.00	0.000	--
Acifluorfen	16.437	0.0	0.00	0.000	--

c:\ezchrom\chrom\wi25\wi25.009 -- Channel B



METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	09/25/15 22:51
Lab Samp ID:	I185-06	Dilution Factor:	50
Lab File ID:	WI25010A	Matrix :	LEACHATE
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND)|ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	334.4|(350.8)	500.0	66.9|(70.2)	50-130

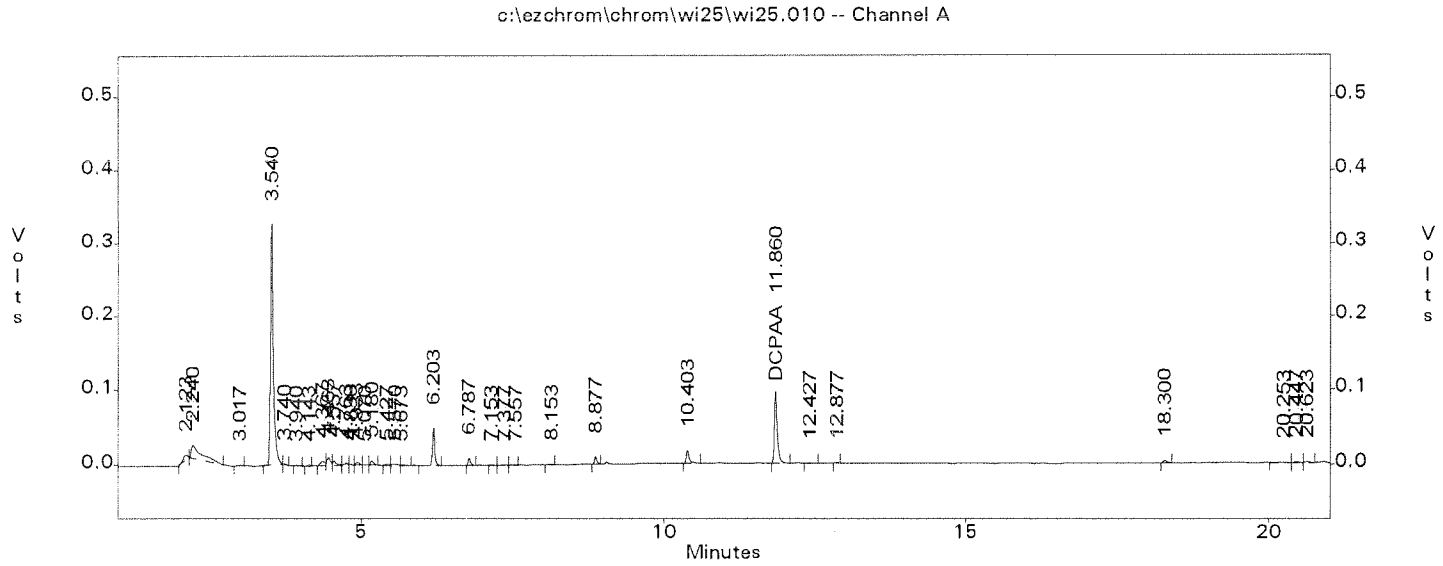
DateTime Leached: 09/23/15 15:30

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.010
Method : c:\ezchrom\methods\he16g08.met
Sample ID : I185-06
Acquired : Sep 25, 2015 22:51:38
Printed : Sep 28, 2015 09:44:42
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.010	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	10.247	0.0	0.00	0.000	--
4-Nitrophenol	11.123	0.0	0.00	0.000	--
DCPAA	11.860	300278.0	448.93	668.870	Bx
Dicamba	12.047	0.0	0.00	0.000	--
MCPP	12.137	0.0	0.00	0.000	--
MCPA	12.640	0.0	0.00	0.000	--
DCP	12.997	0.0	0.00	0.000	--
2,4-D	13.560	0.0	0.00	0.000	--
Pentachlorophenol	14.273	0.0	0.00	0.000	--
Silvex	14.427	0.0	0.00	0.000	--
2,4,5-T	15.067	0.0	0.00	0.000	--
Chloramben	15.323	0.0	0.00	0.000	--
Dinoseb	15.483	0.0	0.00	0.000	--
2,4-DB	15.653	0.0	0.00	0.000	--
Bentazon	16.560	0.0	0.00	0.000	--
Dacthal	16.837	0.0	0.00	0.000	--
Picloram	17.347	0.0	0.00	0.000	--
Acifluorfen	19.050	0.0	0.00	0.000	--



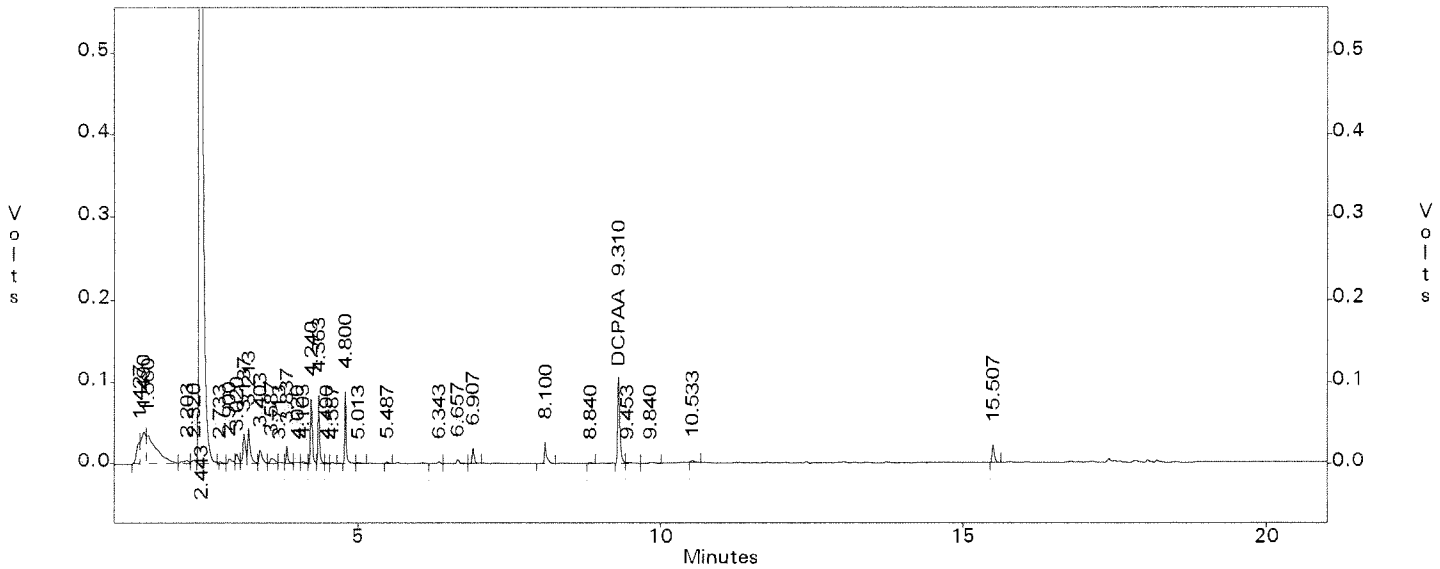
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.010
Method : c:\ezchrom\methods\he16g08.met
Sample ID : I185-06
Acquired : Sep 25, 2015 22:51:38
Printed : Sep 28, 2015 09:44:42
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.847	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	7.853	0.0	0.00	0.000	--
4-Nitrophenol	8.647	0.0	0.00	0.000	--
DCPAA	9.310	277001.0	394.76	701.686	VV
Dicamba	9.560	0.0	0.00	0.000	--
MCPP	9.740	0.0	0.00	0.000	--
MCPA	10.047	0.0	0.00	0.000	--
DCP	10.477	0.0	0.00	0.000	--
2,4-D	10.863	0.0	0.00	0.000	--
Pentachlorophenol	11.327	0.0	0.00	0.000	--
Silvex	11.827	0.0	0.00	0.000	--
2,4,5-T	12.250	0.0	0.00	0.000	--
Chloramben	12.263	0.0	0.00	0.000	--
2,4-DB	12.833	0.0	0.00	0.000	--
Dinoseb	13.187	0.0	0.00	0.000	--
Bentazon	13.750	0.0	0.00	0.000	--
Dacthal	14.167	0.0	0.00	0.000	--
Picloram	14.207	0.0	0.00	0.000	--
Acifluorfen	16.437	0.0	0.00	0.000	--

c:\ezchrom\chrom\wi25\wi25.010 -- Channel B



QC SUMMARIES

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	MBLK1W	Date Analyzed:	09/25/15 19:33
Lab Samp ID:	SVI004WB	Dilution Factor:	1
Lab File ID:	WI25004A	Matrix :	WATER
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	0.40	0.10	0.20
2,4,5-TP (SILVEX)	(ND)|ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.149|(7.558)	10.00	71.5|(75.6)	50-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/8151A

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	HEI004WB	HEI004WL	HEI004WC		
LAB FILE ID:	WI25004A	WI25005A	WI25006A		
DATE EXTRACTED:	09/25/1514:00	09/25/1514:00	09/25/1514:00	DATE COLLECTED:	NA
DATE ANALYZED:	09/25/1519:33	09/25/1520:06	09/25/1520:39	DATE RECEIVED:	09/25/15
PREP. BATCH:	HEI004W	HEI004W	HEI004W		
CALIB. REF:	WI25002A	WI25002A	WI25002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
2,4-D	(ND)|ND	1.00	1.00|(1.05)	100|(105)	1.00	0.962|(0.965)	96|(96)	4|(8)	35-115	30
2,4,5-TP (Silvex)	(ND)|ND	1.00	1.03|(1.13)	103|(113)	1.00	0.988|(1.06)	99|(106)	4|(6)	50-115	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
2,4-DCPAA	10.00	8.900|(9.603)	89.0|(96.0)	10.00	8.488|(9.033)	84.9|(90.3)	50-130

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/25/15
Batch No.	: 15I185	Date Extracted:	09/25/15 14:00
Sample ID:	MBLK2W	Date Analyzed:	09/25/15 21:12
Lab Samp ID:	TXI007SB	Dilution Factor:	50
Lab File ID:	WI25007A	Matrix :	LEACHATE
Ext Btch ID:	HEI004W	% Moisture :	NA
Calib. Ref.:	WI25002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND)|ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	434.8|(442.7)	500.0	87.0|(88.5)	50-130

DateTime Leached: 09/23/15 15:30

QC DATA

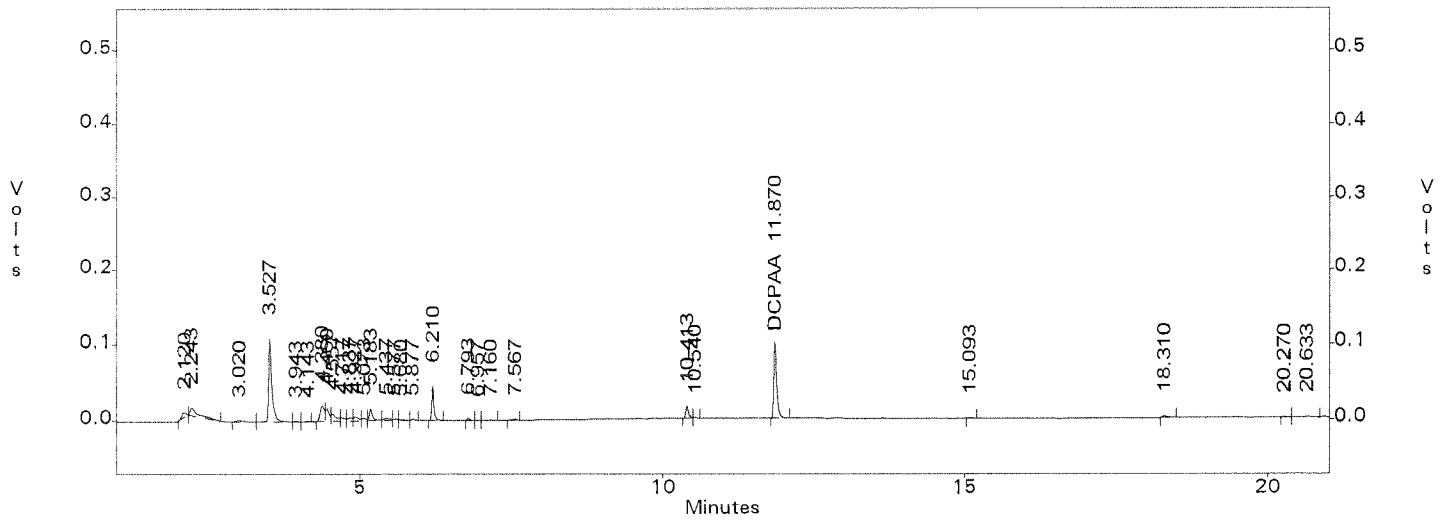
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.004
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HEI004WB
Acquired : Sep 25, 2015 19:33:05
Printed : Sep 28, 2015 09:40:03
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.010	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	10.247	0.0	0.00	0.000	--
4-Nitrophenol	11.123	0.0	0.00	0.000	--
DCPAA	11.870	320950.0	448.93	714.917	Bx
Dicamba	12.047	0.0	0.00	0.000	--
MCPP	12.137	0.0	0.00	0.000	--
MCPA	12.640	0.0	0.00	0.000	--
DCP	12.997	0.0	0.00	0.000	--
2,4-D	13.560	0.0	0.00	0.000	--
Pentachlorophenol	14.273	0.0	0.00	0.000	--
Silvex	14.427	0.0	0.00	0.000	--
2,4,5-T	15.067	0.0	0.00	0.000	--
Chloramben	15.323	0.0	0.00	0.000	--
Dinoseb	15.483	0.0	0.00	0.000	--
2,4-DB	15.653	0.0	0.00	0.000	--
Bentazon	16.560	0.0	0.00	0.000	--
Dacthal	16.837	0.0	0.00	0.000	--
Picloram	17.347	0.0	0.00	0.000	--
Acifluorfen	19.050	0.0	0.00	0.000	--

c:\ezchrom\chrom\wi25\wi25.004 -- Channel A

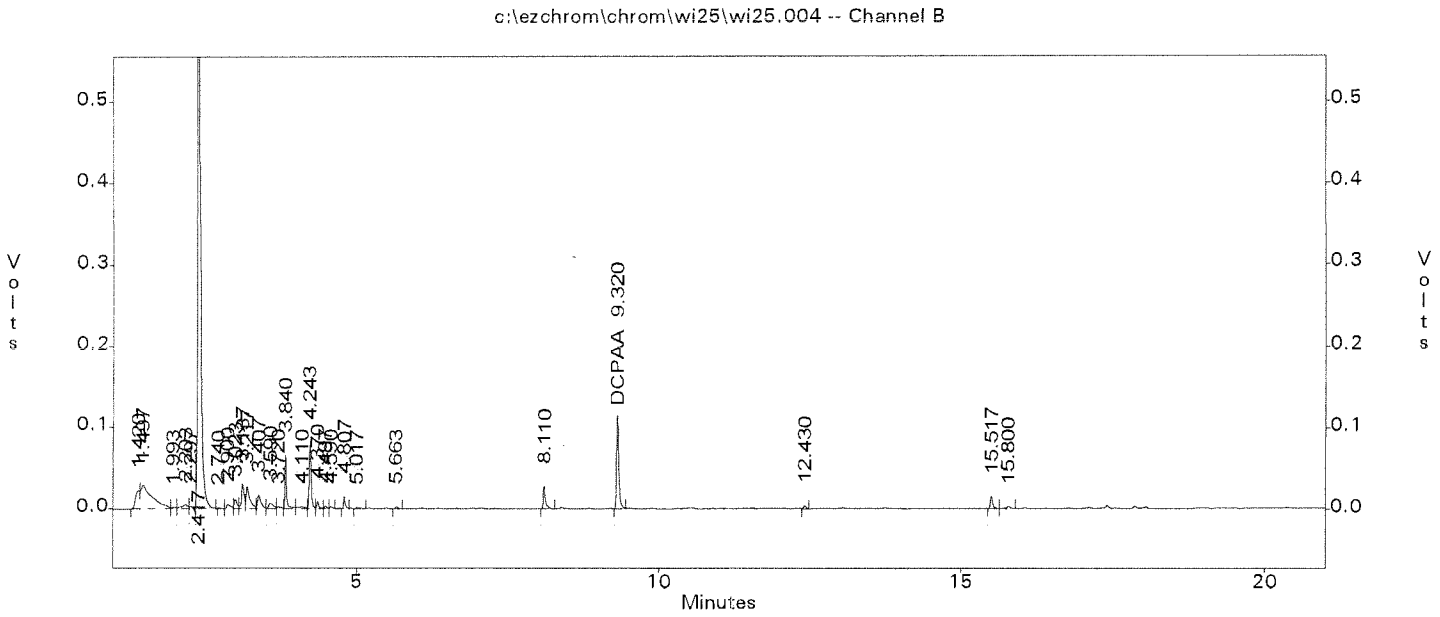


EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.004
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HEI004WB
Acquired : Sep 25, 2015 19:33:05
Printed : Sep 28, 2015 09:40:03
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.847	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	7.853	0.0	0.00	0.000	--
4-Nitrophenol	8.647	0.0	0.00	0.000	--
DCPAA	9.320	298352.0	394.76	755.772	VV
Dicamba	9.560	0.0	0.00	0.000	--
MCPP	9.740	0.0	0.00	0.000	--
MCPA	10.047	0.0	0.00	0.000	--
DCP	10.477	0.0	0.00	0.000	--
2,4-D	10.863	0.0	0.00	0.000	--
Pentachlorophenol	11.327	0.0	0.00	0.000	--
Silvex	11.827	0.0	0.00	0.000	--
2,4,5-T	12.267	0.0	0.00	0.000	--
Chloramben	12.290	0.0	0.00	0.000	--
2,4-DB	12.833	0.0	0.00	0.000	--
Dinoseb	13.187	0.0	0.00	0.000	--
Bentazon	13.750	0.0	0.00	0.000	--
Dacthal	14.167	0.0	0.00	0.000	--
Picloram	14.207	0.0	0.00	0.000	--
Acifluorfen	16.437	0.0	0.00	0.000	--

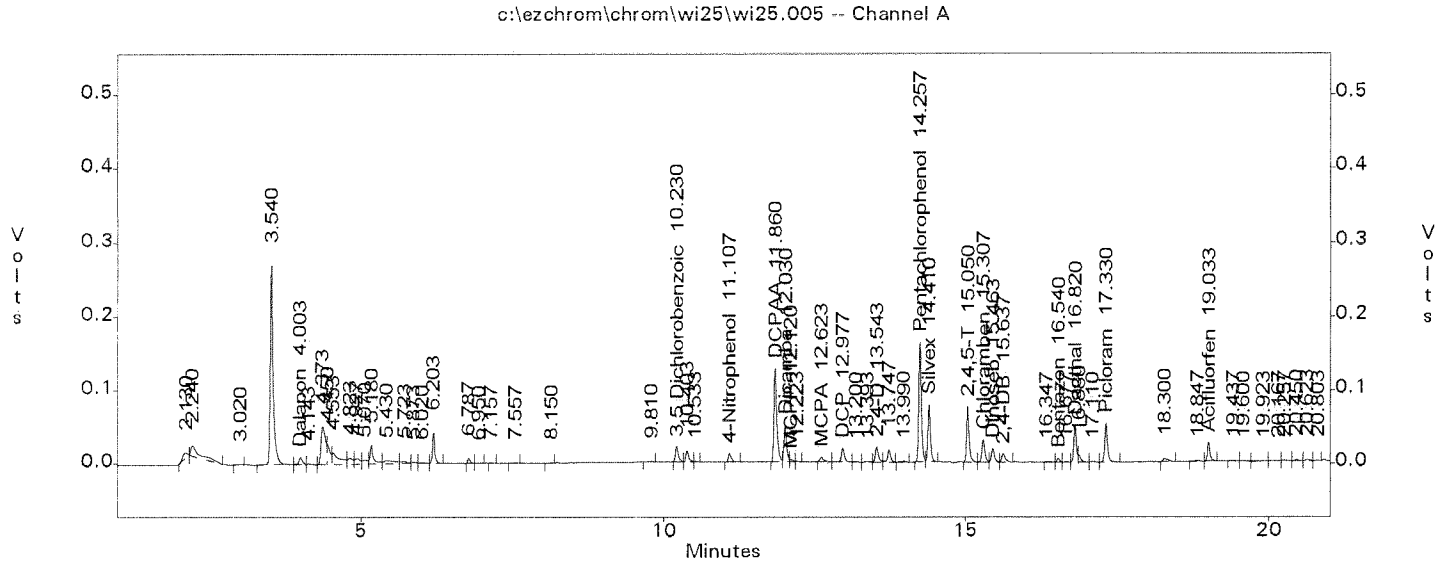


EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.005
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HEI004WL
Acquired : Sep 25, 2015 20:06:11
Printed : Sep 28, 2015 09:42:41
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.003	41497.0	589.96	70.338	VV
3,5 Dichlorobenzoic	10.230	65025.0	806.30	80.646	BV
4-Nitrophenol	11.107	37327.0	262.86	142.003	BV
DCPAA	11.860	399540.0	448.93	889.976	BV
Dicamba	12.030	146267.0	1531.67	95.495	Vx
MCPP	12.120	10465.0	2.55	4098.862	xV
MCPA	12.623	28815.0	5.73	5024.906	BV
DCP	12.977	62708.0	630.50	99.457	VV
2,4-D	13.543	67404.0	670.94	100.463	VV
Pentachlorophenol	14.257	491792.0	5303.02	92.738	BV
Silvex	14.410	219886.0	2141.78	102.665	VV
2,4,5-T	15.050	228948.0	2198.66	104.131	BV
Chloramben	15.307	94148.0	1480.23	63.603	VV
Dinoseb	15.463	55903.0	781.73	71.512	VV
2,4-DB	15.637	39269.0	388.09	101.186	VV
Bentazon	16.540	15270.0	225.56	67.699	VV
Dacthal	16.820	145235.0	2498.57	58.127	VS
Picloram	17.330	166372.0	2108.02	78.923	VB
Acifluorfen	19.033	74938.0	841.15	89.090	VV



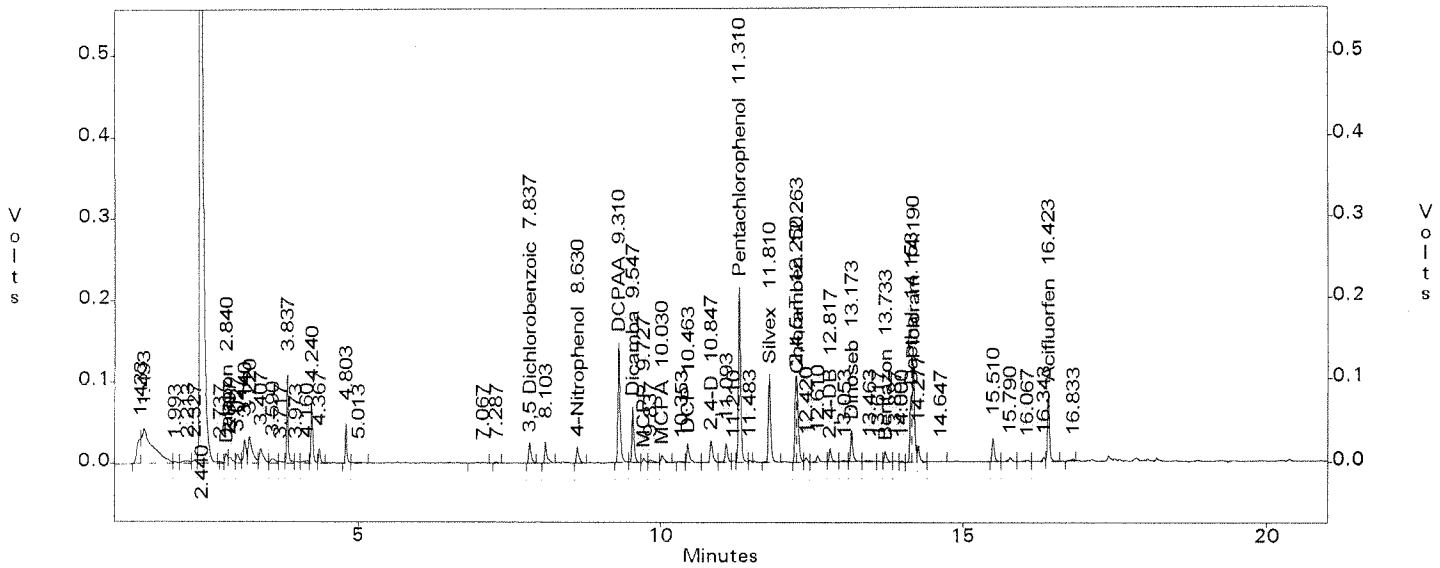
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.005
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HEI004WL
Acquired : Sep 25, 2015 20:06:11
Printed : Sep 28, 2015 09:42:41
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.840	37262.0	808.98	46.060	VS
3,5 Dichlorobenzoic	7.837	66027.0	760.73	86.794	BV
4-Nitrophenol	8.630	55761.0	440.78	126.505	BV
DCPAA	9.310	379092.0	394.76	960.299	VV
Dicamba	9.547	171366.0	1564.43	109.539	VV
MCPP	9.727	15665.0	2.78	5641.639	VV
MCPA	10.030	35046.0	5.29	6620.564	VV
DCP	10.463	69213.0	611.51	113.184	VV
2,4-D	10.847	78049.0	744.91	104.777	VV
Pentachlorophenol	11.310	542198.0	5688.82	95.309	VV
Silvex	11.810	268484.0	2383.87	112.625	BV
2,4,5-T	12.250	196545.0	1740.34	112.935	Bx
Chloramben	12.263	209778.0	2718.33	77.172	xV
2,4-DB	12.817	42446.0	427.74	99.233	VV
Dinoseb	13.173	99333.0	1738.25	57.146	VV
Bentazon	13.733	40360.0	377.03	107.048	VV
Dacthal	14.153	143079.0	2454.04	58.303	VS
Picloram	14.190	313818.0	3706.34	84.671	SV
Acifluorfen	16.423	194421.0	2137.76	90.946	VV

c:\ezchrom\chrom\wi25\wi25.005 -- Channel B



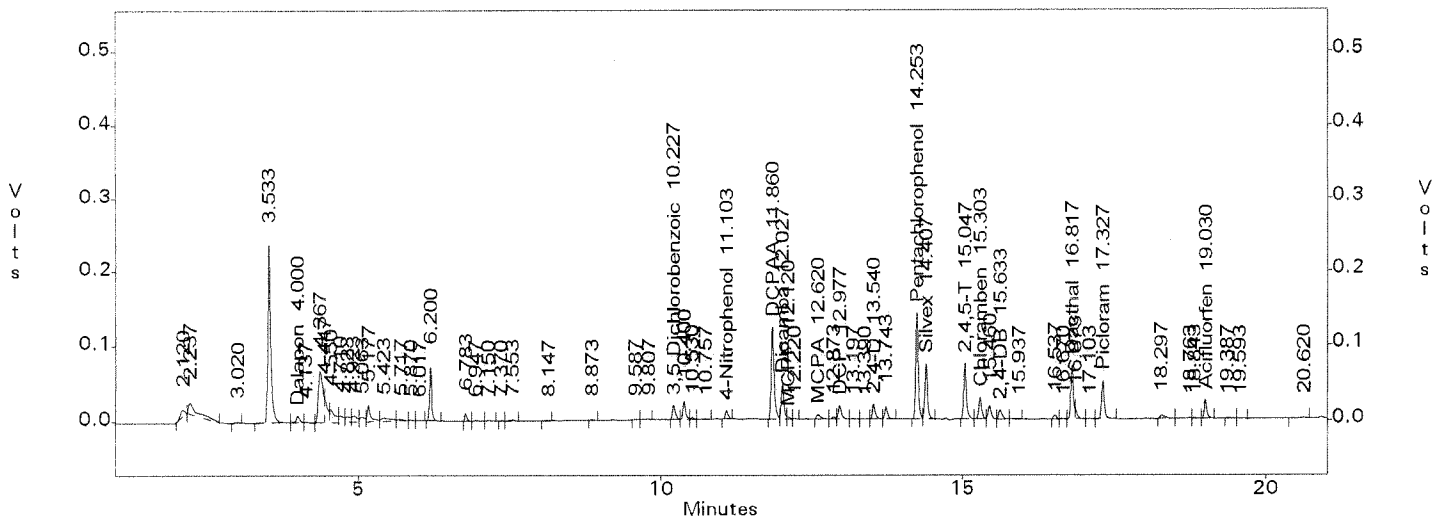
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.006
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HEI004WC
Acquired : Sep 25, 2015 20:39:21
Printed : Sep 28, 2015 09:43:29
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.000	39898.0	589.96	67.628	VV
3,5 Dichlorobenzoic	10.227	56071.0	806.30	69.541	BV
4-Nitrophenol	11.103	35439.0	262.86	134.820	VB
DCPAA	11.860	381034.0	448.93	848.754	BV
Dicamba	12.027	133186.0	1531.67	86.955	Vx
MCPP	12.120	8750.0	2.55	3427.142	xV
MCPA	12.620	25733.0	5.73	4487.451	BV
DCP	12.977	58492.0	630.50	92.770	VV
2,4-D	13.540	64528.0	670.94	96.176	VV
Pentachlorophenol	14.253	415804.0	5303.02	78.409	BV
Silvex	14.407	211700.0	2141.78	98.843	VV
2,4,5-T	15.047	235134.0	2198.66	106.944	BV
Chloramben	15.303	88261.0	1480.23	59.626	VV
Dinoseb	15.483	0.0	0.00	0.000	--
2,4-DB	15.633	39456.0	388.09	101.667	VV
Bentazon	16.560	0.0	0.00	0.000	--
Dacthal	16.817	207312.0	2498.57	82.972	VS
Picloram	17.327	158955.0	2108.02	75.405	VB
Acifluorfen	19.030	72550.0	841.15	86.251	VV

c:\ezchrom\chrom\wi25\wi25.006 -- Channel A

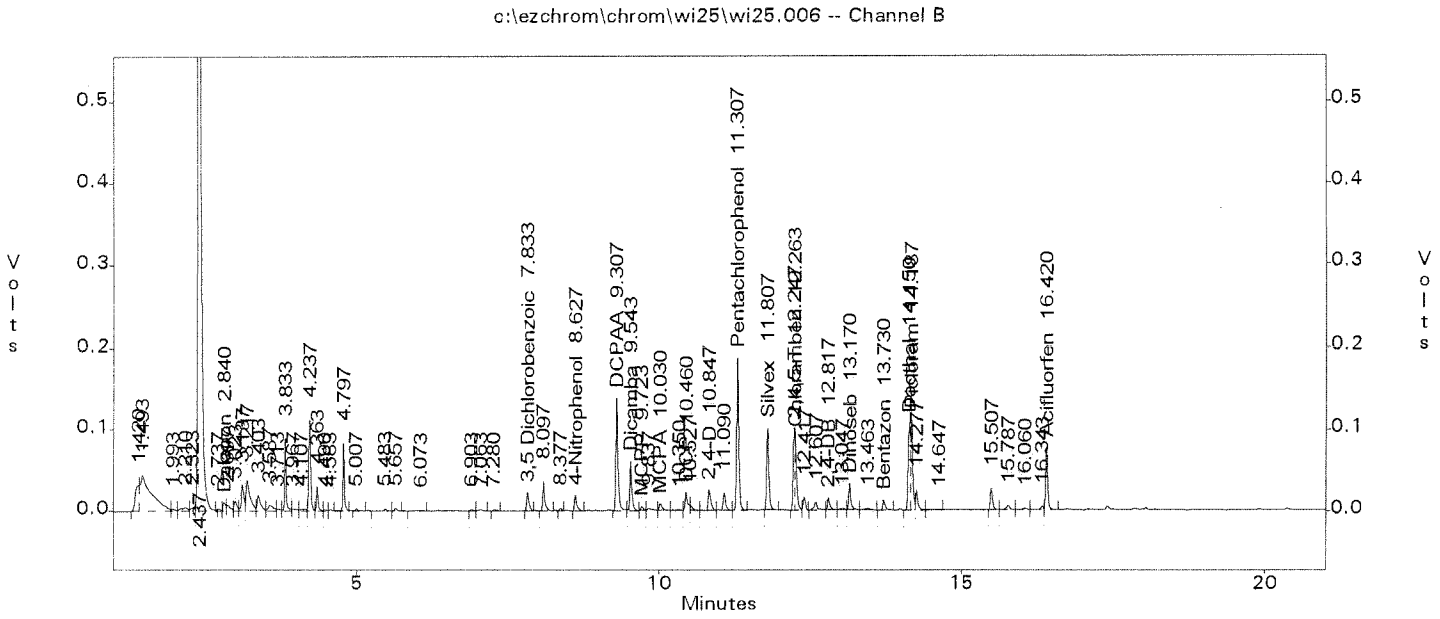


EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.006
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HEI004WC
Acquired : Sep 25, 2015 20:39:21
Printed : Sep 28, 2015 09:43:29
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.840	32824.0	808.98	40.574	VS
3,5 Dichlorobenzoic	7.833	59455.0	760.73	78.155	BV
4-Nitrophenol	8.627	51435.0	440.78	116.690	VV
DCPAA	9.307	356595.0	394.76	903.310	VV
Dicamba	9.543	152129.0	1564.43	97.242	VV
MCPP	9.723	13921.0	2.78	5013.550	VV
MCPA	10.030	30272.0	5.29	5718.705	VV
DCP	10.460	64468.0	611.51	105.425	Vx
2,4-D	10.847	71891.0	744.91	96.510	VV
Pentachlorophenol	11.307	472530.0	5688.82	83.063	VV
Silvex	11.807	252267.0	2383.87	105.823	BV
2,4,5-T	12.247	203048.0	1740.34	116.671	Bx
Chloramben	12.263	183176.0	2718.33	67.386	xV
2,4-DB	12.817	42021.0	427.74	98.239	VV
Dinoseb	13.170	80430.0	1738.25	46.271	VV
Bentazon	13.730	35840.0	377.03	95.059	VV
Dacthal	14.150	242368.0	2454.04	98.763	VS
Picloram	14.187	273048.0	3706.34	73.671	SV
Acifluorfen	16.420	172408.0	2137.76	80.649	VV

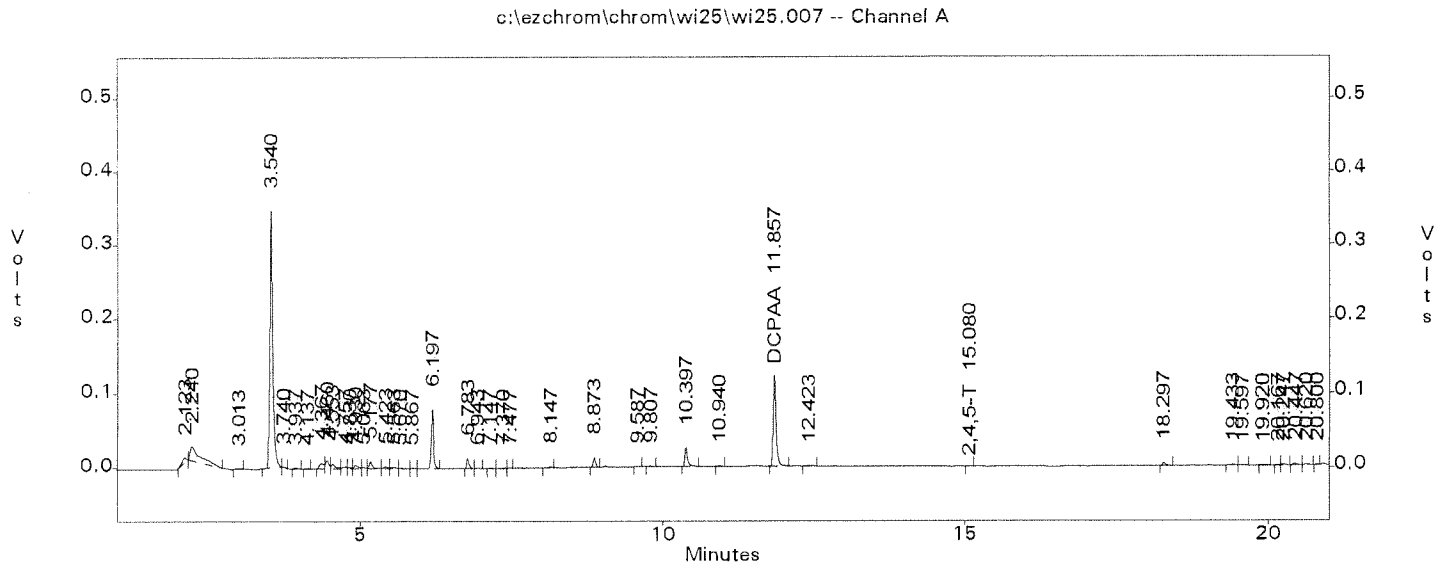


EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.007
Method : c:\ezchrom\methods\he16g08.met
Sample ID : TXI007SB
Acquired : Sep 25, 2015 21:12:31
Printed : Sep 28, 2015 09:43:38
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.010	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	10.247	0.0	0.00	0.000	--
4-Nitrophenol	11.123	0.0	0.00	0.000	--
DCPAA	11.857	390397.0	448.93	869.610	Bx
Dicamba	12.047	0.0	0.00	0.000	--
MCPP	12.137	0.0	0.00	0.000	--
MCPA	12.640	0.0	0.00	0.000	--
DCP	12.997	0.0	0.00	0.000	--
2,4-D	13.560	0.0	0.00	0.000	--
Pentachlorophenol	14.273	0.0	0.00	0.000	--
Silvex	14.427	0.0	0.00	0.000	--
2,4,5-T	15.080	2460.0	2198.66	1.119	VV
Chloramben	15.323	0.0	0.00	0.000	--
Dinoseb	15.483	0.0	0.00	0.000	--
2,4-DB	15.653	0.0	0.00	0.000	--
Bentazon	16.560	0.0	0.00	0.000	--
Dacthal	16.837	0.0	0.00	0.000	--
Picloram	17.347	0.0	0.00	0.000	--
Acifluorfen	19.050	0.0	0.00	0.000	--



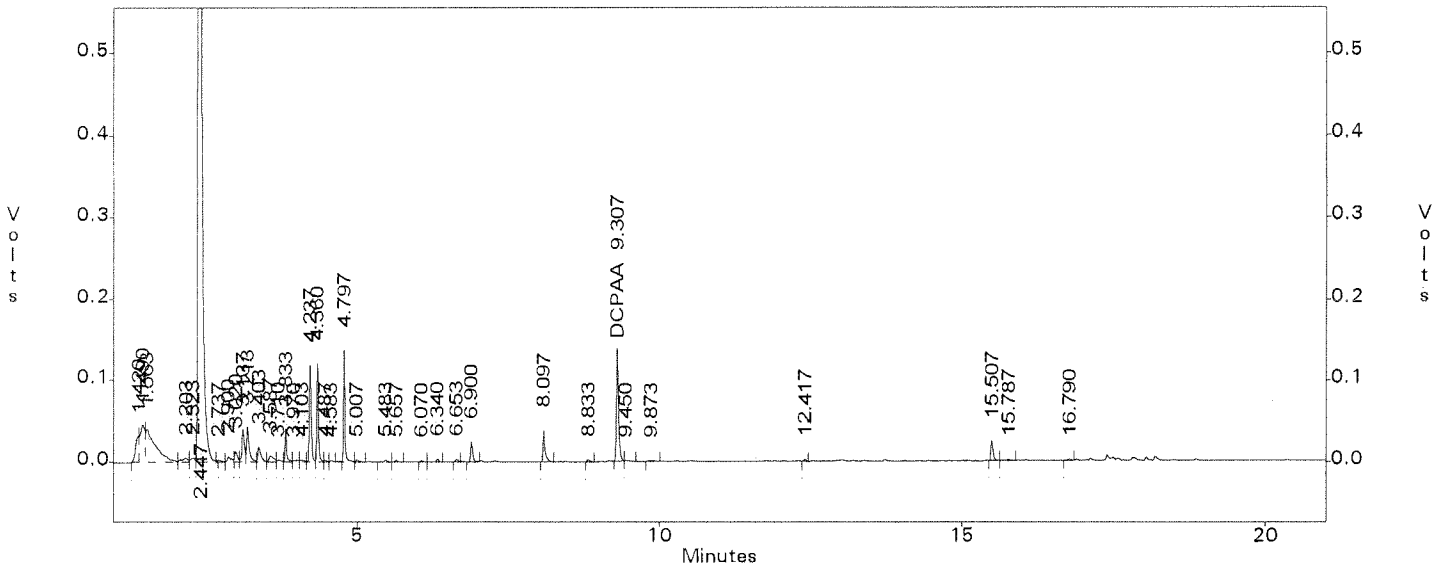
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.007
Method : c:\ezchrom\methods\he16g08.met
Sample ID : TXI007SB
Acquired : Sep 25, 2015 21:12:31
Printed : Sep 28, 2015 09:43:38
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.847	0.0	0.00	0.000	--
3,5 Dichlorobenzoic	7.853	0.0	0.00	0.000	--
4-Nitrophenol	8.647	0.0	0.00	0.000	--
DCPAA	9.307	349514.0	394.76	885.373	VV
Dicamba	9.560	0.0	0.00	0.000	--
MCPP	9.740	0.0	0.00	0.000	--
MCPA	10.047	0.0	0.00	0.000	--
DCP	10.477	0.0	0.00	0.000	--
2,4-D	10.863	0.0	0.00	0.000	--
Pentachlorophenol	11.327	0.0	0.00	0.000	--
Silvex	11.827	0.0	0.00	0.000	--
2,4,5-T	12.250	0.0	0.00	0.000	--
Chloramben	12.263	0.0	0.00	0.000	--
2,4-DB	12.833	0.0	0.00	0.000	--
Dinoseb	13.187	0.0	0.00	0.000	--
Bentazon	13.750	0.0	0.00	0.000	--
Dacthal	14.167	0.0	0.00	0.000	--
Picloram	14.207	0.0	0.00	0.000	--
Acifluorfen	16.437	0.0	0.00	0.000	--

c:\ezchrom\chrom\wi25\wi25.007 -- Channel B



INITIAL CALIBRATIONS

INITIAL CALIBRATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : ZB-35HT
Column size ID : 30MX0.25MM 0.25UM
LFID & Datetime: WG08009A 07/08/15 19:36
LFID & Datetime: WG08008A 07/08/15 19:05
LFID & Datetime: WG08007A 07/08/15 18:34
LFID & Datetime: WG08006A 07/08/15 18:03
LFID & Datetime: WG08005A 07/08/15 17:32
LFID & Datetime: WG08004A 07/08/15 17:03
LFID & Datetime: WG08003A 07/08/15 16:32
LFID & Datetime: WG08002A 07/08/15 16:01
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	4.00X	7.00X	10.00X	13.00X	16.00X	20.00X	MEAN	%RSD
Dalapon	9.10	0	601	595	590	604	598	583	561	590.0	2.5
3,5-Dichlorobenzo	9.31	0	841	797	793	819	848	785	761	806.3	3.9
4-Nitrophenol	9.09	0	271	263	263	271	278	251	242	262.9	4.7
Dicamba	9.40	0	1470	1453	1489	1581	1658	1552	1518	1531.7	4.7
MCPP	469.30	0	0	2.01	2.43	2.57	2.87	2.82	2.62	2.55	12.2
MCPA	467.30	0	0	6.63	5.98	6.00	5.77	5.18	4.85	5.73	11.1
Dichloroprop	9.44	0	698	643	617	634	654	596	571	630.5	6.6
2,4-D	9.40	0	697	670	660	682	707	651	629	670.9	4.0
Pentachlorophenol	9.50	4277	4659	4986	5368	5786	6100	5694	5553	5303.0	11.6
2,4,5-TP(Silvex)	9.50	0	1865	1937	2044	2263	2402	2260	2221	2141.8	9.1
Chloramben	9.36	0	1286	1309	1404	1551	1674	1580	1557	1480.2	10.0
2,4,5-T	9.48	0	1949	1995	2130	2315	2456	2298	2247	2198.7	8.3
2,4-DB	9.47	0	393	380	374	392	419	387	371	388.1	4.1
Dinoseb	9.45	0	861	800	771	785	808	740	706	781.7	6.4
Bentazon	9.45	0	212	211	217	234	246	232	228	225.6	5.8
Dacthal	9.15	0	2040	2150	2380	2658	2870	2711	2681	2498.6	12.5
Picloram	9.45	0	1661	1739	1983	2258	2459	2345	2311	2108.0	14.9
Acifluorfen	9.63	0	876	832	829	861	887	818	785	841.1	4.2

SURROGATE	X	1.00X	2.00X	4.00X	7.00X	10.00X	13.00X	16.00X	20.00X	MEAN	%RSD
2,4-DCPAA	93.58	0	531	476	446	441	446	409	393	448.9	10.1

7/17/15

827

INITIAL CALIBRATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Column : STX-CLPESTII
Column size ID : 30MX0.32MM 0.32UM
LFID & Datetime: WG08009B 07/08/15 19:36
LFID & Datetime: WG08008B 07/08/15 19:05
LFID & Datetime: WG08007B 07/08/15 18:34
LFID & Datetime: WG08006B 07/08/15 18:03
LFID & Datetime: WG08005B 07/08/15 17:32
LFID & Datetime: WG08004B 07/08/15 17:03
LFID & Datetime: WG08003B 07/08/15 16:32
LFID & Datetime: WG08002B 07/08/15 16:01
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	4.00X	7.00X	10.00X	13.00X	16.00X	20.00X	MEAN	%RSD
Dalapon	9.10	0	859	815	793	811	818	799	768	809.0	3.4
3,5-Dichlorobenzo	9.31	0	908	808	760	749	752	691	657	760.7	10.7
4-Nitrophenol	9.09	0	550	479	440	430	427	390	370	440.8	13.5
Dicamba	9.40	0	1682	1570	1543	1582	1622	1502	1450	1564.4	4.9
MCPP	469.30	0	0	2.66	2.78	2.89	2.96	2.75	2.62	2.78	4.7
MCPA	467.30	0	0	6.65	5.58	5.35	5.18	4.67	4.33	5.29	15.3
Dichloroprop	9.44	0	785	660	599	592	591	540	513	611.5	14.7
2,4-D	9.40	0	889	785	738	728	743	683	648	744.9	10.4
Pentachlorophenol	9.50	6179	6061	5719	5566	5674	5789	5354	5168	5688.8	5.9
2,4,5-TP(Silvex)	9.50	0	2407	2359	2371	2454	2521	2327	2247	2383.9	3.7
Chloramben	9.36	0	2767	2602	2686	2847	2843	2702	2581	2718.3	3.9
2,4,5-T	9.48	0	1763	1852	1752	1739	1853	1636	1588	1740.3	5.7
2,4-DB	9.47	0	487	451	421	424	431	399	381	427.7	8.0
Dinoseb	9.45	0	1930	1772	1713	1743	1786	1645	1579	1738.2	6.4
Bentazon	9.45	0	462	375	353	368	383	354	344	377.0	10.6
Dacthal	9.15	0	2517	2438	2516	2554	2479	2356	2318	2454.0	3.6
Picloram	9.45	0	3257	3543	3594	3873	4177	3834	3665	3706.3	7.9
Acifluorfen	9.63	0	2020	2017	2063	2209	2333	2180	2143	2137.8	5.4

SURROGATE	X	1.00X	2.00X	4.00X	7.00X	10.00X	13.00X	16.00X	20.00X	MEAN	%RSD
2,4-DCPAA	93.58	0	487	421	389	382	386	357	342	394.8	12.1

7/17/15

INITIAL CALIBRATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Column : ZB-35HT
Column size ID : 30MX0.25MM 0.25UM
LFID & Datetime: WG08009A 07/08/15 19:36
LFID & Datetime: WG08008A 07/08/15 19:05
LFID & Datetime: WG08007A 07/08/15 18:34
LFID & Datetime: WG08006A 07/08/15 18:03
LFID & Datetime: WG08005A 07/08/15 17:32
LFID & Datetime: WG08004A 07/08/15 17:03
LFID & Datetime: WG08003A 07/08/15 16:32
LFID & Datetime: WG08002A 07/08/15 16:01

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	4.0X	7.0X	10.0X	13.0X	16.0X	20.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Dalapon	3.927	3.927	3.923	3.927	3.927	3.930	3.930	3.937	3.929	3.913	3.945	0.016
3,5-Dichlorobenzo	10.150	10.150	10.143	10.147	10.150	10.153	10.157	10.163	10.152	10.131	10.173	0.021
4-Nitrophenol	11.023	11.023	11.017	11.020	11.023	11.027	11.030	11.037	11.025	11.005	11.045	0.020
Dicamba	11.947	11.947	11.940	11.947	11.947	11.953	11.957	11.963	11.951	11.928	11.974	0.023
MCPP	0.000	0.000	12.037	12.040	12.043	12.050	12.050	12.057	12.046	12.023	12.069	0.023
MCPA	12.543	12.547	12.537	12.540	12.543	12.547	12.550	12.557	12.546	12.524	12.568	0.022
Dichloroprop	12.897	12.897	12.890	12.897	12.897	12.903	12.907	12.913	12.901	12.879	12.923	0.022
2,4-D	13.460	13.463	13.453	13.460	13.460	13.467	13.470	13.473	13.464	13.437	13.491	0.027
Pentachlorophenol	14.163	14.167	14.160	14.167	14.167	14.177	14.177	14.183	14.170	14.143	14.197	0.027
2,4,5-TP(Silvex)	14.327	14.330	14.320	14.327	14.327	14.333	14.337	14.343	14.331	14.310	14.352	0.021
Chloramben	15.220	15.220	15.213	15.220	15.220	15.227	15.230	15.237	15.224	15.202	15.246	0.022
2,4,5-T	14.967	14.967	14.960	14.963	14.967	14.973	14.973	14.980	14.969	14.947	14.991	0.022
2,4-DB	15.557	15.557	15.550	15.553	15.553	15.563	15.563	15.570	15.558	15.537	15.579	0.021
Dinoseb	15.380	15.383	15.377	15.380	15.380	15.390	15.390	15.397	15.385	15.364	15.406	0.021
Bentazon	16.453	16.457	16.450	16.453	16.457	16.463	16.467	16.473	16.460	16.439	16.481	0.021
Dacthal	16.730	16.733	16.727	16.730	16.730	16.740	16.743	16.747	16.736	16.715	16.757	0.021
Picloram	17.243	17.243	17.237	17.240	17.243	17.250	17.253	17.260	17.247	17.226	17.268	0.021
Acifluorfen	18.943	18.947	18.940	18.943	18.943	18.953	18.957	18.963	18.949	18.928	18.970	0.021
SURROGATE	**1.0X**	**2.0X**	**4.0X**	**7.0X**	**10.0X**	**13.0X**	**16.0X**	**20.0X**	**RT**	**FROM**	**TO**	**WIDTH**
2,4-DCPAA	11.780	11.783	11.773	11.780	11.780	11.787	11.790	11.793	11.784	11.761	11.807	0.023

7/17/15

INITIAL CALIBRATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Column : STX-CLPESTII
Column size ID : 30MX0.32MM 0.32UM
LFID & Datetime: WG08009B 07/08/15 19:36
LFID & Datetime: WG08008B 07/08/15 19:05
LFID & Datetime: WG08007B 07/08/15 18:34
LFID & Datetime: WG08006B 07/08/15 18:03
LFID & Datetime: WG08005B 07/08/15 17:32
LFID & Datetime: WG08004B 07/08/15 17:03
LFID & Datetime: WG08003B 07/08/15 16:32
LFID & Datetime: WG08002B 07/08/15 16:01

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	4.0X	7.0X	10.0X	13.0X	16.0X	20.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Dalapon	2.810	2.807	2.800	2.807	2.807	2.807	2.807	2.810	2.806	2.790	2.822	0.016
3,5-Dichlorobenzo	7.820	7.820	7.810	7.813	7.813	7.820	7.820	7.827	7.818	7.797	7.839	0.021
4-Nitrophenol	8.617	8.617	8.607	8.610	8.610	8.613	8.613	8.620	8.613	8.582	8.644	0.031
Dicamba	9.523	9.523	9.517	9.520	9.523	9.527	9.530	9.533	9.525	9.501	9.549	0.024
MCPP	0.000	9.707	9.700	9.703	9.703	9.710	9.710	9.717	9.707	9.686	9.728	0.021
MCPA	10.013	10.013	10.003	10.007	10.007	10.013	10.013	10.020	10.010	9.986	10.035	0.024
Dichloroprop	10.443	10.443	10.437	10.440	10.440	10.443	10.447	10.453	10.443	10.417	10.469	0.026
2,4-D	10.833	10.833	10.827	10.830	10.830	10.833	10.833	10.840	10.832	10.810	10.854	0.022
Pentachlorophenol	11.280	11.283	11.277	11.280	11.283	11.290	11.290	11.297	11.285	11.261	11.309	0.024
2,4,5-TP(Silvex)	11.790	11.790	11.783	11.787	11.790	11.793	11.797	11.803	11.792	11.768	11.816	0.024
Chloramben	12.250	12.253	12.247	12.250	12.253	12.260	12.260	12.267	12.256	12.230	12.282	0.026
2,4,5-T	12.237	12.237	12.227	12.237	12.230	12.237	12.237	12.243	12.235	12.211	12.259	0.024
2,4-DB	12.807	12.807	12.797	12.800	12.800	12.807	12.807	12.813	12.804	12.778	12.830	0.026
Dinoseb	13.147	13.147	13.140	13.147	13.147	13.153	13.157	13.160	13.150	13.126	13.174	0.024
Bentazon	13.713	13.717	13.707	13.713	13.713	13.720	13.720	13.727	13.717	13.690	13.744	0.027
Dacthal	14.127	14.127	14.120	14.127	14.127	14.133	14.137	14.143	14.131	14.104	14.158	0.027
Picloram	14.180	14.180	14.170	14.173	14.173	14.180	14.180	14.187	14.178	14.152	14.204	0.026
Acifluorfen	16.400	16.403	16.393	16.400	16.400	16.407	16.410	16.417	16.404	16.380	16.428	0.024
SURROGATE	1.0X	2.0X	4.0X	7.0X	10.0X	13.0X	16.0X	20.0X	RT	FROM	TO	WIDTH
2,4-DCPAA	9.293	9.290	9.283	9.287	9.287	9.293	9.293	9.300	9.290	9.266	9.314	0.024

Rw 7/17/15

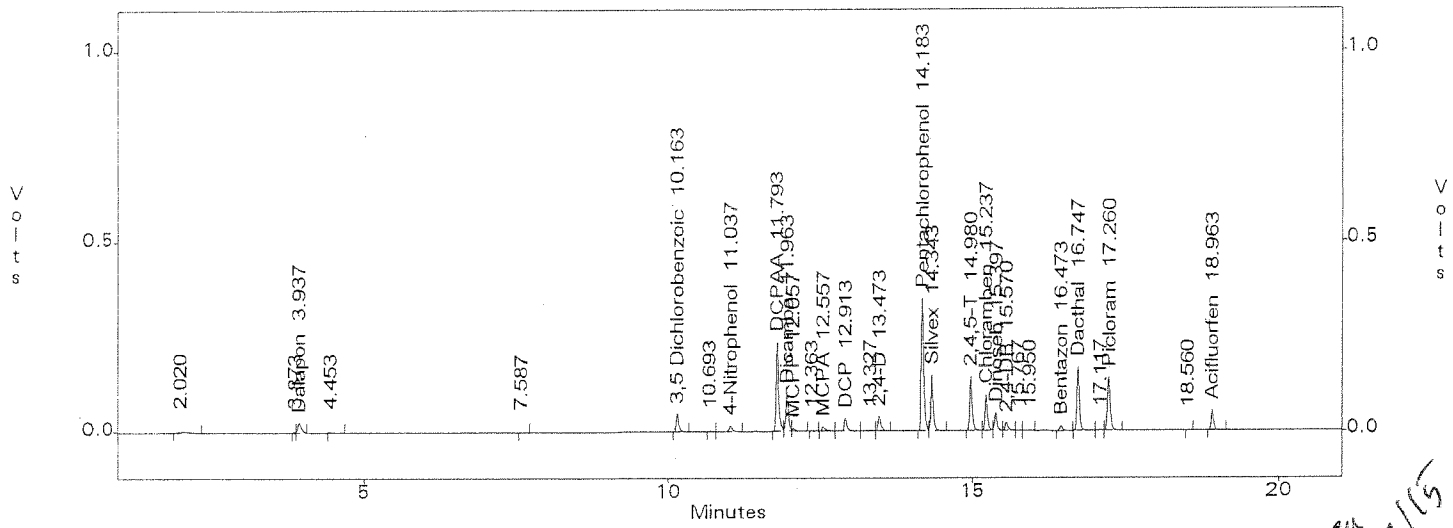
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.002
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0808
Acquired : Jul 08, 2015 16:01:56
Printed : Jul 13, 2015 18:27:48
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.937	102067.0	589.96	182.060	xI
3,5 Dichlorobenzoic	10.163	141685.0	806.30	186.280	BV
4-Nitrophenol	11.037	43991.0	262.86	181.700	VB
DCPAA	11.793	735646.0	448.93	1871.600	BV
Dicamba	11.963	285483.0	1531.67	188.040	VV
MCPP	12.057	24552.0	2.55	9383.000	VB
MCPA	12.557	45317.0	5.73	9346.000	VV
DCP	12.913	107832.0	630.50	188.700	VV
2,4-D	13.473	118258.0	670.94	188.040	VB
Pentachlorophenol	14.183	1054720.0	5303.02	189.920	BV
Silvex	14.343	422106.0	2141.78	190.060	VB
2,4,5-T	14.980	425804.0	2198.66	189.540	BV
Chloramben	15.237	291540.0	1480.23	187.220	VV
Dinoseb	15.397	133403.0	781.73	188.980	VV
2,4-DB	15.570	70293.0	388.09	189.320	VV
Bentazon	16.473	43001.0	225.56	188.980	BV
Dacthal	16.747	490709.0	2498.57	183.020	VV
Picloram	17.260	436766.0	2108.02	188.980	VI
Acifluorfen	18.963	151199.0	841.15	192.540	BV

c:\ezchrom\chrom\WG08\WG08.002 -- Channel A



7/17/15

831

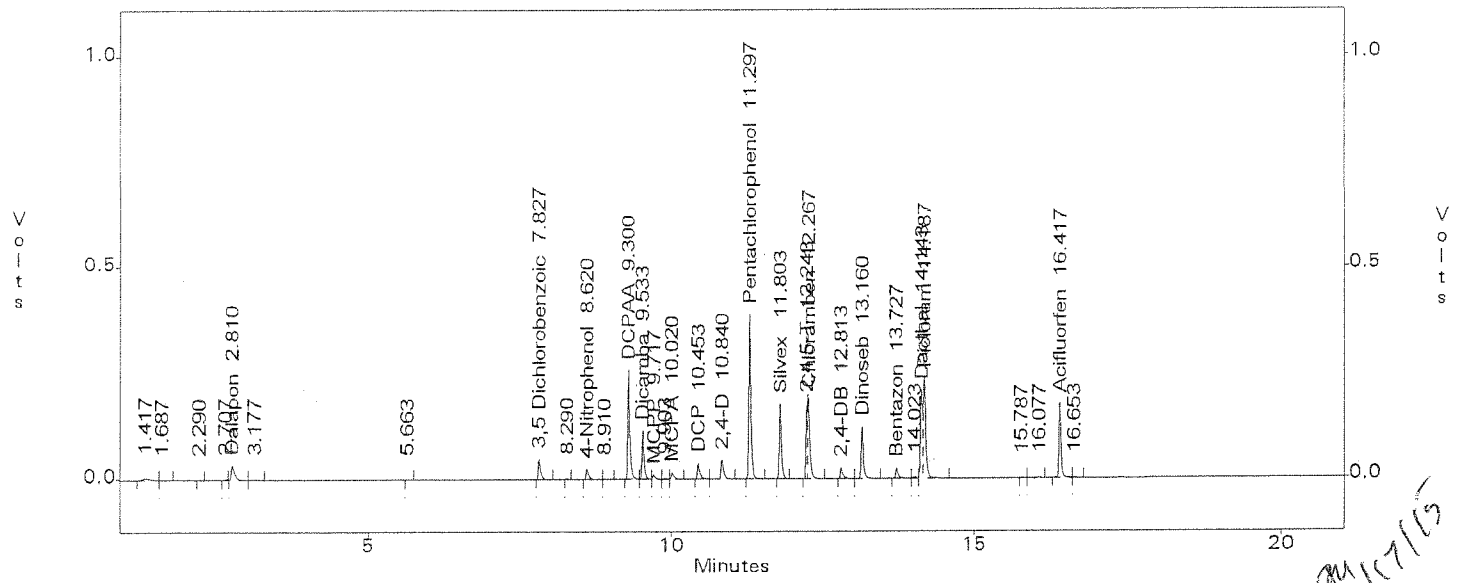
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.002
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0808
Acquired : Jul 08, 2015 16:01:56
Printed : Jul 13, 2015 18:27:49
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.810	139807.0	808.98	182.060	VV
3,5 Dichlorobenzoic	7.827	122355.0	760.73	186.280	BB
4-Nitrophenol	8.620	67254.0	440.78	181.700	BV
DCPAA	9.300	639738.0	394.76	1871.600	BV
Dicamba	9.533	272590.0	1564.43	188.040	VV
MCPP	9.717	24609.0	2.78	9383.000	VV
MCPA	10.020	40466.0	5.29	9346.000	VV
DCP	10.453	96745.0	611.51	188.700	BV
2,4-D	10.840	121857.0	744.91	188.040	VV
Pentachlorophenol	11.297	981580.0	5688.82	189.920	BV
Silvex	11.803	427066.0	2383.87	190.060	BB
2,4,5-T	12.243	300956.0	1740.34	189.540	Bx
Chloramben	12.267	483293.0	2718.33	187.220	xB
2,4-DB	12.813	72219.0	427.74	189.320	BV
Dinoseb	13.160	298313.0	1738.25	188.980	VB
Bentazon	13.727	64981.0	377.03	188.980	BV
Dacthal	14.143	424322.0	2454.04	183.020	VS
Picloram	14.187	692698.0	3706.34	188.980	SB
Acifluorfen	16.417	412630.0	2137.76	192.540	VV

c:\ezchrom\chrom\WG08\WG08.002 -- Channel B



7/17/15

832

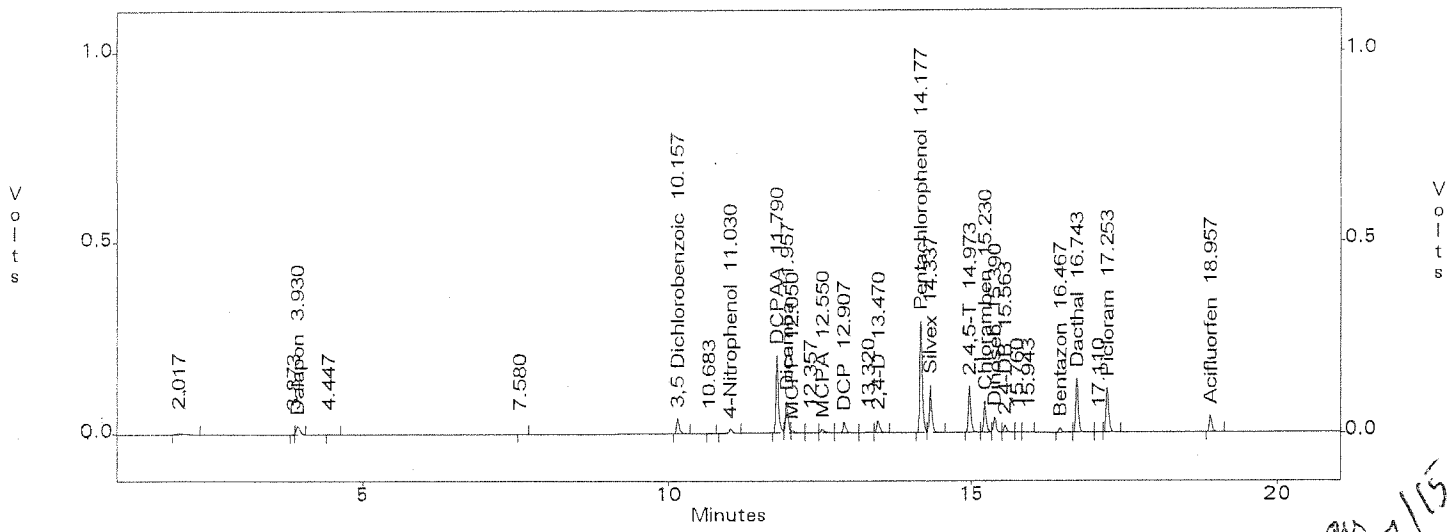
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.003
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0807
Acquired : Jul 08, 2015 16:32:37
Printed : Jul 13, 2015 18:27:53
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.930	84887.0	589.96	145.648	xI
3,5 Dichlorobenzoic	10.157	116986.0	806.30	149.024	BV
4-Nitrophenol	11.030	36532.0	262.86	145.360	VV
DCPAA	11.790	612999.0	448.93	1497.280	BV
Dicamba	11.957	233527.0	1531.67	150.432	VV
MCPP	12.050	21195.0	2.55	7506.400	VV
MCPA	12.550	38707.0	5.73	7476.800	VV
DCP	12.907	89922.0	630.50	150.960	VV
2,4-D	13.470	97926.0	670.94	150.432	VB
Pentachlorophenol	14.177	865049.0	5303.02	151.936	BV
Silvex	14.337	343585.0	2141.78	152.048	VB
2,4,5-T	14.973	348458.0	2198.66	151.632	BV
Chloramben	15.230	236613.0	1480.23	149.776	VV
Dinoseb	15.390	111943.0	781.73	151.184	VV
2,4-DB	15.563	58542.0	388.09	151.456	VV
Bentazon	16.467	35024.0	225.56	151.184	BV
Dacthal	16.743	396874.0	2498.57	146.416	VV
Picloram	17.253	354496.0	2108.02	151.184	VI
Acifluorfen	18.957	126056.0	841.15	154.032	BV

c:\ezchrom\chrom\WG08\WG08.003 -- Channel A



7/17/15

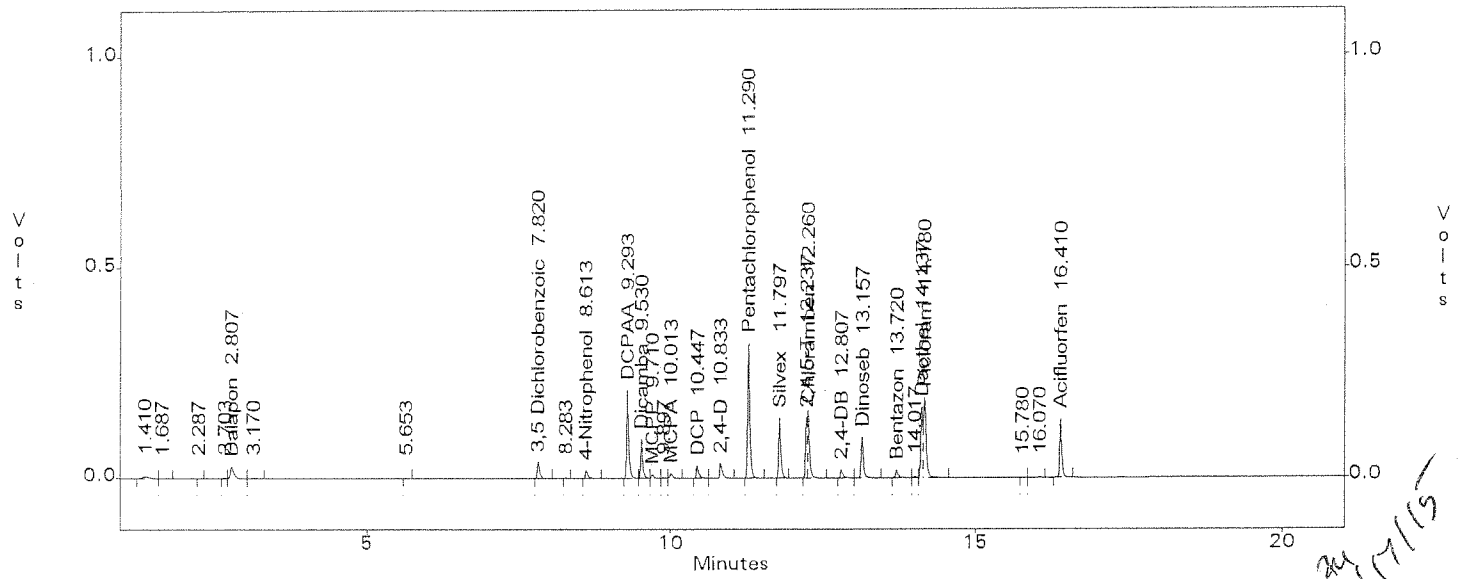
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.003
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0807
Acquired : Jul 08, 2015 16:32:37
Printed : Jul 13, 2015 18:27:53
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.807	116424.0	808.98	145.648	VV
3,5 Dichlorobenzoic	7.820	103042.0	760.73	149.024	BB
4-Nitrophenol	8.613	56645.0	440.78	145.360	BV
DCPAA	9.293	534042.0	394.76	1497.280	BV
Dicamba	9.530	226013.0	1564.43	150.432	VV
MCPP	9.710	20615.0	2.78	7506.400	VV
MCPA	10.013	34883.0	5.29	7476.800	VV
DCP	10.447	81589.0	611.51	150.960	BV
2,4-D	10.833	102672.0	744.91	150.432	VV
Pentachlorophenol	11.290	813488.0	5688.82	151.936	BV
Silvex	11.797	353879.0	2383.87	152.048	BB
2,4,5-T	12.237	248080.0	1740.34	151.632	Bx
Chloramben	12.260	404746.0	2718.33	149.776	xV
2,4-DB	12.807	60443.0	427.74	151.456	BV
Dinoseb	13.157	248772.0	1738.25	151.184	VB
Bentazon	13.720	53554.0	377.03	151.184	BV
Dacthal	14.137	345029.0	2454.04	146.416	VS
Picloram	14.180	579667.0	3706.34	151.184	SB
Acifluorfen	16.410	335853.0	2137.76	154.032	VV

c:\ezchrom\chrom\WG08\WG08.003 -- Channel B



7/17/15

834

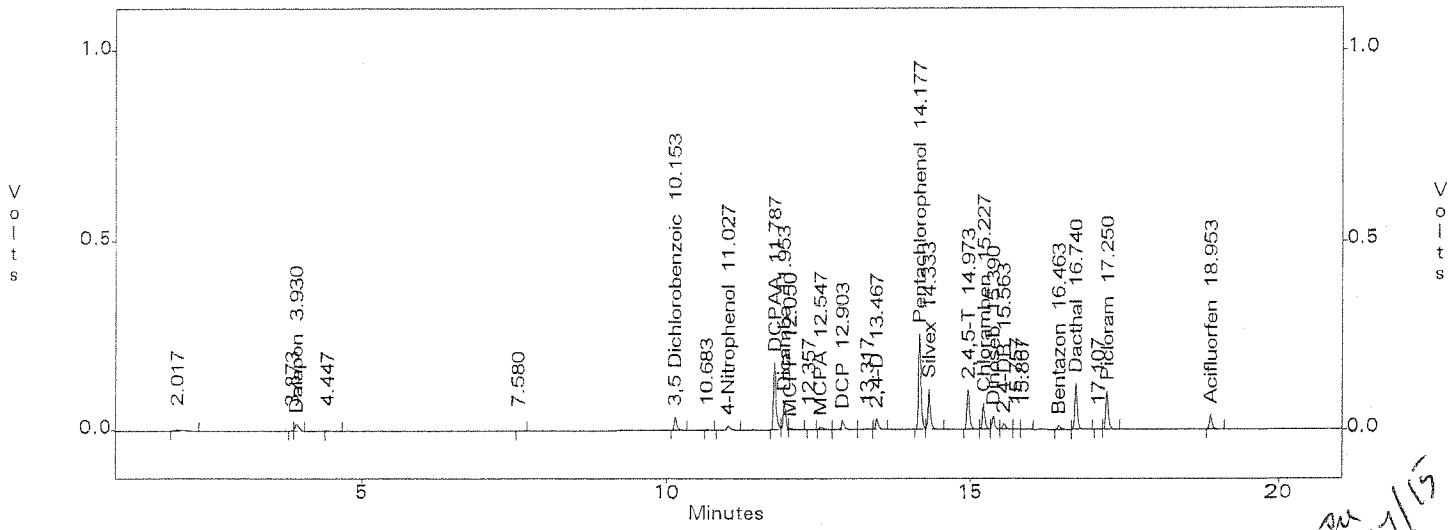
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.004
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0806
Acquired : Jul 08, 2015 17:03:17
Printed : Jul 13, 2015 18:27:57
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.930	70717.0	589.96	118.339	xI
3,5 Dichlorobenzoic	10.153	102642.0	806.30	121.082	BV
4-Nitrophenol	11.027	32839.0	262.86	118.105	VV
DCPAA	11.787	542372.0	448.93	1216.540	BV
Dicamba	11.953	202643.0	1531.67	122.226	Vx
MCPP	12.050	17526.0	2.55	6098.950	xB
MCPA	12.547	35047.0	5.73	6074.900	VV
DCP	12.903	80266.0	630.50	122.655	VV
2,4-D	13.467	86403.0	670.94	122.226	VB
Pentachlorophenol	14.177	753089.0	5303.02	123.448	BV
Silvex	14.333	296695.0	2141.78	123.539	VB
2,4,5-T	14.973	302600.0	2198.66	123.201	BV
Chloramben	15.227	203772.0	1480.23	121.693	VV
Dinoseb	15.390	99253.0	781.73	122.837	VV
2,4-DB	15.563	51540.0	388.09	123.058	VV
Bentazon	16.463	30272.0	225.56	122.837	BV
Dacthal	16.740	341478.0	2498.57	118.963	VV
Picloram	17.250	302088.0	2108.02	122.837	VI
Acifluorfen	18.953	110950.0	841.15	125.151	BV

c:\ezchrom\chrom\WG08\WG08.004 -- Channel A



7/17/15

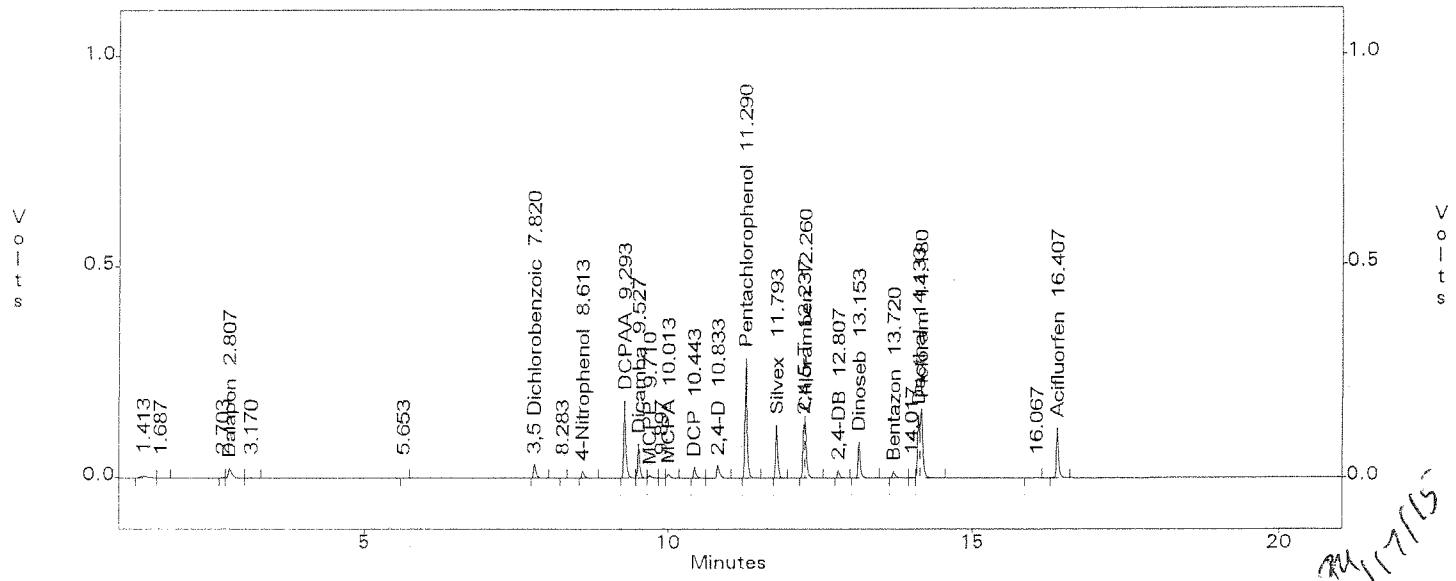
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.004
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0806
Acquired : Jul 08, 2015 17:03:17
Printed : Jul 13, 2015 18:27:57
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.807	96852.0	808.98	118.339	VV
3,5 Dichlorobenzoic	7.820	91098.0	760.73	121.082	BB
4-Nitrophenol	8.613	50404.0	440.78	118.105	BV
DCPAA	9.293	470006.0	394.76	1216.540	BV
Dicamba	9.527	198245.0	1564.43	122.226	VV
MCPP	9.710	18046.0	2.78	6098.950	VV
MCPA	10.013	31449.0	5.29	6074.900	VV
DCP	10.443	72482.0	611.51	122.655	BV
2,4-D	10.833	90860.0	744.91	122.226	VV
Pentachlorophenol	11.290	714583.0	5688.82	123.448	BV
Silvex	11.793	311412.0	2383.87	123.539	BB
2,4,5-T	12.237	228298.0	1740.34	123.201	Bx
Chloramben	12.260	346009.0	2718.33	121.693	xV
2,4-DB	12.807	53005.0	427.74	123.058	BB
Dinoseb	13.153	219416.0	1738.25	122.837	BB
Bentazon	13.720	47020.0	377.03	122.837	BV
Dacthal	14.133	294887.0	2454.04	118.963	VS
Picloram	14.180	513146.0	3706.34	122.837	SB
Acifluorfen	16.407	291915.0	2137.76	125.151	VV

c:\ezchrom\chrom\WG08\WG08.004 -- Channel B



7/17/15

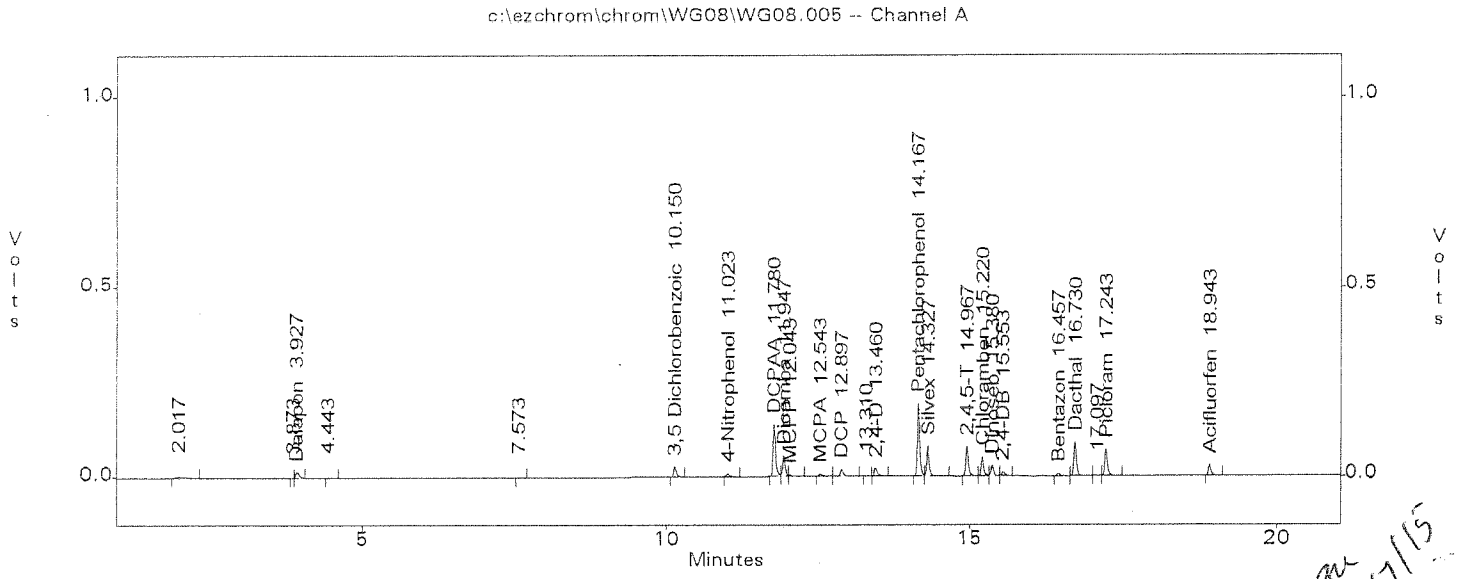
836

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.005
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0805
Acquired : Jul 08, 2015 17:32:57
Printed : Jul 13, 2015 18:28:00
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.927	54958.0	589.96	91.030	xI
3,5 Dichlorobenzoic	10.150	76325.0	806.30	93.140	BV
4-Nitrophenol	11.023	24631.0	262.86	90.850	BV
DCPAA	11.780	412316.0	448.93	935.800	BV
Dicamba	11.947	148615.0	1531.67	94.020	VV
MCPP	12.043	12042.0	2.55	4691.500	VB
MCPA	12.543	28025.0	5.73	4673.000	VV
DCP	12.897	59788.0	630.50	94.350	VB
2,4-D	13.460	64168.0	670.94	94.020	VB
Pentachlorophenol	14.167	549436.0	5303.02	94.960	BV
Silvex	14.327	215097.0	2141.78	95.030	VV
2,4,5-T	14.967	219428.0	2198.66	94.770	BV
Chloramben	15.220	145234.0	1480.23	93.610	VV
Dinoseb	15.380	74217.0	781.73	94.490	VV
2,4-DB	15.553	37106.0	388.09	94.660	VV
Bentazon	16.457	22064.0	225.56	94.490	BV
Dacthal	16.730	243205.0	2498.57	91.510	VV
Picloram	17.243	213340.0	2108.02	94.490	VI
Acifluorfen	18.943	82934.0	841.15	96.270	BV



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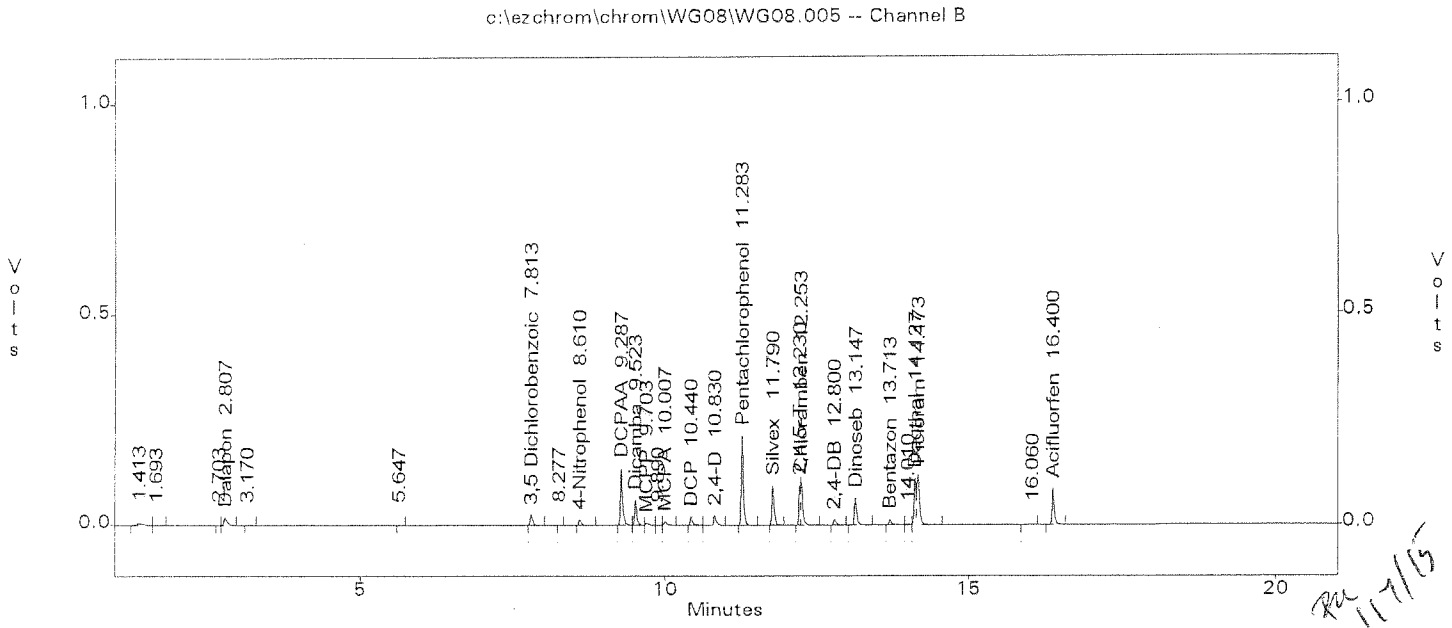
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.005
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0805
Acquired : Jul 08, 2015 17:32:57
Printed : Jul 13, 2015 18:28:01
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.807	73823.0	808.98	91.030	VB
3,5 Dichlorobenzoic	7.813	69743.0	760.73	93.140	BB
4-Nitrophenol	8.610	39081.0	440.78	90.850	BV
DCPAA	9.287	357569.0	394.76	935.800	BV
Dicamba	9.523	148781.0	1564.43	94.020	VV
MCPP	9.703	13567.0	2.78	4691.500	VV
MCPA	10.007	25009.0	5.29	4673.000	VV
DCP	10.440	55830.0	611.51	94.350	BV
2,4-D	10.830	68451.0	744.91	94.020	VB
Pentachlorophenol	11.283	538796.0	5688.82	94.960	BV
Silvex	11.790	233230.0	2383.87	95.030	BB
2,4,5-T	12.230	164770.0	1740.34	94.770	Bx
Chloramben	12.253	266464.0	2718.33	93.610	xV
2,4-DB	12.800	40132.0	427.74	94.660	BB
Dinoseb	13.147	164702.0	1738.25	94.490	BB
Bentazon	13.713	34753.0	377.03	94.490	BV
Dacthal	14.127	233736.0	2454.04	91.510	VS
Picloram	14.173	365931.0	3706.34	94.490	SB
Acifluorfen	16.400	212636.0	2137.76	96.270	VV



RW 7/17/15

838

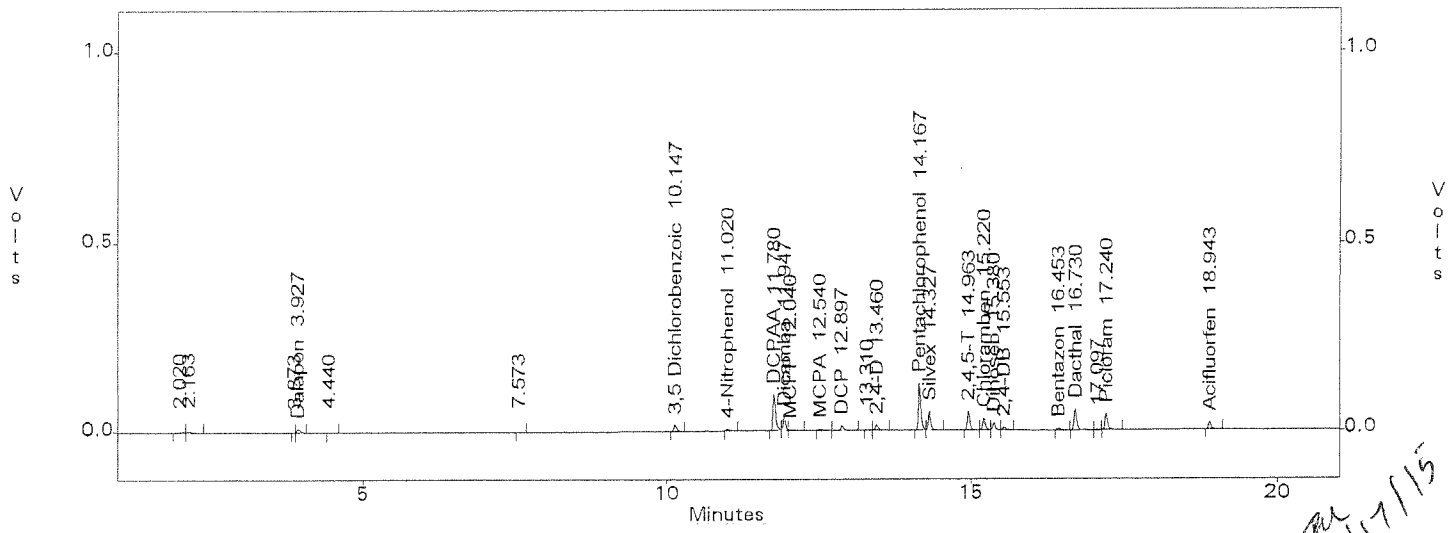
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.006
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0804
Acquired : Jul 08, 2015 18:03:48
Printed : Jul 13, 2015 18:28:05
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.927	37570.0	589.96	63.721	xI
3,5 Dichlorobenzoic	10.147	51718.0	806.30	65.198	BV
4-Nitrophenol	11.020	16740.0	262.86	63.595	BV
DCPAA	11.780	292398.0	448.93	655.060	BV
Dicamba	11.947	98010.0	1531.67	65.814	Vx
MCPP	12.040	7964.0	2.55	3284.050	xB
MCPA	12.540	19565.0	5.73	3271.100	BV
DCP	12.897	40738.0	630.50	66.045	VB
2,4-D	13.460	43425.0	670.94	65.814	VB
Pentachlorophenol	14.167	356848.0	5303.02	66.472	BV
Silvex	14.327	135991.0	2141.78	66.521	VV
2,4,5-T	14.963	141326.0	2198.66	66.339	BV
Chloramben	15.220	91979.0	1480.23	65.527	VV
Dinoseb	15.380	50988.0	781.73	66.143	VV
2,4-DB	15.553	24805.0	388.09	66.262	VV
Bentazon	16.453	14365.0	225.56	66.143	BV
Dacthal	16.730	152437.0	2498.57	64.057	VV
Picloram	17.240	131165.0	2108.02	66.143	VI
Acifluorfen	18.943	55832.0	841.15	67.389	BV

c:\ezchrom\chrom\WG08\WG08.006 -- Channel A



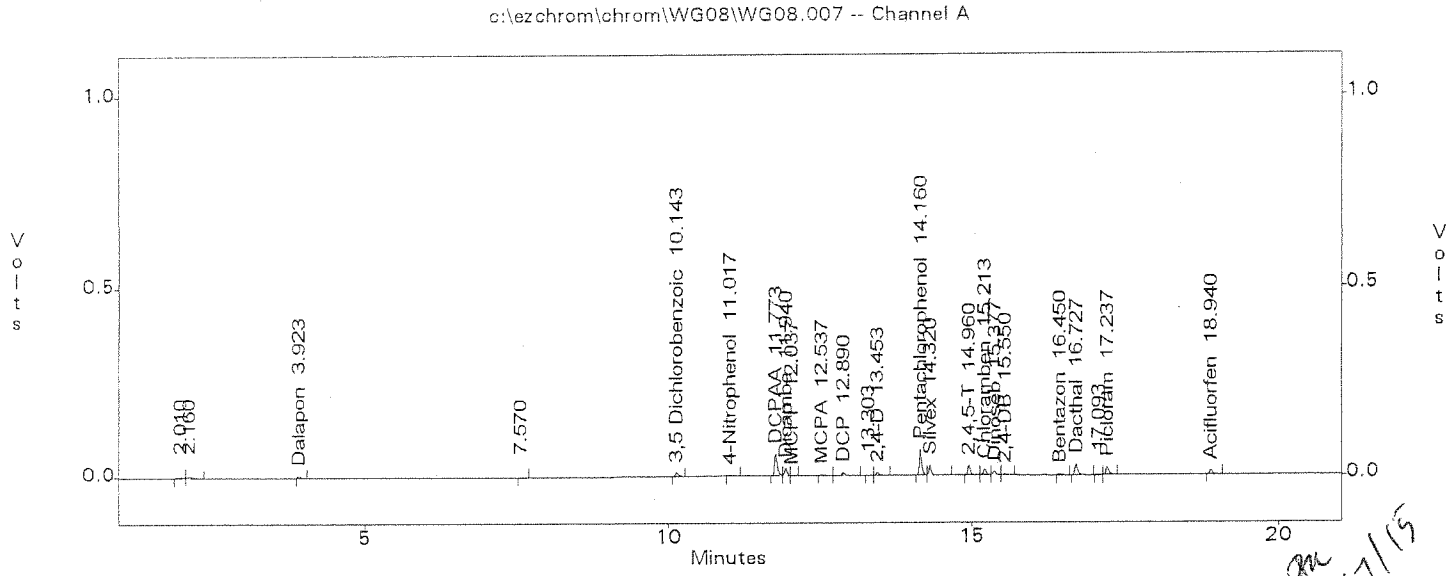
7/17/15

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.007
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0803
Acquired : Jul 08, 2015 18:34:41
Printed : Jul 13, 2015 18:28:08
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.923	21658.0	589.96	36.412	xI
3,5 Dichlorobenzoic	10.143	29682.0	806.30	37.256	BV
4-Nitrophenol	11.017	9557.0	262.86	36.340	BV
DCPAA	11.773	178090.0	448.93	374.320	HH
Dicamba	11.940	54654.0	1531.67	37.608	Hx
MCPP	12.037	3778.0	2.55	1876.600	xH
MCPA	12.537	12399.0	5.73	1869.200	BV
DCP	12.890	24270.0	630.50	37.740	VB
2,4-D	13.453	25202.0	670.94	37.608	VB
Pentachlorophenol	14.160	189403.0	5303.02	37.984	BV
Silvex	14.320	73628.0	2141.78	38.012	VV
2,4,5-T	14.960	75618.0	2198.66	37.908	BV
Chloramben	15.213	49030.0	1480.23	37.444	VV
Dinoseb	15.377	30239.0	781.73	37.796	VV
2,4-DB	15.550	14399.0	388.09	37.864	VV
Bentazon	16.450	7961.0	225.56	37.796	BV
Dacthal	16.727	78698.0	2498.57	36.604	VV
Picloram	17.237	65714.0	2108.02	37.796	VB
Acifluorfen	18.940	32050.0	841.15	38.508	BV



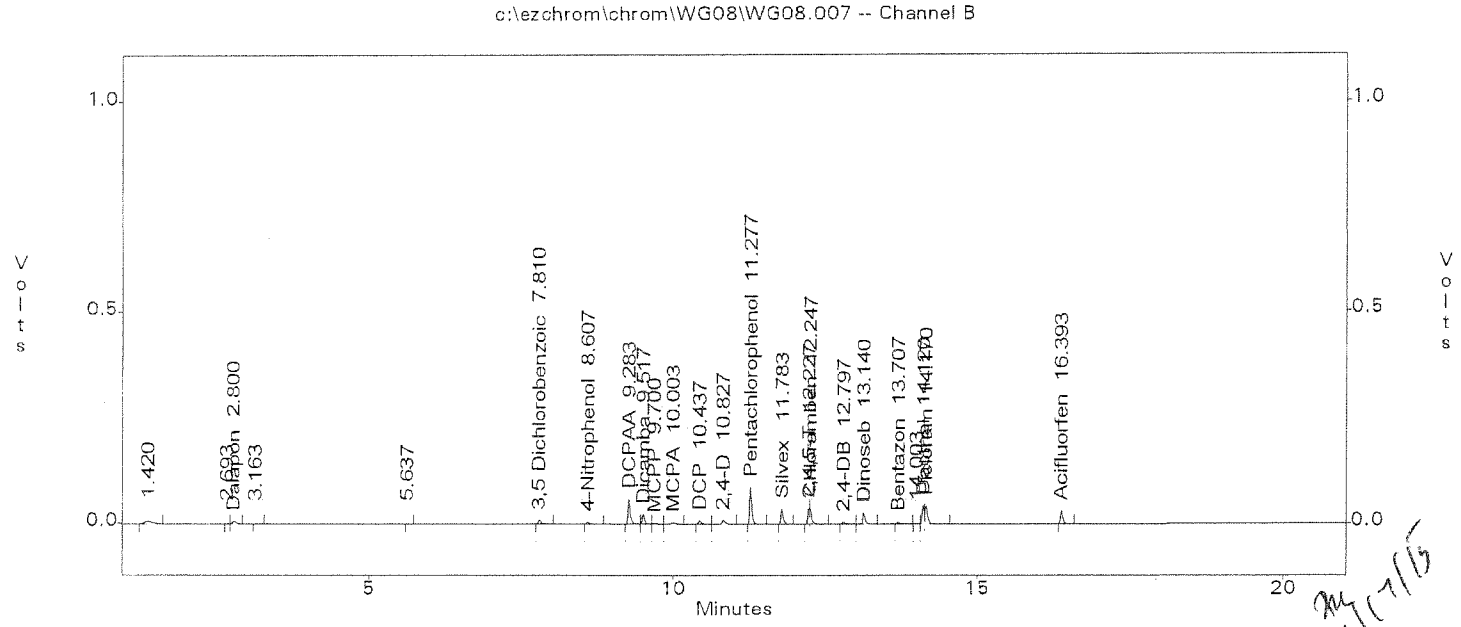
7/17/15

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.007
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0803
Acquired : Jul 08, 2015 18:34:41
Printed : Jul 13, 2015 18:28:09
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.800	29660.0	808.98	36.412	xV
3,5 Dichlorobenzoic	7.810	30096.0	760.73	37.256	BB
4-Nitrophenol	8.607	17401.0	440.78	36.340	BV
DCPAA	9.283	157474.0	394.76	374.320	BV
Dicamba	9.517	59057.0	1564.43	37.608	VV
MCPP	9.700	4991.0	2.78	1876.600	VV
MCPA	10.003	12437.0	5.29	1869.200	VV
DCP	10.437	24927.0	611.51	37.740	BV
2,4-D	10.827	29531.0	744.91	37.608	VV
Pentachlorophenol	11.277	217222.0	5688.82	37.984	BB
Silvex	11.783	89674.0	2383.87	38.012	BV
2,4,5-T	12.227	70201.0	1740.34	37.908	Bx
Chloramben	12.247	97418.0	2718.33	37.444	xV
2,4-DB	12.797	17075.0	427.74	37.864	BV
Dinoseb	13.140	66956.0	1738.25	37.796	VB
Bentazon	13.707	14179.0	377.03	37.796	BV
Dacthal	14.120	89226.0	2454.04	36.604	VS
Picloram	14.170	133907.0	3706.34	37.796	SB
Acifluorfen	16.393	77683.0	2137.76	38.508	BV



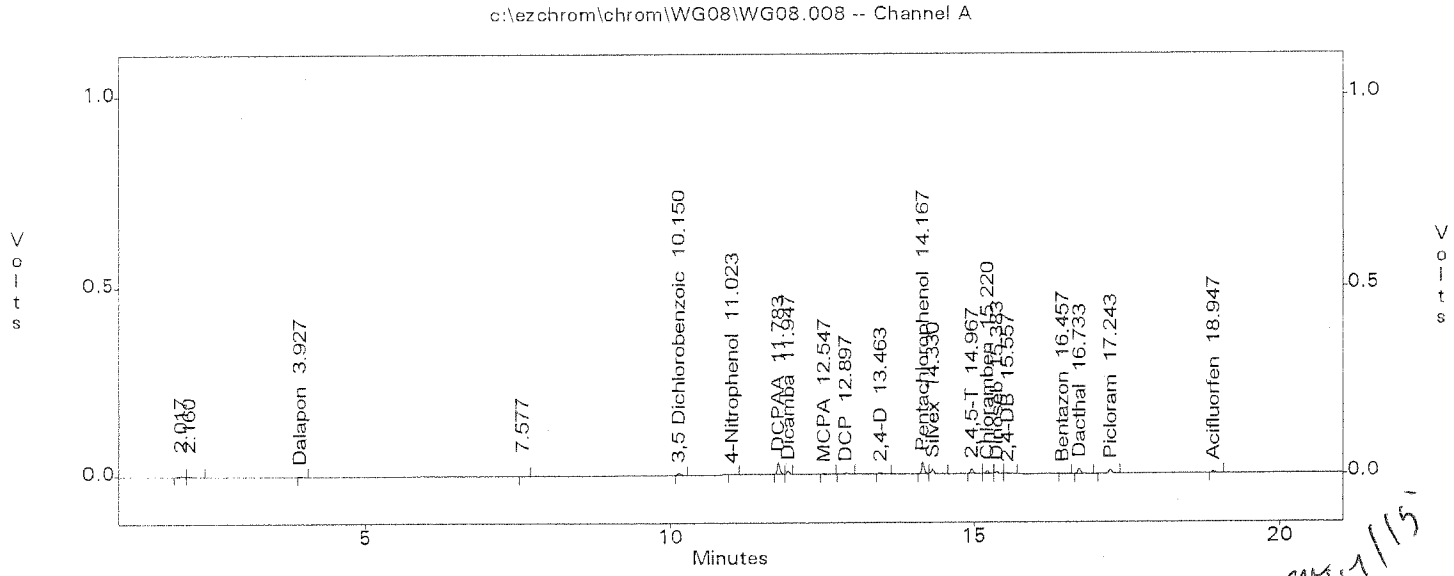
7/17/15

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.008
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0802
Acquired : Jul 08, 2015 19:05:29
Printed : Jul 13, 2015 18:28:12
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.927	10934.0	589.96	18.206	xI
3,5 Dichlorobenzoic	10.150	15673.0	806.30	18.628	BV
4-Nitrophenol	11.023	4928.0	262.86	18.170	BV
DCPAA	11.783	99475.0	448.93	187.160	BV
Dicamba	11.947	27643.0	1531.67	18.804	Vx
MCPP	12.037	0.0	0.00	0.000	--
MCPA	12.547	7288.0	5.73	-1.000	BV
DCP	12.897	13179.0	630.50	18.870	VV
2,4-D	13.463	13113.0	670.94	18.804	BV
Pentachlorophenol	14.167	88488.0	5303.02	18.992	BV
Silvex	14.330	35455.0	2141.78	19.006	VB
2,4,5-T	14.967	36949.0	2198.66	18.954	BV
Chloramben	15.220	24069.0	1480.23	18.722	VV
Dinoseb	15.383	16278.0	781.73	18.898	VV
2,4-DB	15.557	7447.0	388.09	18.932	VV
Bentazon	16.457	4005.0	225.56	18.898	BV
Dacthal	16.733	37343.0	2498.57	18.302	VV
Picloram	17.243	31397.0	2108.02	18.898	VB
Acifluorfen	18.947	16858.0	841.15	19.254	BV



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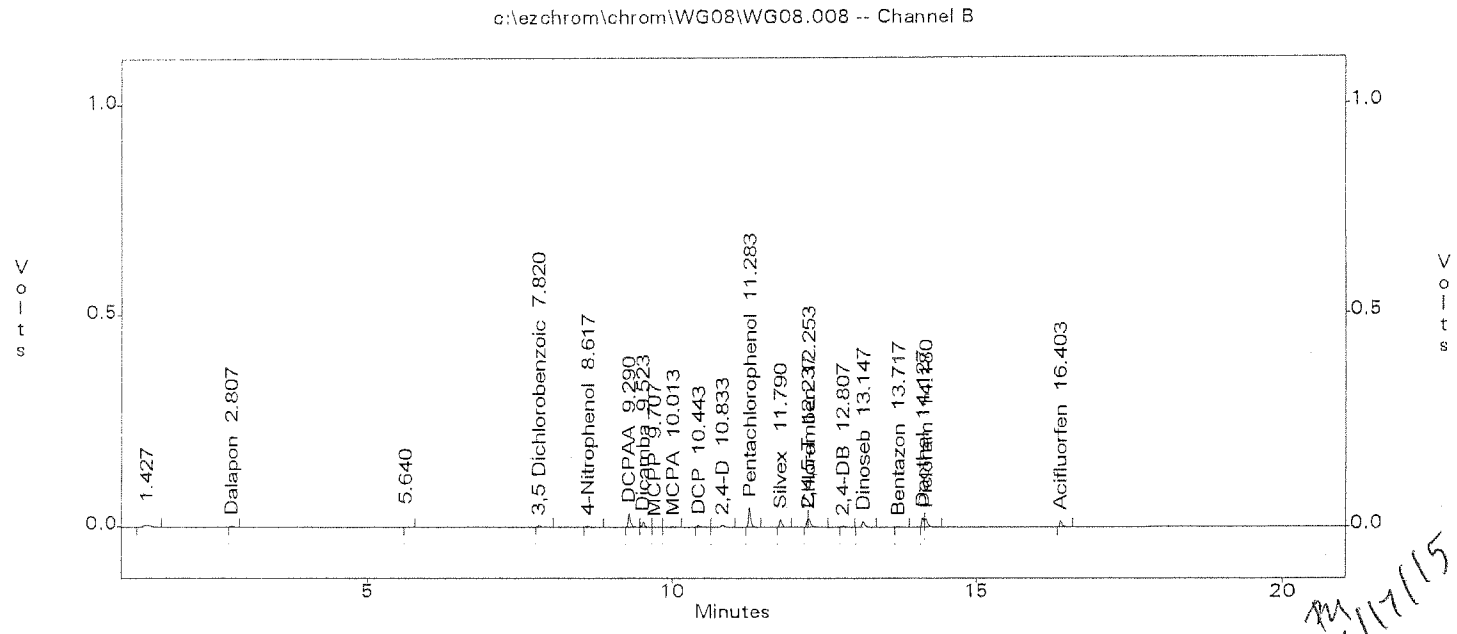
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.008
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0802
Acquired : Jul 08, 2015 19:05:29
Printed : Jul 13, 2015 18:28:12
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.807	15633.0	808.98	18.206	BV
3,5 Dichlorobenzoic	7.820	16913.0	760.73	18.628	BB
4-Nitrophenol	8.617	9985.0	440.78	18.170	BV
DCPAA	9.290	91057.0	394.76	187.160	BV
Dicamba	9.523	31620.0	1564.43	18.804	VV
MCPP	9.707	2226.0	2.78	-1.000	VV
MCPA	10.013	7071.0	5.29	-1.000	VV
DCP	10.443	14815.0	611.51	18.870	BV
2,4-D	10.833	16722.0	744.91	18.804	VV
Pentachlorophenol	11.283	115119.0	5688.82	18.992	BV
Silvex	11.790	45748.0	2383.87	19.006	BV
2,4,5-T	12.237	33420.0	1740.34	18.954	Bx
Chloramben	12.253	51813.0	2718.33	18.722	xV
2,4-DB	12.807	9212.0	427.74	18.932	BV
Dinoseb	13.147	36474.0	1738.25	18.898	VB
Bentazon	13.717	8739.0	377.03	18.898	BV
Dacthal	14.127	46067.0	2454.04	18.302	BS
Picloram	14.180	61556.0	3706.34	18.898	SB
Acifluorfen	16.403	38884.0	2137.76	19.254	BV



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843

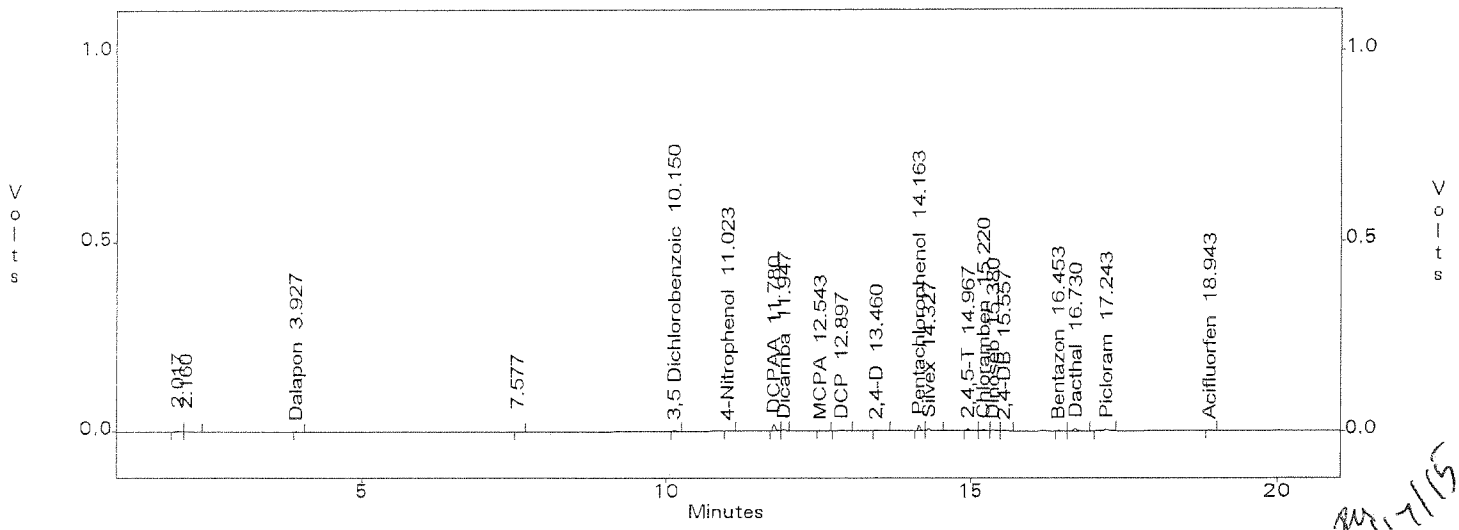
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.009
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0801
Acquired : Jul 08, 2015 19:36:19
Printed : Jul 13, 2015 18:28:16
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.927	5622.0	589.96	-1.000	xI
3,5 Dichlorobenzoic	10.150	7949.0	806.30	-1.000	BV
4-Nitrophenol	11.023	2495.0	262.86	-1.000	BV
DCPAA	11.780	54273.0	448.93	-1.000	BV
Dicamba	11.947	14358.0	1531.67	-1.000	VV
MCPP	12.037	0.0	0.00	0.000	--
MCPA	12.543	4163.0	5.73	-1.000	BV
DCP	12.897	7757.0	630.50	-1.000	VB
2,4-D	13.460	6757.0	670.94	-1.000	BB
Pentachlorophenol	14.163	40612.0	5303.02	9.496	BV
Silvex	14.327	17756.0	2141.78	-1.000	VB
2,4,5-T	14.967	18317.0	2198.66	-1.000	BV
Chloramben	15.220	12493.0	1480.23	-1.000	VV
Dinoseb	15.380	8826.0	781.73	-1.000	VV
2,4-DB	15.557	3757.0	388.09	-1.000	VB
Bentazon	16.453	2047.0	225.56	-1.000	BV
Dacthal	16.730	18213.0	2498.57	-1.000	VV
Picloram	17.243	15498.0	2108.02	-1.000	VB
Acifluorfen	18.943	8269.0	841.15	-1.000	BV

c:\ezchrom\chrom\WG08\WG08.009 -- Channel A



7/17/15

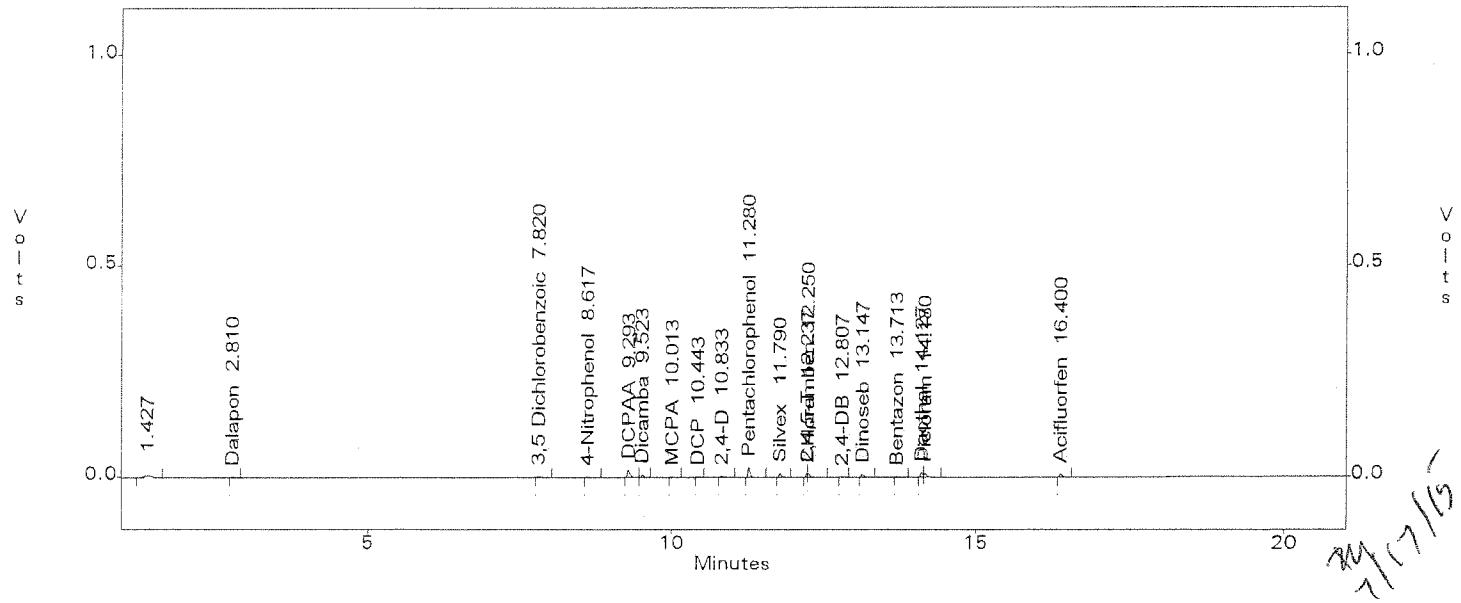
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.009
Method : c:\ezchrom\methods\he16g08.met
Sample ID : HE16G0801
Acquired : Jul 08, 2015 19:36:19
Printed : Jul 13, 2015 18:28:16
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.810	8360.0	808.98	-1.000	BV
3,5 Dichlorobenzoic	7.820	9163.0	760.73	-1.000	BB
4-Nitrophenol	8.617	5377.0	440.78	-1.000	BB
DCPAA	9.293	51687.0	394.76	-1.000	BV
Dicamba	9.523	16263.0	1564.43	-1.000	VB
MCPP	9.707	0.0	0.00	0.000	--
MCPA	10.013	4032.0	5.29	-1.000	BV
DCP	10.443	5781.0	611.51	-1.000	BB
2,4-D	10.833	8687.0	744.91	-1.000	BV
Pentachlorophenol	11.280	58677.0	5688.82	9.496	BB
Silvex	11.790	22524.0	2383.87	-1.000	BV
2,4,5-T	12.237	17291.0	1740.34	-1.000	Bx
Chloramben	12.250	24839.0	2718.33	-1.000	xV
2,4-DB	12.807	4352.0	427.74	-1.000	BB
Dinoseb	13.147	18911.0	1738.25	-1.000	BB
Bentazon	13.713	4789.0	377.03	-1.000	BV
Dacthal	14.127	23864.0	2454.04	-1.000	BV
Picloram	14.180	29192.0	3706.34	-1.000	VB
Acifluorfen	16.400	19172.0	2137.76	-1.000	BV

c:\ezchrom\chrom\WG08\WG08.009 -- Channel B



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SECOND SOURCE VERIFICATION

SECOND SOURCE VERIFICATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : ZB-35HT
Column size ID : 30MX0.25MM 0.25UM
Mid Conc Init LFID & Datetime: WG08005A 07/08/2015 17:32
Conc Cont LFID & Datetime: WG08010A 07/08/2015 20:07
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Dalapon	3.923	3.907	3.939	91.0	590.000	57287	97.10	7		20
3,5-Dichlorobenzo	10.147	10.126	10.168	93.1	806.300	74861	92.85	-0		20
4-Nitrophenol	11.020	11.000	11.040	90.8	262.900	25987	98.86	9		20
Dicamba	11.943	11.920	11.966	94.0	1531.7	155305	101.40	8		20
Dichloroprop	12.893	12.871	12.915	94.3	630.500	63809	101.20	7		20
2,4-D	13.457	13.430	13.484	94.0	670.900	66193	98.66	5		20
Pentachlorophenol	14.163	14.136	14.190	95.0	5303.0	577657	108.93	15		20
2,4,5-TP(Silvex)	14.323	14.302	14.344	95.0	2141.8	228297	106.59	12		20
Chloramben	15.217	15.195	15.239	93.6	1480.2	157818	106.62	14		20
2,4,5-T	14.963	14.941	14.985	94.8	2198.7	239710	109.03	15		20
2,4-DB	15.553	15.532	15.574	94.7	388.100	37712	97.17	3		20
Dinoseb	15.380	15.359	15.401	94.5	781.700	75202	96.20	2		20
Bentazon	16.453	16.432	16.474	94.5	225.600	23176	102.75	9		20
Dacthal	16.730	16.709	16.751	91.5	2498.6	259822	103.99	14		20
Picloram	17.240	17.219	17.261	94.5	2108.0	228167	108.24	15		20
Acifluorfen	18.943	18.922	18.964	96.3	841.100	84021	99.89	4		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
2,4-DCPAA	11.777	11.754	11.800	935.8	448.900	433305	965.19	3		20

RW 7/17/15

SECOND SOURCE VERIFICATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : STX-CLPESTII
Column size ID : 30MX0.32MM 0.32UM
Mid Conc Init LFID & Datetime: WG08005B 07/08/2015 17:32
Conc Cont LFID & Datetime: WG08010B 07/08/2015 20:07
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Dalapon	2.803	2.787	2.819	91.0	809.000	82308	101.74	12		20
3,5-Dichlorobenzo	7.810	7.789	7.831	93.1	760.700	65220	85.73	-8		20
4-Nitrophenol	8.603	8.572	8.634	90.8	440.800	41387	93.89	3		20
Dicamba	9.517	9.493	9.541	94.0	1564.4	159908	102.21	9		20
Dichloroprop	10.437	10.411	10.463	94.3	611.500	62856	102.79	9		20
2,4-D	10.823	10.801	10.845	94.0	744.900	70359	94.45	0		20
Pentachlorophenol	11.280	11.256	11.304	95.0	5688.8	566971	99.66	5		20
2,4,5-TP(Silvex)	11.783	11.759	11.807	95.0	2383.9	246018	103.20	9		20
Chloramben	12.250	12.224	12.276	93.6	2718.3	284147	104.53	12		20
2,4,5-T	12.227	12.203	12.251	94.8	1740.3	183508	105.44	11		20
2,4-DB	12.797	12.771	12.823	94.7	427.700	39988	93.49	-1		20
Dinoseb	13.143	13.119	13.167	94.5	1738.2	166188	95.61	1		20
Bentazon	13.710	13.683	13.737	94.5	377.000	35008	92.85	-2		20
Dacthal	14.123	14.096	14.150	91.5	2454.0	245548	100.06	9		20
Picloram	14.170	14.144	14.196	94.5	3706.3	389784	105.17	11		20
Acifluorfen	16.400	16.376	16.424	96.3	2137.8	212717	99.50	3		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
2,4-DCPAA	9.283	9.259	9.307	935.8	394.800	373107	945.14	1		20

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SECOND SOURCE VERIFICATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : ZB-35HT
Column size ID : 30MX0.25MM 0.25UM
Mid Conc Init LFID & Datetime: WG08005A 07/08/2015 17:32
Conc Cont LFID & Datetime: WG08010A 07/08/2015 20:07
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Dalapon	3.923	3.907	3.939	91.0	590.000	57287	97.10	7		15
3,5-Dichlorobenzo	10.147	10.126	10.168	93.1	806.300	74861	92.85	-0		15
4-Nitrophenol	11.020	11.000	11.040	90.8	262.900	25987	98.86	9		15
Dicamba	11.943	11.920	11.966	94.0	1531.7	155305	101.40	8		15
Dichloroprop	12.893	12.871	12.915	94.3	630.500	63809	101.20	7		15
2,4-D	13.457	13.430	13.484	94.0	670.900	66193	98.66	5		15
Pentachlorophenol	14.163	14.136	14.190	95.0	5303.0	577657	108.93	15		15
2,4,5-TP(Silvex)	14.323	14.302	14.344	95.0	2141.8	228297	106.59	12		15
Chloramben	15.217	15.195	15.239	93.6	1480.2	157818	106.62	14		15
2,4,5-T	14.963	14.941	14.985	94.8	2198.7	239710	109.03	15		15
2,4-DB	15.553	15.532	15.574	94.7	388.100	37712	97.17	3		15
Dinoseb	15.380	15.359	15.401	94.5	781.700	75202	96.20	2		15
Bentazon	16.453	16.432	16.474	94.5	225.600	23176	102.75	9		15
Dacthal	16.730	16.709	16.751	91.5	2498.6	259822	103.99	14		15
Picloram	17.240	17.219	17.261	94.5	2108.0	228167	108.24	15		15
Acifluorfen	18.943	18.922	18.964	96.3	841.100	84021	99.89	4		15

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
2,4-DCPAA	11.777	11.754	11.800	935.8	448.900	433305	965.19	3		15

AM 7/17/15

SECOND SOURCE VERIFICATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : STX-CLPESTII
Column size ID : 30MX0.32MM 0.32UM
Mid Conc Init LFID & Datetime: WG08005B 07/08/2015 17:32
Conc Cont LFID & Datetime: WG08010B 07/08/2015 20:07
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Dalapon	2.803	2.787	2.819	91.0	809.000	82308	101.74	12		15
3,5-Dichlorobenzo	7.810	7.789	7.831	93.1	760.700	65220	85.73	-8		15
4-Nitrophenol	8.603	8.572	8.634	90.8	440.800	41387	93.89	3		15
Dicamba	9.517	9.493	9.541	94.0	1564.4	159908	102.21	9		15
Dichloroprop	10.437	10.411	10.463	94.3	611.500	62856	102.79	9		15
2,4-D	10.823	10.801	10.845	94.0	744.900	70359	94.45	0		15
Pentachlorophenol	11.280	11.256	11.304	95.0	5688.8	566971	99.66	5		15
2,4,5-TP(Silvex)	11.783	11.759	11.807	95.0	2383.9	246018	103.20	9		15
Chloramben	12.250	12.224	12.276	93.6	2718.3	284147	104.53	12		15
2,4,5-T	12.227	12.203	12.251	94.8	1740.3	183508	105.44	11		15
2,4-DB	12.797	12.771	12.823	94.7	427.700	39988	93.49	-1		15
Dinoseb	13.143	13.119	13.167	94.5	1738.2	166188	95.61	1		15
Bentazon	13.710	13.683	13.737	94.5	377.000	35008	92.85	-2		15
Dacthal	14.123	14.096	14.150	91.5	2454.0	245548	100.06	9		15
Picloram	14.170	14.144	14.196	94.5	3706.3	389784	105.17	11		15
Acifluorfen	16.400	16.376	16.424	96.3	2137.8	212717	99.50	3		15

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
2,4-DCPAA	9.283	9.259	9.307	935.8	394.800	373107	945.14	1		15

7/17/15

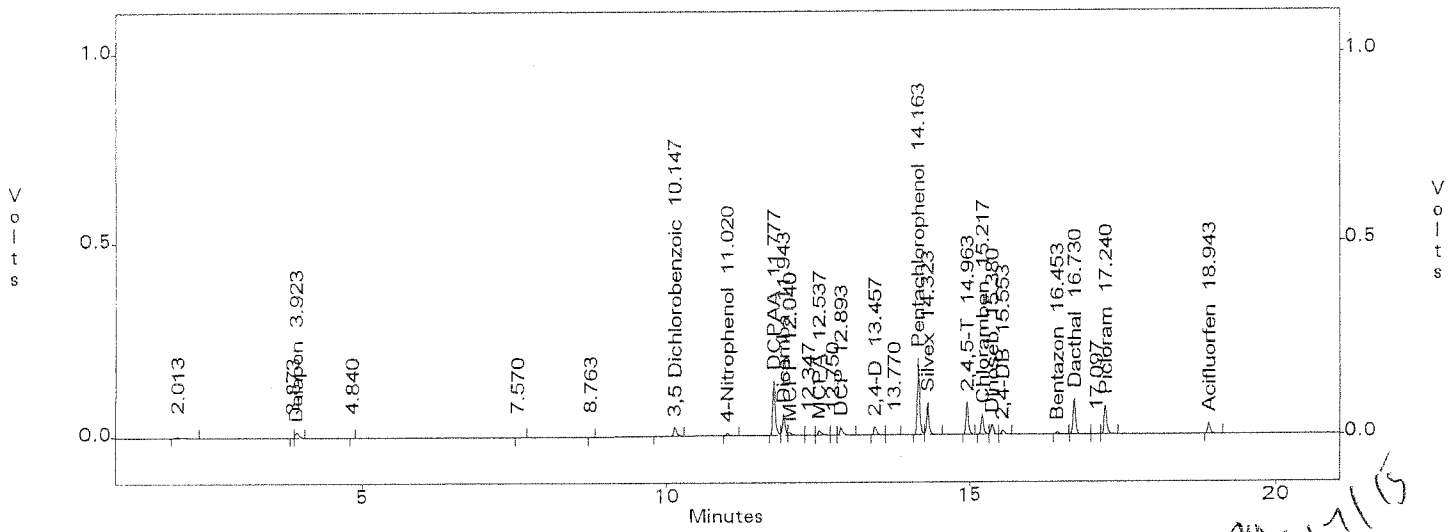
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.010
Method : c:\ezchrom\methods\he16g08.met
Sample ID : IHE16G08001
Acquired : Jul 08, 2015 20:07:07
Printed : Jul 15, 2015 18:39:37
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.923	57287.0	589.96	97.103	xI
3,5 Dichlorobenzoic	10.147	74861.0	806.30	92.845	BV
4-Nitrophenol	11.020	25987.0	262.86	98.862	BV
DCPAA	11.777	433305.0	448.93	965.188	BV
Dicamba	11.943	155305.0	1531.67	101.396	VV
MCPP	12.040	25220.0	2.55	9878.002	VV
MCPA	12.537	47190.0	5.73	8229.231	VV
DCP	12.893	63809.0	630.50	101.203	VV
2,4-D	13.457	66193.0	670.94	98.658	BV
Pentachlorophenol	14.163	577657.0	5303.02	108.930	BV
Silvex	14.323	228297.0	2141.78	106.592	VB
2,4,5-T	14.963	239710.0	2198.66	109.025	BI
Chloramben	15.217	157818.0	1480.23	106.617	BV
Dinoseb	15.380	75202.0	781.73	96.200	VV
2,4-DB	15.553	37712.0	388.09	97.174	VV
Bentazon	16.453	23176.0	225.56	102.750	BV
Dacthal	16.730	259822.0	2498.57	103.988	VV
Picloram	17.240	228167.0	2108.02	108.238	VI
Acifluorfen	18.943	84021.0	841.15	99.889	BV

c:\ezchrom\chrom\WG08\WG08.010 -- Channel A



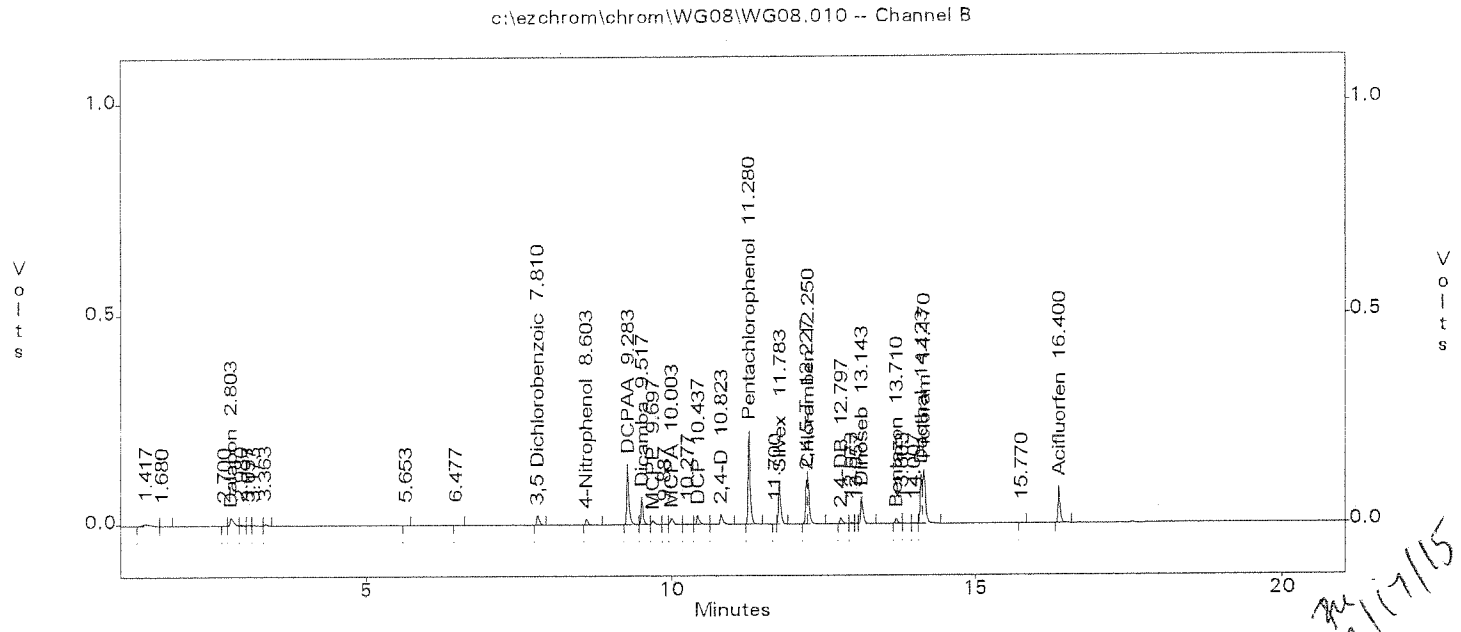
7/17/15

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.010
Method : c:\ezchrom\methods\he16g08.met
Sample ID : IHE16G08001
Acquired : Jul 08, 2015 20:07:07
Printed : Jul 15, 2015 18:39:37
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.803	82308.0	808.98	101.743	xV
3,5 Dichlorobenzoic	7.810	65220.0	760.73	85.733	BV
4-Nitrophenol	8.603	41387.0	440.78	93.895	BV
DCPAA	9.283	373107.0	394.76	945.138	BV
Dicamba	9.517	159908.0	1564.43	102.215	VV
MCPP	9.697	27718.0	2.78	9982.442	VV
MCPA	10.003	46423.0	5.29	8769.801	VV
DCP	10.437	62856.0	611.51	102.788	VV
2,4-D	10.823	70359.0	744.91	94.453	VV
Pentachlorophenol	11.280	566971.0	5688.82	99.664	BB
Silvex	11.783	246018.0	2383.87	103.201	xV
2,4,5-T	12.227	183508.0	1740.34	105.443	Bx
Chloramben	12.250	284147.0	2718.33	104.530	xB
2,4-DB	12.797	39988.0	427.74	93.486	BV
Dinoseb	13.143	166188.0	1738.25	95.607	xB
Bentazon	13.710	35008.0	377.03	92.852	Bx
Dacthal	14.123	245548.0	2454.04	100.059	VS
Picloram	14.170	389784.0	3706.34	105.167	SB
Acifluorfen	16.400	212717.0	2137.76	99.505	BV



7/17/15

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SECOND SOURCE VERIFICATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : ZB-35HT
Column size ID : 30MX0.25MM 0.25UM
Mid Conc Init LFID & Datetime: WG08005A 07/08/2015 17:32
Conc Cont LFID & Datetime: WG08016A 07/09/2015 11:36
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
MCPP	12.053	12.030	12.076	4693.0	2.550	12165	4764.71	2		20
MCPA	12.553	12.531	12.575	4673.0	5.730	27685	4827.85	3		20

RM 7/17/15

SECOND SOURCE VERIFICATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : STX-CLPESTII
Column size ID : 30MX0.32MM 0.32UM
Mid Conc Init LFID & Datetime: WG08005B 07/08/2015 17:32
Conc Cont LFID & Datetime: WG08016B 07/09/2015 11:36
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
MCPP	9.710	9.689	9.731	4693.0	2.780	14329	5160.49	10		20
MCPA	10.017	9.993	10.041	4673.0	5.290	27673	5227.73	12		20

RM 7/17/15

SECOND SOURCE VERIFICATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : ZB-35HT
Column size ID : 30MX0.25MM 0.25UM
Mid Conc Init LFID & Datetime: WG08005A 07/08/2015 17:32
Conc Cont LFID & Datetime: WG08016A 07/09/2015 11:36
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
MCPP	12.053	12.030	12.076	4693.0	2.550	12165	4764.71	2		15
MCPA	12.553	12.531	12.575	4673.0	5.730	27685	4827.85	3		15

sm 7/17/15

SECOND SOURCE VERIFICATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Column : STX-CLPESTII
Column size ID : 30MX0.32MM 0.32UM
Mid Conc Init LFID & Datetime: WG08005B 07/08/2015 17:32
Conc Cont LFID & Datetime: WG08016B 07/09/2015 11:36
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
MCPP	9.710	9.689	9.731	4693.0	2.780	14329	5160.49	10		15
MCPA	10.017	9.993	10.041	4673.0	5.290	27673	5227.73	12		15

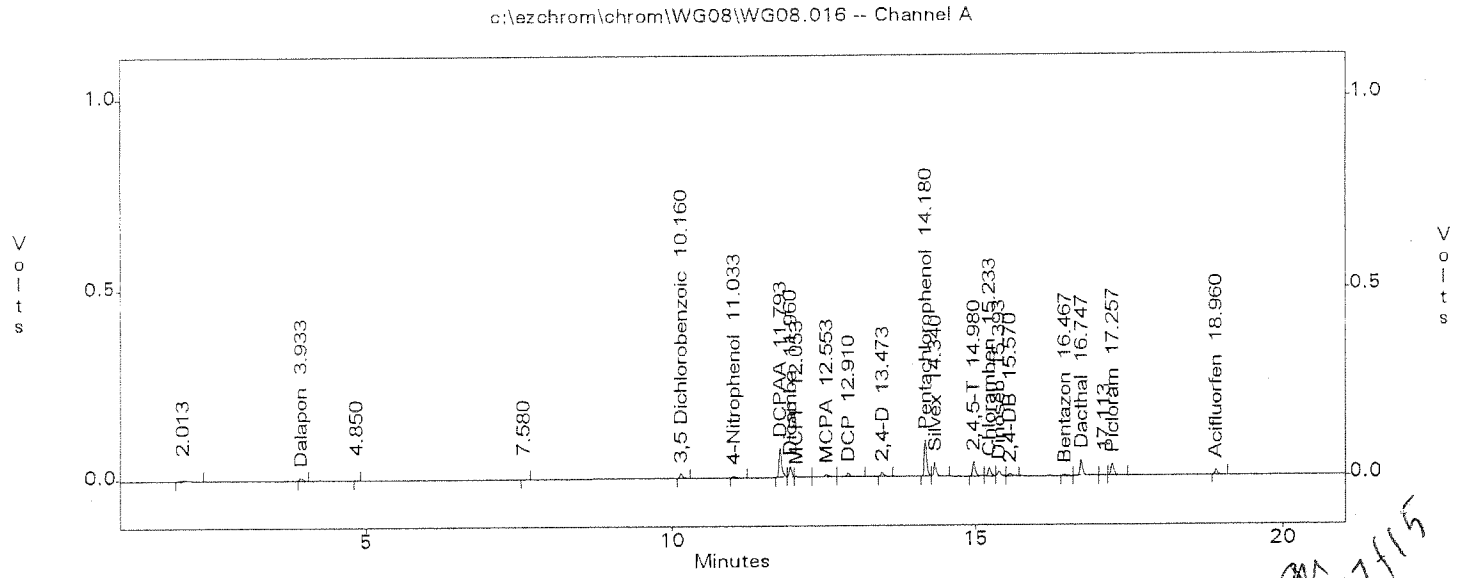
RW 7/17/15

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.016
Method : c:\ezchrom\methods\he16g08.met
Sample ID : IHE16G08003
Acquired : Jul 09, 2015 11:36:01
Printed : Jul 13, 2015 18:29:23
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	3.933	26321.0	589.96	44.615	xI
3,5 Dichlorobenzoic	10.160	35091.0	806.30	43.521	BV
4-Nitrophenol	11.033	12799.0	262.86	48.691	BB
DCPAA	11.793	228107.0	448.93	508.109	BV
Dicamba	11.960	73586.0	1531.67	48.043	VV
MCPP	12.053	12165.0	2.55	4764.707	VV
MCPA	12.553	27685.0	5.73	4827.851	VV
DCP	12.910	33997.0	630.50	53.920	VB
2,4-D	13.473	32966.0	670.94	49.134	BB
Pentachlorophenol	14.180	262262.0	5303.02	49.455	BV
Silvex	14.340	101291.0	2141.78	47.293	VB
2,4,5-T	14.980	109186.0	2198.66	49.660	BV
Chloramben	15.233	69223.0	1480.23	46.765	VV
Dinoseb	15.393	37415.0	781.73	47.862	VV
2,4-DB	15.570	18459.0	388.09	47.564	VV
Bentazon	16.467	10535.0	225.56	46.707	BV
Dacthal	16.747	111836.0	2498.57	44.760	VV
Picloram	17.257	95478.0	2108.02	45.293	VI
Acifluorfen	18.960	39015.0	841.15	46.383	BV



7/17/15

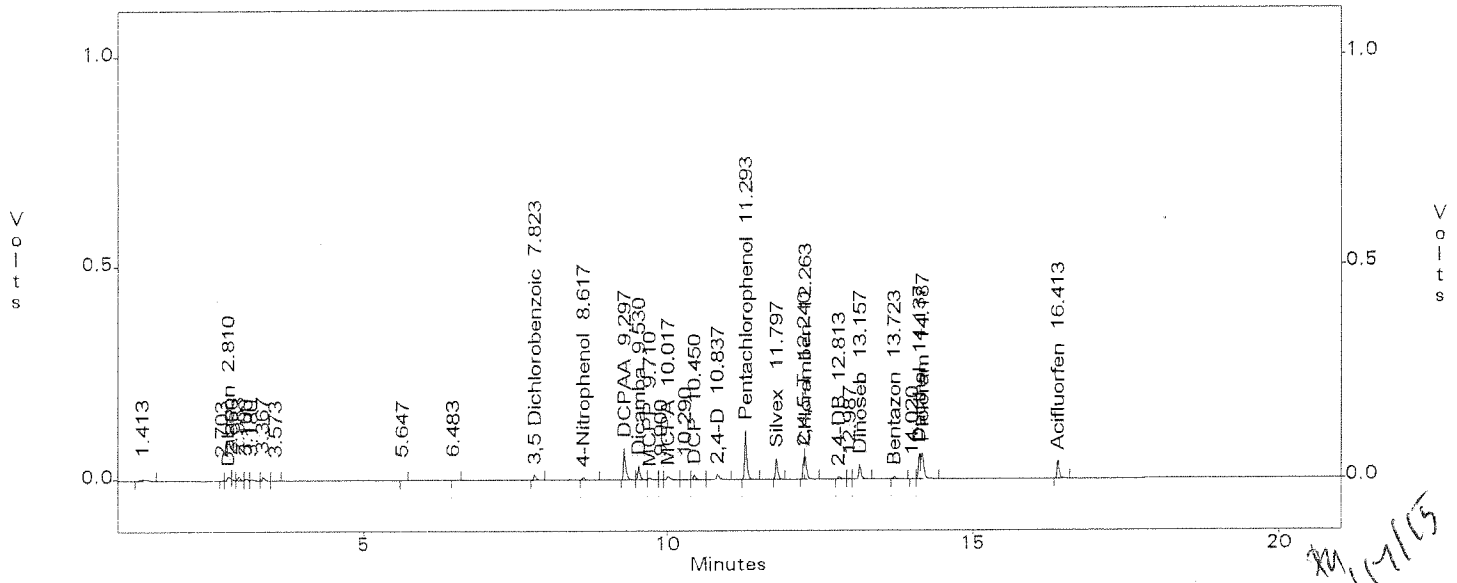
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\WG08\WG08.016
Method : c:\ezchrom\methods\he16g08.met
Sample ID : IHE16G08003
Acquired : Jul 09, 2015 11:36:01
Printed : Jul 13, 2015 18:29:24
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.810	38754.0	808.98	47.905	xx
3,5 Dichlorobenzoic	7.823	34002.0	760.73	44.696	BB
4-Nitrophenol	8.617	22614.0	440.78	51.304	BV
DCPAA	9.297	197147.0	394.76	499.404	BV
Dicamba	9.530	79343.0	1564.43	50.717	VV
MCPP	9.710	14329.0	2.78	5160.488	VV
MCPA	10.017	27673.0	5.29	5227.726	xV
DCP	10.450	33037.0	611.51	54.025	VV
2,4-D	10.837	37336.0	744.91	50.122	VV
Pentachlorophenol	11.293	284887.0	5688.82	50.078	BB
Silvex	11.797	119799.0	2383.87	50.254	BV
2,4,5-T	12.240	89079.0	1740.34	51.185	Bx
Chloramben	12.263	141805.0	2718.33	52.166	xB
2,4-DB	12.813	20346.0	427.74	47.566	BV
Dinoseb	13.157	86621.0	1738.25	49.832	VB
Bentazon	13.723	18223.0	377.03	48.333	BB
Dacthal	14.137	119889.0	2454.04	48.854	VS
Picloram	14.187	189975.0	3706.34	51.257	SB
Acifluorfen	16.413	102182.0	2137.76	47.799	BV

c:\ezchrom\chrom\WG08\WG08.016 -- Channel B



7/17/15

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DAILY CALIBRATIONS

CONTINUE CALIBRATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : ZB-35HT
Column size ID : 30MX0.25MM 0.25UM
Mid Conc Init LFID & Datetime: WG08005A 07/08/2015 17:32
Conc Cont LFID & Datetime: WI25002A 09/25/2015 18:07
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Dalapon	4.010	3.994	4.026	91.0	590.000	54198	91.87	1		20
3,5-Dichlorobenzo	10.247	10.226	10.268	93.1	806.300	72663	90.12	-3		20
4-Nitrophenol	11.123	11.103	11.143	90.8	262.900	24862	94.58	4		20
Dicamba	12.047	12.024	12.070	94.0	1531.7	140747	91.89	-2		20
MCPP	12.137	12.114	12.160	4693.0	2.550	14278	5592.31	19		20
MCPA	12.640	12.618	12.662	4673.0	5.730	28313	4937.37	6		20
Dichloroprop	12.997	12.975	13.019	94.3	630.500	55359	87.80	-7		20
2,4-D	13.560	13.533	13.587	94.0	670.900	60427	90.06	-4		20
Pentachlorophenol	14.273	14.246	14.300	95.0	5303.0	523767	98.77	4		20
2,4,5-TP(Silvex)	14.427	14.406	14.448	95.0	2141.8	203796	95.15	0		20
Chloramben	15.323	15.301	15.345	93.6	1480.2	137017	92.56	-1		20
2,4,5-T	15.067	15.045	15.089	94.8	2198.7	206863	94.09	-1		20
2,4-DB	15.653	15.632	15.674	94.7	388.100	34435	88.73	-6		20
Dinoseb	15.483	15.462	15.504	94.5	781.700	77145	98.68	4		20
Bentazon	16.560	16.539	16.581	94.5	225.600	20450	90.67	-4		20
Dacthal	16.837	16.816	16.858	91.5	2498.6	230025	92.06	1		20
Picloram	17.347	17.326	17.368	94.5	2108.0	209079	99.18	5		20
Acifluorfen	19.050	19.029	19.071	96.3	841.100	86214	102.50	6		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
2,4-DCPAA	11.877	11.854	11.900	935.8	448.900	403694	899.23	-4		20

CONTINUE CALIBRATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : STX-CLPESTII
Column size ID : 30MX0.32MM 0.32UM
Mid Conc Init LFID & Datetime: WG08005B 07/08/2015 17:32
Conc Cont LFID & Datetime: WI25002B 09/25/2015 18:07
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Dalapon	2.847	2.831	2.863	91.0	809.000	78554	97.10	7		20
3,5-Dichlorobenzo	7.853	7.832	7.874	93.1	760.700	73308	96.36	3		20
4-Nitrophenol	8.647	8.616	8.678	90.8	440.800	42873	97.27	7		20
Dicamba	9.560	9.536	9.584	94.0	1564.4	159260	101.80	8		20
MCPP	9.740	9.719	9.761	4693.0	2.780	15398	5545.48	18		20
MCPA	10.047	10.023	10.071	4673.0	5.290	27709	5234.53	12		20
Dichloroprop	10.477	10.451	10.503	94.3	611.500	58107	95.02	1		20
2,4-D	10.863	10.841	10.885	94.0	744.900	73349	98.47	5		20
Pentachlorophenol	11.327	11.303	11.351	95.0	5688.8	576578	101.35	7		20
2,4,5-TP(Silvex)	11.827	11.803	11.851	95.0	2383.9	246525	103.41	9		20
Chloramben	12.290	12.264	12.316	93.6	2718.3	292459	107.59	15		20
2,4,5-T	12.267	12.243	12.291	94.8	1740.3	157212	90.33	-5		20
2,4-DB	12.833	12.807	12.859	94.7	427.700	42208	98.68	4		20
Dinoseb	13.187	13.163	13.211	94.5	1738.2	168964	97.20	3		20
Bentazon	13.750	13.723	13.777	94.5	377.000	35573	94.35	-0		20
Dacthal	14.167	14.140	14.194	91.5	2454.0	253194	103.17	13		20
Picloram	14.207	14.181	14.233	94.5	3706.3	379907	102.50	8		20
Acifluorfen	16.437	16.413	16.461	96.3	2137.8	228833	107.04	11		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
2,4-DCPAA	9.327	9.303	9.351	935.8	394.800	384278	973.43	4		20

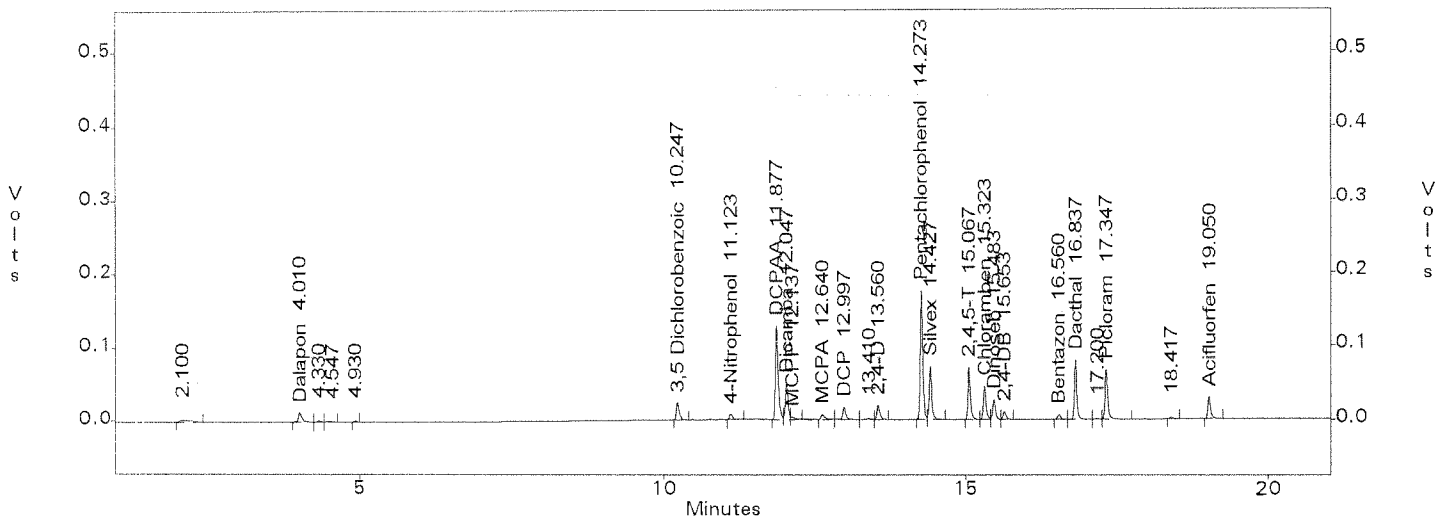
EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.002
Method : c:\ezchrom\methods\he16g08.met
Sample ID : CHE16G08043
Acquired : Sep 25, 2015 18:07:14
Printed : Sep 28, 2015 09:36:12
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.010	54198.0	589.96	91.867	BV
3,5 Dichlorobenzoic	10.247	72663.0	806.30	90.119	BV
4-Nitrophenol	11.123	24862.0	262.86	94.582	BB
DCPAA	11.877	403694.0	448.93	899.229	BV
Dicamba	12.047	140747.0	1531.67	91.891	Vx
MCPP	12.137	14278.0	2.55	5592.313	xx
MCPA	12.640	28313.0	5.73	4937.365	VV
DCP	12.997	55359.0	630.50	87.801	VV
2,4-D	13.560	60427.0	670.94	90.064	VB
Pentachlorophenol	14.273	523767.0	5303.02	98.768	BV
Silvex	14.427	203796.0	2141.78	95.153	VB
2,4,5-T	15.067	206863.0	2198.66	94.086	BV
Chloramben	15.323	137017.0	1480.23	92.564	VV
Dinoseb	15.483	77145.0	781.73	98.685	VV
2,4-DB	15.653	34435.0	388.09	88.730	VV
Bentazon	16.560	20450.0	225.56	90.665	VV
Dacthal	16.837	230025.0	2498.57	92.063	VV
Picloram	17.347	209079.0	2108.02	99.183	VV
Acifluorfen	19.050	86214.0	841.15	102.496	BV

c:\ezchrom\chrom\wi25\wi25.002 -- Channel A

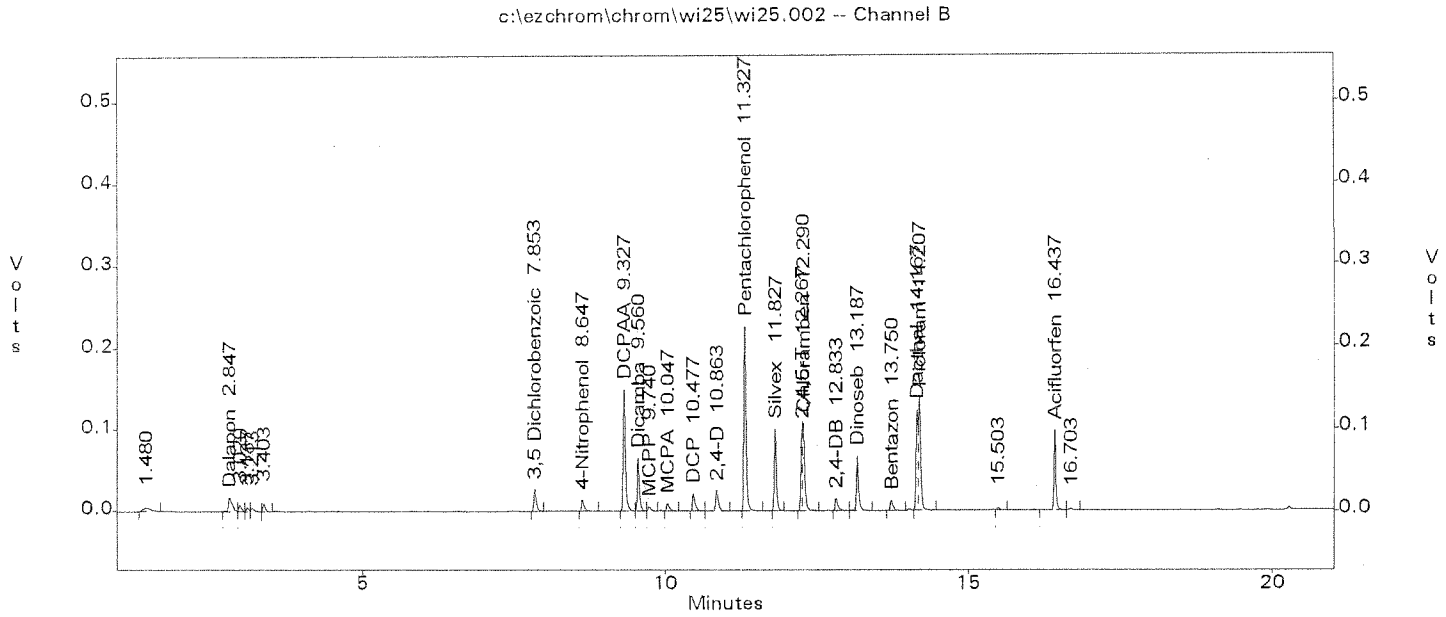


EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.002
Method : c:\ezchrom\methods\hel6g08.met
Sample ID : CHE16G08043
Acquired : Sep 25, 2015 18:07:14
Printed : Sep 28, 2015 09:36:12
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.847	78554.0	808.98	97.102	xV
3,5 Dichlorobenzoic	7.853	73308.0	760.73	96.365	BV
4-Nitrophenol	8.647	42873.0	440.78	97.266	BV
DCPAA	9.327	384278.0	394.76	973.435	VV
Dicamba	9.560	159260.0	1564.43	101.800	VV
MCPP	9.740	15398.0	2.78	5545.481	VV
MCPA	10.047	27709.0	5.29	5234.526	VV
DCP	10.477	58107.0	611.51	95.022	BV
2,4-D	10.863	73349.0	744.91	98.467	VV
Pentachlorophenol	11.327	576578.0	5688.82	101.353	BB
Silvex	11.827	246525.0	2383.87	103.414	BV
2,4,5-T	12.267	157212.0	1740.34	90.334	Bx
Chloramben	12.290	292459.0	2718.33	107.588	xB
2,4-DB	12.833	42208.0	427.74	98.676	BV
Dinoseb	13.187	168964.0	1738.25	97.204	VB
Bentazon	13.750	35573.0	377.03	94.351	BV
Dacthal	14.167	253194.0	3706.34	102.502	SB
Picloram	14.207	379907.0	3706.34	102.502	SB
Acifluorfen	16.437	228833.0	2137.76	107.043	VV



CONTINUE CALIBRATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : ZB-35HT
Column size ID : 30MX0.25MM 0.25UM
Mid Conc Init LFID & Datetime: WG08005A 07/08/2015 17:32
Conc Cont LFID & Datetime: WI25012A 09/25/2015 23:57
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Dalapon	4.000	3.984	4.016	91.0	590.000	56738	96.17	6		20
3,5-Dichlorobenzo	10.230	10.209	10.251	93.1	806.300	75472	93.60	0		20
4-Nitrophenol	11.107	11.087	11.127	90.8	262.900	26808	101.99	12		20
Dicamba	12.030	12.007	12.053	94.0	1531.7	147256	96.14	2		20
MCPP	12.123	12.100	12.146	4693.0	2.550	13903	5445.44	16		20
MCPA	12.623	12.601	12.645	4673.0	5.730	28668	4999.27	7		20
Dichloroprop	12.980	12.958	13.002	94.3	630.500	56598	89.77	-5		20
2,4-D	13.543	13.516	13.570	94.0	670.900	63418	94.52	1		20
Pentachlorophenol	14.257	14.230	14.284	95.0	5303.0	547849	103.31	9		20
2,4,5-TP(Silvex)	14.410	14.389	14.431	95.0	2141.8	213190	99.54	5		20
Chloramben	15.307	15.285	15.329	93.6	1480.2	145951	98.60	5		20
2,4,5-T	15.050	15.028	15.072	94.8	2198.7	218336	99.30	5		20
2,4-DB	15.637	15.616	15.658	94.7	388.100	36474	93.98	-1		20
Dinoseb	15.467	15.446	15.488	94.5	781.700	83604	106.95	13		20
Bentazon	16.547	16.526	16.568	94.5	225.600	21744	96.40	2		20
Dacthal	16.820	16.799	16.841	91.5	2498.6	241528	96.67	6		20
Picloram	17.333	17.312	17.354	94.5	2108.0	221879	105.25	11		20
Acifluorfen	19.033	19.012	19.054	96.3	841.100	92066	109.45	14		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
2,4-DCPAA	11.863	11.840	11.886	935.8	448.900	419351	934.10	-0		20

CONTINUE CALIBRATION
METHOD 8151

Lab Name : EMAX Inc
Instrument ID : GC-W GC16
GC Columm : STX-CLPESTII
Column size ID : 30MX0.32MM 0.32UM
Mid Conc Init LFID & Datetime: WG08005B 07/08/2015 17:32
Conc Cont LFID & Datetime: WI25012B 09/25/2015 23:57
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Dalapon	2.840	2.824	2.856	91.0	809.000	78049	96.48	6		20
3,5-Dichlorobenzo	7.840	7.819	7.861	93.1	760.700	75872	99.74	7		20
4-Nitrophenol	8.633	8.602	8.664	90.8	440.800	41752	94.72	4		20
Dicamba	9.547	9.523	9.571	94.0	1564.4	162649	103.97	11		20
MCPP	9.727	9.706	9.748	4693.0	2.780	14407	5188.58	11		20
MCPA	10.033	10.009	10.057	4673.0	5.290	28536	5390.75	15		20
Dichloroprop	10.463	10.437	10.489	94.3	611.500	60147	98.36	4		20
2,4-D	10.850	10.828	10.872	94.0	744.900	74908	100.56	7		20
Pentachlorophenol	11.310	11.286	11.334	95.0	5688.8	595992	104.77	10		20
2,4,5-TP(Silvex)	11.813	11.789	11.837	95.0	2383.9	255538	107.19	13		20
Chloramben	12.277	12.251	12.303	93.6	2718.3	280969	103.36	10		20
2,4,5-T	12.253	12.229	12.277	94.8	1740.3	183116	105.22	11		20
2,4-DB	12.820	12.794	12.846	94.7	427.700	43639	102.02	8		20
Dinoseb	13.173	13.149	13.197	94.5	1738.2	163580	94.11	-0		20
Bentazon	13.733	13.706	13.760	94.5	377.000	36529	96.89	3		20
Dacthal	14.153	14.126	14.180	91.5	2454.0	263135	107.22	17		20
Picloram	14.193	14.167	14.219	94.5	3706.3	391908	105.74	12		20
Acifluorfen	16.423	16.399	16.447	96.3	2137.8	225178	105.33	9		20

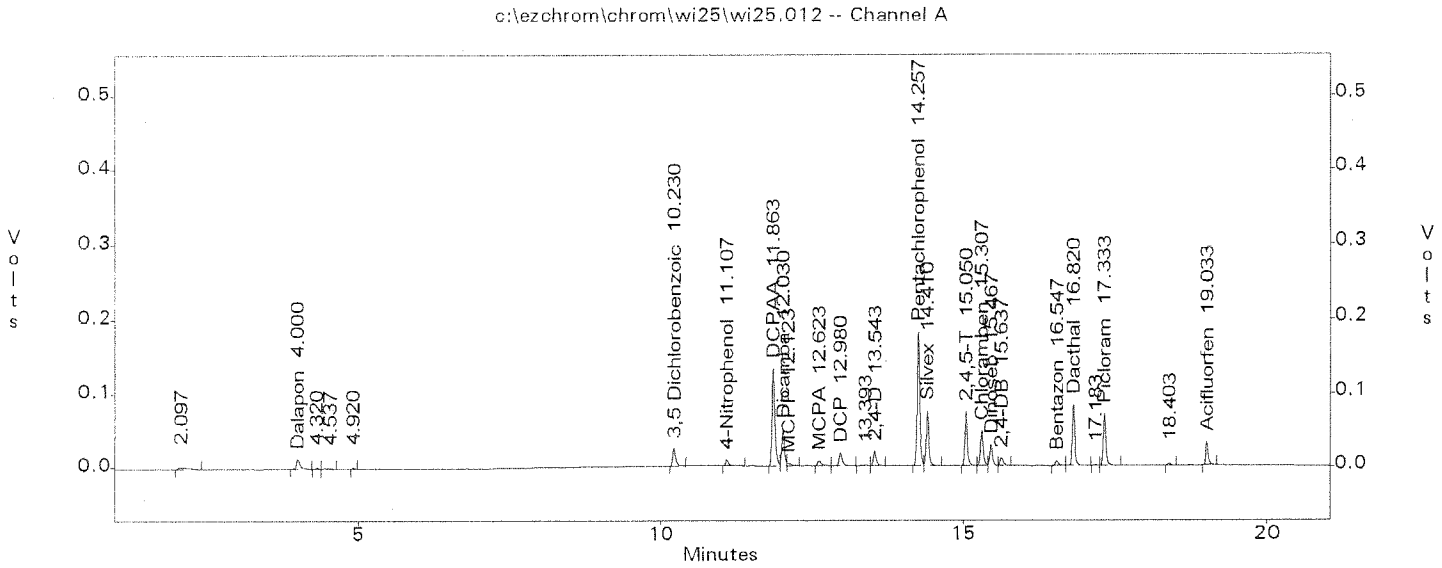
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
2,4-DCPAA	9.313	9.289	9.337	935.8	394.800	395730	1002.45	7		20

EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.012
Method : c:\ezchrom\methods\he16g08.met
Sample ID : CHE16G08044
Acquired : Sep 25, 2015 23:57:46
Printed : Sep 28, 2015 09:38:50
User : RZhou

Channel A Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	4.000	56738.0	589.96	96.172	BV
3,5 Dichlorobenzoic	10.230	75472.0	806.30	93.603	BV
4-Nitrophenol	11.107	26808.0	262.86	101.985	BV
DCPAA	11.863	419351.0	448.93	934.105	BV
Dicamba	12.030	147256.0	1531.67	96.141	Vx
MCPP	12.123	13903.0	2.55	5445.436	xx
MCPA	12.623	28668.0	5.73	4999.271	BV
DCP	12.980	56598.0	630.50	89.766	VV
2,4-D	13.543	63418.0	670.94	94.522	VB
Pentachlorophenol	14.257	547849.0	5303.02	103.309	BV
Silvex	14.410	213190.0	2141.78	99.539	VB
2,4,5-T	15.050	218336.0	2198.66	99.304	BV
Chloramben	15.307	145951.0	1480.23	98.600	VV
Dinoseb	15.467	83604.0	781.73	106.948	VV
2,4-DB	15.637	36474.0	388.09	93.984	VV
Bentazon	16.547	21744.0	225.56	96.402	VV
Dacthal	16.820	241528.0	2498.57	96.667	VV
Picloram	17.333	221879.0	2108.02	105.255	VB
Acifluorfen	19.033	92066.0	841.15	109.453	BI

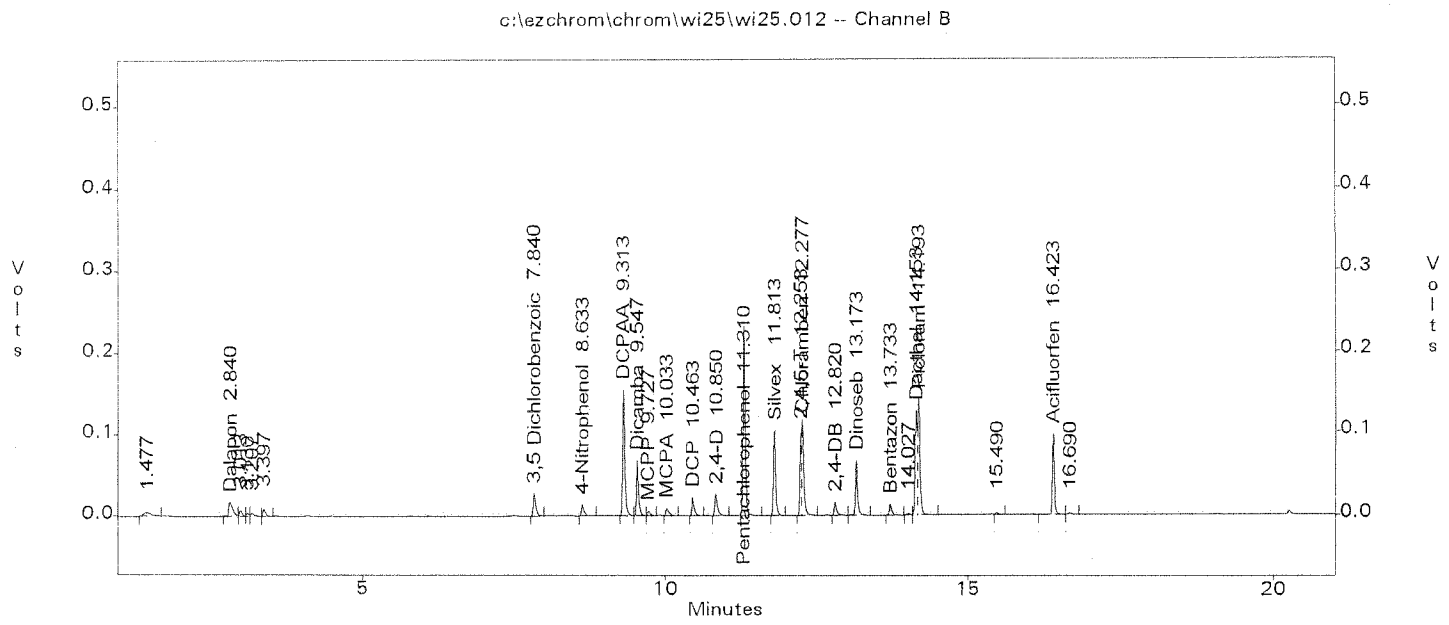


EPA 8151 by GC/ECD
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\wi25\wi25.012
Method : c:\ezchrom\methods\he16g08.met
Sample ID : CHE16G08044
Acquired : Sep 25, 2015 23:57:46
Printed : Sep 28, 2015 09:38:50
User : RZhou

Channel B Results

Peak Name	RT(min)	Area	Average RF	ESTD Conc(ppb)	ICODE
Dalapon	2.840	78049.0	808.98	96.478	xV
3,5 Dichlorobenzoic	7.840	75872.0	760.73	99.735	BV
4-Nitrophenol	8.633	41752.0	440.78	94.723	BB
DCPAA	9.313	395730.0	394.76	1002.445	VV
Dicamba	9.547	162649.0	1564.43	103.967	VV
MCPP	9.727	14407.0	2.78	5188.580	BV
MCPA	10.033	28536.0	5.29	5390.755	VV
DCP	10.463	60147.0	611.51	98.358	BV
2,4-D	10.850	74908.0	744.91	100.560	VV
Pentachlorophenol	11.310	595992.0	5688.82	104.766	BB
Silvex	11.813	255538.0	2383.87	107.195	BV
2,4,5-T	12.253	183116.0	1740.34	105.218	Bx
Chloramben	12.277	280969.0	2718.33	103.361	xB
2,4-DB	12.820	43639.0	427.74	102.022	BV
Dinoseb	13.173	163580.0	1738.25	94.106	VB
Bentazon	13.733	36529.0	377.03	96.887	BV
Dacthal	14.153	263135.0	2454.04	107.225	VS
Picloram	14.193	391908.0	3706.34	105.740	SB
Acifluorfen	16.423	225178.0	2137.76	105.334	VV



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PCB CONGENERS/HERBICIDES/EDB and DBCP

Note: For samples and relevant QC/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #:	A16-026
Instrument No.:	16
Analytical Sequence:	WG08
Method File:	HE16G08
Anlytical Batch:	WG08 005

SOP #	Rev. #
☑ EMAX-8151	4
☐ EMAX-8082CON	1
☐ EMAX-504.1	4
☐ EMAX-	

ICAL REFERENCE

ICAL ID	BATCH	DATE
HE16G08	WG08	7/8/15

STANDARDS ID		Conc (µg/L)
DCC	SS4B-03-77-03	100/5000/1000
1CVAC	SS4B-03-76-03	10/500/~~100~~-200/10,000/20
1CV	↓ 77-01	100-10,000
		50-5000

Hexane Lot # J4297

Column	☑ A. ZB-35HT B. RTX CLPEST II

ELECTRONIC DATA ARCHIVAL

Location	Date
☑ EZC_4_Pesticides	
☐	

Analyzed By: [illegible] Date: 7/8/15

Disposed By: RZ Date Disposed: NA

This page is checked during data review.

Syringe Lot #: ☑ 430353 ☑ 454251 ☐ 475284 ☐ 354311

Run	Sample ID	Method	Filename	Mult.	Description
1	IB16G08001	he16g08.met	WG08.001	1	
2	HE16G0808	he16g08.met	WG08.002	1	
3	HE16G0807	he16g08.met	WG08.003	1	
4	HE16G0806	he16g08.met	WG08.004	1	
5	HE16G0805	he16g08.met	WG08.005	1	
6	HE16G0804	he16g08.met	WG08.006	1	
7	HE16G0803	he16g08.met	WG08.007	1	
8	HE16G0802	he16g08.met	WG08.008	1	
9	HE16G0801	he16g08.met	WG08.009	1	
10	IHE16G08001 ✓	he16g08.met	WG08.010	1	
11	IHE16G08002 not used	he16g08.met	WG08.011	1	
12	CHE16G08001	he16g08.met	WG08.012	1	
13	NO DATA	he16g08.met	WG08.013	1	
14	BLANK	he16g08.met	WG08.014	1	
15	BLANK	he16g08.met	WG08.015	1	
16	IHE16G08003 ✓	he16g08.met	WG08.016	1	

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PCB CONGENERS/HERBICIDES/EDB and DBCP

Note: For samples and relevant QC/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #:	A16-026
Instrument No.:	16
Analytical Sequence:	WI25
Method File:	HE16G08
Anlytical Batch:	WI25002

SOP #	Rev. #
☑ EMAX-8151	4
☐ EMAX-8082CON	1
☐ EMAX-504.1	4
☐ EMAX-	

ICAL REFERENCE

ICAL ID	BATCH	DATE
HE16G08	WG08	7/8/15

STANDARDS ID	Conc (µg/L)
DCC 5543-03-77-03	100/5000/1000

Hexane Lot # 54297

Column	☑ A. ZB-35HT B. RTX CLPEST II

ELECTRONIC DATA ARCHIVAL

Location	Date
☑ EZC_4_Pesticides	
☐	

Analyzed By: [illegible] Date: 9/25/15

Disposed By: [illegible] Date Disposed: 9/28/15

This page is checked during data review.

Syringe Lot #: ☑ 430353 ☐ 454251 ☐ 475284 ☐ 354311

871

Run	Sample ID	Method	Filename	Mult.	Description
1	IB16G08043	he16g08.met	WI25.001	1	
2	CHE16G08043	he16g08.met	WI25.002	1	
3	I307-01	he16g08.met	WI25.003	1	
4	HEI004WB	he16g08.met	WI25.004	1	
5	HEI004WL	he16g08.met	WI25.005	1	
6	HEI004WC	he16g08.met	WI25.006	1	
7	TXI007SB	he16g08.met	WI25.007	1	
8	I185-04	he16g08.met	WI25.008	1	
9	I185-05	he16g08.met	WI25.009	1	
10	I185-06	he16g08.met	WI25.010	1	
11	IB16G08044	he16g08.met	WI25.011	1	
12	CHE16G08044	he16g08.met	WI25.012	1	
13	IB	he16g08.met	WI25.013	1	

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
HERBICIDES

SOP	Rev. #
☑ EMAX-8151	4
☐ EMAX-	

Note: For samples, relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

Book #.: EHE-019

Preparation Batch: ~~HEI003~~ HEI004 W

Matrix TCLP Extract

Micropipette ID: PE00-04 (1000 ml)

Micropipette ID: PE97C-03 (100 ml)

Standards	ID	Amount Added (ml)
Surrogate	SS4B-03-10-02	1.0
LCS/MS	SS4A-02-155	0.1

Reagent	Lot # / ID
CH_2Cl_2	–
Hexane	54297
Ethyl Ether	DN300
Acified Na_2SO_4	SP1B-08-24-01
H_2SO_4	3113122
Diazo-methane	SP1B-08-33-02
Silica Sand	–
Silicic Acid	SP1A-07-01-07
Reagent Water	SW1A-005-14-19
Residual Chlorine Strip	5190
pH Strip	HC5A612

TUNING

Sonicator #	Reading

Concentrator	Water Bath Temperature Setting(°C)	Thermometer Reading (°C)
1	35	35
2	35	35
3		
4		
5		
6		

Lab Sample ID	Sonicator #	Concentrator #
HEI004 -WB		1
-WL		1
-WC		1
TXI007 -SB		2
I185 -04		2
-05		2
-06		2
I307 -01		2

Test Thermometer = SVOC-T1

Prepared By: [signature] Standard Added By: [signature]

Witnessed By: ML Checked By: ML

Extract Received By: KZ Extract Location: SE04-Herb#01

Disposal Date: Disposed By:

FileID: HEI004W

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR HERBICIDES

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
15HEI004W01	HEI004WB	500	ml	9/25/15 14:52	5	500	5	1	
15HEI004W02	HEI004WL	500	ml	9/25/15 14:52	5	500	5	1	
15HEI004W03	HEI004WC	500	ml	9/25/15 14:52	5	500	5	1	
15HEI004W04	TXI007SB	10	ml	9/25/15 14:52	5	500	5	50	
15HEI004W05	I185-04	10	ml	9/25/15 14:52	5	500	5	50	
15HEI004W06	I185-05	10	ml	9/25/15 14:52	5	500	5	50	
15HEI004W07	I185-06	10	ml	9/25/15 14:52	5	500	5	50	
15HEI004W08	I307-01	200	ml	9/25/15 18:07	5	500	5	2.5	OC for Ethyl Ether: SW1A-005-14-24

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 9/25/15 14:00

☑ Extraction Ended @ 9/25/15 17:54

Prepared By: MYokoo

Checked By: ML

Date 9/25/15

Comments:

SOP EMAX-8151 Rev. 5

FileID: TXI007S

EMAX LABORATORIES, INC.

TCLP EXTRACTION LOG

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	TCLPSoln	TCLPVol	Exrtract pH	Preservation	Comments
15TXI007S01	TXI0075B	0	g	9/23/15 10:52		2000		HNO_3	
15TXI007S02	I185-04	100	g	9/23/15 10:53	#1	2000	5.22	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)
15TXI007S03	I185-05	100.01	g	9/23/15 10:58	#1	2000	4.93	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)
15TXI007S04	I185-06	100.02	g	9/23/15 11:01	#1	2000	5	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)

☑ DateTimeStarted 9/23/2015 15:30 ☑ Thermometer Reset on 9/23/2015 15:30 Balance ID: 10203192. Calibration check was verified prior to use.

☑ DateTimeEnded 9/24/2015 9:30 Note: Sample preserved with HNO_3 is for metals analysis. MS/MSD were spiked prio Prepared By: DFelic/MLyudm

Extract Location: Metals Received By: SP 9/24/15 Checked By: ML

Comment: 14:11 Date 9/24/15

EMAX LABORATORIES, INC.

FileID: TXI007S

TCLP EXTRACTION LOG

Determination of TLCP Solution							Determination of TCLP Extract Filtration			Determination of % solids for aqueos phase			
LabSampleID	Phase(s)	Aliquot	Sample pH	HCl	pH	TCLPSolnReq'd	(ml)	(g)	Pressure	WtS(g)	WtF(g)	WtDFS(g)	% Solids
TXI007SB							100						
I185-04	1	5	9.52	3.5	2.5	#1	100	98.78	Vacuum				
I185-05	1	5	9.46	3.5	1.5	#1	100	98.19	Vacuum				
I185-06	1	5.02	8.56	3.5	1.66	#1	100	98.67	Vacuum				

Calibration of pH Meter			InstrumentID: 96
BufferID	Value	Reading	DateTime
SP1A-05-02-01	4	4.01	9/23/15 12:23
SP1A-05-02-02	7	7	9/23/15 12:22
SW1A-005-12-24	CalVer 5	5.05	9/23/15 12:24
SP1A-05-02-01	4	4.01	9/24/15 13:55
SP1A-05-02-02	7	7	9/24/15 13:42
SW1A-005-12-24	CalVer 5	5.05	9/24/15 13:56
ID	Reagent	Desc	Expiration Date
SP1A-05-02-04	HCl	1N	03/04/16
5W1A-005-11-08	HNO_3	Conc	08/19/16
SP1B-08-31-03	TCLP Soln	#1	03/17/16
	TCLP Soln		
Rotary Agitator #	Criteria	rpm	DateTime
1	30 ± 2 rpm	30	9/23/15 12:25
	30 ± 2 rpm		
Thermostat Setting:		Thermometer ID:	122273404
TCLP Room Temperature	Criteria	Rdg	DateTime
Room Temp (°C) High	23 ± 2 °C	24.4	9/24/15 9:28
Room Temp (°C) Low	23 ± 2 °C	22.5	9/23/15 17:48
Pipette ID	PE04-03		
CONCENTRATOR (WATER BATH)			
Concentrator #	Temp Setting	Thermometer Rdg	Thermometer ID
6	50	50	SVOC-T1
Filter ID/Lot #	103013/ 062513		
pH strip Lot#	HC554612		

Legend:

WtS = weight of sample

WtF = weight of filter

WtDFS = weight of dried filter + solids

Prepared By: DFelic/MLyudm

Checked By: ML

Date 9/24/15

8171

METALS / MERCURY

METALS

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	09/26/15 15:30
Sample ID:	CAFB-FT006-BKF-001	Date Analyzed:	09/28/15 20:01
Lab Samp ID:	I185-01	Dilution Factor:	0.962
Lab File ID:	F6I16111	Matrix :	SOIL
Ext Btch ID:	IMI036S	% Moisture :	0.5
Calib. Ref.:	F6I16105	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	2340	96.7	4.83	9.67
Antimony	ND	0.483	0.0967	0.193
Arsenic	0.791	0.483	0.0483	0.0967
Barium	11.5	0.483	0.0696	0.0967
Cadmium	0.0627J	0.483	0.0551	0.0967
Chromium, total	3.49	0.483	0.0483	0.0967
Cobalt	0.696	0.483	0.0483	0.0967
Copper	1.21	0.483	0.0967	0.193
Iron	3280	96.7	4.83	9.67
Lead	2.29	0.483	0.0483	0.0967
Magnesium	359	96.7	9.67	19.3
Manganese	30.6	0.483	0.148	0.193
Nickel	1.71	0.483	0.0609	0.0967
Potassium	562	96.7	9.67	19.3
Selenium	ND	0.483	0.0483	0.0967
Silver	ND	0.483	0.0483	0.0967
Sodium	ND	96.7	9.67	19.3
Thallium	ND	0.483	0.0483	0.0967
Vanadium	6.77	0.483	0.184	0.290
Zinc	5.95	1.93	0.660	0.967

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	09/26/15 15:30
Sample ID:	CAFB-FT006-BKF-002	Date Analyzed:	09/28/15 20:14
Lab Samp ID:	I185-02	Dilution Factor:	0.990
Lab File ID:	F6I16114	Matrix :	SOIL
Ext Btch ID:	IMI036S	% Moisture :	0.4
Calib. Ref.:	F6I16105	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	2710	99.4	4.97	9.94
Antimony	ND	0.497	0.0994	0.199
Arsenic	0.818	0.497	0.0497	0.0994
Barium	13.0	0.497	0.0716	0.0994
Cadmium	0.0669J	0.497	0.0567	0.0994
Chromium, total	3.65	0.497	0.0497	0.0994
Cobalt	0.726	0.497	0.0497	0.0994
Copper	1.37	0.497	0.0994	0.199
Iron	3360	99.4	4.97	9.94
Lead	2.52	0.497	0.0497	0.0994
Magnesium	406	99.4	9.94	19.9
Manganese	34.5	0.497	0.152	0.199
Nickel	1.85	0.497	0.0626	0.0994
Potassium	661	99.4	9.94	19.9
Selenium	ND	0.497	0.0497	0.0994
Silver	ND	0.497	0.0497	0.0994
Sodium	ND	99.4	9.94	19.9
Thallium	ND	0.497	0.0497	0.0994
Vanadium	7.06	0.497	0.189	0.298
Zinc	6.66	1.99	0.679	0.994

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	09/16/15
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	09/26/15 15:30
Sample ID:	CAFB-FT006-BKF-003	Date Analyzed:	09/28/15 20:19
Lab Samp ID:	I185-03	Dilution Factor:	0.985
Lab File ID:	F6I16115	Matrix :	SOIL
Ext Btch ID:	IMI036S	% Moisture :	0.5
Calib. Ref.:	F6I16105	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	2900	99.0	4.95	9.90
Antimony	ND	0.495	0.0990	0.198
Arsenic	0.903	0.495	0.0495	0.0990
Barium	15.7	0.495	0.0713	0.0990
Cadmium	0.0860J	0.495	0.0564	0.0990
Chromium, total	4.10	0.495	0.0495	0.0990
Cobalt	0.876	0.495	0.0495	0.0990
Copper	1.54	0.495	0.0990	0.198
Iron	3840	99.0	4.95	9.90
Lead	3.00	0.495	0.0495	0.0990
Magnesium	450	99.0	9.90	19.8
Manganese	44.6	0.495	0.151	0.198
Nickel	2.06	0.495	0.0624	0.0990
Potassium	689	99.0	9.90	19.8
Selenium	ND	0.495	0.0495	0.0990
Silver	ND	0.495	0.0495	0.0990
Sodium	ND	99.0	9.90	19.8
Thallium	ND	0.495	0.0495	0.0990
Vanadium	7.80	0.495	0.188	0.297
Zinc	8.06	1.98	0.676	0.990

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	09/26/15
SDG NO.	: 15I185	Date Extracted:	09/26/15 15:30
Sample ID:	MBLK1S	Date Analyzed:	09/28/15 19:44
Lab Samp ID:	IMI036SB	Dilution Factor:	1
Lab File ID:	F6I16107	Matrix :	SOIL
Ext Btch ID:	IMI036S	% Moisture :	NA
Calib. Ref.:	F6I16105	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	ND	100	5.00	10.0
Antimony	ND	0.500	0.100	0.200
Arsenic	ND	0.500	0.0500	0.100
Barium	ND	0.500	0.0720	0.100
Cadmium	ND	0.500	0.0570	0.100
Chromium, total	ND	0.500	0.0500	0.100
Cobalt	ND	0.500	0.0500	0.100
Copper	ND	0.500	0.100	0.200
Iron	ND	100	5.00	10.0
Lead	ND	0.500	0.0500	0.100
Magnesium	ND	100	10.0	20.0
Manganese	ND	0.500	0.153	0.200
Nickel	ND	0.500	0.0630	0.100
Potassium	ND	100	10.0	20.0
Selenium	ND	0.500	0.0500	0.100
Silver	ND	0.500	0.0500	0.100
Sodium	ND	100	10.0	20.0
Thallium	ND	0.500	0.0500	0.100
Vanadium	ND	0.500	0.190	0.300
Zinc	0.821J	2.00	0.683	1.00

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW6020A

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MATRIX:	SOIL		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MBLK1S			
CONTROL NO.:	IMI036SB	IMI036SL		
LAB FILE ID:	F6I16107	F6I16108		
DATIME EXTRCTD:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	NA
DATIME ANALYZD:	09/28/1519:44	09/28/1519:49	DATE RECEIVED:	09/26/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Aluminum	ND	2500	2370	95	80-120
Antimony	ND	25.0	24.8	99	80-120
Arsenic	ND	25.0	25.4	102	80-120
Barium	ND	25.0	24.8	99	80-120
Cadmium	ND	25.0	24.3	97	80-120
Chromium, total	ND	25.0	25.0	100	80-120
Cobalt	ND	25.0	24.2	97	80-120
Copper	ND	25.0	25.3	101	80-120
Iron	ND	2500	2620	105	80-120
Lead	ND	25.0	24.4	98	80-120
Magnesium	ND	2500	2480	99	80-120
Manganese	ND	25.0	25.0	100	80-120
Nickel	ND	25.0	24.9	100	80-120
Potassium	ND	2500	2650	106	80-120
Selenium	ND	25.0	24.1	96	80-120
Silver	ND	25.0	24.2	97	75-120
Sodium	ND	2500	2540	102	80-120
Thallium	ND	25.0	25.2	101	80-120
Vanadium	ND	25.0	25.4	102	80-120
Zinc	0.821J	50.0	48.9	98	80-120

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	0.5
DILTN FACTR:	0.962	0.985		
SAMPLE ID:	CAFB-FT006-BKF-001			
CONTROL NO.:	I185-01	I185-01M		
LAB FILE ID:	F6I16111	F6I16109		
DATIME EXTRCTD:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	09/16/15
DATIME ANALYZD:	09/28/1520:01	09/28/1519:53	DATE RECEIVED:	09/17/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
Aluminum	2340	2470	5800	140*	80-120
Antimony	ND	24.7	22.7	92	80-120
Arsenic	0.791	24.7	24.7	97	80-120
Barium	11.5	24.7	35.7	98	80-120
Cadmium	0.0627J	24.7	23.2	93	80-120
Chromium, total	3.49	24.7	27.9	99	80-120
Cobalt	0.696	24.7	23.7	93	80-120
Copper	1.21	24.7	24.8	95	80-120
Iron	3280	2470	5800	102	80-120
Lead	2.29	24.7	25.5	94	80-120
Magnesium	359	2470	2790	98	80-120
Manganese	30.6	24.7	52.8	90	80-120
Nickel	1.71	24.7	25.5	96	80-120
Potassium	562	2470	3150	104	80-120
Selenium	ND	24.7	22.9	93	80-120
Silver	ND	24.7	23.0	93	80-120
Sodium	ND	2470	2440	99	80-120
Thallium	ND	24.7	24.1	97	80-120
Vanadium	6.77	24.7	31.3	99	80-120
Zinc	5.95	49.5	51.2	91	80-120

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	0.5
DILUTION FACTOR:	0.962	4.81		
SAMPLE ID:	CAFB-FT006-BKF	CAFB-FT006-BKF		
EMAX SAMP ID:	I185-01	I185-01J		
LAB FILE ID:	F6I16111	F6I16112		
DATE EXTRACTED:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	09/16/15
DATE ANALYZED:	09/28/1520:01	09/28/1520:06	DATE RECEIVED:	09/17/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Aluminum	2340	2420	4	10
Antimony	ND	ND	0	10
Arsenic	.791	.572J	NA	10
Barium	11.5	11.6	1	10
Cadmium	0.0627J	ND	NA	10
Chromium, total	3.49	3.32	5	10
Cobalt	.696	.709J	NA	10
Copper	1.21	1.93J	NA	10
Iron	3280	3400	4	10
Lead	2.29	2.4J	NA	10
Magnesium	359	375J	NA	10
Manganese	30.6	31.2	2	10
Nickel	1.71	1.76J	NA	10
Potassium	562	576	2	10
Selenium	ND	ND	0	10
Silver	ND	ND	0	10
Sodium	ND	ND	0	10
Thallium	ND	ND	0	10
Vanadium	6.77	5.64	17*	10
Zinc	5.95	9.84	65*	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	0.5
DILTN FACTR:	0.962	0.962		
SAMPLE ID:	CAFB-FT006-BKF-001			
CONTROL NO.:	I185-01	I185-01A		
LAB FILE ID:	F6I16111	F6I16110		
DATIME EXTRCTD:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	09/16/15
DATIME ANALYZD:	09/28/1520:01	09/28/1519:57	DATE RECEIVED:	09/17/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Aluminum	2340	2420	4630	95	75-125
Antimony	ND	24.2	23.9	99	75-125
Arsenic	0.791	24.2	25.1	100	75-125
Barium	11.5	24.2	35.7	100	75-125
Cadmium	0.0627J	24.2	23.6	97	75-125
Chromium, total	3.49	24.2	27.8	100	75-125
Cobalt	0.696	24.2	23.8	96	75-125
Copper	1.21	24.2	25.4	100	75-125
Iron	3280	2420	5710	101	75-125
Lead	2.29	24.2	26.0	98	75-125
Magnesium	359	2420	2730	98	75-125
Manganese	30.6	24.2	54.3	98	75-125
Nickel	1.71	24.2	25.5	99	75-125
Potassium	562	2420	3070	104	75-125
Selenium	ND	24.2	23.4	97	75-125
Silver	ND	24.2	22.1	92	75-120
Sodium	ND	2420	2460	102	75-125
Thallium	ND	24.2	24.6	102	75-125
Vanadium	6.77	24.2	31.6	103	75-125
Zinc	5.95	48.3	51.1	93	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	0.5
DILUTION FACTOR:	0.962	0.995		
SAMPLE ID:	CAFB-FT006-BKF	CAFB-FT006-BKF		
EMAX SAMP ID:	I185-01	I185-01D		
LAB FILE ID:	F6I16111	F6I16113		
DATE EXTRACTED:	09/26/1515:30	09/26/1515:30	DATE COLLECTED:	09/16/15
DATE ANALYZED:	09/28/1520:01	09/28/1520:10	DATE RECEIVED:	09/17/15
PREP. BATCH:	IMI036S	IMI036S		
CALIB. REF:	F6I16105	F6I16105		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Aluminum	2340	2170	8	20
Antimony	ND	ND	0	20
Arsenic	.791	.784	1	20
Barium	11.5	10.8	7	20
Cadmium	0.0627J	0.0609J	NA	20
Chromium, total	3.49	3.32	5	20
Cobalt	.696	.659	5	20
Copper	1.21	1.36	11	20
Iron	3280	3160	4	20
Lead	2.29	2.29	0	20
Magnesium	359	339	6	20
Manganese	30.6	29.3	4	20
Nickel	1.71	1.62	5	20
Potassium	562	526	7	20
Selenium	ND	ND	0	20
Silver	ND	ND	0	20
Sodium	ND	ND	0	20
Thallium	ND	ND	0	20
Vanadium	6.77	6.54	3	20
Zinc	5.95	6.13	3	20

ICP-MS QC CHECK TABLE

QC	CCV HIGH	ICV	CCV	ICSAB	ICSA
Limit%	95-105	90-110	90-110	80-120	80-120
Comp	ug/L	ug/L	ug/L	ug/L	ug/L
Al	5000	3000	2500	100000	100000
Sb	50	30	25	20	0
As	50	30	25	20	0
Ba	50	30	25	20	0
Be	50	30	25	20	0
B	50	30	25	20	0
Cd	50	30	25	20	0
Ca	5000	3000	2500	100000	100000
Cr	50	30	25	20	0
Co	50	30	25	20	0
Cu	50	30	25	20	0
Fe	5000	30	2500	100000	100000
Pb	50	30	25	20	0
Mg	5000	3000	2500	100000	100000
Mn	50	30	25	20	0
Mo	50	30	25	2000	2000
Ni	50	30	25	20	0
P	500	300	250	100000	100000
K	5000	3000	2500	100000	100000
Se	50	30	25	20	0
Si	5000	3000	2500	200	0
Ag	50	30	25	20	0
Na	2500	1500	1250	100000	100000
Sr	50	30	25	20	0
Tl	50	30	25	20	0
Sn	50	30	25	20	0
Ti	50	30	25	2000	2000
Th	50	30	25	20	0
W	50	30	25	20	0
V	50	30	25	20	0
U	50	30	25	20	0
Zn	100	60	50	20	0
Zr	30	20	15	20	0

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP-MS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 9/28/15 12:21

End Date: 9/28/15 23:46

Comments:

All soil/solid samples are diluted at 10x dilution prior to analysis.

Filter Lot #: NA

- CCB1, CCB5 Na failed
- IHT0359B Zn failed
- I152-22, -23 Ba > highest pt in cal
- I204 & I216 samples – several analytes > highest pt in cal
- I306 iron, needs closing note

Book #:	AF6-014
Instrument No.:	F6
Analytical Batch:	IF6I16
Analytical Sequence:	F6I16
Method File:	EMX6020
Micropipette ID:	☑ 142781004
Micropipette ID:	☑ ICP-06
Micropipette ID:	☑ 339362028
Micropipette ID:	☑ GFAA-07
Micropipette ID:	☐

SOP #	Rev. #
☑ EMAX-6020	9 9/28/15
☑ EMAX-200.8	5
☐ EMAX-	

STANDARDS ID		STANDARDS ID	
S0	SMCB059.44.56	MRL1 (1)	SMCB059.46.53
S1	44.57	MRL2 (0.5)	46.54
S2	44.58	MRL3 (0.1)	46.54
S3	45.01	MRL4	NA
S4	45.52	MRL5	
S5	NA	MRL6	
S6		Internal Standard	SMCB057.38.53
S7		Post-Spike 1	SMCA057.0223
ICV	SMCB059.45.53	Post-Spike 2	0224
CCV	45.54	Post-Spike 3	NA
ICSA	46.01	Post-Spike 4	
ICSAB	46.52		
6020 TUNE SOLN.	44.54		
200.8 TUNE SOLN.	44.55		

Analyzed By: CW

Date: 9/28/15

SEQUENCE FILE : IF6I16

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
F6I16003	BLNK	12:21	09/28/15	1.00
F6I16004	S0	12:25	09/28/15	1.00
F6I16005	S1 0.5	12:29	09/28/15	1.00
F6I16006	S2 5	12:34	09/28/15	1.00
F6I16007	S3 25	12:38	09/28/15	1.00
F6I16008	S4 50	12:42	09/28/15	1.00
F6I16009	ICV	12:46	09/28/15	1.00
F6I16010	ICB	12:51	09/28/15	1.00
F6I16011	MRLI2801	12:55	09/28/15	1.00
F6I16012	MRLI2802	12:59	09/28/15	1.00
F6I16013	ICSA	13:04	09/28/15	1.00
F6I16014	ICSAB	13:08	09/28/15	1.00
F6I16015	MRLI2803	13:12	09/28/15	1.00
F6I16016	CCV1	13:17	09/28/15	1.00
F6I16017	CCB1	13:21	09/28/15	1.00
F6I16018	IMI036SB	13:25	09/28/15	1.00
F6I16019	IMI036SL	13:30	09/28/15	1.00
F6I16020	I185-01M	13:34	09/28/15	1.00
F6I16021	I185-01A	13:38	09/28/15	1.00
F6I16022	I185-01	13:42	09/28/15	1.00
F6I16023	I185-01J	13:46	09/28/15	5.00
F6I16024	I185-01D	13:51	09/28/15	1.00
F6I16025	I185-02	13:55	09/28/15	1.00
F6I16026	I185-03	13:59	09/28/15	1.00
F6I16027	BLANK	14:04	09/28/15	1.00
F6I16028	CCV2	14:08	09/28/15	1.00
F6I16029	CCB2	14:12	09/28/15	1.00
F6I16030	IMI033SB	14:16	09/28/15	1.00
F6I16031	IMI033SL	14:21	09/28/15	1.00
F6I16032	IMI033SC	14:25	09/28/15	1.00
F6I16033	I152-17M	14:29	09/28/15	1.00
F6I16034	I152-17S	14:33	09/28/15	1.00
F6I16035	I152-17A	14:38	09/28/15	1.00
F6I16036	I152-17	14:42	09/28/15	1.00
F6I16037	I152-17J	14:46	09/28/15	5.00
F6I16038	I152-22	14:50	09/28/15	1.00
F6I16039	BLANK	14:55	09/28/15	1.00
F6I16040	CCV3	14:59	09/28/15	1.00
F6I16041	CCB3	15:03	09/28/15	1.00
F6I16042	I152-23	15:08	09/28/15	1.00
F6I16043	I231-03	15:12	09/28/15	1.00
F6I16044	I231-04	15:16	09/28/15	1.00
F6I16045	I231-05	15:21	09/28/15	1.00
F6I16046	I231-06	15:25	09/28/15	1.00
F6I16047	I243-01	15:29	09/28/15	1.00
F6I16048	I243-02	15:33	09/28/15	1.00
F6I16049	I243-03	15:38	09/28/15	1.00
F6I16050	I243-04	15:42	09/28/15	1.00
F6I16051	BLANK	15:46	09/28/15	1.00
F6I16052	CCV4	15:50	09/28/15	1.00
F6I16053	CCB4	15:55	09/28/15	1.00

F6I16054	IMI036SB	15:59	09/28/15	1.00
F6I16055	IMI036SL	16:03	09/28/15	1.00
F6I16056	I243-05	16:08	09/28/15	1.00
F6I16057	I243-06	16:12	09/28/15	1.00
F6I16058	I243-07	16:16	09/28/15	1.00
F6I16059	I243-08	16:20	09/28/15	1.00
F6I16060	I243-09	16:24	09/28/15	1.00
F6I16061	I243-10	16:29	09/28/15	1.00
F6I16062	I243-11	16:33	09/28/15	1.00
F6I16063	BLANK	16:37	09/28/15	1.00
F6I16064	CCV5	16:41	09/28/15	1.00
F6I16065	CCB5	16:46	09/28/15	1.00
F6I16066	I243-12A	16:50	09/28/15	1.00
F6I16067	I243-12	16:54	09/28/15	1.00
F6I16068	I243-12J	16:58	09/28/15	5.00
F6I16069	I243-13	17:03	09/28/15	1.00
F6I16070	BLANK	17:07	09/28/15	1.00
F6I16071	CCV6	17:11	09/28/15	1.00
F6I16072	CCB6	17:16	09/28/15	1.00
F6I16073	IMI035SB	17:20	09/28/15	1.00
F6I16074	IMI035SL	17:24	09/28/15	1.00
F6I16075	IMI035SC	17:28	09/28/15	1.00
F6I16076	I242-03	17:33	09/28/15	1.00
F6I16077	I242-04	17:37	09/28/15	1.00
F6I16078	I300-01M	17:41	09/28/15	1.00
F6I16079	I300-01S	17:45	09/28/15	1.00
F6I16080	I300-01A	17:49	09/28/15	1.00
F6I16081	I300-01	17:54	09/28/15	1.00
F6I16082	BLANK	17:58	09/28/15	1.00
F6I16083	CCV7	18:02	09/28/15	1.00
F6I16084	CCB7	18:06	09/28/15	1.00
F6I16085	I300-01J	18:11	09/28/15	5.00
F6I16086	I300-02	18:15	09/28/15	1.00
F6I16087	I300-03	18:19	09/28/15	1.00
F6I16088	I300-04	18:24	09/28/15	1.00
F6I16089	I204-02	18:28	09/28/15	1.00
F6I16090	I204-17	18:32	09/28/15	1.00
F6I16091	I204-27	18:36	09/28/15	1.00
F6I16092	I204-31	18:40	09/28/15	1.00
F6I16093	I204-33	18:45	09/28/15	1.00
F6I16094	BLANK	18:49	09/28/15	1.00
F6I16095	CCV8	18:53	09/28/15	1.00
F6I16096	CCB8	18:57	09/28/15	1.00
F6I16097	I216-01	19:02	09/28/15	1.00
F6I16098	I216-02	19:06	09/28/15	1.00
F6I16099	I216-03	19:10	09/28/15	1.00
F6I16100	I216-04	19:14	09/28/15	1.00
F6I16101	I216-05	19:19	09/28/15	1.00
F6I16102	I216-06	19:23	09/28/15	1.00
F6I16103	I216-07	19:27	09/28/15	1.00
F6I16104	BLANK	19:31	09/28/15	1.00
F6I16105	CCV9	19:36	09/28/15	1.00
F6I16106	CCB9	19:40	09/28/15	1.00
F6I16107	IMI036SB	19:44	09/28/15	1.00

F6I16108	IMI036SL	19:49	09/28/15	1.00
F6I16109	I185-01M	19:53	09/28/15	1.00
F6I16110	I185-01A	19:57	09/28/15	1.00
F6I16111	I185-01	20:01	09/28/15	1.00
F6I16112	I185-01J	20:06	09/28/15	5.00
F6I16113	I185-01D	20:10	09/28/15	1.00
F6I16114	I185-02	20:14	09/28/15	1.00
F6I16115	I185-03	20:19	09/28/15	1.00
F6I16116	BLANK	20:23	09/28/15	1.00
F6I16117	CCV10	20:27	09/28/15	1.00
F6I16118	CCB10	20:31	09/28/15	1.00
F6I16119	IMI034WB	20:36	09/28/15	1.00
F6I16120	IMI034WL	20:40	09/28/15	1.00
F6I16121	IMI034WC	20:44	09/28/15	1.00
F6I16122	I306-01A	20:49	09/28/15	1.00
F6I16123	I306-01	20:53	09/28/15	1.00
F6I16124	I306-01J	20:57	09/28/15	1.00
F6I16125	I306-02	21:02	09/28/15	1.00
F6I16126	I306-03	21:06	09/28/15	1.00
F6I16127	I306-04	21:10	09/28/15	1.00
F6I16128	BLANK	21:14	09/28/15	1.00
F6I16129	CCV11	21:19	09/28/15	1.00
F6I16130	CCB11	21:23	09/28/15	1.00
F6I16131	I122-01	21:27	09/28/15	1.00
F6I16132	I122-02	21:32	09/28/15	1.00
F6I16133	I122-03	21:36	09/28/15	1.00
F6I16134	I122-04	21:40	09/28/15	1.00
F6I16135	I122-05M	21:44	09/28/15	1.00
F6I16136	I122-05S	21:49	09/28/15	1.00
F6I16137	I122-05A	21:53	09/28/15	1.00
F6I16138	I122-05	21:57	09/28/15	1.00
F6I16139	I122-05J	22:02	09/28/15	5.00
F6I16140	BLANK	22:06	09/28/15	1.00
F6I16141	CCV12	22:11	09/28/15	1.00
F6I16142	CCB12	22:15	09/28/15	1.00
F6I16143	I122-06	22:19	09/28/15	1.00
F6I16144	I122-07	22:23	09/28/15	1.00
F6I16145	I122-08	22:28	09/28/15	1.00
F6I16146	I122-01	22:32	09/28/15	1.00
F6I16147	I122-04	22:36	09/28/15	1.00
F6I16148	I184-01	22:41	09/28/15	1.00
F6I16149	I184-02	22:45	09/28/15	1.00
F6I16150	I184-03	22:49	09/28/15	1.00
F6I16151	I184-04	22:54	09/28/15	1.00
F6I16152	BLANK	22:58	09/28/15	1.00
F6I16153	CCV13	23:02	09/28/15	1.00
F6I16154	CCB13	23:07	09/28/15	1.00
F6I16155	I184-05M	23:11	09/28/15	1.00
F6I16156	I184-05S	23:15	09/28/15	1.00
F6I16157	I184-05A	23:20	09/28/15	1.00
F6I16158	I184-05	23:24	09/28/15	1.00
F6I16159	I184-05J	23:28	09/28/15	5.00
F6I16160	I184-06	23:33	09/28/15	1.00
F6I16161	BLANK	23:37	09/28/15	1.00

F6I16162	CCV14	23:41	09/28/15	1.00
F6I16163	CCB14	23:46	09/28/15	1.00

SDG : 15I185 UNIT : % ICPMS CHECK : IF6I16 DATE : 09/28/15 INST : EMAXTIF6

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
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S3 25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	96	99	104	102	100	97	100	9*	104	102	94	100	99	97	103	96	99	101	94	99	97	98	88*	98	95	97	97	97	96	102	98	97	98
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLI2801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLI2802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	----	----	----	97	94	89	----	102	97	96	102	----	----	----	95	----	----	----	----	----	----	----	----	101	----	----	----	----	----	----	----	----	----
ICSAB	100	95	81	96	93	89	97	102	97	96	103	98	102	97	95	95	92	95	97	101	105	96	40*	103	90	97	98	101	99	101	93	93	98
MRLI2803	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	100	97	98	100	97	95	96	96	102	101	97	100	101	101	104	97	101	104	100	101	102	104	89*	100	97	100	100	100	98	104	104	102	105
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI036SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI036SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	100	100	102	103	99	96	98	97	103	101	96	99	101	101	104	97	100	101	100	99	101	104	91	99	99	101	100	101	99	105	104	102	105
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI033SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI033SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI033SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	100	102	99	103	100	97	99	98	104	102	95	100	101	101	103	97	100	101	100	98	100	105	90	97	96	100	100	101	98	104	105	103	107
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I231-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I231-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I231-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I231-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	97	104	109	104	101	97	99	100	104	101	96	99	101	100	102	96	99	101	101	100	102	105	91	98	97	100	98	100	98	104	104	102	107
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

IMI036SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI036SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	96	102	101	102	100	97	99	99	105	102	95	98	100	99	103	95	99	100	99	101	99	104	96	98	98	100	99	99	98	101	103	101	105
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-12A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-12J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	99	100	94	102	99	96	100	98	104	102	94	98	99	99	103	96	99	100	100	101	101	104	96	97	96	99	99	99	99	101	102	100	104
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI035SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI035SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI035SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I242-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I242-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	97	98	88*	101	99	97	100	98	106	102	94	99	100	98	103	96	99	101	100	101	100	104	96	98	97	99	98	99	99	100	101	99	104
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-33	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	97	100	87*	100	98	96	100	100	106	102	94	100	100	98	103	95	101	102	99	103	100	102	95	98	97	99	98	99	98	100	101	99	102
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	97	101	85*	99	99	96	100	101	106	102	96	100	100	99	103	96	99	102	99	101	98	103	90	98	97	98	97	99	99	100	100	99	102
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI036SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

IMI036SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	97	101	86*	100	100	97	100	100	106	103	95	100	100	98	103	96	99	101	98	101	98	104	92	97	96	98	97	98	99	100	101	100	101
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI034WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI034WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI034WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	97	99	85*	101	100	97	99	99	106	102	96	100	101	99	103	96	100	102	98	101	99	104	83*	98	97	99	98	99	99	100	101	99	101
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	97	98	82*	99	98	96	101	99	107	102	96	100	100	98	104	97	100	102	98	103	98	104	83*	99	96	97	98	98	98	99	99	98	97
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	95	95	100	97	97	96	102	99	107	102	97	101	100	97	104	98	101	104	97	104	97	105	82*	100	97	97	97	97	99	97	97	95	92
CCB13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV14	94	96	88*	96	98	97	103	101	107	103	97	101	100	98	104	98	102	103	97	103	99	105	82*	100	97	96	97	96	98	97	97	95	93
CCB14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

SDG : 157185 UNIT : UG/L SUMMARY of CALIBRATION BLANKS : IF6I16 (SOIL) DATE : 09/28/15 INST : EMAXTIF6

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S1 0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S2 5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	-.082	.003	-1.11	-12.2	-2.29	.059	-.676	-2.24	-4.98	.225	-.095	.120	-.046	-.052	1.26	.000	-.046	-.010	-.015	.000	.003	.002	-.004	.015	.001	-.002	.001	.007	-.000	.018	.002	-.003	.005
MRLI2801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLI2802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	.458	.006	-1.77	----	----	----	3.02	----	----	----	----	.130	1.26	.302	----	.312	.100	.686	2.56	.265	.045	.596	.132	----	.021	.229	.026	.038	.097	.137	.002	.188	.002
ICSAB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLI2803	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	-.015	-.003	-2.74	-42.2	-1.90	.479	-1.48	-5.95	-9.24	.632	-.050	-.002	-.059	-.113	1.67	-.007	-.015	.012	-.008	-.028	-.001	-.004	-.005	.154	.002	-.001	.000	.004	-.002	.017	.002	-.003	.004
IMI036SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI036SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	-.011	-.000	-.574	-37.7	-2.14	.184	.631	-2.98	-5.67	.280	-.074	.164	-.049	-.100	.521	-.004	.077	-.013	.000	-.030	.000	-.002	-.004	.017	.002	-.002	-.000	.006	-.004	.012	.000	-.003	.003
IMI033SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI033SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI033SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-17J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I152-22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	.009	.001	-.528	-44.4	-2.37	.236	1.39	-1.48	-4.26	.280	-.124	.242	-.049	-.114	.652	.000	.086	-.014	.009	-.030	.003	-.008	-.003	.015	.000	-.002	.003	.012	.000	.009	.002	-.003	.003
I152-23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I231-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I231-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I231-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I231-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	-.035	-.000	-.959	-48.1	-2.33	.308	2.79	1.23	-1.45	1.73	-.106	.226	-.042	-.069	2.03	-.001	.053	-.016	.020	-.020	-.002	-.011	-.002	.016	.000	-.003	.005	.005	.011	.012	.000	-.003	.003

IMI036SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI036SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	.011	-.003	-.650	-52.6	-2.52	.294	1.84	.406	-3.32	1.24	-.138	.115	-.047	-.074	1.54	-.004	.061	-.016	.000	-.026	.008	-.014	-.000	.016	.000	-.002	.001	.023	.015	.014	.000	-.002	.003
I243-12A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-12J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I243-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CC86	-.060	-.005	-2.94	-56.0	-2.80	.237	.810	-.358	-4.14	.342	-.136	.071	-.046	-.076	.865	-.003	.111	-.013	.046	-.017	.003	-.015	-.002	.011	.002	-.002	.000	.025	.010	.011	.000	-.002	.003
IMI035SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI035SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI035SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I242-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I242-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	-.010	.002	-1.98	-57.7	-2.82	.287	1.93	-.677	-2.70	.671	-.160	.085	-.050	-.097	1.16	-.000	.020	.012	.013	-.007	.008	-.015	-.002	.016	.003	-.001	.008	.033	.014	.012	.002	-.000	.004
I300-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I300-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I204-33	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	-.040	.000	-3.94	-4.15	-2.94	.281	1.56	-2.25	-1.29	-4.81	-.149	.043	-.052	-.095	1.06	-.003	.066	-.020	-.193	-.005	.004	-.020	-.003	.011	.000	-.005	-.002	.017	.011	.013	.000	-.004	.003
I216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I216-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	-.146	-.005	-3.86	-6.06	-3.12	.312	.396	-2.59	-3.93	-4.98	-.130	.047	-.050	-.105	1.23	-.004	-.019	-.017	-.178	-.027	-.004	-.020	-.003	.013	.000	-.003	.002	.020	.025	.011	-.000	-.003	.002
IMI036SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

IMI036SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	-.116	-.002	-4.89	-6.09	-3.46	.234	-.915	-.455	-5.85	-5.13	-.161	.194	-.054	-.132	.096	-.005	-.071	-.029	-.148	-.015	.007	-.020	-.003	.010	.001	-.002	.002	.018	.003	.010	-.000	-.003	.003
IMI034WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI034WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMI034WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I306-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	-.092	-.000	-4.33	5.56	-2.84	.188	-.250	-1.56	-4.38	-4.32	-.174	.077	-.055	-.123	.151	-.008	-.079	-.005	-.150	-.023	.007	-.019	-.005	.009	.001	-.005	.003	.030	-.001	.012	-.000	-.003	.003
I122-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	-.249	-.001	-4.44	1.08	-1.64	.182	-.778	-2.66	-5.84	-2.80	-.180	.075	-.056	-.133	-.543	-.007	-.119	.006	-.153	.009	.004	.011	-.000	.011	.002	-.003	.005	.028	.000	.012	-.000	-.003	.004
I122-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I122-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB13	-.191	-.007	-.525	2.40	-1.16	.176	-.351	-5.37	-7.00	-.731	-.162	.056	-.055	-.058	-1.01	-.007	-.112	.022	-.141	.009	.003	.312	-.003	.009	.003	-.003	-.000	.044	-.005	.014	-.000	-.003	.003
I184-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I184-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB14	-.248	-.004	-3.10	-1.45	-1.46	.171	-.524	-3.87	-7.13	-2.09	-.177	.072	-.053	.001	-.933	-.006	-.035	.008	-.149	.014	.001	.181	-.002	.015	.001	-.003	.003	.047	.001	.007	.000	-.004	.003

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
1		Keyword		TUNBEG	Start of TUNE						
2	C:\ICPCHEM\1\METHODS\TN6020_C.M	Tun6	1301	F6I16001	6020tunchk		1.000				
3	C:\ICPCHEM\1\METHODS\TN200_8C.M	Tun2	1302	F6I16002	200.8tunchk		1.000				
4		Keyword		TUNEND	End of TUNE						
5		Keyword		CALBEG	Start of CALIB						
6	C:\ICPCHEM\1\METHODS\EMX6020.M	CalBlk	1101	F6I16003	BLNK		Level 1				
7	C:\ICPCHEM\1\METHODS\EMX6020.M	CalBlk	1102	F6I16004	S0		Level 1				
8	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1104	F6I16005	S1 0.5		Level 2				
9	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1105	F6I16006	S2 5		Level 3				
10	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1106	F6I16007	S3 25		Level 4				
11	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1107	F6I16008	S4 50		Level 5				
12	C:\ICPCHEM\1\METHODS\EMX6020.M	ICV1	1204	F6I16009	ICV		1.000				
13	C:\ICPCHEM\1\METHODS\EMX6020.M	ICB	1102	F6I16010	ICB		1.000				
14	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	F6I16011	MRLI2801	1/100/10 ppb	1.000				
15	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1306	F6I16012	MRLI2802	0.5/50/4 ppb	1.000				
16	C:\ICPCHEM\1\METHODS\EMX6020.M	ICS-A	1303	F6I16013	ICSA		1.000				
17	C:\ICPCHEM\1\METHODS\EMX6020.M	ICS-AB	1304	F6I16014	ICSAB		1.000				
18	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1207	F6I16015	MRLI2803	500 ppb CAT	1.000				
19	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16016	CCV1		1.000				
20	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16017	CCB1	Na failed	1.000				
21		Keyword		CALEND	End of CALIB						
22		Keyword		SMPLBEG	Start of SMPL						
23	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2101	F6I16018	IMI036SB	Zn failed	1.000				
24	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2102	F6I16019	IMI036SL		1.000				
25	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2103	F6I16020	I185-01M		1.000				
26	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2104	F6I16021	I185-01A		1.000				
27	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2105	F6I16022	I185-01		1.000				
28	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2106	F6I16023	I185-01J		5.000				
29	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2107	F6I16024	I185-01D		1.000				
30	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2108	F6I16025	I185-02		1.000				
31	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2109	F6I16026	I185-03		1.000				
32	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16027	BLANK		1.000				
33	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16028	CCV2		1.000				
34	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16029	CCB2		1.000				
35	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2110	F6I16030	IMI033SB	Zn hi	1.000				
36	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2111	F6I16031	IMI033SL		1.000				
37	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2112	F6I16032	IMI033SC		1.000				
38	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2201	F6I16033	I152-17M	dil 5x, lev cal analyte	1.000				
39	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2202	F6I16034	I152-17S	above light	1.000				
40	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2203	F6I16035	I152-17A	pt in cal	1.000				
41	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2204	F6I16036	I152-17		1.000				

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
42	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2205	F6I16037	I152-17J		5.000				
43	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2206	F6I16038	I152-22	Ba > linear pt (5x)	1.000				
44	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16039	BLANK		1.000				
45	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16040	CCV3		1.000				
46	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16041	CCB3		1.000				
47	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2207	F6I16042	I152-23	Ba > linear pt (5x)	1.000				
48	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2208	F6I16043	I231-03		1.000				
49	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2209	F6I16044	I231-04		1.000				
50	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2210	F6I16045	I231-05		1.000				
51	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2211	F6I16046	I231-06		1.000				
52	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2212	F6I16047	I243-01		1.000				
53	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2301	F6I16048	I243-02		1.000				
54	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2302	F6I16049	I243-03		1.000				
55	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2303	F6I16050	I243-04		1.000				
56	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16051	BLANK		1.000				
57	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16052	CCV4		1.000				
58	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16053	CCB4		1.000				
59	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2101	F6I16054	IMI036SB		1.000				
60	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2102	F6I16055	IMI036SL		1.000				
61	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2304	F6I16056	I243-05		1.000				
62	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2305	F6I16057	I243-06		1.000				
63	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2306	F6I16058	I243-07		1.000				
64	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2307	F6I16059	I243-08		1.000				
65	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2308	F6I16060	I243-09		1.000				
66	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2309	F6I16061	I243-10		1.000				
67	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2310	F6I16062	I243-11		1.000				
68	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16063	BLANK		1.000				
69	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16064	CCV5	Na failed	1.000				
70	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16065	CCB5	[illegible]	1.000				
71	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2311	F6I16066	I243-12A		1.000				
72	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2312	F6I16067	I243-12		1.000				
73	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2401	F6I16068	I243-12J		5.000				
74	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2402	F6I16069	I243-13		1.000				
75	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16070	BLANK		1.000				
76	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16071	CCV6		1.000				
77	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16072	CCB6		1.000				
78	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2403	F6I16073	IMI035SB		1.000				
79	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2404	F6I16074	IMI035SL		1.000				
80	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2405	F6I16075	IMI035SC		1.000				
81	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2406	F6I16076	I242-03		1.000				
82	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2407	F6I16077	I242-04		1.000				

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
83	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2408	F6I16078	I300-01M		1.000				
84	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2409	F6I16079	I300-01S		1.000				
85	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2410	F6I16080	I300-01A		1.000				
86	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2411	F6I16081	I300-01		1.000				
87	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16082	BLANK		1.000				
88	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16083	CCV7		1.000				
89	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16084	CCB7		1.000				
90	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2412	F6I16085	I300-01J		5.000				
91	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2501	F6I16086	I300-02		1.000				
92	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2502	F6I16087	I300-03		1.000				
93	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2503	F6I16088	I300-04		1.000				
94	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2504	F6I16089	I204-02		1.000				
95	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2505	F6I16090	I204-17	Ba > hi cal pt (5x)	1.000				
96	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2506	F6I16091	I204-27	Ba > hi cal pt (5x)	1.000				
97	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2507	F6I16092	I204-31	V, Zn, Ba > hi cal pt (5x)	1.000				
98	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2508	F6I16093	I204-33	V, Zn, Ba > hi cal pt (5x)	1.000				
99	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16094	BLANK		1.000				
100	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16095	CCV8		1.000				
101	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16096	CCB8		1.000				
102	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2509	F6I16097	I216-01	Ba > hi cal pt (5x)	1.000				
103	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2510	F6I16098	I216-02		1.000				
104	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2511	F6I16099	I216-03		1.000				
105	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2512	F6I16100	I216-04		1.000				
106	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3101	F6I16101	I216-05	V, Ba > hi cal pt (10x)	1.000				✓
107	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3102	F6I16102	I216-06	Cr, Cu, Ba, Pb, Zn (5x)	1.000		~~Zn (5x)~~ Cu and Pb 1.5		Zn (5x)
108	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3103	F6I16103	I216-07	V, Cr, Ba > hi cal pt (2x)	1.000				
109	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16104	BLANK		1.000				
110	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16105	CCV9		1.000				
111	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16106	CCB9		1.000				
112	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	3104	F6I16107	IMI036SB		1.000				
113	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	3105	F6I16108	IMI036SL		1.000				
114	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3106	F6I16109	I185-01M		1.000				
115	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3107	F6I16110	I185-01A		1.000				
116	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3108	F6I16111	I185-01		1.000				
117	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3109	F6I16112	I185-01J		5.000				
118	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3110	F6I16113	I185-01D		1.000				
119	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3111	F6I16114	I185-02		1.000				
120	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3112	F6I16115	I185-03		1.000				
121	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16116	BLANK		1.000				
122	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16117	CCV10		1.000				
123	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16118	CCB10		1.000				

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
124	C:\ICPCHEM\1\METHODS\EMX6020.M	MBW	3201	F6I16119	IMI034WB		1.000				
125	C:\ICPCHEM\1\METHODS\EMX6020.M	LCS	3202	F6I16120	IMI034WL		1.000				
126	C:\ICPCHEM\1\METHODS\EMX6020.M	LCS	3203	F6I16121	IMI034WC		1.000				
127	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3408	F6I16122	I306-01A		1.000				
128	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3204	F6I16123	I306-01		1.000				
129	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3409	F6I16124	I306-01J		1.000				
130	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3205	F6I16125	I306-02	Na2S2O3 (Q)	1.000				
131	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3206	F6I16126	I306-03		1.000				
132	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3207	F6I16127	I306-04		1.000				
133	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16128	BLANK	needs cleaning HEL	1.000				
134	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16129	CCV11		1.000				
135	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16130	CCB11		1.000				
136	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3208	F6I16131	I122-01		1.000				
137	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3209	F6I16132	I122-02		1.000				
138	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3210	F6I16133	I122-03		1.000				
139	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3211	F6I16134	I122-04		1.000				
140	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3212	F6I16135	I122-05M		1.000				
141	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3301	F6I16136	I122-05S		1.000				
142	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3302	F6I16137	I122-05A		1.000				
143	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3303	F6I16138	I122-05		1.000				
144	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3304	F6I16139	I122-05J		5.000				
145	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16140	BLANK		1.000				
146	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16141	CCV12		1.000				
147	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16142	CCB12		1.000				
148	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3305	F6I16143	I122-06		1.000				
149	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3306	F6I16144	I122-07		1.000				
150	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3307	F6I16145	I122-08		1.000				
151	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3308	F6I16146	I122-01	DISS	1.000				
152	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3309	F6I16147	I122-04	DISS	1.000				
153	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3310	F6I16148	I184-01		1.000				
154	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3311	F6I16149	I184-02		1.000				
155	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3312	F6I16150	I184-03		1.000				
156	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3401	F6I16151	I184-04		1.000				
157	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16152	BLANK		1.000				
158	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16153	CCV13		1.000				
159	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16154	CCB13		1.000				
160	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3402	F6I16155	I184-05M		1.000				
161	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3403	F6I16156	I184-05S		1.000				
162	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3404	F6I16157	I184-05A		1.000				
163	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3405	F6I16158	I184-05		1.000				
164	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3406	F6I16159	I184-05J		5.000				

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
165	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3407	F6I16160	I184-06		1.000				
166	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	F6I16161	BLANK		1.000				
167	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	F6I16162	CCV14		1.000				
168	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	F6I16163	CCB14		1.000				
169		Keyword		StandBy							
170		Keyword		SMPLEND	End of SMPL						
171		Keyword		End	End of Sequence						
172		Keyword		CCVBEG	Start of CCV						
173		Keyword		CCVEND	End of CCV						
174		Keyword		BLKBEG	Start of BLANK						
175		Keyword		BLKEND	End of BLANK						
176		Keyword		ERRBEG	Start of ERRTERM						
177		Keyword		ERREND	End of ERRTERM						

395

Last Calib: Sep 28, 2015 12:45 pm
Calibration Type: External Calibration Method
Calibration Title:
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Multi Tune: #1 h2.u
#2 he.u
#3 norm.u

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

	Data File	Sample Name	Date Acquired
1	c:\data\if62015\i\if6i16.b\f6i16004.d\f6i16004.d#	S0	Sep 28 2015 12:25 pm
2	c:\data\if62015\i\if6i16.b\f6i16005.d\f6i16005.d#	S1 0.5	Sep 28 2015 12:29 pm
3	c:\data\if62015\i\if6i16.b\f6i16006.d\f6i16006.d#	S2 5	Sep 28 2015 12:34 pm
4	c:\data\if62015\i\if6i16.b\f6i16007.d\f6i16007.d#	S3 25	Sep 28 2015 12:38 pm
5	c:\data\if62015\i\if6i16.b\f6i16008.d\f6i16008.d#	S4 50	Sep 28 2015 12:42 pm
6	---		
7	---		
8	---		
9	---		
10	---		
11	---		
12	---		
13	---		
14	---		
15	---		
16	---		
17	---		
18	---		
19	---		
20	---		

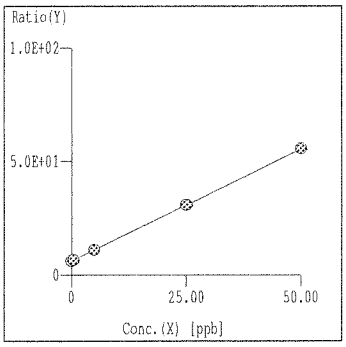
=== ISTD Table ===

Fix ISTD Conc: ON

	Step	Mass	Element	VIS	Units	All Levels
1	3	6	Li		ppb	100.0
2	1	45	Sc		ppb	100.0
3	2	45	Sc		ppb	100.0
4	3	45	Sc		ppb	100.0
5	1	72	Ge		ppb	100.0
6	2	72	Ge		ppb	100.0
7	3	72	Ge		ppb	100.0
8	3	115	In		ppb	100.0
9	3	159	Tb		ppb	100.0
10	3	209	Bi		ppb	100.0

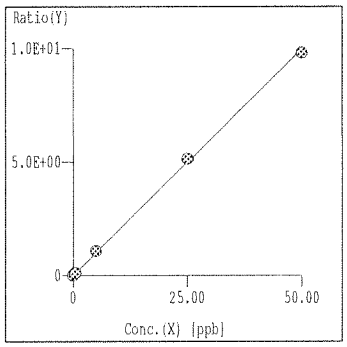
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 7 Li	6	ppb



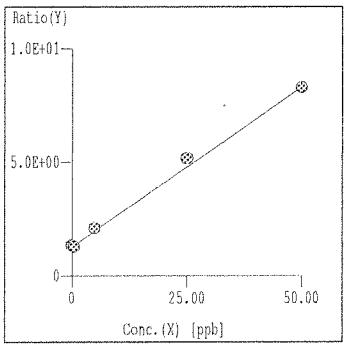
Curve Fit: Y=aX+b
r = 1.0000
Y = 9.870E-001*X +6.168E+000
X = 1.013E+000*Y -6.250E+000
DL = 1.059E-01 ppb
BEC = 6.250 ppb

Step Mass Element	ISTD	Unit
(3) 9 Be	45	ppb



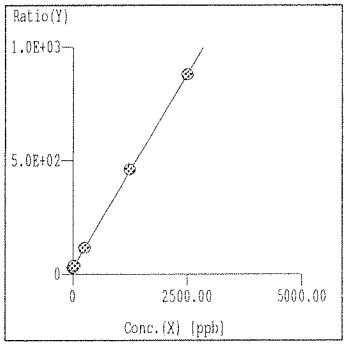
Curve Fit: Y=aX+b
r = 0.9997
Y = 1.999E-001*X +3.112E-003
X = 5.003E+000*Y -1.557E-002
DL = 6.940E-03 ppb
BEC = 1.557E-02 ppb

Step Mass Element	ISTD	Unit
(3) 11 B	45	ppb



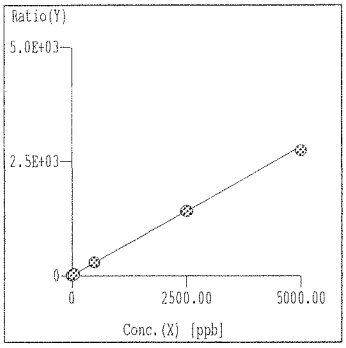
Curve Fit: Y=aX+b
r = 0.9985
Y = 1.412E-001*X +1.257E+000
X = 7.083E+000*Y -8.906E+000
DL = 3.189 ppb
BEC = 8.906 ppb

Step Mass Element	ISTD	Unit
(1) 23 Na	45	ppb



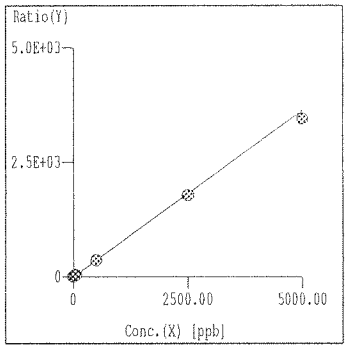
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.416E-001*X +2.804E+001
X = 2.927E+000*Y -8.208E+001
DL = 1.148 ppb
BEC = 82.08 ppb

Step Mass Element	ISTD	Unit
(3) 24 Mg	45	ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 5.656E-001*X +2.915E+000
X = 1.768E+000*Y -5.154E+000
DL = 3.415E-01 ppb
BEC = 5.154 ppb

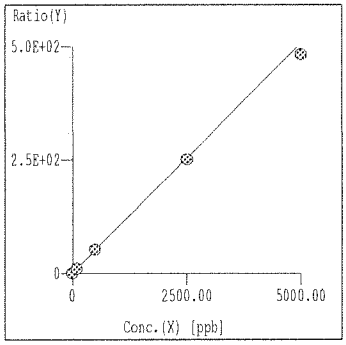
Step Mass Element	ISTD	Unit
(3) 27 Al	45	ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 7.267E-001*X +1.300E-001
X = 1.376E+000*Y -1.789E-001
DL = 2.909E-02 ppb
BEC = 1.789E-01 ppb

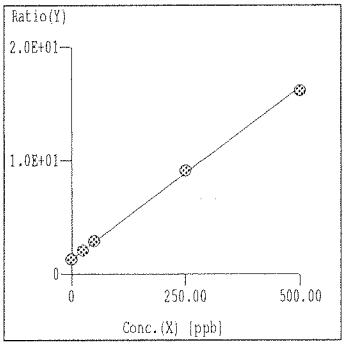
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	28	Si	45	ppb



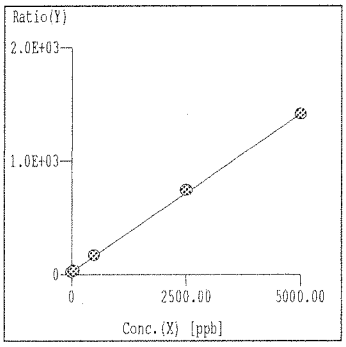
Curve Fit: Y=aX+b
r = 0.9998
Y = 1.016E-001*X +5.182E-001
X = 9.843E+000*Y -5.100E+000
DL = 7.391E-01 ppb
BEC = 5.100 ppb

Step	Mass	Element	ISTD	Unit
(3)	31	P	45	ppb



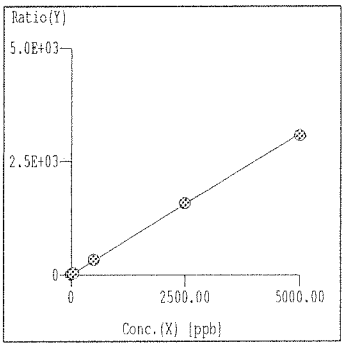
Curve Fit: Y=aX+b
r = 0.9997
Y = 3.038E-002*X +1.306E+000
X = 3.292E+001*Y -4.299E+001
DL = 2.032 ppb
BEC = 42.99 ppb

Step	Mass	Element	ISTD	Unit
(2)	39	K	45	ppb



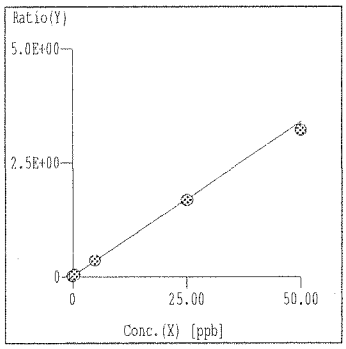
Curve Fit: Y=aX+b
r = 0.9998
Y = 2.792E-001*X +2.054E+001
X = 3.582E+000*Y -7.358E+001
DL = 4.237 ppb
BEC = 73.58 ppb

Step	Mass	Element	ISTD	Unit
(1)	40	Ca	45	ppb



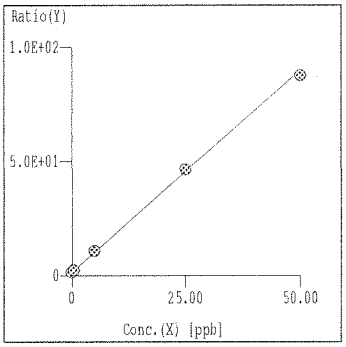
Curve Fit: Y=aX+b
r = 0.9999
Y = 6.225E-001*X +6.180E+000
X = 1.606E+000*Y -9.928E+000
DL = 1.239E-01 ppb
BEC = 9.928 ppb

Step	Mass	Element	ISTD	Unit
(3)	47	Ti	45	ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 6.776E-002*X +1.466E-002
X = 1.476E+001*Y -2.164E-001
DL = 8.090E-02 ppb
BEC = 2.164E-01 ppb

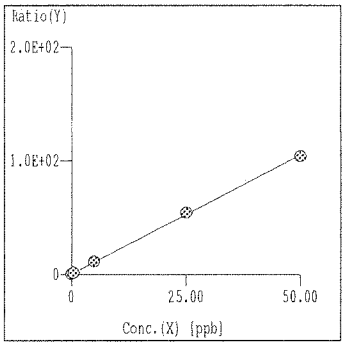
Step	Mass	Element	ISTD	Unit
(2)	51	V	45	ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 1.776E+000*X +1.401E+000
X = 5.632E-001*Y -7.888E-001
DL = 1.081E-02 ppb
BEC = 7.888E-01 ppb

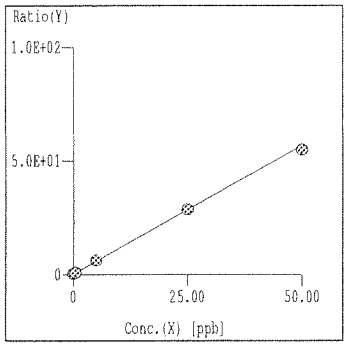
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(2)	52	Cr	45	ppb



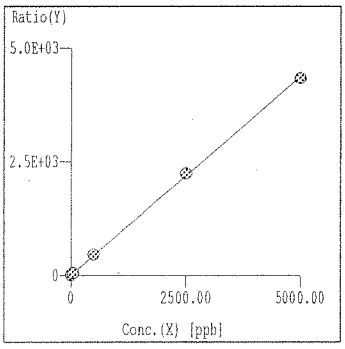
Curve Fit: Y=aX+b
r = 0.9998
Y = 2.097E+000*X +3.348E-001
X = 4.769E-001*Y -1.596E-001
DL = 2.453E-02 ppb
BEC = 1.596E-01 ppb

Step	Mass	Element	ISTD	Unit
(3)	55	Mn	45	ppb



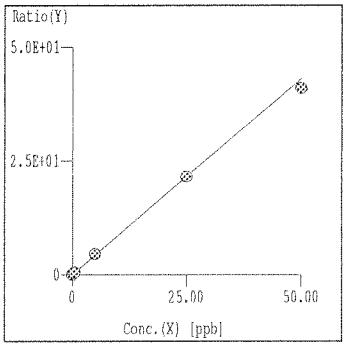
Curve Fit: Y=aX+b
r = 0.9998
Y = 1.131E+000*X +2.940E-001
X = 8.839E-001*Y -2.599E-001
DL = 3.065E-02 ppb
BEC = 2.599E-01 ppb

Step	Mass	Element	ISTD	Unit
(1)	56	Fe	45	ppb



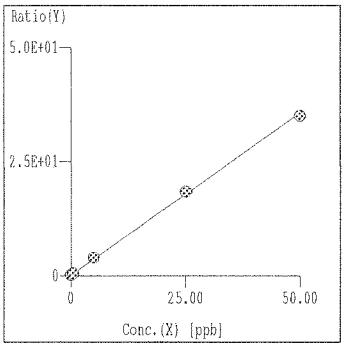
Curve Fit: Y=aX+b
r = 0.9999
Y = 8.759E-001*X +2.388E+000
X = 1.142E+000*Y -2.727E+000
DL = 3.974E-02 ppb
BEC = 2.727 ppb

Step	Mass	Element	ISTD	Unit
(3)	59	Co	45	ppb



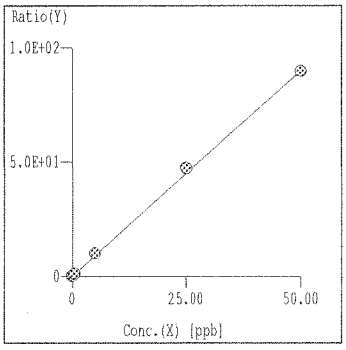
Curve Fit: Y=aX+b
r = 0.9997
Y = 8.613E-001*X +1.872E-002
X = 1.161E+000*Y -2.173E-002
DL = 2.285E-03 ppb
BEC = 2.173E-02 ppb

Step	Mass	Element	ISTD	Unit
(2)	60	Ni	45	ppb



Curve Fit: Y=aX+b
r = 0.9997
Y = 7.105E-001*X +1.405E-001
X = 1.407E+000*Y -1.978E-001
DL = 1.241E-02 ppb
BEC = 1.978E-01 ppb

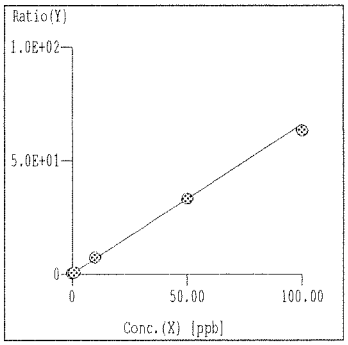
Step	Mass	Element	ISTD	Unit
(2)	63	Cu	45	ppb



Curve Fit: Y=aX+b
r = 0.9996
Y = 1.797E+000*X +9.502E-002
X = 5.565E-001*Y -5.288E-002
DL = 7.996E-03 ppb
BEC = 5.288E-02 ppb

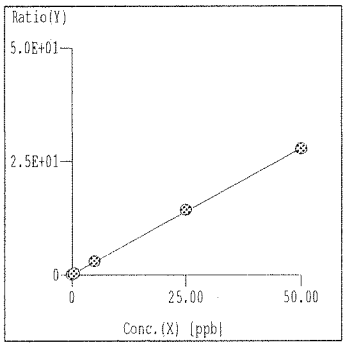
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(3)	66	Zn	72	ppb



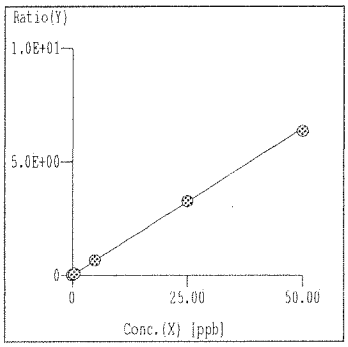
Curve Fit: Y=aX+b
r = 0.9997
Y = 6.601E-001*X +2.623E-001
X = 1.515E+000*Y -3.973E-001
DL = 1.993E-02 ppb
BEC = 3.973E-01 ppb

Step	Mass	Element	ISTD	Unit
(2)	75	As	72	ppb



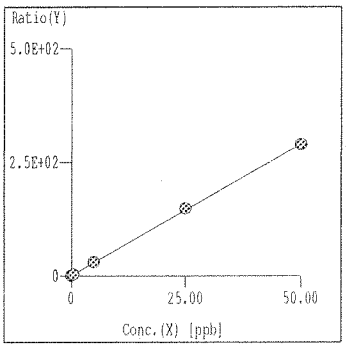
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.563E-001*X +9.250E-002
X = 1.798E+000*Y -1.663E-001
DL = 3.715E-02 ppb
BEC = 1.663E-01 ppb

Step	Mass	Element	ISTD	Unit
(1)	78	Se	72	ppb



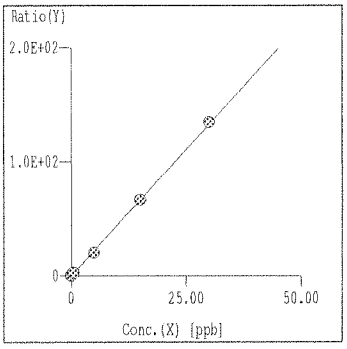
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.297E-001*X +1.721E-003
X = 7.708E+000*Y -1.327E-002
DL = 2.276E-02 ppb
BEC = 1.327E-02 ppb

Step	Mass	Element	ISTD	Unit
(3)	88	Sr	72	ppb



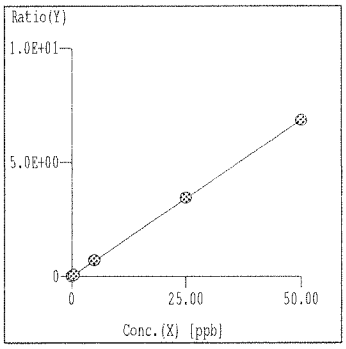
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.795E+000*X +2.482E-001
X = 1.726E-001*Y -4.284E-002
DL = 1.281E-02 ppb
BEC = 4.284E-02 ppb

Step	Mass	Element	ISTD	Unit
(3)	90	Zr	72	ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 4.428E+000*X +6.534E-002
X = 2.259E-001*Y -1.476E-002
DL = 2.457E-03 ppb
BEC = 1.476E-02 ppb

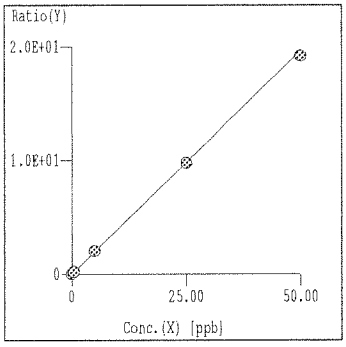
Step	Mass	Element	ISTD	Unit
(3)	95	Mo	115	ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.371E-001*X +1.338E-003
X = 7.295E+000*Y -9.759E-003
DL = 1.109E-02 ppb
BEC = 9.759E-03 ppb

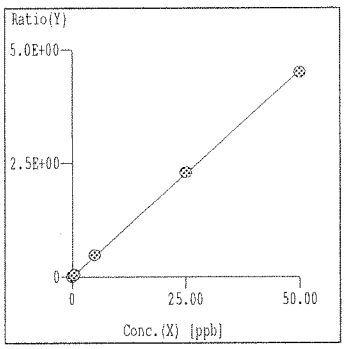
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 107 Ag	115	ppb



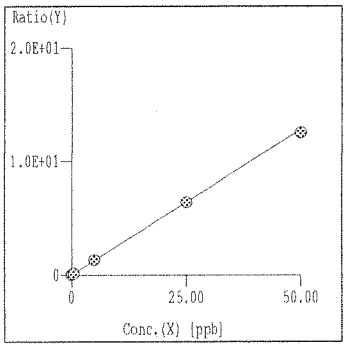
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.936E-001*X +1.498E-003
X = 2.541E+000*Y -3.807E-003
DL = 3.726E-03 ppb
BEC = 3.807E-03 ppb

Step Mass Element	ISTD	Unit
(3) 111 Cd	115	ppb



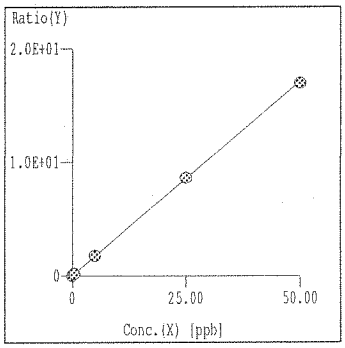
Curve Fit: Y=aX+b
r = 0.9999
Y = 9.084E-002*X +4.284E-004
X = 1.101E+001*Y -4.716E-003
DL = 7.968E-03 ppb
BEC = 4.716E-03 ppb

Step Mass Element	ISTD	Unit
(3) 118 Sn	115	ppb



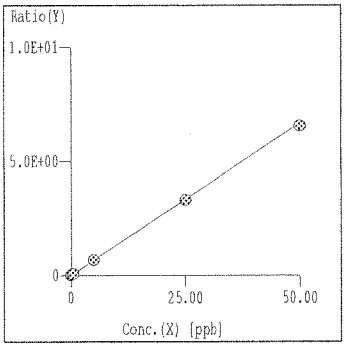
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.568E-001*X +3.531E-003
X = 3.894E+000*Y -1.375E-002
DL = 1.048E-02 ppb
BEC = 1.375E-02 ppb

Step Mass Element	ISTD	Unit
(3) 121 Sb	115	ppb



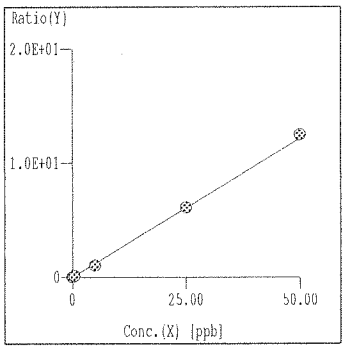
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.426E-001*X +7.999E-003
X = 2.919E+000*Y -2.335E-002
DL = 1.346E-02 ppb
BEC = 2.335E-02 ppb

Step Mass Element	ISTD	Unit
(3) 137 Ba	115	ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.336E-001*X +2.975E-003
X = 7.485E+000*Y -2.227E-002
DL = 1.050E-02 ppb
BEC = 2.227E-02 ppb

Step Mass Element	ISTD	Unit
(3) 182 W	159	ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 2.435E-001*X +1.741E-003
X = 4.106E+000*Y -7.147E-003
DL = 3.051E-03 ppb
BEC = 7.147E-03 ppb

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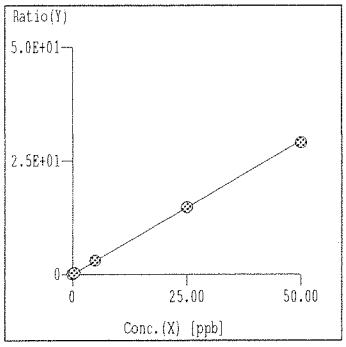
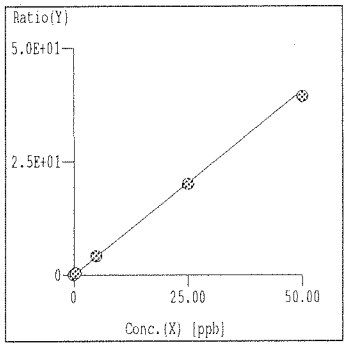
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 205 Tl	159	ppb



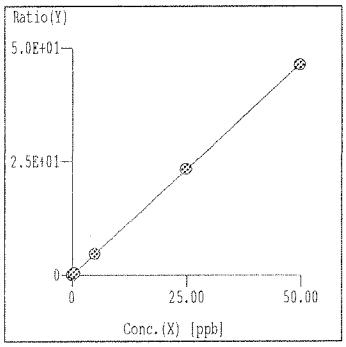
Curve Fit: Y=aX+b
r = 1.0000
Y = 5.889E-001*X +1.632E-003
X = 1.698E+000*Y -2.770E-003
DL = 1.792E-03 ppb
BEC = 2.770E-03 ppb

Step Mass Element	ISTD	Unit
(3) 208 Pb	159	ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 8.153E-001*X +7.915E-003
X = 1.227E+000*Y -9.708E-003
DL = 4.276E-03 ppb
BEC = 9.708E-03 ppb

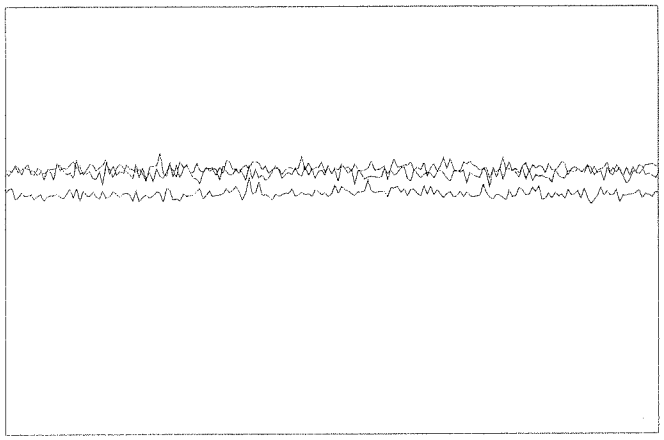
Step Mass Element	ISTD	Unit
(3) 238 U	159	ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 9.334E-001*X +4.780E-004
X = 1.071E+000*Y -5.121E-004
DL = 3.779E-04 ppb
BEC = 5.121E-04 ppb

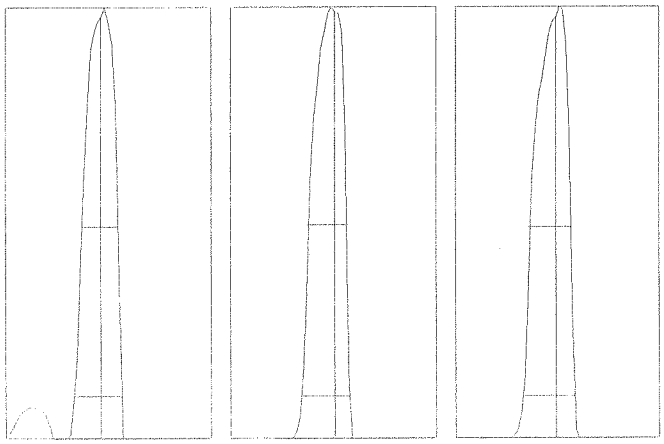
Tune Report

Tune File : NORM.U
Comment : IF6I16



Integration Time:	0.1000 sec	
Sampling Period:	0.6200 sec	
n:	200	
Oxide:	156/140	1.833%
Doubly Charged:	70/140	0.835%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	12284.0	12244.5	2.00	0.90
89	50,000	31620.0	31167.6	1.74	0.70
205	50,000	28189.0	28176.4	1.75	3.20
156/140	5	1.768%	1.906%	5.04	
70/140	2	0.864%	0.818%	7.27	



m/z:	7	89	205
Height:	12,031	30,839	27,700
Axis:	6.95	89.05	205.00
W-50%:	0.55	0.60	0.65
W-10%:	0.700	0.7500	0.800

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Sep 28, 2015 11:16:46
Printed : Sep 28, 2015 11:16:48

Tune Report

Tune File : NORM.U
Comment : IF6I16

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1500 W	Extract 1	:	0 V	AMU Gain	:	128
RF Matching	:	1.74 V	Extract 2	:	-110 V	AMU Offset	:	127
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1
Torch-H	:	-0.3 mm	Omega Lens-ce	:	1 V	Axis Offset	:	-0.08
Torch-V	:	0.1 mm	Cell Entrance	:	-26 V	QP Bias	:	-3 V
Carrier Gas	:	0.9 L/min	QP Focus	:	1 V			
Makeup Gas	:	0.1 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	2060 V
Sample Pump	:	--- rps	OctP RF	:	169 V	Pulse HV	:	1390 V
S/C Temp	:	2 degC	OctP Bias	:	-6 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

Generated : Sep 28, 2015 11:16:46
Printed : Sep 28, 2015 11:16:51

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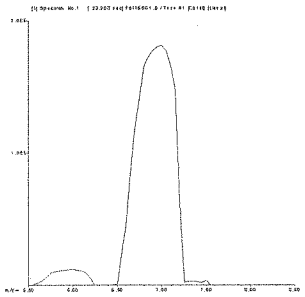
6020 QC Tune Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16001.D
Date Acquired:	Sep 28 2015 12:11 pm
Acq. Method:	TN6020_C.M
Operator:	CCapul
Sample Name:	6020tunchk
Misc Info:	
Vial Number:	1301
Current Method:	C:\ICPCHEM\1\METHODS\TN6020_C.M

RSD (%)

Element	Actual	Required	Flag
7 Li	2.19	5.00	
59 Co	1.08	5.00	
115 In	0.98	5.00	
205 Tl	2.08	5.00	



7 Li

Mass Calib.

Actual: 6.95

Required: 6.90 - 7.10

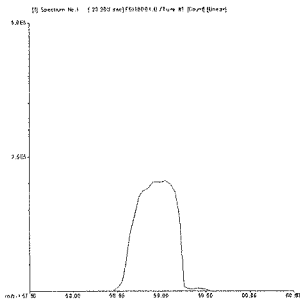
Flag:

Peak Width-10%

Actual: 0.60

Limit 0.90

Flag:



59 Co

Mass Calib.

Actual: 59.00

Required: 58.90 - 59.10

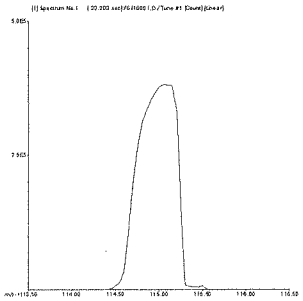
Flag:

Peak Width-10%

Actual: 0.60

Limit 0.90

Flag:



115 In

Mass Calib.

Actual: 115.05

Required: 114.90 - 115.10

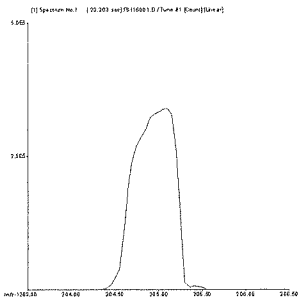
Flag:

Peak Width-10%

Actual: 0.60

Limit 0.90

Flag:



205 Tl

Mass Calib.

Actual: 205.05

Required: 204.90 - 205.10

Flag:

Peak Width-10%

Actual: 0.65

Limit 0.90

Flag:

Calibration Blank QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16003
Date Acquired:	Sep 28 2015 12:21 pm
Operator:	CCapul
Sample Name:	BLNK
Misc Info:	
Vial Number:	1101
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.
Last Cal Update:	Sep 28 2015 12:23 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	1827865.00	A	11680.00	0.64
7	Li	112092.10	P	361.80	0.32
9	Be	110.00	P	29.06	26.42
11	B	32158.66	P	2127.00	6.61
23	Na	315081.69	P	1587.00	0.50
24	Mg	50253.20	P	580.30	1.15
27	Al	6278.22	P	58.99	0.94
28	Si	6337.17	P	47.18	0.74
31	P	29218.71	P	240.90	0.82
39	K	47311.42	P	446.10	0.94
40	Ca	69164.82	P	1855.00	2.68
45	Sc	1001733.00	A	35940.00	3.59
45	Sc	240100.30	P	2548.00	1.06
45	Sc	2283978.00	A	17750.00	0.78
47	Ti	220.01	P	16.67	7.58
51	V	3236.60	P	66.03	2.04
52	Cr	857.37	P	22.10	2.58
55	Mn	6852.98	P	86.03	1.26
56	Fe	26114.12	P	369.60	1.42
59	Co	472.25	P	57.96	12.27
60	Ni	378.23	P	19.80	5.23
63	Cu	241.56	P	7.43	3.08
66	Zn	1405.68	P	101.50	7.22
72	Ge	258689.70	P	5572.00	2.15
72	Ge	125383.10	P	1295.00	1.03
72	Ge	515014.81	P	5243.00	1.02
75	As	105.78	P	7.49	7.08
78	Se	3.56	P	1.02	28.63
88	Sr	1243.44	P	30.55	2.46
90	Zr	384.47	P	63.63	16.55
95	Mo	52.22	P	19.25	36.86
107	Ag	81.11	P	11.71	14.44
111	Cd	10.16	P	2.18	21.48
115	In	3807756.00	A	20390.00	0.54
118	Sn	163.34	P	23.09	14.14
121	Sb	335.57	P	50.92	15.17
137	Ba	113.34	P	20.82	18.37
159	Tb	5962991.00	A	17540.00	0.29
182	W	122.23	P	13.88	11.36
205	Tl	128.89	P	12.62	9.79
208	Pb	505.58	P	58.91	11.65
209	Bi	4139035.00	A	34090.00	0.82
235	U	1.11	P	1.93	173.24
238	U	50.00	P	13.33	26.66

Calibration Blank QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16004
Date Acquired:	Sep 28 2015 12:25 pm
Operator:	CCapul
Sample Name:	S0
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.
Last Cal Update:	Sep 28 2015 12:24 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	1763612.00	A	25200.00	1.43
7	Li	108977.10	P	1134.00	1.04
9	Be	66.67	P	10.00	15.00
11	B	29292.97	P	2886.00	9.85
23	Na	284052.50	P	1180.00	0.42
24	Mg	46832.16	P	548.50	1.17
27	Al	2818.16	P	118.60	4.21
28	Si	5222.23	P	238.10	4.56
31	P	28253.72	P	122.00	0.43
39	K	46634.61	P	544.60	1.17
40	Ca	62620.08	P	53.84	0.09
45	Sc	1013187.00	A	5067.00	0.50
45	Sc	229422.80	P	1844.00	0.80
45	Sc	2184530.00	A	40790.00	1.87
47	Ti	260.01	P	37.57	14.45
51	V	3212.60	P	40.24	1.25
52	Cr	715.58	P	33.53	4.69
55	Mn	6366.06	P	144.00	2.26
56	Fe	24169.60	P	199.50	0.83
59	Co	401.13	P	20.09	5.01
60	Ni	321.34	P	8.00	2.49
63	Cu	188.23	P	12.12	6.44
66	Zn	1295.67	P	13.88	1.07
72	Ge	258401.09	P	1281.00	0.50
72	Ge	121037.70	P	741.80	0.61
72	Ge	493345.69	P	4640.00	0.94
75	As	99.78	P	8.80	8.82
78	Se	2.44	P	2.52	103.25
88	Sr	1216.77	P	111.40	9.16
90	Zr	323.35	P	20.82	6.44
95	Mo	47.78	P	18.36	38.43
107	Ag	53.34	P	17.64	33.07
111	Cd	15.38	P	8.84	57.50
115	In	3642560.00	A	11390.00	0.31
118	Sn	91.11	P	32.89	36.10
121	Sb	290.01	P	55.68	19.20
137	Ba	85.56	P	16.78	19.61
159	Tb	5798794.00	A	84500.00	1.46
182	W	113.34	P	14.53	12.82
205	Tl	93.34	P	20.82	22.31
208	Pb	353.35	P	63.34	17.93
209	Bi	4007882.00	A	29120.00	0.73
235	U	2.22	P	3.85	173.20
238	U	27.78	P	6.94	24.98

Calibration Standard QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16005.D\F6I16005.D#
Date Acquired: Sep 28 2015 12:29 pm
Operator: CCapul
Sample Name: S1 0.5
Misc Info:
Vial Number: 1104
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal Update: Sep 28 2015 12:28 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1784992.00	A	17090.00	0.96
7 Li	118563.60	P	204.40	0.17
9 Be	2424.72	P	144.90	5.98
11 B	28200.64	P	1130.00	4.01
23 Na	382499.41	P	2506.00	0.66
24 Mg	708110.19	P	4787.00	0.68
27 Al	825435.69	M	5505.00	0.67
28 Si	111756.10	P	1533.00	1.37
31 P	45536.31	P	171.90	0.38
39 K	82204.78	P	567.40	0.69
40 Ca	390719.31	P	4848.00	1.24
45 Sc	1048543.00	A	8533.00	0.81
45 Sc	238407.80	P	1049.00	0.44
45 Sc	2204747.00	A	10410.00	0.47
47 Ti	1020.08	P	47.03	4.61
51 V	5424.59	P	34.12	0.63
52 Cr	3300.40	P	3.06	0.09
55 Mn	18855.01	P	311.80	1.65
56 Fe	536831.19	P	4079.00	0.76
59 Co	10359.60	P	70.47	0.68
60 Ni	1177.17	P	46.75	3.97
63 Cu	2558.25	P	35.90	1.40
66 Zn	3856.22	P	136.70	3.54
72 Ge	268189.31	P	920.60	0.34
72 Ge	124469.80	P	1467.00	1.18
72 Ge	497191.91	P	1724.00	0.35
75 As	475.12	P	13.70	2.88
78 Se	184.00	P	4.16	2.26
88 Sr	15466.65	P	393.60	2.54
90 Zr	12156.73	P	349.70	2.88
95 Mo	2573.67	P	101.70	3.95
107 Ag	7400.00	P	66.81	0.90
111 Cd	1677.63	P	89.77	5.35
115 In	3721275.00	A	34170.00	0.92
118 Sn	4984.42	P	115.90	2.33
121 Sb	6634.06	P	257.10	3.88
137 Ba	2664.80	P	32.38	1.22
159 Tb	5825466.00	A	48050.00	0.82
182 W	6467.38	P	108.90	1.68
205 Tl	17341.93	P	68.47	0.39
208 Pb	24217.46	P	219.30	0.91
209 Bi	4075710.00	A	41830.00	1.03
235 U	217.79	P	37.47	17.21
238 U	26669.29	P	816.30	3.06

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1784991.60	0.96	1763611.90	101.2	60 - 125	
45 Sc	1048542.70	0.81	1013186.80	103.5	60 - 125	
45 Sc	238407.78	0.44	229422.78	103.9	60 - 125	
45 Sc	2204747.50	0.47	2184529.50	100.9	60 - 125	
72 Ge	268189.28	0.34	258401.14	103.8	60 - 125	
72 Ge	124469.77	1.18	121037.70	102.8	60 - 125	
72 Ge	497191.88	0.35	493345.72	100.8	60 - 125	
115 In	3721275.00	0.92	3642559.50	102.2	60 - 125	
159 Tb	5825465.50	0.82	5798793.50	100.5	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: **Pass**
ISTD: **Pass**

Calibration Standard QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16006.D\F6I16006.D#
Date Acquired: Sep 28 2015 12:34 pm
Operator: CCapul
Sample Name: S2 5
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal Update: Sep 28 2015 12:32 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1783326.00	A	24140.00	1.35
7 Li	196699.91	P	3477.00	1.77
9 Be	23812.88	P	622.20	2.61
11 B	46350.31	P	2850.00	6.15
23 Na	1179367.00	A	10500.00	0.89
24 Mg	6363117.00	A	45350.00	0.71
27 Al	7932857.00	A	75350.00	0.95
28 Si	534260.19	P	5402.00	1.01
31 P	64418.50	P	1110.00	1.72
39 K	390457.50	P	2132.00	0.55
40 Ca	3373360.00	A	15580.00	0.46
45 Sc	1019016.00	A	13930.00	1.37
45 Sc	230092.00	P	3390.00	1.47
45 Sc	2210693.00	A	17530.00	0.79
47 Ti	7950.26	P	19.25	0.24
51 V	24623.98	P	356.00	1.45
52 Cr	26056.68	P	302.10	1.16
55 Mn	136161.20	P	2178.00	1.60
56 Fe	4648422.00	A	32130.00	0.69
59 Co	99659.03	P	975.20	0.98
60 Ni	9073.09	P	13.71	0.15
63 Cu	23173.77	P	136.20	0.59
66 Zn	35889.89	P	220.10	0.61
72 Ge	256649.09	P	345.20	0.13
72 Ge	119000.80	P	1069.00	0.90
72 Ge	491843.19	P	1330.00	0.27
75 As	3572.24	P	21.22	0.59
78 Se	1670.55	P	28.11	1.68
88 Sr	147057.41	P	1946.00	1.32
90 Zr	99554.67	P	946.00	0.95
95 Mo	25897.67	P	312.70	1.21
107 Ag	73872.89	P	281.40	0.38
111 Cd	17449.48	P	353.00	2.02
115 In	3649927.00	A	40210.00	1.10
118 Sn	47489.26	P	666.60	1.40
121 Sb	63805.13	P	248.30	0.39
137 Ba	24600.38	P	588.20	2.39
159 Tb	5788256.00	A	33020.00	0.57
182 W	59903.33	P	212.90	0.36
205 Tl	175521.91	P	2227.00	1.27
208 Pb	241661.41	P	3011.00	1.25
209 Bi	4031166.00	A	48100.00	1.19
235 U	1921.33	P	130.10	6.77
238 U	271223.09	P	2797.00	1.03

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1783326.40	1.35	1763611.90	101.1	60 - 125	
45 Sc	1019016.30	1.37	1013186.80	100.6	60 - 125	
45 Sc	230091.97	1.47	229422.78	100.3	60 - 125	
45 Sc	2210693.00	0.79	2184529.50	101.2	60 - 125	
72 Ge	256649.11	0.13	258401.14	99.3	60 - 125	
72 Ge	119000.79	0.90	121037.70	98.3	60 - 125	
72 Ge	491843.22	0.27	493345.72	99.7	60 - 125	
115 In	3649927.50	1.10	3642559.50	100.2	60 - 125	
159 Tb	5788256.00	0.57	5798793.50	99.8	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: **Pass**
ISTD: **Pass**

Calibration Standard QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16007.D\F6I16007.D#
Date Acquired: Sep 28 2015 12:38 pm
Operator: CCapul
Sample Name: S3 25
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal Update: Sep 28 2015 12:37 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1706638.00	A	31310.00	1.83
7 Li	526178.19	P	6342.00	1.21
9 Be	112337.70	P	1016.00	0.90
11 B	112861.10	P	3154.00	2.79
23 Na	4654079.00	A	20570.00	0.44
24 Mg	30858750.00	A	35380.00	0.11
27 Al	38753500.00	A	255700.00	0.66
28 Si	2537018.00	A	11330.00	0.45
31 P	199094.00	P	380.40	0.19
39 K	1689047.00	A	6669.00	0.39
40 Ca	15928880.00	A	68660.00	0.43
45 Sc	1011225.00	A	15260.00	1.51
45 Sc	227024.70	P	2725.00	1.20
45 Sc	2187960.00	A	26000.00	1.19
47 Ti	36827.14	P	568.60	1.54
51 V	105386.30	P	419.40	0.40
52 Cr	123059.30	P	786.20	0.64
55 Mn	627038.00	P	4641.00	0.74
56 Fe	22646190.00	A	96600.00	0.43
59 Co	470506.00	P	1883.00	0.40
60 Ni	41727.85	P	158.50	0.38
63 Cu	107328.60	P	322.20	0.30
66 Zn	156582.30	P	1553.00	0.99
72 Ge	251848.91	P	1823.00	0.72
72 Ge	116727.60	P	1312.00	1.12
72 Ge	472192.81	P	3965.00	0.84
75 As	16715.27	P	54.57	0.33
78 Se	8205.27	P	57.92	0.71
88 Sr	700354.38	P	3715.00	0.53
90 Zr	314417.09	P	3905.00	1.24
95 Mo	122465.70	P	867.10	0.71
107 Ag	347076.69	P	686.60	0.20
111 Cd	81641.85	P	943.10	1.16
115 In	3554927.00	A	45490.00	1.28
118 Sn	226852.59	P	794.40	0.35
121 Sb	305897.50	P	1725.00	0.56
137 Ba	117329.30	P	492.00	0.42
159 Tb	5708485.00	A	56170.00	0.98
182 W	348398.50	P	3837.00	1.10
205 Tl	841082.69	P	7729.00	0.92
208 Pb	1143464.00	P	8639.00	0.76
209 Bi	3866979.00	A	37570.00	0.97
235 U	9516.04	P	168.00	1.77
238 U	1331819.00	A	19180.00	1.44

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1706637.90	1.83	1763611.90	96.8	60 - 125	
45 Sc	1011224.60	1.51	1013186.80	99.8	60 - 125	
45 Sc	227024.70	1.20	229422.78	99.0	60 - 125	
45 Sc	2187960.30	1.19	2184529.50	100.2	60 - 125	
72 Ge	251848.84	0.72	258401.14	97.5	60 - 125	
72 Ge	116727.63	1.12	121037.70	96.4	60 - 125	
72 Ge	472192.81	0.84	493345.72	95.7	60 - 125	
115 In	3554927.00	1.28	3642559.50	97.6	60 - 125	
159 Tb	5708485.00	0.98	5798793.50	98.4	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16008.D\F6I16008.D#
Date Acquired: Sep 28 2015 12:42 pm
Operator: CCapul
Sample Name: S4 50
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal Update: Sep 28 2015 12:41 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1702575.00	A	10110.00	0.59
7 Li	948258.19	A	6863.00	0.72
9 Be	224095.59	P	559.30	0.25
11 B	189413.09	P	477.70	0.25
23 Na	9441871.00	A	88910.00	0.94
24 Mg	62538900.00	A	318700.00	0.51
27 Al	78634008.00	A	368500.00	0.47
28 Si	5182292.00	A	45770.00	0.88
31 P	369053.09	P	1343.00	0.36
39 K	3424947.00	A	16330.00	0.48
40 Ca	32974130.00	A	192800.00	0.58
45 Sc	1074147.00	A	13980.00	1.30
45 Sc	241975.20	P	1118.00	0.46
45 Sc	2285532.00	A	17580.00	0.77
47 Ti	73481.02	P	629.70	0.86
51 V	212114.41	P	1482.00	0.70
52 Cr	250974.91	P	1231.00	0.49
55 Mn	1253296.00	A	9731.00	0.78
56 Fe	46592792.00	A	485500.00	1.04
59 Co	937114.19	P	3030.00	0.32
60 Ni	84624.25	P	286.40	0.34
63 Cu	217158.09	P	722.50	0.33
66 Zn	307469.41	P	1048.00	0.34
72 Ge	262352.09	P	1040.00	0.40
72 Ge	122635.50	P	668.60	0.55
72 Ge	486807.69	P	3538.00	0.73
75 As	34077.11	P	179.00	0.53
78 Se	16656.78	P	138.00	0.83
88 Sr	1409247.00	A	9380.00	0.67
90 Zr	654702.38	P	3906.00	0.60
95 Mo	247140.41	P	1610.00	0.65
107 Ag	693286.31	P	6602.00	0.95
111 Cd	162652.80	P	645.30	0.40
115 In	3611173.00	A	12380.00	0.34
118 Sn	452066.31	P	648.30	0.14
121 Sb	612242.38	P	4245.00	0.69
137 Ba	236515.09	P	1939.00	0.82
159 Tb	5843539.00	A	33320.00	0.57
182 W	730147.00	P	1770.00	0.24
205 Tl	1693490.00	A	7978.00	0.47
208 Pb	2297615.00	P	21190.00	0.92
209 Bi	3977549.00	A	19440.00	0.49
235 U	19114.64	P	232.80	1.22
238 U	2706563.00	A	14770.00	0.55

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1702575.10	0.59	1763611.90	96.5	60 - 125	
45 Sc	1074146.80	1.30	1013186.80	106.0	60 - 125	
45 Sc	241975.20	0.46	229422.78	105.5	60 - 125	
45 Sc	2285531.80	0.77	2184529.50	104.6	60 - 125	
72 Ge	262352.09	0.40	258401.14	101.5	60 - 125	
72 Ge	122635.45	0.55	121037.70	101.3	60 - 125	
72 Ge	486807.69	0.73	493345.72	98.7	60 - 125	
115 In	3611173.30	0.34	3642559.50	99.1	60 - 125	
159 Tb	5843538.50	0.57	5798793.50	100.8	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: **Pass**
ISTD: **Pass**

ICV QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16009.D\F6I16009.D#
Date Acquired: Sep 28 2015 12:46 pm
Acq. Method: EMX6020.M
Operator: CCapul
Sample Name: ICV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update: Sep 28 2015 12:45 pm
Sample Type: ICV1
Dilution Factor: 1.00

QC Elements

Element	Conc.		CPS	Conc. RSD(%)	Expected	QC Range(%)	Flag
7 Li	28.81	ppb	581710.1	0.84	30.00	90 - 110	
9 Be	29.81	ppb	129092.0	1.32	30.00	90 - 110	
11 B	31.31	ppb	122922.1	3.63	30.00	90 - 110	
23 Na	1532.00	ppb	5503887.0	1.43	1500.00	90 - 110	
24 Mg	2990.00	ppb	36678152.0	1.71	3000.00	90 - 110	
27 Al	2913.00	ppb	45832648.0	0.89	3000.00	90 - 110	
28 Si	2995.00	ppb	3041699.0	0.73	3000.00	90 - 110	
31 P	27.68	ppb	46482.6	2.62	300.00	90 - 110	Fail
39 K	3123.00	ppb	2053442.0	1.13	3000.00	90 - 110	
40 Ca	3067.00	ppb	19111630.0	0.67	3000.00	90 - 110	
47 Ti	28.22	ppb	41717.9	1.15	30.00	90 - 110	
51 V	30.03	ppb	125941.4	0.18	30.00	90 - 110	
52 Cr	29.68	ppb	143970.0	0.28	30.00	90 - 110	
55 Mn	28.97	ppb	716087.7	1.44	30.00	90 - 110	
56 Fe	3096.00	ppb	27088710.0	0.38	3000.00	90 - 110	
59 Co	28.84	ppb	538206.2	1.86	30.00	90 - 110	
60 Ni	29.83	ppb	49093.2	0.75	30.00	90 - 110	
63 Cu	30.45	ppb	126122.8	0.97	30.00	90 - 110	
66 Zn	56.53	ppb	177159.4	0.73	60.00	90 - 110	
75 As	29.84	ppb	19808.0	0.91	30.00	90 - 110	
78 Se	29.02	ppb	9461.8	1.16	30.00	90 - 110	
88 Sr	29.40	ppb	804488.7	0.63	30.00	90 - 110	
90 Zr	17.53	ppb	366253.4	0.55	20.00	90 - 110	Fail
95 Mo	29.40	ppb	142583.2	0.93	30.00	90 - 110	
107 Ag	28.59	ppb	397947.6	1.23	30.00	90 - 110	
111 Cd	29.23	ppb	93920.3	0.71	30.00	90 - 110	
118 Sn	29.09	ppb	264313.9	1.04	30.00	90 - 110	
121 Sb	29.19	ppb	353988.1	0.44	30.00	90 - 110	
137 Ba	28.92	ppb	136744.0	0.71	30.00	90 - 110	
182 W	30.65	ppb	426234.9	0.06	30.00	90 - 110	
205 Tl	29.32	ppb	985751.3	0.81	30.00	90 - 110	
208 Pb	29.03	ppb	1351722.0	0.31	30.00	90 - 110	
235 U	0.21	ppb	10960.6	0.73	0.21	90 - 110	
238 U	29.50	ppb	1571785.0	0.65	29.79	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1680892.0	0.46	1763611.90	95.3	60 - 125	
45 Sc	997954.3	0.29	1013186.80	98.5	60 - 125	
45 Sc	230103.8	0.51	229422.78	100.3	60 - 125	
45 Sc	2165344.3	1.13	2184529.50	99.1	60 - 125	
72 Ge	251211.3	0.67	258401.14	97.2	60 - 125	
72 Ge	118680.7	0.20	121037.70	98.1	60 - 125	
72 Ge	471466.2	0.27	493345.72	95.6	60 - 125	
115 In	3536742.0	0.86	3642559.50	97.1	60 - 125	
159 Tb	5709148.5	0.75	5798793.50	98.5	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

2 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

ICB QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16010.D\F6I16010.D#
Date Acquired:	Sep 28 2015 12:51 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICB
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	ICB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0820	ppb	105021.8	79.50	0.20	
9 Be	0.0027	ppb	77.8	223.21	0.10	
11 B	-1.1080	ppb	23422.4	47.57	5.00	
23 Na	-12.2200	ppb	237866.7	2.55	40.00	
24 Mg	-2.2920	ppb	34442.8	0.83	10.00	
27 Al	0.0595	ppb	3686.1	19.51	20.00	
28 Si	-0.6764	ppb	4478.6	29.67	20.00	
31 P	-2.2390	ppb	26341.4	13.14	10.00	
39 K	-4.9820	ppb	44069.1	13.77	20.00	
40 Ca	0.2248	ppb	62992.8	37.19	25.00	
47 Ti	-0.0946	ppb	175.6	12.68	0.50	
51 V	0.1204	ppb	3715.2	11.72	0.50	
52 Cr	-0.0462	ppb	547.3	11.77	0.20	
55 Mn	-0.0519	ppb	5005.5	6.95	0.20	
56 Fe	1.2630	ppb	34832.6	2.76	10.00	
59 Co	0.0000	ppb	398.9	3335.30	0.20	
60 Ni	-0.0462	ppb	247.8	41.65	0.20	
63 Cu	-0.0102	ppb	176.4	18.36	0.40	
66 Zn	-0.0153	ppb	1192.3	210.46	2.00	
75 As	0.0009	ppb	112.4	1903.10	0.20	
78 Se	0.0032	ppb	5.6	128.71	0.20	
90 Zr	-0.0037	ppb	232.2	39.83	2.00	
95 Mo	0.0153	ppb	123.3	40.09	0.40	
107 Ag	0.0015	ppb	74.4	54.48	0.20	
111 Cd	-0.0016	ppb	10.0	148.85	0.20	
118 Sn	0.0011	ppb	136.7	92.73	0.20	
121 Sb	0.0073	ppb	376.7	72.55	0.40	
137 Ba	-0.0008	ppb	103.3	628.30	0.20	
182 W	0.0185	ppb	357.8	20.26	1.00	
205 Tl	0.0024	ppb	173.3	5.32	0.20	
208 Pb	-0.0030	ppb	313.3	23.11	0.10	
235 U	0.0002	ppb	13.3	30.05	1.00	
238 U	0.0052	ppb	305.6	16.14	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1725300.1	0.74	1763611.90	97.8	60 - 125	
45 Sc	996724.6	0.98	1013186.80	98.4	60 - 125	
45 Sc	230133.5	0.33	229422.78	100.3	60 - 125	
45 Sc	2127896.3	0.29	2184529.50	97.4	60 - 125	
72 Ge	259672.2	0.56	258401.14	100.5	60 - 125	
72 Ge	120950.0	1.04	121037.70	99.9	60 - 125	
72 Ge	472960.2	0.85	493345.72	95.9	60 - 125	
115 In	3591955.0	0.69	3642559.50	98.6	60 - 125	
159 Tb	5739846.0	1.08	5798793.50	99.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16011.D\F6I16011.D#
Date Acquired:	Sep 28 2015 12:55 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	MRLI2801
Misc Info:	1/100/10 ppb
Vial Number:	1305
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	123049.0	0.0000	0.9717	ppb	2.63	225.00	
9 Be	# 3	45	4502.0	0.0000	1.0360	ppb	1.58	225.00	
11 B	# 3	45	55002.9	0.0000	9.2860	ppb	1.01	225.00	
23 Na	# 1	45	620810.5	0.0000	98.2300	ppb	0.30	269999.99	
24 Mg	# 3	45	1275733.0	0.0000	100.2000	ppb	2.51	180000.00	
27 Al	# 3	45	1507470.0	0.0000	96.7000	ppb	2.01	90000.00	
28 Si	# 1	45	5114.4	0.0000	-0.1056	ppb	144.79	9000.00	
31 P	# 3	45	61455.7	0.0000	51.4900	ppb	3.18	359999.99	
39 K	# 2	45	112262.2	0.0000	98.7800	ppb	1.09	269999.99	
40 Ca	# 1	45	736876.2	0.0000	107.5000	ppb	0.89	269999.99	
47 Ti	# 3	45	1722.4	0.0000	0.9708	ppb	5.40	2700.00	
51 V	# 2	45	7754.3	0.0000	1.0830	ppb	3.20	2700.00	
52 Cr	# 2	45	5626.9	0.0000	0.9907	ppb	3.20	2700.00	
55 Mn	# 3	45	30047.3	0.0000	0.9805	ppb	1.91	2700.00	
56 Fe	# 1	45	972770.4	0.0000	107.5000	ppb	1.40	90000.00	
59 Co	# 3	45	19340.1	0.0000	1.0270	ppb	2.68	2700.00	
60 Ni	# 2	45	1982.1	0.0000	0.9982	ppb	3.47	2700.00	
63 Cu	# 2	45	4696.3	0.0000	1.0670	ppb	0.71	2700.00	
66 Zn	# 3	72	33113.1	0.0000	9.9630	ppb	0.77	2700.00	
75 As	# 2	72	787.8	0.0000	0.9928	ppb	5.93	2700.00	
78 Se	# 1	72	332.5	0.0000	0.9761	ppb	4.52	2700.00	
88 Sr	# 3	72	58493.0	0.0000	2.0420	ppb	0.67	2700.00	
90 Zr	# 3	72	56602.6	0.0000	2.6260	ppb	0.55	1800.00	
95 Mo	# 3	115	4953.3	0.0000	0.9847	ppb	2.74	2700.00	
107 Ag	# 3	115	14262.2	0.0000	0.9936	ppb	0.97	225.00	
111 Cd	# 3	115	3532.8	0.0000	1.0660	ppb	5.81	2700.00	
118 Sn	# 3	115	9303.4	0.0000	0.9833	ppb	1.57	2700.00	
121 Sb	# 3	115	12602.8	0.0000	0.9892	ppb	1.81	2700.00	
137 Ba	# 3	115	4907.7	0.0000	0.9888	ppb	0.89	2700.00	
182 W	# 3	159	24849.2	0.0000	1.7370	ppb	1.37	450.00	
205 Tl	# 3	159	34541.5	0.0000	1.0000	ppb	0.68	2700.00	
208 Pb	# 3	159	47954.8	0.0000	0.9959	ppb	1.15	2700.00	
235 U	# 3	159	377.8	0.0000	0.0069	ppb	6.71	27.00	
238 U	# 3	159	53483.2	0.0000	0.9792	ppb	0.62	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1726425.10	0.34	1763611.90	97.9	60 - 125	
45 Sc # 1	1007844.10	0.25	1013186.80	99.5	60 - 125	
45 Sc # 2	233309.86	1.33	229422.78	101.7	60 - 125	
45 Sc # 3	2141552.80	1.22	2184529.50	98.0	60 - 125	
72 Ge # 1	259047.50	0.35	258401.14	100.3	60 - 125	
72 Ge # 2	122195.83	0.92	121037.70	101.0	60 - 125	
72 Ge # 3	484204.47	0.35	493345.72	98.1	60 - 125	
115 In # 3	3633316.50	0.77	3642559.50	99.7	60 - 125	
159 Tb # 3	5849039.00	0.85	5798793.50	100.9	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

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Sample QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16012.D\F6I16012.D#
Date Acquired:	Sep 28 2015 12:59 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	MRLI2802
Misc Info:	0.5/50/4 ppb
Vial Number:	1306
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	113779.2	0.0000	0.4467	ppb	22.17	225.00	
9 Be	# 3	45	2321.4	0.0000	0.5262	ppb	3.44	225.00	
11 B	# 3	45	27037.4	0.0000	0.0352	ppb	2393.30	225.00	
23 Na	# 1	45	438450.5	0.0000	49.8200	ppb	3.80	269999.99	
24 Mg	# 3	45	671102.2	0.0000	50.2100	ppb	0.29	180000.00	
27 Al	# 3	45	774936.0	0.0000	49.5700	ppb	0.23	90000.00	
28 Si	# 1	45	7345.5	0.0000	2.3290	ppb	1.77	9000.00	
31 P	# 3	45	25972.7	0.0000	-3.1010	ppb	11.68	359999.99	
39 K	# 2	45	77803.7	0.0000	50.0800	ppb	1.37	269999.99	
40 Ca	# 1	45	443030.6	0.0000	63.2200	ppb	1.33	269999.99	
47 Ti	# 3	45	834.5	0.0000	0.3582	ppb	3.85	2700.00	
51 V	# 2	45	5499.1	0.0000	0.5853	ppb	2.28	2700.00	
52 Cr	# 2	45	3016.8	0.0000	0.4787	ppb	2.41	2700.00	
55 Mn	# 3	45	17890.4	0.0000	0.4781	ppb	3.00	2700.00	
56 Fe	# 1	45	506933.7	0.0000	56.7600	ppb	1.36	90000.00	
59 Co	# 3	45	10102.8	0.0000	0.5256	ppb	1.28	2700.00	
60 Ni	# 2	45	1118.5	0.0000	0.5008	ppb	0.49	2700.00	
63 Cu	# 2	45	2438.7	0.0000	0.5493	ppb	0.36	2700.00	
66 Zn	# 3	72	14938.2	0.0000	4.3300	ppb	1.98	2700.00	
75 As	# 2	72	434.9	0.0000	0.4949	ppb	3.56	2700.00	
78 Se	# 1	72	172.9	0.0000	0.5219	ppb	7.67	2700.00	
88 Sr	# 3	72	15149.7	0.0000	0.5034	ppb	1.89	2700.00	
90 Zr	# 3	72	595.6	0.0000	0.0133	ppb	4.17	1800.00	
95 Mo	# 3	115	2611.5	0.0000	0.5174	ppb	4.27	2700.00	
107 Ag	# 3	115	7077.6	0.0000	0.4939	ppb	1.36	225.00	
111 Cd	# 3	115	1674.1	0.0000	0.5054	ppb	2.14	2700.00	
118 Sn	# 3	115	4795.4	0.0000	0.5031	ppb	2.13	2700.00	
121 Sb	# 3	115	6700.8	0.0000	0.5180	ppb	2.31	2700.00	
137 Ba	# 3	115	2574.8	0.0000	0.5111	ppb	5.58	2700.00	
182 W	# 3	159	222.2	0.0000	0.0086	ppb	20.31	450.00	
205 Tl	# 3	159	17901.6	0.0000	0.5228	ppb	0.74	2700.00	
208 Pb	# 3	159	24315.2	0.0000	0.5060	ppb	1.11	2700.00	
235 U	# 3	159	188.9	0.0000	0.0035	ppb	5.04	27.00	
238 U	# 3	159	27003.4	0.0000	0.4997	ppb	1.07	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1721540.10	0.39	1763611.90	97.6	60 - 125	
45 Sc # 1	973124.06	1.13	1013186.80	96.0	60 - 125	
45 Sc # 2	225366.17	0.73	229422.78	98.2	60 - 125	
45 Sc # 3	2143273.00	1.13	2184529.50	98.1	60 - 125	
72 Ge # 1	248999.66	0.27	258401.14	96.4	60 - 125	
72 Ge # 2	118255.05	0.87	121037.70	97.7	60 - 125	
72 Ge # 3	478697.28	1.02	493345.72	97.0	60 - 125	
115 In # 3	3612883.30	0.96	3642559.50	99.2	60 - 125	
159 Tb # 3	5783467.50	0.49	5798793.50	99.7	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICS-A QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16013.D\F6I16013.D#
Date Acquired:	Sep 28 2015 01:04 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICSA
Misc Info:	
Vial Number:	1303
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	ICS-A
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.46	ppb	91703.5	14.78	---	
9 Be	0.01	ppb	83.3	46.69	---	
11 B	-1.77	ppb	19187.3	27.92	---	
23 Na	96600.00	ppb	312768190.0	2.55	120000.00	
24 Mg	93640.00	ppb	1009362000.0	0.35	120000.00	
27 Al	89350.00	ppb	1237499000.0	0.49	120000.00	
28 Si	3.02	ppb	7810.1	16.67	---	
31 P	102500.00	ppb	59354728.0	0.34	---	
39 K	97040.00	ppb	57696408.0	0.79	120000.00	
40 Ca	96170.00	ppb	566903810.0	3.20	120000.00	
47 Ti	2036.00	ppb	2629710.0	0.35	2400.00	
51 V	0.13	ppb	3470.7	2.77	---	
52 Cr	1.26	ppb	6338.3	0.87	---	
55 Mn	0.30	ppb	12103.2	3.37	---	
56 Fe	95140.00	ppb	789087420.0	2.86	120000.00	
59 Co	0.31	ppb	5476.8	3.66	---	
60 Ni	0.10	ppb	449.8	5.58	---	
63 Cu	0.69	ppb	2823.6	1.57	---	
66 Zn	2.56	ppb	8861.9	2.73	---	
75 As	0.26	ppb	266.4	16.49	---	
78 Se	0.04	ppb	17.1	35.77	---	
88 Sr	0.60	ppb	16817.2	0.68	---	
90 Zr	0.13	ppb	2946.0	6.62	---	
95 Mo	2020.00	ppb	8553844.0	0.27	2400.00	
107 Ag	0.02	ppb	306.7	6.38	---	
111 Cd	0.23	ppb	656.6	31.99	---	
118 Sn	0.03	ppb	312.2	11.28	---	
121 Sb	0.04	ppb	646.7	5.50	---	
137 Ba	0.10	ppb	492.3	16.47	---	
182 W	0.14	ppb	1834.6	4.18	---	
205 Tl	0.00	ppb	145.6	32.41	---	
208 Pb	0.19	ppb	8432.5	2.33	---	
235 U	0.00	ppb	10.0	74.53	---	
238 U	0.00	ppb	125.6	18.27	---	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1385117.3	0.76	1763611.90	78.5	60 - 125	
45 Sc	947424.8	2.83	1013186.80	93.5	60 - 125	
45 Sc	212804.1	0.28	229422.78	92.8	60 - 125	
45 Sc	1905754.5	0.42	2184529.50	87.2	60 - 125	
72 Ge	228232.1	0.26	258401.14	88.3	60 - 125	
72 Ge	111101.9	0.63	121037.70	91.8	60 - 125	
72 Ge	454178.1	0.43	493345.72	92.1	60 - 125	
115 In	3088988.5	0.24	3642559.50	84.8	60 - 125	
159 Tb	5233754.5	0.75	5798793.50	90.3	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICS-AB QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16014.D\F6I16014.D#
Date Acquired:	Sep 28 2015 01:08 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICSAB
Misc Info:	
Vial Number:	1304
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	ICS-AB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	20.00	ppb	351648.4	0.34	20.00	80 - 120	
9 Be	18.97	ppb	72318.5	0.83	20.00	80 - 120	
11 B	16.17	ppb	67484.3	2.43	20.00	80 - 120	
23 Na	95740.00	ppb	308061310.0	1.30	100000.00	80 - 120	
24 Mg	92810.00	ppb	1000567000.0	1.38	100000.00	80 - 120	
27 Al	88800.00	ppb	1230114900.0	0.86	100000.00	80 - 120	
28 Si	193.90	ppb	190302.1	1.22	200.00	80 - 120	
31 P	101700.00	ppb	58915392.0	0.78	100000.00	80 - 120	
39 K	96830.00	ppb	56844408.0	0.32	100000.00	80 - 120	
40 Ca	95940.00	ppb	562098110.0	0.76	100000.00	80 - 120	
47 Ti	2063.00	ppb	2664996.0	0.45	2000.00	80 - 120	
51 V	19.67	ppb	76320.7	0.46	20.00	80 - 120	
52 Cr	20.47	ppb	90875.9	0.56	20.00	80 - 120	
55 Mn	19.49	ppb	425986.2	0.89	20.00	80 - 120	
56 Fe	95430.00	ppb	786673020.0	0.71	100000.00	80 - 120	
59 Co	19.00	ppb	312231.8	0.57	20.00	80 - 120	
60 Ni	18.44	ppb	27824.9	0.94	20.00	80 - 120	
63 Cu	18.92	ppb	71628.4	0.56	20.00	80 - 120	
66 Zn	19.45	ppb	58140.7	0.41	20.00	80 - 120	
75 As	20.19	ppb	12405.2	0.73	20.00	80 - 120	
78 Se	21.05	ppb	6153.1	0.89	20.00	80 - 120	
88 Sr	19.29	ppb	497011.6	0.76	20.00	80 - 120	
90 Zr	8.08	ppb	158937.9	0.93	20.00	80 - 120	Fail
95 Mo	2056.00	ppb	8708650.0	0.73	2000.00	80 - 120	
107 Ag	17.94	ppb	218298.0	0.83	20.00	80 - 120	
111 Cd	19.48	ppb	54699.3	0.94	20.00	80 - 120	
118 Sn	19.53	ppb	155136.0	0.44	20.00	80 - 120	
121 Sb	20.23	ppb	214457.0	0.90	20.00	80 - 120	
137 Ba	19.85	ppb	82036.8	0.53	20.00	80 - 120	
182 W	20.17	ppb	259555.6	0.66	20.00	80 - 120	
205 Tl	18.66	ppb	580725.1	0.98	20.00	80 - 120	
208 Pb	18.61	ppb	802055.4	0.11	20.00	80 - 120	
235 U	0.14	ppb	7098.9	1.43	0.14	80 - 120	
238 U	19.65	ppb	968881.0	0.75	19.86	80 - 120	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1357053.4	1.14	1763611.90	76.9	60 - 125	
45 Sc	941132.1	0.57	1013186.80	92.9	60 - 125	
45 Sc	210110.4	0.36	229422.78	91.6	60 - 125	
45 Sc	1906182.0	1.14	2184529.50	87.3	60 - 125	
72 Ge	225161.3	0.44	258401.14	87.1	60 - 125	
72 Ge	109560.5	0.15	121037.70	90.5	60 - 125	
72 Ge	443727.7	0.21	493345.72	89.9	60 - 125	
115 In	3090462.3	0.89	3642559.50	84.8	60 - 125	
159 Tb	5283072.0	0.43	5798793.50	91.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16016.D\F6I16016.D#
Date Acquired: Sep 28 2015 01:17 pm
Operator: CCapul
Sample Name: CCV1
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal Update: Sep 28 2015 12:45 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	24.92 ppb	1.42	25.00	90 - 110	
9 Be	24.14 ppb	2.81	25.00	90 - 110	
11 B	24.43 ppb	5.11	25.00	90 - 110	
23 Na	1246.00 ppb	0.74	1250.00	90 - 110	
24 Mg	2419.00 ppb	1.72	2500.00	90 - 110	
27 Al	2365.00 ppb	1.54	2500.00	90 - 110	
28 Si	2400.00 ppb	0.54	2500.00	90 - 110	
31 P	239.20 ppb	1.80	250.00	90 - 110	
39 K	2559.00 ppb	0.88	2500.00	90 - 110	
40 Ca	2519.00 ppb	0.50	2500.00	90 - 110	
47 Ti	24.22 ppb	1.42	25.00	90 - 110	
51 V	24.93 ppb	1.34	25.00	90 - 110	
52 Cr	25.31 ppb	1.15	25.00	90 - 110	
55 Mn	25.15 ppb	2.40	25.00	90 - 110	
56 Fe	2588.00 ppb	0.44	2500.00	90 - 110	
59 Co	24.36 ppb	1.44	25.00	90 - 110	
60 Ni	25.18 ppb	1.82	25.00	90 - 110	
63 Cu	25.90 ppb	1.23	25.00	90 - 110	
66 Zn	49.84 ppb	1.58	50.00	90 - 110	
75 As	25.21 ppb	1.81	25.00	90 - 110	
78 Se	25.52 ppb	1.11	25.00	90 - 110	
88 Sr	26.02 ppb	1.03	25.00	90 - 110	
90 Zr	13.29 ppb	1.57	15.00	90 - 110	Fail
95 Mo	25.05 ppb	1.51	25.00	90 - 110	
107 Ag	24.29 ppb	1.53	25.00	90 - 110	
111 Cd	25.11 ppb	1.67	25.00	90 - 110	
118 Sn	24.90 ppb	0.25	25.00	90 - 110	
121 Sb	25.01 ppb	0.55	25.00	90 - 110	
137 Ba	24.50 ppb	0.99	25.00	90 - 110	
182 W	25.93 ppb	0.70	25.00	90 - 110	
205 Tl	26.00 ppb	1.11	25.00	90 - 110	
208 Pb	25.44 ppb	1.83	25.00	90 - 110	
235 U	0.19 ppb	2.77	0.18	90 - 110	
238 U	26.23 ppb	1.62	24.82	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1513430.80	1.13	1763611.90	85.8	60 - 125	
45 Sc	941102.69	0.41	1013186.80	92.9	60 - 125	
45 Sc	214735.45	0.99	229422.78	93.6	60 - 125	
45 Sc	2058550.00	1.75	2184529.50	94.2	60 - 125	
72 Ge	234724.61	0.84	258401.14	90.8	60 - 125	
72 Ge	110195.41	1.24	121037.70	91.0	60 - 125	
72 Ge	445897.28	1.15	493345.72	90.4	60 - 125	
115 In	3500858.30	0.92	3642559.50	96.1	60 - 125	
159 Tb	5741863.00	1.45	5798793.50	99.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16017.D\F6I16017.D#
Date Acquired:	Sep 28 2015 01:21 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB1
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0148	ppb	94160.6	159.43	0.20	
9 Be	-0.0027	ppb	51.1	157.23	0.10	
11 B	-2.7380	ppb	17313.9	13.50	5.00	
23 Na	-42.2200	ppb	128382.5	0.37	40.00	Fail
24 Mg	-1.8960	ppb	36630.2	2.10	10.00	
27 Al	0.4792	ppb	9507.8	5.22	20.00	
28 Si	-1.4820	ppb	3465.0	14.24	20.00	
31 P	-5.9480	ppb	22367.6	7.79	10.00	
39 K	-9.2440	ppb	38694.0	4.84	20.00	
40 Ca	0.6322	ppb	61968.7	13.80	25.00	
47 Ti	-0.0498	ppb	224.5	14.60	0.50	
51 V	-0.0024	ppb	3008.3	611.82	0.50	
52 Cr	-0.0592	ppb	453.8	6.24	0.20	
55 Mn	-0.1132	ppb	3295.0	7.61	0.20	
56 Fe	1.6660	ppb	36269.2	7.26	10.00	
59 Co	-0.0069	ppb	254.5	5.35	0.20	
60 Ni	-0.0153	ppb	279.3	23.43	0.20	
63 Cu	0.0120	ppb	251.1	38.84	0.40	
66 Zn	-0.0077	ppb	1152.3	388.27	2.00	
75 As	-0.0283	ppb	87.8	6.58	0.20	
78 Se	-0.0013	ppb	3.8	332.47	0.20	
88 Sr	-0.0040	ppb	1007.9	106.55	0.20	
90 Zr	-0.0049	ppb	195.6	24.04	2.00	
95 Mo	0.1542	ppb	795.6	4.65	0.40	
107 Ag	0.0017	ppb	76.7	25.57	0.20	
111 Cd	-0.0015	ppb	10.4	333.85	0.20	
118 Sn	0.0009	ppb	133.3	147.96	0.20	
121 Sb	0.0041	ppb	332.2	70.81	0.40	
137 Ba	-0.0023	ppb	94.4	219.37	0.20	
182 W	0.0167	ppb	335.6	7.22	1.00	
205 Tl	0.0016	ppb	147.8	11.83	0.20	
208 Pb	-0.0033	ppb	300.0	41.34	0.10	
235 U	0.0000	ppb	2.2	1354.50	1.00	
238 U	0.0037	ppb	228.9	6.11	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1530147.9	0.67	1763611.90	86.8	60 - 125	
45 Sc	942714.7	0.31	1013186.80	93.0	60 - 125	
45 Sc	215439.0	0.71	229422.78	93.9	60 - 125	
45 Sc	1987934.1	1.07	2184529.50	91.0	60 - 125	
72 Ge	243302.1	0.37	258401.14	94.2	60 - 125	
72 Ge	114390.2	0.36	121037.70	94.5	60 - 125	
72 Ge	447900.8	0.62	493345.72	90.8	60 - 125	
115 In	3540141.3	0.49	3642559.50	97.2	60 - 125	
159 Tb	5766506.5	1.01	5798793.50	99.4	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16105.D\F6I16105.D#
Date Acquired: Sep 28 2015 07:36 pm
Operator: CCapul
Sample Name: CCV9
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal Update: Sep 28 2015 12:45 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	24.37 ppb	1.52	25.00	90 - 110	
9 Be	25.13 ppb	1.67	25.00	90 - 110	
11 B	21.30 ppb	4.53	25.00	90 - 110	Fail
23 Na	1234.00 ppb	1.13	1250.00	90 - 110	
24 Mg	2476.00 ppb	1.29	2500.00	90 - 110	
27 Al	2409.00 ppb	0.84	2500.00	90 - 110	
28 Si	2498.00 ppb	0.71	2500.00	90 - 110	
31 P	252.50 ppb	1.19	250.00	90 - 110	
39 K	2658.00 ppb	0.59	2500.00	90 - 110	
40 Ca	2539.00 ppb	0.87	2500.00	90 - 110	
47 Ti	24.06 ppb	0.85	25.00	90 - 110	
51 V	24.88 ppb	0.84	25.00	90 - 110	
52 Cr	24.94 ppb	0.95	25.00	90 - 110	
55 Mn	24.67 ppb	0.89	25.00	90 - 110	
56 Fe	2564.00 ppb	1.07	2500.00	90 - 110	
59 Co	24.06 ppb	1.57	25.00	90 - 110	
60 Ni	24.83 ppb	1.40	25.00	90 - 110	
63 Cu	25.44 ppb	1.38	25.00	90 - 110	
66 Zn	49.31 ppb	0.73	50.00	90 - 110	
75 As	25.34 ppb	1.31	25.00	90 - 110	
78 Se	24.55 ppb	1.43	25.00	90 - 110	
88 Sr	25.81 ppb	0.73	25.00	90 - 110	
90 Zr	13.52 ppb	0.96	15.00	90 - 110	
95 Mo	24.58 ppb	0.43	25.00	90 - 110	
107 Ag	24.30 ppb	0.21	25.00	90 - 110	
111 Cd	24.62 ppb	0.66	25.00	90 - 110	
118 Sn	24.29 ppb	0.83	25.00	90 - 110	
121 Sb	24.76 ppb	0.73	25.00	90 - 110	
137 Ba	24.65 ppb	0.30	25.00	90 - 110	
182 W	24.92 ppb	1.32	25.00	90 - 110	
205 Tl	25.05 ppb	1.32	25.00	90 - 110	
208 Pb	24.66 ppb	0.44	25.00	90 - 110	
235 U	0.18 ppb	2.19	0.18	90 - 110	
238 U	25.46 ppb	1.66	24.82	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1423450.80	1.61	1763611.90	80.7	60 - 125	
45 Sc	848977.19	1.24	1013186.80	83.8	60 - 125	
45 Sc	191177.67	1.54	229422.78	83.3	60 - 125	
45 Sc	1847236.30	1.39	2184529.50	84.6	60 - 125	
72 Ge	211666.08	0.21	258401.14	81.9	60 - 125	
72 Ge	99376.01	1.04	121037.70	82.1	60 - 125	
72 Ge	398295.88	0.71	493345.72	80.7	60 - 125	
115 In	3113367.50	0.24	3642559.50	85.5	60 - 125	
159 Tb	5140375.50	0.43	5798793.50	88.6	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16106.D\F6I16106.D#
Date Acquired: Sep 28 2015 07:40 pm
Acq. Method: EMX6020.M
Operator: CCapul
Sample Name: CCB9
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update: Sep 28 2015 12:45 pm
Sample Type: CCB
Dilution Factor: 1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.1461	ppb	88854.0	50.38	0.20	
9 Be	-0.0047	ppb	40.0	69.80	0.10	
11 B	-3.8640	ppb	13147.3	16.92	5.00	
23 Na	-6.0580	ppb	218981.6	5.43	40.00	
24 Mg	-3.1160	ppb	21299.2	0.60	10.00	
27 Al	0.3123	ppb	6596.1	5.49	20.00	
28 Si	0.3965	ppb	4706.5	93.24	20.00	
31 P	-2.5850	ppb	22681.8	33.89	10.00	
39 K	-3.9290	ppb	37783.9	27.23	20.00	
40 Ca	-4.9780	ppb	25974.7	0.63	25.00	
47 Ti	-0.1303	ppb	107.8	4.15	0.50	
51 V	0.0472	ppb	2884.8	28.17	0.50	
52 Cr	-0.0497	ppb	448.2	15.51	0.20	
55 Mn	-0.1048	ppb	3241.6	6.47	0.20	
56 Fe	1.2250	ppb	29174.3	14.04	10.00	
59 Co	-0.0036	ppb	287.8	37.36	0.20	
60 Ni	-0.0188	ppb	247.1	67.22	0.20	
63 Cu	-0.0174	ppb	124.0	18.37	0.40	
66 Zn	-0.1782	ppb	595.6	1.92	2.00	
75 As	-0.0275	ppb	79.3	24.69	0.20	
78 Se	-0.0038	ppb	2.7	2.40	0.20	
88 Sr	-0.0196	ppb	555.6	4.46	0.20	
90 Zr	-0.0026	ppb	222.2	32.98	2.00	
95 Mo	0.0126	ppb	98.9	65.33	0.40	
107 Ag	0.0008	ppb	58.9	69.74	0.20	
111 Cd	-0.0032	ppb	4.5	80.26	0.20	
118 Sn	0.0015	ppb	126.7	102.99	0.20	
121 Sb	0.0201	ppb	481.1	21.12	0.40	
137 Ba	0.0245	ppb	202.2	30.92	0.20	
182 W	0.0111	ppb	232.2	2.65	1.00	
205 Tl	-0.0002	ppb	78.9	206.65	0.20	
208 Pb	-0.0029	ppb	290.0	25.49	0.10	
235 U	0.0000	ppb	4.4	177.84	1.00	
238 U	0.0024	ppb	143.3	22.90	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1475009.4	0.49	1763611.90	83.6	60 - 125	
45 Sc	843170.4	1.21	1013186.80	83.2	60 - 125	
45 Sc	194331.6	0.35	229422.78	84.7	60 - 125	
45 Sc	1847941.3	0.56	2184529.50	84.6	60 - 125	
72 Ge	218006.2	0.98	258401.14	84.4	60 - 125	
72 Ge	102764.0	0.57	121037.70	84.9	60 - 125	
72 Ge	411764.5	0.33	493345.72	83.5	60 - 125	
115 In	3232640.3	0.74	3642559.50	88.7	60 - 125	
159 Tb	5226964.0	0.79	5798793.50	90.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16107.D\F6I16107.D#
Date Acquired:	Sep 28 2015 07:44 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	IMI036SB
Misc Info:	
Vial Number:	3104
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	MBS
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0187	ppb	91908.0	311.08	0.50	
9 Be	-0.0053	ppb	38.9	50.55	0.50	
11 B	-3.7510	ppb	13742.4	13.84	10.00	
23 Na	0.4377	ppb	240214.7	301.80	100.00	
24 Mg	-1.9950	ppb	33740.0	1.20	100.00	
27 Al	2.6000	ppb	38137.7	0.95	100.00	
28 Si	2.6120	ppb	6678.4	1.34	50.00	
31 P	13.9800	ppb	32688.2	8.40	10.00	Fail
39 K	-1.2900	ppb	39725.7	71.64	100.00	
40 Ca	23.4800	ppb	177215.7	2.11	100.00	
47 Ti	-0.0923	ppb	158.9	25.06	0.50	
51 V	-0.2595	ppb	1849.9	3.67	0.50	
52 Cr	-0.0452	ppb	472.2	14.54	0.50	
55 Mn	-0.0620	ppb	4227.5	7.32	0.50	
56 Fe	1.4860	ppb	31443.6	4.94	100.00	
59 Co	-0.0070	ppb	238.9	18.81	0.50	
60 Ni	0.0418	ppb	335.1	60.06	0.50	
63 Cu	0.0586	ppb	394.2	10.93	0.50	
66 Zn	1.6420	ppb	5618.0	2.52	2.00	
75 As	-0.0644	ppb	58.7	9.35	0.50	
78 Se	-0.0031	ppb	2.9	187.43	0.50	
88 Sr	-0.0018	ppb	992.3	101.71	0.50	
90 Zr	0.0026	ppb	321.1	74.81	5.00	
95 Mo	0.0081	ppb	80.0	90.35	0.50	
107 Ag	0.0011	ppb	62.2	42.82	0.50	
111 Cd	-0.0001	ppb	13.7	2861.80	0.50	
118 Sn	3.4300	ppb	28777.1	0.84	20.00	
121 Sb	0.0058	ppb	325.6	45.80	0.50	
137 Ba	0.0626	ppb	368.9	6.13	0.50	
182 W	0.0079	ppb	194.5	11.04	2.00	
205 Tl	0.0005	ppb	102.2	103.93	0.50	
208 Pb	0.0065	ppb	698.9	8.51	0.50	
235 U	0.0000	ppb	0.0	0.00	---	
238 U	0.0011	ppb	80.0	53.14	0.50	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1494422.9	0.43	1763611.90	84.7	60 - 125	
45 Sc	852230.3	1.62	1013186.80	84.1	60 - 125	
45 Sc	196858.5	0.45	229422.78	85.8	60 - 125	
45 Sc	1888645.1	0.31	2184529.50	86.5	60 - 125	
72 Ge	220123.6	0.45	258401.14	85.2	60 - 125	
72 Ge	103564.1	0.30	121037.70	85.6	60 - 125	
72 Ge	417312.4	1.07	493345.72	84.6	60 - 125	
115 In	3253156.8	1.22	3642559.50	89.3	60 - 125	
159 Tb	5288847.5	0.71	5798793.50	91.2	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

LCS QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16108.D\F6I16108.D#
Date Acquired:	Sep 28 2015 07:49 pm
Operator:	CCapul
Sample Name:	IMI036SL
Misc Info:	
Vial Number:	3105
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	LCSS
Final Dil Factor:	1.00

Analyte Elements

Element	CPS Mean	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 Li	793068.50	49.65	ppb	1.66	50.00	80 - 120	
9 Be	185940.91	50.35	ppb	0.58	50.00	80 - 120	
11 B	143502.00	46.13	ppb	1.72	50.00	80 - 120	
23 Na	14608160.00	5076.00	ppb	0.25	5000.00	80 - 120	
24 Mg	51831640.00	4956.00	ppb	0.58	5000.00	80 - 120	
27 Al	63660180.00	4743.00	ppb	0.98	5000.00	80 - 120	
28 Si	7844.68	4.21	ppb	1.47	5000.00	80 - 120	Fail
31 P	33097.94	16.00	ppb	2.20	500.00	80 - 120	Fail
39 K	2860308.00	5290.00	ppb	0.97	5000.00	80 - 120	
40 Ca	26181530.00	5064.00	ppb	0.06	5000.00	80 - 120	
47 Ti	58207.35	46.30	ppb	1.35	50.00	80 - 120	
51 V	175142.91	50.85	ppb	0.67	50.00	80 - 120	
52 Cr	200810.70	49.97	ppb	0.04	50.00	80 - 120	
55 Mn	1049534.00	49.97	ppb	0.90	50.00	80 - 120	
56 Fe	38096360.00	5244.00	ppb	0.07	5000.00	80 - 120	
59 Co	769903.88	48.37	ppb	0.61	50.00	80 - 120	
60 Ni	67791.41	49.75	ppb	0.26	50.00	80 - 120	
63 Cu	174036.30	50.65	ppb	0.33	50.00	80 - 120	
66 Zn	261331.80	97.72	ppb	0.30	100.00	80 - 120	
75 As	28027.77	50.79	ppb	0.30	50.00	80 - 120	
78 Se	13086.43	48.20	ppb	0.92	50.00	80 - 120	
88 Sr	1229027.00	52.52	ppb	1.08	50.00	80 - 120	
90 Zr	2542.55	0.13	ppb	3.27	30.00	80 - 120	Fail
95 Mo	210621.00	49.55	ppb	1.01	50.00	80 - 120	
107 Ag	589965.81	48.35	ppb	0.33	50.00	80 - 120	
111 Cd	136973.50	48.63	ppb	0.92	50.00	80 - 120	
118 Sn	417539.41	52.42	ppb	0.77	50.00	80 - 120	
121 Sb	526906.88	49.58	ppb	0.82	50.00	80 - 120	
137 Ba	205479.50	49.58	ppb	0.35	50.00	80 - 120	
182 W	374.46	0.02	ppb	8.25	50.00	80 - 120	Fail
205 Tl	1527971.00	50.33	ppb	0.56	50.00	80 - 120	
208 Pb	2054169.00	48.87	ppb	0.63	50.00	80 - 120	
235 U	16815.88	0.35	ppb	2.70	0.35	80 - 120	
238 U	2441848.00	50.76	ppb	1.81	49.65	80 - 120	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1437446.00	1.05	1763611.90	81.5	60 - 125	
45 Sc	828992.69	0.55	1013186.80	81.8	60 - 125	
45 Sc	191012.59	0.28	229422.78	83.3	60 - 125	
45 Sc	1847022.60	0.85	2184529.50	84.6	60 - 125	
72 Ge	209248.88	0.47	258401.14	81.0	60 - 125	
72 Ge	98882.91	0.35	121037.70	81.7	60 - 125	
72 Ge	403488.63	0.18	493345.72	81.8	60 - 125	
115 In	3100412.00	0.11	3642559.50	85.1	60 - 125	
159 Tb	5154604.00	0.96	5798793.50	88.9	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

4 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

Sample QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16109.D\F6I16109.D#
Date Acquired: Sep 28 2015 07:53 pm
Acq. Method: EMX6020.M
Operator: CCapul
Sample Name: I185-01M
Misc Info:
Vial Number: 3106
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update: Sep 28 2015 12:45 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	847124.5	0.0000	54.1800	ppb	0.76	225.00	
9 Be	# 3	45	178913.4	0.0000	48.5300	ppb	1.00	225.00	
11 B	# 3	45	147058.2	0.0000	47.5900	ppb	1.34	225.00	
23 Na	# 1	45	14666480.0	0.0000	4931.0000	ppb	1.00	269999.99	
24 Mg	# 3	45	58839120.0	0.0000	5637.0000	ppb	0.39	180000.00	
27 Al	# 3	45	157089600.0	0.0000	11720.0000	ppb	0.67	90000.00	
28 Si	# 1	45	1662873.0	0.0000	1906.0000	ppb	1.08	9000.00	
31 P	# 3	45	70770.4	0.0000	83.3600	ppb	2.43	359999.99	
39 K	# 2	45	3444987.0	0.0000	6354.0000	ppb	0.55	269999.99	
40 Ca	# 1	45	29633400.0	0.0000	5549.0000	ppb	1.51	269999.99	
47 Ti	# 3	45	263672.8	0.0000	210.8000	ppb	1.02	2700.00	
51 V	# 2	45	218398.5	0.0000	63.2800	ppb	0.33	2700.00	
52 Cr	# 2	45	227669.0	0.0000	56.4000	ppb	0.24	2700.00	
55 Mn	# 3	45	2232165.0	0.0000	106.7000	ppb	0.76	2700.00	
56 Fe	# 1	45	87909448.0	0.0000	11720.0000	ppb	0.75	90000.00	
59 Co	# 3	45	759936.7	0.0000	47.8300	ppb	0.91	2700.00	
60 Ni	# 2	45	70529.9	0.0000	51.5100	ppb	0.36	2700.00	
63 Cu	# 2	45	173328.4	0.0000	50.2000	ppb	0.30	2700.00	
66 Zn	# 3	72	276426.7	0.0000	103.5000	ppb	0.36	2700.00	
75 As	# 2	72	27522.2	0.0000	49.9100	ppb	0.24	2700.00	
78 Se	# 1	72	12778.6	0.0000	46.3600	ppb	0.59	2700.00	
88 Sr	# 3	72	1308605.0	0.0000	55.9800	ppb	0.62	2700.00	
90 Zr	# 3	72	53864.9	0.0000	3.0030	ppb	0.47	1800.00	
95 Mo	# 3	115	199969.0	0.0000	47.4800	ppb	1.18	2700.00	
107 Ag	# 3	115	561194.6	0.0000	46.4200	ppb	1.25	225.00	
111 Cd	# 3	115	130696.5	0.0000	46.8400	ppb	0.48	2700.00	
118 Sn	# 3	115	397594.4	0.0000	50.3900	ppb	1.02	2700.00	
121 Sb	# 3	115	483472.8	0.0000	45.9300	ppb	0.74	2700.00	
137 Ba	# 3	115	296111.9	0.0000	72.1300	ppb	0.89	2700.00	
182 W	# 3	159	1034.5	0.0000	0.0755	ppb	4.99	450.00	
205 Tl	# 3	159	1472670.0	0.0000	48.6600	ppb	0.82	2700.00	
208 Pb	# 3	159	2160048.0	0.0000	51.5500	ppb	0.54	2700.00	
235 U	# 3	159	16346.4	0.0000	0.3421	ppb	3.03	27.00	
238 U	# 3	159	2369566.0	0.0000	49.4000	ppb	0.30	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1420255.40	0.36	1763611.90	80.5	60 - 125	
45 Sc # 1	856402.25	1.09	1013186.80	84.5	60 - 125	
45 Sc # 2	191963.53	0.26	229422.78	83.7	60 - 125	
45 Sc # 3	1843830.00	0.47	2184529.50	84.4	60 - 125	
72 Ge # 1	212392.22	0.54	258401.14	82.2	60 - 125	
72 Ge # 2	98796.75	0.33	121037.70	81.6	60 - 125	
72 Ge # 3	403145.06	0.31	493345.72	81.7	60 - 125	
115 In # 3	3071532.50	0.66	3642559.50	84.3	60 - 125	
159 Tb # 3	5139054.50	0.82	5798793.50	88.6	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16110.D\F6I16110.D#
Date Acquired: Sep 28 2015 07:57 pm
Acq. Method: EMX6020.M
Operator: CCapul
Sample Name: I185-01A
Misc Info:
Vial Number: 3107
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update: Sep 28 2015 12:45 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	829170.0	0.0000	53.6500	ppb	0.78	225.00	
9 Be	# 3	45	181979.2	0.0000	50.3100	ppb	0.87	225.00	
11 B	# 3	45	148294.3	0.0000	49.1600	ppb	1.10	225.00	
23 Na	# 1	45	14667910.0	0.0000	5082.0000	ppb	0.45	269999.99	
24 Mg	# 3	45	57879008.0	0.0000	5651.0000	ppb	0.41	180000.00	
27 Al	# 3	45	125793200.0	0.0000	9568.0000	ppb	0.71	90000.00	
28 Si	# 1	45	1379976.0	0.0000	1628.0000	ppb	0.15	9000.00	
31 P	# 3	45	70299.2	0.0000	84.9300	ppb	1.12	359999.99	
39 K	# 2	45	3356179.0	0.0000	6359.0000	ppb	0.11	269999.99	
40 Ca	# 1	45	30674040.0	0.0000	5917.0000	ppb	0.75	269999.99	
47 Ti	# 3	45	237955.1	0.0000	193.9000	ppb	1.08	2700.00	
51 V	# 2	45	219258.9	0.0000	65.2800	ppb	0.83	2700.00	
52 Cr	# 2	45	225621.0	0.0000	57.4100	ppb	0.62	2700.00	
55 Mn	# 3	45	2306019.0	0.0000	112.4000	ppb	0.04	2700.00	
56 Fe	# 1	45	86113368.0	0.0000	11820.0000	ppb	0.58	90000.00	
59 Co	# 3	45	768298.1	0.0000	49.2900	ppb	0.28	2700.00	
60 Ni	# 2	45	70438.4	0.0000	52.8500	ppb	0.79	2700.00	
63 Cu	# 2	45	176793.8	0.0000	52.5900	ppb	0.57	2700.00	
66 Zn	# 3	72	275272.8	0.0000	105.7000	ppb	0.83	2700.00	
75 As	# 2	72	28101.3	0.0000	51.8600	ppb	0.48	2700.00	
78 Se	# 1	72	12967.0	0.0000	48.5000	ppb	1.01	2700.00	
88 Sr	# 3	72	1302181.0	0.0000	57.1400	ppb	1.13	2700.00	
90 Zr	# 3	72	40042.8	0.0000	2.2870	ppb	0.96	1800.00	
95 Mo	# 3	115	205583.2	0.0000	50.1600	ppb	0.48	2700.00	
107 Ag	# 3	115	538825.7	0.0000	45.8000	ppb	0.76	225.00	
111 Cd	# 3	115	132456.5	0.0000	48.7800	ppb	0.56	2700.00	
118 Sn	# 3	115	402371.1	0.0000	52.4000	ppb	0.93	2700.00	
121 Sb	# 3	115	507513.8	0.0000	49.5400	ppb	1.00	2700.00	
137 Ba	# 3	115	295103.1	0.0000	73.8800	ppb	1.00	2700.00	
182 W	# 3	159	953.4	0.0000	0.0714	ppb	7.52	450.00	
205 Tl	# 3	159	1493676.0	0.0000	50.8500	ppb	0.58	2700.00	
208 Pb	# 3	159	2183993.0	0.0000	53.7000	ppb	0.60	2700.00	
235 U	# 3	159	16575.6	0.0000	0.3574	ppb	2.72	27.00	
238 U	# 3	159	2398385.0	0.0000	51.5200	ppb	0.43	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1402577.00	0.25	1763611.90	79.5	60 - 125	
45 Sc # 1	831438.00	0.98	1013186.80	82.1	60 - 125	
45 Sc # 2	186888.16	0.92	229422.78	81.5	60 - 125	
45 Sc # 3	1809073.10	0.82	2184529.50	82.8	60 - 125	
72 Ge # 1	206055.38	1.31	258401.14	79.7	60 - 125	
72 Ge # 2	97092.85	0.60	121037.70	80.2	60 - 125	
72 Ge # 3	392997.22	0.38	493345.72	79.7	60 - 125	
115 In # 3	2989048.50	1.16	3642559.50	82.1	60 - 125	
159 Tb # 3	4987556.50	0.64	5798793.50	86.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16111.D\F6I16111.D#
Date Acquired:	Sep 28 2015 08:01 pm
Acq. Method:	EMX6020.M
Operator:	CCapu1
Sample Name:	I185-01
Misc Info:	
Vial Number:	3108
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	147977.6	0.0000	4.0610	ppb	4.04	225.00	
9 Be	# 3	45	867.8	0.0000	0.2179	ppb	4.09	225.00	
11 B	# 3	45	20070.8	0.0000	-1.2560	ppb	60.69	225.00	
23 Na	# 1	45	109542.3	0.0000	-43.4000	ppb	0.27	269999.99	
24 Mg	# 3	45	7870334.0	0.0000	743.0000	ppb	1.17	180000.00	
27 Al	# 3	45	65443848.0	0.0000	4842.0000	ppb	0.95	90000.00	
28 Si	# 1	45	1372022.0	0.0000	1624.0000	ppb	1.04	9000.00	
31 P	# 3	45	70895.5	0.0000	82.5000	ppb	2.04	359999.99	
39 K	# 2	45	659393.9	0.0000	1163.0000	ppb	0.73	269999.99	
40 Ca	# 1	45	4403587.0	0.0000	843.5000	ppb	0.29	269999.99	
47 Ti	# 3	45	186761.2	0.0000	148.0000	ppb	1.36	2700.00	
51 V	# 2	45	50216.6	0.0000	14.0100	ppb	0.49	2700.00	
52 Cr	# 2	45	29577.1	0.0000	7.2230	ppb	0.44	2700.00	
55 Mn	# 3	45	1335160.0	0.0000	63.2100	ppb	2.57	2700.00	
56 Fe	# 1	45	49227032.0	0.0000	6778.0000	ppb	0.17	90000.00	
59 Co	# 3	45	23402.8	0.0000	1.4390	ppb	1.50	2700.00	
60 Ni	# 2	45	5055.8	0.0000	3.5270	ppb	0.79	2700.00	
63 Cu	# 2	45	8797.6	0.0000	2.5100	ppb	1.13	2700.00	
66 Zn	# 3	72	33761.3	0.0000	12.3000	ppb	0.89	2700.00	
75 As	# 2	72	991.6	0.0000	1.6370	ppb	0.94	2700.00	
78 Se	# 1	72	27.1	0.0000	0.0879	ppb	45.49	2700.00	
88 Sr	# 3	72	129734.6	0.0000	5.5150	ppb	1.33	2700.00	
90 Zr	# 3	72	37223.9	0.0000	2.0720	ppb	2.60	1800.00	
95 Mo	# 3	115	949.0	0.0000	0.2142	ppb	5.48	2700.00	
107 Ag	# 3	115	291.1	0.0000	0.0201	ppb	4.31	225.00	
111 Cd	# 3	115	377.4	0.0000	0.1297	ppb	7.55	2700.00	
118 Sn	# 3	115	21064.5	0.0000	2.6400	ppb	1.80	2700.00	
121 Sb	# 3	115	2329.2	0.0000	0.1966	ppb	0.52	2700.00	
137 Ba	# 3	115	98565.1	0.0000	23.8500	ppb	1.12	2700.00	
182 W	# 3	159	696.7	0.0000	0.0484	ppb	6.80	450.00	
205 Tl	# 3	159	2016.9	0.0000	0.0637	ppb	3.04	2700.00	
208 Pb	# 3	159	199151.3	0.0000	4.7300	ppb	1.19	2700.00	
235 U	# 3	159	108.9	0.0000	0.0022	ppb	13.79	27.00	
238 U	# 3	159	11080.7	0.0000	0.2298	ppb	0.88	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1454275.80	1.14	1763611.90	82.5	60 - 125	
45 Sc # 1	828906.44	0.12	1013186.80	81.8	60 - 125	
45 Sc # 2	191040.88	0.47	229422.78	83.3	60 - 125	
45 Sc # 3	1859966.90	1.42	2184529.50	85.1	60 - 125	
72 Ge # 1	206406.08	0.46	258401.14	79.9	60 - 125	
72 Ge # 2	98856.15	0.15	121037.70	81.7	60 - 125	
72 Ge # 3	402887.00	0.70	493345.72	81.7	60 - 125	
115 In # 3	3090649.80	0.40	3642559.50	84.8	60 - 125	
159 Tb # 3	5154291.00	0.56	5798793.50	88.9	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16112.D\F6I16112.D#
Date Acquired: Sep 28 2015 08:06 pm
Acq. Method: EMX6020.M
Operator: CCapul
Sample Name: I185-01J
Misc Info:
Vial Number: 3109
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update: Sep 28 2015 12:45 pm
Sample Type: Sample
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	104916.3	0.0000	0.6967	ppb	3.81	225.00	
9 Be	# 3	45	243.3	0.0000	0.0512	ppb	28.92	225.00	
11 B	# 3	45	13602.2	0.0000	-3.6290	ppb	17.77	225.00	
23 Na	# 1	45	105351.1	0.0000	-43.8200	ppb	1.86	269999.99	
24 Mg	# 3	45	1658326.0	0.0000	155.2000	ppb	1.30	180000.00	
27 Al	# 3	45	13329230.0	0.0000	1003.0000	ppb	0.56	90000.00	
28 Si	# 1	45	279352.4	0.0000	336.0000	ppb	0.35	9000.00	
31 P	# 3	45	34582.3	0.0000	19.2700	ppb	1.17	359999.99	
39 K	# 2	45	162727.9	0.0000	238.4000	ppb	1.79	269999.99	
40 Ca	# 1	45	1047308.0	0.0000	198.8000	ppb	0.72	269999.99	
47 Ti	# 3	45	37706.1	0.0000	30.2200	ppb	1.68	2700.00	
51 V	# 2	45	10353.5	0.0000	2.3320	ppb	1.21	2700.00	
52 Cr	# 2	45	6012.4	0.0000	1.3750	ppb	1.71	2700.00	
55 Mn	# 3	45	271935.8	0.0000	12.8900	ppb	3.04	2700.00	
56 Fe	# 1	45	9935892.0	0.0000	1405.0000	ppb	1.05	90000.00	
59 Co	# 3	45	4959.9	0.0000	0.2932	ppb	1.60	2700.00	
60 Ni	# 2	45	1229.6	0.0000	0.7284	ppb	2.33	2700.00	
63 Cu	# 2	45	2859.4	0.0000	0.7987	ppb	1.48	2700.00	
66 Zn	# 3	72	11996.5	0.0000	4.0690	ppb	2.13	2700.00	
75 As	# 2	72	222.7	0.0000	0.2365	ppb	13.01	2700.00	
78 Se	# 1	72	7.8	0.0000	0.0155	ppb	25.54	2700.00	
88 Sr	# 3	72	26677.9	0.0000	1.0880	ppb	1.07	2700.00	
90 Zr	# 3	72	7282.1	0.0000	0.3894	ppb	2.24	1800.00	
95 Mo	# 3	115	233.3	0.0000	0.0449	ppb	13.78	2700.00	
107 Ag	# 3	115	88.9	0.0000	0.0034	ppb	64.36	225.00	
111 Cd	# 3	115	103.0	0.0000	0.0317	ppb	18.61	2700.00	
118 Sn	# 3	115	4268.7	0.0000	0.5200	ppb	3.66	2700.00	
121 Sb	# 3	115	748.9	0.0000	0.0469	ppb	2.96	2700.00	
137 Ba	# 3	115	20038.6	0.0000	4.7950	ppb	0.92	2700.00	
182 W	# 3	159	184.5	0.0000	0.0077	ppb	3.75	450.00	
205 Tl	# 3	159	517.8	0.0000	0.0144	ppb	4.65	2700.00	
208 Pb	# 3	159	41747.3	0.0000	0.9919	ppb	1.65	2700.00	
235 U	# 3	159	23.3	0.0000	0.0004	ppb	82.28	27.00	
238 U	# 3	159	2180.3	0.0000	0.0452	ppb	5.00	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1530235.10	1.17	1763611.90	86.8	60 - 125	
45 Sc # 1	806088.31	0.74	1013186.80	79.6	60 - 125	
45 Sc # 2	186878.30	1.36	229422.78	81.5	60 - 125	
45 Sc # 3	1828517.60	2.28	2184529.50	83.7	60 - 125	
72 Ge # 1	208510.39	0.98	258401.14	80.7	60 - 125	
72 Ge # 2	99377.56	0.33	121037.70	82.1	60 - 125	
72 Ge # 3	406957.38	0.97	493345.72	82.5	60 - 125	
115 In # 3	3113050.50	1.19	3642559.50	85.5	60 - 125	
159 Tb # 3	5113372.50	1.84	5798793.50	88.2	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

941

Sample QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16113.D\F6I16113.D#
Date Acquired: Sep 28 2015 08:10 pm
Acq. Method: EMX6020.M
Operator: CCapul
Sample Name: I185-01D
Misc Info:
Vial Number: 3110
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update: Sep 28 2015 12:45 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	144224.5	0.0000	3.5440	ppb	0.58	225.00	
9 Be	# 3	45	762.3	0.0000	0.1941	ppb	2.21	225.00	
11 B	# 3	45	17560.9	0.0000	-2.0650	ppb	25.00	225.00	
23 Na	# 1	45	109586.1	0.0000	-43.1300	ppb	2.26	269999.99	
24 Mg	# 3	45	7035008.0	0.0000	678.8000	ppb	2.30	180000.00	
27 Al	# 3	45	57328200.0	0.0000	4337.0000	ppb	1.17	90000.00	
28 Si	# 1	45	1265741.0	0.0000	1507.0000	ppb	1.64	9000.00	
31 P	# 3	45	68043.4	0.0000	80.1900	ppb	2.83	359999.99	
39 K	# 2	45	594527.9	0.0000	1053.0000	ppb	1.16	269999.99	
40 Ca	# 1	45	3963711.0	0.0000	763.1000	ppb	1.48	269999.99	
47 Ti	# 3	45	182986.6	0.0000	148.3000	ppb	1.17	2700.00	
51 V	# 2	45	46570.8	0.0000	13.0900	ppb	1.03	2700.00	
52 Cr	# 2	45	26907.7	0.0000	6.6310	ppb	0.92	2700.00	
55 Mn	# 3	45	1210604.0	0.0000	58.5800	ppb	2.03	2700.00	
56 Fe	# 1	45	45597432.0	0.0000	6317.0000	ppb	1.22	90000.00	
59 Co	# 3	45	20977.9	0.0000	1.3180	ppb	2.59	2700.00	
60 Ni	# 2	45	4603.0	0.0000	3.2310	ppb	0.41	2700.00	
63 Cu	# 2	45	9403.8	0.0000	2.7170	ppb	1.06	2700.00	
66 Zn	# 3	72	33349.2	0.0000	12.2600	ppb	1.59	2700.00	
75 As	# 2	72	943.8	0.0000	1.5670	ppb	1.46	2700.00	
78 Se	# 1	72	25.6	0.0000	0.0820	ppb	29.59	2700.00	
88 Sr	# 3	72	114180.0	0.0000	4.8930	ppb	1.13	2700.00	
90 Zr	# 3	72	36663.9	0.0000	2.0590	ppb	1.33	1800.00	
95 Mo	# 3	115	903.4	0.0000	0.2041	ppb	10.93	2700.00	
107 Ag	# 3	115	237.8	0.0000	0.0158	ppb	21.64	225.00	
111 Cd	# 3	115	354.0	0.0000	0.1218	ppb	15.52	2700.00	
118 Sn	# 3	115	21415.0	0.0000	2.6930	ppb	4.51	2700.00	
121 Sb	# 3	115	1712.4	0.0000	0.1389	ppb	5.80	2700.00	
137 Ba	# 3	115	88869.9	0.0000	21.5700	ppb	0.77	2700.00	
182 W	# 3	159	730.0	0.0000	0.0523	ppb	1.37	450.00	
205 Tl	# 3	159	1884.7	0.0000	0.0607	ppb	7.15	2700.00	
208 Pb	# 3	159	189141.9	0.0000	4.5890	ppb	1.23	2700.00	
235 U	# 3	159	64.4	0.0000	0.0013	ppb	31.96	27.00	
238 U	# 3	159	9257.0	0.0000	0.1961	ppb	3.44	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1491985.50	1.00	1763611.90	84.6	60 - 125	
45 Sc # 1	823879.44	1.50	1013186.80	81.3	60 - 125	
45 Sc # 2	188963.55	1.47	229422.78	82.4	60 - 125	
45 Sc # 3	1818791.30	1.41	2184529.50	83.3	60 - 125	
72 Ge # 1	206883.22	0.85	258401.14	80.1	60 - 125	
72 Ge # 2	97907.51	1.33	121037.70	80.9	60 - 125	
72 Ge # 3	399202.31	0.65	493345.72	80.9	60 - 125	
115 In # 3	3080650.50	0.47	3642559.50	84.6	60 - 125	
159 Tb # 3	5044669.00	0.55	5798793.50	87.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16114.D\F6I16114.D#
Date Acquired:	Sep 28 2015 08:14 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	I185-02
Misc Info:	
Vial Number:	3111
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	154102.0	0.0000	4.2550	ppb	0.13	225.00	
9 Be	# 3	45	828.9	0.0000	0.2111	ppb	10.95	225.00	
11 B	# 3	45	18269.4	0.0000	-1.8310	ppb	33.48	225.00	
23 Na	# 1	45	114845.1	0.0000	-41.6900	ppb	3.42	269999.99	
24 Mg	# 3	45	8506232.0	0.0000	816.8000	ppb	0.39	180000.00	
27 Al	# 3	45	72628072.0	0.0000	5462.0000	ppb	0.34	90000.00	
28 Si	# 1	45	1388255.0	0.0000	1636.0000	ppb	0.84	9000.00	
31 P	# 3	45	69710.1	0.0000	82.4300	ppb	1.21	359999.99	
39 K	# 2	45	742471.6	0.0000	1330.0000	ppb	0.73	269999.99	
40 Ca	# 1	45	3807780.0	0.0000	724.9000	ppb	0.54	269999.99	
47 Ti	# 3	45	206880.3	0.0000	166.6000	ppb	0.55	2700.00	
51 V	# 2	45	50440.1	0.0000	14.2000	ppb	0.61	2700.00	
52 Cr	# 2	45	29850.3	0.0000	7.3520	ppb	0.82	2700.00	
55 Mn	# 3	45	1441845.0	0.0000	69.3900	ppb	0.71	2700.00	
56 Fe	# 1	45	49364008.0	0.0000	6767.0000	ppb	0.82	90000.00	
59 Co	# 3	45	23360.6	0.0000	1.4610	ppb	0.92	2700.00	
60 Ni	# 2	45	5265.0	0.0000	3.7130	ppb	2.55	2700.00	
63 Cu	# 2	45	9577.6	0.0000	2.7600	ppb	1.29	2700.00	
66 Zn	# 3	72	36614.9	0.0000	13.4100	ppb	1.17	2700.00	
75 As	# 2	72	988.0	0.0000	1.6450	ppb	4.71	2700.00	
78 Se	# 1	72	27.6	0.0000	0.0882	ppb	22.36	2700.00	
88 Sr	# 3	72	127050.9	0.0000	5.4170	ppb	0.25	2700.00	
90 Zr	# 3	72	40681.4	0.0000	2.2730	ppb	0.96	1800.00	
95 Mo	# 3	115	861.2	0.0000	0.1926	ppb	4.68	2700.00	
107 Ag	# 3	115	317.8	0.0000	0.0222	ppb	10.95	225.00	
111 Cd	# 3	115	393.2	0.0000	0.1347	ppb	10.15	2700.00	
118 Sn	# 3	115	21080.6	0.0000	2.6300	ppb	0.80	2700.00	
121 Sb	# 3	115	1840.2	0.0000	0.1497	ppb	0.63	2700.00	
137 Ba	# 3	115	108222.8	0.0000	26.0700	ppb	0.52	2700.00	
182 W	# 3	159	752.3	0.0000	0.0536	ppb	3.74	450.00	
205 Tl	# 3	159	2174.7	0.0000	0.0698	ppb	5.55	2700.00	
208 Pb	# 3	159	210755.9	0.0000	5.0700	ppb	2.53	2700.00	
235 U	# 3	159	82.2	0.0000	0.0017	ppb	12.48	27.00	
238 U	# 3	159	10741.5	0.0000	0.2256	ppb	2.19	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1486238.30	1.07	1763611.90	84.3	60 - 125	
45 Sc # 1	832522.13	1.27	1013186.80	82.2	60 - 125	
45 Sc # 2	189509.48	0.91	229422.78	82.6	60 - 125	
45 Sc # 3	1829722.60	0.84	2184529.50	83.8	60 - 125	
72 Ge # 1	209274.66	0.89	258401.14	81.0	60 - 125	
72 Ge # 2	98075.67	0.77	121037.70	81.0	60 - 125	
72 Ge # 3	401609.63	1.05	493345.72	81.4	60 - 125	
115 In # 3	3104144.00	0.22	3642559.50	85.2	60 - 125	
159 Tb # 3	5089356.00	1.11	5798793.50	87.8	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16115.D\F6I16115.D#
Date Acquired:	Sep 28 2015 08:19 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	I185-03
Misc Info:	
Vial Number:	3112
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	162838.5	0.0000	4.7070	ppb	2.27	225.00	
9 Be	# 3	45	1001.2	0.0000	0.2547	ppb	9.89	225.00	
11 B	# 3	45	19663.4	0.0000	-1.3930	ppb	27.13	225.00	
23 Na	# 1	45	131646.3	0.0000	-35.9500	ppb	1.89	269999.99	
24 Mg	# 3	45	9582337.0	0.0000	908.7000	ppb	1.67	180000.00	
27 Al	# 3	45	79012768.0	0.0000	5864.0000	ppb	1.66	90000.00	
28 Si	# 1	45	1303948.0	0.0000	1531.0000	ppb	1.78	9000.00	
31 P	# 3	45	73635.5	0.0000	87.7600	ppb	1.97	359999.99	
39 K	# 2	45	779017.0	0.0000	1392.0000	ppb	0.45	269999.99	
40 Ca	# 1	45	4398143.0	0.0000	835.8000	ppb	1.25	269999.99	
47 Ti	# 3	45	238389.4	0.0000	189.6000	ppb	1.69	2700.00	
51 V	# 2	45	55895.4	0.0000	15.7500	ppb	0.44	2700.00	
52 Cr	# 2	45	33683.2	0.0000	8.2790	ppb	0.37	2700.00	
55 Mn	# 3	45	1894756.0	0.0000	90.0800	ppb	1.72	2700.00	
56 Fe	# 1	45	56814200.0	0.0000	7762.0000	ppb	1.18	90000.00	
59 Co	# 3	45	28606.8	0.0000	1.7700	ppb	3.26	2700.00	
60 Ni	# 2	45	5901.2	0.0000	4.1660	ppb	0.41	2700.00	
63 Cu	# 2	45	10849.4	0.0000	3.1190	ppb	1.96	2700.00	
66 Zn	# 3	72	43877.3	0.0000	16.2900	ppb	1.47	2700.00	
75 As	# 2	72	1090.9	0.0000	1.8250	ppb	2.94	2700.00	
78 Se	# 1	72	25.3	0.0000	0.0805	ppb	8.71	2700.00	
88 Sr	# 3	72	150501.9	0.0000	6.4760	ppb	0.22	2700.00	
90 Zr	# 3	72	47683.1	0.0000	2.6890	ppb	5.34	1800.00	
95 Mo	# 3	115	950.1	0.0000	0.2120	ppb	11.94	2700.00	
107 Ag	# 3	115	275.6	0.0000	0.0186	ppb	23.18	225.00	
111 Cd	# 3	115	506.6	0.0000	0.1737	ppb	3.39	2700.00	
118 Sn	# 3	115	19919.9	0.0000	2.4680	ppb	3.18	2700.00	
121 Sb	# 3	115	2063.6	0.0000	0.1694	ppb	2.99	2700.00	
137 Ba	# 3	115	132404.8	0.0000	31.6800	ppb	1.14	2700.00	
182 W	# 3	159	752.3	0.0000	0.0531	ppb	3.70	450.00	
205 Tl	# 3	159	2362.5	0.0000	0.0755	ppb	5.42	2700.00	
208 Pb	# 3	159	253955.3	0.0000	6.0700	ppb	1.03	2700.00	
235 U	# 3	159	84.4	0.0000	0.0017	ppb	6.71	27.00	
238 U	# 3	159	12433.1	0.0000	0.2595	ppb	1.65	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1505978.00	1.77	1763611.90	85.4	60 - 125	
45 Sc # 1	835445.13	0.63	1013186.80	82.5	60 - 125	
45 Sc # 2	190350.41	0.40	229422.78	83.0	60 - 125	
45 Sc # 3	1854103.30	1.40	2184529.50	84.9	60 - 125	
72 Ge # 1	208333.22	0.60	258401.14	80.6	60 - 125	
72 Ge # 2	98502.58	0.56	121037.70	81.4	60 - 125	
72 Ge # 3	398414.97	0.65	493345.72	80.8	60 - 125	
115 In # 3	3125700.50	0.68	3642559.50	85.8	60 - 125	
159 Tb # 3	5123713.50	0.56	5798793.50	88.4	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\DATA\IF62015\I\IF6I16.B\F6I16117.D\F6I16117.D#
Date Acquired: Sep 28 2015 08:27 pm
Operator: CCapul
Sample Name: CCV10
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal Update: Sep 28 2015 12:45 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	24.30 ppb	1.89	25.00	90 - 110	
9 Be	25.28 ppb	0.25	25.00	90 - 110	
11 B	21.62 ppb	1.47	25.00	90 - 110	Fail
23 Na	1256.00 ppb	0.59	1250.00	90 - 110	
24 Mg	2503.00 ppb	0.17	2500.00	90 - 110	
27 Al	2416.00 ppb	0.45	2500.00	90 - 110	
28 Si	2506.00 ppb	0.20	2500.00	90 - 110	
31 P	249.00 ppb	0.95	250.00	90 - 110	
39 K	2654.00 ppb	0.66	2500.00	90 - 110	
40 Ca	2563.00 ppb	0.46	2500.00	90 - 110	
47 Ti	23.83 ppb	2.09	25.00	90 - 110	
51 V	25.04 ppb	0.45	25.00	90 - 110	
52 Cr	25.05 ppb	0.89	25.00	90 - 110	
55 Mn	24.50 ppb	0.31	25.00	90 - 110	
56 Fe	2587.00 ppb	0.24	2500.00	90 - 110	
59 Co	23.91 ppb	0.06	25.00	90 - 110	
60 Ni	24.81 ppb	1.04	25.00	90 - 110	
63 Cu	25.34 ppb	0.14	25.00	90 - 110	
66 Zn	48.93 ppb	0.60	50.00	90 - 110	
75 As	25.36 ppb	1.25	25.00	90 - 110	
78 Se	24.59 ppb	0.30	25.00	90 - 110	
88 Sr	25.99 ppb	0.97	25.00	90 - 110	
90 Zr	13.73 ppb	0.36	15.00	90 - 110	
95 Mo	24.18 ppb	0.50	25.00	90 - 110	
107 Ag	23.93 ppb	0.46	25.00	90 - 110	
111 Cd	24.54 ppb	1.26	25.00	90 - 110	
118 Sn	24.36 ppb	0.63	25.00	90 - 110	
121 Sb	24.38 ppb	0.58	25.00	90 - 110	
137 Ba	24.64 ppb	1.33	25.00	90 - 110	
182 W	24.94 ppb	0.64	25.00	90 - 110	
205 Tl	25.26 ppb	0.79	25.00	90 - 110	
208 Pb	24.95 ppb	0.60	25.00	90 - 110	
235 U	0.18 ppb	0.29	0.18	90 - 110	
238 U	25.15 ppb	0.95	24.82	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1387273.40	2.07	1763611.90	78.7	60 - 125	
45 Sc	803221.69	0.71	1013186.80	79.3	60 - 125	
45 Sc	179322.91	0.48	229422.78	78.2	60 - 125	
45 Sc	1752336.90	0.09	2184529.50	80.2	60 - 125	
72 Ge	199487.52	0.45	258401.14	77.2	60 - 125	
72 Ge	92074.84	0.96	121037.70	76.1	60 - 125	
72 Ge	375026.44	0.18	493345.72	76.0	60 - 125	
115 In	2972078.80	0.91	3642559.50	81.6	60 - 125	
159 Tb	4924723.50	1.07	5798793.50	84.9	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\I\IF6I16.B\F6I16118.D\F6I16118.D#
Date Acquired:	Sep 28 2015 08:31 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB10
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	C:\DATA\IF62015\A\IF6A01.B\EMX6020.C
Last Cal. Update:	Sep 28 2015 12:45 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.1162	ppb	86751.7	83.16	0.20	
9 Be	-0.0023	ppb	46.7	123.74	0.10	
11 B	-4.8920	ppb	9954.8	7.09	5.00	
23 Na	-6.0910	ppb	205331.2	11.68	40.00	
24 Mg	-3.4570	ppb	16861.2	1.35	10.00	
27 Al	0.2338	ppb	5268.9	4.15	20.00	
28 Si	-0.9155	ppb	3362.7	1.91	20.00	
31 P	-0.4546	ppb	22696.9	94.59	10.00	
39 K	-5.8500	ppb	34237.4	10.99	20.00	
40 Ca	-5.1310	ppb	23614.0	1.54	25.00	
47 Ti	-0.1613	ppb	65.6	9.56	0.50	
51 V	0.1940	ppb	3159.9	8.86	0.50	
52 Cr	-0.0545	ppb	399.3	5.66	0.20	
55 Mn	-0.1323	ppb	2533.7	6.70	0.20	
56 Fe	0.0956	ppb	19547.0	136.30	10.00	
59 Co	-0.0054	ppb	247.8	38.13	0.20	
60 Ni	-0.0710	ppb	163.1	12.74	0.20	
63 Cu	-0.0290	ppb	77.6	10.32	0.40	
66 Zn	-0.1484	ppb	635.6	12.89	2.00	
75 As	-0.0151	ppb	79.8	81.51	0.20	
78 Se	0.0072	ppb	5.3	71.56	0.20	
88 Sr	-0.0205	ppb	501.1	7.47	0.20	
90 Zr	-0.0028	ppb	204.5	13.65	2.00	
95 Mo	0.0100	ppb	83.3	33.38	0.40	
107 Ag	0.0010	ppb	58.9	61.12	0.20	
111 Cd	-0.0021	ppb	7.4	44.72	0.20	
118 Sn	0.0020	ppb	124.5	152.02	0.20	
121 Sb	0.0177	ppb	433.4	8.11	0.40	
137 Ba	0.0026	ppb	102.2	14.42	0.20	
182 W	0.0101	ppb	212.2	15.54	1.00	
205 Tl	0.0000	ppb	82.2	9959.90	0.20	
208 Pb	-0.0030	ppb	276.7	10.09	0.10	
235 U	0.0000	ppb	1.1	174.84	1.00	
238 U	0.0030	ppb	164.5	17.08	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1433238.1	1.33	1763611.90	81.3	60 - 125	
45 Sc	790973.7	1.08	1013186.80	78.1	60 - 125	
45 Sc	181077.3	0.19	229422.78	78.9	60 - 125	
45 Sc	1756541.6	0.51	2184529.50	80.4	60 - 125	
72 Ge	201367.4	0.30	258401.14	77.9	60 - 125	
72 Ge	94924.4	1.06	121037.70	78.4	60 - 125	
72 Ge	386953.9	0.45	493345.72	78.4	60 - 125	
115 In	3080241.5	1.24	3642559.50	84.6	60 - 125	
159 Tb	5052730.0	0.16	5798793.50	87.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\I\IF6I16.B\F6I16004.D\F6I16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP-MS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Digestion Vessel Lot # 02515001

Book #: EIM-056
Batch: TMT0365
Matrix: Soil
Digestor ID: D

SOP #	Rev. #
☐ EMAX-200.8	5
☑ EMAX-6020	9
☐ EMAX-	

Start	Temp	End	Temp
	92.4 °C		92.6 °C

Standards	ID	Amount Added (ml/g)
LCS-1	SM6A-007-02-23	5
LCS-2	SM6A-007-02-24	5
MS	Same spike soln & vol as LCS 1 & 2	
Blank Soil (Bead)	SM5A-03-01-28	2g
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-005-14-09	10
HCl	SW1A-005-13-08	5+5
H_2O_2	SW1A-005-10-17	10
HNO_3(1:1)	SM5B-03-03-01	10
pH Strip (0-14)	NA	NA

Digestate Location	metals
Extract Location	NA
☑ Reagent Water ID:	SM5A-03-02-03
☑ Thermometer ID:	140245688/D28
☑ Pipette ID:	142780035
☐ Pipette ID:	NA
☐ Pipette ID:	NA
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask	
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask	

Prepared By: SP

Standard Added By: SP Witnessed By: TH

Extract Rcvd By: TH Checked By: TH

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
15IMI036S01	IMI036SB	2.09	g	9/26/15 13:56	100	2	100	1	
15IMI036S02	IMI036SL	2.05	g	9/26/15 13:56	100	2	100	1	
15IMI036S03	I185-01	2.08	g	9/26/15 13:57	100	2	100	0.962	
15IMI036S04	I185-01D	2.01	g	9/26/15 13:58	100	2	100	0.995	
15IMI036S05	I185-01M	2.03	g	9/26/15 13:58	100	2	100	0.985	
15IMI036S06	I185-02	2.02	g	9/26/15 13:59	100	2	100	0.99	
15IMI036S07	I185-03	2.03	g	9/26/15 14:00	100	2	100	0.985	

SP 9/26/15

Balance ID: 10203192. Calibration check was verified prior to use.

Vd=digestate volume

PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 9/26/15 15:30

Prepared By: SPara

☑ Digestion Ended @ 9/26/15 17:40

Checked By: TH

Comments:

Date 9/26/15

SOP EMAX-6020 Rev. 9

METALS TCLP

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	09/16/15 14:08
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	CAFB-FT006-WC1-002	Date Analyzed:	10/08/15 13:52
Lab Samp ID:	I185-04R	Dilution Factor:	5
Lab File ID:	ID8J007040	Matrix :	LEACHATE
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0500	0.0150	0.0250
Barium	1.26	0.0500	0.00500	0.0100
Cadmium	ND	0.0500	0.00500	0.0100
Chromium	ND	0.0500	0.00750	0.0150
Lead	ND	0.0500	0.00850	0.0150
Selenium	0.0154J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 10/05/15 16:00

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	09/16/15 14:25
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	CAFB-FT006-WC2-002	Date Analyzed:	10/08/15 14:05
Lab Samp ID:	I185-05R	Dilution Factor:	5
Lab File ID:	ID8J007044	Matrix :	LEACHATE
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0500	0.0150	0.0250
Barium	0.616	0.0500	0.00500	0.0100
Cadmium	ND	0.0500	0.00500	0.0100
Chromium	ND	0.0500	0.00750	0.0150
Lead	0.0144J	0.0500	0.00850	0.0150
Selenium	0.0134J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 10/05/15 16:00

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	09/16/15 14:40
Project	: CANNON AFB PBR	Date Received:	09/17/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	CAFB-FT006-WC3-002	Date Analyzed:	10/08/15 14:08
Lab Samp ID:	I185-06R	Dilution Factor:	5
Lab File ID:	ID8J007045	Matrix :	LEACHATE
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0500	0.0150	0.0250
Barium	0.875	0.0500	0.00500	0.0100
Cadmium	0.0398J	0.0500	0.00500	0.0100
Chromium	ND	0.0500	0.00750	0.0150
Lead	0.345	0.0500	0.00850	0.0150
Selenium	0.0219J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 10/05/15 16:00

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	10/07/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	MBLK1W	Date Analyzed:	10/08/15 13:40
Lab Samp ID:	IPJ008WB	Dilution Factor:	1
Lab File ID:	ID8J007036	Matrix :	WATER
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0100	0.00300	0.00500
Barium	ND	0.0100	0.00100	0.00200
Cadmium	ND	0.0100	0.00100	0.00200
Chromium	ND	0.0100	0.00150	0.00300
Lead	ND	0.0100	0.00170	0.00300
Selenium	ND	0.0100	0.00250	0.00500
Silver	ND	0.0100	0.00150	0.00300

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW1311/3010A/6010C

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MBLK1W			
CONTROL NO.:	IPJ008WB	IPJ008WL		
LAB FILE ID:	ID8J007036	ID8J007037		
DATIME EXTRCTD:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	NA
DATIME ANALYZD:	10/08/1513:40	10/08/1513:43	DATE RECEIVED:	10/07/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	QC LIMIT (%)
Arsenic	ND	.5	.488	98	80-120
Barium	ND	.5	.47	94	80-120
Cadmium	ND	.5	.513	103	80-120
Chromium	ND	.5	.493	99	80-120
Lead	ND	.5	.485	97	80-120
Selenium	ND	.5	.497	99	80-120
Silver	ND	.5	.484	97	80-120

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	10/07/15
SDG NO.	: 15I185	Date Extracted:	10/07/15 12:11
Sample ID:	MBLK2W	Date Analyzed:	10/08/15 13:46
Lab Samp ID:	TXJ002SB	Dilution Factor:	5
Lab File ID:	ID8J007038	Matrix :	LEACHATE
Ext Btch ID:	IPJ008W	% Moisture :	NA
Calib. Ref.:	ID8J007034	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	ND	0.0500	0.0150	0.0250
Barium	0.0187J	0.0500	0.00500	0.0100
Cadmium	ND	0.0500	0.00500	0.0100
Chromium	ND	0.0500	0.00750	0.0150
Lead	ND	0.0500	0.00850	0.0150
Selenium	0.0160J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 10/05/15 16:00

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW1311/3010A/6010C

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MATRIX:	LEACHATE		% MOISTURE:	NA
DILTN FACTR:	5	5		
SAMPLE ID:	CAFB-FT006-WC1-002			
CONTROL NO.:	I185-04R	I185-04M		
LAB FILE ID:	ID8J007040	ID8J007042		
DATIME EXTRCTD:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	09/16/15 14:08
DATIME ANALYZD:	10/08/1513:52	10/08/1513:58	DATE RECEIVED:	09/17/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Arsenic	ND	2.5	2.58	103	80-120
Barium	1.26	2.5	3.42	86	80-120
Cadmium	ND	2.5	2.59	104	80-120
Chromium	ND	2.5	2.49	100	80-120
Lead	ND	2.5	2.41	97	80-120
Selenium	ND	2.5	2.71	108	80-120
Silver	ND	2.5	2.56	102	80-120

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/3010A/6010C

MATRIX:	LEACHATE		% MOISTURE:	NA
DILUTION FACTOR:	5	25		
SAMPLE ID:	CAFB-FT006-WC1-002	CAFB-FT006-WC1-002DL		
EMAX SAMP ID:	I185-04R	I185-04J		
LAB FILE ID:	ID8J007040	ID8J007041		
DATE EXTRACTED:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	09/16/15 14:08
DATE ANALYZED:	10/08/1513:52	10/08/1513:55	DATE RECEIVED:	09/17/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Barium	1.26	1.26	1	10
Cadmium	ND	ND	0	10
Chromium	ND	ND	0	10
Lead	ND	ND	0	10
Selenium	0.0154J	ND	NA	10
Silver	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15I185
METHOD: SW1311/3010A/6010C

MATRIX:	LEACHATE		% MOISTURE:	NA
DILTN FACTR:	5	5		
SAMPLE ID:	CAFB-FT006-WC1-002			
CONTROL NO.:	I185-04R	I185-04A		
LAB FILE ID:	ID8J007040	ID8J007039		
DATIME EXTRCTD:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	09/16/15 14:08
DATIME ANALYZD:	10/08/1513:52	10/08/1513:49	DATE RECEIVED:	09/17/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	2.5	2.67	107	75-125
Barium	1.26	2.5	3.68	97	75-125
Cadmium	ND	2.5	2.66	106	75-125
Chromium	ND	2.5	2.57	103	75-125
Lead	ND	2.5	2.52	101	75-125
Selenium	0.0154	2.5	2.79	111	75-125
Silver	ND	2.5	2.63	105	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15I185
METHOD: SW1311/3010A/6010C

MATRIX:	LEACHATE		% MOISTURE:	NA
DILUTION FACTOR:	5	5		
SAMPLE ID:	CAFB-FT006-WC1-002	CAFB-FT006-WC1-002D		
EMAX SAMP ID:	I185-04R	I185-04D		
LAB FILE ID:	ID8J007040	ID8J007043		
DATE EXTRACTED:	10/07/1512:11	10/07/1512:11	DATE COLLECTED:	09/16/15 14:08
DATE ANALYZED:	10/08/1513:52	10/08/1514:02	DATE RECEIVED:	09/17/15
PREP. BATCH:	IPJ008W	IPJ008W		
CALIB. REF:	ID8J007034	ID8J007034		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	20
Barium	1.26	1.29	3	20
Cadmium	ND	ND	0	20
Chromium	ND	ND	0	20
Lead	ND	ND	0	20
Selenium	0.0154J	ND	NA	20
Silver	ND	ND	0	20

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 10/8/15 11:46

End Date: 10/8/15 16:57

SOP #	Rev. #
☑ EMAX-6010	7
☑ EMAX-6010C	1
☐ EMAX-200.7	4
☐ EMAX-	

Comments:

- CCV5-CCV7 Cd failed.
SD6 15J310 for rerun

Book #: AD8-037

Instrument No.: D8

Analytical Batch: ID8J007

Analytical Sequence: S-15J6010(VS)

Method File: 15J6010(VS)

Database: Emax21

Micropipette ID: ☐ 2846967

Micropipette ID: ☐ ICP-DOE4

Micropipette ID: ☑ 242780103

Micropipette ID: ☑ 439360087

Micropipette ID: ☐

	STANDARDS ID		STANDARDS ID
S0	SMIB016-6003	S26	SMIB016-6001
S1	MA	S27	6002
S2		S28	5601
S3		S29	6106
S4		S30	5401
S5		S31	5402
S6		ICV	5602
S7		CCV	6004
S8		ICSA	5603
S9		ICSAB	5902
S10		CRI/MRL	5201
S11		CRI/MRL	6104
S12		Internal Standard	SMIA013-0928
S16		Post-Spike 1	0919
S17		Post-Spike 2	0920
S18		Post-Spike 3	0921
S20	SMIB016-6105		
S21	4205		
S22	5501		
S23	5502		
S24	4405		
S25	4406		

Analyzed By: TH

Date: 10/8/15

SEQUENCE FILE : ID8J007

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8J007001	Blank	11:46	10/08/15	1.000
ID8J007002	S20	11:49	10/08/15	1.000
ID8J007003	S21	11:52	10/08/15	1.000
ID8J007004	S22	11:56	10/08/15	1.000
ID8J007005	S23	11:59	10/08/15	1.000
ID8J007006	S24	12:02	10/08/15	1.000
ID8J007007	S25	12:05	10/08/15	1.000
ID8J007008	S26	12:08	10/08/15	1.000
ID8J007009	S27	12:11	10/08/15	1.000
ID8J007010	S28	12:15	10/08/15	1.000
ID8J007011	S29	12:18	10/08/15	1.000
ID8J007012	S30	12:21	10/08/15	1.000
ID8J007013	S31	12:24	10/08/15	1.000
ID8J007014	ICV	12:27	10/08/15	1.000
ID8J007015	ICB	12:30	10/08/15	1.000
ID8J007016	ZZZZ	12:33	10/08/15	1.000
ID8J007017	ICSA1	12:39	10/08/15	1.000
ID8J007018	ICSAB1	12:43	10/08/15	1.000
ID8J007019	MRLJ0801	12:47	10/08/15	1.000
ID8J007020	MRLJ0802	12:50	10/08/15	1.000
ID8J007021	MRLJ0803	12:54	10/08/15	1.000
ID8J007022	CCV1	12:57	10/08/15	1.000
ID8J007023	CCB1	13:00	10/08/15	1.000
ID8J007024	IPJ010SB	13:03	10/08/15	1.000
ID8J007025	IPJ010SL	13:07	10/08/15	1.000
ID8J007026	IPJ010SC	13:09	10/08/15	1.000
ID8J007027	J035-01K	13:12	10/08/15	100.0
ID8J007028	J035-02A	13:15	10/08/15	1.000
ID8J007029	J035-02	13:18	10/08/15	1.000
ID8J007030	J035-02J	13:21	10/08/15	5.000
ID8J007031	MDLV	13:25	10/08/15	1.000
ID8J007032	LODV	13:28	10/08/15	1.000
ID8J007033	LOQV	13:31	10/08/15	1.000
ID8J007034	CCV2	13:34	10/08/15	1.000
ID8J007035	CCB2	13:37	10/08/15	1.000
ID8J007036	IPJ008WB	13:40	10/08/15	1.000
ID8J007037	IPJ008WL	13:43	10/08/15	1.000
ID8J007038	TXJ002SB TCLP	13:46	10/08/15	1.000
ID8J007039	I185-04A	13:49	10/08/15	1.000
ID8J007040	I185-04R	13:52	10/08/15	1.000
ID8J007041	I185-04J	13:55	10/08/15	5.000
ID8J007042	I185-04M	13:58	10/08/15	1.000
ID8J007043	I185-04D	14:02	10/08/15	1.000
ID8J007044	I185-05R	14:05	10/08/15	1.000
ID8J007045	I185-06R	14:08	10/08/15	1.000
ID8J007046	CCV3	14:11	10/08/15	1.000
ID8J007047	CCB3	14:14	10/08/15	1.000
ID8J007048	IPJ009WB	14:17	10/08/15	1.000
ID8J007049	IPJ009WL	14:20	10/08/15	1.000
ID8J007050	IPJ009WC	14:23	10/08/15	1.000
ID8J007051	I338-01A	14:26	10/08/15	1.000

ID8J007052	I338-01	14:29	10/08/15	1.000
ID8J007053	I338-01J	14:32	10/08/15	5.000
ID8J007054	I338-01M	14:35	10/08/15	1.000
ID8J007055	I338-01S	14:38	10/08/15	1.000
ID8J007056	I322-07	14:41	10/08/15	1.000
ID8J007057	J017-01	14:45	10/08/15	1.000
ID8J007058	CCV4	14:48	10/08/15	1.000
ID8J007059	CCB4	14:51	10/08/15	1.000
ID8J007060	J019-01	14:54	10/08/15	1.000
ID8J007061	J019-02	14:58	10/08/15	1.000
ID8J007062	J019-03	15:01	10/08/15	1.000
ID8J007063	J019-04	15:05	10/08/15	1.000
ID8J007064	J019-05	15:08	10/08/15	1.000
ID8J007065	J019-06	15:12	10/08/15	1.000
ID8J007066	J019-07	15:15	10/08/15	1.000
ID8J007067	Blank	15:19	10/08/15	1.000
ID8J007068	MRLJ0804	15:22	10/08/15	1.000
ID8J007069	MRLJ0805	15:25	10/08/15	1.000
ID8J007070	CCV5	15:28	10/08/15	1.000
ID8J007071	CCB5	15:31	10/08/15	1.000
ID8J007072	I310-01A	15:34	10/08/15	1.000
ID8J007073	I310-01	15:37	10/08/15	1.000
ID8J007074	I310-01J	15:40	10/08/15	5.000
ID8J007075	I310-01M	15:43	10/08/15	1.000
ID8J007076	I310-01S	15:46	10/08/15	1.000
ID8J007077	I310-02	15:49	10/08/15	1.000
ID8J007078	I310-03	15:52	10/08/15	1.000
ID8J007079	I310-04	15:55	10/08/15	1.000
ID8J007080	CCV6	16:00	10/08/15	1.000
ID8J007081	CCB6	16:03	10/08/15	1.000
ID8J007082	I310-05	16:06	10/08/15	1.000
ID8J007083	I310-06	16:09	10/08/15	1.000
ID8J007084	I310-08	16:12	10/08/15	1.000
ID8J007085	I310-09	16:15	10/08/15	1.000
ID8J007086	I310-10	16:18	10/08/15	1.000
ID8J007087	I310-11	16:21	10/08/15	1.000
ID8J007088	I310-12	16:24	10/08/15	1.000
ID8J007089	I310-13	16:27	10/08/15	1.000
ID8J007090	I310-14	16:30	10/08/15	1.000
ID8J007091	I310-15	16:33	10/08/15	1.000
ID8J007092	CCV7	16:36	10/08/15	1.000
ID8J007093	CCB7	16:39	10/08/15	1.000
ID8J007094	I310-16	16:42	10/08/15	1.000
ID8J007095	I310-17	16:45	10/08/15	1.000
ID8J007096	I310-18	16:48	10/08/15	1.000
ID8J007097	I310-19	16:51	10/08/15	1.000
ID8J007098	CCV8	16:54	10/08/15	1.000
ID8J007099	CCB8	16:57	10/08/15	1.000

VERSON : 15A UNIT : % SUMMARY of ICV and CCV : ID8J007 DATE : 10/08/15 INST : EMAXTID8

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	97	94	100	94	98	97	104	101	100	97	103	95	97	104	93	96	94	101	96	102	98	100	94	92	95	95	101	101
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ZZZZ	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	94	----	----	----	----	----	----	97	----	----	----	91	----	----	94	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB1	91	94	102	96	97	97	98	97	97	97	107	91	96	113	93	91	98	99	105	101	104	104	97	83	95	95	102	102
MRLJ0801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0803	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	103	97	104	97	101	100	107	103	102	104	106	97	99	106	96	98	96	103	97	105	100	102	96	96	96	98	104	103
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ010SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ010SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J035-01K	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J035-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J035-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J035-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MDLV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
LODV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
LOQV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	102	96	103	96	101	99	106	105	103	103	105	98	99	106	97	99	96	103	98	104	100	102	95	95	97	97	104	104
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ008WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ008WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXJ002SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-05R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-06R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	103	98	104	94	99	100	108	103	104	104	108	97	98	104	97	97	95	103	96	105	102	100	94	96	94	94	107	103
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ009WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ009WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ009WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I338-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

I338-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I338-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I338-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I338-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I322-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J017-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	104	100	104	94	98	101	109	102	105	104	109	97	98	104	97	96	95	103	96	105	102	100	94	97	93	94	108	103
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0804	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0805	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	103	100	105	94	97	101	111*	103	107	104	109	98	98	105	95	91	94	103	97	106	103	101	94	98	92	93	110	104
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	103	102	107	95	96	102	114*	102	107	104	109	98	98	105	94	88*	94	103	98	109	103	101	95	100	93	93	110	104
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	101	101	106	96	96	101	112*	103	106	104	106	98	99	107	93	88*	94	102	100	108	102	103	96	99	93	93	108	105
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	100	97	102	96	97	100	109	103	105	103	105	98	98	108	93	88*	94	102	102	103	101	105	97	96	94	94	106	104
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

VERSON : 15A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : ID8J007 (WATER) DATE : 10/08/15 INST : EMAXTID8

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	6.86	-.370	.370	.200	.180	1.48	.030	18.8	.110	.120	-.160	2.12	.100	-.310	4.31	.010	.340	.130	30.9	1.16	.100	16.4	.240	-.370	-.040	.630	-.020	1.34
ZZZZ	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	----	5.17	2.24	.030	.030	5.61	.400	----	2.31	.210	.850	----	-1.92	6.19	----	.890	-2.22	-1.25	26.4	-.120	.320	55.8	.750	-2.71	1.44	1.08	-.270	2.55
ICSAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0803	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	37.4	.470	-.900	.310	.150	-1.08	.020	98.4	.410	-.140	.520	4.47	-.430	-1.39	10.7	.270	.420	.120	44.1	-.670	.030	22.2	.120	.260	-.010	.660	.060	2.46
IPJ010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ010SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ010SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J035-01K	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J035-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J035-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J035-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MDLV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
LODV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
LOQV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	11.9	1.29	-.540	.390	.170	-2.24	.030	211	.230	-.060	-.130	.340	.090	-.570	10.8	.260	.470	.080	23.1	1.16	.230	19.0	.120	.150	-.440	.670	-.030	5.16
IPJ008WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ008WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXJ002SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-04D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-05R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I185-06R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	16.4	.090	.540	.360	.240	-3.92	-.080	195	.250	.020	-.030	.720	.490	-.790	9.50	.440	.380	.040	52.5	.100	.180	90.9	.220	-.750	-.100	.730	.140	4.65
IPJ009WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ009WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPJ009WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I338-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

I338-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I338-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I338-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I338-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I322-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J017-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	22.6	-.500	-.770	.400	.260	-2.33	-.060	220	.310	-.060	-.140	2.32	.140	-.310	30.7	.510	.420	-.020	115	1.76	.150	246	.160	-.720	-.080	.500	.050	5.24
J019-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
J019-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0804	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLJ0805	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	23.1	.450	1.68	.180	.120	-.520	-.030	190	.380	.070	.050	1.27	.780	-1.69	7.70	.170	.370	.100	121	.060	.220	572	.120	-.440	.280	.220	.050	4.83
I310-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	18.8	.620	.460	.370	.220	-1.41	-.060	191	.190	-.010	-.200	3.18	.020	-1.54	18.3	.330	.420	.020	70.9	2.00	.040	226	.170	-.690	-.160	.190	.130	4.78
I310-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	18.4	.470	1.16	.360	.180	-2.33	-.060	197	.270	-.090	-.160	7.75	-.120	-1.63	19.0	.270	.350	.090	42.5	1.03	.280	153	.140	-.030	.080	.390	.070	5.06
I310-16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I310-19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	15.9	-.050	-.070	.390	.170	-2.79	-.090	166	.330	-.030	.160	8.26	.180	-1.31	3.03	.120	.310	.060	30.8	.100	.270	119	.130	-.780	-.290	.960	.090	4.34

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Date File	Type	Anaylst	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8J007001		THuang	1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8J007002		THuang	1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8J007003		THuang	1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8J007004		THuang	1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8J007005		THuang	1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8J007006		THuang	1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8J007007		THuang	1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8J007008		THuang	1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8J007009		THuang	1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8J007010		THuang	1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8J007011		THuang	1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8J007012		THuang	1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8J007013		THuang	1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8J007014		THuang	1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8J007015		THuang	1	☒	3XIDL	None
16	5	2	5	1	QC	ZZZZ		ID8J007016		THuang	1	☒	ICSA	None
17	5	2	5	1	QC	ICSA1		ID8J007017		THuang	1	☒	ICSA-DoD	None
18	6	2	6	1	QC	ICSAB1		ID8J007018		THuang	1	☒	ICSAB	None
19	3	2	3	1	QC	MRLJ0801		ID8J007019		THuang	1	☒	MRL-EMAX	None
20	4	2	4	1	QC	MRLJ0802		ID8J007020		THuang	1	☒	MRL-AFCEE	None
21	85	3	1	3	QC	MRLJ0803		ID8J007021		THuang	1	☒	MRL-EMAX	None
22	7	2	7	1	QC	CCV1		ID8J007022		THuang	1	☒	CCV	None
23	8	2	8	1	QC	CCB1		ID8J007023		THuang	1	☒	LOD	None
24	9	2	9	1	QC	IPJ010SB		ID8J007024		THuang	1	☒	1/2LOQ	None
25	10	2	10	1	QC	IPJ010SL		ID8J007025		THuang	1	☒	LCS	None
26	11	2	11	1	QC	IPJ010SC		ID8J007026		THuang	1	☒	LCS	None
27	12	2	12	1	Unk	J035-01K	100X	ID8J007027		THuang	1	☒	unk	---
28	13	2	1	2	Unk	J035-02A		ID8J007028		THuang	1	☒	unk	---
29	14	2	2	2	Unk	J035-02		ID8J007029		THuang	1	☒	unk	---
30	15	2	3	2	Unk	J035-02J		ID8J007030		THuang	1	☒	unk	---
31	16	2	4	2	Unk	MDLV		ID8J007031		THuang	1	☒	unk	---
32	17	2	5	2	Unk	LODV		ID8J007032		THuang	1	☒	unk	---
33	18	2	6	2	Unk	LOQV		ID8J007033		THuang	1	☒	unk	---
34	19	2	7	2	QC	CCV2		ID8J007034		THuang	1	☒	CCV	None
35	20	2	8	2	QC	CCB2		ID8J007035		THuang	1	☒	LOD	None
36	21	2	9	2	QC	IPJ008WB		ID8J007036		THuang	1	☒	1/2LOQ	None
37	22	2	10	2	QC	IPJ008WL		ID8J007037		THuang	1	☒	LCS-WDoD	None
38	23	2	11	2	QC	TXJ002SB	TCLP	ID8J007038		THuang	1	☒	1/2LOQ	None
39	24	2	12	2	Unk	I185-04A	TCLP	ID8J007039		THuang	1	☒	unk6010C	---
40	25	2	1	3	Unk	I185-04R	TCLP	ID8J007040		THuang	1	☒	unk6010C	---
41	26	2	2	3	Unk	I185-04J	TCLP	ID8J007041		THuang	1	☒	unk6010C	---
42	27	2	3	3	Unk	I185-04M	TCLP	ID8J007042		THuang	1	☒	unk6010C	---
43	28	2	4	3	Unk	I185-04D	TCLP	ID8J007043		THuang	1	☒	unk6010C	---
44	29	2	5	3	Unk	I185-05R	TCLP	ID8J007044		THuang	1	☒	unk6010C	---
45	30	2	6	3	Unk	I185-06R	TCLP	ID8J007045		THuang	1	☒	unk6010C	---
46	31	2	7	3	QC	CCV3		ID8J007046		THuang	1	☒	CCV	None
47	32	2	8	3	QC	CCB3		ID8J007047		THuang	1	☒	LOD	None
48	33	2	9	3	QC	IPJ009WB		ID8J007048		THuang	1	☒	1/2LOQ	None
49	34	2	10	3	QC	IPJ009WL		ID8J007049		THuang	1	☒	LCS	None
50	35	2	11	3	QC	IPJ009WC		ID8J007050		THuang	1	☒	LCS	None

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Date File	Type	Anaylst	CorrFact	Check	Check Table	Fail Action
51	36	2	12	3	Unk	I338-01A		ID8J007051		THuang	1	☒	unk6010C	---
52	37	2	1	4	Unk	I338-01		ID8J007052		THuang	1	☒	unk6010C	---
53	38	2	2	4	Unk	I338-01J		ID8J007053		THuang	1	☒	unk6010C	---
54	39	2	3	4	Unk	I338-01M		ID8J007054		THuang	1	☒	unk	---
55	40	2	4	4	Unk	I338-01S		ID8J007055		THuang	1	☒	unk	---
56	41	2	5	4	Unk	I322-07		ID8J007056		THuang	1	☒	unk	---
57	42	2	6	4	Unk	J017-01		ID8J007057		THuang	1	☒	unk	---
58	43	2	7	4	QC	CCV4		ID8J007058		THuang	1	☒	CCV	None
59	44	2	8	4	QC	CCB4		ID8J007059		THuang	1	☒	LOD	None
60	45	2	9	4	Unk	J019-01		ID8J007060		THuang	1	☒	unk6010C	---
61	46	2	10	4	Unk	J019-02		ID8J007061		THuang	1	☒	unk6010C	---
62	47	2	11	4	Unk	J019-03		ID8J007062		THuang	1	☒	unk6010C	---
63	48	2	12	4	Unk	J019-04		ID8J007063		THuang	1	☒	unk6010C	---
64	49	2	1	5	Unk	J019-05		ID8J007064		THuang	1	☒	unk6010C	---
65	50	2	2	5	Unk	J019-06		ID8J007065		THuang	1	☒	unk6010C	---
66	51	2	3	5	Unk	J019-07		ID8J007066		THuang	1	☒	unk6010C	---
67	52	2	4	5	Blank	Blank		ID8J007067		THuang	1	☐		---
68	53	2	5	5	QC	MRLJ0804		ID8J007068		THuang	1	☒	MRL-EMAX	None
69	54	2	6	5	QC	MRLJ0805		ID8J007069		THuang	1	☒	MRL-AFCEE	None
70	55	2	7	5	QC	CCV5		ID8J007070		THuang	1	☒	CCV	None
71	56	2	8	5	QC	CCB5		ID8J007071		THuang	1	☒	LOD	None
72	57	2	9	5	Unk	I310-01A		ID8J007072		THuang	1	☒	unk	---
73	58	2	10	5	Unk	I310-01		ID8J007073		THuang	1	☒	unk	---
74	59	2	11	5	Unk	I310-01J		ID8J007074		THuang	1	☒	unk	---
75	60	2	12	5	Unk	I310-01M		ID8J007075		THuang	1	☒	unk	---
76	61	3	1	1	Unk	I310-01S		ID8J007076		THuang	1	☒	unk	---
77	62	3	2	1	Unk	I310-02		ID8J007077		THuang	1	☒	unk	---
78	63	3	3	1	Unk	I310-03		ID8J007078		THuang	1	☒	unk	---
79	64	3	4	1	Unk	I310-04		ID8J007079		THuang	1	☒	unk	---
80	67	3	7	1	QC	CCV6		ID8J007080		THuang	1	☒	CCV	None
81	68	3	8	1	QC	CCB6		ID8J007081		THuang	1	☒	LOD	None
82	65	3	5	1	Unk	I310-05		ID8J007082		THuang	1	☒	unk	---
83	66	3	6	1	Unk	I310-06		ID8J007083		THuang	1	☒	unk	---
84	69	3	9	1	Unk	I310-08		ID8J007084		THuang	1	☒	unk	---
85	70	3	10	1	Unk	I310-09		ID8J007085		THuang	1	☒	unk	---
86	71	3	11	1	Unk	I310-10		ID8J007086		THuang	1	☒	unk	---
87	72	3	12	1	Unk	I310-11		ID8J007087		THuang	1	☒	unk	---
88	73	3	1	2	Unk	I310-12		ID8J007088		THuang	1	☒	unk	---
89	74	3	2	2	Unk	I310-13		ID8J007089		THuang	1	☒	unk	---
90	75	3	3	2	Unk	I310-14		ID8J007090		THuang	1	☒	unk	---
91	76	3	4	2	Unk	I310-15		ID8J007091		THuang	1	☒	unk	---
92	79	3	7	2	QC	CCV7		ID8J007092		THuang	1	☒	CCV	None
93	80	3	8	2	QC	CCB7		ID8J007093		THuang	1	☒	LOD	None
94	77	3	5	2	Unk	I310-16		ID8J007094		THuang	1	☒	unk	---
95	78	3	6	2	Unk	I310-17		ID8J007095		THuang	1	☒	unk	---
96	81	3	9	2	Unk	I310-18		ID8J007096		THuang	1	☒	unk	---
97	82	3	10	2	Unk	I310-19		ID8J007097		THuang	1	☒	unk	---
98	83	3	11	2	QC	CCV8		ID8J007098		THuang	1	☒	CCV	None
99	84	3	12	2	QC	CCB8		ID8J007099		THuang	1	☒	LOD	None

Status

Revision	8	
Date Created	8/14/2006 16:36:29	by admin
Date Modified	10/8/2015 10:39:46	by admin
Date Calibrated	10/8/2015 12:26:58	
Current Status	by admin	
Number of Elements	31	
Number of Wavelengths	33	
Calibration Type	External	
Notes:		

Analysis Preferences

Sample Options	# Repeats:	3			
	Delay Time:	0.0 seconds			
	Sample Flush Time:	19 seconds			
	Analysis mode	Speed			
Source	Sample Introduction	Nebulizer			
	Plasma View:	Line Selection			
Analysis Maximum Integration Times (sec)	Low WL Range	Axial	15	Radial	15
	High WL Range:	Axial	10	Radial	5
Calibration Mode	Concentration				
Trailing Full Frame Options	Intelli-Frame:		No		
	Max Integration Time (sec):		30		
	WL Range:		Low		
	View:		Axial		
	Auto-Increment Sample Names:		Yes		
	Use Sample Weight Corrections:		No		

Source Settings

Nebulizer Pump	Flush Pump Rate (rpm):	67	
	Analysis Pump Rate (rpm):	15	
	Pump Relaxation Time (sec):	2	
	Pump Tubing Type:	Tygon Orange/White	
	RF Power:	1150	W
	Nebulizer Flow:	0.55	L/min
	Auxiliary Gas:	0.5	L/min

Automated Output

Option	Unknowns	QC Std	Blanks	Standards	Recoveries	Duplicate	Time Scan
Save results to database	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Print results	No	No	No	No	No	No	No
Export results to comma	Yes	Yes	Yes	Yes	Yes	Yes	Yes

ID8J007 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00189	.00001	-.00002	.00019	.00010	.00146	-.00003	.00059	-.00002	-.00074	Blank
2	S20					.91851		.14927				S20
3	S21					B.9414		1.4243				S21
4	S22				.47580						.14830	S22
5	S23				4.7224						1.5040	S23
6	S24						.10967					S24
7	S25						1.1220					S25
8	S26	.07603							1.0339	.16858		S26
9	S27	5.8291							9.4904	1.6525		S27
10	S28		.00653									S28
11	S29		.06420									S29
12	S30			.00152								S30
13	S31			.00614								S31
14	ICV	96.809	1.4163	1.0044	1.8766	1.4718	2.4223	2.0714	76.055	2.4898	.96599	ICV
15	ICB	.00686	-.00037	.00037	.00020	.00018	.00148	.00003	.01882	.00011	.00012	ICB
16	ZZZZ	374.25	.00425	.00273	.00020	.00008	.00529	.00048	481.04	.00249	.00030	ZZZZ
17	ICSA1	376.27	.00517	.00224	.00003	.00003	.00561	.00040	486.20	.00231	.00021	ICSA1
18	ICSAB1	364.52	.93584	1.0176	.47958	.48679	.48658	.98490	484.48	.48262	.48462	ICSAB1
19	MRLJ0801	.25347*	.09093	.00865	.00984	.00987	.09341	.01059	1.0599	.01027	.00962	MRLJ0801
20	MRLJ0802	.22082	.04570	.01085	.00473	.00389	.09121	.00526	.57244	.01035	.00965	MRLJ0802
21	MRLJ0803	.23661	.09312	.00929	.00990	.00983	.09207	.01075	1.0791	.01031	.00965	MRLJ0803
22	CCV1	102.52	1.4600	1.0356	1.9312	1.5171	2.4927	2.1378	77.299	2.5603	1.0378	CCV1
23	CCB1	.03744*	.00047	-.00090	.00031	.00015	-.00108	.00002	.09842	.00041	-.00014	CCB1
24	IPJ010SB	.05931	-.00013	-.00137	.00037	.00025	-.00227	.00006	.09444	.00086	.00002	IPJ010SB
25	IPJ010SL	4.8470	2.2823	.48993	.49257	.50099	.46441	.51610	53.232	.50319	.50651	IPJ010SL
26	IPJ010SC	4.8001	2.2694	.48389	.48593	.49305	.46490	.51190	53.141	.50282	.50456	IPJ010SC
27	J035-01K	.19662	.00106	.00162	2.1398	.00004	-.00146	.00004	.18488	.00338	.01126	J035-01K
28	J035-02A	8.3195	2.4170	.51943	.88108	.49136	.50867	.50675	883.38	.52402	.51407	J035-02A
29	J035-02	3.2568	.00394	.00282	.39918	.00011	.00806	.01229	866.30	.03201	.01314	J035-02
30	J035-02J	.66615	-.00067	.00207	.08024	-.00005	-.00073	.00237	188.27	.00705	.00249	J035-02J
31	MDLV	.00552	.00032	.00472	.00004	-.00004	-.00405	.00105	.04209	.00276	.00001	MDLV
32	LODV	.04319	.03051	.00346	.00216	.00094	.00562	.00219	.28137	.00353	.00207	LODV
33	LOQV	.21820	.09312	.00837	.01094	.00985	.08967	.01059	1.0745	.01069	.01084	LOQV
34	CCV2	101.96	1.4455	1.0312	1.9141	1.5114	2.4851	2.1262	78.491	2.5678	1.0348	CCV2
35	CCB2	.01190	.00129	-.00054	.00039	.00017	-.00224	.00003	.21062*	.00023	-.00006	CCB2
36	IPJ008WB	.00964	-.00036	-.00063	.00006	.00001	-.00347	-.00006	.02065	.00003	-.00001	IPJ008WB
37	IPJ008WL	4.8968	2.2875	.48755	.47027	.48080	.48399	.51331	51.451	.49349	.48223	IPJ008WL
38	TXJ002SB	.12317*	.00006	-.00254	.00374	.00017	.02372	.00007	.32623	.00075	-.00003	TXJ002SB
39	I185-04A	5.2659	2.4509	.53485	.73660	.49933	.53326	.53109	168.56	.51374	.51118	I185-04A
40	I185-04R	.09056	.00125	-.00214	.25115	.00010	.01905	.00017	120.56	.00086	-.00010	I185-04R
41	I185-04J	.02362	.00040	.00037	.05052	-.00005	-.00003	-.00003	24.722	.00031	-.00011	I185-04J
42	I185-04M	5.1286	2.4150	.51643	.68316	.47777	.51586	.51874	150.69	.49899	.48985	I185-04M
43	I185-04D	.09590	-.00028	-.00413	.25874	.00015	.01934	.00019	124.74	.00079	-.00030	I185-04D
44	I185-05R	.17876	-.00004	-.00288	.12325	.00008	.01385	.00021	13.109	.00065	-.00017	I185-05R
45	I185-06R	.79853	-.00062	-.00357	.17506	.00011	.01763	.00796	12.624	.00087	.00121	I185-06R
46	CCV3	102.78	1.4768	1.0357	1.8846	1.4793	2.5113	2.1596	77.181	2.6041	1.0391	CCV3
47	CCB3	.01636	.00009	.00054	.00036	.00024	-.00392	-.00008	.19521*	.00025	.00002	CCB3
48	IPJ009WB	.01092	.00027	-.00056	.00008	.00002	-.00439	-.00006	.00262	.00024	.00001	IPJ009WB
49	IPJ009WL	5.1077	2.4477	.51598	.48176	.49338	.50705	.54350	50.222	.51742	.49865	IPJ009WL
50	IPJ009WC	5.0752	2.3861	.50714	.47735	.48817	.49817	.53102	53.067	.51030	.49263	IPJ009WC
51	I338-01A	6.2599	2.5914	.55573	.63431	.51671	.73179	.54568	224.71	.53484	.52710	I338-01A

52	I338-01	.78375	.00147	.00881	.12543	.00007	.18829	-.00041	175.91	.00226	.00530	I338-01
53	I338-01J	.16253	-.00109	.00091	.02538	.00002	.03439	-.00027	36.664	.00063	.00093	I338-01J
54	I338-01M	6.8216	2.5324	.54092	.61852	.49408	.72697	.53318	232.09	.52225	.51036	I338-01M
55	I338-01S	7.0837	2.4525	.53078	.59556	.47661	.69973	.52349	220.15	.50934	.49499	I338-01S
56	I322-07	.55394	.00370	.00288	.06172	.00025	2.5749	-.00057	184.64	.00466	.00542	I322-07
57	J017-01	.01724	.00004	.00093	.00010	-.00003	.00130	-.00014	.03970	.00033	.00002	J017-01
58	CCV4	103.89	1.5007	1.0371	1.8812	1.4764	2.5245	2.1872	76.840	2.6137	1.0413	CCV4
59	CCB4	.02256	-.00050	-.00077	.00040	.00026	-.00233	-.00006	.21960*	.00031	-.00006	CCB4
60	J019-01	.02583	.00100	.00603	.00164	.00023	5.6648	-.00261	390.04	.00137	-.00107	J019-01
61	J019-02	.01877	.00058	-.00222	.00136	-.00001	5.5819	-.00251	382.28	.00126	-.00088	J019-02
62	J019-03	.01615	.00047	.00003	.00132	.00001	5.4938	-.00257	394.74	.00119	-.00097	J019-03
63	J019-04	.01307	-.00036	.00347	.00121	-.00001	5.5724	-.00257	402.69	.00115	-.00135	J019-04
64	J019-05	.01206	-.00008	.00032	.00137	-.00004	5.5087	-.00253	389.81	.00100	-.00098	J019-05
65	J019-06	.03059	-.00025	.00147	.00115	-.00005	5.5568	-.00254	387.28	.00098	-.00110	J019-06
66	J019-07	.02160	.00017	.00227	.00126	-.00007	5.5417	-.00243	380.55	.00094	-.00095	J019-07
67	Blank	.00614	-.00105	.00006	.00012	-.00004	.00408	-.00010	.13191	-.00005	.00002	Blank
68	MRLJ0804	.22469	.09607	.00903	.00990	.00952	.09700	.01120	1.1008	.01061	.00977	MRLJ0804
69	MRLJ0805	.20896	.04739	.00993	.00485	.00383	.09331	.00546	.55652	.01062	.00952	MRLJ0805
70	CCV5	103.04	1.5038	1.0470	1.8833	1.4478	2.5369	2.2295*	77.014	2.6662	1.0371	CCV5
71	CCB5	.02312	.00045	.00168	.00018	.00012	-.00052	-.00003	.19033*	.00038	.00007	CCB5
72	I310-01A	57.505	2.5069	.54259	.86855	.47461	.51375	.55363	100.95	.72195	.52563	I310-01A
73	I310-01	53.474	.01015	.02047	.40861	.00358	.02385	.00487	50.501	.20263	.02120	I310-01
74	I310-01J	10.899	.00134	.00543	.08253	.00067	.00264	.00078	10.383	.04163	.00421	I310-01J
75	I310-01M	73.783	2.3921	.53412	.87290	.46032	.50145	.54956	100.61	.75783	.52015	I310-01M
76	I310-01S	71.379	2.4510	.55253	1.2450	.45924	.51159	.54215	295.31	.78439	.51684	I310-01S
77	I310-02	53.819	.00981	.03223	.48272	.00327	.01982	.00498	64.210	.15793	.03368	I310-02
78	I310-03	32.147	.00117	.01490	.17090	.00099	.00841	-.00007	1.7027	.06801	.01012	I310-03
79	I310-04	154.09	.00566	.02371	.30232	.00414	.05665	-.00142	11.136	.28302	.03294	I310-04
80	CCV6	102.61	1.5326	1.0725	1.9042	1.4368	2.5493	2.2718*	76.330	2.6756	1.0370	CCV6
81	CCB6	.01877	.00062	.00046	.00037	.00022	-.00141	-.00006	.19082*	.00019	-.00001	CCB6
82	I310-05	176.31	.01326	.01817	.48397	.00382	.11737	-.00129	16.480	.64444	.04915	I310-05
83	I310-06	161.78	.01263	.11935	1.7955	.01320	.08410	-.00131	22.350	.54470	.07521	I310-06
84	I310-08	52.152	.00653	.03317	.54067	.00241	.03001	.00718	48.632	.16697	.03179	I310-08
85	I310-09	64.318	.00555	.03909	.55029	.00277	.02986	.00893	59.306	.14639	.04621	I310-09
86	I310-10	23.248	.00019	.00743	.10963	.00060	.00713	-.00030	3.5166	.03312	.00590	I310-10
87	I310-11	112.21	.00442	.02595	.14259	.00212	.03626	-.00129	6.1642	.20976	.01968	I310-11
88	I310-12	112.78	.00711	.03168	.61015	.00312	.03782	-.00157	7.2397	.37933	.05271	I310-12
89	I310-13	126.21	.00975	.28803	2.3364	.01233	.04119	-.00163	11.983	.39051	.04099	I310-13
90	I310-14	49.645	.00336	.03447	.72399	.00249	.01015	.00602	120.20	.12744	.03225	I310-14
91	I310-15	49.868	.00265	.02850	.39540	.00203	.00840	.00405	50.826	.13541	.03516	I310-15
92	CCV7	100.63	1.5099	1.0650	1.9106	1.4415	2.5356	2.2425*	77.045	2.6568	1.0370	CCV7
93	CCB7	.01840	.00047	.00116	.00036	.00018	-.00233	-.00006	.19704*	.00027	-.00009	CCB7
94	I310-16	25.708	-.00126	.01176	.11851	.00099	.00779	-.00029	1.5510	.05099	.00666	I310-16
95	I310-17	43.924	.00014	.01754	.39698	.00061	.01053	-.00060	1.3014	.06113	.00367	I310-17
96	I310-18	49.844	.00281	.02115	.12528	.00107	.01267	.00013	11.269	.11703	.01218	I310-18
97	I310-19	164.85	.01152	.09674	.78042	.00469	.06821	-.00173	7.2784	.56544	.06235	I310-19
98	CCV8	99.934	1.4572	1.0227	1.9215	1.4525	2.5009	2.1746	77.294	2.6159	1.0313	CCV8
99	CCB8	.01590	-.00005	-.00007	.00039	.00017	-.00279	-.00009	.16624*	.00033	-.00003	CCB8
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00148	.00004	.00019	-.00017	-.00001	.00002	-.00006	-.00106	-.00068	.00000	Blank
2	S20			.19178			.11392					S20
3	S21			1.8737			1.1108					S21
4	S22	.39206	.01495									S22
5	S23	3.8199	1.3015									S23
6	S24							.64970				S24
7	S25							6.5947				S25
8	S26								.77332	.30003		S26
9	S27								7.5058	2.9744		S27
10	S28					.02202						S28
11	S29					.22417						S29
12	S30				.02550						.00167	S30
13	S31				.12655						.00658	S31
14	ICV	2.5715	23.808	2.4192	.52046	56.037	2.3995	2.3579	2.5154	57.583	1.0219	ICV
15	ICB	-.00016	.00212	.00010	-.00031	.00431	.00001	.00034	.00013	.03089	.00116	ICB
16	ZZZZ	.00092	182.60	-.00316*	.00708	186.96	.00107	-.00177	-.00120	.02558	-.00034	ZZZZ
17	ICSA1	.00085	182.37	-.00192	.00619	187.01	.00089	-.00222	-.00125	.02644	-.00012	ICSA1
18	ICSAB1	.53642	181.75	.96180	1.1291	186.74	.45539	.98073	.99243	78.881	1.0103	ICSAB1
19	MRLJ0801	.01069	.22863	.00977	.00887	.98274	.00984	.00926	.01026	1.0029	.01213*	MRLJ0801
20	MRLJ0802	.01038	.11188	.00265	.09888	.20782	.00498	.00907	.01039	.96767	.01085	MRLJ0802
21	MRLJ0803	.01038	.22258	.00947	.00940	1.0002	.00988	.00918	.01020	.95999	.00975	MRLJ0803
22	CCV1	2.6542	24.338	2.4734	.53053	57.513	2.4616	2.3975	2.5729	58.487	1.0491	CCV1
23	CCB1	.00052	.00447	-.00043	-.00139	.01068	.00027	.00042	.00012	.04410	-.00067	CCB1
24	IPJ010SB	.00052	.04870	-.00059	-.00069	.04719	.00075	.00034	.00046	.06855	.00244	IPJ010SB
25	IPJ010SL	.51029	4.9502	.50012	-.00016*	47.956	.48385	.51873	.52911	50.631	.49385	IPJ010SL
26	IPJ010SC	.50748	4.8945	.49817	-.00044*	47.799	.47979	.51796	.52608	50.419	.48763	IPJ010SC
27	J035-01K	.00346	4.2229	7.5353	.00237	.14884	.01544	.00079	.00177	.05968	.00133	J035-01K
28	J035-02A	.86136	109.99	.53182	.01609	71.224	1.0734	.53280	.59103	55.084	.52183	J035-02A
29	J035-02	.32647	109.09	.04447	.01466	25.947	.63269	.00260	.07361	.81710	.00240	J035-02
30	J035-02J	.06499	22.828	.00916	.00262	5.5154	.13179	.00042	.01464	.17930	-.00059	J035-02J
31	MDLV	.00243	.00538	.00241	-.00068	.05506	-.00003	.00003	.00263	.08607	.00032	MDLV
32	LODV	.00357	.06280	.00344	.04959	.10604	.00310	.00309	.00315	.10456	.00743	LODV
33	LOQV	.01050	.21630	.00999	1.0021	.96889	.00976	.01024	.01051	.93578	.01059	LOQV
34	CCV2	2.6346	24.396	2.4686	.52808	58.383	2.4634	2.3910	2.5646	58.732	1.0436	CCV2
35	CCB2	-.00013	.00034	.00009	-.00057	.01077	.00026	.00047	.00008	.02307	.00116	CCB2
36	IPJ008WB	-.00002	-.00061	.00034	-.00041	.01508	.00000	-.00002	.00009	.00783	.00076	IPJ008WB
37	IPJ008WL	.50533	4.8114	.48492	.00018*	46.650	.46447	.48197	.50474	48.634	.49707	IPJ008WL
38	TXJ002SB	.00087	.00963	.00030	-.00085	.06654	.00032	.00026	.00100	.09710	.00319	TXJ002SB
39	I185-04A	.54293	4.9676	.50331	.00290	49.656	.60267	.52203	.53612	54.824	.55720	I185-04A
40	I185-04R	.00186	.02848	.00032	.00148	1.8432	.12813	-.00003	.00195	.95089	.00309	I185-04R
41	I185-04J	.00036	.00086	.00004	-.00041	.38446	.02604	-.00016	.00037	.23477	.00000	I185-04J
42	I185-04M	.53037	4.8132	.48291	.00236	47.261	.56654	.49661	.51347	51.049	.54192	I185-04M
43	I185-04D	.00132	.03503	-.00057	.00195	1.9139	.13154	-.00001	.00219	.95009	.00230	I185-04D
44	I185-05R	.00212	.06807	.00288	.00084	1.3150	.02872	-.00004	.00146	2.2641	.00267	I185-05R
45	I185-06R	.00797	.33512	.06896	.00210	1.4753	.12423	-.00002	.00339	4.0418	.00438	I185-06R
46	CCV3	2.6985	24.277	2.4561	.52192	58.162	2.4187	2.3752	2.5717	57.568	1.0526	CCV3
47	CCB3	-.00003	.00072	.00049	-.00079	.00950	.00044	.00038	.00004	.05251	.00010	CCB3
48	IPJ009WB	-.00001	.00471	-.00025	-.00043	.00388	.00003	.00002	.00009	.03123	.00073	IPJ009WB
49	IPJ009WL	.53193	5.0041	.49965	-.00028*	45.868	.47633	.49804	.52208	46.914	.52547	IPJ009WL
50	IPJ009WC	.52444	4.9402	.49465	.00010*	48.463	.47165	.49045	.51596	49.659	.51637	IPJ009WC
51	I338-01A	.56969	19.961	.51947	.01337	112.89*	9.4155*	.53795	.56332	62.543	.55749	I338-01A

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
52	I338-01	.00200	15.113	.00081	.01222	62.328	8.9872	.00555	.01989	8.2022	.00171	I338-01
53	I338-01J	.00049	3.1527	.00013	.00131	12.849	1.8739	.00098	.00393	1.6111	.00014	I338-01J
54	I338-01M	.55808	20.465	.50105	.01337	113.84	9.7130	.51985	.54599	60.449	.54022	I338-01M
55	I338-01S	.54427	19.856	.48656	.01240	106.86	9.2677	.49735	.53035	55.111	.52886	I338-01S
56	I322-07	.01807	5.7760	.00568	.09278	492.13	.86574	.00737	.01690	172.30	.00249	I322-07
57	J017-01	-.00003	.04177	.00019	-.00085	.06645	.00102	.00000	.00002	.36952	.00119	J017-01
58	CCV4	2.7285	24.287	2.4575	.52026	57.985	2.4103	2.3688	2.5751	57.331	1.0529	CCV4
59	CCB4	-.00014	.00232	.00014	-.00031	.03068	.00051	.00042	-.00002	.11452*	.00176	CCB4
60	J019-01	.00021	-.02941	-.00255	.25443	1273.9*	.00080	.00866	.00004	461.36*	.00135	J019-01
61	J019-02	-.00011	-.03728	-.00262	.25358	1237.8*	-.00078	.00838	-.00072	452.57*	-.00299	J019-02
62	J019-03	-.00009	-.03797	-.00355	.24718	1281.2*	-.00072	.00885	-.00098	456.18*	-.00029	J019-03
63	J019-04	-.00026	-.03746	-.00281	.25141	1294.6*	-.00096	.00884	-.00063	471.87*	.00006	J019-04
64	J019-05	.00035	-.03444	-.00347	.25201	1249.3*	.00007	.00829	-.00054	465.14*	-.00039	J019-05
65	J019-06	-.00022	-.04627	-.00260	.25408	1246.5*	-.00066	.00896	-.00041	478.28*	.00036	J019-06
66	J019-07	.00042	-.02497	-.00367	.25532	1209.8*	-.00067	.00858	-.00059	459.51*	-.00186	J019-07
67	Blank	-.00040	-.00243	.00005	-.00116	.33326	-.00002	-.00001	.00006	.87453	.00016	Blank
68	MRLJ0804	.01078	.21653	.00987	.00864	1.0003	.00924	.00915	.01023	1.2969*	.01003	MRLJ0804
69	MRLJ0805	.01041	.10387	.00302	.09615	.20817	.00457	.00891	.01034	1.1789	.00863	MRLJ0805
70	CCV5	2.7129	24.543	2.4517	.52274	57.231	2.2736	2.3553	2.5671	58.259	1.0606	CCV5
71	CCB5	.00005	.00127	.00078	-.00169	.00770	.00017	.00037	.00010	.12087*	.00006	CCB5
72	I310-01A	.69303	69.215	.98071	.04542	73.797	1.1567	.51556	.67213	58.435	.51818	I310-01A
73	I310-01	.14377	67.751	.51143	.04544	26.591	.75432	.01437	.15258	8.5649	.00385	I310-01
74	I310-01J	.02873	14.034	.10246	.00786	5.4884	.15403	.00249	.03004	1.7089	.00073	I310-01J
75	I310-01M	.67577	85.987	.87838	.05990	76.088	1.2863	.50308	.67739	58.358	.51395	I310-01M
76	I310-01S	.68915	110.66	.97507	.06489	168.46	2.4431	.51822	.68296	59.025	.52465	I310-01S
77	I310-02	.15217	99.901	.45023	.06314	33.364	1.3451	.01178	.20654	8.6477	.00279	I310-02
78	I310-03	.03794	36.990	.02687	.01321	3.0226	.21064	.00302	.02659	5.1145	.00162	I310-03
79	I310-04	.09573	149.56	.05266	.07121	22.142	.81246	.00130	.14367	15.180	.00328	I310-04
80	CCV6	2.7230	24.607	2.4588	.52646	56.243	2.2007*	2.3473	2.5679	58.949	1.0872	CCV6
81	CCB6	-.00020	.00318	.00002	-.00154	.01832	.00033	.00042	.00002	.07092	.00200	CCB6
82	I310-05	.23204	308.58	.17522	.06671	61.177	.62868	.00161	.33580	36.997	.00085	I310-05
83	I310-06	.26538	247.26	.09090	.08606	57.820	.71055	.01952	.48468	39.290	.00059	I310-06
84	I310-08	.15126	109.21	.52872	.07056	29.053	1.1707	.01634	.15095	8.5953	.00453	I310-08
85	I310-09	.15592	134.03	.48350	.09412	36.059	1.9858	.00892	.15347	8.8865	.00347	I310-09
86	I310-10	.02799	19.114	.01491	.01363	2.5627	.17823	.00223	.01752	3.7670	.00261	I310-10
87	I310-11	.08837	131.49	.12406	.03346	12.408	.19669	.00214	.09498	7.0258	.00537	I310-11
88	I310-12	.14986	154.99	.10516	.03706	32.545	.31308	.00062	.24772	18.165	.00162	I310-12
89	I310-13	.17003	233.69	.14048	.04746	35.378	.39350	.00527	.23524	22.821	.00112	I310-13
90	I310-14	.09134	110.52	.19009	.08072	50.474	1.4208	.01744	.21738	9.0759	.00270	I310-14
91	I310-15	.07074	103.02	.37579	.08586	38.113	1.4665	.00710	.18049	6.6634	.00229	I310-15
92	CCV7	2.6607	24.592	2.4646	.53303	55.937	2.1969*	2.3526	2.5608	60.284	1.0751	CCV7
93	CCB7	-.00016	.00775	-.00012	-.00163	.01904	.00027	.00035	.00009	.04248	.00103	CCB7
94	I310-16	.03521	35.040	.02150	.01400	3.1287	.19140	.00337	.01925	4.6039	.00196	I310-16
95	I310-17	.01660	43.352	.02671	.01276	3.0141	.08392	.00258	.01697	2.5909	.00333	I310-17
96	I310-18	.04896	66.627	.05050	.02827	13.264	.29477	.00437	.08919	4.5119	.00272	I310-18
97	I310-19	.23571	370.95	.16839	.05936	50.137	.58951	.00186	.46942	24.978	.00454	I310-19
98	CCV8	2.6192	24.519	2.4580	.53907	55.754	2.2085*	2.3587	2.5498	61.041	1.0339	CCV8
99	CCB8	.00016	.00826	.00018	-.00131	.00303	.00012	.00031	.00006	.03080	.00010	CCB8

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00012	.00019	-.00022	-.00003	.00009	.00003	-.00011	.00102	Blank
2	S20									S20
3	S21									S21
4	S22							.17468		S22
5	S23							1.7606		S23
6	S24		.99835							S24
7	S25		5.7913							S25
8	S26									S26
9	S27									S27
10	S28				.00745					S28
11	S29				.07334					S29
12	S30	.05387		.12619		.02141	.01542		.61879	S30
13	S31	.25923		.61981		.10359	.07592		6.0656	S31
14	ICV	.48784	59.806	.46812	2.3085	.47452	.47472	1.5203	2.5298	ICV
15	ICB	.00010	.01637	.00024	-.00037	-.00004	.00063	-.00002	.00134	ICB
16	ZZZZ	.00032	.05686	.00089	.00063	.00093	.00155	-.00007	.00385	ZZZZ
17	ICSA1	.00032	.05578	.00075	-.00271	.00144	.00108	-.00027	.00255	ICSA1
18	ICSAB1	1.0427	78.092	.48270	.82634	.95192	.94717	.50902	1.0182	ICSAB1
19	MRLJ0801	.01008	1.0127	.00992	.01011	.09615	.01009	.01036	.02021	MRLJ0801
20	MRLJ0802	.00990	.50377	.00975	.01028	.00897	.00943	.01023	.01083	MRLJ0802
21	MRLJ0803	.01000	.98726	.00983	.01028	.09558	.00998	.01053	.02118	MRLJ0803
22	CCV1	.50121	61.085	.47780	2.3992	.48163	.48761	1.5670	2.5832	CCV1
23	CCB1	.00003	.02221	.00012	.00026	-.00001	.00066	.00006	.00246	CCB1
24	IPJ010SB	.00011	.03288	.00011	-.00091	.02341	.00067	.00025	.00096	IPJ010SB
25	IPJ010SL	.47851	51.023	.49325	.46121	.53711	.51279	.52080	.53090	IPJ010SL
26	IPJ010SC	.47787	50.862	.49162	.45661	.52830	.50460	.51855	.52842	IPJ010SC
27	J035-01K	.00026	.09064	.03240	.00057	.00068	.04711	.00097	.00515	J035-01K
28	J035-02A	.52588	55.674	3.6624	.42552	.53438	.66441	.54722	.67599	J035-02A
29	J035-02	-.00005	1.2927	3.2471	-.00194	.03444	.16445	.02005	.16357	J035-02
30	J035-02J	.00012	.25118	.64950	-.00098	.00671	.03493	.00395	.03269	J035-02J
31	MDLV	-.00006	.01389	.00010	-.00095	-.00023	.00072	-.00005	.00549	MDLV
32	LODV	.00298	.11286	.00150	.00362	.00534	.00571	.00213	.01156	LODV
33	LOQV	.00965	.98155	.00996	.00816	.97694	.99962	.01019	.02375	LOQV
34	CCV2	.50058	61.080	.47555	2.3829	.48286	.48347	1.5672	2.6017	CCV2
35	CCB2	.00023	.01903	.00012	.00015	-.00044	.00067	-.00003	.00516	CCB2
36	IPJ008WB	.00003	.00687	.00005	-.00044	-.00026	.00022	-.00012	.00292	IPJ008WB
37	IPJ008WL	.48434	49.059	.47358	.46712	.48116	.48274	.50984	.50783	IPJ008WL
38	TXJ002SB	.00017	344.39*	.00271	-.00112	.00045	.00056	.00029	.01999*	TXJ002SB
39	I185-04A	.52631	371.17*	.60798	.45124	.50387	.50505	.54134	.55080	I185-04A
40	I185-04R	.00017	323.15*	.12048	-.00267	.00077	.00213	.00116	.00685	I185-04R
41	I185-04J	-.00002	66.472	.02425	-.00065	-.00033	.00082	.00020	.00179	I185-04J
42	I185-04M	.51158	325.80*	.56959	.44257	.48067	.48197	.52758	.52617	I185-04M
43	I185-04D	.00006	333.83*	.12441	-.00372	.00014	.00271	.00124	.00539	I185-04D
44	I185-05R	-.00009	294.69*	.05193	-.00267	-.00011	.00401	.00042	.00617	I185-05R
45	I185-06R	-.00003	328.91*	.03355	-.00229	.00036	.02089	.00148	.09395	I185-06R
46	CCV3	.50793	59.936	.47101	2.4014	.46941	.47161	1.6058	2.5798	CCV3
47	CCB3	.00018	.09088	.00022	-.00075	-.00010	.00073	.00014	.00465	CCB3
48	IPJ009WB	.00003	.06678	.00014	-.00061	-.00047	.00049	-.00006	.00062	IPJ009WB
49	IPJ009WL	.50544	47.324	.48785	.49111	.49380	.49730	.53947	.52499	IPJ009WL
50	IPJ009WC	.49920	50.101	.48188	.48022	.48697	.48866	.52996	.51821	IPJ009WC
51	I338-01A	.54429	144.26	1.2750*	.47733	.52025	.54210	.56429	.55089	I338-01A

52	I338-01	-.00073	90.862	.76766	-.00115	-.00063	.02294	.00170	.00635	I338-01
53	I338-01J	-.00028	18.124	.15660	-.00110	-.00052	.00515	.00024	.00188	I338-01J
54	I338-01M	.53593	144.48	1.2877	.46360	.49584	.52746	.55412	.53173	I338-01M
55	I338-01S	.52159	134.59	1.2294	.45645	.47359	.51016	.54104	.51584	I338-01S
56	I322-07	.00119	*****	3.3528	-.00315	.00319	.05827	.00961	.12355	I322-07
57	J017-01	.00004	1.1350	.00064	-.00111	-.00057	.00086	-.00008	.00280	J017-01
58	CCV4	.51110	59.984	.46822	2.4262	.46270	.46963	1.6172	2.5723	CCV4
59	CCB4	.00015	.24591*	.00016	-.00072	-.00008	.00050	.00005	.00524	CCB4
60	J019-01	.00147	*****	7.2896*	-.00410	-.00033	-.00017	.00083	.00251	J019-01
61	J019-02	.00207	*****	7.2444*	-.00261	-.00152	-.00018	.00064	.00144	J019-02
62	J019-03	.00040	*****	7.2867*	-.00403	.00020	-.00075	.00059	.00094	J019-03
63	J019-04	.00488	*****	7.5622*	-.00233	-.00144	-.00017	.00080	.00149	J019-04
64	J019-05	.00061	*****	7.2420*	-.00329	-.00040	.00011	.00053	.00276	J019-05
65	J019-06	.00396	*****	7.3827*	-.00401	.00010	-.00025	.00053	.00536	J019-06
66	J019-07	.00051	*****	7.3981*	-.00412	-.00059	-.00019	.00107	.00029	J019-07
67	Blank	.00031	6.0276	.00192	.00023	-.00036	-.00018	.00002	.00160	Blank
68	MRLJ0804	.01027	2.5962*	.01004	.01052	.09294	.01028	.01097	.02278	MRLJ0804
69	MRLJ0805	.01001	1.6538*	.00958	.01027	.00824	.00954	.01070	.01155	MRLJ0805
70	CCV5	.51341	60.616	.47084	2.4530	.46065	.46383	1.6430	2.5937	CCV5
71	CCB5	.00022	.57228*	.00012	-.00044	.00028	.00022	.00005	.00483	CCB5
72	I310-01A	.51184	55.301	.77176	.47833	.48875	1.5544	1.0506	1.2144	I310-01A
73	I310-01	.00019	4.7953	.30277	.00233	.01505	1.1207	.50714	.70848	I310-01
74	I310-01J	.00010	1.1754	.06145	-.00003	.00236	.22442	.10303	.13872	I310-01J
75	I310-01M	.51050	53.138	.72318	.47314	.47995	2.0517	1.1812	1.3051	I310-01M
76	I310-01S	.52406	54.511	1.0095	.45652	.47628	1.7649	1.2601	1.4783	I310-01S
77	I310-02	.00014	4.2060	.30469	.00096	.01578	1.1884	.42617	.98927	I310-02
78	I310-03	-.00023	1.6116	.03524	-.00256	.01258	.81766	.11948	.04385	I310-03
79	I310-04	-.00034	6.0200	.10253	.00083	.01497	1.2154	.33899	.12190	I310-04
80	CCV6	.51712	60.704	.47271	2.5033	.46405	.46324	1.6496	2.6046	CCV6
81	CCB6	.00004	.22603*	.00017	-.00069	-.00016	.00019	.00013	.00478	CCB6
82	I310-05	.00002	33.200	.42361	.00319	.01819	2.3417	.58731	.54287	I310-05
83	I310-06	-.00471	41.796	3.2034	-.00496	.01832	2.1783	.67985	.75294	I310-06
84	I310-08	-.00006	2.9171	.26634	.00062	.01823	1.1366	.30302	1.0411	I310-08
85	I310-09	-.00019	2.7034	.21259	-.00125	.01786	1.3788	.31906	1.1407	I310-09
86	I310-10	-.00028	1.2343	.03608	-.00174	.01214	.68576	.06609	.02340	I310-10
87	I310-11	.00025	8.0111	.06672	-.00045	.01435	.79873	.27482	.09665	I310-11
88	I310-12	-.00164	24.851	.18212	-.00450	.01744	.97961	.30719	.30897	I310-12
89	I310-13	-.00508*	27.833	4.9652	-.01699*	.01841	1.1984	.45955	.44818	I310-13
90	I310-14	.00037	2.0883	.32281	-.00055	.01690	1.3871	.41173	.39071	I310-14
91	I310-15	.00146	1.9683	.15163	.00076	.02795	1.6191	.35559	.56793	I310-15
92	CCV7	.51218	61.962	.47831	2.4690	.46725	.46616	1.6245	2.6180	CCV7
93	CCB7	.00028	.15252*	.00014	-.00003	.00008	.00039	.00007	.00506	CCB7
94	I310-16	.00000	1.5561	.02852	-.00143	.01214	1.0149	.11963	.02913	I310-16
95	I310-17	.00010	3.1051	.03536	-.00069	.01455	.91565	.14513	.01509	I310-17
96	I310-18	.00001	6.2233	.06248	-.00032	.01562	.74827	.16811	.10601	I310-18
97	I310-19	-.00137	29.994	.47542	-.00097	.02142	2.6096	.52192	.65071	I310-19
98	CCV8	.50526	62.827	.48290	2.4019	.47024	.47067	1.5888	2.6035	CCV8
99	CCB8	.00027	.11905*	.00013	-.00078	-.00029	.00096	.00009	.00434	CCB8
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

Sample Name: Blank Acquired: 10/8/2015 11:46:39 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00189	.00001	-.00002	.00019	.00010	.00146	-.00003	.00059	-.00002
Stddev	.00002	.00001	.00000	.00003	.00002	.00004	.00000	.00001	.00002
%RSD	.89067	56.072	15.672	17.130	21.777	2.7535	1.3459	2.3092	76.139
#1	.00189	.00000	-.00001	.00016	.00009	.00150	-.00003	.00060	-.00001
#2	.00191	.00002	-.00001	.00021	.00008	.00148	-.00003	.00059	-.00002
#3	.00188	.00001	-.00002	.00022	.00012	.00142	-.00003	.00057	-.00004

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00074	.00148	.00004	.00019	-.00017	-.00001	.00002	-.00006	-.00106
Stddev	.00003	.00006	.00001	.00006	.00005	.00002	.00002	.00010	.00009
%RSD	3.8765	4.3436	25.169	32.138	30.232	233.02	110.59	171.74	8.5392
#1	-.00074	.00152	.00003	.00021	-.00022	-.00002	.00000	-.00010	-.00095
#2	-.00077	.00150	.00005	.00024	-.00013	-.00002	.00004	.00006	-.00111
#3	-.00071	.00140	.00004	.00012	-.00015	.00001	.00002	-.00013	-.00110

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00068	.00000	.00012	.00019	-.00022	-.00003	.00009	.00003	-.00011
Stddev	.00007	.00000	.00002	.00002	.00003	.00001	.00003	.00002	.00002
%RSD	9.6093	100.86	17.883	12.670	12.962	17.203	39.250	58.937	15.872
#1	-.00071	.00000	.00010	.00016	-.00025	-.00004	.00005	.00001	-.00010
#2	-.00073	.00000	.00014	.00020	-.00022	-.00003	.00009	.00004	-.00012
#3	-.00061	.00001	.00011	.00020	-.00019	-.00003	.00012	.00004	-.00009

Elem	Zn
Units	Cts/S
Avg	.00102
Stddev	.00001
%RSD	1.3615
#1	.00101
#2	.00102
#3	.00104

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8105.6	117580.	137940.
Stddev	69.8	558.	784.
%RSD	.86108	.47490	.56848
#1	8121.2	117690.	137250.
#2	8166.2	118070.	137780.
#3	8029.2	116970.	138800.

Sample Name: S20 Acquired: 10/8/2015 11:49:45 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.91851	.14927	.19178	.11392
Stddev	.00363	.00067	.00080	.00033
%RSD	.39470	.44700	.41854	.29353
#1	.91862	.14970	.19100	.11384
#2	.92207	.14961	.19173	.11429
#3	.91483	.14850	.19260	.11363

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8098.1	119270.	141500.
Stddev	38.4	871.	499.
%RSD	.47416	.73066	.35288
#1	8112.7	120270.	140950.
#2	8127.2	118840.	141620.
#3	8054.6	118690.	141930.

Sample Name: S21 Acquired: 10/8/2015 11:52:48 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.9414	1.4243	1.8737	1.1108
Stddev	.0774	.0124	.0053	.0021
%RSD	.86595	.87073	.28293	.18813
#1	9.0296	1.4295	1.8708	1.1113
#2	8.8845	1.4333	1.8705	1.1085
#3	8.9101	1.4101	1.8798	1.1125

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8045.9	118480.	142260.
Stddev	57.9	470.	589.
%RSD	.71925	.39702	.41430
#1	8067.8	118130.	141920.
#2	8089.7	118290.	141920.
#3	7980.3	119010.	142940.

Sample Name: S22 Acquired: 10/8/2015 11:56:00 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.47580	.14830	.39206	.01495	.17468
Stddev	.00133	.00030	.00061	.00003	.00033
%RSD	.28040	.20089	.15634	.18243	.19054
#1	.47426	.14829	.39143	.01498	.17430
#2	.47649	.14801	.39208	.01494	.17487
#3	.47664	.14861	.39265	.01493	.17488

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8132.4	118200.	142970.
Stddev	75.9	1130.	649.
%RSD	.93338	.95627	.45391
#1	8165.4	119490.	142330.
#2	8186.2	117420.	142940.
#3	8045.6	117680.	143630.

Sample Name: S23 Acquired: 10/8/2015 11:59:05 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.7224	1.5040	3.8199	1.3015	1.7606
Stddev	.0387	.0025	.0116	.0042	.0040
%RSD	.81865	.16580	.30414	.32332	.22677
#1	4.7665	1.5013	3.8307	1.3014	1.7651
#2	4.7065	1.5043	3.8215	1.3057	1.7590
#3	4.6942	1.5063	3.8076	1.2973	1.7576

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7593.4	118720.	139640.
Stddev	66.6	296.	806.
%RSD	.87700	.24907	.57709
#1	7651.7	119060.	139020.
#2	7607.6	118530.	139340.
#3	7520.8	118580.	140550.

Sample Name: S24 Acquired: 10/8/2015 12:02:24 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	.10967	.64970	.99835
Stddev	.00004	.00124	.00159
%RSD	.03584	.19070	.15902
#1	.10966	.64976	.99680
#2	.10971	.64843	.99828
#3	.10963	.65091	.99998

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7733.8	118010.	135500.
Stddev	25.7	333.	784.
%RSD	.33280	.28195	.57842
#1	7741.3	118260.	134700.
#2	7754.9	118130.	135540.
#3	7705.1	117630.	136270.

Sample Name: S25 Acquired: 10/8/2015 12:05:27 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	1.1220	6.5947	5.7913
Stddev	.0038	.0092	.0616
%RSD	.33590	.13993	1.0644
#1	1.1194	6.6006	5.8592
#2	1.1263	6.5840	5.7390
#3	1.1202	6.5994	5.7756

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7088.8	117440.	127490.
Stddev	55.6	1207.	1101.
%RSD	.78480	1.0274	.86347
#1	7127.1	118830.	127800.
#2	7114.2	116840.	126260.
#3	7024.9	116650.	128390.

Sample Name: S26 Acquired: 10/8/2015 12:08:40 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.07603	1.0339	.16858	.77332	.30003
Stddev	.00025	.0040	.00019	.00162	.00135
%RSD	.32960	.38566	.11246	.20990	.44848
#1	.07594	1.0294	.16859	.77343	.29848
#2	.07584	1.0370	.16877	.77165	.30094
#3	.07632	1.0353	.16839	.77489	.30066

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7464.0	116160.	130460.
Stddev	54.2	665.	365.
%RSD	.72678	.57235	.27971
#1	7457.8	116840.	130110.
#2	7521.1	115510.	130450.
#3	7413.1	116140.	130840.

Sample Name: S27 Acquired: 10/8/2015 12:11:44 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.8291	9.4904	1.6525	7.5058	2.9744
Stddev	.0343	.0440	.0048	.0233	.0312
%RSD	.58842	.46326	.29108	.31093	1.0472
#1	5.7968	9.4607	1.6471	7.4900	2.9558
#2	5.8255	9.4696	1.6544	7.5327	2.9571
#3	5.8651	9.5409	1.6561	7.4949	3.0104

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6468.1	114130.	117910.
Stddev	84.4	656.	63.
%RSD	1.3044	.57477	.05341
#1	6564.5	114810.	117870.
#2	6432.5	114080.	117870.
#3	6407.5	113500.	117980.

Sample Name: S28 Acquired: 10/8/2015 12:15:15 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	.00653	.02202	.00745
Stddev	.00015	.00013	.00015
%RSD	2.2585	.60272	2.0470
#1	.00637	.02193	.00733
#2	.00656	.02194	.00740
#3	.00666	.02217	.00762

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	112580.	116040.
Stddev	2106.	1834.
%RSD	1.8708	1.5802
#1	114760.	117900.
#2	112430.	115990.
#3	110560.	114240.

Sample Name: S29 Acquired: 10/8/2015 12:18:03 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	.06420	.22417	.07334
Stddev	.00028	.00087	.00029
%RSD	.43516	.38639	.39384
#1	.06429	.22331	.07341
#2	.06442	.22415	.07359
#3	.06389	.22505	.07302

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	118810.	128230.
Stddev	161.	491.
%RSD	.13541	.38301
#1	118760.	127720.
#2	119000.	128250.
#3	118690.	128700.

Sample Name: S30 Acquired: 10/8/2015 12:21:08 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00152	.02550	.00167	.05387	.12619	.02141	.01542	.61879
Stddev	.00001	.00008	.00002	.00008	.00010	.00017	.00011	.00273
%RSD	.35951	.32102	1.0060	.15248	.07848	.81722	.73063	.44170
#1	.00152	.02550	.00167	.05377	.12622	.02153	.01549	.61722
#2	.00152	.02541	.00169	.05390	.12609	.02121	.01529	.61720
#3	.00153	.02558	.00166	.05393	.12628	.02149	.01548	.62194

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8115.0	118910.	132150.
Stddev	58.1	568.	520.
%RSD	.71545	.47780	.39374
#1	8127.7	119510.	131790.
#2	8165.7	118850.	131910.
#3	8051.7	118370.	132740.

Sample Name: S31 Acquired: 10/8/2015 12:24:12 Type: Cal
Method: 15J6010(v8) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00614	.12655	.00658	.25923	.61981	.10359	.07592	6.0656
Stddev	.00004	.00038	.00005	.00040	.00171	.00064	.00021	.0147
%RSD	.57791	.29713	.72349	.15577	.27540	.61441	.27286	.24189
#1	.00615	.12625	.00661	.25877	.61839	.10339	.07570	6.0607
#2	.00616	.12697	.00659	.25953	.62170	.10308	.07611	6.0540
#3	.00610	.12643	.00652	.25938	.61933	.10430	.07596	6.0821

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7971.0	119100.	133050.
Stddev	21.5	102.	1247.
%RSD	.27025	.08554	.93732
#1	7963.4	118990.	131880.
#2	7995.3	119180.	132920.
#3	7954.2	119140.	134360.

Sample Name: ICV Acquired: 10/8/2015 12:27:12 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007014 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	96.809	1.4163	1.0044	1.8766	1.4718	2.4223	2.0714	76.055	2.4898	.96599
Stddev	.583	.0185	.0106	.0048	.0027	.0020	.0216	.275	.0057	.00100
%RSD	.60171	1.3027	1.0537	.25421	.18452	.08090	1.0409	.36187	.22895	.10353
#1	97.269	1.4293	1.0125	1.8810	1.4725	2.4228	2.0887	75.738	2.4947	.96494
#2	97.005	1.4245	1.0083	1.8715	1.4688	2.4239	2.0782	76.191	2.4912	.96693
#3	96.154	1.3952	.99245	1.8773	1.4741	2.4201	2.0472	76.236	2.4836	.96611
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.5715	23.808	2.4192	.52046	56.037	2.3995	2.3579	2.5154	57.583	1.0219
Stddev	.0129	.012	.0061	.00133	.229	.0043	.0059	.0016	.165	.0099
%RSD	.50320	.05140	.25307	.25486	.40950	.17908	.24954	.06394	.28655	.97170
#1	2.5827	23.812	2.4138	.52080	55.795	2.3958	2.3539	2.5152	57.554	1.0308
#2	2.5744	23.818	2.4181	.51900	56.251	2.3985	2.3552	2.5140	57.434	1.0238
#3	2.5573	23.794	2.4258	.52159	56.066	2.4042	2.3647	2.5172	57.760	1.0112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.48784	59.806	.46812	2.3085	.47452	.47472	1.5203	2.5298
Stddev	.00160	.119	.00060	.0211	.00232	.00206	.0068	.0030
%RSD	.32875	.19912	.12741	.91533	.48813	.43372	.44900	.11903
#1	.48906	59.808	.46829	2.3266	.47246	.47510	1.5271	2.5280
#2	.48843	59.686	.46746	2.3137	.47408	.47250	1.5203	2.5280
#3	.48603	59.924	.46861	2.2853	.47703	.47656	1.5135	2.5332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7189.5	120190.	126010.
Stddev	25.0	383.	1299.
%RSD	.34827	.31858	1.0308
#1	7190.3	120600.	124800.
#2	7214.1	120150.	125850.
#3	7164.0	119830.	127380.

Sample Name: ICB Acquired: 10/8/2015 12:30:09 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007015 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00686	-.00037	.00037	.00020	.00018	.00148	.00003	.01882	.00011	.00012
Stddev	.00245	.00031	.00182	.00017	.00009	.00069	.00006	.00551	.00014	.00011
%RSD	35.670	85.769	489.49	88.034	50.501	46.767	205.27	29.260	124.69	87.375
#1	.00939	-.00008	.00234	.00036	.00028	.00225	.00008	.02386	.00010	.00014
#2	.00666	-.00070	.00003	.00002	.00012	.00131	-.00003	.01968	-.00002	.00022
#3	.00451	-.00032	-.00126	.00020	.00012	.00090	.00004	.01294	.00025	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00016	.00212	.00010	-.00031	.00431	.00001	.00034	.00013	.03089	.00116
Stddev	.00006	.00387	.00043	.00057	.00081	.00040	.00012	.00015	.02365	.00127
%RSD	34.328	182.36	435.63	185.38	18.721	3655.9	33.952	115.58	76.567	109.33
#1	-.00011	-.00172	-.00039	-.00023	.00379	.00047	.00046	.00015	.00870	.00203
#2	-.00022	.00206	.00044	.00022	.00524	-.00023	.00034	-.00003	.05577	.00176
#3	-.00016	.00602	.00024	-.00090	.00390	-.00021	.00023	.00026	.02819	-.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00010	.01637	.00024	-.00037	-.00004	.00063	-.00002	.00134
Stddev	.00021	.01135	.00003	.00043	.00036	.00015	.00017	.00004
%RSD	203.75	69.314	14.289	114.11	932.77	23.943	1026.5	3.1806
#1	.00029	.02256	.00028	.00011	.00028	.00080	.00015	.00134
#2	-.00012	.02327	.00024	-.00052	-.00043	.00061	-.00018	.00130
#3	.00013	.00327	.00021	-.00071	.00004	.00049	-.00002	.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8199.7	120210.	137600.
Stddev	47.3	456.	522.
%RSD	.57709	.37959	.37951
#1	8189.9	120730.	137160.
#2	8251.2	120020.	138180.
#3	8158.1	119870.	137460.

Sample Name: ICSA1 Acquired: 10/8/2015 12:39:29 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007017 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	376.27	.00517	.00224	.00003	.00003	.00561	.00040	486.20	.00231	.00021
Stddev	2.30	.00160	.00534	.00019	.00001	.00071	.00028	5.19	.00008	.00010
%RSD	.61026	30.875	238.22	633.68	31.144	12.671	70.646	1.0666	3.6064	48.164
#1	375.69	.00498	.00812	-.00016	.00003	.00641	.00071	490.22	.00233	.00009
#2	374.32	.00368	.00091	.00003	.00004	.00506	.00036	488.03	.00221	.00028
#3	378.80	.00686	-.00231	.00022	.00002	.00536	.00014	480.35	.00238	.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00085	182.37	-.00192	.00619	187.01	.00089	-.00222	-.00125	.02644	-.00012
Stddev	.00021	.34	.00110	.00092	1.13	.00030	.00032	.00017	.02261	.00143
%RSD	24.493	.18689	57.346	14.881	.60285	33.885	14.485	13.911	85.495	1152.1
#1	.00090	181.99	-.00244	.00716	185.90	.00113	-.00259	-.00144	.00957	-.00072
#2	.00104	182.46	-.00265	.00533	188.15	.00098	-.00211	-.00109	.05213	.00150
#3	.00063	182.66	-.00065	.00607	186.99	.00055	-.00198	-.00124	.01763	-.00115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00032	.05578	.00075	-.00271	.00144	.00108	-.00027	.00255
Stddev	.00013	.00230	.00006	.00099	.00033	.00017	.00010	.00014
%RSD	40.619	4.1289	7.9979	36.390	22.990	15.637	36.801	5.4454
#1	.00043	.05599	.00073	-.00373	.00129	.00113	-.00037	.00266
#2	.00034	.05798	.00071	-.00175	.00183	.00089	-.00028	.00239
#3	.00018	.05339	.00082	-.00265	.00122	.00121	-.00017	.00260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6289.6	114080.	117800.
Stddev	60.0	810.	343.
%RSD	.95365	.70981	.29122
#1	6333.1	114540.	117460.
#2	6314.6	113150.	117810.
#3	6221.2	114560.	118140.

Sample Name: ICSAB1 Acquired: 10/8/2015 12:43:10 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007018 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	364.52	.93584	1.0176	.47958	.48679	.48658	.98490	484.48	.48262	.48462
Stddev	2.77	.00977	.0059	.00132	.00150	.00100	.00661	2.20	.00029	.00033
%RSD	.76042	1.0440	.58302	.27556	.30818	.20576	.67091	.45449	.06036	.06898
#1	367.03	.94147	1.0237	.48084	.48796	.48630	.98871	483.77	.48295	.48425
#2	365.00	.94148	1.0172	.47969	.48731	.48574	.98872	486.95	.48252	.48490
#3	361.54	.92455	1.0119	.47820	.48509	.48769	.97727	482.72	.48239	.48470
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.53642	181.75	.96180	1.1291	186.74	.45539	.98073	.99243	78.881	1.0103
Stddev	.00089	.27	.00208	.0048	.87	.00239	.00107	.00151	.197	.0064
%RSD	.16501	.14779	.21650	.42159	.46476	.52582	.10864	.15168	.24998	.62908
#1	.53540	181.44	.95973	1.1346	185.75	.45538	.98138	.99305	78.975	1.0150
#2	.53685	181.88	.96178	1.1265	187.12	.45779	.97950	.99071	79.014	1.0129
#3	.53701	181.93	.96389	1.1263	187.36	.45300	.98130	.99352	78.655	1.0031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.0427	78.092	.48270	.82634	.95192	.94717	.50902	1.0182
Stddev	.0029	.287	.00120	.00333	.00197	.00323	.00102	.0033
%RSD	.28022	.36745	.24799	.40238	.20725	.34146	.19988	.32534
#1	1.0394	78.332	.48350	.82942	.95171	.95000	.50817	1.0154
#2	1.0436	78.170	.48326	.82678	.95007	.94785	.51015	1.0174
#3	1.0450	77.774	.48132	.82282	.95399	.94364	.50874	1.0219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6243.7	113230.	116290.
Stddev	25.0	234.	640.
%RSD	.40030	.20627	.55022
#1	6241.1	113400.	115690.
#2	6269.9	112970.	116210.
#3	6220.1	113330.	116970.

Sample Name: MRLJ0803 Acquired: 10/8/2015 12:54:25 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007021 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.23661	.09312	.00929	.00990	.00983	.09207	.01075	1.0791	.01031	.00965
Stddev	.00372	.00140	.00118	.00016	.00007	.00015	.00005	.0187	.00011	.00009
%RSD	1.5723	1.5045	12.714	1.6147	.71163	.16489	.48525	1.7373	1.0474	.97980
#1	.24001	.09282	.01062	.00981	.00976	.09223	.01069	1.0589	.01029	.00974
#2	.23263	.09465	.00891	.00980	.00982	.09203	.01078	1.0826	.01021	.00965
#3	.23718	.09189	.00835	.01008	.00990	.09194	.01078	1.0959	.01043	.00955
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01038	.22258	.00947	.00940	1.0002	.00988	.00918	.01020	.95999	.00975
Stddev	.00012	.00136	.00019	.00080	.0217	.00002	.00006	.00008	.01871	.00039
%RSD	1.1946	.61303	2.0541	8.4664	2.1692	.20332	.66779	.76928	1.9493	4.0396
#1	.01046	.22415	.00937	.00850	.99090	.00989	.00925	.01029	.97134	.00964
#2	.01024	.22189	.00936	.00970	.98479	.00990	.00912	.01016	.97024	.00942
#3	.01045	.22170	.00970	.01001	1.0251	.00986	.00918	.01016	.93839	.01019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01000	.98726	.00983	.01028	.09558	.00998	.01053	.02118
Stddev	.00008	.00657	.00008	.00055	.00051	.00066	.00020	.00013
%RSD	.83132	.66574	.77460	5.3400	.53479	6.5834	1.9038	.60378
#1	.00991	.98214	.00977	.01009	.09501	.00952	.01054	.02131
#2	.01003	.98496	.00981	.00985	.09599	.00969	.01033	.02119
#3	.01007	.99467	.00992	.01089	.09575	.01073	.01073	.02105
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8174.4	118360.	133600.
Stddev	33.0	387.	338.
%RSD	.40418	.32698	.25310
#1	8152.0	118500.	133240.
#2	8212.4	118650.	133900.
#3	8158.9	117920.	133670.

Sample Name: CCV1 Acquired: 10/8/2015 12:57:55 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007022 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.52	1.4600	1.0356	1.9312	1.5171	2.4927	2.1378	77.299	2.5603	1.0378
Stddev	.41	.0042	.0019	.0086	.0029	.0051	.0047	.357	.0052	.0006
%RSD	.39900	.28993	.18540	.44286	.19163	.20309	.22085	.46165	.20255	.06037
#1	102.35	1.4618	1.0363	1.9346	1.5170	2.4905	2.1386	77.016	2.5651	1.0375
#2	102.99	1.4630	1.0371	1.9375	1.5201	2.4891	2.1421	77.181	2.5548	1.0374
#3	102.23	1.4551	1.0335	1.9214	1.5143	2.4985	2.1328	77.700	2.5610	1.0386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.6542	24.338	2.4734	.53053	57.513	2.4616	2.3975	2.5729	58.487	1.0491
Stddev	.0034	.036	.0065	.00156	.401	.0035	.0027	.0015	.185	.0042
%RSD	.12998	.14976	.26357	.29362	.69775	.14095	.11312	.05973	.31661	.40435
#1	2.6567	24.377	2.4679	.53134	57.362	2.4595	2.3954	2.5725	58.324	1.0442
#2	2.6503	24.305	2.4718	.53150	57.209	2.4656	2.3965	2.5716	58.688	1.0518
#3	2.6556	24.334	2.4806	.52873	57.968	2.4597	2.4006	2.5746	58.449	1.0513
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.50121	61.085	.47780	2.3992	.48163	.48761	1.5670	2.5832
Stddev	.00069	.254	.00071	.0085	.00079	.00189	.0032	.0054
%RSD	.13670	.41655	.14938	.35470	.16455	.38815	.20761	.20731
#1	.50066	61.011	.47771	2.4051	.48229	.48811	1.5673	2.5801
#2	.50099	61.368	.47855	2.4031	.48183	.48921	1.5636	2.5802
#3	.50198	60.875	.47713	2.3895	.48075	.48552	1.5701	2.5894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6929.0	115170.	120250.
Stddev	24.1	345.	598.
%RSD	.34764	.29994	.49756
#1	6908.5	115410.	119610.
#2	6955.5	115330.	120350.
#3	6923.0	114770.	120800.

Sample Name: CCB1 Acquired: 10/8/2015 13:00:52 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007023 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .03744	.00047	-.00090	.00031	.00015	-.00108	.00002	.09842	.00041
Stddev	.00620	.00131	.00119	.00004	.00007	.00044	.00007	.00724	.00008
%RSD	16.552	278.06	132.00	12.411	43.496	40.706	345.63	7.3531	20.770
#1	.04375	.00180	.00020	.00032	.00010	-.00067	.00011	.09086	.00047
#2	.03723	-.00082	-.00216	.00027	.00012	-.00103	-.00001	.09910	.00044
#3	.03136	.00044	-.00074	.00034	.00022	-.00155	-.00003	.10529	.00031
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03000								
Low Limit	-.03000								

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00014	.00052	.00447	-.00043	-.00139	.01068	.00027	.00042	.00012
Stddev	.00014	.00008	.00412	.00038	.00091	.01426	.00019	.00029	.00001
%RSD	101.28	15.572	92.051	87.591	65.669	133.50	68.041	69.745	9.9397
#1	.00000	.00051	.00897	-.00002	-.00035	-.00251	.00015	.00072	.00013
#2	-.00028	.00060	.00356	-.00050	-.00208	.00875	.00018	.00040	.00013
#3	-.00013	.00044	.00089	-.00077	-.00174	.02580	.00049	.00014	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.04410	-.00067	.00003	.02221	.00012	.00026	-.00001	.00066	.00006
Stddev	.03501	.00146	.00017	.00535	.00005	.00120	.00014	.00006	.00019
%RSD	79.401	219.66	548.44	24.102	41.033	455.85	1125.3	9.0137	317.45
#1	.07567	.00101	.00017	.02655	.00007	.00127	.00012	.00073	.00017
#2	.00644	-.00133	.00008	.02385	.00012	-.00107	.00001	.00062	-.00016
#3	.05017	-.00167	-.00016	.01623	.00018	.00059	-.00017	.00063	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Zn
Units	mg/L
Avg	.00246
Stddev	.00007
%RSD	2.7219
#1	.00240
#2	.00245
#3	.00253
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB1 Acquired: 10/8/2015 13:00:52 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007023 Type: Anaylst: THuang
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7928.0	115190.	131120.
Stddev	59.6	168.	296.
%RSD	.75205	.14600	.22591
#1	7947.5	115280.	130830.
#2	7975.5	115000.	131430.
#3	7861.1	115290.	131120.

Sample Name: CCV2 Acquired: 10/8/2015 13:34:15 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007034 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	101.96	1.4455	1.0312	1.9141	1.5114	2.4851	2.1262	78.491	2.5678	1.0348
Stddev	.60	.0087	.0040	.0037	.0030	.0055	.0089	.064	.0078	.0017
%RSD	.58461	.60055	.39128	.19064	.19685	.22305	.41796	.08172	.30251	.16525
#1	102.61	1.4456	1.0323	1.9127	1.5094	2.4811	2.1278	78.457	2.5684	1.0329
#2	101.43	1.4540	1.0345	1.9183	1.5148	2.4914	2.1342	78.450	2.5753	1.0362
#3	101.84	1.4367	1.0267	1.9114	1.5099	2.4829	2.1167	78.565	2.5598	1.0354
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.6346	24.396	2.4686	.52808	58.383	2.4634	2.3910	2.5646	58.732	1.0436
Stddev	.0056	.064	.0088	.00275	.299	.0057	.0051	.0040	.186	.0057
%RSD	.21274	.26107	.35725	.52151	.51156	.22978	.21379	.15625	.31685	.54194
#1	2.6359	24.328	2.4624	.52670	58.251	2.4620	2.3852	2.5604	58.789	1.0459
#2	2.6394	24.407	2.4646	.53125	58.173	2.4696	2.3930	2.5652	58.882	1.0478
#3	2.6285	24.454	2.4787	.52628	58.725	2.4585	2.3949	2.5683	58.524	1.0372
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.50058	61.080	.47555	2.3829	.48286	.48347	1.5672	2.6017
Stddev	.00102	.235	.00140	.0092	.00336	.00017	.0055	.0072
%RSD	.20308	.38465	.29428	.38776	.69683	.03508	.35092	.27497
#1	.50005	61.166	.47609	2.3862	.48244	.48330	1.5676	2.5985
#2	.50175	61.259	.47661	2.3901	.47972	.48364	1.5725	2.5967
#3	.49993	60.814	.47397	2.3725	.48641	.48347	1.5615	2.6099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7090.3	117490.	123470.
Stddev	23.4	318.	377.
%RSD	.33058	.27069	.30570
#1	7106.7	117780.	123380.
#2	7100.7	117530.	123150.
#3	7063.4	117150.	123880.

Sample Name: CCB2 Acquired: 10/8/2015 13:37:12 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007035 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01190	.00129	-.00054	.00039	.00017	-.00224	.00003	F .21062	.00023
Stddev	.00171	.00128	.00156	.00025	.00003	.00034	.00001	.00289	.00010
%RSD	14.387	99.900	289.73	64.478	15.209	15.152	37.077	1.3744	43.943
#1	.01264	-.00020	.00126	.00067	.00018	-.00192	.00004	.20729	.00026
#2	.00994	.00205	-.00160	.00035	.00014	-.00220	.00003	.21254	.00012
#3	.01311	.00201	-.00128	.00016	.00018	-.00260	.00002	.21203	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit								.10000	
Low Limit								-.10000	

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00006	-.00013	.00034	.00009	-.00057	.01077	.00026	.00047	.00008
Stddev	.00009	.00011	.00172	.00045	.00014	.00677	.00006	.00010	.00017
%RSD	169.74	83.122	504.78	483.89	24.038	62.803	24.295	22.068	213.15
#1	.00005	-.00014	.00176	-.00040	-.00063	.01812	.00026	.00058	.00004
#2	-.00008	-.00002	-.00157	.00047	-.00041	.00942	.00032	.00043	.00026
#3	-.00013	-.00023	.00083	.00021	-.00066	.00479	.00019	.00038	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02307	.00116	.00023	.01903	.00012	.00015	-.00044	.00067	-.00003
Stddev	.01587	.00042	.00007	.00434	.00005	.00027	.00024	.00051	.00006
%RSD	68.780	36.183	31.769	22.831	39.130	188.12	53.909	77.027	196.89
#1	.01363	.00102	.00024	.02399	.00009	.00046	-.00071	.00080	.00003
#2	.04140	.00082	.00015	.01717	.00017	-.00001	-.00036	.00010	-.00010
#3	.01420	.00162	.00030	.01593	.00009	-.00001	-.00025	.00110	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Zn
Units	mg/L
Avg	.00516
Stddev	.00007
%RSD	1.4262
#1	.00522
#2	.00518
#3	.00508
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB2 Acquired: 10/8/2015 13:37:12 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007035 Type: Anaylst: THuang
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7984.3	115950.	132210.
Stddev	47.6	543.	416.
%RSD	.59671	.46788	.31486
#1	8005.9	116570.	132100.
#2	8017.2	115560.	132660.
#3	7929.6	115720.	131850.

Sample Name: IPJ008WB Acquired: 10/8/2015 13:40:18 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007036 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00964	-.00036	-.00063	.00006	.00001	-.00347	-.00006	.02065	.00003	-.00001
Stddev	.00121	.00100	.00128	.00006	.00002	.00012	.00004	.00112	.00011	.00004
%RSD	12.572	279.50	202.59	91.018	163.77	3.5643	57.751	5.4300	332.61	512.66
#1	.01080	.00004	.00020	.00007	.00001	-.00334	-.00005	.02069	.00016	.00003
#2	.00974	.00038	.00001	.00011	.00000	-.00348	-.00003	.01951	.00000	-.00001
#3	.00838	-.00149	-.00210	.00000	.00003	-.00358	-.00011	.02175	-.00006	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00002	-.00061	.00034	-.00041	.01508	.00000	-.00002	.00009	.00783	.00076
Stddev	.00014	.00195	.00040	.00099	.00570	.00010	.00012	.00013	.00319	.00086
%RSD	878.68	321.08	116.92	240.66	37.817	14222.	484.01	143.89	40.711	113.59
#1	.00006	.00069	-.00006	-.00124	.01819	-.00011	-.00005	.00004	.01143	.00061
#2	.00008	.00034	.00035	.00069	.00850	.00002	-.00013	.00000	.00670	.00169
#3	-.00018	-.00285	.00074	-.00069	.01854	.00009	.00010	.00024	.00536	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00003	.00687	.00005	-.00044	-.00026	.00022	-.00012	.00292
Stddev	.00005	.00449	.00007	.00032	.00029	.00053	.00010	.00011
%RSD	160.57	65.323	142.08	74.249	111.77	241.29	83.241	3.8333
#1	.00008	.01151	-.00003	-.00060	-.00045	.00076	-.00015	.00304
#2	-.00002	.00653	.00010	-.00006	.00007	-.00031	-.00001	.00291
#3	.00003	.00256	.00010	-.00064	-.00039	.00022	-.00021	.00282
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8178.3	120950.	138430.
Stddev	35.4	573.	1118.
%RSD	.43247	.47389	.80741
#1	8169.4	121480.	138250.
#2	8217.3	121020.	137410.
#3	8148.2	120340.	139620.

Sample Name: IPJ008WL Acquired: 10/8/2015 13:43:25 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007037 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.8968	2.2875	.48755	.47027	.48080	.48399	.51331	51.451	.49349
Stddev	.0173	.0088	.00256	.00092	.00066	.00163	.00166	.216	.00158
%RSD	.35368	.38608	.52597	.19558	.13711	.33646	.32349	.42036	.31942
#1	4.9166	2.2839	.48714	.47105	.48058	.48577	.51400	51.215	.49504
#2	4.8895	2.2975	.49030	.46926	.48028	.48256	.51451	51.497	.49354
#3	4.8844	2.2810	.48522	.47051	.48154	.48364	.51141	51.641	.49189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.48223	.50533	4.8114	.48492	F .00018	46.650	.46447	.48197	.50474
Stddev	.00040	.00179	.0113	.00130	.00039	.170	.00120	.00077	.00040
%RSD	.08206	.35430	.23561	.26886	218.31	.36498	.25764	.15894	.07917
#1	.48184	.50739	4.8043	.48522	.00050	46.499	.46375	.48188	.50442
#2	.48263	.50439	4.8245	.48349	-.00026	46.616	.46381	.48278	.50460
#3	.48221	.50419	4.8054	.48604	.00029	46.834	.46585	.48125	.50519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					.50000				
Range					-15.200%				

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	48.634	.49707	.48434	49.059	.47358	.46712	.48116	.48274	.50984
Stddev	.115	.00341	.00050	.092	.00154	.00155	.00262	.00106	.00184
%RSD	.23704	.68599	.10415	.18672	.32426	.33173	.54355	.21874	.36040
#1	48.589	.49876	.48484	49.061	.47534	.46672	.47903	.48395	.51145
#2	48.547	.49929	.48437	48.967	.47288	.46883	.48408	.48202	.51022
#3	48.764	.49314	.48383	49.150	.47251	.46581	.48038	.48225	.50784
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Zn
Units	mg/L
Avg	.50783
Stddev	.00063
%RSD	.12317
#1	.50733
#2	.50762
#3	.50853
Check ?	Chk Pass
Value	
Range	

Sample Name: IPJ008WL Acquired: 10/8/2015 13:43:25 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007037 Type: Anaylst: THuang
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7373.9	121360.	130280.
Stddev	30.9	1158.	888.
%RSD	.41947	.95439	.68147
#1	7339.6	122470.	129570.
#2	7382.5	121450.	129980.
#3	7399.7	120160.	131270.

Sample Name: TXJ002SB Acquired: 10/8/2015 13:46:14 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007038 Type: Anaylst: THuang
Comment: TCLP

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .12317	.00006	-.00254	.00374	.00017	.02372	.00007	.32623	.00075
Stddev	.00216	.00048	.00228	.00011	.00004	.00037	.00008	.00205	.00019
%RSD	1.7521	808.38	89.538	2.9135	21.879	1.5650	107.39	.62972	24.951
#1	.12563	.00048	-.00034	.00370	.00017	.02415	.00013	.32773	.00067
#2	.12161	-.00046	-.00240	.00365	.00022	.02351	.00010	.32389	.00096
#3	.12226	.00016	-.00489	.00386	.00014	.02351	-.00002	.32707	.00061
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000								
Low Limit	-10.000								

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00003	.00087	.00963	.00030	-.00085	.06654	.00032	.00026	.00100
Stddev	.00013	.00010	.00325	.00077	.00017	.00944	.00014	.00017	.00012
%RSD	479.48	11.851	33.784	259.23	19.950	14.194	44.072	66.867	11.933
#1	.00006	.00098	.01091	.00116	-.00071	.07555	.00016	.00046	.00113
#2	.00003	.00084	.00593	.00005	-.00081	.05671	.00040	.00015	.00089
#3	-.00017	.00078	.01206	-.00032	-.00104	.06735	.00039	.00017	.00099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.09710	.00319	.00017	F 344.39	.00271	-.00112	.00045	.00056	.00029
Stddev	.00643	.00029	.00022	3.26	.00003	.00113	.00043	.00043	.00015
%RSD	6.6253	8.9488	127.93	.94663	.97424	101.07	95.089	76.593	51.374
#1	.09310	.00287	-.00007	347.19	.00269	-.00227	.00063	.00073	.00044
#2	.10452	.00341	.00035	345.18	.00271	.00000	.00075	.00088	.00028
#3	.09368	.00330	.00023	340.81	.00274	-.00109	-.00004	.00007	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.50000					
Low Limit				-10.000					

Elem	Zn
Units	mg/L
Avg	F .01999
Stddev	.00007
%RSD	.36828
#1	.02002
#2	.01991
#3	.02005
Check ?	Chk Fail
High Limit	.01000
Low Limit	-10.000

Sample Name: TXJ002SB Acquired: 10/8/2015 13:46:14 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007038 Type: Anaylst: THuang
Comment: TCLP

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7088.0	121280.	126560.
Stddev	83.6	308.	720.
%RSD	1.1800	.25374	.56918
#1	7126.1	121390.	125880.
#2	7145.7	121520.	126470.
#3	6992.1	120940.	127320.

Sample Name: I185-04A Acquired: 10/8/2015 13:49:30 Type: Unk
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007039 Type: Anaylst: THuang
Comment: TCLP

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.2659	2.4509	.53485	.73660	.49933	.53326	.53109	168.56	.51374
Stddev	.0095	.0080	.00505	.00185	.00161	.00190	.00209	.66	.00116
%RSD	.17996	.32855	.94366	.25180	.32322	.35681	.39413	.38952	.22593
#1	5.2552	2.4466	.53421	.73533	.49821	.53115	.53121	169.03	.51240
#2	5.2693	2.4602	.54018	.73873	.50118	.53484	.53311	167.81	.51437
#3	5.2732	2.4460	.53015	.73575	.49860	.53380	.52893	168.85	.51444

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.51118	.54293	4.9676	.50331	.00290	49.656	.60267	.52203	.53612
Stddev	.00083	.00138	.0067	.00176	.00074	.181	.00172	.00053	.00050
%RSD	.16165	.25328	.13560	.35039	25.624	.36428	.28511	.10159	.09367
#1	.51051	.54159	4.9623	.50193	.00374	49.466	.60115	.52262	.53573
#2	.51093	.54434	4.9752	.50270	.00262	49.675	.60454	.52159	.53596
#3	.51210	.54286	4.9652	.50529	.00234	49.826	.60233	.52189	.53669

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	54.824	.55720	.52631	F 371.17	.60798	.45124	.50387	.50505	.54134
Stddev	.299	.00219	.00173	2.84	.00081	.00350	.00077	.00358	.00036
%RSD	.54492	.39270	.32838	.76595	.13356	.77639	.15312	.70900	.06650
#1	54.494	.55811	.52435	373.91	.60743	.45236	.50466	.50386	.54092
#2	55.077	.55879	.52696	371.36	.60891	.45405	.50384	.50908	.54154
#3	54.900	.55471	.52762	368.24	.60760	.44732	.50312	.50222	.54155

Elem	Zn
Units	mg/L
Avg	.55080
Stddev	.00147
%RSD	.26671
#1	.54992
#2	.54999
#3	.55250

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6544.3	117060.	119330.
Stddev	29.6	471.	375.
%RSD	.45260	.40272	.31441
#1	6540.6	117230.	119050.
#2	6575.6	116530.	119180.
#3	6516.7	117420.	119750.

Sample Name: I185-04R Acquired: 10/8/2015 13:52:38 Type: Unk
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007040 Type: Anaylst: THuang
Comment: TCLP

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.09056	.00125	-.00214	.25115	.00010	.01905	.00017	120.56	.00086
Stddev	.00161	.00047	.00103	.00089	.00004	.00032	.00008	.37	.00007
%RSD	1.7780	37.672	48.060	.35412	37.959	1.6910	45.971	.31077	8.6373
#1	.08951	.00176	-.00315	.25135	.00015	.01938	.00015	120.13	.00090
#2	.09241	.00115	-.00109	.25193	.00010	.01902	.00010	120.81	.00077
#3	.08975	.00083	-.00218	.25018	.00007	.01874	.00025	120.75	.00089

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00010	.00186	.02848	.00032	.00148	1.8432	.12813	-.00003	.00195
Stddev	.00016	.00018	.00358	.00122	.00073	.0040	.00076	.00012	.00003
%RSD	149.70	9.8678	12.564	378.15	49.215	.21559	.59235	358.76	1.6610
#1	.00000	.00196	.02755	.00115	.00231	1.8387	.12735	.00000	.00193
#2	-.00028	.00165	.03244	-.00108	.00095	1.8460	.12886	-.00017	.00198
#3	-.00003	.00196	.02546	.00090	.00118	1.8450	.12818	.00006	.00192

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.95089	.00309	.00017	F 323.15	.12048	-.00267	.00077	.00213	.00116
Stddev	.01267	.00113	.00022	.58	.00034	.00068	.00027	.00037	.00012
%RSD	1.3327	36.491	124.88	.18069	.28540	25.611	34.549	17.172	10.254
#1	.94992	.00221	.00042	322.95	.12072	-.00257	.00074	.00220	.00128
#2	.96402	.00436	.00006	322.69	.12064	-.00204	.00105	.00174	.00104
#3	.93874	.00270	.00003	323.81	.12009	-.00340	.00052	.00246	.00117

Elem	Zn
Units	mg/L
Avg	.00685
Stddev	.00006
%RSD	.87536
#1	.00686
#2	.00679
#3	.00691

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6791.4	119040.	121570.
Stddev	54.2	294.	211.
%RSD	.79814	.24729	.17321
#1	6821.8	119220.	121550.
#2	6823.6	118700.	121370.
#3	6728.8	119200.	121790.

Sample Name: I185-04J Acquired: 10/8/2015 13:55:50 Type: Unk
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007041 Type: Anaylst: THuang
Comment: TCLP

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02362	.00040	.00037	.05052	-.00005	-.00003	-.00003	24.722	.00031	-.00011
Stddev	.00067	.00021	.00075	.00007	.00001	.00026	.00000	.115	.00015	.00017
%RSD	2.8257	52.500	200.38	.14374	27.427	794.83	1.1031	.46535	50.224	157.04
#1	.02301	.00041	-.00046	.05044	-.00006	.00025	-.00003	24.593	.00048	-.00030
#2	.02350	.00019	.00061	.05054	-.00005	-.00010	-.00003	24.759	.00023	-.00007
#3	.02433	.00061	.00097	.05058	-.00004	-.00025	-.00003	24.814	.00020	.00004

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00036	.00086	.00004	-.00041	.38446	.02604	-.00016	.00037	.23477	.00000
Stddev	.00003	.00016	.00107	.00077	.01058	.00018	.00005	.00007	.02080	.0015
%RSD	8.9673	18.460	2780.1	190.21	2.7524	.69847	29.977	20.095	8.8606	57844.
#1	.00040	.00090	.00100	-.00109	.37620	.02583	-.00015	.00039	.23775	.00130
#2	.00035	.00099	.00023	.00043	.39639	.02613	-.00012	.00043	.21264	.00031
#3	.00034	.00068	-.00112	-.00056	.38080	.02615	-.00022	.00028	.25392	-.00162

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00002	66.472	.02425	-.00065	-.00033	.00082	.00020	.00179
Stddev	.00003	.174	.00011	.00041	.00091	.00037	.00013	.00016
%RSD	166.70	.26240	.44855	63.484	272.66	45.445	63.645	8.7356
#1	-.00002	66.273	.02432	-.00051	.00012	.00120	.00006	.00197
#2	.00001	66.544	.02431	-.00111	.00026	.00081	.00030	.00170
#3	-.00005	66.599	.02412	-.00032	-.00139	.00045	.00024	.00170

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7647.9	120700.	129500.
Stddev	41.2	1059.	240.
%RSD	.53927	.87766	.18564
#1	7625.8	121920.	129370.
#2	7695.5	120160.	129350.
#3	7622.4	120020.	129780.

Sample Name: I185-04M Acquired: 10/8/2015 13:58:54 Type: Unk
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007042 Type: Anaylst: THuang
Comment: TCLP

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.1286	2.4150	.51643	.68316	.47777	.51586	.51874	150.69	.49899
Stddev	.0020	.0236	.00466	.00105	.00118	.00132	.00428	.82	.00152
%RSD	.03936	.97623	.90241	.15367	.24683	.25615	.82576	.54400	.30391
#1	5.1266	2.4252	.51683	.68325	.47778	.51471	.52089	151.25	.49934
#2	5.1286	2.4317	.52088	.68208	.47659	.51730	.52153	151.07	.50030
#3	5.1306	2.3880	.51159	.68417	.47895	.51557	.51381	149.75	.49733

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.48985	.53037	4.8132	.48291	.00236	47.261	.56654	.49661	.51347
Stddev	.00121	.00084	.0227	.00218	.00072	.162	.00168	.00121	.00022
%RSD	.24752	.15771	.47142	.45214	30.482	.34259	.29624	.24407	.04364
#1	.48857	.53012	4.7936	.48318	.00255	47.074	.56535	.49628	.51334
#2	.49002	.53130	4.8381	.48060	.00297	47.354	.56581	.49559	.51373
#3	.49098	.52968	4.8078	.48494	.00157	47.354	.56846	.49795	.51334

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	51.049	.54192	.51158	F 325.80	.56959	.44257	.48067	.48197	.52758
Stddev	.153	.00165	.00175	.69	.00044	.00205	.00101	.00158	.00114
%RSD	.29953	.30517	.34297	.21290	.07734	.46426	.21035	.32709	.21528
#1	50.920	.54327	.51072	325.02	.56991	.44338	.48158	.48104	.52813
#2	51.009	.54242	.51360	326.05	.56909	.44408	.48084	.48108	.52834
#3	51.218	.54008	.51042	326.34	.56978	.44023	.47958	.48379	.52628

Elem	Zn
Units	mg/L
Avg	.52617
Stddev	.00130
%RSD	.24731
#1	.52495
#2	.52602
#3	.52754

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6665.7	118900.	118930.
Stddev	45.2	484.	561.
%RSD	.67826	.40672	.47176
#1	6678.5	119320.	118460.
#2	6703.1	118370.	118770.
#3	6615.4	119000.	119550.

Sample Name: I185-04D Acquired: 10/8/2015 14:02:01 Type: Unk
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007043 Type: Anaylst: THuang
Comment: TCLP

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.09590	-.00028	-.00413	.25874	.00015	.01934	.00019	124.74	.00079
Stddev	.00023	.00158	.00250	.00060	.00003	.00039	.00007	.39	.00012
%RSD	.24504	573.18	60.500	.23275	21.142	1.9966	33.788	.31241	15.182
#1	.09579	-.00172	-.00224	.25941	.00018	.01979	.00014	124.30	.00066
#2	.09617	-.00053	-.00318	.25860	.00013	.01916	.00027	124.99	.00089
#3	.09575	.00142	-.00696	.25823	.00012	.01908	.00017	124.94	.00083

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00030	.00132	.03503	-.00057	.00195	1.9139	.13154	-.00001	.00219
Stddev	.00013	.00010	.00079	.00088	.00045	.0204	.00032	.00010	.00010
%RSD	44.398	7.5978	2.2620	155.59	23.254	1.0639	.24395	883.12	4.5216
#1	-.00020	.00143	.03523	-.00158	.00228	1.8923	.13118	-.00009	.00209
#2	-.00025	.00124	.03415	-.00001	.00143	1.9165	.13179	.00010	.00228
#3	-.00045	.00129	.03569	-.00011	.00214	1.9328	.13164	-.00004	.00221

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.95009	.00230	.00006	F 333.83	.12441	-.00372	.00014	.00271	.00124
Stddev	.01698	.00078	.00018	2.98	.00030	.00099	.00030	.00057	.00006
%RSD	1.7877	33.814	307.48	.89279	.23967	26.504	209.24	21.185	4.6070
#1	.96967	.00308	.00008	335.90	.12449	-.00294	.00013	.00314	.00118
#2	.94119	.00153	.00022	330.41	.12407	-.00339	.00044	.00206	.00125
#3	.93940	.00230	-.00013	335.17	.12465	-.00483	-.00015	.00293	.00130

Elem	Zn
Units	mg/L
Avg	.00539
Stddev	.00006
%RSD	1.1177
#1	.00536
#2	.00536
#3	.00546

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6791.9	119320.	119860.
Stddev	47.4	489.	274.
%RSD	.69735	.41021	.22847
#1	6800.5	119540.	119550.
#2	6834.4	118750.	119970.
#3	6740.9	119650.	120060.

Sample Name: I185-05R Acquired: 10/8/2015 14:05:12 Type: Unk
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007044 Type: Anaylst: THuang
Comment: TCLP

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.17876	-.00004	-.00288	.12325	.00008	.01385	.00021	13.109	.00065
Stddev	.00140	.00067	.00110	.00022	.00005	.00062	.00009	.044	.00017
%RSD	.78364	1630.9	38.191	.17815	65.879	4.4594	39.636	.33589	26.502
#1	.18032	.00073	-.00334	.12320	.00003	.01446	.00021	13.059	.00046
#2	.17761	-.00044	-.00163	.12306	.00008	.01386	.00030	13.124	.00071
#3	.17836	-.00041	-.00368	.12349	.00013	.01322	.00013	13.143	.00078

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00017	.00212	.06807	.00288	.00084	1.3150	.02872	-.00004	.00146
Stddev	.00030	.00017	.00272	.00060	.00091	.0087	.00023	.00006	.00003
%RSD	181.17	8.0816	3.9894	21.037	108.75	.65940	.81136	153.03	2.3592
#1	.00010	.00209	.06878	.00324	.00175	1.3179	.02894	-.00011	.00150
#2	-.00010	.00231	.06507	.00218	-.00008	1.3219	.02847	.00000	.00144
#3	-.00050	.00197	.07036	.00321	.00085	1.3053	.02874	.00000	.00144

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.2641	.00267	-.00009	F 294.69	.05193	-.00267	-.00011	.00401	.00042
Stddev	.0092	.00162	.00021	.23	.00022	.00104	.00048	.00011	.00011
%RSD	.40429	60.892	225.87	.07650	.42587	38.965	430.81	2.6378	26.733
#1	2.2538	.00342	-.00008	294.47	.05192	-.00196	.00010	.00402	.00033
#2	2.2715	.00379	-.00031	294.69	.05171	-.00386	.00022	.00391	.00055
#3	2.2668	.00080	.00011	294.92	.05215	-.00218	-.00066	.00412	.00038

Elem	Zn
Units	mg/L
Avg	.00617
Stddev	.00003
%RSD	.43414
#1	.00614
#2	.00617
#3	.00619

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7099.1	122020.	121890.
Stddev	58.1	623.	609.
%RSD	.81894	.51033	.49978
#1	7110.9	122720.	121210.
#2	7150.4	121530.	122400.
#3	7036.0	121810.	122060.

Sample Name: I185-06R Acquired: 10/8/2015 14:08:24 Type: Unk
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007045 Type: Anaylst: THuang
Comment: TCLP

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.79853	-.00062	-.00357	.17506	.00011	.01763	.00796	12.624	.00087
Stddev	.00414	.00038	.00272	.00001	.00004	.00040	.00006	.058	.00020
%RSD	.51838	60.336	76.266	.00397	36.393	2.2531	.78762	.46140	23.042
#1	.80275	-.00058	-.00560	.17507	.00014	.01802	.00795	12.578	.00101
#2	.79447	-.00027	-.00048	.17506	.00012	.01765	.00803	12.605	.00064
#3	.79838	-.00102	-.00464	.17506	.00006	.01723	.00791	12.690	.00096

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00121	.00797	.33512	.06896	.00210	1.4753	.12423	-.00002	.00339
Stddev	.00022	.00010	.00121	.00040	.00063	.0159	.00034	.00003	.00012
%RSD	18.111	1.2374	.35983	.58105	29.799	1.0746	.27615	126.53	3.5819
#1	.00119	.00788	.33604	.06871	.00161	1.4574	.12438	-.00001	.00351
#2	.00100	.00797	.33375	.06874	.00188	1.4808	.12384	.00000	.00327
#3	.00144	.00808	.33556	.06942	.00281	1.4876	.12448	-.00005	.00340

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.0418	.00438	-.00003	F 328.91	.03355	-.00229	.00036	.02089	.00148
Stddev	.0562	.00096	.00020	3.42	.00009	.00065	.00035	.00043	.00016
%RSD	1.3902	21.877	801.22	1.0389	.26426	28.347	97.114	2.0775	10.853
#1	3.9835	.00547	-.00007	329.77	.03351	-.00154	.00048	.02130	.00162
#2	4.0462	.00372	-.00020	331.82	.03348	-.00269	-.00003	.02043	.00152
#3	4.0956	.00393	.00020	325.15	.03365	-.00264	.00063	.02095	.00130

Elem	Zn
Units	mg/L
Avg	.09395
Stddev	.00039
%RSD	.41036
#1	.09363
#2	.09386
#3	.09438

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7058.7	121360.	121370.
Stddev	51.5	196.	362.
%RSD	.72947	.16134	.29814
#1	7066.9	121490.	120960.
#2	7105.7	121460.	121490.
#3	7003.7	121130.	121650.

Sample Name: CCV3 Acquired: 10/8/2015 14:11:36 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007046 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.78	1.4768	1.0357	1.8846	1.4793	2.5113	2.1596	77.181	2.6041	1.0391
Stddev	.73	.0097	.0056	.0061	.0041	.0034	.0114	.245	.0076	.0001
%RSD	.71165	.65429	.53803	.32452	.27495	.13350	.52634	.31739	.29230	.00672
#1	101.98	1.4803	1.0307	1.8916	1.4840	2.5085	2.1607	76.924	2.6049	1.0391
#2	102.93	1.4843	1.0417	1.8802	1.4767	2.5151	2.1704	77.208	2.6113	1.0392
#3	103.42	1.4659	1.0345	1.8820	1.4773	2.5105	2.1477	77.412	2.5961	1.0390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.6985	24.277	2.4561	.52192	58.162	2.4187	2.3752	2.5717	57.568	1.0526
Stddev	.0107	.021	.0030	.00097	.323	.0043	.0019	.0026	.192	.0090
%RSD	.39642	.08749	.12333	.18538	.55560	.17599	.08035	.10101	.33309	.85479
#1	2.7065	24.265	2.4580	.52302	57.789	2.4223	2.3747	2.5747	57.639	1.0499
#2	2.7026	24.301	2.4526	.52118	58.339	2.4140	2.3737	2.5705	57.351	1.0626
#3	2.6863	24.264	2.4576	.52158	58.358	2.4197	2.3774	2.5700	57.714	1.0453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.50793	59.936	.47101	2.4014	.46941	.47161	1.6058	2.5798
Stddev	.00139	.135	.00137	.0128	.00140	.00243	.0062	.0038
%RSD	.27411	.22567	.29159	.53222	.29895	.51448	.38293	.14619
#1	.50851	60.057	.47247	2.3996	.46823	.47434	1.6088	2.5801
#2	.50894	59.790	.46974	2.4150	.47096	.46972	1.6099	2.5759
#3	.50635	59.960	.47082	2.3897	.46904	.47077	1.5987	2.5834
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7027.5	117960.	120320.
Stddev	21.7	555.	498.
%RSD	.30817	.47091	.41366
#1	7015.8	118440.	120030.
#2	7052.5	118070.	120030.
#3	7014.2	117350.	120890.

Sample Name: CCB3 Acquired: 10/8/2015 14:14:32 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007047 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01636	.00009	.00054	.00036	.00024	-.00392	-.00008	F .19521	.00025
Stddev	.00252	.00051	.00037	.00015	.00012	.00036	.00001	.00562	.00007
%RSD	15.377	546.97	67.816	40.861	49.989	9.3014	7.9738	2.8799	26.079
#1	.01876	.00044	.00091	.00049	.00035	-.00366	-.00007	.19956	.00025
#2	.01657	-.00050	.00054	.00039	.00025	-.00375	-.00007	.19720	.00019
#3	.01374	.00034	.00018	.00020	.00011	-.00433	-.00008	.18886	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit								.10000	
Low Limit								-.10000	

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00002	-.00003	.00072	.00049	-.00079	.00950	.00044	.00038	.00004
Stddev	.00013	.00016	.00173	.00048	.00029	.00615	.00027	.00010	.00012
%RSD	639.67	608.36	240.20	96.370	36.885	64.725	61.847	25.984	330.69
#1	-.00012	.00006	.00170	.00098	-.00106	.00252	.00063	.00045	.00015
#2	.00014	.00007	.00174	.00003	-.00048	.01411	.00055	.00042	-.00009
#3	.00004	-.00021	-.00128	.00047	-.00082	.01188	.00013	.00027	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.05251	.00010	.00018	.09088	.00022	-.00075	-.00010	.00073	.00014
Stddev	.02443	.00060	.00016	.00510	.00009	.00020	.00045	.00058	.00012
%RSD	46.527	585.80	89.245	5.6108	39.686	26.944	457.02	79.286	85.286
#1	.08042	.00043	-.00001	.09641	.00017	-.00065	.00036	.00013	.00000
#2	.03499	-.00059	.00027	.08986	.00033	-.00098	-.00053	.00129	.00021
#3	.04213	.00046	.00028	.08636	.00017	-.00062	-.00012	.00078	.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Zn
Units	mg/L
Avg	.00465
Stddev	.00004
%RSD	.88271
#1	.00467
#2	.00468
#3	.00460
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB3 Acquired: 10/8/2015 14:14:32 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007047 Type: Anaylst: THuang
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7956.8	115770.	127710.
Stddev	35.7	577.	915.
%RSD	.44881	.49872	.71662
#1	7961.5	116370.	126800.
#2	7989.9	115730.	127700.
#3	7919.0	115220.	128630.

Sample Name: CCV4 Acquired: 10/8/2015 14:48:16 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007058 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	103.89	1.5007	1.0371	1.8812	1.4764	2.5245	2.1872	76.840	2.6137	1.0413
Stddev	1.11	.0018	.0050	.0063	.0066	.0049	.0028	.222	.0081	.0004
%RSD	1.0643	.12143	.48375	.33739	.44859	.19550	.12772	.28894	.31059	.04033
#1	102.77	1.4987	1.0322	1.8740	1.4694	2.5263	2.1865	76.609	2.6112	1.0417
#2	103.90	1.5011	1.0422	1.8858	1.4772	2.5189	2.1849	76.860	2.6072	1.0413
#3	104.99	1.5022	1.0370	1.8838	1.4826	2.5282	2.1903	77.052	2.6228	1.0409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.7285	24.287	2.4575	.52026	57.985	2.4103	2.3688	2.5751	57.331	1.0529
Stddev	.0066	.068	.0024	.00235	.313	.0089	.0018	.0019	.081	.0032
%RSD	.24106	.27800	.09710	.45187	.54018	.37017	.07737	.07178	.14069	.30165
#1	2.7261	24.360	2.4555	.51801	57.747	2.4001	2.3668	2.5731	57.250	1.0554
#2	2.7235	24.227	2.4568	.52270	57.866	2.4151	2.3691	2.5767	57.333	1.0540
#3	2.7359	24.274	2.4602	.52005	58.340	2.4159	2.3704	2.5754	57.411	1.0493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Elem	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.51110	59.984	.46822	2.4262	.46270	.46963	1.6172	2.5723
Stddev	.00127	.118	.00042	.0050	.00176	.00177	.0050	.0061
%RSD	.24940	.19623	.09023	.20524	.38073	.37699	.30835	.23722
#1	.51047	59.955	.46774	2.4244	.46073	.46774	1.6149	2.5675
#2	.51026	60.113	.46854	2.4224	.46414	.46992	1.6138	2.5702
#3	.51257	59.883	.46837	2.4318	.46323	.47124	1.6229	2.5792
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6963.0	116440.	117800.
Stddev	10.5	675.	188.
%RSD	.15055	.57945	.15986
#1	6954.8	117120.	117640.
#2	6974.8	116430.	118010.
#3	6959.4	115770.	117760.

Sample Name: CCB4 Acquired: 10/8/2015 14:51:13 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007059 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02256	-.00050	-.00077	.00040	.00026	-.00233	-.00006	F .21960	.00031
Stddev	.00268	.00031	.00078	.00015	.00009	.00005	.00004	.00262	.00014
%RSD	11.894	62.782	101.50	38.131	33.490	2.3447	71.087	1.1914	43.494
#1	.02560	-.00067	-.00084	.00051	.00027	-.00228	-.00001	.22206	.00040
#2	.02155	-.00068	-.00151	.00048	.00033	-.00233	-.00007	.21988	.00038
#3	.02053	-.00014	.00005	.00023	.00016	-.00239	-.00009	.21685	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit								.10000	
Low Limit								-.10000	

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00006	-.00014	.00232	.00014	-.00031	.03068	.00051	.00042	-.00002
Stddev	.00010	.00009	.00158	.00052	.00089	.00475	.00019	.00012	.00009
%RSD	185.54	61.930	68.046	375.85	285.41	15.497	36.427	28.623	609.79
#1	-.00016	-.00010	.00243	.00073	-.00046	.03599	.00055	.00028	.00006
#2	.00005	-.00008	.00383	-.00013	.00064	.02924	.00067	.00050	-.00012
#3	-.00006	-.00024	.00068	-.00019	-.00111	.02681	.00031	.00047	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .11452	.00176	.00015	F .24591	.00016	-.00072	-.00008	.00050	.00005
Stddev	.02889	.00078	.00020	.00779	.00015	.00066	.00050	.00010	.00015
%RSD	25.226	44.136	129.61	3.1696	97.360	91.332	617.39	19.220	307.30
#1	.13012	.00210	.00008	.25156	.00032	-.00040	-.00059	.00058	.00005
#2	.13226	.00232	.00038	.24914	.00003	-.00148	-.00005	.00054	.00020
#3	.08118	.00087	.00000	.23701	.00011	-.00029	.00040	.00040	-.00010
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000			.10000					
Low Limit	-.10000			-.10000					

Elem	Zn
Units	mg/L
Avg	.00524
Stddev	.00015
%RSD	2.8047
#1	.00538
#2	.00525
#3	.00509
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB4 Acquired: 10/8/2015 14:51:13 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007059 Type: Anaylst: THuang
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7919.6	116090.	124950.
Stddev	48.4	958.	216.
%RSD	.61103	.82543	.17311
#1	7932.3	117110.	124970.
#2	7960.4	115950.	125160.
#3	7866.1	115210.	124730.

Sample Name: MRLJ0804 Acquired: 10/8/2015 15:22:45 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007068 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.22469	.09607	.00903	.00990	.00952	.09700	.01120	1.1008	.01061
Stddev	.00038	.00052	.00144	.00017	.00009	.00032	.00005	.0035	.00010
%RSD	.17089	.54105	15.968	1.6668	.95980	.33271	.45796	.31694	.92389
#1	.22434	.09573	.01014	.00975	.00943	.09674	.01124	1.1007	.01051
#2	.22463	.09581	.00956	.00989	.00961	.09736	.01114	1.0974	.01061
#3	.22510	.09667	.00740	.01008	.00954	.09690	.01122	1.1044	.01071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00977	.01078	.21653	.00987	.00864	1.0003	.00924	.00915	.01023
Stddev	.00009	.00010	.00473	.00041	.00056	.0117	.00026	.00009	.00020
%RSD	.87002	.89721	2.1858	4.1259	6.4546	1.1705	2.8659	.95953	1.9880
#1	.00984	.01083	.21263	.01000	.00800	.99627	.00898	.00925	.01002
#2	.00981	.01067	.21517	.01020	.00890	1.0135	.00951	.00909	.01025
#3	.00968	.01084	.22180	.00941	.00902	.99115	.00924	.00912	.01043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 1.2969	.01003	.01027	F 2.5962	.01004	.01052	.09294	.01028	.01097
Stddev	.0285	.00100	.00009	.0918	.00003	.00023	.00035	.00011	.00024
%RSD	2.2000	10.001	.87766	3.5354	.31427	2.1616	.37263	1.0228	2.1856
#1	1.3242	.01099	.01019	2.6851	.01004	.01054	.09255	.01035	.01109
#2	1.2991	.01012	.01037	2.6016	.01000	.01074	.09320	.01016	.01070
#3	1.2673	.00899	.01024	2.5018	.01007	.01029	.09309	.01033	.01113
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000			1.0000					
Range	20.000%			20.000%					

Elem	Zn
Units	mg/L
Avg	.02278
Stddev	.00008
%RSD	.33716
#1	.02276
#2	.02271
#3	.02286
Check ?	Chk Pass
Value	
Range	

Sample Name: MRLJ0804 Acquired: 10/8/2015 15:22:45 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007068 Type: Anaylst: THuang
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8052.9	112670.	128200.
Stddev	49.9	663.	450.
%RSD	.62005	.58855	.35086
#1	8046.3	113350.	128240.
#2	8105.8	112030.	128630.
#3	8006.6	112640.	127730.

Sample Name: CCV5 Acquired: 10/8/2015 15:28:55 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007070 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	103.04	1.5038	1.0470	1.8833	1.4478	2.5369	F 2.2295	77.014	2.6662
Stddev	1.36	.0112	.0059	.0029	.0037	.0087	.0168	.350	.0101
%RSD	1.3179	.74494	.56058	.15578	.25205	.34301	.75148	.45416	.37701
#1	102.40	1.5053	1.0464	1.8829	1.4462	2.5329	2.2366	76.614	2.6628
#2	102.13	1.4919	1.0414	1.8864	1.4520	2.5309	2.2104	77.169	2.6582
#3	104.60	1.5142	1.0531	1.8806	1.4453	2.5469	2.2415	77.260	2.6775
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value							2.0000		
Range							10.000%		

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.0371	2.7129	24.543	2.4517	.52274	57.231	2.2736	2.3553	2.5671
Stddev	.0014	.0228	.072	.0059	.00069	.297	.0039	.0031	.0043
%RSD	.13040	.84139	.29416	.24101	.13109	.51938	.17214	.13082	.16734
#1	1.0364	2.7129	24.522	2.4486	.52197	56.924	2.2702	2.3518	2.5624
#2	1.0387	2.6901	24.483	2.4480	.52296	57.253	2.2779	2.3572	2.5679
#3	1.0363	2.7357	24.623	2.4585	.52329	57.517	2.2727	2.3570	2.5709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	58.259	1.0606	.51341	60.616	.47084	2.4530	.46065	.46383	1.6430
Stddev	.293	.0031	.00315	.209	.00076	.0162	.00004	.00031	.0088
%RSD	.50292	.29398	.61381	.34445	.16118	.66085	.00871	.06617	.53350
#1	57.943	1.0596	.51282	60.407	.47061	2.4522	.46062	.46390	1.6413
#2	58.522	1.0581	.51059	60.824	.47169	2.4371	.46064	.46410	1.6353
#3	58.312	1.0641	.51681	60.617	.47023	2.4695	.46070	.46349	1.6526
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Zn
Units	mg/L
Avg	2.5937
Stddev	.0019
%RSD	.07478
#1	2.5922
#2	2.5930
#3	2.5959
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV5 Acquired: 10/8/2015 15:28:55 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007070 Type: Anaylst: THuang
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6981.0	110390.	115890.
Stddev	16.5	1075.	943.
%RSD	.23689	.97418	.81329
#1	6991.7	111620.	115550.
#2	6989.3	109930.	116960.
#3	6961.9	109620.	115160.

Sample Name: CCB5 Acquired: 10/8/2015 15:31:52 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007071 Type: Anaylst: THuang
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02312	.00045	.00168	.00018	.00012	-.00052	-.00003	F .19033	.00038
Stddev	.00122	.00005	.00137	.00011	.00003	.00033	.00004	.00211	.00014
%RSD	5.2613	11.760	81.687	60.709	22.102	63.049	104.04	1.1073	37.055
#1	.02402	.00040	.00095	.00012	.00015	-.00018	-.00003	.19229	.00045
#2	.02360	.00051	.00326	.00031	.00009	-.00056	.00000	.19059	.00047
#3	.02173	.00045	.00082	.00012	.00013	-.00083	-.00007	.18810	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit								.10000	
Low Limit								-.10000	

Elem	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00007	.00005	.00127	.00078	-.00169	.00770	.00017	.00037	.00010
Stddev	.00009	.00006	.00490	.00085	.00004	.01018	.00011	.00007	.00007
%RSD	116.24	122.32	386.88	108.60	2.3531	132.19	60.533	19.918	71.182
#1	.00017	-.00002	.00688	.00124	-.00167	.01867	.00029	.00046	.00009
#2	.00000	.00009	-.00222	-.00020	-.00166	.00589	.00016	.00032	.00018
#3	.00006	.00008	-.00085	.00130	-.00173	-.00145	.00008	.00034	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .12087	.00006	.00022	F .57228	.00012	-.00044	.00028	.00022	.00005
Stddev	.01244	.00138	.00010	.03049	.00008	.00045	.00102	.00050	.00010
%RSD	10.295	2420.9	46.027	5.3284	65.634	102.36	363.49	234.23	215.10
#1	.13198	-.00107	.00014	.60722	.00020	-.00053	-.00062	-.00032	-.00005
#2	.12321	.00159	.00019	.55857	.00004	.00005	.00139	.00028	.00015
#3	.10743	-.00035	.00033	.55105	.00012	-.00084	.00008	.00068	.00004
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000			.10000					
Low Limit	-.10000			-.10000					

Elem	Zn
Units	mg/L
Avg	.00483
Stddev	.00014
%RSD	2.8354
#1	.00471
#2	.00481
#3	.00498
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB5 Acquired: 10/8/2015 15:31:52 Type: QC
Method: 15J6010(v8) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8J007071 Type: Anaylst: THuang
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7901.2	110190.	123750.
Stddev	33.8	635.	305.
%RSD	.42789	.57670	.24624
#1	7904.8	110920.	123690.
#2	7933.1	109910.	123470.
#3	7865.8	109750.	124080.

EMAX LABORATORIES INC

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
15IPJ008W01	IPJ008WB	50	ml	10/7/15 10:24	50	50	50	1	
15IPJ008W02	IPJ008WL	50	ml	10/7/15 10:24	50	50	50	1	
15IPJ008W03	TXJ002SB	10	ml	10/7/15 10:24	50	50	50	5	TCLP
15IPJ008W04	I185-04R	10	ml	10/7/15 10:24	50	50	50	5	TCLP
15IPJ008W05	I185-04RM	10	ml	10/7/15 10:24	50	50	50	5	TCLP
15IPJ008W06	I185-04RD	10	ml	10/7/15 10:24	50	50	50	5	TCLP
15IPJ008W07	I185-05R	10	ml	10/7/15 10:24	50	50	50	5	TCLP
15IPJ008W08	I185-06R	10	ml	10/7/15 10:24	50	50	50	5	TCLP
15IPJ008W09	LODV	50	ml	10/7/15 10:24	50	50	50	1	
15IPJ008W10	LOQV	50	ml	10/7/15 10:24	50	50	50	1	
15IPJ008W11	MDLV	50	ml	10/7/15 10:24	50	50	50	1	

SP 10/7/15

Vd=digestate volume

PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 10/7/15 12:11

☑ Digestion Ended @ 10/7/15 18:21

Prepared By: SPara

Checked By: TH

Date 10/7/15

Comments:

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Digestion Vessel Lot # 1408268 - 7A - 5035 - BJ

Filter Lot # NA

all the samples are pH <2

Book #: EIP-126

Batch: TPJ008W

Matrix: Water

Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	6
☐ EMAX-3050	5
☐ EMAX-200.7	4
☐ EMAX-	

Start	Temp	End	Temp
	92.4 °C		92.2 °C

Standards	ID	Amount Added (ml/g)
LCS-1	SMIA - 013 - 09 - 19	0.95
LCS-2	SMIA - 013 - 09 - 10	0.95
LCS-3	SMIA - 013 - 11 - 04	0.50
MS	Same spike soln & vol as LCS 1,2,3	
Blank Soil (Bead)	NA	NA
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SMIA - 005 - 14 - 09	1.5 + 1.5
HCl	SMIA - 005 - 12 - 08	2.5 + 2.5
H_2O_2	NA	NA
HNO_3(1:1)	NA	NA
pH Strip (0-14)	HC554612	NA
Digestate Location	metals	
Extract Location	NA	
☑ Reagent Water ID:	SM5A - 03 - 09 - 03	
☑ Thermometer ID:	101993366 / E28	
☑ Pipette ID:	142780035	
☑ Pipette ID:	939360318	
☐ Pipette ID:	NA	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask		
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask		

Prepared By: SP

Standard Added By: SP Witnessed By: [illegible]

Extract Rcvd By: TH Checked By: TH

FileID: TXJ002S

EMAX LABORATORIES, INC.

TCLP EXTRACTION LOG

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	TCLPSoln	TCLPVol	Exrtract pH	Preservation	Comments
15TXJ002S01	TXJ0025B	0	g	10/5/15 12:15		2000		HNO_3	
15TXJ002S02	I185-04R	100.02	g	10/5/15 12:17	#1	2000	5.37	HNO_3	UNPRESERVED
15TXJ002S03	I185-05R	100.01	g	10/5/15 12:19	#1	2000	4.85	HNO_3	
15TXJ002S04	I185-06R	100.03	g	10/5/15 12:23	#1	2000	4.86	HNO_3	
15TXJ002S05	I285-03	100	g	10/5/15 12:27	#1	2000	5.02	HNO_3	for 8270, Pesticides, Metals, & Hg
15TXJ002S06	I285-04	100	g	10/5/15 12:31	#1	2000	5.14	HNO_3	for 8270, Pesticides, Metals, & Hg
15TXJ002S07	I285-05	100.01	g	10/5/15 12:34	#1	2000	5.15	HNO_3	for 8270, Pesticides, Metals, & Hg... (UNPRESERVED)
15TXJ002S08	J417-01	100.02	g	10/5/15 12:39	#1	2000	5.35	HNO_3	

☑ DateTimeStarted 10/5/2015 16:00 ☑ Thermometer Reset on 10/5/2015 16:00 Balance ID: 10203192. Calibration check was verified prior to use.

☑ DateTimeEnded 10/6/2015 10:02 Note: Sample preserved with HNO_3 is for metals analysis. MS/MSD were spiked prio Prepared By: Dfelic/Mlyudm

Extract Location: Metals Received By: 10/6/15 1740 10/6/15 Checked By: ML

Comment: Date 10/06/15

1021

EMAX LABORATORIES, INC.

FileID: TXJ002S

TCLP EXTRACTION LOG

Determination of TLCP Solution							Determination of TCLP Extract Filtration			Determination of % solids for aqueos phase			
LabSampleID	Phase(s)	Aliquot	Sample pH	HCl	pH	TCLPSolnReq'd	(ml)	(g)	Pressure	WtS(g)	WtF(g)	WtDFS(g)	% Solids
TXJ002SB							100						
I185-04R	1	5.01	9.58	3.5	2	#1	100	98.14	Vacuum				
I185-05R	1	5	9.61	3.5	1.58	#1	100	98.09	Vacuum				
I185-06R	1	5.01	7.18	3.5	1.54	#1	100	98.13	Vacuum				
I285-03	1	5.02	9.74	3.5	1.72	#1	100	98.01	Vacuum				
I285-04	1	5.01	9.5	3.5	2.3	#1	100	97.04	Vacuum				
I285-05	1	5.03	9.37	3.5	3.1	#1	100	99.52	Vacuum				
J417-01	1	5.02	5.06	3.5	1.95	#1	100	97.77	Vacuum				

Calibration of pH Meter		InstrumentID:	96
BufferID	Value	Reading	DateTime
SP1A-05-02-01	4	4.01	10/5/15 13:41
SP1A-05-02-02	7	7	10/5/15 13:40
SW1A-005-12-24	CalVer 5	5.04	10/5/15 13:42
SP1A-05-02-01	4	4.01	10/6/15 17:24
SP1A-05-02-02	7	7	10/6/15 17:23
SW1A-005-12-24	CalVer 5	5	10/6/15 17:25
ID	Reagent	Desc	Expiration Date
SP1A-05-02-04	HCl	1N	03/04/16
SW1A-005-11-08	HNO_3	Conc	08/19/16
SP1B-08-34-03	TCLP Soln	#1	03/29/16
5P1B-08-35-04	TCLP Soln	#1	04/05/16
Rotary Agitator #	Criteria	rpm	DateTime
1	30 ± 2 rpm	30	10/5/15 13:43
	30 ± 2 rpm		
Thermostat Setting:		Thermometer ID:	122273404
TCLP Room Temperature	Criteria	Rdg	DateTime
Room Temp (°C) High	23 ± 2 °C	24.4	10/5/15 20:20
Room Temp (°C) Low	23 ± 2 °C	21.7	10/6/15 7:52
Pipette ID	PE04-03		
CONCENTRATOR (WATER BATH)			
Concentrator #	Temp Setting	Thermometer Rdg	Thermometer ID
5	50	50	SVOC-T1
Filter ID/Lot #	103013/ 062513		
pH strip Lot#	HC554612		

Legend:

WtS = weight of sample

WtF = weight of filter

WtDFS = weight of dried filter + solids

Prepared By: Dfelic/Mlyudm

Checked By: ML

Date 10/06/15

1928

MERCURY

METHOD SW7471B
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 15I185

Matrix : SOIL
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DIL'N FACTOR	MOIST (%)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	HGI033SB	ND	1	NA	0.10	0.010	0.020	09/29/1519:38	09/29/1516:15	M47I022011	M47I022	HGI033S	NA	NA
LCS1S	HGI033SL	0.416	1	NA	0.10	0.010	0.020	09/29/1519:40	09/29/1516:15	M47I022012	M47I022	HGI033S	NA	NA
CAFB-FT006-BKF-001	I185-01	ND	1	0.5	0.098	0.0098	0.020	09/29/1519:45	09/29/1516:15	M47I022014	M47I022	HGI033S	09/16/1509:15	09/17/15
CAF8-FT006-BKF-001MS	I185-01M	0.414	1	0.5	0.098	0.0098	0.020	09/29/1519:49	09/29/1516:15	M47I022016	M47I022	HGI033S	09/16/1509:15	09/17/15
CAFB-FT006-BKF-001DUP	I185-01D	ND	1	0.5	0.10	0.010	0.020	09/29/1519:51	09/29/1516:15	M47I022017	M47I022	HGI033S	09/16/1509:15	09/17/15
CAFB-FT006-BKF-002	I185-02	ND	1	0.4	0.10	0.010	0.020	09/29/1519:54	09/29/1516:15	M47I022018	M47I022	HGI033S	09/16/1509:17	09/17/15
CAF8-FT006-BKF-003	I185-03	ND	1	0.5	0.099	0.0099	0.020	09/29/1519:56	09/29/1516:15	M47I022019	M47I022	HGI033S	09/16/1509:20	09/17/15

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW7471B

MATRIX : SOIL

DILUTION FACTOR:	1	1
SAMPLE ID :	MBLK1S	LCS1S
LAB SAMPLE ID :	HGI033SB	HGI033SL
LAB FILE ID :	M47I022011	M47I022012
DATE PREPARED :	09/29/1516:15	09/29/1516:15
DATE ANALYZED :	09/29/1519:38	09/29/1519:40
PREP BATCH :	HGI033S	HGI033S
CALIBRATION REF:	M47I0220	M47I0220

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	QC LIMIT (%)
Mercury	ND	.417	0.416	100	80-120

EMAX QUALITY CONTROL DATA
MATRIX SPIKE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW7471B

MATRIX	: SOIL	% MOISTURE: 0.5
DILUTION FACTOR	: 1	1
SAMPLE ID	: CAFB-FT006-BKF-001	CAFB-FT006-BKF-001MS
LAB SAMPLE ID	: I185-01	I185-01M
LAB FILE ID	: M47I022014	M47I022016
DATE PREPARED	: 09/29/1516:15	09/29/1516:15
DATE ANALYZED	: 09/29/1519:45	09/29/1519:49
PREP BATCH	: HGI033S	HGI033S
CALIBRATION REF	: M47I022	M47I022

ACCESSION:

PARAMETER	PARENT RESULT (mg/kg)	SPIKE AMT (mg/kg)	MS RESULT (mg/kg)	MS REC (%)	QC LIMIT (%)
Mercury	ND	0.410	0.414	101	80-120

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
MERCURY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 9/29/15 Start Time: 19:16

End Date: 9/29/15 End Time: 22:24

Comments:

QC OK

Book #:	A47-099
Instrument No.:	47
Analytical Sequence/Batch:	M47I022
Method File:	HG1
Micropipette ID:	☐ ICP DOE-1
Micropipette ID:	☑ HG-03
Micropipette ID:	☑ HG-04
Micropipette ID:	☐

SOP #	Rev. #
☐ EMAX-7470	7
☑ EMAX-7471	8
☐ EMAX-245.1	3
☐ EMAX-	

STANDARDS ID	
S1	BLANK
S2	SM38-12-30-04
S3	↓
S4	
S5	
S6	
CCV	
ICV	SM38-12-30-05
LCS	↓
Analytical Spike	
	SM38-12-30-06 TV 3ug/L

Analyzed By: NT

Date: 9/29/15

"M47I022"

EMAXlfid	EMAXlsid	conc	Raw_resp	rsd/rf	adatetime	DF
M47I022001	STD01REP1	0	2628		09/29/1519:16	1
M47I022002	STD02REP1	.2	19392		09/29/1519:19	1
M47I022003	STD03REP1	.5	45307		09/29/1519:21	1
M47I022004	STD04REP1	1	87374		09/29/1519:23	1
M47I022005	STD05REP1	2	171563		09/29/1519:25	1
M47I022006	STD06REP1	5	423254		09/29/1519:27	1
M47I022007	ICV	1.98	169159	0	09/29/1519:30	1
M47I022008	ICB	-.006	2457	0	09/29/1519:32	1
M47I022009	CCV1	1.99	170420	0	09/29/1519:34	1
M47I022010	CCB1	-.014	1832	0	09/29/1519:36	1
M47I022011	HGI033SB	-.023	1002	0	09/29/1519:38	1
M47I022012	HGI033SL	2.5	213059	0	09/29/1519:40	1
M47I022013	I185-01A	2.92	248479	0	09/29/1519:43	1
M47I022014	I185-01	-.008	2266	0	09/29/1519:45	1
M47I022015	I185-01J	-.008	2267	0	09/29/1519:47	5
M47I022016	I185-01M	2.53	215834	0	09/29/1519:49	1
M47I022017	I185-01D	-.018	1433	0	09/29/1519:51	1
M47I022018	I185-02	-.007	2401	0	09/29/1519:54	1
M47I022019	I185-03	.009	3718	0	09/29/1519:56	1
M47I022020	HGI034S8	-.008	2324	0	09/29/1519:58	1
M47I022021	CCV2	1.98	169890	0	09/29/1520:00	1
M47I022022	CCB2	-.021	1213	0	09/29/1520:03	1
M47I022023	HGI034SL	2.49	212803	0	09/29/1520:05	1
M47I022024	HGI034SC	2.5	213255	0	09/29/1520:07	1
M47I022025	I300-03A	3.08	261684	0	09/29/1520:09	1
M47I022026	I300-03	.064	8379	0	09/29/1520:11	1
M47I022027	I300-03J	.008	3669	0	09/29/1520:13	5
M47I022028	I300-03M	2.63	224476	0	09/29/1520:15	1
M47I022029	I300-03S	2.64	225398	0	09/29/1520:17	1
M47I022030	I300-01	.097	11159	0	09/29/1520:20	1
M47I022031	I300-02	.128	13714	0	09/29/1520:22	1
M47I022032	I300-04	.13	13944	0	09/29/1520:24	1
M47I022033	CCV3	1.97	168603	0	09/29/1520:26	1
M47I022034	CCB3	-.041	-517	0	09/29/1520:29	1
M47I022035	I229-01	.241	23223	0	09/29/1520:31	1
M47I022036	I229-02	.798	70075	0	09/29/1520:33	1
M47I022037	I229-03	.114	12592	0	09/29/1520:35	1
M47I022038	I229-04	-.026	814	0	09/29/1520:37	1
M47I022039	I229-05	-.01	2117	0	09/29/1520:39	1
M47I022040	I229-06	-.004	2670	0	09/29/1520:41	1
M47I022041	I575-01	.097	11167	0	09/29/1520:44	1
M47I022042	I575-02	.01	3842	0	09/29/1520:46	1
M47I022043	I575-03	-.01	2172	0	09/29/1520:48	1
M47I022044	I575-04	.049	7122	0	09/29/1520:50	1
M47I022045	CCV4	1.95	167029	0	09/29/1520:52	1
M47I022046	CCB4	-.031	333	0	09/29/1520:54	1
M47I022047	I575-05	.025	5094	0	09/29/1520:57	1
M47I022048	I575-06	.06	8000	0	09/29/1520:59	1
M47I022049	I575-07	.048	6995	0	09/29/1521:01	1
M47I022050	I575-08	.081	9806	0	09/29/1521:03	1
M47I022051	I575-09	.041	6444	0	09/29/1521:05	1
M47I022052	I575-10	.147	15348	0	09/29/1521:07	1
M47I022053	HGI035SB	-.017	1556	0	09/29/1521:10	1
M47I022054	HGI035SL	2.47	210854	0	09/29/1521:12	1
M47I022055	HGI035SC	2.45	209235	0	09/29/1521:14	1
M47I022056	I243-08A	3.13	266410	0	09/29/1521:17	1
M47I022057	CCV5	1.94	1660B6	0	09/29/1521:19	1
M47I022058	CCB5	-.027	668	0	09/29/1521:21	1
M47I022059	I243-08	.142	14891	0	09/29/1521:23	1
M47I022060	I243-08J	.01	3833	0	09/29/1521:25	5
M47I022061	I243-08M	2.69	229092	0	09/29/1521:28	1
M47I022062	I243-08S	2.66	2262B6	0	09/29/1521:30	1
M47I022063	I243-01	.002	3134	0	09/29/1521:32	1
M47I022064	I243-02	.233	22585	0	09/29/1521:34	1
M47I022065	I243-03	.172	17438	0	09/29/1521:36	1
M47I022066	I243-04	.186	18613	0	09/29/1521:38	1
M47I022067	I243-05	.202	19923	0	09/29/1521:41	1
M47I022068	I243-06	.209	20552	0	09/29/1521:43	1
M47I022069	CCV6	1.94	165843	0	09/29/1521:45	1
M47I022070	CCB6	-.033	218	0	09/29/1521:48	1
M47I022071	I243-07	.117	12847	0	09/29/1521:50	1
M47I022072	I243-09	.155	15971	0	09/29/1521:52	1
M47I022073	I243-10	.087	10249	0	09/29/1521:54	1

M47I022074	I243-11	.125	13469	0	09/29/1521:56	1
M47I022075	I243-12	.188	18808	0	09/29/1521:58	1
M47I022076	I243-13	.162	16576	0	09/29/1522:00	1
M47I022077	I231-03	.146	15280	0	09/29/1522:02	1
M47I022078	I231-04	.164	16747	0	09/29/1522:05	1
M47I022079	I231-05	.227	22070	0	09/29/1522:07	1
M47I022080	I231-06	.163	16672	0	09/29/1522:10	1
M47I022081	CCV7	1.93	165116	0	09/29/1522:12	1
M47I022082	CCB7	-.036	-77	0	09/29/1522:15	1
M47I022083	I242-03	.218	21337	0	09/29/1522:17	1
M47I022084	I242-04	.241	23203	0	09/29/1522:19	1
M47I022085	CCV8	1.95	166587	0	09/29/1522:21	1
M47I022086	CCB8	-.03	478	0	09/29/1522:24	1
**********	**********	**********	**********	**********	**********	***
EMAXlfid	EMAXlsid	Xint	Yint	rrf	adatetime	DF
M47I022001	BLANK	-3.533734E-02	2971.937	.9999974	09/29/1522:24	1

M47I022

cup	sample ID	extended ID	weight	volume	? A D F P S U SC UI US C1..7
1	ICV		1.0000	1.0000	
2	ICB		1.0000	1.0000	
3	CCV1		1.0000	1.0000	
4	CCB1		1.0000	1.0000	
5	HGI033SB		1.0000	1.0000	
6	HGI033SL		1.0000	1.0000	
7	I185-01A		1.0000	1.0000	
8	I185-01		1.0000	1.0000	
9	I185-01J		1.0000	1.0000	
10	I185-01M		1.0000	1.0000	
11	I185-01D		1.0000	1.0000	
12	I185-02		1.0000	1.0000	
13	I185-03		1.0000	1.0000	
14	HGI034SB		1.0000	1.0000	
15	CCV2		1.0000	1.0000	
16	CCB2		1.0000	1.0000	
17	HGI034SL		1.0000	1.0000	
18	HGI034SC		1.0000	1.0000	
19	I300-03A		1.0000	1.0000	
20	I300-03		1.0000	1.0000	
21	I300-03J		1.0000	1.0000	
22	I300-03M		1.0000	1.0000	
23	I300-03S		1.0000	1.0000	
24	I300-01		1.0000	1.0000	
25	I300-02		1.0000	1.0000	
26	I300-04		1.0000	1.0000	
27	CCV3		1.0000	1.0000	
28	CCB3		1.0000	1.0000	
29	I229-01		1.0000	1.0000	
30	I229-02		1.0000	1.0000	
31	I229-03		1.0000	1.0000	
32	I229-04		1.0000	1.0000	
33	I229-05		1.0000	1.0000	
34	I229-06		1.0000	1.0000	
35	I575-01		1.0000	1.0000	
36	I575-02		1.0000	1.0000	
37	I575-03		1.0000	1.0000	
38	I575-04		1.0000	1.0000	
39	CCV4		1.0000	1.0000	
40	CCB4		1.0000	1.0000	
41	I575-05		1.0000	1.0000	
42	I575-06		1.0000	1.0000	
43	I575-07		1.0000	1.0000	
44	I575-08		1.0000	1.0000	

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cup	sample ID	extended ID	weight	volume	? A D F P S U SC UI US C1..7
1	I575-09		1.0000	1.0000	
2	I575-10		1.0000	1.0000	
3	HGI035SB		1.0000	1.0000	
4	HGI035SL		1.0000	1.0000	
5	HGI035SC		1.0000	1.0000	
6	I243-08A		1.0000	1.0000	
7	CCV5		1.0000	1.0000	
8	CCB5		1.0000	1.0000	
9	I243-08		1.0000	1.0000	
10	I243-08J		1.0000	1.0000	
11	I243-08M		1.0000	1.0000	
12	I243-08S		1.0000	1.0000	
13	I243-01		1.0000	1.0000	
14	I243-02		1.0000	1.0000	
15	I243-03		1.0000	1.0000	
16	I243-04		1.0000	1.0000	
17	I243-05		1.0000	1.0000	
18	I243-06		1.0000	1.0000	
19	CCV6		1.0000	1.0000	
20	CCB6		1.0000	1.0000	
21	I243-07		1.0000	1.0000	
22	I243-09		1.0000	1.0000	
23	I243-10		1.0000	1.0000	
24	I243-11		1.0000	1.0000	
25	I243-12		1.0000	1.0000	
26	I243-13		1.0000	1.0000	
27	I231-03		1.0000	1.0000	
28	I231-04		1.0000	1.0000	
29	I231-05		1.0000	1.0000	
30	I231-06		1.0000	1.0000	
31	CCV7		1.0000	1.0000	
32	CCB7		1.0000	1.0000	
33	I242-03		1.0000	1.0000	
34	I242-04		1.0000	1.0000	
35	CCV8		1.0000	1.0000	
36	CCB8		1.0000	1.0000	
37			1.0000	1.0000	
38			1.0000	1.0000	
39			1.0000	1.0000	
40			1.0000	1.0000	
41			1.0000	1.0000	
42			1.0000	1.0000	
43			1.0000	1.0000	
44			1.0000	1.0000	

NT 9/29/15

WinHg Database 1.3

File Utility Help

RN RN

Protocol HG1 Dataset/Proto M47I022 /HG1

Protocol | Line info | Cal Curve | Report | Ctrl Chart | Viewer

Reset

Calib Coeffs

New Cal

Update Coeffs

Spike Coeffs

A

B 1.18903e-5

C -3.53296e-2

Rho .999997

Type Linear

Calibrated

Accepted

Accept

Rel. Abs.
423254

Accepted

New

Include S1 Rep 1 2 3 4 5

Conc. 5.00

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
01	.00000	-.004	-.004	2628	1	2628		
02	.20000	.195	-.005	19392	0%	19392		
03	.50000	.503	.003	45308	0%	45307		
04	1.0000	1.00	.004	87374	0%	87374		
05	2.0000	2.00	.005	171563	0%	171563		
06	5.0000	5.00	-.003	423255	0%	423254		

Ready CAP NUM

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 1	19:16:46 29 Sep 15	HG		
Hg	.000	ppb	2628					
*** Standard: 2 Rep: 1				Seq: 2	19:19:00 29 Sep 15	HG		
Hg	.200	ppb	19392					
*** Standard: 3 Rep: 1				Seq: 3	19:21:34 29 Sep 15	HG		
Hg	.500	ppb	45307					
*** Standard: 4 Rep: 1				Seq: 4	19:23:48 29 Sep 15	HG		
Hg	1.00	ppb	87374					
*** Standard: 5 Rep: 1				Seq: 5	19:25:50 29 Sep 15	HG		
Hg	2.00	ppb	171563					
*** Standard: 6 Rep: 1				Seq: 6	19:27:53 29 Sep 15	HG		
Hg	5.00	ppb	423254					
*** Sample ID: ICV				Seq: 7	19:30:33 29 Sep 15	HG		
Hg	1.98	ppb	169159					
*** Sample ID: ICB				Seq: 8	19:32:52 29 Sep 15	HG		
Hg	-.006	ppb	2457					
*** Sample ID: CCV1				Seq: 9	19:34:54 29 Sep 15	HG		
Hg	1.99	ppb	170420					
*** Sample ID: CCB1				Seq: 10	19:36:55 29 Sep 15	HG		
Hg	-.014	ppb	1832					
*** Sample ID: HGI033SB				Seq: 11	19:38:54 29 Sep 15	HG		
Hg	-.023	ppb	1002					
*** Sample ID: HGI033SL				Seq: 12	19:40:53 29 Sep 15	HG		
Hg	2.50	ppb	213059					
*** Sample ID: I185-01A				Seq: 13	19:43:04 29 Sep 15	HG		
Hg	2.92	ppb	248479					
*** Sample ID: I185-01				Seq: 14	19:45:13 29 Sep 15	HG		
Hg	-.008	ppb	2266					
*** Sample ID: I185-01J				Seq: 15	19:47:13 29 Sep 15	HG		
Hg	-.008	ppb	2267					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: I185-01M				Seq:	16	19:49:55 29 Sep 15		HG
Hg	2.53	ppb	215834					
*** Sample ID: I185-01D				Seq:	17	19:51:56 29 Sep 15		HG
Hg	-.018	ppb	1433					
*** Sample ID: I185-02				Seq:	18	19:54:06 29 Sep 15		HG
Hg	-.007	ppb	2401					
*** Sample ID: I185-03				Seq:	19	19:56:07 29 Sep 15		HG
Hg	.009	ppb	3718					
*** Sample ID: HGI034SB				Seq:	20	19:58:50 29 Sep 15		HG
Hg	-.008	ppb	2324					
*** Sample ID: CCV2				Seq:	21	20:00:49 29 Sep 15		HG
Hg	1.98	ppb	169890					
*** Sample ID: CCB2				Seq:	22	20:03:08 29 Sep 15		HG
Hg	-.021	ppb	1213					
*** Sample ID: HGI034SL				Seq:	23	20:05:17 29 Sep 15		HG
Hg	2.49	ppb	212803					
*** Sample ID: HGI034SC				Seq:	24	20:07:19 29 Sep 15		HG
Hg	2.50	ppb	213255					
*** Sample ID: I300-03A				Seq:	25	20:09:38 29 Sep 15		HG
Hg	3.08	ppb	261684					
*** Sample ID: I300-03				Seq:	26	20:11:38 29 Sep 15		HG
Hg	.064	ppb	8379					
*** Sample ID: I300-03J				Seq:	27	20:13:48 29 Sep 15		HG
Hg	.008	ppb	3669					
*** Sample ID: I300-03M				Seq:	28	20:15:51 29 Sep 15		HG
Hg	2.63	ppb	224476					
*** Sample ID: I300-03S				Seq:	29	20:17:49 29 Sep 15		HG
Hg	2.64	ppb	225398					
*** Sample ID: I300-01				Seq:	30	20:20:21 29 Sep 15		HG
Hg	.097	ppb	11159					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: I300-02				Seq:	31	20:22:21 29 Sep 15		HG
Hg	.128	ppb	13714					
*** Sample ID: I300-04				Seq:	32	20:24:34 29 Sep 15		HG
Hg	.130	ppb	13944					
*** Sample ID: CCV3				Seq:	33	20:26:53 29 Sep 15		HG
Hg	1.97	ppb	168603					
*** Sample ID: CCB3				Seq:	34	20:29:06 29 Sep 15		HG
Hg	-.041	ppb	-517					
*** Sample ID: I229-01				Seq:	35	20:31:35 29 Sep 15		HG
Hg	.241	ppb	23223					
*** Sample ID: I229-02				Seq:	36	20:33:41 29 Sep 15		HG
Hg	.798	ppb	70075					
*** Sample ID: I229-03				Seq:	37	20:35:43 29 Sep 15		HG
Hg	.114	ppb	12592					
*** Sample ID: I229-04				Seq:	38	20:37:44 29 Sep 15		HG
Hg	-.026	ppb	814					
*** Sample ID: I229-05				Seq:	39	20:39:44 29 Sep 15		HG
Hg	-.010	ppb	2117					
*** Sample ID: I229-06				Seq:	40	20:41:44 29 Sep 15		HG
Hg	-.004	ppb	2670					
*** Sample ID: I575-01				Seq:	41	20:44:25 29 Sep 15		HG
Hg	.097	ppb	11167					
*** Sample ID: I575-02				Seq:	42	20:46:24 29 Sep 15		HG
Hg	.010	ppb	3842					
*** Sample ID: I575-03				Seq:	43	20:48:25 29 Sep 15		HG
Hg	-.010	ppb	2172					
*** Sample ID: I575-04				Seq:	44	20:50:37 29 Sep 15		HG
Hg	.049	ppb	7122					
*** Sample ID: CCV4				Seq:	45	20:52:42 29 Sep 15		HG
Hg	1.95	ppb	167029					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CCB4				Seq: 46	20:54:52 29 Sep 15	HG		
Hg	-.031	ppb	333					
*** Sample ID: I575-05				Seq: 47	20:57:21 29 Sep 15	HG		
Hg	.025	ppb	5094					
*** Sample ID: I575-06				Seq: 48	20:59:21 29 Sep 15	HG		
Hg	.060	ppb	8000					
*** Sample ID: I575-07				Seq: 49	21:01:22 29 Sep 15	HG		
Hg	.048	ppb	6995					
*** Sample ID: I575-08				Seq: 50	21:03:33 29 Sep 15	HG		
Hg	.081	ppb	9806					
*** Sample ID: I575-09				Seq: 51	21:05:33 29 Sep 15	HG		
Hg	.041	ppb	6444					
*** Sample ID: I575-10				Seq: 52	21:07:36 29 Sep 15	HG		
Hg	.147	ppb	15348					
*** Sample ID: HGI035SB				Seq: 53	21:10:09 29 Sep 15	HG		
Hg	-.017	ppb	1556					
*** Sample ID: HGI035SL				Seq: 54	21:12:21 29 Sep 15	HG		
Hg	2.47	ppb	210854					
*** Sample ID: HGI035SC				Seq: 55	21:14:32 29 Sep 15	HG		
Hg	2.45	ppb	209235					
*** Sample ID: I243-08A				Seq: 56	21:17:12 29 Sep 15	HG		
Hg	3.13	ppb	266410					
*** Sample ID: CCV5				Seq: 57	21:19:24 29 Sep 15	HG		
Hg	1.94	ppb	166086					
*** Sample ID: CCB5				Seq: 58	21:21:35 29 Sep 15	HG		
Hg	-.027	ppb	668					
*** Sample ID: I243-08				Seq: 59	21:23:49 29 Sep 15	HG		
Hg	.142	ppb	14891					
*** Sample ID: I243-08J				Seq: 60	21:25:50 29 Sep 15	HG		
Hg	.010	ppb	3833					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: I243-08M				Seq: 61	21:28:14 29 Sep 15	HG		
Hg	2.69	ppb	229092					
*** Sample ID: I243-08S				Seq: 62	21:30:25 29 Sep 15	HG		
Hg	2.66	ppb	226286					
*** Sample ID: I243-01				Seq: 63	21:32:47 29 Sep 15	HG		
Hg	.002	ppb	3134					
*** Sample ID: I243-02				Seq: 64	21:34:49 29 Sep 15	HG		
Hg	.233	ppb	22585					
*** Sample ID: I243-03				Seq: 65	21:36:50 29 Sep 15	HG		
Hg	.172	ppb	17438					
*** Sample ID: I243-04				Seq: 66	21:38:52 29 Sep 15	HG		
Hg	.186	ppb	18613					
*** Sample ID: I243-05				Seq: 67	21:41:08 29 Sep 15	HG		
Hg	.202	ppb	19923					
*** Sample ID: I243-06				Seq: 68	21:43:38 29 Sep 15	HG		
Hg	.209	ppb	20552					
*** Sample ID: CCV6				Seq: 69	21:45:52 29 Sep 15	HG		
Hg	1.94	ppb	165843					
*** Sample ID: CCB6				Seq: 70	21:48:08 29 Sep 15	HG		
Hg	-.033	ppb	218					
*** Sample ID: I243-07				Seq: 71	21:50:08 29 Sep 15	HG		
Hg	.117	ppb	12847					
*** Sample ID: I243-09				Seq: 72	21:52:10 29 Sep 15	HG		
Hg	.155	ppb	15971					
*** Sample ID: I243-10				Seq: 73	21:54:11 29 Sep 15	HG		
Hg	.087	ppb	10249					
*** Sample ID: I243-11				Seq: 74	21:56:17 29 Sep 15	HG		
Hg	.125	ppb	13469					
*** Sample ID: I243-12				Seq: 75	21:58:19 29 Sep 15	HG		
Hg	.188	ppb	18808					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: I243-13				Seq: 76	22:00:25 29 Sep 15	HG		
Hg	.162	ppb	16576					
*** Sample ID: I231-03				Seq: 77	22:02:27 29 Sep 15	HG		
Hg	.146	ppb	15280					
*** Sample ID: I231-04				Seq: 78	22:05:19 29 Sep 15	HG		
Hg	.164	ppb	16747					
*** Sample ID: I231-05				Seq: 79	22:07:24 29 Sep 15	HG		
Hg	.227	ppb	22070					
*** Sample ID: I231-06				Seq: 80	22:10:21 29 Sep 15	HG		
Hg	.163	ppb	16672					
*** Sample ID: CCV7				Seq: 81	22:12:55 29 Sep 15	HG		
Hg	1.93	ppb	165116					
*** Sample ID: CCB7				Seq: 82	22:15:38 29 Sep 15	HG		
Hg	-.036	ppb	-77					
*** Sample ID: I242-03				Seq: 83	22:17:48 29 Sep 15	HG		
Hg	.218	ppb	21337					
*** Sample ID: I242-04				Seq: 84	22:19:53 29 Sep 15	HG		
Hg	.241	ppb	23203					
*** Sample ID: CCV8				Seq: 85	22:21:55 29 Sep 15	HG		
Hg	1.95	ppb	166587					
*** Sample ID: CCB8				Seq: 86	22:24:06 29 Sep 15	HG		
Hg	-.030	ppb	478					

EMAX LABORATORIES, INC.

DIGESTION LOG
for
MERCURY

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Digestion Vessel Lot #: 1914007

Book #: E47-099 NT 9/29/15

Batch No.: HGI033105

Matrix: ~~Water~~ Soil

NT 9/29/15

SOP #	Rev. #
☐ EMAX-7470	7
☑ EMAX-7471	8
☐ EMAX-245.1	3
☐ EMAX-	

Standards	ID	Conc. (µg/L)	Amount Added (ml)
ICAL	SM3B-12-30-04	100	0.2, 0.5, 1, 2, 5
CCV	↓	↓	2
ICV	SM3B-12-30-05	↓	2
LCS/MS	↓	↓	2.5

Reagent	ID / Lot #
HNO_3 / aqua	SW1A-005-14-09
HCl / regia	SW1A-005-12-08
H_2SO_4	N/A
$KMnO_4$	SM5B-03-63-03
$K_2S_2O_8$	N/A
$NH_2OH \cdot HCl$	SM5B-03-62-04
$SnCl_2$	SM5B-03-63-02
Silica Sand	SW1B-002-43-08
Reagent Water	SM5A-03-02-03
pH strip 0-14	N/A

Digestor ID/ Temp (°C)	A / 94.8
Thermometer ID/LOC:	111241125 / A8
Thermometer ID/LOC:	N/A
Pipette ID:	ICP DOE-1, HG-03, HG-04
☐ H_2SO_4 dispenser checked @ 2.5 ml with Class A graduated cylinder	
☑ HCl dispenser checked @ 20 ml with Class A graduated cylinder	
☑ HNO_3 dispenser checked @ 10 ml with Class A graduated cylinder	

Prepared By: NT

Standard Added By: NT Witnessed By: [illegible]

EMAX LABORATORIES INC

DIGESTION LOG FOR MERCURY

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
15HGI033S01	HGI033SB	0.601	g	9/29/15 15:09	100	0.6	100	0.998	
15HGI033S02	HGI033SL	0.601	g	9/29/15 15:11	100	0.6	100	0.998	
15HGI033S03	I185-01	0.612	g	9/29/15 15:12	100	0.6	100	0.98	
15HGI033S04	I185-01M	0.614	g	9/29/15 15:13	100	0.6	100	0.977	
15HGI033S05	I185-01D	0.602	g	9/29/15 15:13	100	0.6	100	0.997	
15HGI033S06	I185-02	0.601	g	9/29/15 15:14	100	0.6	100	0.998	
15HGI033S07	I185-03	0.607	g	9/29/15 15:15	100	0.6	100	0.988	
15HGI033S08	S-0/CCB/ICB	0.6	g	9/29/15 15:15	100	0.6	100	1	
15HGI033S09	S-0.2	0.6	g	9/29/15 15:15	100	0.6	100	1	
15HGI033S10	S-0.5	0.6	g	9/29/15 15:15	100	0.6	100	1	
15HGI033S11	S-1	0.6	g	9/29/15 15:15	100	0.6	100	1	
15HGI033S12	S-2/CCV	0.6	g	9/29/15 15:15	100	0.6	100	1	
15HGI033S13	S-5	0.6	g	9/29/15 15:15	100	0.6	100	1	
15HGI033S14	ICV	0.6	g	9/29/15 15:15	100	0.6	100	1	
15HGI033S15	PS SOIL	0.6	g	9/29/15 15:15	100	0.6	100	1	

NT
9/29/15

Balance ID: 10601202. Calibration check was verified prior to use. Vd=digestate volume PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 9/29/15 16:15 Prepared By: NTan

☑ Digestion Ended @ 9/29/15 17:15 Checked By: NT

Comments: Date 9/29/15

SOP EMAX-7471 Rev. 7

MERCURY TCLP

METHOD SW1311/7470A
TCLP MERCURY

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 15I185

Matrix : LEACHATE
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DIL'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1W	HGI031WB	ND	1	NA	0.50	0.054	0.10	09/28/1517:58	09/28/1513:30	M47I021011	M47I021	HGI031W	NA	NA
LCS1W	HGI031WL	2.56	1	NA	0.50	0.054	0.10	09/28/1518:00	09/28/1513:30	M47I021012	M47I021	HGI031W	NA	NA
LCD1W	HGI031WC	2.53	1	NA	0.50	0.054	0.10	09/28/1518:02	09/28/1513:30	M47I021013	M47I021	HGI031W	NA	NA
MBLK2W	TXI007SB	ND	1	NA	5.0	0.54	1.0	09/28/1518:51	09/28/1513:30	M47I021036	M47I021	HGI031W	NA	NA
CAFB-FT006-WC1-002	I185-04A	30.0	1	NA	5.0	0.54	1.0	09/28/1518:53	09/28/1513:30	M47I021037	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC1-002	I185-04	ND	1	NA	5.0	0.54	1.0	09/28/1518:56	09/28/1513:30	M47I021038	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC1-002	I185-04J	ND	5	NA	25	2.7	5.0	09/28/1518:58	09/28/1513:30	M47I021039	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC1-002MS	I185-04M	19.0	1	NA	5.0	0.54	1.0	09/28/1519:00	09/28/1513:30	M47I021040	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC1-002MSD	I185-04S	19.1	1	NA	5.0	0.54	1.0	09/28/1519:02	09/28/1513:30	M47I021041	M47I021	HGI031W	09/16/1514:08	09/17/15
CAFB-FT006-WC2-002	I185-05	ND	1	NA	5.0	0.54	1.0	09/28/1519:04	09/28/1513:30	M47I021042	M47I021	HGI031W	09/16/1514:25	09/17/15
CAFB-FT006-WC3-002	I185-06	ND	1	NA	5.0	0.54	1.0	09/28/1519:06	09/28/1513:30	M47I021043	M47I021	HGI031W	09/16/1514:40	09/17/15

DateTime Leached: 09/23/15 15:30
Note: 5 ml leachate was diluted to 50 ml reagent water prior to digestion.

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW1311/7470A

MATRIX	WATER		% MOISTURE: N/A
DILUTION FACTOR	1	1	1
SAMPLE ID	MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	HGI031WB	HGI031WL	HGI031WC
LAB FILE ID	M47I021011	M47I021012	M47I021013
DATE PREPARED	09/28/1513:30	09/28/1513:30	09/28/1513:30
DATE ANALYZED	09/28/1517:58	09/28/1518:00	09/28/1518:02
PREP BATCH	HGI031W	HGI031W	HGI031W
CALIBRATION REF	M47I021	M47I021	M47I021

ACCESSION:

PARAMETER	MB RESULT (ug/L)	SPIKE AMT (ug/L)	BS RESULT (ug/L)	BS REC (%)	SPIKE AMT (ug/L)	BSD RESULT (ug/L)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Mercury	ND	2.50	2.56	102	2.50	2.53	101	1	80-120	20

15I185

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW1311/7470A

MATRIX	: LEACHATE		% MOISTURE: NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: CAFB-FT006-WC1-002	CAFB-FT006-WC1-002MS	CAFB-FT006-WC1-002MSD
LAB SAMPLE ID	: I185-04	I185-04M	I185-04S
LAB FILE ID	: M47I021038	M47I021040	M47I021041
DATE PREPARED	: 09/28/1513:30	09/28/1513:30	09/28/1513:30
DATE ANALYZED	: 09/28/1518:56	09/28/1519:00	09/28/1519:02
PREP BATCH	: HGI031W	HGI031W	HGI031W
CALIBRATION REF	: M47I021	M47I021	M47I021

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SPIKE AMT (ug/L)	MS RESULT (ug/L)	MS REC (%)	SPIKE AMT (ug/L)	MSD RESULT (ug/L)	MSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Mercury	ND	25.0	19.0	76*	25.0	19.1	76*	1	80-120	20

* Out of MS QC limit.

EMAX QUALITY CONTROL DATA
SERIAL DILUTION

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW1311/7470A

MATRIX	: LEACHATE	% MOISTURE: NA
DILUTION FACTOR	: 1	5
SAMPLE ID	: CAFB-FT006-WC1-002	CAFB-FT006-WC1-002
LAB SAMPLE ID	: I185-04	I185-04J
LAB FILE ID	: M47I021038	M47I021039
DATE PREPARED	: 09/28/1513:30	09/28/1513:30
DATE ANALYZED	: 09/28/1518:56	09/28/1518:58
PREP BATCH	: HGI031W	HGI031W
CALIBRATION REF	: M47I021	M47I021

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SER RESULT (ug/L)	RPD (%)	MAX RPD (%)
Mercury	ND	ND	0	10

EMAX QUALITY CONTROL DATA
POST SPIKE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
8ATCH NO. : 15I185
METHOD : SW1311/7470A

MATRIX	: LEACHATE	% MOISTURE: NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: CAFB-FT006-WC1-002	CAFB-FT006-WC1-002
LAB SAMPLE ID	: I185-04	I185-04A
LAB FILE ID	: M47I021038	M47I021037
DATE PREPARED	: 09/28/1513:30	09/28/1513:30
DATE ANALYZED	: 09/28/1518:56	09/28/1518:53
PREP BATCH	: HGI031W	HGI031W
CALIBRATION REF	: M47I021	M47I021

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SPIKE AMT (ug/L)	MS RESULT (ug/L)	MS REC (%)	QC LIMIT (%)
Mercury	ND	30.0	30.0	100	80-120

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
MERCURY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 9/28/15 Start Time: 17:36

End Date: 9/28/15 End Time: 20:27

Comments:

QC OK

I185-04 MS/MSD were out of QC limit, However Post spike was analyzed

Book #:	A47-099
Instrument No.:	47
Analytical Sequence/Batch:	M47I021
Method File:	HG1
Micropipette ID:	☐ ICP DOE-1
Micropipette ID:	☑ HG-03
Micropipette ID:	☑ HG-04
Micropipette ID:	☐

SOP #	Rev. #
☑ EMAX-7470	7
☐ EMAX-7471	8
☑ EMAX-245.1	3
☐ EMAX-	

STANDARDS ID	
S1	BLANK
S2	SM38-12-30-01
S3	↓
S4	↓
S5	↓
S6	↓
CCV	↓
ICV	SM38-12-30-02
LCS	↓
Analytical Spike	
	SM38-12-30-03 TV 3ug/L

Analyzed By: NT

Date: 9/28/15

"M47I021"

EMAXlfid	EMAXlsid	conc	Raw_resp	rsd/rf	adatetime	DF
M47I021001	STD01REP1	0	2581		09/28/1517:36	1
M47I021002	STD02REP1	.2	13647		09/28/1517:38	1
M47I021003	STD03REP1	.5	28639		09/28/1517:40	1
M47I021004	STD04REP1	1	53682		09/28/1517:42	1
M47I021005	STD05REP1	2	106286		09/28/1517:44	1
M47I021006	STD06REP1	5	256525		09/28/1517:47	1
M47I021007	ICV	2.02	105569	0	09/28/1517:50	1
M47I021008	ICB	-.057	417	0	09/28/1517:52	1
M47I021009	CCV1	1.98	103922	0	09/28/1517:54	1
M47I021010	CCB1	-.047	935	0	09/28/1517:56	1
M47I021011	HGI031WB	-.029	1816	0	09/28/1517:58	1
M47I021012	HGI031WL	2.56	133180	0	09/28/1518:00	1
M47I021013	HGI031WC	2.53	131699	0	09/28/1518:02	1
M47I021014	I113-17A	2.97	153904	0	09/28/1518:04	1
M47I021015	I113-17	-.018	2373	0	09/28/1518:07	1
M47I021016	I113-17J	-.027	1934	0	09/28/1518:09	5
M47I021017	I113-17M	2.56	133249	0	09/28/1518:11	1
M47I021018	I113-17S	2.51	130552	0	09/28/1518:13	1
M47I021019	I113-06	-.026	1968	0	09/28/1518:15	1
M47I021020	I113-07	.104	8604	0	09/28/1518:17	1
M47I021021	CCV2	2.01	105420	0	09/28/1518:20	1
M47I021022	CCB2	-.039	1313	0	09/28/1518:22	1
M47I021023	I113-15	-.014	2583	0	09/28/1518:24	1
M47I021024	I113-16	-.018	2366	0	09/28/1518:26	1
M47I021025	I137-04	-.017	2436	0	09/28/1518:28	1
M47I021026	I137-05	-.028	1863	0	09/28/1518:31	1
M47I021027	I137-06	-.007	2950	0	09/28/1518:33	1
M47I021028	I137-07	-.042	1171	0	09/28/1518:35	1
M47I021029	I137-08	-.017	2460	0	09/28/1518:37	1
M47I021030	I137-09	-.009	2868	0	09/28/1518:39	1
M47I021031	I142-01	-.011	2723	0	09/28/1518:41	1
M47I021032	I142-02	-.011	2737	0	09/28/1518:43	1
M47I021033	CCV3	2.01	105285	0	09/28/1518:45	1
M47I021034	CCB3	-.023	2114	0	09/28/1518:47	1
M47I021035	I186-01	-.029	1818	0	09/28/1518:49	1
M47I021036	TXI007SB	-.018	2373	0	09/28/1518:51	1
M47I021037	I185-04A	3	155336	0	09/28/1518:53	1
M47I021038	I185-04	-.018	2391	0	09/28/1518:56	1
M47I021039	I185-04J	-.041	1246	0	09/28/1518:58	5
M47I021040	I185-04M	1.9	99912	0	09/28/1519:00	1
M47I021041	I185-04S	1.91	100174	0	09/28/1519:02	1
M47I021042	I185-05	-.024	2089	0	09/28/1519:04	1
M47I021043	I185-06	-.001	3243	0	09/28/1519:06	1
M47I021044	HGI032WB	-.043	1122	0	09/28/1519:08	1
M47I021045	CCV4	1.99	104342	0	09/28/1519:10	1
M47I021046	CCB4	-.048	857	0	09/28/1519:12	1
M47I021047	HGI032WL	2.55	132547	0	09/28/1519:14	1
M47I021048	HGI032WC	2.49	129422	0	09/28/1519:16	1
M47I021049	I189-03A	2.97	154148	0	09/28/1519:18	1
M47I021050	I189-03	-.041	1244	0	09/28/1519:20	1
M47I021051	I189-03J	-.049	815	0	09/28/1519:22	5
M47I021052	I189-03M	2.62	136280	0	09/28/1519:24	1
M47I021053	I189-03S	2.56	133187	0	09/28/1519:27	1
M47I021054	I189-02	-.042	1180	0	09/28/1519:29	1
M47I021055	I189-04	-.009	2843	0	09/28/1519:31	1
M47I021056	I189-05	-.008	2899	0	09/28/1519:33	1
M47I021057	CCV5	2.02	105640	0	09/28/1519:35	1
M47I021058	CCB5	-.053	610	0	09/28/1519:37	1
M47I021059	I189-06	-.03	1764	0	09/28/1519:40	1
M47I021060	I189-07	-.021	2260	0	09/28/1519:42	1
M47I021061	I189-08	-.053	632	0	09/28/1519:44	1
M47I021062	I233-01	-.025	2018	0	09/28/1519:46	1
M47I021063	I245-05	-.029	1833	0	09/28/1519:48	1
M47I021064	I245-06	-.023	2121	0	09/28/1519:50	1
M47I021065	I245-07	-.027	1949	0	09/28/1519:52	1
M47I021066	I245-08	-.026	1987	0	09/28/1519:54	1
M47I021067	I245-09A	2.99	155019	0	09/28/1519:56	1
M47I021068	I245-09	-.046	971	0	09/28/1519:58	1
M47I021069	CCV6	1.99	104514	0	09/28/1520:01	1
M47I021070	CCB6	-.067	85	0	09/28/1520:03	1
M47I021071	I245-09J	-.053	604	0	09/28/1520:05	5
M47I021072	I245-09M	2.57	133960	0	09/28/1520:07	1
M47I021073	I245-09S	2.56	133047	0	09/28/1520:09	1

M47I021074	I245-10	-.034	1602	0	09/28/1520:12	1
M47I021075	I566-01	.023	4468	0	09/28/1520:14	1
M47I021076	I566-02	.002	3395	0	09/28/1520:16	1
M47I021077	I566-03	-.029	1822	0	09/28/1520:18	1
M47I021078	I277-06	-.064	55	0	09/28/1520:20	1
M47I021079	I278-07	-.023	2153	0	09/28/1520:22	1
M47I021080	CCV7	1.99	104447	0	09/28/1520:25	1
M47I021081	CCB7	-.082	-838	0	09/28/1520:27	1
**********	**********	**********	**********	**********	**********	***
EMAX1fid	EMAX1sid	Xint	Yint	rrf	adatetime	DF
M47I021001	BLANK	-.0652246	3309.962	.9999651	09/28/1520:27	1

M47I021

cup	sample ID	extended ID	weight	volume	? A D F P S U SC UI US C1..7
1	ICV		1.0000	1.0000	
2	ICB		1.0000	1.0000	
3	CCV1		1.0000	1.0000	
4	CCB1		1.0000	1.0000	
5	HGI031WB		1.0000	1.0000	
6	HGI031WL		1.0000	1.0000	
7	HGI031WC		1.0000	1.0000	
8	I113-17A		1.0000	1.0000	
9	I113-17		1.0000	1.0000	
10	I113-17J		1.0000	1.0000	
11	I113-17M		1.0000	1.0000	
12	I113-17S		1.0000	1.0000	
13	I113-06		1.0000	1.0000	
14	I113-07		1.0000	1.0000	
15	CCV2		1.0000	1.0000	
16	CCB2		1.0000	1.0000	
17	I113-15		1.0000	1.0000	
18	I113-16		1.0000	1.0000	
19	I137-04		1.0000	1.0000	
20	I137-05		1.0000	1.0000	
21	I137-06		1.0000	1.0000	
22	I137-07		1.0000	1.0000	
23	I137-08		1.0000	1.0000	
24	I137-09		1.0000	1.0000	
25	I142-01		1.0000	1.0000	
26	I142-02		1.0000	1.0000	
27	CCV3		1.0000	1.0000	
28	CCB3		1.0000	1.0000	
29	I186-01		1.0000	1.0000	
30	TXI007SB	TCLP	1.0000	1.0000	
31	I185-04A	TCLP	1.0000	1.0000	
32	I185-04	TCLP	1.0000	1.0000	
33	I185-04J	TCLP	1.0000	1.0000	
34	I185-04M	TCLP	1.0000	1.0000	
35	I185-04S	TCLP	1.0000	1.0000	
36	I185-05	TCLP	1.0000	1.0000	
37	I185-06	TCLP	1.0000	1.0000	
38	HGI032WB		1.0000	1.0000	
39	CCV4		1.0000	1.0000	
40	CCB4		1.0000	1.0000	
41	HGI032WL		1.0000	1.0000	
42	HGI032WC		1.0000	1.0000	
43	I189-03A		1.0000	1.0000	
44	I189-03		1.0000	1.0000	

NT 9/28/15

1056

cup	sample ID	extended ID	weight	volume	? A D F P S U SC UI US C1..7
1	I189-03J		1.0000	1.0000	
2	I189-03M		1.0000	1.0000	
3	I189-03S		1.0000	1.0000	
4	I189-02		1.0000	1.0000	
5	I189-04		1.0000	1.0000	
6	I189-05		1.0000	1.0000	
7	CCV5		1.0000	1.0000	
8	CCB5		1.0000	1.0000	
9	I189-06		1.0000	1.0000	
10	I189-07		1.0000	1.0000	
11	I189-08		1.0000	1.0000	
12	I233-01		1.0000	1.0000	
13	I245-05		1.0000	1.0000	
14	I245-06		1.0000	1.0000	
15	I245-07		1.0000	1.0000	
16	I245-08		1.0000	1.0000	
17	I245-09A		1.0000	1.0000	
18	I245-09		1.0000	1.0000	
19	CCV6		1.0000	1.0000	
20	CCB6		1.0000	1.0000	
21	I245-09J		1.0000	1.0000	
22	I245-09M		1.0000	1.0000	
23	I245-09S		1.0000	1.0000	
24	I245-10		1.0000	1.0000	
25	I566-01		1.0000	1.0000	
26	I566-02		1.0000	1.0000	
27	I566-03		1.0000	1.0000	
28	I277-06		1.0000	1.0000	
29	I278-07		1.0000	1.0000	
30	CCV7		1.0000	1.0000	
31	CCB7		1.0000	1.0000	
32			1.0000	1.0000	
33			1.0000	1.0000	
34			1.0000	1.0000	
35			1.0000	1.0000	
36			1.0000	1.0000	
37			1.0000	1.0000	
38			1.0000	1.0000	
39			1.0000	1.0000	
40			1.0000	1.0000	
41			1.0000	1.0000	
42			1.0000	1.0000	
43			1.0000	1.0000	
44			1.0000	1.0000	

HT 9/28/15

WinHg Database 1.3

File Utility Help

Protocol HG1 Dataset/Proto M47I021 /HG1

Protocol | Line info | Cal Curve | Report | Ctrl Chart | Viewer

Reset

Calib Coeffs

New Cal

Update Coeffs

Spike Coeffs

A

B 1.97042e-5

C -6.51189e-2

Rho .999965

Type Linear

Calibrated

Accepted

Accept

Rel. Abs.
256525

Accepted

New

Include S1 Rep 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Conc. 5.00

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
01	00000	-.014	-.014	2582	0	2581		
02	.20000	.204	.004	13647	0%	13647		
03	.50000	.499	-.001	28639	0%	28639		
04	1.0000	.993	-.007	53682	0%	53682		
05	2.0000	2.03	.029	106287	0%	106286		
06	5.0000	4.99	-.011	256526	0%	256525		

Ready CAP NUM

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 1	17:36:20 28 Sep 15	HG		
Hg	.000	ppb	2581					
*** Standard: 2 Rep: 1				Seq: 2	17:38:20 28 Sep 15	HG		
Hg	.200	ppb	13647					
*** Standard: 3 Rep: 1				Seq: 3	17:40:22 28 Sep 15	HG		
Hg	.500	ppb	28639					
*** Standard: 4 Rep: 1				Seq: 4	17:42:33 28 Sep 15	HG		
Hg	1.00	ppb	53682					
*** Standard: 5 Rep: 1				Seq: 5	17:44:42 28 Sep 15	HG		
Hg	2.00	ppb	106286					
*** Standard: 6 Rep: 1				Seq: 6	17:47:48 28 Sep 15	HG		
Hg	5.00	ppb	256525					
*** Sample ID: ICV				Seq: 7	17:50:33 28 Sep 15	HG		
Hg	2.02	ppb	105569					
*** Sample ID: ICB				Seq: 8	17:52:32 28 Sep 15	HG		
Hg	-.057	ppb	417					
*** Sample ID: CCV1				Seq: 9	17:54:30 28 Sep 15	HG		
Hg	1.98	ppb	103922					
*** Sample ID: CCB1				Seq: 10	17:56:30 28 Sep 15	HG		
Hg	-.047	ppb	935					
*** Sample ID: HGI031WB				Seq: 11	17:58:34 28 Sep 15	HG		
Hg	-.029	ppb	1816					
*** Sample ID: HGI031WL				Seq: 12	18:00:35 28 Sep 15	HG		
Hg	2.56	ppb	133180					
*** Sample ID: HGI031WC				Seq: 13	18:02:47 28 Sep 15	HG		
Hg	2.53	ppb	131699					
*** Sample ID: I113-17A				Seq: 14	18:04:46 28 Sep 15	HG		
Hg	2.97	ppb	153904					
*** Sample ID: I113-17				Seq: 15	18:07:27 28 Sep 15	HG		
Hg	-.018	ppb	2373					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: I113-17J				Seq:	16	18:09:39 28 Sep 15		HG
Hg	-.027	ppb	1934					
*** Sample ID: I113-17M				Seq:	17	18:11:38 28 Sep 15		HG
Hg	2.56	ppb	133249					
*** Sample ID: I113-17S				Seq:	18	18:13:38 28 Sep 15		HG
Hg	2.51	ppb	130552					
*** Sample ID: I113-06				Seq:	19	18:15:39 28 Sep 15		HG
Hg	-.026	ppb	1968					
*** Sample ID: I113-07				Seq:	20	18:17:57 28 Sep 15		HG
Hg	.104	ppb	8604					
*** Sample ID: CCV2				Seq:	21	18:20:09 28 Sep 15		HG
Hg	2.01	ppb	105420					
*** Sample ID: CCB2				Seq:	22	18:22:19 28 Sep 15		HG
Hg	-.039	ppb	1313					
*** Sample ID: I113-15				Seq:	23	18:24:24 28 Sep 15		HG
Hg	-.014	ppb	2583					
*** Sample ID: I113-16				Seq:	24	18:26:35 28 Sep 15		HG
Hg	-.018	ppb	2366					
*** Sample ID: I137-04				Seq:	25	18:28:36 28 Sep 15		HG
Hg	-.017	ppb	2436					
*** Sample ID: I137-05				Seq:	26	18:31:17 28 Sep 15		HG
Hg	-.028	ppb	1863					
*** Sample ID: I137-06				Seq:	27	18:33:27 28 Sep 15		HG
Hg	-.007	ppb	2950					
*** Sample ID: I137-07				Seq:	28	18:35:27 28 Sep 15		HG
Hg	-.042	ppb	1171					
*** Sample ID: I137-08				Seq:	29	18:37:28 28 Sep 15		HG
Hg	-.017	ppb	2460					
*** Sample ID: I137-09				Seq:	30	18:39:26 28 Sep 15		HG
Hg	-.009	ppb	2868					

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: I142-01 Seq: 31 18:41:26 28 Sep 15 HG

Hg -.011 ppb 2723

*** Sample ID: I142-02 Seq: 32 18:43:25 28 Sep 15 HG

Hg -.011 ppb 2737

*** Sample ID: CCV3 Seq: 33 18:45:34 28 Sep 15 HG

Hg 2.01 ppb 105285

*** Sample ID: CCB3 Seq: 34 18:47:34 28 Sep 15 HG

Hg -.023 ppb 2114

*** Sample ID: I186-01 Seq: 35 18:49:55 28 Sep 15 HG

Hg -.029 ppb 1818

*** Sample ID: TXI007SB Seq: 36 18:51:57 28 Sep 15 HG
TCLP
Hg -.018 ppb 2373

*** Sample ID: I185-04A Seq: 37 18:53:56 28 Sep 15 HG
TCLP
Hg 3.00 ppb 155336

*** Sample ID: I185-04 Seq: 38 18:56:00 28 Sep 15 HG
TCLP
Hg -.018 ppb 2391

*** Sample ID: I185-04J Seq: 39 18:58:10 28 Sep 15 HG
TCLP
Hg -.041 ppb 1248

*** Sample ID: I185-04M Seq: 40 19:00:09 28 Sep 15 HG
TCLP
Hg 1.90 ppb 99912

*** Sample ID: I185-04S Seq: 41 19:02:18 28 Sep 15 HG
TCLP
Hg 1.91 ppb 100174

*** Sample ID: I185-05 Seq: 42 19:04:18 28 Sep 15 HG
TCLP
Hg -.024 ppb 2089

*** Sample ID: I185-06 Seq: 43 19:06:17 28 Sep 15 HG
TCLP
Hg -.001 ppb 3243

*** Sample ID: HGI032WB Seq: 44 19:08:27 28 Sep 15 HG

Hg -.043 ppb 1122

*** Sample ID: CCV4 Seq: 45 19:10:26 28 Sep 15 HG

Hg 1.99 ppb 104342

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: CCB4 Seq: 46 19:12:27 28 Sep 15 HG

Hg -.048 ppb 857

*** Sample ID: HGI032WL Seq: 47 19:14:29 28 Sep 15 HG

Hg 2.55 ppb 132547

*** Sample ID: HGI032WC Seq: 48 19:16:34 28 Sep 15 HG

Hg 2.49 ppb 129422

*** Sample ID: I189-03A Seq: 49 19:18:38 28 Sep 15 HG

Hg 2.97 ppb 154148

*** Sample ID: I189-03 Seq: 50 19:20:40 28 Sep 15 HG

Hg -.041 ppb 1244

*** Sample ID: I189-03J Seq: 51 19:22:40 28 Sep 15 HG

Hg -.049 ppb 815

*** Sample ID: I189-03M Seq: 52 19:24:59 28 Sep 15 HG

Hg 2.62 ppb 136280

*** Sample ID: I189-03S Seq: 53 19:27:02 28 Sep 15 HG

Hg 2.56 ppb 133187

*** Sample ID: I189-02 Seq: 54 19:29:12 28 Sep 15 HG

Hg -.042 ppb 1180

*** Sample ID: I189-04 Seq: 55 19:31:23 28 Sep 15 HG

Hg -.009 ppb 2843

*** Sample ID: I189-05 Seq: 56 19:33:35 28 Sep 15 HG

Hg -.008 ppb 2899

*** Sample ID: CCV5 Seq: 57 19:35:35 28 Sep 15 HG

Hg 2.02 ppb 105640

*** Sample ID: CCB5 Seq: 58 19:37:45 28 Sep 15 HG

Hg -.053 ppb 610

*** Sample ID: I189-06 Seq: 59 19:40:15 28 Sep 15 HG

Hg -.030 ppb 1764

*** Sample ID: I189-07 Seq: 60 19:42:15 28 Sep 15 HG

Hg -.021 ppb 2260

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: I189-08				Seq:	61	19:44:17 28 Sep 15		HG
Hg	-.053	ppb	632					
*** Sample ID: I233-01				Seq:	62	19:46:22 28 Sep 15		HG
Hg	-.025	ppb	2018					
*** Sample ID: I245-05				Seq:	63	19:48:23 28 Sep 15		HG
Hg	-.029	ppb	1833					
*** Sample ID: I245-06				Seq:	64	19:50:45 28 Sep 15		HG
Hg	-.023	ppb	2121					
*** Sample ID: I245-07				Seq:	65	19:52:46 28 Sep 15		HG
Hg	-.027	ppb	1949					
*** Sample ID: I245-08				Seq:	66	19:54:46 28 Sep 15		HG
Hg	-.026	ppb	1987					
*** Sample ID: I245-09A				Seq:	67	19:56:50 28 Sep 15		HG
Hg	2.99	ppb	155019					
*** Sample ID: I245-09				Seq:	68	19:58:52 28 Sep 15		HG
Hg	-.046	ppb	971					
*** Sample ID: CCV6				Seq:	69	20:01:06 28 Sep 15		HG
Hg	1.99	ppb	104514					
*** Sample ID: CCB6				Seq:	70	20:03:09 28 Sep 15		HG
Hg	-.067	ppb	-85					
*** Sample ID: I245-09J				Seq:	71	20:05:09 28 Sep 15		HG
Hg	-.053	ppb	604					
*** Sample ID: I245-09M				Seq:	72	20:07:30 28 Sep 15		HG
Hg	2.57	ppb	133960					
*** Sample ID: I245-09S				Seq:	73	20:09:52 28 Sep 15		HG
Hg	2.56	ppb	133047					
*** Sample ID: I245-10				Seq:	74	20:12:01 28 Sep 15		HG
Hg	-.034	ppb	1602					
*** Sample ID: I566-01				Seq:	75	20:14:17 28 Sep 15		HG
Hg	.023	ppb	4468					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: I566-02				Seq: 76	20:16:19 28 Sep 15			HG
Hg	.002	ppb	3395					
*** Sample ID: I566-03				Seq: 77	20:18:24 28 Sep 15			HG
Hg	-.029	ppb	1822					
*** Sample ID: I277-06				Seq: 78	20:20:40 28 Sep 15			HG
Hg	-.064	ppb	55					
*** Sample ID: I278-07				Seq: 79	20:22:50 28 Sep 15			HG
Hg	-.023	ppb	2153					
*** Sample ID: CCV7				Seq: 80	20:25:23 28 Sep 15			HG
Hg	1.99	ppb	104447					
*** Sample ID: CCB7				Seq: 81	20:27:55 28 Sep 15			HG
Hg	-.082	ppb	-838					

EMAX LABORATORIES, INC.

DIGESTION LOG
for
MERCURY

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Digestion Vessel Lot #: 1914007

All Samples PH = <2

Book #: E47-099
Batch No.: HGI031W
Matrix: Water

SOP #	Rev. #
☑ EMAX-7470	7
☐ EMAX-7471	8
☐ EMAX-245.1	3
☐ EMAX-	

Standards	ID	Conc. (µg/L)	Amount Added (ml)
ICAL	SM3B-12-30-01	50	0.2, 0.5, 1, 2, 5
CCV	↓	↓	2
ICV	SM3B-12-30-02	↓	2
LCS/MS	↓	↓	2.5

Reagent	ID / Lot #
HNO_3	SW1A-005-14-09
HCl	N/A
H_2SO_4	SW1A-005-11-09
$KMnO_4$	SM5B-03-63-03
$K_2S_2O_8$	SM5B-03-61-01
$NH_2OH \cdot HCl$	SM5B-03-62-04
$SnCl_2$	SM5B-03-63-02
Silica Sand	NT 9/28/15 N/A
Reagent Water	SM5B-A-03-02-03
pH strip 0-14	HC413032

Digestor ID/ Temp (°C): A / 95.3
Thermometer ID/LOC: 11124125 / A7
Thermometer ID/LOC: N/A
Pipette ID: ICPDOE-1, HG-03, HG-04

☑ H_2SO_4 dispenser checked @ 2.5 ml with Class A graduated cylinder
☐ HCl dispenser checked @ ___ ml with Class A graduated cylinder
☐ HNO_3 dispenser checked @ ___ ml with Class A graduated cylinder

Prepared By: NT
Standard Added By: NT Witnessed By: SP

EMAX LABORATORIES INC

DIGESTION LOG FOR MERCURY

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
15HGI031W01	HGI031WB	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W02	HGI031WL	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W03	HGI031WC	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W04	I113-06	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W05	I113-07	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W06	I113-15	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W07	I113-16	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W08	I113-17	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W09	I113-17M	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W10	I113-17S	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W11	I137-04	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W12	I137-05	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W13	I137-06	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W14	I137-07	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W15	I137-08	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W16	I137-09	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W17	I142-01	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W18	I142-02	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W19	I186-01	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W20	TXI007SB	5	ml	9/28/15 11:34	80	50	80	10	TCLP
15HGI031W21	I185-04	5	ml	9/28/15 11:34	80	50	80	10	TCLP
15HGI031W22	I185-04M	5	ml	9/28/15 11:34	80	50	80	10	TCLP
15HGI031W23	I185-04S	5	ml	9/28/15 11:34	80	50	80	10	TCLP
15HGI031W24	I185-05	5	ml	9/28/15 11:34	80	50	80	10	TCLP
15HGI031W25	I185-06	5	ml	9/28/15 11:34	80	50	80	10	TCLP
15HGI031W26	S-0/CCB/ICB	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W27	S-0.2	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W28	S-0.5	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W29	S-1	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W30	S-2/CCV	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W31	S-5	50	ml	9/28/15 11:34	80	50	80	1	
15HGI031W32	ICV	50	ml	9/28/15 11:34	80	50	80	1	

NT
9/28/15

Vd=digestate volume

PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 9/28/15 13:30

☑ Digestion Ended @ 9/28/15 16:00

Comments:

Prepared By: NTan

Checked By: NT

Date 9/28/15

EMAX LABORATORIES, INC.

FileID: TXI007S

TCLP EXTRACTION LOG

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	TCLPSoln	TCLPVol	Exrtract pH	Preservation	Comments
15TXI007S01	TXI007SB	0	g	9/23/15 10:52		2000		HNO_3	
15TXI007S02	I185-04	100	g	9/23/15 10:53	#1	2000	5.22	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)
15TXI007S03	I185-05	100.01	g	9/23/15 10:58	#1	2000	4.93	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)
15TXI007S04	I185-06	100.02	g	9/23/15 11:01	#1	2000	5	HNO_3	for 8270, Metals, Hg, Pest, 8151 (UNPRESERVED)

☑ DateTimeStarted 9/23/2015 15:30 ☑ Thermometer Reset on 9/23/2015 15:30 Balance ID: 10203192. Calibration check was verified prior to use.

☑ DateTimeEnded 9/24/2015 9:30 Note: Sample preserved with HNO_3 is for metals analysis. MS/MSD were spiked prio Prepared By: DFelic/MLyudm

Extract Location: Metals Received By: SP 9/24/15 Checked By: ML

Comment: 14:11 Date 9/24/15

EMAX LABORATORIES, INC.

FileID: TXI007S

TCLP EXTRACTION LOG

Determination of TLCP Solution							Determination of TCLP Extract Filtration			Determination of % solids for aqueos phase			
LabSampleID	Phase(s)	Aliquot	Sample pH	HCl	pH	TCLPSolnReq'd	(ml)	(g)	Pressure	WtS(g)	WtF(g)	WtDF5(g)	% Solids
TXI007SB							100						
I185-04	1	5	9.52	3.5	2.5	#1	100	98.78	Vacuum				
I185-05	1	5	9.46	3.5	1.5	#1	100	98.19	Vacuum				
I185-06	1	5.02	8.56	3.5	1.66	#1	100	98.67	Vacuum				

Calibration of pH Meter		InstrumentID:	96
BufferID	Value	Reading	DateTime
SP1A-05-02-01	4	4.01	9/23/15 12:23
SP1A-05-02-02	7	7	9/23/15 12:22
SW1A-005-12-24	CalVer 5	5.05	9/23/15 12:24
SP1A-05-02-01	4	4.01	9/24/15 13:55
SP1A-05-02-02	7	7	9/24/15 13:42
SW1A-005-12-24	CalVer 5	5.05	9/24/15 13:56
ID	Reagent	Desc	Expiration Date
SP1A-05-02-04	HCl	1N	03/04/16
SW1A-005-11-08	HNO_3	Conc	08/19/16
SP1B-08-31-03	TCLP Soln	#1	03/17/16
-	TCLP Soln		
Rotary Agitator #	Criteria	rpm	DateTime
1	30 ± 2 rpm	30	9/23/15 12:25
	30 ± 2 rpm		
Thermostat Setting:		Thermometer ID:	122273404
TCLP Room Temperature	Criteria	Rdg	DateTime
Room Temp (°C) High	23 ± 2 °C	24.4	9/24/15 9:28
Room Temp (°C) Low	23 ± 2 °C	22.5	9/23/15 17:48
Pipette ID	PE04-03		
CONCENTRATOR (WATER BATH)			
Concentrator #	Temp Setting	Thermometer Rdg	Thermometer ID
6	50	50	5VOC-T1
Filter ID/Lot #	103013/ 062513		
pH strip Lot#	HC554612		

Legend:

WtS = weight of sample

WtF = weight of filter

WtDFS = weight of dried filter + solids

Prepared By: DFelic/MLyudm

Checked By: ML

Date 9/24/15

1508

PAINT FILTER LIQUID TEST

METHOD SW9095B
PAINT FILTER LIQUID TEST

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 15I185

Matrix : SOIL
InstrumentID : NA

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ml)	PREP FACTOR	MOIST (%)	LOQ (ml)	LOD (ml)	DL (ml)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME
CAFB-FT006-WC1-002	I185-04	ND	1.00	NA	5.00	5.00	5.00	09/17/1514:30	NA	15PFI00101	15PFI001	PFI001S	09/16/1514:08
CAFB-FT006-WC1-002DUP	I185-04D	ND	1.00	NA	5.00	5.00	5.00	09/17/1514:30	NA	15PFI00101	15PFI001	PFI001S	09/16/1514:08
CAFB-FT006-WC2-002	I185-05	ND	1.00	NA	5.00	5.00	5.00	09/17/1514:30	NA	15PFI00101	15PFI001	PFI001S	09/16/1514:25
CAFB-FT006-WC3-002	I185-06	ND	1.00	NA	5.00	5.00	5.00	09/17/1514:30	NA	15PFI00101	15PFI001	PFI001S	09/16/1514:40

EMAX QUALITY CONTROL DATA
SAMPLE DUPLICATE ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 15I185
METHOD : SW9095B

==========

MATRIX : SOIL

DILUTION FACTOR:	1.00	1.00
SAMPLE ID :	CAFB-FT006-WC1-002	CAFB-FT006-WC1-002DUP
LAB SAMPLE ID :	I185-04	I185-04D
LAB FILE ID :	15PFI00101	15PFI00101
DATE PREPARED :	NA	NA
DATE ANALYZED :	09/17/1514:30	09/17/1514:30
PREP BATCH :	PFI001S	PFI001S
CALIBRATION REF:	15PFI001	15PFI001

ACCESSION:

PARAMETER	PARENT RESULT (ml)	DUP RESULT (ml)	RPD (%)	MAX RPD (%)
Paint Filter	ND	ND	0	20

EMAX LABORATORIES, INC.

PAINT FILTER LIQUID ANALYSIS LOG

SOP ☑ EMAX-9095 Rev. No. 3 ☐ EMAX- Conical Paint Filter Used: 60 Mesh Temp (°C): NA Book # A45-004

Start Date/Time: 09/17/15 14:30 End Date/Time: 09/17/15 14:35

ANALYTICAL BATCH * PFI001

	Date File Name	Analytical Batch	Lab Sample ID	Matrix	Sample Amt (g / ml)	Run Time (min)	Time Lapsed (min)	Filtrate Vol Collected (ml)	Free Liquids/ Results (ml/min)
1		PFI001	I185-04	Soil	100.02	14:30-14:35	5	0	ND
2		PFI001	I185-04D	Soil	100.01	14:30-14:35	5	0	ND
3		PFI001	I185-05	Soil	100.05	14:30-14:35	5	0	ND
4		PFI001	I185-06	Soil	100.02	14:30-14:35	5	0	ND
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25								TK 09/18/15	

Comments:
Balance ID: 10203192

Analyzed by TK
Date 09/17/15

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15L067 **URS Chemist: Jennifer Zorinsky**
Date Verified: 12/11/2015 **URS ITR: Jeff Aust (1/6/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 6020A

Sample Identification #	Date Collected	Date Received	Matrix	Analysis
CAFT006-SW03-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-EB03-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-SW05-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-EB04-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-SW08-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-EB01-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-EB01-202.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-SW07-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-SW06-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-SW01-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-SW04-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-SW04-202.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-SW02-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)
CAFT006-EB02-002.5	12/7/2015	12/8/2015	Soil	Lead (6020A)

1.0 Laboratory Case Narrative \ Cooler Receipt Form

Verification Criteria	Yes	No	N/A
Were any DoD-QSM deviations noted in the laboratory case narrative?	X		
Were DoD-QSM corrective actions followed if deviations were noted?	X		
Were any issues noted in the cooler receipt form?	X		

The laboratory case narrative indicated the MS recovery for lead was outside evaluation criteria. This issue is addressed in the appropriate section below.

The cooler receipt form indicated changes to the COC were not initialed and dated. No qualification of the data was required.

2.0 Sample Documentation

Verification Criteria	Yes	No
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X	
Were all sample identifications (IDs) documented correctly on sample labels?	X	
Did samples listed on COCs match the sample labels?	X	
Were samples relinquished properly on the COC?	X	

The cooler receipt form indicated changes to the COC were not initialed and dated. No qualification of the data was required.

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15L067 **URS Chemist: Jennifer Zorinsky**
Date Verified: 12/11/2015 **URS ITR: Jeff Aust (1/6/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 6020A

3.0 Holding Time

Verification Criteria	Yes	No	N/A
Were all samples extracted/analyzed within holding time?	X		
Were samples outside holding time extracted/analyzed < 2x holding time?			X
Were samples outside holding time extracted/analyzed > 2x holding time?			X

4.0 Instrument Performance Check (Tuning)

Method 6020A Instrument Tuning Criteria (Filename)	**F6L06001.D**	
Instrument:	**F6**	
Date of Tuning:	**12/8/2015**	
	Yes	**No**
Was instrument tuning completed prior to calibration?	X	
Was mass calibration ≤ 0.1 amu from true value?	X	
Was resolution < 0.9 amu full width at 10% peak height?	X	
For stability, was the RSD ≤ 5% for at least four replicate analytes?	X	

5.0 Initial Calibration

Method 6020A Initial Calibration Criteria			
Instrument:	**F6**		
Date of Calibration:	**09/28/2015**		
	Yes	**No**	**N/A**
Was a minimum of two standards and a calibration blank used for ICAL?	X		
Was r ≥ 0.995?	X		

6.0 Initial Calibration Verification [(ICV) Second Source]

Method 6020A ICV Criteria (Filename)	**F6L06009.D**		
Instrument:	**F6**		
Date of Initial Calibration Verification	**12/8//2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each ICAL, prior to the beginning of a sample analysis?	X		
Was the ICV %recovery (%R) for all analytes within 90-110%?	X		

7.0 Continuing Calibration Verification (CCV)

Method 6020A CCV Criteria (Date)	**All CCVs on 12/8/2015**		
Instrument:	**F6**		
	Yes	**No**	**N/A**
Was the CCV analyzed after every 10 samples and at the end of the analysis sequence?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15L067 **URS Chemist: Jennifer Zorinsky**
Date Verified: 12/11/2015 **URS ITR: Jeff Aust (1/6/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 6020A

Method 6020A CCV Criteria (Date)	**All CCVs on 12/8/2015**		
Instrument:	**F6**		
	Yes	**No**	**N/A**
Were the CCV %Rs for all analytes within 90-110%?	X		

8.0 Blank Samples

Blank Criteria	**Yes**	**No**	**N/A**
Was a method blank analyzed with every preparatory batch?	X		
Were analytes detected > ½ the LOQ and > 1/10 the amount measured in any sample or 1/10 the regulatory limit?		X	
Were target analytes detected in method, trip or calibration blanks?		X	

9.0 Laboratory Control Sample (LCS)

LCS Criteria	**Yes**	**No**	**N/A**
Was an LCS analyzed with every preparatory batch?	X		
Were LCS recoveries within acceptance criteria listed in the UFP-QAPP?	X		

10.0 Internal Standards (IS)

Methods 6020A Criteria	**Yes**	**No**	**N/A**
For Method 6020A, were internal standards spiked for all samples and standards?	X		
For Method 6020A, were internal standard areas within 30% to 120% of the ICAL midpoint standard area?	X		

11.0 Interference Check Sample (6020A Metals only)

Interference Check Sample Criteria	**Yes**	**No**	**N/A**
Were ICS-A and ICSAB samples analyzed at the beginning of the analytical run and every 12 hours?	X		
Was the ICS-A absolute value concentration for all non-spiked metals < LOD (unless they are a verified trace impurity form one of the spiked metals)	X		
Were the ICS-AB recoveries within ± 20%?	X		

12.0 Matrix Spike/Matrix Spike Duplicate

MS/MSD Criteria	**Yes**	**No**	**N/A**
Was a MS/MSD sample analyzed with every preparatory batch?	X		
Was a MS/MSD sample collected for this SDG?	X		
Were MS/MSD recoveries/RPDs within acceptance criteria listed in the UFP-QAPP?		X	

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15L067 **URS Chemist: Jennifer Zorinsky**
Date Verified: 12/11/2015 **URS ITR: Jeff Aust (1/6/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 6020A

Sample CAFT006-SW01-002.5 was spiked and analyzed for lead.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
CAFT006-SW01-002.5	Metals	Lead	**187/127**	11	80-120/20

Analytical data that required qualification based on MS/MSD recoveries are included in the table below.

Field ID	Parameter	Analyte	Qualification
CAFT006-SW01-002.5	Metals	Lead	**J**

13.0 Matrix Duplicate

Matrix Duplicate (MD) Criteria	Yes	No	N/A
Were MD samples analyzed with every preparatory batch?	X		
Were MD samples collected for this SDG?		X	
Were MD RPDs within acceptance criteria listed in the UFP-QAPP?			X

14.0 Dilution Test

Method 6020A Dilution Test Criteria	Yes	No	N/A
Was a dilution test sample analyzed with every preparatory batch?	X		
Was a dilution test sample analyzed from this SDG?	X		
Were metals concentrations > 50x the LOQ?	X		
Did the five-fold dilution agree within ± 10% of the original measurement?	X		
If the five-fold dilution did not agree within ± 10% of the original measurement, was a post digestion spike sample analyzed?	X		

Sample CAFT006-SW01-002.5 was diluted and analyzed for lead.

15.0 Post Digestion Spike (PDS)

Method 6020A PDS Criteria	Yes	No	N/A
Was a PDS sample analyzed from this SDG?	X		
Was a PDS sample analyzed if the dilution test failed or metals concentrations were < 50 x the LOD?	X		
Were the PDS recoveries within 75-125%?	X		

Sample CAFT006-SW01-002.5 was spiked and analyzed for lead.

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 15L067 **URS Chemist: Jennifer Zorinsky**
Date Verified: 12/11/2015 **URS ITR: Jeff Aust (1/6/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan for Final Closure SWMUs 70 and 71 (North Wind 2010)
Applicable Analytical Methods: 6020A

16.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	N/A
Were field duplicate samples collected for this SDG? (if yes, list below)		X	
Were parent sample / field duplicate RPDs ≤ 50% for soil analytes that had concentrations > 5x the LOQ.			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ			X

17.0 Sensitivity

Sensitivity Criteria	Yes	No	N/A
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		

18.0 Additional Qualifications

Additional Qualification Criteria	Yes	No	N/A
Were common laboratory contaminants detected?		X	
Were common laboratory contaminant concentrations < 2x the LOQ?			X
Was professional judgment used to qualify data (if yes, list below)?		X	

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **15L067**

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

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **15L067**

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Revised Report

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-09-2015
EMAX Batch No.: 15L067

Attn: Jeff Aust

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 12/08/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CAFT006-SW03-002.5	L067-01	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-EB03-002.5	L067-02	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW05-003.5	L067-03	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-EB04-002.5	L067-04	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW08-002.5	L067-05	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-EB01-002.5	L067-06	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-EB01-202.5	L067-07	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW02-002.5	L067-08	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW06-002.5	L067-09	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW01-002.5	L067-10	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW04-002.5	L067-11	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW04-202.5	L067-12	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW02-002.5	L067-13	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-EB-002.5	L067-14	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW01-002.5MS	L067-10M	12/07/15	SOIL	LEAD BY ICP-MS
CAFT006-SW01-002.5MSD	L067-10S	12/07/15	SOIL	LEAD BY ICP-MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number E871112
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 15L067

METHOD SW6020A
LEAD BY ICP-MS

A total of fourteen (14) soil samples were received on 12/08/15 to be analyzed for Lead by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. IML015SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. IML015SL/IML015SC was within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of MS/MSD was analyzed and the following was noted: L067-10M/S (CAFT006-SW01-002.5MS/MSD) - Percent recovery for Lead was not within MS QC limits. Presence of matrix interference was suspected. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 154067
☑ Fedex ☐ UPS ☐ GSO ☐ Others	8079 3348 7602	Recipient Cecilia Chavez
☐ EMAX Courier ☐ Client Delivery	8079 3348 7598	Date 12-08-15 Time 0900

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☐ Preservative (if any) ☑ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note: Changes made to the COC are not initialed/dated

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☑ Custody Seal ☑ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☑ plastic bag
Temperatures (Cool, ≤6 °C but not frozen) ☑ Cooler 1 1.6 °C ☑ Cooler 2 2.8 °C ☐ Cooler 3 ____ °C ☐ Cooler 4 ____ °C ☐ Cooler 5 ____ °C
☐ Cooler 6 ____ °C ☐ Cooler 7 ____ °C ☐ Cooler 8 ____ °C ☐ Cooler 9 ____ °C ☐ Cooler 10 ____ °C
Thermometer: A - S/N ____ FM 1/20/15 B - S/N 140252070 C - S/N 140252067 D - S/N 150555630

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY.

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1,12,14	1,13,15	D10		R1
			12/8/15	

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

☐ Continue to next page.

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in ____	D13	Out of Holding Time	R1	Proceed as indicated in ☑ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in ____	D16	Preservation not indicated in ____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in ____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	
D10	No initial/date on corrections in COC/label	D22		R10	
D11	Container count mismatch COC vs received	D23		R11	
D12	Container size mismatch COC vs received	D24		R12	

REVIEWS:

Sample Labeling [signature] Date 12-08-15 / 12/8/15

SRF [signature] Date 12/8/15

PM LP for Andy Date 12/8/15

Andy Mai

From: Ye Myint
Sent: Tuesday, December 15, 2015 1:10 PM
To: 'Aust, Jeff'
Cc: Andy Mai; Linh Pham; Zorinsky, Jennifer; Wilson, Paul (Omaha)
Subject: RE: 15L067

Thanks Jeff. Final reports were sent out on the 10th. We will revise the report with the correct IDs.

Please note that EMAX will be closed on 12/24, 12/25, 12/28, 12/31 and, 01/01 for the Holidays.
Ye

310-618-8889 x121

From: Aust, Jeff [mailto:jeff.aust@aecom.com]
Sent: Tuesday, December 15, 2015 12:24 PM
To: Ye Myint
Cc: Andy Mai; Linh Pham; Zorinsky, Jennifer; Wilson, Paul (Omaha)
Subject: RE: 15L067

Ye

Sample CAFT006-SW02-002.5 collected at 1356 should be CAFT006-SW07-002.5 L067-08

Sample CAFT006-EB-002.5 should be CAFT006-EB02-002.5 L067-14

Thanks

Jeff Aust, Ph.D
Associate Chemist, Environment, Central Midwest
D 402-952-2516
jeff.aust@aecom.com

AECOM
12120 Shamrock Plaza, Suite 100
Omaha, Nebraska 68154, USA
T 402-334-8181

Built to deliver a better world

From: Ye Myint [mailto:YMyint@emaxlabs.com]
Sent: Tuesday, December 15, 2015 2:10 PM
To: Aust, Jeff
Cc: Andy Mai; Linh Pham
Subject: FW: 15L067

Hello Jeff,

Andy is out of the office and won't be in for a couple of days. It looks like we have the same sample ID with the different collection time in 15L067 (COC attached). It was discovered during our EDD generation process.

Please see below.

Could you please look into it and let us know how we should proceed? Thanks.

Ye

310-618-8889 x121

From: Kenette Pimentel
Sent: Tuesday, December 15, 2015 9:09 AM
To: Andy Mai
Subject: 15L067

Andy,

Samples 8 and 13 have the same client sample ID. Was there any correction sent by the client; if not, can you please ask the client?

Please advice.

Thanks,
Ken

QA & Data Validation Manager
EMAX Laboratories, Inc.
1835 W. 205th St.
Torrance, Ca 90501
310-618-8889 Ext. 110
310-618-0818 FAX

FedEx Express Package US Airbill

FedEx Tracking Number 8079 3348 7602

Form ID No. 0215

MUR4

1

1 From

Date 12/7/2015 [redacted]

Sender's Name Kyle Klocwer Phone 402 ~~552-2661~~ 341-0977

Company URS GCP

Address 12120 SHAMROCK PLZ STE 100

Dept./Floor/Suite/Room

City OMAHA State NE ZIP 68154-3539

2 Your Internal Billing Reference 60475810.54710.23446540.0008AA

3 To

Recipient's Name Sample Custodian Phone 310 618-8889

Company EMAX Laboratories

Address 1835 West 205th Street

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Torrance State CA ZIP 90501

HOLD Weekday: FedEx location address REQUIRED. **NOT available for** FedEx First Overnight. ☐

HOLD Saturday: FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations. ☐

0119170083

8079 3348 7602

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the FedEx Express Freight US Airbill.*

Next Business Day

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — **NOT available for** FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☒ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. ***Fee applies.***

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. ***Fee applies.***

Does this shipment contain dangerous goods?

One box must be checked.

☒ No

☐ Yes — As per attached Shipper's Declaration.

☐ Yes — Shipper's Declaration not required.

☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

☒ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Obtain recip. Acct. No. ☐

[redacted]

Total Packages ____ Total Weight ____ lbs.

[redacted] Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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fedex.com 1.800.GoFedEx 1.800.463.3339

FedEx Express Package US Airbill

FedEx Tracking Number 8079 3348 7598

Form ID No. 0215

MUR4

(2) Recipient's Copy

1 From

Date 12/7/2015 [redacted]

Sender's Name Kyle Klocwer Phone 402 ~~[illegible]~~ 321-0977

Company URS GCP

Address 12120 SHAMROCK PLZ STE 100 Dept./Floor/Suite/Room

City OMAHA State NE ZIP 68154-3539

2 Your Internal Billing Reference 60425210.54210.23446540.0008AA

3 To

Recipient's Name Sample Custodian Phone 310 618-8889

Company EMAX Laboratories

Address 1835 West 205th Street Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Torrance State CA ZIP 90501

HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

0119170083

8079 3348 7598

Align Open End of FedEx Pouch

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs.
For packages over 150 lbs., use the FedEx Express Freight US Airbill.

Next Business Day

- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- [ ] FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

[ ] FedEx Envelope* [ ] FedEx Pak* [ ] FedEx Box [ ] FedEx Tube [X] Other

6 Special Handling and Delivery Signature Options

[ ] SATURDAY Delivery — **NOT available for** FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

[X] No Signature Required — Package may be left without obtaining a signature for delivery.
[ ] Direct Signature — Someone at recipient's address may sign for delivery. ***Fee applies.***
[ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. ***Fee applies.***

Does this shipment contain dangerous goods?

One box must be checked.

[X] No
[ ] Yes — As per attached Shipper's Declaration.
[ ] Yes — Shipper's Declaration not required.
[ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg
[ ] Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

[X] Sender — Acct. No. in Section 1 will be billed. [redacted]
[ ] Recipient
[ ] Third Party
[ ] Credit Card
[ ] Cash/Check
Obtain recip. Acct. No. [ ]

Total Packages ____ Total Weight ____ lbs. [redacted] Credit Card Auth. ____

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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URS Corporation
12120 Shamrock Plaza, Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

151067

(7)

Project Name: Cannon AFB PBR
Project No.: 60425210.23446540.0008AA
Project Location: Clovis, NM
Project Manager: Mike Sonderman
Sampler(s): K. Klocwo

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	Analytical Parameters: LEAD 6010A	Preservative / Remarks
1	12/7/15	1436		X	CAFT006-SW03-002.5	Soil	1	8oz jar	X	4°C
2	12/7/15	1442		X	CAFT006-EB03-002.5	Soil	1	8oz jar	X	4°C
3	12/7/15	1448		X	CAFT006-SW05-003.5	Soil	1	8oz jar	X	4°C
4	12/7/15	1453		X	CAFT006-EB04-002.5	Soil	1	8oz jar	X	4°C
5	12/7/15	1500		X	CAFT006-SW08-002.5	Soil	1	8oz jar	X	4°C
6	12/7/15	1507		X	CAFT006-EB01-002.5	Soil	1	8oz jar	X	4°C
7	12/7/15	1509		X	CAFT006-EB01-202.5	Soil	1	8oz jar	X	4°C

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by:	12/7/15	1700	Method of Shipment: FED EX	LEAD ONLY
Received by:			Airbill No.: 8079 3348 7602	24 HOUR TAT
Relinquished by:			Lab Address: EMAX Labs 1835 West 205th Torrance, CA 90501	
Received for Laboratory by:	12/8/15	09:00		Temp. 1.6°

P Drive/Office Administration/Chain of Custody Form (Nov 2012) White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

129974

URS Corporation
12120 Shamrock Plaza, Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

15L067

Page 1 of 1

(2)

Project Name: Cannon AFB PBR	Project No.: 60425210.23446540.0008AA
Project Location: Clovis, New Mexico	Project Manager: Mike Sonduman
Sampler(s): K. Klocwer	

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	LEAD 6020A										Preservative / Remarks
8	12/7/15	1356		X	CAFT006-SW02-002.5	Soil	1	8oz jar	X										4°C
9	12/7/15	1400		X	CAFT006-SW06-002.5	Soil	1	8oz jar	X										4°C
10	12/7/15	1408		X	CAFT006-SW01-002.5	Soil	2	8oz jar	X										4°C (MS/MSD)
11	12/7/15	1420		X	CAFT006-SW04-002.5	Soil	1	8oz jar	X										4°C
12	12/7/15	1422		X	CAFT006-SW04-200.5	Soil	1	8oz jar	X										4°C
13	12/7/15	1423		X	CAFT006-SW02-002.5	Soil	1	8oz jar	X										4°C
14	12/7/15	1428		X	CAFT006-EB-002.5	Soil	1	8oz jar	X										4°C

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: [signature]	12/7/2015	1700	Method of Shipment: 8079 3348 7598	LEAD ONLY
Received by:			Airbill No.: FED EX	24 HOUR TAT
Relinquished by:			Lab Address: EMAX Labs 1835 West 205th Torrance, CA 90501	
Received for Laboratory by: [signature]	12/8/15	09:10		Temp - 2.8°

P Drive/Office Administration/Chain of Custody Form (Nov 2012) White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

129956

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
LEAD BY ICP-MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 15L067
Instrument ID : T-IF6

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IML015SB	1	NA	12/09/1500:58	12/08/1514:31	F6L06165	F6L06163	IML015S	Method Blank
LCS1S	IML015SL	1	NA	12/09/1501:03	12/08/1514:31	F6L06166	F6L06163	IML015S	Lab Control Sample (LCS)
LCD1S	IML015SC	1	NA	12/09/1501:07	12/08/1514:31	F6L06167	F6L06163	IML015S	LCS Duplicate
CAFT006-SW03-002.5	L067-01	0.990	11.4	12/09/1501:11	12/08/1514:31	F6L06168	F6L06163	IML015S	Field Sample
CAFT006-EB03-002.5	L067-02	0.971	14.2	12/09/1501:16	12/08/1514:31	F6L06169	F6L06163	IML015S	Field Sample
CAFT006-SW05-003.5	L067-03	0.990	11.7	12/09/1501:20	12/08/1514:31	F6L06170	F6L06163	IML015S	Field Sample
CAFT006-EB04-002.5	L067-04	0.995	11.7	12/09/1501:24	12/08/1514:31	F6L06171	F6L06163	IML015S	Field Sample
CAFT006-SW08-002.5	L067-05	0.980	11.4	12/09/1501:28	12/08/1514:31	F6L06172	F6L06163	IML015S	Field Sample
CAFT006-EB01-002.5	L067-06	0.976	10.7	12/09/1501:33	12/08/1514:31	F6L06173	F6L06163	IML015S	Field Sample
CAFT006-EB01-202.5	L067-07	0.966	10.5	12/09/1501:49	12/08/1514:31	F6L06177	F6L06175	IML015S	Field Sample
CAFT006-SW07-002.5	L067-08	0.971	7.7	12/09/1501:54	12/08/1514:31	F6L06178	F6L06175	IML015S	Field Sample
CAFT006-SW06-002.5	L067-09	0.985	10.4	12/09/1501:58	12/08/1514:31	F6L06179	F6L06175	IML015S	Field Sample
CAFT006-SW01-002.5MS	L067-10M	0.995	8.0	12/09/1502:02	12/08/1514:31	F6L06180	F6L06175	IML015S	Matrix Spike Sample (MS)
CAFT006-SW01-002.5MSD	L067-10S	0.990	8.0	12/09/1502:06	12/08/1514:31	F6L06181	F6L06175	IML015S	MS Duplicate (MSD)
CAFT006-SW01-002.5AS	L067-10A	0.957	8.0	12/09/1502:11	12/08/1514:31	F6L06182	F6L06175	IML015S	Analytical Spike Sample
CAFT006-SW01-002.5	L067-10	0.957	8.0	12/09/1502:15	12/08/1514:31	F6L06183	F6L06175	IML015S	Field Sample
CAFT006-SW01-002.5DL	L067-10J	4.78	8.0	12/09/1502:19	12/08/1514:31	F6L06184	F6L06175	IML015S	Diluted Sample
CAFT006-SW04-002.5	L067-11	0.990	12.8	12/09/1502:23	12/08/1514:31	F6L06185	F6L06175	IML015S	Field Sample
CAFT006-SW04-202.5	L067-12	0.971	13.3	12/09/1502:40	12/08/1514:31	F6L06189	F6L06187	IML015S	Field Sample
CAFT006-SW02-002.5	L067-13	0.962	7.1	12/09/1502:45	12/08/1514:31	F6L06190	F6L06187	IML015S	Field Sample
CAFT006-EB02-002.5	L067-14	0.966	10.4	12/09/1502:49	12/08/1514:31	F6L06191	F6L06187	IML015S	Field Sample

FN - Filename
% Moist - Percent Moisture

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RESULTS SUMMARIES

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW03-002.5	Date Analyzed:	12/09/15 01:11
Lab Samp ID:	L067-01	Dilution Factor:	0.990
Lab File ID:	F6L06168	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	11.4
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	10.7	0.559	0.0559	0.112

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB03-002.5	Date Analyzed:	12/09/15 01:16
Lab Samp ID:	L067-02	Dilution Factor:	0.971
Lab File ID:	F6L06169	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	14.2
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	18.0	0.566	0.0566	0.113

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW05-003.5	Date Analyzed:	12/09/15 01:20
Lab Samp ID:	L067-03	Dilution Factor:	0.990
Lab File ID:	F6L06170	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	11.7
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	11.5	0.561	0.0561	0.112

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB04-002.5	Date Analyzed:	12/09/15 01:24
Lab Samp ID:	L067-04	Dilution Factor:	0.995
Lab File ID:	F6L06171	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	11.7
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	38.3	0.563	0.0563	0.113

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW08-002.5	Date Analyzed:	12/09/15 01:28
Lab Samp ID:	L067-05	Dilution Factor:	0.980
Lab File ID:	F6L06172	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	11.4
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	14.9	0.553	0.0553	0.111

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB01-002.5	Date Analyzed:	12/09/15 01:33
Lab Samp ID:	L067-06	Dilution Factor:	0.976
Lab File ID:	F6L06173	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	10.7
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	22.8	0.546	0.0546	0.109

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB01-202.5	Date Analyzed:	12/09/15 01:49
Lab Samp ID:	L067-07	Dilution Factor:	0.966
Lab File ID:	F6L06177	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	10.5
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	23.0	0.540	0.0540	0.10B

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW07-002.5	Date Analyzed:	12/09/15 01:54
Lab Samp ID:	L067-08	Dilution Factor:	0.971
Lab File ID:	F6L06178	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	7.7
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	19.7	0.526	0.0526	0.105

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METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW06-002.5	Date Analyzed:	12/09/15 01:58
Lab Samp ID:	L067-09	Dilution Factor:	0.985
Lab File ID:	F6L06179	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	10.4
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	43.2	0.550	0.0550	0.110

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW01-002.5	Date Analyzed:	12/09/15 02:15
Lab Samp ID:	L067-10	Dilution Factor:	0.957
Lab File ID:	F6L06183	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	8.0
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	81.8	0.520	0.0520	0.104

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW04-002.5	Date Analyzed:	12/09/15 02:23
Lab Samp ID:	L067-11	Dilution Factor:	0.990
Lab File ID:	F6L06185	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	12.8
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	15.5	0.568	0.0568	0.114

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW04-202.5	Date Analyzed:	12/09/15 02:40
Lab Samp ID:	L067-12	Dilution Factor:	0.971
Lab File ID:	F6L06189	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	13.3
Calib. Ref.:	F6L06187	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	13.6	0.560	0.0560	0.112

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW02-002.5	Date Analyzed:	12/09/15 02:45
Lab Samp ID:	L067-13	Dilution Factor:	0.962
Lab File ID:	F6L06190	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	7.1
Calib. Ref.:	F6L06187	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	32.5	0.518	0.0518	0.104

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB02-002.5	Date Analyzed:	12/09/15 02:49
Lab Samp ID:	L067-14	Dilution Factor:	0.966
Lab File ID:	F6L06191	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	10.4
Calib. Ref.:	F6L06187	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	38.5	0.539	0.0539	0.108

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QC SUMMARIES

METHOD BLANK

Method: 6020A

QC Measure: IML015SB

Associated Samples:

CAFT006-SW03-002.5
CAFT006-EB03-002.5
CAFT006-SW05-003.5
CAFT006-EB04-002.5
CAFT006-SW08-002.5
CAFT006-EB01-002.5
CAFT006-EB01-202.5
CAFT006-SW07-002.5
CAFT006-SW06-002.5
CAFT006-SW01-002.5
CAFT006-SW04-002.5
CAFT006-SW04-202.5
CAFT006-SW02-002.5
CAFT006-EB02-002.5

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METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	MBLK1S	Date Analyzed:	12/09/15 00:58
Lab Samp ID:	IML015SB	Dilution Factor:	1
Lab File ID:	F6L06165	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	NA
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	ND	0.500	0.0500	0.100

LCS/LCSD

Method: 6020A

QC Measure: IML015SL

Associated Samples:

CAFT006-SW03-002.5
CAFT006-EB03-002.5
CAFT006-SW05-003.5
CAFT006-EB04-002.5
CAFT006-SW08-002.5
CAFT006-EB01-002.5
CAFT006-EB01-202.5
CAFT006-SW07-002.5
CAFT006-SW06-002.5
CAFT006-SW01-002.5
CAFT006-SW04-002.5
CAFT006-SW04-202.5
CAFT006-SW02-002.5
CAFT006-EB02-002.5

Revised Report

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15L067
METHOD: SW6020A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IML015SB	IML015SL	IML015SC		
LAB FILE ID:	F6L06165	F6L06166	F6L06167		
DATIME EXTRCTD:	12/08/1514:31	12/08/1514:31	12/08/1514:31	DATE COLLECTED:	NA
DATIME ANALYZD:	12/09/1500:58	12/09/1501:03	12/09/1501:07	DATE RECEIVED:	12/08/15
PREP. BATCH:	IML015S	IML015S	IML015S		
CALIB. REF:	F6L06163	F6L06163	F6L06163		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Lead	ND	20.0	20.5	103	20.0	20.1	101	2	80-120	20

MS/MSD / DUPLICATE / SERIAL DILUTION / ANALYTICAL SPIKE

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15L067
METHOD: SW6020A

MATRIX:	SOIL			% MOISTURE:	8.0
DILTN FACTR:	0.957	0.995	0.990		
SAMPLE ID:	CAFT006-SW01-002.5				
CONTROL NO.:	L067-10	L067-10M	L067-10S		
LAB FILE ID:	F6L06183	F6L06180	F6L06181		
DATIME EXTRCTD:	12/08/1514:31	12/08/1514:31	12/08/1514:31	DATE COLLECTED:	12/07/15
DATIME ANALYZD:	12/09/1502:15	12/09/1502:02	12/09/1502:06	DATE RECEIVED:	12/08/15
PREP. BATCH:	IML015S	IML015S	IML015S		
CALIB. REF:	F6L06175	F6L06175	F6L06175		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Lead	81.8	21.6	122	187*	21.5	109	127*	11	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15L067
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	8.0
DILUTION FACTOR:	0.957	4.78		
SAMPLE ID:	CAFT006-SW01-0	CAFT006-SW01-0		
EMAX SAMP ID:	L067-10	L067-10J		
LAB FILE ID:	F6L06183	F6L06184		
DATE EXTRACTED:	12/08/1514:31	12/08/1514:31	DATE COLLECTED:	12/07/15
DATE ANALYZED:	12/09/1502:15	12/09/1502:19	DATE RECEIVED:	12/08/15
PREP. BATCH:	IML015S	IML015S		
CALIB. REF:	F6L06175	F6L06175		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Lead	81.8	83.1	2	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15L067
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	8.0
DILTN FACTR:	0.957	0.957		
SAMPLE ID:	CAFT006-SW01-002.5			
CONTROL NO.:	L067-10	L067-10A		
LAB FILE ID:	F6L06183	F6L06182		
DATIME EXTRCTD:	12/08/1514:31	12/08/1514:31	DATE COLLECTED:	12/07/15
DATIME ANALYZD:	12/09/1502:15	12/09/1502:11	DATE RECEIVED:	12/08/15
PREP. BATCH:	IML015S	IML015S		
CALIB. REF:	F6L06175	F6L06175		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Lead	81.8	20.8	101	93	80-120

RAW DATA

LEAD

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW03-002.5	Date Analyzed:	12/09/15 01:11
Lab Samp ID:	L067-01	Dilution Factor:	0.990
Lab File ID:	F6L06168	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	11.4
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	10.7	0.559	0.0559	0.112

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB03-002.5	Date Analyzed:	12/09/15 01:16
Lab Samp ID:	L067-02	Dilution Factor:	0.971
Lab File ID:	F6L06169	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	14.2
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	18.0	0.566	0.0566	0.113

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW05-003.5	Date Analyzed:	12/09/15 01:20
Lab Samp ID:	L067-03	Dilution Factor:	0.990
Lab File ID:	F6L06170	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	11.7
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	11.5	0.561	0.0561	0.112

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB04-002.5	Date Analyzed:	12/09/15 01:24
Lab Samp ID:	L067-04	Dilution Factor:	0.995
Lab File ID:	F6L06171	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	11.7
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	38.3	0.563	0.0563	0.113

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW08-002.5	Date Analyzed:	12/09/15 01:28
Lab Samp ID:	L067-05	Dilution Factor:	0.980
Lab File ID:	F6L06172	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	11.4
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	14.9	0.553	0.0553	0.111

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB01-002.5	Date Analyzed:	12/09/15 01:33
Lab Samp ID:	L067-06	Dilution Factor:	0.976
Lab File ID:	F6L06173	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	10.7
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	22.8	0.546	0.0546	0.109

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB01-202.5	Date Analyzed:	12/09/15 01:49
Lab Samp ID:	L067-07	Dilution Factor:	0.966
Lab File ID:	F6L06177	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	10.5
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	23.0	0.540	0.0540	0.108

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW07-002.5	Date Analyzed:	12/09/15 01:54
Lab Samp ID:	L067-08	Dilution Factor:	0.971
Lab File ID:	F6L06178	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	7.7
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	19.7	0.526	0.0526	0.105

Revised Report

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/0B/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW06-002.5	Date Analyzed:	12/09/15 01:58
Lab Samp ID:	L067-09	Dilution Factor:	0.985
Lab File ID:	F6L06179	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	10.4
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	43.2	0.550	0.0550	0.110

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW01-002.5	Date Analyzed:	12/09/15 02:15
Lab Samp ID:	L067-10	Dilution Factor:	0.957
Lab File ID:	F6L06183	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	8.0
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	81.8	0.520	0.0520	0.104

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW04-002.5	Date Analyzed:	12/09/15 02:23
Lab Samp ID:	L067-11	Dilution Factor:	0.990
Lab File ID:	F6L06185	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	12.8
Calib. Ref.:	F6L06175	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	15.5	0.568	0.0568	0.114

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW04-202.5	Date Analyzed:	12/09/15 02:40
Lab Samp ID:	L067-12	Dilution Factor:	0.971
Lab File ID:	F6L06189	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	13.3
Calib. Ref.:	F6L06187	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	13.6	0.560	0.0560	0.112

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-SW02-002.5	Date Analyzed:	12/09/15 02:45
Lab Samp ID:	L067-13	Dilution Factor:	0.962
Lab File ID:	F6L06190	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	7.1
Calib. Ref.:	F6L06187	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	32.5	0.518	0.0518	0.104

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	12/07/15
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	CAFT006-EB02-002.5	Date Analyzed:	12/09/15 02:49
Lab Samp ID:	L067-14	Dilution Factor:	0.966
Lab File ID:	F6L06191	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	10.4
Calib. Ref.:	F6L06187	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	38.5	0.539	0.0539	0.108

Revised Report

METHOD SW6020A
LEAD BY ICP-MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	12/08/15
SDG NO.	: 15L067	Date Extracted:	12/08/15 14:31
Sample ID:	MBLK1S	Date Analyzed:	12/09/15 00:58
Lab Samp ID:	IML015SB	Dilution Factor:	1
Lab File ID:	F6L06165	Matrix :	SOIL
Ext Btch ID:	IML015S	% Moisture :	NA
Calib. Ref.:	F6L06163	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Lead	ND	0.500	0.0500	0.100

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15L067
METHOD: SW6020A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IML015SB	IML015SL	IML015SC		
LAB FILE ID:	F6L06165	F6L06166	F6L06167		
DATIME EXTRCTD:	12/08/1514:31	12/08/1514:31	12/08/1514:31	DATE COLLECTED:	NA
DATIME ANALYZD:	12/09/1500:58	12/09/1501:03	12/09/1501:07	DATE RECEIVED:	12/08/15
PREP. BATCH:	IML015S	IML015S	IML015S		
CALI8. REF:	F6L06163	F6L06163	F6L06163		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Lead	ND	20.0	20.5	103	20.0	20.1	101	2	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15L067
METHOD: SW6020A

MATRIX:	SOIL			% MOISTURE:	8.0
DILTN FACTR:	0.957	0.995	0.990		
SAMPLE ID:	CAFT006-SW01-002.5				
CONTROL NO.:	L067-10	L067-10M	L067-10S		
LAB FILE ID:	F6L06183	F6L06180	F6L06181		
DATIME EXTRCTD:	12/08/1514:31	12/08/1514:31	12/08/1514:31	DATE COLLECTED:	12/07/15
DATIME ANALYZD:	12/09/1502:15	12/09/1502:02	12/09/1502:06	DATE RECEIVED:	12/08/15
PREP. BATCH:	IML015S	IML015S	IML015S		
CALIB. REF:	F6L06175	F6L06175	F6L06175		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Lead	81.8	21.6	122	187*	21.5	109	127*	11	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 15L067
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	8.0
DILUTION FACTOR:	0.957	4.78		
SAMPLE ID:	CAFT006-SW01-0	CAFT006-SW01-0		
EMAX SAMP ID:	L067-10	L067-10J		
LAB FILE ID:	F6L06183	F6L06184		
DATE EXTRACTED:	12/08/1514:31	12/08/1514:31	DATE COLLECTED:	12/07/15
DATE ANALYZED:	12/09/1502:15	12/09/1502:19	DATE RECEIVED:	12/08/15
PREP. BATCH:	IML015S	IML015S		
CALIB. REF:	F6L06175	F6L06175		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Lead	81.8	83.1	2	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 15L067
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	8.0
DILTN FACTR:	0.957	0.957		
SAMPLE ID:	CAFT006-SW01-002.5			
CONTROL NO.:	L067-10	L067-10A		
LAB FILE ID:	F6L06183	F6L06182		
DATIME EXTRCTD:	12/08/1514:31	12/08/1514:31	DATE COLLECTED:	12/07/15
DATIME ANALYZD:	12/09/1502:15	12/09/1502:11	DATE RECEIVED:	12/08/15
PREP. BATCH:	IML015S	IML015S		
CALIB. REF:	F6L06175	F6L06175		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Lead	81.8	20.8	101	93	80-120

ICP-MS QC CHECK TABLE

QC	CCV HIGH	ICV	CCV	ICSAB	ICSA
Limit%	95-105	90-110	90-110	80-120	80-120
Comp	ug/L	ug/L	ug/L	ug/L	ug/L
Al	50000	30000	25000	100000	100000
Sb	500	300	250	20	0
As	500	300	250	20	0
Ba	1000	300	500	20	0
Be	50	30	25	20	0
B	50	30	25	20	0
Cd	500	300	250	20	0
Ca	50000	30000	25000	100000	100000
Cr	500	300	250	20	0
Co	500	300	250	20	0
Cu	500	300	250	20	0
Fe	50000	30000	25000	100000	100000
Li	50	30	25	20	0
Pb	500	300	250	20	0
Mg	50000	30000	25000	100000	100000
Mn	3000	2000	1500	20	0
Mo	500	300	250	2000	2000
Ni	500	300	250	20	0
P	500	300	250	100000	100000
K	50000	30000	25000	100000	100000
Se	500	300	250	20	0
Si	5000	3000	2500	200	0
Ag	50	30	25	20	0
Na	50000	30000	25000	100000	100000
Sr	500	300	250	20	0
Tl	500	300	250	20	0
Sn	500	300	250	20	0
Ti	500	300	250	2000	2000
W	50	30	25	20	0
V	500	300	250	20	0
U	500	300	250	20	0
Zn	500	300	250	20	0
Zr	50	30	25	20	0

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP-MS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/8/15 13:26

End Date: 12/9/15 03:01

Comments:

All soil/solid samples are diluted at 10x dilution prior to analysis.

Filter Lot #: NA

CCV10, CCV12, CCV13, CCV14 Be failed

Book #: AF6-014

Instrument No.: F6

Analytical Batch: IF6L06

Analytical Sequence: F6L06

Method File: EMX6020H

Micropipette ID: ☑ 142781004

Micropipette ID: ☑ ICP-06

Micropipette ID: ☑ 339362028

Micropipette ID: ☑ GFAA-07

Micropipette ID: ☐

SOP #	Rev. #
☑ EMAX-6020	8
☑ EMAX-200.8	5
☐ EMAX-	

STANDARDS ID		STANDARDS ID	
S0	SMLB009.17-03	MRL1 (1)	SMLB009.18-07
S1	.14-02	MRL2 (0.5)	.19-01
S2	.11-04	MRL3 (0.1)	.17-02
S3	.11-01	MRL4	NA
S4	.13-07	MRL5	
S5	NA	MRL6	
S6		Internal Standard	SMLB009.18-03
S7		Post-Spike 1	SMLA.0070273
ICV	SMLB009.11-07	Post-Spike 2	02-24
CCV	.11-06	Post-Spike 3	NA
ICSA	.18-01	Post-Spike 4	
ICSAB	.18-06		
6020 TUNE SOLN.	.19-02		
200.8 TUNE SOLN.	.19-03		

Analyzed By: Cue

Date: 12/8/15

SEQUENCE FILE : IF6L06

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
F6L06003	BLNK	13:26	12/08/15	1.00
F6L06004	S0	13:30	12/08/15	1.00
F6L06005	S1 0.5	13:35	12/08/15	1.00
F6L06006	S2 50	13:39	12/08/15	1.00
F6L06007	S3 250	13:43	12/08/15	1.00
F6L06008	S4 500	13:47	12/08/15	1.00
F6L06009	ICV	13:51	12/08/15	1.00
F6L06010	ICB	13:55	12/08/15	1.00
F6L06011	MRLL0801	13:59	12/08/15	1.00
F6L06012	MRLL0802	14:03	12/08/15	1.00
F6L06013	ICSA	14:08	12/08/15	1.00
F6L06014	ICSAB	14:12	12/08/15	1.00
F6L06015	MRLL0803	14:17	12/08/15	1.00
F6L06016	CCV1	14:21	12/08/15	1.00
F6L06017	CCB1	14:25	12/08/15	1.00
F6L06018	IML002SB	14:29	12/08/15	1.00
F6L06019	IML002SL	14:34	12/08/15	1.00
F6L06020	IML002SC	14:38	12/08/15	1.00
F6L06021	K181-01A	14:42	12/08/15	1.00
F6L06022	K181-01	14:46	12/08/15	1.00
F6L06023	K181-01J	14:50	12/08/15	5.00
F6L06024	K181-02	14:55	12/08/15	1.00
F6L06025	K181-03	14:59	12/08/15	1.00
F6L06026	K181-04	15:03	12/08/15	1.00
F6L06027	K181-05	15:07	12/08/15	1.00
F6L06028	BLANK	15:11	12/08/15	1.00
F6L06029	CCV2	15:15	12/08/15	1.00
F6L06030	CCB2	15:19	12/08/15	1.00
F6L06031	IML002SB	15:24	12/08/15	1.00
F6L06032	K181-06	15:28	12/08/15	1.00
F6L06033	K181-07	15:32	12/08/15	1.00
F6L06034	K181-08	15:36	12/08/15	1.00
F6L06035	K140-06I	15:41	12/08/15	5.00
F6L06036	K140-07I	15:45	12/08/15	5.00
F6L06037	K140-09I	15:49	12/08/15	5.00
F6L06038	BLANK	15:53	12/08/15	1.00
F6L06039	MRLL0801	15:58	12/08/15	1.00
F6L06040	MRLL0805	16:02	12/08/15	1.00
F6L06041	CCV3	16:06	12/08/15	1.00
F6L06042	CC83	16:10	12/08/15	1.00
F6L06043	K140-01M	16:14	12/08/15	5.00
F6L06044	K140-01S	16:19	12/08/15	5.00
F6L06045	K140-01A	16:23	12/08/15	5.00
F6L06046	K140-01I	16:27	12/08/15	5.00
F6L06047	K140-01J	16:31	12/08/15	25.00
F6L06048	K140-02I	16:36	12/08/15	5.00
F6L06049	K140-03I	16:40	12/08/15	5.00
F6L06050	K140-04I	16:44	12/08/15	5.00
F6L06051	K140-05I	16:48	12/08/15	5.00
F6L06052	BLANK	16:53	12/08/15	1.00
F6L06053	CCV4	16:57	12/08/15	1.00

F6L06054	CCB4	17:01	12/08/15	1.00
F6L06055	K150-12N	17:05	12/08/15	1.00
F6L06056	K150-13N	17:09	12/08/15	1.00
F6L06057	K150-14N	17:14	12/08/15	1.00
F6L06058	K150-15N	17:18	12/08/15	1.00
F6L06059	K150-16N	17:22	12/08/15	1.00
F6L06060	K150-17N	17:27	12/08/15	1.00
F6L06061	K150-18N	17:31	12/08/15	1.00
F6L06062	K150-19N	17:35	12/08/15	1.00
F6L06063	K150-20N	17:39	12/08/15	1.00
F6L06064	BLANK	17:44	12/08/15	1.00
F6L06065	CCV5	17:48	12/08/15	1.00
F6L06066	CCB5	17:52	12/08/15	1.00
F6L06067	K150-02I	17:56	12/08/15	5.00
F6L06068	K150-05I	18:00	12/08/15	5.00
F6L06069	K150-06I	18:05	12/08/15	5.00
F6L06070	K150-07I	18:09	12/08/15	5.00
F6L06071	K150-08I	18:13	12/08/15	5.00
F6L06072	K150-09I	18:17	12/08/15	5.00
F6L06073	K150-11I	18:21	12/08/15	5.00
F6L06074	K150-13I	18:26	12/08/15	5.00
F6L06075	K150-14I	18:30	12/08/15	5.00
F6L06076	BLANK	18:34	12/08/15	1.00
F6L06077	CCV6	18:38	12/08/15	1.00
F6L06078	CCB6	18:42	12/08/15	1.00
F6L06079	K150-17I	18:47	12/08/15	5.00
F6L06080	K150-18I	18:51	12/08/15	5.00
F6L06081	K150-19I	18:55	12/08/15	5.00
F6L06082	BLANK	18:59	12/08/15	1.00
F6L06083	CCV7	19:04	12/08/15	1.00
F6L06084	CCB7	19:08	12/08/15	1.00
F6L06085	IML005SB	19:12	12/08/15	1.00
F6L06086	IML005SL	19:16	12/08/15	1.00
F6L06087	IML005SC	19:20	12/08/15	1.00
F6L06088	K171-23	19:25	12/08/15	1.00
F6L06089	K171-24	19:29	12/08/15	1.00
F6L06090	K184-01	19:33	12/08/15	1.00
F6L06091	K184-02	19:38	12/08/15	1.00
F6L06092	K184-03	19:42	12/08/15	1.00
F6L06093	K184-04	19:46	12/08/15	1.00
F6L06094	BLANK	19:50	12/08/15	1.00
F6L06095	CCV8	19:55	12/08/15	1.00
F6L06096	CCB8	19:59	12/08/15	1.00
F6L06097	K184-05M	20:03	12/08/15	1.00
F6L06098	K184-05S	20:07	12/08/15	1.00
F6L06099	K184-05A	20:11	12/08/15	1.00
F6L06100	K184-05	20:16	12/08/15	1.00
F6L06101	K184-05J	20:20	12/08/15	5.00
F6L06102	K184-06	20:24	12/08/15	1.00
F6L06103	K184-07	20:29	12/08/15	1.00
F6L06104	K194-01	20:33	12/08/15	1.00
F6L06105	BLANK	20:37	12/08/15	1.00
F6L06106	CCV9	20:49	12/08/15	1.00
F6L06107	CCB9	20:53	12/08/15	1.00

F6L06108	K194-02	20:57	12/08/15	1.00
F6L06109	K194-03	21:01	12/08/15	1.00
F6L06110	K194-04	21:05	12/08/15	1.00
F6L06111	K194-05	21:10	12/08/15	1.00
F6L06112	K194-06	21:14	12/08/15	1.00
F6L06113	K194-07	21:18	12/08/15	1.00
F6L06114	K194-08	21:23	12/08/15	1.00
F6L06115	K194-09	21:27	12/08/15	1.00
F6L06116	BLANK	21:31	12/08/15	1.00
F6L06117	CCV10	21:35	12/08/15	1.00
F6L06118	CCB10	21:39	12/08/15	1.00
F6L06119	IML004SB	21:44	12/08/15	1.00
F6L06120	IML004SL	21:48	12/08/15	1.00
F6L06121	IML004SC	21:52	12/08/15	1.00
F6L06122	K171-03M	21:57	12/08/15	1.00
F6L06123	K171-03S	22:01	12/08/15	1.00
F6L06124	K171-03A	22:05	12/08/15	1.00
F6L06125	K171-03	22:10	12/08/15	1.00
F6L06126	K171-03J	22:14	12/08/15	5.00
F6L06127	K171-04	22:18	12/08/15	1.00
F6L06128	BLANK	22:22	12/08/15	1.00
F6L06129	CCV11	22:27	12/08/15	1.00
F6L06130	CCB11	22:31	12/08/15	1.00
F6L06131	K171-05	22:35	12/08/15	1.00
F6L06132	K171-06	22:39	12/08/15	1.00
F6L06133	K171-07	22:44	12/08/15	1.00
F6L06134	K171-08	22:48	12/08/15	1.00
F6L06135	K171-09	22:52	12/08/15	1.00
F6L06136	K171-10	22:56	12/08/15	1.00
F6L06137	K171-11	23:01	12/08/15	1.00
F6L06138	K171-12	23:05	12/08/15	1.00
F6L06139	K171-13	23:09	12/08/15	1.00
F6L06140	BLANK	23:13	12/08/15	1.00
F6L06141	CCV12	23:18	12/08/15	1.00
F6L06142	CCB12	23:22	12/08/15	1.00
F6L06143	K171-14	23:26	12/08/15	1.00
F6L06144	K171-15	23:30	12/08/15	1.00
F6L06145	K171-16	23:34	12/08/15	1.00
F6L06146	K171-17	23:39	12/08/15	1.00
F6L06147	K171-18	23:43	12/08/15	1.00
F6L06148	K171-19M	23:47	12/08/15	1.00
F6L06149	K171-19S	23:51	12/08/15	1.00
F6L06150	K171-19A	23:55	12/08/15	1.00
F6L06151	K171-19	00:00	12/09/15	1.00
F6L06152	BLANK	00:04	12/09/15	1.00
F6L06153	CCV13	00:08	12/09/15	1.00
F6L06154	CCB13	00:12	12/09/15	1.00
F6L06155	K171-19J	00:16	12/09/15	1.00
F6L06156	K171-20	00:20	12/09/15	1.00
F6L06157	K171-21	00:25	12/09/15	1.00
F6L06158	K171-22	00:29	12/09/15	1.00
F6L06159	K150-02K	00:33	12/09/15	20.00
F6L06160	K150-05K	00:37	12/09/15	20.00
F6L06161	K150-08K	00:42	12/09/15	20.00

F6L06162	BLANK	00:46	12/09/15	1.00
F6L06163	CCV14	00:50	12/09/15	1.00
F6L06164	CCB14	00:54	12/09/15	1.00
F6L06165	IML015SB	00:58	12/09/15	1.00
F6L06166	IML015SL	01:03	12/09/15	1.00
F6L06167	IML015SC	01:07	12/09/15	1.00
F6L06168	L067-01	01:11	12/09/15	1.00
F6L06169	L067-02	01:16	12/09/15	1.00
F6L06170	L067-03	01:20	12/09/15	1.00
F6L06171	L067-04	01:24	12/09/15	1.00
F6L06172	L067-05	01:28	12/09/15	1.00
F6L06173	L067-06	01:33	12/09/15	1.00
F6L06174	BLANK	01:37	12/09/15	1.00
F6L06175	CCV15	01:41	12/09/15	1.00
F6L06176	CCB15	01:45	12/09/15	1.00
F6L06177	L067-07	01:49	12/09/15	1.00
F6L06178	L067-08	01:54	12/09/15	1.00
F6L06179	L067-09	01:58	12/09/15	1.00
F6L06180	L067-10M	02:02	12/09/15	1.00
F6L06181	L067-10S	02:06	12/09/15	1.00
F6L06182	L067-10A	02:11	12/09/15	1.00
F6L06183	L067-10	02:15	12/09/15	1.00
F6L06184	L067-10J	02:19	12/09/15	5.00
F6L06185	L067-11	02:23	12/09/15	1.00
F6L06186	BLANK	02:28	12/09/15	1.00
F6L06187	CCV16	02:32	12/09/15	1.00
F6L06188	CCB16	02:36	12/09/15	1.00
F6L06189	L067-12	02:40	12/09/15	1.00
F6L06190	L067-13	02:45	12/09/15	1.00
F6L06191	L067-14	02:49	12/09/15	1.00
F6L06192	BLANK	02:53	12/09/15	1.00
F6L06193	CCV17	02:57	12/09/15	1.00
F6L06194	CCB17	03:01	12/09/15	1.00

SDG : 15L067 UNIT : % ICPMS CHECK : IF6L06 DATE : 12/08/15 INST : EMAXTIF6

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
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S2 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 500	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	96	98	99	95	98	94	98	96	96	91	99	98	96	96	97	98	102	97	95	97	99	94	114*	98	93	98	93	95	99	101	92	92	93
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	----	----	----	96	91	87	----	95	94	91	103	----	----	----	96	----	----	----	----	----	----	----	----	96	----	----	----	----	----	----	----	----	----
ICSAB	100	106	102	94	89	87	100	93	94	90	104	97	102	102	96	104	99	97	106	100	107	98	55*	96	89	100	93	100	100	98	96	98	99
MRLL0803	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	101	105	108	96	97	96	96	98	98	91	99	98	99	98	99	99	103	97	97	101	102	98	106	99	99	98	97	99	99	101	95	94	97
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML002SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML002SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML002SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	101	102	105	98	99	97	99	100	99	91	100	97	98	98	97	98	101	95	97	101	102	97	113*	99	99	99	97	98	99	100	94	93	95
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML002SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-06I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-07I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-09I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0805	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	101	102	104	98	100	98	98	101	99	91	101	99	98	98	97	99	101	96	97	101	100	97	118*	100	101	99	97	99	100	99	93	92	93
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-03I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-04I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-05I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	100	100	102	100	99	97	101	100	99	91	100	98	98	97	98	99	101	95	97	101	101	98	114*	101	100	98	97	99	99	100	93	92	93

CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-12N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-13N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-14N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-15N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-16N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-17N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-18N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-19N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-20N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	99	96	100	100	105	102	102	103	100	92	99	99	97	94	97	96	102	95	95	102	101	98	121*	99	99	99	96	98	99	99	94	94	95
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-05I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-06I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-07I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-08I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-09I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-11I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-13I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-14I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	100	96	99	100	106	103	101	102	99	92	99	98	98	96	98	97	101	95	96	100	101	97	118*	98	99	99	96	98	99	100	96	94	96
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-17I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-18I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-19I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	98	94	97	99	105	101	100	101	100	92	100	99	98	97	97	96	102	96	97	100	101	97	116*	100	99	99	96	98	100	99	94	93	96
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML005SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML005SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML005SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
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CCV8	99	93	98	99	107	104	101	103	100	92	99	99	98	95	97	96	101	96	96	100	102	98	121*	100	98	102	96	98	98	99	95	94	97
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	98	92	96	99	104	101	100	99	99	91	99	97	97	96	97	96	100	94	98	100	101	98	113*	100	98	101	96	99	102	99	93	92	97
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K194-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	99	89*	93	99	108	105	102	103	100	92	98	99	97	96	98	96	101	95	98	101	101	98	116*	99	98	101	96	98	101	99	96	95	97
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML004SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML004SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML004SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	99	90	94	99	106	104	102	104	101	92	98	98	97	95	97	95	100	95	97	101	100	98	120*	99	98	100	96	97	101	98	94	93	94
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	97	88*	91	97	110	107	102	107	100	92	99	98	97	95	97	96	100	94	97	102	100	98	126*	100	97	100	96	97	100	98	94	93	93
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	96	85*	90	99	112*	108	104	109	102	93	99	98	97	94	97	96	100	94	96	102	100	97	129*	101	99	100	96	97	100	97	94	93	92
CCB13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-02K	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-05K	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-08K	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV14	95	84*	89*	100	110	106	104	107	102	93	98	97	96	93	97	93	99	93	96	101	100	98	125*	101	99	100	96	97	102	97	94	92	92
CCB14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML015SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML015SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML015SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	97	86*	90	98	110	106	102	106	102	93	97	97	97	94	97	93	99	93	96	101	100	99	115*	99	96	100	96	97	100	97	94	94	95
CCB15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	98	85*	90	98	108	105	102	105	102	92	97	97	96	94	96	93	98	93	97	100	99	99	113*	98	96	98	96	97	101	97	94	93	95
CCB16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	99	88*	94	98	111*	106	102	106	102	93	97	97	96	95	97	94	97	93	97	100	100	99	109	100	98	100	96	97	101	99	97	96	94
CCB17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

SDG : 15L067 UNIT : UG/L SUMMARY of CALIBRATION BLANKS : IF6L06 (SOIL) DATE : 12/08/15 INST : EMAXTIF6

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S1 0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S2 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 500	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	.072	.011	.251	2.69	-2.48	.727	.692	.127	1.54	4.01	.012	.032	.021	.080	8.70	.018	-.081	.011	-.244	.050	.111	-.006	.008	.246	.000	.011	.099	.054	.021	.031	.045	.017	.037
MRLL0801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	.425	.009	.525	----	----	----	5.60	----	----	----	----	.035	1.28	.486	----	.225	.066	.607	2.62	.179	.094	.601	1.04	----	.021	.251	.141	.033	.143	.132	.003	.218	.001
ICSAB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0803	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	-.049	.003	.110	1.25	-1.23	.477	.325	.276	.931	2.57	.017	.023	.008	.016	7.41	-.003	-.137	.005	-.285	.043	.079	-.013	.009	.303	-.000	.003	.051	.027	.005	.016	.028	.007	.023
IML002S8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML002SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML002SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	-.011	.003	.120	.194	-2.64	.775	.847	.761	3.07	3.30	.007	.052	.015	.038	7.01	.003	.030	.008	-.221	.053	.085	-.009	.012	.161	.000	.004	.049	.024	.019	.018	.030	.008	.024
IML002S8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K181-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-06I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-07I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-09I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0805	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	-.060	.001	.126	-.869	-4.08	.651	.932	.567	3.49	3.78	-.005	.049	.020	.045	7.47	.003	-.004	.007	-.247	.051	.082	-.002	.019	.151	.000	.007	.046	.029	.019	.016	.034	.007	.024
K140-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-03I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-04I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K140-05I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCB4	-.023	.003	.175	-4.24	-4.96	.835	.609	-.533	-.822	6.80	.030	.027	.014	.043	7.59	.005	-.019	.003	-.061	.063	.090	.009	.022	.146	.000	.011	.045	.024	.009	.014	.022	.008	.025
K150-12N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-13N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-14N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-15N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-16N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-17N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-18N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-19N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-20N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	-.162	-.002	.340	-6.40	-5.17	.804	.508	.370	2.46	5.83	.010	.053	.010	.054	6.53	-.002	-.095	.004	-.101	.050	.078	.002	.023	.147	.000	.005	.039	.021	.023	.014	.025	.008	.023
K150-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-05I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-06I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-07I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-08I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-09I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-11I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-13I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-14I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	-.012	-.001	.125	-6.93	-5.55	.773	.545	-.458	-.881	6.16	.002	.046	.011	.049	6.82	.002	-.106	.000	-.103	.058	.086	.001	.017	.149	-.000	.009	.043	.023	.029	.014	.028	.009	.022
K150-17I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-18I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-19I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	-.030	-.002	.095	-6.49	-5.21	1.15	.480	.253	-1.13	6.24	.005	.056	.016	.081	7.31	.006	-.095	.009	-.088	.068	.090	.001	.016	.157	.000	.015	.054	.029	.035	.016	.034	.013	.028
IML005SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML005SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML005SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	-.065	.001	.353	-8.39	-5.62	1.15	.603	-.316	-1.07	7.13	.006	.051	.010	.073	7.61	.005	-.145	.006	-.104	.056	.095	.010	.026	.169	.001	.008	.065	.029	.041	.014	.033	.019	.027
K184-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	-.043	.005	.384	-9.21	-5.49	1.36	.614	-.816	-3.27	7.84	.025	.045	.012	.096	7.41	.008	-.158	.002	-.161	.063	.096	.022	.017	.172	-.000	.015	.073	.044	.034	.017	.045	.021	.028

K194-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K194-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	-.125	.002	.350	-10.3	-4.95	1.51	.652	1.50	1.45	9.99	.022	.077	.015	.084	7.80	.005	-.179	.005	-.122	.058	.079	.073	.024	.145	.000	.008	.074	.036	.042	.013	.042	.020	.025
IML004S8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML004SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML004SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	-.015	.011	.493	-10.8	-4.70	1.37	.745	.487	4.59	9.01	.022	.066	.017	.087	8.08	.007	-.188	.000	-.138	.063	.084	.027	.025	.146	-.000	.015	.074	.036	.066	.011	.042	.018	.026
K171-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	-.130	.001	.515	-10.5	-3.37	1.85	.990	1.48	7.54	10.9	.034	.108	.020	.115	9.43	.007	-.170	.011	-.140	.083	.091	.035	.039	.156	-.000	.014	.067	.034	.115	.016	.046	.021	.028
K171-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB13	-.120	.009	.481	-11.1	-2.25	2.04	1.19	4.26	10.0	10.8	.034	.154	.023	.110	9.83	.008	-.172	.022	-.142	.074	.087	.038	.034	.163	.000	.014	.075	.035	.287	.017	.049	.024	.028
K171-19J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K171-22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-02K	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-05K	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K150-08K	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

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CCV14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB14	-.231	.005	.253	-11.0	-.291	2.08	1.07	6.10	12.0	12.4	.018	.205	.024	.128	10.5	.011	-.132	.019	-.130	.072	.079	.033	.031	.157	.001	.010	.078	.034	.165	.015	.054	.024	.030
IML015SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML015SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IML015SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB15	-.099	.009	.224	7.05	1.96	2.29	2.63	6.09	13.9	21.2	.026	.215	.051	.160	25.9	.023	-.318	.026	-.291	.111	.256	.017	.031	.178	-.000	.014	.068	.049	.063	.017	.038	.016	.036
L067-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-10J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB16	-.143	.010	.255	8.99	3.83	2.78	3.14	7.29	16.4	23.0	.032	.254	.052	.174	27.6	.025	-.335	.035	-.273	.107	.287	.028	.032	.182	.002	.014	.065	.044	.096	.016	.041	.025	.036
L067-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L067-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB17	-.040	.009	.175	2.47	3.53	2.18	2.51	7.90	15.7	17.5	.007	.262	.044	.152	21.4	.024	-.323	.021	-.280	.116	.212	.016	.027	.198	.001	.017	.075	.048	.079	.015	.040	.019	.033

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
1		Keyword		TUNBEG	Start of TUNE						
2	C:\ICPCHEM\1\METHODS\TN6020_C.M	Tun6	1301	F6L06001	6020tunchk		1.000				
3	C:\ICPCHEM\1\METHODS\TN200_8C.M	Tun2	1302	F6L06002	200.8tunchk		1.000				
4		Keyword		TUNEND	End of TUNE						
5		Keyword		CALBEG	Start of CALIB						
6	C:\ICPCHEM\1\METHODS\EMX6020H.M	CalBlk	1101	F6L06003	BLNK		Level 1				
7	C:\ICPCHEM\1\METHODS\EMX6020H.M	CalBlk	1102	F6L06004	S0		Level 1				
8	C:\ICPCHEM\1\METHODS\EMX6020H.M	CalStd	1104	F6L06005	S1 0.5		Level 2				
9	C:\ICPCHEM\1\METHODS\EMX6020H.M	CalStd	1105	F6L06006	S2 50		Level 3				
10	C:\ICPCHEM\1\METHODS\EMX6020H.M	CalStd	1106	F6L06007	S3 250		Level 4				
11	C:\ICPCHEM\1\METHODS\EMX6020H.M	CalStd	1107	F6L06008	S4 500		Level 5				
12	C:\ICPCHEM\1\METHODS\EMX6020H.M	ICV1	1204	F6L06009	ICV		1.000				
13	C:\ICPCHEM\1\METHODS\EMX6020H.M	ICB	1102	F6L06010	ICB		1.000				
14	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1305	F6L06011	MRLL0801	1/100/10 ppb	1.000				
15	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1306	F6L06012	MRLL0802	0.5/50/4 ppb	1.000				
16	C:\ICPCHEM\1\METHODS\EMX6020H.M	ICS-A	1303	F6L06013	ICSA		1.000				
17	C:\ICPCHEM\1\METHODS\EMX6020H.M	ICS-AB	1304	F6L06014	ICSAB		1.000				
18	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1207	F6L06015	MRLL0803	500 ppb CAT	1.000				
19	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06016	CCV1		1.000				
20	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06017	CCB1		1.000				
21		Keyword		CALEND	End of CALIB						
22		Keyword		SMPLBEG	Start of SMPL						
23	C:\ICPCHEM\1\METHODS\EMX6020H.M	MBS	2101	F6L06018	IML002SB		1.000				
24	C:\ICPCHEM\1\METHODS\EMX6020H.M	LCSS	2102	F6L06019	IML002SL		1.000				
25	C:\ICPCHEM\1\METHODS\EMX6020H.M	LCSS	2103	F6L06020	IML002SC		1.000				
26	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2104	F6L06021	K181-01A		1.000				
27	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2105	F6L06022	K181-01		1.000				
28	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2106	F6L06023	K181-01J		5.000				
29	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2107	F6L06024	K181-02		1.000				
30	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2108	F6L06025	K181-03		1.000				
31	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2109	F6L06026	K181-04		1.000				
32	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2110	F6L06027	K181-05		1.000				
33	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06028	BLANK		1.000				
34	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06029	CCV2		1.000				
35	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06030	CCB2		1.000				
36	C:\ICPCHEM\1\METHODS\EMX6020H.M	MBS	2101	F6L06031	IML002SB		1.000				
37	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2111	F6L06032	K181-06		1.000				
38	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2112	F6L06033	K181-07		1.000				
39	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2201	F6L06034	K181-08		1.000				
40	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2202	F6L06035	K140-06I		5.000				
41	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2203	F6L06036	K140-07I		5.000				

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
42	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2204	F6L06037	K140-09I		5.000				
43	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06038	BLANK		1.000				
44	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1305	F6L06039	MRLL0801	1/100/10 ppb	1.000				
45	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1306	F6L06040	MRLL0805	0.5/50/4 ppb	1.000				
46	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06041	CCV3		1.000				
47	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06042	CCB3		1.000				
48	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2205	F6L06043	K140-01M		5.000				
49	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2206	F6L06044	K140-01S		5.000				
50	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2207	F6L06045	K140-01A		5.000				
51	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2208	F6L06046	K140-01I		5.000				
52	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2209	F6L06047	K140-01J		25.00				
53	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2210	F6L06048	K140-02I		5.000				
54	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2211	F6L06049	K140-03I		5.000				
55	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2212	F6L06050	K140-04I		5.000				
56	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2301	F6L06051	K140-05I		5.000				
57	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06052	BLANK		1.000				
58	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06053	CCV4		1.000				
59	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06054	CCB4		1.000				
60	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2302	F6L06055	K150-12N	contitate	1.000				
61	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2303	F6L06056	K150-13N	Zn > ~~CR~~, hi cal	1.000				
62	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2304	F6L06057	K150-14N		1.000				
63	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2305	F6L06058	K150-15N		1.000				
64	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2306	F6L06059	K150-16N		1.000				
65	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2307	F6L06060	K150-17N	Zn > hi cal	1.000				
66	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2308	F6L06061	K150-18N	Zn > hi cal	1.000				
67	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2309	F6L06062	K150-19N	Zn > hi cal	1.000				
68	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2310	F6L06063	K150-20N		1.000				
69	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06064	BLANK		1.000				
70	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06065	CCV5		1.000				
71	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06066	CCB5		1.000				
72	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2311	F6L06067	K150-02I	Zn > hi cal	5.000				
73	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2312	F6L06068	K150-05I	Zn > hi cal	5.000				
74	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2401	F6L06069	K150-06I		5.000				
75	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2402	F6L06070	K150-07I		5.000				
76	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2403	F6L06071	K150-08I	Zn, Ba > hi cal	5.000				
77	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2404	F6L06072	K150-09I		5.000				
78	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2405	F6L06073	K150-11I		5.000				
79	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2406	F6L06074	K150-13I		5.000				
80	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2407	F6L06075	K150-14I		5.000				
81	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06076	BLANK		1.000				
82	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06077	CCV6		1.000				

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	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
83	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06078	CCB6		1.000				
84	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2408	F6L06079	K150-17I		5.000				
85	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2409	F6L06080	K150-18I		5.000				
86	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2410	F6L06081	K150-19I		5.000				
87	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06082	BLANK		1.000				
88	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06083	CCV7		1.000				
89	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06084	CCB7		1.000				
90	C:\ICPCHEM\1\METHODS\EMX6020H.M	MBS	2411	F6L06085	IML005SB		1.000				
91	C:\ICPCHEM\1\METHODS\EMX6020H.M	LCSS	2412	F6L06086	IML005SL		1.000				
92	C:\ICPCHEM\1\METHODS\EMX6020H.M	LCSS	2501	F6L06087	IML005SC		1.000				
93	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2502	F6L06088	K171-23		1.000				
94	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2503	F6L06089	K171-24		1.000				
95	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2504	F6L06090	K184-01		1.000				
96	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2505	F6L06091	K184-02		1.000				
97	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2506	F6L06092	K184-03		1.000				
98	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2507	F6L06093	K184-04	Fe 7 hical	1.000				
99	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06094	BLANK		1.000				
100	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06095	CCV8		1.000				
101	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06096	CCB8		1.000				
102	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2508	F6L06097	K184-05M		1.000				
103	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2509	F6L06098	K184-05S		1.000				
104	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2510	F6L06099	K184-05A		1.000				
105	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2511	F6L06100	K184-05		1.000				
106	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	2512	F6L06101	K184-05J		5.000				
107	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3101	F6L06102	K184-06		1.000				
108	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3102	F6L06103	K184-07		1.000				
109	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3103	F6L06104	K194-01		1.000				
110	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06105	BLANK		1.000				
111	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06106	CCV9		1.000				
112	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06107	CCB9		1.000				
113	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3104	F6L06108	K194-02		1.000				
114	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3105	F6L06109	K194-03		1.000				
115	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3106	F6L06110	K194-04		1.000				
116	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3107	F6L06111	K194-05		1.000				
117	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3108	F6L06112	K194-06		1.000				
118	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3109	F6L06113	K194-07		1.000				
119	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3110	F6L06114	K194-08	Fe 7 hical	1.000				
120	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3111	F6L06115	K194-09		1.000				
121	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06116	BLANK		1.000				
122	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06117	CCV10	Be fails	1.000				
123	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06118	CCB10		1.000				

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	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
124	C:\ICPCHEM\1\METHODS\EMX6020H.M	MBS	3112	F6L06119	IML004SB		1.000				
125	C:\ICPCHEM\1\METHODS\EMX6020H.M	LCSS	3201	F6L06120	IML004SL		1.000				
126	C:\ICPCHEM\1\METHODS\EMX6020H.M	LCSS	3202	F6L06121	IML004SC		1.000				
127	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3203	F6L06122	K171-03M		1.000				
128	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3204	F6L06123	K171-03S		1.000				
129	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3205	F6L06124	K171-03A		1.000				
130	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3206	F6L06125	K171-03		1.000				
131	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3207	F6L06126	K171-03J		5.000				
132	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3208	F6L06127	K171-04	Fe, Ba > limit	1.000				
133	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06128	BLANK		1.000				
134	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06129	CCV11		1.000				
135	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06130	CCB11		1.000				
136	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3209	F6L06131	K171-05		1.000				
137	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3210	F6L06132	K171-06		1.000				
138	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3211	F6L06133	K171-07		1.000				
139	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3212	F6L06134	K171-08		1.000				
140	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3301	F6L06135	K171-09		1.000				
141	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3302	F6L06136	K171-10		1.000				
142	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3303	F6L06137	K171-11	Fe, Cu, Ba > limit	1.000				
143	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3304	F6L06138	K171-12	Ba > limit	1.000				
144	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3305	F6L06139	K171-13	Cu, Ba > limit	1.000				
145	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06140	BLANK		1.000				
146	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06141	CCV12	Be failed	1.000				
147	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06142	CCB12		1.000				
148	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3306	F6L06143	K171-14	Ba > limit	1.000				
149	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3307	F6L06144	K171-15	Al, Cu, Ba > limit	1.000				
150	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3308	F6L06145	K171-16	Ba > limit	1.000				
151	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3309	F6L06146	K171-17	Ba > limit	1.000				
152	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3310	F6L06147	K171-18	Ba > limit	1.000				
153	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3311	F6L06148	K171-19M	Fe, Cu, Ba > limit	1.000				
154	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3312	F6L06149	K171-19S		1.000				
155	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3401	F6L06150	K171-19A		1.000				
156	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3402	F6L06151	K171-19		1.000				
157	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06152	BLANK		1.000				
158	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06153	CCV13	Be failed	1.000				
159	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06154	CCB13	Ba > LOQ (0.25 ppb)	1.000				
160	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3403	F6L06155	K171-19J		1.000				
161	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3404	F6L06156	K171-20	Fe, Cu, Ba > limit	1.000				
162	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3405	F6L06157	K171-21	Ba > limit	1.000				
163	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3406	F6L06158	K171-22	Ba > limit	1.000				
164	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3407	F6L06159	K150-02K		20.00				

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	ISTD Conc	Action on Failure	Skip	Result
165	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3408	F6L06160	K150-05K		20.00				
166	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3409	F6L06161	K150-08K		20.00				
167	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06162	BLANK		1.000				
168	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06163	CCV14	Re-Run	1.000				
169	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1102	F6L06164	CCB14		1.000				
170	C:\ICPCHEM\1\METHODS\EMX6020H.M	MBS	3410	F6L06165	IML015SB		1.000				
171	C:\ICPCHEM\1\METHODS\EMX6020H.M	LCSS	3411	F6L06166	IML015SL		1.000				
172	C:\ICPCHEM\1\METHODS\EMX6020H.M	LCSS	3412	F6L06167	IML015SC		1.000				
173	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3501	F6L06168	L067-01		1.000				
174	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3502	F6L06169	L067-02		1.000				
175	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3503	F6L06170	L067-03		1.000				
176	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3504	F6L06171	L067-04		1.000				
177	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3505	F6L06172	L067-05		1.000				
178	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3506	F6L06173	L067-06		1.000				
179	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06174	BLANK		1.000				
180	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06175	CCV15		1.000				
181	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1201	F6L06176	CCB15		1.000				
182	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3507	F6L06177	L067-07		1.000				
183	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3508	F6L06178	L067-08		1.000				
184	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3509	F6L06179	L067-09		1.000				
185	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3510	F6L06180	L067-10M		1.000				
186	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3511	F6L06181	L067-10S		1.000				
187	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	3512	F6L06182	L067-10A		1.000				
188	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	4101	F6L06183	L067-10		1.000				
189	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	4102	F6L06184	L067-10J		5.000				
190	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	4103	F6L06185	L067-11		1.000				
191	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06186	BLANK		1.000				
192	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06187	CCV16		1.000				
193	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1201	F6L06188	CCB16		1.000				
194	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	4104	F6L06189	L067-12		1.000				
195	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	4105	F6L06190	L067-13		1.000				
196	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	4106	F6L06191	L067-14		1.000				
197	C:\ICPCHEM\1\METHODS\EMX6020H.M	Sample	1101	F6L06192	BLANK		1.000				
198	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCV	1206	F6L06193	CCV17		1.000				
199	C:\ICPCHEM\1\METHODS\EMX6020H.M	CCB	1201	F6L06194	CCB17		1.000				
200		Keyword		StandBy							
201		Keyword		SMPLEND	End of SMPL						
202		Keyword		End	End of Sequence						
203		Keyword		CCVBEG	Start of CCV						
204		Keyword		CCVEND	End of CCV						
205		Keyword		BLKBEG	Start of BLANK						

Last Calib: Dec 08, 2015 01:50 pm
Calibration Type: External Calibration Method
Calibration Title:
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Multi Tune: #1 h2.u
#2 he.u
#3 norm.u

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

	Data File	Sample Name	Date Acquired
1	c:\data\if62015\l\if6l06.b\f6l06004.d\f6l06004.d#	S0	Dec 8 2015 01:30 pm
2	c:\data\if62015\l\if6l06.b\f6l06005.d\f6l06005.d#	S1 0.5	Dec 8 2015 01:35 pm
3	c:\data\if62015\l\if6l06.b\f6l06006.d\f6l06006.d#	S2 50	Dec 8 2015 01:39 pm
4	c:\data\if62015\l\if6l06.b\f6l06007.d\f6l06007.d#	S3 250	Dec 8 2015 01:43 pm
5	c:\data\if62015\l\if6l06.b\f6l06008.d\f6l06008.d#	S4 500	Dec 8 2015 01:47 pm
6	---		
7	---		
8	---		
9	---		
10	---		
11	---		
12	---		
13	---		
14	---		
15	---		
16	---		
17	---		
18	---		
19	---		
20	---		

Calibration - C:\DATA\IF62015\L\IF6L06.B\EMX6020H.C

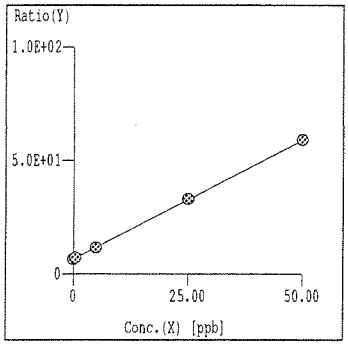
=== ISTD Table ===

Fix ISTD Conc: ON

	Step	Mass	Element	VIS	Units	All Levels
1	3	6	Li		ppb	100.0
2	1	45	Sc		ppb	100.0
3	2	45	Sc		ppb	100.0
4	3	45	Sc		ppb	100.0
5	1	72	Ge		ppb	100.0
6	2	72	Ge		ppb	100.0
7	3	72	Ge		ppb	100.0
8	3	115	In		ppb	100.0
9	3	159	Tb		ppb	100.0
10	3	209	Bi		ppb	100.0

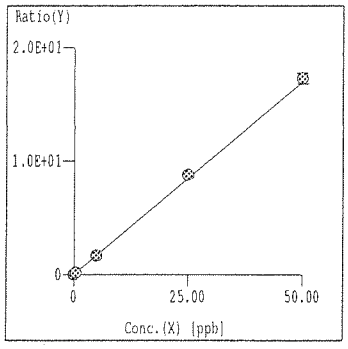
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(3)	7	Li	6	ppb



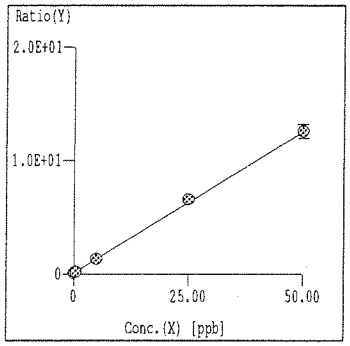
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.048E+000*X +6.498E+000
X = 9.542E-001*Y -6.200E+000
DL = 2.687E-01 ppb
BEC = 6.200 ppb

Step	Mass	Element	ISTD	Unit
(3)	9	Be	6	ppb



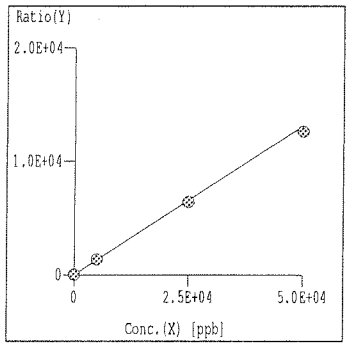
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.395E-001*X +3.758E-003
X = 2.945E+000*Y -1.107E-002
DL = 7.468E-03 ppb
BEC = 1.107E-02 ppb

Step	Mass	Element	ISTD	Unit
(3)	11	B	6	ppb



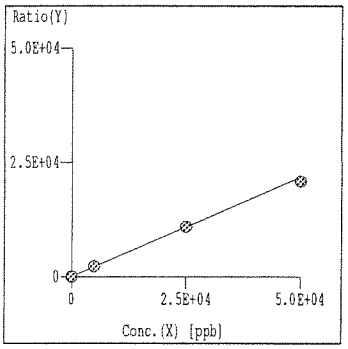
Curve Fit: Y=aX+b
r = 0.9998
Y = 2.495E-001*X +8.179E-002
X = 4.007E+000*Y -3.278E-001
DL = 9.677E-02 ppb
BEC = 3.278E-01 ppb

Step	Mass	Element	ISTD	Unit
(1)	23	Na	45	ppb



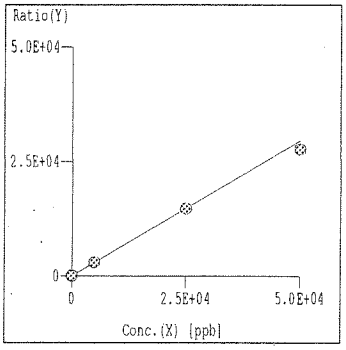
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.624E-001*X +6.709E+000
X = 3.811E+000*Y -2.557E+001
DL = 1.391 ppb
BEC = 25.57 ppb

Step	Mass	Element	ISTD	Unit
(3)	24	Mg	45	ppb



Curve Fit: Y=aX+b
r = 0.9997
Y = 4.366E-001*X +4.262E+000
X = 2.291E+000*Y -9.762E+000
DL = 2.958E-01 ppb
BEC = 9.762 ppb

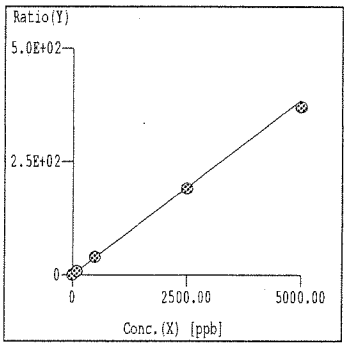
Step	Mass	Element	ISTD	Unit
(3)	27	Al	45	ppb



Curve Fit: Y=aX+b
r = 0.9995
Y = 5.915E-001*X +3.308E-001
X = 1.691E+000*Y -5.593E-001
DL = 2.601E-01 ppb
BEC = 5.593E-01 ppb

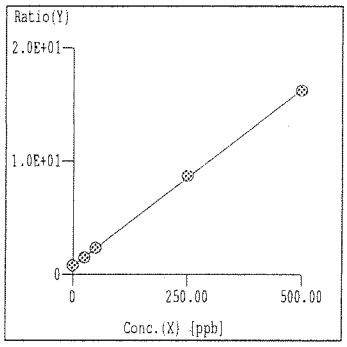
=== Graph Detail ===

Step Mass Element ISTD Unit
(1) 28 Si 45 ppb



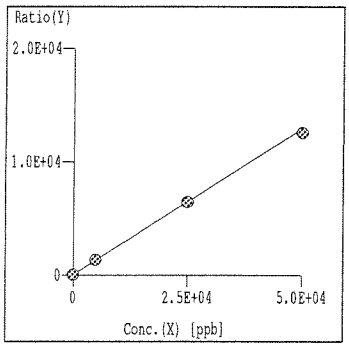
Curve Fit: Y=aX+b
r = 0.9999
Y = 7.724E-002*X +9.548E-002
X = 1.295E+001*Y -1.236E+000
DL = 1.211E-01 ppb
BEC = 1.236 ppb

Step Mass Element ISTD Unit
(3) 31 P 45 ppb



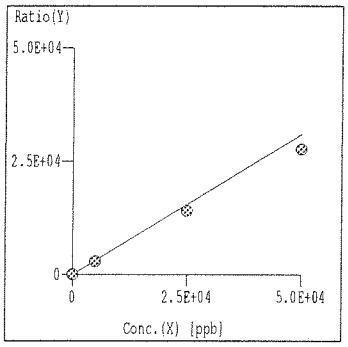
Curve Fit: Y=aX+b
r = 0.9999
Y = 3.113E-002*X +7.589E-001
X = 3.212E+001*Y -2.438E+001
DL = 9.209E-01 ppb
BEC = 24.38 ppb

Step Mass Element ISTD Unit
(2) 39 K 45 ppb



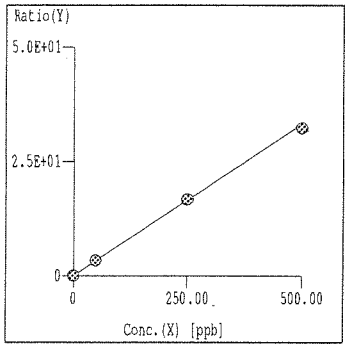
Curve Fit: Y=aX+b
r = 0.9999
Y = 2.588E-001*X +1.852E+001
X = 3.864E+000*Y -7.155E+001
DL = 2.704 ppb
BEC = 71.55 ppb

Step Mass Element ISTD Unit
(1) 40 Ca 45 ppb



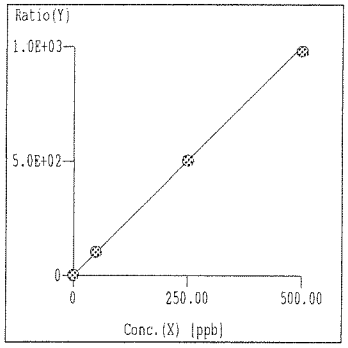
Curve Fit: Y=aX+b
r = 1.0000
Y = 6.196E-001*X +2.726E+000
X = 1.614E+000*Y -4.400E+000
DL = 7.410E-02 ppb
BEC = 4.400 ppb

Step Mass Element ISTD Unit
(3) 47 Ti 45 ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 6.644E-002*X +3.573E-003
X = 1.505E+001*Y -5.377E-002
DL = 2.270E-02 ppb
BEC = 5.377E-02 ppb

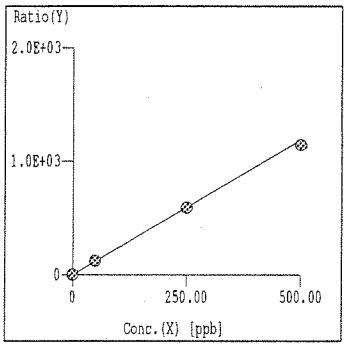
Step Mass Element ISTD Unit
(2) 51 V 45 ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 2.010E+000*X +8.371E-001
X = 4.976E-001*Y -4.165E-001
DL = 4.412E-02 ppb
BEC = 4.165E-01 ppb

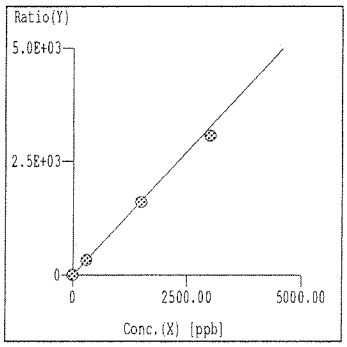
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(2) 52 Cr	45	ppb



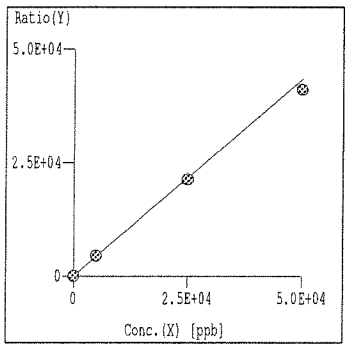
Curve Fit: Y=aX+b
r = 0.9999
Y = 2.374E+000*X +1.488E-001
X = 4.212E-001*Y -6.267E-002
DL = 1.225E-02 ppb
BEC = 6.267E-02 ppb

Step Mass Element	ISTD	Unit
(3) 55 Mn	45	ppb



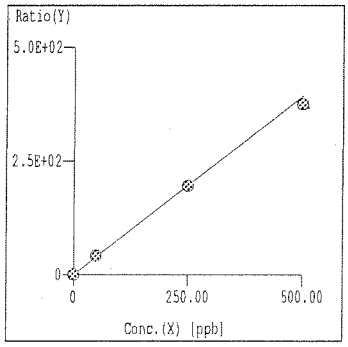
Curve Fit: Y=aX+b
r = 0.9998
Y = 1.087E+000*X +1.794E-001
X = 9.196E-001*Y -1.649E-001
DL = 2.050E-03 ppb
BEC = 1.649E-01 ppb

Step Mass Element	ISTD	Unit
(1) 56 Fe	45	ppb



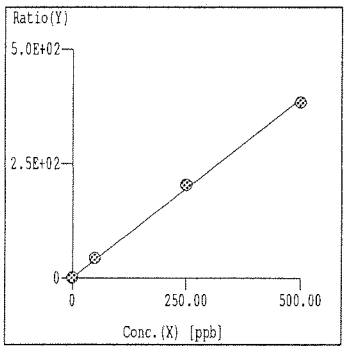
Curve Fit: Y=aX+b
r = 0.9998
Y = 8.672E-001*X +1.427E+000
X = 1.153E+000*Y -1.646E+000
DL = 3.938E-02 ppb
BEC = 1.646 ppb

Step Mass Element	ISTD	Unit
(3) 59 Co	45	ppb



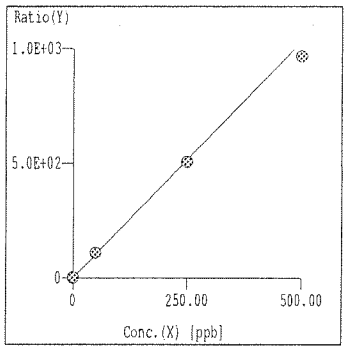
Curve Fit: Y=aX+b
r = 0.9998
Y = 7.854E-001*X +2.450E-002
X = 1.273E+000*Y -3.120E-002
DL = 7.217E-03 ppb
BEC = 3.120E-02 ppb

Step Mass Element	ISTD	Unit
(2) 60 Ni	45	ppb



Curve Fit: Y=aX+b
r = 0.9995
Y = 7.815E-001*X +3.892E-001
X = 1.280E+000*Y -4.980E-001
DL = 5.100E-02 ppb
BEC = 4.980E-01 ppb

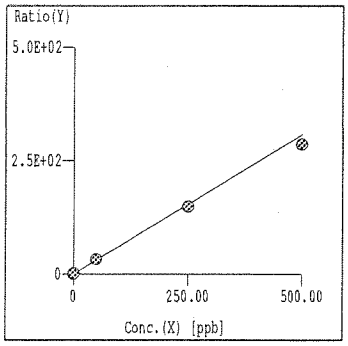
Step Mass Element	ISTD	Unit
(2) 63 Cu	45	ppb



Curve Fit: Y=aX+b
r = 0.9997
Y = 2.065E+000*X +1.370E-001
X = 4.842E-001*Y -6.635E-002
DL = 5.125E-03 ppb
BEC = 6.635E-02 ppb

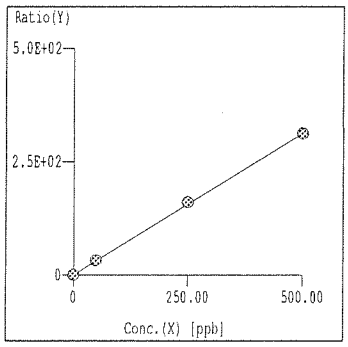
=== Graph Detail ===

Step Mass Element ISTD Unit
(3) 66 Zn 72 ppb



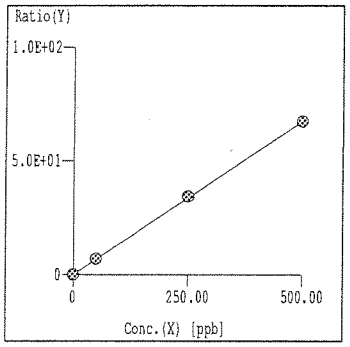
Curve Fit: Y=aX+b
r = 0.9998
Y = 6.154E-001*X +3.231E-001
X = 1.625E+000*Y -5.250E-001
DL = 9.639E-02 ppb
BEC = 5.250E-01 ppb

Step Mass Element ISTD Unit
(2) 75 As 72 ppb



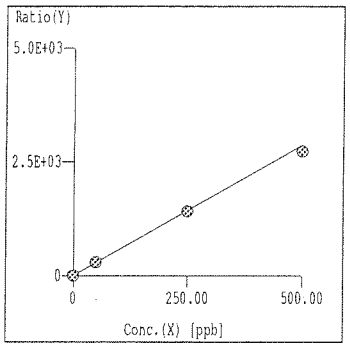
Curve Fit: Y=aX+b
r = 0.9999
Y = 6.259E-001*X +3.566E-002
X = 1.598E+000*Y -5.697E-002
DL = 1.689E-02 ppb
BEC = 5.697E-02 ppb

Step Mass Element ISTD Unit
(1) 78 Se 72 ppb



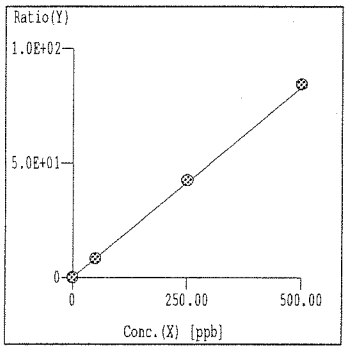
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.350E-001*X +1.384E-003
X = 7.409E+000*Y -1.025E-002
DL = 2.005E-02 ppb
BEC = 1.025E-02 ppb

Step Mass Element ISTD Unit
(3) 88 Sr 72 ppb



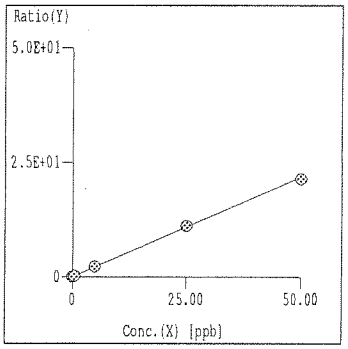
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.743E+000*X +2.325E-001
X = 1.741E-001*Y -4.048E-002
DL = 1.193E-02 ppb
BEC = 4.048E-02 ppb

Step Mass Element ISTD Unit
(3) 95 Mo 115 ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.665E-001*X +7.534E-003
X = 6.005E+000*Y -4.524E-002
DL = 5.677E-03 ppb
BEC = 4.524E-02 ppb

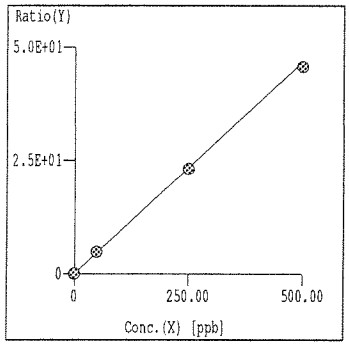
Step Mass Element ISTD Unit
(3) 107 Ag 115 ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 4.369E-001*X +1.594E-003
X = 2.289E+000*Y -3.648E-003
DL = 8.695E-04 ppb
BEC = 3.648E-03 ppb

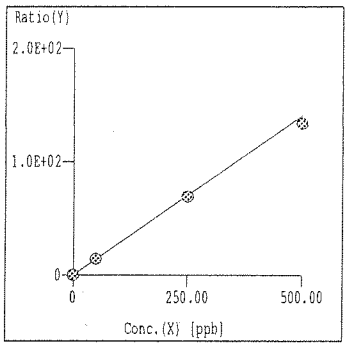
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 111 Cd	115	ppb



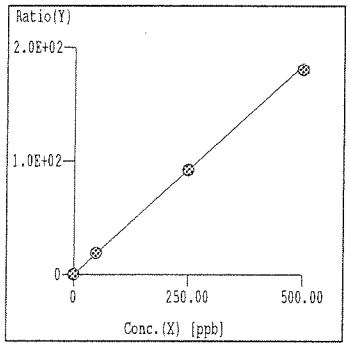
Curve Fit: Y=aX+b
r = 1.0000
Y = 9.372E-002*X +7.097E-004
X = 1.067E+001*Y -7.573E-003
DL = 4.379E-03 ppb
BEC = 7.573E-03 ppb

Step Mass Element	ISTD	Unit
(3) 118 Sn	115	ppb



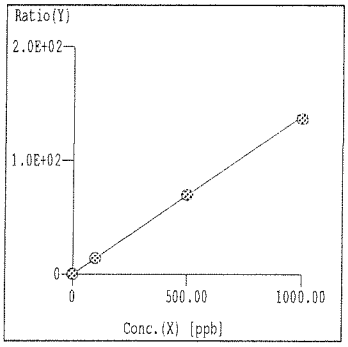
Curve Fit: Y=aX+b
r = 0.9998
Y = 2.814E-001*X +1.039E-002
X = 3.554E+000*Y -3.693E-002
DL = 1.552E-02 ppb
BEC = 3.693E-02 ppb

Step Mass Element	ISTD	Unit
(3) 121 Sb	115	ppb



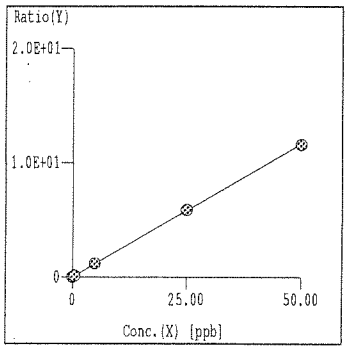
Curve Fit: Y=aX+b
r = 0.9999
Y = 3.694E-001*X +1.886E-002
X = 2.707E+000*Y -5.106E-002
DL = 1.053E-02 ppb
BEC = 5.106E-02 ppb

Step Mass Element	ISTD	Unit
(3) 137 Ba	115	ppb



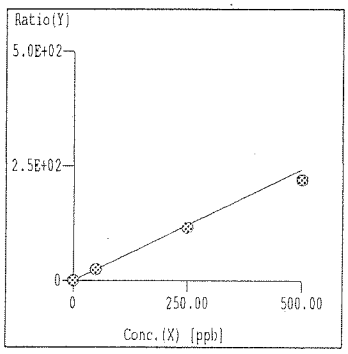
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.393E-001*X +5.404E-003
X = 7.179E+000*Y -3.880E-002
DL = 7.285E-03 ppb
BEC = 3.880E-02 ppb

Step Mass Element	ISTD	Unit
(3) 182 W	159	ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 2.334E-001*X +2.803E-003
X = 4.285E+000*Y -1.201E-002
DL = 9.810E-04 ppb
BEC = 1.201E-02 ppb

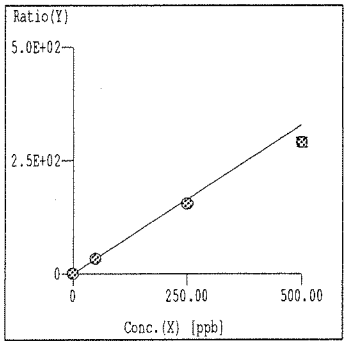
Step Mass Element	ISTD	Unit
(3) 205 Tl	159	ppb



Curve Fit: Y=aX+b
r = 0.9997
Y = 4.861E-001*X +6.096E-003
X = 2.057E+000*Y -1.254E-002
DL = 4.589E-03 ppb
BEC = 1.254E-02 ppb

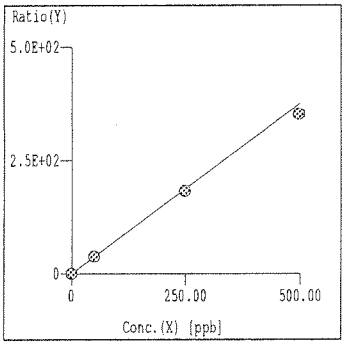
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 208 Pb	159	ppb



Curve Fit: Y=aX+b
r = 0.9995
Y = 6.578E-001*X +1.040E-002
X = 1.520E+000*Y -1.581E-002
DL = 6.973E-04 ppb
BEC = 1.581E-02 ppb

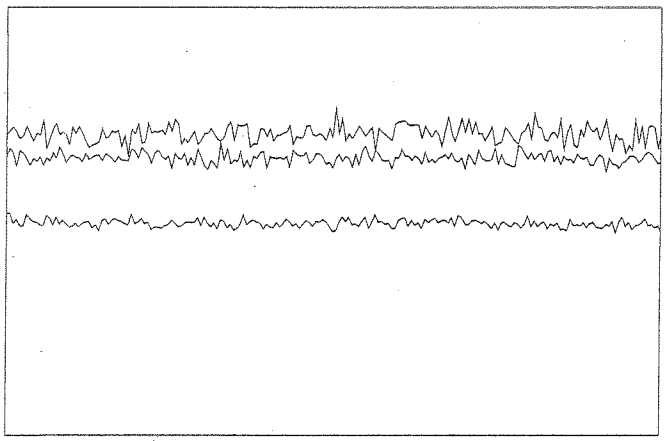
Step Mass Element	ISTD	Unit
(3) 238 U	159	ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 7.528E-001*X +4.265E-003
X = 1.328E+000*Y -5.666E-003
DL = 1.221E-03 ppb
BEC = 5.666E-03 ppb

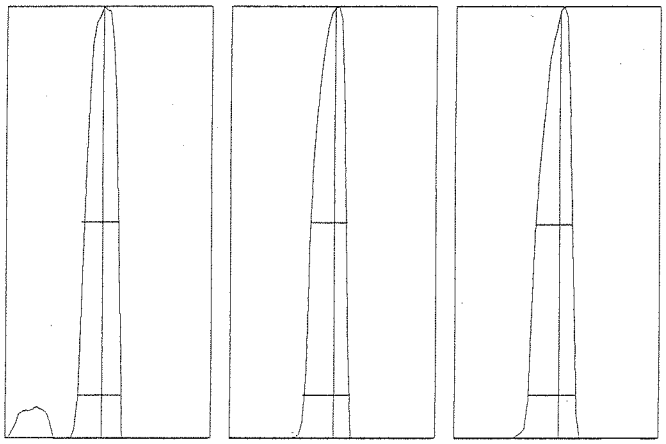
Tune Report

Tune File : NORM.U
Comment : IF6L06



Integration Time:	0.1000 sec	
Sampling Period:	0.6200 sec	
n:	200	
Oxide:	156/140	1.913%
Doubly Charged:	70/140	0.812%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	14183.0	14133.7	2.80	3.60
89	100,000	47766.0	49689.4	1.89	1.90
205	50,000	31979.0	32475.0	2.00	8.40
156/140	5	1.996%	1.989%	4.74	
70/140	2	0.814%	0.834%	6.25	



m/z:	7	89	205
Height:	14,040	50,511	34,033
Axis:	6.95	89.05	205.05
W-50%:	0.55	0.55	0.55
W-10%:	0.6500	0.700	0.700

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Dec 08, 2015 12:09:49
Printed : Dec 08, 2015 12:09:52

Tune Report

Tune File : NORM.U
Comment : IF6L06

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1500 W	Extract 1	:	0 V	AMU Gain	:	128
RF Matching	:	1.74 V	Extract 2	:	-110 V	AMU Offset	:	127
Smpl Depth	:	8 mm	Omega Bias-ce	:	-22 V	Axis Gain	:	1
Torch-H	:	-0.6 mm	Omega Lens-ce	:	0.6 V	Axis Offset	:	-0.08
Torch-V	:	-0.5 mm	Cell Entrance	:	-26 V	QP Bias	:	-3 V
Carrier Gas	:	0.9 L/min	QP Focus	:	1 V			
Makeup Gas	:	0.1 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	2060 V
Sample Pump	:	--- rps	OctP RF	:	169 V	Pulse HV	:	1390 V
S/C Temp	:	2 degC	OctP Bias	:	-6 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

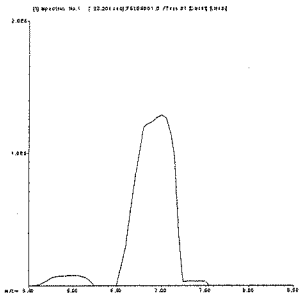
Generated : Dec 08, 2015 12:09:49
Printed : Dec 08, 2015 12:09:54

6020 QC Tune Report

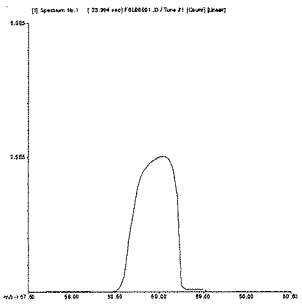
Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06001.D
Date Acquired: Dec 8 2015 12:42 pm
Acq. Method: TN6020_C.M
Operator: CCapul
Sample Name: 6020tunchk
Misc Info:
Vial Number: 1301
Current Method: C:\ICPCHEM\1\METHODS\TN6020_C.M

RSD (%)

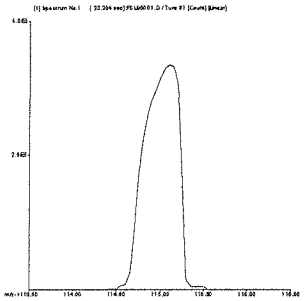
Element	Actual	Required	Flag
7 Li	1.33	5.00	
59 Co	0.82	5.00	
115 In	1.84	5.00	
205 Tl	2.02	5.00	



7 Li
Mass Calib.
Actual: 6.95
Required: 6.90 - 7.10
Flag:
Peak Width-10%
Actual: 0.60
Limit 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width-10%
Actual: 0.55
Limit 0.90
Flag:



115 In

Mass Calib.

Actual: 115.10

Required: 114.90 - 115.10

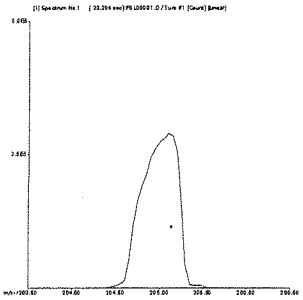
Flag:

Peak Width-10%

Actual: 0.55

Limit 0.90

Flag:



205 Tl

Mass Calib.

Actual: 205.05

Required: 204.90 - 205.10

Flag:

Peak Width-10%

Actual: 0.65

Limit 0.90

Flag:

Calibration Blank QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06003
Date Acquired:	Dec 8 2015 01:26 pm
Operator:	CCapul
Sample Name:	BLNK
Misc Info:	
Vial Number:	1101
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H
Last Cal Update:	Dec 08 2015 01:14 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	1302380.00	A	21150.00	1.62
7	Li	83917.09	P	856.30	1.02
9	Be	66.67	P	20.82	31.23
11	B	1385.67	P	39.07	2.82
23	Na	96448.17	P	572.50	0.59
24	Mg	139402.41	P	381.10	0.27
27	Al	23126.65	P	697.30	3.02
28	Si	2998.19	P	70.28	2.34
31	P	24367.89	P	247.90	1.02
39	K	53041.89	P	494.90	0.93
40	Ca	151630.41	P	1153.00	0.76
45	Sc	1449970.00	A	23370.00	1.61
45	Sc	278359.69	P	1260.00	0.45
45	Sc	3153368.00	A	17350.00	0.55
47	Ti	190.01	P	53.65	28.24
51	V	2359.32	P	61.68	2.61
52	Cr	458.68	P	17.24	3.76
55	Mn	19358.94	P	171.80	0.89
56	Fe	54677.09	P	129.50	0.24
59	Co	951.18	P	38.35	4.03
60	Ni	1053.38	P	6.67	0.63
63	Cu	444.45	P	28.60	6.43
66	Zn	5112.20	P	76.94	1.51
72	Ge	372276.31	P	1258.00	0.34
72	Ge	153289.41	P	1898.00	1.24
72	Ge	672691.69	P	6253.00	0.93
75	As	72.89	P	5.00	6.87
78	Se	14.67	P	4.00	27.27
88	Sr	1683.50	P	78.82	4.68
90	Zr	410.02	P	37.86	9.23
95	Mo	531.14	P	65.18	12.27
107	Ag	76.67	P	11.55	15.07
111	Cd	30.24	P	5.31	17.56
115	In	4292570.00	A	40690.00	0.95
118	Sn	760.05	P	14.53	1.91
121	Sb	1057.86	P	67.53	6.38
137	Ba	602.26	P	49.48	8.22
159	Tb	6283045.00	A	8512.00	0.14
182	W	270.01	P	17.64	6.53
205	Tl	505.58	P	11.71	2.32
208	Pb	1022.28	P	30.97	3.03
209	Bi	3521051.00	A	18690.00	0.53
235	U	16.67	P	5.77	34.64
238	U	516.70	P	15.28	2.96

Calibration Blank QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06004
Date Acquired:	Dec 8 2015 01:30 pm
Operator:	CCapul
Sample Name:	S0
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H
Last Cal Update:	Dec 08 2015 01:29 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	1282156.00	A	3574.00	0.28
7	Li	82978.49	P	1433.00	1.73
9	Be	48.89	P	10.71	21.91
11	B	1085.63	P	102.20	9.41
23	Na	94214.97	P	831.40	0.88
24	Mg	130538.10	P	2501.00	1.92
27	Al	7568.97	P	1663.00	21.97
28	Si	1375.67	P	36.87	2.68
31	P	23858.03	P	435.80	1.83
39	K	51346.90	P	293.10	0.57
40	Ca	38951.43	P	698.80	1.79
45	Sc	1442971.00	A	17830.00	1.24
45	Sc	279186.00	P	4755.00	1.70
45	Sc	3081898.00	A	37340.00	1.21
47	Ti	106.67	P	16.67	15.63
51	V	2336.43	P	44.95	1.92
52	Cr	382.90	P	24.23	6.33
55	Mn	5514.56	P	45.84	0.83
56	Fe	20553.95	P	391.20	1.90
59	Co	728.93	P	55.41	7.60
60	Ni	1048.05	P	26.77	2.55
63	Cu	312.01	P	4.67	1.50
66	Zn	1074.52	P	130.90	12.18
72	Ge	366345.41	P	1092.00	0.30
72	Ge	152918.20	P	256.40	0.17
72	Ge	658417.38	P	9250.00	1.40
75	As	69.33	P	5.29	7.63
78	Se	10.00	P	3.33	33.33
88	Sr	1060.08	P	159.00	15.00
90	Zr	285.57	P	28.35	9.93
95	Mo	321.13	P	13.88	4.32
107	Ag	67.78	P	5.09	7.51
111	Cd	29.36	P	5.81	19.80
115	In	4239832.00	A	18400.00	0.43
118	Sn	437.80	P	62.93	14.37
121	Sb	625.59	P	55.91	8.94
137	Ba	226.68	P	15.28	6.74
159	Tb	6179295.00	A	69960.00	1.13
182	W	173.34	P	6.67	3.85
205	Tl	350.02	P	46.19	13.20
208	Pb	642.25	P	13.88	2.16
209	Bi	3488013.00	A	30380.00	0.87
235	U	14.45	P	8.39	58.08
238	U	263.35	P	21.86	8.30

Calibration Standard QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06005.D\F6L06005.D#
Date Acquired:	Dec 8 2015 01:35 pm
Operator:	CCapul
Sample Name:	S1 0.5
Misc Info:	
Vial Number:	1104
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update:	Dec 08 2015 01:33 pm
Sample Type:	CalStd
Total Dil Factor:	1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1313881.00	A	23480.00	1.79
7 Li	92944.67	P	1152.00	1.24
9 Be	2210.24	P	168.60	7.63
11 B	2675.89	P	127.60	4.77
23 Na	196878.30	P	1505.00	0.76
24 Mg	864022.38	A	10150.00	1.17
27 Al	972343.69	A	5141.00	0.53
28 Si	113420.90	P	1732.00	1.53
31 P	46787.09	P	879.50	1.88
39 K	89767.18	P	471.90	0.53
40 Ca	609054.13	P	7515.00	1.23
45 Sc	1454927.00	A	27240.00	1.87
45 Sc	284735.59	P	2252.00	0.79
45 Sc	3161731.00	A	33040.00	1.05
47 Ti	1241.21	P	65.02	5.24
51 V	5233.19	P	175.00	3.34
52 Cr	3858.09	P	22.01	0.57
55 Mn	30941.52	P	478.60	1.55
56 Fe	733112.00	P	6494.00	0.89
59 Co	15040.51	P	373.30	2.48
60 Ni	2244.63	P	55.48	2.47
63 Cu	3668.71	P	49.41	1.35
66 Zn	8321.55	P	155.30	1.87
72 Ge	366982.69	P	2277.00	0.62
72 Ge	155486.80	P	646.30	0.42
72 Ge	668896.19	P	3202.00	0.48
75 As	522.90	P	4.02	0.77
78 Se	244.23	P	3.01	1.23
88 Sr	21232.07	P	91.07	0.43
90 Zr	11935.44	P	68.16	0.57
95 Mo	3807.30	P	146.80	3.86
107 Ag	9015.45	P	234.30	2.60
111 Cd	2204.65	P	110.50	5.01
115 In	4335322.00	A	30290.00	0.70
118 Sn	6548.41	P	154.20	2.35
121 Sb	9564.70	P	103.40	1.08
137 Ba	3383.88	P	112.90	3.34
159 Tb	6307909.00	A	108800.00	1.72
182 W	7384.50	P	132.70	1.80
205 Tl	16704.42	P	567.00	3.39
208 Pb	22967.55	P	119.50	0.52
209 Bi	3557393.00	A	32430.00	0.91
235 U	238.90	P	73.44	30.74
238 U	24233.31	P	252.90	1.04

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1313880.90	1.79	1282155.90	102.5	60 - 125	
45 Sc	1454926.50	1.87	1442971.30	100.8	60 - 125	
45 Sc	284735.66	0.79	279185.97	102.0	60 - 125	
45 Sc	3161730.50	1.05	3081898.50	102.6	60 - 125	
72 Ge	366982.75	0.62	366345.44	100.2	60 - 125	
72 Ge	155486.80	0.42	152918.19	101.7	60 - 125	
72 Ge	668896.19	0.48	658417.44	101.6	60 - 125	
115 In	4335322.50	0.70	4239832.00	102.3	60 - 125	
159 Tb	6307909.00	1.72	6179295.50	102.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: **Pass**
ISTD: **Pass**

Calibration Standard QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06006.D\F6L06006.D#
Date Acquired: Dec 8 2015 01:39 pm
Operator: CCapul
Sample Name: S2 50
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update: Dec 08 2015 01:38 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1269690.00	A	17910.00	1.41
7 Li	146492.20	P	843.40	0.58
9 Be	21274.49	P	175.40	0.82
11 B	16765.59	P	64.58	0.39
23 Na	19233180.00	A	366400.00	1.91
24 Mg	68667984.00	A	888200.00	1.29
27 Al	90072912.00	A	523000.00	0.58
28 Si	566527.00	P	8309.00	1.47
31 P	71455.62	P	547.20	0.77
39 K	3677896.00	A	14260.00	0.39
40 Ca	41613000.00	A	850200.00	2.04
45 Sc	1443743.00	A	17650.00	1.22
45 Sc	275959.19	P	1820.00	0.66
45 Sc	3070215.00	A	15200.00	0.50
47 Ti	102124.00	P	388.30	0.38
51 V	284955.00	P	1039.00	0.36
52 Cr	338056.00	P	641.70	0.19
55 Mn	10030750.00	A	50700.00	0.51
56 Fe	64284400.00	A	262600.00	0.41
59 Co	1265333.00	A	8476.00	0.67
60 Ni	118525.80	P	383.00	0.32
63 Cu	301599.81	P	1108.00	0.37
66 Zn	206843.80	P	552.60	0.27
72 Ge	361781.69	P	5729.00	1.58
72 Ge	148551.30	P	1463.00	0.98
72 Ge	640233.13	P	3918.00	0.61
75 As	47338.91	P	509.60	1.08
78 Se	25170.00	P	348.30	1.38
88 Sr	1874586.00	A	12650.00	0.67
90 Zr	103083.30	P	506.80	0.49
95 Mo	340519.41	P	440.50	0.13
107 Ag	91015.66	P	1181.00	1.30
111 Cd	197077.50	P	187.50	0.10
115 In	4098335.00	A	17640.00	0.43
118 Sn	578543.19	P	2296.00	0.40
121 Sb	772109.69	P	3987.00	0.52
137 Ba	572945.63	P	3857.00	0.67
159 Tb	6039301.00	A	14500.00	0.24
182 W	70851.18	P	740.10	1.04
205 Tl	1473605.00	A	6926.00	0.47
208 Pb	1994492.00	A	3384.00	0.17
209 Bi	3353067.00	A	43350.00	1.29
235 U	16526.69	P	177.20	1.07
238 U	2284449.00	A	11910.00	0.52

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1269690.10	1.41	1282155.90	99.0	60 - 125	
45 Sc	1443743.10	1.22	1442971.30	100.1	60 - 125	
45 Sc	275959.19	0.66	279185.97	98.8	60 - 125	
45 Sc	3070215.30	0.50	3081898.50	99.6	60 - 125	
72 Ge	361781.69	1.58	366345.44	98.8	60 - 125	
72 Ge	148551.34	0.98	152918.19	97.1	60 - 125	
72 Ge	640233.06	0.61	658417.44	97.2	60 - 125	
115 In	4098335.00	0.43	4239832.00	96.7	60 - 125	
159 Tb	6039301.00	0.24	6179295.50	97.7	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06007.D\F6L06007.D#
Date Acquired:	Dec 8 2015 01:43 pm
Operator:	CCapul
Sample Name:	S3 250
Misc Info:	
Vial Number:	1106
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update:	Dec 08 2015 01:42 pm
Sample Type:	CalStd
Total Dil Factor:	1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1172227.00	A	30170.00	2.57
7 Li	385737.31	P	6168.00	1.60
9 Be	102839.40	P	668.50	0.65
11 B	76978.21	P	391.20	0.51
23 Na	90721048.00	A	1596000.00	1.76
24 Mg	330532510.00	A	900800.00	0.27
27 Al	446339490.00	A	5381000.00	1.21
28 Si	2697542.00	A	42520.00	1.58
31 P	263832.69	P	2844.00	1.08
39 K	17660640.00	A	45190.00	0.26
40 Ca	198685300.00	A	2312000.00	1.16
45 Sc	1418371.00	A	21770.00	1.53
45 Sc	273899.50	P	910.60	0.33
45 Sc	3037691.00	A	16870.00	0.56
47 Ti	507582.50	P	952.90	0.19
51 V	1374579.00	A	16950.00	1.23
52 Cr	1615838.00	A	7470.00	0.46
55 Mn	48636060.00	A	468900.00	0.96
56 Fe	301467710.00	A	3944000.00	1.31
59 Co	5917924.00	A	15250.00	0.26
60 Ni	557662.63	P	3353.00	0.60
63 Cu	1385278.00	A	9058.00	0.65
66 Zn	952699.88	A	11710.00	1.23
72 Ge	344965.91	P	1711.00	0.50
72 Ge	143947.91	P	1180.00	0.82
72 Ge	640004.00	P	5755.00	0.90
75 As	231199.80	P	1994.00	0.86
78 Se	118486.40	P	955.10	0.81
88 Sr	9030038.00	A	132200.00	1.46
90 Zr	563474.38	P	3021.00	0.54
95 Mo	1653491.00	A	7671.00	0.46
107 Ag	431028.09	P	3665.00	0.85
111 Cd	896972.38	A	16440.00	1.83
115 In	3888957.00	A	31480.00	0.81
118 Sn	2687039.00	A	38480.00	1.43
121 Sb	3579582.00	A	32940.00	0.92
137 Ba	2707034.00	A	19630.00	0.73
159 Tb	5813701.00	A	77260.00	1.33
182 W	341240.69	P	2138.00	0.63
205 Tl	6688409.00	A	53120.00	0.79
208 Pb	8978408.00	A	106600.00	1.19
209 Bi	3062254.00	A	790.30	0.03
235 U	80801.89	P	455.10	0.56
238 U	10600700.00	A	87230.00	0.82

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1172227.50	2.57	1282155.90	91.4	60 - 125	
45 Sc	1418370.60	1.53	1442971.30	98.3	60 - 125	
45 Sc	273899.47	0.33	279185.97	98.1	60 - 125	
45 Sc	3037690.80	0.56	3081898.50	98.6	60 - 125	
72 Ge	344965.91	0.50	366345.44	94.2	60 - 125	
72 Ge	143947.91	0.82	152918.19	94.1	60 - 125	
72 Ge	640004.00	0.90	658417.44	97.2	60 - 125	
115 In	3888957.00	0.81	4239832.00	91.7	60 - 125	
159 Tb	5813701.50	1.33	6179295.50	94.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: **Pass**
ISTD: **Pass**

Calibration Standard QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06008.D\F6L06008.D#
Date Acquired:	Dec 8 2015 01:47 pm
Operator:	CCapul
Sample Name:	S4 500
Misc Info:	
Vial Number:	1107
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update:	Dec 08 2015 01:46 pm
Sample Type:	CalStd
Total Dil Factor:	1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1149983.00	A	25910.00	2.25
7 Li	678128.63	A	14510.00	2.14
9 Be	198820.70	P	2193.00	1.10
11 B	144488.00	P	3992.00	2.76
23 Na	179250700.00	A	776900.00	0.43
24 Mg	631229180.00	A	11750000.00	1.86
27 Al	838398210.00	A	23420000.00	2.79
28 Si	5270791.00	A	58190.00	1.10
31 P	492200.91	P	5651.00	1.15
39 K	34562560.00	A	590100.00	1.71
40 Ca	393852800.00	A	5245000.00	1.33
45 Sc	1425150.00	A	28610.00	2.01
45 Sc	275221.91	P	1811.00	0.66
45 Sc	3035496.00	A	46290.00	1.53
47 Ti	979588.00	A	13270.00	1.35
51 V	2695546.00	A	33150.00	1.23
52 Cr	3141146.00	A	35670.00	1.14
55 Mn	92979616.00	A	1795000.00	1.93
56 Fe	584785410.00	A	8666000.00	1.48
59 Co	11372850.00	A	253200.00	2.23
60 Ni	1055249.00	A	5382.00	0.51
63 Cu	2657133.00	A	4228.00	0.16
66 Zn	1830073.00	A	17110.00	0.93
72 Ge	340515.91	P	3478.00	1.02
72 Ge	145267.41	P	614.80	0.42
72 Ge	639476.63	P	3712.00	0.58
75 As	453783.91	P	1301.00	0.29
78 Se	229378.59	P	2426.00	1.06
88 Sr	17448540.00	A	166900.00	0.96
90 Zr	1099457.00	A	15180.00	1.38
95 Mo	3241109.00	A	19210.00	0.59
107 Ag	818053.13	P	11540.00	1.41
111 Cd	1751390.00	A	15290.00	0.87
115 In	3835902.00	A	41110.00	1.07
118 Sn	5120715.00	A	80350.00	1.57
121 Sb	6920965.00	A	36590.00	0.53
137 Ba	5235921.00	A	92740.00	1.77
159 Tb	5810506.00	A	89820.00	1.55
182 W	671749.13	P	6921.00	1.03
205 Tl	12747080.00	A	224300.00	1.76
208 Pb	16834260.00	A	344200.00	2.04
209 Bi	2942899.00	A	62620.00	2.13
235 U	155409.30	P	2318.00	1.49
238 U	20466490.00	A	187500.00	0.92

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1149982.80	2.25	1282155.90	89.7	60 - 125	
45 Sc	1425149.50	2.01	1442971.30	98.8	60 - 125	
45 Sc	275221.94	0.66	279185.97	98.6	60 - 125	
45 Sc	3035495.80	1.53	3081898.50	98.5	60 - 125	
72 Ge	340515.88	1.02	366345.44	92.9	60 - 125	
72 Ge	145267.42	0.42	152918.19	95.0	60 - 125	
72 Ge	639476.56	0.58	658417.44	97.1	60 - 125	
115 In	3835902.50	1.07	4239832.00	90.5	60 - 125	
159 Tb	5810505.50	1.55	6179295.50	94.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: **Pass**
ISTD: **Pass**

ICV QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06009.D\F6L06009.D#
Date Acquired:	Dec 8 2015 01:51 pm
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	ICV
Misc Info:	
Vial Number:	1204
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	ICV1
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc. RSD(%)	Expected	QC Range(%)	Flag
7 Li	28.80	ppb	430348.9	1.33	30.00	90 - 110	
9 Be	29.46	ppb	117388.3	1.36	30.00	90 - 110	
11 B	29.81	ppb	88223.8	0.90	30.00	90 - 110	
23 Na	28520.00	ppb	110959400.0	0.73	30000.00	90 - 110	
24 Mg	29470.00	ppb	395098820.0	1.52	30000.00	90 - 110	
27 Al	28160.00	ppb	511393980.0	0.40	30000.00	90 - 110	
28 Si	2939.00	ppb	3364704.0	0.65	3000.00	90 - 110	
31 P	289.20	ppb	299713.0	0.49	300.00	90 - 110	
39 K	28890.00	ppb	20882770.0	0.24	30000.00	90 - 110	
40 Ca	27230.00	ppb	249994300.0	1.73	30000.00	90 - 110	
47 Ti	297.00	ppb	606082.2	1.62	300.00	90 - 110	
51 V	292.50	ppb	1639766.0	1.32	300.00	90 - 110	
52 Cr	289.30	ppb	1914307.0	1.14	300.00	90 - 110	
55 Mn	1923.00	ppb	64186980.0	2.28	2000.00	90 - 110	
56 Fe	29210.00	ppb	375280700.0	0.86	30000.00	90 - 110	
59 Co	293.30	ppb	7071908.0	2.40	300.00	90 - 110	
60 Ni	306.20	ppb	667669.5	0.70	300.00	90 - 110	
63 Cu	290.10	ppb	1669267.0	1.19	300.00	90 - 110	
66 Zn	285.50	ppb	1145846.0	1.19	300.00	90 - 110	
75 As	291.30	ppb	270925.5	1.14	300.00	90 - 110	
78 Se	296.00	ppb	142481.5	0.68	300.00	90 - 110	
88 Sr	282.50	ppb	10561310.0	0.99	300.00	90 - 110	
90 Zr	34.25	ppb	723415.7	0.96	30.00	90 - 110	Fail
95 Mo	294.00	ppb	1932048.0	1.32	300.00	90 - 110	
107 Ag	27.97	ppb	482280.0	0.75	30.00	90 - 110	
111 Cd	294.30	ppb	1088410.0	0.70	300.00	90 - 110	
118 Sn	278.20	ppb	3089676.0	0.38	300.00	90 - 110	
121 Sb	285.10	ppb	4155887.0	0.41	300.00	90 - 110	
137 Ba	295.60	ppb	1625058.0	0.12	300.00	90 - 110	
182 W	30.18	ppb	419010.2	0.70	30.00	90 - 110	
205 Tl	275.20	ppb	7956778.0	1.14	300.00	90 - 110	
208 Pb	274.70	ppb	10748900.0	0.86	300.00	90 - 110	
235 U	2.02	ppb	95242.0	1.70	2.20	90 - 110	
238 U	279.90	ppb	12533340.0	0.83	300.00	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1173266.4	0.81	1282155.90	91.5	60 - 125	
45 Sc	1481508.3	1.24	1442971.30	102.7	60 - 125	
45 Sc	278602.8	0.55	279185.97	99.8	60 - 125	
45 Sc	3070577.5	1.25	3081898.50	99.6	60 - 125	
72 Ge	356582.9	0.84	366345.44	97.3	60 - 125	
72 Ge	148593.0	1.26	152918.19	97.2	60 - 125	
72 Ge	650890.3	0.45	658417.44	98.9	60 - 125	
115 In	3945582.8	0.89	4239832.00	93.1	60 - 125	
159 Tb	5947798.5	0.86	6179295.50	96.3	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

ICB QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06010.D\F6L06010.D#
Date Acquired:	Dec 8 2015 01:55 pm
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	ICB
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	ICB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.0717	ppb	81565.7	172.74	0.20	
9 Be	0.0108	ppb	92.2	26.75	0.10	
11 B	0.2513	ppb	1793.5	18.88	5.00	
23 Na	2.6920	ppb	107566.1	35.15	40.00	
24 Mg	-2.4850	ppb	97088.4	11.36	10.00	
27 Al	0.7269	ppb	23229.4	28.75	20.00	
28 Si	0.6924	ppb	2162.5	10.77	20.00	
31 P	0.1272	ppb	23320.5	500.39	10.00	
39 K	1.5360	ppb	52785.3	116.47	20.00	
40 Ca	4.0050	ppb	75535.9	9.89	25.00	
47 Ti	0.0119	ppb	133.3	87.51	0.50	
51 V	0.0318	ppb	2513.8	51.29	0.50	
52 Cr	0.0209	ppb	553.3	12.47	0.20	
55 Mn	0.0798	ppb	8134.8	17.15	0.20	
56 Fe	8.7030	ppb	130111.5	8.92	10.00	
59 Co	0.0175	ppb	1169.0	28.87	0.20	
60 Ni	-0.0808	ppb	909.8	17.51	0.20	
63 Cu	0.0111	ppb	446.0	67.15	0.40	
66 Zn	-0.2438	ppb	1136.7	3.14	2.00	
75 As	0.0503	ppb	101.3	13.46	0.20	
78 Se	0.1110	ppb	59.8	10.64	0.20	
90 Zr	0.0078	ppb	493.4	26.25	2.00	
95 Mo	0.2460	ppb	2065.8	12.43	0.40	
107 Ag	0.0004	ppb	75.6	70.70	0.20	
111 Cd	0.0114	ppb	75.6	68.44	0.20	
118 Sn	0.0992	ppb	1631.3	11.63	0.20	
121 Sb	0.0545	ppb	1661.3	1.72	0.40	
137 Ba	0.0206	ppb	352.2	43.90	0.20	
182 W	0.0307	ppb	611.2	24.14	1.00	
205 Tl	0.0452	ppb	1720.2	17.93	0.20	
208 Pb	0.0173	ppb	1336.7	16.39	0.10	
235 U	0.0002	ppb	25.6	75.96	1.00	
238 U	0.0373	ppb	1982.5	15.19	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1241142.5	1.51	1282155.90	96.8	60 - 125	
45 Sc	1451201.1	1.91	1442971.30	100.6	60 - 125	
45 Sc	279123.5	1.96	279185.97	100.0	60 - 125	
45 Sc	3057652.3	1.35	3081898.50	99.2	60 - 125	
72 Ge	365375.8	0.88	366345.44	99.7	60 - 125	
72 Ge	150963.6	0.05	152918.19	98.7	60 - 125	
72 Ge	656933.6	0.76	658417.44	99.8	60 - 125	
115 In	4261273.0	0.55	4239832.00	100.5	60 - 125	
159 Tb	6127928.0	0.83	6179295.50	99.2	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06011.D\F6L06011.D#
Date Acquired:	Dec 8 2015 01:59 pm
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	MRLL0801
Misc Info:	1/100/10 ppb
Vial Number:	1305
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	96150.6	0.0000	0.9532	ppb	8.69	50.00	
9 Be	# 3	6	4330.8	0.0000	0.9838	ppb	2.67	50.00	
11 B	# 3	6	32782.6	0.0000	9.9200	ppb	3.83	50.00	
23 Na	# 1	45	499527.1	0.0000	101.8000	ppb	0.99	50000.00	
24 Mg	# 3	45	1601991.0	0.0000	106.7000	ppb	2.75	50000.00	
27 Al	# 3	45	1913415.0	0.0000	102.1000	ppb	3.48	50000.00	
28 Si	# 1	45	1770.2	0.0000	0.2974	ppb	6.01	5000.00	
31 P	# 3	45	74659.5	0.0000	51.7000	ppb	3.60	500.00	
39 K	# 2	45	130777.8	0.0000	102.9000	ppb	1.29	50000.00	
40 Ca	# 1	45	957440.6	0.0000	99.0000	ppb	1.10	50000.00	
47 Ti	# 3	45	2498.1	0.0000	1.1380	ppb	5.19	500.00	
51 V	# 2	45	8223.0	0.0000	0.9958	ppb	2.40	500.00	
52 Cr	# 2	45	7427.3	0.0000	1.0170	ppb	1.78	500.00	
55 Mn	# 3	45	43361.2	0.0000	1.1000	ppb	1.82	3000.00	
56 Fe	# 1	45	1418738.0	0.0000	107.8000	ppb	0.37	50000.00	
59 Co	# 3	45	29110.0	0.0000	1.1450	ppb	3.17	500.00	
60 Ni	# 2	45	3348.0	0.0000	0.9808	ppb	0.35	500.00	
63 Cu	# 2	45	6928.6	0.0000	1.0920	ppb	1.06	500.00	
66 Zn	# 3	72	45549.2	0.0000	10.3500	ppb	1.92	500.00	
75 As	# 2	72	1055.6	0.0000	1.0160	ppb	2.16	500.00	
78 Se	# 1	72	536.2	0.0000	1.0440	ppb	4.91	500.00	
88 Sr	# 3	72	81288.2	0.0000	2.0400	ppb	2.42	500.00	
90 Zr	# 3	72	87211.0	0.0000	3.9370	ppb	2.57	50.00	
95 Mo	# 3	115	7690.1	0.0000	1.0310	ppb	2.29	500.00	
107 Ag	# 3	115	19248.2	0.0000	1.0230	ppb	1.69	50.00	
111 Cd	# 3	115	4466.6	0.0000	1.1030	ppb	1.60	500.00	
118 Sn	# 3	115	12365.9	0.0000	0.9874	ppb	2.24	500.00	
121 Sb	# 3	115	17779.7	0.0000	1.0710	ppb	4.72	500.00	
137 Ba	# 3	115	6528.4	0.0000	1.0530	ppb	0.94	1000.00	
182 W	# 3	159	28675.9	0.0000	1.9320	ppb	1.53	50.00	
205 Tl	# 3	159	32002.9	0.0000	1.0290	ppb	2.98	500.00	
208 Pb	# 3	159	43781.2	0.0000	1.0370	ppb	1.07	500.00	
235 U	# 3	159	382.2	0.0000	0.0073	ppb	12.77	30.00	
238 U	# 3	159	47831.6	0.0000	0.9995	ppb	0.50	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1282663.00	2.30	1282155.90	100.0	60 - 125	
45 Sc # 1	1494502.80	0.84	1442971.30	103.6	60 - 125	
45 Sc # 2	289690.75	0.43	279185.97	103.8	60 - 125	
45 Sc # 3	3153094.30	2.11	3081898.50	102.3	60 - 125	
72 Ge # 1	376910.50	0.45	366345.44	102.9	60 - 125	
72 Ge # 2	157243.42	0.19	152918.19	102.8	60 - 125	
72 Ge # 3	680420.13	0.53	658417.44	103.3	60 - 125	
115 In # 3	4291285.00	1.65	4239832.00	101.2	60 - 125	
159 Tb # 3	6321335.00	0.61	6179295.50	102.3	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06012.D\F6L06012.D#
Date Acquired:	Dec 8 2015 02:03 pm
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	MRLL0802
Misc Info:	0.5/50/4 ppb
Vial Number:	1306
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	92835.4	0.0000	0.5210	ppb	23.05	50.00	
9 Be	# 3	6	2323.6	0.0000	0.5082	ppb	4.16	50.00	
11 B	# 3	6	3656.1	0.0000	0.7840	ppb	4.66	50.00	
23 Na	# 1	45	299473.1	0.0000	50.1000	ppb	2.07	50000.00	
24 Mg	# 3	45	848710.1	0.0000	51.0800	ppb	2.40	50000.00	
27 Al	# 3	45	972613.1	0.0000	50.9000	ppb	0.84	50000.00	
28 Si	# 1	45	1683.5	0.0000	0.2087	ppb	4.50	5000.00	
31 P	# 3	45	23741.8	0.0000	-0.5114	ppb	39.70	500.00	
39 K	# 2	45	93338.2	0.0000	51.0400	ppb	1.13	50000.00	
40 Ca	# 1	45	495415.0	0.0000	48.6100	ppb	0.61	50000.00	
47 Ti	# 3	45	1171.2	0.0000	0.4977	ppb	10.80	500.00	
51 V	# 2	45	5420.8	0.0000	0.5004	ppb	4.07	500.00	
52 Cr	# 2	45	3963.7	0.0000	0.5048	ppb	1.74	500.00	
55 Mn	# 3	45	24629.4	0.0000	0.5439	ppb	0.51	3000.00	
56 Fe	# 1	45	766863.7	0.0000	56.9800	ppb	1.63	50000.00	
59 Co	# 3	45	15103.9	0.0000	0.5707	ppb	3.50	500.00	
60 Ni	# 2	45	2155.5	0.0000	0.4397	ppb	5.29	500.00	
63 Cu	# 2	45	3756.5	0.0000	0.5520	ppb	1.21	500.00	
66 Zn	# 3	72	19484.8	0.0000	4.1390	ppb	1.01	500.00	
75 As	# 2	72	569.3	0.0000	0.5180	ppb	2.21	500.00	
78 Se	# 1	72	268.7	0.0000	0.5171	ppb	2.29	500.00	
88 Sr	# 3	72	21413.4	0.0000	0.5088	ppb	0.21	500.00	
90 Zr	# 3	72	1191.2	0.0000	0.0388	ppb	4.29	50.00	
95 Mo	# 3	115	4118.5	0.0000	0.5167	ppb	0.73	500.00	
107 Ag	# 3	115	1886.9	0.0000	0.0945	ppb	1.42	50.00	
111 Cd	# 3	115	2144.8	0.0000	0.5125	ppb	2.37	500.00	
118 Sn	# 3	115	6608.5	0.0000	0.4968	ppb	4.20	500.00	
121 Sb	# 3	115	9084.4	0.0000	0.5078	ppb	2.22	500.00	
137 Ba	# 3	115	3319.4	0.0000	0.5027	ppb	2.30	1000.00	
182 W	# 3	159	186.7	0.0000	0.0005	ppb	304.03	50.00	
205 Tl	# 3	159	16731.1	0.0000	0.5277	ppb	0.52	500.00	
208 Pb	# 3	159	23339.1	0.0000	0.5412	ppb	0.74	500.00	
235 U	# 3	159	212.2	0.0000	0.0039	ppb	8.08	30.00	
238 U	# 3	159	24820.2	0.0000	0.5119	ppb	2.16	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1318207.10	1.23	1282155.90	102.8	60 - 125	
45 Sc # 1	1508490.30	1.66	1442971.30	104.5	60 - 125	
45 Sc # 2	294168.25	0.28	279185.97	105.4	60 - 125	
45 Sc # 3	3195347.50	0.58	3081898.50	103.7	60 - 125	
72 Ge # 1	377499.69	0.78	366345.44	103.0	60 - 125	
72 Ge # 2	158201.42	0.79	152918.19	103.5	60 - 125	
72 Ge # 3	678756.06	0.81	658417.44	103.1	60 - 125	
115 In # 3	4400532.00	0.18	4239832.00	103.8	60 - 125	
159 Tb # 3	6370789.50	0.83	6179295.50	103.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICS-A QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06013.D\F6L06013.D#
Date Acquired:	Dec 8 2015 02:08 pm
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	ICSA
Misc Info:	
Vial Number:	1303
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	ICS-A
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.43	ppb	63003.3	7.08	---	
9 Be	0.01	ppb	62.2	53.57	---	
11 B	0.52	ppb	1930.2	11.08	---	
23 Na	95630.00	ppb	342883200.0	1.02	120000.00	
24 Mg	90580.00	ppb	1061883000.0	1.55	120000.00	
27 Al	87410.00	ppb	1388226000.0	1.70	120000.00	
28 Si	5.60	ppb	7212.0	3.63	---	
31 P	94880.00	ppb	79332672.0	0.92	---	
39 K	94120.00	ppb	65240248.0	0.42	120000.00	
40 Ca	90550.00	ppb	766480700.0	0.92	120000.00	
47 Ti	2067.00	ppb	3687720.0	0.31	2400.00	
51 V	0.04	ppb	2429.8	36.54	---	
52 Cr	1.28	ppb	8503.2	1.55	---	
55 Mn	0.49	ppb	19020.8	0.76	---	
56 Fe	96120.00	ppb	1138796000.0	0.43	120000.00	
59 Co	0.22	ppb	5393.4	5.96	---	
60 Ni	0.07	ppb	1179.6	8.23	---	
63 Cu	0.61	ppb	3722.5	1.17	---	
66 Zn	2.62	ppb	11806.3	2.52	---	
75 As	0.18	ppb	214.4	4.23	---	
78 Se	0.09	ppb	47.3	21.83	---	
88 Sr	0.60	ppb	22499.6	0.38	---	
90 Zr	1.04	ppb	20937.2	0.77	---	
95 Mo	1930.00	ppb	11494310.0	0.19	2400.00	
107 Ag	0.02	ppb	383.4	14.42	---	
111 Cd	0.25	ppb	867.2	34.51	---	
118 Sn	0.14	ppb	1794.6	0.37	---	
121 Sb	0.03	ppb	1115.6	23.64	---	
137 Ba	0.14	ppb	905.6	12.82	---	
182 W	0.13	ppb	1824.6	3.67	---	
205 Tl	0.00	ppb	423.4	7.12	---	
208 Pb	0.22	ppb	8369.2	1.74	---	
235 U	0.00	ppb	12.2	296.32	---	
238 U	0.00	ppb	277.8	29.54	---	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	907455.5	1.03	1282155.90	70.8	60 - 125	
45 Sc	1366251.4	1.54	1442971.30	94.7	60 - 125	
45 Sc	267623.6	1.15	279185.97	95.9	60 - 125	
45 Sc	2685244.8	0.59	3081898.50	87.1	60 - 125	
72 Ge	335484.2	0.28	366345.44	91.6	60 - 125	
72 Ge	144931.1	0.34	152918.19	94.8	60 - 125	
72 Ge	610935.9	0.86	658417.44	92.8	60 - 125	
115 In	3575260.8	1.27	4239832.00	84.3	60 - 125	
159 Tb	5433992.5	0.46	6179295.50	87.9	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICS-AB QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06014.D\F6L06014.D#
Date Acquired:	Dec 8 2015 02:12 pm
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	ICSAB
Misc Info:	
Vial Number:	1304
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	ICS-AB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	20.05	ppb	234011.2	1.20	20.00	80 - 120	
9 Be	21.10	ppb	60976.8	1.91	20.00	80 - 120	
11 B	20.41	ppb	44019.0	1.32	20.00	80 - 120	
23 Na	94170.00	ppb	329386690.0	1.59	100000.00	80 - 120	
24 Mg	89130.00	ppb	1003963000.0	0.26	100000.00	80 - 120	
27 Al	86800.00	ppb	1324543000.0	0.70	100000.00	80 - 120	
28 Si	200.00	ppb	207120.3	1.12	200.00	80 - 120	
31 P	92660.00	ppb	74437952.0	0.78	100000.00	80 - 120	
39 K	93580.00	ppb	61781768.0	0.74	100000.00	80 - 120	
40 Ca	90270.00	ppb	745391300.0	1.69	100000.00	80 - 120	
47 Ti	2077.00	ppb	3560302.0	0.93	2000.00	80 - 120	
51 V	19.36	ppb	101300.7	0.65	20.00	80 - 120	
52 Cr	20.39	ppb	123767.0	0.27	20.00	80 - 120	
55 Mn	20.31	ppb	574429.7	1.37	20.00	80 - 120	
56 Fe	96090.00	ppb	1110461100.0	1.95	100000.00	80 - 120	
59 Co	20.71	ppb	420271.3	0.18	20.00	80 - 120	
60 Ni	19.71	ppb	40248.3	0.63	20.00	80 - 120	
63 Cu	19.32	ppb	102055.7	0.84	20.00	80 - 120	
66 Zn	21.21	ppb	77795.8	1.19	20.00	80 - 120	
75 As	19.95	ppb	17289.9	0.09	20.00	80 - 120	
78 Se	21.30	ppb	9499.8	0.29	20.00	80 - 120	
88 Sr	19.60	ppb	656011.4	0.22	20.00	80 - 120	
90 Zr	11.03	ppb	208393.6	0.65	20.00	80 - 120	Fail
95 Mo	1926.00	ppb	11236980.0	0.60	2000.00	80 - 120	
107 Ag	17.75	ppb	271774.5	0.59	20.00	80 - 120	
111 Cd	20.06	ppb	65896.1	1.47	20.00	80 - 120	
118 Sn	18.65	ppb	184225.6	0.67	20.00	80 - 120	
121 Sb	20.04	ppb	259948.4	0.25	20.00	80 - 120	
137 Ba	19.96	ppb	97557.1	0.96	20.00	80 - 120	
182 W	19.63	ppb	248614.9	1.24	20.00	80 - 120	
205 Tl	19.28	ppb	508714.6	0.46	20.00	80 - 120	
208 Pb	19.54	ppb	697737.2	0.43	20.00	80 - 120	
235 U	0.14	ppb	5888.2	1.50	0.14	80 - 120	
238 U	19.87	ppb	811608.2	0.27	19.86	80 - 120	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	850731.9	1.05	1282155.90	66.4	60 - 125	
45 Sc	1332655.3	1.07	1442971.30	92.4	60 - 125	
45 Sc	254876.5	0.35	279185.97	91.3	60 - 125	
45 Sc	2579890.0	0.67	3081898.50	83.7	60 - 125	
72 Ge	330237.5	0.65	366345.44	90.1	60 - 125	
72 Ge	138057.1	0.13	152918.19	90.3	60 - 125	
72 Ge	581667.1	0.30	658417.44	88.3	60 - 125	
115 In	3502783.3	0.43	4239832.00	82.6	60 - 125	
159 Tb	5423564.0	0.34	6179295.50	87.8	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06016.D\F6L06016.D#
Date Acquired: Dec 8 2015 02:21 pm
Operator: CCapul
Sample Name: CCV1
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update: Dec 08 2015 01:50 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	25.17 ppb	1.40	25.00	90 - 110	
9 Be	26.25 ppb	3.25	25.00	90 - 110	
11 B	27.05 ppb	3.88	25.00	90 - 110	
23 Na	24060.00 ppb	0.76	25000.00	90 - 110	
24 Mg	24300.00 ppb	0.66	25000.00	90 - 110	
27 Al	23960.00 ppb	0.44	25000.00	90 - 110	
28 Si	2406.00 ppb	1.21	2500.00	90 - 110	
31 P	244.90 ppb	0.79	250.00	90 - 110	
39 K	24410.00 ppb	0.80	25000.00	90 - 110	
40 Ca	22630.00 ppb	0.70	25000.00	90 - 110	
47 Ti	248.70 ppb	0.68	250.00	90 - 110	
51 V	246.20 ppb	0.80	250.00	90 - 110	
52 Cr	247.80 ppb	0.93	250.00	90 - 110	
55 Mn	1467.00 ppb	0.95	1500.00	90 - 110	
56 Fe	24680.00 ppb	0.56	25000.00	90 - 110	
59 Co	247.20 ppb	0.55	250.00	90 - 110	
60 Ni	256.50 ppb	0.56	250.00	90 - 110	
63 Cu	242.20 ppb	0.23	250.00	90 - 110	
66 Zn	241.50 ppb	0.77	250.00	90 - 110	
75 As	253.00 ppb	0.92	250.00	90 - 110	
78 Se	255.20 ppb	0.29	250.00	90 - 110	
88 Sr	244.80 ppb	0.84	250.00	90 - 110	
90 Zr	26.51 ppb	1.79	25.00	90 - 110	
95 Mo	247.80 ppb	1.68	250.00	90 - 110	
107 Ag	24.70 ppb	0.65	25.00	90 - 110	
111 Cd	246.20 ppb	1.65	250.00	90 - 110	
118 Sn	242.70 ppb	1.17	250.00	90 - 110	
121 Sb	247.10 ppb	1.44	250.00	90 - 110	
137 Ba	495.30 ppb	1.39	500.00	90 - 110	
182 W	25.33 ppb	1.35	25.00	90 - 110	
205 Tl	237.00 ppb	1.53	250.00	90 - 110	
208 Pb	234.50 ppb	1.72	250.00	90 - 110	
235 U	1.75 ppb	1.07	1.80	90 - 110	
238 U	241.60 ppb	0.81	250.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1048810.50	1.92	1282155.90	81.8	60 - 125	
45 Sc	1436513.30	0.66	1442971.30	99.6	60 - 125	
45 Sc	266805.00	0.47	279185.97	95.6	60 - 125	
45 Sc	2884692.80	0.26	3081898.50	93.6	60 - 125	
72 Ge	350013.09	0.30	366345.44	95.5	60 - 125	
72 Ge	141143.00	1.05	152918.19	92.3	60 - 125	
72 Ge	615845.56	1.05	658417.44	93.5	60 - 125	
115 In	3887841.30	1.22	4239832.00	91.7	60 - 125	
159 Tb	5908745.00	0.94	6179295.50	95.6	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06017.D\F6L06017.D#
Date Acquired:	Dec 8 2015 02:25 pm
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	CCB1
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0493	ppb	74337.1	256.19	0.20	
9 Be	0.0034	ppb	56.7	31.06	0.10	
11 B	0.1098	ppb	1257.9	26.83	5.00	
23 Na	1.2530	ppb	96743.5	57.23	40.00	
24 Mg	-1.2330	ppb	109756.7	4.70	10.00	
27 Al	0.4772	ppb	18068.6	38.87	20.00	
28 Si	0.3247	ppb	1656.8	38.65	20.00	
31 P	0.2759	ppb	22625.6	354.77	10.00	
39 K	0.9310	ppb	50616.7	150.91	20.00	
40 Ca	2.5650	ppb	59321.8	9.70	25.00	
47 Ti	0.0166	ppb	137.8	89.31	0.50	
51 V	0.0233	ppb	2384.9	28.15	0.50	
52 Cr	0.0082	ppb	453.8	89.47	0.20	
55 Mn	0.0160	ppb	5801.4	46.38	0.20	
56 Fe	7.4060	ppb	107882.6	7.91	10.00	
59 Co	-0.0035	ppb	642.3	68.41	0.20	
60 Ni	-0.1371	ppb	760.9	13.00	0.20	
63 Cu	0.0050	ppb	397.6	72.88	0.40	
66 Zn	-0.2849	ppb	932.3	0.52	2.00	
75 As	0.0427	ppb	91.8	6.92	0.20	
78 Se	0.0793	ppb	42.0	8.80	0.20	
88 Sr	-0.0132	ppb	986.7	7.89	0.20	
90 Zr	0.0086	ppb	491.1	27.86	2.00	
95 Mo	0.3029	ppb	2419.2	6.20	0.40	
107 Ag	-0.0002	ppb	62.2	221.79	0.20	
111 Cd	0.0035	ppb	43.2	55.47	0.20	
118 Sn	0.0511	ppb	1033.4	17.33	0.20	
121 Sb	0.0273	ppb	1207.9	21.48	0.40	
137 Ba	0.0046	ppb	252.2	37.79	0.20	
182 W	0.0161	ppb	398.9	13.39	1.00	
205 Tl	0.0278	ppb	1191.2	19.42	0.20	
208 Pb	0.0073	ppb	924.5	25.38	0.10	
235 U	0.0001	ppb	17.8	57.31	1.00	
238 U	0.0232	ppb	1320.1	15.55	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1153773.6	3.37	1282155.90	90.0	60 - 125	
45 Sc	1374943.5	1.11	1442971.30	95.3	60 - 125	
45 Sc	269835.7	1.09	279185.97	96.7	60 - 125	
45 Sc	2948168.3	0.44	3081898.50	95.7	60 - 125	
72 Ge	347388.1	0.41	366345.44	94.8	60 - 125	
72 Ge	147136.3	0.61	152918.19	96.2	60 - 125	
72 Ge	631021.6	0.60	658417.44	95.8	60 - 125	
115 In	4171797.0	0.32	4239832.00	98.4	60 - 125	
159 Tb	6077836.5	0.61	6179295.50	98.4	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06163.D\F6L06163.D#
Date Acquired: Dec 9 2015 12:50 am
Operator: CCapul
Sample Name: CCV14
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update: Dec 08 2015 01:50 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	23.87 ppb	0.17	25.00	90 - 110	
9 Be	21.06 ppb	0.87	25.00	90 - 110	Fail
11 B	22.14 ppb	0.73	25.00	90 - 110	Fail
23 Na	24890.00 ppb	0.58	25000.00	90 - 110	
24 Mg	27540.00 ppb	1.28	25000.00	90 - 110	Fail
27 Al	26560.00 ppb	1.05	25000.00	90 - 110	
28 Si	2600.00 ppb	0.83	2500.00	90 - 110	
31 P	268.30 ppb	0.89	250.00	90 - 110	
39 K	25430.00 ppb	0.96	25000.00	90 - 110	
40 Ca	23330.00 ppb	0.84	25000.00	90 - 110	
47 Ti	243.80 ppb	0.05	250.00	90 - 110	
51 V	243.20 ppb	0.60	250.00	90 - 110	
52 Cr	240.70 ppb	0.52	250.00	90 - 110	
55 Mn	1397.00 ppb	0.31	1500.00	90 - 110	
56 Fe	24300.00 ppb	0.99	25000.00	90 - 110	
59 Co	233.20 ppb	0.25	250.00	90 - 110	
60 Ni	246.60 ppb	0.56	250.00	90 - 110	
63 Cu	232.00 ppb	0.36	250.00	90 - 110	
66 Zn	240.00 ppb	0.68	250.00	90 - 110	
75 As	251.90 ppb	1.58	250.00	90 - 110	
78 Se	250.10 ppb	0.16	250.00	90 - 110	
88 Sr	245.40 ppb	0.37	250.00	90 - 110	
90 Zr	31.28 ppb	1.54	25.00	90 - 110	Fail
95 Mo	251.30 ppb	0.70	250.00	90 - 110	
107 Ag	24.68 ppb	1.30	25.00	90 - 110	
111 Cd	249.40 ppb	0.31	250.00	90 - 110	
118 Sn	240.20 ppb	0.56	250.00	90 - 110	
121 Sb	242.90 ppb	0.45	250.00	90 - 110	
137 Ba	508.70 ppb	0.39	500.00	90 - 110	
182 W	24.26 ppb	0.76	25.00	90 - 110	
205 Tl	233.80 ppb	1.12	250.00	90 - 110	
208 Pb	230.70 ppb	0.99	250.00	90 - 110	
235 U	1.63 ppb	1.05	1.80	90 - 110	
238 U	230.30 ppb	0.80	250.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1288999.10	0.46	1282155.90	100.5	60 - 125	
45 Sc	1029623.20	0.66	1442971.30	71.4	60 - 125	
45 Sc	190786.78	0.53	279185.97	68.3	60 - 125	
45 Sc	2544402.80	0.19	3081898.50	82.6	60 - 125	
72 Ge	251994.53	0.78	366345.44	68.8	60 - 125	
72 Ge	100312.48	1.63	152918.19	65.6	60 - 125	
72 Ge	502926.19	0.82	658417.44	76.4	60 - 125	
115 In	3013819.00	0.78	4239832.00	71.1	60 - 125	
159 Tb	4403310.00	0.34	6179295.50	71.3	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

4 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06164.D\F6L06164.D#
Date Acquired:	Dec 9 2015 12:54 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	CCB14
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.2310	ppb	85966.4	17.87	0.20	Fail
9 Be	0.0051	ppb	75.6	43.06	0.10	
11 B	0.2529	ppb	1991.3	8.22	5.00	
23 Na	-11.0500	ppb	40654.2	6.00	40.00	
24 Mg	-0.2910	ppb	106168.0	57.84	10.00	
27 Al	2.0750	ppb	39998.3	9.07	20.00	
28 Si	1.0690	ppb	1901.3	7.64	20.00	
31 P	6.1010	ppb	24362.1	14.34	10.00	
39 K	12.0200	ppb	42833.4	8.70	20.00	
40 Ca	12.3800	ppb	110967.2	1.66	25.00	
47 Ti	0.0185	ppb	123.3	17.53	0.50	
51 V	0.2050	ppb	2473.6	5.85	0.50	
52 Cr	0.0239	ppb	406.9	30.25	0.20	
55 Mn	0.1283	ppb	8184.8	9.65	0.20	
56 Fe	10.4900	ppb	112319.3	5.16	10.00	Fail
59 Co	0.0110	ppb	851.2	33.55	0.20	
60 Ni	-0.1318	ppb	566.7	2.88	0.20	
63 Cu	0.0193	ppb	350.2	2.85	0.40	
66 Zn	-0.1300	ppb	1263.4	12.31	2.00	
75 As	0.0723	ppb	86.0	13.69	0.20	
78 Se	0.0792	ppb	32.4	6.88	0.20	
88 Sr	0.0332	ppb	2199.1	9.80	0.20	
90 Zr	0.0306	ppb	775.6	12.82	2.00	
95 Mo	0.1570	ppb	1112.3	20.43	0.40	
107 Ag	0.0011	ppb	68.9	48.40	0.20	
111 Cd	0.0096	ppb	53.0	55.04	0.20	
118 Sn	0.0784	ppb	1072.3	4.08	0.20	
121 Sb	0.0338	ppb	1035.6	11.38	0.40	
137 Ba	0.1652	ppb	939.0	7.63	0.20	
182 W	0.0150	ppb	288.9	25.33	1.00	
205 Tl	0.0538	ppb	1480.1	8.06	0.20	
208 Pb	0.0242	ppb	1207.8	3.29	0.10	
235 U	0.0002	ppb	18.9	63.14	1.00	
238 U	0.0304	ppb	1245.7	12.22	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1374310.4	0.86	1282155.90	107.2	60 - 125	
45 Sc	1067641.8	0.47	1442971.30	74.0	60 - 125	
45 Sc	198020.3	0.50	279185.97	70.9	60 - 125	
45 Sc	2568056.5	1.27	3081898.50	83.3	60 - 125	
72 Ge	268836.0	0.19	366345.44	73.4	60 - 125	
72 Ge	106321.6	0.76	152918.19	69.5	60 - 125	
72 Ge	519828.4	0.72	658417.44	79.0	60 - 125	
115 In	3304840.0	0.83	4239832.00	77.9	60 - 125	
159 Tb	4587444.5	0.44	6179295.50	74.2	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

2 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06165.D\F6L06165.D#
Date Acquired:	Dec 9 2015 12:58 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	IML015SB
Misc Info:	
Vial Number:	3410
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	MBS
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.2056	ppb	86299.3	22.70	0.50	
9 Be	0.0008	ppb	55.6	297.60	0.50	
11 B	0.1797	ppb	1739.1	10.06	10.00	
23 Na	-13.9900	ppb	32420.4	0.31	100.00	
24 Mg	1.8800	ppb	130043.6	5.18	100.00	
27 Al	4.4220	ppb	75385.4	0.71	100.00	
28 Si	2.6490	ppb	3203.8	1.96	50.00	
31 P	16.2500	ppb	32358.4	2.52	10.00	Fail
39 K	11.1800	ppb	42505.6	7.84	100.00	
40 Ca	46.0800	ppb	333959.8	0.48	100.00	
47 Ti	0.0757	ppb	220.0	14.50	0.50	
51 V	0.0133	ppb	1714.6	63.27	0.50	
52 Cr	-0.0016	ppb	288.0	148.16	0.50	
55 Mn	0.3821	ppb	15223.9	1.94	0.50	
56 Fe	5.2270	ppb	63639.3	0.58	100.00	
59 Co	-0.0084	ppb	458.9	20.27	0.50	
60 Ni	-0.2742	ppb	347.1	3.84	0.50	
63 Cu	0.0433	ppb	449.3	8.37	0.50	
66 Zn	2.5290	ppb	9736.9	1.36	2.00	Fail
75 As	0.0069	ppb	42.4	124.47	0.50	
78 Se	0.0070	ppb	6.2	136.07	0.50	
88 Sr	0.0700	ppb	3286.1	6.19	0.50	
90 Zr	0.0462	ppb	1034.5	5.94	5.00	
95 Mo	0.0104	ppb	304.5	72.96	0.50	
107 Ag	-0.0016	ppb	30.0	39.59	0.50	
111 Cd	-0.0020	ppb	17.3	150.51	0.50	
118 Sn	3.3420	ppb	31245.7	1.38	20.00	
121 Sb	-0.0110	ppb	486.7	2.78	0.50	
137 Ba	0.1488	ppb	858.9	12.72	0.50	
182 W	-0.0005	ppb	124.4	347.87	2.00	
205 Tl	0.0001	ppb	284.5	701.18	0.50	
208 Pb	0.0168	ppb	995.6	7.48	0.50	
235 U	-0.0001	ppb	6.7	205.21	---	
238 U	0.0009	ppb	228.9	29.97	0.50	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1373694.9	0.82	1282155.90	107.1	60 - 125	
45 Sc	1067680.4	0.34	1442971.30	74.0	60 - 125	
45 Sc	198499.8	0.79	279185.97	71.1	60 - 125	
45 Sc	2558820.8	0.86	3081898.50	83.0	60 - 125	
72 Ge	267269.0	0.26	366345.44	73.0	60 - 125	
72 Ge	106025.2	1.61	152918.19	69.3	60 - 125	
72 Ge	518055.0	0.48	658417.44	78.7	60 - 125	
115 In	3285919.0	0.43	4239832.00	77.5	60 - 125	
159 Tb	4640614.0	0.45	6179295.50	75.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

2 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

LCS QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06166.D\F6L06166.D#
Date Acquired: Dec 9 2015 01:03 am
Operator: CCapul
Sample Name: IML015SL
Misc Info:
Vial Number: 3411
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update: Dec 08 2015 01:50 pm
Sample Type: LCSS
Final Dil Factor: 1.00

Analyte Elements

Element	CPS Mean	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 Li	623683.13	37.89	ppb	0.54	40.00	80 - 120	
9 Be	147525.30	32.18	ppb	1.17	40.00	80 - 120	
11 B	109115.80	32.07	ppb	1.71	40.00	80 - 120	
23 Na	10993710.00	3991.00	ppb	0.86	4000.00	80 - 120	
24 Mg	50431500.00	4495.00	ppb	1.68	4000.00	80 - 120	
27 Al	64427488.00	4247.00	ppb	0.79	4000.00	80 - 120	
28 Si	5505.95	5.57	ppb	76.81	4000.00	80 - 120	Fail
31 P	32593.46	16.45	ppb	1.24	400.00	80 - 120	Fail
39 K	2147162.00	4215.00	ppb	1.28	4000.00	80 - 120	
40 Ca	24308850.00	3757.00	ppb	1.11	4000.00	80 - 120	
47 Ti	67861.67	39.77	ppb	0.78	40.00	80 - 120	
51 V	157710.30	40.13	ppb	0.71	40.00	80 - 120	
52 Cr	182128.50	39.57	ppb	0.43	40.00	80 - 120	
55 Mn	1100735.00	39.31	ppb	1.41	40.00	80 - 120	
56 Fe	37115712.00	4102.00	ppb	1.04	4000.00	80 - 120	
59 Co	827624.38	41.06	ppb	1.01	40.00	80 - 120	
60 Ni	65418.10	42.75	ppb	0.58	40.00	80 - 120	
63 Cu	164162.59	41.01	ppb	0.46	40.00	80 - 120	
66 Zn	257187.70	82.31	ppb	0.54	80.00	80 - 120	
75 As	25790.06	39.89	ppb	0.34	40.00	80 - 120	
78 Se	13771.73	39.46	ppb	0.96	40.00	80 - 120	
88 Sr	1214151.00	41.86	ppb	0.54	40.00	80 - 120	
90 Zr	23533.43	1.42	ppb	1.98	30.00	80 - 120	Fail
95 Mo	207551.09	38.80	ppb	0.67	40.00	80 - 120	
107 Ag	527836.38	37.65	ppb	0.51	40.00	80 - 120	
111 Cd	117851.30	39.19	ppb	0.95	40.00	80 - 120	
118 Sn	363047.19	40.18	ppb	0.46	40.00	80 - 120	
121 Sb	455204.81	38.36	ppb	0.88	40.00	80 - 120	
137 Ba	180272.80	40.30	ppb	0.58	40.00	80 - 120	
182 W	215.57	0.01	ppb	17.59	40.00	80 - 120	Fail
205 Tl	905342.69	40.65	ppb	0.74	40.00	80 - 120	
208 Pb	1238032.00	41.08	ppb	0.89	40.00	80 - 120	
235 U	9840.74	0.27	ppb	1.97	0.28	80 - 120	
238 U	1345553.00	39.02	ppb	1.49	39.72	80 - 120	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1349693.40	0.43	1282155.90	105.3	60 - 125	
45 Sc	1043046.10	0.92	1442971.30	72.3	60 - 125	
45 Sc	193540.97	0.25	279185.97	69.3	60 - 125	
45 Sc	2564449.30	0.71	3081898.50	83.2	60 - 125	
72 Ge	258483.80	0.62	366345.44	70.6	60 - 125	
72 Ge	103141.10	0.36	152918.19	67.4	60 - 125	
72 Ge	504506.28	0.30	658417.44	76.6	60 - 125	
115 In	3208336.80	0.81	4239832.00	75.7	60 - 125	
159 Tb	4580428.50	0.63	6179295.50	74.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

4 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

LCS QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06167.D\F6L06167.D#
Date Acquired:	Dec 9 2015 01:07 am
Operator:	CCapul
Sample Name:	IML015SC
Misc Info:	
Vial Number:	3412
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	LCSS
Final Dil Factor:	1.00

Analyte Elements

Element	CPS Mean	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 Li	606105.69	37.42	ppb	2.46	40.00	80 - 120	
9 Be	143597.50	31.89	ppb	0.84	40.00	80 - 120	Fail
11 B	106915.00	31.99	ppb	2.23	40.00	80 - 120	Fail
23 Na	10803630.00	4016.00	ppb	1.13	4000.00	80 - 120	
24 Mg	49751420.00	4496.00	ppb	0.57	4000.00	80 - 120	
27 Al	63805500.00	4264.00	ppb	0.63	4000.00	80 - 120	
28 Si	3431.64	3.12	ppb	2.84	4000.00	80 - 120	Fail
31 P	33357.14	17.98	ppb	0.32	400.00	80 - 120	Fail
39 K	2112036.00	4198.00	ppb	0.39	4000.00	80 - 120	
40 Ca	23662720.00	3745.00	ppb	1.26	4000.00	80 - 120	
47 Ti	66482.10	39.50	ppb	0.34	40.00	80 - 120	
51 V	154236.50	39.74	ppb	1.05	40.00	80 - 120	
52 Cr	177885.30	39.14	ppb	0.45	40.00	80 - 120	
55 Mn	1089442.00	39.45	ppb	1.42	40.00	80 - 120	
56 Fe	36529248.00	4134.00	ppb	1.41	4000.00	80 - 120	
59 Co	806300.63	40.56	ppb	0.98	40.00	80 - 120	
60 Ni	62178.59	41.13	ppb	0.69	40.00	80 - 120	
63 Cu	158189.91	40.02	ppb	0.94	40.00	80 - 120	
66 Zn	244286.41	78.54	ppb	0.18	80.00	80 - 120	
75 As	24859.56	39.24	ppb	0.88	40.00	80 - 120	
78 Se	13400.71	39.11	ppb	0.64	40.00	80 - 120	
88 Sr	1186231.00	41.10	ppb	0.25	40.00	80 - 120	
90 Zr	17527.96	1.06	ppb	2.41	30.00	80 - 120	Fail
95 Mo	203345.20	38.69	ppb	1.31	40.00	80 - 120	
107 Ag	518178.81	37.63	ppb	1.29	40.00	80 - 120	
111 Cd	115312.20	39.03	ppb	1.68	40.00	80 - 120	
118 Sn	347938.09	39.19	ppb	0.79	40.00	80 - 120	
121 Sb	442200.91	37.93	ppb	1.22	40.00	80 - 120	
137 Ba	175701.80	39.98	ppb	1.78	40.00	80 - 120	
182 W	211.12	0.01	ppb	29.65	40.00	80 - 120	Fail
205 Tl	881144.00	39.72	ppb	0.29	40.00	80 - 120	
208 Pb	1208001.00	40.25	ppb	0.10	40.00	80 - 120	
235 U	9589.45	0.26	ppb	2.73	0.28	80 - 120	
238 U	1307909.00	38.09	ppb	1.34	39.72	80 - 120	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1325726.50	0.48	1282155.90	103.4	60 - 125	
45 Sc	1018714.70	1.89	1442971.30	70.6	60 - 125	
45 Sc	191120.67	1.08	279185.97	68.5	60 - 125	
45 Sc	2529372.80	0.53	3081898.50	82.1	60 - 125	
72 Ge	253819.50	0.83	366345.44	69.3	60 - 125	
72 Ge	101081.80	0.68	152918.19	66.1	60 - 125	
72 Ge	502033.06	0.18	658417.44	76.2	60 - 125	
115 In	3151957.80	0.87	4239832.00	74.3	60 - 125	
159 Tb	4561456.00	0.41	6179295.50	73.8	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

6 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

Sample QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06168.D\F6L06168.D#
Date Acquired: Dec 9 2015 01:11 am
Acq. Method: EMX6020H.M
Operator: CCapul
Sample Name: L067-01
Misc Info:
Vial Number: 3501
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update: Dec 08 2015 01:50 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	409243.4	0.0000	22.8100	ppb	0.84	50.00	
9 Be	# 3	6	5874.7	0.0000	1.2740	ppb	3.76	50.00	
11 B	# 3	6	27797.6	0.0000	7.9480	ppb	1.00	50.00	
23 Na	# 1	45	739663.4	0.0000	223.9000	ppb	1.18	50000.00	
24 Mg	# 3	45	73914016.0	0.0000	5999.0000	ppb	0.55	50000.00	
27 Al	# 3	45	588561280.0	0.0000	35310.0000	ppb	1.12	50000.00	
28 Si	# 1	45	1172408.0	0.0000	1342.0000	ppb	1.85	5000.00	
31 P	# 3	45	314896.4	0.0000	334.6000	ppb	0.94	500.00	
39 K	# 2	45	2860145.0	0.0000	5065.0000	ppb	0.28	50000.00	
40 Ca	# 1	45	151228500.0	0.0000	21600.0000	ppb	0.73	50000.00	
47 Ti	# 3	45	634764.1	0.0000	339.0000	ppb	0.45	500.00	
51 V	# 2	45	234631.6	0.0000	53.8500	ppb	0.80	500.00	
52 Cr	# 2	45	145597.0	0.0000	28.4400	ppb	0.69	500.00	
55 Mn	# 3	45	12807610.0	0.0000	417.8000	ppb	0.34	3000.00	
56 Fe	# 1	45	270281410.0	0.0000	27580.0000	ppb	1.00	50000.00	
59 Co	# 3	45	233998.0	0.0000	10.5400	ppb	1.09	500.00	
60 Ni	# 2	45	41295.5	0.0000	24.0600	ppb	1.09	500.00	
63 Cu	# 2	45	81900.8	0.0000	18.3700	ppb	1.07	500.00	
66 Zn	# 3	72	228528.1	0.0000	69.3700	ppb	0.51	500.00	
75 As	# 2	72	5690.7	0.0000	8.3570	ppb	1.49	500.00	
78 Se	# 1	72	136.4	0.0000	0.3813	ppb	9.17	500.00	
88 Sr	# 3	72	1854358.0	0.0000	60.7300	ppb	0.53	500.00	
90 Zr	# 3	72	119184.3	0.0000	6.9010	ppb	0.55	50.00	
95 Mo	# 3	115	4512.0	0.0000	0.7890	ppb	2.32	500.00	
107 Ag	# 3	115	1333.4	0.0000	0.0903	ppb	6.17	50.00	
111 Cd	# 3	115	1665.7	0.0000	0.5397	ppb	2.91	500.00	
118 Sn	# 3	115	29497.5	0.0000	3.1910	ppb	2.02	500.00	
121 Sb	# 3	115	6949.7	0.0000	0.5282	ppb	2.08	500.00	
137 Ba	# 3	115	977990.7	0.0000	216.1000	ppb	0.21	1000.00	
182 W	# 3	159	1532.4	0.0000	0.1273	ppb	2.35	50.00	
205 Tl	# 3	159	8943.3	0.0000	0.3779	ppb	0.50	500.00	
208 Pb	# 3	159	593707.8	0.0000	19.1400	ppb	0.16	500.00	
235 U	# 3	159	174.5	0.0000	0.0044	ppb	21.65	30.00	
238 U	# 3	159	24314.6	0.0000	0.6799	ppb	0.42	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1346077.40	0.34	1282155.90	105.0	60 - 125	
45 Sc # 1	1130072.60	2.36	1442971.30	78.3	60 - 125	
45 Sc # 2	215148.36	1.35	279185.97	77.1	60 - 125	
45 Sc # 3	2817795.30	0.38	3081898.50	91.4	60 - 125	
72 Ge # 1	258325.44	1.34	366345.44	70.5	60 - 125	
72 Ge # 2	108060.20	0.03	152918.19	70.7	60 - 125	
72 Ge # 3	531293.13	0.29	658417.44	80.7	60 - 125	
115 In # 3	3247801.80	0.40	4239832.00	76.6	60 - 125	
159 Tb # 3	4711769.00	0.10	6179295.50	76.3	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06169.D\F6L06169.D#
Date Acquired: Dec 9 2015 01:16 am
Acq. Method: EMX6020H.M
Operator: CCapul
Sample Name: L067-02
Misc Info:
Vial Number: 3502
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update: Dec 08 2015 01:50 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	426531.2	0.0000	24.6600	ppb	1.16	50.00	
9 Be	# 3	6	6246.0	0.0000	1.3840	ppb	2.14	50.00	
11 B	# 3	6	30619.7	0.0000	8.9760	ppb	0.10	50.00	
23 Na	# 1	45	247458.4	0.0000	54.3200	ppb	0.52	50000.00	
24 Mg	# 3	45	74761720.0	0.0000	5947.0000	ppb	0.41	50000.00	
27 Al	# 3	45	640820480.0	0.0000	37680.0000	ppb	0.78	50000.00	
28 Si	# 1	45	1525008.0	0.0000	1671.0000	ppb	0.92	5000.00	
31 P	# 3	45	374615.3	0.0000	394.2000	ppb	0.71	500.00	
39 K	# 2	45	3446334.0	0.0000	6011.0000	ppb	0.33	50000.00	
40 Ca	# 1	45	133747500.0	0.0000	18280.0000	ppb	0.18	50000.00	
47 Ti	# 3	45	798491.6	0.0000	417.9000	ppb	0.42	500.00	
51 V	# 2	45	266213.5	0.0000	60.1000	ppb	0.52	500.00	
52 Cr	# 2	45	153627.6	0.0000	29.5000	ppb	0.85	500.00	
55 Mn	# 3	45	12263180.0	0.0000	392.1000	ppb	1.14	3000.00	
56 Fe	# 1	45	309825410.0	0.0000	30260.0000	ppb	0.89	50000.00	
59 Co	# 3	45	211754.3	0.0000	9.3470	ppb	0.08	500.00	
60 Ni	# 2	45	40412.8	0.0000	23.1300	ppb	0.46	500.00	
63 Cu	# 2	45	104400.5	0.0000	23.0300	ppb	0.45	500.00	
66 Zn	# 3	72	259321.1	0.0000	77.3800	ppb	1.17	500.00	
75 As	# 2	72	6978.4	0.0000	10.1000	ppb	1.02	500.00	
78 Se	# 1	72	148.4	0.0000	0.3976	ppb	6.73	500.00	
88 Sr	# 3	72	913192.3	0.0000	29.3500	ppb	0.13	500.00	
90 Zr	# 3	72	166052.3	0.0000	9.4500	ppb	1.32	50.00	
95 Mo	# 3	115	5207.8	0.0000	0.9109	ppb	1.91	500.00	
107 Ag	# 3	115	1969.1	0.0000	0.1341	ppb	1.84	50.00	
111 Cd	# 3	115	2203.5	0.0000	0.7114	ppb	8.23	500.00	
118 Sn	# 3	115	32243.4	0.0000	3.4670	ppb	2.01	500.00	
121 Sb	# 3	115	6975.3	0.0000	0.5263	ppb	3.00	500.00	
137 Ba	# 3	115	1152683.0	0.0000	253.0000	ppb	1.57	1000.00	
182 W	# 3	159	1450.1	0.0000	0.1181	ppb	5.45	50.00	
205 Tl	# 3	159	9265.8	0.0000	0.3866	ppb	1.46	500.00	
208 Pb	# 3	159	1001507.0	0.0000	31.8700	ppb	0.82	500.00	
235 U	# 3	159	202.2	0.0000	0.0050	ppb	6.64	30.00	
238 U	# 3	159	27321.8	0.0000	0.7543	ppb	0.89	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1318922.80	0.50	1282155.90	102.9	60 - 125	
45 Sc # 1	1180545.40	1.60	1442971.30	81.8	60 - 125	
45 Sc # 2	218908.88	1.05	279185.97	78.4	60 - 125	
45 Sc # 3	2875012.80	0.61	3081898.50	93.3	60 - 125	
72 Ge # 1	269617.22	0.10	366345.44	73.6	60 - 125	
72 Ge # 2	109745.63	0.77	152918.19	71.8	60 - 125	
72 Ge # 3	540925.13	0.89	658417.44	82.2	60 - 125	
115 In # 3	3270607.30	0.27	4239832.00	77.1	60 - 125	
159 Tb # 3	4775950.50	0.89	6179295.50	77.3	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06170.D\F6L06170.D#
Date Acquired:	Dec 9 2015 01:20 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-03
Misc Info:	
Vial Number:	3503
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	377044.9	0.0000	20.5100	ppb	0.70	50.00	
9 Be	# 3	6	5976.9	0.0000	1.2960	ppb	0.96	50.00	
11 B	# 3	6	23792.8	0.0000	6.7520	ppb	3.31	50.00	
23 Na	# 1	45	484573.4	0.0000	131.5000	ppb	0.31	50000.00	
24 Mg	# 3	45	68761984.0	0.0000	5477.0000	ppb	1.07	50000.00	
27 Al	# 3	45	535886020.0	0.0000	31560.0000	ppb	0.38	50000.00	
28 Si	# 1	45	1021348.0	0.0000	1124.0000	ppb	1.60	5000.00	
31 P	# 3	45	262119.0	0.0000	268.9000	ppb	0.63	500.00	
39 K	# 2	45	2763883.0	0.0000	4811.0000	ppb	0.51	50000.00	
40 Ca	# 1	45	57976072.0	0.0000	7956.0000	ppb	0.40	50000.00	
47 Ti	# 3	45	695601.1	0.0000	364.6000	ppb	0.54	500.00	
51 V	# 2	45	213090.4	0.0000	48.0700	ppb	0.25	500.00	
52 Cr	# 2	45	138598.5	0.0000	26.6300	ppb	0.39	500.00	
55 Mn	# 3	45	13013300.0	0.0000	416.7000	ppb	0.96	3000.00	
56 Fe	# 1	45	270352510.0	0.0000	26520.0000	ppb	0.71	50000.00	
59 Co	# 3	45	230508.5	0.0000	10.1900	ppb	0.65	500.00	
60 Ni	# 2	45	44197.7	0.0000	25.3600	ppb	0.57	500.00	
63 Cu	# 2	45	88605.6	0.0000	19.5500	ppb	0.45	500.00	
66 Zn	# 3	72	216397.0	0.0000	64.6000	ppb	0.86	500.00	
75 As	# 2	72	5551.8	0.0000	7.9300	ppb	1.48	500.00	
78 Se	# 1	72	128.0	0.0000	0.3381	ppb	13.80	500.00	
88 Sr	# 3	72	1309957.0	0.0000	42.2000	ppb	0.53	500.00	
90 Zr	# 3	72	146671.4	0.0000	8.3600	ppb	1.10	50.00	
95 Mo	# 3	115	4624.3	0.0000	0.8012	ppb	3.02	500.00	
107 Ag	# 3	115	1346.8	0.0000	0.0903	ppb	0.99	50.00	
111 Cd	# 3	115	1875.5	0.0000	0.6024	ppb	6.44	500.00	
118 Sn	# 3	115	29397.3	0.0000	3.1480	ppb	1.95	500.00	
121 Sb	# 3	115	7000.9	0.0000	0.5266	ppb	3.27	500.00	
137 Ba	# 3	115	866668.2	0.0000	189.6000	ppb	0.64	1000.00	
182 W	# 3	159	1525.7	0.0000	0.1253	ppb	3.87	50.00	
205 Tl	# 3	159	8159.5	0.0000	0.3401	ppb	2.80	500.00	
208 Pb	# 3	159	644315.5	0.0000	20.5600	ppb	0.79	500.00	
235 U	# 3	159	171.1	0.0000	0.0042	ppb	5.74	30.00	
238 U	# 3	159	22274.3	0.0000	0.6160	ppb	1.47	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1347075.40	1.28	1282155.90	105.1	60 - 125	
45 Sc # 1	1175471.10	1.63	1442971.30	81.5	60 - 125	
45 Sc # 2	218691.45	0.43	279185.97	78.3	60 - 125	
45 Sc # 3	2870888.00	0.50	3081898.50	93.2	60 - 125	
72 Ge # 1	272057.53	1.12	366345.44	74.3	60 - 125	
72 Ge # 2	111056.98	0.74	152918.19	72.6	60 - 125	
72 Ge # 3	539944.19	0.35	658417.44	82.0	60 - 125	
115 In # 3	3280669.50	0.52	4239832.00	77.4	60 - 125	
159 Tb # 3	4759890.50	0.85	6179295.50	77.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06171.D\F6L06171.D#
Date Acquired: Dec 9 2015 01:24 am
Acq. Method: EMX6020H.M
Operator: CCapul
Sample Name: L067-04
Misc Info:
Vial Number: 3504
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update: Dec 08 2015 01:50 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	312514.2	0.0000	16.2600	ppb	0.70	50.00	
9 Be	# 3	6	5076.6	0.0000	1.1150	ppb	1.01	50.00	
11 B	# 3	6	17983.5	0.0000	5.1030	ppb	3.30	50.00	
23 Na	# 1	45	523394.2	0.0000	143.0000	ppb	0.73	50000.00	
24 Mg	# 3	45	58335768.0	0.0000	4740.0000	ppb	0.62	50000.00	
27 Al	# 3	45	424902210.0	0.0000	25530.0000	ppb	0.69	50000.00	
28 Si	# 1	45	1340438.0	0.0000	1465.0000	ppb	2.05	5000.00	
31 P	# 3	45	294200.1	0.0000	311.5000	ppb	0.16	500.00	
39 K	# 2	45	2371449.0	0.0000	4167.0000	ppb	1.14	50000.00	
40 Ca	# 1	45	105531700.0	0.0000	14390.0000	ppb	0.72	50000.00	
47 Ti	# 3	45	543313.5	0.0000	290.6000	ppb	0.47	500.00	
51 V	# 2	45	203022.0	0.0000	46.3100	ppb	0.25	500.00	
52 Cr	# 2	45	120924.4	0.0000	23.4900	ppb	0.76	500.00	
55 Mn	# 3	45	11786120.0	0.0000	385.1000	ppb	0.60	3000.00	
56 Fe	# 1	45	241352990.0	0.0000	23520.0000	ppb	0.98	50000.00	
59 Co	# 3	45	209821.0	0.0000	9.4650	ppb	0.64	500.00	
60 Ni	# 2	45	36695.3	0.0000	21.2200	ppb	0.51	500.00	
63 Cu	# 2	45	111042.3	0.0000	24.8100	ppb	0.14	500.00	
66 Zn	# 3	72	260569.8	0.0000	78.2700	ppb	0.32	500.00	
75 As	# 2	72	5522.9	0.0000	7.9980	ppb	1.84	500.00	
78 Se	# 1	72	129.6	0.0000	0.3430	ppb	4.03	500.00	
88 Sr	# 3	72	1287266.0	0.0000	41.6700	ppb	0.76	500.00	
90 Zr	# 3	72	100954.3	0.0000	5.7770	ppb	0.75	50.00	
95 Mo	# 3	115	4295.2	0.0000	0.7400	ppb	1.88	500.00	
107 Ag	# 3	115	1563.5	0.0000	0.1053	ppb	2.75	50.00	
111 Cd	# 3	115	3304.7	0.0000	1.0660	ppb	6.59	500.00	
118 Sn	# 3	115	32704.5	0.0000	3.5010	ppb	1.06	500.00	
121 Sb	# 3	115	7617.9	0.0000	0.5768	ppb	2.46	500.00	
137 Ba	# 3	115	981718.6	0.0000	214.5000	ppb	1.79	1000.00	
182 W	# 3	159	1422.4	0.0000	0.1165	ppb	0.89	50.00	
205 Tl	# 3	159	7211.1	0.0000	0.3002	ppb	3.67	500.00	
208 Pb	# 3	159	2122173.0	0.0000	68.0000	ppb	0.45	500.00	
235 U	# 3	159	167.8	0.0000	0.0042	ppb	9.82	30.00	
238 U	# 3	159	20956.5	0.0000	0.5813	ppb	2.41	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1327487.60	1.53	1282155.90	103.5	60 - 125	
45 Sc # 1	1183395.60	1.16	1442971.30	82.0	60 - 125	
45 Sc # 2	216186.86	0.45	279185.97	77.4	60 - 125	
45 Sc # 3	2813269.00	0.71	3081898.50	91.3	60 - 125	
72 Ge # 1	271695.31	0.60	366345.44	74.2	60 - 125	
72 Ge # 2	109537.74	0.75	152918.19	71.6	60 - 125	
72 Ge # 3	537368.81	0.60	658417.44	81.6	60 - 125	
115 In # 3	3284664.80	1.15	4239832.00	77.5	60 - 125	
159 Tb # 3	4743390.50	0.67	6179295.50	76.8	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06172.D\F6L06172.D#
Date Acquired:	Dec 9 2015 01:28 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-05
Misc Info:	
Vial Number:	3505
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	344351.8	0.0000	18.5600	ppb	2.52	50.00	
9 Be	# 3	6	5082.1	0.0000	1.1170	ppb	2.54	50.00	
11 B	# 3	6	26545.3	0.0000	7.6900	ppb	2.97	50.00	
23 Na	# 1	45	358545.1	0.0000	91.4000	ppb	1.44	50000.00	
24 Mg	# 3	45	66805872.0	0.0000	5464.0000	ppb	1.08	50000.00	
27 Al	# 3	45	502700420.0	0.0000	30400.0000	ppb	1.18	50000.00	
28 Si	# 1	45	879809.2	0.0000	973.8000	ppb	1.83	5000.00	
31 P	# 3	45	349110.3	0.0000	376.8000	ppb	1.18	500.00	
39 K	# 2	45	2656690.0	0.0000	4667.0000	ppb	0.73	50000.00	
40 Ca	# 1	45	269668990.0	0.0000	37250.0000	ppb	1.30	50000.00	
47 Ti	# 3	45	647263.8	0.0000	348.4000	ppb	1.33	500.00	
51 V	# 2	45	212334.5	0.0000	48.3500	ppb	0.34	500.00	
52 Cr	# 2	45	131766.4	0.0000	25.5600	ppb	0.77	500.00	
55 Mn	# 3	45	11643180.0	0.0000	382.9000	ppb	1.39	3000.00	
56 Fe	# 1	45	249586900.0	0.0000	24630.0000	ppb	0.71	50000.00	
59 Co	# 3	45	214816.3	0.0000	9.7530	ppb	1.59	500.00	
60 Ni	# 2	45	34330.5	0.0000	19.7800	ppb	0.63	500.00	
63 Cu	# 2	45	89047.4	0.0000	19.8400	ppb	0.75	500.00	
66 Zn	# 3	72	229978.5	0.0000	70.1000	ppb	0.66	500.00	
75 As	# 2	72	5206.1	0.0000	7.5630	ppb	0.85	500.00	
78 Se	# 1	72	112.9	0.0000	0.3043	ppb	10.94	500.00	
88 Sr	# 3	72	1664586.0	0.0000	54.7300	ppb	0.16	500.00	
90 Zr	# 3	72	162296.5	0.0000	9.4410	ppb	0.69	50.00	
95 Mo	# 3	115	4394.2	0.0000	0.7687	ppb	1.14	500.00	
107 Ag	# 3	115	1336.8	0.0000	0.0907	ppb	5.29	50.00	
111 Cd	# 3	115	2389.7	0.0000	0.7790	ppb	2.57	500.00	
118 Sn	# 3	115	29048.6	0.0000	3.1480	ppb	0.44	500.00	
121 Sb	# 3	115	6128.2	0.0000	0.4607	ppb	2.75	500.00	
137 Ba	# 3	115	1043127.0	0.0000	231.0000	ppb	1.50	1000.00	
182 W	# 3	159	1446.8	0.0000	0.1199	ppb	7.69	50.00	
205 Tl	# 3	159	7688.1	0.0000	0.3238	ppb	1.86	500.00	
208 Pb	# 3	159	836181.5	0.0000	27.0200	ppb	0.38	500.00	
235 U	# 3	159	217.8	0.0000	0.0055	ppb	4.01	30.00	
238 U	# 3	159	26265.2	0.0000	0.7365	ppb	1.45	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1327420.10	2.46	1282155.90	103.5	60 - 125	
45 Sc # 1	1168204.00	0.85	1442971.30	81.0	60 - 125	
45 Sc # 2	216627.84	0.37	279185.97	77.6	60 - 125	
45 Sc # 3	2795781.30	1.02	3081898.50	90.7	60 - 125	
72 Ge # 1	265859.13	0.79	366345.44	72.6	60 - 125	
72 Ge # 2	109157.12	1.24	152918.19	71.4	60 - 125	
72 Ge # 3	529164.00	0.55	658417.44	80.4	60 - 125	
115 In # 3	3241643.50	0.26	4239832.00	76.5	60 - 125	
159 Tb # 3	4701591.00	0.37	6179295.50	76.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06173.D\F6L06173.D#
Date Acquired:	Dec 9 2015 01:33 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-06
Misc Info:	
Vial Number:	3506
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	396602.8	0.0000	22.3900	ppb	0.68	50.00	
9 Be	# 3	6	5505.6	0.0000	1.2140	ppb	3.29	50.00	
11 B	# 3	6	30386.0	0.0000	8.8710	ppb	2.59	50.00	
23 Na	# 1	45	279374.7	0.0000	65.0900	ppb	0.86	50000.00	
24 Mg	# 3	45	68737968.0	0.0000	5483.0000	ppb	1.24	50000.00	
27 Al	# 3	45	591329020.0	0.0000	34880.0000	ppb	1.05	50000.00	
28 Si	# 1	45	1338315.0	0.0000	1474.0000	ppb	0.76	5000.00	
31 P	# 3	45	350848.1	0.0000	368.8000	ppb	0.92	500.00	
39 K	# 2	45	3099240.0	0.0000	5406.0000	ppb	1.92	50000.00	
40 Ca	# 1	45	141374500.0	0.0000	19420.0000	ppb	0.29	50000.00	
47 Ti	# 3	45	759690.3	0.0000	398.8000	ppb	1.51	500.00	
51 V	# 2	45	240658.2	0.0000	54.3600	ppb	0.54	500.00	
52 Cr	# 2	45	147999.3	0.0000	28.4500	ppb	0.23	500.00	
55 Mn	# 3	45	11060880.0	0.0000	354.7000	ppb	1.17	3000.00	
56 Fe	# 1	45	281082590.0	0.0000	27600.0000	ppb	0.87	50000.00	
59 Co	# 3	45	226162.1	0.0000	10.0100	ppb	0.94	500.00	
60 Ni	# 2	45	37688.4	0.0000	21.5600	ppb	0.42	500.00	
63 Cu	# 2	45	86831.7	0.0000	19.1700	ppb	0.67	500.00	
66 Zn	# 3	72	268273.7	0.0000	80.9500	ppb	0.22	500.00	
75 As	# 2	72	5947.5	0.0000	8.6390	ppb	0.80	500.00	
78 Se	# 1	72	123.6	0.0000	0.3294	ppb	2.83	500.00	
88 Sr	# 3	72	1007532.0	0.0000	32.7500	ppb	1.29	500.00	
90 Zr	# 3	72	211935.3	0.0000	12.2000	ppb	1.00	50.00	
95 Mo	# 3	115	4460.9	0.0000	0.7681	ppb	2.74	500.00	
107 Ag	# 3	115	1623.5	0.0000	0.1092	ppb	5.06	50.00	
111 Cd	# 3	115	2765.8	0.0000	0.8885	ppb	1.43	500.00	
118 Sn	# 3	115	33251.4	0.0000	3.5520	ppb	2.80	500.00	
121 Sb	# 3	115	6658.5	0.0000	0.4963	ppb	2.20	500.00	
137 Ba	# 3	115	1089858.0	0.0000	237.5000	ppb	0.58	1000.00	
182 W	# 3	159	1520.1	0.0000	0.1241	ppb	3.32	50.00	
205 Tl	# 3	159	8620.9	0.0000	0.3580	ppb	2.25	500.00	
208 Pb	# 3	159	1315931.0	0.0000	41.7900	ppb	0.25	500.00	
235 U	# 3	159	187.8	0.0000	0.0046	ppb	6.69	30.00	
238 U	# 3	159	25912.1	0.0000	0.7136	ppb	1.05	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1323860.10	0.70	1282155.90	103.3	60 - 125	
45 Sc # 1	1174473.50	1.40	1442971.30	81.4	60 - 125	
45 Sc # 2	218588.84	0.51	279185.97	78.3	60 - 125	
45 Sc # 3	2866491.30	0.59	3081898.50	93.0	60 - 125	
72 Ge # 1	269526.66	0.29	366345.44	73.6	60 - 125	
72 Ge # 2	109270.24	0.43	152918.19	71.5	60 - 125	
72 Ge # 3	535011.38	0.53	658417.44	81.3	60 - 125	
115 In # 3	3293115.00	0.53	4239832.00	77.7	60 - 125	
159 Tb # 3	4785715.50	0.61	6179295.50	77.4	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06175.D\F6L06175.D#
Date Acquired: Dec 9 2015 01:41 am
Operator: CCapul
Sample Name: CCV15
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update: Dec 08 2015 01:50 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	24.20 ppb	1.17	25.00	90 - 110	
9 Be	21.44 ppb	1.52	25.00	90 - 110	Fail
11 B	22.59 ppb	3.06	25.00	90 - 110	
23 Na	24620.00 ppb	0.07	25000.00	90 - 110	
24 Mg	27460.00 ppb	2.42	25000.00	90 - 110	
27 Al	26520.00 ppb	1.82	25000.00	90 - 110	
28 Si	2548.00 ppb	0.48	2500.00	90 - 110	
31 P	265.90 ppb	1.18	250.00	90 - 110	
39 K	25590.00 ppb	1.22	25000.00	90 - 110	
40 Ca	23130.00 ppb	0.99	25000.00	90 - 110	
47 Ti	243.00 ppb	0.41	250.00	90 - 110	
51 V	243.50 ppb	0.48	250.00	90 - 110	
52 Cr	241.60 ppb	0.07	250.00	90 - 110	
55 Mn	1403.00 ppb	0.46	1500.00	90 - 110	
56 Fe	24200.00 ppb	0.57	25000.00	90 - 110	
59 Co	231.50 ppb	1.05	250.00	90 - 110	
60 Ni	246.30 ppb	1.05	250.00	90 - 110	
63 Cu	233.40 ppb	1.59	250.00	90 - 110	
66 Zn	240.90 ppb	0.61	250.00	90 - 110	
75 As	252.80 ppb	0.35	250.00	90 - 110	
78 Se	249.10 ppb	0.45	250.00	90 - 110	
88 Sr	246.80 ppb	0.14	250.00	90 - 110	
90 Zr	28.65 ppb	1.72	25.00	90 - 110	Fail
95 Mo	247.40 ppb	0.59	250.00	90 - 110	
107 Ag	24.12 ppb	0.40	25.00	90 - 110	
111 Cd	248.80 ppb	0.62	250.00	90 - 110	
118 Sn	239.70 ppb	0.71	250.00	90 - 110	
121 Sb	242.10 ppb	1.15	250.00	90 - 110	
137 Ba	499.20 ppb	1.55	500.00	90 - 110	
182 W	24.20 ppb	0.38	25.00	90 - 110	
205 Tl	236.20 ppb	1.66	250.00	90 - 110	
208 Pb	234.90 ppb	2.64	250.00	90 - 110	
235 U	1.69 ppb	2.31	1.80	90 - 110	
238 U	237.50 ppb	1.41	250.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1245323.00	2.14	1282155.90	97.1	60 - 125	
45 Sc	1061383.30	1.09	1442971.30	73.6	60 - 125	
45 Sc	195606.36	0.93	279185.97	70.1	60 - 125	
45 Sc	2592781.50	1.38	3081898.50	84.1	60 - 125	
72 Ge	256103.36	1.11	366345.44	69.9	60 - 125	
72 Ge	102368.01	0.30	152918.19	66.9	60 - 125	
72 Ge	511400.03	1.12	658417.44	77.7	60 - 125	
115 In	3105670.80	0.48	4239832.00	73.2	60 - 125	
159 Tb	4508064.50	1.41	6179295.50	73.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06176.D\F6L06176.D#
Date Acquired:	Dec 9 2015 01:45 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	CCB15
Misc Info:	
Vial Number:	1201
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0987	ppb	84007.8	45.52	0.20	
9 Be	0.0086	ppb	87.8	70.92	0.10	
11 B	0.2240	ppb	1809.1	4.50	5.00	
23 Na	7.0470	ppb	91533.6	55.39	40.00	
24 Mg	1.9620	ppb	132394.6	2.46	10.00	
27 Al	2.2890	ppb	43574.1	18.39	20.00	
28 Si	2.6280	ppb	3192.7	16.25	20.00	
31 P	6.0880	ppb	24533.5	7.14	10.00	
39 K	13.9400	ppb	44370.1	19.06	20.00	
40 Ca	21.2100	ppb	169730.2	14.86	25.00	
47 Ti	0.0264	ppb	137.8	60.27	0.50	
51 V	0.2154	ppb	2546.7	8.03	0.50	
52 Cr	0.0505	ppb	538.7	25.07	0.20	
55 Mn	0.1596	ppb	9128.7	14.48	0.20	
56 Fe	25.8700	ppb	255188.1	14.60	10.00	Fail
59 Co	0.0225	ppb	1091.2	25.33	0.20	
60 Ni	-0.3180	ppb	281.8	7.02	0.20	Fail
63 Cu	0.0258	ppb	381.1	57.55	0.40	
66 Zn	-0.2907	ppb	750.0	9.06	2.00	
75 As	0.1105	ppb	112.4	16.62	0.20	
78 Se	0.2559	ppb	95.8	4.77	0.20	Fail
88 Sr	0.0172	ppb	1722.4	16.77	0.20	
90 Zr	0.0308	ppb	778.9	18.05	2.00	
95 Mo	0.1775	ppb	1225.7	15.72	0.40	
107 Ag	0.0000	ppb	52.2	3064.60	0.20	
111 Cd	0.0145	ppb	68.2	46.32	0.20	
118 Sn	0.0682	ppb	976.7	26.07	0.20	
121 Sb	0.0485	ppb	1214.5	27.44	0.40	
137 Ba	0.0626	ppb	466.7	4.33	0.20	
182 W	0.0175	ppb	320.0	34.04	1.00	
205 Tl	0.0384	ppb	1152.3	22.79	0.20	
208 Pb	0.0163	ppb	982.3	13.45	0.10	
235 U	0.0002	ppb	16.7	177.31	1.00	
238 U	0.0359	ppb	1456.8	15.57	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1313883.8	0.69	1282155.90	102.5	60 - 125	
45 Sc	1069745.4	0.41	1442971.30	74.1	60 - 125	
45 Sc	200560.8	0.97	279185.97	71.8	60 - 125	
45 Sc	2586704.8	0.36	3081898.50	83.9	60 - 125	
72 Ge	266666.2	0.34	366345.44	72.8	60 - 125	
72 Ge	107238.2	0.09	152918.19	70.1	60 - 125	
72 Ge	520413.2	1.06	658417.44	79.0	60 - 125	
115 In	3304665.3	0.72	4239832.00	77.9	60 - 125	
159 Tb	4659652.5	1.05	6179295.50	75.4	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

3 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06177.D\F6L06177.D#
Date Acquired:	Dec 9 2015 01:49 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-07
Misc Info:	
Vial Number:	3507
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	403496.3	0.0000	23.0700	ppb	0.33	50.00	
9 Be	# 3	6	5789.1	0.0000	1.2850	ppb	1.21	50.00	
11 B	# 3	6	30993.8	0.0000	9.1150	ppb	1.29	50.00	
23 Na	# 1	45	277876.1	0.0000	67.1000	ppb	0.08	50000.00	
24 Mg	# 3	45	68646160.0	0.0000	5632.0000	ppb	0.67	50000.00	
27 Al	# 3	45	589750270.0	0.0000	35780.0000	ppb	1.05	50000.00	
28 Si	# 1	45	812953.8	0.0000	919.8000	ppb	0.52	5000.00	
31 P	# 3	45	349679.5	0.0000	378.7000	ppb	0.57	500.00	
39 K	# 2	45	3086712.0	0.0000	5555.0000	ppb	1.46	50000.00	
40 Ca	# 1	45	145052900.0	0.0000	20480.0000	ppb	0.42	50000.00	
47 Ti	# 3	45	656219.0	0.0000	354.3000	ppb	0.29	500.00	
51 V	# 2	45	243837.1	0.0000	56.8300	ppb	0.15	500.00	
52 Cr	# 2	45	148345.9	0.0000	29.4100	ppb	0.45	500.00	
55 Mn	# 3	45	11667680.0	0.0000	384.8000	ppb	0.48	3000.00	
56 Fe	# 1	45	283264700.0	0.0000	28580.0000	ppb	0.23	50000.00	
59 Co	# 3	45	216342.3	0.0000	9.8520	ppb	0.82	500.00	
60 Ni	# 2	45	37144.2	0.0000	21.9300	ppb	0.68	500.00	
63 Cu	# 2	45	86122.9	0.0000	19.6100	ppb	0.21	500.00	
66 Zn	# 3	72	266437.5	0.0000	82.5200	ppb	0.57	500.00	
75 As	# 2	72	5940.6	0.0000	8.8210	ppb	0.55	500.00	
78 Se	# 1	72	125.1	0.0000	0.3447	ppb	3.84	500.00	
88 Sr	# 3	72	1029662.0	0.0000	34.3500	ppb	1.00	500.00	
90 Zr	# 3	72	224568.5	0.0000	13.2700	ppb	0.48	50.00	
95 Mo	# 3	115	4792.1	0.0000	0.8593	ppb	2.76	500.00	
107 Ag	# 3	115	1581.3	0.0000	0.1101	ppb	5.74	50.00	
111 Cd	# 3	115	2875.1	0.0000	0.9567	ppb	6.96	500.00	
118 Sn	# 3	115	28269.4	0.0000	3.1210	ppb	3.12	500.00	
121 Sb	# 3	115	7283.3	0.0000	0.5688	ppb	2.13	500.00	
137 Ba	# 3	115	1171505.0	0.0000	264.3000	ppb	1.30	1000.00	
182 W	# 3	159	1509.0	0.0000	0.1258	ppb	6.29	50.00	
205 Tl	# 3	159	8729.9	0.0000	0.3700	ppb	1.14	500.00	
208 Pb	# 3	159	1317943.0	0.0000	42.6700	ppb	0.02	500.00	
235 U	# 3	159	166.7	0.0000	0.0042	ppb	10.75	30.00	
238 U	# 3	159	25820.9	0.0000	0.7251	ppb	0.95	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1315373.50	0.47	1282155.90	102.6	60 - 125	
45 Sc # 1	1142798.90	0.97	1442971.30	79.2	60 - 125	
45 Sc # 2	211956.61	0.19	279185.97	75.9	60 - 125	
45 Sc # 3	2787047.30	0.43	3081898.50	90.4	60 - 125	
72 Ge # 1	261191.66	0.92	366345.44	71.3	60 - 125	
72 Ge # 2	106901.63	1.09	152918.19	69.9	60 - 125	
72 Ge # 3	521303.00	0.66	658417.44	79.2	60 - 125	
115 In # 3	3181132.00	0.38	4239832.00	75.0	60 - 125	
159 Tb # 3	4694212.50	0.59	6179295.50	76.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06178.D\F6L06178.D#
Date Acquired:	Dec 9 2015 01:54 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-08
Misc Info:	
Vial Number:	3508
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	313765.0	0.0000	16.0400	ppb	0.81	50.00	
9 Be	# 3	6	3968.4	0.0000	0.8573	ppb	1.65	50.00	
11 B	# 3	6	24869.0	0.0000	7.0760	ppb	1.60	50.00	
23 Na	# 1	45	251643.9	0.0000	58.8400	ppb	1.96	50000.00	
24 Mg	# 3	45	47141352.0	0.0000	3879.0000	ppb	1.68	50000.00	
27 Al	# 3	45	397436100.0	0.0000	24200.0000	ppb	1.13	50000.00	
28 Si	# 1	45	769459.6	0.0000	875.5000	ppb	1.96	5000.00	
31 P	# 3	45	270903.5	0.0000	289.0000	ppb	1.34	500.00	
39 K	# 2	45	2462503.0	0.0000	4444.0000	ppb	0.62	50000.00	
40 Ca	# 1	45	42195968.0	0.0000	5989.0000	ppb	0.78	50000.00	
47 Ti	# 3	45	525657.3	0.0000	284.9000	ppb	1.61	500.00	
51 V	# 2	45	178236.0	0.0000	41.6800	ppb	0.68	500.00	
52 Cr	# 2	45	111775.1	0.0000	22.2800	ppb	0.77	500.00	
55 Mn	# 3	45	10138580.0	0.0000	335.6000	ppb	1.70	3000.00	
56 Fe	# 1	45	206382400.0	0.0000	20940.0000	ppb	0.91	50000.00	
59 Co	# 3	45	165818.3	0.0000	7.5720	ppb	1.57	500.00	
60 Ni	# 2	45	29165.3	0.0000	17.2200	ppb	0.83	500.00	
63 Cu	# 2	45	80657.6	0.0000	18.4700	ppb	0.80	500.00	
66 Zn	# 3	72	221965.6	0.0000	67.5700	ppb	0.40	500.00	
75 As	# 2	72	4387.8	0.0000	6.4690	ppb	0.32	500.00	
78 Se	# 1	72	114.4	0.0000	0.3064	ppb	7.82	500.00	
88 Sr	# 3	72	713629.1	0.0000	23.4200	ppb	0.05	500.00	
90 Zr	# 3	72	110613.0	0.0000	6.4240	ppb	1.11	50.00	
95 Mo	# 3	115	3769.5	0.0000	0.6430	ppb	1.93	500.00	
107 Ag	# 3	115	1254.6	0.0000	0.0837	ppb	3.71	50.00	
111 Cd	# 3	115	2256.5	0.0000	0.7247	ppb	6.19	500.00	
118 Sn	# 3	115	25652.1	0.0000	2.7350	ppb	1.56	500.00	
121 Sb	# 3	115	7066.5	0.0000	0.5306	ppb	1.76	500.00	
137 Ba	# 3	115	697839.1	0.0000	152.3000	ppb	0.91	1000.00	
182 W	# 3	159	1324.6	0.0000	0.1072	ppb	1.62	50.00	
205 Tl	# 3	159	6233.9	0.0000	0.2567	ppb	2.49	500.00	
208 Pb	# 3	159	1174500.0	0.0000	37.4800	ppb	0.94	500.00	
235 U	# 3	159	164.5	0.0000	0.0041	ppb	11.03	30.00	
238 U	# 3	159	20703.8	0.0000	0.5718	ppb	1.58	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1346063.30	0.25	1282155.90	105.0	60 - 125	
45 Sc # 1	1136344.50	1.52	1442971.30	78.8	60 - 125	
45 Sc # 2	210677.80	0.89	279185.97	75.5	60 - 125	
45 Sc # 3	2777345.50	1.69	3081898.50	90.1	60 - 125	
72 Ge # 1	267882.31	1.27	366345.44	73.1	60 - 125	
72 Ge # 2	107419.79	0.49	152918.19	70.2	60 - 125	
72 Ge # 3	529679.50	0.70	658417.44	80.4	60 - 125	
115 In # 3	3288895.30	0.73	4239832.00	77.6	60 - 125	
159 Tb # 3	4762535.50	0.29	6179295.50	77.1	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06179.D\F6L06179.D#
Date Acquired:	Dec 9 2015 01:58 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-09
Misc Info:	
Vial Number:	3509
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	370975.1	0.0000	20.6400	ppb	2.18	50.00	
9 Be	# 3	6	5072.1	0.0000	1.1220	ppb	3.06	50.00	
11 B	# 3	6	28220.7	0.0000	8.2470	ppb	2.12	50.00	
23 Na	# 1	45	428225.8	0.0000	114.0000	ppb	0.62	50000.00	
24 Mg	# 3	45	63856200.0	0.0000	5197.0000	ppb	0.38	50000.00	
27 Al	# 3	45	532696610.0	0.0000	32060.0000	ppb	0.59	50000.00	
28 Si	# 1	45	1447807.0	0.0000	1602.0000	ppb	0.62	5000.00	
31 P	# 3	45	311822.4	0.0000	332.1000	ppb	0.21	500.00	
39 K	# 2	45	2794439.0	0.0000	4972.0000	ppb	0.52	50000.00	
40 Ca	# 1	45	112928500.0	0.0000	15590.0000	ppb	0.86	50000.00	
47 Ti	# 3	45	725359.3	0.0000	388.5000	ppb	0.54	500.00	
51 V	# 2	45	216244.5	0.0000	49.8500	ppb	0.64	500.00	
52 Cr	# 2	45	137162.5	0.0000	26.9200	ppb	0.60	500.00	
55 Mn	# 3	45	11645120.0	0.0000	381.0000	ppb	0.50	3000.00	
56 Fe	# 1	45	256952400.0	0.0000	25350.0000	ppb	1.06	50000.00	
59 Co	# 3	45	203679.8	0.0000	9.2000	ppb	1.11	500.00	
60 Ni	# 2	45	36789.3	0.0000	21.4900	ppb	0.50	500.00	
63 Cu	# 2	45	121520.4	0.0000	27.4200	ppb	0.63	500.00	
66 Zn	# 3	72	290201.7	0.0000	88.1500	ppb	0.12	500.00	
75 As	# 2	72	5237.2	0.0000	7.5950	ppb	1.10	500.00	
78 Se	# 1	72	134.0	0.0000	0.3604	ppb	7.42	500.00	
88 Sr	# 3	72	1231588.0	0.0000	40.2900	ppb	0.13	500.00	
90 Zr	# 3	72	167372.5	0.0000	9.6890	ppb	0.54	50.00	
95 Mo	# 3	115	4328.6	0.0000	0.7504	ppb	1.68	500.00	
107 Ag	# 3	115	2869.3	0.0000	0.1973	ppb	3.07	50.00	
111 Cd	# 3	115	4363.2	0.0000	1.4170	ppb	1.01	500.00	
118 Sn	# 3	115	27356.3	0.0000	2.9390	ppb	1.71	500.00	
121 Sb	# 3	115	7850.2	0.0000	0.5995	ppb	1.72	500.00	
137 Ba	# 3	115	988749.0	0.0000	217.2000	ppb	1.20	1000.00	
182 W	# 3	159	1406.8	0.0000	0.1136	ppb	7.67	50.00	
205 Tl	# 3	159	8091.6	0.0000	0.3345	ppb	4.39	500.00	
208 Pb	# 3	159	2480931.0	0.0000	78.6200	ppb	1.13	500.00	
235 U	# 3	159	200.0	0.0000	0.0050	ppb	18.18	30.00	
238 U	# 3	159	24774.4	0.0000	0.6804	ppb	0.42	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1318964.50	0.60	1282155.90	102.9	60 - 125	
45 Sc # 1	1168929.60	1.05	1442971.30	81.0	60 - 125	
45 Sc # 2	214065.14	0.82	279185.97	76.7	60 - 125	
45 Sc # 3	2809457.00	0.50	3081898.50	91.2	60 - 125	
72 Ge # 1	267800.84	0.53	366345.44	73.1	60 - 125	
72 Ge # 2	109347.03	0.41	152918.19	71.5	60 - 125	
72 Ge # 3	531758.50	0.30	658417.44	80.8	60 - 125	
115 In # 3	3266839.00	0.82	4239832.00	77.1	60 - 125	
159 Tb # 3	4797063.50	0.89	6179295.50	77.6	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06180.D\F6L06180.D#
Date Acquired:	Dec 9 2015 02:02 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-10M
Misc Info:	
Vial Number:	3510
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	892291.8	0.0000	60.3600	ppb	1.80	50.00	>LRS
9 Be	# 3	6	147453.4	0.0000	33.9400	ppb	1.07	50.00	
11 B	# 3	6	133376.1	0.0000	41.4600	ppb	0.45	50.00	
23 Na	# 1	45	11523040.0	0.0000	3709.0000	ppb	0.57	50000.00	
24 Mg	# 3	45	113456200.0	0.0000	9249.0000	ppb	0.57	50000.00	
27 Al	# 3	45	676288510.0	0.0000	40740.0000	ppb	0.57	50000.00	
28 Si	# 1	45	2021842.0	0.0000	2225.0000	ppb	0.92	5000.00	
31 P	# 3	45	464150.8	0.0000	506.8000	ppb	0.72	500.00	>LRS
39 K	# 2	45	4964390.0	0.0000	8951.0000	ppb	1.21	50000.00	
40 Ca	# 1	45	106438900.0	0.0000	14600.0000	ppb	0.67	50000.00	
47 Ti	# 3	45	756726.8	0.0000	405.7000	ppb	0.50	500.00	
51 V	# 2	45	376817.3	0.0000	87.7800	ppb	0.66	500.00	
52 Cr	# 2	45	342050.8	0.0000	67.7000	ppb	0.21	500.00	
55 Mn	# 3	45	11085170.0	0.0000	363.0000	ppb	0.75	3000.00	
56 Fe	# 1	45	288345410.0	0.0000	28270.0000	ppb	0.31	50000.00	
59 Co	# 3	45	964400.1	0.0000	43.7200	ppb	0.81	500.00	
60 Ni	# 2	45	93077.6	0.0000	55.5300	ppb	0.62	500.00	
63 Cu	# 2	45	594260.8	0.0000	135.3000	ppb	0.54	500.00	
66 Zn	# 3	72	1598344.0	0.0000	496.1000	ppb	0.51	500.00	
75 As	# 2	72	29528.1	0.0000	44.6800	ppb	1.14	500.00	
78 Se	# 1	72	13461.7	0.0000	37.2200	ppb	1.00	500.00	
88 Sr	# 3	72	1916430.0	0.0000	63.7700	ppb	1.14	500.00	
90 Zr	# 3	72	259093.6	0.0000	15.2600	ppb	1.20	50.00	
95 Mo	# 3	115	202402.4	0.0000	37.5500	ppb	0.89	500.00	
107 Ag	# 3	115	508231.2	0.0000	35.9800	ppb	0.19	50.00	
111 Cd	# 3	115	125540.0	0.0000	41.4200	ppb	0.87	500.00	
118 Sn	# 3	115	361667.4	0.0000	39.7200	ppb	0.59	500.00	
121 Sb	# 3	115	367537.3	0.0000	30.7200	ppb	0.32	500.00	
137 Ba	# 3	115	1334014.0	0.0000	296.2000	ppb	0.85	1000.00	
182 W	# 3	159	1591.3	0.0000	0.1313	ppb	1.54	50.00	
205 Tl	# 3	159	895341.9	0.0000	38.7000	ppb	0.36	500.00	
208 Pb	# 3	159	7065526.0	0.0000	225.8000	ppb	0.33	500.00	
235 U	# 3	159	9906.4	0.0000	0.2622	ppb	2.58	30.00	
238 U	# 3	159	1370232.0	0.0000	38.2600	ppb	0.58	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1279161.00	0.39	1282155.90	99.8	60 - 125	
45 Sc # 1	1175969.90	0.87	1442971.30	81.5	60 - 125	
45 Sc # 2	212598.11	0.42	279185.97	76.1	60 - 125	
45 Sc # 3	2806792.30	0.91	3081898.50	91.1	60 - 125	
72 Ge # 1	267907.03	0.10	366345.44	73.1	60 - 125	
72 Ge # 2	105460.92	1.00	152918.19	69.0	60 - 125	
72 Ge # 3	522986.81	0.44	658417.44	79.4	60 - 125	
115 In # 3	3232978.00	0.56	4239832.00	76.3	60 - 125	
159 Tb # 3	4756808.00	0.25	6179295.50	77.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

2 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes:	Fail
ISTD:	Pass

Sample QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06181.D\F6L06181.D#
Date Acquired: Dec 9 2015 02:06 am
Acq. Method: EMX6020H.M
Operator: CCapul
Sample Name: L067-10S
Misc Info:
Vial Number: 3511
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update: Dec 08 2015 01:50 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	883221.3	0.0000	59.4500	ppb	0.91	50.00	>LRS
9 Be	# 3	6	144607.7	0.0000	33.1700	ppb	0.66	50.00	
11 B	# 3	6	130483.5	0.0000	40.4000	ppb	0.15	50.00	
23 Na	# 1	45	11077170.0	0.0000	3637.0000	ppb	1.17	50000.00	
24 Mg	# 3	45	112408400.0	0.0000	9113.0000	ppb	1.44	50000.00	
27 Al	# 3	45	664171520.0	0.0000	39790.0000	ppb	1.45	50000.00	
28 Si	# 1	45	1884496.0	0.0000	2115.0000	ppb	0.60	5000.00	
31 P	# 3	45	449960.6	0.0000	487.7000	ppb	1.10	500.00	
39 K	# 2	45	4896337.0	0.0000	8931.0000	ppb	0.95	50000.00	
40 Ca	# 1	45	104662300.0	0.0000	14650.0000	ppb	1.09	50000.00	
47 Ti	# 3	45	743373.1	0.0000	396.3000	ppb	0.64	500.00	
51 V	# 2	45	371322.6	0.0000	87.5200	ppb	0.52	500.00	
52 Cr	# 2	45	337266.2	0.0000	67.5400	ppb	0.53	500.00	
55 Mn	# 3	45	11439190.0	0.0000	372.5000	ppb	0.46	3000.00	
56 Fe	# 1	45	284738300.0	0.0000	28480.0000	ppb	1.05	50000.00	
59 Co	# 3	45	951918.7	0.0000	42.9100	ppb	1.11	500.00	
60 Ni	# 2	45	91523.9	0.0000	55.2400	ppb	0.52	500.00	
63 Cu	# 2	45	474650.0	0.0000	109.3000	ppb	0.59	500.00	
66 Zn	# 3	72	888431.7	0.0000	274.7000	ppb	0.77	500.00	
75 As	# 2	72	28909.3	0.0000	43.4900	ppb	0.50	500.00	
78 Se	# 1	72	13103.8	0.0000	36.8200	ppb	1.02	500.00	
88 Sr	# 3	72	1924577.0	0.0000	63.8500	ppb	1.35	500.00	
90 Zr	# 3	72	252897.2	0.0000	14.8500	ppb	0.68	50.00	
95 Mo	# 3	115	199903.8	0.0000	37.4600	ppb	0.56	500.00	
107 Ag	# 3	115	503066.2	0.0000	35.9700	ppb	0.75	50.00	
111 Cd	# 3	115	122989.8	0.0000	40.9900	ppb	1.16	500.00	
118 Sn	# 3	115	355881.5	0.0000	39.4800	ppb	0.33	500.00	
121 Sb	# 3	115	362741.8	0.0000	30.6300	ppb	0.34	500.00	
137 Ba	# 3	115	1319556.0	0.0000	295.9000	ppb	1.02	1000.00	
182 W	# 3	159	1546.8	0.0000	0.1266	ppb	5.52	50.00	
205 Tl	# 3	159	878635.5	0.0000	37.7800	ppb	0.62	500.00	
208 Pb	# 3	159	6373011.0	0.0000	202.6000	ppb	0.65	500.00	
235 U	# 3	159	9638.4	0.0000	0.2537	ppb	1.63	30.00	
238 U	# 3	159	1337973.0	0.0000	37.1600	ppb	1.69	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1283744.00	0.98	1282155.90	100.1	60 - 125	
45 Sc # 1	1152820.50	1.58	1442971.30	79.9	60 - 125	
45 Sc # 2	210119.16	0.67	279185.97	75.3	60 - 125	
45 Sc # 3	2822636.50	1.43	3081898.50	91.6	60 - 125	
72 Ge # 1	263575.84	0.12	366345.44	71.9	60 - 125	
72 Ge # 2	106070.79	0.81	152918.19	69.4	60 - 125	
72 Ge # 3	524517.00	0.44	658417.44	79.7	60 - 125	
115 In # 3	3200489.00	0.47	4239832.00	75.5	60 - 125	
159 Tb # 3	4782436.50	0.58	6179295.50	77.4	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

1 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Sample QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06182.D\F6L06182.D#
Date Acquired: Dec 9 2015 02:11 am
Acq. Method: EMX6020H.M
Operator: CCapul
Sample Name: L067-10A
Misc Info:
Vial Number: 3512
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update: Dec 08 2015 01:50 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	846738.5	0.0000	57.3800	ppb	2.07	50.00	>LRS
9 Be	# 3	6	149635.8	0.0000	34.6700	ppb	1.34	50.00	
11 B	# 3	6	135878.2	0.0000	42.5200	ppb	0.30	50.00	
23 Na	# 1	45	12252590.0	0.0000	4006.0000	ppb	0.95	50000.00	
24 Mg	# 3	45	107282600.0	0.0000	8887.0000	ppb	0.78	50000.00	
27 Al	# 3	45	566631810.0	0.0000	34680.0000	ppb	0.66	50000.00	
28 Si	# 1	45	1453782.0	0.0000	1624.0000	ppb	1.81	5000.00	
31 P	# 3	45	408202.3	0.0000	450.3000	ppb	0.44	500.00	
39 K	# 2	45	4685735.0	0.0000	8546.0000	ppb	1.00	50000.00	
40 Ca	# 1	45	96947632.0	0.0000	13500.0000	ppb	0.24	50000.00	
47 Ti	# 3	45	837062.5	0.0000	456.1000	ppb	0.89	500.00	
51 V	# 2	45	361623.0	0.0000	85.2300	ppb	0.32	500.00	
52 Cr	# 2	45	326102.6	0.0000	65.3100	ppb	0.28	500.00	
55 Mn	# 3	45	10847150.0	0.0000	361.0000	ppb	0.38	3000.00	
56 Fe	# 1	45	284687300.0	0.0000	28340.0000	ppb	0.13	50000.00	
59 Co	# 3	45	965371.2	0.0000	44.4700	ppb	0.50	500.00	
60 Ni	# 2	45	92586.8	0.0000	55.8900	ppb	0.47	500.00	
63 Cu	# 2	45	490349.0	0.0000	112.9000	ppb	0.33	500.00	
66 Zn	# 3	72	832832.0	0.0000	259.4000	ppb	0.22	500.00	
75 As	# 2	72	30535.0	0.0000	46.1500	ppb	0.09	500.00	
78 Se	# 1	72	14446.4	0.0000	40.2700	ppb	0.97	500.00	
88 Sr	# 3	72	1830378.0	0.0000	61.1700	ppb	0.39	500.00	
90 Zr	# 3	72	193625.2	0.0000	11.4500	ppb	1.48	50.00	
95 Mo	# 3	115	214539.9	0.0000	40.4000	ppb	0.46	500.00	
107 Ag	# 3	115	529629.3	0.0000	38.0500	ppb	0.48	50.00	
111 Cd	# 3	115	127112.5	0.0000	42.5700	ppb	0.41	500.00	
118 Sn	# 3	115	384405.5	0.0000	42.8500	ppb	0.59	500.00	
121 Sb	# 3	115	469681.3	0.0000	39.8600	ppb	1.39	500.00	
137 Ba	# 3	115	1191628.0	0.0000	268.5000	ppb	0.41	1000.00	
182 W	# 3	159	1466.8	0.0000	0.1214	ppb	3.61	50.00	
205 Tl	# 3	159	913893.0	0.0000	39.9000	ppb	0.97	500.00	
208 Pb	# 3	159	6024885.0	0.0000	194.4000	ppb	0.83	500.00	
235 U	# 3	159	10352.3	0.0000	0.2767	ppb	0.86	30.00	
238 U	# 3	159	1399434.0	0.0000	39.4600	ppb	0.26	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1270905.00	0.86	1282155.90	99.1	60 - 125	
45 Sc # 1	1158307.10	1.04	1442971.30	80.3	60 - 125	
45 Sc # 2	210088.47	0.08	279185.97	75.3	60 - 125	
45 Sc # 3	2762052.50	0.35	3081898.50	89.6	60 - 125	
72 Ge # 1	265727.41	0.73	366345.44	72.5	60 - 125	
72 Ge # 2	105568.38	0.36	152918.19	69.0	60 - 125	
72 Ge # 3	520653.06	0.17	658417.44	79.1	60 - 125	
115 In # 3	3185453.80	0.38	4239832.00	75.1	60 - 125	
159 Tb # 3	4710221.50	0.11	6179295.50	76.2	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

1 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06183.D\F6L06183.D#
Date Acquired:	Dec 9 2015 02:15 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-10
Misc Info:	
Vial Number:	4101
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	335428.8	0.0000	18.4600	ppb	1.80	50.00	
9 Be	# 3	6	4736.5	0.0000	1.0640	ppb	2.63	50.00	
11 B	# 3	6	28346.3	0.0000	8.4240	ppb	1.17	50.00	
23 Na	# 1	45	278305.8	0.0000	66.1600	ppb	1.62	50000.00	
24 Mg	# 3	45	55453700.0	0.0000	4567.0000	ppb	0.63	50000.00	
27 Al	# 3	45	505169090.0	0.0000	30780.0000	ppb	0.49	50000.00	
28 Si	# 1	45	1451330.0	0.0000	1624.0000	ppb	0.88	5000.00	
31 P	# 3	45	413341.8	0.0000	454.1000	ppb	0.58	500.00	
39 K	# 2	45	2560396.0	0.0000	4568.0000	ppb	0.12	50000.00	
40 Ca	# 1	45	70913720.0	0.0000	9893.0000	ppb	1.04	50000.00	
47 Ti	# 3	45	781108.7	0.0000	423.6000	ppb	0.48	500.00	
51 V	# 2	45	205202.7	0.0000	47.4700	ppb	0.31	500.00	
52 Cr	# 2	45	145181.5	0.0000	28.6200	ppb	0.56	500.00	
55 Mn	# 3	45	9920096.0	0.0000	328.6000	ppb	0.61	3000.00	
56 Fe	# 1	45	246890100.0	0.0000	24620.0000	ppb	0.34	50000.00	
59 Co	# 3	45	176819.9	0.0000	8.0820	ppb	1.43	500.00	
60 Ni	# 2	45	31117.9	0.0000	18.1800	ppb	0.97	500.00	
63 Cu	# 2	45	345694.1	0.0000	78.4500	ppb	0.65	500.00	
66 Zn	# 3	72	605319.5	0.0000	185.8000	ppb	0.46	500.00	
75 As	# 2	72	4821.9	0.0000	7.0610	ppb	1.07	500.00	
78 Se	# 1	72	125.6	0.0000	0.3378	ppb	5.78	500.00	
88 Sr	# 3	72	641012.8	0.0000	21.1000	ppb	0.36	500.00	
90 Zr	# 3	72	188688.9	0.0000	11.0000	ppb	1.30	50.00	
95 Mo	# 3	115	5495.7	0.0000	0.9641	ppb	1.26	500.00	
107 Ag	# 3	115	2670.3	0.0000	0.1833	ppb	4.56	50.00	
111 Cd	# 3	115	8868.0	0.0000	2.8870	ppb	1.67	500.00	
118 Sn	# 3	115	44469.2	0.0000	4.7970	ppb	0.14	500.00	
121 Sb	# 3	115	14064.2	0.0000	1.1130	ppb	1.22	500.00	
137 Ba	# 3	115	1034955.0	0.0000	227.2000	ppb	0.95	1000.00	
182 W	# 3	159	1351.2	0.0000	0.1087	ppb	4.62	50.00	
205 Tl	# 3	159	7326.8	0.0000	0.3017	ppb	2.17	500.00	
208 Pb	# 3	159	4960287.0	0.0000	157.2000	ppb	1.35	500.00	
235 U	# 3	159	198.9	0.0000	0.0049	ppb	2.52	30.00	
238 U	# 3	159	23626.7	0.0000	0.6488	ppb	0.71	500.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	1298123.30	1.14	1282155.90	101.2	60 - 125	
45 Sc	# 1	1156330.00	1.35	1442971.30	80.1	60 - 125	
45 Sc	# 2	213198.39	0.24	279185.97	76.4	60 - 125	
45 Sc	# 3	2775092.80	0.63	3081898.50	90.0	60 - 125	
72 Ge	# 1	267181.78	1.18	366345.44	72.9	60 - 125	
72 Ge	# 2	108227.59	0.51	152918.19	70.8	60 - 125	
72 Ge	# 3	527920.00	0.20	658417.44	80.2	60 - 125	
115 In	# 3	3269279.50	0.25	4239832.00	77.1	60 - 125	
159 Tb	# 3	4795748.50	0.22	6179295.50	77.6	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06184.D\F6L06184.D#
Date Acquired:	Dec 9 2015 02:19 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-10J
Misc Info:	
Vial Number:	4102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	5.00
Autodil Factor:	Undiluted
Final Dil Factor:	5.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	133497.0	0.0000	3.5020	ppb	4.61	50.00	
9 Be	# 3	6	1066.7	0.0000	0.2283	ppb	4.14	50.00	
11 B	# 3	6	7276.4	0.0000	1.8940	ppb	5.88	50.00	
23 Na	# 1	45	74567.9	0.0000	-0.2170	ppb	287.47	50000.00	
24 Mg	# 3	45	11000750.0	0.0000	933.7000	ppb	0.73	50000.00	
27 Al	# 3	45	98647848.0	0.0000	6244.0000	ppb	0.72	50000.00	
28 Si	# 1	45	291847.6	0.0000	335.8000	ppb	2.32	5000.00	
31 P	# 3	45	101334.8	0.0000	97.5000	ppb	1.89	500.00	
39 K	# 2	45	554218.2	0.0000	972.9000	ppb	0.44	50000.00	
40 Ca	# 1	45	14159720.0	0.0000	2034.0000	ppb	0.62	50000.00	
47 Ti	# 3	45	152210.8	0.0000	85.7200	ppb	1.06	500.00	
51 V	# 2	45	42350.8	0.0000	9.8620	ppb	0.87	500.00	
52 Cr	# 2	45	29100.3	0.0000	5.9150	ppb	0.42	500.00	
55 Mn	# 3	45	2011569.0	0.0000	69.1000	ppb	1.12	3000.00	
56 Fe	# 1	45	49218928.0	0.0000	5060.0000	ppb	0.51	50000.00	
59 Co	# 3	45	35784.6	0.0000	1.6750	ppb	2.11	500.00	
60 Ni	# 2	45	6564.8	0.0000	3.5990	ppb	1.01	500.00	
63 Cu	# 2	45	72006.7	0.0000	16.9400	ppb	0.62	500.00	
66 Zn	# 3	72	123659.0	0.0000	37.7500	ppb	0.84	500.00	
75 As	# 2	72	1044.0	0.0000	1.4760	ppb	0.79	500.00	
78 Se	# 1	72	30.0	0.0000	0.0714	ppb	19.59	500.00	
88 Sr	# 3	72	127238.9	0.0000	4.1800	ppb	0.47	500.00	
90 Zr	# 3	72	34755.5	0.0000	2.0260	ppb	3.20	50.00	
95 Mo	# 3	115	1155.6	0.0000	0.1643	ppb	5.38	500.00	
107 Ag	# 3	115	537.8	0.0000	0.0335	ppb	7.42	50.00	
111 Cd	# 3	115	1793.0	0.0000	0.5702	ppb	1.46	500.00	
118 Sn	# 3	115	9057.7	0.0000	0.9352	ppb	3.35	500.00	
121 Sb	# 3	115	3122.7	0.0000	0.2042	ppb	3.98	500.00	
137 Ba	# 3	115	205817.9	0.0000	44.5800	ppb	0.58	1000.00	
182 W	# 3	159	287.8	0.0000	0.0137	ppb	30.61	50.00	
205 Tl	# 3	159	1565.7	0.0000	0.0546	ppb	3.40	500.00	
208 Pb	# 3	159	1009460.0	0.0000	31.9800	ppb	1.50	500.00	
235 U	# 3	159	43.3	0.0000	0.0008	ppb	18.00	30.00	
238 U	# 3	159	4612.1	0.0000	0.1221	ppb	1.32	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1313312.10	2.19	1282155.90	102.4	60 - 125	
45 Sc # 1	1121288.30	1.49	1442971.30	77.7	60 - 125	
45 Sc # 2	205026.94	0.56	279185.97	73.4	60 - 125	
45 Sc # 3	2670801.50	0.44	3081898.50	86.7	60 - 125	
72 Ge # 1	272051.56	0.27	366345.44	74.3	60 - 125	
72 Ge # 2	108813.43	1.46	152918.19	71.2	60 - 125	
72 Ge # 3	524979.19	0.66	658417.44	79.7	60 - 125	
115 In # 3	3311337.50	0.43	4239832.00	78.1	60 - 125	
159 Tb # 3	4796430.50	0.28	6179295.50	77.6	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06185.D\F6L06185.D#
Date Acquired:	Dec 9 2015 02:23 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-11
Misc Info:	
Vial Number:	4103
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	388961.6	0.0000	22.3500	ppb	0.57	50.00	
9 Be	# 3	6	5442.3	0.0000	1.2220	ppb	0.76	50.00	
11 B	# 3	6	23641.5	0.0000	6.9610	ppb	1.00	50.00	
23 Na	# 1	45	280836.7	0.0000	66.4600	ppb	1.65	50000.00	
24 Mg	# 3	45	68797768.0	0.0000	5700.0000	ppb	0.67	50000.00	
27 Al	# 3	45	554442500.0	0.0000	33960.0000	ppb	1.03	50000.00	
28 Si	# 1	45	675859.8	0.0000	751.2000	ppb	2.40	5000.00	
31 P	# 3	45	272001.3	0.0000	292.2000	ppb	0.64	500.00	
39 K	# 2	45	3101601.0	0.0000	5589.0000	ppb	1.09	50000.00	
40 Ca	# 1	45	40440648.0	0.0000	5607.0000	ppb	0.92	50000.00	
47 Ti	# 3	45	659191.9	0.0000	359.4000	ppb	0.36	500.00	
51 V	# 2	45	226763.4	0.0000	52.8800	ppb	0.50	500.00	
52 Cr	# 2	45	141399.3	0.0000	28.0700	ppb	0.31	500.00	
55 Mn	# 3	45	13319110.0	0.0000	443.6000	ppb	0.79	3000.00	
56 Fe	# 1	45	275595390.0	0.0000	27320.0000	ppb	0.49	50000.00	
59 Co	# 3	45	230501.0	0.0000	10.6000	ppb	0.73	500.00	
60 Ni	# 2	45	40025.5	0.0000	23.6900	ppb	0.40	500.00	
63 Cu	# 2	45	92440.6	0.0000	21.0800	ppb	0.49	500.00	
66 Zn	# 3	72	258614.8	0.0000	80.0500	ppb	0.28	500.00	
75 As	# 2	72	5617.3	0.0000	8.2180	ppb	1.61	500.00	
78 Se	# 1	72	144.2	0.0000	0.3898	ppb	6.19	500.00	
88 Sr	# 3	72	1256297.0	0.0000	41.9000	ppb	1.07	500.00	
90 Zr	# 3	72	162129.4	0.0000	9.5690	ppb	0.57	50.00	
95 Mo	# 3	115	4345.3	0.0000	0.7649	ppb	1.76	500.00	
107 Ag	# 3	115	1783.5	0.0000	0.1231	ppb	3.06	50.00	
111 Cd	# 3	115	2395.6	0.0000	0.7861	ppb	1.19	500.00	
118 Sn	# 3	115	24914.0	0.0000	2.7120	ppb	0.93	500.00	
121 Sb	# 3	115	7381.1	0.0000	0.5693	ppb	1.17	500.00	
137 Ba	# 3	115	906073.2	0.0000	201.9000	ppb	2.07	1000.00	
182 W	# 3	159	1493.5	0.0000	0.1232	ppb	4.78	50.00	
205 Tl	# 3	159	8613.1	0.0000	0.3618	ppb	3.83	500.00	
208 Pb	# 3	159	850741.0	0.0000	27.3100	ppb	0.26	500.00	
235 U	# 3	159	164.5	0.0000	0.0041	ppb	1.57	30.00	
238 U	# 3	159	23842.6	0.0000	0.6636	ppb	1.38	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1299889.60	1.19	1282155.90	101.4	60 - 125	
45 Sc # 1	1163097.40	0.77	1442971.30	80.6	60 - 125	
45 Sc # 2	211721.34	0.81	279185.97	75.8	60 - 125	
45 Sc # 3	2760115.00	0.17	3081898.50	89.6	60 - 125	
72 Ge # 1	267110.50	0.36	366345.44	72.9	60 - 125	
72 Ge # 2	108461.87	0.77	152918.19	70.9	60 - 125	
72 Ge # 3	521540.47	0.53	658417.44	79.2	60 - 125	
115 In # 3	3220696.50	0.40	4239832.00	76.0	60 - 125	
159 Tb # 3	4732831.50	0.56	6179295.50	76.6	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06187.D\F6L06187.D#
Date Acquired: Dec 9 2015 02:32 am
Operator: CCapul
Sample Name: CCV16
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update: Dec 08 2015 01:50 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	24.40 ppb	1.15	25.00	90 - 110	
9 Be	21.18 ppb	1.07	25.00	90 - 110	Fail
11 B	22.40 ppb	1.94	25.00	90 - 110	Fail
23 Na	24610.00 ppb	0.41	25000.00	90 - 110	
24 Mg	27060.00 ppb	1.66	25000.00	90 - 110	
27 Al	26290.00 ppb	0.46	25000.00	90 - 110	
28 Si	2544.00 ppb	0.39	2500.00	90 - 110	
31 P	262.60 ppb	0.59	250.00	90 - 110	
39 K	25580.00 ppb	0.51	25000.00	90 - 110	
40 Ca	23090.00 ppb	0.29	25000.00	90 - 110	
47 Ti	243.30 ppb	0.35	250.00	90 - 110	
51 V	243.50 ppb	0.50	250.00	90 - 110	
52 Cr	240.90 ppb	0.60	250.00	90 - 110	
55 Mn	1415.00 ppb	0.63	1500.00	90 - 110	
56 Fe	24060.00 ppb	0.03	25000.00	90 - 110	
59 Co	231.60 ppb	0.68	250.00	90 - 110	
60 Ni	244.50 ppb	0.68	250.00	90 - 110	
63 Cu	233.30 ppb	0.26	250.00	90 - 110	
66 Zn	242.00 ppb	0.80	250.00	90 - 110	
75 As	250.00 ppb	0.91	250.00	90 - 110	
78 Se	248.60 ppb	1.17	250.00	90 - 110	
88 Sr	247.70 ppb	1.02	250.00	90 - 110	
90 Zr	28.20 ppb	1.45	25.00	90 - 110	Fail
95 Mo	245.90 ppb	1.55	250.00	90 - 110	
107 Ag	24.04 ppb	0.68	25.00	90 - 110	
111 Cd	245.40 ppb	0.14	250.00	90 - 110	
118 Sn	241.20 ppb	0.58	250.00	90 - 110	
121 Sb	242.70 ppb	0.50	250.00	90 - 110	
137 Ba	503.50 ppb	0.98	500.00	90 - 110	
182 W	24.15 ppb	1.00	25.00	90 - 110	
205 Tl	235.20 ppb	2.23	250.00	90 - 110	
208 Pb	233.10 ppb	1.69	250.00	90 - 110	
235 U	1.67 ppb	0.54	1.80	90 - 110	
238 U	236.50 ppb	1.38	250.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1212413.30	0.60	1282155.90	94.6	60 - 125	
45 Sc	1046998.00	0.52	1442971.30	72.6	60 - 125	
45 Sc	189510.72	0.22	279185.97	67.9	60 - 125	
45 Sc	2531044.80	0.13	3081898.50	82.1	60 - 125	
72 Ge	250607.63	0.16	366345.44	68.4	60 - 125	
72 Ge	99633.09	0.93	152918.19	65.2	60 - 125	
72 Ge	493281.88	1.23	658417.44	74.9	60 - 125	
115 In	3043454.00	0.66	4239832.00	71.8	60 - 125	
159 Tb	4481663.50	0.43	6179295.50	72.5	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

3 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06188.D\F6L06188.D#
Date Acquired:	Dec 9 2015 02:36 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	CCB16
Misc Info:	
Vial Number:	1201
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.1428	ppb	81267.4	49.18	0.20	
9 Be	0.0104	ppb	93.3	47.14	0.10	
11 B	0.2547	ppb	1860.2	9.74	5.00	
23 Na	8.9860	ppb	94967.3	38.77	40.00	
24 Mg	3.8290	ppb	150707.8	4.32	10.00	
27 Al	2.7760	ppb	50104.7	8.92	20.00	
28 Si	3.1420	ppb	3542.8	11.86	20.00	
31 P	7.2920	ppb	25042.0	4.43	10.00	
39 K	16.3500	ppb	44784.7	17.94	20.00	
40 Ca	22.9500	ppb	177511.8	13.82	25.00	
47 Ti	0.0318	ppb	144.5	71.87	0.50	
51 V	0.2536	ppb	2651.1	5.14	0.50	
52 Cr	0.0525	ppb	538.0	31.46	0.20	
55 Mn	0.1735	ppb	9347.7	10.32	0.20	
56 Fe	27.6000	ppb	265668.4	12.98	10.00	Fail
59 Co	0.0252	ppb	1124.5	16.49	0.20	
60 Ni	-0.3349	ppb	250.9	4.60	0.20	Fail
63 Cu	0.0350	ppb	411.8	37.31	0.40	
66 Zn	-0.2725	ppb	788.9	7.13	2.00	
75 As	0.1071	ppb	106.9	9.97	0.20	
78 Se	0.2867	ppb	103.6	14.61	0.20	Fail
88 Sr	0.0275	ppb	1983.5	9.09	0.20	
90 Zr	0.0319	ppb	777.8	8.91	2.00	
95 Mo	0.1817	ppb	1227.9	10.59	0.40	
107 Ag	0.0015	ppb	73.3	58.39	0.20	
111 Cd	0.0144	ppb	66.8	37.50	0.20	
118 Sn	0.0646	ppb	927.8	16.38	0.20	
121 Sb	0.0442	ppb	1142.3	21.32	0.40	
137 Ba	0.0957	ppb	608.9	0.88	0.20	
182 W	0.0159	ppb	302.2	16.37	1.00	
205 Tl	0.0414	ppb	1215.7	24.69	0.20	
208 Pb	0.0250	ppb	1243.4	12.70	0.10	
235 U	0.0002	ppb	17.8	113.54	1.00	
238 U	0.0362	ppb	1461.3	13.17	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1280322.4	0.99	1282155.90	99.9	60 - 125	
45 Sc	1047919.7	1.00	1442971.30	72.6	60 - 125	
45 Sc	196875.4	0.92	279185.97	70.5	60 - 125	
45 Sc	2539970.5	0.14	3081898.50	82.4	60 - 125	
72 Ge	258586.2	1.41	366345.44	70.6	60 - 125	
72 Ge	104087.7	0.49	152918.19	68.1	60 - 125	
72 Ge	508172.3	0.85	658417.44	77.2	60 - 125	
115 In	3249320.0	0.90	4239832.00	76.6	60 - 125	
159 Tb	4636259.5	0.07	6179295.50	75.0	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

3 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06189.D\F6L06189.D#
Date Acquired:	Dec 9 2015 02:40 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-12
Misc Info:	
Vial Number:	4104
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	348318.2	0.0000	19.1500	ppb	1.27	50.00	
9 Be	# 3	6	5631.2	0.0000	1.2540	ppb	4.14	50.00	
11 B	# 3	6	17955.7	0.0000	5.1610	ppb	2.61	50.00	
23 Na	# 1	45	263278.9	0.0000	64.0800	ppb	0.64	50000.00	
24 Mg	# 3	45	63658792.0	0.0000	5313.0000	ppb	0.68	50000.00	
27 Al	# 3	45	472601410.0	0.0000	29170.0000	ppb	1.19	50000.00	
28 Si	# 1	45	977265.4	0.0000	1129.0000	ppb	2.22	5000.00	
31 P	# 3	45	264256.5	0.0000	285.5000	ppb	0.17	500.00	
39 K	# 2	45	2690819.0	0.0000	4880.0000	ppb	0.92	50000.00	
40 Ca	# 1	45	36523608.0	0.0000	5262.0000	ppb	1.38	50000.00	
47 Ti	# 3	45	515340.1	0.0000	283.1000	ppb	0.28	500.00	
51 V	# 2	45	213522.5	0.0000	50.1800	ppb	0.42	500.00	
52 Cr	# 2	45	128175.8	0.0000	25.6500	ppb	0.60	500.00	
55 Mn	# 3	45	12636650.0	0.0000	424.0000	ppb	0.08	3000.00	
56 Fe	# 1	45	255893900.0	0.0000	26360.0000	ppb	1.30	50000.00	
59 Co	# 3	45	220706.2	0.0000	10.2300	ppb	0.33	500.00	
60 Ni	# 2	45	38800.0	0.0000	23.1500	ppb	1.24	500.00	
63 Cu	# 2	45	84136.6	0.0000	19.3400	ppb	0.92	500.00	
66 Zn	# 3	72	203944.2	0.0000	63.3400	ppb	0.75	500.00	
75 As	# 2	72	5780.1	0.0000	8.6080	ppb	0.41	500.00	
78 Se	# 1	72	137.3	0.0000	0.3777	ppb	9.96	500.00	
88 Sr	# 3	72	1282290.0	0.0000	42.9900	ppb	0.81	500.00	
90 Zr	# 3	72	114162.1	0.0000	6.7680	ppb	1.17	50.00	
95 Mo	# 3	115	4646.5	0.0000	0.8253	ppb	1.67	500.00	
107 Ag	# 3	115	1520.1	0.0000	0.1049	ppb	1.94	50.00	
111 Cd	# 3	115	1833.5	0.0000	0.6029	ppb	2.85	500.00	
118 Sn	# 3	115	23832.0	0.0000	2.6060	ppb	1.60	500.00	
121 Sb	# 3	115	6834.1	0.0000	0.5263	ppb	3.52	500.00	
137 Ba	# 3	115	830833.4	0.0000	186.1000	ppb	1.08	1000.00	
182 W	# 3	159	1452.4	0.0000	0.1208	ppb	5.24	50.00	
205 Tl	# 3	159	8413.0	0.0000	0.3567	ppb	1.08	500.00	
208 Pb	# 3	159	748523.5	0.0000	24.2600	ppb	0.41	500.00	
235 U	# 3	159	168.9	0.0000	0.0042	ppb	14.40	30.00	
238 U	# 3	159	22605.9	0.0000	0.6350	ppb	1.42	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1311054.60	1.02	1282155.90	102.3	60 - 125	
45 Sc # 1	1119239.10	0.81	1442971.30	77.6	60 - 125	
45 Sc # 2	209973.44	0.84	279185.97	75.2	60 - 125	
45 Sc # 3	2739556.30	0.18	3081898.50	88.9	60 - 125	
72 Ge # 1	262149.09	0.74	366345.44	71.6	60 - 125	
72 Ge # 2	106576.87	0.37	152918.19	69.7	60 - 125	
72 Ge # 3	518896.91	0.30	658417.44	78.8	60 - 125	
115 In # 3	3204811.50	0.51	4239832.00	75.6	60 - 125	
159 Tb # 3	4687379.50	0.64	6179295.50	75.9	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06190.D\F6L06190.D#
Date Acquired: Dec 9 2015 02:45 am
Acq. Method: EMX6020H.M
Operator: CCapul
Sample Name: L067-13
Misc Info:
Vial Number: 4105
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update: Dec 08 2015 01:50 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	320372.3	0.0000	17.3800	ppb	1.72	50.00	
9 Be	# 3	6	4605.3	0.0000	1.0350	ppb	1.60	50.00	
11 B	# 3	6	22561.0	0.0000	6.6480	ppb	1.61	50.00	
23 Na	# 1	45	750368.1	0.0000	227.4000	ppb	1.53	50000.00	
24 Mg	# 3	45	52536160.0	0.0000	4429.0000	ppb	1.23	50000.00	
27 Al	# 3	45	478266910.0	0.0000	29820.0000	ppb	0.83	50000.00	
28 Si	# 1	45	1375558.0	0.0000	1574.0000	ppb	0.87	5000.00	
31 P	# 3	45	307550.5	0.0000	340.0000	ppb	0.67	500.00	
39 K	# 2	45	2358902.0	0.0000	4328.0000	ppb	0.56	50000.00	
40 Ca	# 1	45	89308176.0	0.0000	12750.0000	ppb	0.53	50000.00	
47 Ti	# 3	45	470970.6	0.0000	261.4000	ppb	0.42	500.00	
51 V	# 2	45	192977.4	0.0000	45.9400	ppb	0.65	500.00	
52 Cr	# 2	45	144862.0	0.0000	29.3900	ppb	0.67	500.00	
55 Mn	# 3	45	10696700.0	0.0000	362.7000	ppb	1.27	3000.00	
56 Fe	# 1	45	220537500.0	0.0000	22490.0000	ppb	0.21	50000.00	
59 Co	# 3	45	187119.2	0.0000	8.7570	ppb	0.99	500.00	
60 Ni	# 2	45	33017.2	0.0000	19.9000	ppb	0.33	500.00	
63 Cu	# 2	45	392254.2	0.0000	91.6400	ppb	0.55	500.00	
66 Zn	# 3	72	657464.8	0.0000	207.7000	ppb	0.74	500.00	
75 As	# 2	72	4773.9	0.0000	7.1890	ppb	3.33	500.00	
78 Se	# 1	72	127.3	0.0000	0.3502	ppb	8.63	500.00	
88 Sr	# 3	72	912248.2	0.0000	30.9200	ppb	1.21	500.00	
90 Zr	# 3	72	149655.5	0.0000	8.9790	ppb	0.55	50.00	
95 Mo	# 3	115	3818.4	0.0000	0.6666	ppb	4.96	500.00	
107 Ag	# 3	115	1779.1	0.0000	0.1228	ppb	10.51	50.00	
111 Cd	# 3	115	6702.4	0.0000	2.2120	ppb	1.49	500.00	
118 Sn	# 3	115	25279.1	0.0000	2.7520	ppb	2.42	500.00	
121 Sb	# 3	115	8092.6	0.0000	0.6290	ppb	1.65	500.00	
137 Ba	# 3	115	840983.4	0.0000	187.4000	ppb	1.03	1000.00	
182 W	# 3	159	1336.8	0.0000	0.1097	ppb	3.90	50.00	
205 Tl	# 3	159	6829.8	0.0000	0.2860	ppb	1.72	500.00	
208 Pb	# 3	159	1944962.0	0.0000	62.8200	ppb	1.17	500.00	
235 U	# 3	159	146.7	0.0000	0.0036	ppb	26.45	30.00	
238 U	# 3	159	21922.4	0.0000	0.6132	ppb	0.60	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1296321.40	1.45	1282155.90	101.1	60 - 125	
45 Sc # 1	1130514.90	1.04	1442971.30	78.3	60 - 125	
45 Sc # 2	207131.45	0.45	279185.97	74.2	60 - 125	
45 Sc # 3	2711099.80	0.64	3081898.50	88.0	60 - 125	
72 Ge # 1	261699.16	0.93	366345.44	71.4	60 - 125	
72 Ge # 2	105264.29	0.36	152918.19	68.8	60 - 125	
72 Ge # 3	512981.66	0.59	658417.44	77.9	60 - 125	
115 In # 3	3221653.50	0.99	4239832.00	76.0	60 - 125	
159 Tb # 3	4705695.00	0.52	6179295.50	76.2	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06191.D\F6L06191.D#
Date Acquired:	Dec 9 2015 02:49 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	L067-14
Misc Info:	
Vial Number:	4106
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	353886.5	0.0000	20.1800	ppb	0.91	50.00	
9 Be	# 3	6	4928.8	0.0000	1.1230	ppb	1.24	50.00	
11 B	# 3	6	25165.1	0.0000	7.5490	ppb	0.88	50.00	
23 Na	# 1	45	492146.0	0.0000	140.1000	ppb	0.61	50000.00	
24 Mg	# 3	45	59838880.0	0.0000	4986.0000	ppb	0.59	50000.00	
27 Al	# 3	45	504211580.0	0.0000	31070.0000	ppb	1.39	50000.00	
28 Si	# 1	45	1325785.0	0.0000	1515.0000	ppb	1.17	5000.00	
31 P	# 3	45	310494.9	0.0000	339.1000	ppb	0.60	500.00	
39 K	# 2	45	2668588.0	0.0000	4883.0000	ppb	1.85	50000.00	
40 Ca	# 1	45	88889072.0	0.0000	12670.0000	ppb	0.50	50000.00	
47 Ti	# 3	45	572384.4	0.0000	313.9000	ppb	0.37	500.00	
51 V	# 2	45	202610.3	0.0000	48.0300	ppb	1.22	500.00	
52 Cr	# 2	45	131809.9	0.0000	26.6100	ppb	0.86	500.00	
55 Mn	# 3	45	10083640.0	0.0000	337.8000	ppb	0.54	3000.00	
56 Fe	# 1	45	249320000.0	0.0000	25400.0000	ppb	1.00	50000.00	
59 Co	# 3	45	192355.9	0.0000	8.8950	ppb	0.33	500.00	
60 Ni	# 2	45	35326.1	0.0000	21.2200	ppb	1.42	500.00	
63 Cu	# 2	45	115552.5	0.0000	26.8200	ppb	0.58	500.00	
66 Zn	# 3	72	287128.4	0.0000	89.8800	ppb	0.41	500.00	
75 As	# 2	72	5062.7	0.0000	7.6710	ppb	0.61	500.00	
78 Se	# 1	72	125.8	0.0000	0.3459	ppb	6.24	500.00	
88 Sr	# 3	72	1192843.0	0.0000	40.2100	ppb	0.19	500.00	
90 Zr	# 3	72	188257.0	0.0000	11.2300	ppb	0.70	50.00	
95 Mo	# 3	115	4264.1	0.0000	0.7559	ppb	4.21	500.00	
107 Ag	# 3	115	1808.0	0.0000	0.1258	ppb	1.35	50.00	
111 Cd	# 3	115	4000.4	0.0000	1.3280	ppb	6.03	500.00	
118 Sn	# 3	115	26513.7	0.0000	2.9110	ppb	1.46	500.00	
121 Sb	# 3	115	8037.0	0.0000	0.6295	ppb	0.60	500.00	
137 Ba	# 3	115	914141.1	0.0000	205.3000	ppb	1.87	1000.00	
182 W	# 3	159	1341.2	0.0000	0.1100	ppb	3.40	50.00	
205 Tl	# 3	159	7717.0	0.0000	0.3245	ppb	1.63	500.00	
208 Pb	# 3	159	2215454.0	0.0000	71.5000	ppb	1.34	500.00	
235 U	# 3	159	183.3	0.0000	0.0046	ppb	8.44	30.00	
238 U	# 3	159	23654.5	0.0000	0.6616	ppb	1.58	500.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1280266.50	0.69	1282155.90	99.9	60 - 125	
45 Sc # 1	1131840.80	1.47	1442971.30	78.4	60 - 125	
45 Sc # 2	208123.48	0.97	279185.97	74.5	60 - 125	
45 Sc # 3	2743767.50	0.92	3081898.50	89.0	60 - 125	
72 Ge # 1	261598.14	0.32	366345.44	71.4	60 - 125	
72 Ge # 2	104670.91	0.85	152918.19	68.4	60 - 125	
72 Ge # 3	516050.66	0.27	658417.44	78.4	60 - 125	
115 In # 3	3196659.30	1.07	4239832.00	75.4	60 - 125	
159 Tb # 3	4709640.50	0.48	6179295.50	76.2	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\DATA\IF62015\L\IF6L06.B\F6L06193.D\F6L06193.D#
Date Acquired: Dec 9 2015 02:57 am
Operator: CCapul
Sample Name: CCV17
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File: C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal Update: Dec 08 2015 01:50 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	24.69 ppb	1.78	25.00	90 - 110	
9 Be	21.96 ppb	3.06	25.00	90 - 110	Fail
11 B	23.51 ppb	3.05	25.00	90 - 110	
23 Na	24620.00 ppb	0.60	25000.00	90 - 110	
24 Mg	27720.00 ppb	1.70	25000.00	90 - 110	Fail
27 Al	26490.00 ppb	1.74	25000.00	90 - 110	
28 Si	2550.00 ppb	0.39	2500.00	90 - 110	
31 P	265.10 ppb	1.16	250.00	90 - 110	
39 K	25410.00 ppb	0.53	25000.00	90 - 110	
40 Ca	23220.00 ppb	0.27	25000.00	90 - 110	
47 Ti	243.70 ppb	1.00	250.00	90 - 110	
51 V	242.00 ppb	1.32	250.00	90 - 110	
52 Cr	240.60 ppb	1.48	250.00	90 - 110	
55 Mn	1426.00 ppb	1.74	1500.00	90 - 110	
56 Fe	24250.00 ppb	0.54	25000.00	90 - 110	
59 Co	235.00 ppb	1.65	250.00	90 - 110	
60 Ni	242.50 ppb	0.25	250.00	90 - 110	
63 Cu	232.50 ppb	0.30	250.00	90 - 110	
66 Zn	242.60 ppb	1.27	250.00	90 - 110	
75 As	250.00 ppb	0.22	250.00	90 - 110	
78 Se	249.20 ppb	0.47	250.00	90 - 110	
88 Sr	246.90 ppb	0.86	250.00	90 - 110	
90 Zr	27.36 ppb	0.47	25.00	90 - 110	
95 Mo	248.90 ppb	2.09	250.00	90 - 110	
107 Ag	24.59 ppb	1.77	25.00	90 - 110	
111 Cd	250.50 ppb	0.84	250.00	90 - 110	
118 Sn	240.00 ppb	0.92	250.00	90 - 110	
121 Sb	243.20 ppb	0.92	250.00	90 - 110	
137 Ba	505.40 ppb	1.30	500.00	90 - 110	
182 W	24.66 ppb	0.64	25.00	90 - 110	
205 Tl	242.80 ppb	2.31	250.00	90 - 110	
208 Pb	239.50 ppb	2.35	250.00	90 - 110	
235 U	1.69 ppb	3.44	1.80	90 - 110	
238 U	235.70 ppb	2.43	250.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1170010.90	2.73	1282155.90	91.3	60 - 125	
45 Sc	1030544.30	0.71	1442971.30	71.4	60 - 125	
45 Sc	188664.86	0.17	279185.97	67.6	60 - 125	
45 Sc	2481091.50	1.47	3081898.50	80.5	60 - 125	
72 Ge	248323.88	0.74	366345.44	67.8	60 - 125	
72 Ge	98440.40	0.31	152918.19	64.4	60 - 125	
72 Ge	491592.84	0.55	658417.44	74.7	60 - 125	
115 In	2978498.00	0.88	4239832.00	70.3	60 - 125	
159 Tb	4414632.50	1.51	6179295.50	71.4	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	C:\DATA\IF62015\L\IF6L06.B\F6L06194.D\F6L06194.D#
Date Acquired:	Dec 9 2015 03:01 am
Acq. Method:	EMX6020H.M
Operator:	CCapul
Sample Name:	CCB17
Misc Info:	
Vial Number:	1201
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020H.M
Calibration File:	C:\DATA\IF62015\K\IF6K02.B\EMX6020H.C
Last Cal. Update:	Dec 08 2015 01:50 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0400	ppb	81485.1	303.92	0.20	
9 Be	0.0092	ppb	86.7	40.29	0.10	
11 B	0.1753	ppb	1583.5	20.02	5.00	
23 Na	2.4730	ppb	76863.4	90.98	40.00	
24 Mg	3.5300	ppb	145369.3	7.04	10.00	
27 Al	2.1840	ppb	40644.6	9.08	20.00	
28 Si	2.5130	ppb	3024.9	15.63	20.00	
31 P	7.9030	ppb	25176.8	3.57	10.00	
39 K	15.6600	ppb	43828.5	9.91	20.00	
40 Ca	17.5300	ppb	141934.5	10.86	25.00	
47 Ti	0.0069	ppb	101.1	96.34	0.50	
51 V	0.2623	ppb	2648.5	13.28	0.50	
52 Cr	0.0437	ppb	490.0	35.26	0.20	
55 Mn	0.1524	ppb	8643.9	13.57	0.20	
56 Fe	21.3700	ppb	208528.0	11.91	10.00	Fail
59 Co	0.0237	ppb	1079.0	19.08	0.20	
60 Ni	-0.3233	ppb	264.9	5.05	0.20	Fail
63 Cu	0.0208	ppb	349.6	26.89	0.40	
66 Zn	-0.2805	ppb	757.8	7.70	2.00	
75 As	0.1161	ppb	111.6	7.40	0.20	
78 Se	0.2124	ppb	78.2	9.32	0.20	Fail
88 Sr	0.0164	ppb	1644.6	16.65	0.20	
90 Zr	0.0270	ppb	691.2	8.69	2.00	
95 Mo	0.1982	ppb	1302.3	7.13	0.40	
107 Ag	0.0010	ppb	65.6	92.29	0.20	
111 Cd	0.0175	ppb	75.4	31.96	0.20	
118 Sn	0.0754	ppb	1014.5	21.12	0.20	
121 Sb	0.0476	ppb	1170.1	22.57	0.40	
137 Ba	0.0793	ppb	527.8	26.81	0.20	
182 W	0.0148	ppb	286.7	49.70	1.00	
205 Tl	0.0403	ppb	1177.9	7.96	0.20	
208 Pb	0.0186	ppb	1037.8	34.74	0.10	
235 U	0.0002	ppb	16.7	102.68	1.00	
238 U	0.0330	ppb	1332.3	23.92	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1262523.1	1.72	1282155.90	98.5	60 - 125	
45 Sc	1045025.5	0.69	1442971.30	72.4	60 - 125	
45 Sc	194181.8	0.75	279185.97	69.6	60 - 125	
45 Sc	2505223.8	0.55	3081898.50	81.3	60 - 125	
72 Ge	260333.1	0.61	366345.44	71.1	60 - 125	
72 Ge	103004.3	0.48	152918.19	67.4	60 - 125	
72 Ge	503766.8	0.47	658417.44	76.5	60 - 125	
115 In	3213569.0	1.06	4239832.00	75.8	60 - 125	
159 Tb	4586789.5	1.10	6179295.50	74.2	60 - 125	

ISTD Ref File : C:\DATA\IF62015\L\IF6L06.B\F6L06004.D\F6L06004.D#

3 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP-MS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Digestion Vessel Lot # 02515001

Book #: EIM-057
Batch: IML0155
Matrix: Soil
Digestor ID: D

SOP #	Rev. #
☐ EMAX-200.8	5
☑ EMAX-6020	9
☐ EMAX-	

Start	Temp	End	Temp
	92.4 °C		92.6 °C

Standards	ID	Amount Added (ml/g)
LCS-1	SM6A-007-02-23	4
LCS-2	SM6A-007-02-24	4
MS	same spike soln & vol	as LCS 1&2
Blank Soil (Bead)	SM5A-03-02-04	2g
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-005-14-09	10
HCl	↓ -12-08	5+5
H_2O_2	↓ -14-23	10
HNO_3(1:1)	SM5B-03-66-03	10
pH Strip (0-14)	NA	NA
Digestate Location		Metals
Extract Location		NA
☑ Reagent Water ID:	SM5A-03-02-03	
☑ Thermometer ID:	14069047/D20	
☑ Pipette ID:	14278035 7	
☐ Pipette ID:	NA	
☐ Pipette ID:	NA	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask		
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask		

Prepared By: SP
Standard Added By: SP Witnessed By: TH
Extract Rcvd By: [illegible] Checked By: [illegible]

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
15IML015S01	IML015SB	2.06	g	12/8/15 13:04	100	2	100	1	
15IML015S02	IML015SL	2.04	g	12/8/15 13:06	100	2	100	1	
15IML015S03	IML015SC	2.07	g	12/8/15 13:05	100	2	100	1	
15IML015S04	L067-01	2.02	g	12/8/15 13:06	100	2	100	0.99	
15IML015S05	L067-02	2.06	g	12/8/15 13:08	100	2	100	0.971	
15IML015S06	L067-03	2.02	g	12/8/15 13:09	100	2	100	0.99	
15IML015S07	L067-04	2.01	g	12/8/15 13:10	100	2	100	0.995	
15IML015S08	L067-05	2.04	g	12/8/15 13:11	100	2	100	0.98	
15IML015S09	L067-06	2.05	g	12/8/15 13:11	100	2	100	0.976	
15IML015S10	L067-07	2.07	g	12/8/15 13:12	100	2	100	0.966	
15IML015S11	L067-08	2.06	g	12/8/15 13:13	100	2	100	0.971	
15IML015S12	L067-09	2.03	g	12/8/15 13:14	100	2	100	0.985	
15IML015S13	L067-10	2.09	g	12/8/15 13:14	100	2	100	0.957	
15IML015S14	L067-10M	2.01	g	12/8/15 13:15	100	2	100	0.995	
15IML015S15	L067-10S	2.02	g	12/8/15 13:16	100	2	100	0.99	
15IML015S16	L067-11	2.02	g	12/8/15 13:17	100	2	100	0.99	
15IML015S17	L067-12	2.06	g	12/8/15 13:18	100	2	100	0.971	
15IML015S18	L067-13	2.08	g	12/8/15 13:19	100	2	100	0.962	
15IML015S19	L067-14	2.07	g	12/8/15 13:20	100	2	100	0.966	

SP 12/08/15

Balance ID: 10203192. Calibration check was verified prior to use.

Vd=digestate volume

PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 12/8/15 14:31

Prepared By: SPara

☑ Digestion Ended @ 12/8/15 18:38

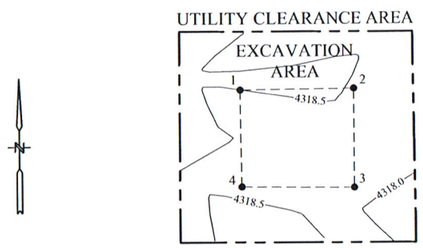
Checked By: GM

Comments:

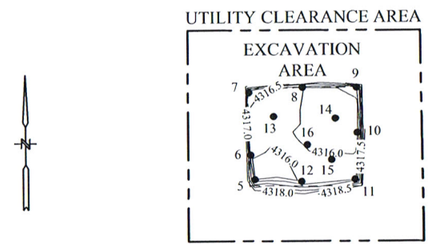
Date 12/8/15

TOPOGRAPHIC SURVEY AT SITE FT006
CANNON AIR FORCE BASE, NEW MEXICO

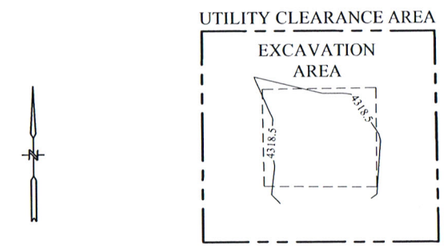
PRE-EXCAVATION



POST-EXCAVATION



FINAL GRADE



EXCAVATION AREA POINTS:

POINT NO.	LATITUDE	LONGITUDE
1	N 34° 24' 8.701"	W -103° 18' 10.90"
2	N 34° 24' 8.70"	W -103° 18' 10.461"
3	N 34° 24' 8.38"	W -103° 18' 10.465"
4	N 34° 24' 8.387"	W -103° 18' 10.90"
5	N 34° 24' 08.406"	W -103° 18' 10.878"
6	N 34° 24' 08.485"	W -103° 18' 10.893"
7	N 34° 24' 08.686"	W -103° 18' 10.896"
8	N 34° 24' 08.701"	W -103° 18' 10.688"
9	N 34° 24' 08.698"	W -103° 18' 10.480"
10	N 34° 24' 08.552"	W -103° 18' 10.480"
11	N 34° 24' 08.402"	W -103° 18' 10.492"
12	N 34° 24' 08.397"	W -103° 18' 10.697"
13	N 34° 24' 08.608"	W -103° 18' 10.802"
14	N 34° 24' 08.599"	W -103° 18' 10.564"
15	N 34° 24' 08.466"	W -103° 18' 10.580"
16	N 34° 24' 08.516"	W -103° 18' 10.673"

NOTES:

HORIZONTAL PROJECTION: NEW MEXICO STATE PLANE EAST ZONE (GRID COORDINATES)
HORIZONTAL DATUM: NAD 83
VERTICAL DATUM: NAVD 88

TOTALS:

PRE-EXCAVATION = 0 CU YD
POST-EXCAVATION = 100.17 CU YD FINAL GRADE = +16 CU YD

LEGEND

- UTILITY CLEARANCE AREA
- EXCAVATION AREA
- 1 EXCAVATION AREA POINTS
- 4318.00 CONTOUR LABELS

PREPARED BY
LYDICK
ENGINEERS & SURVEYORS
205 EAST SECOND STREET
CLOVIS, NEW MEXICO 88101
(575) 762-3771

50 25 0 50

SCALE: 1" = 50'
DATE: DECEMBER, 2015

ROBERT CHAD LYDICK
NEW MEXICO
5955
12-23-15
LAND SURVEYOR
REGISTERED PROFESSIONAL ENGINEER

SITE ACTIVITIES PHOTOGRAPHIC LOG

FT006 December 2015 Excavation	FT006 ACM Completion Report	**Contract No.** FA8903-13-C-0008

Photograph No. 01

Date: 12-04-2015

Description: Pre-excavation boundaries. Looking south.

Photograph No. 02

Date: 12-07-2015

Description: Excavating soil with front end loader. Looking east.

Photograph No. 03

Date: 12-07-2015

Description: Loading excavated soil on to end dump truck with front end loader. Looking east.

Photograph No. 04

Date: 12-07-2015

Description: Using XRF to screen for lead in the floor of the excavation.

Photograph No. 05

Date: 12-07-2015

Description: Post-excavation boundaries with safety fencing. Looking north.

Photograph No. 06

Date: 12-10-2015

Description: Clean backfill soil being brought on-site for excavation backfill. Looking east.

Photograph No. 07

Date: 12-10-2015

Description: Placing and compacting backfill soil in 1-foot lifts. Looking north.

Photograph No. 08

Date: 12-10-2015

Description: First 1-foot lift of backfill soil placed and compacted within excavation. Looking north.

Photograph No. 09

Date: 12-10-2015

Description: Final Grade of FT006 excavation after completion of backfill. Looking south.

CLOVIS REGIONAL LANDFILL
P.O. BOX 760 CLOVIS, NM 88101-0760
(505) 769-7852
Account cards are mandatory!

Truck: URS/AE
Customer: 436508/URS/AECOM

Ticket: 405807
Date: 12/7/2015
Time: 09:27:22 - 09:39:00

Gross:	73600 LBS	In	Scale Scale IN
Tare:	31800 LBS	Out	Scale OUT
Net:	41800 LBS		

Grid: WEDGE/C & D wedge
Comment: K84

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
11/CAFB	100% of 12/C&D	20.90	TON	$13.00/TN	$271.70
				Total Taxes:	$13.59
				Total Amount:	$285.29

Driver: Stu Barch 12/07/2015 09:36

Deputy Weighmaster:
OSCAR M

CLOVIS REGIONAL LANDFILL
P.O. BOX 760 CLOVIS, NM 88101-0760
(505) 769-7852
Account cards are mandatory!

Truck: URS/AE
Customer: 436508/URS/AECOM

Ticket: 405792
Date: 12/7/2015
Time: 07:59:11 - 08:13:25

Gross:	80760 LBS In	Scale	Scale IN
Tare:	35400 LBS Out	Scale	Scale OUT
Net:	45360 LBS		

Grid: WEDGE/C & D wedge
Comment: GREEN

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
11/CAFB	100% of 12/C&D	22.68	TON	$13.00/TN	$294.84
				Total Taxes:	$14.74
				Total Amount:	$309.58

Driver: 12/07/2015 08:13

Deputy Weighmaster:
OSCAR M

CLOVIS REGIONAL LANDFILL
P.O. BOX 760 CLOVIS, NM 88101-0760
(505) 769-7852
Account cards are mandatory!

Truck: URS/AE2
Customer: 436508/URS/AECOM

Ticket: 405794
Date: 12/7/2015
Time: 08:04:02 - 08:20:09

			Scale
Gross:	71240 LBS	In	Scale IN
Tare:	31820 LBS	Out	Scale OUT
Net:	39420 LBS		

Grid: WEDGE/C & D wedge
Comment: WHITE

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
11/CAFB	100% of 12/C&D	19.71	TON	$13.00/TN	$256.23
				Total Taxes:	$12.81
				Total Amount:	$269.04

Driver: 12/07/2015 08:19

Deputy Weighmaster:
OSCAR M

CLOVIS REGIONAL LANDFILL
P.O. BOX 760 CLOVIS, NM 88101-0760
(505) 769-7852
Account cards are mandatory!

Truck: URS/AE
Customer: 436508/URS/AECOM

Ticket: 405805
Date: 12/7/2015
Time: 09:16:36 - 09:26:47

			Scale
Gross:	85620	LBS In	Scale IN
Tare:	35460	LBS Out	Scale OUT
Net:	50160	LBS	

Grid: WEDGE/C & D wedge
Comment: CJ7

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
11/CAFB	100% of 12/C&D	25.08	TON	$13.00/TN	$326.04
				Total Taxes:	$16.30
				Total Amount:	$342.34

Driver: 12/07/2015 09:28

Deputy Weighmaster:
OSCAR M

CLOVIS REGIONAL LANDFILL
P.O. BOX 760 CLOVIS, NM 88101-0760
(505) 769-7852
Account cards are mandatory!

Truck: URS/AE
Customer: 436508/URS/AECOM

Ticket: 405825
Date: 12/7/2015
Time: 10:26:18 - 10:33:26

			Scale
Gross:	77640 LBS	In	Scale IN
Tare:	35440 LBS	Out	Scale OUT
Net:	42200 LBS		

Grid: WEDGE/C & D wedge
Comment: cj7

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
11/CAFB	100% of 12/C&D	21.10	TON	$13.00/TN	$274.30
				Total Taxes:	$13.72
				Total Amount:	$288.02

Driver: 12/07/2015 10:33

Deputy Weighmaster:
OSCAR M

CLOVIS REGIONAL LANDFILL
P.O. BOX 760 CLOVIS, NM 88101-0760
(505) 769-7852
Account cards are mandatory!

Truck: URS/AE
Customer: 436508/URS/AECOM

Ticket: 405832
Date: 12/7/2015
Time: 10:46:15 - 10:57:06

Gross: 68820 LBS In Scale Scale IN
Tare: 31680 LBS Out Scale OUT
Net: 37140 LBS

Grid: WEDGE/C & D wedge
Comment:

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
11/CAFB	100% of 12/C&D	18.57	TON	$13.00/TN	$241.41
				Total Taxes:	$12.07
				Total Amount:	$253.48

Driver: Steve Bunch 12/07/2015 10:56

Deputy Weighmaster:
OSCAR M

CLOVIS REGIONAL LANDFILL
P.O. BOX 760 CLOVIS, NM 88101-0760
(505) 769-7852
Account cards are mandatory!

Truck: URS/AE
Customer: 436508/URS/AECOM

Ticket: 405849
Date: 12/7/2015
Time: 12:00:10 - 12:10:00

Gross:	70420 LBS	In	Scale Scale IN
Tare:	31820 LBS	Out	Scale OUT
Net:	38600 LBS		

Grid: WEDGE/C & D wedge
Comment: k84

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
11/CAFB	100% of 12/C&D	19.30	TON	$13.00/TN	$250.90
				Total Taxes:	$12.55
				Total Amount:	$263.45

Driver: 12/07/2015 12:06

Deputy Weighmaster:
OSCAR M

№ 004555

LITTLE GATOR TRUCKING TIME SHEET / BILL OF LADING

DATE Dec 7 2015 TRUCK OWNER LGT TRUCK# CJ7

CONTRACTOR URS LOCATION Site # FT006 FROM CAFB

TO Chaves Landfill REG. TIME START 6:30am STOP 10:30am

TOTAL REG. HOURS 4 hrs. FUEL GAL. 0 DRIVER Randy Sisz

LOAD#	TIME IN	TIME OUT	MATERIAL	TICKET #	YARDS	TIME IN	TIME OUT
1	7:30	8:00	Dirt	405797	20		
2	9:00	9:30	Dirt	405805	20		
3	10:00	10:30	Dirt	405825	20		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

To receive payment for this job, all tickets and time sheets MUST BE turned in daily to a Little Gator Representative. Please make sure that the company name and address is on this form so that payment can be sent timely.

COMPANY NAME_____

COMPANY ADDRESS_____

COMPANY FED ID#_____ OR SS#_____

*Please call 575-760-7643 or 575-309-7477 with any questions

REORDER FROM THE PRINT SHOP 575-356-8531

LITTLE GATOR TRUCKING TIME SHEET / BILL OF LADING

DATE 12/7/15 TRUCK OWNER JT TRUCK# M15

CONTRACTOR URS LOCATION CAFB FROM Northend runway

TO Lloyds Landfill REG. TIME START 630 STOP 1:30

TOTAL REG. HOURS 7.50 FUEL GAL. - DRIVER SB

LOAD#	TIME IN	TIME OUT	MATERIAL	TICKET #	YARDS	TIME IN	TIME OUT
1	630	738	contaminated soil	405794	20	800	820
2	837	900		405807		928	939
3	1015	1030		405832		1047	1057
4	1124	1148		405849		1226	1236
5							
6							
7							
8							
9							
10			7.50				
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

To receive payment for this job, all tickets and time sheets MUST BE turned in daily to a Little Gator Representative. Please make sure that the company name and address is on this form so that payment can be sent timely.

COMPANY NAME_____

COMPANY ADDRESS_____

COMPANY FED ID#_____ OR SS#_____

*Please call 575-760-7643 or 575-309-7477 with any questions

URS/AECOM Account # 436508
in AS400 System

Form 29-1
Clovis Regional Solid Waste Facility (CRSWF)
Generator Waste Profile Sheet

Profile Number 014

☐ Renewal for Profile Number _____ Waste Approval Expiration Date 1/1/16

Special Waste Type (Check One): ☐ Regulated Asbestos Waste; ☐ Non Regulated Asbestos Waste; ☐ Ash; ☐ Industrial (Non-Hazardous) Solid Waste ☐ Offal; ☐ Petroleum Contaminated Soils; ☐ Sludge; ☐ Spill of a Chemical Substance or Product; ☐ Special Waste Not Otherwise Specified

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: Cannon AFB
2. Site Address: 402 S. Chindit Blvd.
3. City/Zip: Cannon AFB 88103
4. State: New Mexico
5. County: Curry
6. Contact Name/Title: Sheen Kottkamp
7. Email Address: Sheen.kottkamp.ctr@us.af.mil
8. Phone: 575-904-6743
9. FAX:
10. NAICS Code:
11. Generator USEPA ID#: 757 212 4454
12. State ID# (if applicable):

B. Customer Information ☐ same as above

1. Customer Name: AECOM
2. Billing Address:
3. City, State and Zip:
4. Contact Name: Mike Sonderman
5. Contact Email: michael.sonderman@aecom.com
6. Phone: 505-75-2413 FAX:
7. Transporter Name: Little Gator Trucking
8. Transporter ID# (if appl.):
9. Transporter Address: 1966 South Roosevelt RD #8
10. City, State, and Zip: Portales, NM 88130

C. Waste Stream Information

1. DESCRIPTION

a. Common Waste Name: Non-hazardous Lead impacted Soil State Waste Code(s): N/A

b. Describe Process Generating Waste or Source of Contamination:

Soil from investigations at a lead contaminated site.

c. Typical Color(s): Brown

d. Strong Odor? ☐ Yes ☒ No Describe:

e. Physical State at 70° F: ☐ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other:

f. Layers? ☐ Single Layer ☐ Multi-layer ☒ NA

g. Water Reactive? ☐ Yes ☒ No If Yes, Describe:

h. Free Liquid Range (%): _____ to _____ ☒ NA (solid)

i. pH: ☐ 2.1-12.4 ☒ NA (solid) ☐ Actual:

j. Liquid Flash Point: ☐ ≥140° F ☒ NA (solid) ☐ Actual:

k. Flammable Solid: ☐ Yes ☒ No

l. Does the waste contain asbestos? ☐ Yes ☒ No

If yes, does the waste contain greater than 1% asbestos? ☐ Yes ☐ No (If yes, go to next question. If no, attach results of Polarized Light Microscopy)

Is the waste classified as regulated asbestos waste per 20.9.2.7(A)(9)(d) NMAC? ☐ Yes ☐ No

m. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%) ☐ (See Attached)

Constituents (total Composition Must be ≥100%)	Concentration %	Constituents (Total Composition Must be ≥ 100%)	Concentration %
1. Soil	100%		
2.			
3.			

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Form 29-1
Clovis Regional Solid Waste Facility (CRSWF)
Generator Waste Profile Sheet

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
   a. X Event Base/Ongoing (check one)
   b. Estimated Annual Quantity: 20 Tons X Cubic Yards ☐ Drums ☐ Gallons ☐ Other (specify): _____
   c. Shipping Frequency: _____ Units per ☐ Month ☐ Quarter ☐ Year X One Time ☐ Other
   d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes X No
   e. USDOT Shipping Description (if applicable): _____
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): _____

D. Regulatory Status (Please check appropriate responses)

- Is this a USEPA (40 CFR Part 261)/State hazardous waste? ☐ Yes X No
- Is this waste included in one or more of categories below? (Check all that apply) ☐ Yes X No
  - ☐ Delisted Hazardous Waste
  - ☐ Excluded Wastes Under 40 CFR 261.4
  - ☐ Treated Hazardous Waste Debris
  - ☐ Treated Characteristic Hazardous Waste
- Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? ☐ Yes X No
- Is the waste classified as ignitable by 40 CFR Part 261? ☐ Yes X No
- Is the waste classified as corrosive by 40 CFR Part 261? ☐ Yes X No
- Is the waste classified as reactive by 40 CFR Part 261? ☐ Yes X No
- Is the waste classified as toxic by 40 CFR Part 261? ☐ Yes X No
- Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes X No
- Does the waste contain concentration of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes X No
- Does the waste contain infectious waste? ☐ Yes X No
- Is this remediation waste from a facility that a major sources of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes X No
  - If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes X No

If any question from Section D was answered "yes", the waste cannot be accepted at CRSWF

E. Generator Certification (Please read and certify by signature below)

By signing this Generator Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazardous pertaining to this waste has been disclosed to CRSWF;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and,
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to the CRSWF prior to providing the waste to CRSWF.

Check all that apply:

X Attached analytical pertains to the waste. Identify laboratory & sample ID #s and parameters tested:
FT006 Waste characterization Results # Pages 59

☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical).

Indicate the number of attached pages: _____

X By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

6. For non-friable asbestos waste, the following are valid statements:
   - Public access to the asbestos waste is prevented at the point of generation.
   - The hauler has been instructed to prevent public access to the asbestos wastes during transportation.
   - If Category I non-friable asbestos containing material, the waste has not been subjected to sanding, grinding, cutting or abrading.
   - If Category II non-friable asbestos containing material, the waste has not been subjected to forces expected to break, crumble, pulverize or reduce the material to powder during the course of excavation, renovation, demolition or storage.
   - The hauler has been instructed to handle non-regulated asbestoses waste in a manner to prevent the asbestos waste from becoming regulated asbestos waste.

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Form 29-1
Clovis Regional Solid Waste Facility (CRSWF)
Generator Waste Profile Sheet

7. For regulated asbestos waste, the following are valid statements:

- Public access to the asbestos waste is prevented at the point of generation.
- The hauler has been instructed to prevent public access to the asbestos wastes during transportation.
- Waste was wet, containerized and included the appropriate labels prior to transport and the outsides of the containers are not contaminated with asbestos debris adhering to the containers.
- The hauler has been instructed with the requirements of 20.9.8.12.E (3) NMAC.

Certification Signature: [signature] Title: Program Manager / Scientist

Company Name: Cannon AFB / 27 CCES Name (Print): Sheen Thomas Kottkamp

Date: 11/24/2015

FOR CRSWF USE ONLY

Approval Decision: ☑ Approved ☐ Not Approved

Waste Approval Expiration Date: 1/1/16

Management Facility Precautions, Special Handling Procedures or Limitation on approval: Special Waste Not Otherwise specified.

☑ Shall not contain free liquid
☑ Shipment must be scheduled into disposal facility
☑ Approval number must accompany each shipment
☑ Waste manifest must accompany load

CRSWF Authorization Name/Title: [signature] Date: 12/2/15

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CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **15I185**

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

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **15I185**

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EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 10-19-2015
EMAX Batch No.: 15I185

Attn: Jeff Aust

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 09/17/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CAFB-FT006-BKF-001	I185-01	09/16/15	SOIL	TOTAL METALS BY ICP-MS
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				VOLATILE ORGANICS BY GC/MS
CAFB-FT006-BKF-002	I185-02	09/16/15	SOIL	TOTAL METALS BY ICP-MS
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				VOLATILE ORGANICS BY GC/MS
CAFB-FT006-BKF-003	I185-03	09/16/15	SOIL	TOTAL METALS BY ICP-MS
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				VOLATILE ORGANICS BY GC/MS
CAFB-FT006-WC1-002	I185-04	09/16/15	SOIL	METALS ICP TCLP
				MERCURY TCLP
				SEMIVOLATILE ORGANICS TCLP
				VOLATILE ORGANICS TCLP
				PAINT FILTER LIQUID TEST
				CHLORINATED HERBICIDES TCLP
				PESTICIDES TCLP

Sample ID	Control #	Col Date	Matrix	Analysis
CAFB-FT006-WC2-002	I185-05	09/16/15	SOIL	METALS ICP TCLP
				MERCURY TCLP
				SEMIVOLATILE ORGANICS TCLP
				VOLATILE ORGANICS TCLP
				PAINT FILTER LIQUID TEST
				CHLORINATED HERBICIDES TCLP
				PESTICIDES TCLP
CAFB-FT006-WC3-002	I185-06	09/16/15	SOIL	METALS ICP TCLP
				MERCURY TCLP
				SEMIVOLATILE ORGANICS TCLP
				VOLATILE ORGANICS TCLP
				PAINT FILTER LIQUID TEST
				CHLORINATED HERBICIDES TCLP
				PESTICIDES TCLP

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number E871112
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672