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Alameda County  
Environmental Health

**YRC Worldwide Inc**  
10990 Roe Avenue  
Overland Park, KS 66211



March 12, 2012

To Whom It May Concern:

Attached is the "Underground Storage Tank and Oil Water Separator Removal Report" for the former Roadway Express d.b.a YRC Inc., property located at 1708 Wood Street in Oakland, CA 94607, Fuel Leak Case No. RO 0000039. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report are true and correct to the best of my knowledge.

YRC Inc., is a subsidiary of YRC Worldwide, Inc., and as Sr. Manager of Hazardous Material & Environmental Services of YRC Worldwide, Inc., I have been charged by YRC Worldwide, Inc., to represent YRC Inc.

Sincerely

A handwritten signature in black ink, appearing to read "Steven R. Shippers". The signature is written in a cursive, somewhat stylized font.

Steven R. Shippers  
Sr. Mgr. – Hazardous Materials & Environmental Services

UNDERGROUND STORAGE TANK  
&  
OIL WATER SEPARATOR REMOVAL  
REPORT

YRC Enterprise Services Inc.  
Roadway Express Facility  
1708 Wood Street, Oakland, California  
(Fuel Leak Case No. RO0000039)

March 2012

Burns & McDonnell Project No. 63142



400 Oyster Point Boulevard Suite 533  
South San Francisco, CA 94080



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March 7, 2012

Paresh C. Khatri  
Alameda County Health Care Services  
Environmental Health Services  
Hazardous Materials Specialist  
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**Subject:            Underground Storage Tank & Oil Water Separator Removal Report  
                          YRC Enterprise Services, Inc.  
                          Former Roadway Express Facility  
                          1708 Wood Street, Oakland, CA  
                          Fuel Leak Case No. RO0000039 & Global ID No. T0600102107**

On behalf of YRC Enterprise Services, Inc. (YRC), Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) has prepared this Underground Storage Tank (UST) & Oil Water Separator (OWS) Removal Report; describing the construction activities relating to the removal of two abandoned-in-place USTs, and one OWS at the subject site located at 1708 Wood Street, Oakland, CA (Site) (Figure 1); the facility is currently occupied and operated by Three Rivers Trucking as a trucking facility.

## **1.0                    INTRODUCTION & SITE HISTORY**

### **1.1            Introduction**

ACC Environmental Consultants (ACC) was retained by PSAI Realty Partners (PSAI) to perform a limited soil and groundwater investigation of the Site. ACC's DRAFT Phase II ESA-Limited Soil and Groundwater Investigation Report, dated February 25, 2011, (ACC Feb-2011), identified the previously abandoned-in-place USTs and the OWS as Recognized Environmental Conditions (REC); REC #1 and REC #2, respectively (Figure 2).

PSAI purchased the property from YRC on August 23, 2011; YRC is the recognized Responsible Party (RP) for Alameda County Health Care Services Agency (ACHCS) Fuel Leak Case RO0000039 and San Francisco Bay Region-State Water Resource Control Board (SF-SWRCB) Global ID No. TO600102107.

YRC authorized the removal of the USTs and OWS. Burns & McDonnell was retained by YRC, who in turn, contracted Covey Engineering, Inc. (Covey), to remove and dispose the two USTs, one concrete OWS, residual impacted soil, and associated piping and materials.

The scope of this project included the submittal of an *unauthorized release statement*, dated 7-13-2011(Appendix A), the removal of two USTs (one 8,000 gallon UST, one 10,000 gallon UST, Figure 3), and one OWS (Figure 4). Associated UST product and vent lines that had been left in place during the previous abandonment activities; the clean-out line from the OWS was also removed. Hydrocarbon impacted soil discovered during UST removal activities was excavated and disposed.

Burns & McDonnell recommends the Site be considered for No Further Action (NFA) status. This report shows the on-Site environmental pollutant sources (i.e. central eastern USTs, northwest corner USTs,

OWS, maintenance shed, and waste storage area, and impacted soil), have been removed from the subsurface, and Site, respectively; related residual impacted on-Site soil has been removed.

## **1.2 Site History**

In March 1987, two USTs (one 10,000 gallon gasoline tank and one 2,000 gallon motor oil tank) were removed from the central-eastern area of the Site (Figure 4), a 10,000 gallon diesel UST was left in operation. During this 1987 work, two USTs were identified at the northwest corner (Figure 2) of the property (previously reported as one 2,000 gallon waste oil tank and one 10,000 gallon tank of unknown contents). The USTs were abandoned-in-place (filled with a sand slurry and grout mixture) in May 1987, and removed during this scope-of-work. In April 1996, the remaining 10,000 gallon diesel UST and all associated piping were removed from the central-eastern area of the Site.

One OWS was in operation in the central-eastern area of the Site where tractor maintenance was performed. The OWS was constructed of concrete and had one associated clean-out line. The OWS, and its clean-out line, was removed during this scope-of-work (November 2011).

The maintenance shed was removed from the Site in the summer of 2011 while the property sale was pending.

An unauthorized release statement was issued by YRC to the ACHCS on July 13, 2011, for the USTs located in the northwest corner of the site; the USTs were removed during this scope-of-work on October 31, 2011.

## **2.0 UST & OWS EXCAVATION AND REMOVAL ACTIVITIES**

### **2.1 Utility Survey**

Prior to mobilization, Burns & McDonnell retained ForeSite Engineering to perform an underground utility survey to identify any subsurface utilities or obstructions that may be present in the vicinity of the USTs and the OWS. A dig alert ticket was received from USA North for all construction areas.

A sanitary sewer lateral pipe was identified overlaying the West UST (Figure 3). The sewer line was temporarily rerouted during construction activities, and subsequently restored to original configuration and returned to service with new, 6 inch HDPE piping.

Overhead power and telecommunications lines that overhang the USTs were taken out of service and removed from the work area until construction activities were completed. All power and telecommunication lines were subsequently returned to service.

### **2.2 Permitting**

Prior to mobilization, a UST removal permit was obtained by Covey, from the City of Oakland Fire Department (OFD). A copy of the permit is provided in Appendix A. As per permit requirements, an OFD inspector was present during the UST removal activities on October 31, 2011.

Due to the proximity of the USTs to the property line (Figure 3), an encroachment permit and a permit to close a public sidewalk was obtained from the City of Oakland (Appendix A).

## **2.3 UST and OWS Removal Activities**

### **2.3.1 Demolition**

Prior to demolition activities, a construction zone perimeter was established at the planned UST excavation area utilizing 6' high chain link fence panels and incorporating the existing perimeter security fence.

Based upon the utility survey, a surface grade area of approximately 18 feet by 55 feet was demolished using a hydraulic hammer attached to a backhoe style excavator operated by Covey. The destroyed finish grade overlaying the USTs was a combination of concrete and concrete overlain by asphalt. The demolished surface grade materials were stockpiled along the northern perimeter fence (parallel to 18<sup>th</sup> street) (Figure 2), pending classification and disposal under waste manifest documentation; at an appropriate facility.

### **2.3.2 UST Overburden**

The UST soil overburden was removed from each UST until the top of each UST was exposed. At this time it was discovered that; a) product, siphon, and vent lines were left in-place (and connected to the USTs) during the original abandonment-in-place activities; and b) the USTs had been backfilled (abandoned-in-place) via the eastern end of each tank and apparently, not completely filled. A 'concrete doughnut' measuring 18 inches thick and 4 feet in diameter was present on the east end of the East tank (See Construction Pictures, Appendix AA).

After removal of the overburden and exposing the western end of the West tank, oily water began emerging from the UST; groundwater had not been encountered at this time. A vacuum truck was immediately ordered to contain the water. While waiting for the vacuum truck to arrive, the oily water was collected, by Covey, using a 1-inch sump pump and temporarily contained in DOT approved 55-gallon steel drums. The fill port of the UST was opened and it was then determined that the West tank had not been completely backfilled as water was visible and sand-slurry backfill was not present at the top 18-inches of the UST.

The same situation was encountered on the East tank. Upon removing the overburden on the west end of the East tank, oily water began flowing out of the UST. A small void was observed in the east end; and a 24-inch to 36-inch void was present in the west end.

The oily water collected was transported and disposed of under waste manifest documentation by Clearwater EMI/BigSky Environmental Services (EMI) at an appropriate facility. Waste manifests are provided in Appendix B.

Hydrocarbon impacted soil was observed under the piping lines of the East tank, which appeared to run under the property fence line towards 18<sup>th</sup> Street (Figure 3). The soil was field screened using a photo-ionization detector (PID) and was determined to be impacted and would therefore be excavated and disposed of during this scope-of-work.

### **2.3.3 Sheet Pile Shoring System & UST Backfill removal**

The interior contents of each UST were assessed as being harder than sand/slurry mixtures Covey had experienced in the past; and therefore removal of the USTs contents would not be able to be completed with an excavator bucket alone. A hydraulic hammer was required to break apart the contents of the USTs. At this time it was deemed necessary that a sheet pile shoring system would be required to protect the adjacent maintenance/storage structure located adjacent to the West tank (Figure 2). Additionally, a

third potential UST (potentially the reported 2,000 gallons UST), was identified during the underground utility location, however, the apparent UST was not found in the sub-surface.

A sealed engineered shoring plan (Shoring) was provided by Hartman Civil Engineering Inc. Copies of the Shoring is provided as Appendix C. M.A. McClish was contracted by Covey to install and remove the sheet shoring, and remove and stockpile the interior contents of the USTs.

After the Shoring was installed, the tops of each UST were cut open in order to expose the cemented sand/slurry contents. Once the USTs were opened, it was observed that each UST had not been completely filled (abandoned-in-place). Each tank was nearly filled on their eastern ends and the fill material sloped to the western end. Pictures of the USTs interior materials, and void spaces, are provided in Appendix AA.

Prior to the demolition and removal of the USTs interior materials, a ‘wipe’ sample was collected at each end of each tank for waste profiling classification. Wipe samples were analyzed by Environmental Protection Agency (EPA) Method 8015 modified for oil. Samples were analyzed by Accutest Laboratories (Accutest) of San Jose, CA; a California state-Certified laboratory under Chain-of-Custody protocols. Copies of the certified analytical report and Chain-of-Custody documentation are provided as Appendix D. The excavated UST materials were placed on plastic sheeting and stockpiled pending transportation and disposal at an appropriate facility.

#### **2.3.4 UST Removal**

On October 31, 2011, one 8,000 gallon and one 10,000 gallon UST were removed from the northwest corner of the Site (Figure 3). Prior to removal, standing water was removed from each UST and transferred to a 10,000 gallon Baker style tank (Baker tank) pending disposal; holes were then cut into each end of each tank to allow for strapping to be attached to each UST for lifting.

A UST waste manifest was generated by Ecology Control Industries (ECI); and the manifest was present, and on-Site, during the UST removals. Prior to removal, the interior atmosphere of UST was monitored with a LEL meter. The readings were presented to OFD Inspector Matthews, after which the USTs were rigged and prepped for removal. The USTs were lifted individually as a non-critical load (less than 20,000 pounds), under an approved health & safety lift plan.

Each UST was lifted individually, via a crane, which had outriggers deployed, and had one sheet line walker on each end of the UST to guide the UST to the ground surface, adjacent to the UST pit, for visual inspection and exterior surface cleaning. The East tank was removed first followed by the West tank.

No apparent holes were visually observed in the East or West UST. After the exterior of each UST was cleaned of soil and debris, they were lifted onto a flatbed tractor trailer operated by Eighteen Trucking and transported, under waste manifestation, to the ECI facility located at 255 Parr Boulevard, Richmond, California, for disposal. A copy of the UST waste manifest is provided in Appendix B.

##### **2.3.4.1 UST Groundwater Sampling**

Groundwater was present in each of the UST pits prior to UST removal. At the request of OFD Inspector Matthews, a groundwater sample was collected from each UST pit. Grab groundwater samples were collected (Figure 3) using either disposable bailers or a peristaltic pump and tubing. Groundwater was pumped out of the USTs prior to removal. Groundwater samples were analyzed by Accutest as follows:

- TPH as Gasoline (TPHg) and Light Hydrocarbons (C4-C12) – Method 8015G
- TPH as Diesel (TPHd) (C13-C22) – Method 3630C/M8015D

- TPH as Motor Oil (TPHmo) – Method 3630C/M8015D
- BTEX/ MTBE – (benzene, toluene, ethyl-benzene, total xylenes/methyl tert butyl ether)Method 5035/8260B
- LUFTS Metals (leaking underground fuel tank) – Method 6010B

TPH results are presented on Figure 5. Analytical results are discussed in *Section 4.0 Soil and Groundwater Analytical Results*. Analytical results in groundwater are presented as Table 2 (historical groundwater sampling results are presented as Table 5A and Table 5B). Copies of the certified analytical reports and Chain-of-Custody documentation are provided in Appendix D.

OFD Inspector Matthews additionally requested groundwater samples be collected after a 24 hour recharge period had occurred. Temporary wells were placed in the backfill material to a depth of 14 feet below ground surface (bgs). After the 24 hour time period had elapsed, it was observed that no groundwater recharge had occurred. Burns & McDonnell informed Inspector Matthews about the lack of recharge in the wells, and that a second round of groundwater samples was unable to be collected.

#### **2.3.4.2 UST Soil Sampling**

Soil samples were collected from the ends of each UST at depths ranging from 1 to 2 feet below the bottom of each UST. Prior to soil sample collection, any remaining groundwater from the UST pits were pumped into the Baker tank pending disposal. Approximately 1 to 2 feet of soil was then excavated from below the bottom of the USTs to reduce the potential from the groundwater affecting the collected soil samples.

Soil samples were collected from the excavator bucket from depths ranging from 15 feet bgs to 16 feet bgs. Soil sample locations are shown on Figure 3. Soil samples were analyzed by Accutest on a 24 hour rush turnaround basis as follows:

- TPHg and Light Hydrocarbons (C7-C12) – Method 5035/8260B
- TPHd (C10-C24) – Method M8015D/3630C
- TPHmo (C24-C-36) – Method M8015D/3630C
- BTEX / MTBE – Method: 5035/8260B
- LUFTS Metals – Method 6010B

Soil and groundwater analytical results are discussed in Section 4.0 *Soil and Groundwater Analytical Results*. Analytical results in soil are presented as Table 3 and presented on Figure 5; (historical soil results are presented as Table 4). Copies of the certified analytical reports and Chain-of-Custody documentation are provided in Appendix D.

#### **2.3.5 UST Excavation Restoration**

##### **2.3.5.1 Backfill**

After soil samples were collected, each UST pit was excavated to a uniform depth and width prior to backfilling. The East tank was excavated to a uniform depth of 16 feet bgs and a width of 12 feet (interior perimeter of the Shoring). The West tank was excavated to a uniform depth of 16 feet bgs and a width of 18 feet (interior perimeter of the Shoring, Figure 3). The area between the USTs was excavated to a depth of approximately 6 feet bgs; final excavation depth was determined after confirmatory field screening soil from the excavation floor with a PID for the presence of organic vapors/hydrocarbons.

Back-fill of the UST pits began immediately after the UST pits had been excavated to uniform depths and widths and the excavation floor soil had been sampled and screened with a PID. The UST pits were back-

filled with  $\frac{3}{4}$  inch drain rock to a uniform depth of 4 feet bgs. A layer of geo-fabric was laid between the drain rock and the Class II base rock which was overlain to approximately 6 inches below sub-grade. The base rock was compacted with a vibrating sheeps-foot drum compactor in 1 foot lifts after the Shoring was removed.

#### **2.3.5.2 Shoring Removal**

After the UST pits had been backfilled to a uniform depth of 4 feet bgs, M.A. McClish removed the Shoring as per Shoring plan. Sheet piles were removed with an excavator and chain rigging. Sheets were cleaned of soil debris prior to stockpiling and removal. All sheeting was removed from the UST pits in a one day effort. Sheeting, trench plates, compactor, and remaining heavy equipment were removed from the Site over two days.

#### **2.3.5.3 Compaction**

A 5-gallon bucket sample of the base rock was collected and analyzed by Cal Engineering & Geology (CE&G) for maximum dry density and optimum moisture content using ASTM 1556 Modified Proctor.

The base rock was compacted to a minimum 95% dry density and optimum moisture content. Moisture (water) was added to the base rock during unloading from the dump trucks and during compacting. Compaction testing was performed by CE&G.

#### **2.3.5.4 UST Excavation Grading & Paving**

After compaction activities were complete, DRCYO Construction (DRYCO) saw cut the edges of the UST excavation footprint, framed and poured a three foot concrete strip along the interior perimeter fence (Figure 5); prior to asphalt paving of the UST excavation area.

Concrete sections south of the UST excavation that had been damaged during shoring and UST removal activities were saw cut and removed. The concrete was stockpiled pending disposal. Once the damaged concrete was removed, a new cleanout box was installed for the sewer and the sub-grade was prepared by County Paving.

A 2% slope grade was maintained from the edge of the replacement paving to the property fence. Asphalt paving was completed by DRYCO on December 9, 2011; which included the import of base rock for a uniform asphalt thickness of 5 inches throughout the UST excavation area, which was compacted by County Paving. A 3 inch thick asphalt strip was laid between the new sidewalk and perimeter fence to match surrounding grade (*See Section 3.0 Additional Excavation UST Sidewalk Area*). Additionally, asphalt was laid at the Sites entrance between 18<sup>th</sup> Street and the concrete driveway to the facility.

### **2.4 OWS Removal Activities**

After the UST pits had been restored to sub-grade, the OWS was removed. Water and oily sludge was evacuated from the OWS by EMI prior to demolition activities commencing.

#### **2.4.1 Demolition**

The concrete surface grade immediately surrounding the OWS was broken up using a hydraulic hammer attached to a back hoe style excavator. Associated piping was exposed and disconnected from the OWS prior to removal. The OWS was lifted from the subsurface using the excavator and chain rigging. The OWS was removed whole and intact; no obvious or apparent holes or cracks were observed in the OWS. The OWS was constructed of concrete. The OWS was broken apart after inspection and stockpiled pending disposal.



#### **2.4.2 Soil and Groundwater Sampling**

Prior to the collection of soil samples at the OWS excavation, visually impacted soil immediately adjacent to the inlet and overflow piping (Appendix AA) was observed, excavated, and stockpiled. To determine the extent of excavation, soil was visually inspected and field screened with a PID. OWS soil excavation was extended to the north to include previous Burns & McDonnell boring B-8 (Figure 6) collected in 2008. Locations of previous investigation borings are shown on Figure 7.

#### **2.4.3 Soil & Groundwater Sampling**

Soil samples were collected from each sidewall of the excavation and one sample was collected from the floor of the excavation. The original excavation footprint was approximately 15 x 15 feet to a depth of 4 feet bgs based on soil sample locations shown on Figure 4. Groundwater was observed to infiltrate the excavation from the south east corner only. Groundwater did not infiltrate at a rate fast enough to collect a sample. Groundwater was sampled from the OWS excavation pit after a period of 24 hours had elapsed.

Soil samples were analyzed by Accutest on a rush turn around basis as follows:

- TPHg and Light Hydrocarbons (C7-C12) – Method 5035/8260B
- TPHd (C10-C24) – Method M8015D/3630C
- TPHmo (C24-C-36) – Method M8015D/3630C
- BTEX / MTBE – Method: 5035/8260B
- LUFTS Metals – Method 6010B

Groundwater samples were analyzed by Accutest as follows:

- TPHg and Light Hydrocarbons (C4-C12) – Method 8015G
- TPHd (C13-C22) – Method 3630C/M8015D
- TPHmo– Method 3630C/M8015D
- BTEX/ MTBE- Method 5035/8260B
- LUFTS Metals -Method 6010B

Analytical results are discussed in Section 4.0 *Soil and Groundwater Analytical Results*. Copies of the certified analytical reports and Chain-of-Custody documentation are provided in Appendix D. Analytical results in groundwater and soil are presented as Tables 2 and 3, respectively. Historical groundwater and soil results for TPH in soil, TPH in groundwater wells, TPH in grab groundwater samples, LUFT 5 metals in soil, and CAM 17 metals in soil and groundwater are presented as Tables 4 through 7, respectively.

#### **2.4.4 Additional Excavation and Soil Sampling**

Based upon the initial soil analytical results, the northeast corner of the OWS pit was over-excavated. During excavation, multiple debris items were observed at a depth of 12 to 18 inches bgs. Debris materials included: rusted ¼ inch diameter metal ties, ½ inch thick plate sheet metal, corrugated tin sheets, bricks, and soda and beer bottles. Similar debris was also found in the UST area at the same depths. An additional soil sample was collected from the northeast corner (Figure 4) after over-excavation had occurred.

#### **2.4.5 OWS Clean Out Line**

The OWS clean out line, by request of OFD Inspector Matthews, was to be triple rinsed, capped, and left in place. Soil samples were to be collected for every 20 linear feet of pipe, and sampled below the depth of the pipe. Soil samples could be collected by auguring, GeoProbe, or pot holing.

The attempts to rinse the clean out line failed as the cleanout fitting located at the west end of the line, was clogged. The clean-out was excavated for inspection. PID and visual field screening indicated the presence of hydrocarbon impacts in soil at the clean-out. Impacted soil was excavated from the west end of the clean out line and stockpiled pending disposal. The clean out line was clogged with debris, but was additionally connected to a lateral perpendicular 4 inch pvc pipe orientated north to south. It is assumed the pipe is a sanitary sewer lateral whose presence was unknown to Burns & McDonnell. It was not identified during the underground utility survey or the USA North notification. The lateral pipe was damaged during excavation activities and repaired within a few hours. The clean out fitting and pvc pipe connection was deeper than that of the clean out line connection to the OWS.

Burns & McDonnell directed Covey to commence pot holing activities at approximately ten foot intervals on either side of the clean out line. The area around each pot hole was cleared of debris with the excavator bucket to a depth equal to the bottom of the pipe.

PID field screening readings near the west end, and two areas to the east (Figure 4), indicated impacted soils beneath the clean out line. It was determined that the removal the clean-out line and excavation of impacted soil was the best management practice.

Covey broke up the concrete adjacent to the line and exposed the full length of the pipe, approximately 40 feet. The pipe was constructed of cast iron, in 10 foot sections with slip fittings. The pipe appeared to be free of holes and cracks. PID readings and visual observations confirmed the original pothole PID readings. There were no PID readings detected or visual impacts observed at the eastern end of the pipe near original OWS excavation limits (Figure 4).

The clean out pipe was removed and the soil under the pipe was excavated and stockpiled pending disposal. Groundwater was not observed in the excavation. While over-excavating at the west end, a 2 foot wide section of the east side wall consisted of pea gravel; believed to be connected to the former Central eastern UST backfilled pit. Groundwater infiltrated the excavation from this pea gravel sidewall section after it was disturbed by the excavator bucket. Prior to groundwater inflow, 2 soil samples had been collected from the excavation. In order to collect the four desired soil samples, 2 additional soil samples were collected from beneath the water level with the excavator bucket. Dry samples were collected from the bay mud under laying the clean out line at depths ranging from 4 to 5 feet bgs. A groundwater sample was collected from the inflowing water during soil sample collection.

Soil and groundwater samples were submitted to Accutest on a rush turn around basis. Samples were analyzed as outlined above in *Section 2.4.3 Soil & Groundwater Sampling* and are discussed in *Section 4.0*. Analytical results in groundwater and soil are presented as Tables 2 and 3, respectively. Historical groundwater and soil results are presented as Tables 4 and 5, respectively.

#### **2.4.6 Clean Out Line Backfill**

Prior to backfilling the clean out line excavation, groundwater was vacuumed from the excavation by EMI. After evacuating the water, the excavation was backfilled starting at the west end. Groundwater inflow rate was greater than vacuum rate; a groundwater sample was collected of the inflowing water. Groundwater infiltration ceased after back-filling the trench past the pea-gravel section...

The excavation was backfilled with ¾ inch base rock. OWS cleanout line and OWS pit excavations were backfilled to eight inches below surrounding grade.

#### **2.4.7 OWS Concrete Paving**

The concrete edges of the OWS excavation and clean out line footprints were saw cut by DRYCO. DRYCO installed the rebar lattice and drilled and installed rebar dowels to existing pavement. DRYCO raised the rebar lattice to 2 inches above the base rock, and tied into the doweling. Concrete was supplied by Granit Rock, and poured by DRYCO at a uniform thickness of 8 inches. DRYCO floated and installed construction joints in the new concrete panels (Appendix AA). No groundwater was observed in the sub-grade prior to rebar installation and paving.

After a 48 hour curing period, the OWS area was returned to the Site tenant for operation.

### **3.0 Additional Excavation- UST Area Sidewalk**

During the excavation of the overburden of the East tank, hydrocarbon impacted soil was observed at the western end of the East tank, on the north side (Figure 3). The soil was impacted below the still attached UST vent and syphon pipes. The length of the pipe was estimated to extend underneath the adjacent sidewalk (off-Site). A City of Oakland Encroachment permit had already been obtained in anticipation of encountering potential off-Site impacts in shallow soil.

Impacted soil was observed along the northern sidewall of the East tank laterally for approximately 15 feet from the west end of the East tank to the east (Figure 3). The impacted soil was initially excavated and stockpiled to the extent possible on-Site (within the security fencing).

A City of Oakland Sidewalk Closure permit was obtained by Covey (Appendix A), and a sidewalk closure plan was generated and put in place on 18<sup>th</sup> Street. Once the sidewalk closure was in place, the Site's west entrance gate was reconfigured to a swing style gate (to maintain security during construction activities), the electric fence de-energized and removed from the construction zone, and the perimeter security fencing was removed and re-secured with temporary chain link fencing panels attached to the perimeter fence (Appendix AA).

#### **3.1 Sidewalk Excavation**

The pre-existing concrete sidewalk was removed using a back hoe style excavator, and stockpiled pending disposal. Impacted soil (sand), was excavated to the northern extent of the sidewalk (approximately 10 feet north of the property line- towards 18<sup>th</sup> Street), and laterally for approximately 20 feet (Figure 3). The extent of the northward excavation was terminated at the extent allowed by the City of Oakland Encroachment Permit; and laterally by PID field screening readings.

During excavation, the vent and syphon piping were exposed and visually observed for holes or cracks prior to removal. The East tank vent line was rusted and contained many holes, the West tank vent line (which extended into the East tank pit and Sidewalk excavation), was not rusted and contained no holes; the UST vent lines were removed. The syphon/product line was exposed to its farthest extent which coincided with the northern extent of the sidewalk. The end of the line appeared to have been forcibly removed from whatever feature it was attached to; i.e. dispenser, remote fill port etc. (Appendix AA). Burns & McDonnell is unaware of the actual feature this pipe was attached to.

Visually impacted soils were most evident under and immediately adjacent to the syphon/product line and laterally to approximately the East vent line and the West vent line (Figure 5). PID field screening readings showed little to no impact in soil east and west of the pipe lines.

### **3.2 Sidewalk Soil & Groundwater Sampling**

Soil samples were collected from the side walls of the Sidewalk excavation (Figure 5). The area was excavated to a depth of approximately 5 feet bgs, extending approximately 1 foot into Bay Mud. Soil samples were collected directly above the sand/Bay Mud contact. Groundwater was not encountered in the Sidewalk excavation area.

Soil samples were submitted to Accutest on a rush turn around basis. Samples were analyzed as outlined above in *Section 2.3.6.2 Soil & Groundwater Sampling*. Soil analytical results are discussed in *Section 4.0 Soil and Groundwater Analytical Results*. Analytical results in groundwater and soil are presented as Tables 2 and 3, respectively.

### **3.3 Sidewalk Excavation Restoration**

After soil samples were collected and the sidewall soil screened with a PID, the excavation pit was immediately back-filled with  $\frac{3}{4}$  inch drain rock to approximately 2 feet bgs and then backfilled to the surface with base rock. The base rock was compacted with a vibrating sheep-foot drum compactor. The perimeter security fence was then restored with new support posts, chain-link fencing, barb-wire, and razor wire to match the surrounding security fencing (Appendix AA). The interior electric fence was restored to its initial configuration after grading and sidewalk paving had been completed.

#### **3.3.1 Sidewalk Paving**

The removed sidewalk sections were replaced with ‘City of Oakland’ mix concrete to the nearest competent sidewalk section, as requested by City of Oakland inspectors. Additional 3 x 6 feet concrete panels were removed from each end of the Sidewalk excavation area to meet this request. The finish subgrade was compacted by County Paving and inspected by the City of Oakland. Compaction testing requirements were waived by the Inspector during the pre-pour inspection.

The concrete sidewalk sections were framed and poured by DRYCO. The section ends were floated to integrate with existing sidewalk panels and maintained a 2% slope towards the north.

## **4.0 Soil and Groundwater Analytical Results**

As outlined in Burns & McDonnell’s *UST Removal Workplan* dated July 19, 2011, soil analytical results are compared to SF-RWQCB environmental screening levels (ESL’s) for COMMERCIAL NON DRINKING WATER USE. Groundwater results are compared to SFRWQCB’s ESLs for commercial groundwater that is NOT a current or potential source of drinking water. ESL Tables are presented as Appendix E.

### **4.1 Soil Sampling Results**

Soil samples were analyzed as follows:

- TPHg and Light Hydrocarbons (C7-C12) – Method 5035/8015G/8260B
- TPHd (C10-C24) – Method M8015D/3630C
- TPHmo(C24-C-36) – Method M8015D/3630C
- BTEX / MTBE – Method: 5035/8260B
- LUFTS Metals – Method 6010B

The following is a summary of constituent-of-concern that meets or exceeds the ESLs in shallow soils ( $\leq 3M$ ); no ESLs were exceeded in samples collected from deep soils ( $\geq 3M$ ):

TPHd: The TPHd ESL was exceeded in soil samples SW3-W4B and SW4-W3.6 at concentrations of 206 mg/kg (milligram per kilogram) and 5,930 mg/kg, respectively (Figure 3); in the sidewalk north of the USTs.

TPHg: Detected TPHg concentrations did not exceed shallow soil ESLs.

TPHmo: Detected TPHmo concentrations did not exceed shallow soil ESLs.

BTEX: BTEX compounds were not detected.

MTBE: MTBE was not detected.

Cadmium: The cadmium ESL was exceeded in sample OWS-NEA-3 at a concentration of 12.1 mg/kg.

Zinc: The zinc ESL was exceeded in sample OWS-NEA-3 at a concentration of 1,990 mg/kg.

Soil samples OWS-2NE3 and OWS-6F4 (Figure 4) collected from the initial OWS excavation pit on October 27, 2011, exceeded ESL for one or more constituent-of-concern. As a result, soil in the immediate vicinity of the original samples was excavated and a new soil sample was collected. Soil analytical results are presented as Table 2.

## **4.2 Groundwater Sampling Results**

### **4.2.1 UST Grab Groundwater Results**

Grab groundwater samples were collected from the UST excavation pits after the USTs had been removed from the subsurface. A second round of groundwater samples was unable to be collected as there was no groundwater recharge after 24 hour time frame. The grab groundwater samples collected had been in contact with the USTs and Shoring prior to UST removal. The grab groundwater samples were analyzed as follows:

- TPHg and Light Hydrocarbons (C4-C12) – Method 8015G/8260B
- TPHd (C13-C22) – Method 3630C/M8015D
- TPHmo– Method 3630C/M8015D
- BTEX/ MTBE- Method 5035/8260B
- LUFTS Metals -Method 6010B

The following is a summary of constituent-of-concern that meets or exceeds the ESLs for groundwater in deep soils ( $\geq 3M$ ):

TPHg: The TPHg ESL was exceed in grab groundwater samples WTank Grab at a concentration of 598  $\mu\text{g/L}$  (micrograms per liter).

TPHd: The TPHd ESL was exceeded in grab groundwater samples WTank Grab and ETank Grab at concentrations of 2,250  $\mu\text{g/L}$  and 2,180  $\mu\text{g/L}$ , respectively.

TPHmo: The TPHmo ESL was exceed in grab groundwater samples WTank Grab and

ETank Grab at concentrations of 218 µg/L and 368 µg/L, respectively. The results were flagged by the analytical laboratory with a 'J' qualifier indicating the result is an estimate and of limited value.

BTEX: The BTEX compounds ESLs were not exceeded in sample WTank Grab, and were not detected in sample ETank Grab, with the exception of ethyl-benzene at a concentration of 0.74 µg/L, the result was flagged with a 'J' qualifier. .

MTBE: MTBE was not detected.

Cadmium: The cadmium ESL was exceeded in sample WTank Grab at a concentration of 14.7 µg/L.

Chromium: The chromium ESL was exceeded in sample WTank Grab at a concentration of 866 µg/L.

Lead: The lead ESL was exceeded in grab groundwater samples WTank Grab and ETank Grab at concentrations of 2,050 µg/L and 38.0 µg/L, respectively.

Nickel: The nickel ESL was exceeded in grab groundwater samples WTank Grab and ETank Grab at concentrations of 1,010 µg/L and 59.6 µg/L, respectively.

Zinc: The Zinc ESL was exceeded in grab groundwater samples WTank Grab and ETank Grab at concentrations of 3,070 µg/L and 167 µg/L, respectively.

#### **4.2.2 OWS Grab Groundwater Results**

Grab groundwater samples were collected from the OWS excavation pit and the OWS clean out excavation. The grab groundwater sample collected from the OWS excavation was collected after a 24 hour time period had elapsed due to the infiltration rate of groundwater. The grab groundwater samples collected from the OWS clean out line were collected during initial clean out pipe excavation (CO Water) and during OWS clean out pipe soil sampling (CO Water-2) (Figure 4).

The following is a summary of constituent-of-concern that meets or exceeds the ESLs for groundwater in shallow soils ( $\leq 3M$ ):

TPHg: The TPHg ESL was not exceeded.

TPHd: The TPHd ESL was exceeded in grab groundwater samples CO Water and CO Water-2 at concentrations of 2,990 µg/L and 758 µg/L, respectively.

TPHmo: The TPHmo ESL was exceeded in grab groundwater sample CO Water at a concentration of 1,970 µg/L.

BTEX: No BTEX compounds were detected.

MTBE: The MTBE ESL was not exceeded. MTBE was detected in grab groundwater sample OWS-GW at a concentration of 0.87 µg/L, however, the result was flagged by the analytical laboratory with a 'J' qualifier indicating the result is an estimate and of limited value.

Cadmium: Cadmium was not detected.

Chromium: The chromium ESL was not exceeded.

Lead: The lead ESL was exceeded in grab groundwater samples OWS-GW, CO Water, and CO Water-2 at concentrations of 121 µg/L, 80.4 µg/L, and 311 µg/L, respectively.

Nickel: The nickel ESL was exceeded in grab groundwater samples OWS-GW, CO Water, and CO Water-2 at concentrations of 52.4 µg/L, 19.0 µg/L, and 54.2 µg/L, respectively.

Zinc: The Zinc ESL was exceeded in grab groundwater samples OWS-GW, CO Water, and CO Water-2 at concentrations of 121 µg/L, 102 µg/L, and 388 µg/L, respectively.

All constituents-of-concern concentrations, if detected, in groundwater are presented as Table 2.

## **5.0 Stockpiles**

### **5.1 Soil and Concrete Stockpiles**

All demolished concrete, soil, and interior UST contents, were stockpiled on-Site parallel to the security fence just east of the Site entrance gate on 18<sup>th</sup> Street. The 10,000 gallon Baker tank was staged in this location as well. Stockpile locations were noted in the field log book.

All solid materials were placed on plastic sheeting and covered with plastic sheeting pending waste profiling and disposal at an appropriate facility. As per request of OFD Inspector Matthews, a four point composite soil stockpile was collected from the UST excavation soil stockpile. This soil was stockpiled adjacent to the UST excavation pending waste classification and disposal. The soil was placed on plastic sheeting and covered with plastic sheeting pending disposal. Stockpile composite results are presented in Table 3.

Soil excavated from the Sidewalk excavation was placed on plastic sheeting and stockpiled on the restored UST pit sub-grade. The stockpile was covered with plastic sheeting pending disposal. All stockpiled materials were off-hauled and disposed under waste manifest protocols. Copies of waste manifests are presented in Appendix B.

## **6.0 Investigative Derived Waste**

The investigative derived wastes (IDW) generated during this scope-of-work were profiled, off-hauled, and disposed of under waste manifestation documentation. IDW generated include the USTs, USTs piping, OWS, OWS piping, surface concrete, surface asphalt, UST sand/slurry abandonment materials, and groundwater. IDW including personal protective equipment, plastic sheeting, and other miscellaneous general construction debris was removed from the Site and disposed of in appropriate receptacles. Copies of waste manifests are provided in Appendix B.

## **7.0 Summary & Recommendations**

### **7.1 Summary of Activities**

On October 31, 2011, two previously abandoned-in-place USTs were removed from the northwest corner of the Site. The removed USTs were 8,000 and 10,000 gallon in size and had been abandoned-in-place with a sand/slurry mixture in 1987. A sheet pile shoring plan was put in place during the UST removal to protect the adjacent maintenance/storage building. Approximately 500 cubic yards of soil and sand/slurry (from within the abandoned-in-place USTs) was excavated to remove residual hydrocarbon impacts in soil previously identified by Burns & McDonnell and ACC in the northwest corner of the Site.

During UST removal activities, unanticipated hydrocarbon impacted soil was encountered adjacent to the west end of the East tank (Figure 3). The impacted soil was excavated from the north side of the East UST northward and off-Site (Figure 5) to the contact between the sidewalk and 18<sup>th</sup> Street. The off-Site excavation comprised approximately 34 cubic yards of impacted soil. The impacted soil was excavated to a depth of approximately 4 feet bgs to the soil/Bay Mud contact. An additional 1 foot of Bay Mud was excavated for a total excavated depth of 5 feet bgs. Excavation was halted due to proximity of 18<sup>th</sup> Street northward, and low PID readings to the east and west of the product piping (source). The source of the impacted soil was judged to be a former dispenser, remote fill port, or a similar feature. A product/syphon pipe terminated at approximately the center of the sidewalk. There were no obvious remnants to determine what feature the pipe was attached to. Previous environmental soil borings located to the east and west of the excavated area are non-detect or have detections below ESLs, however, impacted soil remains off-Site; impacted on-Site soil has been removed. The vertical extent of impacted soil off-Site appears to be at 4 to 5 feet bgs at the soil/Bay Mud interface.

One OWS and its associated cleanout line were additionally removed from the central-eastern portion of the Site. Hydrocarbon impacted soil at the OWS either observed during excavation and or identified during previous investigations was removed. Approximately 110 cubic yards of impacted soil was excavated from the OWS and its associated clean-out line.

At an approximate depth to 12 to 18 inches bgs in both the UST and OWS excavations, debris including metal, glass, bricks, and plastics was observed. These materials are believed to have been used as backfill during previous development and property use's which occurred at the Site. The Site has had multiple phases of development and structures prior to its current use as a trucking terminal.

The USTs and OWS were identified as Recognized Environmental Conditions by ACC during due diligence prior to the property being sold by YRC and acquired by PSAI. Burns & McDonnell agreed with ACC's recommendation to remove the USTs and OWS thereby eliminating these REC's.

On behalf of YRC, Burns & McDonnell recommends the Site be considered for NFA status. Environmental pollutions sources, including USTs, OWS, and hazardous waste storage facilities have been removed from the Site. On-Site hydrocarbon impacted soil associated with the former USTs and OWS has been excavated and replaced with clean backfill.

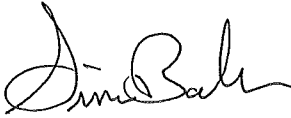
Since the removal of the improperly installed monitoring wells MW-1 and MW-2 in 2008, quarterly groundwater monitoring sampling has returned non-detect analytical results for all constituents-of-concern for greater than one hydro-geologic cycle (Table 4).

A No Further Action Supplement report will be submitted as a separate report, outlining the Site's history, investigative actions, sensitive receptors and historical site plans.

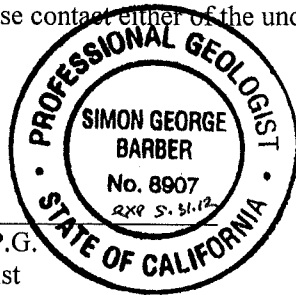


If you have any questions or comments regarding this UST & OWS Removal Report for the YRC Enterprise Services, Inc. (former Roadway Express), facility located at 1708 Wood Street, Oakland, California, please contact either of the undersigned at 650-871-2926.

Sincerely,



Simon Barber P.G.  
Project Geologist



Roshy Mozafar P.E. QSD/P  
Project Engineer

Cc: Keith Nowell, Alameda County  
Cherie McCaulou, SF Bay-RWQCB (Region 2)  
Inspector Mathews, City Of Oakland Fire Department  
Steve Shinnars, YRC  
Ruben Byerley, MM&A  
Martin Ward, PSAI

**Attachments:**

Figures

Figure 1: Site Location  
Figure 2: Site Plan  
Figure 3: Abandoned USTs Area  
Figure 4: Oil Water Separator Area  
Figure 5: TPH in Soil and Groundwater UST Area  
Figure 6: TPH in Soil and Groundwater OWS Area  
Figure 7: Soil Boring Site Plan- OWS Area

Tables:

Table 1: Well Construction  
Table 2: Summary of TPH and LUFT 5 Metals in Groundwater; *UST & OWS Removal 2011*  
Table 3: Summary of TPH and LUFT 5 Metals in Soil; *UST & OWS Removal 2011*  
Table 4: Historical Summary of TPH in Soil  
Table 5A: Historical Summary of TPH in Groundwater Wells  
Table 5B: Historical Summary of TPH in Grab Groundwater  
Table 6: Historical Summary of LUFT 5 Metals in Soil  
Table 7: Historical Summary of CAM 17 Metals in Soil and Groundwater

Appendices:

Appendix A: Unauthorized Release Statement  
UST Removal Permit  
City of Oakland Encroachment Permit, and Permit to Close Sidewalk  
Appendix AA: Construction photos  
Appendix B: Manifests  
Appendix C: Sheet Pile Shoring Plan  
Appendix D: Certified Analytical Reports  
Appendix E: SF Bay SWRQCB ESLs

## **FIGURES**

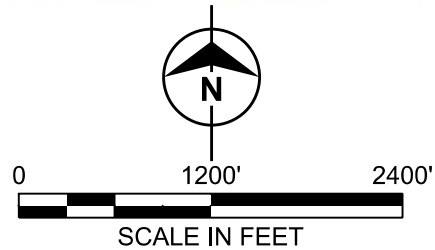
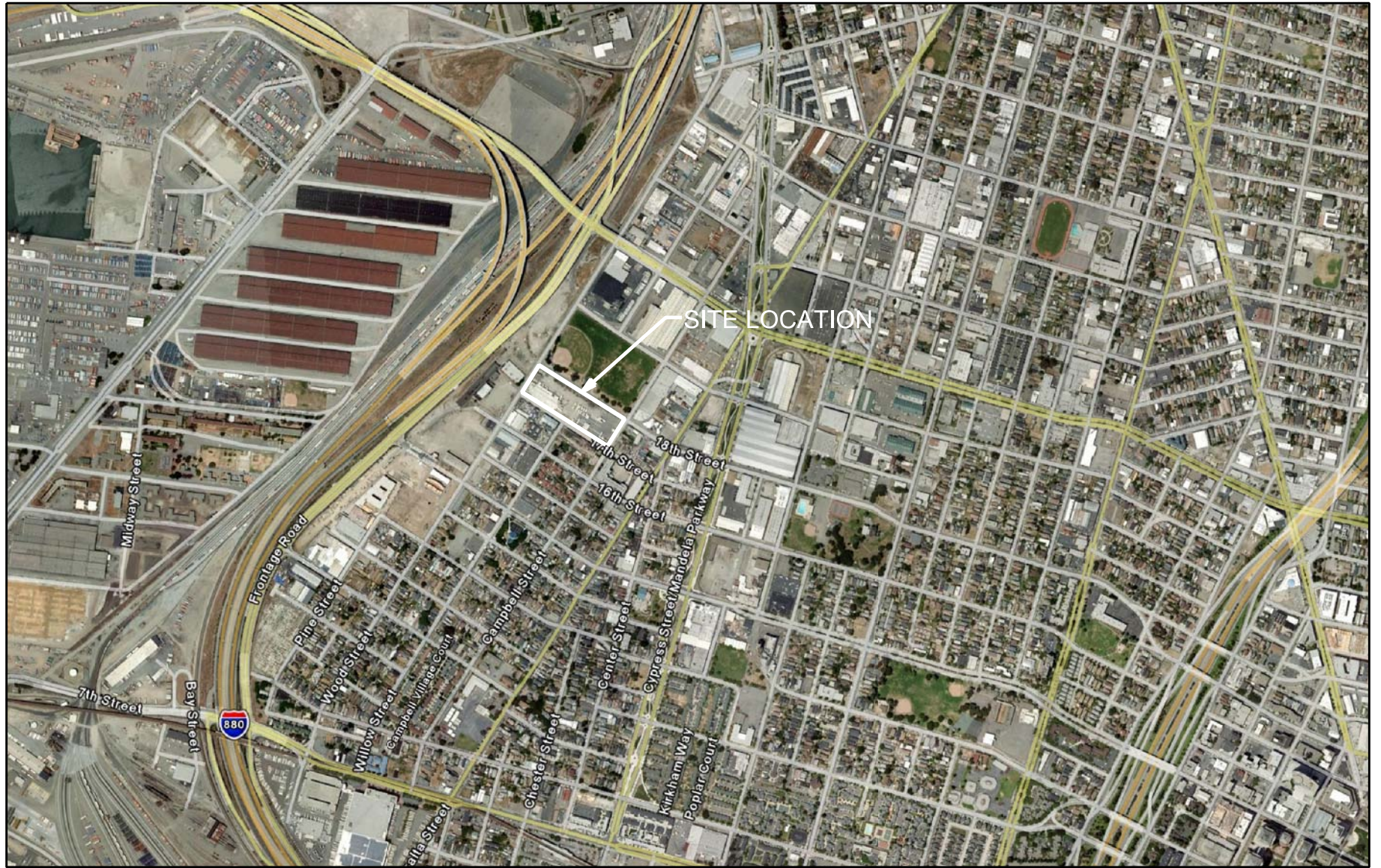


Figure 1  
SITE LOCATION MAP  
ROADWAY EXPRESS  
1708 WOOD STREET  
OAKLAND, CA

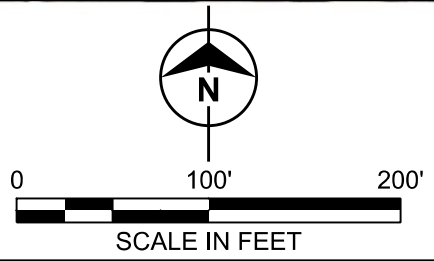
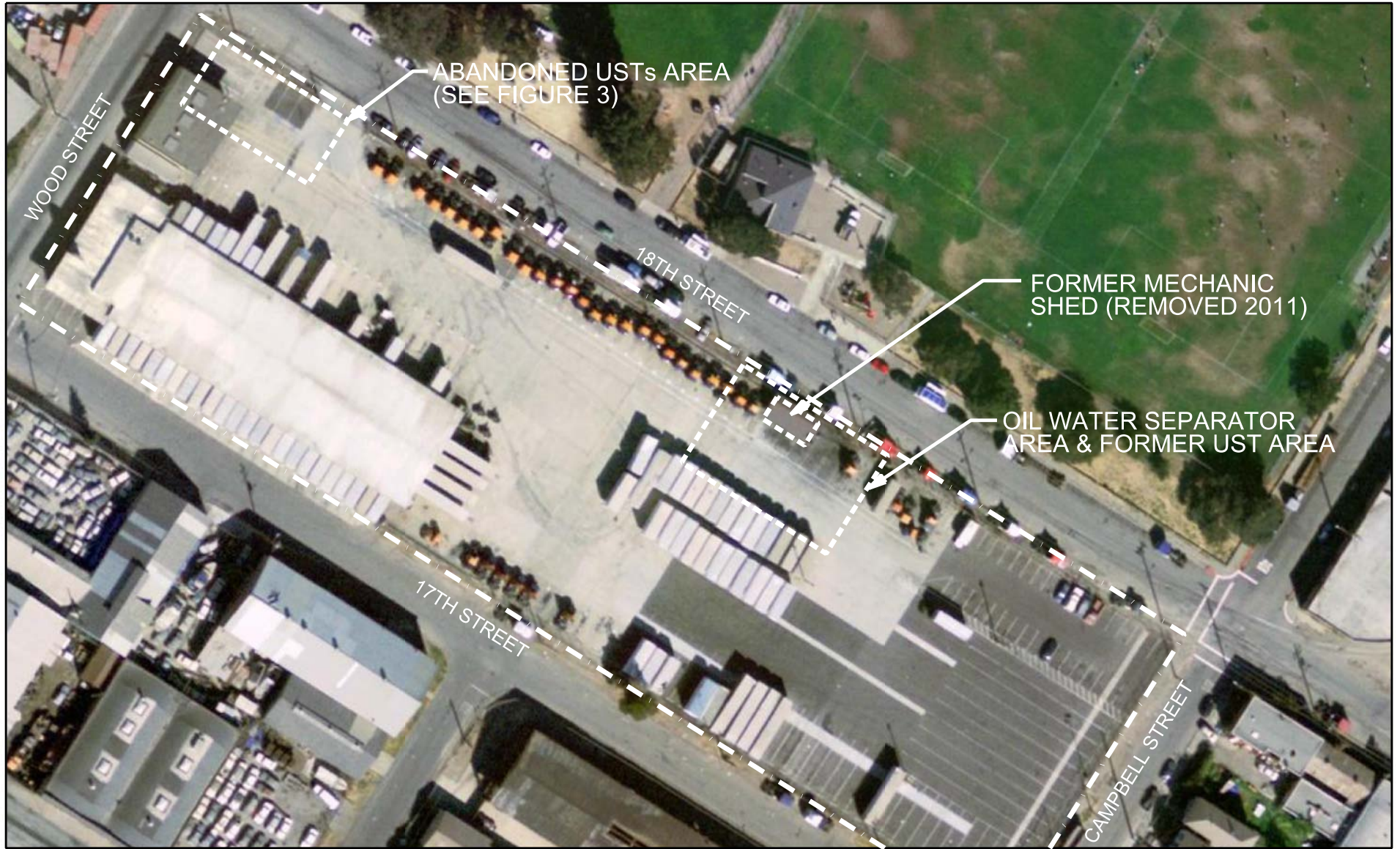
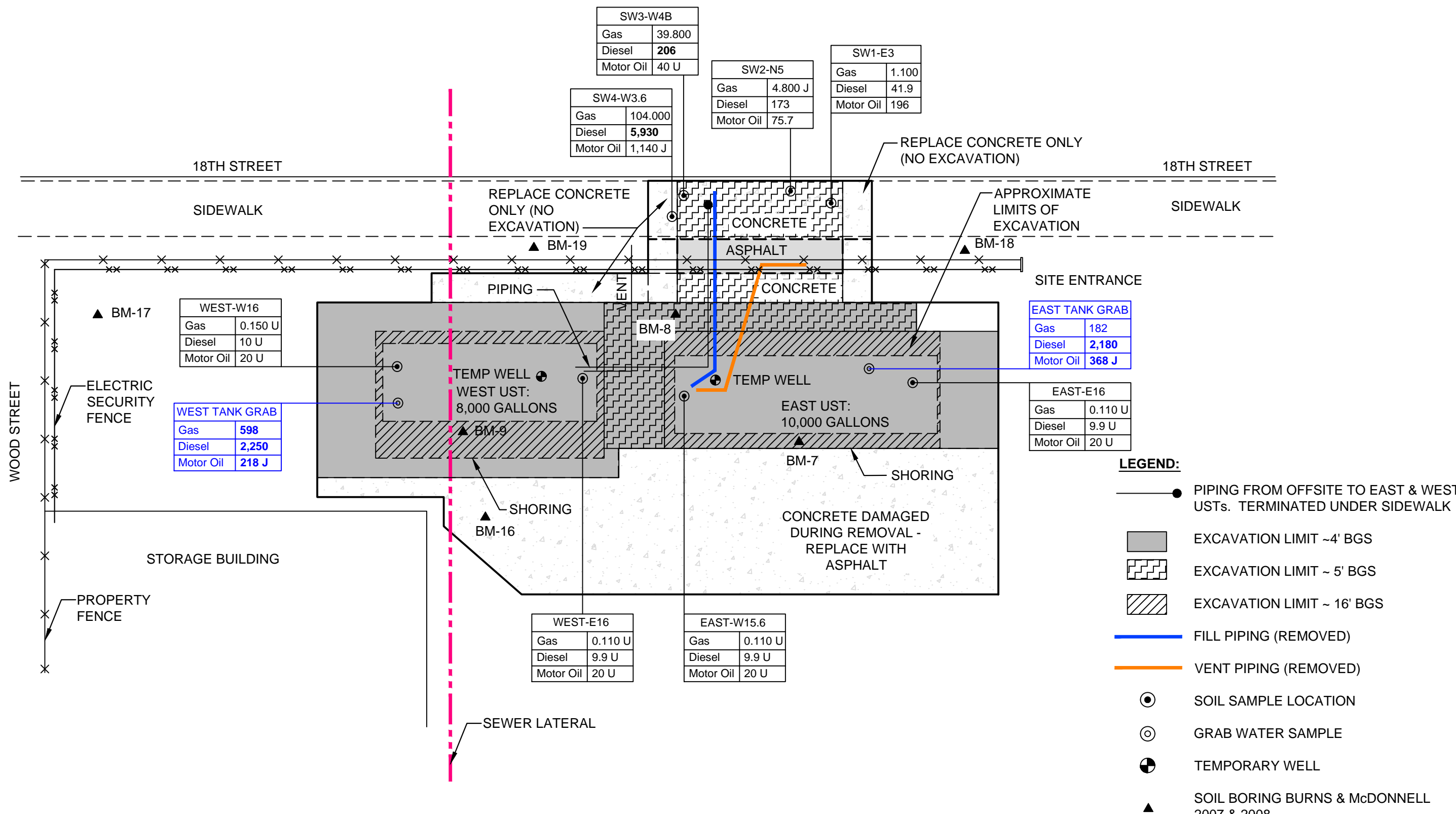


Figure 2  
SITE MAP  
ROADWAY EXPRESS  
1708 WOOD STREET  
OAKLAND, CA



SW3-W4B	
Gas	39.800
Diesel	206
Motor Oil	40 U

SW2-N5	
Gas	4.800 J
Diesel	173
Motor Oil	75.7

SW1-E3	
Gas	1.100
Diesel	41.9
Motor Oil	196

SW4-W3.6	
Gas	104.000
Diesel	5,930
Motor Oil	1,140 J

WEST-W16	
Gas	0.150 U
Diesel	10 U
Motor Oil	20 U

WEST TANK GRAB	
Gas	598
Diesel	2,250
Motor Oil	218 J

EAST TANK GRAB	
Gas	182
Diesel	2,180
Motor Oil	368 J

EAST-E16	
Gas	0.110 U
Diesel	9.9 U
Motor Oil	20 U

WEST-E16	
Gas	0.110 U
Diesel	9.9 U
Motor Oil	20 U

EAST-W15.6	
Gas	0.110 U
Diesel	9.9 U
Motor Oil	20 U

- LEGEND:**
- PIPING FROM OFFSITE TO EAST & WEST USTs. TERMINATED UNDER SIDEWALK
  - EXCAVATION LIMIT ~4' BGS
  - EXCAVATION LIMIT ~5' BGS
  - EXCAVATION LIMIT ~16' BGS
  - FILL PIPING (REMOVED)
  - VENT PIPING (REMOVED)
  - SOIL SAMPLE LOCATION
  - GRAB WATER SAMPLE
  - TEMPORARY WELL
  - SOIL BORING BURNS & McDONNELL 2007 & 2008

**NOTE:**  
 SOIL RESULTS ARE MILLIGRAMS PER KILOGRAM (mg/Kg)  
 GROUNDWATER RESULTS IN MICROGRAMS PER LITER (ug/L)  
 U NON DETECT

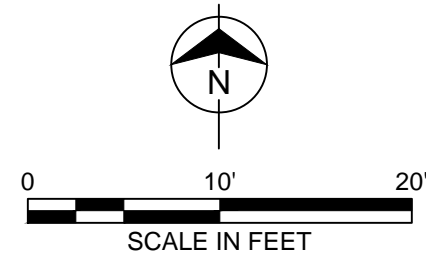
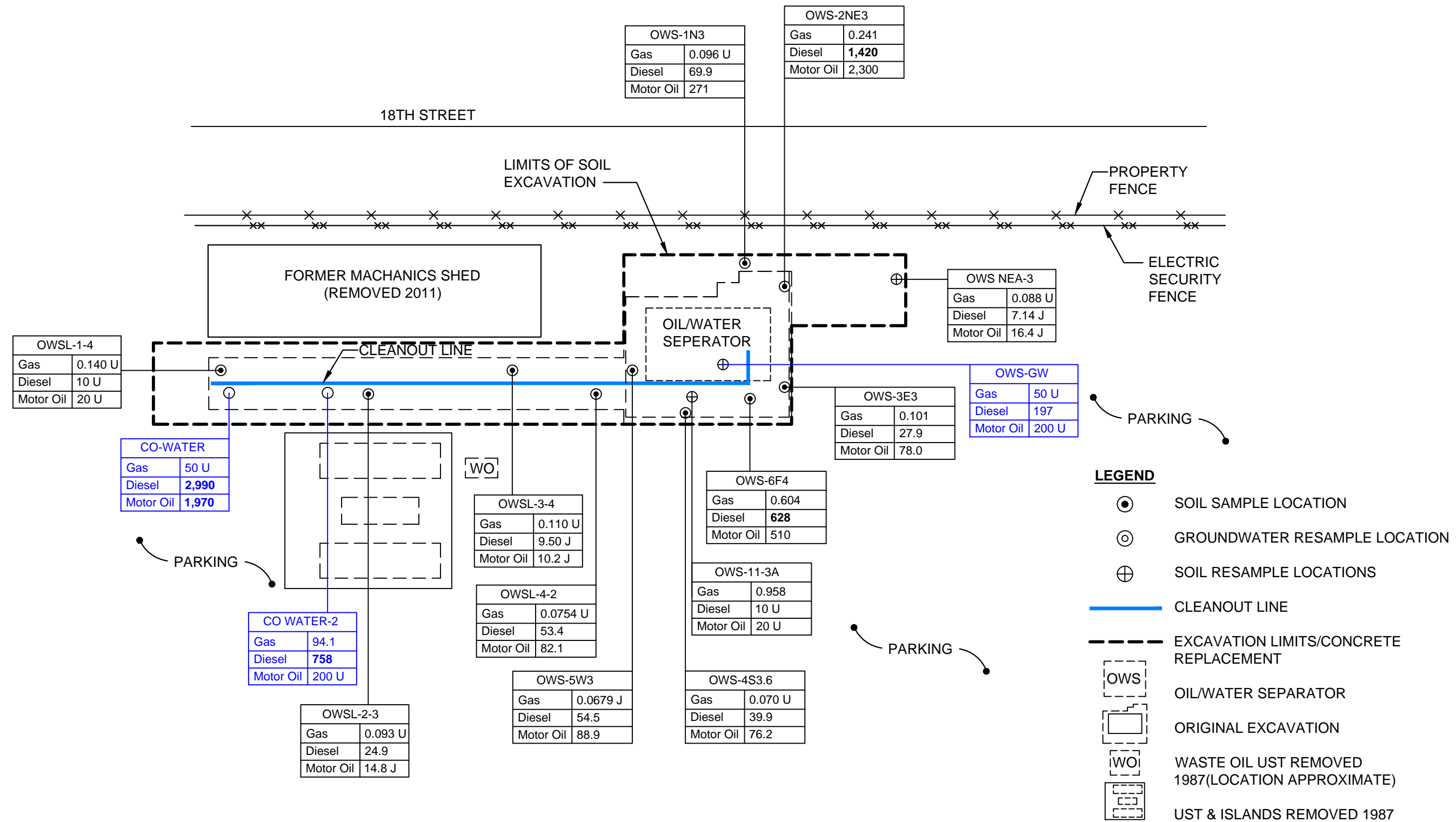
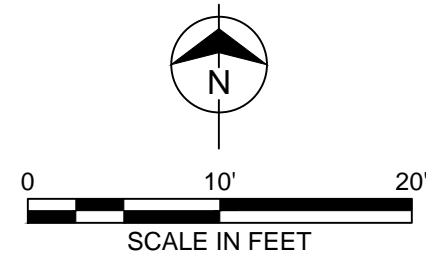


Figure 3  
 UST EXCAVATION LIMITS  
 AND SAMPLE LOCATIONS  
 1708 WOOD STREET  
 YRC SERVICES INC.



**NOTE:**  
 SOIL RESULTS ARE MILLIGRAMS PER KILOGRAM (mg/Kg)  
 GROUNDWATER RESULTS IN MICROGRAMS PER LITER (ug/L)  
 U NON DETECT



**Figure 4**  
**OWS - EXCAVATION LIMITS AND SAMPLE LOCATIONS**  
 1708 WOOD STREET  
 YRC SERVICES INC.

BM-19	SOIL	WATER
Gas	0.98 U	50 U
Diesel	7.6	50 U
Motor Oil	19	300 U

SW3-W4B	
Gas	39.800
Diesel	206
Motor Oil	40 U

SW2-N5	
Gas	4,800 J
Diesel	173
Motor Oil	75.7

SW1-E3	
Gas	1,100
Diesel	41.9
Motor Oil	196

SW4-W3.6	
Gas	104,000
Diesel	5,930
Motor Oil	1,140 J

REPLACE CONCRETE ONLY  
(NO EXCAVATION)

18TH STREET

SIDEWALK

REPLACE CONCRETE ONLY  
(NO EXCAVATION)

CONCRETE  
ASPHALT

APPROXIMATE LIMITS  
OF EXCAVATION

BM-17	SOIL	WATER
Gas	1 U	50 U
Diesel	3.1	50 U
Motor Oil	16	300 U

WEST-W16	
Gas	0.150 U
Diesel	10 U
Motor Oil	20 U

WEST TANK GRAB	
Gas	598
Diesel	2,250
Motor Oil	218 J

TEMP WELL  
WEST UST:  
8,000 GALLONS

TEMP WELL  
EAST UST:  
10,000 GALLONS

EAST TANK GRAB	
Gas	182
Diesel	2,180
Motor Oil	368 J

EAST-E16	
Gas	0.110 U
Diesel	9.9 U
Motor Oil	20 U

BM-18	SOIL	WATER
Gas	1 U	50 U
Diesel	3.7	50 U
Motor Oil	16	300 U

BM-7	SOIL	WATER
Gas	0.5 U	50 U
Diesel	5.0 U	120
Motor Oil	86	-----

CONCRETE DAMAGED  
DURING UST REMOVAL -  
REPLACED WITH ASPHALT

WEST-E16	
Gas	0.110 U
Diesel	9.9 U
Motor Oil	20 U

EAST-W15.6	
Gas	0.110 U
Diesel	9.9 U
Motor Oil	20 U

BM-16	SOIL	WATER
Gas	1.0 U	50 U
Diesel	2.4	50 U
Motor Oil	13	300 U

BM-8	SOIL	WATER
Gas	0.5 U	54,000
Diesel	120 U	61,000
Motor Oil	1,700	-----

BM-9	SOIL	WATER
Gas	0.5 U	180
Diesel	50	1,200
Motor Oil	83	-----

**NOTE:**









SOIL RESULTS ARE MILLIGRAMS PER KILOGRAM  
(mg/Kg)

GROUNDWATER RESULTS IN MICROGRAMS  
PER LITER (ug/L)

---- NOT ANALYZED

U NON DETECT

**LEGEND:**

-  PIPING TO USTS. TERMINATED UNDER SIDEWALK (REMOVED)
-  SIDEWALK TO EDGE OF 18TH STREET AND SIDEWALK
-  FILL PIPING (REMOVED)
-  VENT PIPING (REMOVED)
-  CONFIRMATORY SOIL SAMPLE LOCATION
-  GRAB WATER SAMPLES
-  TEMPORARY WELL
-  SOIL BORING BURNS & MCDONNELL 2007 & 2008

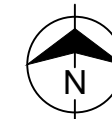
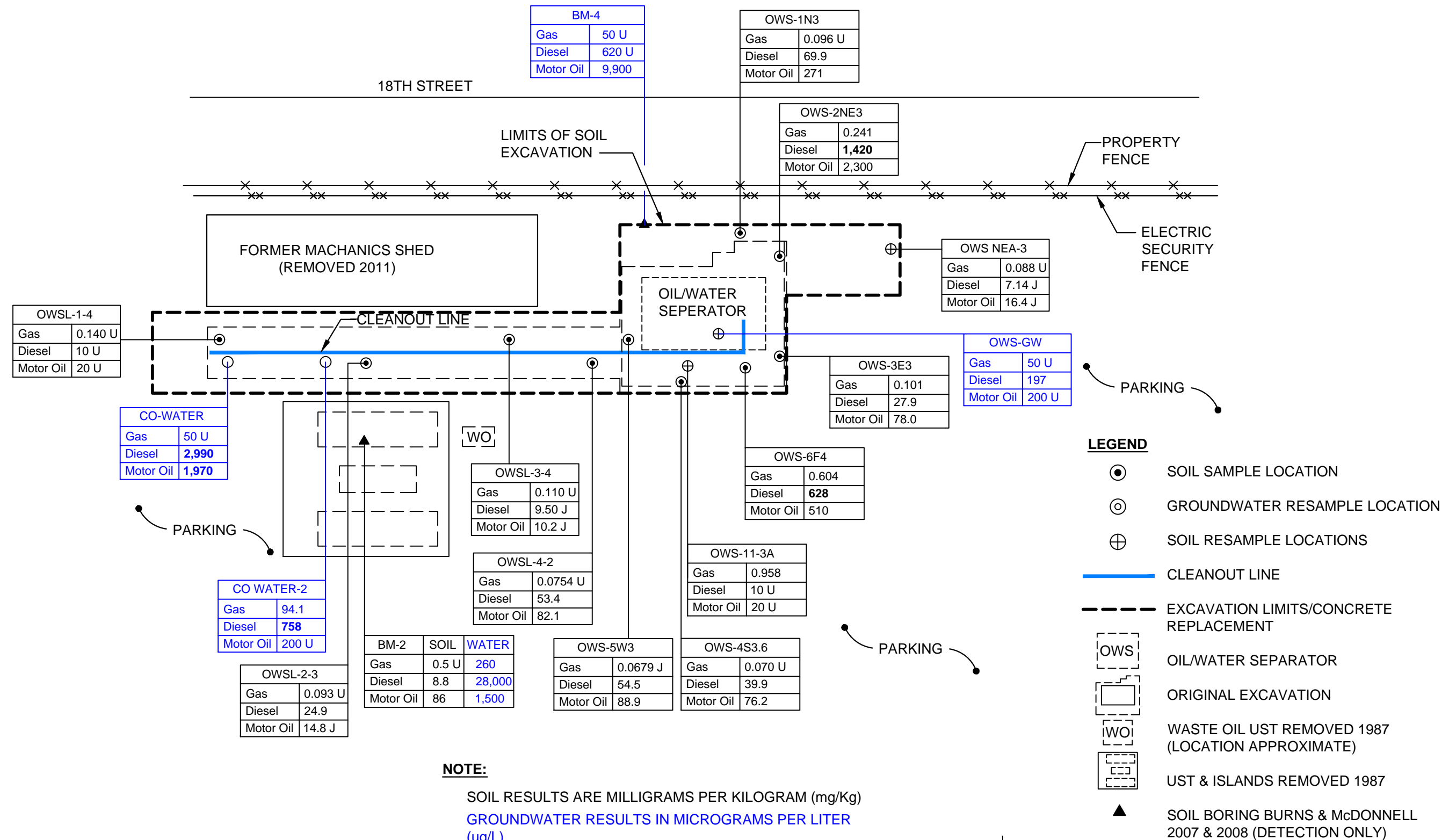


Figure 5  
HISTORICAL &  
CONFIRMATORY  
TPH IN SOIL & WATER  
UST & SIDEWALK  
1708 WOOD STREET  
YRC SERVICES INC.



**NOTE:**

SOIL RESULTS ARE MILLIGRAMS PER KILOGRAM (mg/Kg)

GROUNDWATER RESULTS IN MICROGRAMS PER LITER (ug/L)

10,000 GALLON GASOLINE AND DIESEL UST REMOVED 1987  
 2,000 GALLON WASTE OIL REMOVED 1987  
 OIL WATER SEPARATOR & CLEAN OUT LINE REMOVED NOVEMBER 2011

U NON DETECT

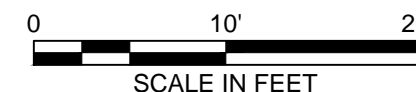
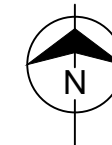
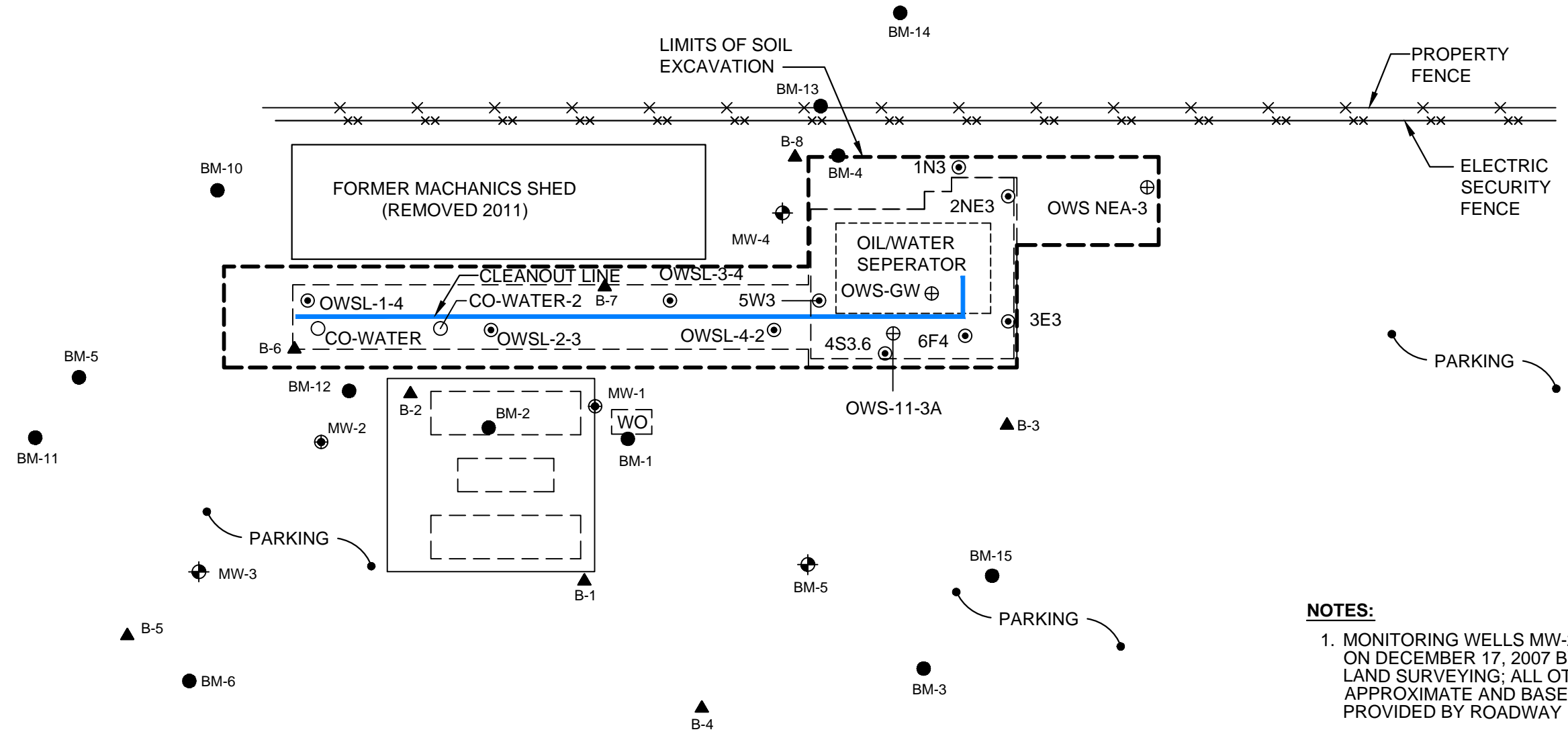


Figure 6  
 HISTORICAL &  
 CONFIRMATORY  
 TPH IN SOIL & WATER  
 OIL/WATER SEPERATOR  
 1708 WOOD STREET  
 YRC SERVICES INC.



18TH STREET



**NOTES:**

1. MONITORING WELLS MW-2 THROUGH MW-5 SURVEYED ON DECEMBER 17, 2007 BY LUK AND ASSOCIATES LAND SURVEYING; ALL OTHER LOCATIONS ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY ROADWAY EXPRESS.
2. LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE AND BASED ON USA MARKINGS AND FIELD OBSERVATIONS.
3. 10,000 GALLON GASOLINE AND DIESEL UST REMOVED 1987  
2,000 GALLON WASTE OIL REMOVED 1987  
OIL WATER SEPARATOR & CLEAN OUT LINE REMOVED NOVEMBER 2011

**LEGEND:**

- |   |  |         |   |
|---|--|---------|---|
| ⊙ | SOIL SAMPLE LOCATION   | —       | CLEANOUT LINE                                     |
| ⊕ | GROUNDWATER RESAMPLE LOCATION                                  | - - -   | EXCAVATION LIMITS/CONCRETE REPLACEMENT            |
| ⊕ | SOIL RESAMPLE LOCATIONS  | [ OWS ] | OIL/WATER SEPARATOR                               |
| ● | SOIL BORING (BURNS & McDONNELL, DECEMBER 2007 AND AUGUST 2008) | [ ]     | ORIGINAL EXCAVATION                               |
| ⊕ | EXISTING MONITORING WELL                                       | [ WO ]  | WASTE OIL UST REMOVED 1987 (LOCATION APPROXIMATE) |
| ⊕ | REMOVED MONITORING WELL  | [ ]     | UST & ISLANDS REMOVED 1987                        |
| ▲ | SOIL BORING (BCON ENVIRONMENTAL, JULY 1997)                    |         |   |

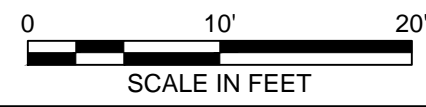
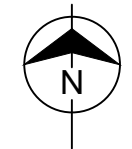


Figure 7  
SITE PLAN  
CENTRAL EASTERN (OWS)  
HISTORICAL BORINGS  
1708 WOOD STREET  
YRC SERVICES INC.

## **TABLES**

**Table 1**  
**Well Construction Details**

YRC Enterprise Services Inc.  
Roadway Express Facility  
1708 Wood Street  
Oakland California

Well ID	Installation Date	Casing Diameter	Casing Elevation	Construction Depth	Screened Interval	Comments
		(Inches)	ft. MSL	ft. bgs	ft. bgs	
MW-1	March 1987	4	unknown	10	0.5-10	Well Destroyed August 2008
MW-2	March 1987	4	9.89	9.5	0.5-9.5	Well Destroyed August 2008
MW-3	September 2000	2	10.11	30	10-30	Deep Zone
MW-4	September 2000	2	9.52	30	10-30	Deep Zone
MW-5	September 2000	2	9.97	30	10-30	Deep Zone
MW-6	February 2009	1	10.13	10	5-10	Shallow Zone
MW-7	February 2009	1	9.93	10	5-10	Shallow Zone
MW-8	February 2009	1	9.83	10	5-10	Shallow Zone

ft. MSI          Elevation in feet above mean sea level  
ft. bgs          Depth in feet below ground surface

Notes:

- Construction depth and screened intervals for MW-3, MW-4, and MW-5 based on boring logs located in the *Additional Groundwater Investigation Report by One Environment, 2001*
- Casing elevation for MW-2, MW-3, MW-4, and MW-5 resurveyed by Luk and Associates on December 20, 2007
- Casing elevation for MW-6, MW-7, and MW-8 surveyed by Luk and Associates on March 3, 2009
  
- In August 2008, Burns & McDonnell destroyed monitoring wells MW-1 and MW-2; these wells were constructed without a proper sanitary seal and posed a risk as a pathway to the subsurface for contaminants.

**Table 2**  
**Summary of Total Petroleum Hydrocarbons and LUFT 5 Metals in Groundwater**  
**UST and OWS Removal 2011**

YRC Enterprise Services Inc.  
Roadway Express Facility  
1708 Wood Street  
Oakland California

Sample ID	Sample Date	Sample Location	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons			BTEX / MTBE				LUFT 5 Metals					
				Gas	Diesel	Motor Oil	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	Cadmium	Chromium	Lead	Nickel	Zinc
CA SWRCB SF Bay Region Tier 1 ESLs (Shallow Soils) ug/L:				210	210	210	46	130	43	100	2.5	0.25	180	2.5	8.2	81
Oil Water Separator Area																
OWS-GW	10/27/2011	Oil Water Pit	5	50 U	197	200 U	1.0 U	1.0 U	1.0 U	2.0 U	0.87 J	2.0 U	10 U	121	52.4	121
Oil Water Separator Clean Out Line																
CO Water	11/9/2011	Oil Water Line	3	50 U	2,990	1,970	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	13.0	80.4	19.0	102
CO Water-2	11/18/2011	Oil Water Line	3	94.1	758	200 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	80.4	311	54.2	388

Sample ID	Sample Date	Sample Location	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons			BTEX / MTBE				LUFT 5 Metals					
				Gas	Diesel	Motor Oil	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	Cadmium	Chromium	Lead	Nickel	Zinc
CA SWRCB SF Bay Region Tier 1 ESLs (Deep Soils) ug/L:				210	210	210	46	130	43	100	1,800	0.25	180	2.5	8.2	81
Underground Storage Tank Area																
WTank Grab	10/31/2011	West Tank- West End	13	598	2,250	218 J	5.2	111	10.7	61.6	2.0 U	14.7	866	2,050	1,010	3,070
ETank Grab	10/31/2011	East Tank- East End	11	182	2,180	368 J	1.0 U	1.0 U	0.74 J	2.0 U	1.0 U	2.0 U	54.6	38.0	59.6	167

Notes:

All results are in micrograms per liter: ug/L

ug/L      Microgram per Liter

ft bgs      Feet below ground surface

U      Constituent not-detected at or below indicated value

Shallow soil    ≤ 3m (meters)

Deep soil      ≥3m (meters)

**Table 3**  
**Summary of Total Petroleum Hydrocarbons and LUFT 5 Metals in Soil**  
**UST and OWS Removal 2011**

YRC Enterprise Services Inc.  
 Roadway Express Facility  
 1708 Wood Street  
 Oakland California

Sample ID	Sample Date	Sample Location	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons			BTEX / MTBE					LUFT 5 Metals				
				Gas	Diesel	Motor Oil	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	Cadmium	Chromium	Lead	Nickel	Zinc
CA SWRCB SF Bay Region Tier 1 ESLs (Shallow Soils) mg/kg:				180	180	2,500	0.27	9.3	4.7	11	8.4	7.4	750	750	150	600
Oil Water Separator Area																
OWS-1N3	10/27/2011	North Sidewall	3	0.096 U	69.9	271	0.0044 U	0.0044 U	0.0044 U	0.0087 U	0.0044 U	0.92 U	30.0	57.0	35.0	102
Dup-1 (OWS-1N3)	10/27/2011	North Sidewall	3	0.0536 J	114	453	0.0048 U	0.0048 U	0.0048 U	0.0097 U	0.0048 U	0.93 U	32.3	260	67.1	184
OWS-2NE3	10/27/2011	Northeast Sidewall	3	0.241	<b>1,420</b>	2,300	0.460 U	0.460 U	0.460 U	0.920 U	0.460 U	5.0	29.6	171	42.5	<b>1,710</b>
OWS-3E3	10/27/2011	East Sidewall	3	0.101	27.9	78.0	0.0040 U	0.0040 U	0.0040 U	0.0081 U	0.0040 U	2.0	30.5	412	76.6	539
OWS-4S3.6	10/27/2011	South Sidewall	3.6	0.070 U	39.9	76.2	0.0034 U	0.0034 U	0.0034 U	0.0069 U	0.0034 U	0.89 U	29.8	184	36.7	155
OWS-5W3	10/27/2011	West Sidewall	3	0.0679 J	54.5	88.9	0.0057 U	0.0057 U	0.0057 U	0.011 U	0.0057 U	0.91 U	32.6	58.8	25.9	51.3
OWS-6F4	10/27/2011	OWS Floor	4	0.604	<b>628</b>	510	0.510 U	0.510 U	0.510 U	1.0 U	0.510 U	0.97 U	45.3	70.4	27.2	98.9
OWS-11-3A	11/3/2011	OWS-6F4 Resample	4.6	0.958	10 U	20 U	0.0047 U	0.0047 U	0.0047 U	0.0095 U	0.0047 U	0.97 U	43.8	4.7	22.0	31.5
OWS NEA-3	11/9/2011	OWS-2NE3 Resample	3	0.088 U	7.14 J	16.4 J	0.0044 U	0.0044 U	0.0044 U	0.0088 U	0.0044 U	<b>12.1</b>	37.1	59.0	39.3	<b>1,990</b>
Oil Water Separator Clean Out Line																
OWSL-1-4	11/9/2011	Oil Water Line	4	0.140 U	10 U	20 U	0.0068 U	0.0068 U	0.0068 U	0.0014 U	0.0068 U	1.0 U	53.2	6.6	31.9	56.8
OWSL-2-3	11/9/2011	Oil Water Line	3	0.093 U	24.9	14.8 J	0.0046 U	0.0046 U	0.0046 U	0.0093 U	0.0046 U	0.91 U	51.2	28.2	41.6	100
OWSL-3-4	11/9/2011	Oil Water Line	4	0.110 U	9.50 J	10.2 J	0.0057 U	0.0057 U	0.0057 U	0.0011 U	0.0057 U	0.95 U	47.0	21.4	33.6	81.6
OWSL-4-2	11/9/2011	Oil Water Line	2	0.0754 U	53.4	82.1	0.0044 U	0.0044 U	0.0044 U	0.0088 U	0.0044 U	0.99 U	40.0	53.9	43.4	85.0
Sidewalk UST Area																
SW1-E3	11/18/2011	Sidewalk- East sidewall	3	1.100	41.9	196	0.0092 U	0.0092 U	0.0092 U	0.018 U	0.0092 U	0.93 U	28.5	3.2	16.6	28.0
SW2-N5	11/18/2011	Sidewalk-North Sidewall	5	4.800 J	173	75.7	0.240 U	0.240 U	0.240 U	0.490 U	0.240 U	0.93 U	52.4	7.4	61.2	56.1
SW3-W4B	11/18/2011	Sidewalk-NW Sidewall	4	39.800	<b>206</b>	40 U	0.420 U	0.420 U	0.420 U	0.840 U	0.420 U	0.89 U	50.6	5.8	54.1	50.8
SW4-W3.6	11/18/2011	Sidewalk-NW Sidewall	3.6	104.000	<b>5,930</b>	1,140 J	4.800 U	4.800 U	4.800 U	9.600 U	4.800 U	0.90 U	41.8	197.0	43.8	180

Sample ID	Sample Date	Sample Location	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons			BTEX / MTBE					LUFT 5 Metals				
				Gas	Diesel	Motor Oil	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	Cadmium	Chromium	Lead	Nickel	Zinc
CA SWRCB SF Bay Region Tier 1 ESLs (Deep Soils) mg/kg:				180	180	5,000	2.0	9.3	4.7	11	8.4	39	5,000	750	260	5,000
Underground Storage Tank Area																
West-W16	10/31/2011	West UST-West End	16	0.150 U	10 U	20 U	0.0077 U	0.0077 U	0.0077 U	0.0015 U	0.0077 U	0.88 U	51.8	5.6	49.2	44.5
West-E16	10/31/2011	West UST-East End	16	0.110 U	9.9 U	20 U	0.0053 U	0.0053 U	0.0053 U	0.0011 U	0.0053 U	0.89 U	47.9	5.0	45.3	41.0
East-W15.6	10/31/2011	East UST-West End	15.6	0.100 U	9.9 U	20 U	0.0051 U	0.0051 U	0.0051 U	0.0010 U	0.0051 U	0.93 U	49.6	5.3	47.9	43.8
East-E16	10/31/2011	East UST-East End	16	0.110 U	9.9 U	20 U	0.0055 U	0.0055 U	0.0055 U	0.0011 U	0.0055 U	0.90 U	46.3	3.9	37.0	35.7

Stockpiles																
Underground Storage Tank Stockpiles																
Sample ID	Sample Date	Sample Location	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons Gas	Diesel	Motor Oil	Benzene	Toluene	BTEX / MTBE Ethyl-Benzene	Xylenes	MTBE	Cadmium	Chromium	Lead	Nickel	Zinc
West Stock	10/31/2011	West UST	C	0.192	12.6	21.6	0.0069 U	0.0069 U	0.0069 U	0.0014 U	0.0069 U	0.90 U	49.3	11.0	51.9	52.0
East Stock	10/31/2011	East East	C	0.100 U	9.8 U	20 U	0.0052 U	0.0052 U	0.0052 U	0.0010 U	0.0052 U	0.94 U	50.5	6.3	47.8	44.5
Sidewalk Stockpile																
Stock SW	11/18/2011	Sidewalk Stockpile	C	68.300	<b>3,790</b>	526 J	1.900 U	1.900 U	1.900 U	3.900 U	1.900 U	0.92 U	0.92	1.8	0.92	1.8

Notes:  
 All soil results are in milligrams per kilogram: mg/kg  
 mg/kg milligrams per kilogram  
 ft bgs Feet below ground surface  
 Shallow soil ≤3m (meters)  
 Deep soil ≥3m (meters)

**Table 4  
Historical Summary of Total Petroleum Hydrocabons in Soil**

YRC Enterprise Services Inc.  
Roadway Express Facility  
1708 Wood Street  
Oakland California

Sample ID	Date Sampled	Depth	TPH-Gasoline	TPH-Diesel	TPH-Motor Oil	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Analytical Reporting Units		(Feet bgs)	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
B-1	24-Jul-97	4	1 U	1 U	---	---	---	---	---	---
B-3	24-Jul-97	6	1 U	240	---	---	---	---	---	---
B-4	24-Jul-97	7	1 U	1 U	---	---	---	---	---	---
B-5	24-Jul-97	3.5	1 U	5.4	---	---	---	---	---	---
B-6	24-Jul-97	5	1 U	1 U	---	---	---	---	---	---
B-7	24-Jul-97	3	1 U	1 U	---	---	---	---	---	---
B-8	24-Jul-97	2	1 U	1 U	---	---	---	---	---	---
MW-3	6-Sep-00	5	ND	ND	---	---	---	---	---	---
MW-3	6-Sep-00	10	ND	ND	---	---	---	---	---	---
MW-4	6-Sep-00	5	ND	ND	---	---	---	---	---	---
MW-4	6-Sep-00	10	ND	ND	---	---	---	---	---	---
MW-5	6-Sep-00	5	ND	ND	---	---	---	---	---	---
MW-5	6-Sep-00	10	ND	ND	---	---	---	---	---	---
BM-2	10-Dec-07	5	0.50 U	8.8 Y	86	---	---	---	---	---
BM-2	10-Dec-07	13	0.50 U	5.0 U	---	---	---	---	---	---
BM-6	10-Dec-07	---	---	---	---	---	---	---	---	---
BM-7	10-Dec-07	6	0.50 U	5.0 U	86	---	---	---	---	---
BM-8	10-Dec-07	7	0.50 U	1 U20	1,700	---	---	---	---	---
BM-9	10-Dec-07	5	0.50 U	5.0 U	83	---	---	---	---	---
BM-10	4-Aug-08	5	0.93 U	4.5 SG Y	12 SG	4.6 U	4.6 U	4.6 U	4.6 U	19 U
BM-10	4-Aug-08	24	0.91 U	0.99 U	5.0 U	4.5 U	4.5 U	4.5 U	4.5 U	18 U
BM-11	4-Aug-08	2.6	0.94 U	30 SG Y	860 SG Y	4.7 U	4.7 U	4.7 U	4.7 U	19 U
BM-11	4-Aug-08	11	0.93 U	1.0 U SG	5.0 U	4.6 U	4.6 U	4.6 U	4.6 U	19 U
BM-11	4-Aug-08	20	1.0 U	1.1 SG Y	5.0 U	4.6 U	4.6 U	4.6 U	4.6 U	18 U
BM-12	4-Aug-08	3	0.98 U	65 SG Y	130 SG	4.6 U	4.6 U	4.6 U	4.6 U	18 U
BM-12	5-Aug-08	9.6	0.93 U	1.2 SG Y	10 SG	4.7 U	4.7 U	4.7 U	4.7 U	19 U
BM-12	5-Aug-08	19.6	0.98 U	0.99 U	5.0 U	4.9 U	4.9 U	4.9 U	4.9 U	20 U
BM-13	5-Aug-08	3.6	1.0 U	3.7 SG Y	13 SG	5.2 U	5.2 U	5.2 U	5.2 U	21 U
BM-13	5-Aug-08	21	1 U.1	1.0 U	5.0 U	5.3 U	5.3 U	5.3 U	5.3 U	21 U
BM-14	5-Aug-08	3	1.0 U	56 SG Y	90 SG	5.0 U	5.0 U	5.0 U	5.0 U	20 U
BM-14	5-Aug-08	17.6	0.99 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U
BM-14	5-Aug-08	23.6	0.95 U	0.99 U	5.0 U	4.8 U	4.8 U	4.8 U	4.8 U	19 U
BM-15	5-Aug-08	3.6	1.0 U	45 SG Y	320 SG	5.1 U	5.1 U	5.1 U	5.1 U	20 U
BM-15	5-Aug-08	11	0.98 U	1.3 SG Y	11 SG	4.9 U	4.9 U	4.9 U	4.9 U	20 U
BM-16	5-Aug-08	19	1.0 U	2.4 SG Y	13 SG	5.2 U	5.2 U	5.2 U	5.2 U	21 U
BM-16	5-Aug-08	29	0.99 U	1.0 U SG	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U
BM-17	6-Aug-08	10.6	1.0 U	2.4 SG Y	16 SG	5.0 U	5.0 U	5.0 U	5.0 U	20 U
BM-17	6-Aug-08	23.2	0.97 U	3.1 SG Y	15 SG	4.9 U	4.9 U	4.9 U	4.9 U	19 U
BM-17	6-Aug-08	25	1.0 U	1.3 SG Y	8.2	5.2 U	5.2 U	5.2 U	5.2 U	21 U
BM-18	6-Aug-08	2.6	0.97 U	3.7 SG Y	16 SG	4.9 U	4.9 U	4.9 U	4.9 U	19 U
BM-18	6-Aug-08	8.6	1.0 U	1.0 U SG	5.0 U SG	5.1 U	5.1 U	5.1 U	5.1 U	20 U
BM-18	6-Aug-08	12.6	0.93 U	2.0 SG Y	13 SG	4.7 U	4.7 U	4.7 U	4.7 U	19 U
BM-19	6-Aug-08	7.8	0.98 U	7.6 SG Y	15 SG	4.9 U	4.9 U	4.9 U	4.9 U	20 U
BM-19	6-Aug-08	11	0.98 U	3.7 SG Y	19 SG	4.9 U	4.9 U	4.9 U	4.9 U	20 U
BM-19	6-Aug-08	19	0.97 U	1.0 U SG Y	5.0 U	4.9 U	4.9 U	4.9 U	4.9 U	19 U
BM-19	6-Aug-08	22	0.94 U	1.0 U	5.0 U	4.7 U	4.7 U	4.7 U	4.7 U	19 U

**Notes:**

mg/Kg = milligrams per kilogram

µg/kg = micrograms per kilogram

ND = Sample not detected above detection limit; unable to find detection limit in prior sampling reports

U = Constituent not detected at or above indicated value

--- = Not sampled/analyzed for this constituent

Boring Locations are indicated on Figures 3 through 7

SG = Result after silica gel clean-up procedure, EPA Method 3630C

Y = Sample exhibits chromatographic pattern that does not resemble the standard

**Table 5A**  
**Historical Summary of Groundwater Elevations and Total Petroleum Hydrocarbons in Groundwater Wells**

YRC Enterprise Services Inc.  
 Roadway Express Facility  
 1708 Wood Street  
 Oakland California

Well ID	Aquifer Zone	Date	Depth to Water (ft below Top of Casing)	Groundwater Elevation (ft MSL)	TPHd (µg/L)	TPHg (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	Total Oil & Grease (mg/L)	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)
MW-1	Shallow	24-Jul-97	---	---	1,200	50 U	---	---	---	---	---	1.4	---	---
MW-2	Shallow	24-Jul-97	---	---	940	50 U	---	---	---	---	---	6.2	---	---
MW-2	Shallow	17-Dec-07	1.56	8.33	140	---	---	---	---	---	---	---	---	---
MW-2	Shallow	28-Mar-08	1.03	8.86	180 BI, SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-2 (DUP-1)	Shallow	28-Mar-08	---	---	160 BI, SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-2	Shallow	02-Jun-08	1.44	8.45	---	---	---	---	---	---	---	---	---	---
MW-2	Shallow	03-Jun-08	---	---	120 SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-2 (DUP-1)	Shallow	03-Jun-08	---	---	150 SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3	Deep	22-Mar-07	4.04	6.07	50 U	50 U	---	---	---	---	---	4.75 U	---	0.5 U
MW-3	Deep	28-Mar-08	4.12	5.99	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-3	Deep	02-Jun-08	4.35	5.76	---	---	---	---	---	---	---	---	---	---
MW-3	Deep	03-Jun-08	---	---	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3	Deep	10-Sep-08	4.48	5.63	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3	Deep	29-Dec-08	4.42	5.69	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3 (DUP-1)	Deep	29-Dec-08	---	---	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3	Deep	06-Mar-09	3.68	6.43	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-3	Deep	13-May-09	3.81	6.30	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-3	Deep	19-Sep-09	4.58	5.53	---	---	---	---	---	---	---	---	---	---
MW-4	Deep	22-Mar-07	3.25	6.27	50 U	50 U	---	---	---	---	---	4.75 U	---	0.5 U
MW-4	Deep	28-Mar-08	3.32	6.2	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-4	Deep	02-Jun-08	3.56	5.96	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-4	Deep	10-Sep-08	3.91	5.61	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-4	Deep	29-Dec-08	3.71	5.81	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-4	Deep	06-Mar-09	2.90	6.62	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-4	Deep	13-May-09	3.06	6.46	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-4	Deep	18-Sep-09	3.76	5.76	---	---	---	---	---	---	---	---	---	---
MW-5	Deep	22-Mar-07	3.73	6.24	500 BI	50 U	---	---	---	---	---	4.85 U	---	0.5 U
MW-5 (DUP-1)	Deep	22-Mar-07	---	---	710 BI	50 U	---	---	---	---	---	4.75 U	---	0.5 U
MW-5	Deep	28-Mar-08	3.82	6.15	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-5	Deep	02-Jun-08	4.05	5.92	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-5	Deep	10-Sep-08	3.45	6.52	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-5 (DUP-1)	Deep	10-Sep-08	---	---	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-5	Deep	29-Dec-08	4.19	5.78	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-5	Deep	06-Mar-09	3.32	6.65	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-5 (DUP-1)	Deep	06-Mar-09	---	---	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-5	Deep	13-May-09	3.54	6.43	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-5 (DUP-1)	Deep	13-May-09	---	---	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-5	Deep	18-Sep-09	4.25	5.72	---	---	---	---	---	---	---	---	---	---
MW-6	Shallow	06-Mar-09	0.60	9.53	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-6	Shallow	13-May-09	1.06	9.07	95 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-6	Shallow	18-Sep-09	1.91	8.22	94 U, SG	50 U	190 U, SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-7	Shallow	06-Mar-09	0.42	9.51	95 U,SG	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-7	Shallow	13-May-09	0.95	8.98	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-7	Shallow	18-Sep-09	1.75	8.18	84.5 SG, J	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-7 (DUP-1)	Shallow	18-Sep-09	---	---	56.7 SG, J	50 U	190 U, SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-8	Shallow	06-Mar-09	0.46	9.37	96 U,SG	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-8	Shallow	13-May-09	1.64	8.19	77.1 SG, J	50 U	200 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-8	Shallow	18-Sep-09	2.08	7.75	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U

**Notes:**

ft MSL Feet above mean sea level  
 µg/L Micrograms per Liter  
 --- No data for the cell, indicates "not measured" or "not analyzed for this constituent"

**Laboratory Qualifiers:**

BI Sample does not resemble standard  
 SG SGCU, Silica Gel Clean-up, EPA Method 3630C  
 J EPA Flag - Estimated value  
 U Compound was not detected above the indicated laboratory reporting limits

**Chemical Abbreviations:**

TPHd Total petroleum hydrocarbons as diesel range by EPA Method 8015M  
 TPHmo Total petroleum hydrocarbons as motor oil range by EPA Method 8015M  
 TPHg Total petroleum hydrocarbons as gasoline range by EPA Method 8260B  
 BTEX Benzene, ethyl-benzene, toluene, and total xylenes by EPA Method 8260B  
 MTBE (8021B) Methyl tert-butyl ether by EPA 8021B  
 MTBE (8260B) Methyl tert-butyl ether by EPA 8260B  
 TOG Total Oil and Grease by EPA Method 413.2

**TABLE 5B**  
**Historical Summary of Total Petroleum Hydrocarbons in Grab Groundwater**

YRC Enterprise Services Inc.  
 Roadway Express Facility  
 1708 Wood Street  
 Oakland California

Sample ID	Date Sampled	TPH-Gasoline	TPH-Diesel	TPH-Motor Oil	Total Oil & Grease	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Analytical Reporting Units		µg/L	µg/L	µg/L	mg/L	µg/kg	µg/kg	µg/kg	µg/kg	µg/L
B-1	24-Jul-97	50 U	50 U	---	0.5 U	---	---	---	---	---
B-3	24-Jul-97	50 U	500	---	0.54	---	---	---	---	---
B-4	24-Jul-97	50 U	560	---	0.5 U	---	---	---	---	---
B-5	24-Jul-97	50 U	50 U	---	0.5 U	---	---	---	---	---
B-6	24-Jul-97	50 U	2,000	---	0.69	---	---	---	---	---
B-7	24-Jul-97	840	120,000	---	8.8	---	---	---	---	---
B-8	24-Jul-97	50 U	2,000	---	0.61	---	---	---	---	---
BM-2	10-Dec-07	260	28,000	1,500	5.0 U	---	---	---	---	---
BM-3	10-Dec-07	50 U	---	---	---	---	---	---	---	---
BM-4	10-Dec-07	50 U	620 U	9,900	5.0 U	---	---	---	---	---
BM-5	10-Dec-07	50 U	---	---	---	---	---	---	---	---
BM-6	10-Dec-07	50 U	---	---	---	---	---	---	---	---
BM-7	10-Dec-07	50 U	120 Y	---	5.0 U	---	---	---	---	---
BM-8	10-Dec-07	54,000 Y	61,000	---	430	---	---	---	---	---
BM-9	10-Dec-07	180 Y	1,200 Y	---	5.0 U	---	---	---	---	---
BM-10-S	4-Aug-08	50 U	50 U SG	300 U SG	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-10-D	4-Aug-08	50 U	50 U	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-11-S	4-Aug-08	50 U	50 U SG	300 U SG	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-11-D	4-Aug-08	50 U	50 U SG	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-12-S	4-Aug-08	50 U	50 U SG	300 U SG	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-12-D	5-Aug-08	50 U	50 U SG	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-13-O	5-Aug-08	50 U	50 U SG	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-14-O	5-Aug-08	50 U	50 U	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-15-S	5-Aug-08	50 U	50 U SG	300 U SG	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-15-D	5-Aug-08	50 U	50 U SG	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-16-O	5-Aug-08	50 U b	50 U b	300 U b	---	0.50 U b	0.50 U b	0.50 U b	0.50 U b	2.0 U b
BM-17-O	6-Aug-08	50 U	50 U SG	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-18-O	6-Aug-08	50 U	50 U	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
BM-19-O	6-Aug-08	50 U	50 U	300 U	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
MW-2	4-Aug-08	50 U	50 U SG	300 U SG	---	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U

**Notes:**  
 µg/L = micrograms per liter  
 mg/kg = milligrams per kilogram  
 ND = Sample not detected above detection limit; unable to find detection limit in prior sampling reports  
 U = Constituent not detected at or above indicated value  
 --- = Not sampled/analyzed for this constituent due to limited recovery of groundwater/and or not scheduled  
 NS = Not sampled for constituent  
 SG = Result after silica gel clean-up procedure, EPA Method 3630C  
 Y = Atypical pattern  
 b = Sample analysed outside of hold time  
 S = Shallow water zone  
 D = Deeper water zone  
 O = Singular water zone  
 Borings are shown on Figures 3 through 7



**Table 6  
Historical Summary of LUFT 5 Metals in Soil**

YRC Enterprise Services Inc.  
Roadway Express Facility  
1708 Wood Street  
Oakland California

Sample ID	Sample Date	Sample Location	Sample Depth (ft bgs)	LUFT 5 Metals				
				Cadmium	Chromium	Lead	Nickel	Zinc
CA SWRCB SF Bay Region Tier 1 ESLs (Shallow Soils) mg/kg:				7.4	750	750	150	600
<b>Oil Water Separator Area</b>								
OWS-1N3	10/27/2011	North Sidewall	3	0.92 U	30.0	57.0	35.0	102
Dup-1 (OWS-1N3)	10/27/2011	North Sidewall	3	0.93 U	32.3	260	67.1	184
OWS-2NE3	10/27/2011	Northeast Sidewall	3	5.0	29.6	171	42.5	<b>1,710</b>
OWS-3E3	10/27/2011	East Sidewall	3	2.0	30.5	412	76.6	539
OWS-4S3.6	10/27/2011	South Sidewall	3.6	0.89 U	29.8	184	36.7	155
OWS-5W3	10/27/2011	West Sidewall	3	0.91 U	32.6	58.8	25.9	51.3
OWS-6F4	10/27/2011	OWS Floor	4	0.97 U	45.3	70.4	27.2	98.9
OWS-11-3A	11/3/2011	OWS-6F4 Resample	4.6	0.97 U	43.8	4.7	22.0	31.5
OWS NEA-3	11/9/2011	OWS-2NE3 Resample	3	<b>12.1</b>	37.1	59.0	39.3	<b>1,990</b>
<b>Oil Water Separator Clean Out Line</b>								
OWSL-1-4	11/9/2011	Oil Water Line	4	1.0 U	53.2	6.6	31.9	56.8
OWSL-2-3	11/9/2011	Oil Water Line	3	0.91 U	51.2	28.2	41.6	100
OWSL-3-4	11/9/2011	Oil Water Line	4	0.95 U	47.0	21.4	33.6	81.6
OWSL-4-2	11/9/2011	Oil Water Line	2	0.99 U	40.0	53.9	43.4	85.0
<b>Sidewalk UST Area</b>								
SW1-E3	11/18/2011	Sidewalk- East sidewall	3	0.93 U	28.5	3.2	16.6	28.0
SW2-N5	11/18/2011	Sidewalk-North Sidewall	5	0.93 U	52.4	7.4	61.2	56.1
SW3-W4B	11/18/2011	Sidewalk-NW Sidewall	4	0.89 U	50.6	5.8	54.1	50.8
SW4-W3.6	11/18/2011	Sidewalk-NW Sidewall	3.6	0.90 U	41.8	197.0	43.8	180

Sample ID	Sample Date	Sample Location	Sample Depth (ft bgs)	LUFT 5 Metals				
				Cadmium	Chromium	Lead	Nickel	Zinc
CA SWRCB SF Bay Region Tier 1 ESLs (Deep Soils) mg/kg:				39	5,000	750	260	5,000
<b>Underground Storage Tank Area</b>								
West-W16	10/31/2011	West UST-West End	16	0.88 U	51.8	5.6	49.2	44.5
West-E16	10/31/2011	West UST-East End	16	0.89 U	47.9	5.0	45.3	41.0
East-W15.6	10/31/2011	East UST-West End	15.6	0.93 U	49.6	5.3	47.9	43.8
East-E16	10/31/2011	East UST-East End	16	0.90 U	46.3	3.9	37.0	35.7

<b>Stockpiles</b>								
Underground Storage Tank Stockpiles				Cadmium	Chromium	Lead	Nickel	Zinc
West Stock	10/31/2011	West UST	C	0.90 U	49.3	11.0	51.9	52.0
East Stock	10/31/2011	East East	C	0.94 U	50.5	6.3	47.8	44.5
<b>Sidewalk Stockpile</b>								
Stock SW	11/18/2011	Sidewalk Stockpile	C	0.92 U	0.92	1.8	0.92	1.8

Notes:

mg/kg = milligrams per kilogram  
ft bgs = feet below ground surface  
U = Constituent not detected at or above indicated value  
Shallow soil = ≤3m (meters)  
Deep soil = ≥3 m (meters)  
C = Composite sample

**Table 7**  
**Summary of CAM17 Metals in Soil and Groundwater**

YRC Enterprise Services Inc.  
 Roadway Express Facility  
 1708 Wood Street  
 Oakland California

Soil					Grab Groundwater				
Boring ID	BM-1	BM-7	BM-8	BM-9	Boring ID	BM-1	BM-7	BM-8	BM-9
Sample Depth (feet bgs)	8	6	7	5					
Metal	mg/kg	mg/kg	mg/kg	mg/kg	Metal	mg/L	mg/L	mg/L	mg/L
Antimony	1.0 U	1.0 U	1.0 U	1.0 U	Antimony	0.063	0.010 U	0.010 U	0.011
Arsenic	5.1	3.2	5.4	2.8	Arsenic	0.43	0.031	0.011	0.072
Barium	21	34	54	94	Barium	5.6	0.27	0.094	2.4
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	Beryllium	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Cadmium	1.4	1.0 U	1.0 U	1.0 U	Cadmium	0.016	0.0020 U	0.0020 U	0.0070
Chromium	44	50	42	31	Chromium	5.5	0.27	0.11	0.61
Cobalt	14	8.0	5.3	7.7	Cobalt	0.61	0.042	0.015	0.17
Copper	19	23	36	28	Copper	2.9	0.11	0.045	0.64
Lead	6.0	9.6	49	22	Lead	9.2	0.083	0.030	0.86
Molybdenum	1.0 U	1.4	1.0 U	1.0 U	Molybdenum	0.0050 U	0.0050	0.0050 U	0.022
Mercury	0.050 U	0.050 U	0.25	0.050 U	Mercury	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	65	37	26	25	Nickel	3.5	0.22	0.075	0.50
Selenium	2.0 U	2.0 U	2.0 U	2.0 U	Selenium	0.020 U	0.020 U	0.020 U	0.020 U
Silver	1.0 U	1.0 U	1.0 U	1.0 U	Silver	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Thallium	2.0 U	2.0 U	2.0 U	2.0 U	Thallium	0.020 U	0.020 U	0.020 U	0.020 U
Vanadium	36	41	35	33	Vanadium	4.0	0.23	0.090	0.58
Zinc	51	61	100	70	Zinc	7.2	0.26	0.087	1.5

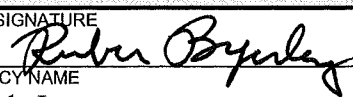
**Notes:**

All samples collected on December 10, 2007  
 Sample Depth in Feet below ground surface  
 U = Analyte not detected at or above indicated value  
 mg/kg = milligrams per kilogram

**APPENDIX A**

**Unauthorized Release Statement  
UST Removal Permit & Plans  
City of Oakland Encroachment Permit  
City of Oakland Permit to Close Sidewalk**

## UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>FOR LOCAL AGENCY USE ONLY</b> I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFETY CODE.	
REPORT DATE 7/13/2011		CASE # Fuel leak Case # RO0000039		SIGNED _____ DATE _____	
REPORTED BY	NAME OF INDIVIDUAL FILING REPORT Ruben Byerley		PHONE (913) 344-3644	SIGNATURE 	
	REPRESENTING <input type="checkbox"/> LOCAL AGENCY <input type="checkbox"/> REGIONAL BOARD <input checked="" type="checkbox"/> OWNER/OPERATOR <input type="checkbox"/> OTHER		COMPANY OR AGENCY NAME YRC Worldwide Inc.		
RESPONSIBLE PARTY	ADDRESS 10990 Roe Avenue		Overland Park	KS	66211
	STREET		CITY	STATE	ZIP
SITE LOCATION	FACILITY NAME (IF APPLICABLE) Roadway Express		OPERATOR YRC Worldwide Inc.	PHONE (913) 344-3644	
	ADDRESS 1708 Wood Street		Oakland	Alameda	94607
STREET		CITY	COUNTY	ZIP	
IMPLEMENTING AGENCIES	LOCAL AGENCY AGENCY NAME Alameda County Environmental Health Services			PHONE (510) 567-6700	
	REGIONAL BOARD 2- SF RWQCB			PHONE (510) 622-2300	
SUBSTANCES INVOLVED	(1) NAME Diesel, Motor Oil, Gasoline		QUANTITY LOST (GALLONS) <input checked="" type="checkbox"/> Unknown		
	(2) NAME Waste Oil		<input checked="" type="checkbox"/> Unknown		
DISCOVERY/ABATEMENT	DATE DISCOVERED	HOW DISCOVERED <input type="checkbox"/> Tank Test <input checked="" type="checkbox"/> Tank Removal <input type="checkbox"/> Nuisance Conditions <input type="checkbox"/> Inventory Control <input checked="" type="checkbox"/> Subsurface Monitoring <input type="checkbox"/> Other			
	DATE DISCHARGE BEGAN	METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY) <input type="checkbox"/> Remove Contents <input checked="" type="checkbox"/> Close Tank <input type="checkbox"/> Repair Tank <input type="checkbox"/> Change Procedure <input type="checkbox"/> Replace Tank <input type="checkbox"/> Other <input type="checkbox"/> Repair Piping			
	HAS DISCHARGE BEEN STOPPED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO    IF YES, DATE	<input checked="" type="checkbox"/> UNKNOWN			
SOURCE/ CAUSE	SOURCE OF DISCHARGE <input checked="" type="checkbox"/> Tank Leak <input checked="" type="checkbox"/> Piping Leak <input type="checkbox"/> Unknown <input type="checkbox"/> Other		CAUSE(S) <input type="checkbox"/> Overfill <input type="checkbox"/> Corrosion <input type="checkbox"/> Rupture/Failure <input type="checkbox"/> Unknown <input type="checkbox"/> Spill <input type="checkbox"/> Other		
	CHECK ONE ONLY <input type="checkbox"/> Undetermined <input type="checkbox"/> Soil Only <input type="checkbox"/> Groundwater <input type="checkbox"/> Drinking Water -- (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)				
CURRENT STATUS	CHECK ONE ONLY <input type="checkbox"/> No Action Taken <input type="checkbox"/> Case Closed (Cleanup Completed or Unnecessary) <input type="checkbox"/> Leak Being Confirmed <input type="checkbox"/> Pollution Characterization <input checked="" type="checkbox"/> Remediation Plan <input checked="" type="checkbox"/> Post Cleanup Monitoring in Progress <input type="checkbox"/> Preliminary Site Assessment Workplan Submitted <input type="checkbox"/> Cleanup Underway <input type="checkbox"/> Preliminary Site Assessment Underway				
	CHECK APPROPRIATE ACTION(S) <input type="checkbox"/> Cap Site (CD) <input type="checkbox"/> Excavate & Treat (ET) <input type="checkbox"/> Treatment At Hookup (HU) <input type="checkbox"/> Other <input type="checkbox"/> Contamination Barrier (CB) <input type="checkbox"/> No Action Required (NA) <input type="checkbox"/> Enhanced Bio Degradation (IT) <input checked="" type="checkbox"/> Vacuum Extract (VE) <input type="checkbox"/> Remove Free Product (FP) <input type="checkbox"/> Replace Supply (RS) <input checked="" type="checkbox"/> Excavate & Dispose (ED) <input type="checkbox"/> Pump & Treat Groundwater (GT) <input type="checkbox"/> Vent Soil (VS)				

COMMENTS

In March 1987, two USTs (one 10,000 gallon gasoline tank and one 2,000 gallon motor oil tank) were removed from the central-eastern area of the Site, along 18th Street. During this work, two other USTs were identified at the northwest corner of the property (one 2,000 gallon waste oil tank and one 10,000 gallon tank of unknown contents, further identified as diesel). The two USTs were abandoned-in-place (filled with sand slurry and grout). In April 1996, the one remaining 10,000 gallon diesel UST and all associated piping was removed from the central-eastern area of the Site, along 18th Street.

We plan on excavating and disposing the two USTs that were abandoned in place in 1987, and any impacted soil and/or groundwater. There is also an Oil Water Separator (OWS) on site. We also plan on excavating and disposing the oil water separator along with any impacted soil and groundwater. The goal is to obtain NFA status for the site upon removal of the remaining USTs and OWS.

Last groundwater sampling event was conducted during the 4<sup>th</sup> quarter of 2009, and a NFA request was sent to Alameda County Environmental Health Services along with the ground water monitoring report on January 20, 2010.

City of Oakland Fire Prevention  
250 Frank Ogawa Suite 3341  
510-238-3851

COVEY ENGINEERING, INC.

=====

DEPT#: 120600	
120 - CUPA - Fines and Fees	
	907.50 907.50

What is the tracking: P11-0640

Payer Name: Covey Engineering, Inc.

=====

SubTotal:	907.50
Total:	907.50

=====

Check 907.50  
Other : P11-0640  
Number : 8341

7/14/2011 09:48 HO  
#0257724 /5/8  
Receipt #: 237704

Thank you.

7/13/2011

907.50

907.50

8341

**A BUSINESS TAX CERTIFICATE IS REQUIRED FOR EACH BUSINESS LOCATION AND IS NOT VALID FOR ANY OTHER ADDRESS. Replacement of second lost certificate is \$25.**

The registration fee paid to obtain a Business Tax Certificate is not refundable, except for an amount collected in error. All refunds must be requested in writing, to Revenue Audit Section, 150 Frank H. Ogawa Plaza, Suite #5342, Oakland, CA 94612-2093.

**RETURN THIS PORTION OF CERTIFICATE IF BUSINESS IS SOLD OR DISCONTINUED (Please check box)**

**Discontinued**       **Sold**

Effective Date \_\_\_\_\_ Signature of Business Owner \_\_\_\_\_

Name and Address of New Owner \_\_\_\_\_ Date \_\_\_\_\_

**RETURN THIS CERTIFICATE IF YOU ARE CHANGING ANY OF THE FOLLOWING [Please check appropriate box(es)]**

**BUSINESS TAX OFFICE**

City of Oakland  
250 Frank H. Ogawa Plaza, Suite #1320  
Oakland, CA 94612-2011  
(510) 238-3704

**ACCOUNT NUMBER**

**28027563**

KWC, INC.  
KEN WATERS  
PO BOX 1451  
VICTORVILLE, CA 92393-1451

A \$15 fee is required for Business Address Changes only  
Print details of change and mail to the Business Tax Office.

- Change Business Name
- Change Business Address
- Change Mailing Name
- Change Mailing Address
- Change Business Activity (Contact Business Tax Section)

Business Name: \_\_\_\_\_

Business Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Mailing Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

TEAR OR FOLD HERE

POST IN A  
CONSPICUOUS  
PLACE

**BUSINESS TAX CERTIFICATE  
CITY OF OAKLAND**

The issuing of a Business Tax Certificate is for revenue purposes only. It does not relieve the taxpayer from the responsibility of complying with the requirements of any other agency of the City of Oakland and/or any other ordinance, law or regulation of the State of California, or any other governmental agency. This certificate is void if non-payable instruments are tendered to obtain it. The Business Tax Certificate expires on December 31st. and you are allowed a grace period until March 1st of the following year.



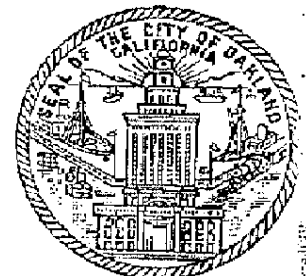
**EXPIRES  
12/31/2011**

**ACCOUNT NUMBER**                    **28027563**

**BUSINESS NAME**                    **KWC, INC.**

**BUSINESS ADDRESS**                **13516 JUBILEE PL  
VICTORVILLE, CA 92395-7743**

**BUSINESS CLASSIFICATION**      **H - Construction Contractors**



**YOU MAY BE REQUIRED TO OBTAIN A VALID ZONING CLEARANCE TO OPERATE YOUR BUSINESS LEGALLY. RENTAL OF REAL PROPERTY IS EXCLUDED FROM ZONING.**

CITY OF OAKLAND - FMA, Revenue-Business Tax  
 250 Frank H. Ogawa Plaza, Suite 1320, Oakland, CA 94612  
 Phone: 510-238-3704 Fax: 510-238-7128  
 Website: [www.oaklandnet.com/bustax.html](http://www.oaklandnet.com/bustax.html)



**CONTRACTOR'S NEW APPLICATION**  
**TAX YEAR 20 11**

Official Use Only:  
 Acct #: 28027563  
 Ind. Code H SIC 1500

NOTE: Please read all instructions on the other side before completing this application.

- TYPE OF CONTRACTOR:  GENERAL     ELECTRICAL     PLUMBING, HEATING OR A/C  
 (CHECK ONE)                     ROOFING     PAINTING     MISC TRADE/OTHER
- BUSINESS NAME: KWC, INC
- BUSINESS ADDRESS: 13510 JUBILEE PLACE  
 CITY: VICTORVILLE STATE: CA ZIP CODE: 92395
- BUSINESS PHONE (760) 841-8888 EXT:      CONTACT PHONE: (951) 522-5110 EXT:
- BUSINESS START DATE: 08/01/11 (Enter the date when you first began your work in Oakland)
- OWNERSHIP TYPE: C (S=Sole Ownership; P=Partnership; C=Corporation; L=Limited Partnership; E=Estate; T=Trust; X=LLC or LLP)
- NO. OF FULL TIME EMPLOYEES: 3    8. DO YOU OWN THIS BUSINESS LOCATION?  YES  NO
- EMAIL/WEBSITE ADDRESS: S.COVEY@YAHOO.COM & KENW@KWCONSTRUCTIONGC.COM
- MAILING NAME: KWC, INC ATTENTION: KEN WATERS
- MAILING ADDRESS: P.O. BOX 1451  
 CITY: VICTORVILLE STATE: CA ZIP CODE: 92393

12. BUSINESS OWNERSHIP REQUIRED:		
Owner(s) Names - First & Last Name(s) and Title (i.e. President, Secretary or Agent for Service)	Social Security Number (required)	Driver's License Number & State
1. <u>Ken Waters</u>	<u>556-68-8052</u>	<u>90632472 CA</u>
2. <u>    </u>	<u>    </u>	<u>    </u>
3. <u>    </u>	<u>    </u>	<u>    </u>

- FEDERAL TAX ID #: 20-8532086 (if partnership, corporation, LLC/LLP, or trust)
- ZONING PERMIT #: N/A (if your company is based in Oakland)
- STATE CONTRACTOR'S LICENSE NO.: 898739 EXPIRATION DATE: 6-30-13
- REGISTRATION FEE: (Due within 30 days of the Oakland business start date): 16 \$ 60.00
- PENALTY (Add \$6.00 if registration fee is paid 30-60 days after Oakland business start date or add \$15.00 if registration fee is paid more than 61 days after Oakland business start date): 17. \$ 0
- 20 11 FIRST YEAR ESTIMATED OAKLAND GROSS RECEIPTS (required): \$ 88,500.
- 20 11 FIRST YEAR ESTIMATED TAX DUE - (amount on Line 18 x .0018 or \$60.00, whichever is greater): 19. \$ 160.00
- PAYMENT ENCLOSED: Registration fee & estimated tax must be included. (Add Lines 16, 17 & 19): 20. \$ 170.00  
 Please make your check or money order payable to "Oakland Business Tax"
- CREDIT CARD INFORMATION:  Visa     MasterCard     Discover  
 Credit Card Number:      Expiration Date:      MO      YR  
 Amount Charged to This Card: \$      Signature:

It is your responsibility to ensure that all taxes are paid in full on work conducted in the City of Oakland. Please note that payment must be paid in full at time of application. The request to close the account must be submitted in writing within 30 days once your Oakland work activity has ceased.

I declare, under penalty of perjury, that to the best of my knowledge, all information contained on this application is true and complete.  
 Signature: [Signature] Title: PROJECT MANAGER Date: 7/11/11

Initials: RM  
 Payment Type: D 8340  
 Date: 7/14/11



**FACILITY INFORMATION**

Facility/Residence Name ROADWAY EXPRESS Business Type TRUCKING  
 Site Address 1708 WOOD ST. City OAKLAND Zip 94607  
 Contact Person SCOTT COVEY Title PROJECT MGR Phone 951-522-5110  
 E-Mail S. COVEY@YANCO.COM Cell Phone 866-706-8265 x4  
 Owner, Agency, or Corporation Name YRC WORLDWIDE, INC Phone \_\_\_\_\_  
 Mailing Address 10990 ROG AVE City OVERLAND PARK State KS Zip 66211  
 EPA ID Number CAR000039180  
 Note: Include "Proof of Financial Responsibility" \* THESE TANKS WERE SWIRL FILLER  
 IN 5-5-07, THEREFORE THIS IS NOT IN PLACE

**CONTRACTOR REMOVING TANK(S) AND PIPING:**

Contractor KW CONSTRUCTION  
 Contract Person SCOTT COVEY / KEN WATERS Phone 951-522-5110  
 Business Address P.O. BOX 145 City VICTORVILLE Zip 92393  
 State Contractors License 898739  
 Note: Attach a copy of Contractors License, Hazardous Materials Certification, and  
 Workers Compensation

**HAZARDOUS WASTE HAULERS:**

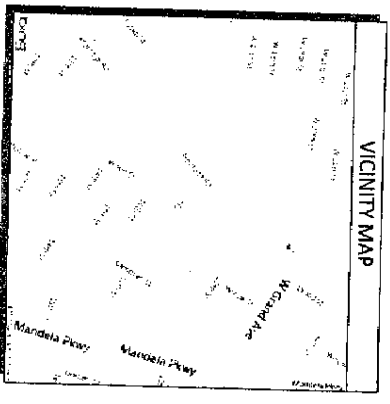
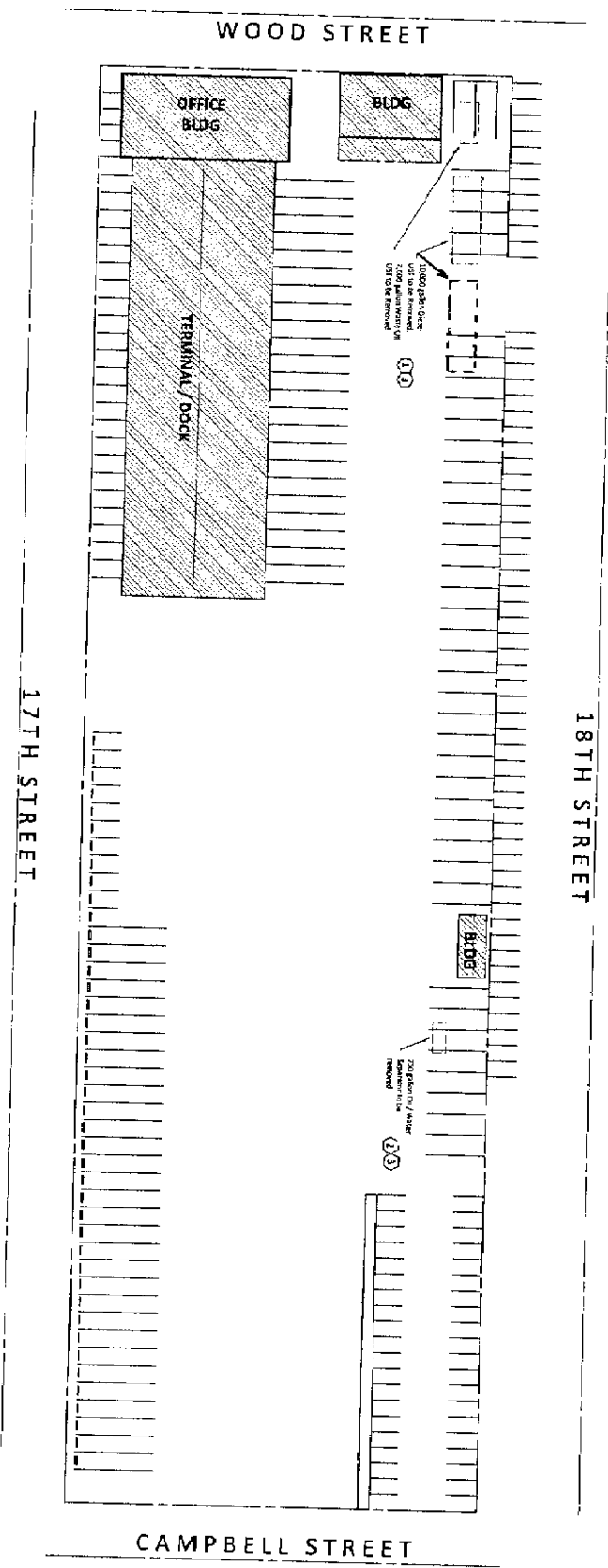
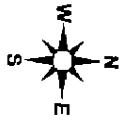
Hazardous Waste Hauler, Tank(s) NIETO & SONS, INC EPA ID # CAR000039180  
 Business Address P.O. BOX 760 City YORBA LINDA  
 Contact STEVE NIETO Phone 714-990-6855  
 Tank(s) and piping destination ECOLOGY AUTO WRECKING, 13780 IMPERIAL HWY, SANTA FE  
 Hazardous Waste Hauler (Rinsate) NIETO & SONS, INC EPA ID # \_\_\_\_\_  
 Business address P.O. BOX 760 City YORBA LINDA  
 Contact STEVE NIETO Phone 714-990-6855  
 Note: Include Hauler License No. CHPCA 557 License Exp. Date 8/12

**SAMPLE COLLECTION AND ANALYSIS:**

Sample Collector MR. SIMON BARBER Company BURNS/MCDONNELL ENGR.  
 Address 400 OYSTER POINT City SO. SAN FRANCISCO Phone 650-871-2661  
 Soil/Water Analysis Laboratory ENTECH ANALYTICAL LABS  
 State certification No. 58598 Contact C.L. THOM Phone 408-588-0200  
 Business Address 3334 VICTOR ST. City SANTA CLARA Zip 95054

**TANK(S) INFORMATION**

TANK SYSTEM: SIZE (GALLONS)	TANK CONSTRUCTION	SUBSTANCE(S) PREVIOUSLY CONTAINED
TANK 1 <u>10,000</u>	<u>STEEL</u>	<u>DIESEL</u>
TANK 2 <u>2,000</u>	<u>WASTE STEEL</u>	<u>WASTE OIL</u>
TANK 3 <u>10,000</u>	<u>STEEL</u>	<u>UNKNOWN</u>
TANK 4		



NOTES

- Oakland Fire Dept to be notified a minimum of 72 hours in advance of any proposed inspection.
- Oakland Fire Dept Inspector shall be allowed to view the location of the liquidation prior to filing the work a verified ILL of less than 10% shall be provided before any tank movement occurs.
- Copies of tank cleaning records shall be made available to the Inspector 600 by 10:00 AM on the day of inspection.
- Tank excavations may require Dredging and / or Sloughing (if required) to protect any structures or utilities.
- All excavations shall be protected with proper temporary shoring.
- See (N) Removal Work Plan for more additional information.

SCOPE OF WORK

- Remove existing ground and (1) 200g Water of Use Ground Storage Tank.
- Three-man tank had been previously abandoned in place with dry air. It is our intent to remove the contents of these tanks, then remove the tank from the site.
- All contents of the tank shall be tested by Burns & McDonnell for PCB's and other hazardous materials.
- Tank will be shipped via truck to ECI in Richmond for certified destruction.
- Remove and dispose of (1) 1750 gallon oil/water separator.
- Soil fill and Compaction lifts to be a min of 6" and shall be tested and accepted by Burns & McDonnell Engineering (Soil Fill will be placed in the tank and compacted into the excavation with a 2' rod (or equivalent) shall be placed into the excavation with a 2' rod to show the water level if encountered.
- Water table shall be pieced between the two cut holes.
- Removal of ground (for 10' x 10') of the excavation shall have a minimum of 12" of compacted fill.
- Apply stable soil over the excavation a minimum of 5' thick heavy duty asphalt shall be applied.
- Re-striping of the paved areas shall include the existing configuration.

GRAPHIC SCALE



PROJECT:	ROADWAY EXPRESS 1708 WOOD STREET OAKLAND, CA
TITLE:	TANK REMOVAL SITE PLAN
DATE DRAWN:	5/16/11
SCALE:	N.T.S.
DRAWN BY:	R. BURNS
CHECKED BY:	R. BURNS
PROJECT NO.:	1701WOOD-001
DATE:	5/16/11

**COVEY ENGINEERING, INC.**  
 985 RENDALL DRIVE, SUITE A-151  
 SAN BERNARDINO, CA 92407  
 (866) 706-8265

**ECS**  
*Design Services*  
 11030 Arrow Rte, Ste 212  
 Rancho Cucamonga, CA 91730  
 909 481-9100

REVISIONS				
NO.	DATE	DESCRIPTIONS	BY:	APP

SP-1

**"UST REMOVAL WORKPLAN"**

**GENERAL NOTES:**

- All liquids, solids, and sludge will be removed and handled according to the provisions of Chapter 6.5, Division 20 of the Health and Safety Code and Title 22, Chapter 32, Section 67383.1 of the California Code of Regulations. The UST shall be properly cleaned, which requires the pressure washing/rinsing of the UST and removal of the contents via a vacuum type pump system that is designed to safely handle flammable liquids.
- Flammable vapors must be purged from the UST and the UST must be inerted to prevent an explosion or fire. The Division must verify LEL is < 10% prior to the Inerting of the UST with 22.2 lbs. of dry ice per 1,000 gallons of UST capacity. The UST will then be promptly be removed, loaded on a stake bed truck, secured and transported to ECI in Richmond for Certified Tank Destruction.
- Air / Vapor monitoring will be conducted per AQMD, Fire, and applicable agency requirements. A PID monitoring device calibrated with Hexane shall be used and calibrated within 3 months of project start date.
- All associated piping must be removed. Product or residue spillage must be prevented.
- Proper UST disposal documentation, in accordance with the requirements of Chapter 6.5, Division 20 of the Health and Safety Code, shall be provided to the Division.
- Applicant must demonstrate to the satisfaction of the Division whether or not an unauthorized release has occurred. Demonstration will be based upon results of soil/water samples obtained during UST closure activities.
- The sample analysis will be performed by a CA Certified Laboratory. The sample analysis, along with the Division Sample Receipt form and a chain of custody must be received by the Division within thirty (30) days.
- Soil samples shall be taken below the UST/piping system at the time of UST removal. At a minimum, samples are required 2' (feet) below the fill end of the tank, with a separate 2' sample taken at the opposite end of the tank. A separate sample for each 20 lineal feet of piping and at each dispenser shall be taken. Division personnel may require additional sampling.
- Samples will be collected and transported in 2" diameter brass tubes or 4 oz glass jars and kept in cooler packed with ice during transport.
- The soil samples shall be analyzed for all constituents of the previously stored hazardous substances and their breakdown constituents or transformation products according to the Table titled "Laboratory Analysis for Samples Collected at UST Sites".
- The Division will evaluate all sample results and determine if any further corrective action is required.
- The detection limit, in accordance with the table titled "Laboratory Analysis for Samples Collected at UST Sites", shall be reported to the Division in accordance with Article 5 of the California Underground Storage Tank Regulations, Title 23, Division 3, Chapter 16, California Code of Regulations.
- Depth to Groundwater is known. If Groundwater is found, all precautions will be made to prevent any contaminated materials from making contact. The side walls of the excavation will be sloped in order to prevent cave-in.
- The excavation will be backfilled with local non-contaminated material and gravel.

**CONTACTS:**

- Responsible Party / Property Owner:  
Roadway Express  
1708 Wood Street  
Oakland, CA  
Attn: Ruben Boryly  
(913) 695-6100
- Project Manager / Primary Contact:  
Covey Engineering, Inc.  
Attn: Scott Covey  
985 Kendall Dr, Ste A-151  
San Bernardino, CA 92407  
(951) 522-5110 Phone  
(866) 706-8265 Fax
- Contractor:  
KW Construction, Inc.  
P.O. Box 1451  
Victorville, CA 92393  
(760) 241-2828 Phone  
(760) 243-9949 Fax  
CSLB# 898739 A,B
- Soil Sampling & Environmental Oversight to be performed by:  
Burns & McDonnell Engineering Company, Inc  
Attn: Simon Barber  
400 Oyster Point Blvd, Suite 533  
South San Francisco, CA 94080  
650-871-2661 - direct  
415-505-2884 - mobile  
650-871-2653 - fax
- SAFETY & PPE  
- See Site Specific Health & Safety Plan

REVISIONS				
NO.	DATE:	DESCRIPTION:	BY:	APP.

**ECS**  
Design Services  
13036 Arrow Rte, Ste 212  
Rancho Cucamonga, CA 91730  
909 481-9100

**COVEY ENGINEERING, INC.**  
985 KENDALL DRIVE, SUITE A-151  
SAN BERNARDINO, CA 92407  
(866) 706-8265

PROJECT: ROADWAY EXPRESS  
1708 WOOD STREET  
OAKLAND, CA

TANK REMOVAL WORK PLAN

DATE OWNED: 6/16/13

SCALE: N.T.S.

DESIGNED BY: B. BURNS

CHECKED BY: B. BURNS

PROJECT # 1701WOOD-001

DATE: 6/16/13

WP-1

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Appl# X1101029 Job Site 1711 18TH ST Parcel# 007 -0563-001-00

Descr Remove UG storage tank in SIDEWALK AREA ONLY. Permit Issued 09/21/11

FIRE MARSHAL review required. 3rd FLOOR. Ref: P11-0640.

Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # P11-0640 Acctg#: Util Fund #:

Applicant Phone# Lic# --License Classes--

Owner ROADWAY EXPRESS INC

Contractor K W C INC

Arch/Engr

Agent

X (760)241-2828 898739 A B

Applic Addr 13516 JUBILEE PLACE, VICTORVILLE, CA, 92393

\$436.05 FEES TO BE PAID AT ISSUANCE		
\$71.00	Applic	\$309.00 Permit
\$ .00	Process	\$36.10 Rec Mgmt
\$ .00	Gen Plan	\$ .00 Invstg
\$ .00	Other	\$19.95 Tech Enh

JOB SITE

Permit Issued By \_\_\_\_\_ Date: \_\_\_\_\_

Finald By \_\_\_\_\_ Date: \_\_\_\_\_

ADDRESS:

DIST:

CITY OF OAKLAND

Date: 09/21/11 Amt Paid: \$436.05 By: SYK Register ROI Receipt# 160509

Permits for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Permit No. X1101029 Parcel #: 007 -0563-001-00  
Project Address: 1711 18TH ST

Page 2 of 2

Licensed Contractors' Declaration

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Construction Lending Agency Declaration

I hereby affirm under penalty of perjury that there is a construction-lending agency for the performance of the work for which this permit is issued, as provided by Section 3097 of the Business and Professions Code. N/A under Lender implies No Lending Agency.

Lender \_\_\_\_\_ Address \_\_\_\_\_

Workers' Compensation Declaration

I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

CARRIER: \_\_\_\_\_ POLICY NO. \_\_\_\_\_

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS, IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3707 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

Hazardous Materials Declaration

I hereby affirm that the intended occupancy  WILL  WILL NOT use, handle or store any hazardous, or acutely hazardous, materials. (Checking "WILL" acknowledges that Sections 25505, 25533, & 25534 of the Health & Safety Code, as well as filing instructions, were made available to you.)

I HEREBY CERTIFY THE FOLLOWING: That I have read this document; that the above information is correct; and that I have truthfully affirmed all applicable declarations contained in this document. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection. I am fully authorized by the owner and to perform the work authorized by this permit.

ADDRESS:

DIST:

PRINT NAME \_\_\_\_\_ Signature  Contractor, or  Agent \_\_\_\_\_ Date \_\_\_\_\_

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

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Appl# X1101029

Job Site 1711 18TH ST

Parcel# 007 -0563-001-00

Descr Remove UG storage tank in SIDEWALK AREA ONLY.

Permit Issued 09/21/11

FIRE MARSHAL review required. 3rd FLOOR. Ref: P11-0640.

Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.

Work Type EXCAVATION-PRIVATE P

USA #

Util Co. Job # P11-0640

Acctg#:

Util Fund #:

Applicant

Phone#

Lic#

--License Classes--

Owner ROADWAY EXPRESS INC

Contractor K W C INC

X

(760)241-2828 898739 A B

Arch/Engr

Agent

Applic Addr 13516 JUBILEE PLACE, VICTORVILLE, CA, 92393

\$436.05 FEES TO BE PAID AT ISSUANCE

\$71.00 Applic \$309.00 Permit

\$.00 Process \$36.10 Rec Mgmt

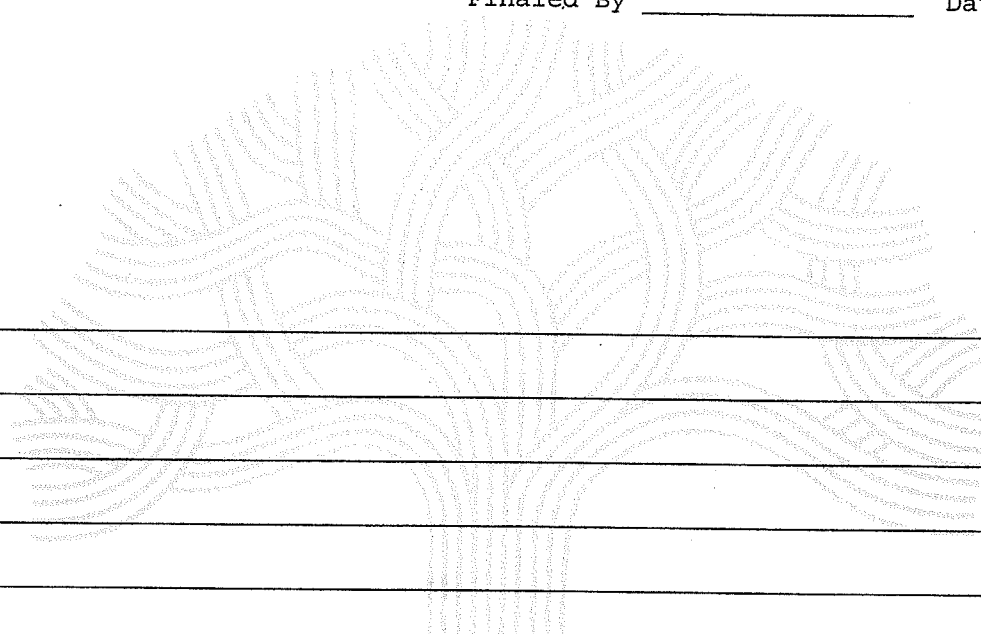
\$.00 Gen Plan \$.00 Invstg

\$.00 Other \$19.95 Tech Enh

JOB SITE

Permit Issued By \_\_\_\_\_ Date: \_\_\_\_\_

Finalled By \_\_\_\_\_ Date: \_\_\_\_\_



ADDRESS

DIST:

CITY OF OAKLAND

Date: 09/21/11 Amt Paid: \$436.05  
By: SYK Register ROD Receipt# 160809

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

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Permit No. X1101029 Parcel #: 007 -0563-001-00  
Project Address: 1711 18TH ST

Page 2 of 2

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Hazardous Materials Declaration

I hereby affirm that the intended occupancy  WILL  WILL NOT use, handle or store any hazardous, or acutely hazardous, materials. (Checking "WILL" acknowledges that Sections 25505, 25533, & 25534 of the Health & Safety Code, as well as filing instructions, were made available to you.)

I HEREBY CERTIFY THE FOLLOWING: That I have read this document; that the above information is correct; and that I have truthfully affirmed all applicable declarations contained in this document. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection. I am fully authorized by the owner and to perform the work authorized by this permit.

DIST: ADDRESS:

PRINT NAME \_\_\_\_\_ Signature  Contractor, or  Agent \_\_\_\_\_ Date \_\_\_\_\_

Applications for which no permit is issued within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

Appl# X1101029 Job Site 1711 18TH ST Parcel# 007 -0563-001-00

Descr Remove UG storage tank in SIDEWALK AREA ONLY. Permit Issued 09/21/11

FIRE MARSHAL review required. 3rd FLOOR. Ref: P11-0640.

Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # P11-0640 Acctg#:  
 Util Fund #:

Applent Phone# Lic# --License Classes--

Owner ROADWAY EXPRESS INC

Contractor K W C INC X (760)241-2828 898739 A B

Arch/Engr

Agent

Applic Addr 13516 JUBILEE PLACE, VICTORVILLE, CA, 92393

\$436.05 FEES TO BE PAID AT ISSUANCE  
 \$71.00 Applic \$309.00 Permit  
 \$.00 Process \$36.10 Rec Mgmt  
 \$.00 Gen Plan \$.00 Invstg  
 \$.00 Other \$19.95 Tech Enh

Permit Issued By [Signature] Date: \_\_\_\_\_

Finalled By [Signature] Date: 12-9-11

NOV 16<sup>TH</sup> : SPOKE TO LEE

2:00 PM

DEC 2ND: ROLANDA SCHED. DENNIS TO INSPECT @ 10AM

Compaction is OK Sidewalk is OK [Signature] 12-9-11

Date: 09/21/11 Amt Paid: \$436.05  
 By: SYK Register ROJ Receipt# 160509

COPY



**APPENDIX AA**

**Construction Photos**

YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California

**Abandoned in Place UST  
Northwest Corner**



**Oil Water Separator  
Central Eastern**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Demolition**

**UST Northwest Corner  
East Tank**



**UST Northwest Corner  
West tank- Oily Water**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Demolition**

**UST- Oily Water Removal**



**UST- East Tank Oily Water with Product  
Piping Still Attached**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Shoring**

**UST- Shoring**



**UST- Shoring West Tank**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Abandoned-in-Place USTs**

**Open UST**



**Partially Abandoned East Tank**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Abandoned-in-Place UST**

**Destroy Interior Contents  
West Tank**



**Removal of Interior Contents  
West Tank**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST Removal**

**Crane**



**UST Removal – East Tank**





**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST's**

**West Tank**



**UST's Loaded for Disposal**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST Excavation Restoration**

**Pre Over-Excavation  
Water Sampled and Removed**



**Over-Excavation  
East Tank**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST Pit Restoration**

**Backfill**



**Compaction**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST Stockpile Removal**

**Stockpile Removal**



**Stockpile Area Clear**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Oil Water Separator**

**Demolition**



**South East Corner of OWS  
Contaminate Source  
Soil Over-Excavated**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Oil Water Separator**

**OWS Removed Whole & Intact  
Impacted Soil**



**OWS- Impacted Soil Over-Excavation**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Oil Water Separator-Clean Out**

**Clean-out Line and Sewer Lateral?  
West end of Line - Repaired**



**Clean-out Line  
Dispenser Electric Line removed**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Oil Water Separator**

**Debris in Sub-Surface**



**West end of Clean Out  
Pea-Gravel from Former UST backfill?**





**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Oil Water Separator-Restoration**

**OWS- Over-Excavation Limits & Rebar**



**Concrete Finishing-OWS**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Excavation**

**Off-Site Excavation- Sidewalk Closure**



**Impacted Shallow Soil**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Excavation**

**Subsurface Concrete/Sidewalk Slab?**



**Product Pipe?  
Source of Impacted Soil?**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Excavation**

**Product Line-Vent line Behind Mr. Covey**



**Rusted Vent Line with Holes**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Excavation**

**North & Northwest Excavation Limit- Bay  
Mud**



**North & Northwest Excavation limit  
Product Pipe Vicinity**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Excavation**

**Excavation Limits & Sidewalk Backfill**



**Sidewalk Compaction**

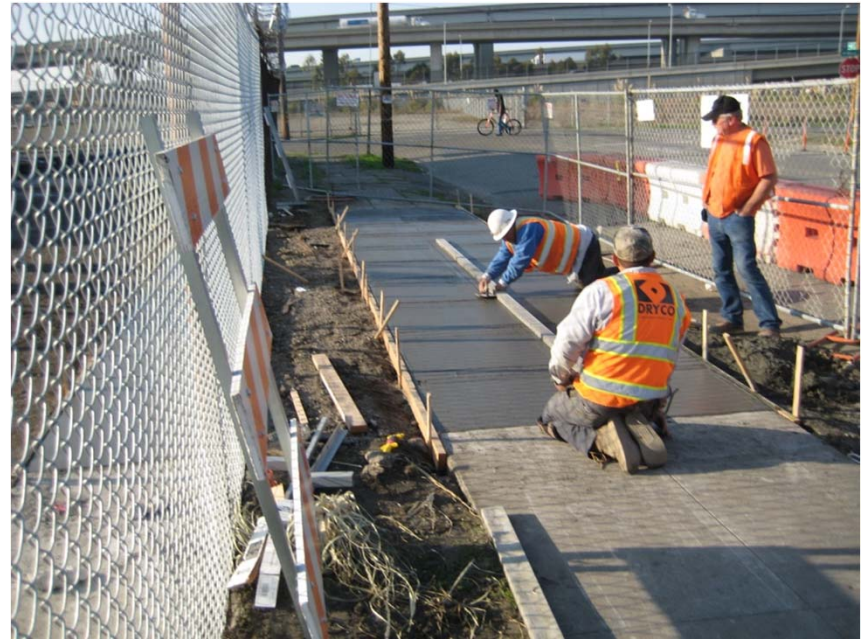


**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Restoration**

**Sidewalk Forms**



**Sidewalk Replaced**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Restoration**

**Asphalt Replaced: Sidewalk to property fence  
& Sidewalk to 18<sup>th</sup> Street**



**Asphalt Laid at Entrance- Courtesy Paving**





**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Restoration**

**Concrete Damaged due to Weight of  
Excavator- South of UST Pit**



**UST Pit Sub-Grade**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Restoration**

**3' Concrete Strip Replaced-UST Pit**



**UST Sub-Grade**



**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
UST/Sidewalk Restoration**

**UST- Asphalt Paving**

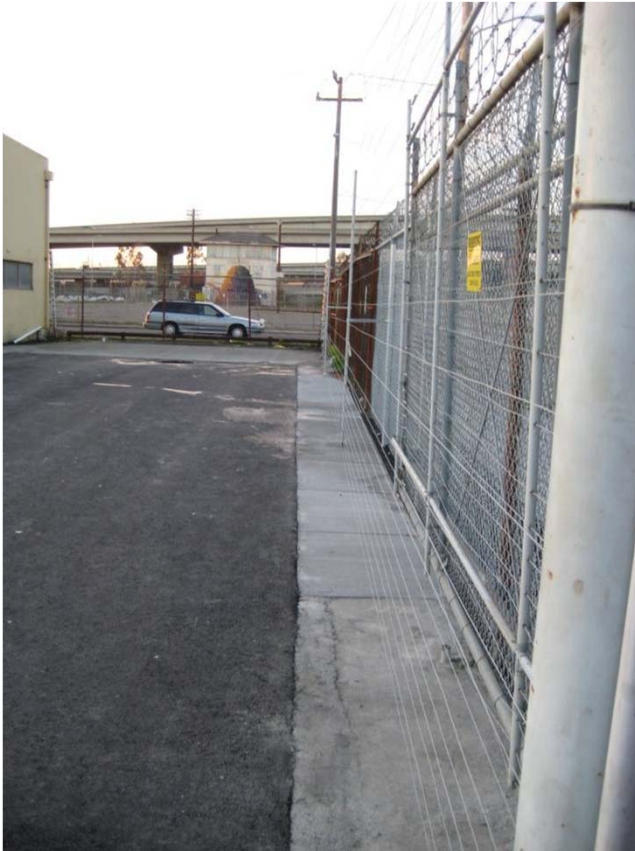


**UST Pit Restored**

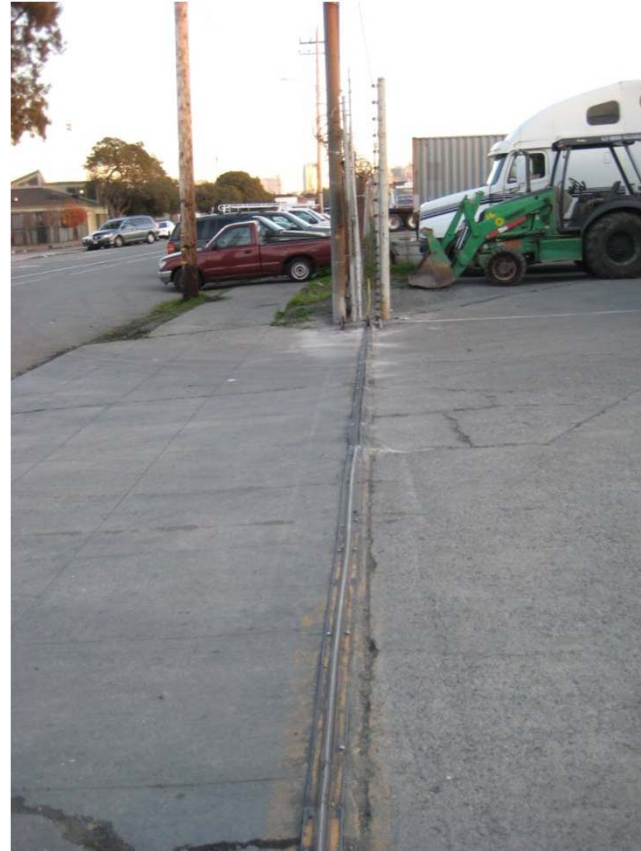


**YRC Enterprise Services Inc. Former Roadway Express  
1708 Wood Street Oakland California  
Electric Fence Restoration**

**Electric Fence Restored**



**Entrance Gate Rail Replaced**



**APPENDIX B**

**Underground Storage Tank Disposal Manifest  
Concrete, Soil, and Water Disposal Manifests**

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>CAR00038180</b>	2. Page 1 of	3. Emergency Response Phone <b>510-235-1393</b>	4. Manifest Tracking Number <b>002135887 JJK</b>			
5. Generator's Name and Mailing Address <b>YRC INC 10990 ROE AVE MAIL STATION A605 OVERLAND PARK, KS 66211</b>			Generator's Site Address (if different than mailing address) <b>1708 WOOD ST OAKLAND, CA 94607</b>					
6. Transporter 1 Company Name <b>EIGHTEEN TRUCKING CO</b>			U.S. EPA ID Number <b>CAR000143875</b>					
7. Transporter 2 Company Name			U.S. EPA ID Number					
8. Designated Facility Name and Site Address <b>ECOLOGY CONTROL INDUSTRIES 255 PARR BOULEVARD RICHMOND, CA 94801</b>			U.S. EPA ID Number <b>CAD009466392</b>					
Facility's Phone: <b>510-235-1393</b>								
9a. HUI	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
1.	NON-RCRA HAZARDOUS WASTE SOLID (EMPTY STORAGE TANK)	<del>001</del> <b>2</b>	TP	<del>16000</del> <b>15000</b>	P	512		
2.				0				
3.				0				
4.				0				
14. Special Handling Instructions and Additional Information <b>ECI JOB NUMBER 52T4283 TANK NUMBER 3d242 #1 342-13 WEAR PROPER PPE WHEN HANDLING // WEIGHTS AND VOLUMES ARE APPROXIMATE</b>								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/packaged, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Officer's Printed/Typed Name <b>SCOTT COVER FOR RUBEN BYERLEY</b>					Signature 		Month Day Year <b>10 31 11</b>	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____								
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name <b>JAVIER MARDINI</b> Signature Month Day Year <b>10 31 11</b> Transporter 2 Printed/Typed Name _____ Signature _____ Month Day Year _____								
18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection								
18b. Alternate Facility (or Generator)						Manifest Reference Number		
Facility's Phone:						U.S. EPA ID Number		
18c. Signature of Alternate Facility (or Generator)						Month Day Year		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1.	2.	3.	4.					
<b>H129</b>								
20. Designated Facility Owner or Operator Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name <b>THOM SPENCE</b> Signature Month Day Year <b>10 31 11</b>								

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>CARD0003918D</b>	2. Page 1 of	3. Emergency Response Phone <b>510-235-1393</b>	4. Manifest Tracking Number <b>002135915 JJK</b>					
5. Generator's Name and Mailing Address <b>YRC INC 10980 ROE AVE MAIL STATION A805 OVERLAND PARK, KS 66211</b>				Generator's Site Address (if different than mailing address) <b>1708 WOOD ST OAKLAND, CA 94607</b>						
6. Transporter 1 Company Name <b>ECOLOGY CONTROL INDUSTRIES</b>				U.S. EPA ID Number <b>CAD982030173</b>						
7. Transporter 2 Company Name				U.S. EPA ID Number						
8. Designated Facility Name and Site Address <b>ECOLOGY CONTROL INDUSTRIES 255 PARR BOULEVARD RICHMOND, CA 94801</b>				U.S. EPA ID Number <b>CAD009466392</b>						
Facility's Phone: <b>510-235-1393</b>										
GENERATOR	9a. HW	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		1.	<b>NON-RCRA HAZARDOUS WASTE SOLID ( STEEL/FIBERGLASS PRODUCTS PIPING )</b>	No.	Type	<b>200</b>	<b>P</b>	<b>512</b>		
		2.				<b>0</b>				
		3.				<b>0</b>				
		4.				<b>0</b>				
14. Special Handling Instructions and Additional Information <b>ECI JOB #S2T4307</b> <b>WEAR PROPER PPE WHEN HANDLING # WEIGHTS AND VOLUMES ARE APPROXIMATE</b>										
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.										
Generator's/Offeror's Printed/Typed Name <b>by STEVEN KAISER IN BEHALF OF ROSEAN BYERLEY</b>										
Signature <i>Steven Kaiser</i>										
Month Day Year <b>12/19/11</b>										
TRANSPORTER INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____									
	17. Transporter Acknowledgment of Receipt of Materials									
TRANSPORTER	Transporter 1 Printed/Typed Name <b>BILL MAASKE</b>									
	Signature <i>Bill Maaske</i>									
Month Day Year <b>12/19/11</b>										
Transporter 2 Printed/Typed Name Signature										
Month Day Year										
DESIGNATED FACILITY	18. Discrepancy									
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
	Manifest Reference Number:									
18b. Alternate Facility (or Generator) U.S. EPA ID Number										
Facility's Phone:										
18c. Signature of Alternate Facility (or Generator)										
Month Day Year										
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)										
1. <b>4129</b> 2. 3. 4.										
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a										
Printed/Typed Name <b>Sharon Spence</b>										
Signature <i>Sharon Spence</i>										
Month Day Year <b>12/19/11</b>										

# EIGHTEEN TRUCKING

SHIPPING ORDER  
and FREIGHT BILL

Day: S | M | T | W | **D** | F | S

DEC 13<sup>TH</sup> 20 11

P.O. BOX 881116 (877) 422-1818 Office  
SAN FRANCISCO (415) 552-1818  
CALIFORNIA 94188 (415) 552-3130 Fax

F 273274

TRUCK NO. **204**

TRAILER TYPE **204A**

DBE/LBE CERTIFIED

- TYPE OF TRUCK
- ROLL OFF
  - FLAT BED
  - SUPER DUMP
  - SEMI END
  - BOTTOMS
  - TEN WHEELER
  - 5 YRD. DUMP
  - TRANSFER

SUB HAULER

P.O. No./JOB #

PRIME CARRIER **18 TRUCKING**

CONSIGNEE **POTRERO HILLS LANDFILL**

SHIPPER/CONTRACTOR **COVEY ENG**

DESTINATION **3675 POTRERO HILLS LANE**

POINT OF ORIGIN **17TH E WOOD STREET**

CITY **SUNSHINE CITY, CA**

CITY **OAKLAND, CA**

MANIFEST No.

## MATERIALS

## LOADING

## UNLOADING

NO.	SCALE TAG NO	YARD OR WEIGHT	TYPE OF MATERIAL	LOADING		UNLOADING	
				TIME ARRIVE	TIME LEAVE	TIME ARRIVE	TIME LEAVE
1	01-245131	31.45 TNS	SOIL	6:10	8:10	10:30	10:45
2	01-245305	29.97 TNS	SOIL	8:10	10:50	2:40	3:00
3							
4							
5							
6		111.74 TNS					
7							
8							
9							
10							
11							
12							
13							
14							
15							

START STOP DEDUCT TIME NET TIME BRIDGEFARE

DRIVER **ROBIN FABRY**

RECEIVED BY **X**

Customer responsible for (A) checking type & quality of material before driver dumps load (B) Correct location of dumping (C) Overweight loads & court fines (D) Safe access & exit for truck (E) Firm level ground for dumping (F) Collection Charges

COPY

DINT  
6/02  
14



# EIGHTEEN TRUCKING

SHIPPING ORDER  
and FREIGHT BILL

F 273286

Day S M T W **TH** F S

P.O. BOX 881116 (877) 422-1818 Office  
SAN FRANCISCO (415) 552-1818  
CALIFORNIA 94188 (415) 552-3130 Fax

12-01-2011

TRUCK NO. 203

TRAILER TYPE 180

DBE/LBE CERTIFIED

TYPE OF TRUCK  
 ROLL OFF  
 SUPER DUMP  
 BOTTOMS  
 5 YRD DUMP  
 FLAT BED  
 SEMI END  
 TEN WHEELER  
 TRANSFER

SUB HAULER

PRIME CARRIER 18 TRUCKING

SHIPPER/CONTRACTOR Covey Eng.

POINT OF ORIGIN 1708 WOOD ST

CITY OAKLAND CA

P.O. No./JOB #

CONSIGNEE POTRERO HILLS LANDFILL

DESTINATION 3615 POTRERO HILLS LN

CITY SUISON CA

MANIFEST NO.

## MATERIALS

## LOADING

## UNLOADING

NO.	SCALE TAG NO	YARD OR WEIGHT	TYPE OF MATERIAL	LOADING		UNLOADING	
				TIME ARRIVE	TIME LEAVE	TIME ARRIVE	TIME LEAVE
1	01245100	28.24	GPK	6:30	7:30		
2	01245243	23.06					
3							
4		50.30					
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

START 6:30 STOP DEDUCT TIME NET TIME BRIDGEFARE

DRIVER SERGIO F

RECEIVED BY X

Customer responsible for (A) checking type & quality of material before driver dumps load (B) Correct location of dumping (C) Overweight loads & court fines (D) Safe access & exit for truck (E) Firm level ground for dumping (F) Collection Charges

\* 6:00 AM 1/2 STAY BY TIME

\* 7:30 COPY

DUMP 50.30 14 TON

POTRERO HILLS LANDFILL, INC.  
Weighed at:  
POTRERO HILLS LANDFILL, INC.  
P.O. Box 68  
FAIRFIELD, CA 94533

POTRERO HILLS LANDFILL, INC.  
Weighed at:  
POTRERO HILLS LANDFILL, INC.  
P.O. Box 68  
FAIRFIELD, CA 94533

Deputy: Jaclyn Deleon  
Deposit: Jaclyn Deleon  
BILL TO: 2562  
DIRT SHOP, INC.

Deputy: Janee Quinonez  
Deposit: Janee Quinonez  
BILL TO: 2562  
DIRT SHOP, INC.

Vehicle ID:  
Reference: PHLF11113  
Grid: 16  
HaulCust#: ORIGIN-OAKLAND  
DriverOn?: N  
Route: TRK# 203  
TRLR/LP#: 9E24024

Vehicle ID:  
Reference: PHLF11113  
Grid: 16  
HaulCust#: ORIGIN-OAKLAND  
DriverOn?: N  
Route: 203  
TRLR/LP#: 9E24024

Origin: OAKLAND  
DATE IN: 12/01/2011 TIME IN: 09:09:35  
DATE OUT: 12/01/2011 TIME OUT: 09:28:07

Origin: OAKLAND  
DATE IN: 12/01/2011 TIME IN: 12:50:22  
DATE OUT: 12/01/2011 TIME OUT: 13:04:33

INBOUND TICKET Number: 01-245100

INBOUND TICKET Number: 01-245243

SCALE 1 GROSS WT. 85980 LB  
SCALE 3 TARE WT. 31500 LB  
NET WEIGHT 54480 LB

SCALE 1 GROSS WT. 77440 LB  
SCALE 3 TARE WT. 31320 LB  
NET WEIGHT 45120 LB

Qty Description Amount  
27.24 Profile Soil-T ADC

Qty Description Amount  
23.06 Profile Soil-T ADC

X \_\_\_\_\_

X \_\_\_\_\_

WEIGHMASTER CERTIFICATE:

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

WEIGHMASTER CERTIFICATE:

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

X \_\_\_\_\_  
(Deputy Signature)

X \_\_\_\_\_  
(Deputy Signature)

This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type.

This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type.

 COPY

POTRERO HILLS LANDFILL, INC.  
Weighed at:  
POTRERO HILLS LANDFILL, INC.  
P.O. Box 68  
FAIRFIELD, CA 94533

POTRERO HILLS LANDFILL, INC.  
Weighed at:  
POTRERO HILLS LANDFILL, INC.  
P.O. Box 68  
FAIRFIELD, CA 94533

Deputy: Janee Quinonez  
Deposit: Janee Quinonez  
BILL TO: 2562  
DIRT SHOP, INC.

Deputy: Janee Quinonez  
Deposit: Janee Quinonez  
BILL TO: 2562  
DIRT SHOP, INC.

Vehicle ID:  
Reference: PHLF11113  
Grid: 16  
HaulCust#: ORIGIN-OAKLAND  
DriverOn?: N  
Route: 204  
TRLR/LP#: VP37561

Vehicle ID:  
Reference: PHLF11113  
Grid: 16  
HaulCust#: ORIGIN-OAKLAND  
DriverOn?: N  
Route: 204  
TRLR/LP#: VP37561

Origin: OAKLAND  
DATE IN: 12/01/2011 TIME IN: 10:22:00  
DATE OUT: 12/01/2011 TIME OUT: 10:36:43

Origin: OAKLAND  
DATE IN: 12/01/2011 TIME IN: 14:40:43  
DATE OUT: 12/01/2011 TIME OUT: 14:53:05

INBOUND TICKET Number: 01-245131

INBOUND TICKET Number: 01-245305

SCALE 1 GROSS WT.	95460 LB
SCALE 3 TARE WT.	32560 LB
NET WEIGHT	62900 LB

SCALE 1 GROSS WT.	92320 LB
SCALE 3 TARE WT.	32380 LB
NET WEIGHT	59940 LB

Qty	Description	Amount
31.45	Profile Soil-T ADC	

Qty	Description	Amount
29.97	Profile Soil-T ADC	

X \_\_\_\_\_

X \_\_\_\_\_

WEIGHMASTER CERTIFICATE:

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

WEIGHMASTER CERTIFICATE:

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

X \_\_\_\_\_  
(Deputy Signature)

X \_\_\_\_\_  
(Deputy Signature)

This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type.

**COPY**

This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type.

# NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

2. Page 1 of 1

3. Document Number  
09179

4. Generator's Name and Mailing Address

Covey Engineering  
10990 Roe Ave.  
San Bernadino Ca 92407  
866 706-8265

Site: YRC Worldwide  
1708 Wood St.  
Oakland CA

5. Transporter Company Name

6. US EPA ID Number

7. Transporter Phone

CLEARWATER ENVIRONMENTAL

CAR000007013

(510) 476-1740

8. Designated Facility Name and Site Address

9. US EPA ID Number

10. Facility's Phone

Alviso Independent Oil  
5002 Archer Street  
Alviso, CA 95002

CAL 000 161 743

510-476-1740

11. Waste Shipping Name and Description

12. Containers

13. Total Quantity

14. Unit Wt/Vol

a. Non-Hazardous waste

001 TT 1200

G

b. NON Haz Solids

001 TT 100

S

15. Special Handling Instructions and Additional Information

Wear PPE  
Emergency Contact  
(510) 476-1740  
Attn: Charles Seaton

Handling Codes for Wastes Listed Above

11a.

11b.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Signature

SCOTT COVEY

Month Day Year

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

TONY BARRERA

Month Day Year

11 27 11

18. Discrepancy Indication Space

COPY

19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.

Printed/Typed Name

Signature

Charles Seaton

Month Day Year

11 18 11

GENERATOR

TRANSPORTER

FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
**NOT REQUIRED**

2. Page 1 of 1  
3. Emergency Response Phone  
**888-423-6868**

4. Waste Tracking Number  
**0701007**

5. Generator's Name and Mailing Address: **YRC Worldwide, Inc.**  
10050 Roe Ave, Overland Park, KS 66211  
Generator's Site Address (if different than mailing address): **1700 Wood St**  
**Oakland, CA 94607**  
Generator's Phone:

6. Transporter 1 Company Name: **American Integrated Services, Inc.**  
U.S. EPA ID Number: **CARNDW148528**

7. Transporter 2 Company Name: \_\_\_\_\_  
U.S. EPA ID Number: \_\_\_\_\_

8. Designated Facility Name and Site Address: **Padrono Hills Landfill**  
**3675 Padrono Hills Lane**  
Facility's Phone: **Suisun, CA 94585**  
U.S. EPA ID Number: \_\_\_\_\_

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. <b>Non-Hazardous Waste Solid (Sd)</b>		<b>DT</b>		<b>Y</b>
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information  
**Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-6868**  
Project: **PHLF-11-098**  
Project #: **71000-2-1**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.  
Generator's/Offor's Printed/Typed Name: **JOE OWEN FOR WASTE RECOVERY**  
Signature: \_\_\_\_\_  
Month: **10** Day: **21** Year: **11**

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_  
Date leaving U.S.: \_\_\_\_\_  
Transporter Signature (for exports only): \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials  
Transporter 1 Printed/Typed Name: **BLD C MILLER**  
Signature: \_\_\_\_\_  
Month: **10** Day: **21** Year: **11**  
Transporter 2 Printed/Typed Name: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

17. Discrepancy  
17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number: \_\_\_\_\_  
U.S. EPA ID Number: \_\_\_\_\_  
Facility's Phone: \_\_\_\_\_

17c. Signature of Alternate Facility (or Generator) \_\_\_\_\_  
Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a  
Printed/Typed Name: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY

**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator ID Number  
**NOT REQUIRED**

2. Page 1 of 1  
3. Emergency Response Phone  
**888-423-6080**

4. Waste Tracking Number  
**0701008**

5. Generator's Name and Mailing Address  
**YRC Worldwide, Inc.**  
10090 Rice Ave, Overland Park, KS 66211  
Generator's Site Address (if different than mailing address)  
**1708 Wood St**  
**Oakland, CA 94607**

Generator's Phone:  
6. Transporter 1 Company Name  
**American International Services, Inc.**  
U.S. EPA ID Number  
**CAR000148338**

7. Transporter 2 Company Name  
U.S. EPA ID Number

8. Designated Facility Name and Site Address  
**Roberto Paine Landfill**  
**3675 Potrero Hills Lane**  
**Suisun, CA 94585**  
U.S. EPA ID Number  
Facility's Phone:

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. <b>Non-Hazardous Waste Solid (Soft)</b>		<b>DT</b>		<b>Y</b>
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information  
**Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-6080**  
**Profile: PHLF-11-088**  
**Project #: 71008-2-1**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.  
Generator's/Offorer's Printed/Typed Name  
**SOFT COVERED PAIL 20250 2150039**  
Signature  
Month Day Year  
**10 21 11**

15. International Shipments  
 Import to U.S.  Export from U.S.  
Port of entry/exit:  
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials  
Transporter 1 Printed/Typed Name  
**Roberto Paine**  
Signature  
Month Day Year  
**10 21 11**  
Transporter 2 Printed/Typed Name  
Signature  
Month Day Year

17. Discrepancy  
17a. Discrepancy Indication Space  
 Quantity  Type  Residue  Partial Rejection  Full Rejection  
Manifest Reference Number:

17b. Alternate Facility (or Generator)  
U.S. EPA ID Number  
Facility's Phone:  
17c. Signature of Alternate Facility (or Generator)  
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a  
Printed/Typed Name  
Signature  
Month Day Year

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
**NOT REQUIRED**

2. Page 1 of 1

3. Emergency Response Phone  
**888-423-6868**

4. Waste Tracking Number  
**0701009**

5. Generator's Name and Mailing Address: **YRC Worldwide, Inc.**  
10990 Roe Ave, Overland Park, KS 66211  
Generator's Site Address (if different than mailing address): **1798 Wood St**  
**Oakland, CA 94607**

6. Transporter 1 Company Name: **American Integrated Services, Inc.** U.S. EPA ID Number: **CAR000149388**

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: **Patroler Hills Landfill**  
**3675 Patroler Hills Lane**  
**Suisun, CA 94585** U.S. EPA ID Number:

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. <b>Non-Hazardous Waste Solid (Soil)</b>		<b>DT</b>		<b>Y</b>
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information  
**Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-6868**  
Project: **PHLP-11008**  
Project #: **71008-2-1**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offero's Printed/Typed Name: **Scott Conroy** Signature: *[Signature]* Month: **10** Day: **21** Year: **11**

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials  
Transporter 1 Printed/Typed Name: **Victor C Alvarez** Signature: *[Signature]* Month: **10** Day: **21** Year: **11**

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

17. Discrepancy  
17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number:

Facility's Phone: 17c. Signature of Alternate Facility (or Generator) Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Signature: Month: Day: Year:

GENERATOR  
TRANSPORTER  
DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
**NOT REQUIRED**

2. Page 1 of  
**1**

3. Emergency Response Phone  
**888-423-6060**

4. Waste Tracking Number  
**0701010**

5. Generator's Name and Mailing Address

**YRC Worldwide, Inc.**  
**10000 Riva Ave, Overland Park, KS 66211**

Generator's Site Address (if different than mailing address)

**1708 Wood St**  
**Dalyland, CA 94607**

Generator's Phone:

6. Transporter 1 Company Name

**American Integrated Services, Inc.**

U.S. EPA ID Number

**CAR000148338**

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

**PO BOX 118103**

**3675 Palero Hills Lane**

U.S. EPA ID Number

Facility's Phone:

**Suisun, CA 94585**

9. Waste Shipping Name and Description

1. **Non-Hazardous Waste Solid (Soil)**

10. Containers

No. Type

11. Total Quantity

12. Unit Wt./Vol.

**DT**

**Y**

13. Special Handling Instructions and Additional Information

**Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-6060**

**Profile: PHLF-11-088**  
**Project #: 71008-2-1**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name

Signature

Month Day Year

**SCOTT COUSY FEA KUBSA BYEOLGY**

**10 21 11**

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY



**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator ID Number  
**NOT REQUIRED**

2. Page 1 of  
**1**

3. Emergency Response Phone  
**888-423-6860**

4. Waste Tracking Number  
**0701011**

5. Generator's Name and Mailing Address  
**YRC Worldwide, Inc.**  
**10000 Rice Ave, Oakland Park, KS 66211**

Generator's Site Address (if different than mailing address)  
**1700 Wood St**  
**Oakland, CA 94607**

6. Transporter 1 Company Name  
**American International Services, Inc**

U.S. EPA ID Number  
**CAD001148338**

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address  
**Potrero Hills Landfill**  
**3675 Potrero Hills Lane**  
**Substn, CA 94525**

U.S. EPA ID Number

Facility's Phone:

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. <b>Non-Hazardous Waste Solid (Soil)</b>		<b>DT</b>		<b>Y</b>
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information

*Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-6860*

Project # **PHLF-11-088**  
Project # **71008-2-1**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_ Date leaving U.S.: \_\_\_\_\_

Transporter Signature (for exports only): \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

Transporter 2 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

17. Discrepancy

17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number: \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

Facility's Phone: \_\_\_\_\_

17c. Signature of Alternate Facility (or Generator) \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

GENERATOR

TRANSPORTER INT'L

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
**NOT REQUIRED**

2. Page 1 of 1  
3. Emergency Response Phone  
**888-423-6888**

4. Waste Tracking Number  
**0701012**

5. Generator's Name and Mailing Address  
**YRC Worldwide, Inc.**  
10000 Rice Ave., Overland Park, KS 66211  
Generator's Phone:  
6. Transporter 1 Company Name  
**American Integrated Services, Inc.**

Generator's Site Address (if different than mailing address)  
**1708 Wood St**  
**Oakland, CA 94607**

U.S. EPA ID Number  
**CAR000148326**

7. Transporter 2 Company Name  
U.S. EPA ID Number

8. Designated Facility Name and Site Address  
**PULBORO HILLS LANDFILL**  
**2875 Pulboro Hills Lane**  
**Suisun, CA 94585**  
Facility's Phone:  
U.S. EPA ID Number

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. <b>Non-Hazardous Waste Solid (Soil)</b>		<b>DT</b>		<b>Y</b>
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information  
**Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-6888**

**Project: PHLP-11-008**  
**Project #: 71000-2-1**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_ Date leaving U.S.: \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials  
Transporter Signature (for exports only): \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials  
Transporter 1 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_  
Transporter 2 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

17. Discrepancy  
17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number: \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

Facility's Phone: \_\_\_\_\_  
17c. Signature of Alternate Facility (or Generator) \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

18. Designated Facility Owner or Operator. Certification of receipt of materials covered by the manifest except as noted in Item 17a  
Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

NOT REQUIRED

2. Page 1 of 1

3. Emergency Response Phone

888-423-6060

4. Waste Tracking Number

0701013

5. Generator's Name and Mailing Address

YRC Worldwide, Inc.  
10900 Roe Ave, Overland Park, KS 66211

Generator's Site Address (if different than mailing address)

1708 Wood St  
Oakland, CA 94607

Generator's Phone:

6. Transporter 1 Company Name

American International Services, Inc.

U.S. EPA ID Number

CA90001AR338

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Potrero Hills Landfill  
3875 Potrero Hills Lane

U.S. EPA ID Number

Facility's Phone:

510-945-8655

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total Quantity

12. Unit Wt/Vol.

1. Non-Hazardous Waste Solid (Soil)

DT

Y

13. Special Handling Instructions and Additional Information

Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-6060

Profit # PHLF-11-088  
Project # 71009-2-1

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name

Signature

Month Day Year

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
**NOT REQUIRED**

2. Page 1 of 1  
3. Emergency Response Phone  
**888-423-8080**

4. Waste Tracking Number  
**0701014**

5. Generator's Name and Mailing Address  
**YRC Worldwide, Inc.**  
10000 Roe Ave. Overland Park, KS 66211

Generator's Site Address (if different than mailing address)  
**1700 Wood St**  
**Oakland, CA 94607**

Generator's Phone:  
6. Transporter 1 Company Name  
**American Integrated Services, Inc.**

U.S. EPA ID Number  
**CARD00148338**

7. Transporter 2 Company Name  
U.S. EPA ID Number

8. Designated Facility Name and Site Address  
**Palero Hills Landfill**  
**3675 Palero Hills Lane**  
**Subur, CA 94585**

Facility's Phone:  
U.S. EPA ID Number

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. <b>Non-Hazardous Waste Solid (Soil)</b>		<b>DT</b>		<b>Y</b>
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information  
**Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-8080**

**Project: PHLF-11-098**  
**Project #: 71008-2-1**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name  
**YRC Worldwide, Inc.**

Signature  
*[Signature]*

Month Day Year  
**10 21 10**

15. International Shipments  
 Import to U.S.  Export from U.S.

Port of entry/exit:  
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name  
**CHARLIE VUONG**

Signature  
*[Signature]*

Month Day Year  
**10 21 10**

Transporter 2 Printed/Typed Name  
Signature  
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space  
 Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator)  
Manifest Reference Number:  
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)  
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name  
Signature  
Month Day Year

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY

**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator ID Number  
**NOT REQUIRED**

2. Page 1 of 1

3. Emergency Response Phone  
**888-423-5050**

4. Waste Tracking Number  
**0701015**

5. Generator's Name and Mailing Address  
**YRC Worldwide, Inc.**  
**10890 Roe Ave, Oakland Park, KS 66211**

Generator's Site Address (if different than mailing address)  
**1708 Wood St**  
**Oakland, CA 94607**

Generator's Phone: \_\_\_\_\_

6. Transporter 1 Company Name  
**American Integrated Services, Inc.**

U.S. EPA ID Number  
**CAR000148338**

7. Transporter 2 Company Name \_\_\_\_\_

U.S. EPA ID Number \_\_\_\_\_

8. Designated Facility Name and Site Address  
**Potrero Hills Landfill**  
**3675 Potrero Hills Lane**

U.S. EPA ID Number \_\_\_\_\_

Facility's Phone: **Suisun, CA 94585**

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
	No.	Type			
1. <b>Non-Hazardous Waste Solid (Soil)</b>		<b>DT</b>		<b>Y</b>	
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information

**Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-5050**

**Project: PHLF-11-088**  
**Project #: 71000-2-1**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_ Date leaving U.S.: \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

Transporter 2 Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

17. Discrepancy

17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator) \_\_\_\_\_ Manifest Reference Number: \_\_\_\_\_ U.S. EPA ID Number \_\_\_\_\_

Facility's Phone: \_\_\_\_\_

17c. Signature of Alternate Facility (or Generator) \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number <b>NOT REQUIRED</b>	2. Page 1 of <b>1</b>	3. Emergency Response Phone <b>888-423-6060</b>	4. Waste Tracking Number <b>0701016</b>
5. Generator's Name and Mailing Address <b>YRC Worldwide, Inc. 10400 Roe Ave, Overland Park, KS 66211</b>		Generator's Site Address (if different than mailing address) <b>1708 Wood St Oakland, CA 94607</b>		
6. Transporter 1 Company Name <b>American Integrated Services, Inc.</b>		U.S. EPA ID Number <b>CAR000148336</b>		
7. Transporter 2 Company Name		U.S. EPA ID Number		
8. Designated Facility Name and Site Address <b>Potrero Hills Landfill 3675 Potrero Hills Lane Suburb, CA 94585</b>		U.S. EPA ID Number		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity
		No.	Type	12. Unit Wt./Vol.
1. <b>Non-Hazardous Waste Solid (Soil)</b>			<b>DT</b>	<b>Y</b>
2.				
3.				
4.				
13. Special Handling Instructions and Additional Information  <b>Wear protective equipment while handling. Weights or volumes are approximates. 24 hour emergency number (888) 423-6060</b>				
<b>Project: PHLF-11-098 Project #: 71006-2-1</b>				
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.				
Generator's/Offeor's Printed/Typed Name		Signature		Month Day Year
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____				
16. Transporter Acknowledgment of Receipt of Materials				
Transporter 1 Printed/Typed Name		Signature		Month Day Year
Transporter 2 Printed/Typed Name		Signature		Month Day Year
17. Discrepancy				
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection				
Manifest Reference Number: _____				
17b. Alternate Facility (or Generator)		U.S. EPA ID Number		
Facility's Phone: _____				
17c. Signature of Alternate Facility (or Generator)		Signature		Month Day Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a				
Printed/Typed Name		Signature		Month Day Year

**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

2. Page 1  
of  
1

3. Document Number  
5125

4. Generator's Name and Mailing Address

*YRC WORLD WIDE  
1708 WOOD ST.  
OAKLAND, CA.*

Generator's Phone *(947) 522-5110*

5. Transporter Company Name

*CLEARWATER ENVIRONMENTAL*

6. US EPA ID Number

*CAR000007013*

7. Transporter Phone

*(510) 476-1740*

8. Designated Facility Name and Site Address

*ALVISO INDEPENDENT OIL  
5002 ARCHER STREET  
ALVISO, CA 95002*

9. US EPA ID Number

*CAL000161743*

10. Facility's Phone

*(510) 476-1740*

11. Waste Shipping Name and Description

a. *Non-Hazardous waste, LIQUID*

12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
<i>001</i>	<i>TT</i>	<i>2000</i>	<i>G</i>
b.			

15. Special Handling Instructions and Additional Information

*Wear PPE  
Emergency Contact  
(510) 476-1740  
Attn: Kirk Hayward*

Handling Codes for Wastes Listed Above	
11a.	11b.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

*Pat Holland*

Signature

*Pat Holland*

Month Day Year  
*10 6 11*

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name

*MIKE STONE*

Signature

*Mike Stone*

Month Day Year  
*10 6 11*

18. Discrepancy Indication Space

19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.


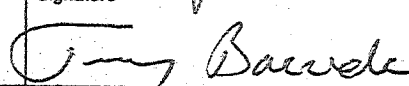

Printed/Typed Name

*Charles Seaton*

Signature

*[Signature]*

Month Day Year  
*10 06 11*

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	2. Page 1 of 1	3. Document Number 5255	
GENERATOR	4. Generator's Name and Mailing Address Covey Eng 985 Kenel Dr # A-151 San Bernadino Ca 92407 Generator's Phone				
	5. Transporter Company Name CLEARWATER ENVIRONMENTAL	6. US EPA ID Number CAR000007013	7. Transporter Phone (510) 476-1740		
	8. Designated Facility Name and Site Address ALVISO INDEPENDENT OIL 5002 ARCHER STREET ALVISO, CA 95002	9. US EPA ID Number CAL000161743	10. Facility's Phone (510) 476-1740		
	11. Waste Shipping Name and Description		12. Containers	13. Total Quantity	14. Unit Wt/Vol
	a. Non-Hazardous waste		No. Type		
	b. 150 lb Haz Solids				
	15. Special Handling Instructions and Additional Information Wear PPE Emergency Contact (510) 476-1740 Attn: Kirk Hayward		Handling Codes for Wastes Listed Above		
			11a.	11b.	
	16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.				
	Printed/Typed Name SCOTT R. COVEY		Signature 		Month Day Year 
17. Transporter Acknowledgement of Receipt of Materials					
Printed/Typed Name TONY BARREDA		Signature 		Month Day Year   9   20   11	
18. Discrepancy Indication Space					
19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.					
Printed/Typed Name Charles Santos		Signature 		Month Day Year   09   21   11	



# NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

2. Page 1 of 1

3. Document Number

5268

Generator's Name and Mailing Address

~~Chromatography~~ YRC Worldwide  
1709 Wood St  
Oakland CA

Generator's Phone

566 702 7265

5. Transporter Company Name

CLEARWATER ENVIRONMENTAL

6.

US EPA ID Number

CAR00007013

7. Transporter Phone

(510) 476-1740

8. Designated Facility Name and Site Address

ALVISO INDEPENDENT OIL  
5002 ARCHER STREET  
ALVISO, CA 95002

9.

US EPA ID Number

CAL000161743

10. Facility's Phone

(510) 476-1740

11. Waste Shipping Name and Description

a. Non-Hazardous waste

Liquid

12. Containers

No.

Type

13. Total Quantity

14. Unit Wt/Vol

001

TA

1500

G

15. Special Handling Instructions and Additional Information

Wear PPE  
Emergency Contact  
(510) 476-1740  
Attn: Kirk Hayward

Handling Codes for Wastes Listed Above

11a.

11b.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Signature

Scott ... FOR RUBEN ...

Month Day Year

11 3 11

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Mike ...

Month Day Year

11 3 11

18. Discrepancy Indication Space

Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.

Printed/Typed Name

Signature

Month Day Year

11 3 11

GENERATOR

TRANSPORTER

FACILITY

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	2. Page 1 of 1	3. Document Number 5269
4. Generator's Name and Mailing Address Covey Engineering Inc 995 Kendall Dr Ste 131, San Bernardino, Ca Generator's Phone 951-522-5110		YRC World Wide 1708 Wood St Oakland, Ca		
5. Transporter Company Name CLEARWATER ENVIRONMENTAL	6. US EPA ID Number CAR000007013	7. Transporter Phone (510) 476-1740		
8. Designated Facility Name and Site Address ALVISO INDEPENDENT OIL 5002 ARCHER STREET ALVISO, CA 95002	9. US EPA ID Number CAL000161743	10. Facility's Phone (510) 476-1740		
11. Waste Shipping Name and Description a. Non-Hazardous waste Liquid		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
		001 TR	1400	Ca
15. Special Handling Instructions and Additional Information Wear PPE Emergency Contact (510) 476-1740 Attn: <del>Kirk Hayward</del> Charles Seton		Handling Codes for Wastes Listed Above 11a. 11b.		
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name FOR QUOTE Signature FOR QUOTE		Month Day Year // 9 //		
17. Transporter Acknowledgement of Receipt of Materials				
Printed/Typed Name Mike Signature		Month Day Year // 9 //		
18. Discrepancy Indication Space				
Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.				
Printed/Typed Name		Signature		
		Month Day Year		

GENERATOR

TRANSPORTER

FACILITY

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	2. Page 1 of 1	3. Document Number 08971	
GENERATOR	4. Generator's Name and Mailing Address  Covey Engineering, Inc. 985 Kendall Drive, Suite A-151 San Bernadino, CA 92407 Generator's Phone: 951-522-5110		Site: 1708 Wood Street Oakland, CA 94607		
	5. Transporter Company Name CLEARWATER ENVIRONMENTAL		6. US EPA ID Number CAR000007013	7. Transporter Phone (510) 476-1740	
	8. Designated Facility Name and Site Address Alviso Independent Oil 5002 Archer Street Alviso, CA 95002		9. US EPA ID Number CAL 000 161 743	10. Facility's Phone 510-476-1740	
	11. Waste Shipping Name and Description		12. Containers	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous waste		No. Type			
		001 TT	400	G	
b. NON Haz Solids		001 TT	200	S	
15. Special Handling Instructions and Additional Information Wear PPE Emergency Contact (510) 476-1740 Attn: Charles Seaton		Handling Codes for Wastes Listed Above 11a. 11b.			
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name X Scott Covey		Signature X		Month Day Year	
17. Transporter Acknowledgement of Receipt of Materials		Printed/Typed Name Tony Barreche		Signature 	
				Month Day Year 9 17 11	
18. Discrepancy Indication Space					
19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.					
Printed/Typed Name Charles Seaton		Signature 		Month Day Year 09 19 11	

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number CAR080039180 CAR08009180	2. Page 1 of 1	3. Emergency Response Phone 800-479-7993	4. Manifest Tracking Number 007270165 JJK
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5. Generator's Name and Mailing Address YRC INC 10990 Roe Ave Overland Park KS 66211 1213 Generator's Phone: 913 344-3054		Generator's Site Address (if different than mailing address) 1708 Wood St Oakland CA 94607		
---	--	--	--	--

6. Transporter 1 Company Name Big Sky Environmental Solutions	U.S. EPA ID Number CAL000346010
--	------------------------------------

7. Transporter 2 Company Name	U.S. EPA ID Number
-------------------------------	--------------------

8. Designated Facility Name and Site Address D/K Dixon 7300 Chevron Way Dixon CA 95620 Facility's Phone: 707-693-6008		U.S. EPA ID Number CAT080012602
---	--	------------------------------------

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
1.	Non RCRA Hazardous Waste Liquid (Oil & Water)	001	TT	2100	G	223
2.						
3.						
4.						

Special Handling Instructions and Additional Information Wear PPE, ERG 152, Emergency Contact: Jeff Rhodes 510 541-2128	
--	--

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeor's Printed/Typed Name Simon Barber	Signature Simon Barber	Month Day Year 9/19/11
---	---------------------------	---------------------------

16. International Shipments	<input type="checkbox"/> Import to U.S.	<input type="checkbox"/> Export from U.S.	Port of entry/exit:
Transporter signature (for exports only):		Date leaving U.S.:	

17. Transporter Acknowledgment of Receipt of Materials		
Transporter 1 Printed/Typed Name Mike Brown Sr	Signature	Month Day Year 9/19/11
Transporter 2 Printed/Typed Name	Signature	Month Day Year

18. Discrepancy	
18a. Discrepancy Indication Space	<input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection

18b. Alternate Facility (or Generator)	Manifest Reference Number:	U.S. EPA ID Number:
Facility's Phone:		

18c. Signature of Alternate Facility (or Generator)				Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)				
	2.	3.	4.	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a		
Printed/Typed Name Simon	Signature	Month Day Year

# HARTMAN

## Civil Engineering, Inc.

P.O. Box 2958  
Petaluma, CA 94953

Office: (707) 763-2862  
Fax: (707) 773-2953

Project:

1708 Wood Street  
Oakland, CA

Client:

M.A. McClish  
1367 Los Alamos Road  
Santa Rosa, CA 95409



Excavation Shoring Design Calculations

Design a sheet pile shoring system for the above referenced project. The soils information and pressure diagrams were based on the soil boring logs by Burns & McDonnell (Project No. 47561, dated 12/10/07, Borings BM-1 thru BM-9, and Project No. 48791, dated 08/04/08, BM-10 thru BM-19). A 200-psf surcharge was added to account for typical construction equipment/traffic adjacent the shoring system, and for the adjacent structure.

DATE: 10/14/11  
DESIGNED BY: J.W.H.  
SHEET: 1 of 10

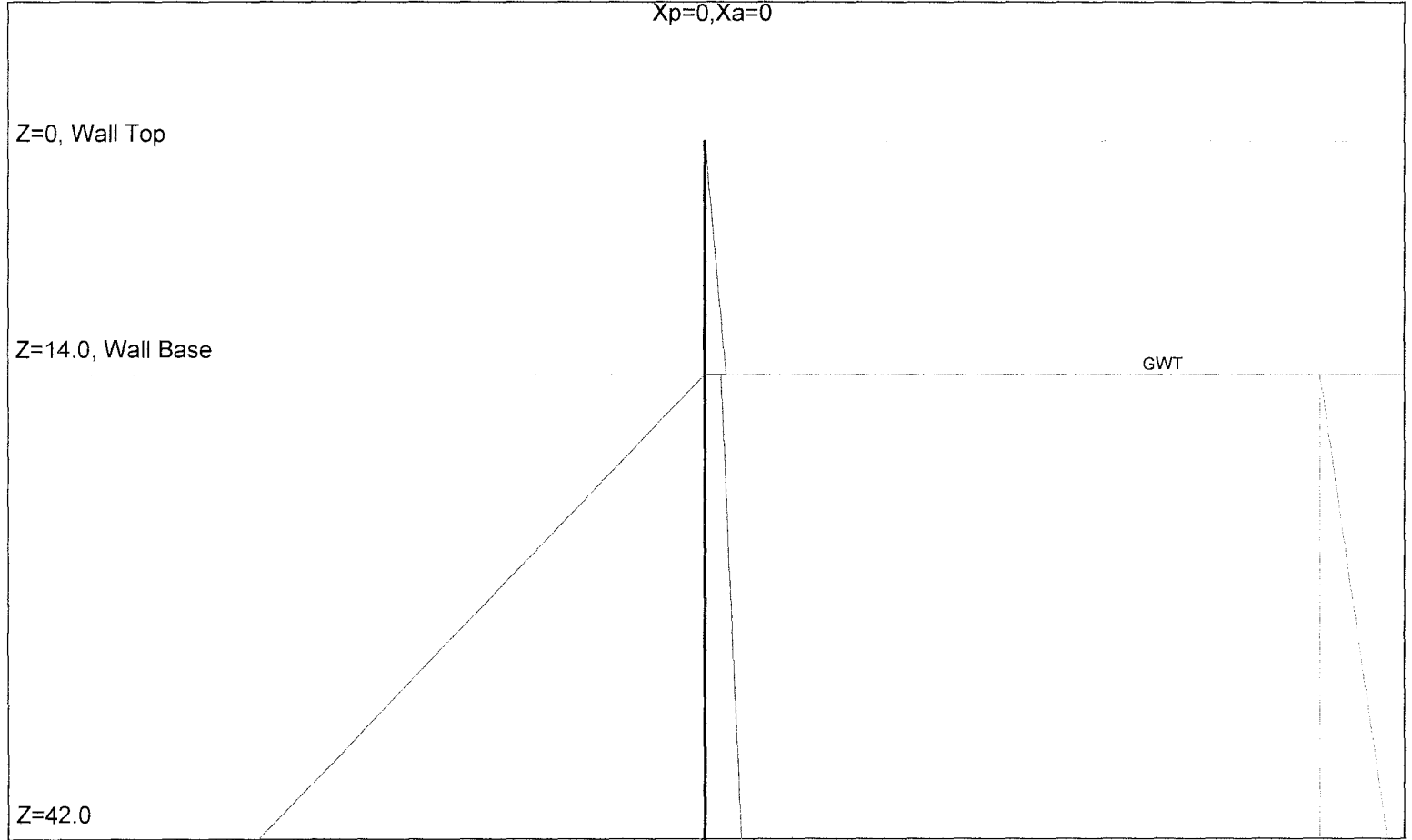
# 1708 Wood St., Oakland

## 14' sheet pile

2 of 10  
10/14/11

Xp=84.0

Xa=84.0



<EarthPres> CIVILTECH SOFTWARE www.civiltechsoftware.com \* Licensed to Joe Hartman Hartman Civil Engineering, Inc  
 UNITS: DEPTH/DISTANCE: ft, UNIT WEIGHT: pcf, FORCE: kip/ft, PRESSURE: ksf, SLOPE: kcf  
 Date: 10/14/2011 File: H:\1334 - McClish - Oakland\Sheet Pile 14.ep8

### \* INPUT DATA \*

Wall Height=14.0 Total Soil Types= 2

Soil No.	Weight	Saturate	Phi	Cohesion	Nspt	Type	Description
1	105.2	115.8	27.2	0.0	2	1	Eqv. Clay
2	117.0	128.7	34.0	0.0	12	4	Sand

Ground Surface at Active Side:

Line	Z1	Xa1	Z2	Xa2	Soil No.	Description
1	0.0	0.0	0.0	800.0	1	Eqv. Clay
2	14.0	0.0	14.0	800.0	2	Sand

Water Table at Active Side:

Point	Z-water	X-water
1	14.0	0.0
2	14.0	80000.0

Ground Surface at Passive Side:

Line	Z1	Xp1	Z2	Xp2	Soil No.	Description
1	14.0	0.0	14.0	800.0	2	Sand

Wall Friction Options: 1. No wall friction

Wall Batter Angle = 0

Apparent Pressure Conversion: 1. Default (Terzaghi and Peck)\*

Water Density = 62.4

Water Pressure: 1. No seepage at wall tip\*

**\* OUTPUT RESULTS \***

Eae (Total Force above Base)= 3.85 Acting over One linear foot width (or meter) X wall height

Ea (Total Static Force above Base)= 3.85

Ee (Total Earthquake Force above Base)= 0.00

Apparent Pressure above Base - Output to Shoring - Multiplier of Pressure = 1

No	Z1	Pa1	Z2	Pa2	Slope
0	0.00	0.00	14.00	0.55	0.0393

Driving Pressure below Base - Output to Shoring - Multiplier of Pressure = 1

No	Z1	Pa1	Z2	Pa2	Slope
0	14.00	0.41	42.00	0.94	0.0188

Passive Pressure below Base - Output to Shoring - Multiplier of Pressure = 1

No	Z1	Pp1	Z2	Pp2	Slope
0	14.00	0.0	42.00	11.6	0.413

Water Pressure - Output to Shoring - Multiplier of Pressure = 1

No	Z1	Pw1	Z2	Pw2	kw1
0	14.00	0.00	42.00	1.75	0.06
1	42.00	1.75	42.00	1.75	0.06

Driving Pressure from Analysis (Above and below Base)

No	Z	Ea	Pa	ka
0	0.00	0.00	0.96	0.0000
1	14.00	3.85	0.41	0.0188
2	42.00	22.84	0.00	0.0000

Passive Pressure from Analysis (Below Base)

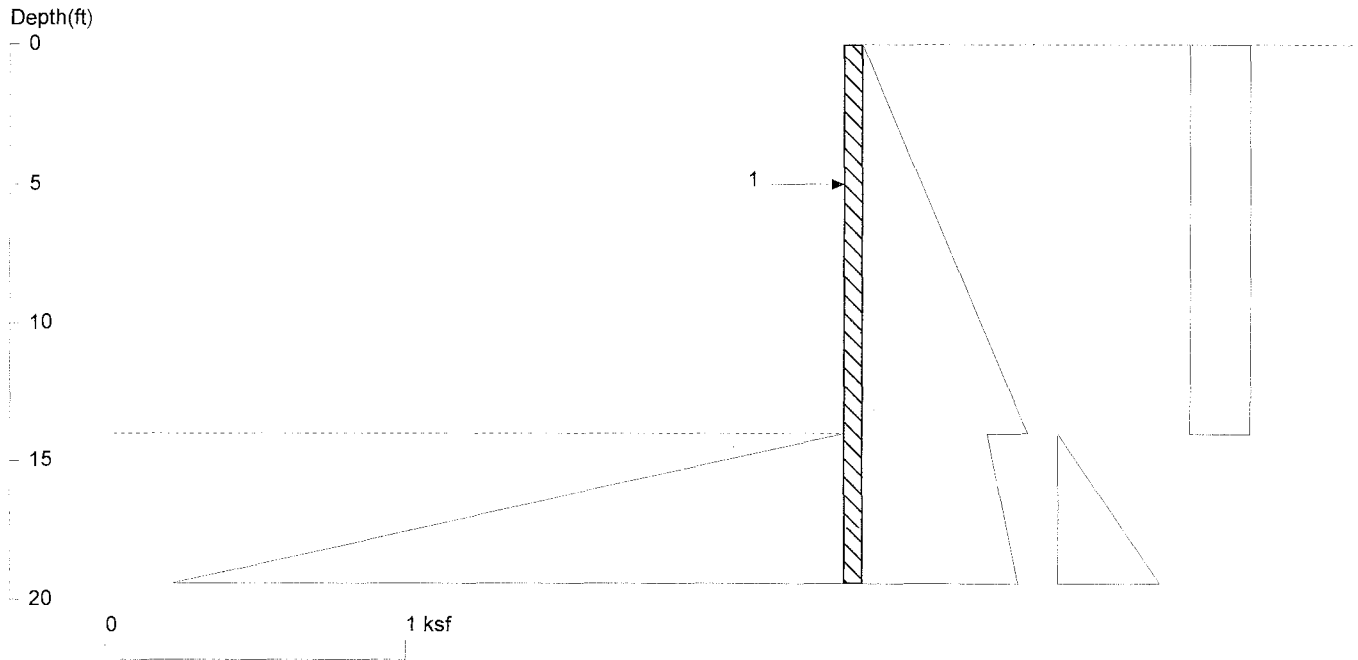
No	Z	Ep	Pp	kp
0	14.00	0.0	40.52	0.0000
1	42.00	162.1	0.00	0.0000

UNITS: DEPTH/DISTANCE: ft, UNIT WEIGHT: pcf, FORCE: kip/ft, PRESSURE: ksf, SLOPE: kcf

Date: 10/14/2011 File Name: H:\1334 - McClish - Oakland\Sheet Pile 14.ep8

# 1708 Wood St., Oakland 14' sheet pile

4 of 10  
10/14/11



<ShoringSuite> CIVILTECH SOFTWARE USA www.civiltechsoftware.com

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File: H:\1334 - McClish - Oakland\Sheet Pile 14 200q.sh8

Date: 10/14/2011

Wall Height=14.0 Pile Diameter=1.0 Pile Spacing=1.0 Wall Type: 1. Sheet Pile

PILE LENGTH: Min. Embedment=5.41 (8~10ft is recommended!!!) Min. Pile Length=19.41 *USE 20' SHEETS.*  
MOMENT IN PILE: Max. Moment=9.60 per Pile Spacing=1.0 at Depth=11.71

VERTICAL BEARING CAPACITY: Vertical Loading=0.0, Resistance=0.0, Vertical Factor of Safety=999.00

**PILE SELECTION:**

Request Min. Section Modulus = 4.9 in<sup>3</sup>/ft, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- LZ3 (-0.77) PMA22 (-0.67) LZ250 (-0.74) CS55 (-0.49) CS60 (-0.45)
- NSZ10 (-0.33) NSZ11 (-0.31) CS69 (-0.38) SZ12 (-0.25) CS76 (-0.35)
- NSZ12 (-0.26) SZ14 (-0.25) SZ15 (-0.25) NSZ14 (-0.23)

*USE 5X10 SHEET PILES S=12.4 in<sup>3</sup>/ft OK*

**BRACE FORCE: Strut, Tieback, Plate Anchor, and Deadman**

No. & Type	Depth	Angle	Space	Total F.	Horiz. F.	Vert. F.	N/A	N/A
1. Strut	5.0	0.0	1.0	5.0	5.0	0.0	0.0	0.0

UNITS: Width,Diameter,Spacing,Length,Depth,and Height - ft; Force - kip; Bond Strength and Pressure - ksf

**DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):**

Z1	P1	Z2	P2	Slope
0.0	0.00	14.0	0.55	0.039
14.0	0.41	70.0	1.47	0.019
14.0	0.00	70.0	3.49	0.062
0.0	0.20	14.0	0.20	0.000

**PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2**

Z1	P1	Z2	P2	Slope
14.0	0.00	70.0	23.15	0.413



50x10  
10/11/11

ACTIVE SPACING:

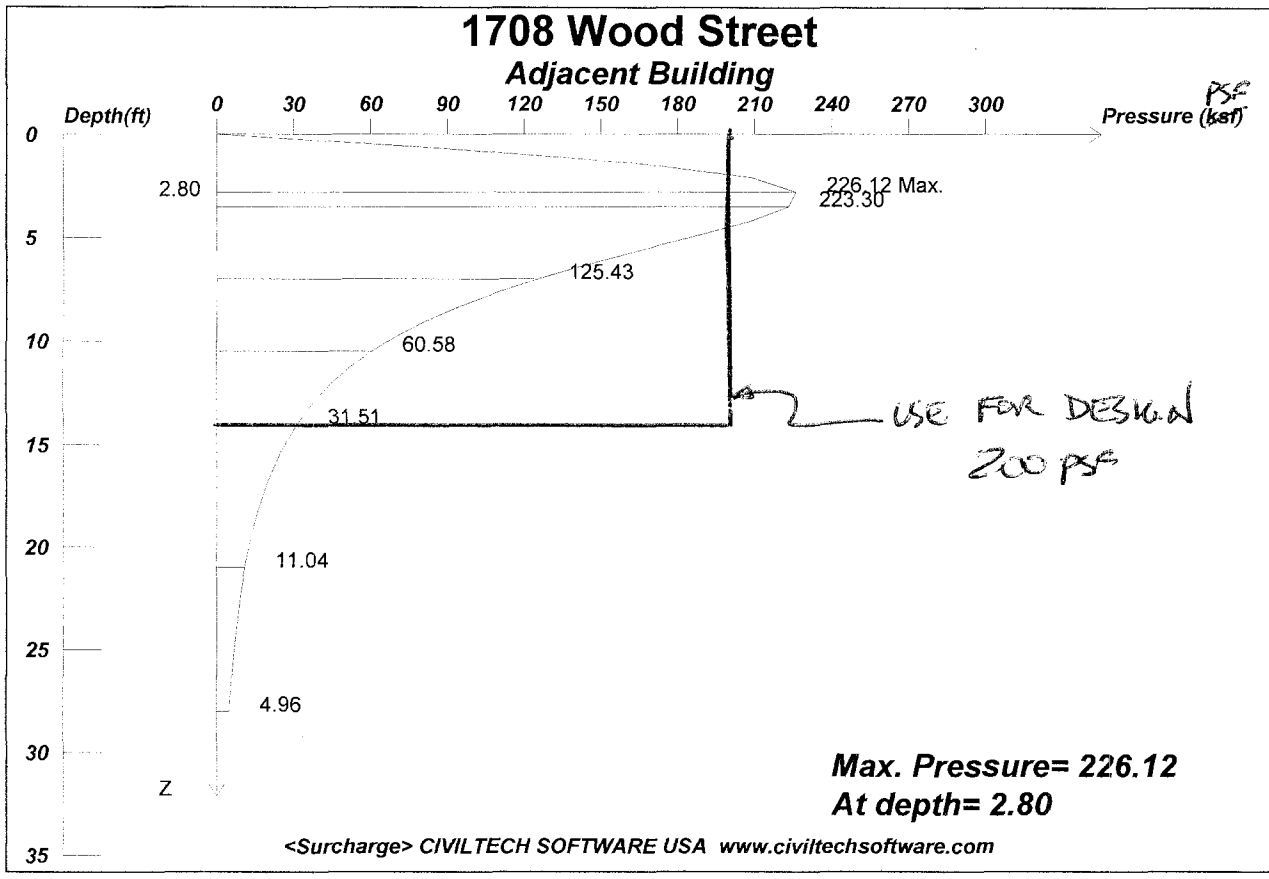
No.	Z depth	Spacing
1	0.00	1.00
2	14.00	1.00

PASSIVE SPACING:

No.	Z depth	Spacing
1	14.00	1.00

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft  
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft<sup>3</sup>; Deflection - in

60 or 10  
10/14/11



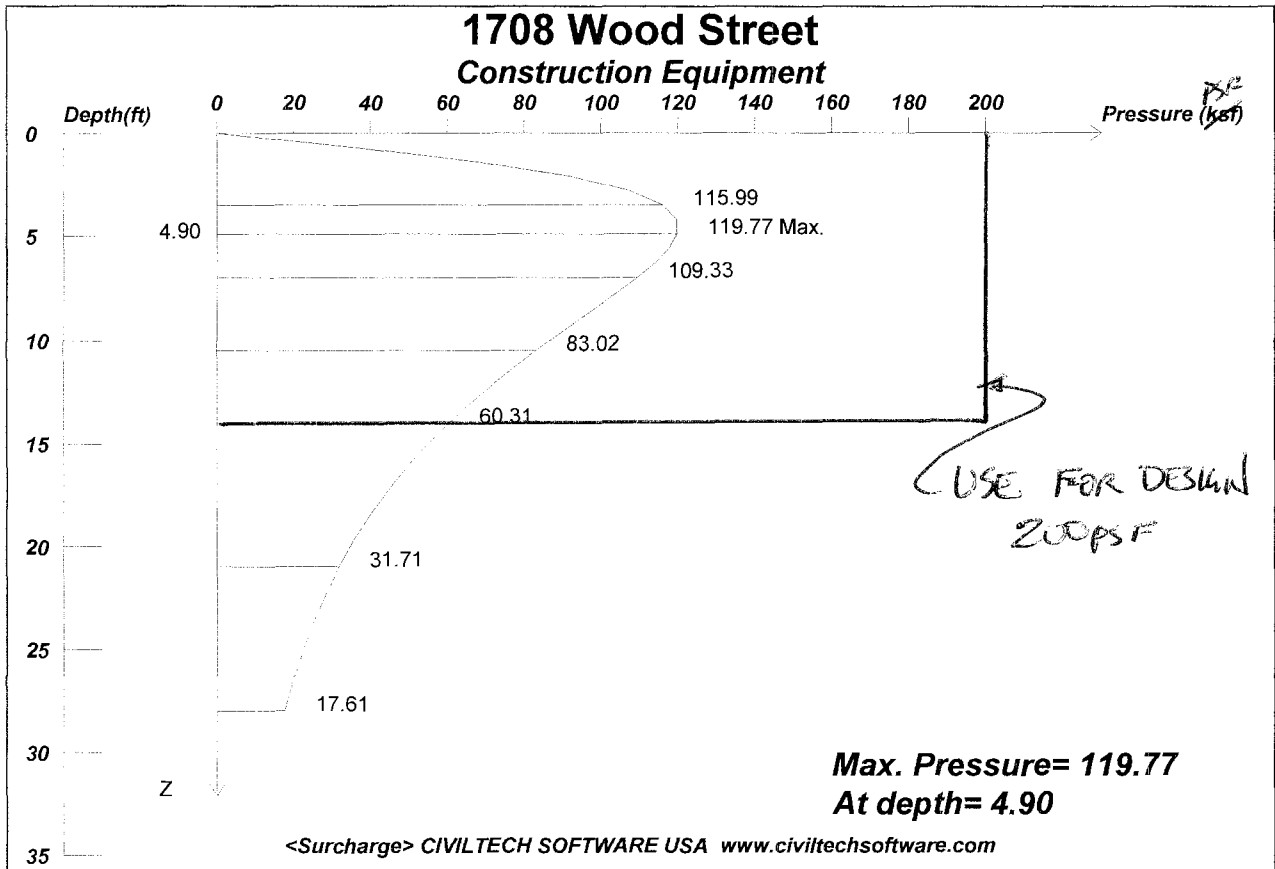
Licensed to Joe Hartman Hartman Civil Engineering, Inc  
Date: 10/14/2011 File: H:\1334 - McClish - Oakland\surcharge.lp8

Wall Height, H= 14 Load Depth at Surface, D= 0  
Load Factor of Surcharge Loading = 1  
Rigid Wall Condition -- No movement or deflection of the wall are allowed.  
Max. Pressure = 226.121 at depth = 2.80

X	Width	Strip Load
4.0	3.0	1000.00

UNITS: LENGTH/DEPTH: ft, Qpoint: kip, Qline: kip/ft, Qstrip/Qarea/PRESSURE: ksf

7 of 10  
10/14/11



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Date: 10/14/2011 File: H:\1334 - McClish - Oakland\surcharge equipment.lp8

Wall Height, H= 14 Load Depth at Surface, D= 0  
Load Factor of Surcharge Loading = 1  
Rigid Wall Condition -- No movement or deflection of the wall are allowed.  
Max. Pressure = 119.766 at depth = 4.90

X	Width	Length	Area Load
4.0	15.0	10.0	640.00

UNITS: LENGTH/DEPTH: ft, Qpoint: kip, Qline: kip/ft, Qstrip/Qarea/PRESSURE: ksf

Check Wales Worst Case on Pit#1:

Distributed Load From Piles (klf):  $w := 5.0$

Span Length (ft):  $L := 25.5$

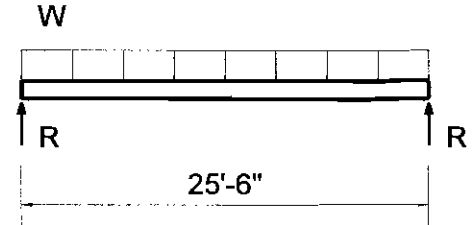
Results:

Reactions (kips):  $R1 := \frac{w \cdot L}{2}$   $R1 = 64$

Max. Shear (kips):  $V_{max} := \frac{w \cdot L}{2}$   $V_{max} = 64$

Max. Moment (k-ft):  $M_{max} := \frac{w \cdot L^2}{8}$   $M_{max} = 406$

Max. Axial (kips):  $P_{max} := 46$



Wale Properties:

Section = W14x211	Web Thickness (in): $t_w := 0.980$	Section Modulus (in <sup>3</sup> ): $S_x := 338$ $S_y := 130$
Area (in <sup>2</sup> ): $A := 62.0$	Flange Width (in): $b_f := 15.800$	Radius of Gyration (in): $r_x := 6.55$ $r_y := 4.07$
Depth (in): $d := 15.72$	Flange Thickness (in): $t_f := 1.560$	Moment of Inertia (in <sup>4</sup> ): $I_x := 2660$ $I_y := 1030$
	Yield Stress (ksi): $F_y := 50.0$	Modulus of Elasticity (ksi): $E := 29000$

Check Shear Stress:

Allowable Shear Stress (ksi):  $F_v := 0.4 \cdot F_y$   $F_v = 20.0$

Max. Shear (kips):  $V_{max} = 63.75$

Max. Shear Stress (ksi):  $f_v := \frac{V_{max}}{d \cdot t_w}$   $f_v = 4.1 < F_v = 20$  **OK**

Check Bending Stress:

Allowable Bending Stress (ksi):  $F_b := 0.66 \cdot F_y$   $F_b = 33.0$

Max. Moment (k-ft):  $M_{max} = 406$

Max. Bending Stress (ksi):  $f_b := \frac{M_{max} \cdot 12}{S_x}$   $f_b = 14.4$

Check Axial Stress:

Unbraced Length (ft):  $L = 25.5$  Allowable Axial Stress (ksi):  $F_a := 24.8$

$K := 1.0$   $\frac{K \cdot L \cdot 12}{r_x} = 46.7$  Maximum Axial Stress (ksi):  $f_a := \frac{P_{max}}{A}$   $f_a = 0.7 < F_a = 24.8$  **OK**

Check Combined Stress:

Reduction Factor:  $C_m := 1.0$

$$F'_e := \frac{[(12 \cdot \pi^2) \cdot E]}{23 \cdot \left[ \frac{(K \cdot L \cdot 12)}{r_x} \right]^2} \quad F'_e = 68.4$$

$$\left( \frac{f_a}{F_a} \right) + \frac{(C_m \cdot f_b)}{\left( 1 - \frac{f_a}{F'_e} \right) \cdot F_b} = 0.47 < 1.00 \quad \text{OK}$$

Check Wales Worst Case (Pit#2):

Distributed Load From Piles (klf):  $w := 5.0$

Span Length (ft):  $L := 29$

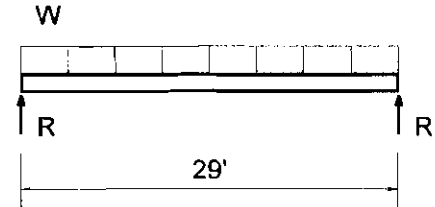
Results:

Reactions (kips):  $R1 := \frac{w \cdot L}{2}$   $R1 = 73$

Max. Shear (kips):  $V_{max} := \frac{w \cdot L}{2}$   $V_{max} = 73$

Max. Moment (k-ft):  $M_{max} := \frac{w \cdot L^2}{8}$   $M_{max} = 526$

Max. Axial (kips):  $P_{max} := 33$



Wale Properties:

Section = W14x211	Web Thickness (in): $t_w := 0.980$	Section Modulus (in <sup>3</sup> ): $S_x := 338$ $S_y := 130$
Area (in <sup>2</sup> ): $A := 62.0$	Flange Width (in): $b_f := 15.800$	Radius of Gyration (in): $r_x := 6.55$ $r_y := 4.07$
Depth (in): $d := 15.72$	Flange Thickness (in): $t_f := 1.560$	Moment of Inertia (in <sup>4</sup> ): $I_x := 2660$ $I_y := 1030$
	Yield Stress (ksi): $F_y := 50.0$	Modulus of Elasticity (ksi): $E := 29000$

Check Shear Stress:

Allowable Shear Stress (ksi):  $F_v := 0.4 \cdot F_y$   $F_v = 20.0$

Max. Shear (kips):  $V_{max} = 72.5$

Max. Shear Stress (ksi):  $f_v := \frac{V_{max}}{d \cdot t_w}$   $f_v = 4.7 < F_v = 20$  **OK**

Check Bending Stress:

Allowable Bending Stress (ksi):  $F_b := 0.66 \cdot F_y$   $F_b = 33.0$

Max. Moment (k-ft):  $M_{max} = 526$

Max. Bending Stress (ksi):  $f_b := \frac{M_{max} \cdot 12}{S_x}$   $f_b = 18.7$

Check Axial Stress:

Unbraced Length (ft):  $L = 29$  Allowable Axial Stress (ksi):  $F_a := 23.9$

$K := 1.0$   $\frac{K \cdot L \cdot 12}{r_x} = 53.1$  Maximum Axial Stress (ksi):  $f_a := \frac{P_{max}}{A}$   $f_a = 0.5 < F_a = 23.9$  **OK**

Check Combined Stress:

Reduction Factor:  $C_m := 1.0$

$F'_e := \frac{[(12 \cdot \pi^2) \cdot E]}{23 \cdot \left[ \frac{(K \cdot L \cdot 12)}{r_x} \right]^2}$   $F'_e = 52.9$

$\left( \frac{f_a}{F_a} \right) + \frac{(C_m \cdot f_b)}{\left( 1 - \frac{f_a}{F'_e} \right) \cdot F_b} = 0.59 < 1.00$  **OK**

Check Connection of Wale Corners (Worst Case):

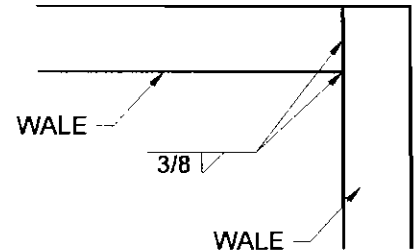
Maximum Load (kips):  $P := 46$

Wale Properties:

Section = W14x211      Web Thickness (in):  $t_w := 0.980$   
 Area (in<sup>2</sup>):  $A := 62.0$       Flange Width (in):  $b_f := 15.800$   
 Depth (in):  $d := 15.72$       Flange Thickness (in):  $t_f := 1.560$

Check Welding of Wale Corner:

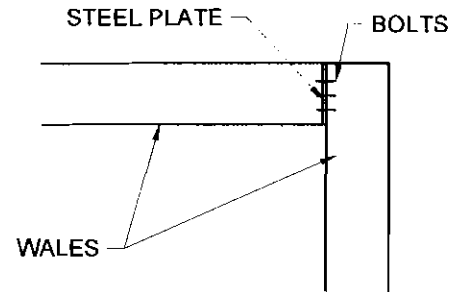
Size of Fillet Weld (in):  $t := 0.375$   
 Strength of Weld (k/in):  $S_w := 0.928 \cdot t \cdot 16$        $S_w = 5.6$   
 Length of Weld Required (in):  $L_{wreq} := \frac{P}{S_w}$        $L_{wreq} = 8.3$



Length of Design Welds (in):  $L_w := (d - 2 \cdot t_f) + b_f$        $L_w = 28.4 > L_{wreq} = 8.3$       **OK**

Check Bolting of Wale Corner:

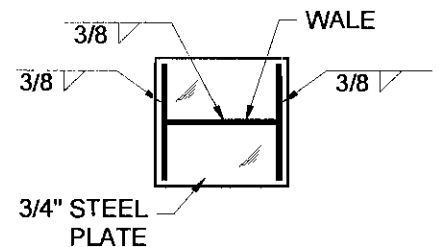
Type of Bolts: A325-N  
 Allowable Shear Stress (ksi):  $F_v := 21.0$   
 Number of Bolts:  $N := 6$   
 Bolt Diameter (in):  $d_b := 1.0$   
 Cross-Sectional Area of Bolt (in<sup>2</sup>):  $A := \frac{(\pi \cdot d_b^2)}{4}$        $A = 0.785$



Shear Stress (ksi):  $f_v := \frac{P}{N \cdot A}$        $f_v = 9.8 < F_v = 21.0$       **OK**

Check Welding of Steel Plate to End of Wales:

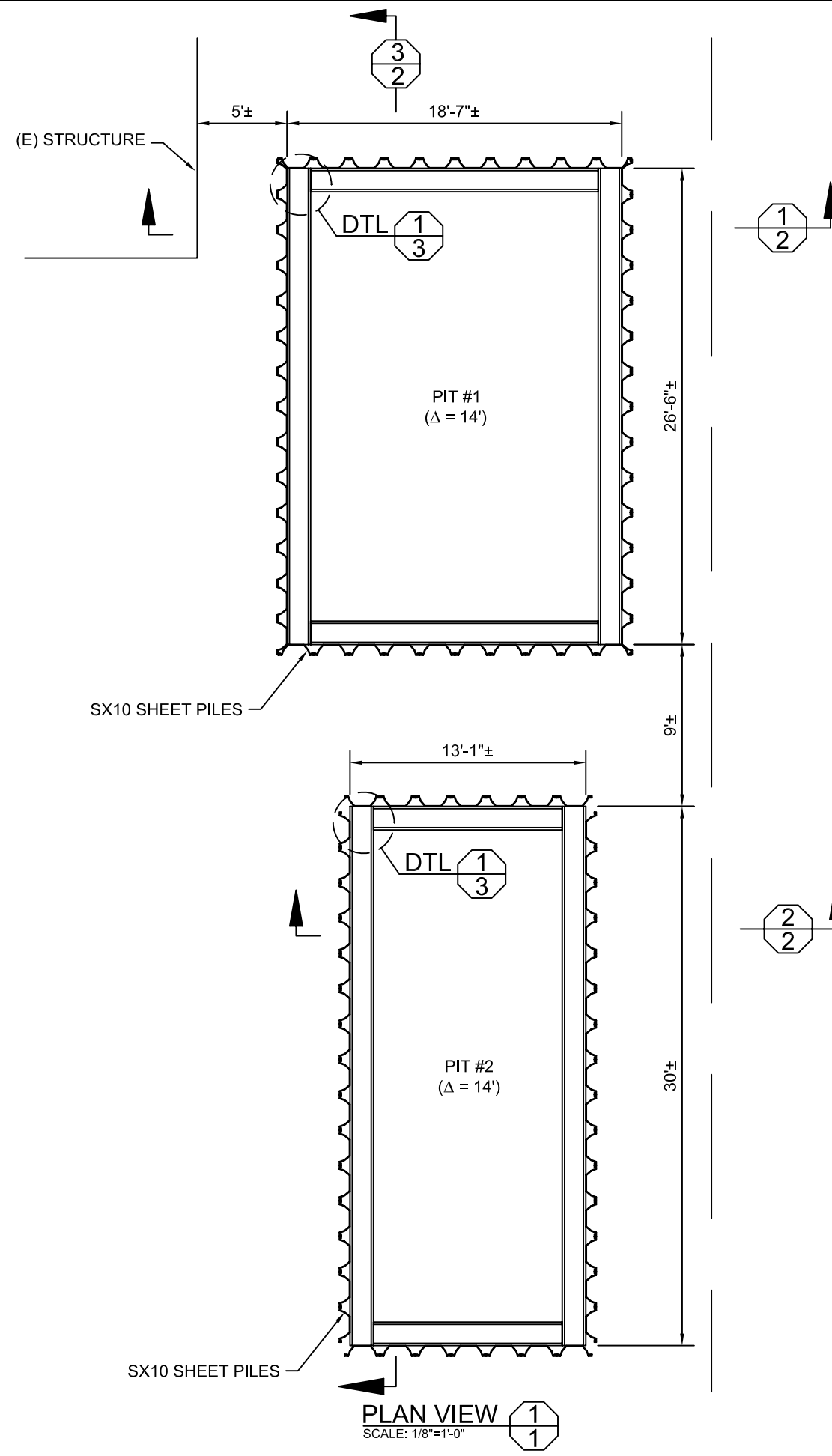
Size of Fillet Weld (in):  $t := 0.375$   
 Strength of Weld (k/in):  $S_w := 0.928 \cdot t \cdot 16$        $S_w = 5.6$   
 Length of Weld Required (in):  $L_{wreq} := \frac{P}{S_w}$        $L_{wreq} = 8.3$



Length of Design Welds (in):  $L_w := (d - 2 \cdot t_f) + 2 \cdot b_f$        $L_w = 44.2 > L_{wreq} = 8.3$       **OK**

**APPENDIX C**

**Engineered Sheet Pile Shoring Plan**



**NOTES:**

1. SHEET PILES TO BE ASTM A328, MINIMUM YIELD STRENGTH OF  $F_y = 38$  KSI.
2. STEEL WALES AND STRUTS TO BE ASTM A572 GRADE 50, MIN YIELD STRENGTH OF  $F_y = 50$  KSI.
3. MISC STEEL SHAPES TO BE ASTM A36, MIN YIELD STRENGTH OF  $F_y = 36$  KSI.
4. BOLTS TO BE ASTM A325 OR BETTER.
5. COMPLETELY INSTALL WALE PRIOR TO EXCAVATING MORE THAN 1' BELOW PROPOSED WALE LOCATION.
6. HANG WALES WITH 1/2" GRADE 80 TAG CHAINS. SUPPORT THE WALE IN ALL FOUR CORNERS.
7. SHEET PILES DO NOT NEED TO BE INTERLOCKED.
8. THIS PLAN IS IN ACCORDANCE WITH OSHA 1541.1 (c)(4), DESIGN BY A REGISTERED CIVIL ENGINEER.
9. THE SOILS INFORMATION AND PRESSURE DIAGRAMS WERE BASED ON THE SOIL BORING LOGS BY BURNS & McDONNELL (PROJECT NO. 47561, DATED 12/10/07, BORINGS BM-1 THRU BM-9, AND PROJECT NO. 48791, DATED 08/04/08, BM-10 THRU BM-19).
10. COVEY ENGINEERING, INC. IS TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES AND OBSTRUCTIONS IN ORDER TO ELIMINATE ANY CONFLICTS WITH THE PROPOSED SHORING SYSTEM.
11. COVEY ENGINEERING, INC. IS TO PROVIDE ACCESS AND BARRICADING IN ACCORDANCE WITH OSHA REQUIREMENTS.
12. COVEY ENGINEERING, INC. IS TO VERIFY THAT ADEQUATE CLEARANCES ARE OBTAINED.
13. WATER LEVEL IS ASSUMED TO BE AT THE BOTTOM OF THE EXCAVATION OR LOWER.
14. CONTRACTOR SHALL HAVE A COMPETENT PERSON ON SITE WHERE THIS PLAN IS TO BE USED. IT IS THIS PERSON'S RESPONSIBILITY TO ENSURE THAT THE SHORING SYSTEM IS INSTALLED IN ACCORDANCE WITH THE APPROVED SHORING PLANS. THEY ARE TO NOTIFY THE ENGINEER IF FIELD CONDITIONS DIFFER FROM WHAT IS SHOWN ON THIS PLAN, SO THAT REMEDIAL ACTION CAN BE TAKEN.

**INSTALLATION / REMOVAL SEQUENCE:**

1. DRIVE SHEET PILES TO DEPTH SHOWN ON THESE PLANS.
2. EXCAVATE DOWN NO MORE THAN 1 FOOT BELOW THE WALE LOCATION.
3. COMPLETELY INSTALL THE WALES.
4. EXCAVATE DOWN TO BOTTOM OF EXCAVATION.
5. WORK TO BE PERFORMED INSIDE THE SHORING SYSTEM (IF APPLICABLE)(BY OTHERS)
6. BACKFILL TO WITHIN 2 FEET OF THE WALES.
7. COMPLETELY REMOVE THE WALES.
8. BACKFILL TO TOP OF SHEET PILES.
9. REMOVE SHEET PILES.



REVISIONS:	BY:

1708 WOOD ST.  
OAKLAND, CA  
EXCAVATION SHORING PLAN

**M.A. McCLISH**  
1367 LOS ALAMOS ROAD  
SANTA ROSA, CA 95409

**HARTMAN**  
**Civil Engineering, Inc.**  
P.O. Box 2958  
Petaluma, CA 94953  
Office: (707) 763-2862  
Fax: (707) 773-2953

DATE:	10/14/11
SCALE:	NOTED
BY:	J.W.H.
JOB #:	1334/S1
SHEET:	1 OF 3



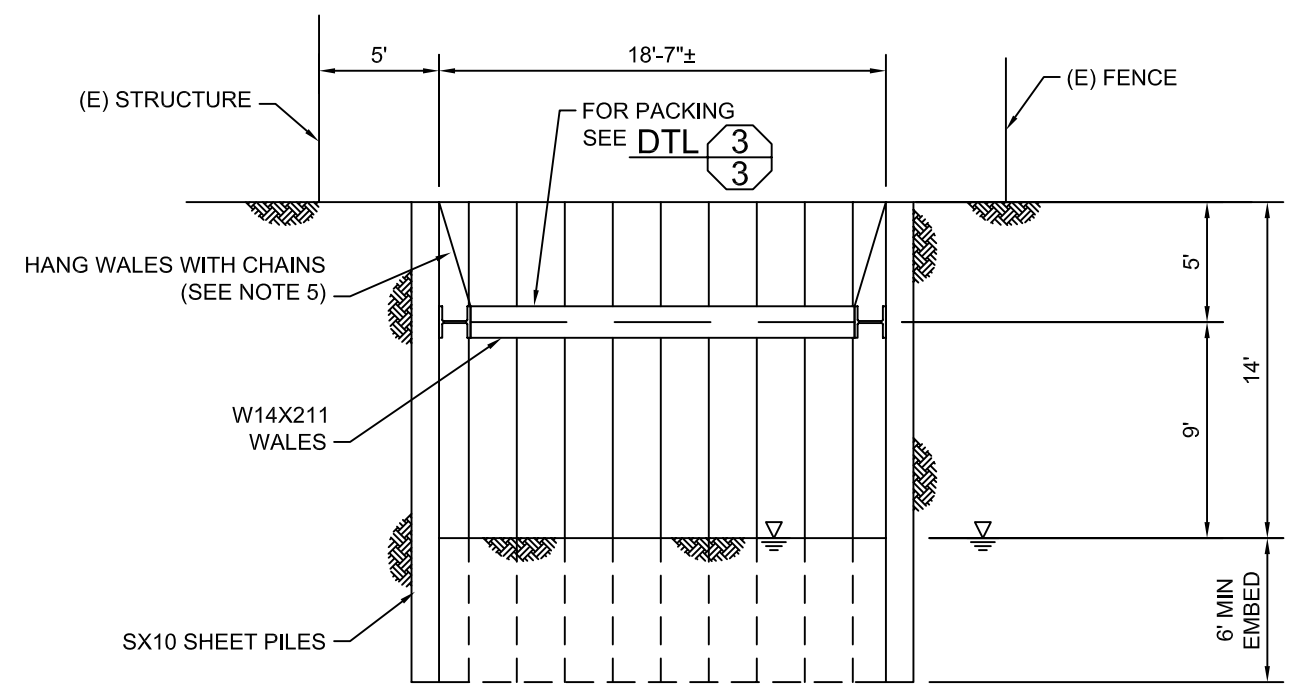
REVISIONS:	BY:

1708 WOOD ST.  
OAKLAND, CA  
EXCAVATION SHORING PLAN

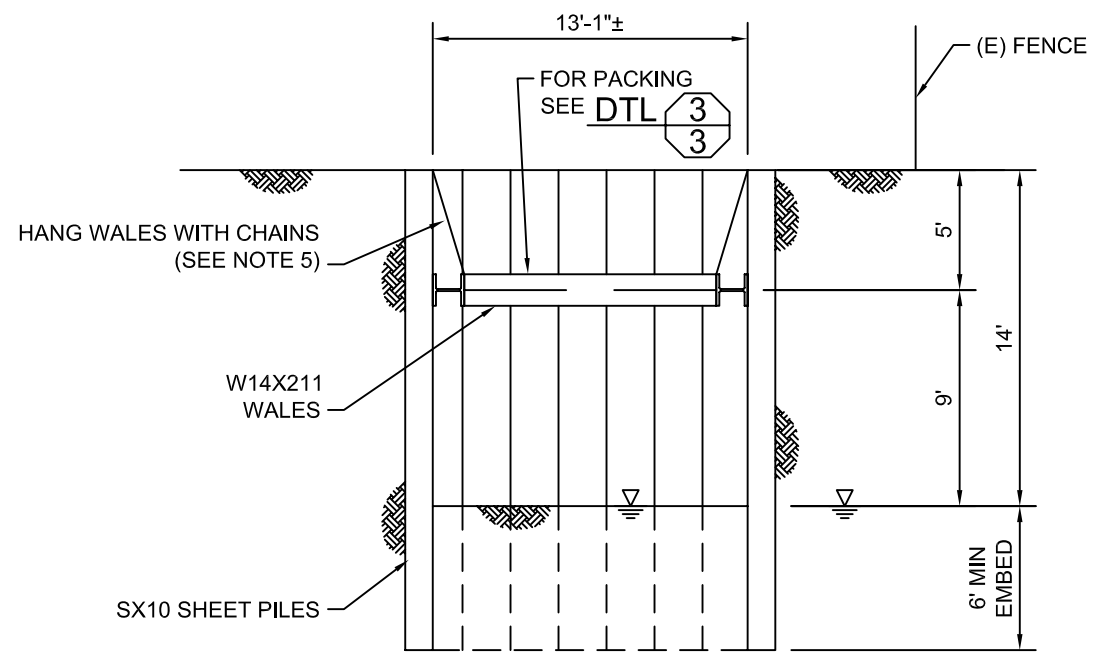
**M.A. McCLISH**  
1367 LOS ALAMOS ROAD  
SANTA ROSA, CA 95409

**HARTMAN**  
**Civil Engineering, Inc.**  
P.O. Box 2958  
Petaluma, CA 94953  
Office: (707) 763-2862  
Fax: (707) 773-2953

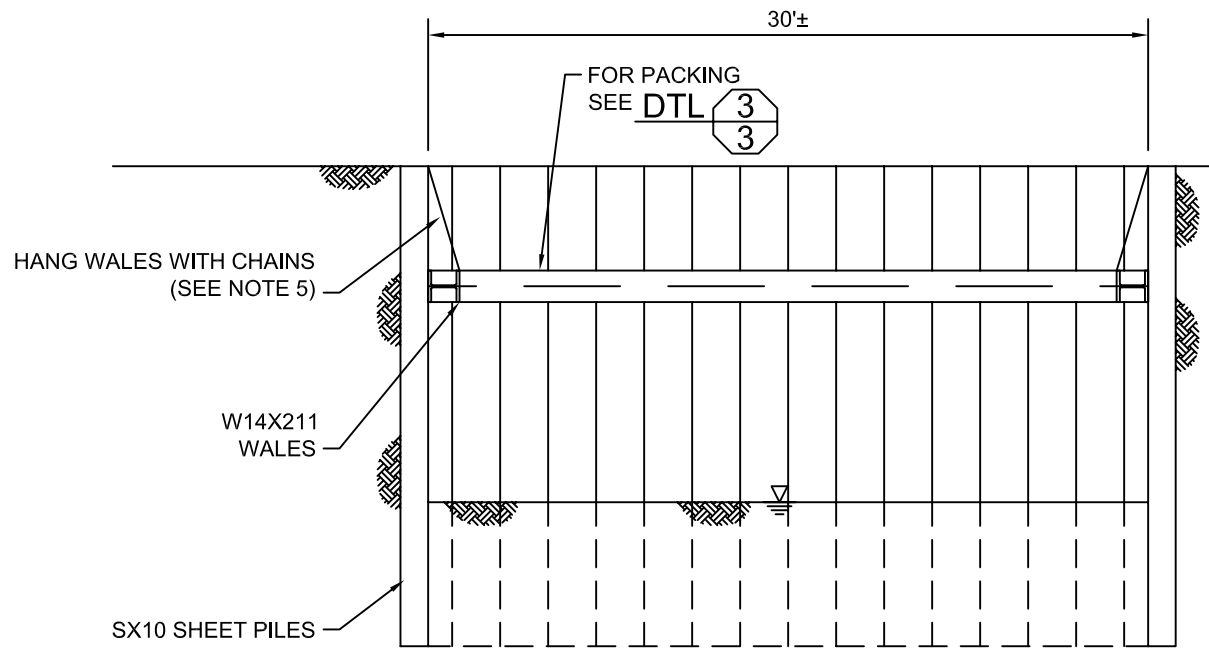
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BY: J.W.H.  
JOB #: 1334/S2  
SHEET: 2 OF 3



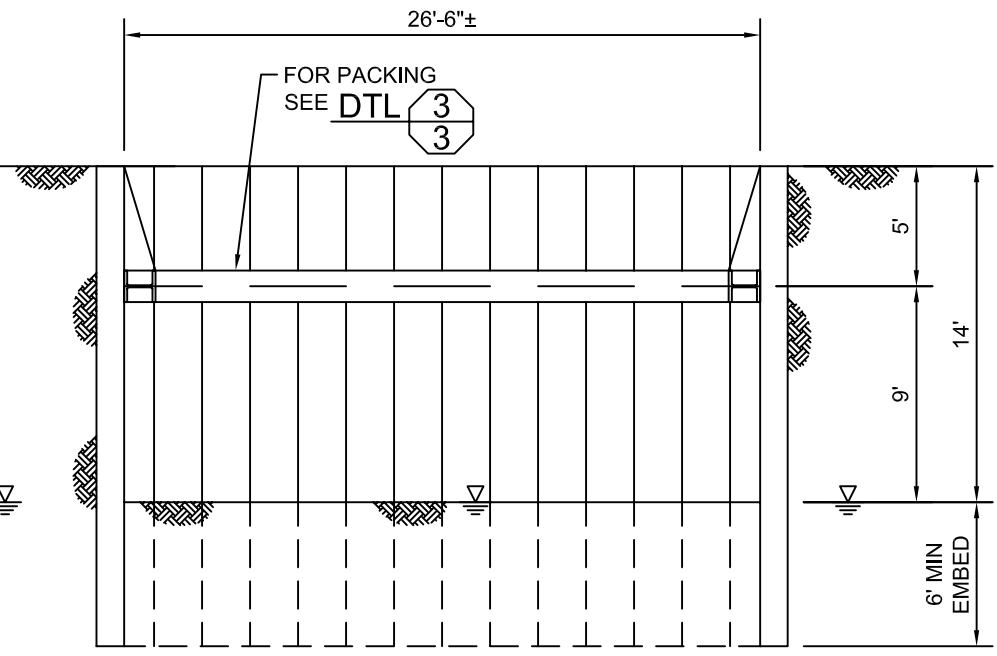
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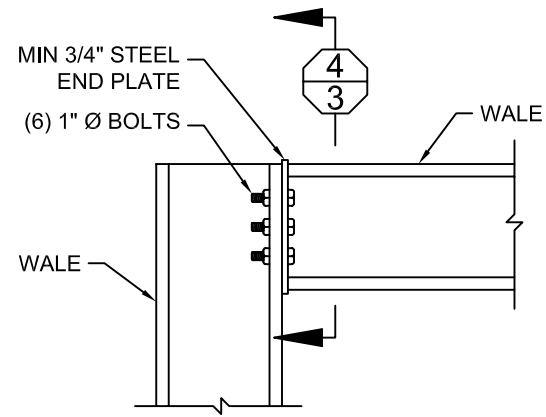


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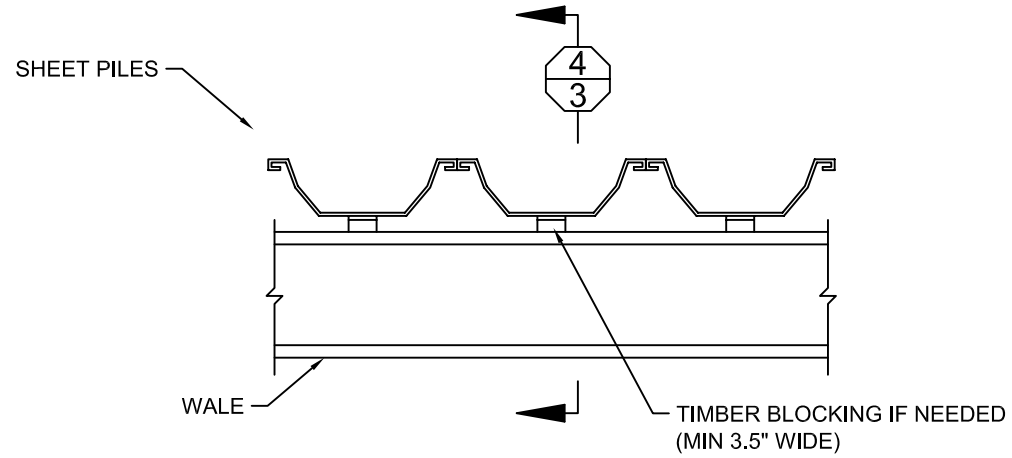


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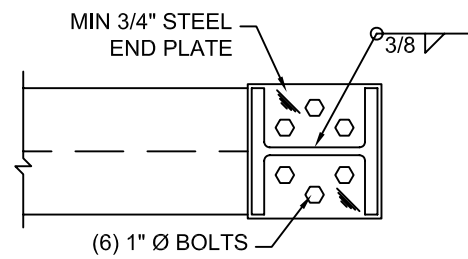




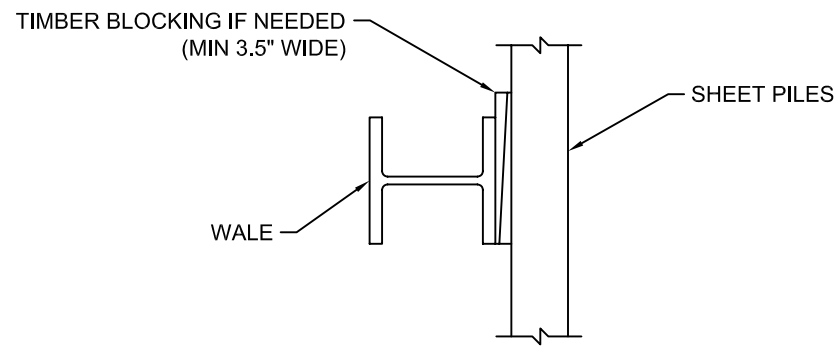
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**3** **DETAIL**  
SCALE: 1/2"=1'-0"



**DETAIL** **3**  
SCALE: 1/2"=1'-0"  
(PACKING)



**DETAIL** **2**  
SCALE: 1/2"=1'-0"



**DETAIL** **4**  
SCALE: 1/2"=1'-0"



REVISIONS:	BY:

1708 WOOD ST.  
OAKLAND, CA  
EXCAVATION SHORING PLAN

**M.A. McCLISH**  
1367 LOS ALAMOS ROAD  
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P.O. Box 2958  
Petaluma, CA 94953  
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Fax: (707) 773-2953

DATE:	10/14/11
SCALE:	NOTED
BY:	J.W.H.
JOB #:	1334/S3
SHEET:	3 OF 3



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- ▶ [Mechanical Properties -- European Standard](#)
- ▶ [Product Specification](#)
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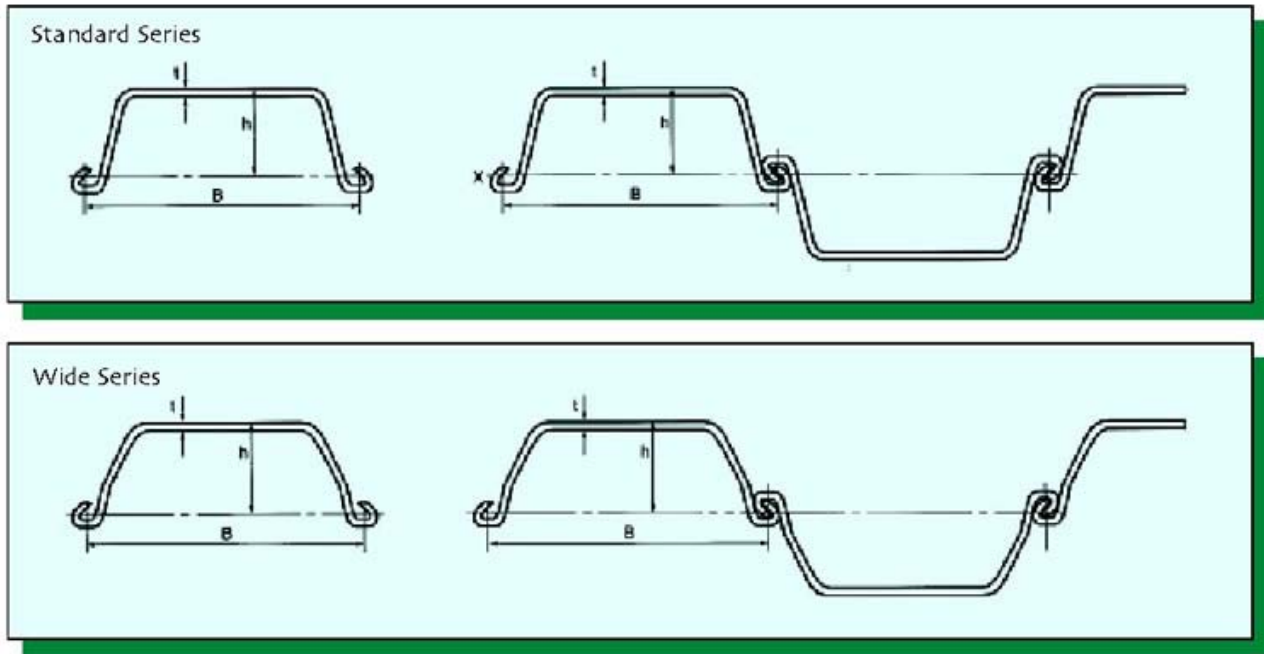
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- ...▶ [SK-476 Trench Steel Sheet Retaining Steel Plate](#)
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**STEEL SHEET PILING**

Shapes



Dimensions And Sectional Properties

Section	Dimentions			Per Pile				Per Liner			
Type	Width	Height	Thickness	Sectional Area	Unit Weight	Moment of Inertia	Section Modulus	Sectional Area	Unit Weight	Meter of Wall Moment	Section Modulus
	B	h	t	cm <sup>2</sup>	Kg/m	cm	cm <sup>3</sup>	cm <sup>2</sup> /m	Kg/m <sup>2</sup>	cm /m	cm <sup>3</sup> /m
SKSP-IA	400	85	8.0	45.21	35.5	598	88.0	113.0	88.8	4500	529
SKSP-II	400	100	10.5	61.18	48.0	1240	152.0	153.0	120.0	8740	874
SKSP-IIA	400	120	9.2	55.01	43.2	1460	160.0	137.5	108.0	10600	880
SKSP-IIIA	400	125	13.0	76.42	60.0	2220	223.0	191.0	150.0	16800	1340
SKSP-IIIA	400	150	13.1	74.40	58.4	2790	250.0	186.0	146.0	22800	1520
SKSP-IV	400	170	15.5	96.99	76.1	4670	362.0	242.5	190.0	38600	2270
SKSP-IVA	400	185	16.1	94.21	74.0	5300	400.0	235.1	185.0	41600	2250
SKSP-VIL	500	200	24.3	133.8	105.0	7960	520.0	267.6	210.0	63000	3150
SKSP-VIL	500	225	27.6	153.0	120.0	11400	680.0	306.0	240.0	86000	3820
SKSP-											

SX10	600	130	10.3	78.70	61.8	2110	203.0	131.2	103.0	13000	1000
SKSP-SX10	23.6	5.12	0.406	12.20	41.5	50.7	12.4	6198	21.1	95.3	18.6
SKSP-SX18	600	180	13.4	103.9	81.6	5220	376.0	173.2	138.0	32400	1800
SKSP-SX18	23.6	7.09	0.528	16.10	54.8	125	22.9	8.183	27.9	237	33.5
SKSP-SX27	600	210	18.0	153.3	106.0	8630	539.0	225.5	177.0	5670	2700
SKSP-SX27	23.6	8.27	0.709	20.97	71.2	207	32.9	10.65	36.3	415	50.2

**Length**

Standard steel sheet piling lengths are designated in metric units with increments of 500mm.



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**APPENDIX D**

**Certified Analytical Reports  
Soil & Groundwater  
Soil Disposal  
Wipe Samples**

Technical Report for

Burns and McDonnell Engineering

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA  
63142

Accutest Job Number: C18635

Sampling Dates: 10/24/11 - 10/26/11

Report to:

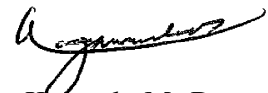
Burns and McDonnell Engineering  
400 Oyster Point Blvd Suite 533  
South San Francisco, CA 94080  
sbarber@burnsmcd.com

ATTN: Simon Barber

Total number of pages in report: **25**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.



Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director

Client Service contact: Laurie Glantz-Murphy 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Sample Results .....</b>	<b>4</b>
<b>2.1: C18635-1: EAST TANK-E1 .....</b>	5
<b>2.2: C18635-2: EAST TANK W-1 .....</b>	6
<b>2.3: C18635-3: WEST TANK W-1 .....</b>	7
<b>2.4: C18635-4: WEST TANK W-2 .....</b>	8
<b>Section 3: Misc. Forms .....</b>	<b>9</b>
<b>3.1: Chain of Custody .....</b>	10
<b>Section 4: GC Semi-volatiles - QC Data Summaries .....</b>	<b>12</b>
<b>4.1: Method Blank Summary .....</b>	13
<b>4.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	14
<b>Section 5: GC Semi-volatiles - Raw Data .....</b>	<b>15</b>
<b>5.1: Samples .....</b>	16
<b>5.2: Method Blanks .....</b>	24



## Sample Summary

Burns and McDonnell Engineering

Job No: C18635

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA  
Project No: 63142

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
C18635-1	10/24/11	11:25 SB	10/27/11	WIPE Wipe Sample	EAST TANK-E1
C18635-2	10/24/11	11:30 SB	10/27/11	WIPE Wipe Sample	EAST TANK W-1
C18635-3	10/26/11	08:00 SB	10/27/11	WIPE Wipe Sample	WEST TANK W-1
C18635-4	10/26/11	11:00 SB	10/27/11	WIPE Wipe Sample	WEST TANK W-2



Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b>	EAST TANK-E1	<b>Date Sampled:</b>	10/24/11
<b>Lab Sample ID:</b>	C18635-1	<b>Date Received:</b>	10/27/11
<b>Matrix:</b>	WIPE - Wipe Sample	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B M SW846 3550B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29337.D	20	10/27/11	JH	10/27/11	OP4797	GGG784
Run #2							

	Initial Weight	Final Volume
Run #1	1.00 wipes	5.0 ml
Run #2		

## TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	ND	20	10	mg/wipe	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	108%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	EAST TANK W-1	<b>Date Sampled:</b>	10/24/11
<b>Lab Sample ID:</b>	C18635-2	<b>Date Received:</b>	10/27/11
<b>Matrix:</b>	WIPE - Wipe Sample	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B M SW846 3550B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29339.D	20	10/27/11	JH	10/27/11	OP4797	GGG784
Run #2							

	Initial Weight	Final Volume
Run #1	1.00 wipes	5.0 ml
Run #2		

## TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	ND	20	10	mg/wipe	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	124%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WEST TANK W-1	<b>Date Sampled:</b>	10/26/11
<b>Lab Sample ID:</b>	C18635-3	<b>Date Received:</b>	10/27/11
<b>Matrix:</b>	WIPE - Wipe Sample	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B M SW846 3550B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18201.D	20	10/27/11	JH	10/27/11	OP4797	GHH595
Run #2							

Run #	Initial Weight	Final Volume
Run #1	1.00 wipes	5.0 ml
Run #2		

## TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	76.7	20	10	mg/wipe	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	0% <sup>a</sup>		45-140%

(a) Outside control limits due to dilution.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WEST TANK W-2	<b>Date Sampled:</b>	10/26/11
<b>Lab Sample ID:</b>	C18635-4	<b>Date Received:</b>	10/27/11
<b>Matrix:</b>	WIPE - Wipe Sample	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B M SW846 3550B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18202.D	100	10/27/11	JH	10/27/11	OP4797	GHH595
Run #2							

	Initial Weight	Final Volume
Run #1	1.00 wipes	10.0 ml
Run #2		

## TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	636	200	100	mg/wipe	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	0% <sup>a</sup>		45-140%

(a) Outside control limits due to dilution.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Misc. Forms

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### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody



03082011 Form WCD-KC1-SDO

### Request for Chemical Analysis and Chain of Custody Record

BMECAF 136

Burns & McDonnell Engineering  
 400 Oyster Point Blvd. Suite 533  
 South San Francisco, CA 94080  
 Phone: (650) 871-2926 Fax: (650) 871-2653  
 Attention: Simon Becker

Laboratory: *accutest*  
 Address: *2105 lundy ave.*  
 City/State/Zip: *San Jose, CA*  
 Telephone:

Document Control No:  
 Lab. Reference No. or Episode No.: *C18635*

Project Number: *63142* Sample Type

Client Name: *YRC wood st. 1708 wood st, Oakland, CA* Matrix

Group or SWMU Name	Sample Point	Sample Designator	Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Remarks
			Round	Year	From	To	Date	Time	Liquid	Wipe	Gas		
-1	East tank-15		Oct	2011			10-24	1125	/			1	for jar w/ mouth wipe
-2	East tank-11		Oct	2011			10-24	1130	/			1	
-3	West tank-11		Oct	2011			10-26	0900	/			1	
-4	West tank-12		Oct	2011			10-26	1100	/			1	

# 2 DAYS

Sampler (signature): *Simon Becker* Sampler (signature): *[Signature]* Special Instructions: *48 hour turn around.*

Relinquished By (signature): *Simon Becker* Date/Time: *10-27-11 10:45* Received By (signature): *[Signature]* Date/Time: *10-27-11 07:45* Ice Present in Container: Yes  No  Temperature Upon Receipt: *48-1.0=3.0 C*

Relinquished By (signature): *2.* Date/Time: Received By (signature): Laboratory Comments:

31  
3





## GC Semi-volatiles

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### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C18635**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4797-MB	GG29342.D	1	10/27/11	JH	10/27/11	OP4797	GGG784

**The QC reported here applies to the following samples:****Method:** SW846 8015B M

C18635-1, C18635-2, C18635-3, C18635-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	ND	0.20	0.10	mg/wipe	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	66% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18635  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4797-BS	GG29340.D	1	10/27/11	JH	10/27/11	OP4797	GGG784
OP4797-BSD	GG29341.D	1	10/27/11	JH	10/27/11	OP4797	GGG784

The QC reported here applies to the following samples: Method: SW846 8015B M

C18635-1, C18635-2, C18635-3, C18635-4

CAS No.	Compound	Spike mg/wipe	BSP mg/wipe	BSP %	BSD mg/wipe	BSD %	RPD	Limits Rec/RPD
	TPH (> C28-C40)	1	0.510	51	0.486	49	5	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	58%	56%	45-140%

4.2.1  
4

GC Semi-volatiles

---

Raw Data

---

5

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG784\GG29337.D Vial: 15  
 Acq On : 10-27-11 2:18:02 PM Operator: JAMESH  
 Sample : C18635-1 Inst : Diesel #2  
 Misc : OP4797,GGG784,1,,,5,20,WIPE Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 27 14:45 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.94	1538580	1.082 ppm
Spiked Amount 100.000		Recovery =	1.08%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	501124956	390.286 ppm
3) H TPH (>C28-C40)	11.83	3757470	4.213 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	501124956	382.960 ppm
7) H TPH (Motor Oil)	11.83	3757470	4.200 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29337.D GGG709.M Fri Oct 28 13:11:03 2011

5.1.1  
**5**

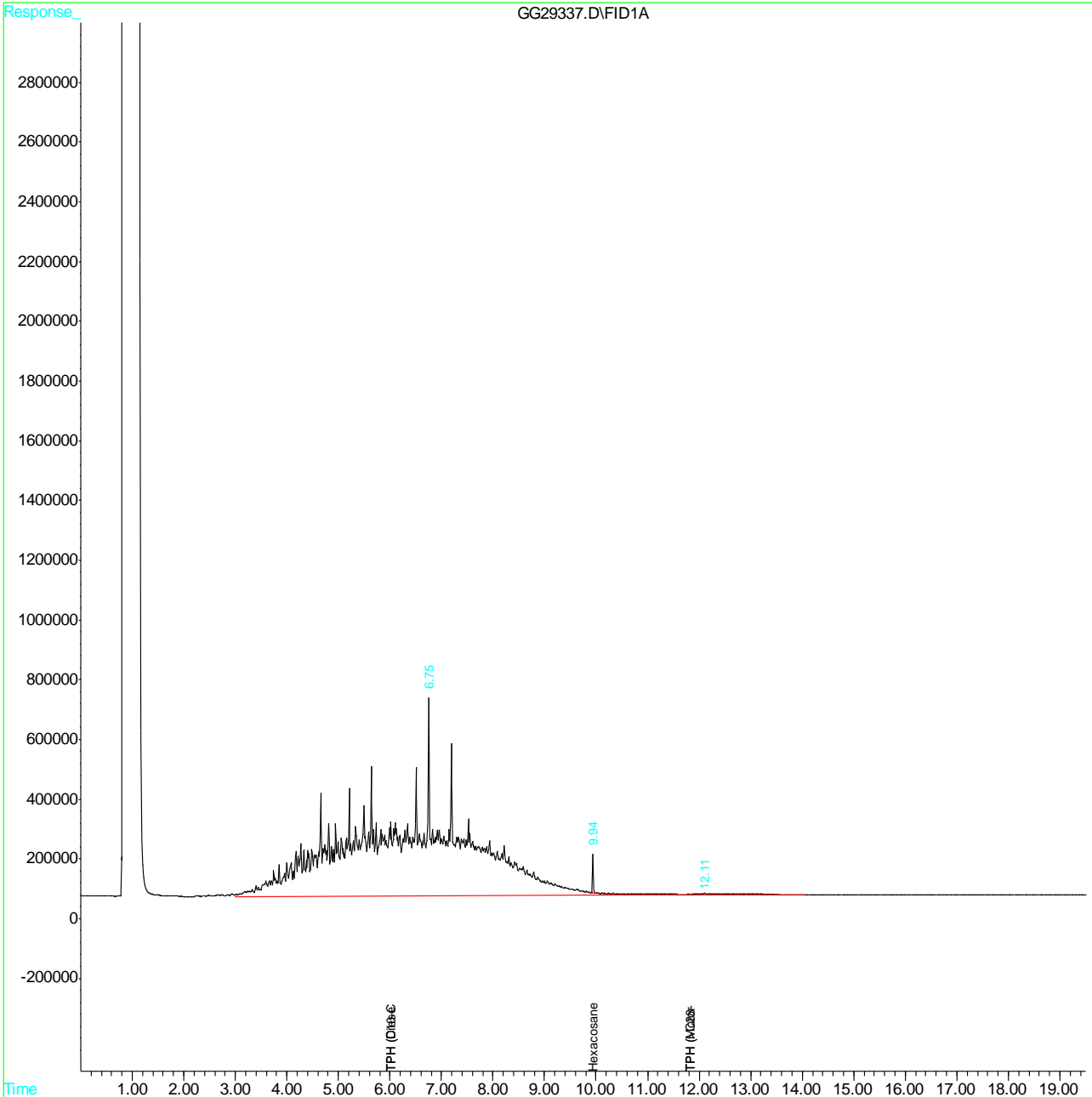
Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG784\GG29337.D Vial: 15  
 Acq On : 10-27-11 2:18:02 PM Operator: JAMESH  
 Sample : C18635-1 Inst : Diesel #2  
 Misc : OP4797,GGG784,1,,5,20,WIPE Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 27 14:45 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

5.1.1  
 5



Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG784\GG29339.D Vial: 16  
 Acq On : 10-27-11 3:09:32 PM Operator: JAMESH  
 Sample : C18635-2 Inst : Diesel #2  
 Misc : OP4797,GGG784,1,,,5,20,WIPE Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 28 8:06 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.94	1764025	1.241 ppm
Spiked Amount 100.000		Recovery =	1.24%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	1184338732	922.386 ppm
3) H TPH (>C28-C40)	11.83	4576398	5.132 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	1184338732	905.072 ppm
7) H TPH (Motor Oil)	11.83	4576398	5.115 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29339.D GGG709.M Fri Oct 28 13:11:04 2011

5.12  
 5

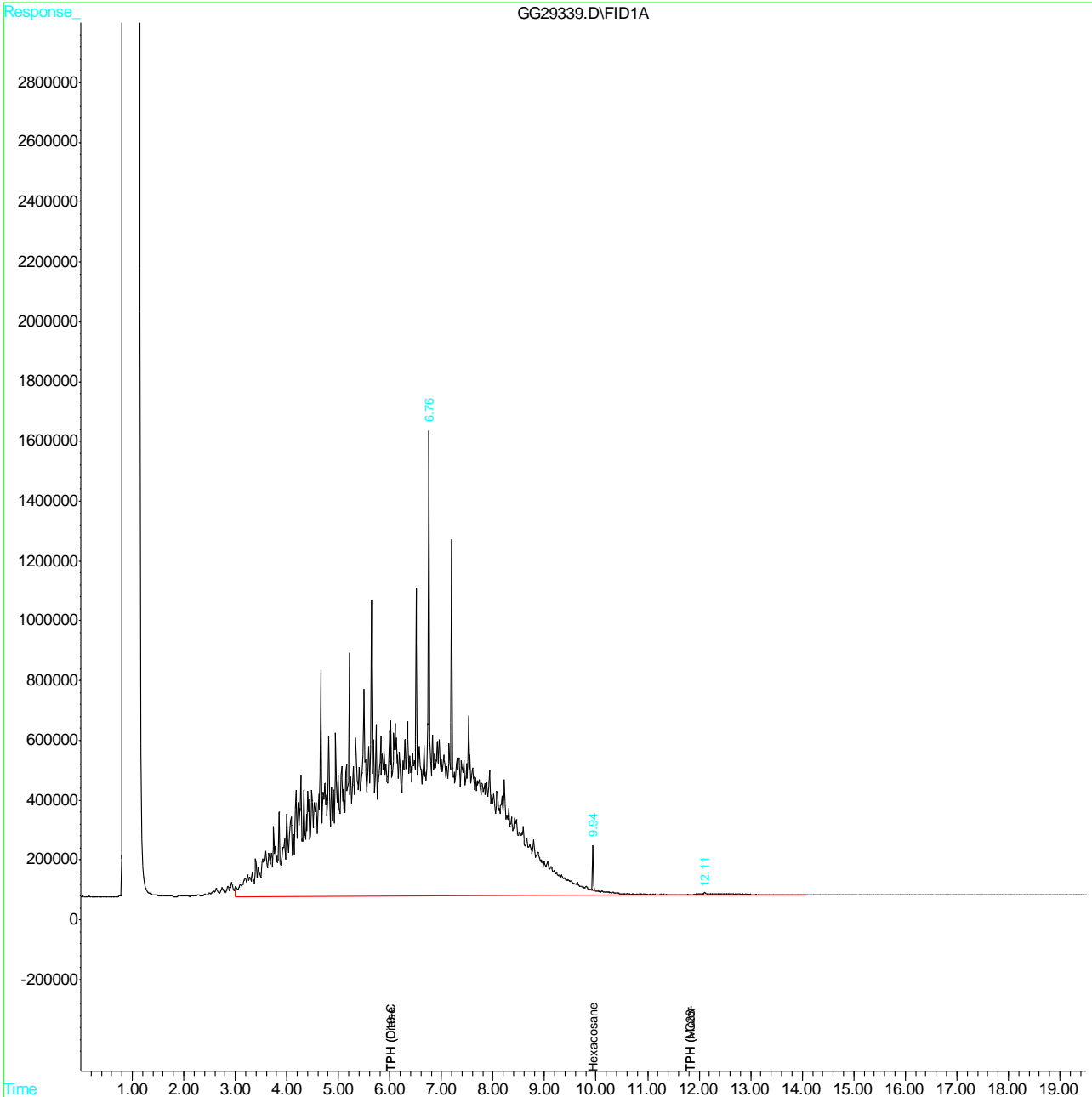
Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG784\GG29339.D Vial: 16  
 Acq On : 10-27-11 3:09:32 PM Operator: JAMESH  
 Sample : C18635-2 Inst : Diesel #2  
 Misc : OP4797,GGG784,1,,5,20,WIPE Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 28 8:06 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

5.1.2  
5





Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH595\HH18201.D Vial: 14  
 Acq On : 27 Oct 2011 2:47 pm Operator: JAMESH  
 Sample : C18635-3 Inst : Diesel 3  
 Misc : OP4797,GHH595,1,,5,20,WIPE Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Oct 28 8:02 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S Hexacosane	0.00	0	N.D.	ppm
Spiked Amount 100.000		Recovery	=	0.00%
Target Compounds				
2) H TPH (C10-C28)	5.82	10130319	501.261	ppm
3) H TPH (>C28-C40)	14.51	11697703	767.125	ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D.	ppm
5) H TPH (Kerosene)	0.00	0	N.D.	ppm
6) H TPH (Diesel)	5.82	10189069	501.705	ppm
7) H TPH (Motor Oil)	14.51	11767759	768.398	ppm

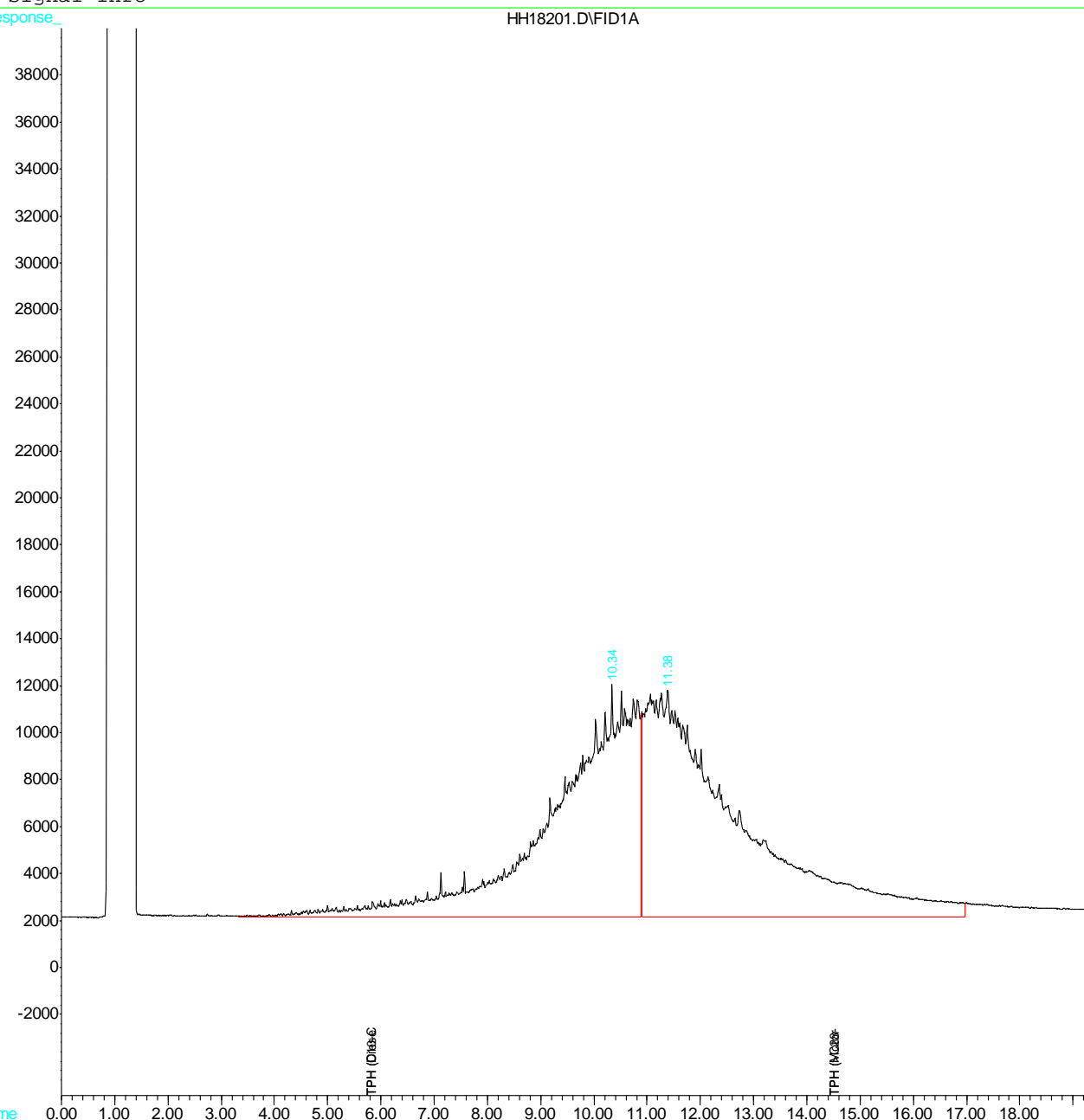
(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18201.D GHH583.M Mon Oct 31 08:47:24 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH595\HH18201.D Vial: 14  
 Acq On : 27 Oct 2011 2:47 pm Operator: JAMESH  
 Sample : C18635-3 Inst : Diesel 3  
 Misc : OP4797,GHH595,1,,5,20,WIPE Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Oct 28 8:02 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH595\HH18202.D Vial: 15  
 Acq On : 27 Oct 2011 3:14 pm Operator: JAMESH  
 Sample : C18635-4 Inst : Diesel 3  
 Misc : OP4797,GHH595,1,,10,100,WIPE Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Oct 28 8:05 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	0.00	0	N.D. ppm
Spiked Amount 100.000		Recovery =	0.00%
Target Compounds			
2) H TPH (C10-C28)	5.82	8245469	407.996 ppm
3) H TPH (>C28-C40)	14.51	9699030	636.054 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	8195288	403.532 ppm
7) H TPH (Motor Oil)	14.51	9732088	635.475 ppm

5.14  
5

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18202.D GHH583.M Mon Oct 31 08:47:25 2011

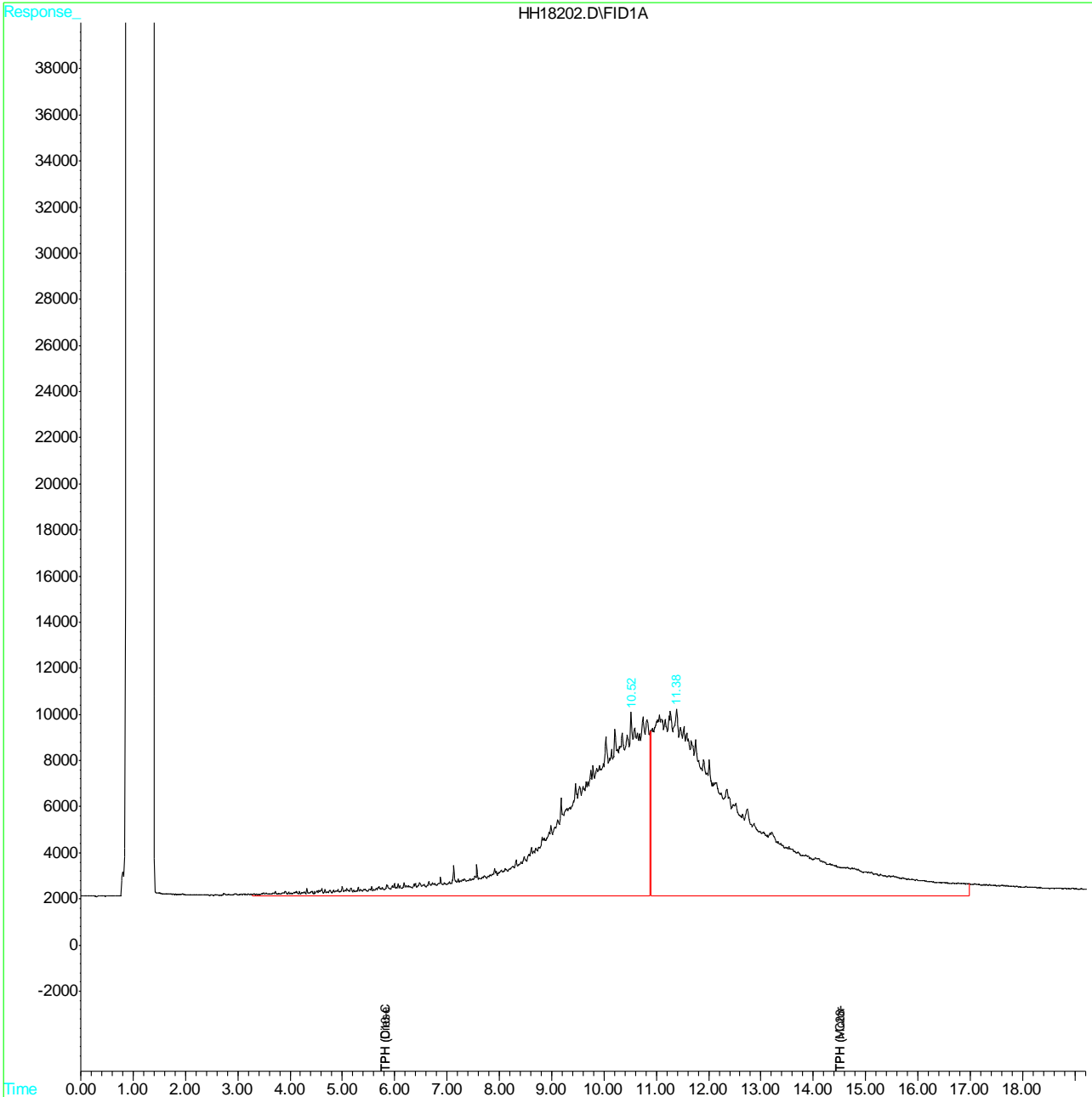
Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH595\HH18202.D Vial: 15  
 Acq On : 27 Oct 2011 3:14 pm Operator: JAMESH  
 Sample : C18635-4 Inst : Diesel 3  
 Misc : OP4797,GHH595,1,,10,100,WIPE Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Oct 28 8:05 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

5.14  
**5**



Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG784\GG29342.D Vial: 19  
 Acq On : 10-27-11 4:27:32 PM Operator: JAMESH  
 Sample : OP4797-MB Inst : Diesel #2  
 Misc : OP4797,GGG784,1,,1,1,WIPE Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 28 8:07 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	94072485	66.165 ppm
Spiked Amount 100.000		Recovery =	66.17%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	29479409	22.959 ppm
3) H TPH (>C28-C40)	11.83	13418675	15.047 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	29479409	22.528 ppm
7) H TPH (Motor Oil)	11.83	13418675	14.998 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29342.D GGG709.M Fri Oct 28 13:11:07 2011

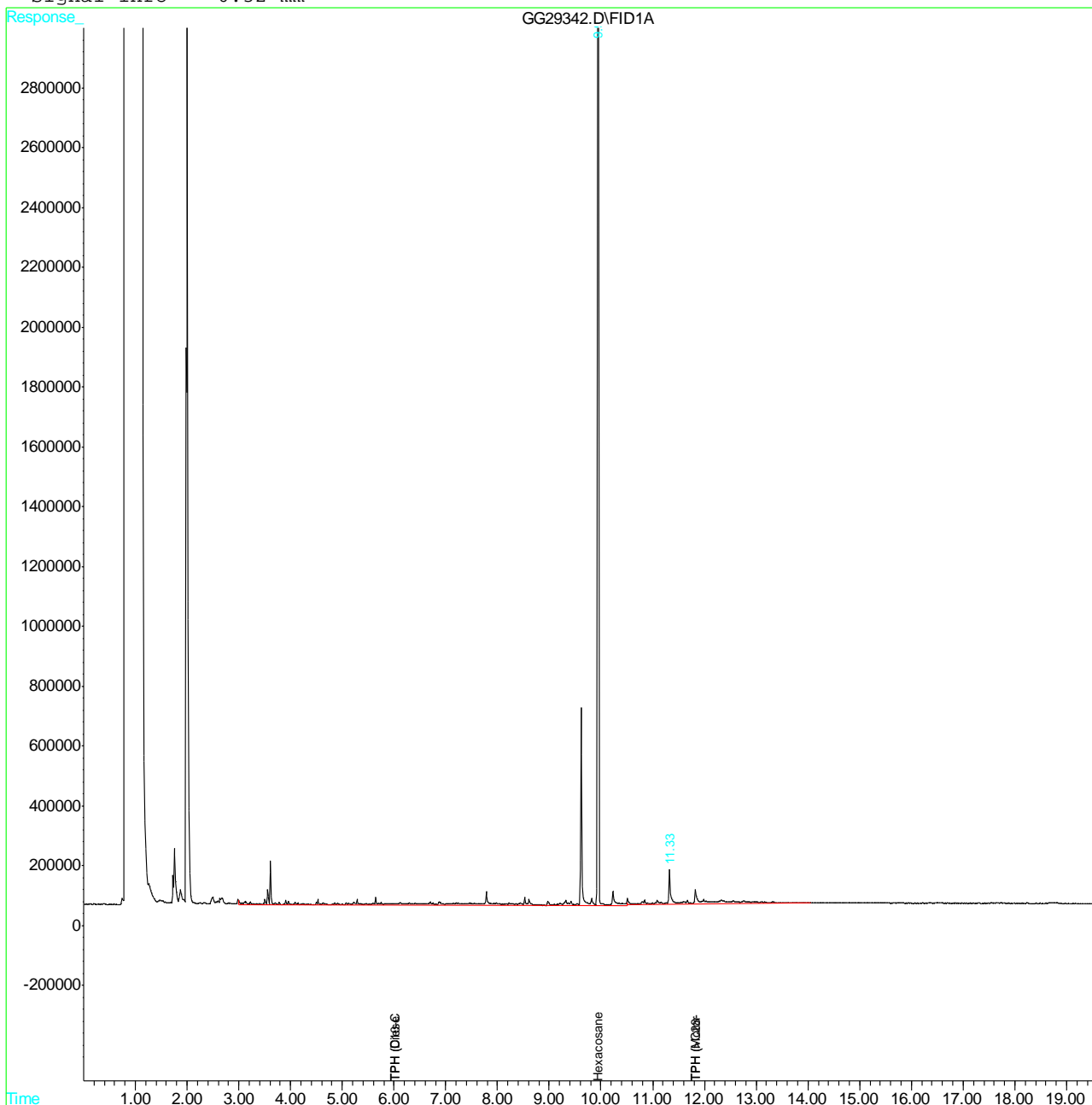
5.2.1  
**5**

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG784\GG29342.D Vial: 19  
 Acq On : 10-27-11 4:27:32 PM Operator: JAMESH  
 Sample : OP4797-MB Inst : Diesel #2  
 Misc : OP4797,GGG784,1,,1,1,WIPE Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 28 8:07 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



5.2.1  
 5



Curtis & Tompkins, Ltd.  
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 231139  
ANALYTICAL REPORT

Burns & McDonnell  
400 Oyster Point Blvd  
South San Francisco, CA 94080

Project : 63142  
Location : YRC  
Level : II

Sample ID  
STOCK #1

Lab ID  
231139-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature:

Project Manager

Date: 09/21/2011

NELAP # 01107CA



## CASE NARRATIVE

Laboratory number: 231139  
Client: Burns & McDonnell  
Project: 63142  
Location: YRC  
Request Date: 09/16/11  
Samples Received: 09/16/11

This data package contains sample and QC results for one soil sample, requested for the above referenced project on 09/16/11. The sample was received cold and intact.

### TPH-Purgeables and/or BTXE by GC (EPA 8015B):

High surrogate recovery was observed for bromofluorobenzene (FID) in STOCK #1 (lab # 231139-001). No other analytical problems were encountered.

### TPH-Extractables by GC (EPA 8015B):

STOCK #1 (lab # 231139-001) was diluted due to the dark and viscous nature of the sample extract. No other analytical problems were encountered.

### Volatile Organics by GC/MS (EPA 8260B):

High recovery was observed for MTBE in the MSD for batch 179129; the parent sample was not a project sample, the LCS was within limits, the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated sample. High surrogate recovery was observed for bromofluorobenzene in STOCK #1 (lab # 231139-001); no target analytes were detected in the sample. No other analytical problems were encountered.

### Metals (EPA 6010B) Soil:

High recovery was observed for zinc in the MSD for batch 179061; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits. No other analytical problems were encountered.

### Metals (EPA 6010B) TCLP Leachate:

No analytical problems were encountered.

### Metals (EPA 6010B and EPA 7470A) WET Leachate:

No analytical problems were encountered.



03082011 Form WCD-KC1-SDO

# Request for Chemical Analysis and Chain of Custody Record

231139

Burns & McDonnell Engineering  
 400 Oyster Point Blvd. Suite 533  
 South San Francisco, CA 94080  
 Phone: (650) 871-2926 Fax: (650) 871-2653  
 Attention: *Simon Barber*

Laboratory: *Curtis + Tompkins Ltd*  
 Address: *2323 Fifth Street*  
 City/State/Zip: *Berkeley, CA 94710*  
 Telephone: *510-204-2226*

Document Control No:

Lab. Reference No. or Episode No.:

Project Number: *63142*

Sample Type

Client Name: *YRC*

Matrix

Group or SWMU Name	Sample Number		Sample Event		Sample Depth (in feet)		Sample Collected		Liquid	Solid	Gas	Number of Containers	Analysis	Remarks
	Sample Point	Sample Designator	Round	Year	From	To	Date	Time						
	<i>Stock #1</i>		<i>NW</i>	<i>2011</i>			<i>9-16</i>	<i>1300</i>		<i>S</i>		<i>7</i>	<i>TPH diesel 3/30/2015</i> <i>TPH Motor Oil 3/22/2015</i> <i>TPH Gasoline 3/22/2015</i> <i>BTEX-mt6 8/15/14</i> <i>TCIP - benzene level 8/15/14</i> <i>STLC - benzene level 8/15/14</i> <i>LUPIS-metals</i>	
														<i>Rush turn around</i> <i>48-72 hours.</i>

Sampler (signature): *Simon Barber*

Sampler (signature): *[Signature]*

Special Instructions:

Relinquished By (signature): *Simon Barber*

Date/Time: *9-16-11/1645*

Received By (signature): *[Signature]*

Date/Time: *9/16/11 1645*

Ice Present in Container: Yes  No

Temperature Upon Receipt:

Relinquished By (signature):

Date/Time:

Received By (signature):

Date/Time:

Laboratory Comments:

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 231139 Date Received 9/16/11 Number of coolers
Client Burns & Mae Project VRC

Date Opened 9/16/11 By (print) Vidya Dashi (sign)
Date Logged in By (print) (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used: Wet, Blue/Gel, None Temp(°C)

Samples Received on ice & cold without a temperature blank

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO

If YES, what time were they transferred to freezer? 1650 9/16/11

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are samples in the appropriate containers for indicated tests? YES NO

11. Are sample labels present, in good condition and complete? YES NO

12. Do the sample labels agree with custody papers? YES NO

13. Was sufficient amount of sample sent for tests requested? YES NO

14. Are the samples appropriately preserved? YES NO N/A

15. Did you check preservatives for all bottles for each sample? YES NO N/A

16. Did you document your preservative check? YES NO N/A

17. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

18. Are bubbles > 6mm absent in VOA samples? YES NO N/A

19. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

1 VOA broken by Logger in

Gasoline by GC/FID (5035 Prep)			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 5035
Project#:	63142	Analysis:	EPA 8015B
Field ID:	STOCK #1	Diln Fac:	1.000
Matrix:	Soil	Batch#:	179040
Units:	mg/Kg	Sampled:	09/16/11
Basis:	as received	Received:	09/16/11

Type: SAMPLE Analyzed: 09/17/11  
 Lab ID: 231139-001

Analyte	Result	RL
Gasoline C7-C12	7.4 Y	0.21

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	187 *	74-132

Type: BLANK Analyzed: 09/16/11  
 Lab ID: QC609423

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	90	74-132

\*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Gasoline by GC/FID (5035 Prep)			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 5035
Project#:	63142	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC609422	Batch#:	179040
Matrix:	Soil	Analyzed:	09/16/11
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	0.9658	97	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	93	74-132

## Batch QC Report

Gasoline by GC/FID (5035 Prep)			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 5035
Project#:	63142	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	231132-001	Batch#:	179040
Matrix:	Soil	Sampled:	09/16/11
Units:	mg/Kg	Received:	09/16/11
Basis:	as received	Analyzed:	09/17/11

Type: MS Lab ID: QC609424

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.03911	10.20	8.765	86	43-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	91	74-132

Type: MSD Lab ID: QC609425

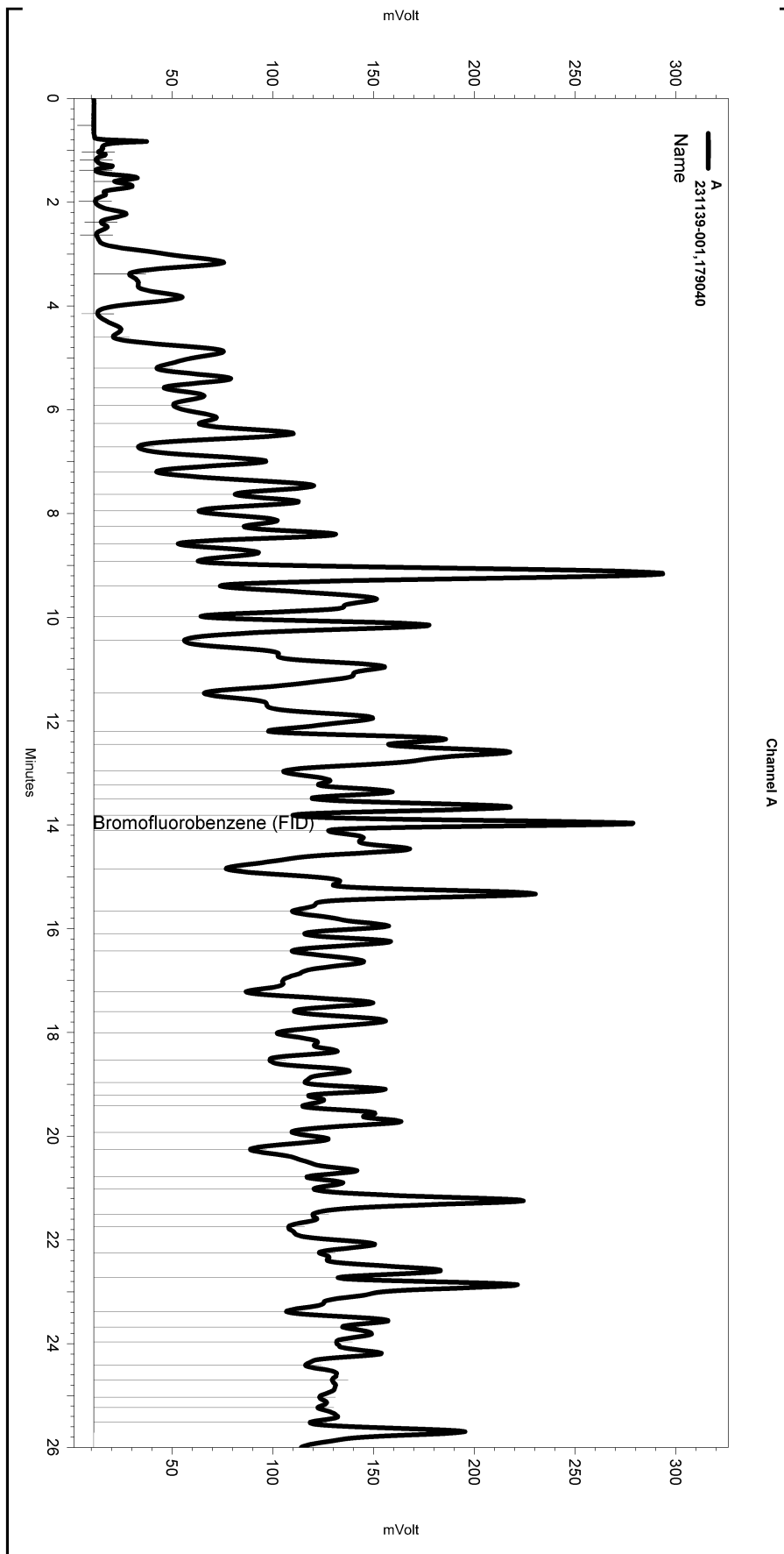
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.615	8.203	85	43-120	1	34

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	93	74-132

RPD= Relative Percent Difference

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\259.seq  
 Sample Name: 231139-001,179040  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\259-022  
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\TVHBTXE257.met

Software Version 3.1.7  
 Run Date: 9/17/2011 1:58:19 AM  
 Analysis Date: 9/19/2011 1:24:41 PM  
 Sample Amount: 4.82 Multiplier: 4.82  
 Vial & pH or Core ID: a



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

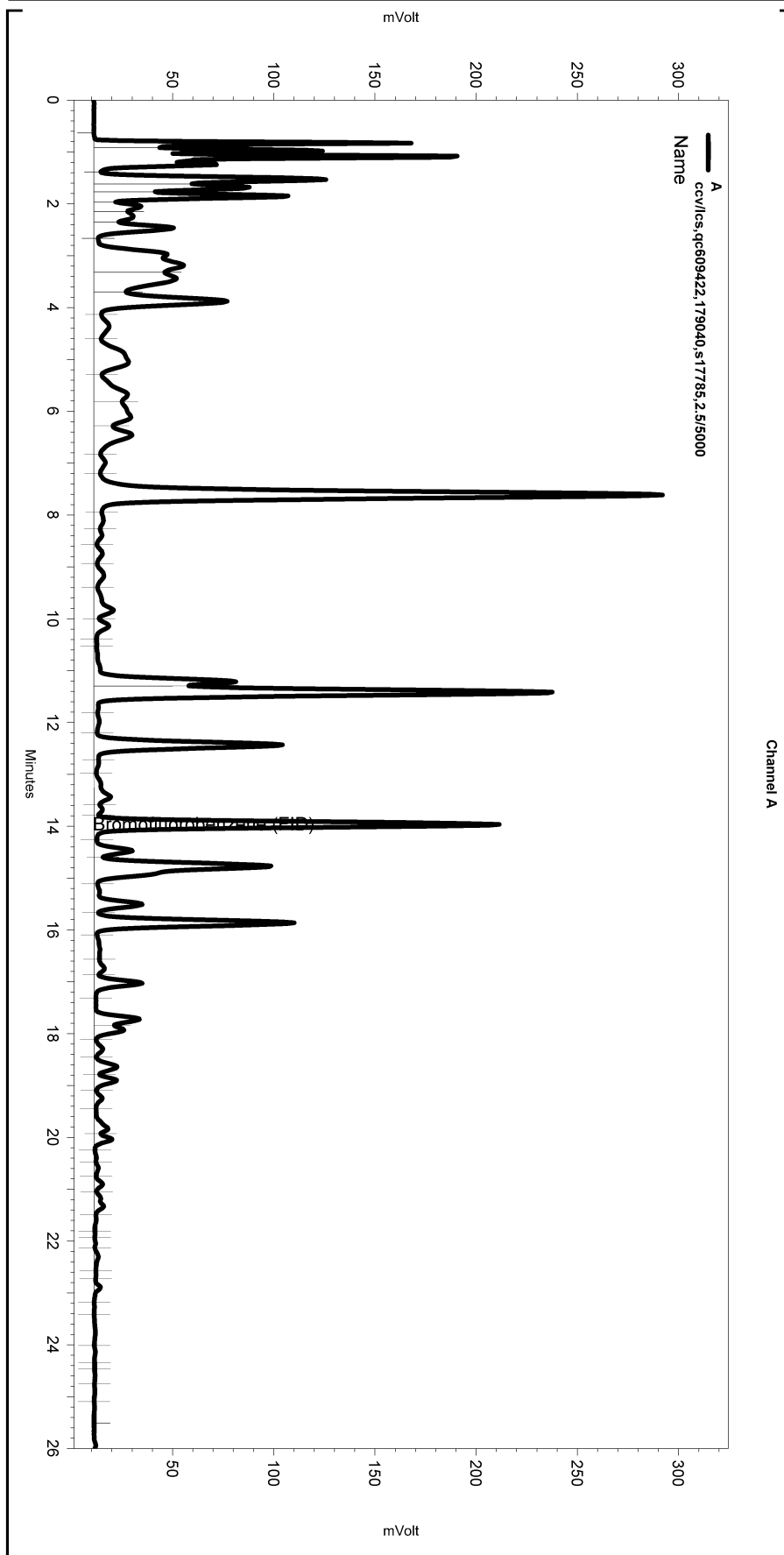
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\259-022

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0	26.017	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\259.seq  
 Sample Name: ccv/lcs,qc609422,179040,s17785,2.5/5000  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\259-016  
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe257.met

Software Version 3.1.7  
 Run Date: 9/16/2011 10:12:40 PM  
 Analysis Date: 9/19/2011 1:15:41 PM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: {Data Description}



-----  
 ---< General Method Parameters >-----  
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No items selected for this section

-----  
 ---< A >-----  
 -----

No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\259-016

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				



Total Extractable Hydrocarbons			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3550B
Project#:	63142	Analysis:	EPA 8015B
Field ID:	STOCK #1	Batch#:	179003
Matrix:	Soil	Sampled:	09/16/11
Units:	mg/Kg	Received:	09/16/11
Basis:	as received		

Type: SAMPLE Prepared: 09/16/11  
 Lab ID: 231139-001 Analyzed: 09/18/11  
 Diln Fac: 5.000

Analyte	Result	RL
Diesel C10-C24	110 Y	5.0
Motor Oil C24-C36	290	25

Surrogate	%REC	Limits
o-Terphenyl	115	62-120

Type: BLANK Prepared: 09/15/11  
 Lab ID: QC609252 Analyzed: 09/16/11  
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	103	62-120

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3550B
Project#:	63142	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC609253	Batch#:	179003
Matrix:	Soil	Prepared:	09/15/11
Units:	mg/Kg	Analyzed:	09/16/11

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.44	44.95	89	54-138

Surrogate	%REC	Limits
o-Terphenyl	111	62-120

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3550B
Project#:	63142	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	179003
MSS Lab ID:	231079-002	Sampled:	09/15/11
Matrix:	Soil	Received:	09/15/11
Units:	mg/Kg	Prepared:	09/15/11
Basis:	as received	Analyzed:	09/16/11
Diln Fac:	1.000		

Type: MS Lab ID: QC609254

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	54.69	50.68	107.5	104	35-150

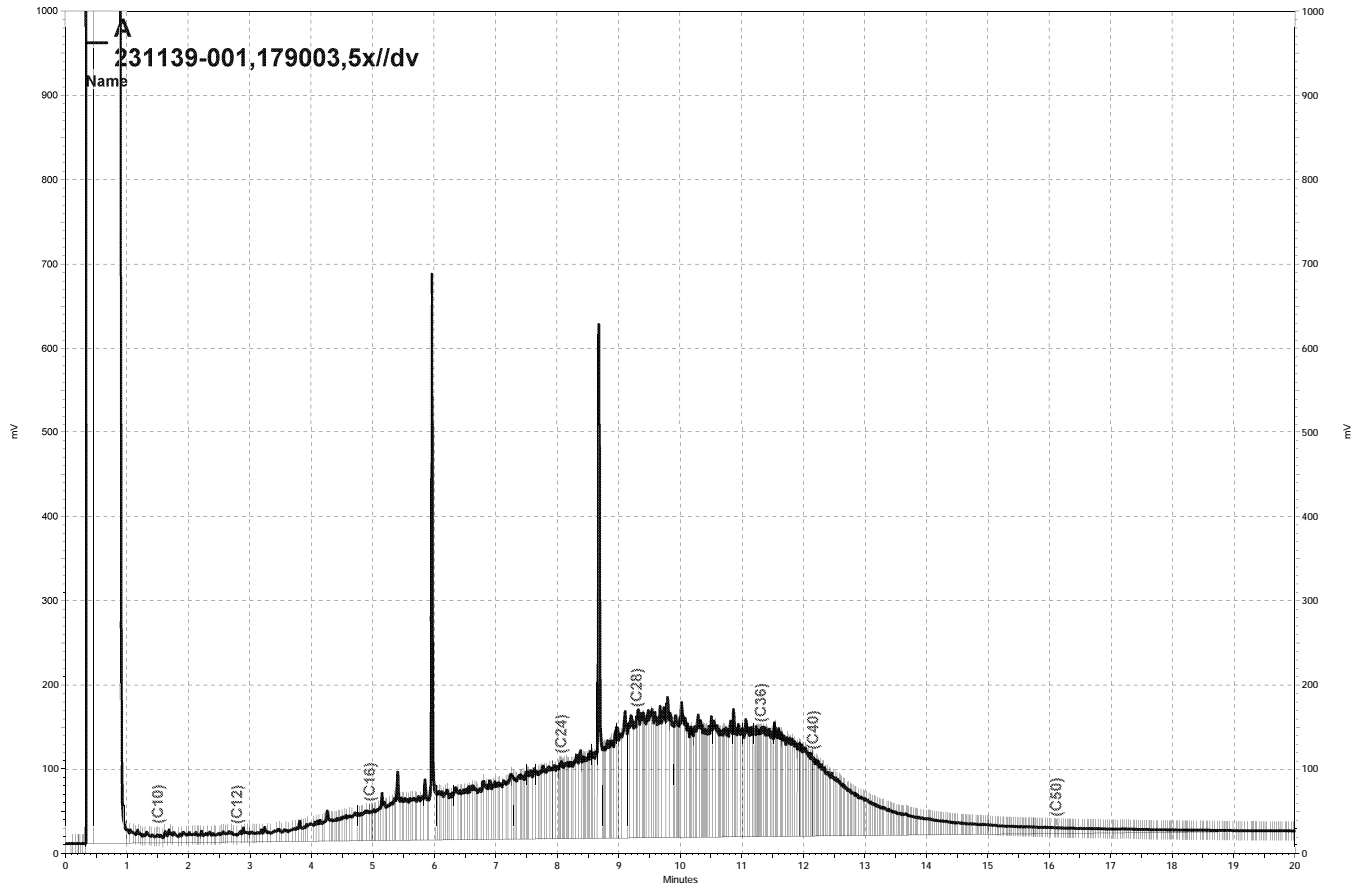
Surrogate	%REC	Limits
o-Terphenyl	105	62-120

Type: MSD Lab ID: QC609255

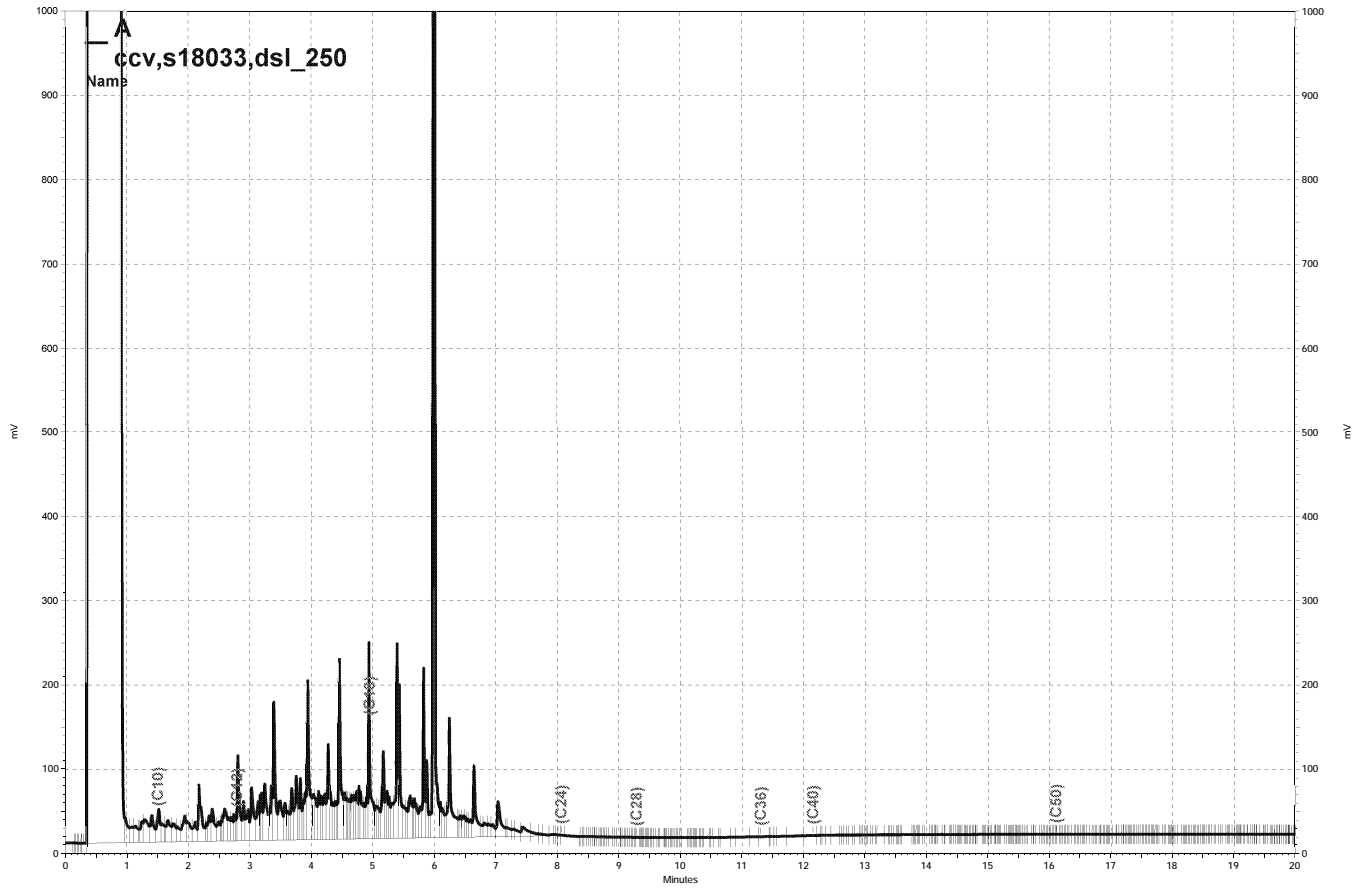
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.00	120.0	131	35-150	12	71

Surrogate	%REC	Limits
o-Terphenyl	102	62-120

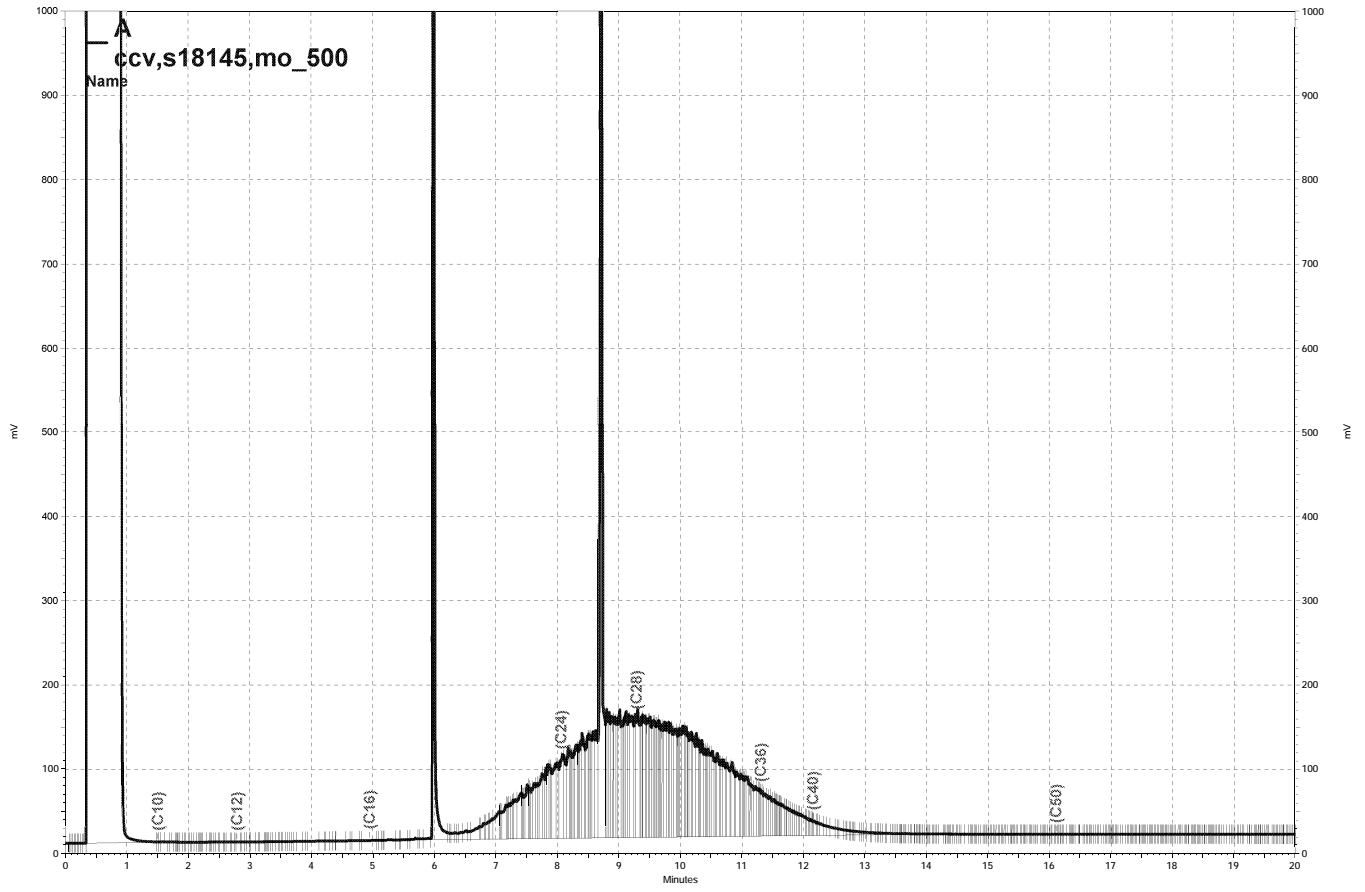
RPD= Relative Percent Difference



— \\Lims\gdrive\ezchrom\Projects\GC17A\Data\261a013, A



— \\Lims\gdrive\ezchrom\Projects\GC17A\Data\261a003, A



— \\Lims\gdrive\ezchrom\Projects\GC17A\Data\261a004, A

Purgeable Aromatics by GC/MS			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 5035
Project#:	63142	Analysis:	EPA 8260B
Field ID:	STOCK #1	Batch#:	179129
Matrix:	Soil	Sampled:	09/16/11
Units:	ug/Kg	Received:	09/16/11
Basis:	as received	Analyzed:	09/20/11

Type: SAMPLE Diln Fac: 0.8213  
 Lab ID: 231139-001

Analyte	Result	RL
MTBE	ND	4.1
Benzene	ND	4.1
Toluene	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	98	71-126
1,2-Dichloroethane-d4	98	74-130
Toluene-d8	98	80-120
Bromofluorobenzene	143 *	76-131

Type: BLANK Diln Fac: 1.000  
 Lab ID: QC609801

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	110	71-126
1,2-Dichloroethane-d4	114	74-130
Toluene-d8	97	80-120
Bromofluorobenzene	101	76-131

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 5035
Project#:	63142	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC609800	Batch#:	179129
Matrix:	Soil	Analyzed:	09/20/11
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	29.93	120	59-120
Benzene	25.00	23.92	96	80-122
Toluene	25.00	21.90	88	80-120
Ethylbenzene	25.00	22.95	92	80-122
m,p-Xylenes	50.00	47.28	95	79-126
o-Xylene	25.00	23.66	95	79-122

Surrogate	%REC	Limits
Dibromofluoromethane	108	71-126
1,2-Dichloroethane-d4	107	74-130
Toluene-d8	96	80-120
Bromofluorobenzene	98	76-131



**Batch QC Report**

Purgeable Aromatics by GC/MS			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 5030B
Project#:	63142	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	179129
MSS Lab ID:	231169-002	Sampled:	09/19/11
Matrix:	Soil	Received:	09/20/11
Units:	ug/Kg	Analyzed:	09/20/11
Basis:	as received		

Type: MS Diln Fac: 0.9785  
 Lab ID: QC609837

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.9702	48.92	56.99	116	52-120
Benzene	<0.6675	48.92	44.16	90	62-123
Toluene	4.980	48.92	44.53	81	59-120
Ethylbenzene	<0.5910	48.92	39.59	81	53-123
m,p-Xylenes	4.660	97.85	82.64	80	52-125
o-Xylene	4.233	48.92	41.97	77	52-123

Surrogate	%REC	Limits
Dibromofluoromethane	105	71-126
1,2-Dichloroethane-d4	99	74-130
Toluene-d8	97	80-120
Bromofluorobenzene	101	76-131

Type: MSD Diln Fac: 0.9728  
 Lab ID: QC609838

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	48.64	59.79	123 *	52-120	5	37
Benzene	48.64	45.06	93	62-123	3	40
Toluene	48.64	44.40	81	59-120	0	43
Ethylbenzene	48.64	39.21	81	53-123	0	43
m,p-Xylenes	97.28	80.07	78	52-125	3	45
o-Xylene	48.64	41.67	77	52-123	0	41

Surrogate	%REC	Limits
Dibromofluoromethane	104	71-126
1,2-Dichloroethane-d4	99	74-130
Toluene-d8	98	80-120
Bromofluorobenzene	104	76-131

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

California LUFT Metals			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3050B
Project#:	63142	Analysis:	EPA 6010B
Field ID:	STOCK #1	Batch#:	179061
Matrix:	Soil	Sampled:	09/16/11
Units:	mg/Kg	Received:	09/16/11
Basis:	as received	Prepared:	09/19/11
Diln Fac:	1.000	Analyzed:	09/19/11

Type: SAMPLE Lab ID: 231139-001

Analyte	Result	RL
Cadmium	0.48	0.25
Chromium	41	0.25
Lead	34	0.25
Nickel	40	0.25
Zinc	87	1.0

Type: BLANK Lab ID: QC609512

Analyte	Result	RL
Cadmium	ND	0.25
Chromium	ND	0.25
Lead	ND	0.25
Nickel	ND	0.25
Zinc	ND	1.0

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California LUFT Metals			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3050B
Project#:	63142	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	179061
Units:	mg/Kg	Prepared:	09/19/11
Diln Fac:	1.000	Analyzed:	09/19/11

Type: BS Lab ID: QC609513

Analyte	Spiked	Result	%REC	Limits
Cadmium	10.00	10.06	101	80-120
Chromium	100.0	98.74	99	80-120
Lead	100.0	98.62	99	80-120
Nickel	25.00	24.24	97	80-120
Zinc	25.00	24.93	100	80-120

Type: BSD Lab ID: QC609514

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Cadmium	10.00	10.19	102	80-120	1	20
Chromium	100.0	100.4	100	80-120	2	20
Lead	100.0	100.0	100	80-120	1	20
Nickel	25.00	24.62	98	80-120	2	20
Zinc	25.00	25.46	102	80-120	2	20

RPD= Relative Percent Difference

**Batch QC Report**

<b>California LUFT Metals</b>			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3050B
Project#:	63142	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	179061
MSS Lab ID:	231131-001	Sampled:	09/16/11
Matrix:	Soil	Received:	09/16/11
Units:	mg/Kg	Prepared:	09/19/11
Basis:	as received	Analyzed:	09/19/11
Diln Fac:	1.000		

Type: MS Lab ID: QC609515

Analyte	MSS Result	Spiked	Result	%REC	Limits
Cadmium	0.3200	9.259	8.764	91	70-120
Chromium	435.3	92.59	683.3 >LR	268 NM	54-127
Lead	21.42	92.59	118.8	105	54-124
Nickel	1,156	23.15	1,253 >LR	416 NM	37-141
Zinc	42.95	23.15	77.72	150	32-153

Type: MSD Lab ID: QC609516

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Cadmium	9.174	8.563	90	70-120	1	37
Chromium	91.74	538.0 >LR	112 NM	54-127	NC	36
Lead	91.74	106.3	93	54-124	10	43
Nickel	22.94	1,140 >LR	-70 NM	37-141	NC	33
Zinc	22.94	85.08	184 *	32-153	9	37

\*= Value outside of QC limits; see narrative

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

### Metals Analytical Report

Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3010A
Project#:	63142	Analysis:	EPA 6010B
Field ID:	STOCK #1	Sampled:	09/16/11
Matrix:	TCLP Leachate	Received:	09/16/11
Units:	ug/L	Prepared:	09/19/11
Diln Fac:	10.00	Analyzed:	09/20/11
Batch#:	179085		

Type: SAMPLE                      Lab ID: 231139-001

Analyte	Result	RL
Barium	890	50
Copper	ND	50
Lead	79	50

Type: BLANK                      Lab ID: QC609615

Analyte	Result	RL
Barium	ND	50
Copper	ND	50
Lead	ND	50

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Metals Analytical Report			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3010A
Project#:	63142	Analysis:	EPA 6010B
Matrix:	TCLP Leachate	Batch#:	179085
Units:	ug/L	Prepared:	09/19/11
Diln Fac:	1.000	Analyzed:	09/20/11

Type: BS Lab ID: QC609616

Analyte	Spiked	Result	%REC	Limits
Barium	2,000	2,006	100	80-120
Copper	250.0	245.9	98	77-120
Lead	2,000	2,021	101	77-120

Type: BSD Lab ID: QC609617

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Barium	2,000	2,088	104	80-120	4	20
Copper	250.0	255.9	102	77-120	4	20
Lead	2,000	2,074	104	77-120	3	20

RPD= Relative Percent Difference

Batch QC Report

Metals Analytical Report			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	EPA 3010A
Project#:	63142	Analysis:	EPA 6010B
Field ID:	STOCK #1	Batch#:	179085
MSS Lab ID:	231139-001	Sampled:	09/16/11
Matrix:	TCLP Leachate	Received:	09/16/11
Units:	ug/L	Prepared:	09/19/11
Diln Fac:	10.00	Analyzed:	09/20/11

Type: MS Lab ID: QC609618

Analyte	MSS Result	Spiked	Result	%REC	Limits
Barium	892.6	2,000	2,868	99	71-120
Copper	26.42	250.0	279.0	101	66-124
Lead	79.15	2,000	2,120	102	58-120

Type: MSD Lab ID: QC609619

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Barium	2,000	3,024	107	71-120	5	24
Copper	250.0	286.7	104	66-124	3	30
Lead	2,000	2,219	107	58-120	5	29

RPD= Relative Percent Difference

**California Title 22 Metals**

Lab #:	231139	Project#:	63142
Client:	Burns & McDonnell	Location:	YRC
Field ID:	STOCK #1	Sampled:	09/16/11
Lab ID:	231139-001	Received:	09/16/11
Matrix:	WET Leachate	Analyzed:	09/21/11
Units:	ug/L		

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Prep	Analysis
Antimony	ND	500	10.00	179148	09/20/11	WET	EPA 6010B
Arsenic	540	300	10.00	179148	09/20/11	WET	EPA 6010B
Barium	4,700	250	10.00	179148	09/20/11	WET	EPA 6010B
Beryllium	ND	100	10.00	179148	09/20/11	WET	EPA 6010B
Cadmium	ND	250	10.00	179148	09/20/11	WET	EPA 6010B
Chromium	ND	250	10.00	179148	09/20/11	WET	EPA 6010B
Cobalt	350	250	10.00	179148	09/20/11	WET	EPA 6010B
Copper	420	250	10.00	179148	09/20/11	WET	EPA 6010B
Lead	2,200	250	10.00	179148	09/20/11	WET	EPA 6010B
Mercury	ND	2.0	1.000	179166	09/21/11	METHOD	EPA 7470A
Molybdenum	ND	250	10.00	179148	09/20/11	WET	EPA 6010B
Nickel	510	250	10.00	179148	09/20/11	WET	EPA 6010B
Selenium	ND	500	10.00	179148	09/20/11	WET	EPA 6010B
Silver	ND	250	10.00	179148	09/20/11	WET	EPA 6010B
Thallium	ND	500	10.00	179148	09/20/11	WET	EPA 6010B
Vanadium	460	250	10.00	179148	09/20/11	WET	EPA 6010B
Zinc	3,800	1,000	10.00	179148	09/20/11	WET	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit



## Batch QC Report

California Title 22 Metals			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	WET
Project#:	63142	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	10.00
Lab ID:	QC609867	Batch#:	179148
Matrix:	WET Leachate	Prepared:	09/20/11
Units:	ug/L	Analyzed:	09/21/11

Analyte	Result	RL
Antimony	ND	500
Arsenic	ND	300
Barium	ND	250
Beryllium	ND	100
Cadmium	ND	250
Chromium	ND	250
Cobalt	ND	250
Copper	ND	250
Lead	ND	250
Molybdenum	ND	250
Nickel	ND	250
Selenium	ND	500
Silver	ND	250
Thallium	ND	500
Vanadium	ND	250
Zinc	ND	1,000

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

California Title 22 Metals			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	WET
Project#:	63142	Analysis:	EPA 6010B
Matrix:	WET Leachate	Batch#:	179148
Units:	ug/L	Prepared:	09/20/11
Diln Fac:	1.000	Analyzed:	09/21/11

Type: BS Lab ID: QC609868

Analyte	Spiked	Result	%REC	Limits
Antimony	2,000	1,689	84	75-120
Arsenic	1,000	1,014	101	80-128
Barium	2,000	2,017	101	80-120
Beryllium	50.00	51.25	103	80-121
Cadmium	200.0	207.4	104	80-120
Chromium	2,000	2,005	100	80-120
Cobalt	500.0	494.4	99	80-120
Copper	250.0	253.4	101	77-120
Lead	2,000	1,976	99	77-120
Molybdenum	400.0	385.1	96	80-120
Nickel	500.0	502.8	101	80-120
Selenium	1,000	1,018	102	80-123
Silver	200.0	200.9	100	79-120
Thallium	1,000	1,035	104	80-124
Vanadium	500.0	510.0	102	80-120
Zinc	500.0	517.6	104	80-120

Type: BSD Lab ID: QC609869

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	2,000	1,723	86	75-120	2	20
Arsenic	1,000	1,020	102	80-128	1	20
Barium	2,000	2,051	103	80-120	2	20
Beryllium	50.00	51.96	104	80-121	1	20
Cadmium	200.0	206.8	103	80-120	0	20
Chromium	2,000	2,023	101	80-120	1	20
Cobalt	500.0	492.9	99	80-120	0	20
Copper	250.0	254.6	102	77-120	0	20
Lead	2,000	1,972	99	77-120	0	20
Molybdenum	400.0	391.3	98	80-120	2	20
Nickel	500.0	492.8	99	80-120	2	20
Selenium	1,000	1,032	103	80-123	1	24
Silver	200.0	202.2	101	79-120	1	20
Thallium	1,000	1,029	103	80-124	1	20
Vanadium	500.0	512.2	102	80-120	0	20
Zinc	500.0	521.2	104	80-120	1	20

RPD= Relative Percent Difference

**Batch QC Report**

California Title 22 Metals			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	WET
Project#:	63142	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	179148
MSS Lab ID:	231120-001	Sampled:	08/31/11
Matrix:	WET Leachate	Received:	09/16/11
Units:	ug/L	Prepared:	09/20/11
Diln Fac:	10.00	Analyzed:	09/21/11

Type: MS Lab ID: QC609870

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	337.0	10,000	8,839	85	68-121
Arsenic	603.1	5,000	5,157	91	70-139
Barium	111.8	10,000	9,261	91	71-120
Beryllium	<11.82	250.0	243.3	97	79-123
Cadmium	<50.01	1,000	954.7	95	70-123
Chromium	199.2	10,000	9,314	91	70-120
Cobalt	<26.31	2,500	2,332	93	72-120
Copper	335.6	1,250	1,388	84	66-124
Lead	<71.25	10,000	8,853	89	58-120
Molybdenum	1,741	2,000	3,439	85	76-120
Nickel	385.2	2,500	2,593	88	66-120
Selenium	309.0	5,000	4,420	82	64-132
Silver	<30.98	1,000	897.3	90	50-127
Thallium	452.2	5,000	5,159	94	64-129
Vanadium	3,205	2,500	5,413	88	73-120
Zinc	<217.8	2,500	2,456	98	69-126

Type: MSD Lab ID: QC609871

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	10,000	9,231	89	68-121	4	20
Arsenic	5,000	5,020	88	70-139	3	28
Barium	10,000	9,609	95	71-120	4	24
Beryllium	250.0	251.5	101	79-123	3	23
Cadmium	1,000	984.2	98	70-123	3	22
Chromium	10,000	9,595	94	70-120	3	22
Cobalt	2,500	2,402	96	72-120	3	22
Copper	1,250	1,388	84	66-124	0	30
Lead	10,000	9,149	91	58-120	3	29
Molybdenum	2,000	3,619	94	76-120	5	25
Nickel	2,500	2,680	92	66-120	3	22
Selenium	5,000	4,725	88	64-132	7	31
Silver	1,000	949.4	95	50-127	6	27
Thallium	5,000	5,267	96	64-129	2	25
Vanadium	2,500	5,643	98	73-120	4	25
Zinc	2,500	2,539	102	69-126	3	23

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	METHOD
Project#:	63142	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	179166
Matrix:	Water	Prepared:	09/21/11
Units:	ug/L	Analyzed:	09/21/11
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC609946	2.500	2.560	102	80-120		
BSD	QC609947	2.500	2.550	102	80-120	0	27

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	METHOD
Project#:	63142	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	179166
Lab ID:	QC609951	Prepared:	09/21/11
Matrix:	WET Leachate	Analyzed:	09/21/11
Units:	ug/L		

Result	RL
ND	2.0

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	231139	Location:	YRC
Client:	Burns & McDonnell	Prep:	METHOD
Project#:	63142	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	179166
Field ID:	STOCK #1	Sampled:	09/16/11
MSS Lab ID:	231139-001	Received:	09/16/11
Matrix:	WET Leachate	Prepared:	09/21/11
Units:	ug/L	Analyzed:	09/21/11
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC609952	0.4050	12.50	11.10	86	67-120		
MSD	QC609953		12.50	9.950	76	67-120	11	39

RPD= Relative Percent Difference

Technical Report for

Burns and McDonnell Engineering

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA  
63142

Accutest Job Number: C19050

Sampling Date: 11/17/11

Report to:

Burns and McDonnell Engineering  
400 Oyster Point Blvd Suite 533  
South San Francisco, CA 94080  
sbarber@burnsmcd.com

ATTN: Simon Barber

Total number of pages in report: **126**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Kesavalu M. Bagawandoss,  
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Client Service contact: Laurie Glantz-Murphy 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Sample Results .....</b>	<b>4</b>
<b>2.1: C19050-1: CO WATER-2 .....</b>	5
<b>2.2: C19050-2: SW1-E3 .....</b>	8
<b>2.3: C19050-3: SW2-N5 .....</b>	11
<b>2.4: C19050-4: SW3-W4B .....</b>	14
<b>2.5: C19050-5: SW4-W3-6 .....</b>	17
<b>2.6: C19050-6: STOCK SW .....</b>	20
<b>Section 3: Misc. Forms .....</b>	<b>23</b>
<b>3.1: Chain of Custody .....</b>	24
<b>Section 4: GC/MS Volatiles - QC Data Summaries .....</b>	<b>27</b>
<b>4.1: Method Blank Summary .....</b>	28
<b>4.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	32
<b>4.3: Laboratory Control Sample Summary .....</b>	35
<b>4.4: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	38
<b>Section 5: GC/MS Volatiles - Raw Data .....</b>	<b>40</b>
<b>5.1: Samples .....</b>	41
<b>5.2: Method Blanks .....</b>	84
<b>Section 6: GC Semi-volatiles - QC Data Summaries .....</b>	<b>93</b>
<b>6.1: Method Blank Summary .....</b>	94
<b>6.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	96
<b>6.3: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	98
<b>Section 7: GC Semi-volatiles - Raw Data .....</b>	<b>99</b>
<b>7.1: Samples .....</b>	100
<b>7.2: Method Blanks .....</b>	112
<b>Section 8: Metals Analysis - QC Data Summaries .....</b>	<b>116</b>
<b>8.1: Prep QC MP4215: Cd,Cr,Pb,Ni,Zn .....</b>	117
<b>8.2: Prep QC MP4219: Cd,Cr,Pb,Ni,Zn .....</b>	122

1

2

3

4

5

6

7

8





## Sample Summary

Burns and McDonnell Engineering

**Job No:** C19050

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Project No: 63142

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C19050-1	11/17/11	10:18 SB	11/18/11	AQ	Ground Water	CO WATER-2
C19050-2	11/17/11	10:40 SB	11/18/11	SO	Soil	SW1-E3
C19050-3	11/17/11	10:45 SB	11/18/11	SO	Soil	SW2-N5
C19050-4	11/17/11	10:50 SB	11/18/11	SO	Soil	SW3-W4B
C19050-5	11/17/11	10:55 SB	11/18/11	SO	Soil	SW4-W3-6
C19050-6	11/17/11	11:50 SB	11/18/11	SO	Soil	STOCK SW

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Results

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Report of Analysis

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Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	CO WATER-2	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-1	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U565.D	1	11/20/11	TF	n/a	n/a	VU18
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	94.1	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	95%		60-130%

ND = Not detected      MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	CO WATER-2	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-1	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B M SW846 3510C		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18872.D	1	11/20/11	JH	11/19/11	OP4939	GHH613
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.758	0.10	0.050	mg/l	
	TPH (> C28-C40)	ND	0.20	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	83%		45-140%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	CO WATER-2	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-1	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 2.0	2.0	ug/l	1	11/18/11	11/21/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Chromium	80.4	10	ug/l	1	11/18/11	11/21/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Lead	311	10	ug/l	1	11/18/11	11/21/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Nickel	54.2	5.0	ug/l	1	11/18/11	11/21/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Zinc	388	20	ug/l	1	11/18/11	11/21/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2204

(2) Prep QC Batch: MP4215

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW1-E3	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-2	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L12510.D	1	11/22/11	XB	n/a	n/a	VL386
Run #2							

Run #	Initial Weight
Run #1	2.73 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	9.2	2.7	ug/kg	
108-88-3	Toluene	ND	9.2	2.7	ug/kg	
100-41-4	Ethylbenzene	ND	9.2	2.7	ug/kg	
1330-20-7	Xylene (total)	ND	18	7.3	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	9.2	1.8	ug/kg	
	TPH-GRO (C6-C10)	1100	180	92	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW1-E3	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-2	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18884.D	2	11/20/11	JH	11/18/11	OP4936	GHH613
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	41.9	20	10	mg/kg	
	TPH (> C28-C40)	196	40	20	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	54%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SW1-E3	
<b>Lab Sample ID:</b> C19050-2	<b>Date Sampled:</b> 11/17/11
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 11/18/11
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.93	0.93	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	28.5	0.93	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	3.2	1.9	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	16.6	0.93	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	28.0	1.9	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2204

(2) Prep QC Batch: MP4219

(a) All results reported on wet weight basis.

RL = Reporting Limit



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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b> SW2-N5		<b>Date Sampled:</b> 11/17/11
<b>Lab Sample ID:</b> C19050-3		<b>Date Received:</b> 11/18/11
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	L12504.D	1	11/21/11	XB	n/a	n/a	VL386
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.14 g	5.0 ml	100 ul
Run #2			

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	240	73	ug/kg	
108-88-3	Toluene	ND	240	73	ug/kg	
100-41-4	Ethylbenzene	ND	240	73	ug/kg	
1330-20-7	Xylene (total)	ND	490	190	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	240	49	ug/kg	
	TPH-GRO (C6-C10)	4800	4900	2400	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on wet weight basis.

(b) Dilution required due to high concentration of non-target hydrocarbons.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SW2-N5	<b>Date Sampled:</b> 11/17/11
<b>Lab Sample ID:</b> C19050-3	<b>Date Received:</b> 11/18/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A	
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18836.D	2	11/19/11	JH	11/18/11	OP4936	GHH612
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	173	20	10	mg/kg	
	TPH (> C28-C40)	75.7	40	20	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	70%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SW2-N5	<b>Date Sampled:</b> 11/17/11
<b>Lab Sample ID:</b> C19050-3	<b>Date Received:</b> 11/18/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.93	0.93	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	52.4	0.93	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	7.4	1.9	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	61.2	0.93	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	56.1	1.9	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2204

(2) Prep QC Batch: MP4219

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b> SW3-W4B		
<b>Lab Sample ID:</b> C19050-4		<b>Date Sampled:</b> 11/17/11
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 11/18/11
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	L12506.D	1	11/21/11	XB	n/a	n/a	VL386
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.97 g	5.0 ml	50.0 ul
Run #2			

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	420	130	ug/kg	
108-88-3	Toluene	ND	420	130	ug/kg	
100-41-4	Ethylbenzene	ND	420	130	ug/kg	
1330-20-7	Xylene (total)	ND	840	340	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	420	84	ug/kg	
	TPH-GRO (C6-C10)	39800	8400	4200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	104%		60-130%

(a) All results reported on wet weight basis.

(b) Dilution required due to high concentration of non-target hydrocarbons.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW3-W4B	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-4	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18837.D	2	11/19/11	JH	11/18/11	OP4936	GHH612
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	206	20	10	mg/kg	
	TPH (> C28-C40)	ND	40	20	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	78%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SW3-W4B	
<b>Lab Sample ID:</b> C19050-4	<b>Date Sampled:</b> 11/17/11
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 11/18/11
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.89	0.89	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	50.6	0.89	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	5.8	1.8	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	54.1	0.89	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	50.8	1.8	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2204

(2) Prep QC Batch: MP4219

(a) All results reported on wet weight basis.

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RL = Reporting Limit

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW4-W3-6	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-5	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	L12508.D	1	11/22/11	XB	n/a	n/a	VL386
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	2.61 g	5.0 ml	10.0 ul
Run #2			

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4800	1400	ug/kg	
108-88-3	Toluene	ND	4800	1400	ug/kg	
100-41-4	Ethylbenzene	ND	4800	1400	ug/kg	
1330-20-7	Xylene (total)	ND	9600	3800	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4800	960	ug/kg	
	TPH-GRO (C6-C10)	104000	96000	48000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	102%		60-130%

(a) All results reported on wet weight basis.

(b) Dilution required due to high concentration of non-target hydrocarbons.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SW4-W3-6	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-5	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18885.D	50	11/20/11	JH	11/18/11	OP4936	GHH613
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.5 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	5930	750	380	mg/kg	
	TPH (> C28-C40)	1140	1500	750	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	0% <sup>b</sup>		45-140%

(a) All results reported on wet weight basis.

(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> SW4-W3-6	<b>Date Sampled:</b> 11/17/11
<b>Lab Sample ID:</b> C19050-5	<b>Date Received:</b> 11/18/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.90	0.90	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	41.8	0.90	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	197	1.8	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	43.8	0.90	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	180	1.8	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2204

(2) Prep QC Batch: MP4219

(a) All results reported on wet weight basis.

RL = Reporting Limit

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	STOCK SW	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-6	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	L12439.D	1	11/19/11	XB	n/a	n/a	VL384
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.48 g	5.0 ml	10.0 ul
Run #2			

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1900	580	ug/kg	
108-88-3	Toluene	ND	1900	580	ug/kg	
100-41-4	Ethylbenzene	ND	1900	580	ug/kg	
1330-20-7	Xylene (total)	ND	3900	1500	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1900	390	ug/kg	
	TPH-GRO (C6-C10)	68300	39000	19000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	102%		60-130%

(a) All results reported on wet weight basis.

(b) Dilution required due to high concentration of non-target hydrocarbons.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	STOCK SW	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-6	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18886.D	40	11/21/11	JH	11/18/11	OP4936	GHH613
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	3790	400	200	mg/kg	
	TPH (> C28-C40)	526	800	400	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	89%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	STOCK SW	<b>Date Sampled:</b>	11/17/11
<b>Lab Sample ID:</b>	C19050-6	<b>Date Received:</b>	11/18/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.92	0.92	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	35.8	0.92	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	47.9	1.8	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	20.8	0.92	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	95.9	1.8	mg/kg	1	11/18/11	11/20/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2204

(2) Prep QC Batch: MP4219

(a) All results reported on wet weight basis.

RL = Reporting Limit

## Misc. Forms

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## Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



03082011 Form WCD-KCI-SDO

### Request for Chemical Analysis and Chain of Custody Record

BMECASF736

Burns & McDonnell Engineering  
 400 Oyster Point Blvd, Suite 533  
 South San Francisco, CA 94080  
 Phone: (650) 871-2926 Fax: (650) 871-2653  
 Attention: Rosky Mozafar  
Simon Barber

Laboratory: Accutest  
 Address: 2105 Lundy Ave  
 City/State/Zip: San Jose, CA  
 Telephone:

Document Control No: 1-02-2  
 Lab. Reference No. or Episode No.: C19050

Project Number: 63142

Sample Type

Client Name: YFC 1708 Wood St

Group or SWMU Name	Sample Number		Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Analysis	Remarks
	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas			
<u>1</u>	<u>cowater-2</u>	<u>2</u>	<u>ust</u>	<u>2011</u>			<u>11-2-11</u>	<u>1018</u>	<u>w</u>			<u>6</u>	<u>X X X X X</u>	<u>3-Vials (w/HeC)</u> <u>1-30ml pet/dur/100% 2</u> <u>2-100ml 25% N/P</u> <u>5cc/ml</u> <u>1-lit only for TPH</u>
<h1>2 DAYS</h1>														
<u>3.3-0.1=3.2 cc</u>														

Sampler (signature): Jim Bah

Sampler (signature): [Signature]

Special Instructions: 500 + 500 grotachun 1077  
TO 600 102107

Relinquished By (signature): [Signature]

Date/Time: 11-18-11 1637

Received By (signature): [Signature]

Date/Time: 11-18-11 1637

Ice Present in Container: Yes  No

Temperature Upon Receipt: 33-1.1 = 3.2 C

Relinquished By (signature): [Signature]

Date/Time:

Received By (signature):

Date/Time:

Laboratory Comments:

31  
3





03/02/011 Form WCD-KC1-SDO

### Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell Engineering  
 400 Oyster Point Blvd, Suite 533  
 South San Francisco, CA 94080  
 Phone: (650) 871-2926 Fax: (650) 871-2653  
 Attention: **Rosly Mozafar**  
**Simon Barber**

Laboratory: **accutest**  
 Address: **2105 Lundy Ave**  
 City/State/Zip: **San Jose, CA**  
 Telephone:

Document Control No: **2-0912**  
 Lab. Reference No. or Episode No.: **C19050**

Project Number: **63142**

Sample Type

Client Name: **YIC 1708 wood st**

Matrix

Group or SWMU Name	Sample Point	Sample Designator	Sample Event		Sample Depth (in feet)		Sample Collected		Liquid	Solid	Gas	Number of Containers	Analysis	Remarks
			Round	Year	From	To	Date	Time						
2	SW1-E3		UST	2011		3	11-18	1040		S		4	X X X X	1-5095 EIT 1-5512
3	SW2-N5		UST	2011		5	11-18	1045		S		4	X X X X	
4	SW3-W4B		UST	2011		4	11-18	1050		S		4	X X X X	
5	SW4-W3.6		UST	2011		3.6	11-18	1055		S		4	X X X X	
6	Stock SW		UST	2011		-	11-18	1050		S		4	X X X X	

Analysis:  
 TPH Bas, CO2, BTEX  
 TPH Aqueous, CO2, BTEX  
 TPH non-aqueous, CO2, BTEX  
 UST, UST, UST  
 UST, UST, UST  
 UST, UST, UST

# 2 DAYS

48 hour turn-around.

Sampler (signature): *Simon Barber*

Sampler (signature): *[Signature]*

Special Instructions: **500 + 500 g of track ID TO 600 102 107**

Relinquished By (signature): *[Signature]*

Date/Time: **11-18-11 1637**

Received By (signature): *[Signature]*

Date/Time: **11-18-11 1637**

Ice Present in Container: Yes  No  Temperature Upon Receipt:

Relinquished By (signature): 2.

Date/Time:

Received By (signature):

Date/Time:

Laboratory Comments:

31  
3





## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C19050**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL384-MB	L12423.D	1	11/19/11	XB	n/a	n/a	VL384

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C19050-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Result	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

**Method Blank Summary****Job Number:** C19050**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU18-MB	U561.D	1	11/20/11	TF	n/a	n/a	VU18

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C19050-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Result	Limits
1868-53-7	Dibromofluoromethane	97%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	93%	60-130%

**Method Blank Summary****Job Number:** C19050**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL386-MB2	L12494.D	1	11/21/11	XB	n/a	n/a	VL386

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C19050-2, C19050-3, C19050-4, C19050-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Result	Limits
1868-53-7	Dibromofluoromethane	97%	60-130%
2037-26-5	Toluene-D8	101%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

## Method Blank Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL386-MB	L12479.D	1	11/21/11	XB	n/a	n/a	VL386

The QC reported here applies to the following samples:

Method: SW846 8260B

VL386-BSD, VL386-BS, VL386-LCS

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Results	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	101%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

4.1.4  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL384-BS	L12420.D	1	11/19/11	XB	n/a	n/a	VL384
VL384-BSD	L12421.D	1	11/19/11	XB	n/a	n/a	VL384

The QC reported here applies to the following samples:

Method: SW846 8260B

C19050-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	41.3	103	40.6	102	2	60-130/30
100-41-4	Ethylbenzene	40	40.6	102	40.2	101	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	44.1	110	40.3	101	9	60-130/30
108-88-3	Toluene	40	40.7	102	40.1	100	1	60-130/30
1330-20-7	Xylene (total)	120	123	103	121	101	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	100%	60-130%
2037-26-5	Toluene-D8	99%	99%	60-130%
460-00-4	4-Bromofluorobenzene	102%	100%	60-130%

4.2.1  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU18-BS	U562.D	1	11/20/11	TF	n/a	n/a	VU18
VU18-BSD	U563.D	1	11/20/11	TF	n/a	n/a	VU18

The QC reported here applies to the following samples:

Method: SW846 8260B

C19050-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.5	93	18.3	92	1	60-130/30
100-41-4	Ethylbenzene	20	18.4	92	18.1	91	2	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	19.5	98	18.9	95	3	60-130/30
108-88-3	Toluene	20	18.5	93	18.2	91	2	60-130/30
1330-20-7	Xylene (total)	60	55.0	92	53.9	90	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	100%	60-130%
2037-26-5	Toluene-D8	98%	98%	60-130%
460-00-4	4-Bromofluorobenzene	98%	97%	60-130%

4.2.2  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL386-BS	L12476.D	1	11/21/11	XB	n/a	n/a	VL386
VL386-BSD	L12477.D	1	11/21/11	XB	n/a	n/a	VL386

The QC reported here applies to the following samples:

Method: SW846 8260B

C19050-2, C19050-3, C19050-4, C19050-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	39.7	99	37.9	95	5	60-130/30
100-41-4	Ethylbenzene	40	40.2	101	38.5	96	4	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	39.1	98	37.7	94	4	60-130/30
108-88-3	Toluene	40	39.9	100	38.3	96	4	60-130/30
1330-20-7	Xylene (total)	120	120	100	115	96	4	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	99%	60-130%
2037-26-5	Toluene-D8	101%	101%	60-130%
460-00-4	4-Bromofluorobenzene	100%	100%	60-130%

4.2.3  
4



# Laboratory Control Sample Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL384-LCS	L12422.D	1	11/19/11	XB	n/a	n/a	VL384

The QC reported here applies to the following samples:

Method: SW846 8260B

C19050-6

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	244	98	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

4.3.1  
4

# Laboratory Control Sample Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU18-LCS	U564.D	1	11/20/11	TF	n/a	n/a	VU18

The QC reported here applies to the following samples:

Method: SW846 8260B

C19050-1

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	117	94	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	94%	60-130%

4.3.2  
4

# Laboratory Control Sample Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL386-LCS	L12478.D	1	11/21/11	XB	n/a	n/a	VL386

The QC reported here applies to the following samples:

Method: SW846 8260B

C19050-2, C19050-3, C19050-4, C19050-5

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	240	96	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

4.3.3  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18899-4MS	L12440.D	1	11/19/11	XB	n/a	n/a	VL384
C18899-4MSD	L12441.D	1	11/19/11	XB	n/a	n/a	VL384
C18899-4	L12437.D	1	11/19/11	XB	n/a	n/a	VL384

The QC reported here applies to the following samples:

Method: SW846 8260B

C19050-6

CAS No.	Compound	C18899-4 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	1640	1470	90	1460	89	1	60-130/30
100-41-4	Ethylbenzene	ND	1640	1460	89	1460	89	0	60-130/30
1634-04-4	Methyl Tert Butyl Ether	385	1640	1950	96	1910	93	2	60-130/30
108-88-3	Toluene	ND	1640	1490	91	1490	91	0	60-130/30
1330-20-7	Xylene (total)	ND	4910	4410	90	4420	90	0	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C18899-4	Limits
1868-53-7	Dibromofluoromethane	98%	96%	97%	60-130%
2037-26-5	Toluene-D8	102%	101%	101%	60-130%
460-00-4	4-Bromofluorobenzene	101%	100%	97%	60-130%

4.4.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19050  
**Account:** BMECASFS Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18899-18MS	L12502.D	1	11/21/11	XB	n/a	n/a	VL386
C18899-18MSD	L12503.D	1	11/21/11	XB	n/a	n/a	VL386
C18899-18	L12481.D	1	11/21/11	XB	n/a	n/a	VL386
C18899-18	L12495.D	1	11/21/11	XB	n/a	n/a	VL386

The QC reported here applies to the following samples:

Method: SW846 8260B

C19050-2, C19050-3, C19050-4, C19050-5

CAS No.	Compound	C18899-18 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.9	J	1820	1700	93	1700	93	0	60-130/30
100-41-4	Ethylbenzene	ND		1820	1690	93	1670	92	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		1820	1810	99	1860	102	3	60-130/30
108-88-3	Toluene	1.7	J	1820	1710	94	1690	93	1	60-130/30
1330-20-7	Xylene (total)	ND		5470	5070	93	5040	92	1	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C18899-18	C18899-18	Limits
1868-53-7	Dibromofluoromethane	100%	100%	105%	96%	60-130%
2037-26-5	Toluene-D8	101%	100%	99%	100%	60-130%
460-00-4	4-Bromofluorobenzene	102%	101%	95%	98%	60-130%

4.4.2  
4

GC/MS Volatiles

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Raw Data

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5

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\U111120\  
 Data File : U565.D  
 Acq On : 20 Nov 2011 1:03 pm  
 Operator : TITIAF  
 Sample : C19050-1  
 Misc : MS1534,VU18,50,,,,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 23 16:34:38 2011  
 Quant Method : C:\msdchem\1\methods\VU14W.M  
 Quant Title : EPA -8260B  
 QLast Update : Thu Nov 17 12:05:31 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.169	168	2172472	10.00	ug/L	0.00
43) 1,4-Difluorobenzene	12.495	114	3656779	10.00	ug/L	0.00
58) Chlorobenzene-d5	16.194	117	3126345	10.00	ug/L	0.00
82) 1,4-Dichlorobenzene-d4	19.190	152	1586480	10.00	ug/L	# 0.00
103) 1,4-Dichlorobenzene-d4A	19.190	152	1586480	10.00	ug/L	# 0.00
System Monitoring Compounds						
39) Dibromofluoromethane	11.284	111	1230687	9.66	ug/L	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	96.60%
59) Toluene-d8	14.438	98	4343735	9.85	ug/L	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	98.50%
79) 4-Bromofluorobenzene	17.668	95	1625359	9.54	ug/L	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	95.40%
Target Compounds						
3) Chloromethane	4.682	50	56704m	0.20	ug/L	Qvalue
10) Acetone	7.448	58	76601m	4.83	ug/L	
41) Cyclohexane	11.775	56	344331	1.21	ug/L	88
51) Methylcyclohexane	13.193	55	907346	3.74	ug/L	92
78) Isopropylbenzene	17.368	105	142226	0.20	ug/L	90
84) n-Propylbenzene	17.902	91	340686	0.39	ug/L	91
89) tert-Butylbenzene	18.584	119	207552	0.38	ug/L	92
92) sec-Butylbenzene	18.846	105	273934	0.36	ug/L	92
96) n-Butylbenzene	19.452	91	281047	0.42	ug/L	92
101) Naphthalene	21.667	128	152994	0.27	ug/L	100
104) TPH-GRO (C6-C10)	14.462	TIC	62057340m	94.08	ug/L	

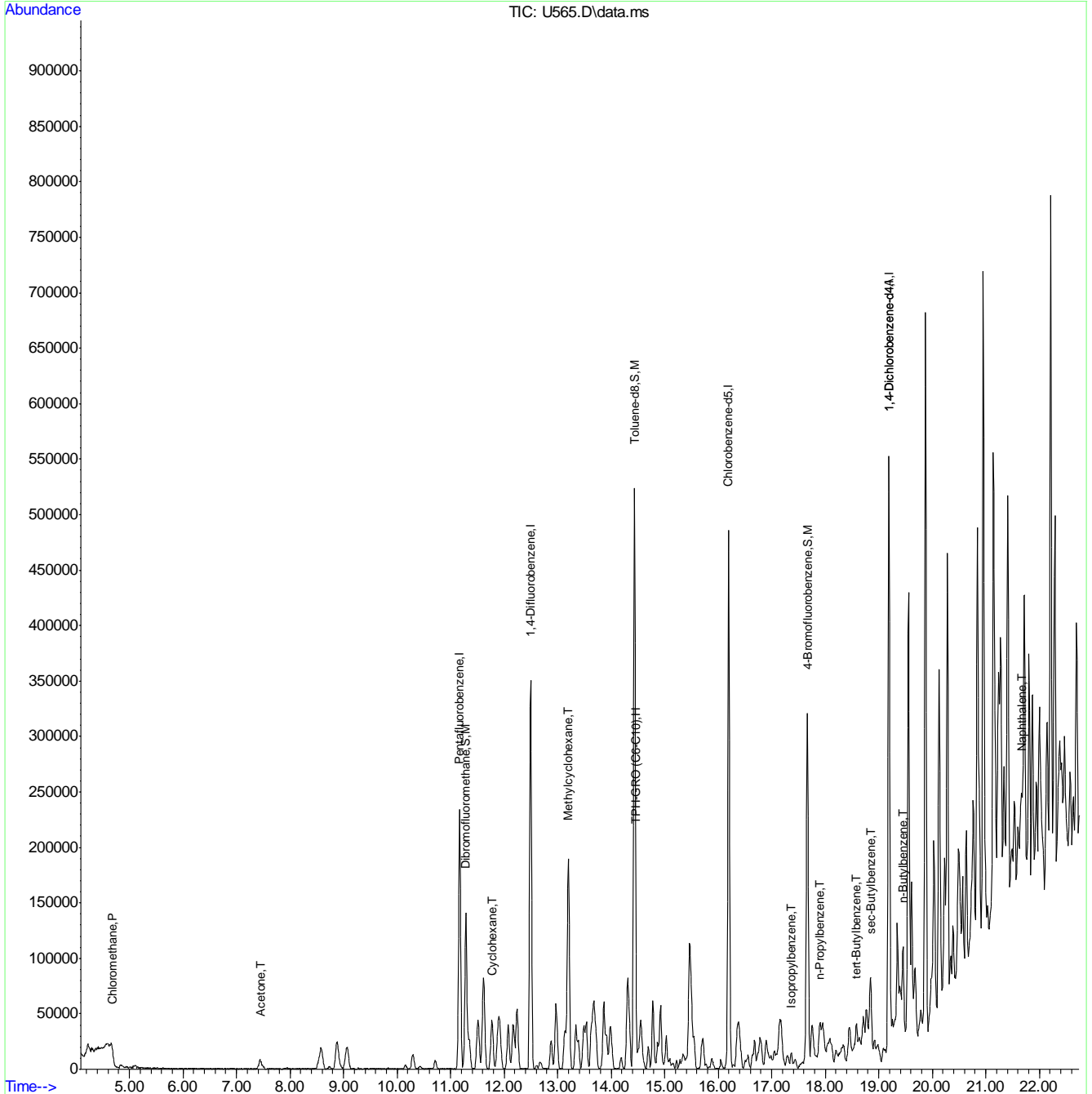
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

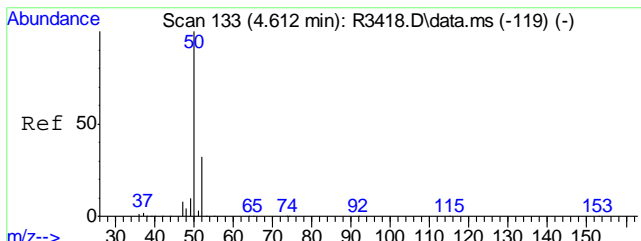
Data Path : C:\msdchem\1\data\U111120\  
Data File : U565.D  
Acq On : 20 Nov 2011 1:03 pm  
Operator : TITIAF  
Sample : C19050-1  
Misc : MS1534,VU18,50,,,1  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 23 16:34:38 2011  
Quant Method : C:\msdchem\1\methods\VU14W.M  
Quant Title : EPA -8260B  
QLast Update : Thu Nov 17 12:05:31 2011  
Response via : Initial Calibration

5.1.1  
5

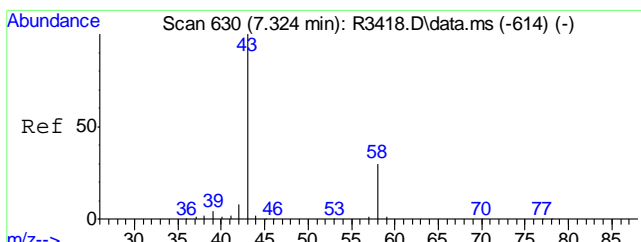
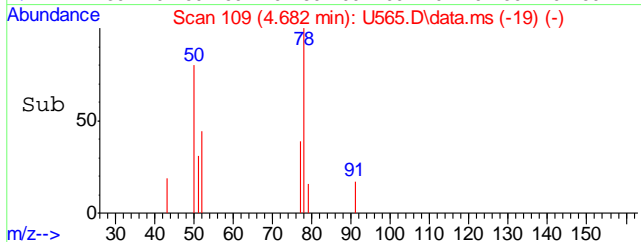
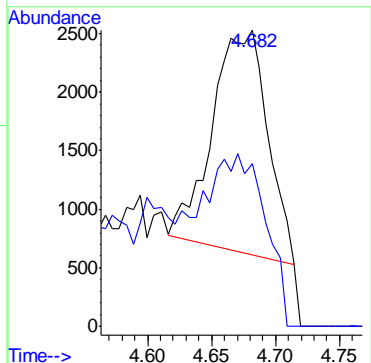
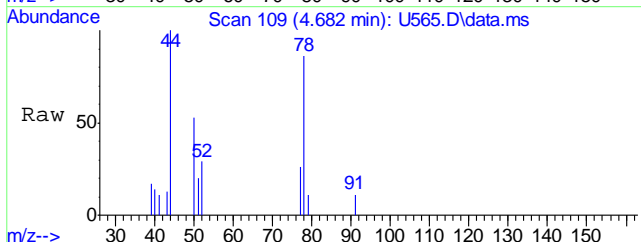






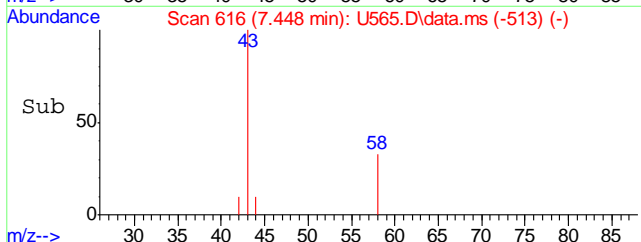
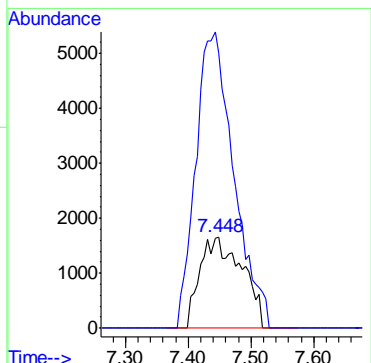
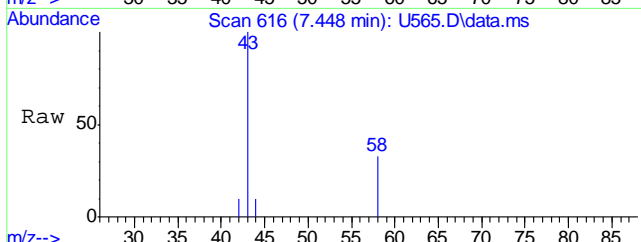
#3  
Chloromethane  
Concen: 0.20 ug/L m  
RT: 4.682 min Scan# 109  
Delta R.T. -0.011 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm

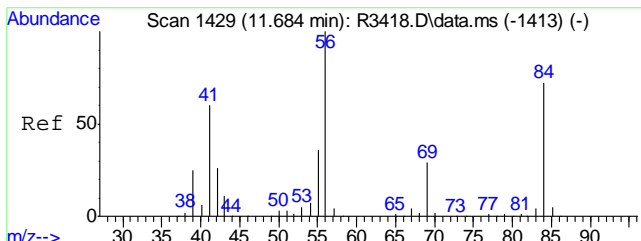
Tgt Ion	Resp	Lower	Upper
50	56704		
52	79.7	12.8	52.8#



#10  
Acetone  
Concen: 4.83 ug/L m  
RT: 7.448 min Scan# 616  
Delta R.T. 0.011 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm

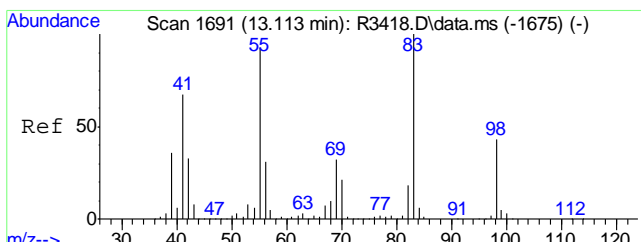
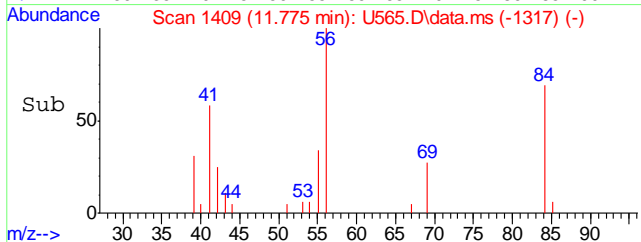
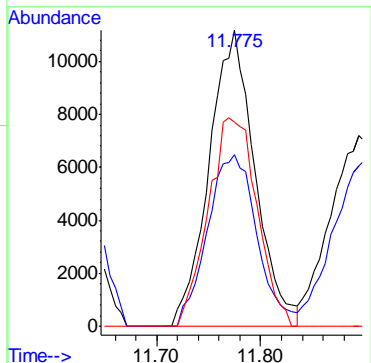
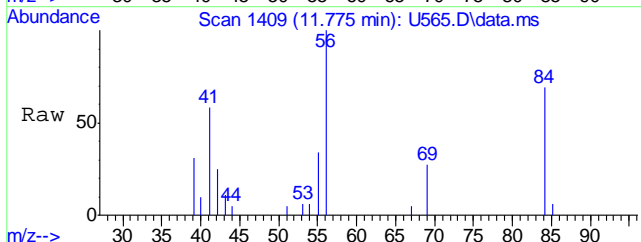
Tgt Ion	Resp	Lower	Upper
58	76601		
43	294.2	0.0	668.1





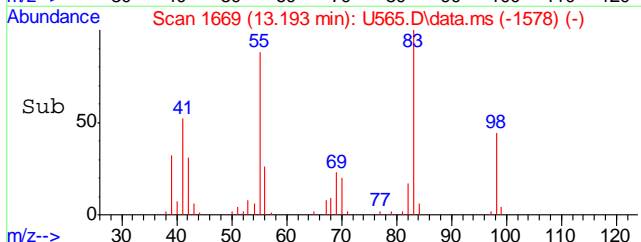
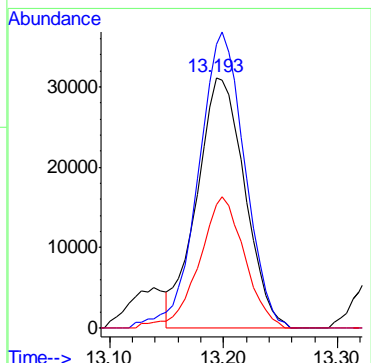
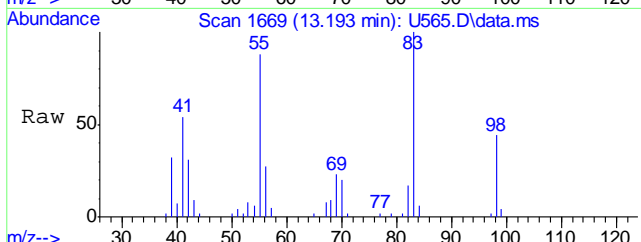
#41  
Cyclohexane  
Concen: 1.21 ug/L  
RT: 11.775 min Scan# 1409  
Delta R.T. -0.000 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm

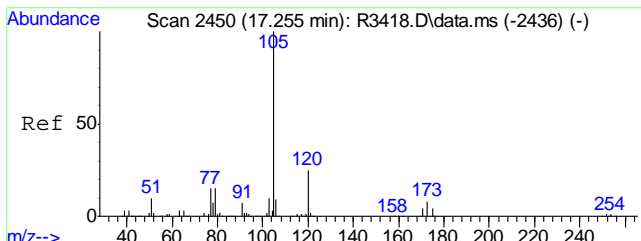
Tgt Ion	Resp	Lower	Upper
56	344331		
41	62.6	35.5	75.5
84	74.9	67.1	107.1



#51  
Methylcyclohexane  
Concen: 3.74 ug/L  
RT: 13.193 min Scan# 1669  
Delta R.T. -0.006 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm

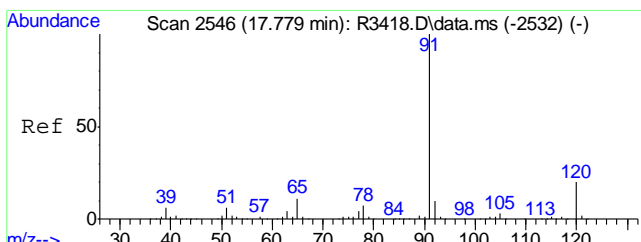
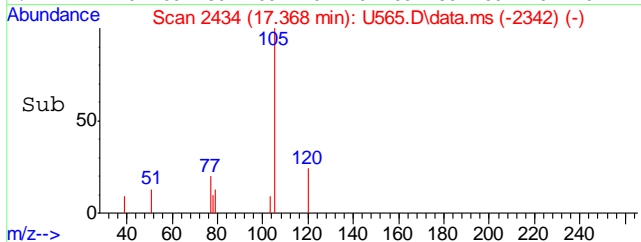
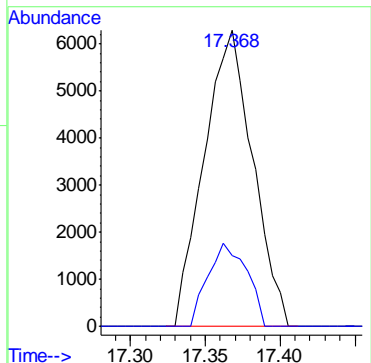
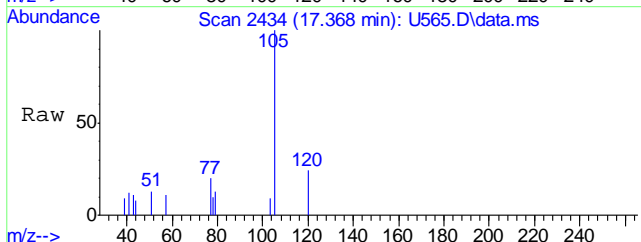
Tgt Ion	Resp	Lower	Upper
55	907346		
83	114.7	103.1	143.1
98	49.9	36.3	76.3





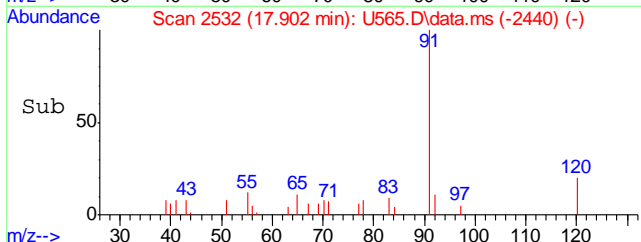
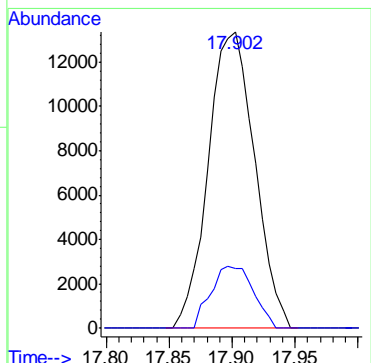
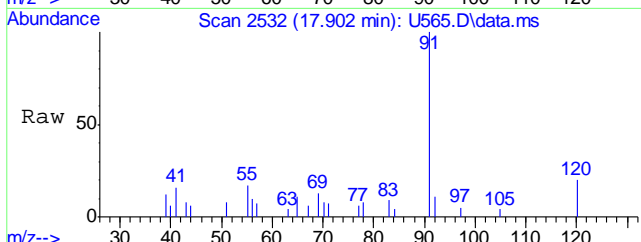
#78  
Isopropylbenzene  
Concen: 0.20 ug/L  
RT: 17.368 min Scan# 2434  
Delta R.T. -0.000 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm

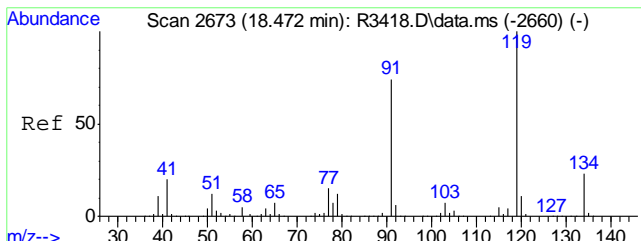
Tgt Ion	Resp	Lower	Upper
105	142226		
120	22.4	7.6	47.6



#84  
n-Propylbenzene  
Concen: 0.39 ug/L  
RT: 17.902 min Scan# 2532  
Delta R.T. 0.000 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm

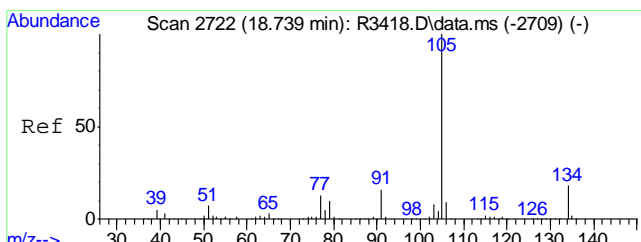
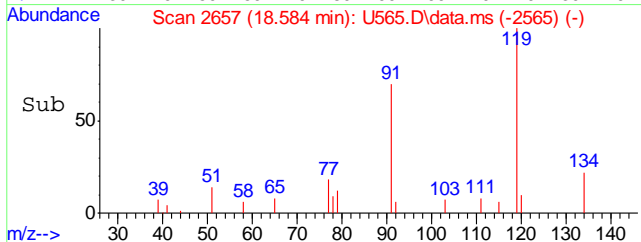
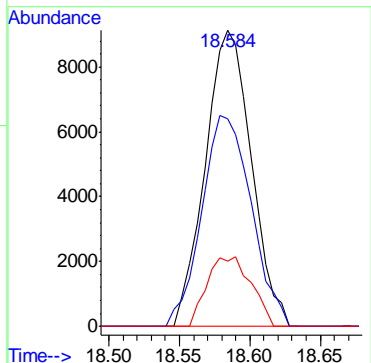
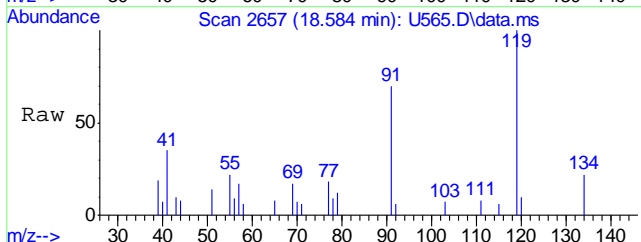
Tgt Ion	Resp	Lower	Upper
91	340686		
120	19.1	3.6	43.6





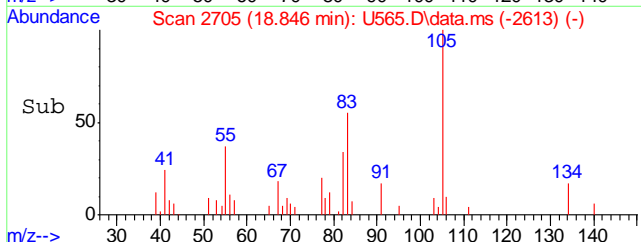
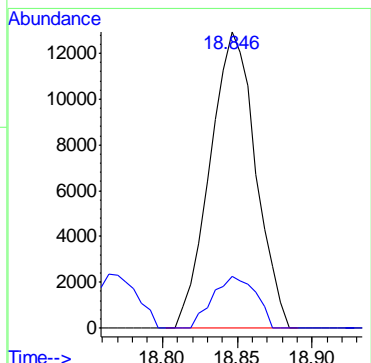
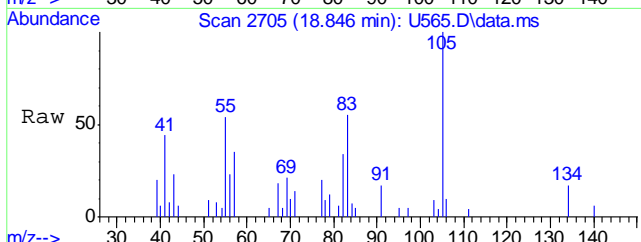
#89  
tert-Butylbenzene  
Concen: 0.38 ug/L  
RT: 18.584 min Scan# 2657  
Delta R.T. 0.000 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm

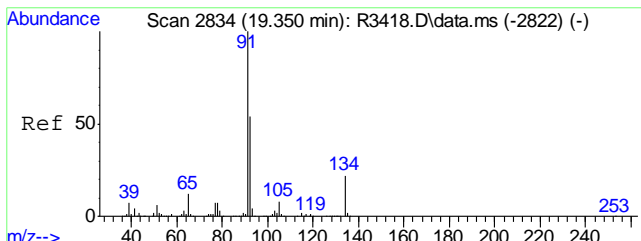
Tgt Ion	Resp	Lower	Upper
119	207552		
119	100		
91	76.4	47.9	87.9
134	22.6	1.8	41.8



#92  
sec-Butylbenzene  
Concen: 0.36 ug/L  
RT: 18.846 min Scan# 2705  
Delta R.T. 0.000 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm

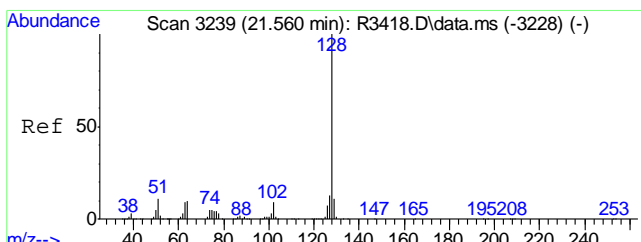
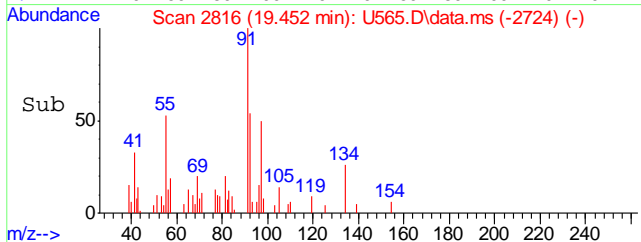
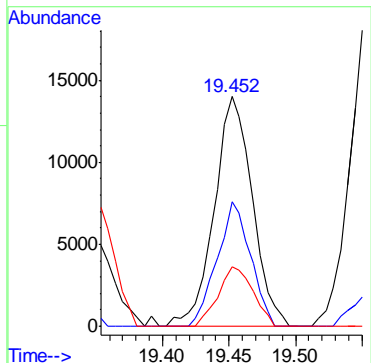
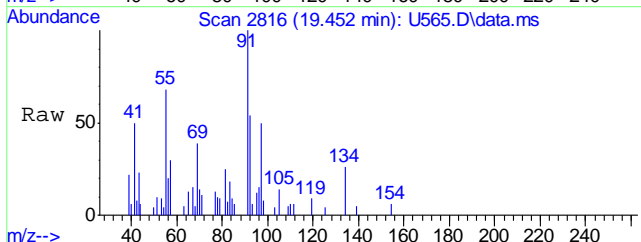
Tgt Ion	Resp	Lower	Upper
105	273934		
105	100		
134	16.5	0.2	40.2





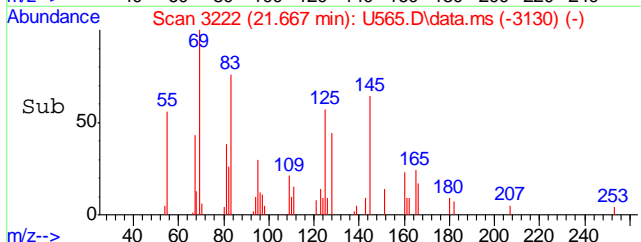
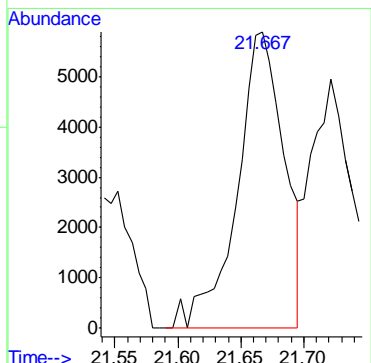
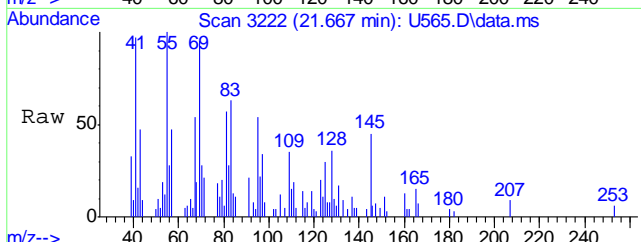
#96  
 n-Butylbenzene  
 Concen: 0.42 ug/L  
 RT: 19.452 min Scan# 2816  
 Delta R.T. -0.000 min  
 Lab File: U565.D  
 Acq: 20 Nov 2011 1:03 pm

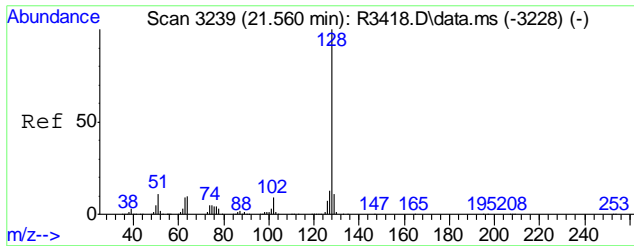
Tgt Ion	Resp	Lower	Upper
91	281047		
92	47.7	35.0	75.0
134	23.7	6.3	46.3



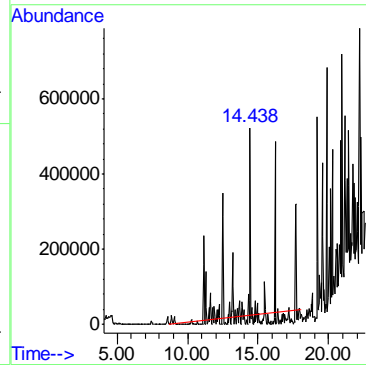
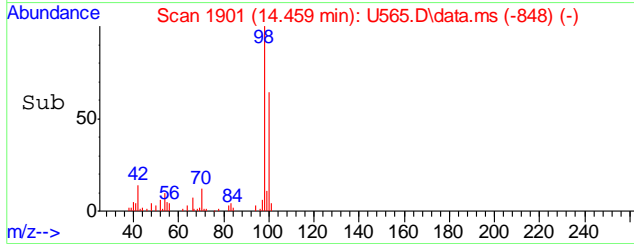
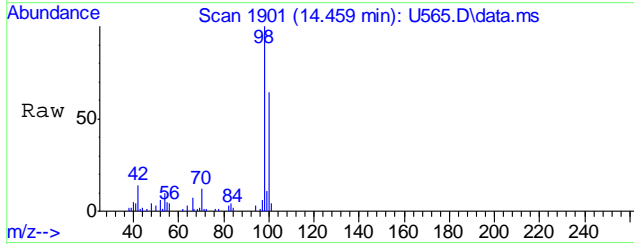
#101  
 Naphthalene  
 Concen: 0.27 ug/L  
 RT: 21.667 min Scan# 3222  
 Delta R.T. 0.000 min  
 Lab File: U565.D  
 Acq: 20 Nov 2011 1:03 pm

Tgt Ion: 128 Resp: 152994





#104  
TPH-GRO (C6-C10)  
Concen: 94.08 ug/L m  
RT: 14.462 min Scan# 1901  
Delta R.T. 0.000 min  
Lab File: U565.D  
Acq: 20 Nov 2011 1:03 pm  
Tgt Ion:TIC Resp:62057340



5.1.1  
5

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
 Data File : L12510.D  
 Acq On : 22 Nov 2011 1:30 am  
 Operator : XINGB  
 Sample : C19050-2  
 Misc : MS1499,VL386,2.73,,,,,1  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 22 08:13:49 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1944816	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	3201286	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2750994	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1486262	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1486262	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.749	111	991357	19.03	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	95.15%
53) Toluene-d8	14.865	98	3913647	20.16	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	100.80%
71) 4-Bromofluorobenzene	18.133	95	1481771	20.02	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	100.10%
Target Compounds						
						Qvalue
10) Acetone	7.941	58	44322	6.03	ug/Kg#	74
18) Methylene Chloride	9.136	84	90370	1.24	ug/Kg#	45
20) Carbon Disulfide	9.256	76	206560	0.96	ug/Kg	71
23) Hexane	10.009	57	2298599	21.05	ug/Kg	100
36) Cyclohexane	12.246	56	1160057	8.39	ug/Kg	98
45) Methylcyclohexane	13.648	55	2508664	22.10	ug/Kg	91
70) Isopropylbenzene	17.822	105	167767	0.56	ug/Kg	94
96) TPH-GRO (C6-C10)	13.850	TIC	181457508m	598.51	ug/Kg	

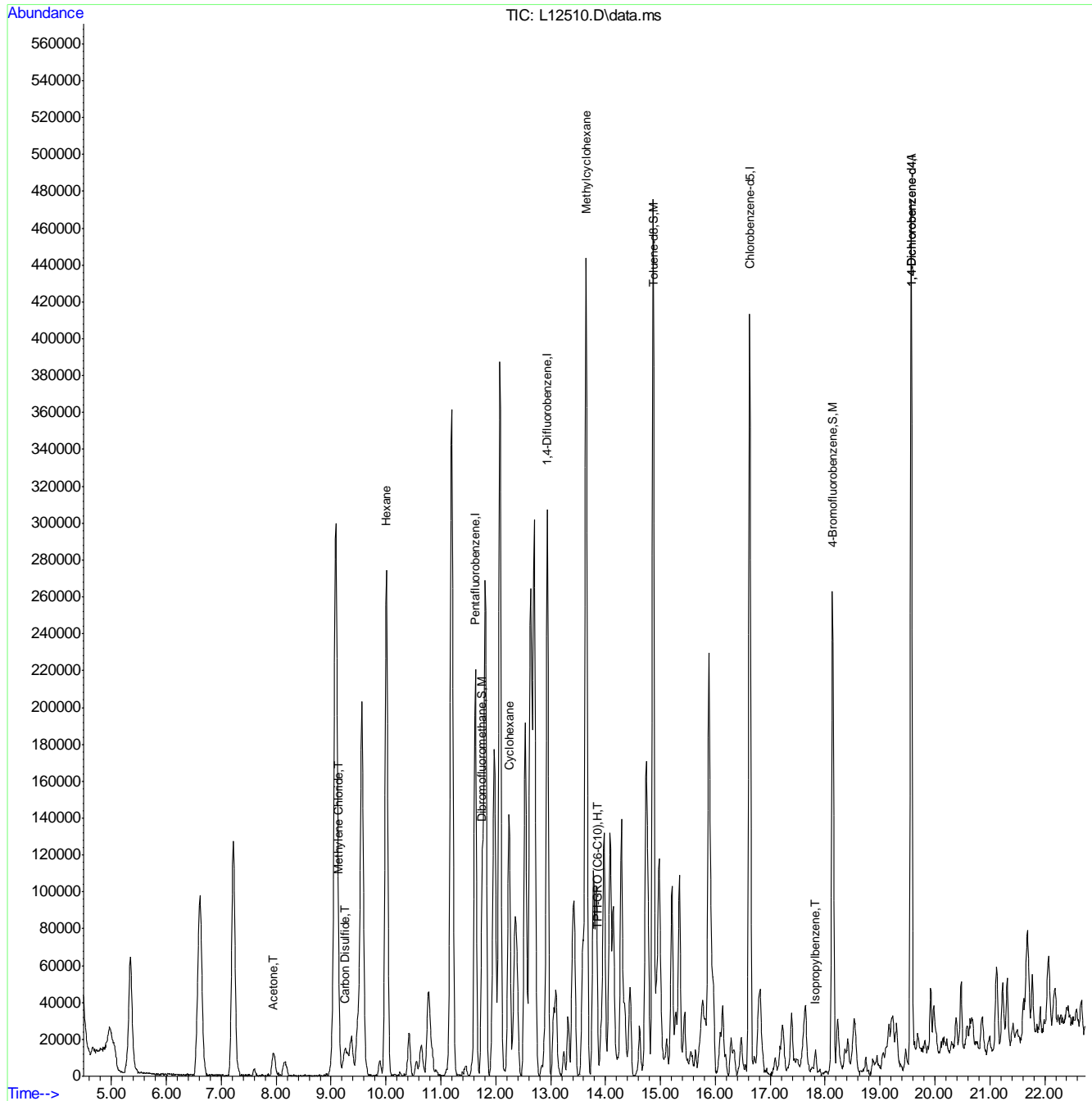
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

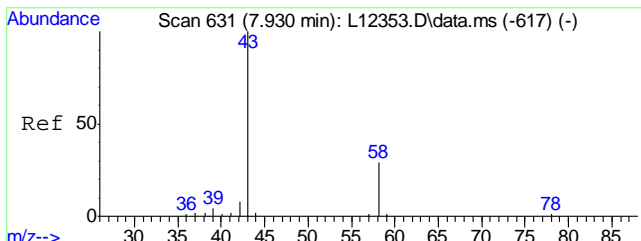
Data Path : C:\msdchem\1\DATA\L111121\  
Data File : L12510.D  
Acq On : 22 Nov 2011 1:30 am  
Operator : XINGB  
Sample : C19050-2  
Misc : MS1499,VL386,2.73,,,,,1  
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 22 08:13:49 2011  
Quant Method : C:\msdchem\1\METHODS\VL382S.M  
Quant Title : EPA -8260B  
QLast Update : Fri Nov 18 08:32:18 2011  
Response via : Initial Calibration

5.12  
5

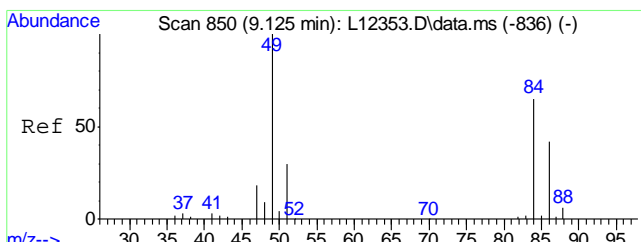
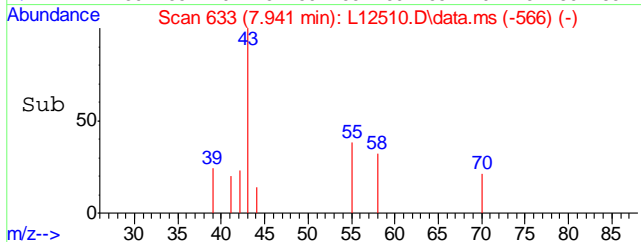
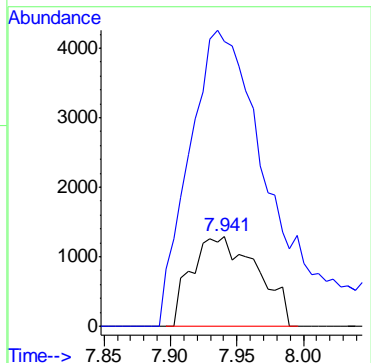
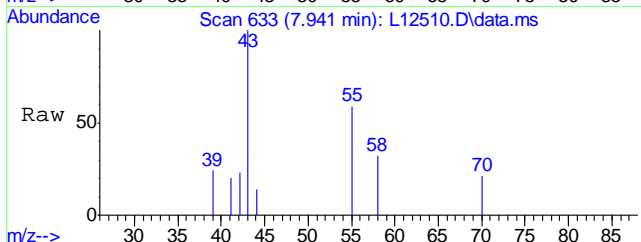






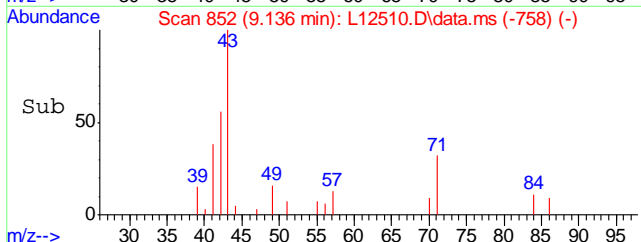
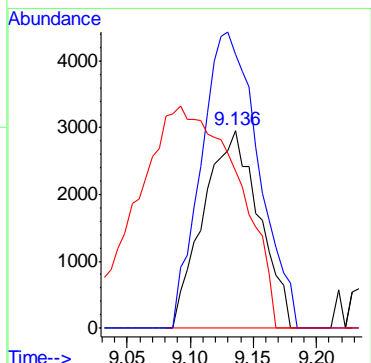
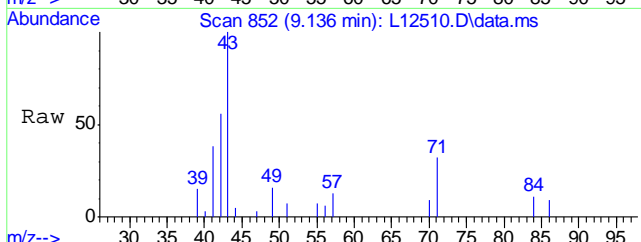
#10  
Acetone  
Concen: 6.03 ug/Kg  
RT: 7.941 min Scan# 633  
Delta R.T. 0.016 min  
Lab File: L12510.D  
Acq: 22 Nov 2011 1:30 am

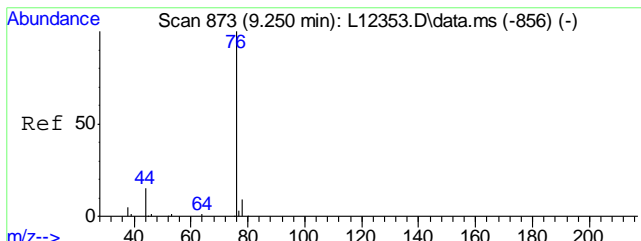
Tgt Ion	Resp	Lower	Upper
58	44322		
58	100		
43	409.9	333.5	373.5#



#18  
Methylene Chloride  
Concen: 1.24 ug/Kg  
RT: 9.136 min Scan# 852  
Delta R.T. 0.012 min  
Lab File: L12510.D  
Acq: 22 Nov 2011 1:30 am

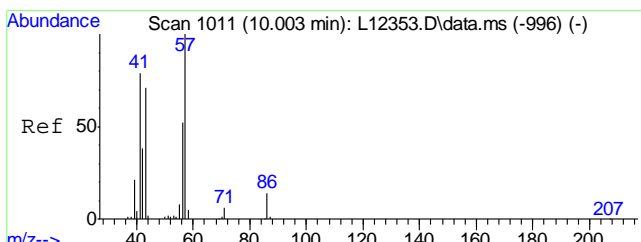
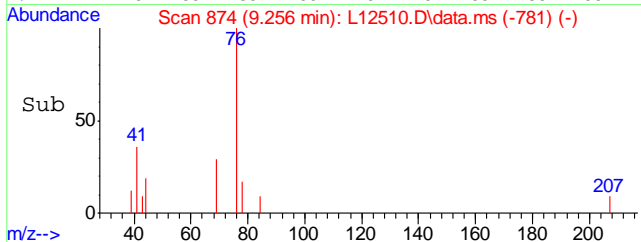
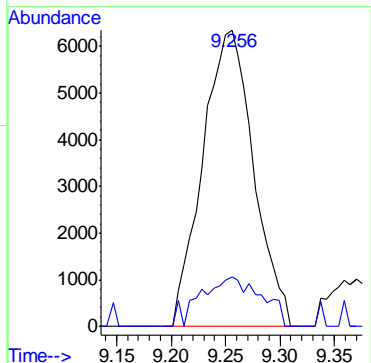
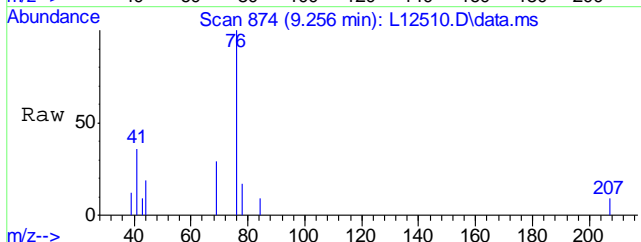
Tgt Ion	Resp	Lower	Upper
84	90370		
84	100		
49	155.2	131.3	171.3
86	201.7	43.2	83.2#





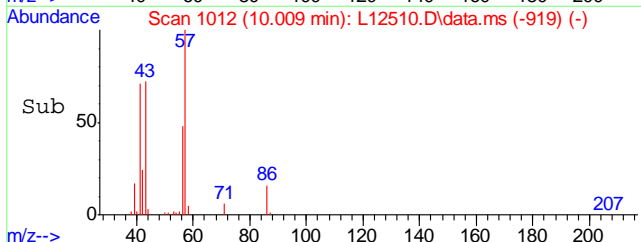
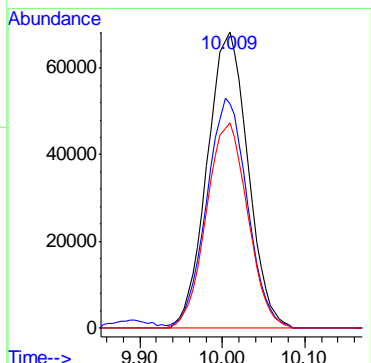
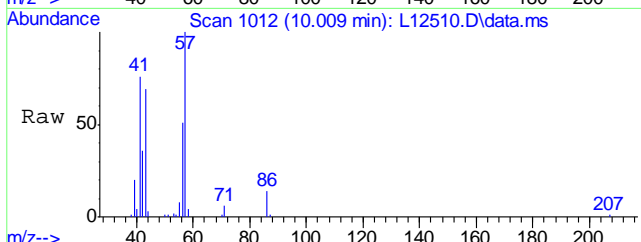
#20  
Carbon Disulfide  
Concen: 0.96 ug/Kg  
RT: 9.256 min Scan# 874  
Delta R.T. 0.005 min  
Lab File: L12510.D  
Acq: 22 Nov 2011 1:30 am

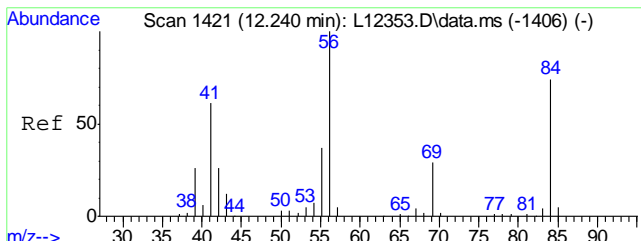
Tgt Ion	Resp	Lower	Upper
76	206560		
76	100		
78	19.9	0.0	29.2



#23  
Hexane  
Concen: 21.05 ug/Kg  
RT: 10.009 min Scan# 1012  
Delta R.T. 0.005 min  
Lab File: L12510.D  
Acq: 22 Nov 2011 1:30 am

Tgt Ion	Resp	Lower	Upper
57	2298599		
57	100		
41	77.6	61.8	92.8
43	70.4	56.2	84.2

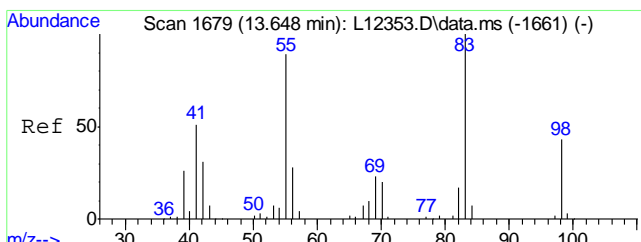
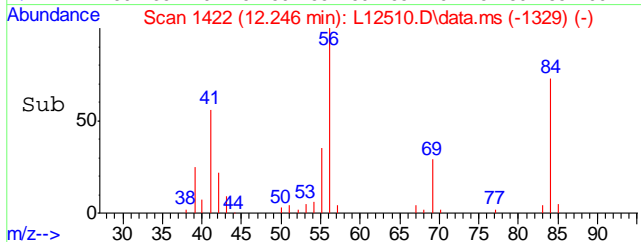
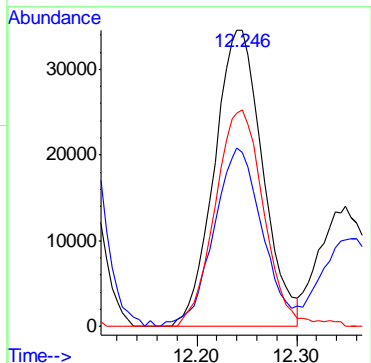
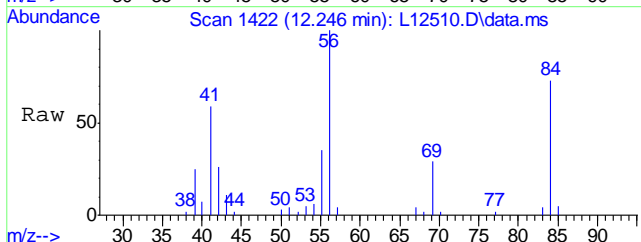




#36  
Cyclohexane  
Concen: 8.39 ug/Kg  
RT: 12.246 min Scan# 1422  
Delta R.T. 0.005 min  
Lab File: L12510.D  
Acq: 22 Nov 2011 1:30 am

Tgt Ion: 56 Resp: 1160057

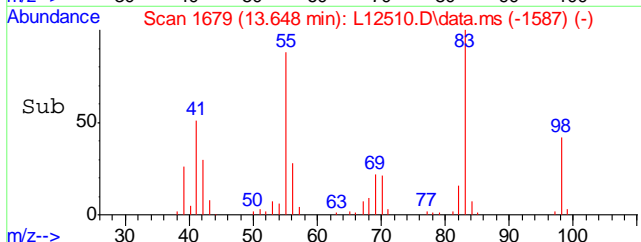
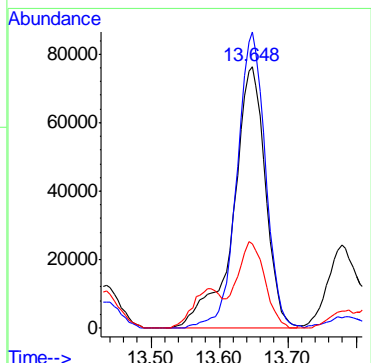
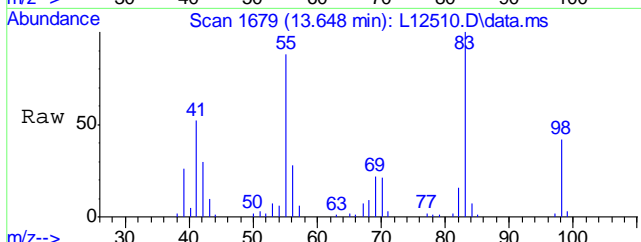
Ion	Ratio	Lower	Upper
56	100		
41	61.4	47.4	71.2
84	73.9	60.4	90.6

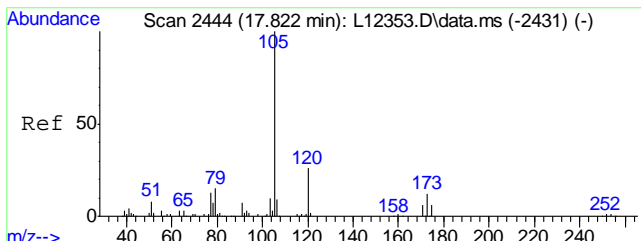


#45  
Methylcyclohexane  
Concen: 22.10 ug/Kg  
RT: 13.648 min Scan# 1679  
Delta R.T. -0.000 min  
Lab File: L12510.D  
Acq: 22 Nov 2011 1:30 am

Tgt Ion: 55 Resp: 2508664

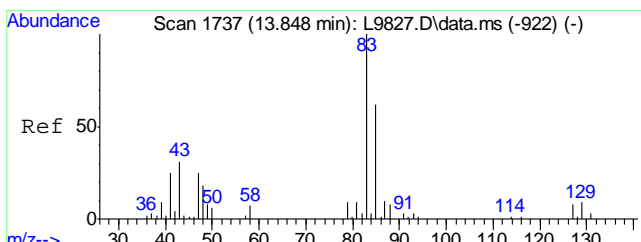
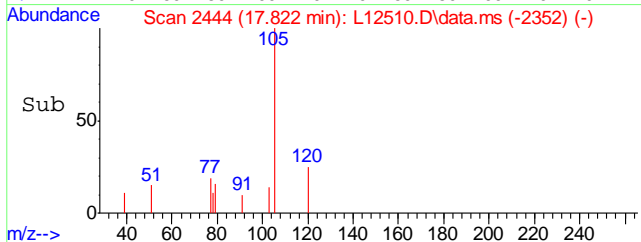
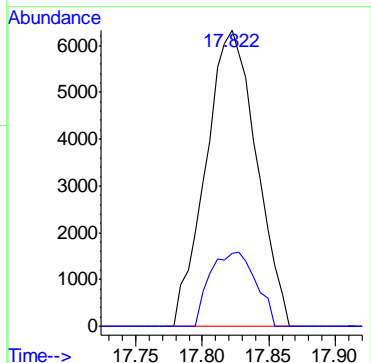
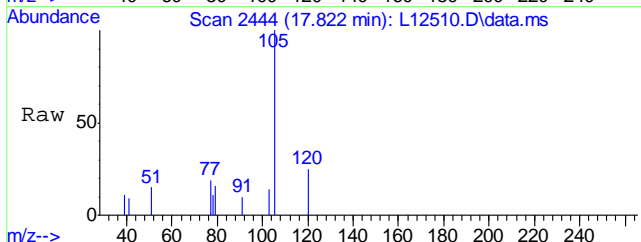
Ion	Ratio	Lower	Upper
55	100		
83	99.8	88.8	128.8
56	28.2	13.0	53.0





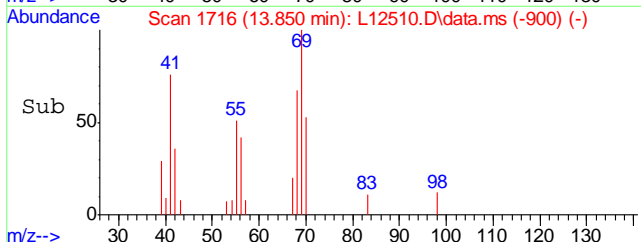
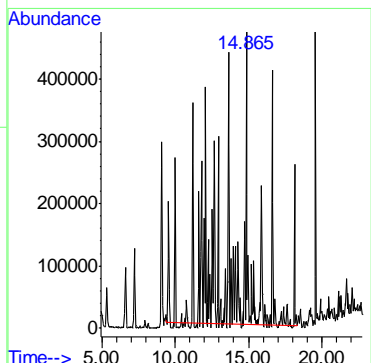
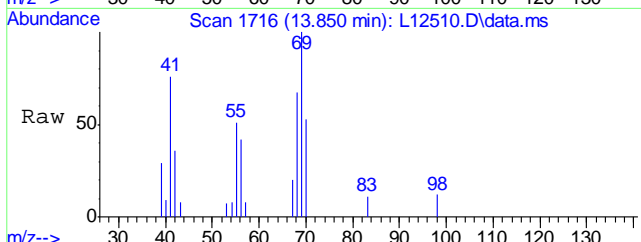
#70  
Isopropylbenzene  
Concen: 0.56 ug/Kg  
RT: 17.822 min Scan# 2444  
Delta R.T. -0.000 min  
Lab File: L12510.D  
Acq: 22 Nov 2011 1:30 am

Tgt Ion	Resp	Lower	Upper
105	167767		
120	22.8	5.6	45.6



#96  
TPH-GRO (C6-C10)  
Concen: 598.51 ug/Kg m  
RT: 13.850 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: L12510.D  
Acq: 22 Nov 2011 1:30 am

Tgt Ion:TIC Resp:181457508



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
 Data File : L12504.D  
 Acq On : 21 Nov 2011 10:36 pm  
 Operator : XINGB  
 Sample : C19050-3  
 Misc : MS1499,VL386,5.14,,100,5,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 22 08:09:27 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration

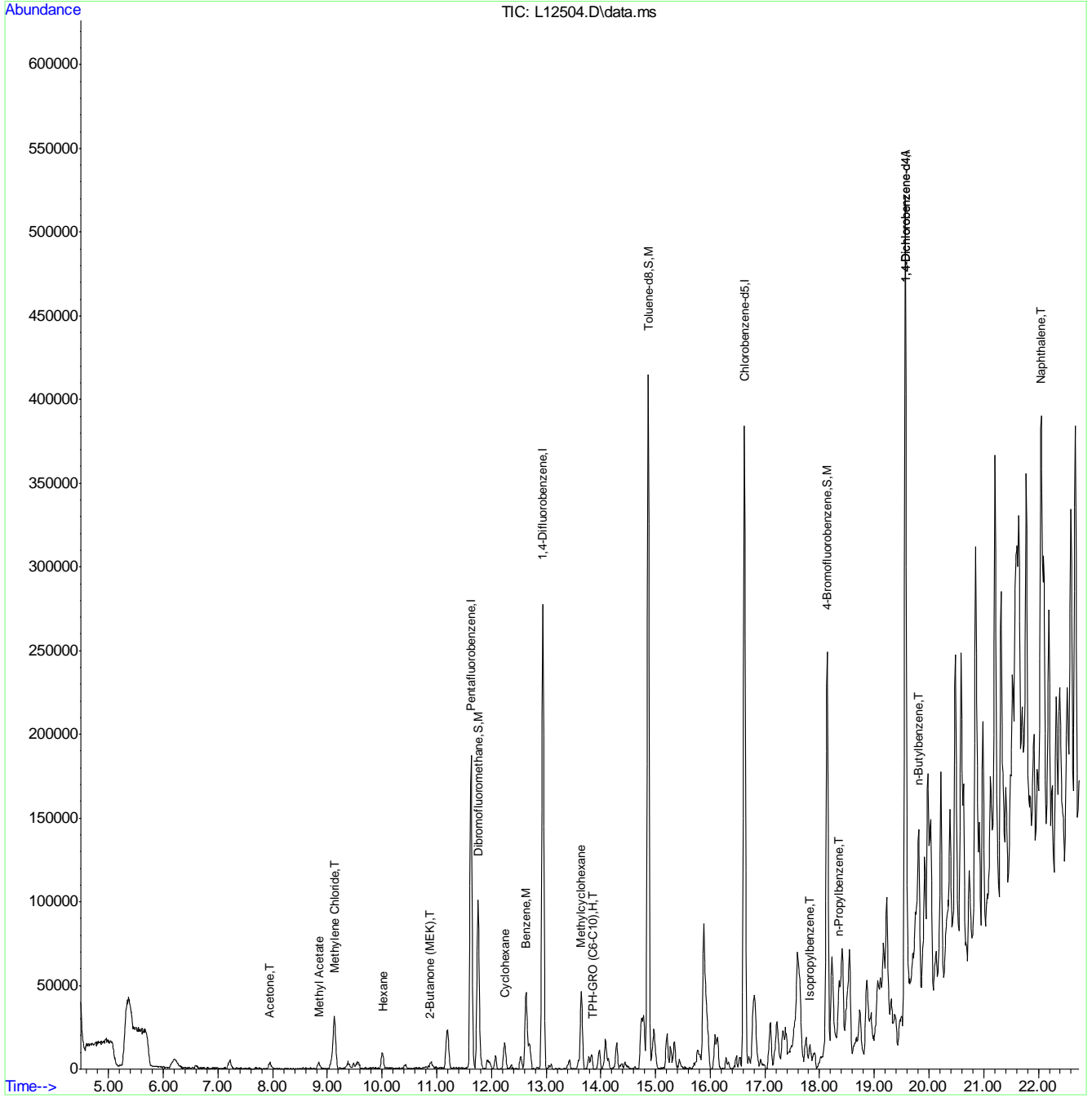
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1855945	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	3037146	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2637153	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1436913	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1436913	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	942447	18.96	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	94.80%		
53) Toluene-d8	14.865	98	3726951	20.02	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	100.10%		
71) 4-Bromofluorobenzene	18.133	95	1433871	20.21	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	101.05%		
Target Compounds						
						Qvalue
10) Acetone	7.952	58	12520	1.79	ug/Kg#	1
15) Methyl Acetate	8.847	43	95935	1.45	ug/Kg#	65
18) Methylene Chloride	9.130	84	220441	3.17	ug/Kg	97
23) Hexane	10.014	57	74694	0.72	ug/Kg	95
29) 2-Butanone (MEK)	10.882	72	14555	1.79	ug/Kg#	72
36) Cyclohexane	12.240	56	122546	0.93	ug/Kg	95
42) Benzene	12.633	78	379925	1.40	ug/Kg	100
45) Methylcyclohexane	13.643	55	252390	2.34	ug/Kg	98
70) Isopropylbenzene	17.822	105	155352	0.54	ug/Kg	98
76) n-Propylbenzene	18.357	91	352004	0.97	ug/Kg	96
88) n-Butylbenzene	19.814	91	242534	0.86	ug/Kg	95
93) Naphthalene	22.046	128	1864617	7.55	ug/Kg	100
96) TPH-GRO (C6-C10)	13.850	TIC	28922292m	98.67	ug/Kg	

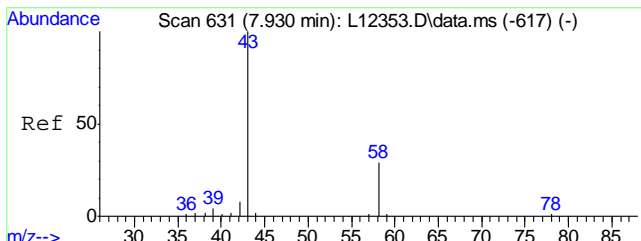
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
Data File : L12504.D  
Acq On : 21 Nov 2011 10:36 pm  
Operator : XINGB  
Sample : C19050-3  
Misc : MS1499,VL386,5.14,,100,5,1  
ALS Vial : 14 Sample Multiplier: 1

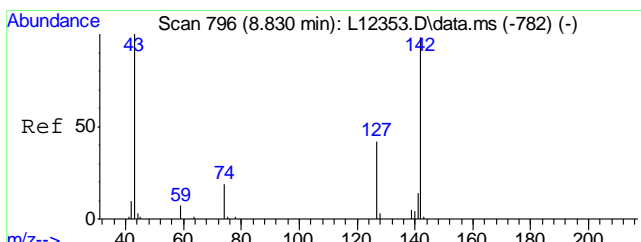
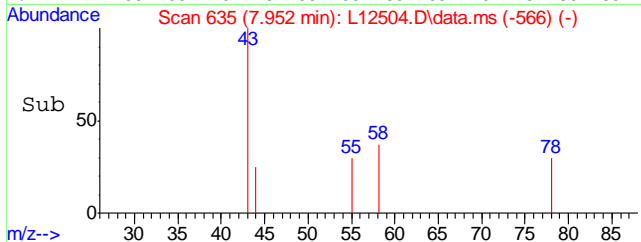
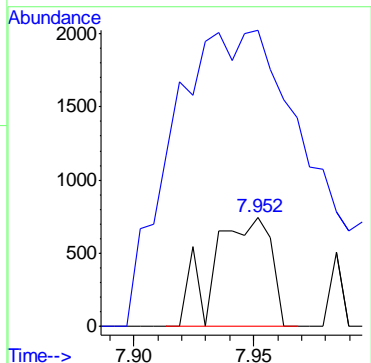
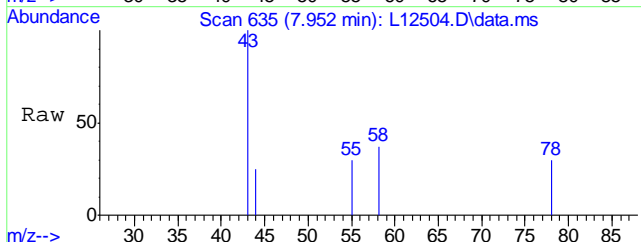
Quant Time: Nov 22 08:09:27 2011  
Quant Method : C:\msdchem\1\METHODS\VL382S.M  
Quant Title : EPA -8260B  
QLast Update : Fri Nov 18 08:32:18 2011  
Response via : Initial Calibration





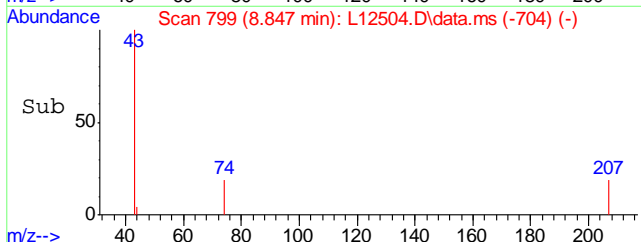
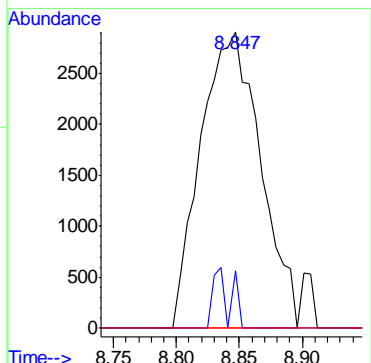
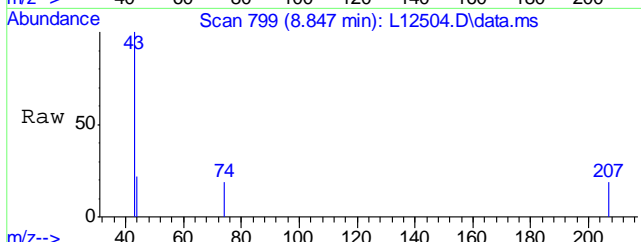
#10  
Acetone  
Concen: 1.79 ug/Kg  
RT: 7.952 min Scan# 635  
Delta R.T. 0.027 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm

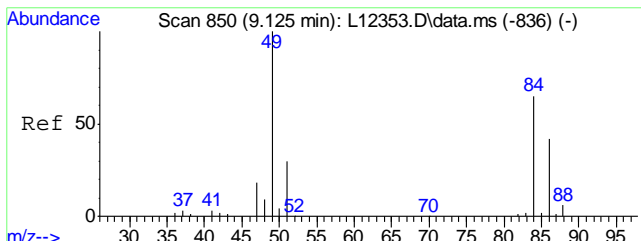
Tgt Ion	Resp	Lower	Upper
58	12520		
58	100		
43	699.6	333.5	373.5#



#15  
Methyl Acetate  
Concen: 1.45 ug/Kg  
RT: 8.847 min Scan# 799  
Delta R.T. 0.016 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm

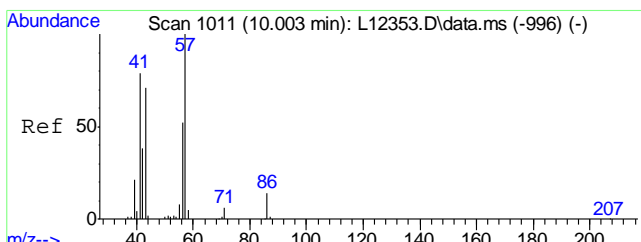
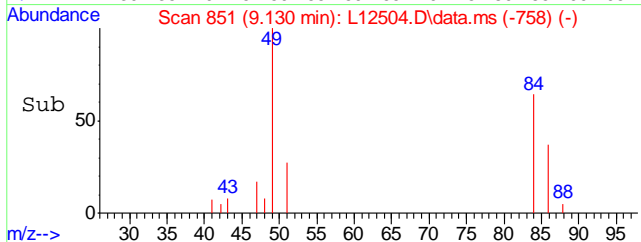
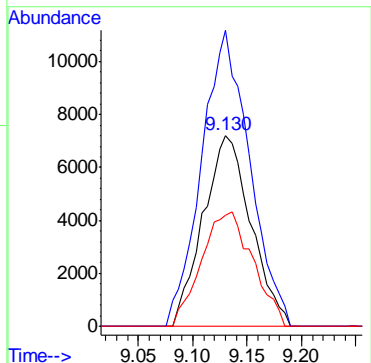
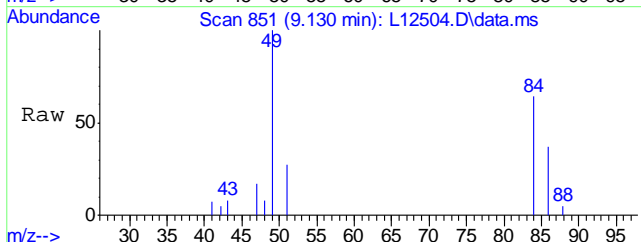
Tgt Ion	Resp	Lower	Upper
43	95935		
43	100		
74	0.0	0.0	38.3
59	0.0	0.0	26.9





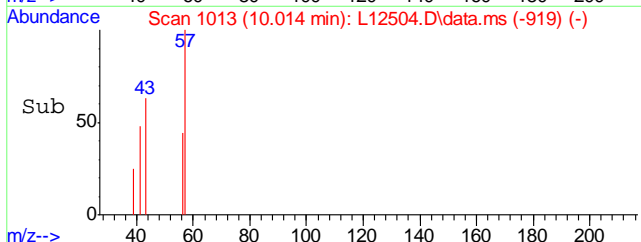
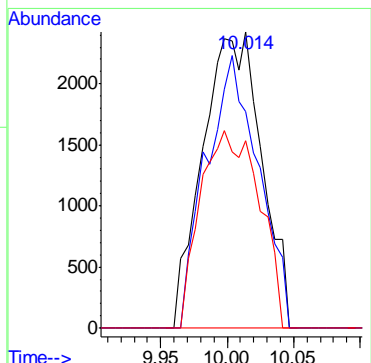
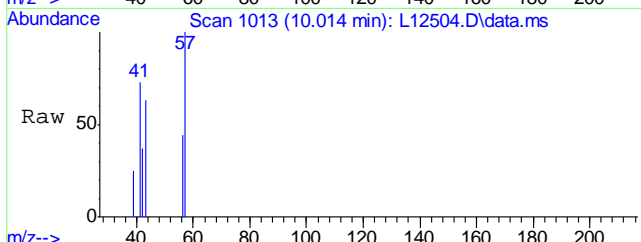
#18  
Methylene Chloride  
Concen: 3.17 ug/Kg  
RT: 9.130 min Scan# 851  
Delta R.T. 0.006 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm

Tgt Ion	Resp	Lower	Upper
84	220441		
84	100		
49	155.9	131.3	171.3
86	64.1	43.2	83.2

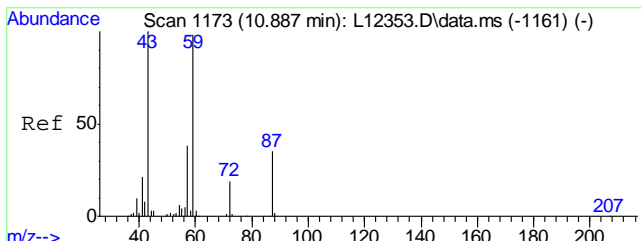


#23  
Hexane  
Concen: 0.72 ug/Kg  
RT: 10.014 min Scan# 1013  
Delta R.T. 0.011 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm

Tgt Ion	Resp	Lower	Upper
57	74694		
57	100		
41	82.2	61.8	92.8
43	66.7	56.2	84.2

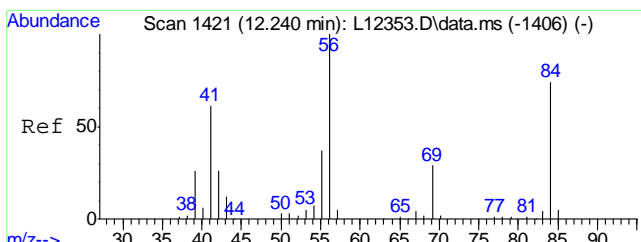
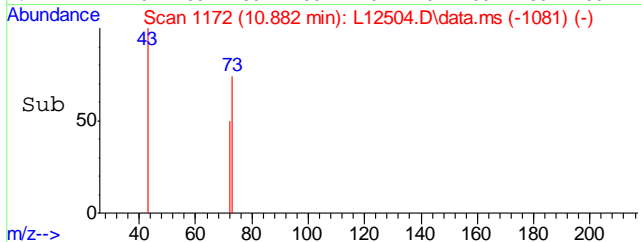
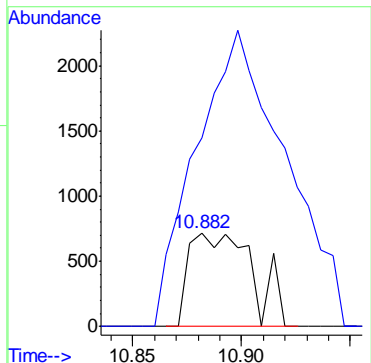
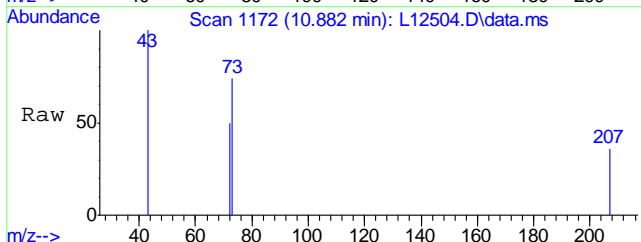






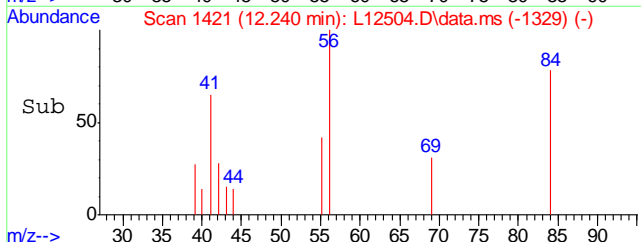
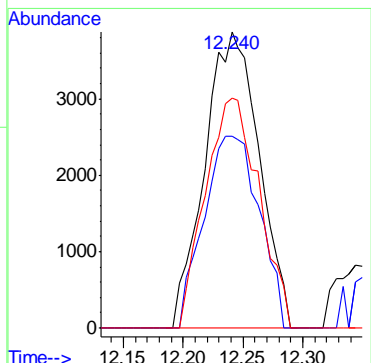
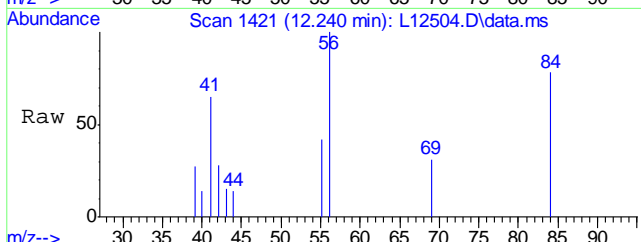
#29  
2-Butanone (MEK)  
Concen: 1.79 ug/Kg  
RT: 10.882 min Scan# 1172  
Delta R.T. -0.005 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm

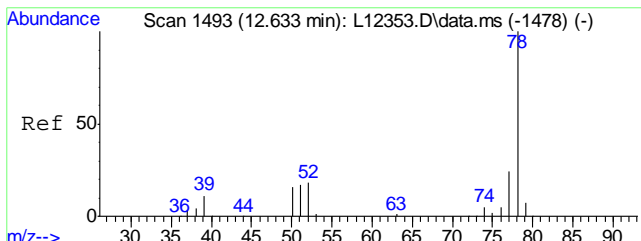
Tgt Ion	Resp	Lower	Upper
72	14555		
72	100		
43	445.5	506.0	546.0#



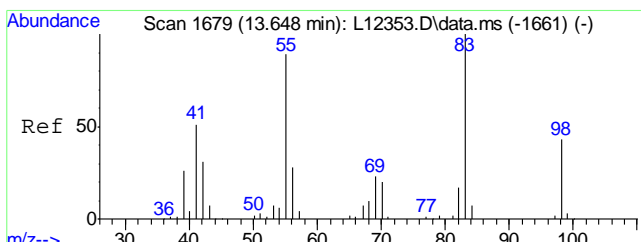
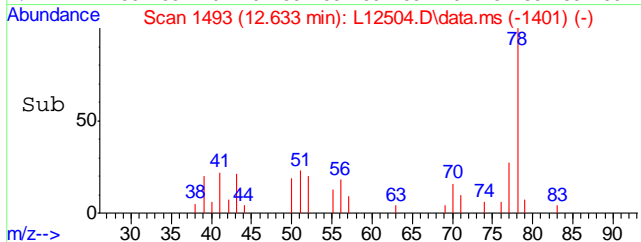
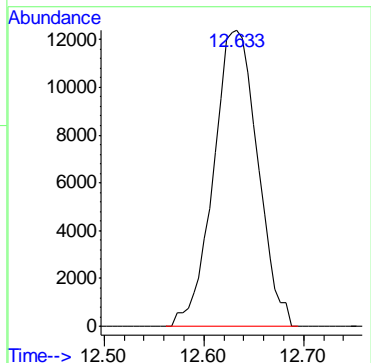
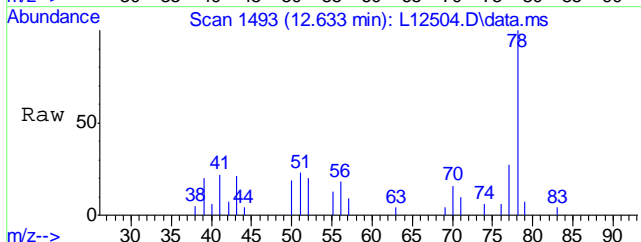
#36  
Cyclohexane  
Concen: 0.93 ug/Kg  
RT: 12.240 min Scan# 1421  
Delta R.T. 0.000 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm

Tgt Ion	Resp	Lower	Upper
56	122546		
56	100		
41	66.1	47.4	71.2
84	76.4	60.4	90.6

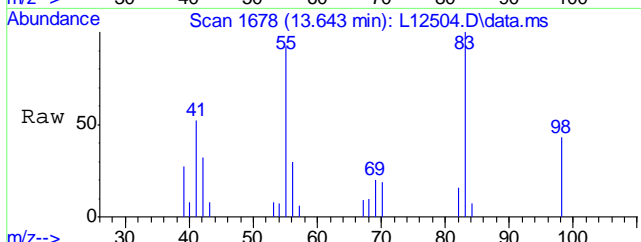




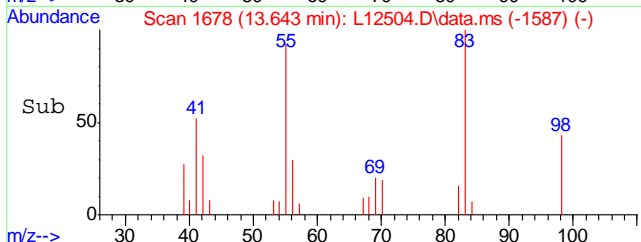
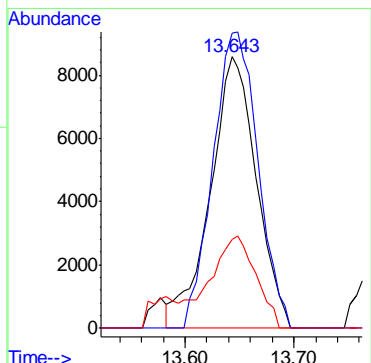
#42  
Benzene  
Concen: 1.40 ug/Kg  
RT: 12.633 min Scan# 1493  
Delta R.T. 0.000 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm  
Tgt Ion: 78 Resp: 379925

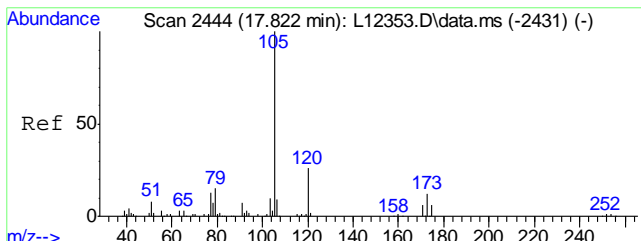


#45  
Methylcyclohexane  
Concen: 2.34 ug/Kg  
RT: 13.643 min Scan# 1678  
Delta R.T. -0.005 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm  
Tgt Ion: 55 Resp: 252390



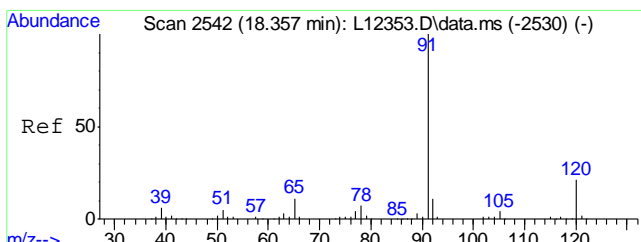
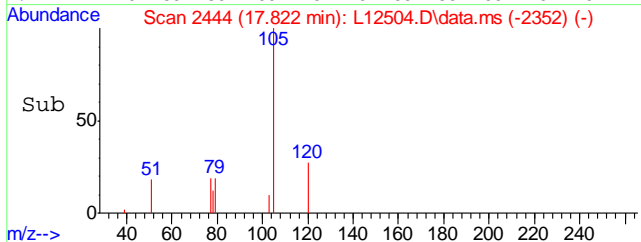
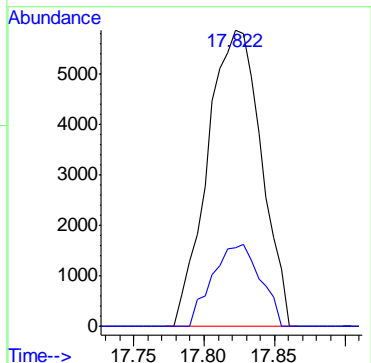
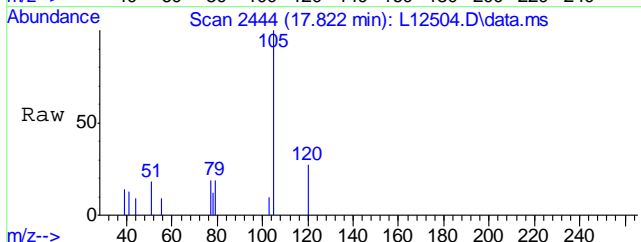
Ion	Ratio	Lower	Upper
55	100		
83	106.3	88.8	128.8
56	32.1	13.0	53.0





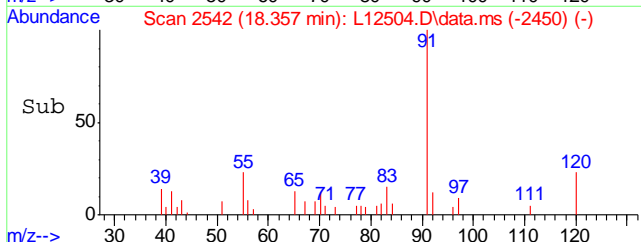
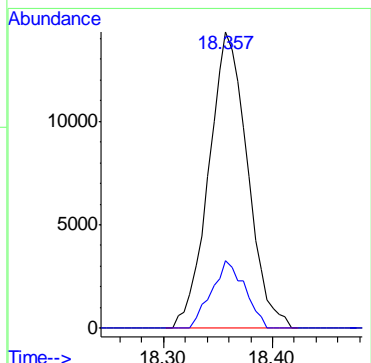
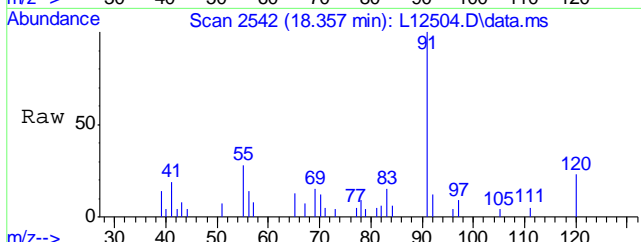
#70  
Isopropylbenzene  
Concen: 0.54 ug/Kg  
RT: 17.822 min Scan# 2444  
Delta R.T. 0.000 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm

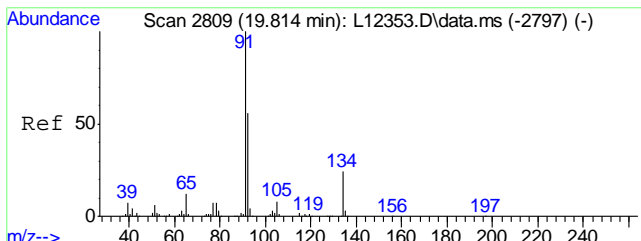
Tgt Ion	Resp	Lower	Upper
105	155352	100	
120	24.7	5.6	45.6



#76  
n-Propylbenzene  
Concen: 0.97 ug/Kg  
RT: 18.357 min Scan# 2542  
Delta R.T. 0.000 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm

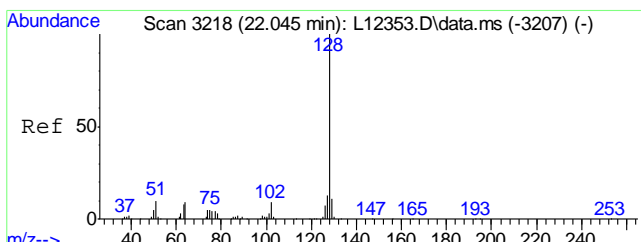
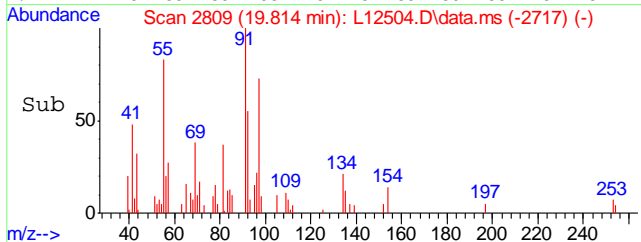
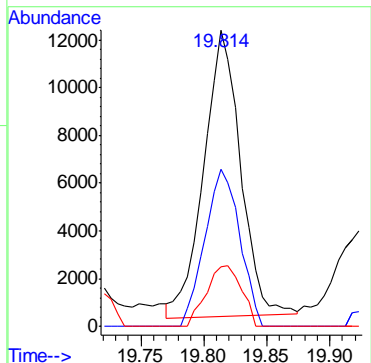
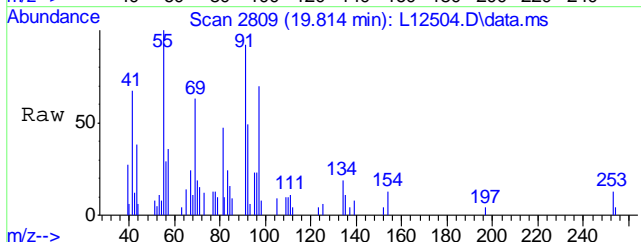
Tgt Ion	Resp	Lower	Upper
91	352004	100	
120	19.6	1.4	41.4





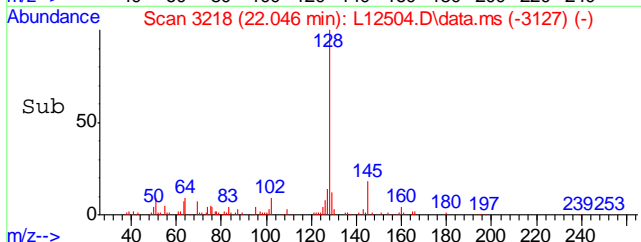
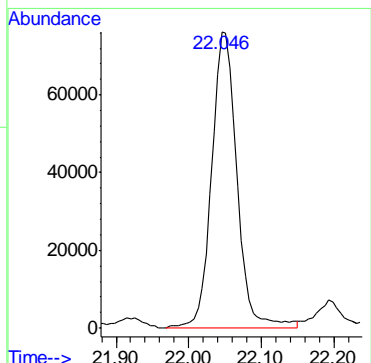
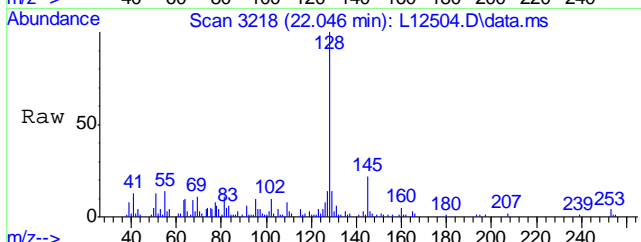
#88  
 n-Butylbenzene  
 Concen: 0.86 ug/Kg  
 RT: 19.814 min Scan# 2809  
 Delta R.T. 0.000 min  
 Lab File: L12504.D  
 Acq: 21 Nov 2011 10:36 pm

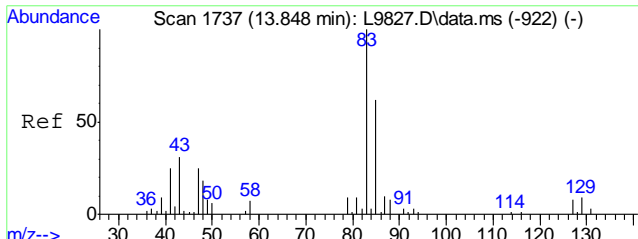
Tgt Ion	Resp	Lower	Upper
91	242534	100	
92	52.1	35.2	75.2
134	20.2	3.8	43.8



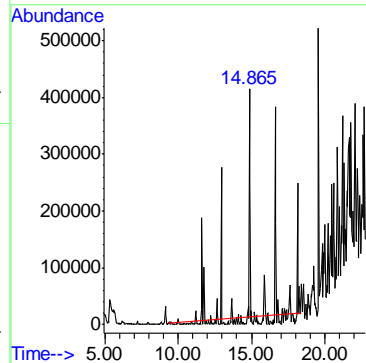
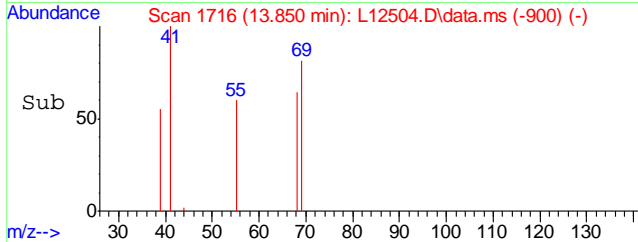
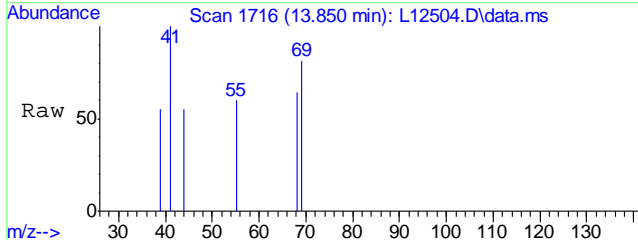
#93  
 Naphthalene  
 Concen: 7.55 ug/Kg  
 RT: 22.046 min Scan# 3218  
 Delta R.T. -0.005 min  
 Lab File: L12504.D  
 Acq: 21 Nov 2011 10:36 pm

Tgt Ion:128 Resp: 1864617





#96  
TPH-GRO (C6-C10)  
Concen: 98.67 ug/Kg m  
RT: 13.850 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: L12504.D  
Acq: 21 Nov 2011 10:36 pm  
Tgt Ion:TIC Resp:28922292



5.1.3  
5

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
 Data File : L12506.D  
 Acq On : 21 Nov 2011 11:34 pm  
 Operator : XINGB  
 Sample : C19050-4  
 Misc : MS1499,VL386,5.97,,50,5,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 22 08:11:01 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration

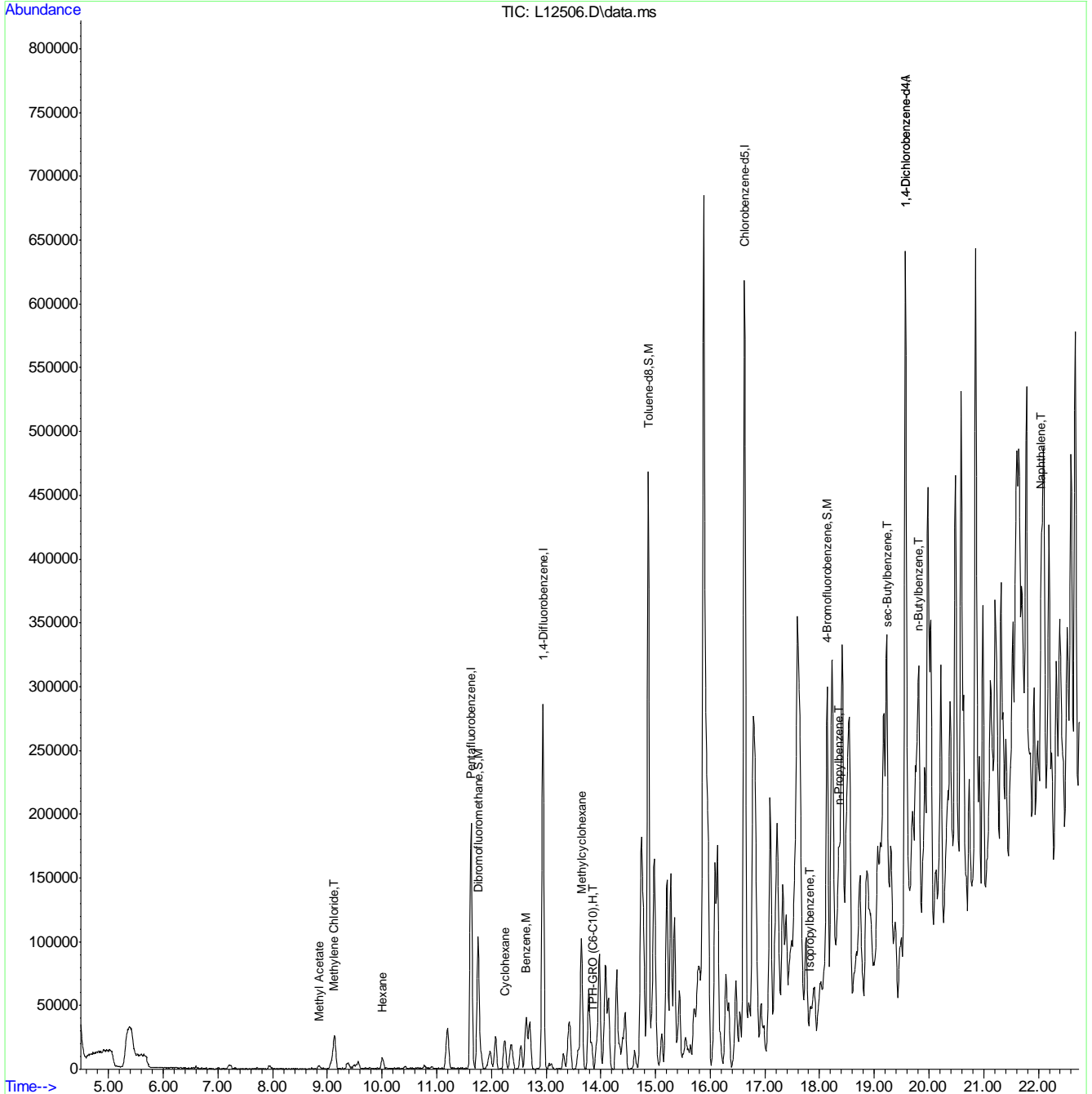
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1941209	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.944	114	3151727	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2805316	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1559986	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1559986	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	967007	18.60	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	93.00%		
53) Toluene-d8	14.865	98	3941608	19.91	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	99.55%		
71) 4-Bromofluorobenzene	18.139	95	1567364	20.77	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	103.85%		
Target Compounds						
						Qvalue
15) Methyl Acetate	8.847	43	72944	1.05	ug/Kg#	65
18) Methylene Chloride	9.125	84	188198	2.59	ug/Kg	97
23) Hexane	10.003	57	69208	0.64	ug/Kg	96
36) Cyclohexane	12.240	56	199234	1.44	ug/Kg	97
42) Benzene	12.633	78	187547	0.67	ug/Kg	100
45) Methylcyclohexane	13.648	55	594313	5.32	ug/Kg	91
70) Isopropylbenzene	17.817	105	221137	0.72	ug/Kg	96
76) n-Propylbenzene	18.357	91	471166	1.19	ug/Kg	93
84) sec-Butylbenzene	19.235	105	241940	0.69	ug/Kg	96
88) n-Butylbenzene	19.814	91	283252	0.93	ug/Kg	94
93) Naphthalene	22.056	128	312978	1.17	ug/Kg	100
96) TPH-GRO (C6-C10)	13.850	TIC	151123653m	474.90	ug/Kg	

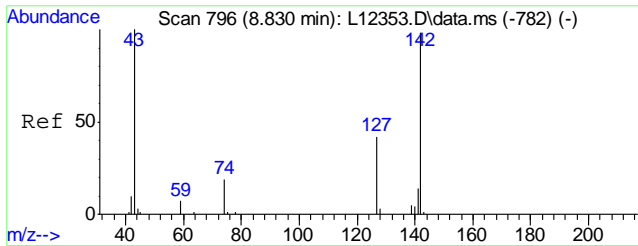
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
Data File : L12506.D  
Acq On : 21 Nov 2011 11:34 pm  
Operator : XINGB  
Sample : C19050-4  
Misc : MS1499,VL386,5.97,,50,5,1  
ALS Vial : 16 Sample Multiplier: 1

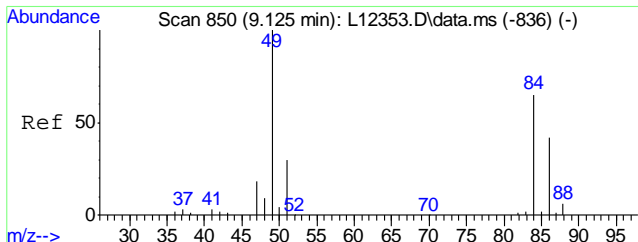
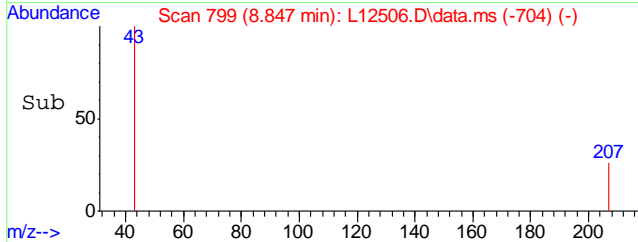
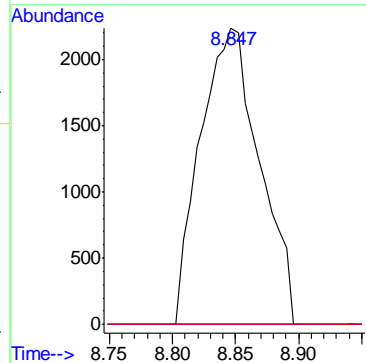
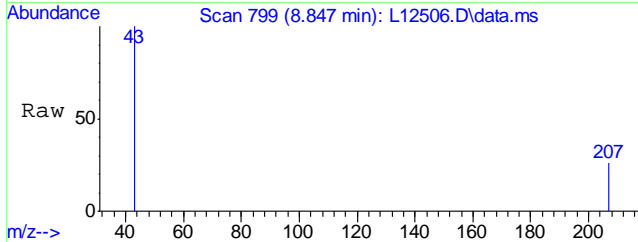
Quant Time: Nov 22 08:11:01 2011  
Quant Method : C:\msdchem\1\METHODS\VL382S.M  
Quant Title : EPA -8260B  
QLast Update : Fri Nov 18 08:32:18 2011  
Response via : Initial Calibration





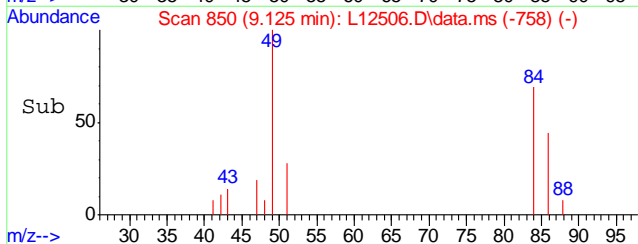
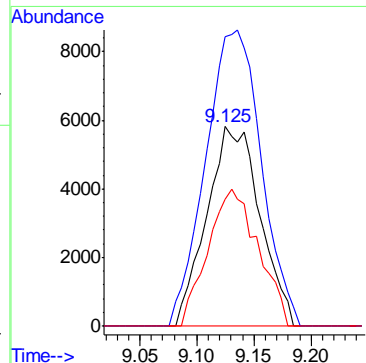
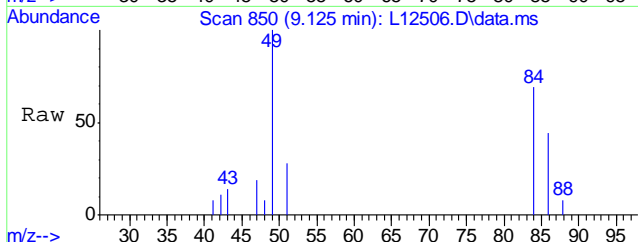
#15  
Methyl Acetate  
Concen: 1.05 ug/Kg  
RT: 8.847 min Scan# 799  
Delta R.T. 0.016 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm

Tgt Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.0	38.3
59	0.0	0.0	26.9

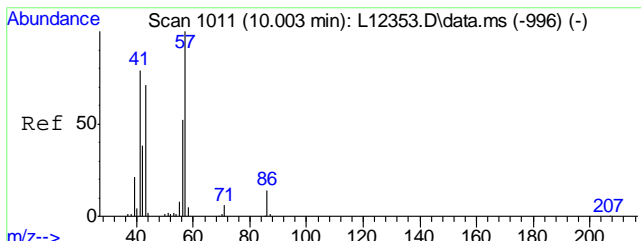


#18  
Methylene Chloride  
Concen: 2.59 ug/Kg  
RT: 9.125 min Scan# 850  
Delta R.T. 0.001 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm

Tgt Ion	Ratio	Lower	Upper
84	100		
49	155.6	131.3	171.3
86	64.8	43.2	83.2

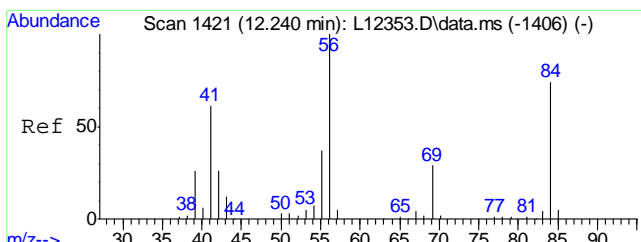
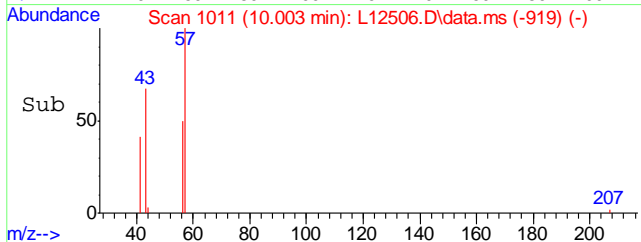
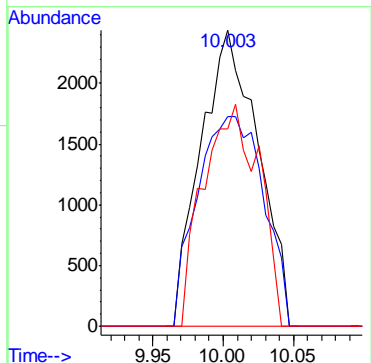
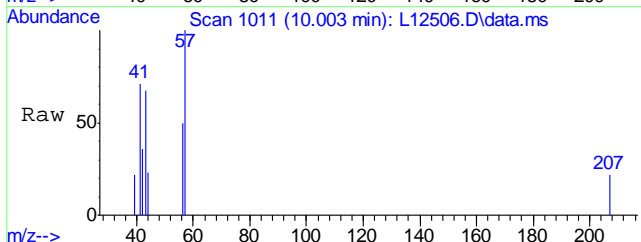






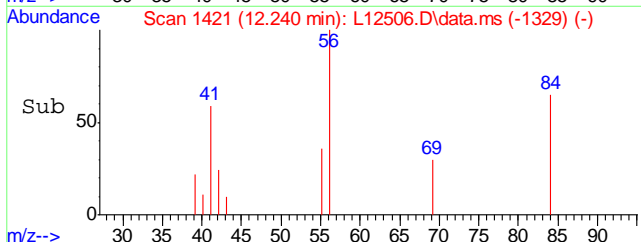
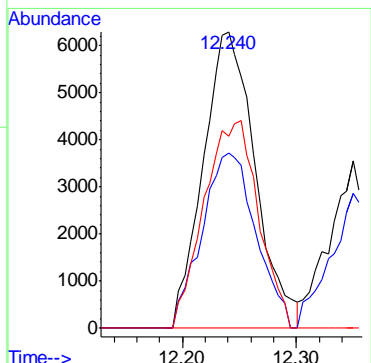
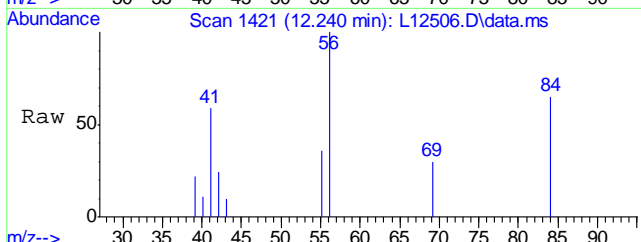
#23  
Hexane  
Concen: 0.64 ug/Kg  
RT: 10.003 min Scan# 1011  
Delta R.T. 0.000 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm

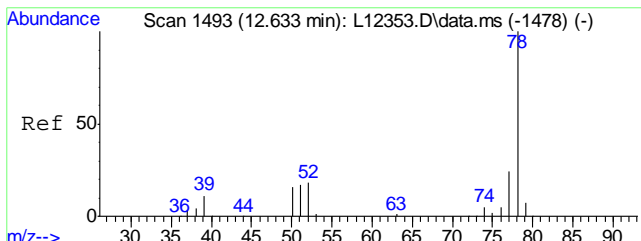
Tgt Ion	Resp	Lower	Upper
57	69208		
57	100		
41	81.8	61.8	92.8
43	73.1	56.2	84.2



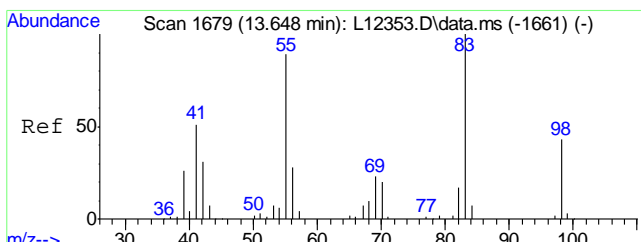
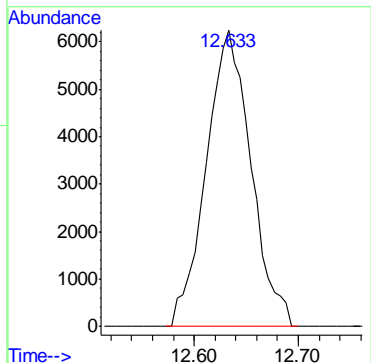
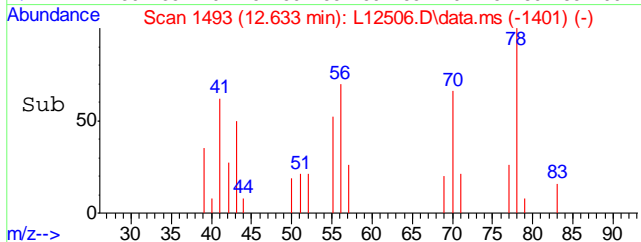
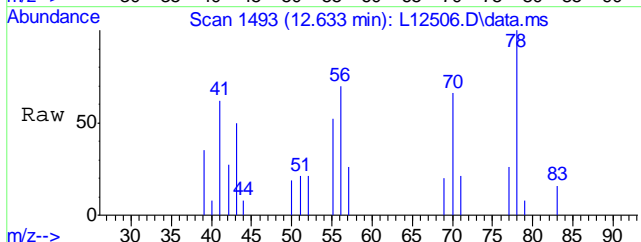
#36  
Cyclohexane  
Concen: 1.44 ug/Kg  
RT: 12.240 min Scan# 1421  
Delta R.T. 0.000 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm

Tgt Ion	Resp	Lower	Upper
56	199234		
56	100		
41	61.2	47.4	71.2
84	73.0	60.4	90.6

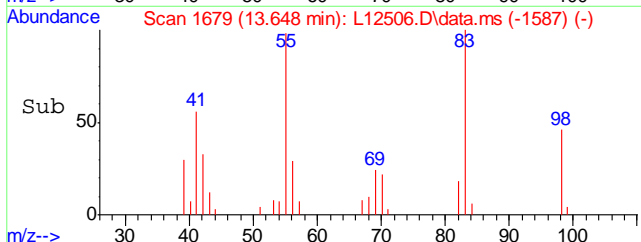
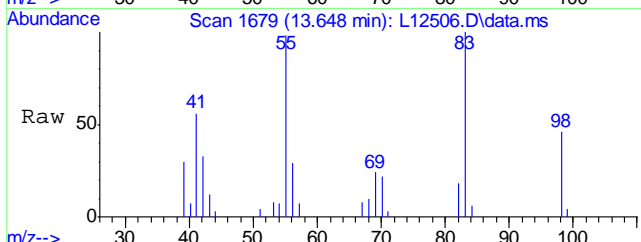




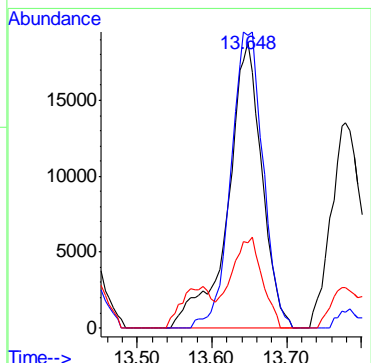
#42  
Benzene  
Concen: 0.67 ug/Kg  
RT: 12.633 min Scan# 1493  
Delta R.T. 0.000 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm  
Tgt Ion: 78 Resp: 187547

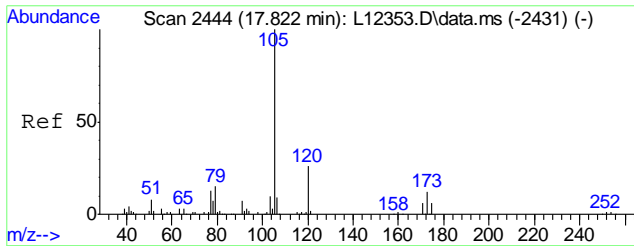


#45  
Methylcyclohexane  
Concen: 5.32 ug/Kg  
RT: 13.648 min Scan# 1679  
Delta R.T. 0.000 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm  
Tgt Ion: 55 Resp: 594313



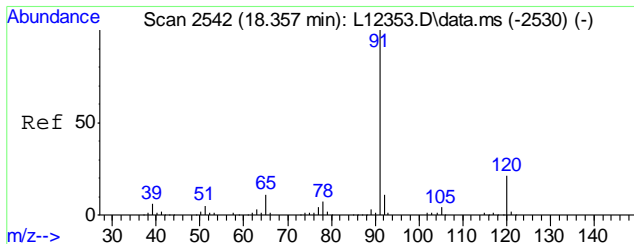
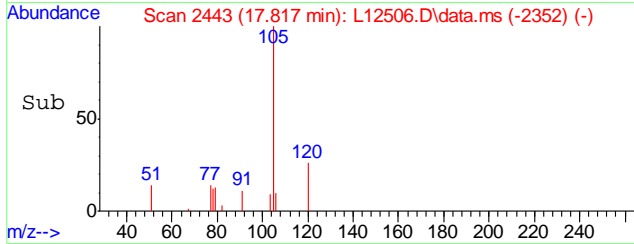
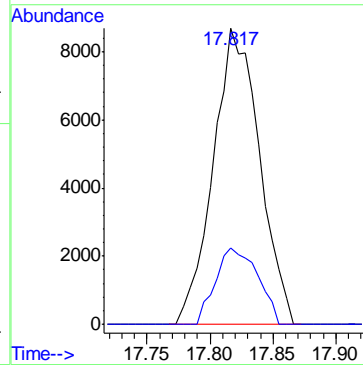
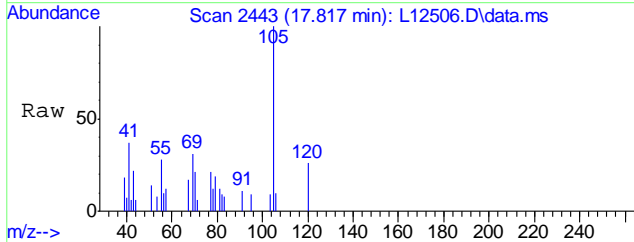
Ion	Ratio	Lower	Upper
55	100		
83	97.9	88.8	128.8
56	29.3	13.0	53.0





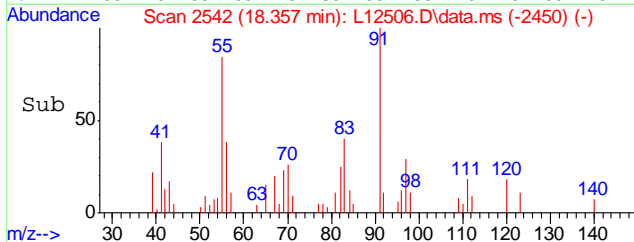
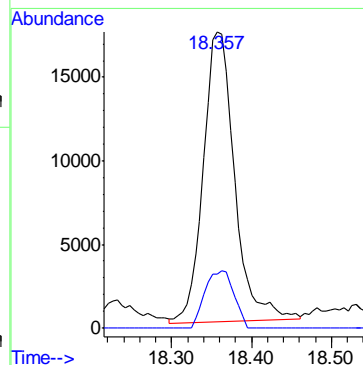
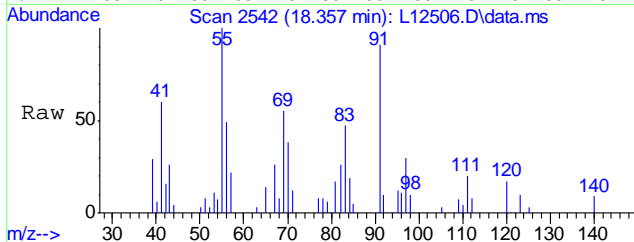
#70  
Isopropylbenzene  
Concen: 0.72 ug/Kg  
RT: 17.817 min Scan# 2443  
Delta R.T. -0.005 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm

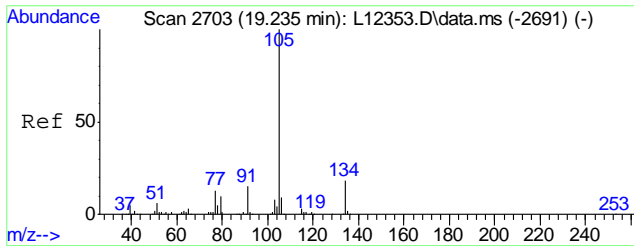
Tgt Ion	Ratio	Lower	Upper
105	100		
120	23.6	5.6	45.6



#76  
n-Propylbenzene  
Concen: 1.19 ug/Kg  
RT: 18.357 min Scan# 2542  
Delta R.T. 0.000 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm

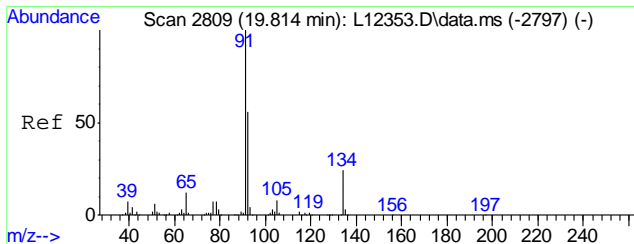
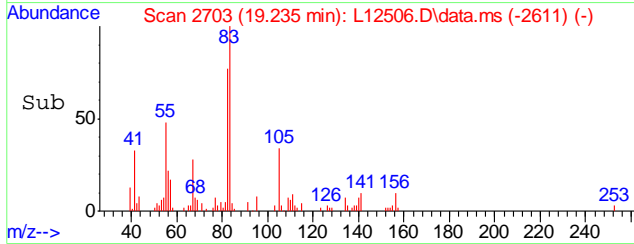
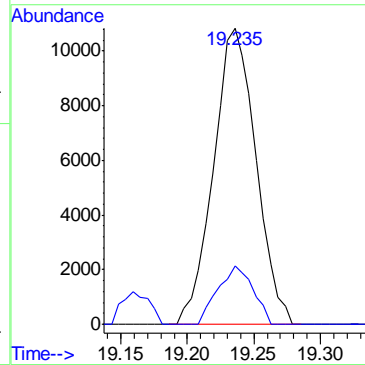
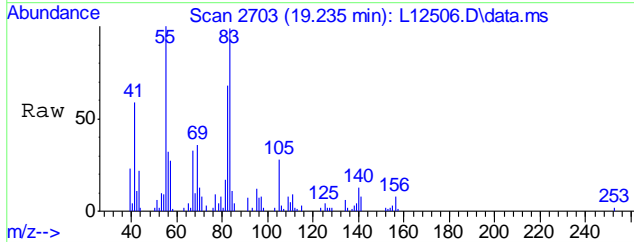
Tgt Ion	Ratio	Lower	Upper
91	100		
120	18.1	1.4	41.4





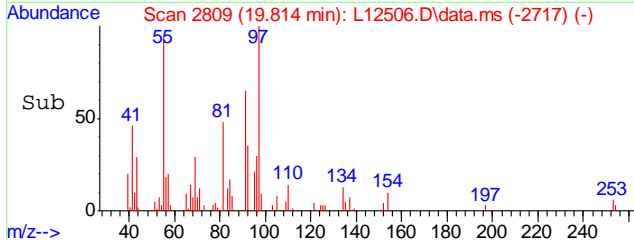
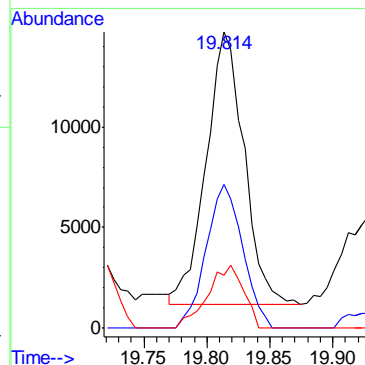
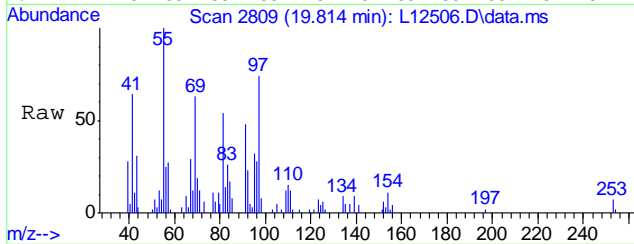
#84  
 sec-Butylbenzene  
 Concen: 0.69 ug/Kg  
 RT: 19.235 min Scan# 2703  
 Delta R.T. 0.000 min  
 Lab File: L12506.D  
 Acq: 21 Nov 2011 11:34 pm

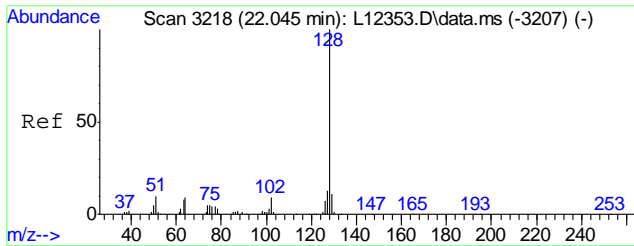
Tgt Ion	Resp	Lower	Upper
105	241940	100	
134	16.4	0.0	38.4



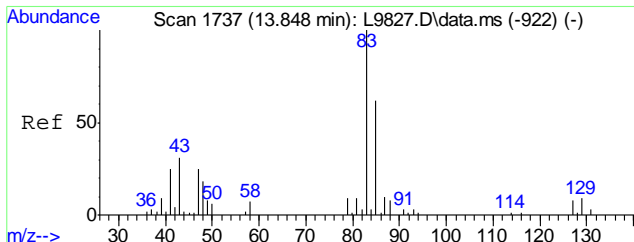
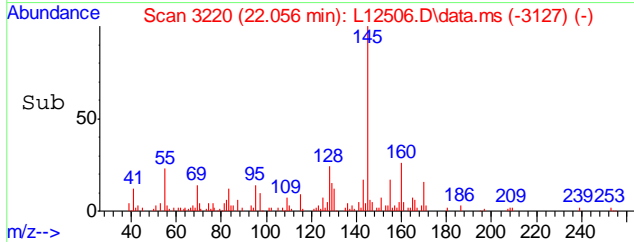
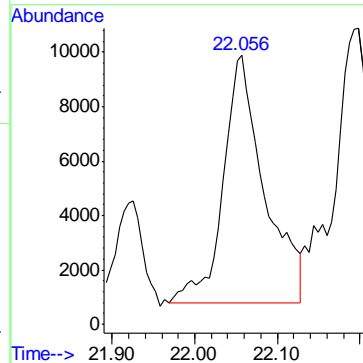
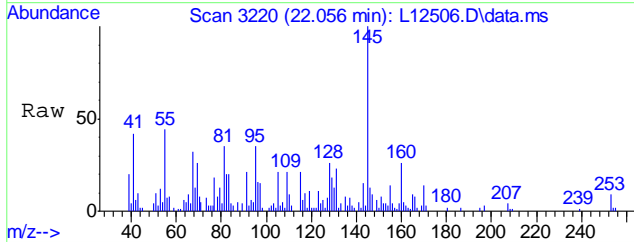
#88  
 n-Butylbenzene  
 Concen: 0.93 ug/Kg  
 RT: 19.814 min Scan# 2809  
 Delta R.T. 0.000 min  
 Lab File: L12506.D  
 Acq: 21 Nov 2011 11:34 pm

Tgt Ion	Resp	Lower	Upper
91	283252	100	
92	50.7	35.2	75.2
134	21.7	3.8	43.8

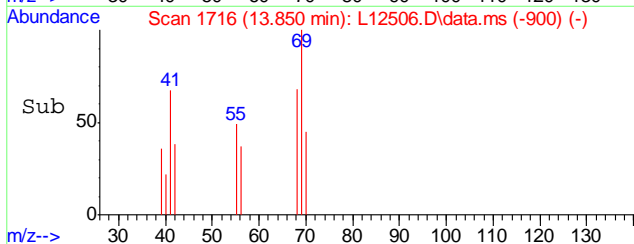
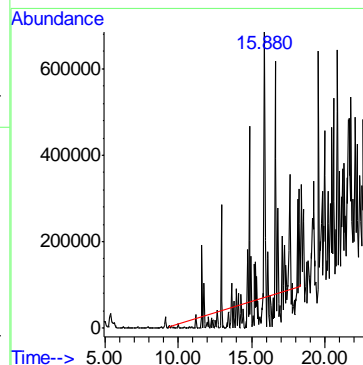
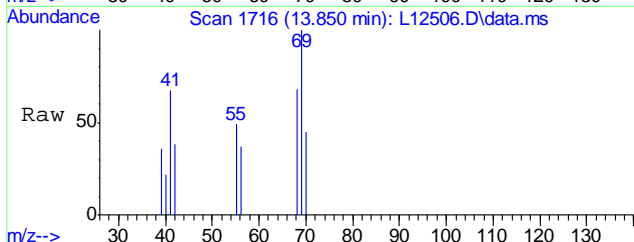




#93  
Naphthalene  
Concen: 1.17 ug/Kg  
RT: 22.056 min Scan# 3220  
Delta R.T. 0.006 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm  
Tgt Ion:128 Resp: 312978



#96  
TPH-GRO (C6-C10)  
Concen: 474.90 ug/Kg m  
RT: 13.850 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: L12506.D  
Acq: 21 Nov 2011 11:34 pm  
Tgt Ion:TIC Resp:151123653



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
 Data File : L12508.D  
 Acq On : 22 Nov 2011 12:32 am  
 Operator : XINGB  
 Sample : C19050-5  
 Misc : MS1499,VL386,2.61,,10,5,1  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 22 08:12:27 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration

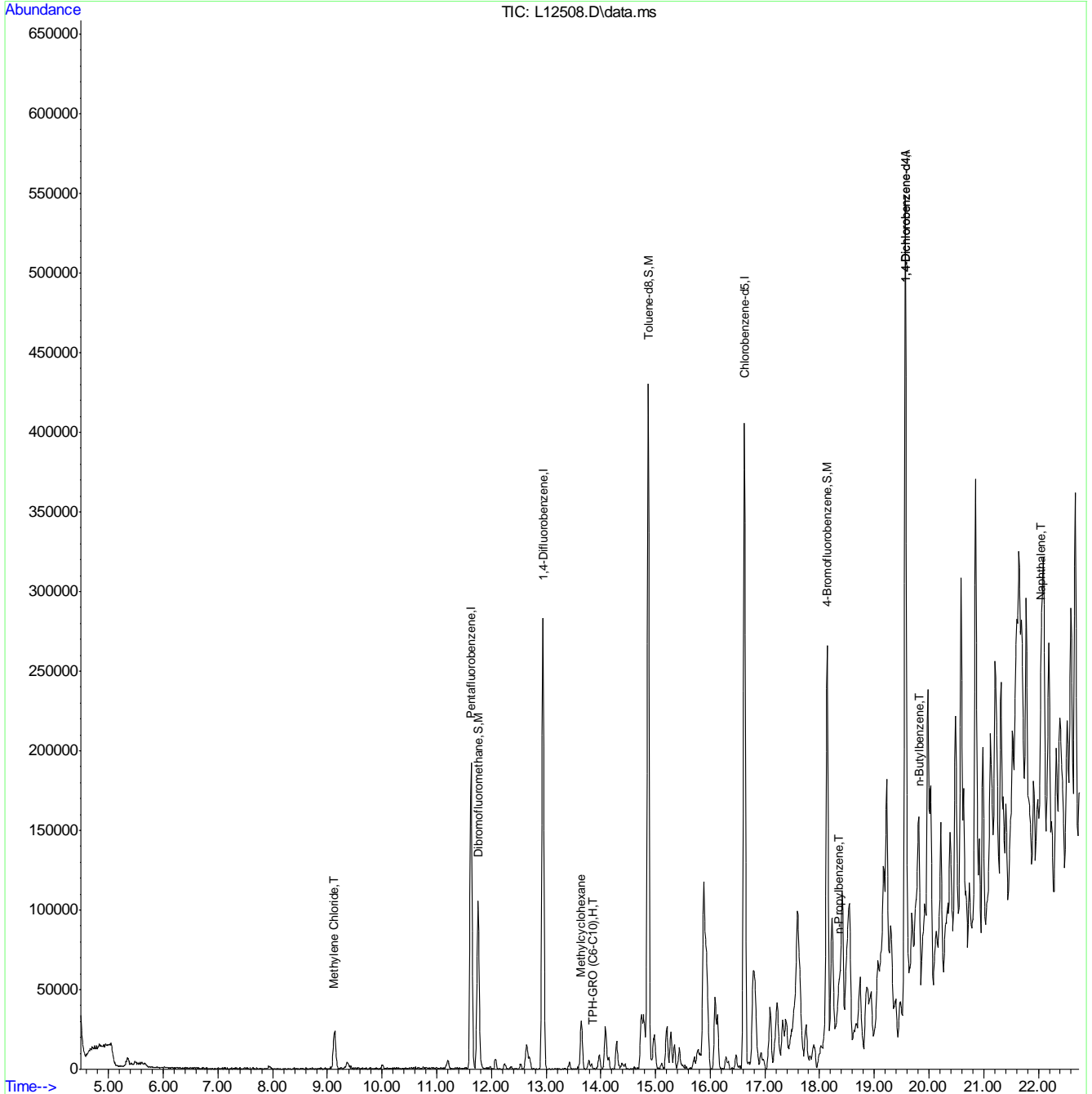
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1939323	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.944	114	3152136	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2747360	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1518092	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1518092	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	965769	18.59	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	92.95%
53) Toluene-d8	14.865	98	3862266	19.92	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	99.60%
71) 4-Bromofluorobenzene	18.133	95	1504583	20.36	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	101.80%
Target Compounds						
18) Methylene Chloride	9.125	84	187413	2.58	ug/Kg	98
45) Methylcyclohexane	13.643	55	167835	1.50	ug/Kg	97
76) n-Propylbenzene	18.357	91	239301	0.62	ug/Kg	90
88) n-Butylbenzene	19.819	91	199189	0.67	ug/Kg	98
93) Naphthalene	22.051	128	283298	1.09	ug/Kg	100
96) TPH-GRO (C6-C10)	13.850	TIC	33564964m	108.39	ug/Kg	

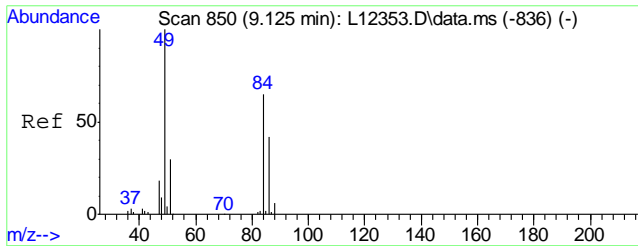
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
Data File : L12508.D  
Acq On : 22 Nov 2011 12:32 am  
Operator : XINGB  
Sample : C19050-5  
Misc : MS1499,VL386,2.61,,10,5,1  
ALS Vial : 18 Sample Multiplier: 1

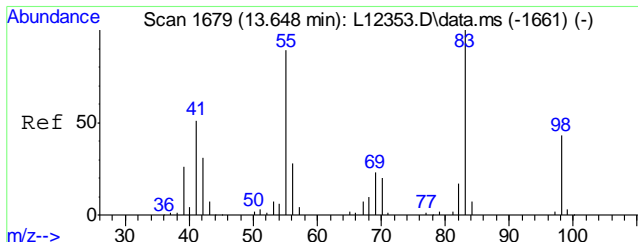
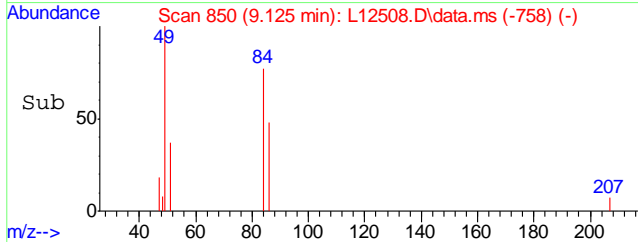
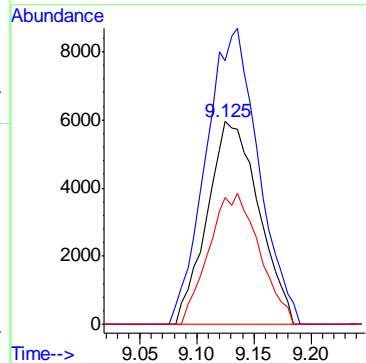
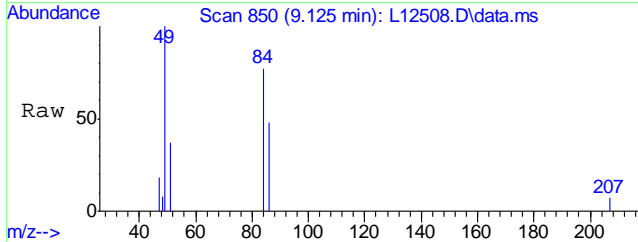
Quant Time: Nov 22 08:12:27 2011  
Quant Method : C:\msdchem\1\METHODS\VL382S.M  
Quant Title : EPA -8260B  
QLast Update : Fri Nov 18 08:32:18 2011  
Response via : Initial Calibration





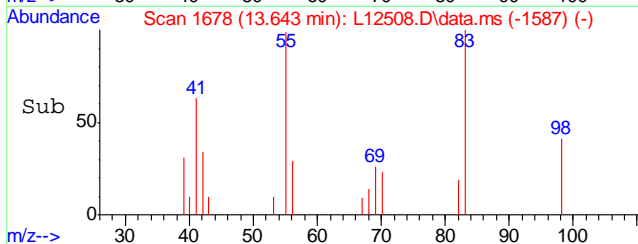
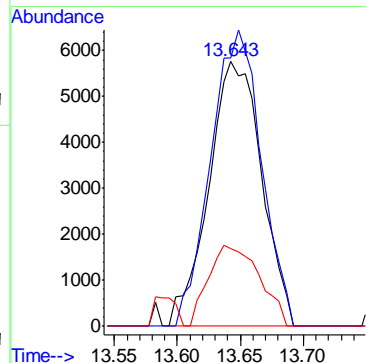
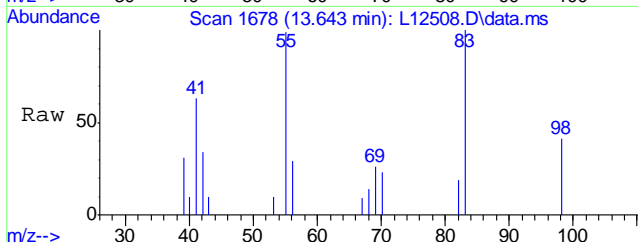
#18  
Methylene Chloride  
Concen: 2.58 ug/Kg  
RT: 9.125 min Scan# 850  
Delta R.T. 0.001 min  
Lab File: L12508.D  
Acq: 22 Nov 2011 12:32 am

Tgt Ion	Resp	Lower	Upper
84	187413		
49	148.3	131.3	171.3
86	63.0	43.2	83.2

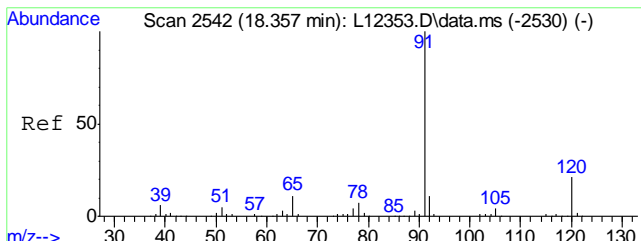


#45  
Methylcyclohexane  
Concen: 1.50 ug/Kg  
RT: 13.643 min Scan# 1678  
Delta R.T. -0.005 min  
Lab File: L12508.D  
Acq: 22 Nov 2011 12:32 am

Tgt Ion	Resp	Lower	Upper
55	167835		
83	107.1	88.8	128.8
56	29.5	13.0	53.0

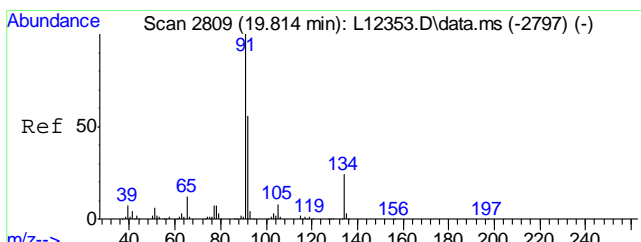
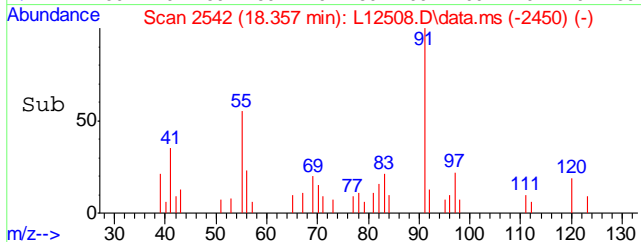
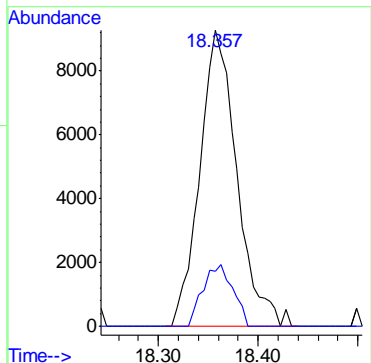
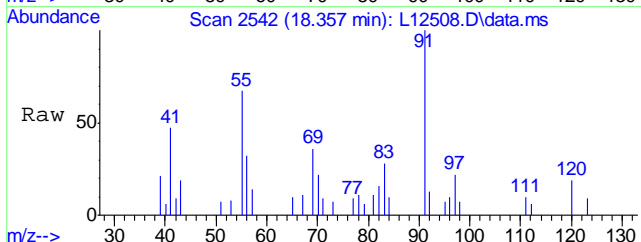






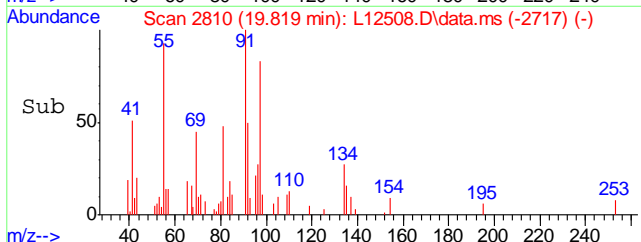
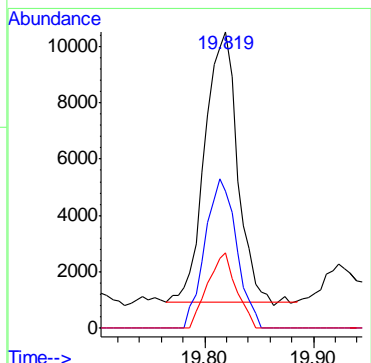
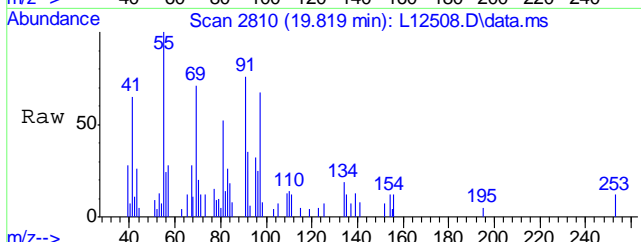
#76  
 n-Propylbenzene  
 Concen: 0.62 ug/Kg  
 RT: 18.357 min Scan# 2542  
 Delta R.T. 0.000 min  
 Lab File: L12508.D  
 Acq: 22 Nov 2011 12:32 am

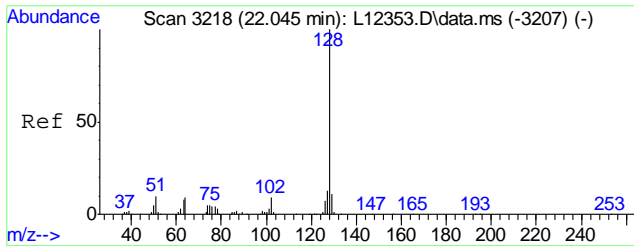
Tgt Ion	Resp	Lower	Upper
91	239301	100	
120	16.8	1.4	41.4



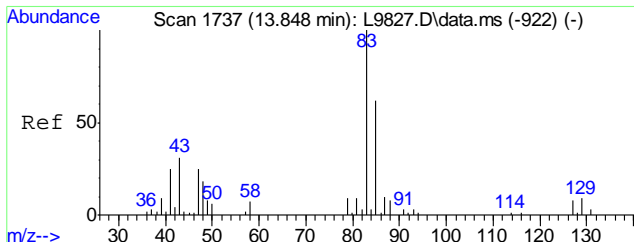
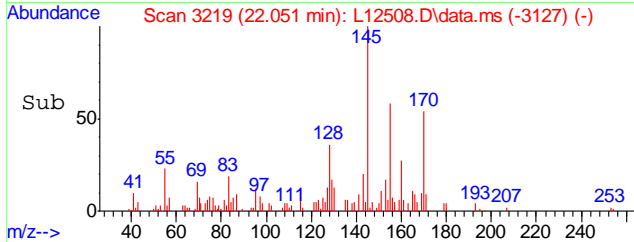
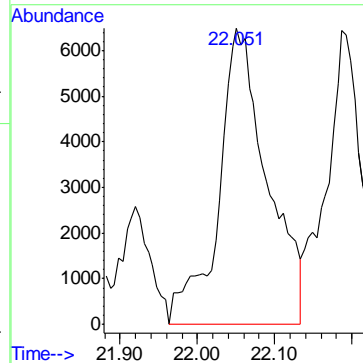
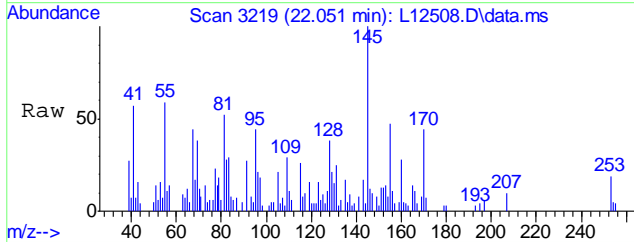
#88  
 n-Butylbenzene  
 Concen: 0.67 ug/Kg  
 RT: 19.819 min Scan# 2810  
 Delta R.T. 0.006 min  
 Lab File: L12508.D  
 Acq: 22 Nov 2011 12:32 am

Tgt Ion	Resp	Lower	Upper
91	199189	100	
92	53.5	35.2	75.2
134	24.3	3.8	43.8

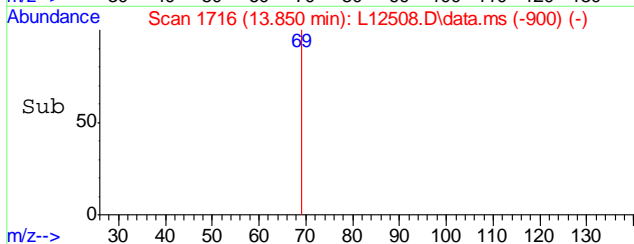
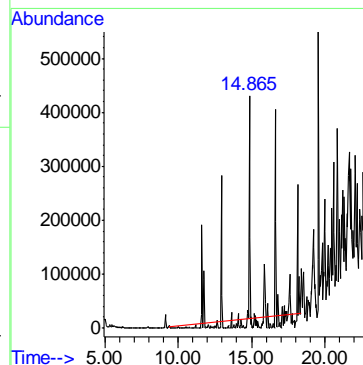
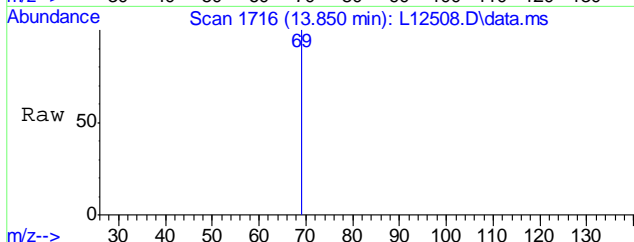




#93  
Naphthalene  
Concen: 1.09 ug/Kg  
RT: 22.051 min Scan# 3219  
Delta R.T. 0.000 min  
Lab File: L12508.D  
Acq: 22 Nov 2011 12:32 am  
Tgt Ion:128 Resp: 283298



#96  
TPH-GRO (C6-C10)  
Concen: 108.39 ug/Kg m  
RT: 13.850 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: L12508.D  
Acq: 22 Nov 2011 12:32 am  
Tgt Ion:TIC Resp:33564964



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111119\  
 Data File : L12439.D  
 Acq On : 19 Nov 2011 9:29 pm  
 Operator : XINGB  
 Sample : C19050-6  
 Misc : MS1499,VL384,6.48,,10,5,1  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 20 15:23:55 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration

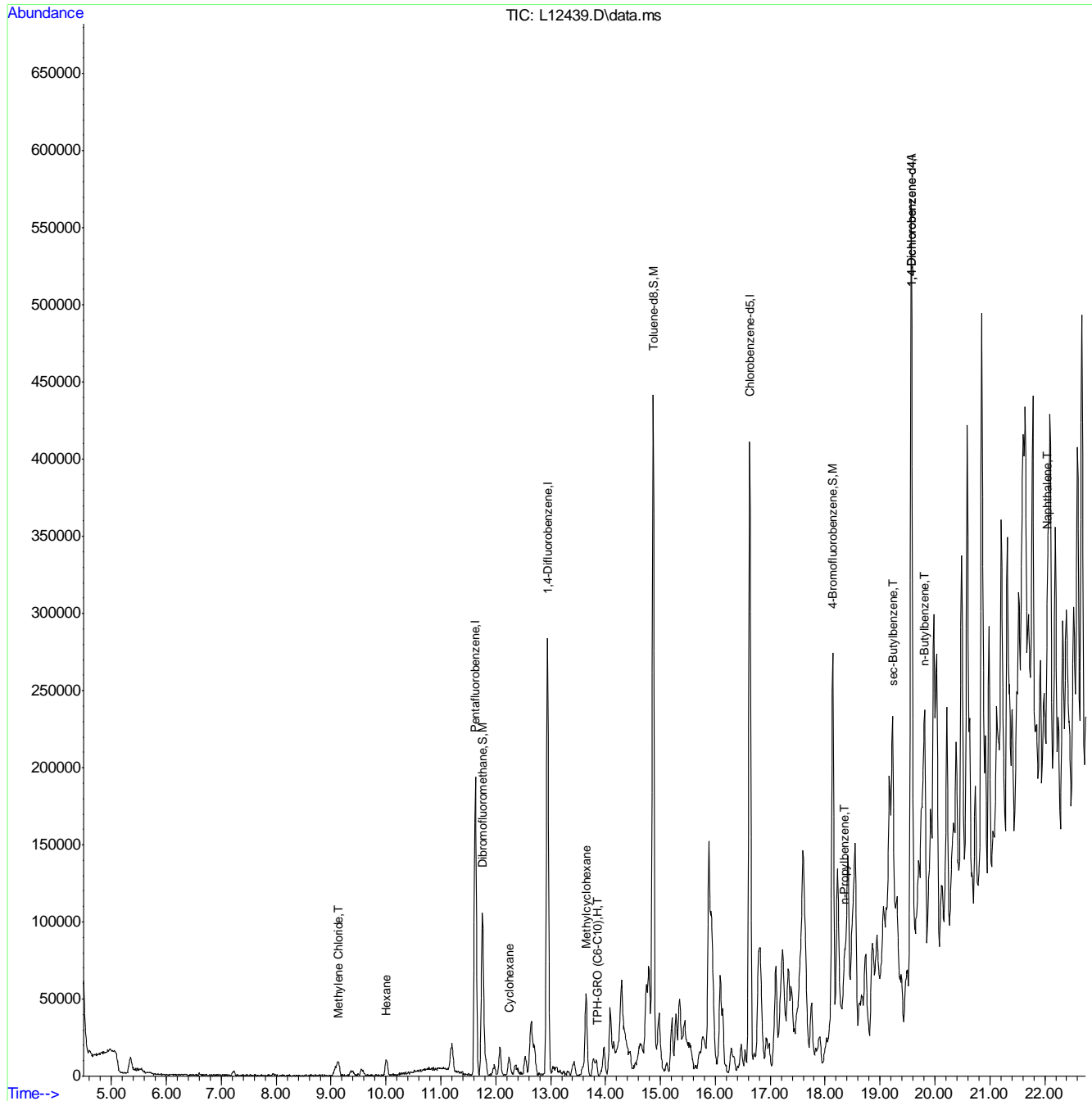
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1918081	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.944	114	3097408	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2710655	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1498354	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1498354	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	988699	19.24	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	96.20%
53) Toluene-d8	14.865	98	3827997	20.01	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	100.05%
71) 4-Bromofluorobenzene	18.139	95	1491653	20.46	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	102.30%
Target Compounds						
						Qvalue
18) Methylene Chloride	9.130	84	57216	0.80	ug/Kg	92
23) Hexane	10.009	57	80184	0.74	ug/Kg	93
36) Cyclohexane	12.246	56	83136	0.61	ug/Kg#	83
45) Methylcyclohexane	13.648	55	305210	2.78	ug/Kg	88
76) n-Propylbenzene	18.357	91	312642	0.82	ug/Kg	96
84) sec-Butylbenzene	19.235	105	196757	0.59	ug/Kg	92
88) n-Butylbenzene	19.814	91	272427	0.93	ug/Kg	94
93) Naphthalene	22.051	128	255210	0.99	ug/Kg	100
96) TPH-GRO (C6-C10)	13.850	TIC	54122113m	177.07	ug/Kg	

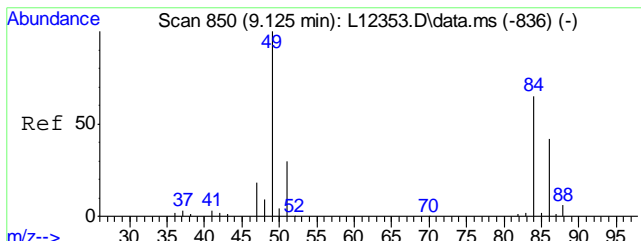
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111119\  
Data File : L12439.D  
Acq On : 19 Nov 2011 9:29 pm  
Operator : XINGB  
Sample : C19050-6  
Misc : MS1499,VL384,6.48,,10,5,1  
ALS Vial : 23 Sample Multiplier: 1

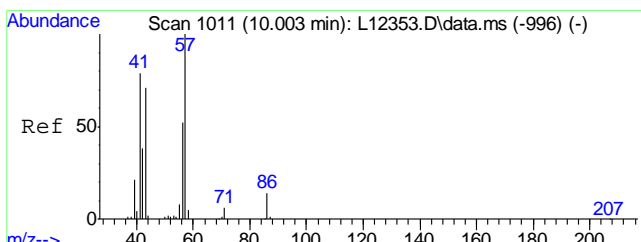
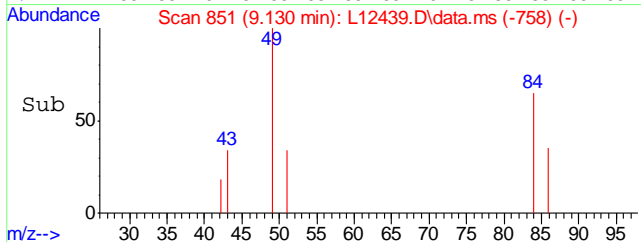
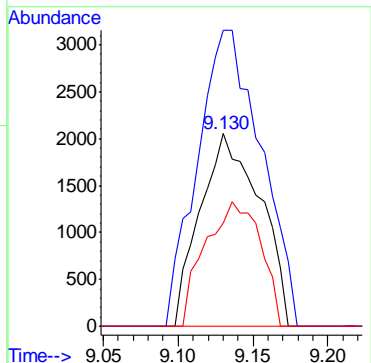
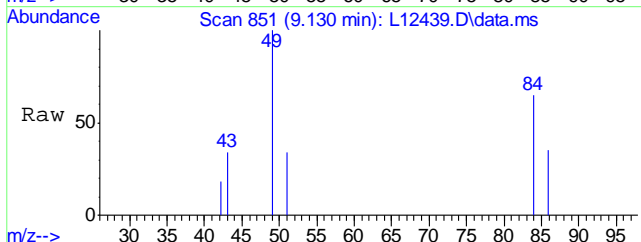
Quant Time: Nov 20 15:23:55 2011  
Quant Method : C:\msdchem\1\METHODS\VL382S.M  
Quant Title : EPA -8260B  
QLast Update : Fri Nov 18 08:32:18 2011  
Response via : Initial Calibration





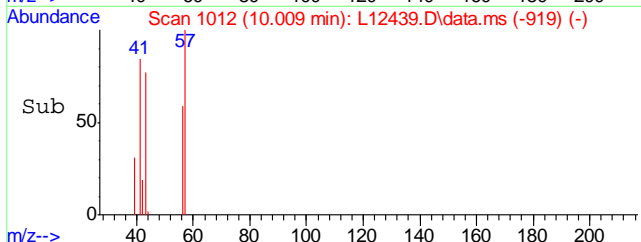
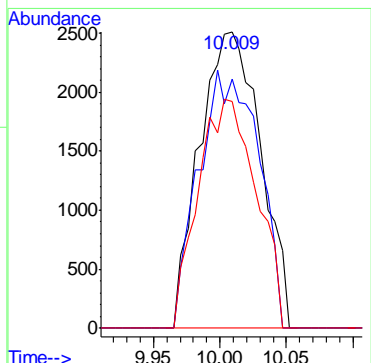
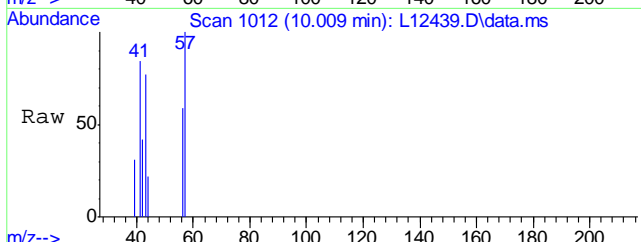
#18  
Methylene Chloride  
Concen: 0.80 ug/Kg  
RT: 9.130 min Scan# 851  
Delta R.T. 0.006 min  
Lab File: L12439.D  
Acq: 19 Nov 2011 9:29 pm

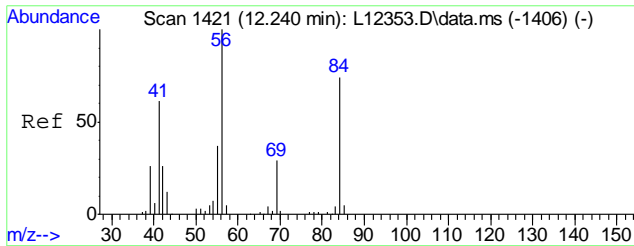
Tgt Ion	Resp	Lower	Upper
84	57216		
84	100		
49	163.6	131.3	171.3
86	59.7	43.2	83.2



#23  
Hexane  
Concen: 0.74 ug/Kg  
RT: 10.009 min Scan# 1012  
Delta R.T. 0.006 min  
Lab File: L12439.D  
Acq: 19 Nov 2011 9:29 pm

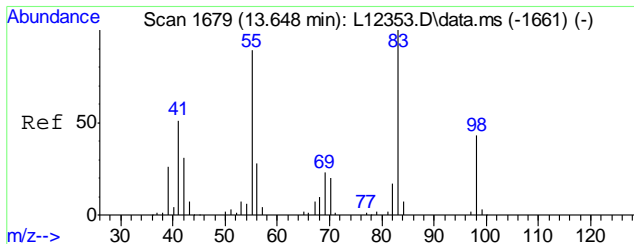
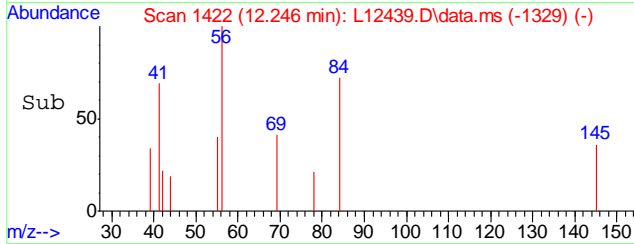
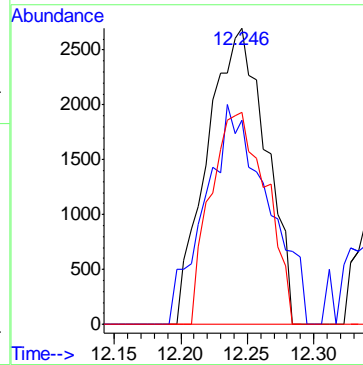
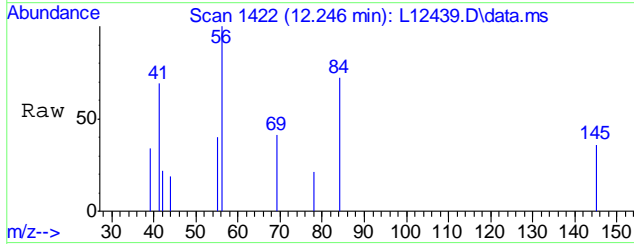
Tgt Ion	Resp	Lower	Upper
57	80184		
57	100		
41	85.5	61.8	92.8
43	73.6	56.2	84.2





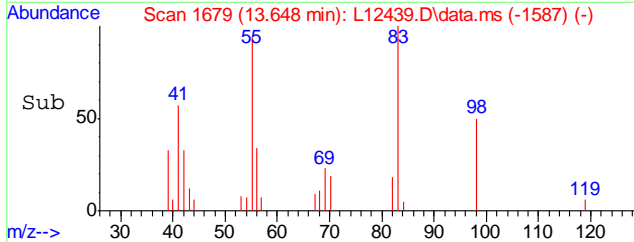
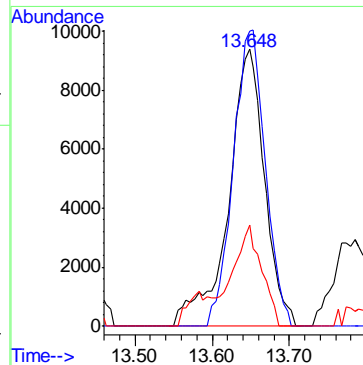
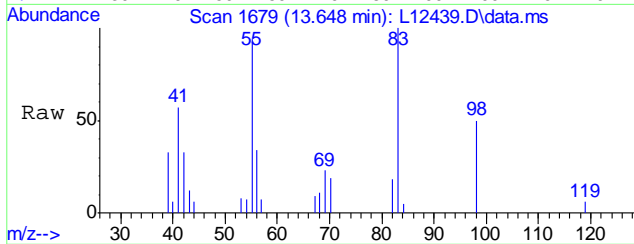
#36  
Cyclohexane  
Concen: 0.61 ug/Kg  
RT: 12.246 min Scan# 1422  
Delta R.T. 0.006 min  
Lab File: L12439.D  
Acq: 19 Nov 2011 9:29 pm

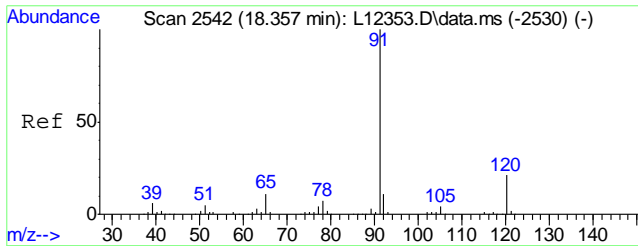
Tgt Ion	Resp	Lower	Upper
56	83136		
41	79.1	47.4	71.2#
84	67.5	60.4	90.6



#45  
Methylcyclohexane  
Concen: 2.78 ug/Kg  
RT: 13.648 min Scan# 1679  
Delta R.T. 0.000 min  
Lab File: L12439.D  
Acq: 19 Nov 2011 9:29 pm

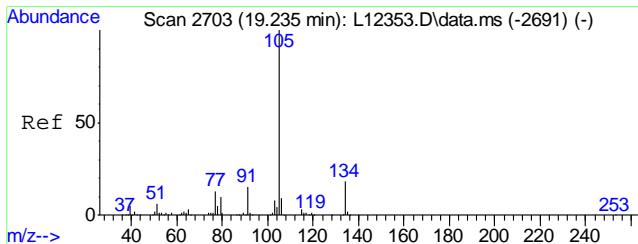
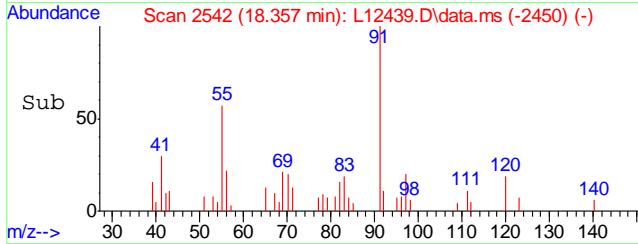
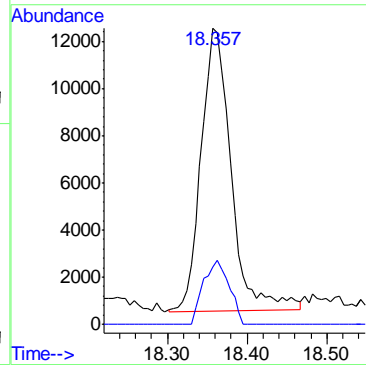
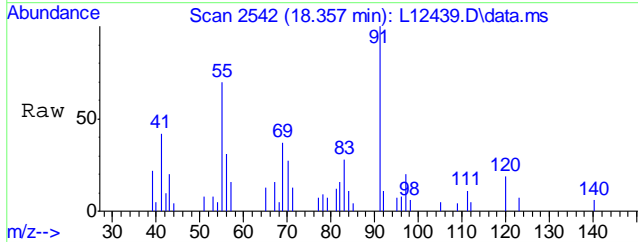
Tgt Ion	Resp	Lower	Upper
55	305210		
83	94.8	88.8	128.8
56	28.8	13.0	53.0





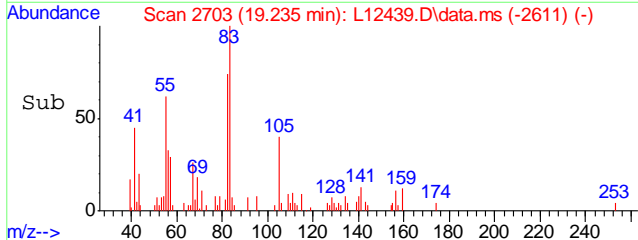
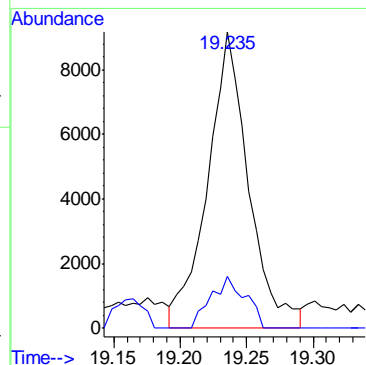
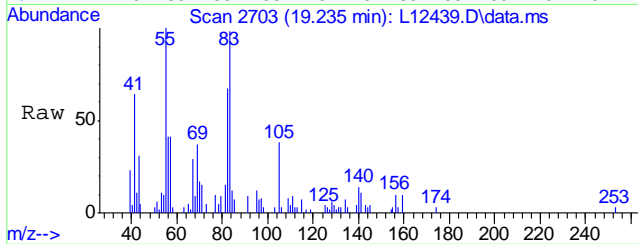
#76  
 n-Propylbenzene  
 Concen: 0.82 ug/Kg  
 RT: 18.357 min Scan# 2542  
 Delta R.T. 0.000 min  
 Lab File: L12439.D  
 Acq: 19 Nov 2011 9:29 pm

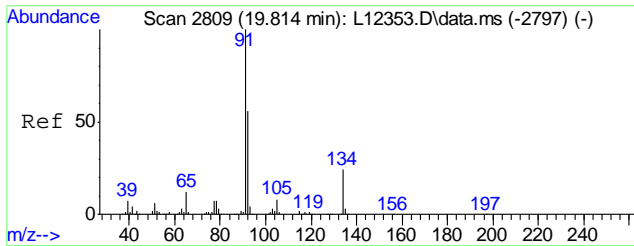
Tgt Ion	Resp	Lower	Upper
91	312642	100	
120	19.4	1.4	41.4



#84  
 sec-Butylbenzene  
 Concen: 0.59 ug/Kg  
 RT: 19.235 min Scan# 2703  
 Delta R.T. 0.000 min  
 Lab File: L12439.D  
 Acq: 19 Nov 2011 9:29 pm

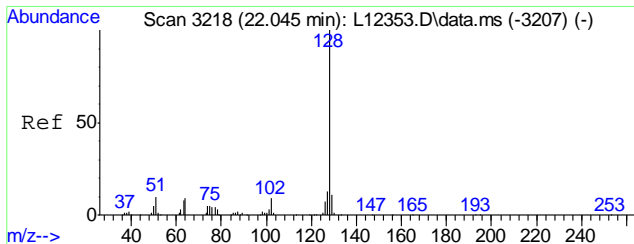
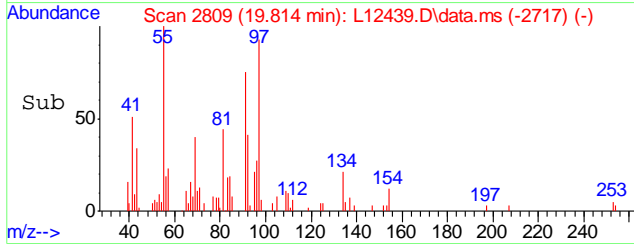
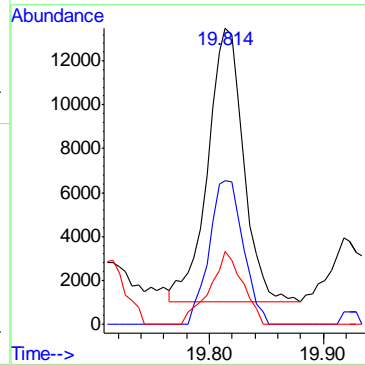
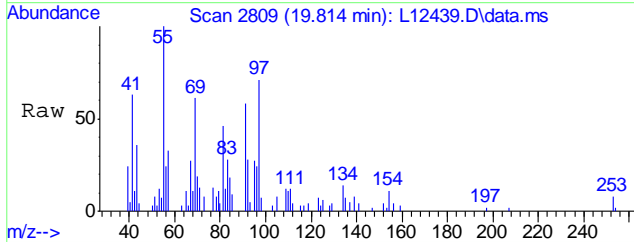
Tgt Ion	Resp	Lower	Upper
105	196757	100	
134	14.6	0.0	38.4





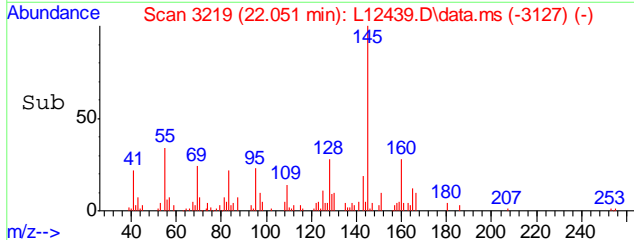
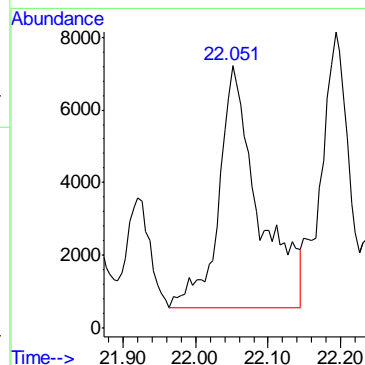
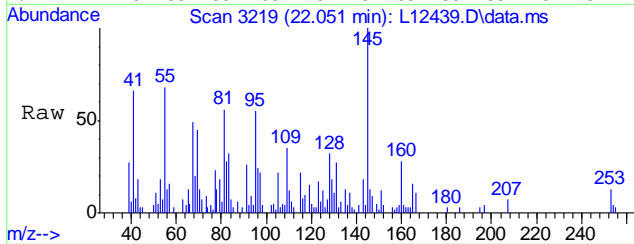
#88  
 n-Butylbenzene  
 Concen: 0.93 ug/Kg  
 RT: 19.814 min Scan# 2809  
 Delta R.T. 0.000 min  
 Lab File: L12439.D  
 Acq: 19 Nov 2011 9:29 pm

Tgt Ion	Resp	Lower	Upper
91	272427		
92	49.8	35.2	75.2
134	24.4	3.8	43.8

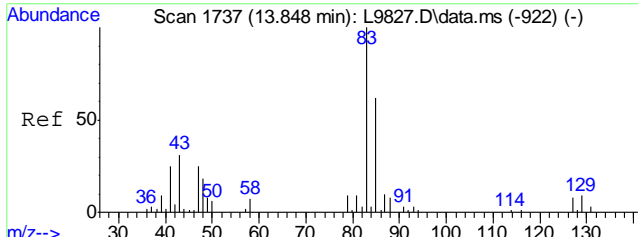


#93  
 Naphthalene  
 Concen: 0.99 ug/Kg  
 RT: 22.051 min Scan# 3219  
 Delta R.T. 0.000 min  
 Lab File: L12439.D  
 Acq: 19 Nov 2011 9:29 pm

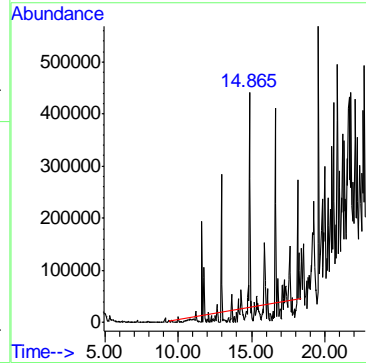
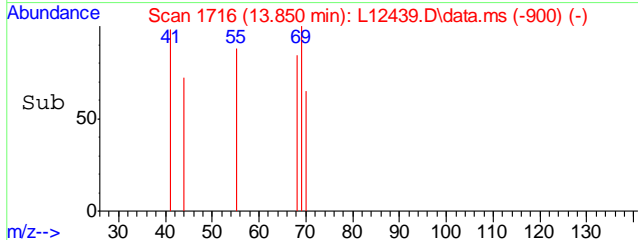
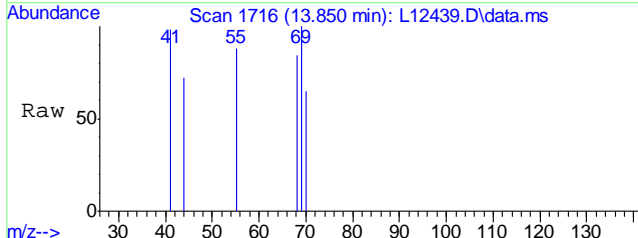
Tgt Ion: 128 Resp: 255210







#96  
 TPH-GRO (C6-C10)  
 Concen: 177.07 ug/Kg m  
 RT: 13.850 min Scan# 1716  
 Delta R.T. 0.000 min  
 Lab File: L12439.D  
 Acq: 19 Nov 2011 9:29 pm  
 Tgt Ion:TIC Resp:54122113



5.1.6  
 5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111119\  
 Data File : L12423.D  
 Acq On : 19 Nov 2011 1:41 pm  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VL384,5,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 20 14:19:56 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.624	168	1856929	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	3030712	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2654963	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1489406	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1489406	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	924546	18.59	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	92.95%
53) Toluene-d8	14.865	98	3698964	19.74	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	98.70%
71) 4-Bromofluorobenzene	18.133	95	1417493	19.85	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	99.25%
Target Compounds						
18) Methylene Chloride	9.125	84	49843	0.72	ug/Kg	94
96) TPH-GRO (C6-C10)	13.850	TIC	1144696m	3.77	ug/Kg	

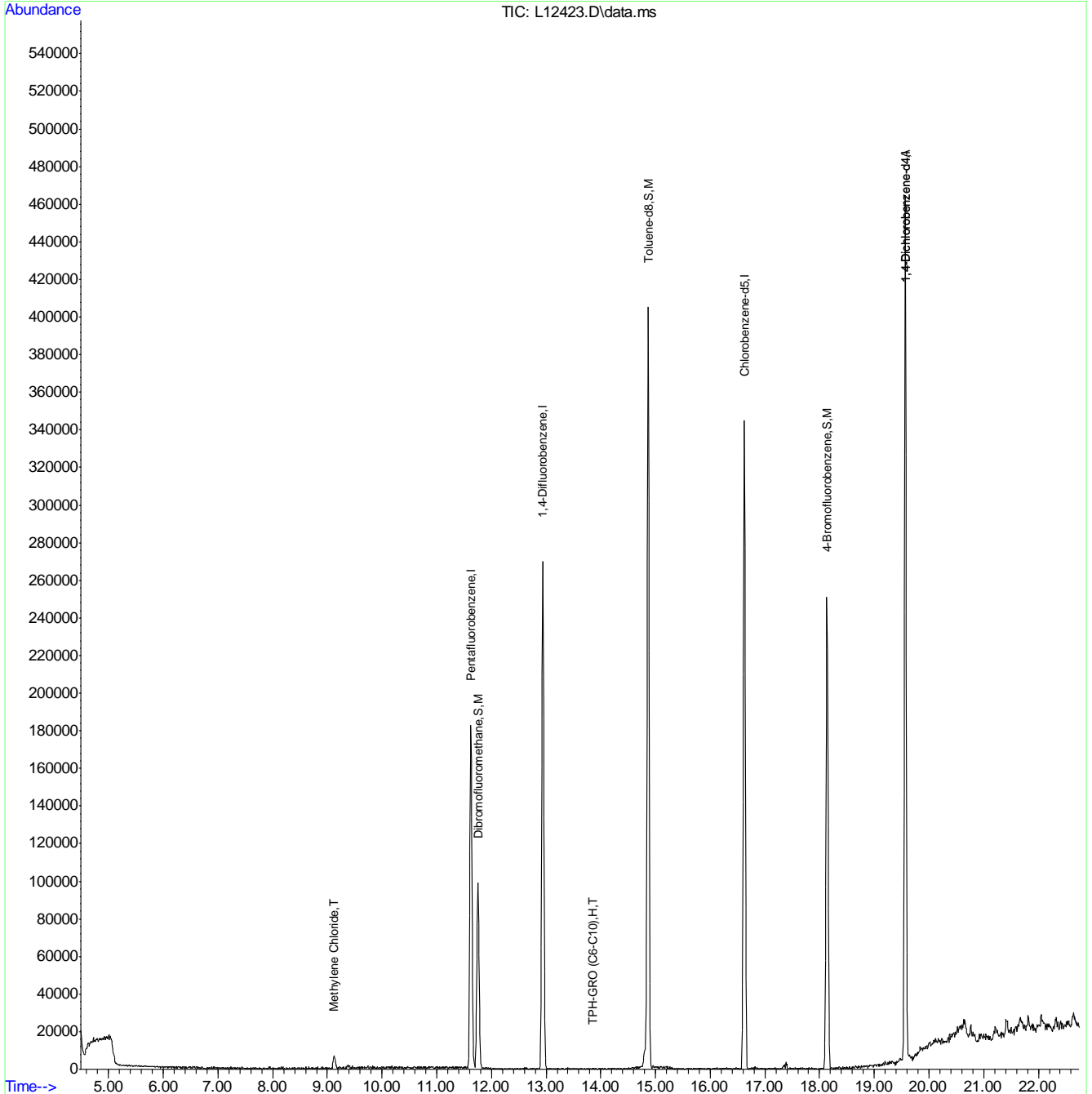
(#) = qualifier out of range (m) = manual integration (+) = signals summed

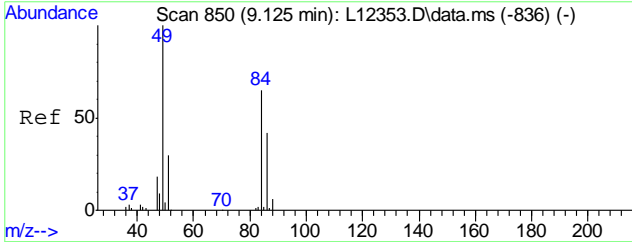
5.2.1  
5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111119\  
 Data File : L12423.D  
 Acq On : 19 Nov 2011 1:41 pm  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VL384,5,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

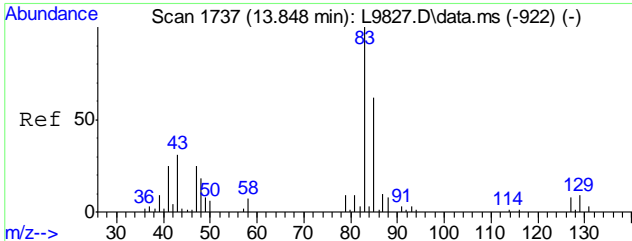
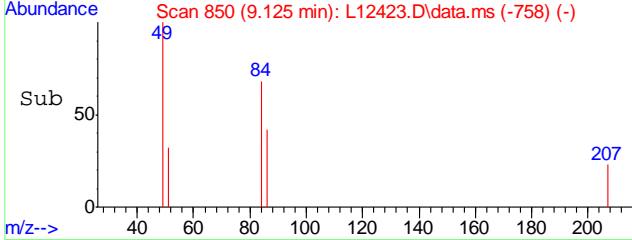
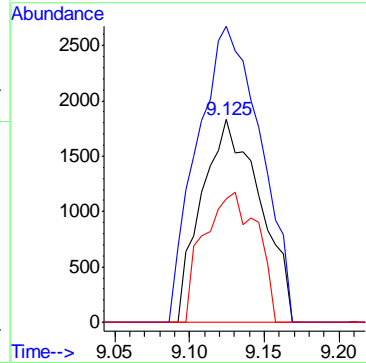
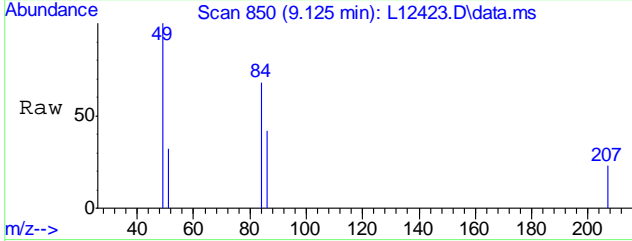
Quant Time: Nov 20 14:19:56 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration





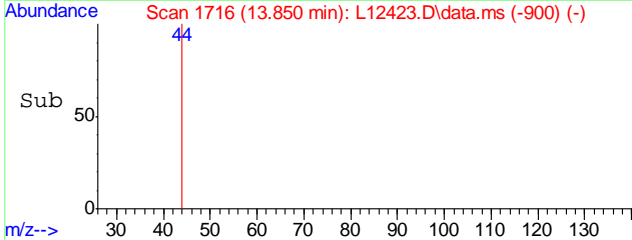
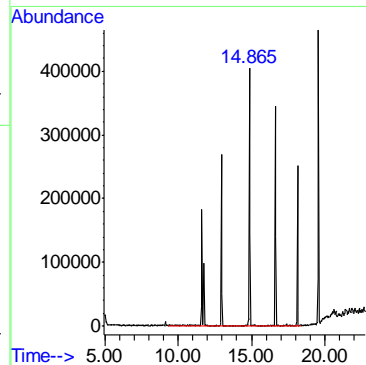
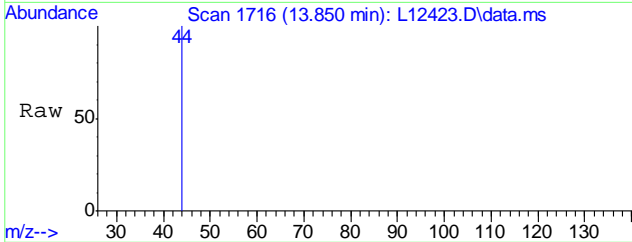
#18  
Methylene Chloride  
Concen: 0.72 ug/Kg  
RT: 9.125 min Scan# 850  
Delta R.T. 0.001 min  
Lab File: L12423.D  
Acq: 19 Nov 2011 1:41 pm

Tgt Ion	Resp	Lower	Upper
84	49843		
49	157.9	131.3	171.3
86	58.2	43.2	83.2



#96  
TPH-GRO (C6-C10)  
Concen: 3.77 ug/Kg m  
RT: 13.850 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: L12423.D  
Acq: 19 Nov 2011 1:41 pm

Tgt Ion:TIC Resp: 1144696



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
 Data File : L12494.D  
 Acq On : 21 Nov 2011 5:44 pm  
 Operator : XINGB  
 Sample : MB2  
 Misc : MS1499,VL386,5,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 22 07:31:48 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1857303	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	3070401	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2612056	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1412931	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1412931	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.749	111	962463	19.34	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	96.70%
53) Toluene-d8	14.865	98	3722205	20.19	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	100.95%
71) 4-Bromofluorobenzene	18.133	95	1387186	19.74	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	98.70%
Target Compounds						
18) Methylene Chloride	9.130	84	121771	1.75	ug/Kg	97
96) TPH-GRO (C6-C10)	13.850	TIC	1271836m	4.41	ug/Kg	

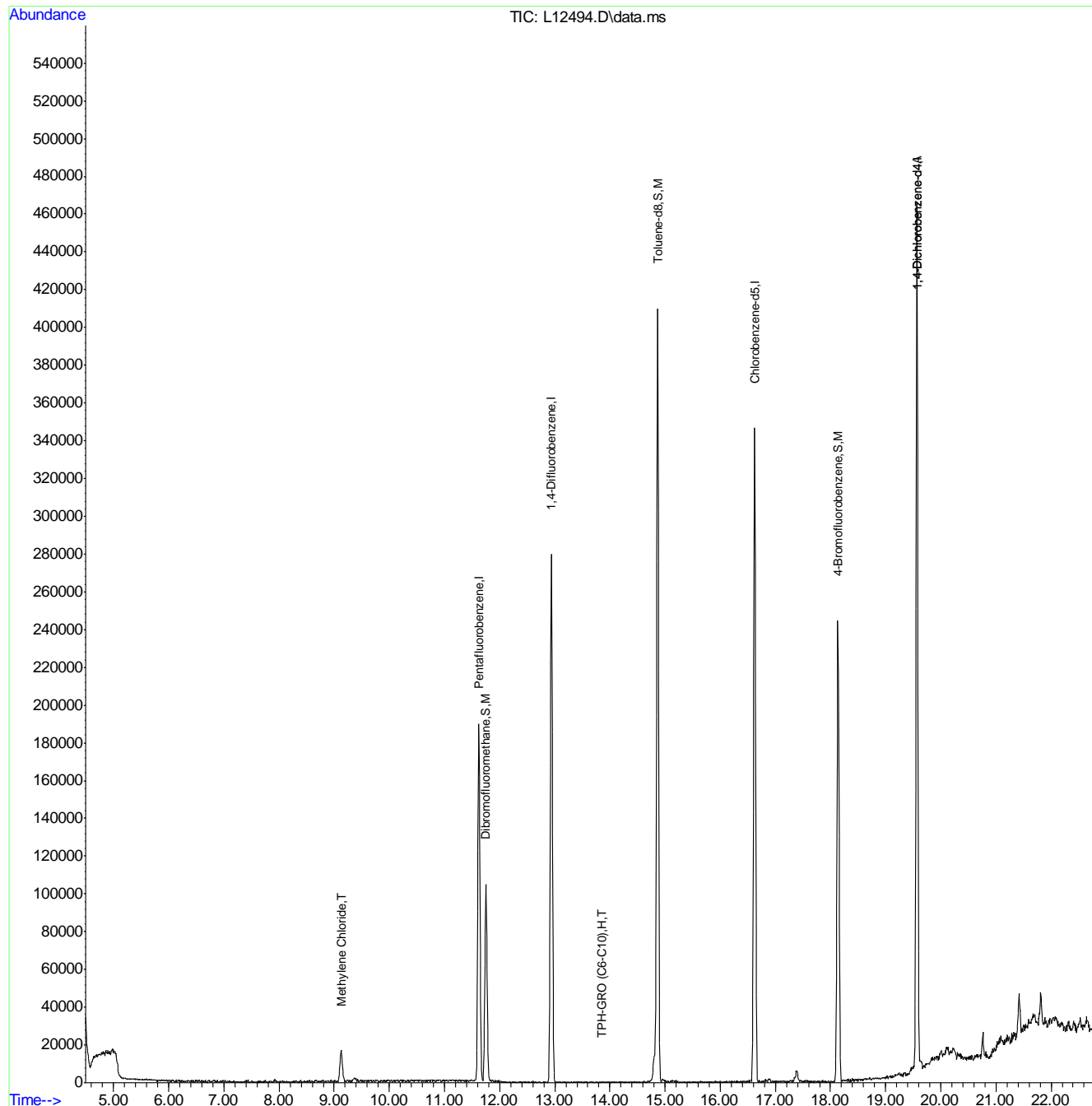
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.22  
5

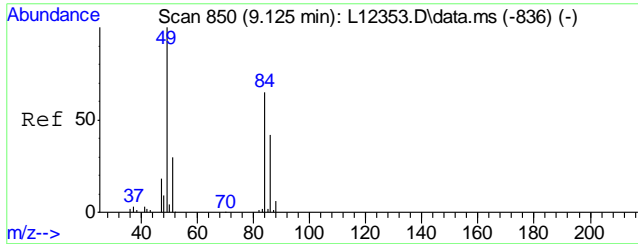
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111121\  
 Data File : L12494.D  
 Acq On : 21 Nov 2011 5:44 pm  
 Operator : XINGB  
 Sample : MB2  
 Misc : MS1499,VL386,5,,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 22 07:31:48 2011  
 Quant Method : C:\msdchem\1\METHODS\VL382S.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Nov 18 08:32:18 2011  
 Response via : Initial Calibration

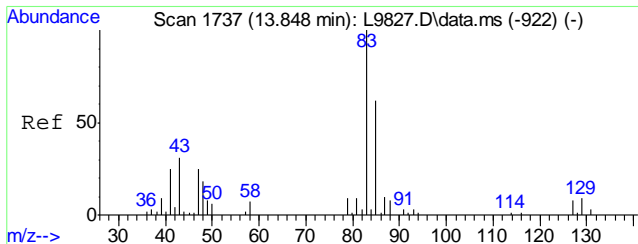
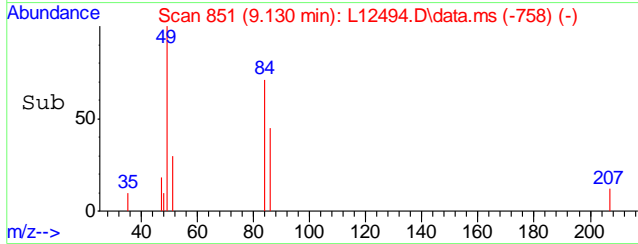
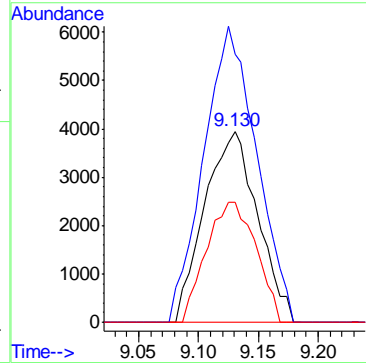
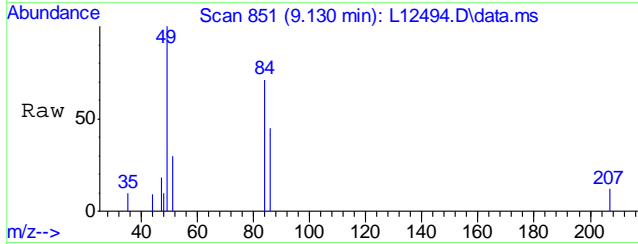


5.2.2  
 5



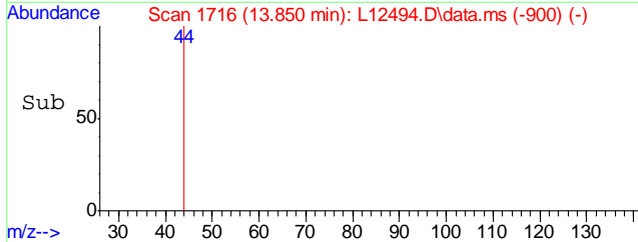
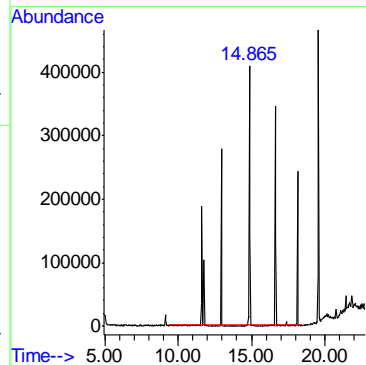
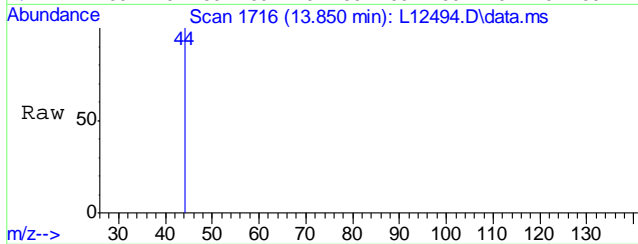
#18  
Methylene Chloride  
Concen: 1.75 ug/Kg  
RT: 9.130 min Scan# 851  
Delta R.T. 0.006 min  
Lab File: L12494.D  
Acq: 21 Nov 2011 5:44 pm

Tgt Ion	Resp	Lower	Upper
84	121771		
49	154.5	131.3	171.3
86	58.9	43.2	83.2



#96  
TPH-GRO (C6-C10)  
Concen: 4.41 ug/Kg m  
RT: 13.850 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: L12494.D  
Acq: 21 Nov 2011 5:44 pm

Tgt Ion:TIC Resp: 1271836



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\U111120\  
 Data File : U561.D  
 Acq On : 20 Nov 2011 11:16 am  
 Operator : TITIAF  
 Sample : MB  
 Misc : MS1534,VU18,50,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 23 16:27:09 2011  
 Quant Method : C:\msdchem\1\methods\VU14W.M  
 Quant Title : EPA -8260B  
 QLast Update : Thu Nov 17 12:05:31 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.169	168	2168717	10.00	ug/L	0.00
43) 1,4-Difluorobenzene	12.495	114	3651354	10.00	ug/L	0.00
58) Chlorobenzene-d5	16.195	117	3113285	10.00	ug/L	0.00
82) 1,4-Dichlorobenzene-d4	19.190	152	1585223	10.00	ug/L	# 0.00
103) 1,4-Dichlorobenzene-d4A	19.190	152	1585223	10.00	ug/L	# 0.00
System Monitoring Compounds						
39) Dibromofluoromethane	11.284	111	1228704	9.66	ug/L	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	96.60%
59) Toluene-d8	14.432	98	4345775	9.89	ug/L	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	98.90%
79) 4-Bromofluorobenzene	17.662	95	1582872	9.33	ug/L	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	93.30%
Target Compounds						
19) Methylene Chloride	8.632	84	43076	0.24	ug/L	# 83
104) TPH-GRO (C6-C10)	14.462	TIC	986692m	1.50	ug/L	

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

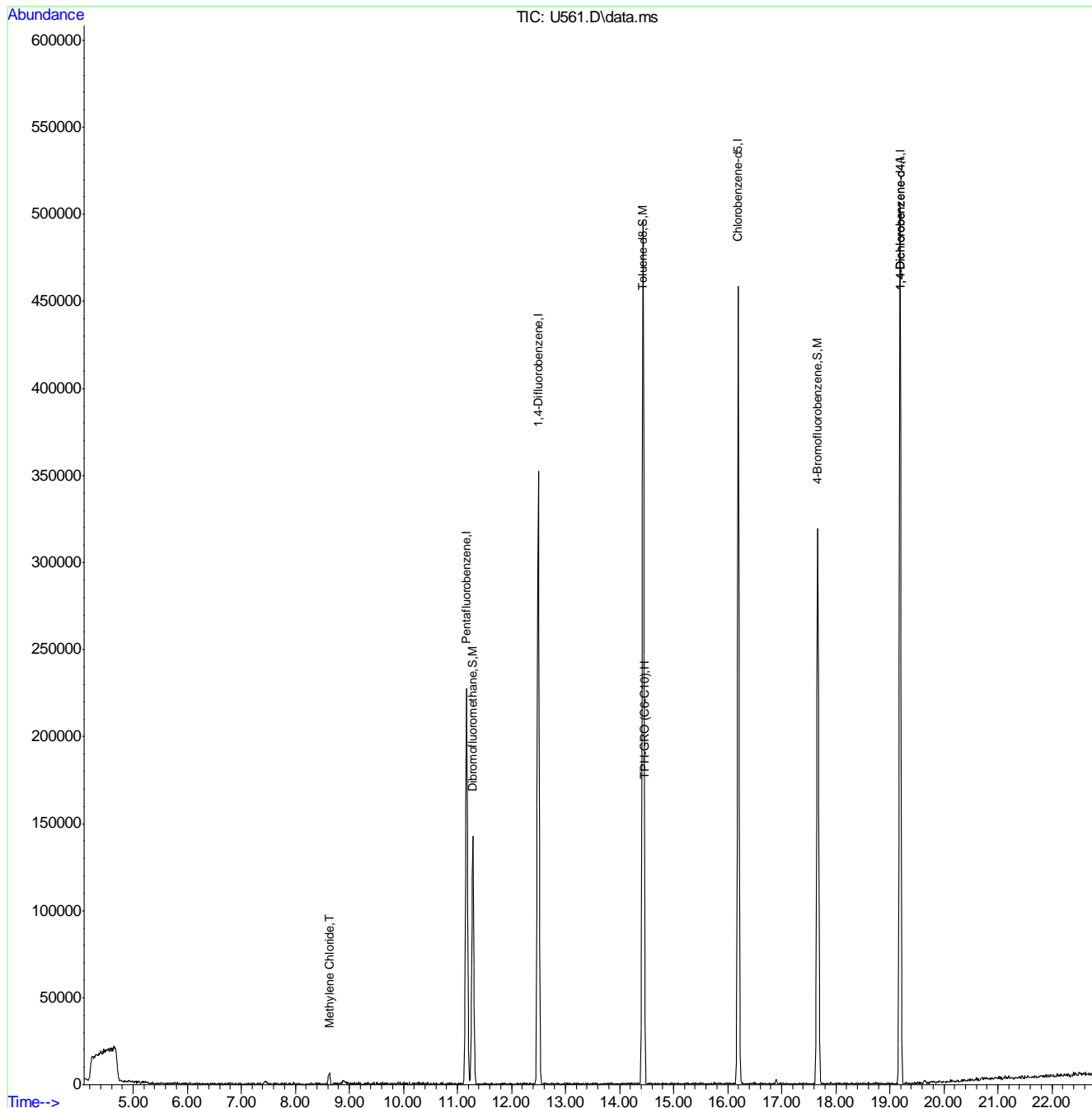
5.2.3  
5

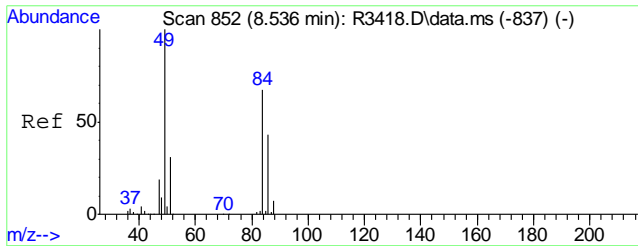


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\U111120\  
 Data File : U561.D  
 Acq On : 20 Nov 2011 11:16 am  
 Operator : TITIAF  
 Sample : MB  
 Misc : MS1534,VU18,50,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

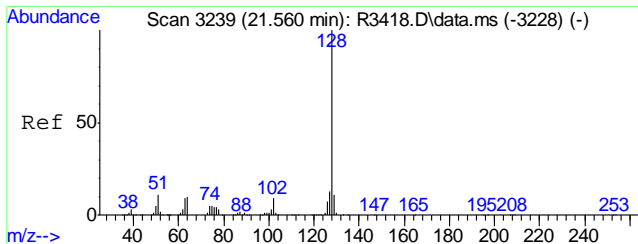
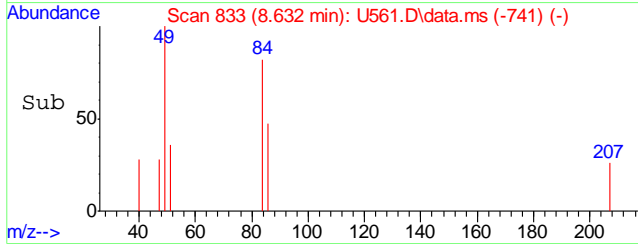
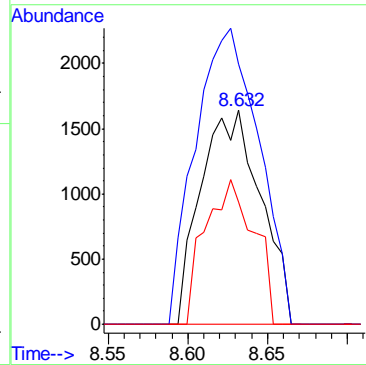
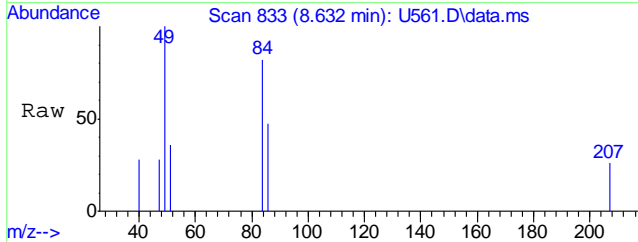
Quant Time: Nov 23 16:27:09 2011  
 Quant Method : C:\msdchem\1\methods\VU14W.M  
 Quant Title : EPA -8260B  
 QLast Update : Thu Nov 17 12:05:31 2011  
 Response via : Initial Calibration





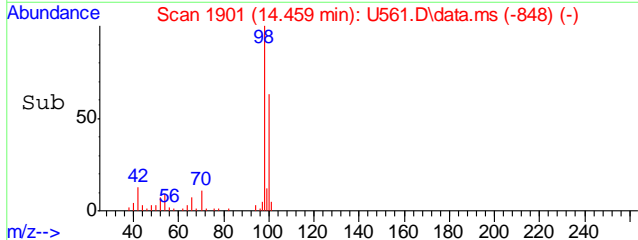
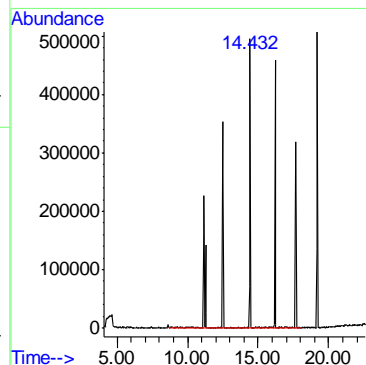
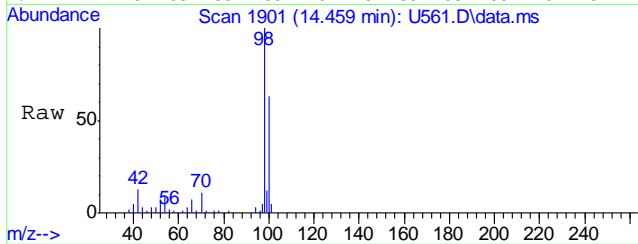
#19  
Methylene Chloride  
Concen: 0.24 ug/L  
RT: 8.632 min Scan# 833  
Delta R.T. 0.000 min  
Lab File: U561.D  
Acq: 20 Nov 2011 11:16 am

Tgt Ion	Resp	Lower	Upper
84	43076		
49	146.4	103.3	143.3#
86	55.2	44.1	84.1



#104  
TPH-GRO (C6-C10)  
Concen: 1.50 ug/L m  
RT: 14.462 min Scan# 1901  
Delta R.T. 0.000 min  
Lab File: U561.D  
Acq: 20 Nov 2011 11:16 am

Tgt Ion:TIC Resp: 986692



## GC Semi-volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C19050**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4936-MB	GG30017.D	1	11/19/11	JH	11/18/11	OP4936	GGG801

**The QC reported here applies to the following samples:****Method:** SW846 8015B M

C19050-2, C19050-3, C19050-4, C19050-5, C19050-6

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	93% 45-140%

**Method Blank Summary****Job Number:** C19050**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4939-MB	HH18854.D	1	11/20/11	JH	11/19/11	OP4939	GHH613

**The QC reported here applies to the following samples:****Method:** SW846 8015B M

C19050-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.050	mg/l	
	TPH (> C28-C40)	ND	0.20	0.10	mg/l	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	95% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4936-BS	GG30018.D	1	11/19/11	JH	11/18/11	OP4936	GGG801
OP4936-BSD	GG30019.D	1	11/19/11	JH	11/18/11	OP4936	GGG801

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19050-2, C19050-3, C19050-4, C19050-5, C19050-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	77.5	78	79.1	79	2	45-140/30
	TPH (> C28-C40)	100	77.1	77	82.1	82	6	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	89%	94%	45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4939-BS	HH18855.D	1	11/20/11	JH	11/19/11	OP4939	GHH613
OP4939-BSD	HH18856.D	1	11/20/11	JH	11/19/11	OP4939	GHH613

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19050-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.882	88	0.892	89	1	45-140/30
	TPH (> C28-C40)	1	0.754	75	0.755	76	0	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	90%	87%	45-140%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19050  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4939-MS	HH18992.D	1	11/23/11	JH	11/19/11	OP4939	GHH615
OP4939-MSD	HH18993.D	1	11/23/11	JH	11/19/11	OP4939	GHH615
C19025-7	HH18879.D	1	11/20/11	JH	11/19/11	OP4939	GHH613

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19050-1

CAS No.	Compound	C19025-7 mg/l	Spike Q mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	2	1.25	63	1.27	64	2	45-140/25
	TPH (> C28-C40)	ND	2	1.23	62	1.25	63	2	45-140/25

CAS No.	Surrogate Recoveries	MS	MSD	C19025-7	Limits
630-01-3	Hexacosane	73%	70%	68%	45-140%



GC Semi-volatiles

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Raw Data

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7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18872.D Vial: 26  
 Acq On : 20 Nov 2011 6:11 pm Operator: JAMESH  
 Sample : C19050-1 Inst : Diesel 3  
 Misc : OP4939,GHH613,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 21 11:00 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.32	1918881	83.368 ppm
Spiked Amount 100.000		Recovery =	83.37%
Target Compounds			
2) H TPH (C10-C28)	5.82	15319349	758.020 ppm
3) H TPH (>C28-C40)	14.51	1113458	73.020 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	15319349	754.318 ppm
7) H TPH (Motor Oil)	14.51	1113458	72.705 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18872.D GHH583.M Tue Nov 22 13:07:06 2011

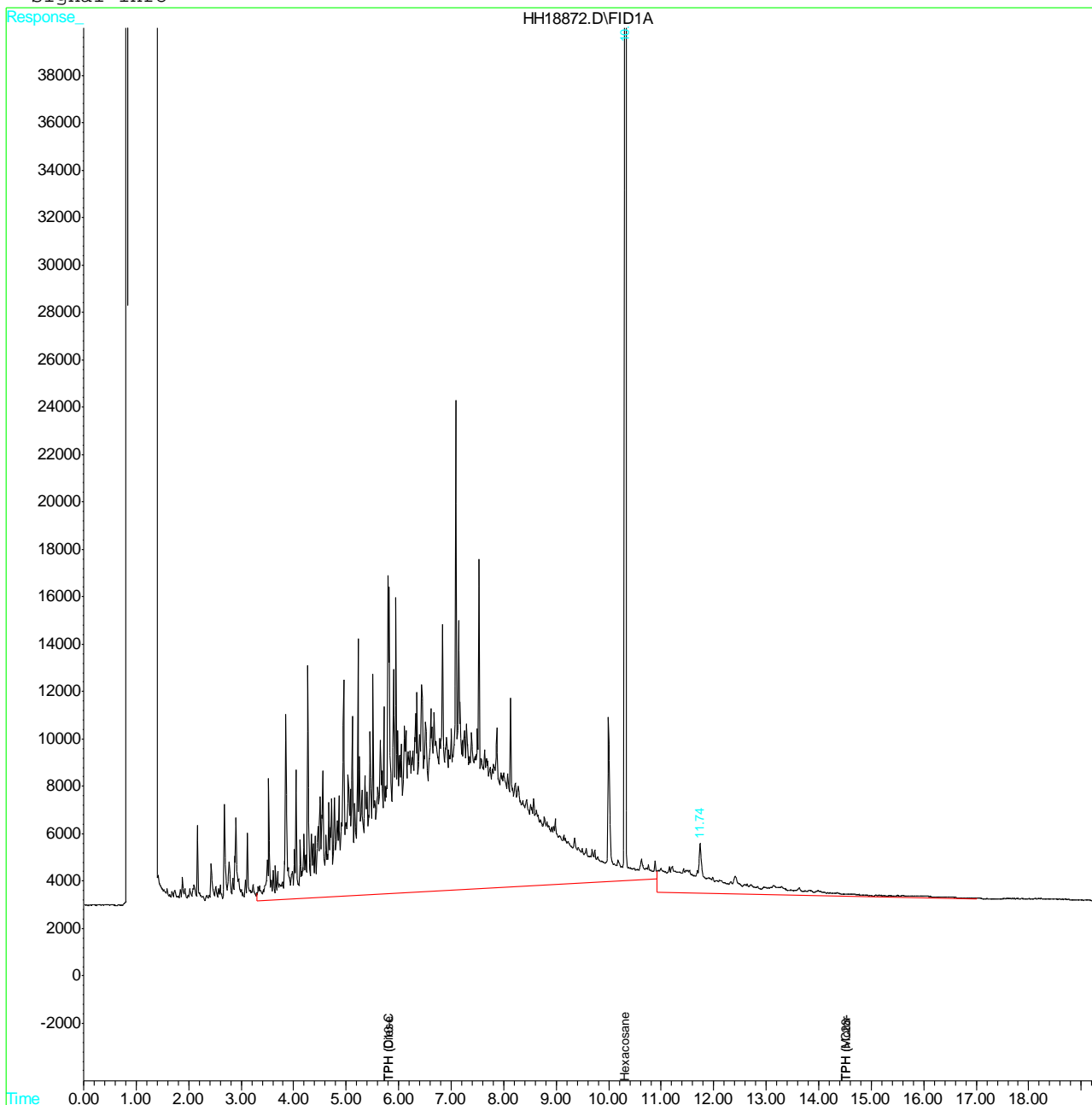
7.1.1  
 7

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18872.D Vial: 26  
Acq On : 20 Nov 2011 6:11 pm Operator: JAMESH  
Sample : C19050-1 Inst : Diesel 3  
Misc : OP4939,GHH613,1000,,,1,1,WATER Multiplr: 1.00  
IntFile : EVENTS.E  
Quant Time: Nov 21 11:00 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
Title : TPH-Extractable by SW-846 Method 8015B  
Last Update : Mon Nov 07 08:33:04 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
Signal Phase :  
Signal Info :



7.1.1  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18884.D Vial: 37  
 Acq On : 20 Nov 2011 11:31 pm Operator: JAMESH  
 Sample : C19050-2 Inst : Diesel 3  
 Misc : OP4936,GHH613,10,,,1,2,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 21 11:04 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.31	617023	26.807 ppm
Spiked Amount 100.000		Recovery =	26.81%
Target Compounds			
2) H TPH (C10-C28)	5.82	4235045	209.555 ppm
3) H TPH (>C28-C40)	14.51	14934886	979.417 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	4352208	214.301 ppm
7) H TPH (Motor Oil)	14.51	14911459	973.672 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18884.D GHH583.M Tue Nov 22 13:07:15 2011

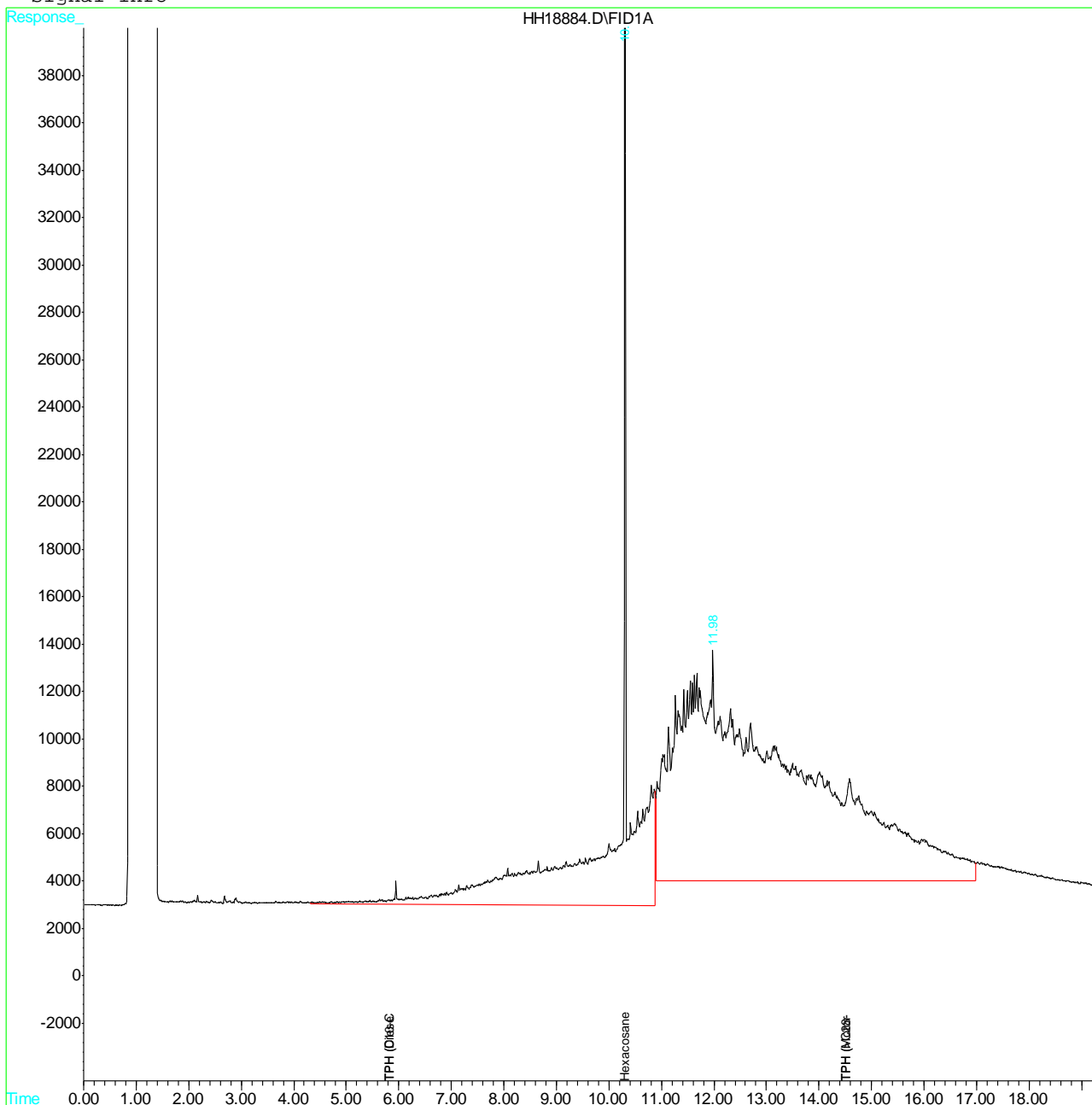
7.12  
 7

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18884.D Vial: 37  
 Acq On : 20 Nov 2011 11:31 pm Operator: JAMESH  
 Sample : C19050-2 Inst : Diesel 3  
 Misc : OP4936,GHH613,10,,,1,2,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 21 11:04 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.12  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH612\HH18836.D Vial: 28  
 Acq On : 19 Nov 2011 6:42 pm Operator: JAMESH  
 Sample : C19050-3 Inst : Diesel 3  
 Misc : OP4936,GHH612,10,,,1,2,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 22 10:39 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.31	802758	34.877 ppm
Spiked Amount 100.000		Recovery =	34.88%
Target Compounds			
2) H TPH (C10-C28)	5.82	17483932	865.127 ppm
3) H TPH (>C28-C40)	14.51	5774491	378.686 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	17393479	856.447 ppm
7) H TPH (Motor Oil)	14.51	5856021	382.380 ppm

7.1.3  
7

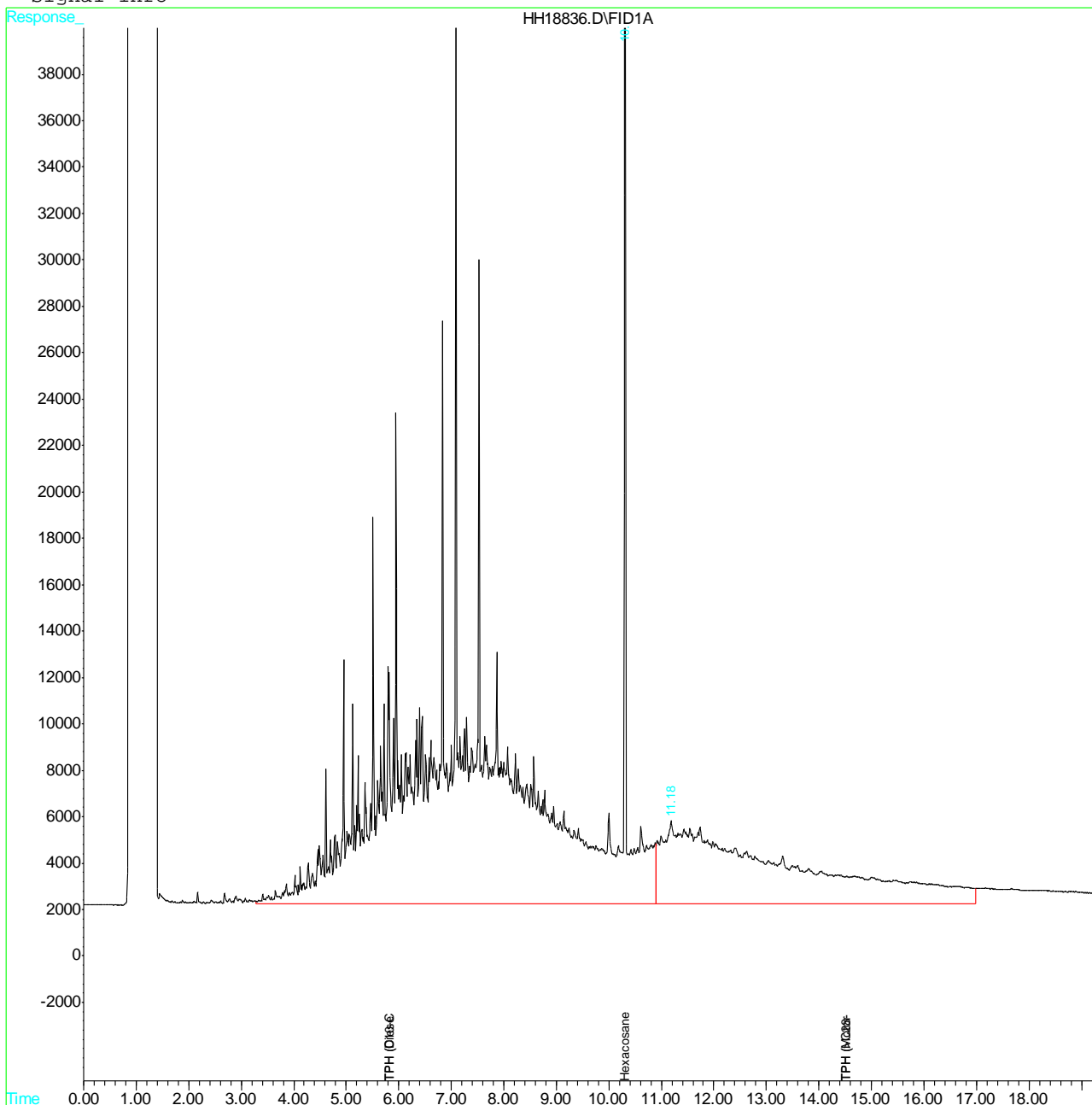
(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18836.D GHH583.M Tue Nov 22 10:57:43 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH612\HH18836.D Vial: 28  
 Acq On : 19 Nov 2011 6:42 pm Operator: JAMESH  
 Sample : C19050-3 Inst : Diesel 3  
 Misc : OP4936,GHH612,10,,,1,2,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 22 10:39 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.1.3  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH612\HH18837.D Vial: 29  
 Acq On : 19 Nov 2011 7:08 pm Operator: JAMESH  
 Sample : C19050-4 Inst : Diesel 3  
 Misc : OP4936,GHH612,10,,,1,2,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 22 10:40 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.31	902074	39.192 ppm
Spiked Amount 100.000		Recovery =	39.19%
Target Compounds			
2) H TPH (C10-C28)	5.82	20781880	1028.313 ppm
3) H TPH (>C28-C40)	14.51	815333	53.469 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	20560772	1012.404 ppm
7) H TPH (Motor Oil)	14.51	815333	53.239 ppm

7.1.4  
7

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18837.D GHH583.M Tue Nov 22 10:57:44 2011

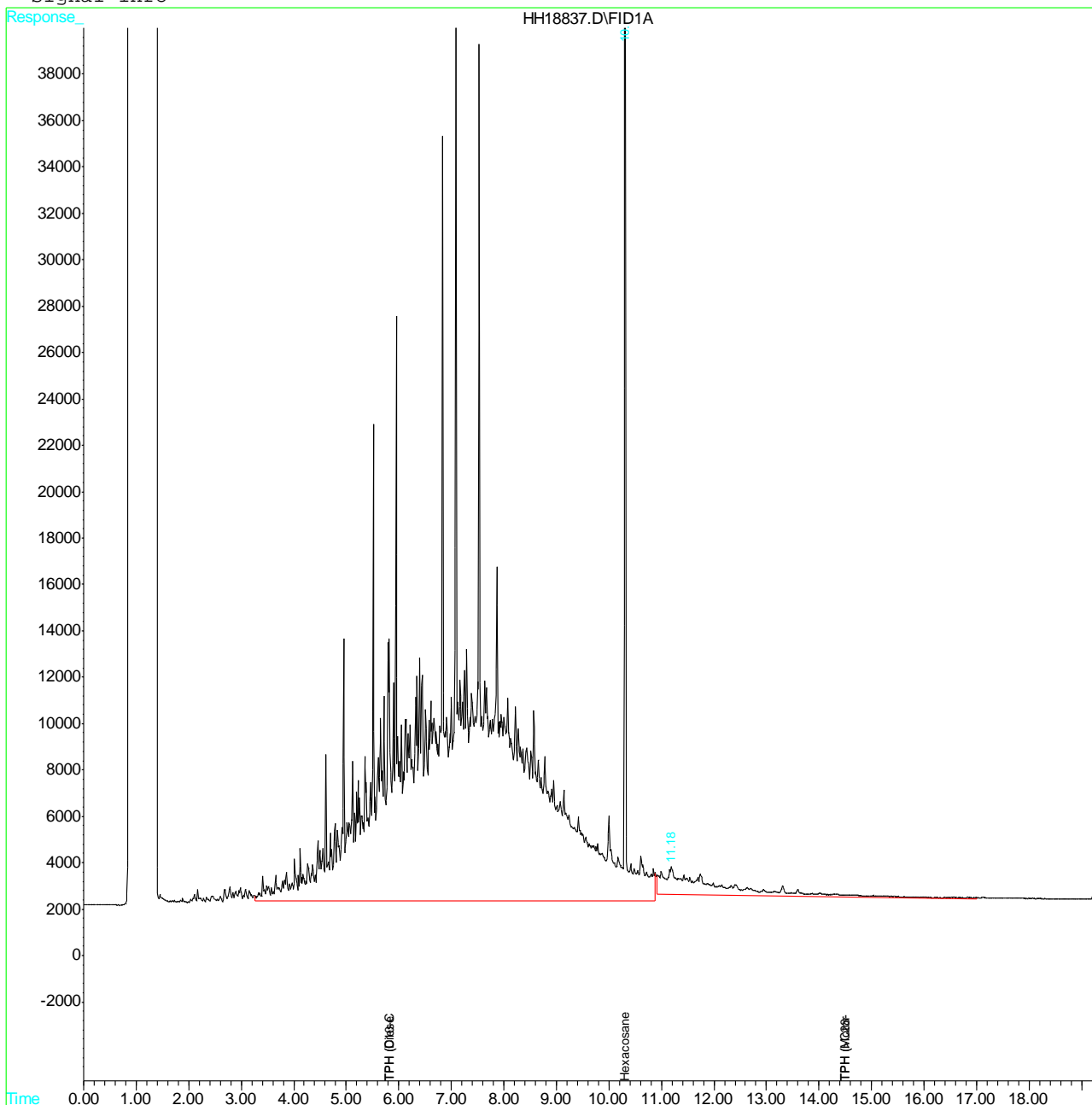


Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH612\HH18837.D Vial: 29  
 Acq On : 19 Nov 2011 7:08 pm Operator: JAMESH  
 Sample : C19050-4 Inst : Diesel 3  
 Misc : OP4936,GHH612,10,,,1,2,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 22 10:40 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.1.4  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18885.D Vial: 38  
 Acq On : 20 Nov 2011 11:58 pm Operator: JAMESH  
 Sample : C19050-5 Inst : Diesel 3  
 Misc : OP4936,GHH613,10,,,1.5,50,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 21 11:06 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc	Units
<b>System Monitoring Compounds</b>				
1) S Hexacosane	0.00	0	N.D.	ppm
Spiked Amount 100.000		Recovery	=	0.00%
<b>Target Compounds</b>				
2) H TPH (C10-C28)	5.82	15974431	790.435	ppm
3) H TPH (>C28-C40)	14.51	2324270	152.424	ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D.	ppm
5) H TPH (Kerosene)	0.00	0	N.D.	ppm
6) H TPH (Diesel)	5.82	16163588	795.888	ppm
7) H TPH (Motor Oil)	14.51	2303426	150.407	ppm

7.1.5  
7

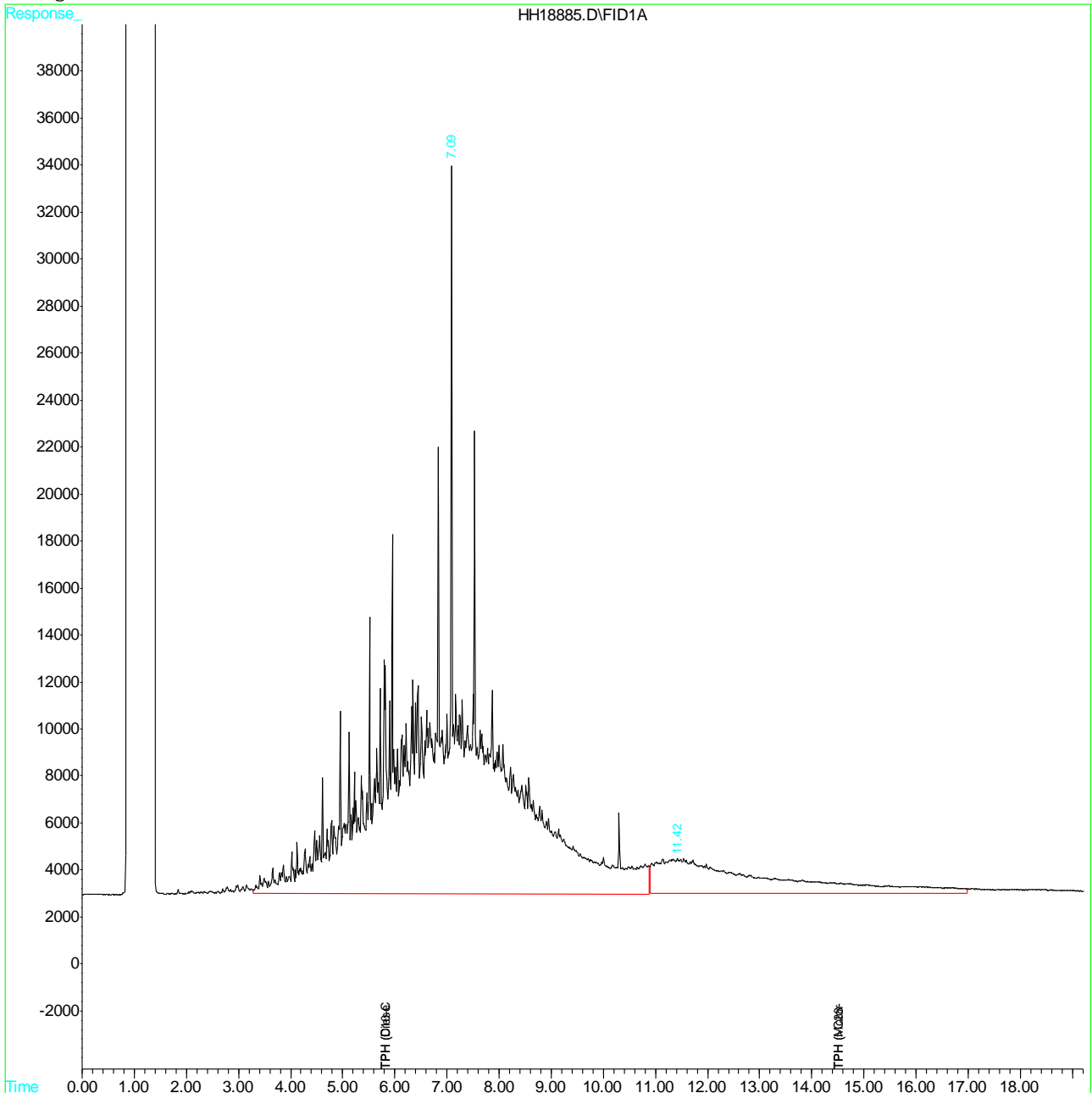
(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18885.D GHH583.M Tue Nov 22 13:07:16 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18885.D Vial: 38  
Acq On : 20 Nov 2011 11:58 pm Operator: JAMESH  
Sample : C19050-5 Inst : Diesel 3  
Misc : OP4936,GHH613,10,,,1.5,50,SOIL Multiplr: 1.00  
IntFile : EVENTS.E  
Quant Time: Nov 21 11:06 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
Title : TPH-Extractable by SW-846 Method 8015B  
Last Update : Mon Nov 07 08:33:04 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
Signal Phase :  
Signal Info :



7.15  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18886.D Vial: 39  
 Acq On : 21 Nov 2011 12:25 am Operator: JAMESH  
 Sample : C19050-6 Inst : Diesel 3  
 Misc : OP4936,GHH613,10,,,1,40,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 21 11:09 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.31	51123	2.221 ppm
Spiked Amount 100.000		Recovery =	2.22%
Target Compounds			
2) H TPH (C10-C28)	5.82	19169196	948.516 ppm
3) H TPH (>C28-C40)	14.51	2006655	131.595 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	19210932	945.938 ppm
7) H TPH (Motor Oil)	14.51	1967969	128.502 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18886.D GHH583.M Tue Nov 22 13:07:16 2011

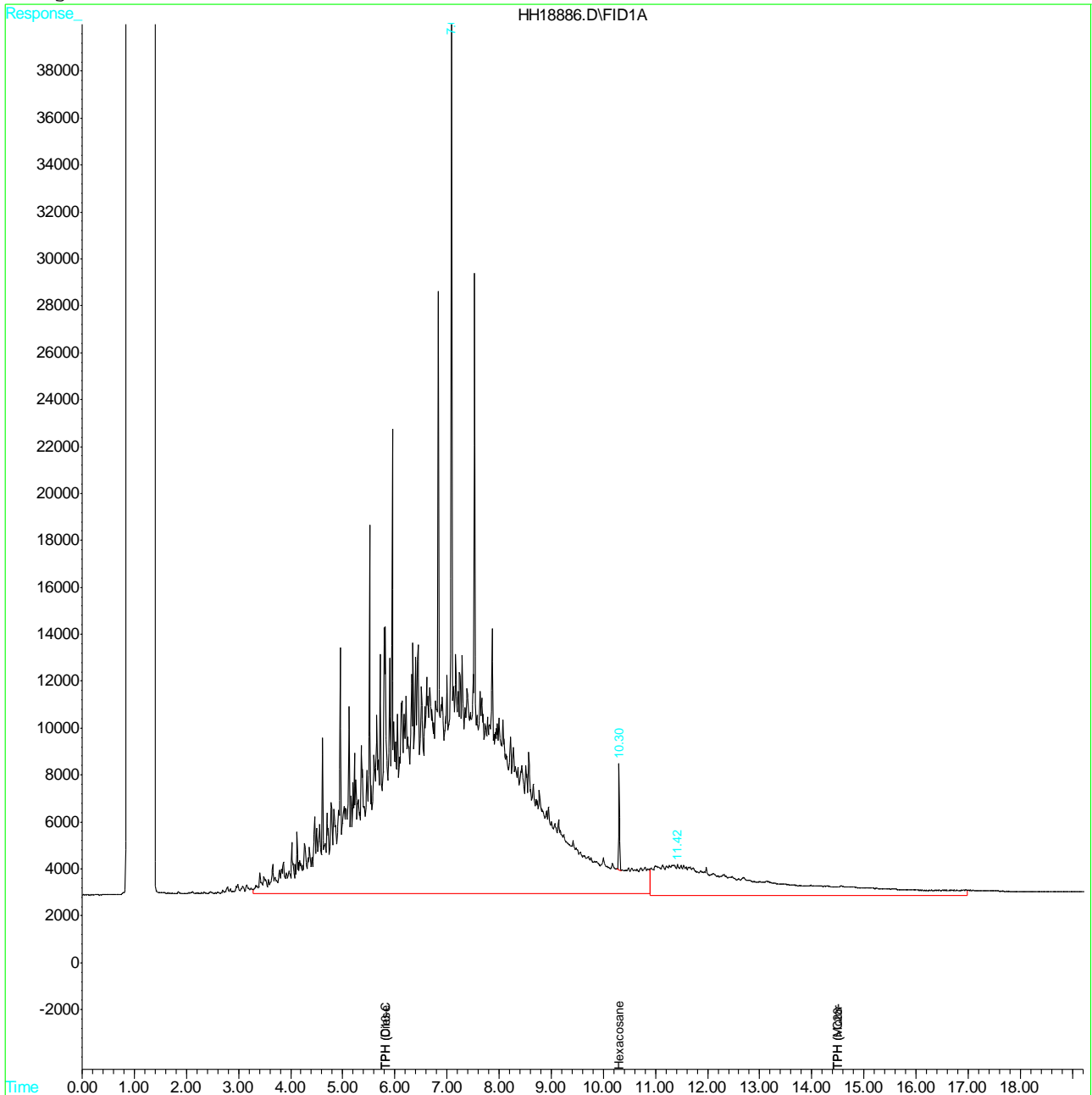
7.1.6  
 7

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18886.D Vial: 39  
 Acq On : 21 Nov 2011 12:25 am Operator: JAMESH  
 Sample : C19050-6 Inst : Diesel 3  
 Misc : OP4936,GHH613,10,,,1,40,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 21 11:09 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.1.6  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG801\GG30017.D Vial: 15  
 Acq On : 11-19-11 11:13:36 AM Operator: JAMESH  
 Sample : OP4936-MB Inst : Diesel #2  
 Misc : OP4936,GGG801,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 20 7:19 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.96	132111126	92.919 ppm
Spiked Amount 100.000		Recovery =	92.92%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	27457175	21.384 ppm
3) H TPH (>C28-C40)	11.83	18603866	20.861 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	27457175	20.983 ppm
7) H TPH (Motor Oil)	11.83	18603866	20.793 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG30017.D GGG709.M Sun Nov 20 08:02:42 2011

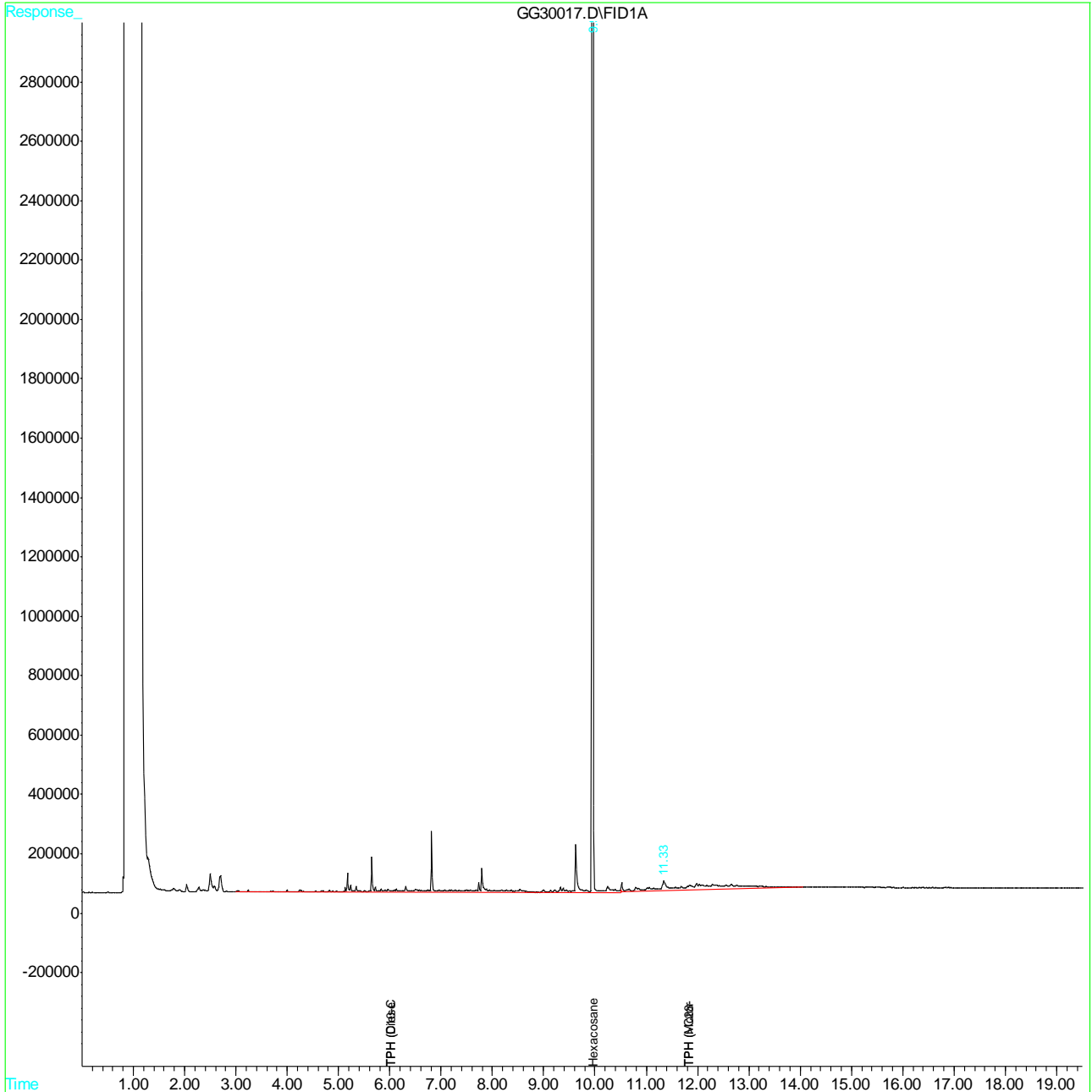
7.2.1  
 7

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG801\GG30017.D Vial: 15  
 Acq On : 11-19-11 11:13:36 AM Operator: JAMESH  
 Sample : OP4936-MB Inst : Diesel #2  
 Misc : OP4936,GGG801,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 20 7:19 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.2.1

7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18854.D Vial: 10  
 Acq On : 20 Nov 2011 10:09 am Operator: JAMESH  
 Sample : OP4939-MB Inst : Diesel 3  
 Misc : OP4939,GHH613,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 21 10:30 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.32	2184538	94.910 ppm
Spiked Amount 100.000		Recovery =	94.91%
Target Compounds			
2) H TPH (C10-C28)	5.82	625453	30.948 ppm
3) H TPH (>C28-C40)	14.51	505520	33.152 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	625453	30.797 ppm
7) H TPH (Motor Oil)	14.51	505520	33.009 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18854.D GHH583.M Mon Nov 21 13:23:51 2011

7.22  
 7

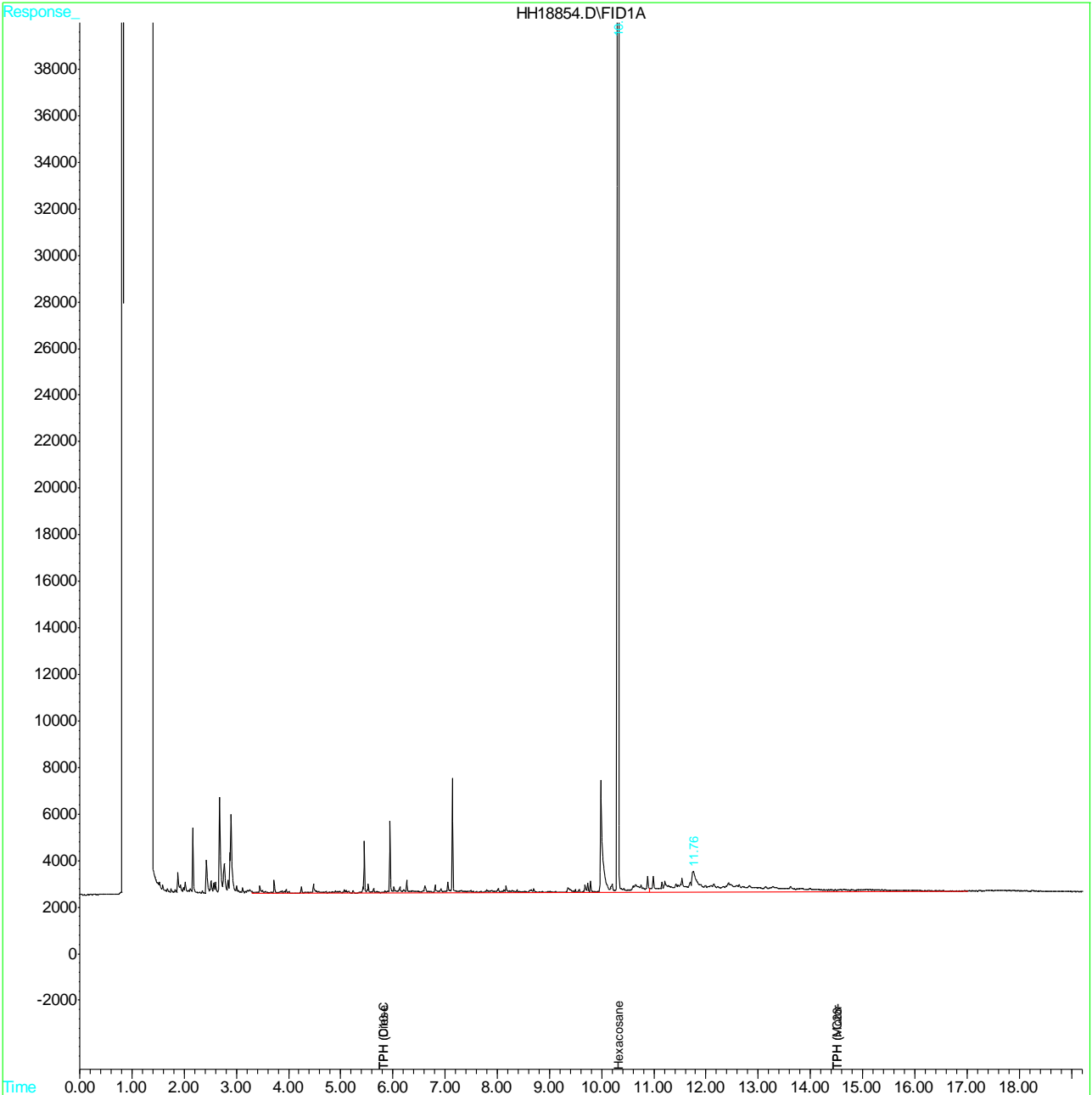


Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH613\HH18854.D Vial: 10  
 Acq On : 20 Nov 2011 10:09 am Operator: JAMESH  
 Sample : OP4939-MB Inst : Diesel 3  
 Misc : OP4939,GHH613,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 21 10:30 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Mon Nov 07 08:33:04 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.2.2  
 7

## Metals Analysis

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C19050  
Account: BMECASF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4215  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 11/18/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.12		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15	0.0	<2.0
Calcium	5000	7.1	12		
Chromium	10	.3	.41	0.30	<10
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	0.10	<10
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12	-0.10	<5.0
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	23		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2	2.2	<20

Associated samples MP4215: C19050-1

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

8.1.1  
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19050  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4215  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/18/11

Metal	C18947-4F Original MS	SpikeLot MPIR4	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	0.0	506	500	101.2 75-125
Calcium	anr			
Chromium	0.90	514	500	102.6 75-125
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	2.4	507	500	100.9 75-125
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	0.50	504	500	100.7 75-125
Potassium	anr			
Selenium	anr			
Silicon	anr			
Silver	anr			
Sodium	anr			
Strontium	anr			
Thallium	anr			
Tin				
Titanium	anr			
Vanadium	anr			
Zinc	2.5	520	500	103.5 75-125

Associated samples MP4215: C19050-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.12  
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19050  
 Account: BMECAF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4215  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/18/11

Metal	C18947-4F Original MSD	SpikeLot MPIR4	% Rec	MSD RPD	QC Limit	
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	0.0	508	500	101.6	0.4	20
Calcium	anr					
Chromium	0.90	520	500	103.8	1.2	20
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	2.4	508	500	101.1	0.2	20
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	0.50	504	500	100.7	0.0	20
Potassium	anr					
Selenium	anr					
Silicon	anr					
Silver	anr					
Sodium	anr					
Strontium	anr					
Thallium	anr					
Tin						
Titanium	anr					
Vanadium	anr					
Zinc	2.5	518	500	103.1	0.4	20

Associated samples MP4215: C19050-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.12  
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C19050  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4215  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/18/11 11/18/11

Metal	BSP Result	Spikelot MPIR4	% Rec	QC Limits	BSD Result	Spikelot MPIR4	% Rec	BSD RPD	QC Limit
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Boron	anr								
Cadmium	486	500	97.2	80-120	495	500	99.0	1.8	
Calcium	anr								
Chromium	517	500	103.4	80-120	524	500	104.8	1.3	
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	494	500	98.8	80-120	503	500	100.6	1.8	
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	479	500	95.8	80-120	490	500	98.0	2.3	
Potassium	anr								
Selenium	anr								
Silicon	anr								
Silver	anr								
Sodium	anr								
Strontium	anr								
Thallium	anr								
Tin									
Titanium	anr								
Vanadium	anr								
Zinc	516	500	103.2	80-120	526	500	105.2	1.9	

Associated samples MP4215: C19050-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

8.1.3  
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: C19050  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4215  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/18/11

Metal	C18947-4F Original SDL 1:5		%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	0.00	0.00	NC	0-10
Calcium	anr			
Chromium	0.900	1.60	77.8 (a)	0-10
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	2.40	7.50	212.5(a)	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	0.500	0.00	100.0(a)	0-10
Potassium	anr			
Selenium	anr			
Silicon	anr			
Silver	anr			
Sodium	anr			
Strontium	anr			
Thallium	anr			
Tin	anr			
Titanium	anr			
Vanadium	anr			
Zinc	2.50	1.50	40.0 (a)	0-10

Associated samples MP4215: C19050-1

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.1.4  
8

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C19050  
Account: BMECASF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4219  
Matrix Type: SOLID

Methods: SW846 6010B  
Units: mg/kg

Prep Date: 11/18/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015	0.010	<1.0
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054	0.020	<1.0
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	0.0	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024	0.060	<1.0
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098	0.26	<2.0

Associated samples MP4219: C19050-2, C19050-3, C19050-4, C19050-5, C19050-6

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19050  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4219  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/18/11

Metal	C19024-1 Original MS		Spike MPIR4A	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	0.054	41.8	45.9	91.0	75-125
Calcium					
Chromium	74.0	86.2	45.9	26.6N(a)	75-125
Cobalt	anr				
Copper	anr				
Iron					
Lead	21.0	64.6	45.9	95.0	75-125
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	65.1	91.6	45.9	57.8N(a)	75-125
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	83.1	128	45.9	97.9	75-125

Associated samples MP4219: C19050-2, C19050-3, C19050-4, C19050-5, C19050-6

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19050  
 Account: BMECAF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4219  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/18/11

Metal	C19024-1 Original MSD		Spike/lot MPIR4A % Rec		MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	0.054	39.8	43.9	90.6	4.9	20
Calcium						
Chromium	74.0	107	43.9	75.2	21.5 (a)	20
Cobalt	anr					
Copper	anr					
Iron						
Lead	21.0	60.9	43.9	91.0	5.9	20
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	65.1	96.3	43.9	71.1N(b)	5.0	20
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	83.1	127	43.9	100.1	0.8	20

Associated samples MP4219: C19050-2, C19050-3, C19050-4, C19050-5, C19050-6

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) High RPD indicates possible matrix interference and/or sample nonhomogeneity.

(b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

8.2.2  
 8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C19050  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4219  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/18/11

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	45.3	50	90.6	80-120
Calcium				
Chromium	48.6	50	97.2	80-120
Cobalt	anr			
Copper	anr			
Iron				
Lead	45.6	50	91.2	80-120
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	45.1	50	90.2	80-120
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	48.1	50	96.2	80-120

Associated samples MP4219: C19050-2, C19050-3, C19050-4, C19050-5, C19050-6

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

8.2.3  
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: C19050  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4219  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/18/11

Metal	C19024-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	0.600	0.00	100.0(a)	0-10
Calcium				
Chromium	821	923	12.4*(b)	0-10
Cobalt	anr			
Copper	anr			
Iron				
Lead	233	246	5.4	0-10
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	722	727	0.7	0-10
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	923	1030	12.0*(b)	0-10

Associated samples MP4219: C19050-2, C19050-3, C19050-4, C19050-5, C19050-6

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

Technical Report for

Burns and McDonnell Engineering

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA  
63142

Accutest Job Number: C18881

Sampling Date: 11/09/11

Report to:

Burns and McDonnell Engineering  
400 Oyster Point Blvd Suite 533  
South San Francisco, CA 94080  
sbarber@burnsmcd.com

ATTN: Simon Barber

Total number of pages in report: **108**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director

Client Service contact: Laurie Glantz-Murphy 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary</b> .....	<b>3</b>
<b>Section 2: Sample Results</b> .....	<b>4</b>
<b>2.1:</b> C18881-1: OWS-NEA3 .....	5
<b>2.2:</b> C18881-2: OWSL-2-3 .....	8
<b>2.3:</b> C18881-3: OWSL-4-2 .....	11
<b>2.4:</b> C18881-4: OWSL-3-4 .....	14
<b>2.5:</b> C18881-5: OWSL-1-4 .....	17
<b>2.6:</b> C18881-6: CO WATER .....	20
<b>Section 3: Misc. Forms</b> .....	<b>23</b>
<b>3.1:</b> Chain of Custody .....	24
<b>Section 4: GC/MS Volatiles - QC Data Summaries</b> .....	<b>27</b>
<b>4.1:</b> Method Blank Summary .....	28
<b>4.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	30
<b>4.3:</b> Laboratory Control Sample Summary .....	32
<b>4.4:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	34
<b>Section 5: GC/MS Volatiles - Raw Data</b> .....	<b>36</b>
<b>5.1:</b> Samples .....	37
<b>5.2:</b> Method Blanks .....	69
<b>Section 6: GC Semi-volatiles - QC Data Summaries</b> .....	<b>75</b>
<b>6.1:</b> Method Blank Summary .....	76
<b>6.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	78
<b>6.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	80
<b>Section 7: GC Semi-volatiles - Raw Data</b> .....	<b>81</b>
<b>7.1:</b> Samples .....	82
<b>7.2:</b> Method Blanks .....	94
<b>Section 8: Metals Analysis - QC Data Summaries</b> .....	<b>98</b>
<b>8.1:</b> Prep QC MP4179: Cd,Cr,Pb,Ni,Zn .....	99
<b>8.2:</b> Prep QC MP4181: Cd,Cr,Pb,Ni,Zn .....	104

1

2

3

4

5

6

7

8



## Sample Summary

Burns and McDonnell Engineering

**Job No:** C18881

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Project No: 63142

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C18881-1	11/09/11	08:45 SB	11/09/11	SO	Soil	OWS-NEA3
C18881-2	11/09/11	08:55 SB	11/09/11	SO	Soil	OWSL-2-3
C18881-3	11/09/11	09:00 SB	11/09/11	SO	Soil	OWSL-4-2
C18881-4	11/09/11	13:40 SB	11/09/11	SO	Soil	OWSL-3-4
C18881-5	11/09/11	13:45 SB	11/09/11	SO	Soil	OWSL-1-4
C18881-6	11/09/11	09:30 SB	11/09/11	AQ	Water	CO WATER

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Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Results

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Report of Analysis

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Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-NEA3	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-1	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M29116.D	1	11/10/11	XB	n/a	n/a	VM921
Run #2							

Run #	Initial Weight
Run #1	5.68 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.4	1.3	ug/kg	
108-88-3	Toluene	ND	4.4	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	4.4	1.3	ug/kg	
1330-20-7	Xylene (total)	ND	8.8	3.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.4	0.88	ug/kg	
	TPH-GRO (C6-C10)	ND	88	44	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		60-130%
2037-26-5	Toluene-D8	107%		60-130%
460-00-4	4-Bromofluorobenzene	91%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-NEA3	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-1	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18554.D	1	11/10/11	JH	11/10/11	OP4879	GHH606
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	7.14	10	5.0	mg/kg	J
	TPH (> C28-C40)	16.4	20	10	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	64%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-NEA3	<b>Date Sampled:</b> 11/09/11
<b>Lab Sample ID:</b> C18881-1	<b>Date Received:</b> 11/09/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	12.1	0.97	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	37.1	0.97	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	59.0	1.9	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	39.3	0.97	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	1990	1.9	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2187

(2) Prep QC Batch: MP4181

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWSL-2-3	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-2	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M29118.D	1	11/10/11	XB	n/a	n/a	VM921
Run #2							

Run #	Initial Weight
Run #1	5.38 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.6	1.4	ug/kg	
108-88-3	Toluene	ND	4.6	1.4	ug/kg	
100-41-4	Ethylbenzene	ND	4.6	1.4	ug/kg	
1330-20-7	Xylene (total)	ND	9.3	3.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.6	0.93	ug/kg	
	TPH-GRO (C6-C10)	ND	93	46	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		60-130%
2037-26-5	Toluene-D8	107%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	OWSL-2-3	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-2	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18555.D	1	11/10/11	JH	11/10/11	OP4879	GHH606
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	24.9	9.8	4.9	mg/kg	
	TPH (> C28-C40)	14.8	20	9.8	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	66%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	OWSL-2-3	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-2	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.91	0.91	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	51.2	0.91	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	28.2	1.8	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	41.6	0.91	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	100	1.8	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2187

(2) Prep QC Batch: MP4181

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWSL-4-2	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-3	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M29119.D	1	11/10/11	XB	n/a	n/a	VM921
Run #2							

Run #	Initial Weight
Run #1	5.66 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.4	1.3	ug/kg	
108-88-3	Toluene	ND	4.4	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	4.4	1.3	ug/kg	
1330-20-7	Xylene (total)	ND	8.8	3.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.4	0.88	ug/kg	
	TPH-GRO (C6-C10)	75.4	88	44	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		60-130%
2037-26-5	Toluene-D8	109%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	OWSL-4-2	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-3	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18552.D	1	11/10/11	JH	11/10/11	OP4879	GHH606
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	53.4	10	5.0	mg/kg	
	TPH (> C28-C40)	82.1	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	68%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> OWSL-4-2	<b>Date Sampled:</b> 11/09/11
<b>Lab Sample ID:</b> C18881-3	<b>Date Received:</b> 11/09/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.99	0.99	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	40.0	0.99	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	53.9	2.0	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	43.4	0.99	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	85.0	2.0	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2187

(2) Prep QC Batch: MP4181

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWSL-3-4	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-4	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M29120.D	1	11/10/11	XB	n/a	n/a	VM921
Run #2							

Run #	Initial Weight
Run #1	4.42 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.7	1.7	ug/kg	
108-88-3	Toluene	ND	5.7	1.7	ug/kg	
100-41-4	Ethylbenzene	ND	5.7	1.7	ug/kg	
1330-20-7	Xylene (total)	ND	11	4.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.7	1.1	ug/kg	
	TPH-GRO (C6-C10)	ND	110	57	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		60-130%
2037-26-5	Toluene-D8	105%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWSL-3-4	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-4	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18556.D	1	11/10/11	JH	11/10/11	OP4879	GHH606
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	9.50	9.7	4.9	mg/kg	J
	TPH (> C28-C40)	10.2	19	9.7	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	68%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWSL-3-4	<b>Date Sampled:</b> 11/09/11
<b>Lab Sample ID:</b> C18881-4	<b>Date Received:</b> 11/09/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.95	0.95	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	47.0	0.95	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	21.4	1.9	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	33.6	0.95	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	81.6	1.9	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2187

(2) Prep QC Batch: MP4181

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWSL-1-4	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-5	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M29121.D	1	11/10/11	XB	n/a	n/a	VM921
Run #2							

Run #	Initial Weight
Run #1	3.65 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	6.8	2.1	ug/kg	
108-88-3	Toluene	ND	6.8	2.1	ug/kg	
100-41-4	Ethylbenzene	ND	6.8	2.1	ug/kg	
1330-20-7	Xylene (total)	ND	14	5.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	6.8	1.4	ug/kg	
	TPH-GRO (C6-C10)	ND	140	68	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		60-130%
2037-26-5	Toluene-D8	106%		60-130%
460-00-4	4-Bromofluorobenzene	96%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWSL-1-4	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-5	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29791.D	1	11/10/11	JH	11/10/11	OP4879	GGG795
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	62%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWSL-1-4	<b>Date Sampled:</b> 11/09/11
<b>Lab Sample ID:</b> C18881-5	<b>Date Received:</b> 11/09/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 1.0	1.0	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	53.2	1.0	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	6.6	2.0	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	31.9	1.0	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	56.8	2.0	mg/kg	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2187

(2) Prep QC Batch: MP4181

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	CO WATER	<b>Date Sampled:</b>	11/09/11
<b>Lab Sample ID:</b>	C18881-6	<b>Date Received:</b>	11/09/11
<b>Matrix:</b>	AQ - Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R5818.D	1	11/10/11	BD	n/a	n/a	VR204
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		60-130%
2037-26-5	Toluene-D8	108%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> CO WATER	
<b>Lab Sample ID:</b> C18881-6	<b>Date Sampled:</b> 11/09/11
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 11/09/11
<b>Method:</b> SW846 8015B M SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18553.D	4	11/10/11	JH	11/10/11	OP4880	GHH606
Run #2							

Run #	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	2.99	0.43	0.21	mg/l	
	TPH (> C28-C40)	1.97	0.85	0.43	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	92%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> CO WATER	
<b>Lab Sample ID:</b> C18881-6	<b>Date Sampled:</b> 11/09/11
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 11/09/11
	<b>Percent Solids:</b> n/a
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 2.0	2.0	ug/l	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Chromium	13.0	10	ug/l	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Lead	80.4	10	ug/l	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Nickel	19.0	5.0	ug/l	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Zinc	102	20	ug/l	1	11/09/11	11/10/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2187

(2) Prep QC Batch: MP4179

RL = Reporting Limit

## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



03082011 Form WCD-KC1-SDO

Request for Chemical Analysis and Chain of Custody Record

C18881

BME CAS# 736

Burns & McDonnell Engineering
400 Oyster Point Blvd. Suite 533
South San Francisco, CA 94080
Phone: (650) 871-2926 Fax: (650) 871-2653
Attention: Rusty Muzafar
Simon Barber

Laboratory: Accutest.
Address: 2105 Lundy ave.
City/State/Zip: San Jose, ca.
Telephone:

Document Control No: 1-0F-2

Lab. Reference No. or Episode No.:

Project Number: 63142

Sample Type

Client Name: Yrc 1208 wood street

Table with columns: Group or SWMU Name, Sample Point, Sample Designator, Sample Event (Round, Year), Sample Depth (From, To), Sample Collected (Date, Time), Matrix (Liquid, Solid, Gas), Number of Containers, Analysis (TAP Gas, TPH, etc.), and Remarks. Includes handwritten data for samples 1-5 and a large '2 DAYS' watermark.

Sampler (signature): [Signature]

Sampler (signature): [Signature]

Special Instructions: EDD + EOP Greater ID
70600102107

Relinquished By (signature): [Signature]

Date/Time: 11.9.11/1600

Received By (signature): [Signature]

Date/Time: 11.9.11/1600

Ice Present in Container: Yes [checked] No [ ]

Temperature Upon Receipt: 6.8 - 1.0 = 5.8 °C

Relinquished By (signature): [Signature]

Date/Time:

Received By (signature):

Date/Time:

Laboratory Comments:

31 3



03/09/11 Form WCD-KC1-SDO

### Request for Chemical Analysis and Chain of Custody Record

C18881

Burns & McDonnell Engineering  
 400 Oyster Point Blvd. Suite 533  
 South San Francisco, CA 94080  
 Phone: (650) 871-2926 Fax: (650) 871-2653  
 Attention: Roshy Mozafar  
Simon Barber

Laboratory: Accutest  
 Address: 2105 Lundy Ave.  
 City/State/Zip: San Jose, CA  
 Telephone:

Document Control No: 2-04-2

Lab. Reference No. or Episode No.:

Project Number: 63142

Sample Type

Client Name: YEC 1708 Wood St

Matrix

Group or SWMU Name	Sample Number		Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Remarks
	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas		
	<u>60 water</u>	<u>-6</u>		<u>2011</u>			<u>1149</u>	<u>0930</u>	<u>W9</u>			<u>6</u>	
<div style="font-size: 48px; opacity: 0.5; position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);">2 DAYS</div>													
<u>3x40ml Amber vials (w/HCL)</u> <u>500ML HDPE (w/HNO3) PKG</u> <u>2x 500ml Ambers N/P.</u>													

Sampler (signature): Jim Boole

Sampler (signature): [Signature]

Special Instructions: EOD + EDF Geo-tracker 10  
70600102107

Relinquished By (signature): [Signature]

Date/Time: 11/9/11 1600

Received By (signature): [Signature]

Date/Time: 11/9/11 1600

Ice Present in Container: Yes  No

Temperature Upon Receipt:

Relinquished By (signature):

Date/Time:

Received By (signature):

Date/Time:

Laboratory Comments:

31  
3

C18881: Chain of Custody

Page 2 of 3



## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C18881**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM921-MB	M29115.D	1	11/10/11	XB	n/a	n/a	VM921

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	99%	60-130%
2037-26-5	Toluene-D8	105%	60-130%
460-00-4	4-Bromofluorobenzene	92%	60-130%



**Method Blank Summary****Job Number:** C18881**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR204-MB	R5804.D	1	11/10/11	BD	n/a	n/a	VR204

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C18881-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Result	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	108%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18881  
**Account:** BMECASFS Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM921-BS	M29112.D	1	11/10/11	XB	n/a	n/a	VM921
VM921-BSD	M29113.D	1	11/10/11	XB	n/a	n/a	VM921

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	39.9	100	37.6	94	6	60-130/30
100-41-4	Ethylbenzene	40	40.0	100	38.4	96	4	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	36.4	91	35.3	88	3	60-130/30
108-88-3	Toluene	40	39.2	98	37.9	95	3	60-130/30
1330-20-7	Xylene (total)	120	120	100	116	97	3	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	100%	60-130%
2037-26-5	Toluene-D8	99%	100%	60-130%
460-00-4	4-Bromofluorobenzene	98%	94%	60-130%

4.2.1  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR204-BS	R5800.D	1	11/10/11	BD	n/a	n/a	VR204
VR204-BSD	R5801.D	1	11/10/11	BD	n/a	n/a	VR204

The QC reported here applies to the following samples:

Method: SW846 8260B

C18881-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.7	94	19.1	96	2	60-130/30
100-41-4	Ethylbenzene	20	20.7	104	21.6	108	4	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	17.0	85	17.6	88	3	60-130/30
108-88-3	Toluene	20	19.6	98	20.5	103	4	60-130/30
1330-20-7	Xylene (total)	60	59.1	99	61.9	103	5	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	94%	94%	60-130%
2037-26-5	Toluene-D8	107%	108%	60-130%
460-00-4	4-Bromofluorobenzene	98%	100%	60-130%

4.2.2  
4

# Laboratory Control Sample Summary

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR204-LCS	R5803.D	1	11/10/11	BD	n/a	n/a	VR204

The QC reported here applies to the following samples:

Method: SW846 8260B

C18881-6

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	123	98	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	108%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

4.3.1  
4

# Laboratory Control Sample Summary

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM921-LCS	M29117.D	1	11/10/11	XB	n/a	n/a	VM921

The QC reported here applies to the following samples:

Method: SW846 8260B

C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	262	105	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	60-130%
2037-26-5	Toluene-D8	107%	60-130%
460-00-4	4-Bromofluorobenzene	96%	60-130%

4.3.2  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18881  
**Account:** BMECASFS Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18857-1MS	M29130.D	1	11/10/11	XB	n/a	n/a	VM921
C18857-1MSD	M29131.D	1	11/10/11	XB	n/a	n/a	VM921
C18857-1	M29129.D	1	11/10/11	XB	n/a	n/a	VM921

The QC reported here applies to the following samples:

Method: SW846 8260B

C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

CAS No.	Compound	C18857-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	39.8	42.0	106	39.0	99	7	60-130/30
100-41-4	Ethylbenzene	ND	39.8	41.0	103	37.0	94	10	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	39.8	44.9	113	42.2	107	6	60-130/30
108-88-3	Toluene	ND	39.8	39.0	98	36.6	93	6	60-130/30
1330-20-7	Xylene (total)	ND	119	122	102	111	94	9	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C18857-1	Limits
1868-53-7	Dibromofluoromethane	115%	105%	110%	60-130%
2037-26-5	Toluene-D8	96%	96%	104%	60-130%
460-00-4	4-Bromofluorobenzene	106%	99%	98%	60-130%

4.4.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18875-1MS	R5822.D	1	11/10/11	BD	n/a	n/a	VR204
C18875-1MSD	R5823.D	1	11/10/11	BD	n/a	n/a	VR204
C18875-1	R5807.D	1	11/10/11	BD	n/a	n/a	VR204

The QC reported here applies to the following samples:

Method: SW846 8260B

C18881-6

CAS No.	Compound	C18875-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	18.5	93	18.0	90	3	60-130/25
100-41-4	Ethylbenzene	ND	20	20.7	104	20.1	101	3	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	16.9	85	16.5	83	2	60-130/25
108-88-3	Toluene	ND	20	19.6	98	19.1	96	3	60-130/25
1330-20-7	Xylene (total)	ND	60	57.5	96	55.6	93	3	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C18875-1	Limits
1868-53-7	Dibromofluoromethane	95%	94%	94%	60-130%
2037-26-5	Toluene-D8	108%	107%	107%	60-130%
460-00-4	4-Bromofluorobenzene	100%	99%	98%	60-130%

4.4.2  
4

GC/MS Volatiles

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Raw Data

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5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\
Data File : M29116.D
Acq On : 10 Nov 2011 12:05 pm
Operator : XINGB
Sample : C18881-1
Misc : MS1499,VM921,5.68,,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 11 10:51:12 2011
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m
Quant Title : EPA 8260B
QLast Update : Thu Sep 15 15:04:15 2011
Response via : Initial Calibration

Table with 7 columns: Internal Standards, R.T., QIon, Response, Conc, Units, Dev(Min). Rows include 1) Pentafluorobenzene, 38) 1,4-Difluorobenzene, 52) Chlorobenzene-d5, 74) 1,4-Dichlorobenzene-d4, 95) 1,4-Dichlorobenzene-d4A.

System Monitoring Compounds table with 7 columns. Rows include 34) Dibromofluoromethane and 53) Toluene-d8, each with Spiked Amount and Recovery information.

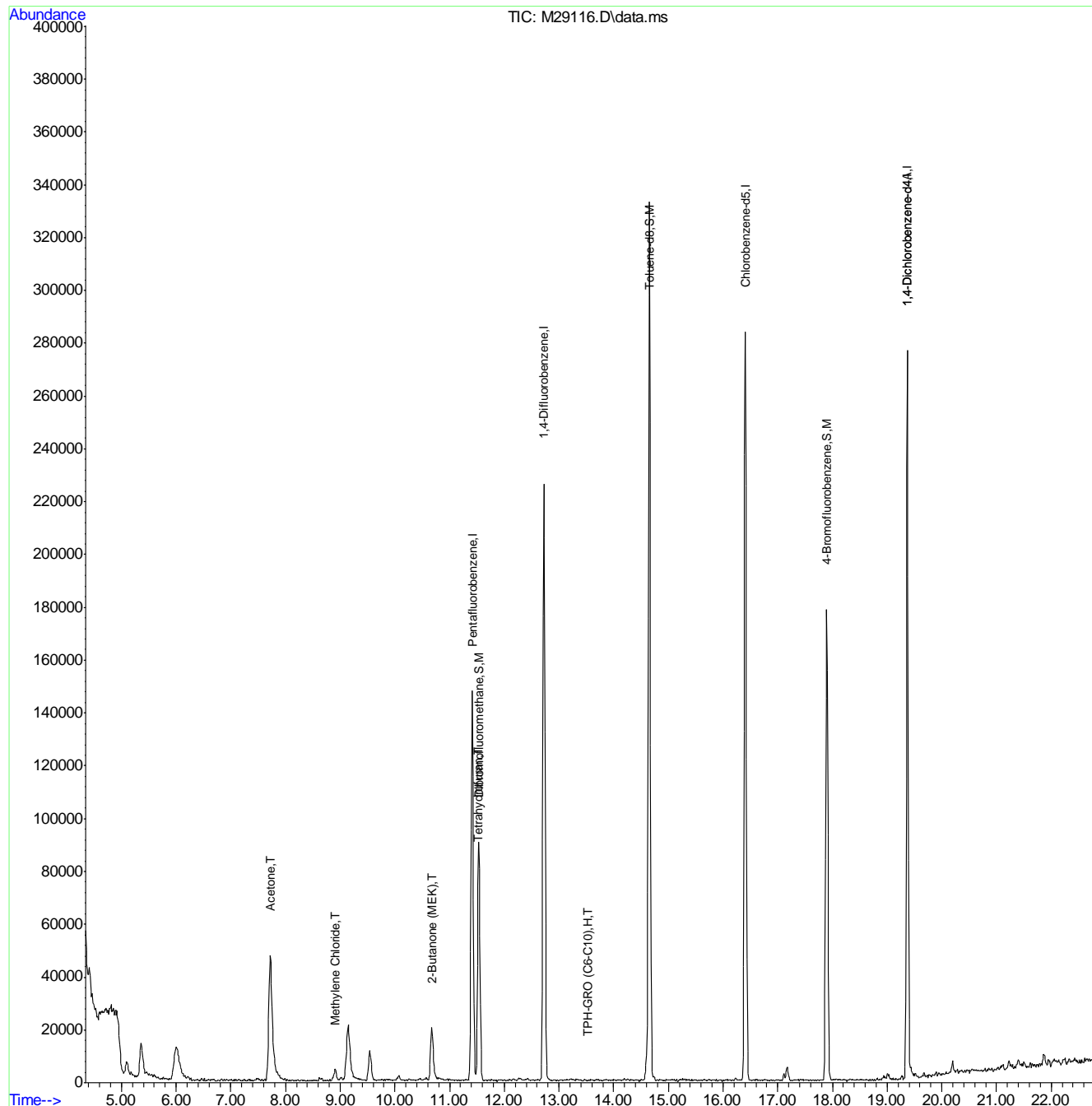
Target Compounds table with 7 columns. Rows include 9) Acetone, 18) Methylene Chloride, 28) Tetrahydrofuran, 29) 2-Butanone (MEK), 96) TPH-GRO (C6-C10).

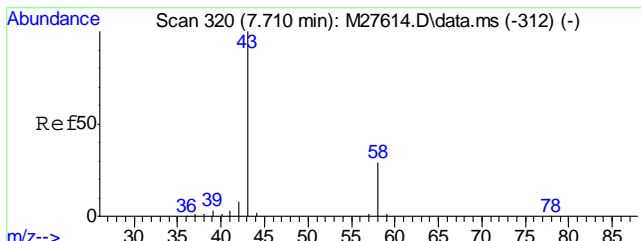
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
 Data File : M29116.D  
 Acq On : 10 Nov 2011 12:05 pm  
 Operator : XINGB  
 Sample : C18881-1  
 Misc : MS1499,VM921,5.68,,,,1  
 ALS Vial : 8 Sample Multiplier: 1

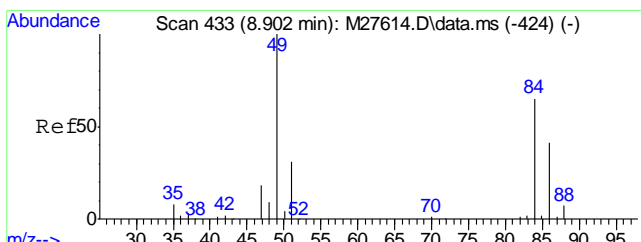
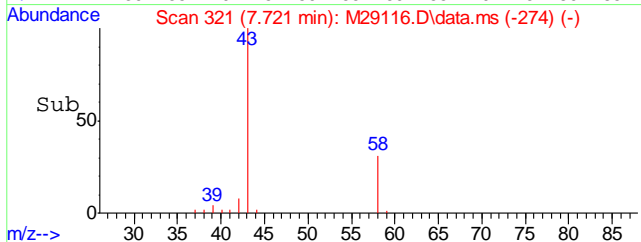
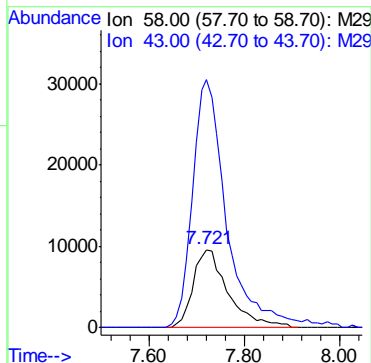
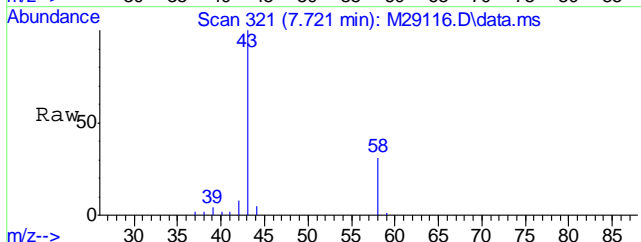
Quant Time: Nov 11 10:51:12 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration





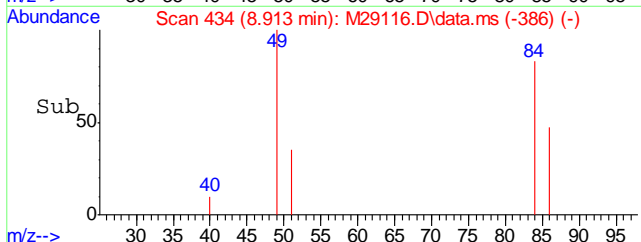
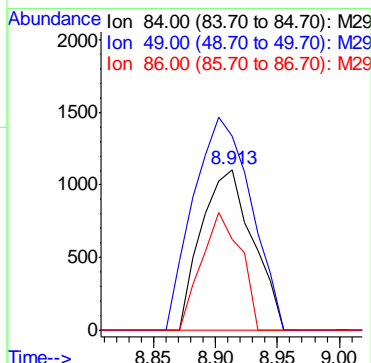
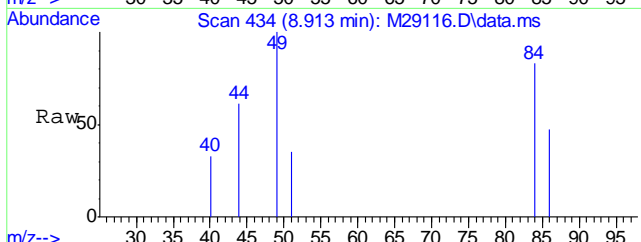
#9  
Acetone  
Concen: 76.37 ppb  
RT: 7.721 min Scan# 321  
Delta R.T. 0.000 min  
Lab File: M29116.D  
Acq: 10 Nov 2011 12:05 pm

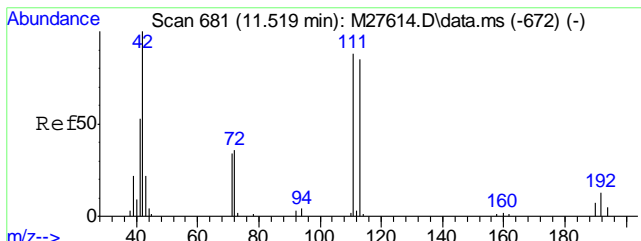
Tgt Ion	Resp	Lower	Upper
58	49178		
58	100		
43	311.6	328.9	368.9#



#18  
Methylene Chloride  
Concen: 0.55 ppb  
RT: 8.913 min Scan# 434  
Delta R.T. 0.011 min  
Lab File: M29116.D  
Acq: 10 Nov 2011 12:05 pm

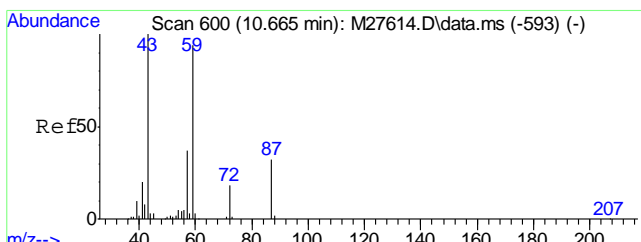
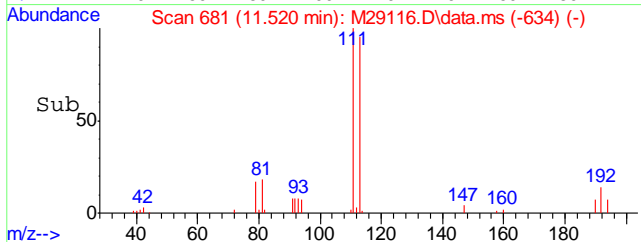
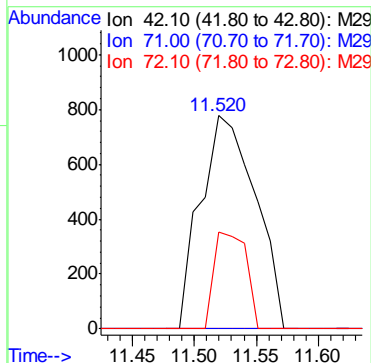
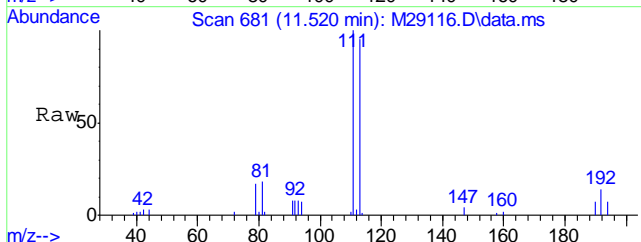
Tgt Ion	Resp	Lower	Upper
84	3207		
84	100		
49	148.9	134.7	174.7
86	56.0	43.0	83.0





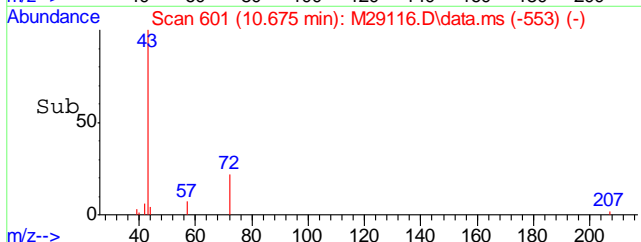
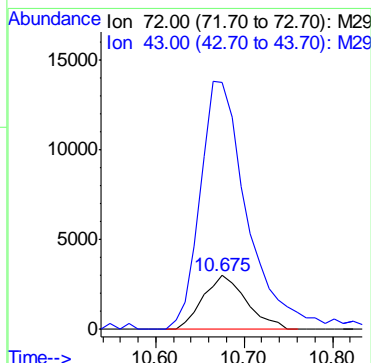
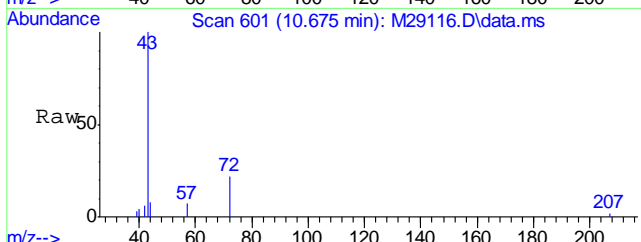
#28  
Tetrahydrofuran  
Concen: 1.02 ppb  
RT: 11.520 min Scan# 681  
Delta R.T. 0.000 min  
Lab File: M29116.D  
Acq: 10 Nov 2011 12:05 pm

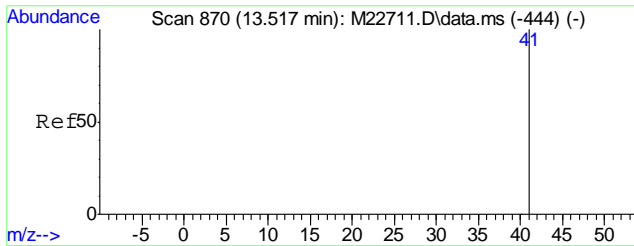
Tgt Ion	Resp	Lower	Upper
42	2404		
71	0.0	12.0	52.0#
72	0.0	14.9	54.9#



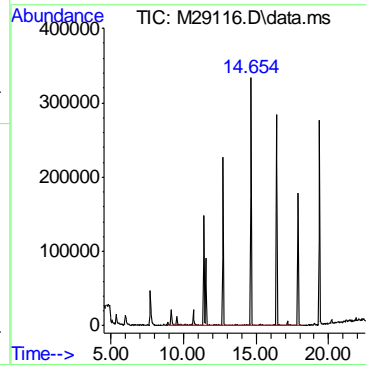
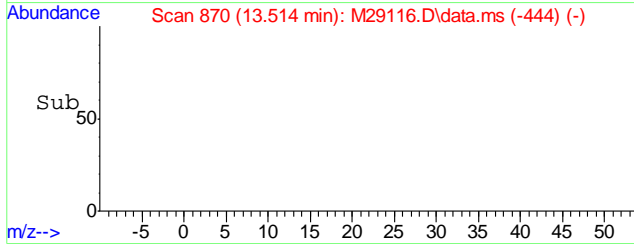
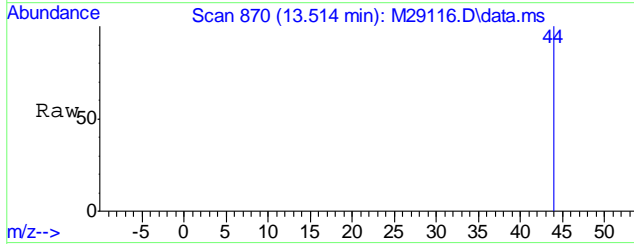
#29  
2-Butanone (MEK)  
Concen: 13.79 ppb  
RT: 10.675 min Scan# 601  
Delta R.T. 0.011 min  
Lab File: M29116.D  
Acq: 10 Nov 2011 12:05 pm

Tgt Ion	Resp	Lower	Upper
72	10278		
43	511.4	540.5	580.5#





#96  
 TPH-GRO (C6-C10)  
 Concen: 15.10 ppb m  
 RT: 13.519 min Scan# 870  
 Delta R.T. 0.000 min  
 Lab File: M29116.D  
 Acq: 10 Nov 2011 12:05 pm  
 Tgt Ion:TIC Resp: 289641



5.1.1  
 5

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\
Data File : M29118.D
Acq On : 10 Nov 2011 1:04 pm
Operator : XINGB
Sample : C18881-2
Misc : MS1499,VM921,5.38,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 11 10:52:20 2011
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m
Quant Title : EPA 8260B
QLast Update : Thu Sep 15 15:04:15 2011
Response via : Initial Calibration

Table with 7 columns: Internal Standards, R.T., QIon, Response, Conc, Units, Dev(Min). Rows include Pentafuorobenzene, 1,4-Difluorobenzene, Chlorobenzene-d5, 1,4-Dichlorobenzene-d4, 1,4-Dichlorobenzene-d4A.

System Monitoring Compounds table with 7 columns. Rows include Dibromofluoromethane, Toluene-d8, 4-Bromofluorobenzene with spiked amounts and recovery percentages.

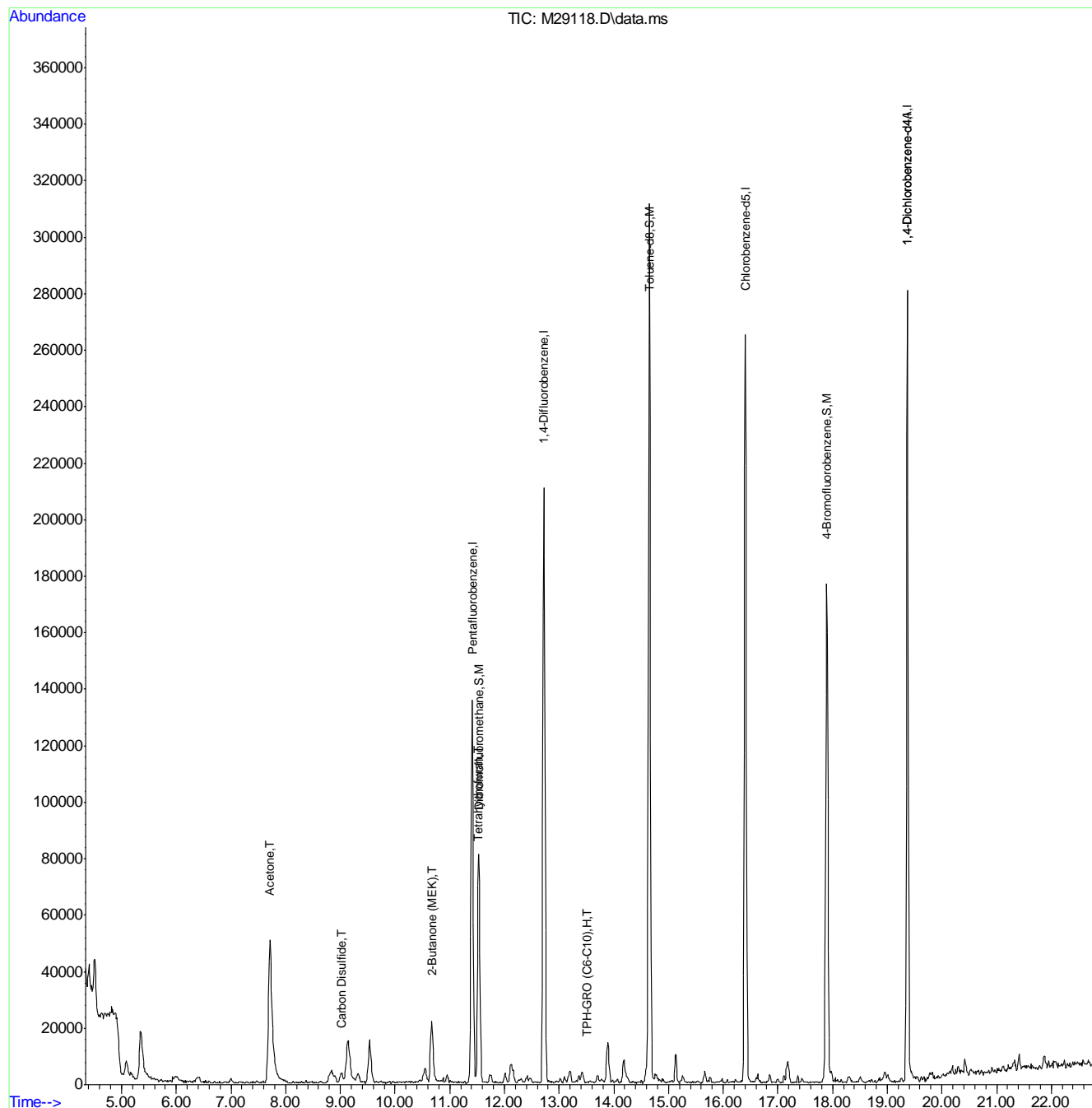
Target Compounds table with 7 columns. Rows include Acetone, Carbon Disulfide, Tetrahydrofuran, 2-Butanone (MEK), TPH-GRO (C6-C10) with Qvalues.

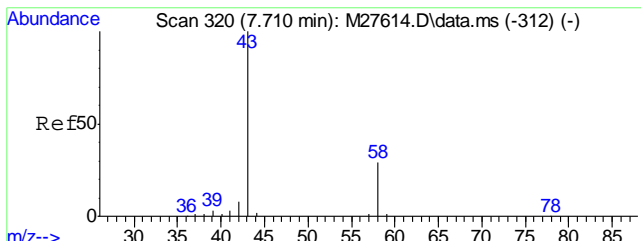
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
Data File : M29118.D  
Acq On : 10 Nov 2011 1:04 pm  
Operator : XINGB  
Sample : C18881-2  
Misc : MS1499,VM921,5.38,,,,1  
ALS Vial : 10 Sample Multiplier: 1

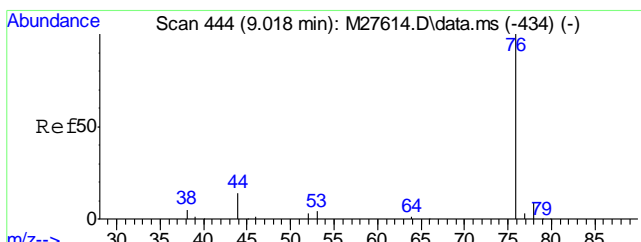
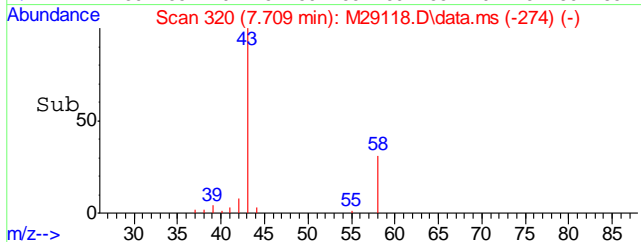
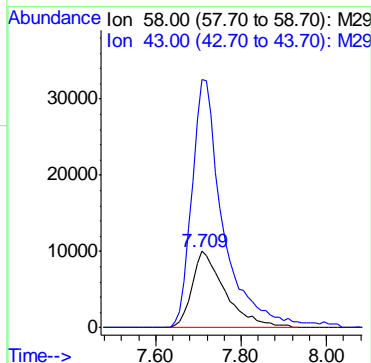
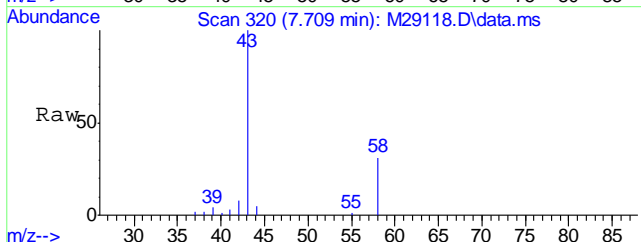
Quant Time: Nov 11 10:52:20 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration





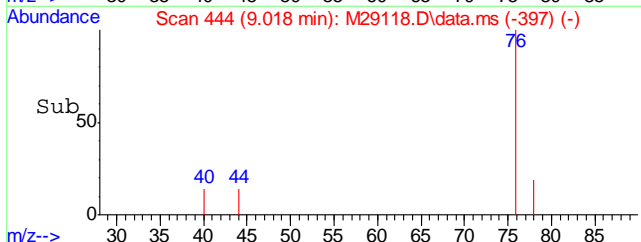
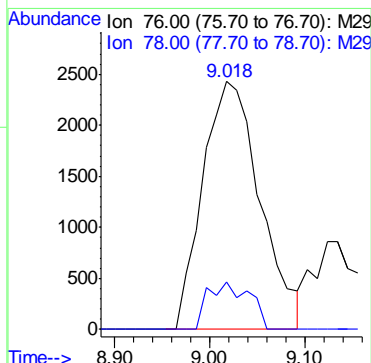
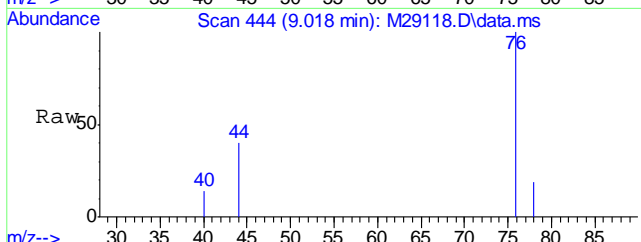
#9  
 Acetone  
 Concen: 92.77 ppb  
 RT: 7.709 min Scan# 320  
 Delta R.T. -0.011 min  
 Lab File: M29118.D  
 Acq: 10 Nov 2011 1:04 pm

Tgt Ion	Resp	Lower	Upper
58	53685		
43	305.8	328.9	368.9#

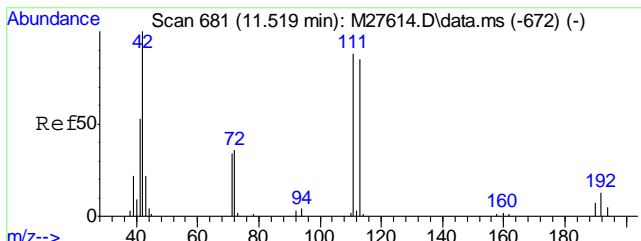


#20  
 Carbon Disulfide  
 Concen: 0.70 ppb  
 RT: 9.018 min Scan# 444  
 Delta R.T. -0.001 min  
 Lab File: M29118.D  
 Acq: 10 Nov 2011 1:04 pm

Tgt Ion	Resp	Lower	Upper
76	10132		
78	0.0	0.0	29.2

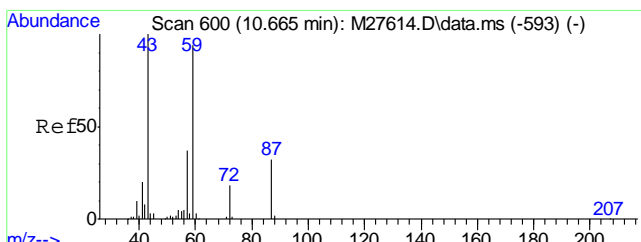
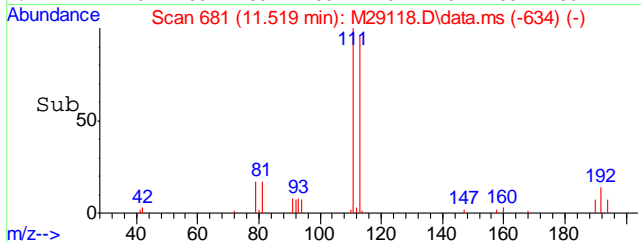
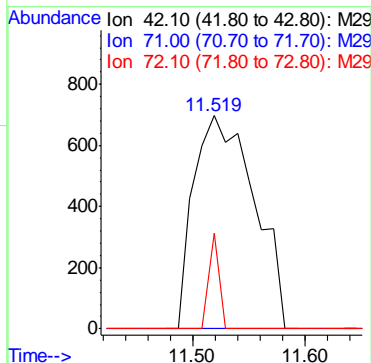
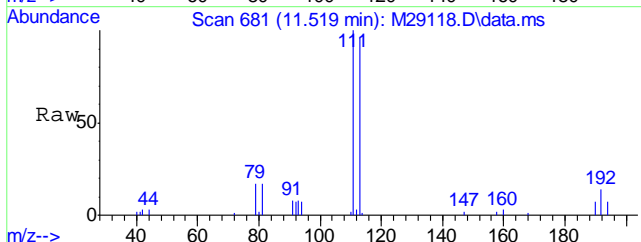






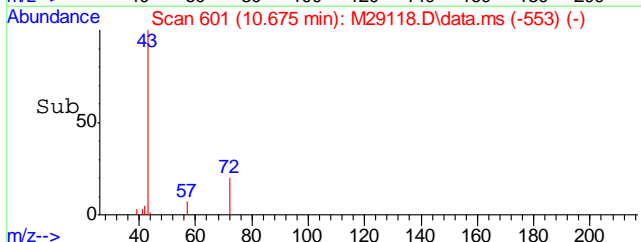
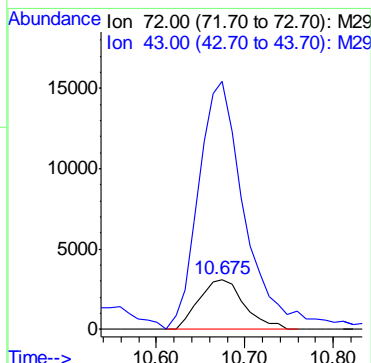
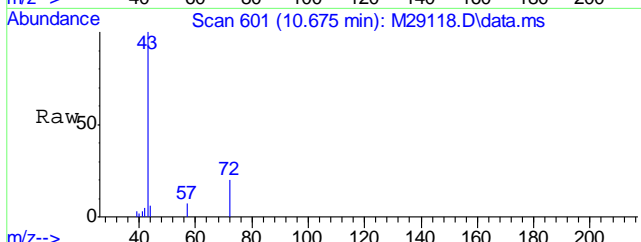
#28  
Tetrahydrofuran  
Concen: 1.23 ppb  
RT: 11.519 min Scan# 681  
Delta R.T. -0.001 min  
Lab File: M29118.D  
Acq: 10 Nov 2011 1:04 pm

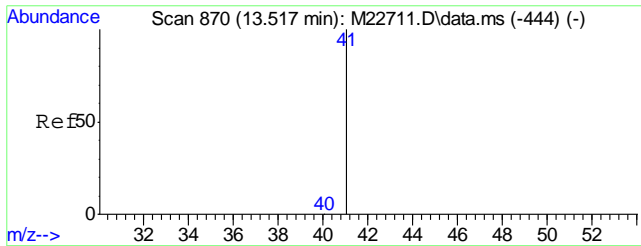
Tgt Ion	Resp	Lower	Upper
42	100		
71	0.0	12.0	52.0#
72	0.0	14.9	54.9#



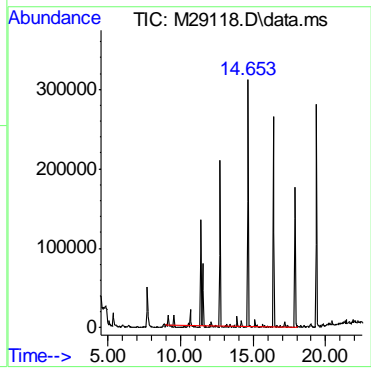
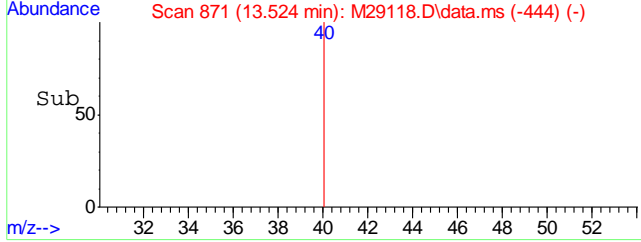
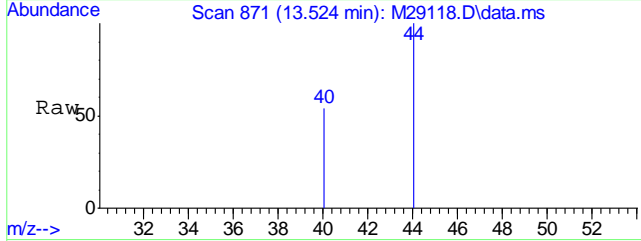
#29  
2-Butanone (MEK)  
Concen: 16.65 ppb  
RT: 10.675 min Scan# 601  
Delta R.T. 0.010 min  
Lab File: M29118.D  
Acq: 10 Nov 2011 1:04 pm

Tgt Ion	Resp	Lower	Upper
72	100		
43	509.7	540.5	580.5#





#96  
 TPH-GRO (C6-C10)  
 Concen: 32.62 ppb m  
 RT: 13.519 min Scan# 871  
 Delta R.T. 0.000 min  
 Lab File: M29118.D  
 Acq: 10 Nov 2011 1:04 pm  
 Tgt Ion:TIC Resp: 632837



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\
Data File : M29119.D
Acq On : 10 Nov 2011 1:34 pm
Operator : XINGB
Sample : C18881-3
Misc : MS1499,VM921,5.66,,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 11 10:53:03 2011
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m
Quant Title : EPA 8260B
QLast Update : Thu Sep 15 15:04:15 2011
Response via : Initial Calibration

Table with 7 columns: Internal Standards, R.T., QIon, Response, Conc, Units, Dev(Min). Rows include Pentafluorobenzene, 1,4-Difluorobenzene, Chlorobenzene-d5, 1,4-Dichlorobenzene-d4, and 1,4-Dichlorobenzene-d4A.

Table with 7 columns: System Monitoring Compounds, R.T., QIon, Response, Conc, Units, Dev(Min). Rows include Dibromofluoromethane and Toluene-d8 with spiked amounts and recovery percentages.

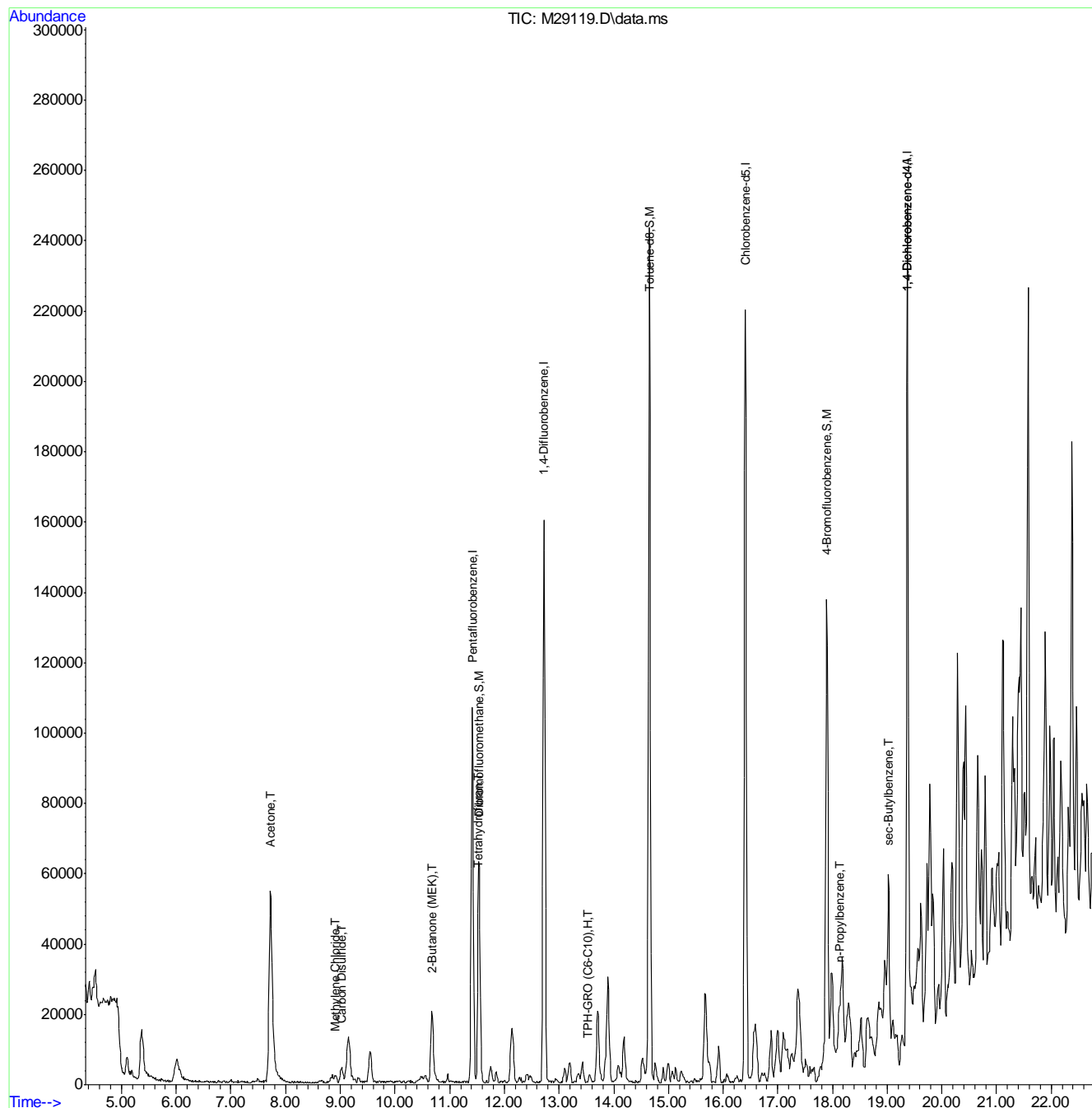
Table with 7 columns: Target Compounds, R.T., QIon, Response, Conc, Units, Qvalue. Rows include Acetone, Methylene Chloride, Carbon Disulfide, Tetrahydrofuran, 2-Butanone (MEK), n-Propylbenzene, sec-Butylbenzene, and TPH-GRO (C6-C10).

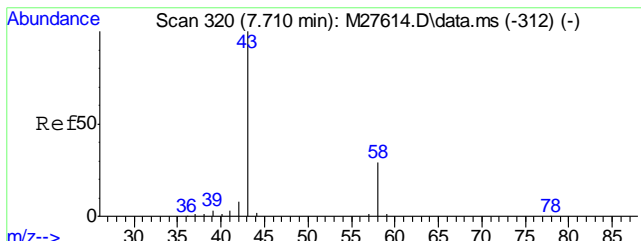
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
 Data File : M29119.D  
 Acq On : 10 Nov 2011 1:34 pm  
 Operator : XINGB  
 Sample : C18881-3  
 Misc : MS1499,VM921,5.66,,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

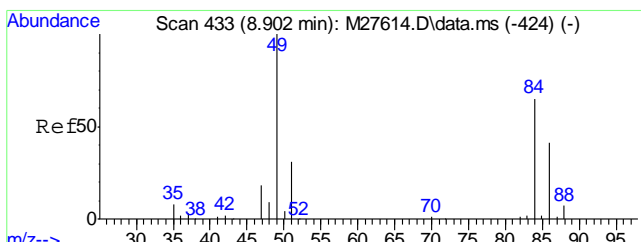
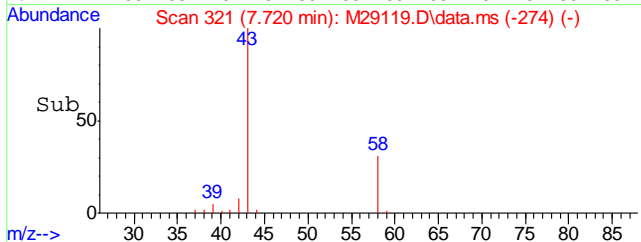
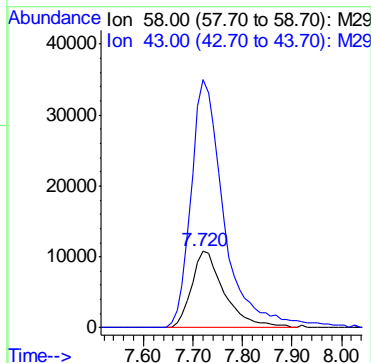
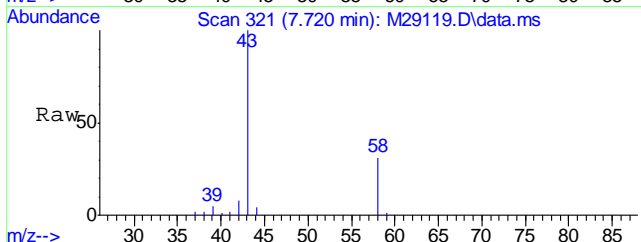
Quant Time: Nov 11 10:53:03 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration





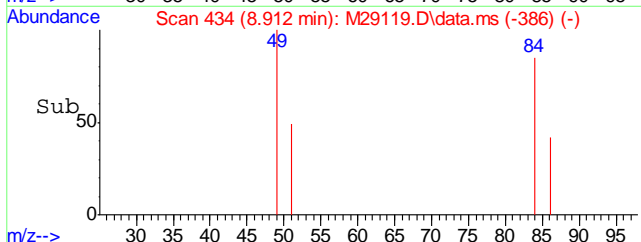
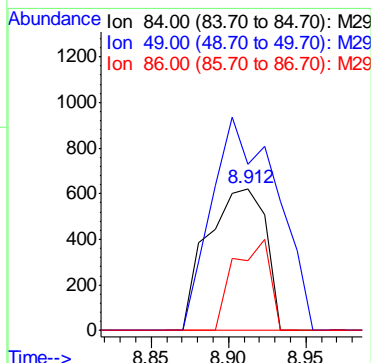
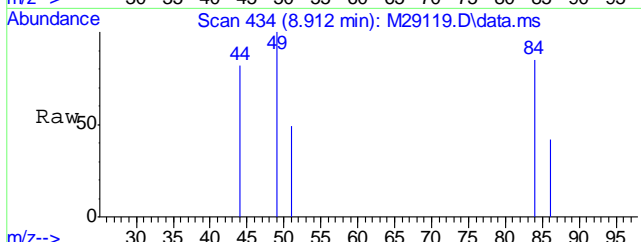
#9  
Acetone  
Concen: 115.33 ppb  
RT: 7.720 min Scan# 321  
Delta R.T. -0.000 min  
Lab File: M29119.D  
Acq: 10 Nov 2011 1:34 pm

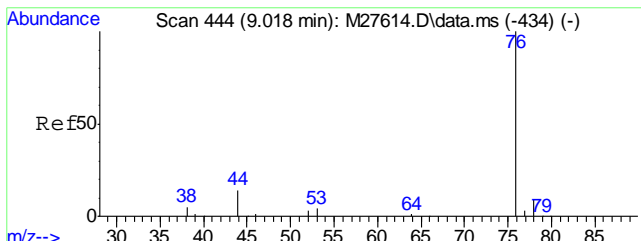
Tgt Ion	Resp	Lower	Upper
58	50086		
43	327.0	328.9	368.9#



#18  
Methylene Chloride  
Concen: 0.41 ppb  
RT: 8.912 min Scan# 434  
Delta R.T. 0.010 min  
Lab File: M29119.D  
Acq: 10 Nov 2011 1:34 pm

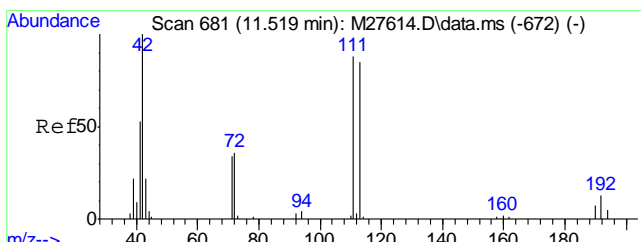
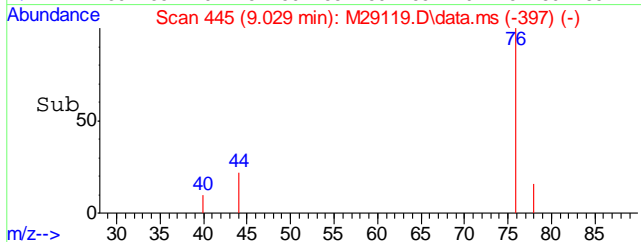
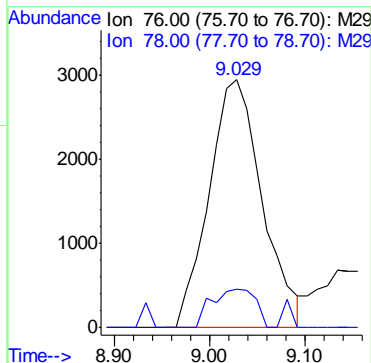
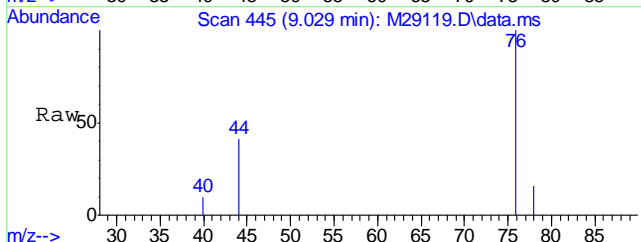
Tgt Ion	Resp	Lower	Upper
84	1623		
49	168.8	134.7	174.7
86	0.0	43.0	83.0#





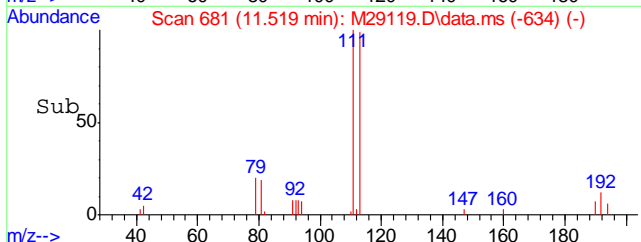
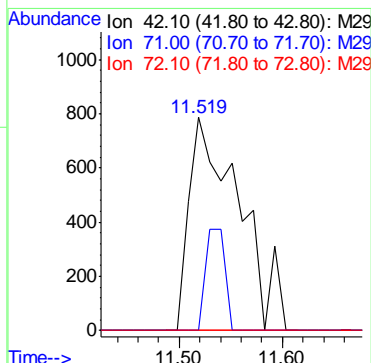
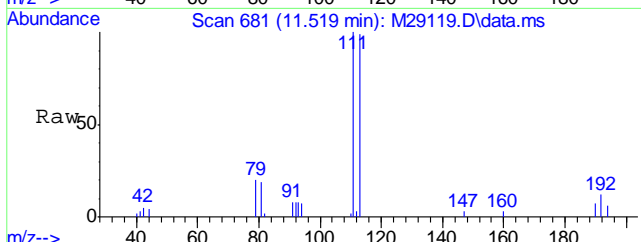
#20  
Carbon Disulfide  
Concen: 1.05 ppb  
RT: 9.029 min Scan# 445  
Delta R.T. 0.010 min  
Lab File: M29119.D  
Acq: 10 Nov 2011 1:34 pm

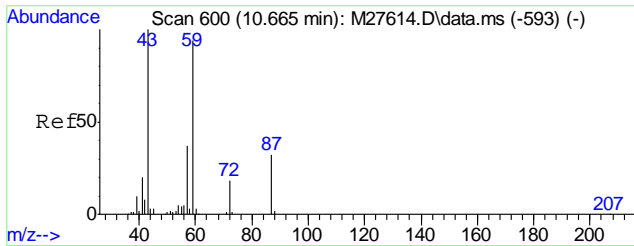
Tgt Ion	Resp	Lower	Upper
76	11368		
78	0.0	0.0	29.2



#28  
Tetrahydrofuran  
Concen: 1.68 ppb  
RT: 11.519 min Scan# 681  
Delta R.T. -0.000 min  
Lab File: M29119.D  
Acq: 10 Nov 2011 1:34 pm

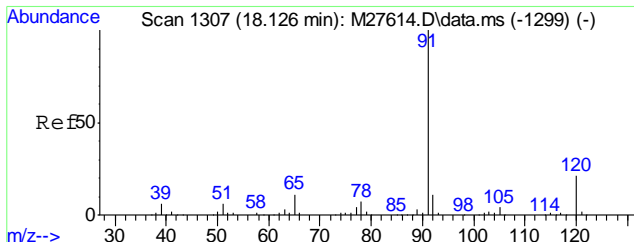
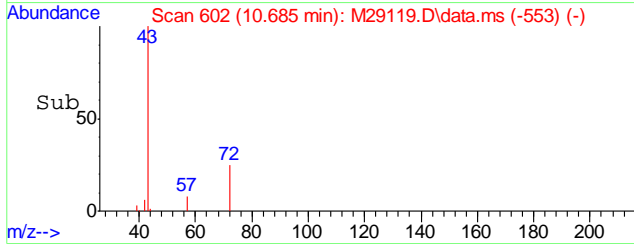
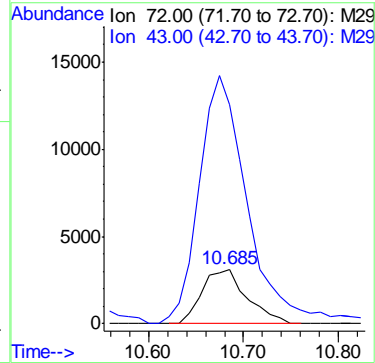
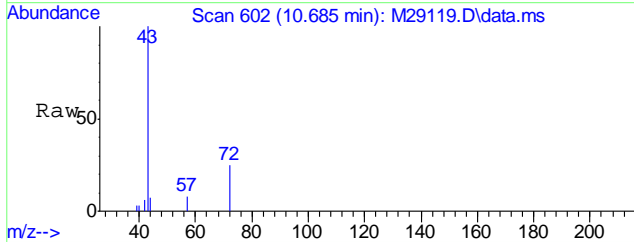
Tgt Ion	Resp	Lower	Upper
42	2665		
71	0.0	12.0	52.0#
72	0.0	14.9	54.9#





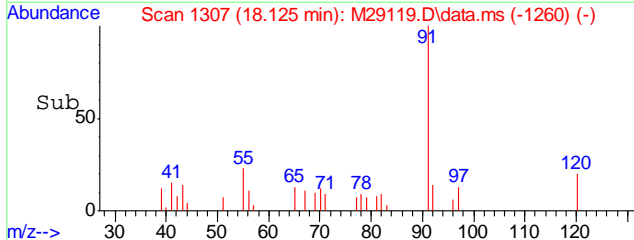
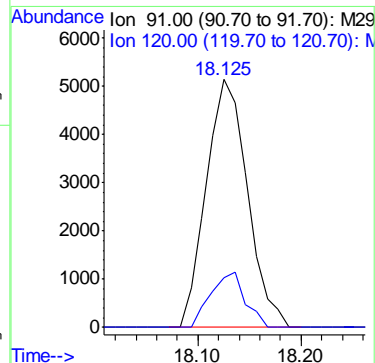
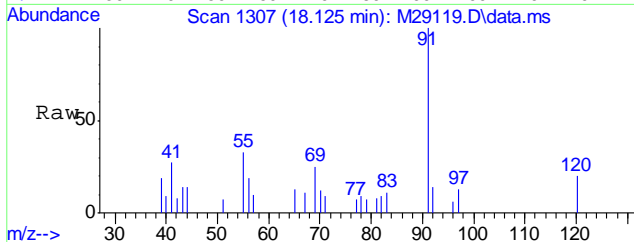
#29  
2-Butanone (MEK)  
Concen: 20.11 ppb  
RT: 10.685 min Scan# 602  
Delta R.T. 0.021 min  
Lab File: M29119.D  
Acq: 10 Nov 2011 1:34 pm

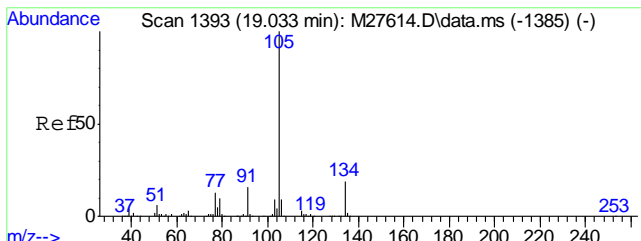
Tgt Ion: 72 Resp: 10106  
Ion Ratio Lower Upper  
72 100  
43 498.5 540.5 580.5#



#76  
n-Propylbenzene  
Concen: 0.75 ppb  
RT: 18.125 min Scan# 1307  
Delta R.T. -0.000 min  
Lab File: M29119.D  
Acq: 10 Nov 2011 1:34 pm

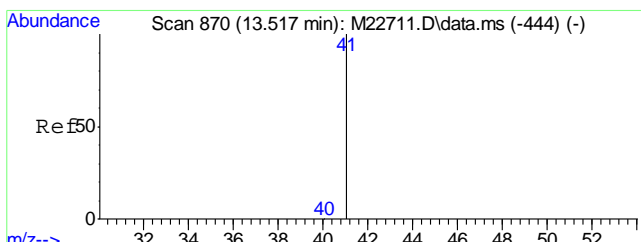
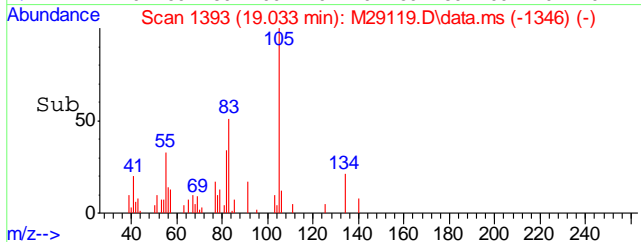
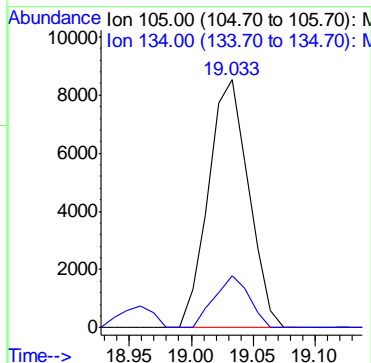
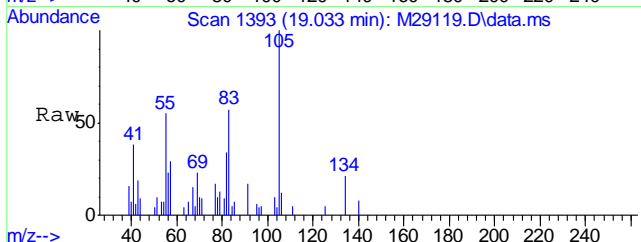
Tgt Ion: 91 Resp: 14247  
Ion Ratio Lower Upper  
91 100  
120 18.5 1.2 41.2





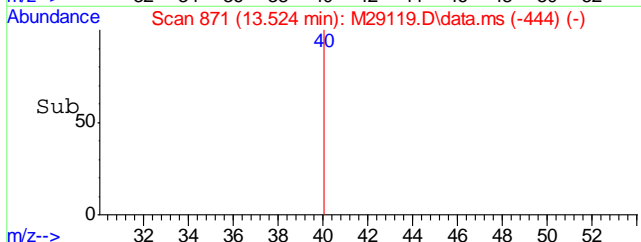
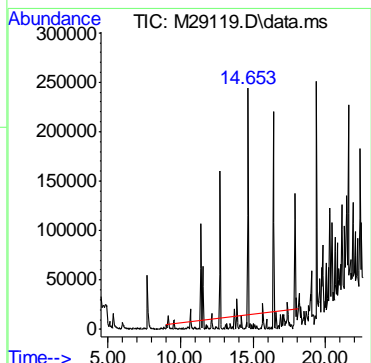
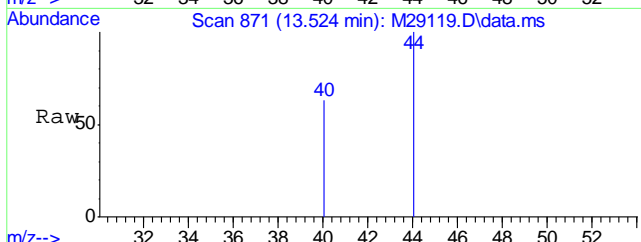
#84  
 sec-Butylbenzene  
 Concen: 1.17 ppb  
 RT: 19.033 min Scan# 1393  
 Delta R.T. -0.000 min  
 Lab File: M29119.D  
 Acq: 10 Nov 2011 1:34 pm

Tgt Ion: 105 Resp: 19327  
 Ion Ratio Lower Upper  
 105 100  
 134 18.2 0.0 38.7



#96  
 TPH-GRO (C6-C10)  
 Concen: 85.30 ppb m  
 RT: 13.519 min Scan# 871  
 Delta R.T. 0.000 min  
 Lab File: M29119.D  
 Acq: 10 Nov 2011 1:34 pm

Tgt Ion: TIC Resp: 1293467





## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
 Data File : M29120.D  
 Acq On : 10 Nov 2011 2:03 pm  
 Operator : XINGB  
 Sample : C18881-4  
 Misc : MS1499,VM921,4.42,,,,,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 11 10:53:39 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.414	168	129082	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.723	114	224580	20.00	ppb	-0.01
52) Chlorobenzene-d5	16.406	117	199907	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.371	152	92470	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.371	152	92470	20.00	ppb	0.00

## System Monitoring Compounds

34) Dibromofluoromethane	11.530	111	72662	20.94	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	104.70%		
53) Toluene-d8	14.654	98	279542	20.91	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	104.55%		
71) 4-Bromofluorobenzene	17.894	95	105591	20.19	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	100.95%		

## Target Compounds

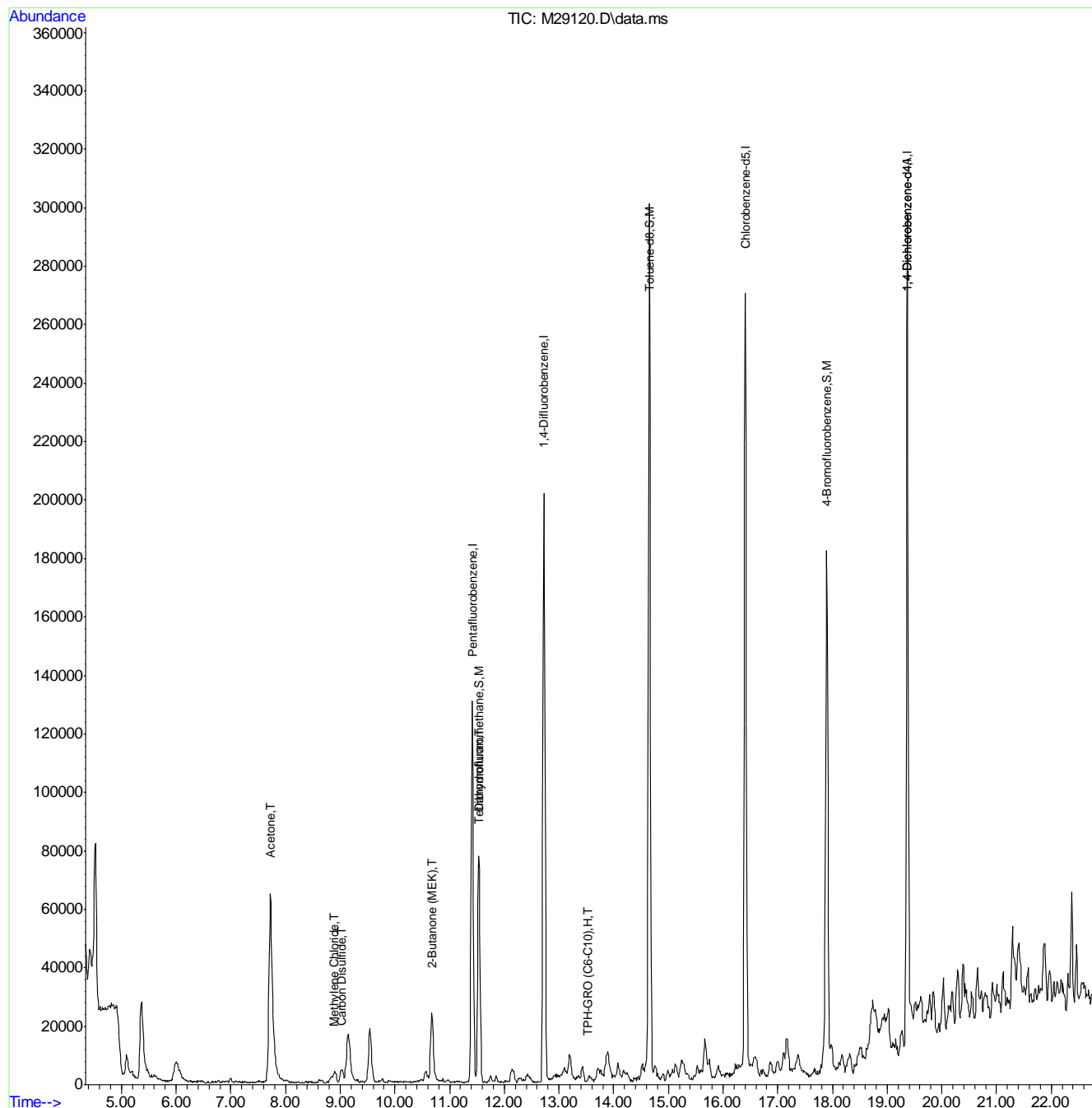
						Qvalue
9) Acetone	7.731	58	66120	118.37	ppb	# 77
18) Methylene Chloride	8.892	84	2775	0.55	ppb	# 75
20) Carbon Disulfide	9.019	76	13115	0.94	ppb	# 84
28) Tetrahydrofuran	11.541	42	2000	0.98	ppb	# 41
29) 2-Butanone (MEK)	10.675	72	13134	20.32	ppb	# 62
96) TPH-GRO (C6-C10)	13.519	TIC	883059m	46.11	ppb	

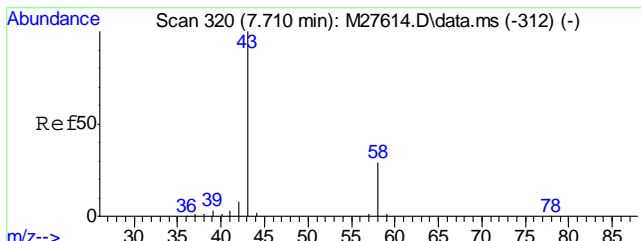
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
Data File : M29120.D  
Acq On : 10 Nov 2011 2:03 pm  
Operator : XINGB  
Sample : C18881-4  
Misc : MS1499,VM921,4.42,,,,,1  
ALS Vial : 12 Sample Multiplier: 1

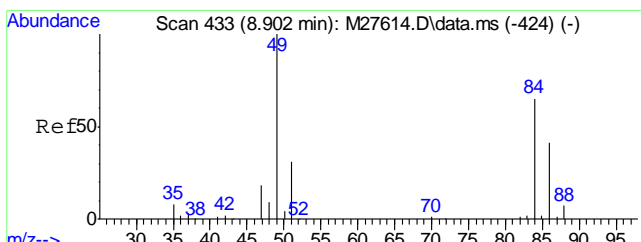
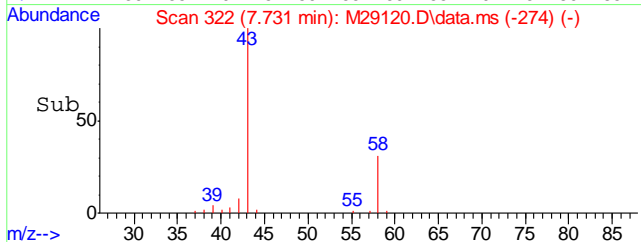
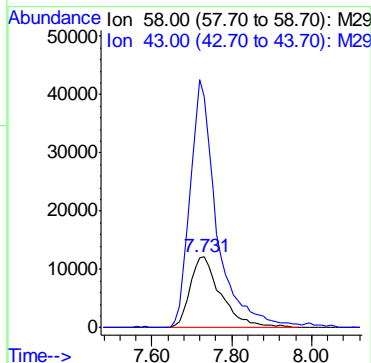
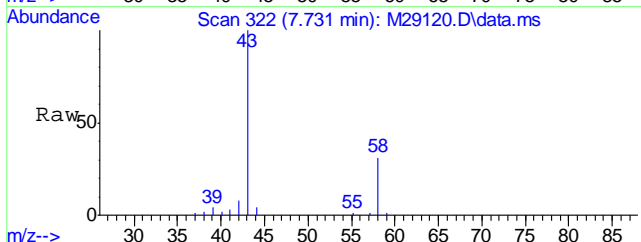
Quant Time: Nov 11 10:53:39 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration





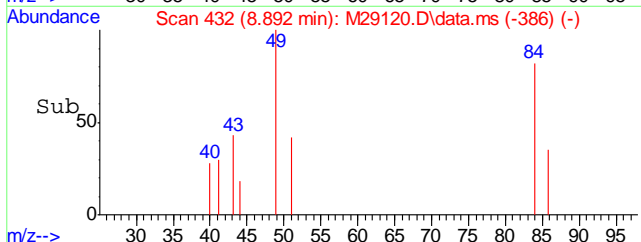
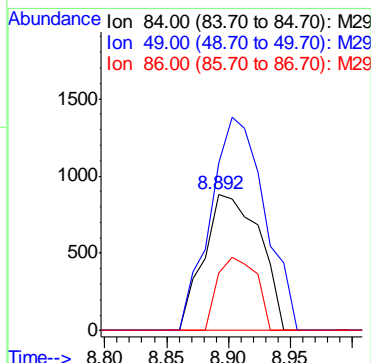
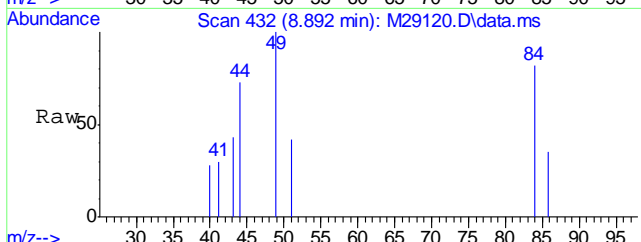
#9  
Acetone  
Concen: 118.37 ppb  
RT: 7.731 min Scan# 322  
Delta R.T. 0.011 min  
Lab File: M29120.D  
Acq: 10 Nov 2011 2:03 pm

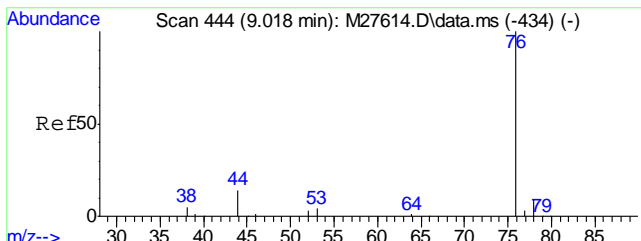
Tgt Ion	Resp	Lower	Upper
58	66120		
58	100		
43	299.7	328.9	368.9#



#18  
Methylene Chloride  
Concen: 0.55 ppb  
RT: 8.892 min Scan# 432  
Delta R.T. -0.010 min  
Lab File: M29120.D  
Acq: 10 Nov 2011 2:03 pm

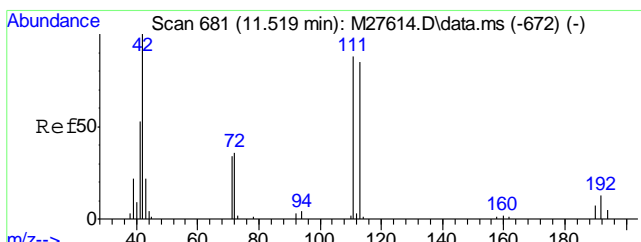
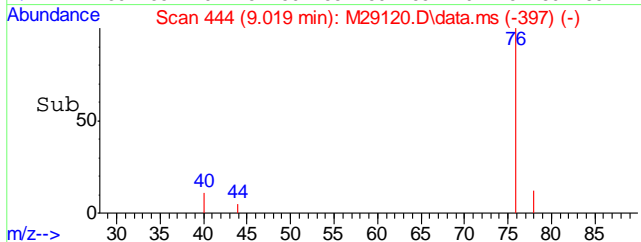
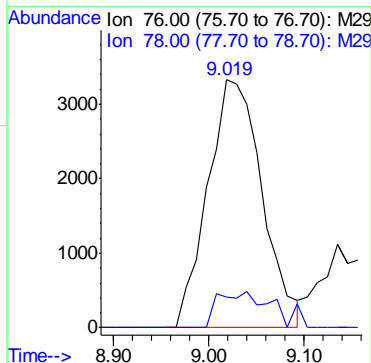
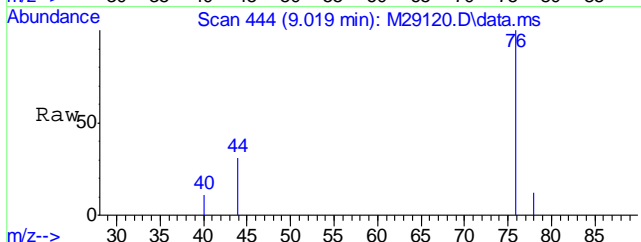
Tgt Ion	Resp	Lower	Upper
84	2775		
84	100		
49	152.6	134.7	174.7
86	0.0	43.0	83.0#





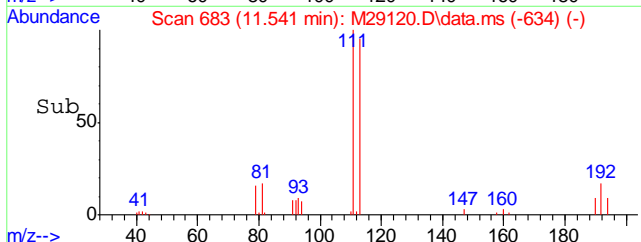
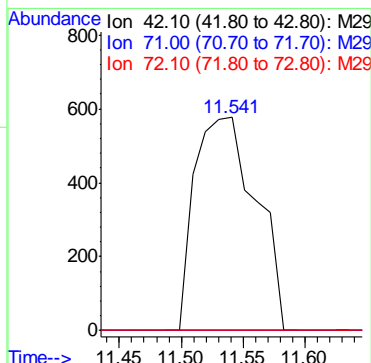
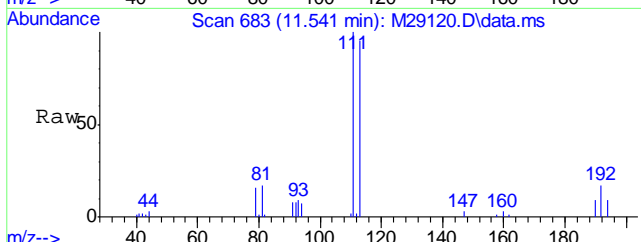
#20  
Carbon Disulfide  
Concen: 0.94 ppb  
RT: 9.019 min Scan# 444  
Delta R.T. 0.000 min  
Lab File: M29120.D  
Acq: 10 Nov 2011 2:03 pm

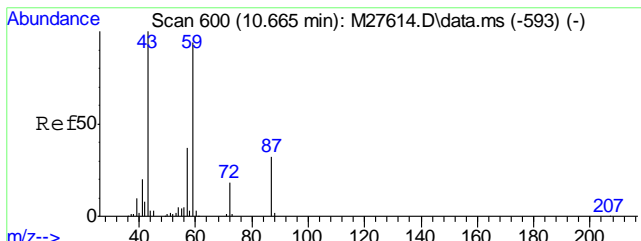
Tgt Ion	Resp	Lower	Upper
76	13115	100	
78	14.9	0.0	29.2



#28  
Tetrahydrofuran  
Concen: 0.98 ppb  
RT: 11.541 min Scan# 683  
Delta R.T. 0.021 min  
Lab File: M29120.D  
Acq: 10 Nov 2011 2:03 pm

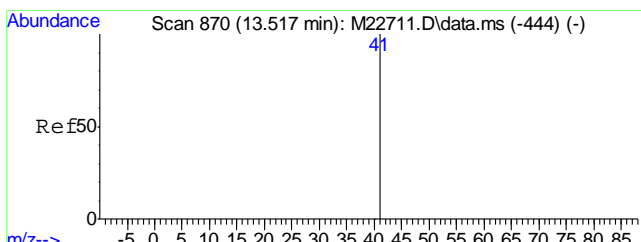
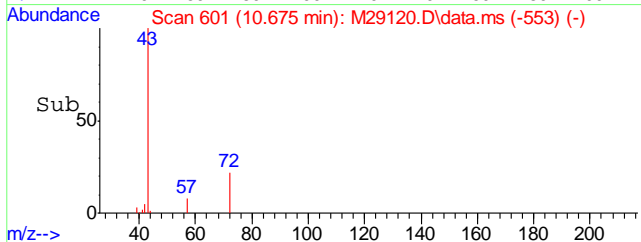
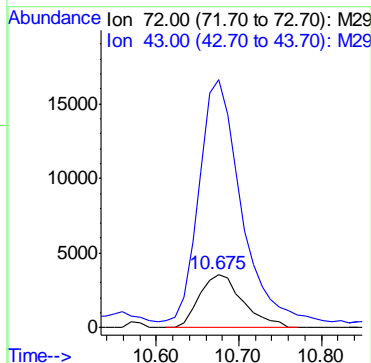
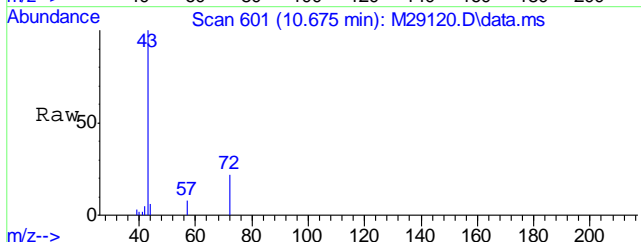
Tgt Ion	Resp	Lower	Upper
42	2000	100	
71	0.0	12.0	52.0#
72	0.0	14.9	54.9#





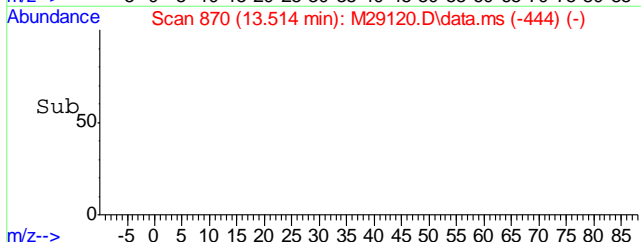
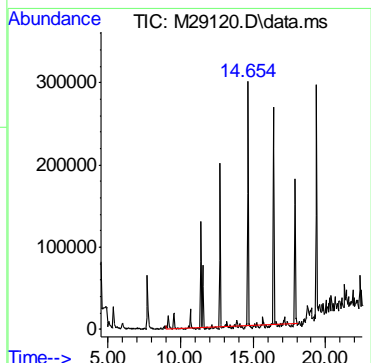
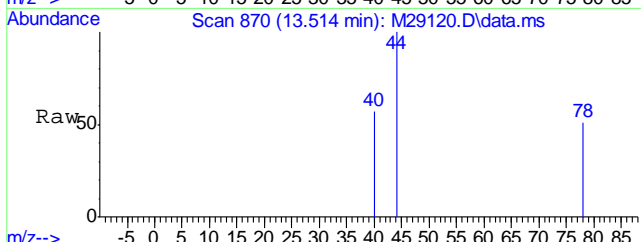
#29  
 2-Butanone (MEK)  
 Concen: 20.32 ppb  
 RT: 10.675 min Scan# 601  
 Delta R.T. 0.011 min  
 Lab File: M29120.D  
 Acq: 10 Nov 2011 2:03 pm

Tgt Ion	Resp	Lower	Upper
72	13134		
43	447.5	540.5	580.5#



#96  
 TPH-GRO (C6-C10)  
 Concen: 46.11 ppb m  
 RT: 13.519 min Scan# 870  
 Delta R.T. 0.000 min  
 Lab File: M29120.D  
 Acq: 10 Nov 2011 2:03 pm

Tgt Ion: TIC Resp: 883059



## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
 Data File : M29121.D  
 Acq On : 10 Nov 2011 2:32 pm  
 Operator : XINGB  
 Sample : C18881-5  
 Misc : MS1499,VM921,3.65,,,,,1  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 11 10:54:23 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.405	168	149616	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.724	114	254717	20.00	ppb	0.00
52) Chlorobenzene-d5	16.407	117	221688	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.373	152	103234	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.373	152	103234	20.00	ppb	0.00

## System Monitoring Compounds

34) Dibromofluoromethane	11.532	111	81165	20.18	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	100.90%		
53) Toluene-d8	14.656	98	313026	21.12	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	105.60%		
71) 4-Bromofluorobenzene	17.895	95	111267	19.18	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	95.90%		

## Target Compounds

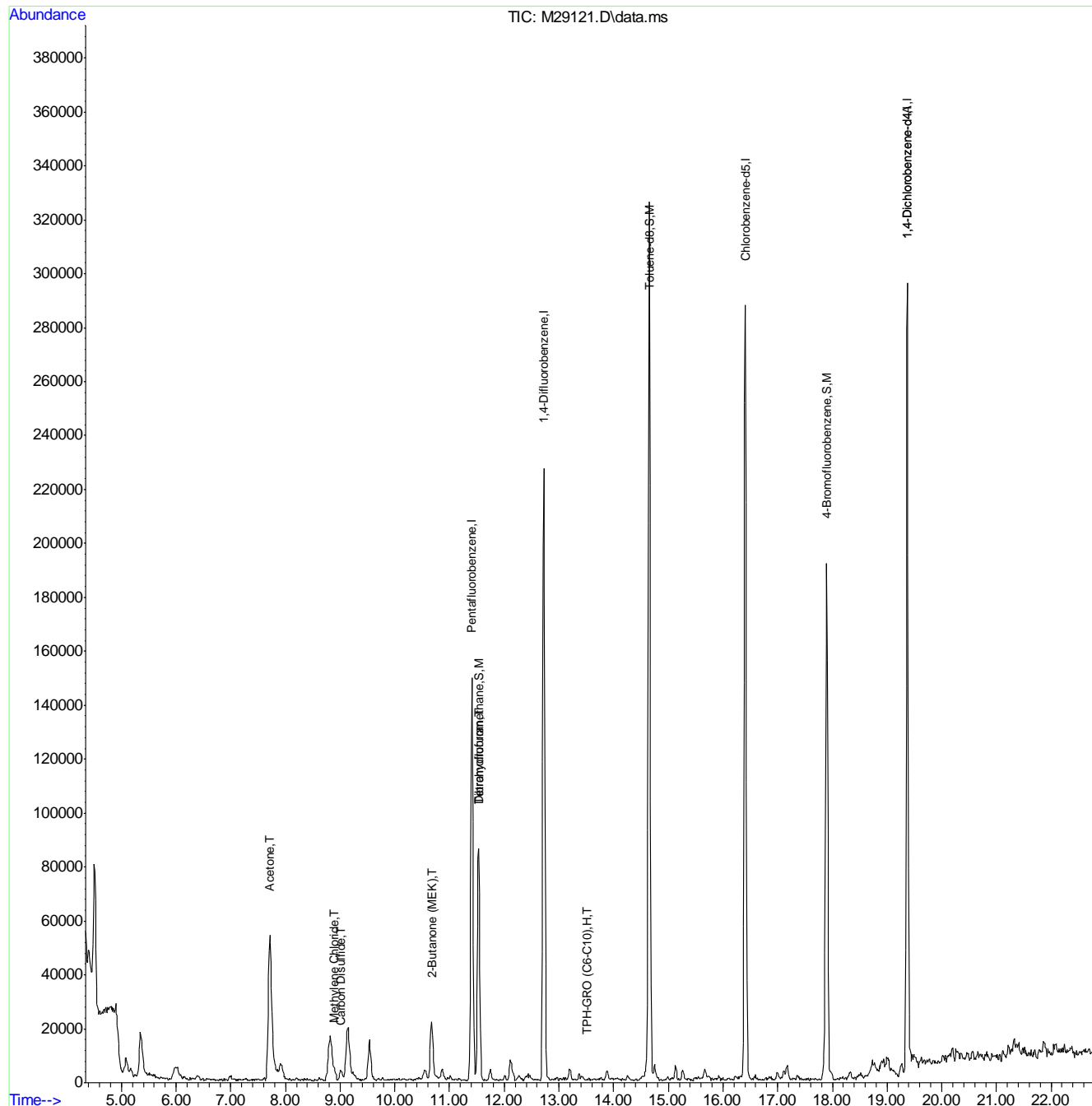
						Qvalue
9) Acetone	7.712	58	57235	88.40	ppb	# 73
18) Methylene Chloride	8.883	84	2421	0.41	ppb	# 74
20) Carbon Disulfide	9.010	76	9814	0.61	ppb	# 75
28) Tetrahydrofuran	11.532	42	2375	1.01	ppb	# 41
29) 2-Butanone (MEK)	10.677	72	11151	14.88	ppb	# 78
96) TPH-GRO (C6-C10)	13.519	TIC	533301m	24.94	ppb	

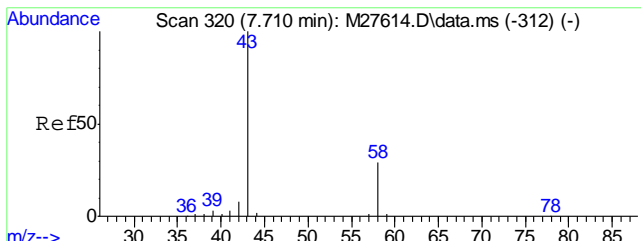
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
 Data File : M29121.D  
 Acq On : 10 Nov 2011 2:32 pm  
 Operator : XINGB  
 Sample : C18881-5  
 Misc : MS1499,VM921,3.65,,,,,1  
 ALS Vial : 13 Sample Multiplier: 1

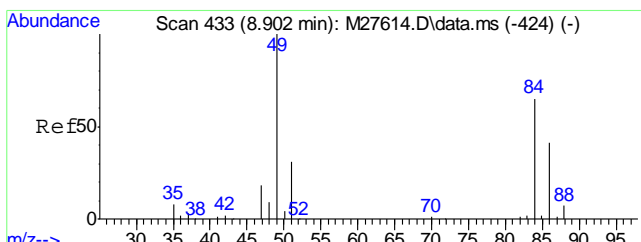
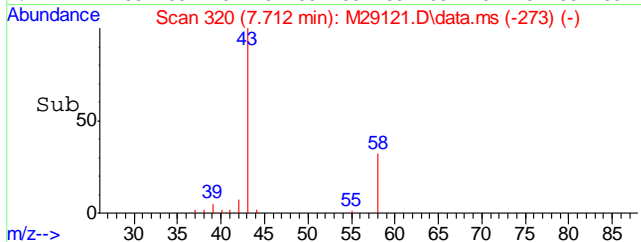
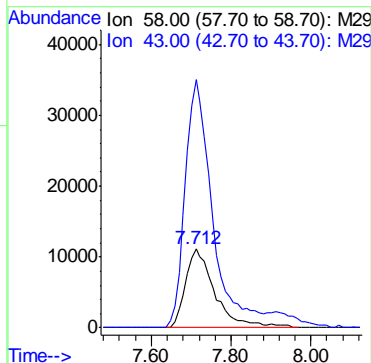
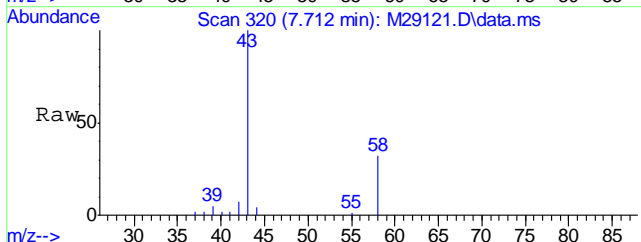
Quant Time: Nov 11 10:54:23 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration





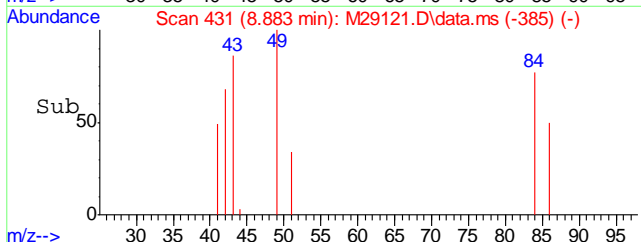
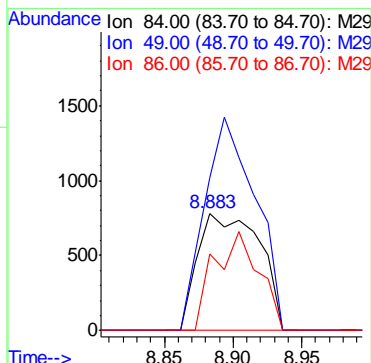
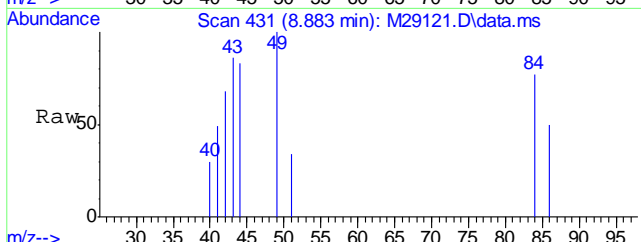
#9  
Acetone  
Concen: 88.40 ppb  
RT: 7.712 min Scan# 320  
Delta R.T. -0.009 min  
Lab File: M29121.D  
Acq: 10 Nov 2011 2:32 pm

Tgt Ion	Resp	Lower	Upper
58	57235		
43	291.2	328.9	368.9#

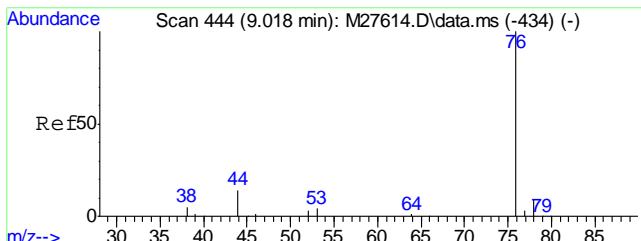


#18  
Methylene Chloride  
Concen: 0.41 ppb  
RT: 8.883 min Scan# 431  
Delta R.T. -0.019 min  
Lab File: M29121.D  
Acq: 10 Nov 2011 2:32 pm

Tgt Ion	Resp	Lower	Upper
84	2421		
49	150.4	134.7	174.7
86	0.0	43.0	83.0#

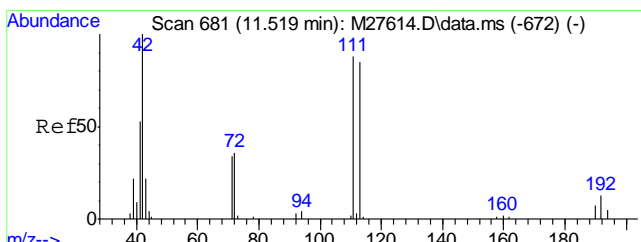
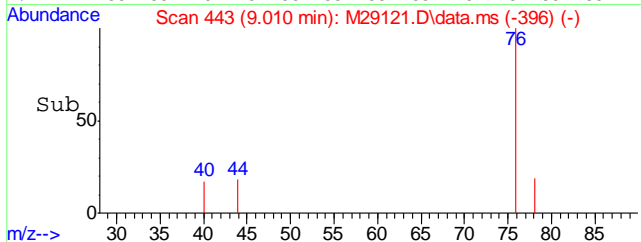
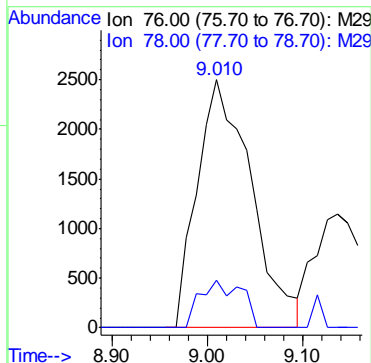
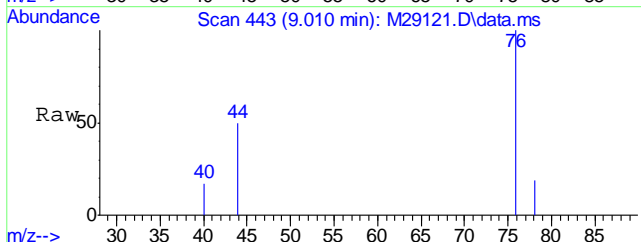






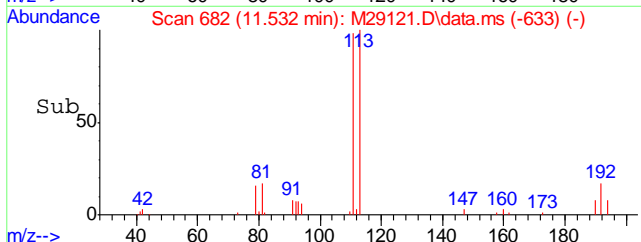
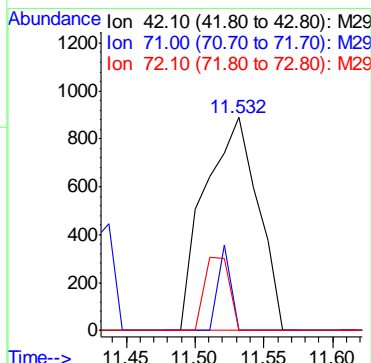
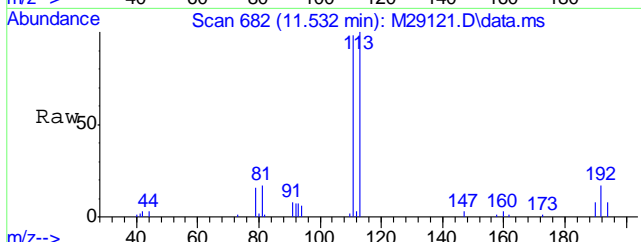
#20  
 Carbon Disulfide  
 Concen: 0.61 ppb  
 RT: 9.010 min Scan# 443  
 Delta R.T. -0.009 min  
 Lab File: M29121.D  
 Acq: 10 Nov 2011 2:32 pm

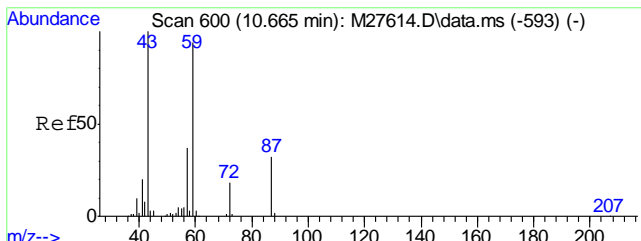
Tgt Ion	Resp	Lower	Upper
76	9814	100	
78	0.0	0.0	29.2



#28  
 Tetrahydrofuran  
 Concen: 1.01 ppb  
 RT: 11.532 min Scan# 682  
 Delta R.T. 0.012 min  
 Lab File: M29121.D  
 Acq: 10 Nov 2011 2:32 pm

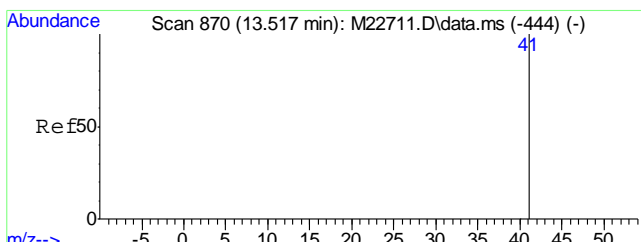
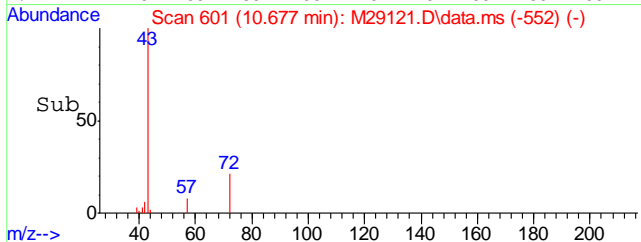
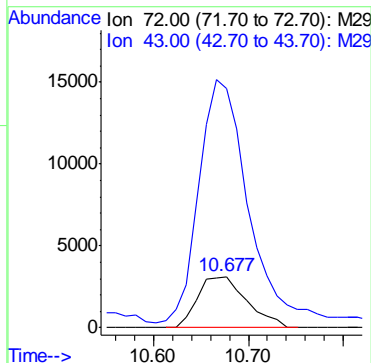
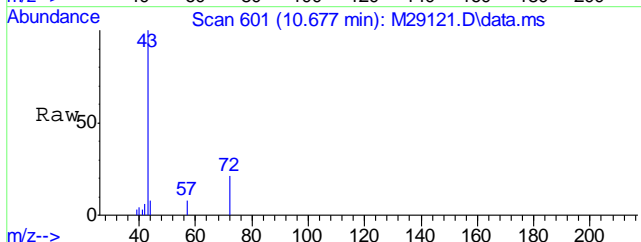
Tgt Ion	Resp	Lower	Upper
42	2375	100	
71	0.0	12.0	52.0#
72	0.0	14.9	54.9#





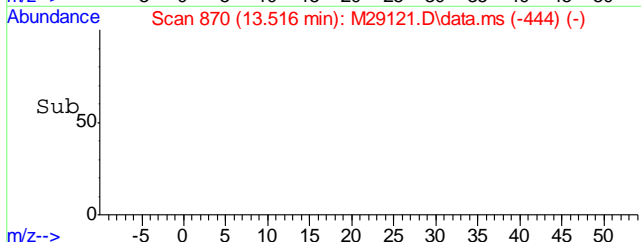
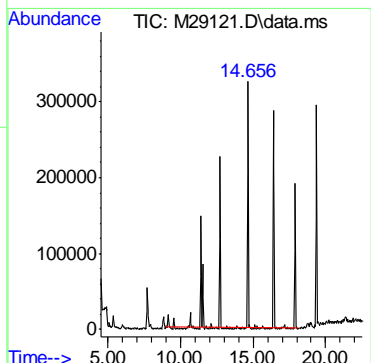
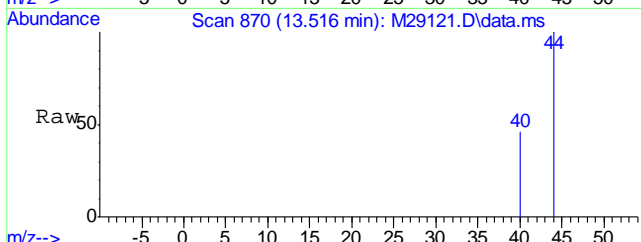
#29  
 2-Butanone (MEK)  
 Concen: 14.88 ppb  
 RT: 10.677 min Scan# 601  
 Delta R.T. 0.012 min  
 Lab File: M29121.D  
 Acq: 10 Nov 2011 2:32 pm

Tgt Ion	Resp	Lower	Upper
72	11151		
43	495.4	540.5	580.5#



#96  
 TPH-GRO (C6-C10)  
 Concen: 24.94 ppb m  
 RT: 13.519 min Scan# 870  
 Delta R.T. 0.000 min  
 Lab File: M29121.D  
 Acq: 10 Nov 2011 2:32 pm

Tgt Ion:TIC Resp: 533301



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111110\  
Data File : R5818.D  
Acq On : 10 Nov 2011 6:33 pm  
Operator : belad  
Sample : C18881-6  
Misc : MS1527,VR204,50,,,,,1  
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 11 09:25:44 2011  
Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
Quant Title : EPA -8260B  
QLast Update : Fri Sep 09 09:14:12 2011  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	10.947	168	7442998	10.00	ug/L	-0.01
43) 1,4-Difluorobenzene	12.273	114	12818152	10.00	ug/L	-0.01
58) Chlorobenzene-d5	15.978	117	11146083	10.00	ug/L	0.00
82) 1,4-Dichlorobenzene-d4	18.968	152	5737652	10.00	ug/L	-0.01
103) 1,4-Dichlorobenzene-d4A	18.968	152	5737652	10.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	11.051	111	4553546	9.35	ug/L	-0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	93.50%
59) Toluene-d8	14.216	98	16375297	10.82	ug/L	-0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	108.20%
79) 4-Bromofluorobenzene	17.413	95	6282826	9.78	ug/L	-0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	97.80%
Target Compounds						
17) Iodomethane	8.072	142	79100	0.12	ug/L	# 90
21) Carbon Disulfide	8.470	76	188725	0.12	ug/L	84
34) cis-1,2-Dichloroethene	10.533	96	88123	0.14	ug/L	90
37) Chloroform	10.767	83	233594	0.25	ug/L	97
48) Trichloroethene	12.759	95	279593	0.57	ug/L	97
66) Tetrachloroethene	15.127	164	45317	0.14	ug/L	97
104) TPH-GRO (C6-C10)	14.462	TIC	8335998m	4.32	ug/L	

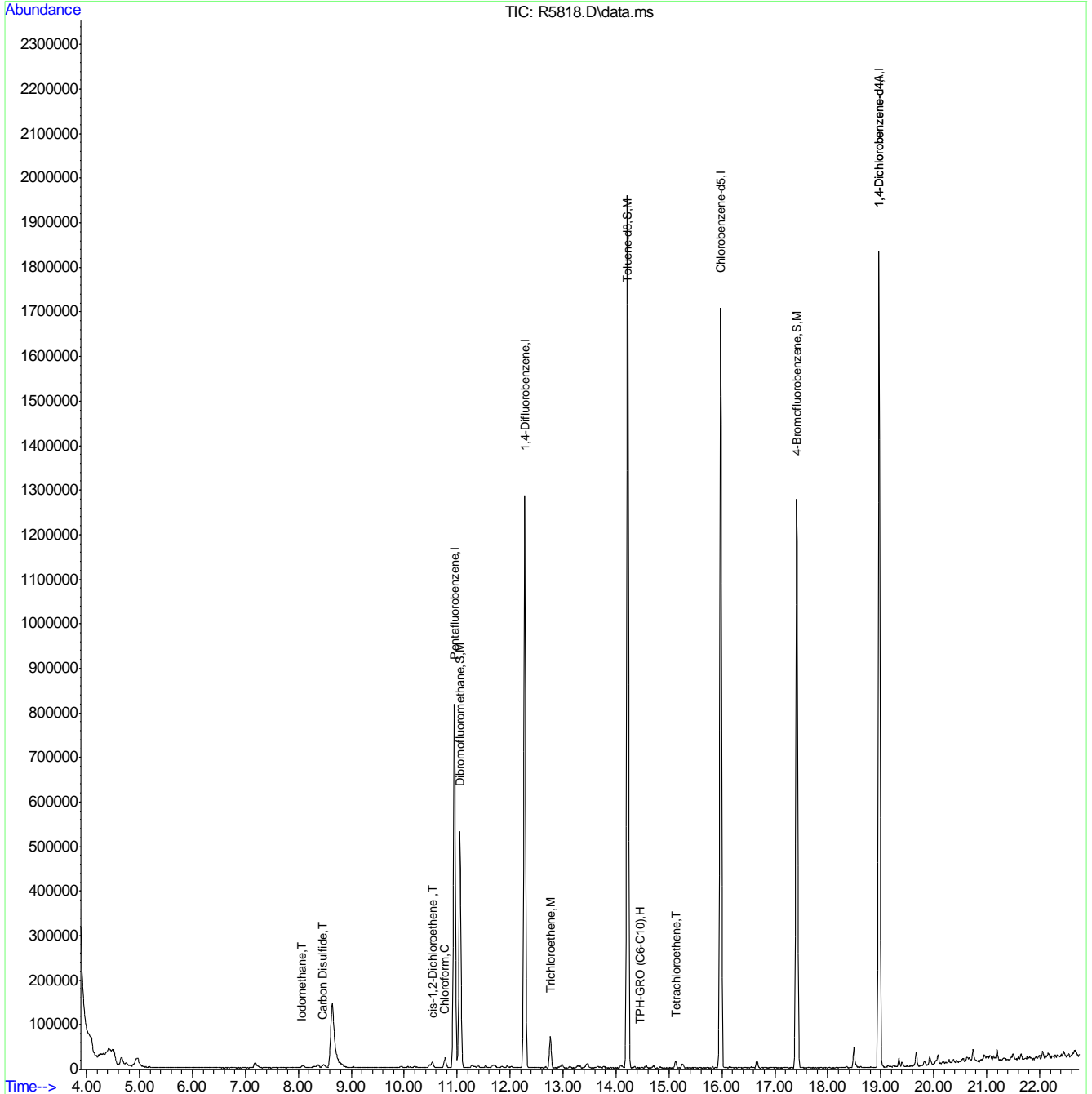
(#) = qualifier out of range (m) = manual integration (+) = signals summed

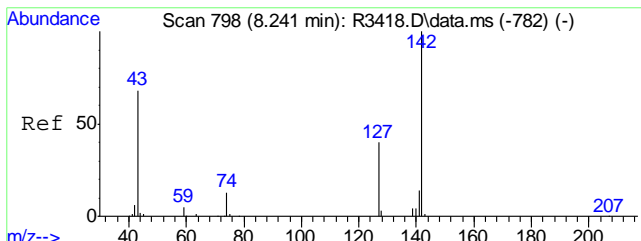
5.1.6  
5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111110\  
Data File : R5818.D  
Acq On : 10 Nov 2011 6:33 pm  
Operator : belad  
Sample : C18881-6  
Misc : MS1527,VR204,50,,,,,1  
ALS Vial : 21 Sample Multiplier: 1

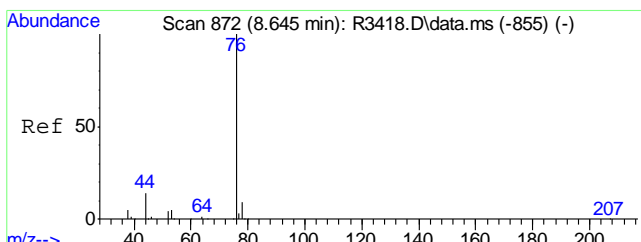
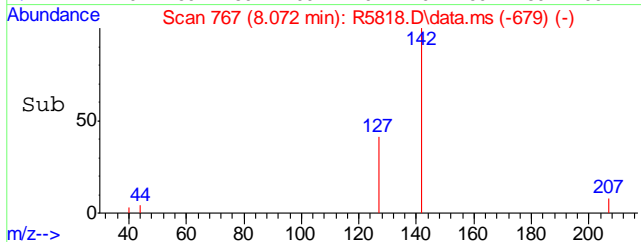
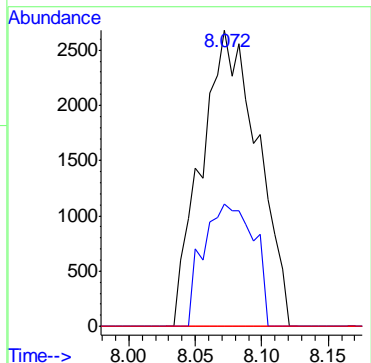
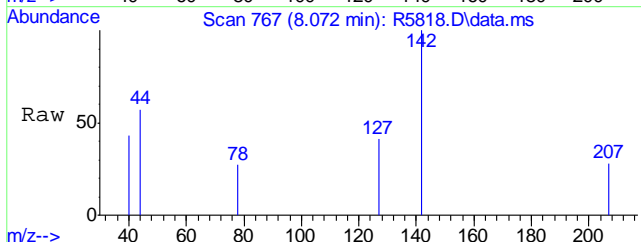
Quant Time: Nov 11 09:25:44 2011  
Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
Quant Title : EPA -8260B  
QLast Update : Fri Sep 09 09:14:12 2011  
Response via : Initial Calibration





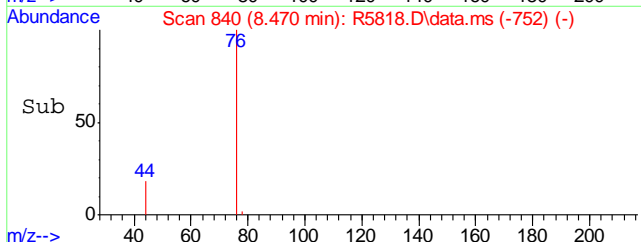
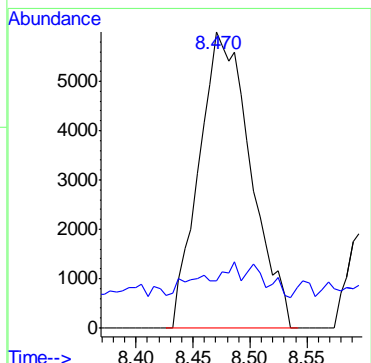
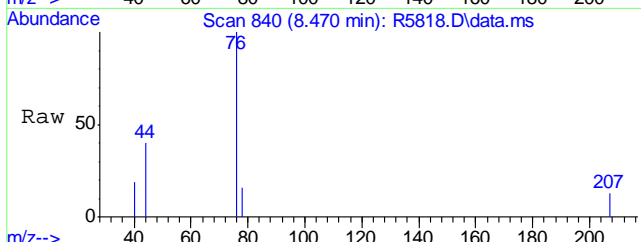
#17  
Iodomethane  
Concen: 0.12 ug/L  
RT: 8.072 min Scan# 767  
Delta R.T. -0.022 min  
Lab File: R5818.D  
Acq: 10 Nov 2011 6:33 pm

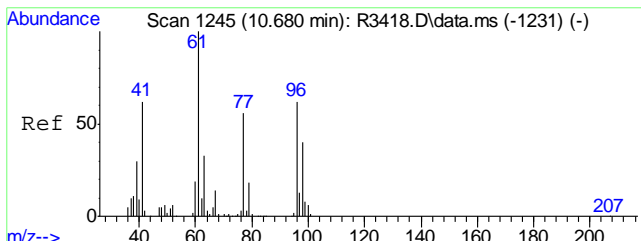
Tgt Ion	Resp	Lower	Upper
142	79100		
127	37.1	17.9	57.9
141	0.0	0.0	34.0



#21  
Carbon Disulfide  
Concen: 0.12 ug/L  
RT: 8.470 min Scan# 840  
Delta R.T. -0.022 min  
Lab File: R5818.D  
Acq: 10 Nov 2011 6:33 pm

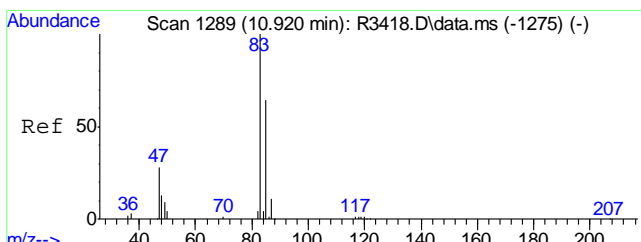
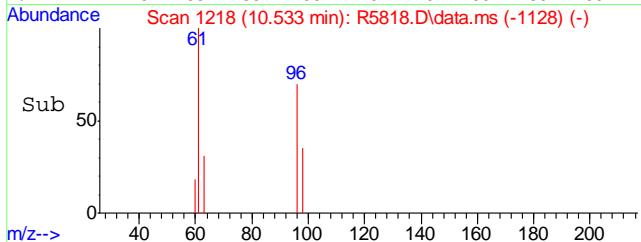
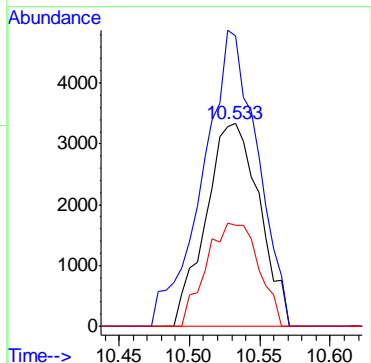
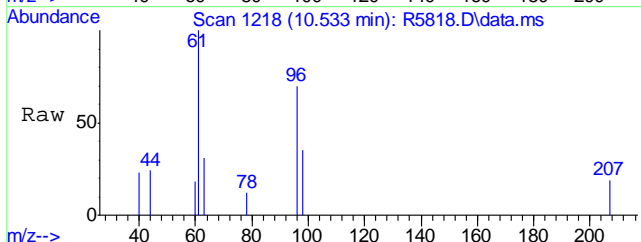
Tgt Ion	Resp	Lower	Upper
76	188725		
78	3.4	0.0	29.1





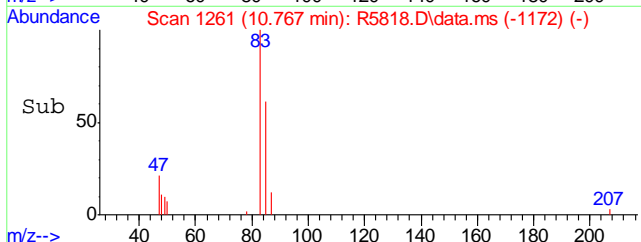
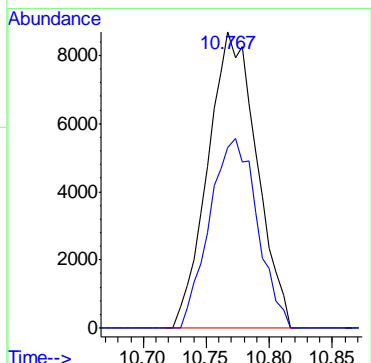
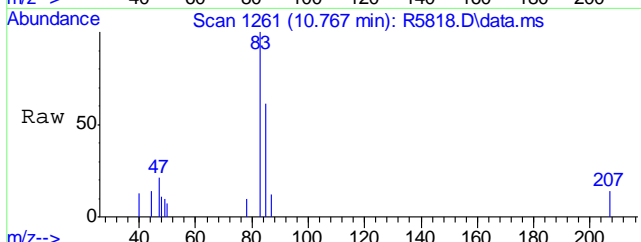
#34  
 cis-1,2-Dichloroethene  
 Concen: 0.14 ug/L  
 RT: 10.533 min Scan# 1218  
 Delta R.T. -0.011 min  
 Lab File: R5818.D  
 Acq: 10 Nov 2011 6:33 pm

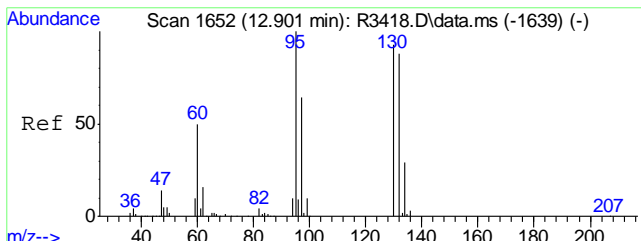
Tgt Ion	Resp	Lower	Upper
96	88123		
96	100		
61	148.2	121.0	161.0
98	49.8	44.2	84.2



#37  
 Chloroform  
 Concen: 0.25 ug/L  
 RT: 10.767 min Scan# 1261  
 Delta R.T. -0.017 min  
 Lab File: R5818.D  
 Acq: 10 Nov 2011 6:33 pm

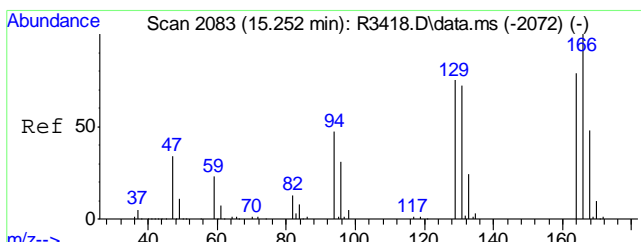
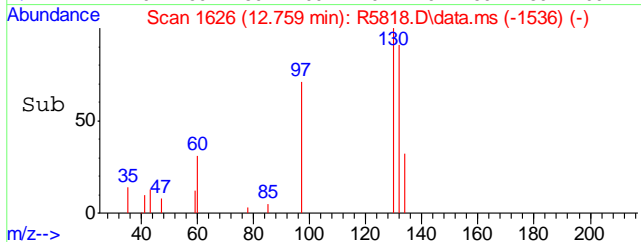
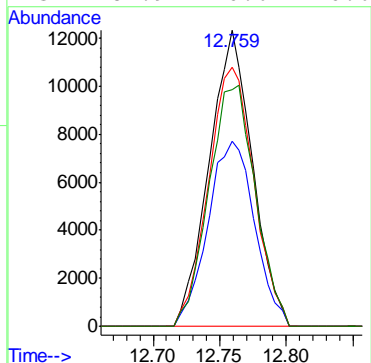
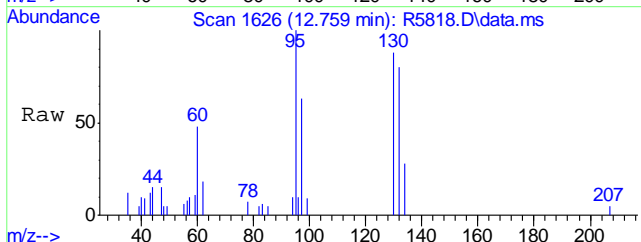
Tgt Ion	Resp	Lower	Upper
83	233594		
83	100		
85	62.5	44.6	84.6





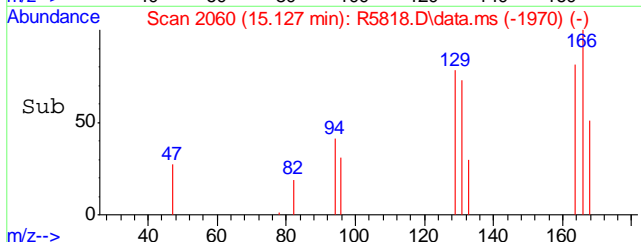
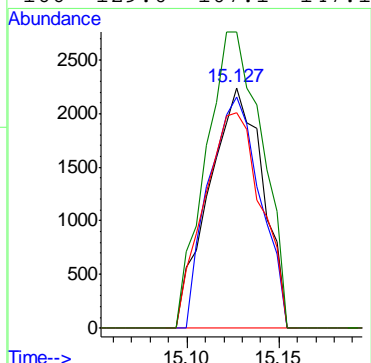
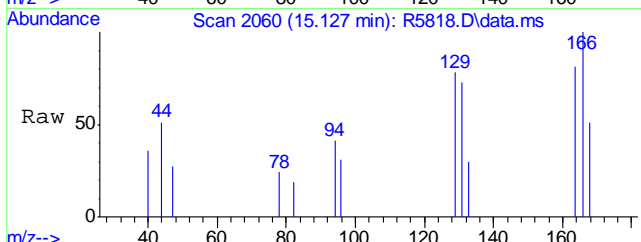
#48  
Trichloroethene  
Concen: 0.57 ug/L  
RT: 12.759 min Scan# 1626  
Delta R.T. -0.011 min  
Lab File: R5818.D  
Acq: 10 Nov 2011 6:33 pm

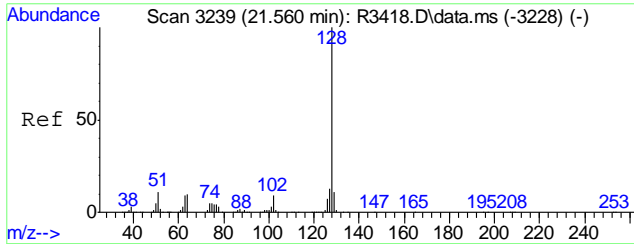
Tgt Ion	Resp	Lower	Upper
95	279593		
95	100		
97	67.5	44.7	84.7
130	92.3	74.5	114.5
132	87.9	70.6	110.6



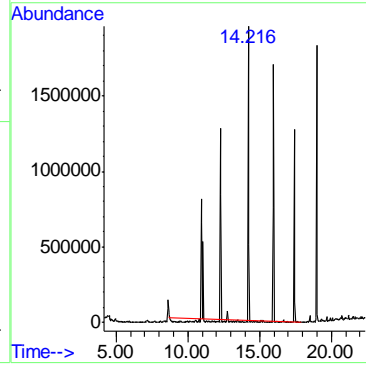
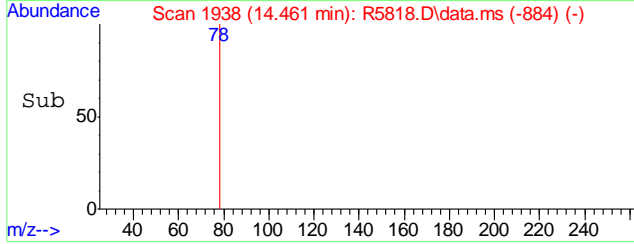
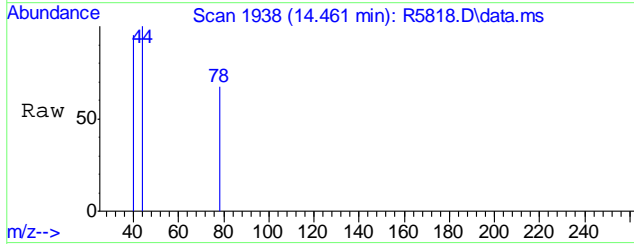
#66  
Tetrachloroethene  
Concen: 0.14 ug/L  
RT: 15.127 min Scan# 2060  
Delta R.T. -0.011 min  
Lab File: R5818.D  
Acq: 10 Nov 2011 6:33 pm

Tgt Ion	Resp	Lower	Upper
164	45317		
164	100		
129	91.9	78.1	118.1
131	94.8	73.9	113.9
166	129.0	107.1	147.1





#104  
 TPH-GRO (C6-C10)  
 Concen: 4.32 ug/L m  
 RT: 14.462 min Scan# 1938  
 Delta R.T. 0.000 min  
 Lab File: R5818.D  
 Acq: 10 Nov 2011 6:33 pm  
 Tgt Ion:TIC Resp: 8335998



5.1.6  
5



## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
 Data File : M29115.D  
 Acq On : 10 Nov 2011 11:36 am  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VM921,5,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 11 08:17:30 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.414	168	171324	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.723	114	287776	20.00	ppb	-0.01
52) Chlorobenzene-d5	16.406	117	249044	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.371	152	119151	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.371	152	119151	20.00	ppb	0.00

## System Monitoring Compounds

34) Dibromofluoromethane	11.530	111	90807	19.71	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	98.55%		
53) Toluene-d8	14.654	98	350518	21.05	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	105.25%		
71) 4-Bromofluorobenzene	17.894	95	120456	18.49	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	92.45%		

## Target Compounds

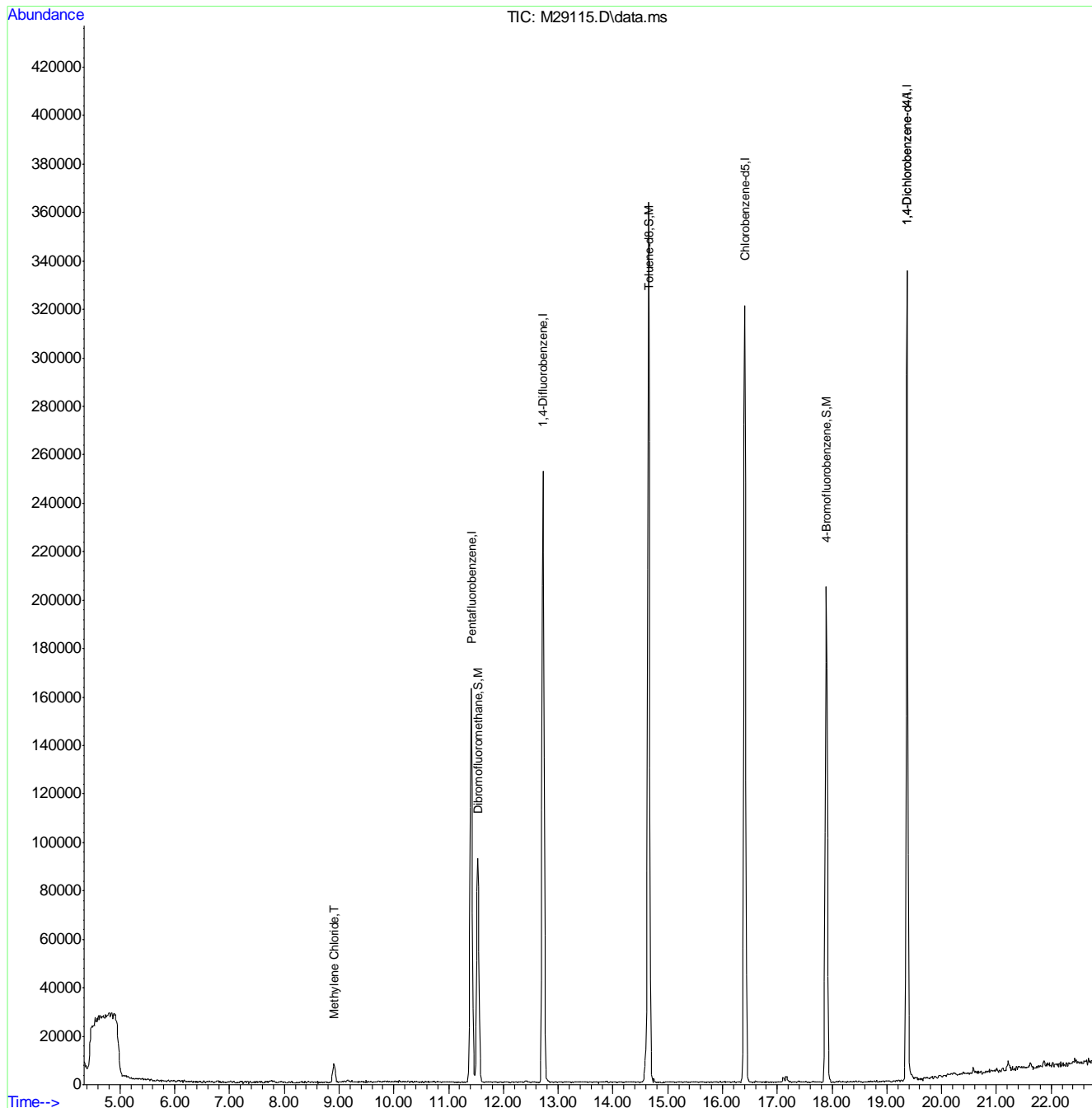
	R.T.	QIon	Response	Conc	Units	Qvalue
18) Methylene Chloride	8.903	84	6058	0.90	ppb	97

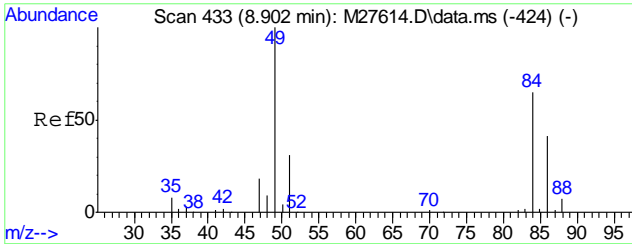
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111110\  
 Data File : M29115.D  
 Acq On : 10 Nov 2011 11:36 am  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VM921,5,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

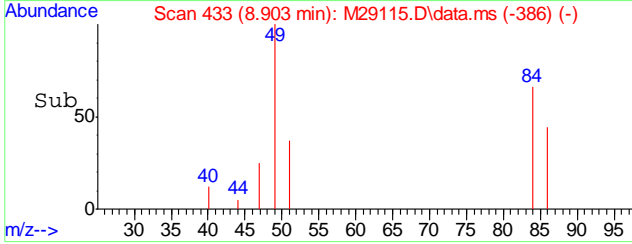
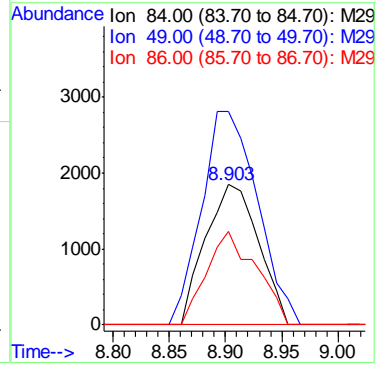
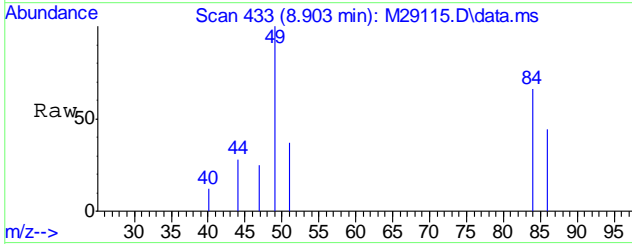
Quant Time: Nov 11 08:17:30 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration





#18  
 Methylene Chloride  
 Concen: 0.90 ppb  
 RT: 8.903 min Scan# 433  
 Delta R.T. 0.000 min  
 Lab File: M29115.D  
 Acq: 10 Nov 2011 11:36 am

Tgt Ion	Resp	Lower	Upper
84	100		
49	160.1	134.7	174.7
86	62.2	43.0	83.0



5.2.1  
5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111110\  
 Data File : R5804.D  
 Acq On : 10 Nov 2011 12:24 pm  
 Operator : belad  
 Sample : MB STORAGE BK VOA R24 11/3/11  
 Misc : MS1527,VR204,50,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 10 15:48:04 2011  
 Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Sep 09 09:14:12 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Pentafluorobenzene	10.942	168	7941366	10.00	ug/L	-0.02	
43) 1,4-Difluorobenzene	12.273	114	13857113	10.00	ug/L	-0.01	
58) Chlorobenzene-d5	15.973	117	12158252	10.00	ug/L	-0.01	
82) 1,4-Dichlorobenzene-d4	18.968	152	6363438	10.00	ug/L	-0.01	
103) 1,4-Dichlorobenzene-d4A	18.968	152	6363438	10.00	ug/L	0.00	
System Monitoring Compounds							
39) Dibromofluoromethane	11.051	111	4866744	9.36	ug/L	-0.01	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	93.60%	
59) Toluene-d8	14.216	98	17868816	10.82	ug/L	-0.01	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	108.20%	
79) 4-Bromofluorobenzene	17.413	95	6888595	9.83	ug/L	-0.01	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	98.30%	
Target Compounds							
10) Acetone	7.177	58	60596	1.14	ug/L		Qvalue 25
104) TPH-GRO (C6-C10)	14.462	TIC	2186619m	1.02	ug/L		

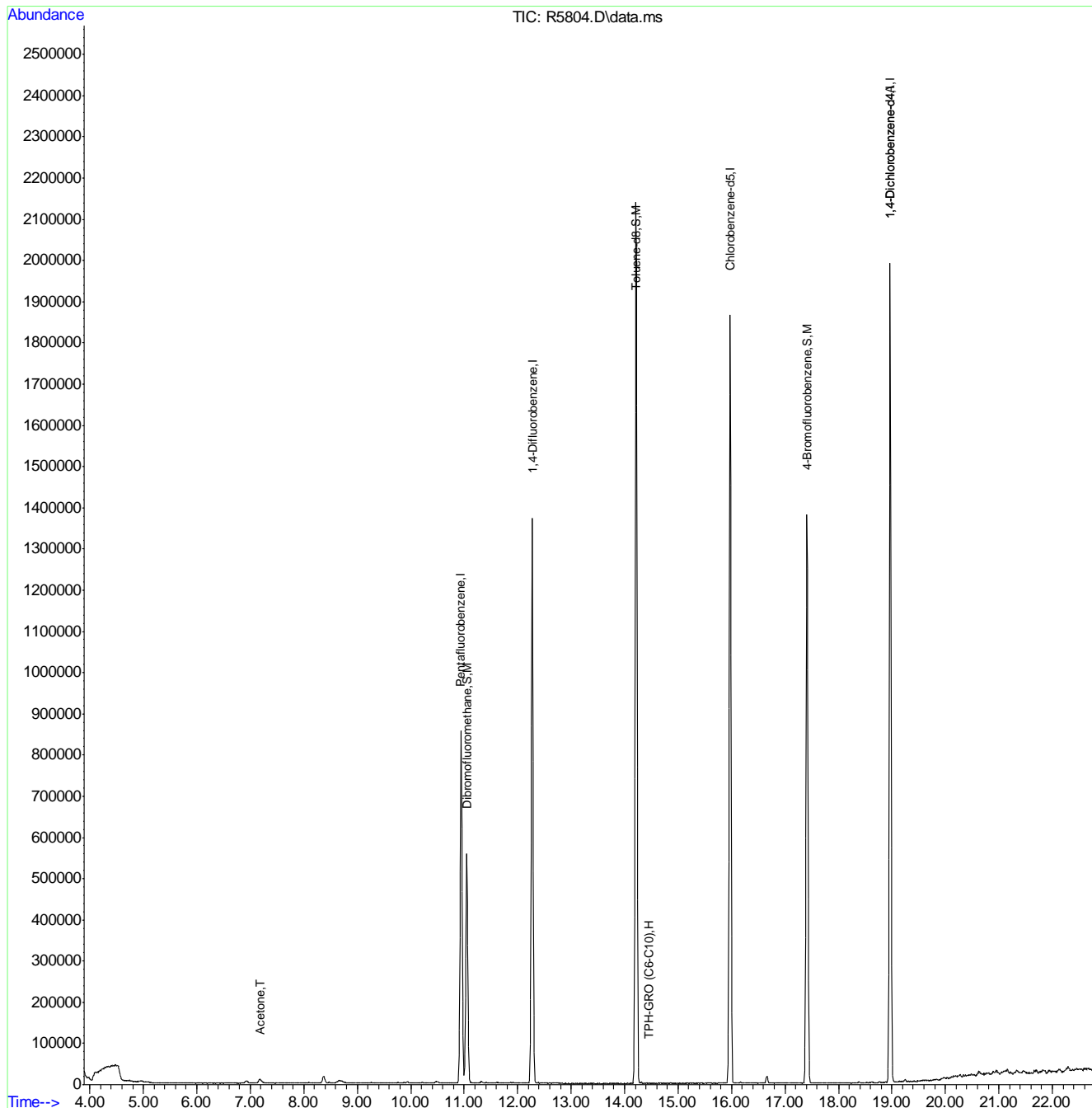
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.22  
5

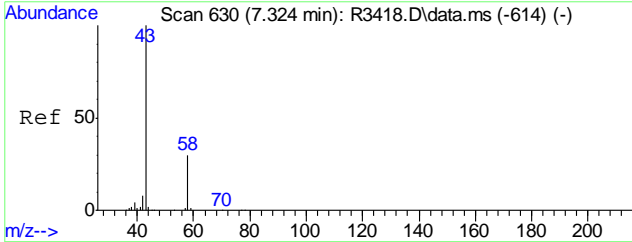
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111110\  
 Data File : R5804.D  
 Acq On : 10 Nov 2011 12:24 pm  
 Operator : belad  
 Sample : MB STORAGE BK VOA R24 11/3/11  
 Misc : MS1527,VR204,50,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 10 15:48:04 2011  
 Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Sep 09 09:14:12 2011  
 Response via : Initial Calibration

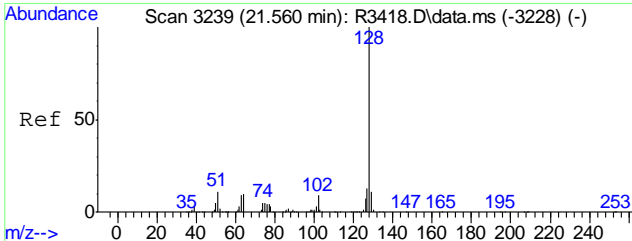
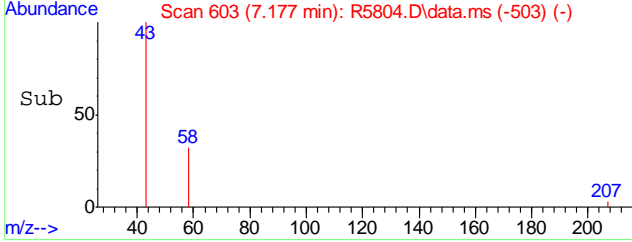
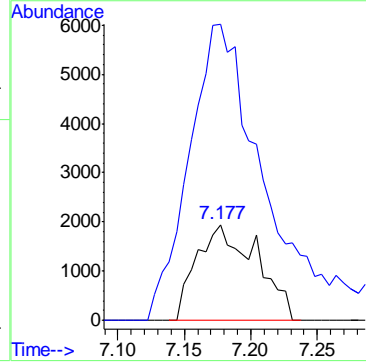
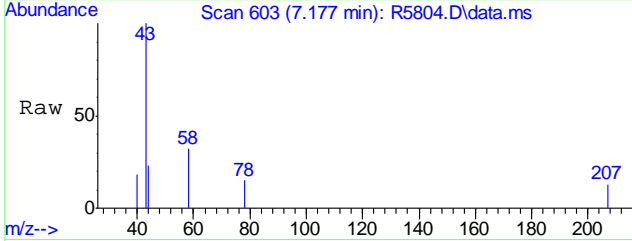


5.2.2  
 5



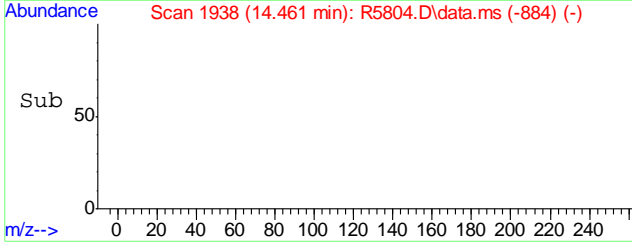
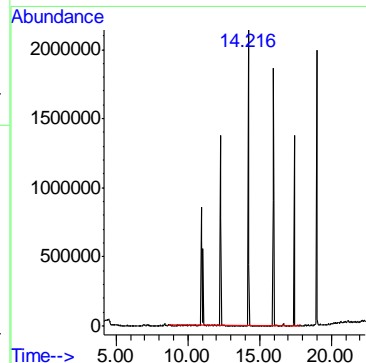
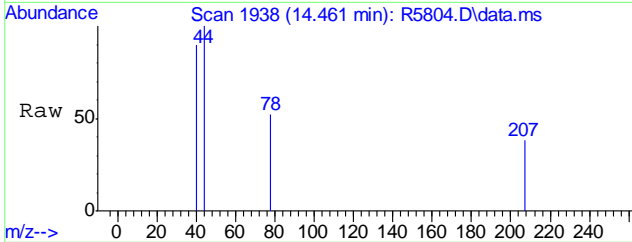
#10  
Acetone  
Concen: 1.14 ug/L  
RT: 7.177 min Scan# 603  
Delta R.T. -0.005 min  
Lab File: R5804.D  
Acq: 10 Nov 2011 12:24 pm

Tgt Ion: 58 Resp: 60596  
Ion Ratio Lower Upper  
58 100  
43 405.6 0.0 621.8



#104  
TPH-GRO (C6-C10)  
Concen: 1.02 ug/L m  
RT: 14.462 min Scan# 1938  
Delta R.T. 0.000 min  
Lab File: R5804.D  
Acq: 10 Nov 2011 12:24 pm

Tgt Ion:TIC Resp: 2186619



## GC Semi-volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary**

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4879-MB	GG29785.D	1	11/10/11	JH	11/10/11	OP4879	GGG795

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	67% 45-140%



**Method Blank Summary**

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4880-MB	GG29788.D	1	11/10/11	JH	11/10/11	OP4880	GGG795

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18881-6

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.050	mg/l	
	TPH (> C28-C40)	ND	0.20	0.10	mg/l	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	79% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4879-BS	GG29786.D	1	11/10/11	JH	11/10/11	OP4879	GGG795
OP4879-BSD	GG29787.D	1	11/10/11	JH	11/10/11	OP4879	GGG795

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	64.6	65	67.8	68	5	45-140/30
	TPH (> C28-C40)	100	62.2	62	70.5	71	13	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	71%	83%	45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4880-BS	GG29789.D	1	11/10/11	JH	11/10/11	OP4880	GGG795
OP4880-BSD	GG29790.D	1	11/10/11	JH	11/10/11	OP4880	GGG795

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18881-6

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.848	85	0.823	82	3	45-140/30
	TPH (> C28-C40)	1	0.737	74	0.754	75	2	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	87%	86%	45-140%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18881  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4879-MS	HH18557.D	1	11/10/11	JH	11/10/11	OP4879	GHH606
OP4879-MSD	HH18558.D	1	11/10/11	JH	11/10/11	OP4879	GHH606
C18881-5	GG29791.D	1	11/10/11	JH	11/10/11	OP4879	GGG795

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

CAS No.	Compound	C18881-5 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	98	57.0	58	53.5	55	6	45-140/30	
	TPH (> C28-C40)	ND	98	55.4	57	56.4	58	2	45-140/30	

CAS No.	Surrogate Recoveries	MS	MSD	C18881-5	Limits
630-01-3	Hexacosane	64%	69%	62%	45-140%

GC Semi-volatiles

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Raw Data

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7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18554.D Vial: 7  
 Acq On : 10 Nov 2011 10:55 am Operator: JAMESH  
 Sample : C18881-1 Inst : Diesel 3  
 Misc : OP4879,GHH606,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:34 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.33	1465139	63.655 ppm
Spiked Amount 100.000		Recovery =	63.66%
Target Compounds			
2) H TPH (C10-C28)	5.82	1443235	71.413 ppm
3) H TPH (>C28-C40)	14.51	2504791	164.262 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	1414520	69.650 ppm
7) H TPH (Motor Oil)	14.51	2310350	150.859 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18554.D GHH583.M Fri Nov 11 05:10:25 2011

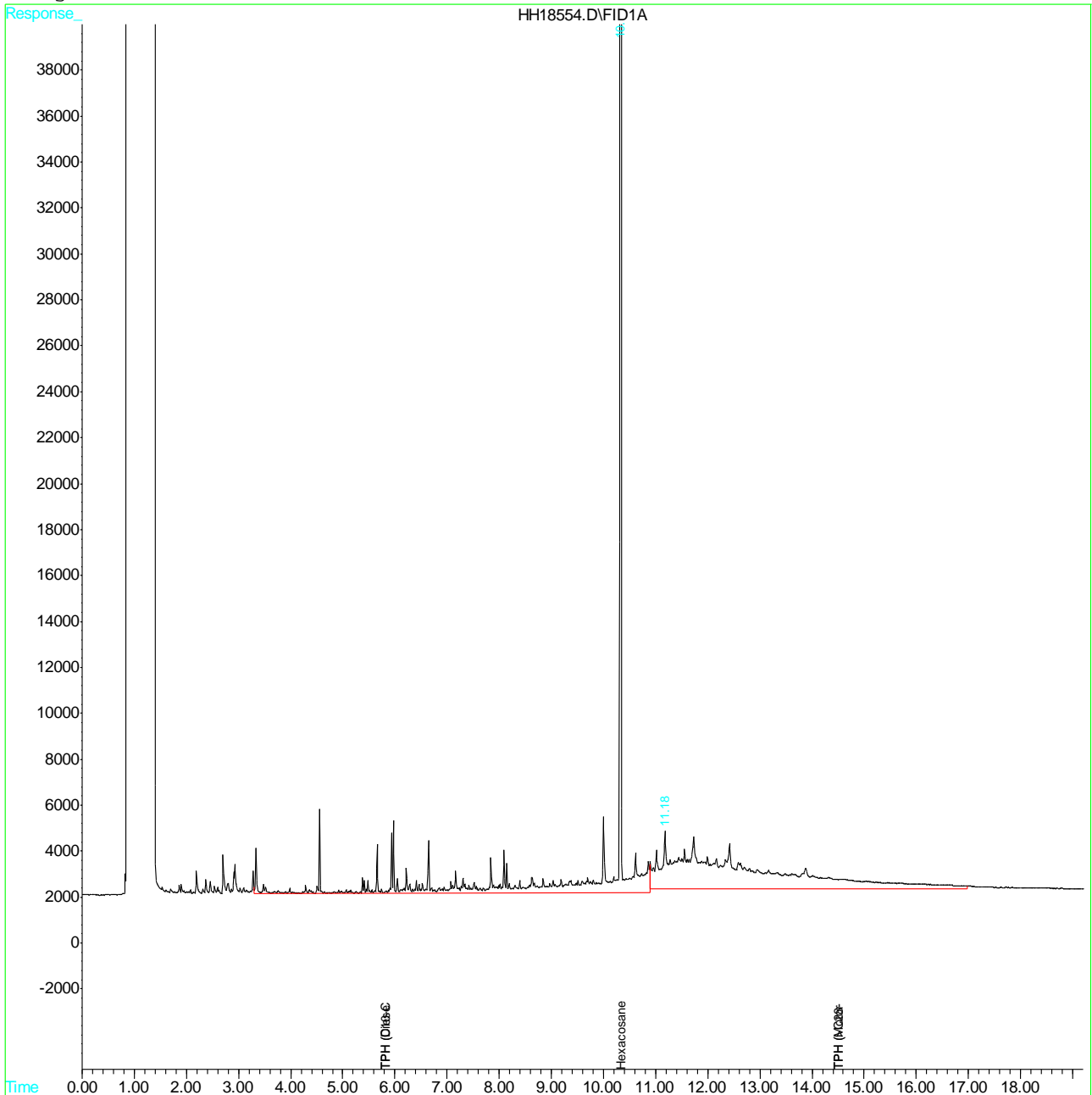
7.1.1  
 7

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18554.D Vial: 7  
 Acq On : 10 Nov 2011 10:55 am Operator: JAMESH  
 Sample : C18881-1 Inst : Diesel 3  
 Misc : OP4879,GHH606,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:34 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.1.1  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18555.D Vial: 8  
 Acq On : 10 Nov 2011 11:22 am Operator: JAMESH  
 Sample : C18881-2 Inst : Diesel 3  
 Misc : OP4879,GHH606,10.2,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:31 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.33	1515455	65.841 ppm
Spiked Amount	100.000	Recovery	= 65.84%
Target Compounds			
2) H TPH (C10-C28)	5.82	5138862	254.277 ppm
3) H TPH (>C28-C40)	14.51	2307560	151.328 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	5232124	257.628 ppm
7) H TPH (Motor Oil)	14.51	2373395	154.975 ppm

7.12  
7

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18555.D GHH583.M Fri Nov 11 05:10:26 2011

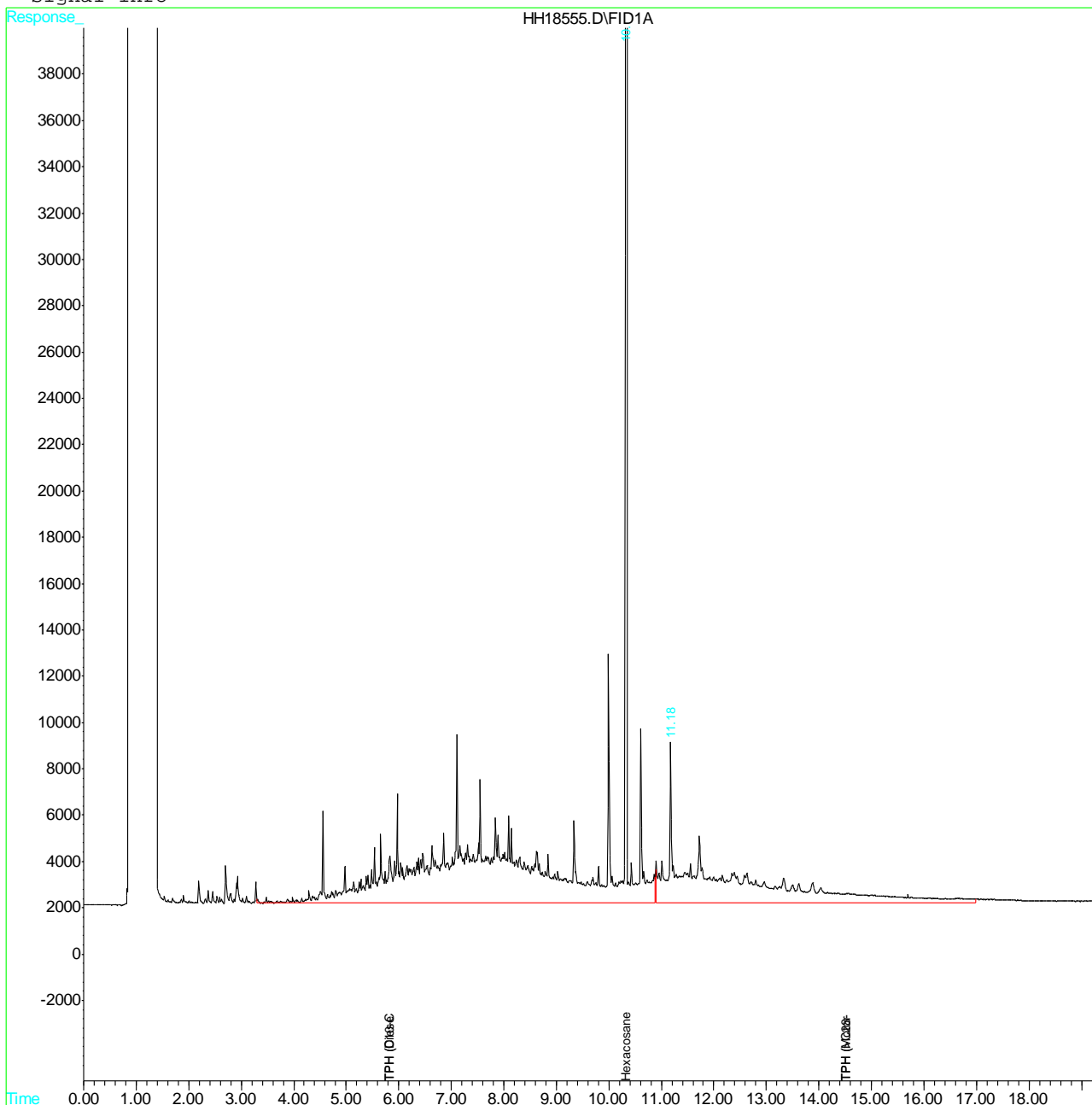


Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18555.D Vial: 8  
 Acq On : 10 Nov 2011 11:22 am Operator: JAMESH  
 Sample : C18881-2 Inst : Diesel 3  
 Misc : OP4879,GHH606,10.2,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:31 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.12  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18552.D Vial: 5  
 Acq On : 10 Nov 2011 10:00 am Operator: JAMESH  
 Sample : C18881-3 Inst : Diesel 3  
 Misc : OP4879,GHH606,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:20 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.33	1553815	67.507 ppm
Spiked Amount 100.000		Recovery =	67.51%
Target Compounds			
2) H TPH (C10-C28)	5.82	10794563	534.128 ppm
3) H TPH (>C28-C40)	14.51	12521208	821.130 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	10942052	538.782 ppm
7) H TPH (Motor Oil)	14.51	12543802	819.072 ppm

7.1.3  
7

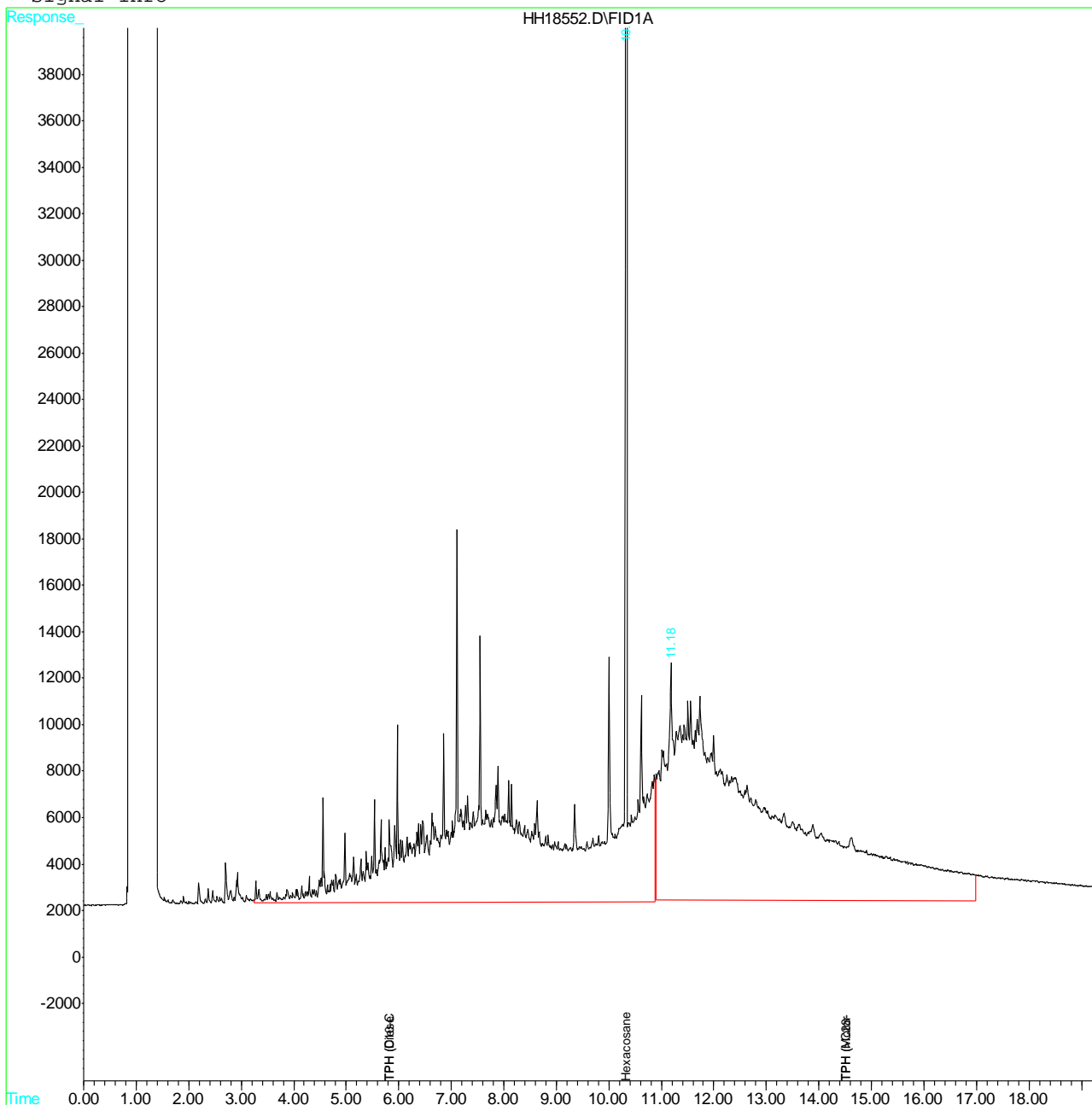
(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18552.D GHH583.M Fri Nov 11 05:10:24 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18552.D Vial: 5  
 Acq On : 10 Nov 2011 10:00 am Operator: JAMESH  
 Sample : C18881-3 Inst : Diesel 3  
 Misc : OP4879,GHH606,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:20 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.1.3  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18556.D Vial: 9  
 Acq On : 10 Nov 2011 11:49 am Operator: JAMESH  
 Sample : C18881-4 Inst : Diesel 3  
 Misc : OP4879,GHH606,10.3,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:33 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.33	1556532	67.625 ppm
Spiked Amount 100.000		Recovery =	67.63%
Target Compounds			
2) H TPH (C10-C28)	5.82	1977209	97.835 ppm
3) H TPH (>C28-C40)	14.51	1609841	105.572 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	1811156	89.181 ppm
7) H TPH (Motor Oil)	14.51	1606228	104.882 ppm

7.1.4  
7

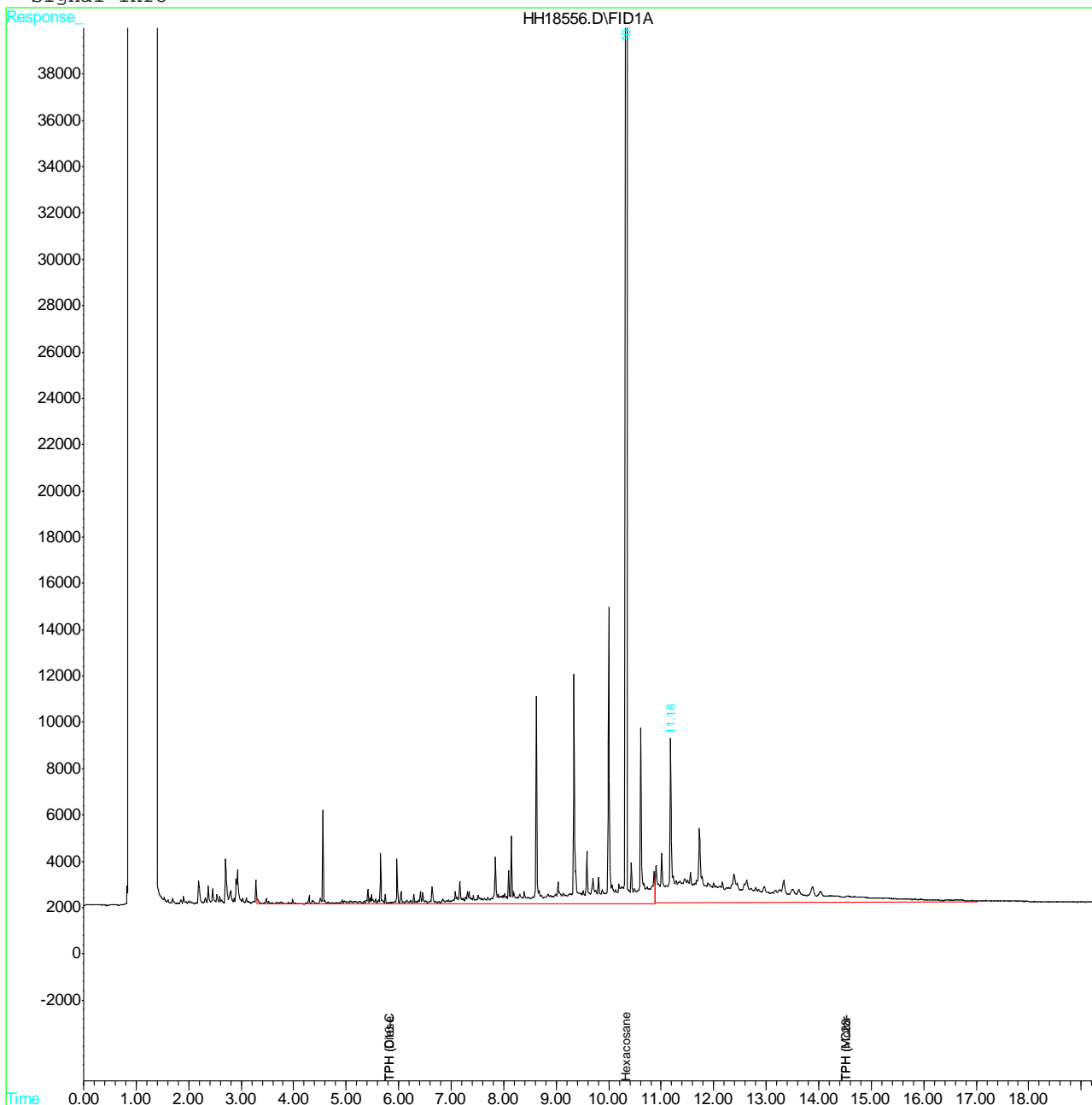
(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18556.D GHH583.M Fri Nov 11 05:10:27 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18556.D Vial: 9  
 Acq On : 10 Nov 2011 11:49 am Operator: JAMESH  
 Sample : C18881-4 Inst : Diesel 3  
 Misc : OP4879,GHH606,10.3,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:33 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.1.4  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG795\GG29791.D Vial: 10  
 Acq On : 11-10-11 11:51:32 AM Operator: JAMESH  
 Sample : C18881-5 Inst : Diesel #2  
 Misc : OP4879,GGG795,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 10 12:51 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	88414361	62.185 ppm
Spiked Amount 100.000		Recovery =	62.19%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	41903042	32.635 ppm
3) H TPH (>C28-C40)	11.83	19629846	22.012 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	41903042	32.022 ppm
7) H TPH (Motor Oil)	11.83	19629846	21.940 ppm

7.15  
7

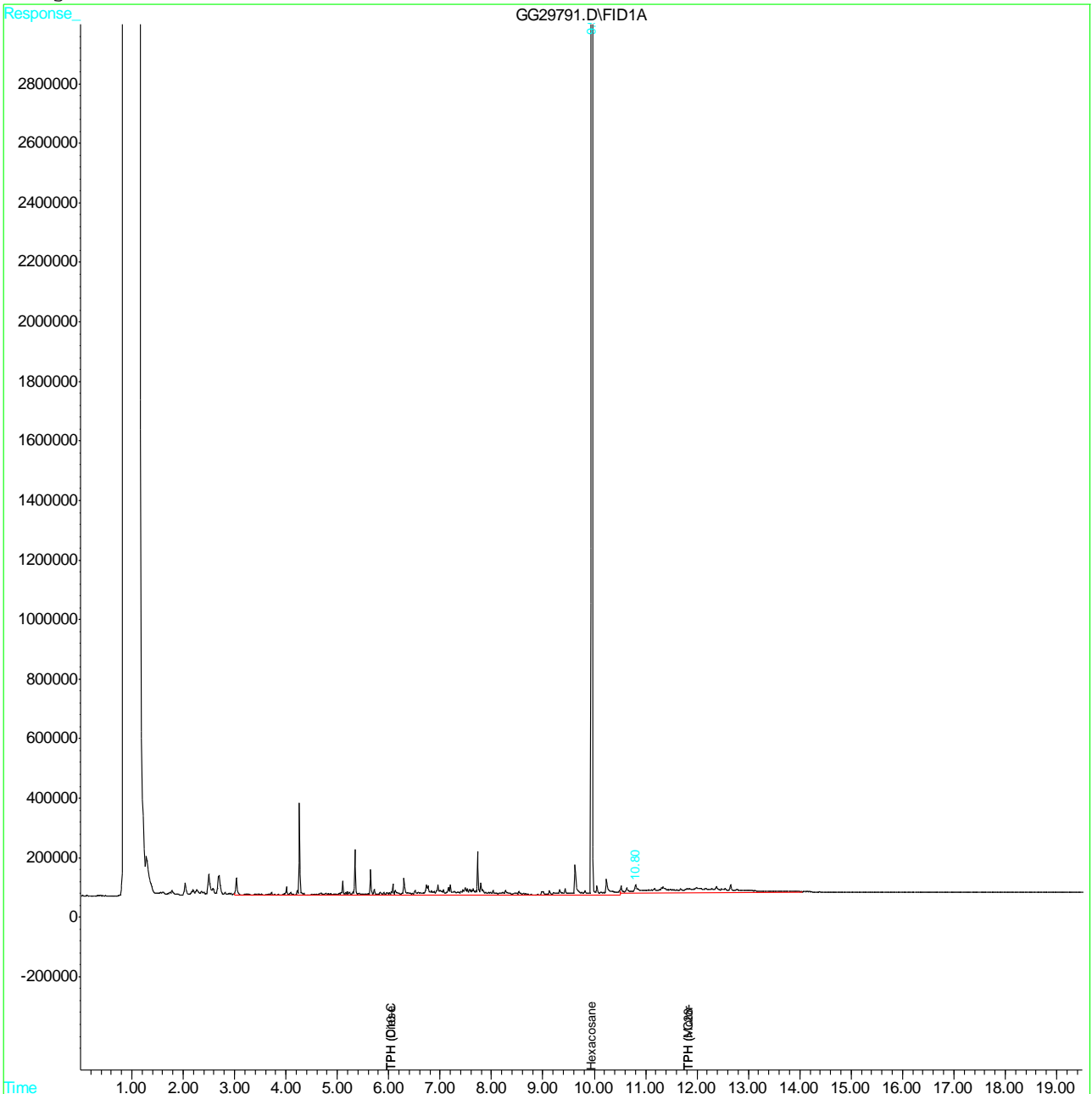
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29791.D GGG709.M Fri Nov 11 05:05:29 2011

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG795\GG29791.D Vial: 10  
 Acq On : 11-10-11 11:51:32 AM Operator: JAMESH  
 Sample : C18881-5 Inst : Diesel #2  
 Misc : OP4879,GGG795,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 10 12:51 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.1.5  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18553.D Vial: 6  
 Acq On : 10 Nov 2011 10:28 am Operator: JAMESH  
 Sample : C18881-6 Inst : Diesel 3  
 Misc : OP4880,GHH606,940,,,1,4,WATER Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:27 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.33	531205	23.079 ppm
Spiked Amount 100.000		Recovery =	23.08%
Target Compounds			
2) H TPH (C10-C28)	5.82	14207563	703.008 ppm
3) H TPH (>C28-C40)	14.51	7067766	463.498 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	14204149	699.406 ppm
7) H TPH (Motor Oil)	14.51	7195250	469.828 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18553.D GHH583.M Fri Nov 11 05:10:25 2011

7.1.6  
 7

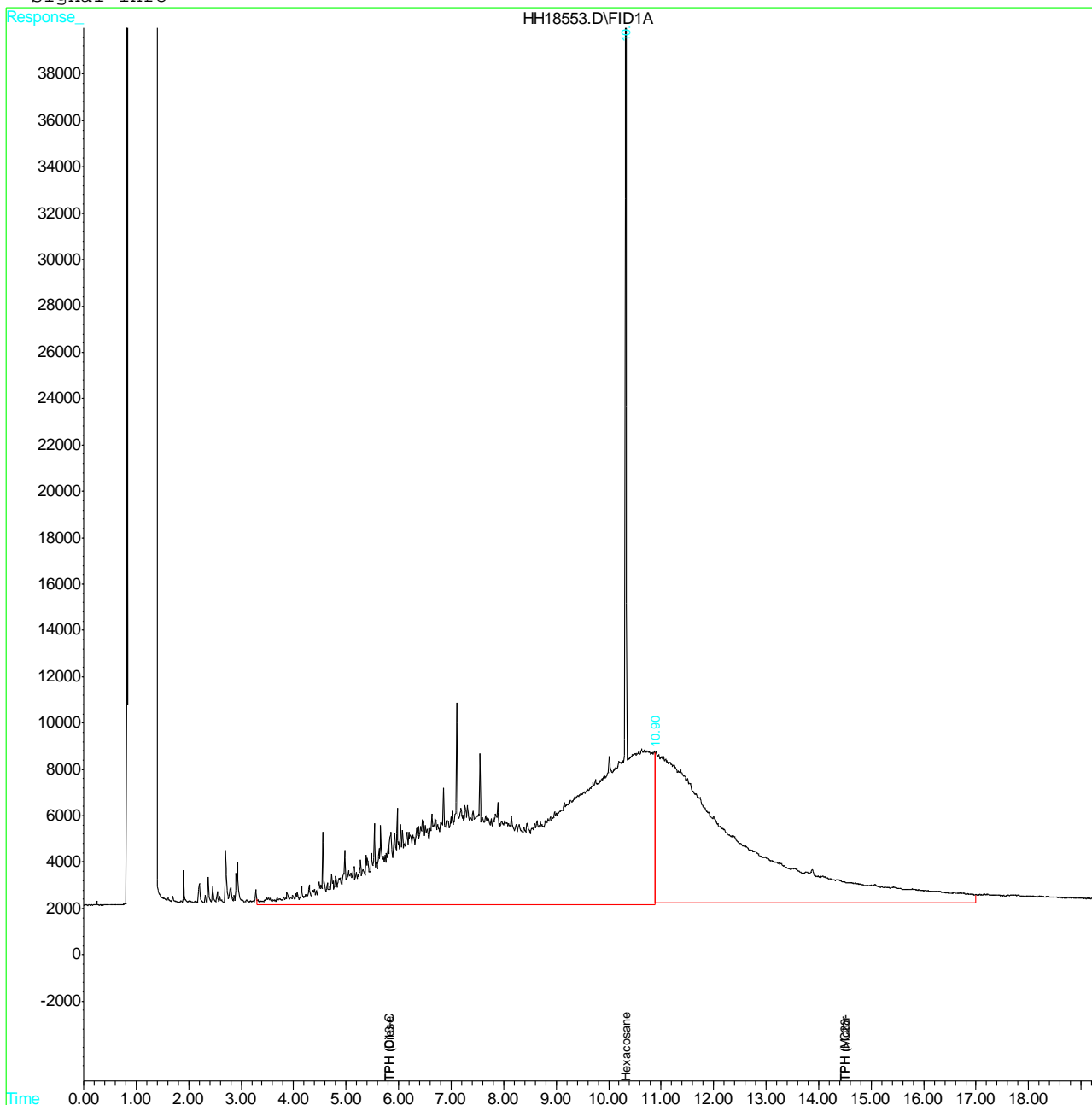


Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH606\HH18553.D Vial: 6  
 Acq On : 10 Nov 2011 10:28 am Operator: JAMESH  
 Sample : C18881-6 Inst : Diesel 3  
 Misc : OP4880,GHH606,940,,,1,4,WATER Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 10 14:27 2011 Quant Results File: GHH583.RES

Quant Method : C:\HPCHEM\1\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.1.6  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG795\GG29785.D Vial: 4  
 Acq On : 11-10-11 9:16:09 AM Operator: JAMESH  
 Sample : OP4879-MB Inst : Diesel #2  
 Misc : OP4879,GGG795,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 10 12:43 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S,M Hexacosane	9.95	95538407	67.196 ppm
Spiked Amount 100.000		Recovery =	67.20%
<b>Target Compounds</b>			
2) H,M TPH (C10-C28)	6.03	30862626	24.036 ppm
3) H TPH (>C28-C40)	11.83	9592277	10.756 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	30862626	23.585 ppm
7) H TPH (Motor Oil)	11.83	9592277	10.721 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29785.D GGG709.M Fri Nov 11 05:05:24 2011

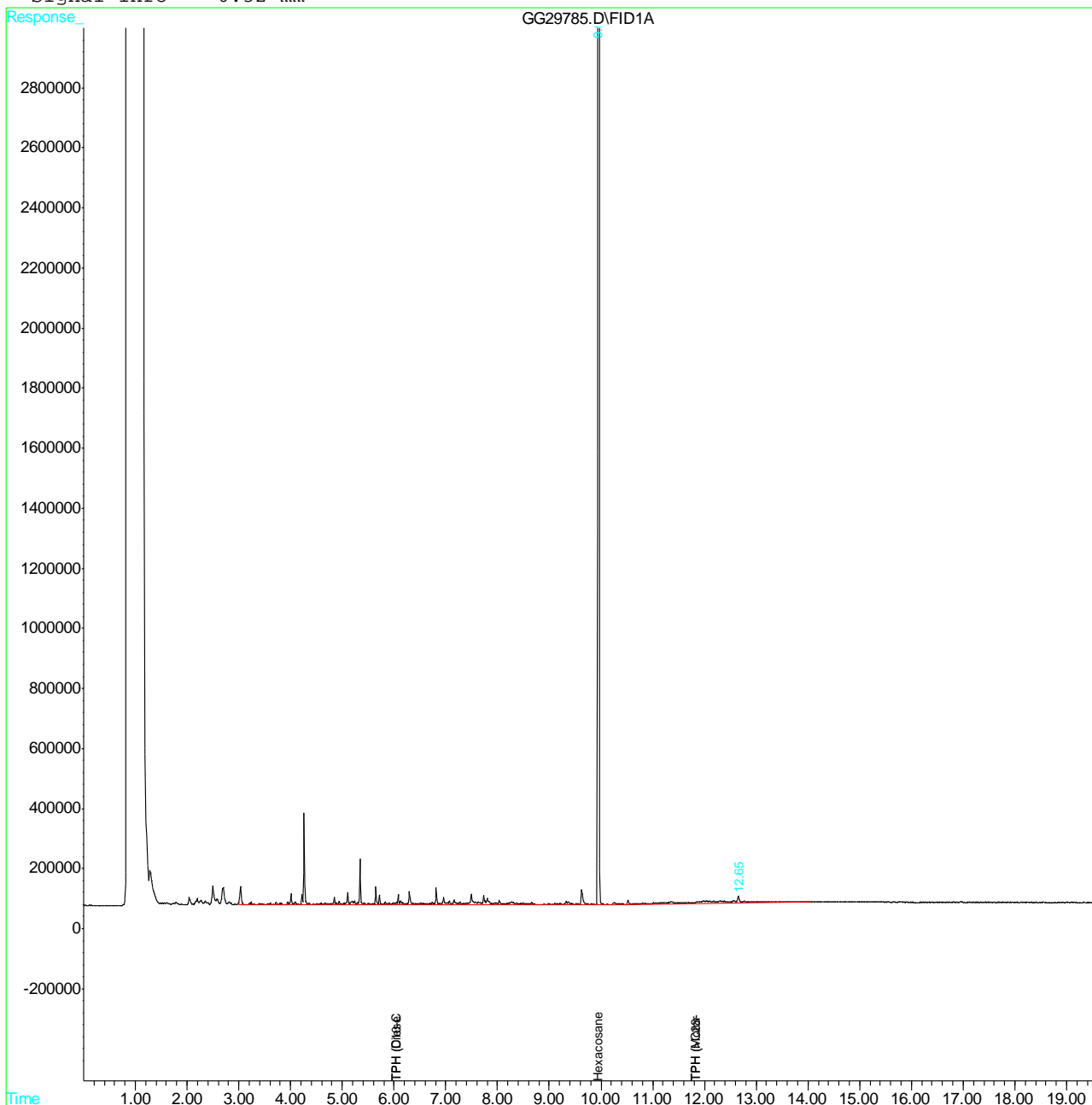
7.2.1  
 7

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG795\GG29785.D Vial: 4  
 Acq On : 11-10-11 9:16:09 AM Operator: JAMESH  
 Sample : OP4879-MB Inst : Diesel #2  
 Misc : OP4879,GGG795,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 10 12:43 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.2.1  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG795\GG29788.D Vial: 7  
 Acq On : 11-10-11 10:33:50 AM Operator: JAMESH  
 Sample : OP4880-MB Inst : Diesel #2  
 Misc : OP4880,GGG795,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 10 12:47 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S,M Hexacosane	9.95	112988073	79.469 ppm
Spiked Amount 100.000		Recovery =	79.47%
<b>Target Compounds</b>			
2) H,M TPH (C10-C28)	6.03	58306844	45.411 ppm
3) H TPH (>C28-C40)	11.83	13622586	15.276 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	58306844	44.558 ppm
7) H TPH (Motor Oil)	11.83	13622586	15.226 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29788.D GGG709.M Fri Nov 11 05:05:27 2011

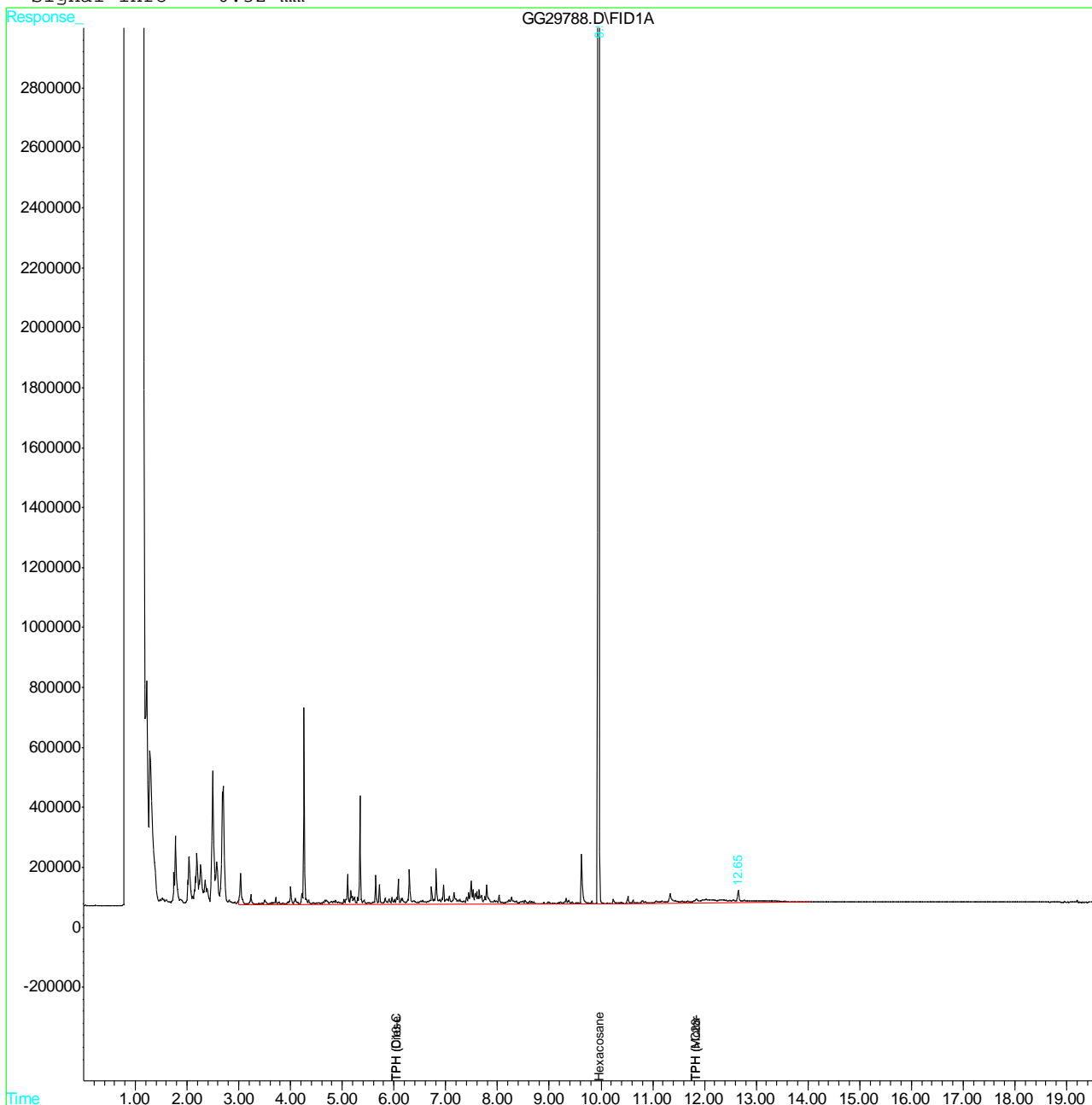
7.22  
 7

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG795\GG29788.D Vial: 7  
 Acq On : 11-10-11 10:33:50 AM Operator: JAMESH  
 Sample : OP4880-MB Inst : Diesel #2  
 Misc : OP4880,GGG795,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 10 12:47 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.22  
7

## Metals Analysis

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C18881  
Account: BMECASF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4179  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 11/09/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.12		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15	0.10	<2.0
Calcium	5000	7.1	12		
Chromium	10	.3	.41	-0.10	<10
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	-0.10	<10
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12	0.20	<5.0
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	23		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2	1.1	<20

Associated samples MP4179: C18881-6

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

8.1.1  
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18881  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4179  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/09/11

Metal	C18852-1 Original MS		SpikeLot MPIR4A	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	0.70	499	500	99.7	75-125
Calcium					
Chromium	4000	4550	500	110.0	75-125
Cobalt	anr				
Copper	anr				
Iron	anr				
Lead	23.5	531	500	101.5	75-125
Magnesium					
Manganese	anr				
Molybdenum	anr				
Nickel	236	751	500	103.0	75-125
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	2420	2930	500	102.0	75-125

Associated samples MP4179: C18881-6

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.12  
8



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18881  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4179  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/09/11

Metal	C18852-1 Original MSD	SpikeLot MPIR4A	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	0.70	493	500	98.5	1.2	20
Calcium						
Chromium	4000	4530	500	106.0	0.4	20
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	23.5	529	500	101.1	0.4	20
Magnesium						
Manganese	anr					
Molybdenum	anr					
Nickel	236	748	500	102.4	0.4	20
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	2420	2940	500	104.0	0.3	20

Associated samples MP4179: C18881-6

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.12  
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C18881

Account: BMECASF - Burns and McDonnell Engineering

Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4179  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 11/09/11

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	513	500	102.6	80-120
Calcium				
Chromium	532	500	106.4	80-120
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	501	500	100.2	80-120
Magnesium				
Manganese	anr			
Molybdenum	anr			
Nickel	497	500	99.4	80-120
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	520	500	104.0	80-120

Associated samples MP4179: C18881-6

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

8.1.3  
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: C18881  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4179  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/09/11

Metal	C18852-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	0.700	0.00	100.0(a)	0-10
Calcium				
Chromium	4000	3930	1.9	0-10
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	23.5	19.9	15.3 (a)	0-10
Magnesium				
Manganese	anr			
Molybdenum	anr			
Nickel	236	205	13.1*(b)	0-10
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	2420	2220	8.3	0-10

Associated samples MP4179: C18881-6

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

8.1.4  
8

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C18881  
Account: BMECASF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4181  
Matrix Type: SOLID

Methods: SW846 6010B  
Units: mg/kg

Prep Date: 11/09/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015	-0.010	<1.0
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054	0.060	<1.0
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	0.030	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024	0.010	<1.0
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098	0.24	<2.0

Associated samples MP4181: C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18881  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4181  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/09/11

Metal	C18881-1 Original MS		Spike MP4181	QC % Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	12.1	57.7	50	91.2	75-125
Calcium					
Chromium	37.1	80.6	50	87.0	75-125
Cobalt	anr				
Copper	anr				
Iron					
Lead	59.0	155	50	192.0N(a)	75-125
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	39.3	86.9	50	95.2	75-125
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	1990	2110	50	240.0(b)	75-125

Associated samples MP4181: C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18881  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4181  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/09/11

Metal	C18881-1 Original MSD	SpikeLot MPiR4A	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	12.1	52.9	49.5	82.4	8.7 20
Calcium					
Chromium	37.1	83.2	49.5	93.1	3.2 20
Cobalt	anr				
Copper	anr				
Iron					
Lead	59.0	112	49.5	107.1	32.2 (a) 20
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	39.3	91.4	49.5	105.2	5.0 20
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	1990	2120	49.5	262.6(b)	0.5 20

Associated samples MP4181: C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) High RPD indicates possible matrix interference and/or sample nonhomogeneity.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

8.2.2  
 8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C18881  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4181  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/09/11

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	46.6	50	93.2	80-120
Calcium				
Chromium	49.3	50	98.6	80-120
Cobalt	anr			
Copper	anr			
Iron				
Lead	46.6	50	93.2	80-120
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	46.3	50	92.6	80-120
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	49.5	50	99.0	80-120

Associated samples MP4181: C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

8.2.3  
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: C18881  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4181  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/09/11

Metal	C18881-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	124	126	1.2 (a)	0-10
Calcium				
Chromium	382	402	5.3 (a)	0-10
Cobalt	anr			
Copper	anr			
Iron				
Lead	607	585	3.6 (a)	0-10
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	405	378	6.5 (a)	0-10
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	20500	21900	6.4 (a)	0-10

Associated samples MP4181: C18881-1, C18881-2, C18881-3, C18881-4, C18881-5

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested  
 (a) Serial dilution indicates possible matrix interference.

8.2.4  
8



Technical Report for

Burns and McDonnell Engineering

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA  
63142

Accutest Job Number: C18797

Sampling Date: 11/03/11

Report to:

Burns and McDonnell Engineering  
400 Oyster Point Blvd Suite 533  
South San Francisco, CA 94080  
sbarber@burnsmcd.com

ATTN: Simon Barber

Total number of pages in report: **39**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director

Client Service contact: Laurie Glantz-Murphy 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Sample Results .....</b>	<b>4</b>
<b>2.1: C18797-1: OWS-11-3A .....</b>	<b>5</b>
<b>Section 3: Misc. Forms .....</b>	<b>8</b>
<b>3.1: Chain of Custody .....</b>	<b>9</b>
<b>Section 4: GC/MS Volatiles - QC Data Summaries .....</b>	<b>11</b>
<b>4.1: Method Blank Summary .....</b>	<b>12</b>
<b>4.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	<b>13</b>
<b>4.3: Laboratory Control Sample Summary .....</b>	<b>14</b>
<b>4.4: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	<b>15</b>
<b>Section 5: GC/MS Volatiles - Raw Data .....</b>	<b>16</b>
<b>5.1: Samples .....</b>	<b>17</b>
<b>5.2: Method Blanks .....</b>	<b>23</b>
<b>Section 6: GC Semi-volatiles - QC Data Summaries .....</b>	<b>25</b>
<b>6.1: Method Blank Summary .....</b>	<b>26</b>
<b>6.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	<b>27</b>
<b>6.3: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	<b>28</b>
<b>Section 7: GC Semi-volatiles - Raw Data .....</b>	<b>29</b>
<b>7.1: Samples .....</b>	<b>30</b>
<b>7.2: Method Blanks .....</b>	<b>32</b>
<b>Section 8: Metals Analysis - QC Data Summaries .....</b>	<b>34</b>
<b>8.1: Prep QC MP4162: Cd,Cr,Pb,Ni,Zn .....</b>	<b>35</b>

1

2

3

4

5

6

7

8



## Sample Summary

Burns and McDonnell Engineering

**Job No:** C18797

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA  
Project No: 63142

Sample Number	Collected		Matrix			Client Sample ID
	Date	Time By	Received	Code	Type	
C18797-1	11/03/11	10:40 SB	11/04/11	SO	Soil	OWS-11-3A

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Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Results

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Report of Analysis

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Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-11-3A	<b>Date Sampled:</b>	11/03/11
<b>Lab Sample ID:</b>	C18797-1	<b>Date Received:</b>	11/04/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L12059.D	1	11/04/11	XB	n/a	n/a	VL372
Run #2							

Run #	Initial Weight
Run #1	5.28 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.7	1.4	ug/kg	
108-88-3	Toluene	ND	4.7	1.4	ug/kg	
100-41-4	Ethylbenzene	ND	4.7	1.4	ug/kg	
1330-20-7	Xylene (total)	ND	9.5	3.8	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.7	0.95	ug/kg	
	TPH-GRO (C6-C10)	95.8	95	47	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		60-130%
2037-26-5	Toluene-D8	95%		60-130%
460-00-4	4-Bromofluorobenzene	95%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	OWS-11-3A	<b>Date Sampled:</b>	11/03/11
<b>Lab Sample ID:</b>	C18797-1	<b>Date Received:</b>	11/04/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29706.D	1	11/06/11	JH	11/04/11	OP4856	GGG792
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	75%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-11-3A	<b>Date Sampled:</b> 11/03/11
<b>Lab Sample ID:</b> C18797-1	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.97	0.97	mg/kg	1	11/04/11	11/07/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	43.8	0.97	mg/kg	1	11/04/11	11/07/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	4.7	1.9	mg/kg	1	11/04/11	11/07/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	22.0	0.97	mg/kg	1	11/04/11	11/07/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	31.5	1.9	mg/kg	1	11/04/11	11/07/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2182

(2) Prep QC Batch: MP4162

(a) All results reported on wet weight basis.

RL = Reporting Limit

## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody





03082011 Form WCD-KC1-SDO

# Request for Chemical Analysis and Chain of Custody Record

"BMECAF 736"

Burns & McDonnell Engineering 400 Oyster Point Blvd. Suite 533 South San Francisco, CA 94080 Phone: (650) 871-2926 Fax: (650) 871-2653 Attention: <u>Simon Barber</u>			Laboratory: <u>Accutest</u>				Document Control No:					
			Address: <u>2105 Lundy ave.</u>				Lab. Reference No. or Episode No.: <u>C18797</u>					
			City/State/Zip: <u>San Jose, CA</u>				Telephone:					
Project Number: <u>63142</u>						Sample Type						
Client Name: <u>YFC 1708 wood st.</u>						Matrix						
Sample Number		Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Remarks
Group or SWMU Name	Sample Point	Round	Year	From	To	Date	Time	Liquid	Solid	Gas		
	<u>ows-11-3A</u>	<u>(-1)</u>	<u>2nd</u>	<u>2011</u>		<u>5</u>	<u>11-3</u>	<u>1040</u>				
<h1>2 DAYS</h1>												<u>48 hour turn around.</u>
												<u>* Gas by B260B as per SB.</u>
												<u>1 x 1602 Jar</u>
												<u>1 x 5035 KIT (1-MeOH 2-DEH2O)</u>
Sampler (signature): <u>Simon Barber</u>			Sampler (signature):			Special Instructions: <u>EDV + ED#</u>						
						<u>Greentree Global CD# 10 600102107</u>						
Relinquished By (signature): 1. <u>[Signature]</u>		Date/Time: <u>11/04/11</u>	Received By (signature): <u>[Signature]</u>		Date/Time: <u>11:45AM</u>	Ice Present in Container: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Temperature Upon Receipt: <u>6.3-1.0 = 5.3 °C</u>				
Relinquished By (signature): 2.		Date/Time:	Received By (signature):		Date/Time:	Laboratory Comments:						

31  
3

C18797: Chain of Custody

Page 1 of 2



## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C18797**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL372-MB	L12050.D	1	11/04/11	XB	n/a	n/a	VL372

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C18797-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	89%	60-130%
2037-26-5	Toluene-D8	95%	60-130%
460-00-4	4-Bromofluorobenzene	93%	60-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18797

**Account:** BMECASF Burns and McDonnell Engineering

**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL372-BS	L12047.D	1	11/04/11	XB	n/a	n/a	VL372
VL372-BSD	L12048.D	1	11/04/11	XB	n/a	n/a	VL372

The QC reported here applies to the following samples:

Method: SW846 8260B

C18797-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	39.7	99	39.5	99	1	60-130/30
100-41-4	Ethylbenzene	40	38.7	97	38.4	96	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	39.0	98	38.7	97	1	60-130/30
108-88-3	Toluene	40	38.9	97	38.9	97	0	60-130/30
1330-20-7	Xylene (total)	120	118	98	117	98	1	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	94%	94%	60-130%
2037-26-5	Toluene-D8	94%	93%	60-130%
460-00-4	4-Bromofluorobenzene	95%	95%	60-130%

4.2.1  
4

# Laboratory Control Sample Summary

**Job Number:** C18797  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL372-LCS	L12049.D	1	11/04/11	XB	n/a	n/a	VL372

The QC reported here applies to the following samples:

Method: SW846 8260B

C18797-1

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	215	86	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	89%	60-130%
2037-26-5	Toluene-D8	95%	60-130%
460-00-4	4-Bromofluorobenzene	94%	60-130%

4.3.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18797  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18764-7MS	L12064.D	1	11/04/11	XB	n/a	n/a	VL372
C18764-7MSD	L12065.D	1	11/04/11	XB	n/a	n/a	VL372
C18764-7	L12051.D	1	11/04/11	XB	n/a	n/a	VL372

The QC reported here applies to the following samples:

Method: SW846 8260B

C18797-1

CAS No.	Compound	C18764-7 ug/kg	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	39.3	35.8	91	35.6	89	1	60-130/30
100-41-4	Ethylbenzene	ND	39.3	34.0	87	34.0	85	0	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	39.3	39.2	100	38.6	97	2	60-130/30
108-88-3	Toluene	ND	39.3	34.9	89	34.5	86	1	60-130/30
1330-20-7	Xylene (total)	ND	118	105	89	104	87	1	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C18764-7	Limits
1868-53-7	Dibromofluoromethane	95%	95%	91%	60-130%
2037-26-5	Toluene-D8	93%	92%	93%	60-130%
460-00-4	4-Bromofluorobenzene	95%	94%	94%	60-130%

4.4.1  
4

GC/MS Volatiles

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Raw Data

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5



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111104\  
 Data File : L12059.D  
 Acq On : 4 Nov 2011 3:09 pm  
 Operator : XINGB  
 Sample : C18797-1  
 Misc : MS1499,VL372,5.28,,,,,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 07 09:32:20 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration

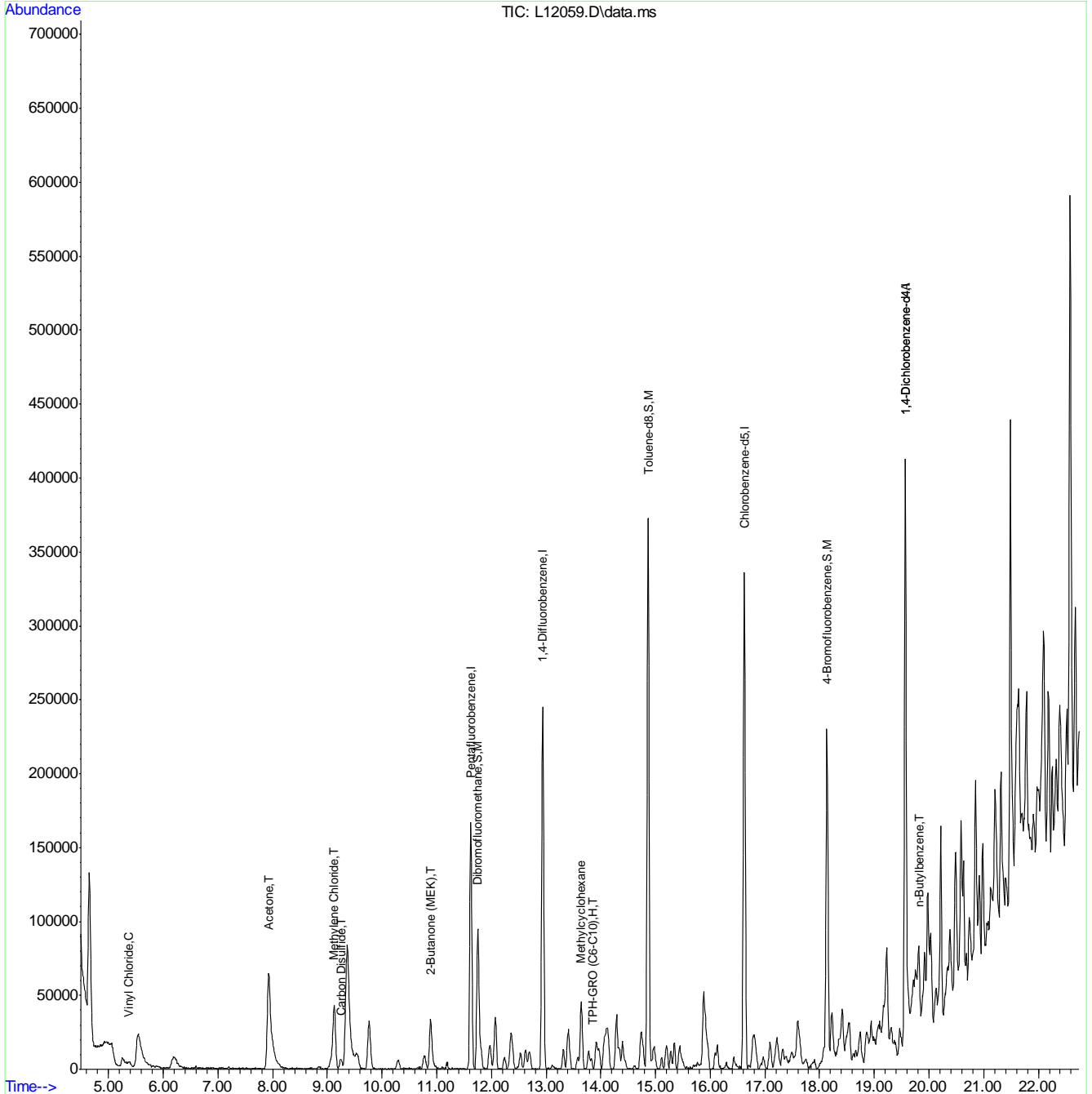
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.624	168	1564808	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	2614698	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2266396	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1177943	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1177943	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.749	111	883027	18.94	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	94.70%
53) Toluene-d8	14.865	98	3235064	19.00	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	95.00%
71) 4-Bromofluorobenzene	18.133	95	1256531	18.97	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	94.85%
Target Compounds						
						Qvalue
4) Vinyl Chloride	5.376	62	76747	0.70	ug/Kg	78
10) Acetone	7.930	58	694104	97.75	ug/Kg#	71
18) Methylene Chloride	9.125	84	292092	4.25	ug/Kg	97
20) Carbon Disulfide	9.245	76	164738	0.78	ug/Kg	92
29) 2-Butanone (MEK)	10.887	72	145270	18.57	ug/Kg#	86
45) Methylcyclohexane	13.637	55	232487	2.00	ug/Kg	99
88) n-Butylbenzene	19.819	91	143947	0.54	ug/Kg	77
96) TPH-GRO (C6-C10)	13.850	TIC	28198429m	101.15	ug/Kg	

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

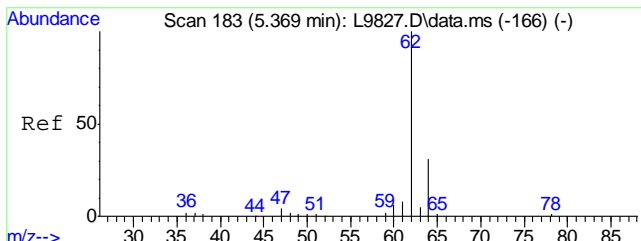
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111104\  
Data File : L12059.D  
Acq On : 4 Nov 2011 3:09 pm  
Operator : XINGB  
Sample : C18797-1  
Misc : MS1499,VL372,5.28,,,,,1  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 07 09:32:20 2011  
Quant Method : C:\msdchem\1\METHODS\VL362S.M  
Quant Title : EPA -8260B  
QLast Update : Mon Oct 24 13:55:38 2011  
Response via : Initial Calibration

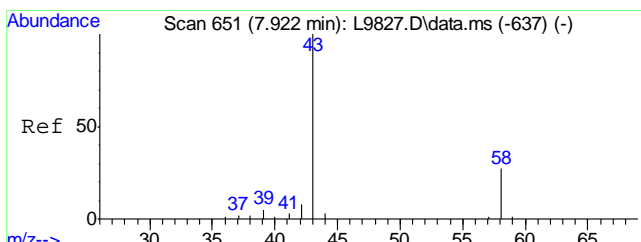
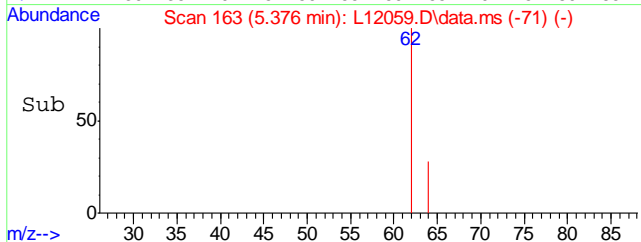
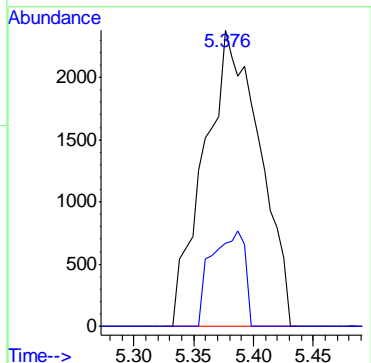
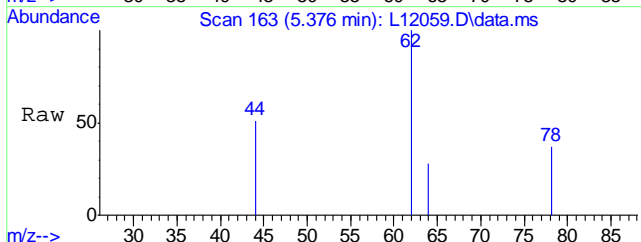


5.1.1  
5



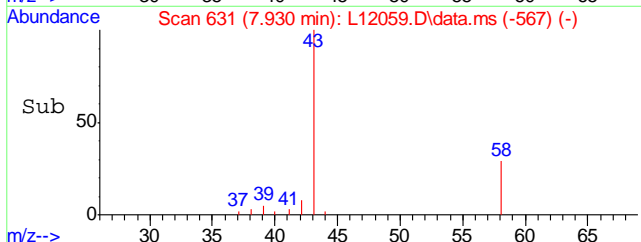
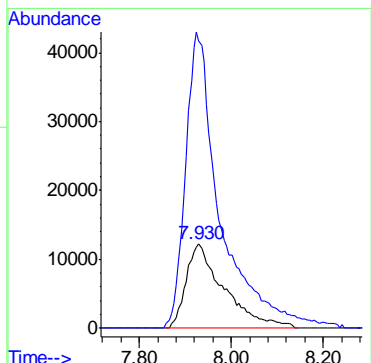
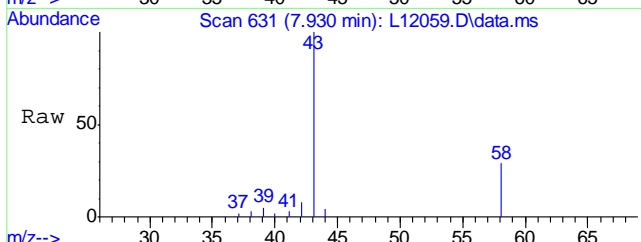
#4  
 Vinyl Chloride  
 Concen: 0.70 ug/Kg  
 RT: 5.376 min Scan# 163  
 Delta R.T. 0.000 min  
 Lab File: L12059.D  
 Acq: 4 Nov 2011 3:09 pm

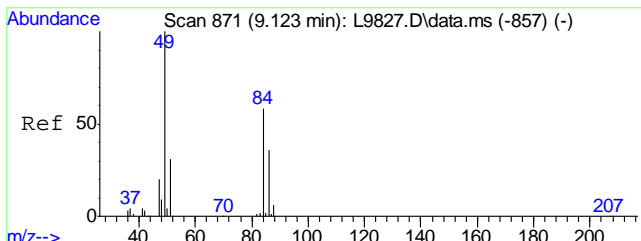
Tgt Ion	Resp	Lower	Upper
62	76747		
64	19.2	11.4	51.4



#10  
 Acetone  
 Concen: 97.75 ug/Kg  
 RT: 7.930 min Scan# 631  
 Delta R.T. 0.000 min  
 Lab File: L12059.D  
 Acq: 4 Nov 2011 3:09 pm

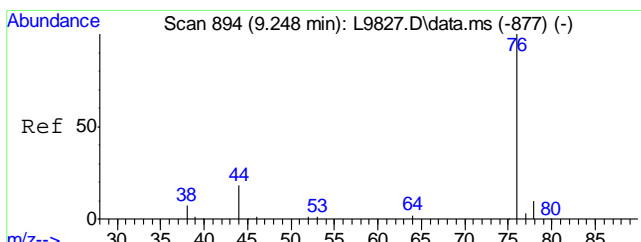
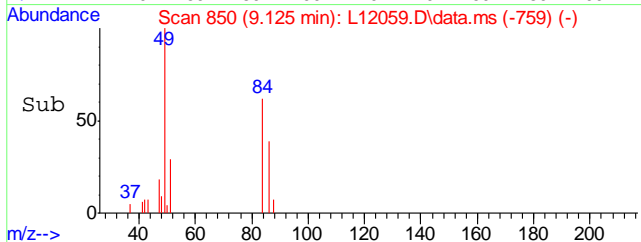
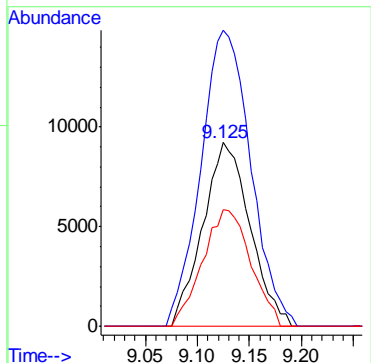
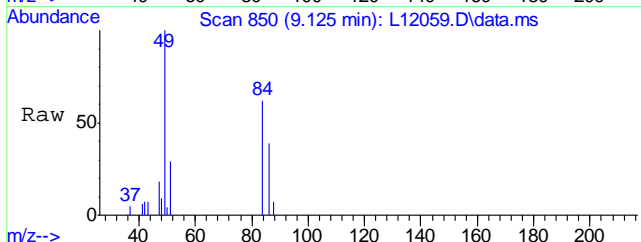
Tgt Ion	Resp	Lower	Upper
58	694104		
43	324.1	370.9	410.9#





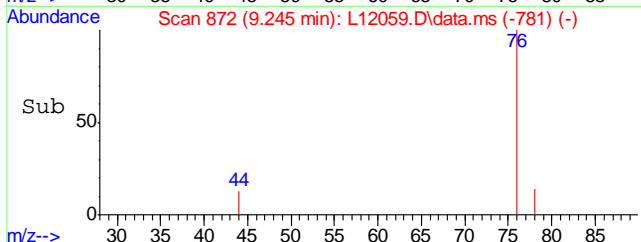
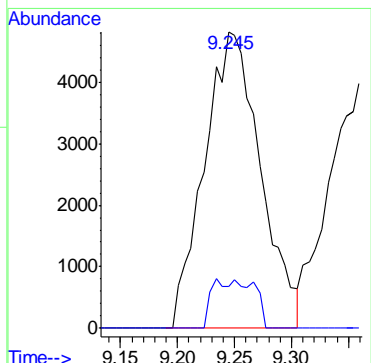
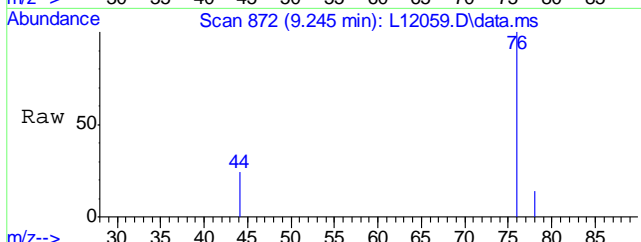
#18  
Methylene Chloride  
Concen: 4.25 ug/Kg  
RT: 9.125 min Scan# 850  
Delta R.T. -0.005 min  
Lab File: L12059.D  
Acq: 4 Nov 2011 3:09 pm

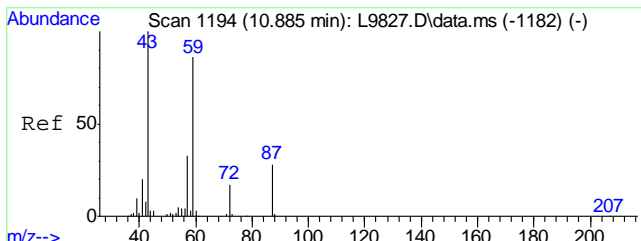
Tgt Ion	Resp	Lower	Upper
84	292092		
49	170.4	155.6	195.6
86	64.4	43.3	83.3



#20  
Carbon Disulfide  
Concen: 0.78 ug/Kg  
RT: 9.245 min Scan# 872  
Delta R.T. -0.005 min  
Lab File: L12059.D  
Acq: 4 Nov 2011 3:09 pm

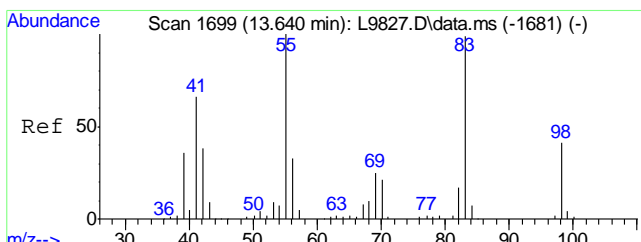
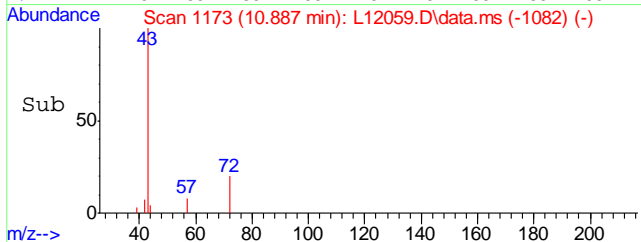
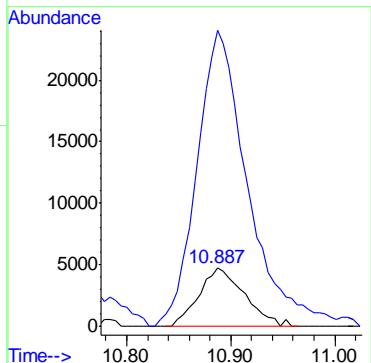
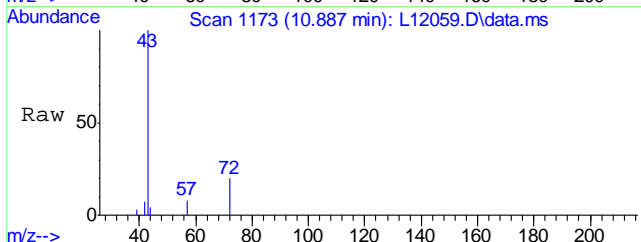
Tgt Ion	Resp	Lower	Upper
76	164738		
78	12.3	0.0	29.3





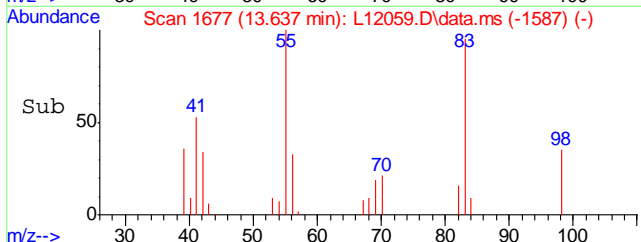
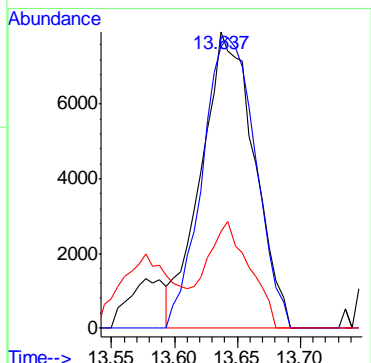
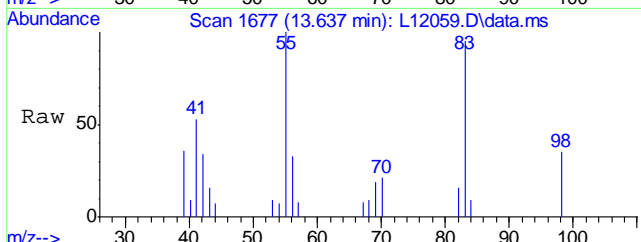
#29  
 2-Butanone (MEK)  
 Concen: 18.57 ug/Kg  
 RT: 10.887 min Scan# 1173  
 Delta R.T. -0.005 min  
 Lab File: L12059.D  
 Acq: 4 Nov 2011 3:09 pm

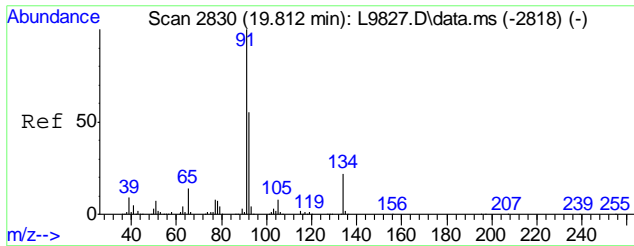
Tgt Ion	Resp	Lower	Upper
72	145270		
43	568.5	591.6	631.6#



#45  
 Methylcyclohexane  
 Concen: 2.00 ug/Kg  
 RT: 13.637 min Scan# 1677  
 Delta R.T. -0.011 min  
 Lab File: L12059.D  
 Acq: 4 Nov 2011 3:09 pm

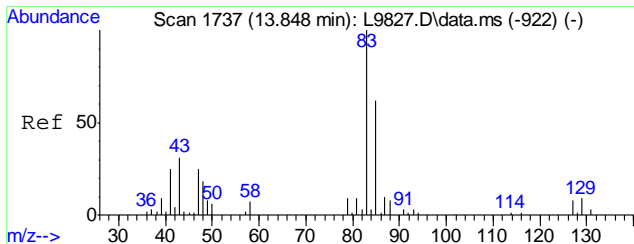
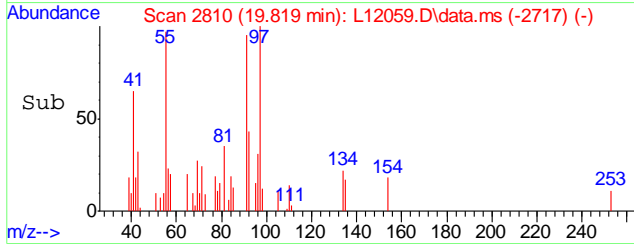
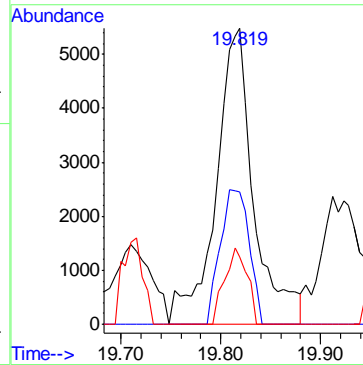
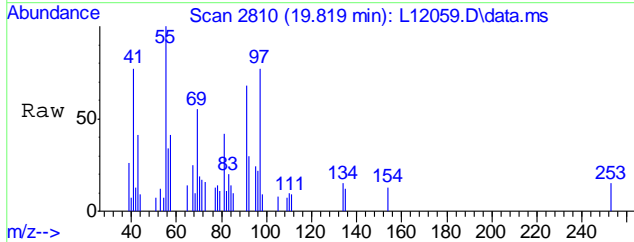
Tgt Ion	Resp	Lower	Upper
55	232487		
83	98.2	78.1	118.1
56	29.6	12.2	52.2





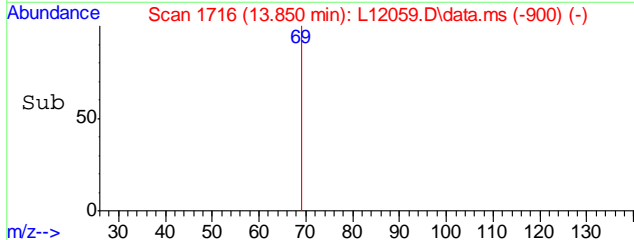
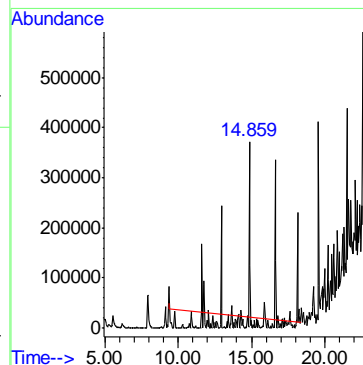
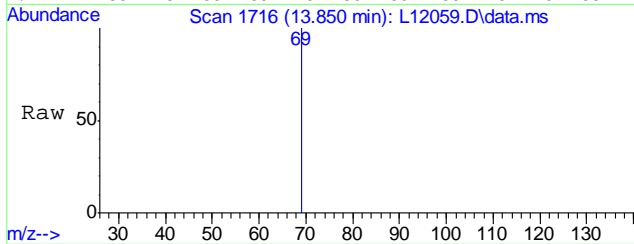
#88  
 n-Butylbenzene  
 Concen: 0.54 ug/Kg  
 RT: 19.819 min Scan# 2810  
 Delta R.T. 0.006 min  
 Lab File: L12059.D  
 Acq: 4 Nov 2011 3:09 pm

Tgt Ion	Resp	Lower	Upper
91	143947		
92	35.0	34.2	74.2
134	15.6	1.5	41.5



#96  
 TPH-GRO (C6-C10)  
 Concen: 101.15 ug/Kg m  
 RT: 13.850 min Scan# 1716  
 Delta R.T. 0.000 min  
 Lab File: L12059.D  
 Acq: 4 Nov 2011 3:09 pm

Tgt Ion:TIC Resp:28198429



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111104\  
 Data File : L12050.D  
 Acq On : 4 Nov 2011 10:44 am  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VL372,5,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 06 13:45:47 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.624	168	1734853	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	2869625	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2487041	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1337264	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1337264	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	915285	17.70	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	88.50%
53) Toluene-d8	14.865	98	3542170	18.96	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	94.80%
71) 4-Bromofluorobenzene	18.133	95	1348657	18.56	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	92.80%
Target Compounds						
96) TPH-GRO (C6-C10)	13.850	TIC	-45973m	Below Cal		Qvalue

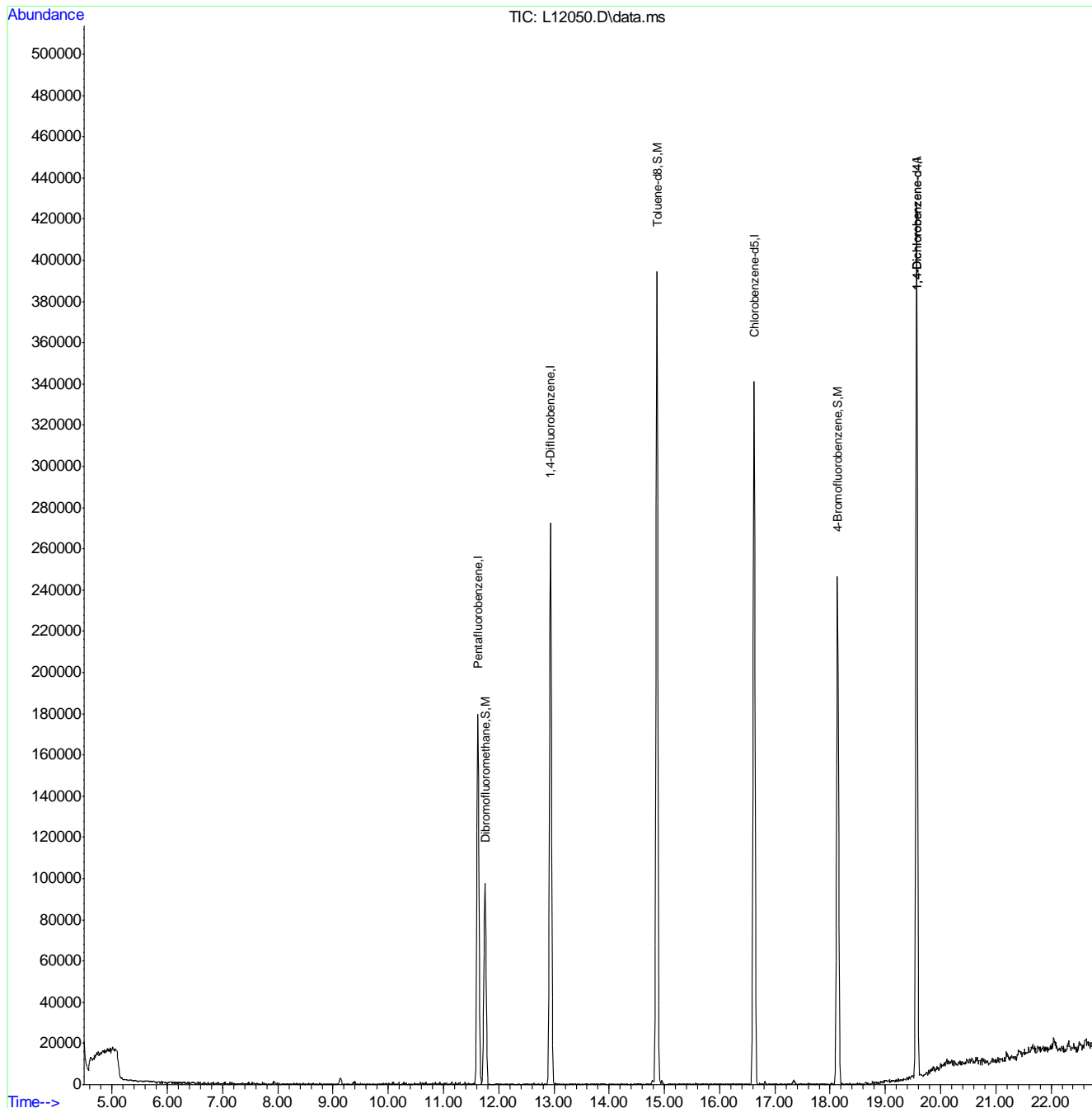
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2.1  
5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111104\  
 Data File : L12050.D  
 Acq On : 4 Nov 2011 10:44 am  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VL372,5,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 06 13:45:47 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration





## GC Semi-volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C18797**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4856-MB	GG29703.D	1	11/05/11	JH	11/04/11	OP4856	GGG792

**The QC reported here applies to the following samples:****Method:** SW846 8015B M

C18797-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	79% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18797  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4856-BS	GG29704.D	1	11/05/11	JH	11/04/11	OP4856	GGG792
OP4856-BSD	GG29705.D	1	11/05/11	JH	11/04/11	OP4856	GGG792

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18797-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	63.2	63	63.9	64	1	45-140/30
	TPH (> C28-C40)	100	67.6	68	65.6	66	3	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	79%	79%	45-140%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18797  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4856-MS	GG29707.D	1	11/06/11	JH	11/04/11	OP4856	GGG792
OP4856-MSD	GG29708.D	1	11/06/11	JH	11/04/11	OP4856	GGG792
C18797-1	GG29706.D	1	11/06/11	JH	11/04/11	OP4856	GGG792

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18797-1

CAS No.	Compound	C18797-1 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	100	60.5	61	61.7	62	2	45-140/30
	TPH (> C28-C40)	ND	100	60.6	61	71.6	72	17	45-140/30

CAS No.	Surrogate Recoveries	MS	MSD	C18797-1	Limits
630-01-3	Hexacosane	69%	82%	75%	45-140%

GC Semi-volatiles

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Raw Data

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7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG792\GG29706.D Vial: 47  
 Acq On : 11-6-11 12:02:13 AM Operator: JAMESH  
 Sample : C18797-1 Inst : Diesel #2  
 Misc : OP4856,GGG792,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 6 6:44 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.96	105968388	74.532 ppm
Spiked Amount 100.000		Recovery =	74.53%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	44388434	34.571 ppm
3) H TPH (>C28-C40)	11.83	44648284	50.066 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	44388434	33.922 ppm
7) H TPH (Motor Oil)	11.83	44648284	49.902 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29706.D GGG709.M Tue Nov 08 07:43:02 2011

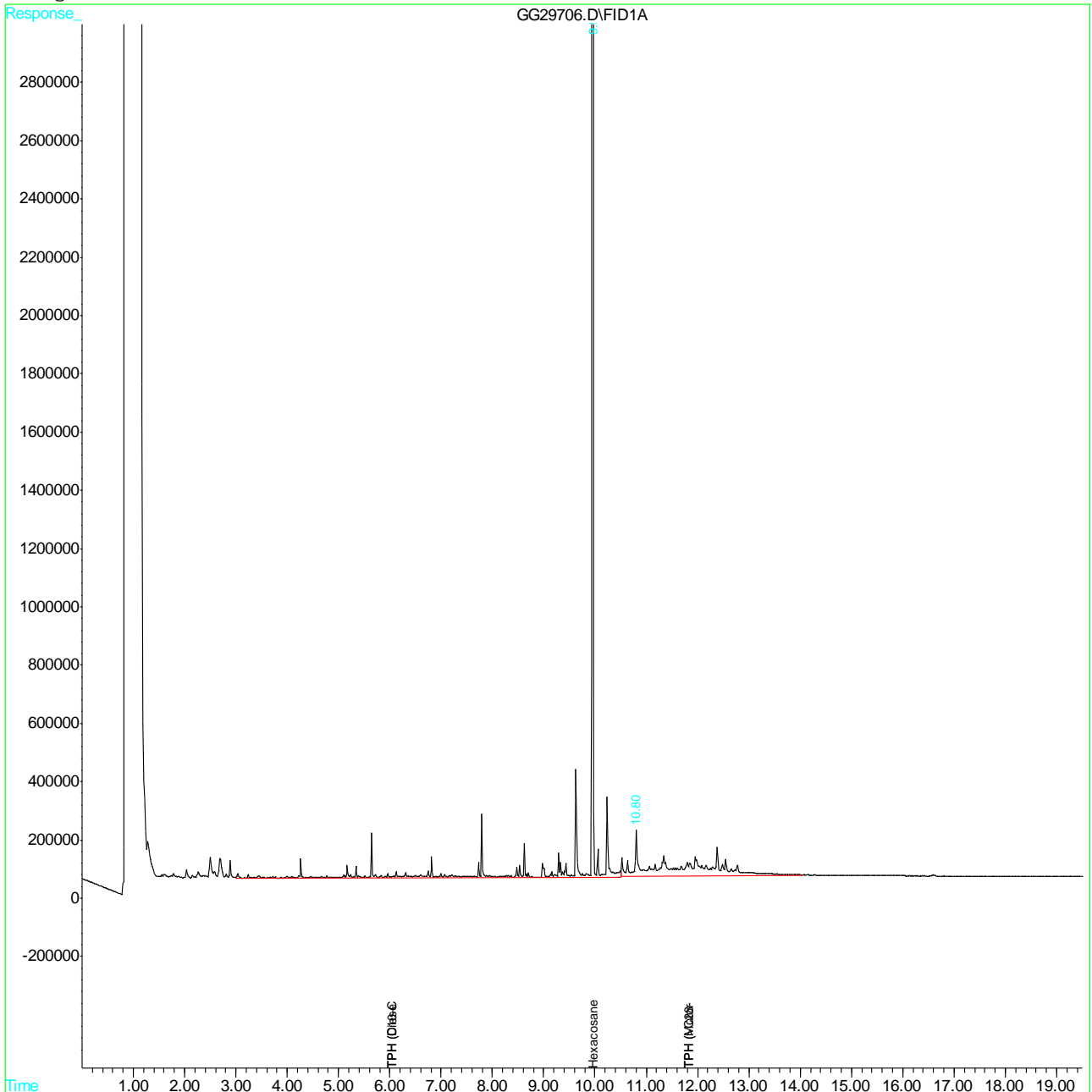
7.1.1  
 7

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG792\GG29706.D Vial: 47  
 Acq On : 11-6-11 12:02:13 AM Operator: JAMESH  
 Sample : C18797-1 Inst : Diesel #2  
 Misc : OP4856,GGG792,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 6 6:44 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.1.1  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG792\GG29703.D Vial: 44  
 Acq On : 11-5-11 10:44:36 PM Operator: JAMESH  
 Sample : OP4856-MB Inst : Diesel #2  
 Misc : OP4856,GGG792,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 6 6:44 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S,M Hexacosane	9.96	112326094	79.003 ppm
Spiked Amount 100.000		Recovery =	79.00%
<b>Target Compounds</b>			
2) H,M TPH (C10-C28)	6.03	40728244	31.720 ppm
3) H TPH (>C28-C40)	11.83	17860558	20.028 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	40728244	31.125 ppm
7) H TPH (Motor Oil)	11.83	17860558	19.962 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29703.D GGG709.M Tue Nov 08 07:42:59 2011

7.2.1  
 7

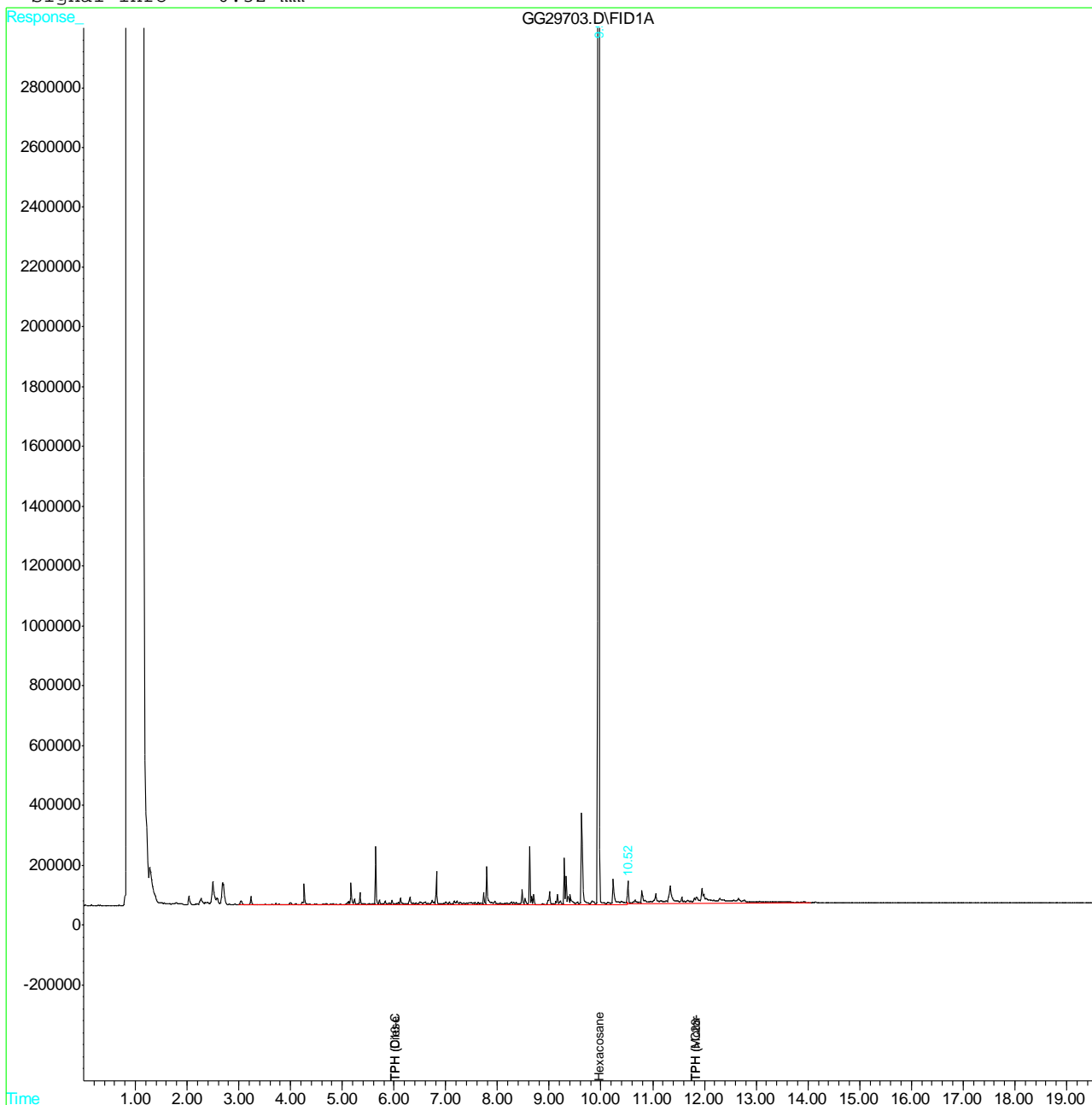


Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG792\GG29703.D Vial: 44  
 Acq On : 11-5-11 10:44:36 PM Operator: JAMESH  
 Sample : OP4856-MB Inst : Diesel #2  
 Misc : OP4856,GGG792,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 6 6:44 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.2.1  
7

## Metals Analysis

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C18797  
Account: BMECASF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4162  
Matrix Type: SOLID

Methods: SW846 6010B  
Units: mg/kg

Prep Date: 11/04/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015	0.010	<1.0
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054	0.12	<1.0
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	-0.070	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024	0.080	<1.0
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098	0.52	<2.0

Associated samples MP4162: C18797-1

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18797  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4162  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/04/11

Metal	C18728-1 Original MS		Spike MPIR4A	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	0.046	43.0	46.3	92.8	75-125
Calcium					
Chromium	3.6	47.5	46.3	94.8	75-125
Cobalt	anr				
Copper	anr				
Iron					
Lead	1.0	43.6	46.3	92.0	75-125
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	2.5	46.1	46.3	94.2	75-125
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	12.9	57.6	46.3	96.6	75-125

Associated samples MP4162: C18797-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.1.2  
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18797  
 Account: BMECAF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4162  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/04/11

Metal	C18728-1 Original MSD	SpikeLot MPiR4A	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	0.046	41.2	45.5	90.5	4.3	20
Calcium						
Chromium	3.6	45.3	45.5	91.7	4.7	20
Cobalt	anr					
Copper	anr					
Iron						
Lead	1.0	42.6	45.5	91.5	2.3	20
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	2.5	44.0	45.5	91.3	4.7	20
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	12.9	54.0	45.5	90.4	6.5	20

Associated samples MP4162: C18797-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.1.2  
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C18797

Account: BMECASF - Burns and McDonnell Engineering

Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4162

Methods: SW846 6010B

Matrix Type: SOLID

Units: mg/kg

Prep Date: 11/04/11

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	45.6	50	91.2	80-120
Calcium				
Chromium	47.4	50	94.8	80-120
Cobalt	anr			
Copper	anr			
Iron				
Lead	44.7	50	89.4	80-120
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	44.7	50	89.4	80-120
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	47.8	50	95.6	80-120

Associated samples MP4162: C18797-1

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

8.1.3  
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: C18797  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4162  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/04/11

Metal	C18728-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	0.500	0.00	100.0(a)	0-10
Calcium				
Chromium	38.5	39.4	2.3	0-10
Cobalt	anr			
Copper	anr			
Iron				
Lead	10.9	0.00	100.0(a)	0-10
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	27.1	24.9	8.1	0-10
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	140	140	0.2 (b)	0-10

Associated samples MP4162: C18797-1

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

8.1.4  
8

Technical Report for

Burns and McDonnell Engineering

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA  
63142

Accutest Job Number: C18677

Sampling Date: 10/27/11

Report to:

Burns and McDonnell Engineering  
400 Oyster Point Blvd Suite 533  
South San Francisco, CA 94080  
sbarber@burnsmcd.com

ATTN: Simon Barber

Total number of pages in report: **175**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director

Client Service contact: Laurie Glantz-Murphy 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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Test results relate only to samples analyzed.



# Table of Contents

-1-

<b>Section 1: Sample Summary</b> .....	<b>3</b>
<b>Section 2: Sample Results</b> .....	<b>4</b>
<b>2.1:</b> C18677-1: OWS-1N3 .....	5
<b>2.2:</b> C18677-2: OWS-2NE3 .....	9
<b>2.3:</b> C18677-3: OWS-3E3 .....	13
<b>2.4:</b> C18677-4: OWS-4S3.6 .....	17
<b>2.5:</b> C18677-5: OWS-5W3 .....	21
<b>2.6:</b> C18677-6: OWS-6F4 .....	25
<b>2.7:</b> C18677-7: DUP-1 .....	29
<b>2.8:</b> C18677-8: OWS-GW .....	33
<b>2.9:</b> C18677-9: TRIP BLANKS .....	37
<b>Section 3: Misc. Forms</b> .....	<b>39</b>
<b>3.1:</b> Chain of Custody .....	40
<b>Section 4: GC/MS Volatiles - QC Data Summaries</b> .....	<b>43</b>
<b>4.1:</b> Method Blank Summary .....	44
<b>4.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	46
<b>4.3:</b> Laboratory Control Sample Summary .....	48
<b>4.4:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	50
<b>Section 5: GC/MS Volatiles - Raw Data</b> .....	<b>52</b>
<b>5.1:</b> Samples .....	53
<b>5.2:</b> Method Blanks .....	102
<b>Section 6: GC Volatiles - QC Data Summaries</b> .....	<b>109</b>
<b>6.1:</b> Method Blank Summary .....	110
<b>6.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	112
<b>6.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	114
<b>Section 7: GC Volatiles - Raw Data</b> .....	<b>115</b>
<b>7.1:</b> Samples .....	116
<b>7.2:</b> Method Blanks .....	134
<b>Section 8: GC Semi-volatiles - QC Data Summaries</b> .....	<b>138</b>
<b>8.1:</b> Method Blank Summary .....	139
<b>8.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	141
<b>8.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	143
<b>Section 9: GC Semi-volatiles - Raw Data</b> .....	<b>144</b>
<b>9.1:</b> Samples .....	145
<b>9.2:</b> Method Blanks .....	161
<b>Section 10: Metals Analysis - QC Data Summaries</b> .....	<b>165</b>
<b>10.1:</b> Prep QC MP4134: Cd,Cr,Pb,Ni,Zn .....	166
<b>10.2:</b> Prep QC MP4139: Cd,Cr,Pb,Ni,Zn .....	171



## Sample Summary

Burns and McDonnell Engineering

Job No: C18677

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Project No: 63142

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C18677-1	10/27/11	14:10 SB	10/28/11	SO	Soil	OWS-1N3
C18677-2	10/27/11	14:12 SB	10/28/11	SO	Soil	OWS-2NE3
C18677-3	10/27/11	14:14 SB	10/28/11	SO	Soil	OWS-3E3
C18677-4	10/27/11	14:16 SB	10/28/11	SO	Soil	OWS-4S3.6
C18677-5	10/27/11	14:18 SB	10/28/11	SO	Soil	OWS-5W3
C18677-6	10/27/11	14:20 SB	10/28/11	SO	Soil	OWS-6F4
C18677-7	10/27/11	00:00 SB	10/28/11	SO	Soil	DUP-1
C18677-8	10/27/11	06:30 SB	10/28/11	AQ	Ground Water	OWS-GW
C18677-9	10/27/11	00:00 SB	10/28/11	AQ	Trip Blank Water	TRIP BLANKS

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Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Results

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Report of Analysis

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Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-1N3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-1	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M28823.D	1	10/31/11	XB	n/a	n/a	VM912
Run #2							

Run #	Initial Weight
Run #1	5.74 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.4	1.3	ug/kg	
108-88-3	Toluene	ND	4.4	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	4.4	1.3	ug/kg	
1330-20-7	Xylene (total)	ND	8.7	3.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.4	0.87	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		60-130%
2037-26-5	Toluene-D8	104%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-1N3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-1	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23450.D	1	11/01/11	TT	n/a	n/a	GJK963
Run #2							

	Initial Weight
Run #1	5.20 g
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.096	0.048	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	88%		60-157%		

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-1N3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-1	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18267.D	5	10/31/11	JH	10/28/11	OP4806	GHH597
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	69.9	49	25	mg/kg	
	TPH (> C28-C40)	271	98	49	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	66%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-1N3	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-1	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.92	0.92	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	30.0	0.92	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	57.0	1.8	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	35.0	0.92	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	102	1.8	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2163

(2) Prep QC Batch: MP4139

(a) All results reported on wet weight basis.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	OWS-2NE3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-2	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	M28828.D	1	10/31/11	XB	n/a	n/a	VM912
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.41 g	5.0 ml	50.0 ul
Run #2			

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	460	140	ug/kg	
108-88-3	Toluene	ND	460	140	ug/kg	
100-41-4	Ethylbenzene	ND	460	140	ug/kg	
1330-20-7	Xylene (total)	ND	920	370	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	460	92	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		60-130%
2037-26-5	Toluene-D8	104%		60-130%
460-00-4	4-Bromofluorobenzene	104%		60-130%

(a) All results reported on wet weight basis.

(b) Dilution required due to high concentration of non-target hydrocarbons.

ND = Not detected      MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-2NE3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-2	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23451.D	1	11/01/11	TT	n/a	n/a	GJK963
Run #2							

	Initial Weight
Run #1	5.41 g
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.241	0.092	0.046	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	91%		60-157%		

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	OWS-2NE3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-2	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18270.D	25	10/31/11	JH	10/28/11	OP4806	GHH597
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	1420	250	120	mg/kg	
	TPH (> C28-C40)	2300	500	250	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	77%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-2NE3	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-2	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	5.0	0.94	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	29.6	0.94	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	171	1.9	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	42.5	0.94	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	1710	1.9	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2163

(2) Prep QC Batch: MP4139

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-3E3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-3	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M28824.D	1	10/31/11	XB	n/a	n/a	VM912
Run #2							

Run #	Initial Weight
Run #1	6.18 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.0	1.2	ug/kg	
108-88-3	Toluene	ND	4.0	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	1.2	ug/kg	
1330-20-7	Xylene (total)	ND	8.1	3.2	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.0	0.81	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		60-130%
2037-26-5	Toluene-D8	104%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	OWS-3E3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-3	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23452.D	1	11/01/11	TT	n/a	n/a	GJK963
Run #2							

Run #	Initial Weight
Run #1	6.92 g
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.101	0.072	0.036	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	90%		60-157%		

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-3E3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-3	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18271.D	1	10/31/11	JH	10/28/11	OP4806	GHH597
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	27.9	9.8	4.9	mg/kg	
	TPH (> C28-C40)	78.0	20	9.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	67%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-3E3	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-3	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	2.0	0.96	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	30.5	0.96	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	412	1.9	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	76.6	0.96	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	539	1.9	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2163

(2) Prep QC Batch: MP4139

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-4S3.6	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-4	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M28825.D	1	10/31/11	XB	n/a	n/a	VM912
Run #2							

Run #	Initial Weight
Run #1	7.25 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	3.4	1.0	ug/kg	
108-88-3	Toluene	ND	3.4	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	3.4	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	6.9	2.8	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	3.4	0.69	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		60-130%
2037-26-5	Toluene-D8	104%		60-130%
460-00-4	4-Bromofluorobenzene	102%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b> OWS-4S3.6	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-4	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B	
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23453.D	1	11/01/11	TT	n/a	n/a	GJK963
Run #2							

Run #	Initial Weight
Run #1	7.19 g
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.070	0.035	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	91%		60-157%		

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b> OWS-4S3.6	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-4	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A	
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18272.D	1	10/31/11	JH	10/28/11	OP4806	GHH597
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	39.9	9.8	4.9	mg/kg	
	TPH (> C28-C40)	76.2	20	9.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	78%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-4S3.6	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-4	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.89	0.89	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	29.8	0.89	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	184	1.8	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	36.7	0.89	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	155	1.8	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2163

(2) Prep QC Batch: MP4139

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-5W3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-5	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M28826.D	1	10/31/11	XB	n/a	n/a	VM912
Run #2							

Run #	Initial Weight
Run #1	4.40 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.7	1.7	ug/kg	
108-88-3	Toluene	ND	5.7	1.7	ug/kg	
100-41-4	Ethylbenzene	ND	5.7	1.7	ug/kg	
1330-20-7	Xylene (total)	ND	11	4.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.7	1.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	OWS-5W3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-5	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23454.D	1	11/01/11	TT	n/a	n/a	GJK963
Run #2							

Run #	Initial Weight
Run #1	5.31 g
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.0679	0.094	0.047	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	92%		60-157%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-5W3	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-5	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18273.D	1	10/31/11	JH	10/28/11	OP4806	GHH597
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	54.5	10	5.0	mg/kg	
	TPH (> C28-C40)	88.9	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	63%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-5W3	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-5	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.91	0.91	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	32.6	0.91	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	58.8	1.8	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	25.9	0.91	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	51.3	1.8	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2163

(2) Prep QC Batch: MP4139

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-6F4	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-6	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	M28830.D	1	10/31/11	XB	n/a	n/a	VM912
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.89 g	5.0 ml	50.0 ul
Run #2			

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	510	150	ug/kg	
108-88-3	Toluene	ND	510	150	ug/kg	
100-41-4	Ethylbenzene	ND	510	150	ug/kg	
1330-20-7	Xylene (total)	ND	1000	410	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	510	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on wet weight basis.

(b) Dilution required due to high concentration of non-target hydrocarbons.

ND = Not detected      MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> OWS-6F4	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-6	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B	
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23455.D	1	11/01/11	TT	n/a	n/a	GJK963
Run #2							

Run #	Initial Weight
Run #1	3.40 g
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.604	0.15	0.074	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	94%		60-157%		

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OWS-6F4	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-6	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18268.D	10	10/31/11	JH	10/28/11	OP4806	GHH597
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	628	99	50	mg/kg	
	TPH (> C28-C40)	510	200	99	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	56%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-6F4	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-6	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.97	0.97	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	45.3	0.97	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	70.4	1.9	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	27.2	0.97	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	98.9	1.9	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2163

(2) Prep QC Batch: MP4139

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	DUP-1	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-7	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M28827.D	1	10/31/11	XB	n/a	n/a	VM912
Run #2							

Run #	Initial Weight
Run #1	5.16 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.8	1.5	ug/kg	
108-88-3	Toluene	ND	4.8	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	4.8	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	9.7	3.9	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.8	0.97	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	DUP-1	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-7	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23456.D	1	11/01/11	TT	n/a	n/a	GJK963
Run #2							

	Initial Weight
Run #1	5.80 g
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.0536	0.086	0.043	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	94%		60-157%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	DUP-1	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-7	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18269.D	5	10/31/11	JH	10/28/11	OP4806	GHH597
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	114	50	25	mg/kg	
	TPH (> C28-C40)	453	99	50	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	74%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DUP-1	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-7	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.93	0.93	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	32.3	0.93	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	260	1.9	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	67.1	0.93	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	184	1.9	mg/kg	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2163

(2) Prep QC Batch: MP4139

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b> OWS-GW	
<b>Lab Sample ID:</b> C18677-8	<b>Date Sampled:</b> 10/27/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 10/28/11
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N26076.D	1	10/31/11	TF	n/a	n/a	VN864
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.87	1.0	0.50	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> OWS-GW	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-8	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B	
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23490.D	1	11/02/11	TT	n/a	n/a	GJK965
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	88%		64-153%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-GW	
<b>Lab Sample ID:</b> C18677-8	<b>Date Sampled:</b> 10/27/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 10/28/11
<b>Method:</b> SW846 8015B M SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29448.D	1	10/29/11	JH	10/28/11	OP4807	GGG786
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.197	0.10	0.050	mg/l	
	TPH (> C28-C40)	ND	0.20	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	69%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> OWS-GW	<b>Date Sampled:</b> 10/27/11
<b>Lab Sample ID:</b> C18677-8	<b>Date Received:</b> 10/28/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 2.0	2.0	ug/l	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Chromium	< 10	10	ug/l	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Lead	121	10	ug/l	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Nickel	52.4	5.0	ug/l	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Zinc	121	20	ug/l	1	10/28/11	10/29/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2163

(2) Prep QC Batch: MP4134

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	TRIP BLANKS	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-9	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N26075.D	1	10/31/11	TF	n/a	n/a	VN864
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANKS	<b>Date Sampled:</b>	10/27/11
<b>Lab Sample ID:</b>	C18677-9	<b>Date Received:</b>	10/28/11
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JK23491.D	1	11/02/11	TT	n/a	n/a	GJK965
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## TPH Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.020	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	89%		64-153%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



03092011 Form WCD KC1-SDO

# Request for Chemical Analysis and Chain of Custody Record

BME CASF736

Burns & McDonnell Engineering  
 400 Oyster Point Blvd, Suite 533  
 South San Francisco, CA 94080  
 Phone: (650) 871-2926 Fax: (650) 871-2653  
*Roshy Member*  
 Attention: Simon Barber

Laboratory: *Accutest*  
 Address: *2105 Lundy Ave*  
 City/State/Zip: *San Jose CA*  
 Telephone:

Document Control No:  
 Lab. Reference No. or Episode No.: *C18677*

Project Number: *63142* Sample Type

Client Name: *YTC 1703 Wood St* Matrix

Group or SWMU Name	Sample Number		Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Analysis	Remarks
	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas			
-1	OWS-1V3		Oct	2011		3	10-27	1410		S		1	X	
-2	OWS-2VE3		Oct	2011		3	10-27	1412		S		1	X X X X X	
-3	OWS-3E3		Oct	2011		3	10-27	1414		S		1	X X X X X	
-4	OWS-4E3.6		Oct	2011		3.6	10-27	1416		S		1	X X X X X	
-5	OWS-5W3		Oct	2011		3	10-27	1418		S		1	X X X X X	
-6	OWS-6R4		Oct	2011		4	10-27	1420		S		1	X X X X X	
-7	DUP-1		Oct	2011		-	10-27	-		S		1	X X X X X	1/2 hour down around

# 2 DAYS

- ① 5035 KIT 2 vials @ 10mL per Sample
- ② 5035 KIT 2 vials @ 15mL per Sample
- ③ 1x 16oz Glass Jar per Sample

Sampler (signature): *Simon Barber* Sampler (signature): *[Signature]* Special Instructions: *Submit EDP + EDU*  
*Go to track in TO 600 102107*

Relinquished By (signature): *[Signature]* Date/Time: *10-27-11* Received By (signature): *[Signature]* Date/Time: *10/28/11* Ice Present in Container: Yes  No  Temperature Upon Receipt: *4.8-1.0 = 3.8°C*

Relinquished By (signature): *[Signature]* Date/Time: Received By (signature): Laboratory Comments:





03082011 Form WCD KC1-SDO

### Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell Engineering  
 400 Oyster Point Blvd. Suite 533  
 South San Francisco, CA 94080  
 Phone: (650) 871-2926 Fax: (650) 871-2653  
 Attention: *Sam Barber*

Laboratory: *9cc01-21*  
 Address: *2105 Landy Ave*  
 City/State/Zip: *San Jose, CA*  
 Telephone:

Document Control No:  
 Lab. Reference No. or Episode No.: *C18677*

Project Number: *63142* Sample Type

Client Name: *YFC 1708 wood st* Matrix

Sample Number			Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Analysis	Remarks
Group or SWMU Name	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas			
-8	<i>OWS-GW</i>		<i>oct</i>	<i>2011</i>			<i>10.28</i>	<i>0630</i>	<i>w</i>			<i>7</i>	<i>X X X X</i>	<i>4 vials (collected) 2 x 500ml Amber Steml HME (41110) PK1 NIP</i>
-9	<i>Trip blanks</i>		<i>oct</i>	<i>2011</i>					<i>w</i>			<i>2</i>	<i>X X</i>	<i>2 vials (w/ HCl)</i>
														<i>48 hour turn around</i>
<h1>2 DAYS</h1>														

Sampler (signature): <i>[Signature]</i>		Sampler (signature): <i>[Signature]</i>		Special Instructions: <i>EOP + EDD backtrack per ID: 10600162107</i>	
Relinquished By (signature): 1. <i>[Signature]</i>	Date/Time <i>10/28/11</i>	Received By (signature): <i>[Signature]</i>	Date/Time <i>10/28/11</i>	Ice Present in Container: Yes <input type="checkbox"/> No <input type="checkbox"/>	Temperature Upon Receipt:
Relinquished By (signature): 2.	Date/Time	Received By (signature):	Date/Time	Laboratory Comments:	

page 2 of 2

31  
3





## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C18677**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM912-MB	M28812.D	1	10/31/11	XB	n/a	n/a	VM912

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	98%	60-130%
2037-26-5	Toluene-D8	103%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

**Method Blank Summary****Job Number:** C18677**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN864-MB	N26071.D	1	10/31/11	TF	n/a	n/a	VN864

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C18677-8, C18677-9

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	96%	60-130%
2037-26-5	Toluene-D8	101%	60-130%
460-00-4	4-Bromofluorobenzene	102%	60-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM912-BS	M28809.D	1	10/31/11	XB	n/a	n/a	VM912
VM912-BSD	M28810.D	1	10/31/11	XB	n/a	n/a	VM912

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	36.7	92	39.9	100	8	60-130/30
100-41-4	Ethylbenzene	40	36.0	90	39.3	98	9	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	36.3	91	36.8	92	1	60-130/30
108-88-3	Toluene	40	36.1	90	39.2	98	8	60-130/30
1330-20-7	Xylene (total)	120	111	93	121	101	9	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	99%	60-130%
2037-26-5	Toluene-D8	99%	100%	60-130%
460-00-4	4-Bromofluorobenzene	99%	98%	60-130%

4.2.1  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN864-BS	N26072.D	1	10/31/11	TF	n/a	n/a	VN864
VN864-BSD	N26073.D	1	10/31/11	TF	n/a	n/a	VN864

The QC reported here applies to the following samples:

Method: SW846 8260B

C18677-8, C18677-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	19.4	97	19.1	96	2	60-130/30
100-41-4	Ethylbenzene	20	18.4	92	18.2	91	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	19.2	96	19.8	99	3	60-130/30
108-88-3	Toluene	20	18.7	94	18.3	92	2	60-130/30
1330-20-7	Xylene (total)	60	56.0	93	55.7	93	1	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	98%	98%	60-130%
2037-26-5	Toluene-D8	97%	96%	60-130%
460-00-4	4-Bromofluorobenzene	103%	102%	60-130%

4.2.2  
4

# Laboratory Control Sample Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM912-LCS	M28811.D	1	10/31/11	XB	n/a	n/a	VM912

The QC reported here applies to the following samples:

Method: SW846 8260B

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	60-130%
2037-26-5	Toluene-D8	104%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

4.3.1  
4

# Laboratory Control Sample Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN864-LCS	N26074.D	1	10/31/11	TF	n/a	n/a	VN864

The QC reported here applies to the following samples: Method: SW846 8260B

C18677-8, C18677-9

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	101%	60-130%

4.3.2  
4



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASFS Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18681-4MS	M28821.D	1	10/31/11	XB	n/a	n/a	VM912
C18681-4MSD	M28822.D	1	10/31/11	XB	n/a	n/a	VM912
C18681-4	M28816.D	1	10/31/11	XB	n/a	n/a	VM912

The QC reported here applies to the following samples:

Method: SW846 8260B

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	C18681-4 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	39.2	43.6	111	47.8	120	9	60-130/30
100-41-4	Ethylbenzene	ND	39.2	41.5	106	45.5	114	9	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	39.2	47.1	120	50.3	126	7	60-130/30
108-88-3	Toluene	ND	39.2	40.6	104	44.8	112	10	60-130/30
1330-20-7	Xylene (total)	ND	118	123	105	135	113	9	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C18681-4	Limits
1868-53-7	Dibromofluoromethane	111%	107%	107%	60-130%
2037-26-5	Toluene-D8	99%	99%	104%	60-130%
460-00-4	4-Bromofluorobenzene	107%	103%	102%	60-130%

4.4.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18550-1MS	N26090.D	1	10/31/11	TF	n/a	n/a	VN864
C18550-1MSD	N26091.D	1	10/31/11	TF	n/a	n/a	VN864
C18550-1	N26083.D	1	10/31/11	TF	n/a	n/a	VN864

The QC reported here applies to the following samples:

Method: SW846 8260B

C18677-8, C18677-9

CAS No.	Compound	C18550-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	20.1	101	22.1	111	9	60-130/25
100-41-4	Ethylbenzene	ND	20	18.8	94	20.7	104	10	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	21.3	107	22.9	115	7	60-130/25
108-88-3	Toluene	ND	20	19.0	95	21.0	105	10	60-130/25
1330-20-7	Xylene (total)	ND	60	57.3	96	62.7	105	9	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C18550-1	Limits
1868-53-7	Dibromofluoromethane	105%	105%	95%	60-130%
2037-26-5	Toluene-D8	98%	98%	98%	60-130%
460-00-4	4-Bromofluorobenzene	104%	103%	102%	60-130%

4.4.2  
4

GC/MS Volatiles

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Raw Data

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5

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\
Data File : M28823.D
Acq On : 31 Oct 2011 4:34 pm
Operator : XINGB
Sample : C18677-1
Misc : MS1499,VM912,5.74,,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 01 08:42:49 2011
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m
Quant Title : EPA 8260B
QLast Update : Thu Sep 15 15:04:15 2011
Response via : Initial Calibration

Table with 7 columns: Internal Standards, R.T., QIon, Response, Conc, Units, Dev(Min). Rows include Pentafluorobenzene, 1,4-Difluorobenzene, Chlorobenzene-d5, 1,4-Dichlorobenzene-d4, and 1,4-Dichlorobenzene-d4A.

System Monitoring Compounds table with 7 columns: Compound Name, R.T., QIon, Response, Conc, Units, Dev(Min). Includes Dibromofluoromethane and Toluene-d8 with spiked amounts and recovery percentages.

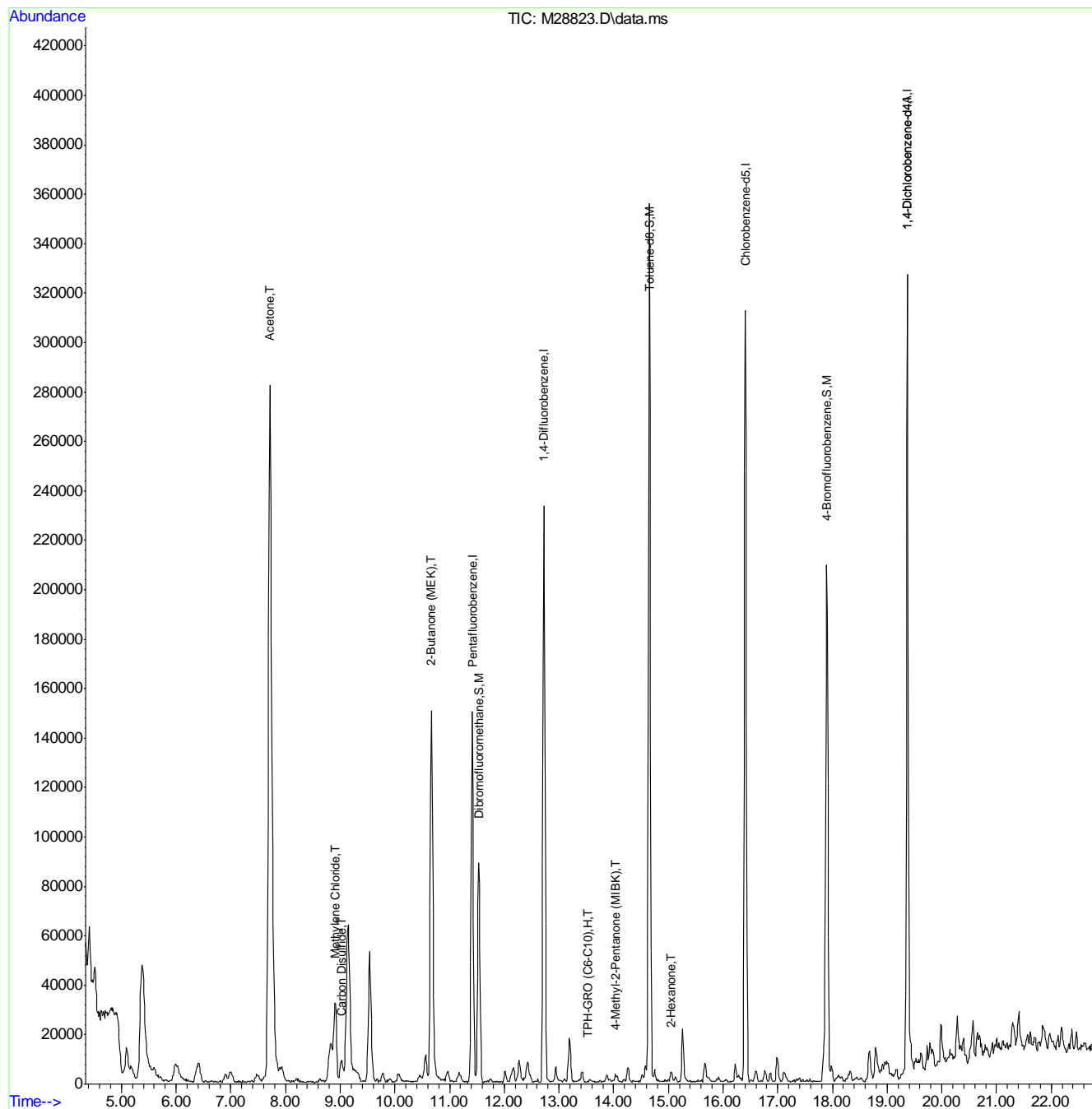
Target Compounds table with 7 columns: Compound Name, R.T., QIon, Response, Conc, Units, Qvalue. Lists various compounds like Acetone, Methylene Chloride, Carbon Disulfide, etc.

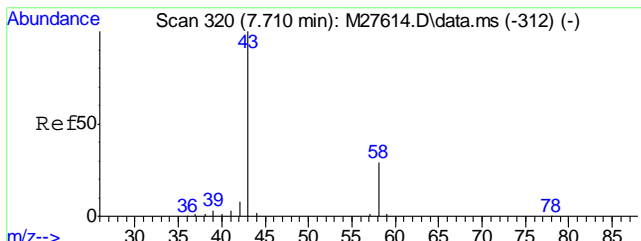
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
Data File : M28823.D  
Acq On : 31 Oct 2011 4:34 pm  
Operator : XINGB  
Sample : C18677-1  
Misc : MS1499,VM912,5.74,,,,,1  
ALS Vial : 18 Sample Multiplier: 1

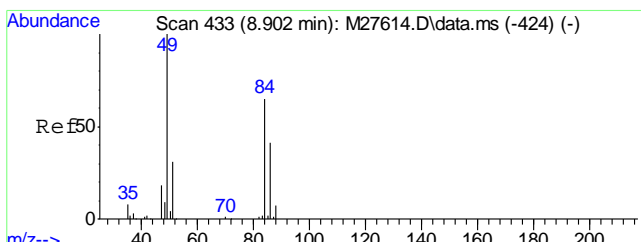
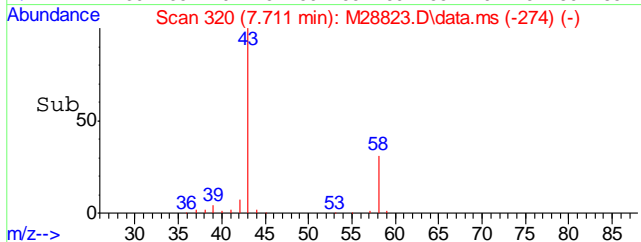
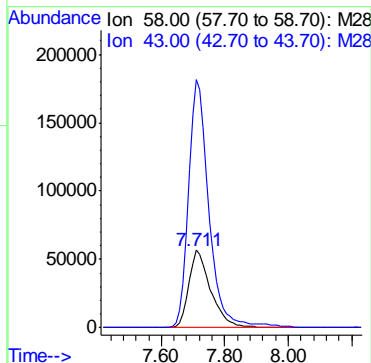
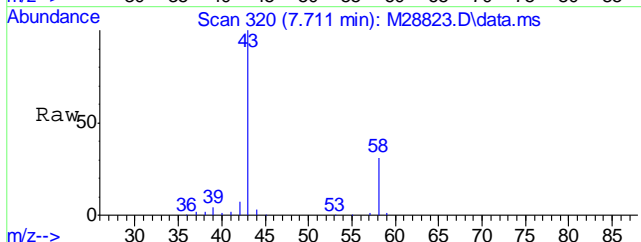
Quant Time: Nov 01 08:42:49 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration





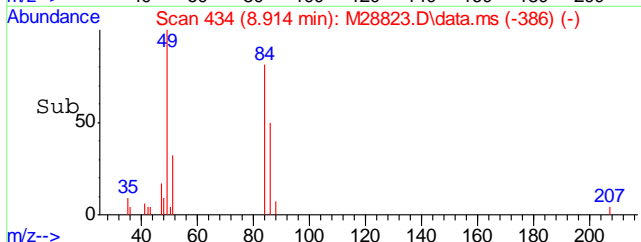
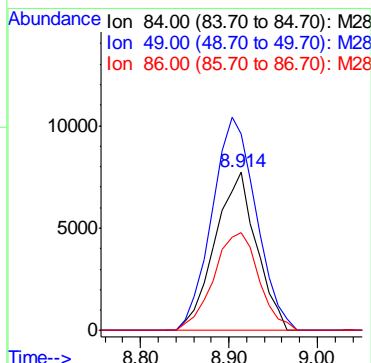
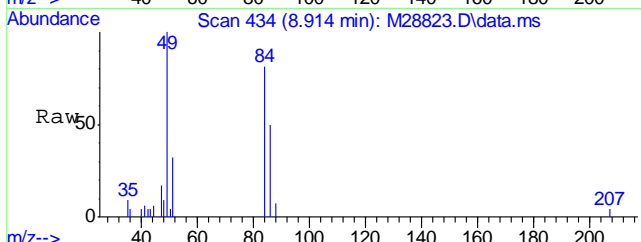
#9  
Acetone  
Concen: 418.99 ppb  
RT: 7.711 min Scan# 320  
Delta R.T. -0.010 min  
Lab File: M28823.D  
Acq: 31 Oct 2011 4:34 pm

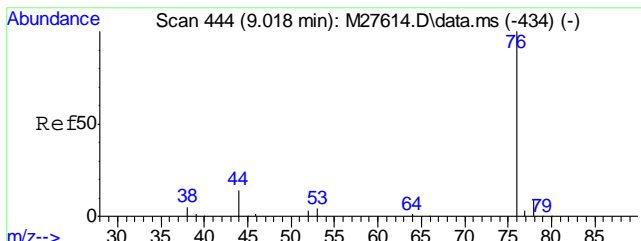
Tgt Ion	Resp	Lower	Upper
58	273125		
58	100		
43	295.9	328.9	368.9#



#18  
Methylene Chloride  
Concen: 4.26 ppb  
RT: 8.914 min Scan# 434  
Delta R.T. 0.011 min  
Lab File: M28823.D  
Acq: 31 Oct 2011 4:34 pm

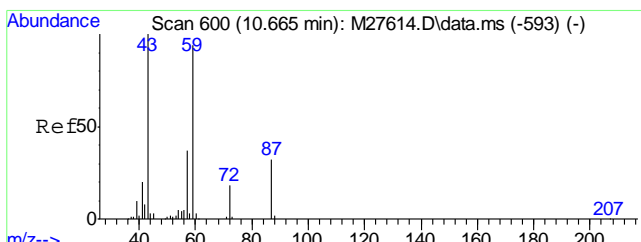
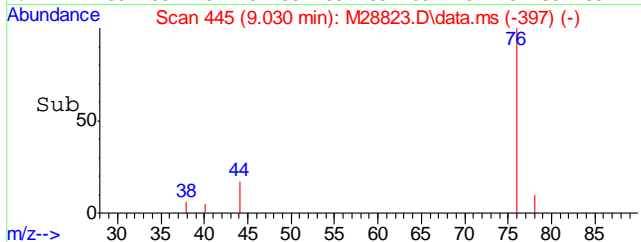
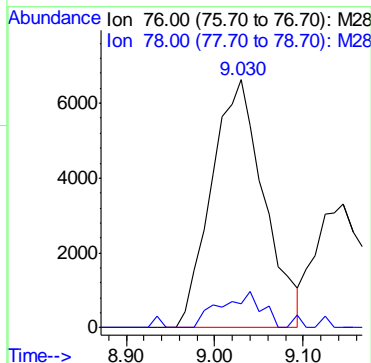
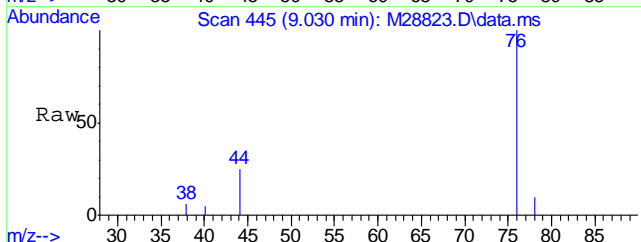
Tgt Ion	Resp	Lower	Upper
84	25253		
84	100		
49	142.7	134.7	174.7
86	67.3	43.0	83.0





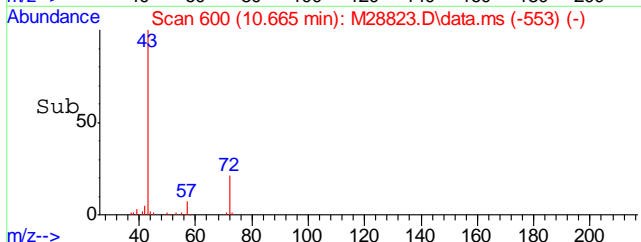
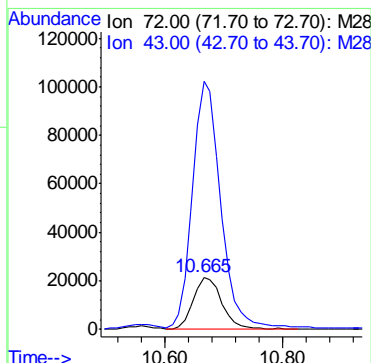
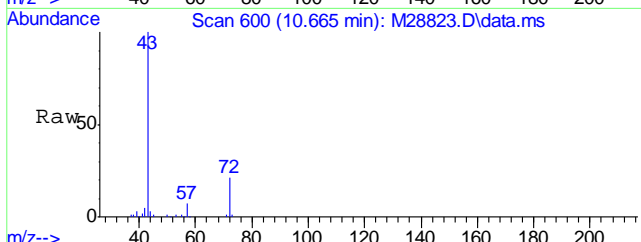
#20  
Carbon Disulfide  
Concen: 1.69 ppb  
RT: 9.030 min Scan# 445  
Delta R.T. 0.011 min  
Lab File: M28823.D  
Acq: 31 Oct 2011 4:34 pm

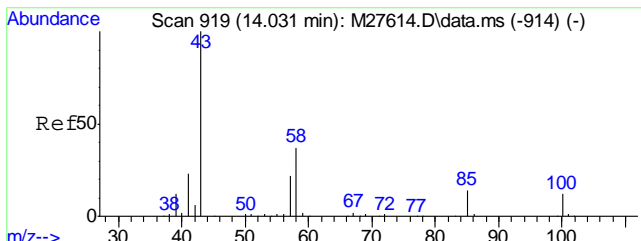
Tgt Ion	Resp	Lower	Upper
76	27509		
78	11.4	0.0	29.2



#29  
2-Butanone (MEK)  
Concen: 96.76 ppb  
RT: 10.665 min Scan# 600  
Delta R.T. 0.001 min  
Lab File: M28823.D  
Acq: 31 Oct 2011 4:34 pm

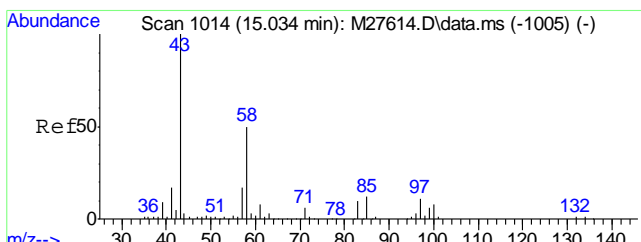
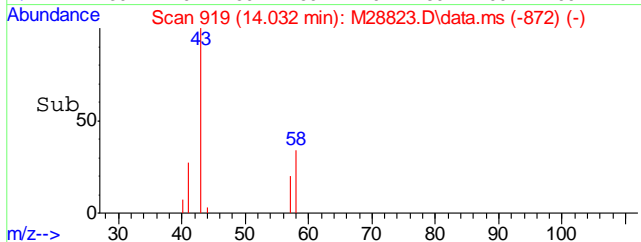
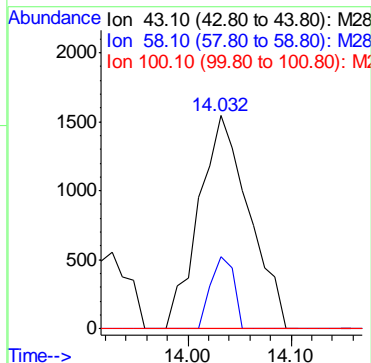
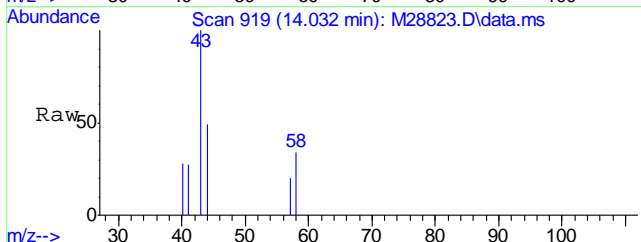
Tgt Ion	Resp	Lower	Upper
72	72986		
43	473.9	540.5	580.5#





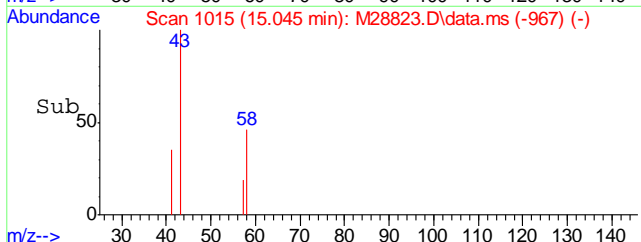
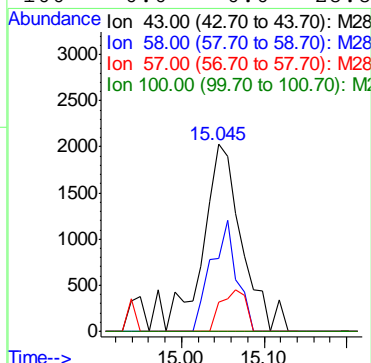
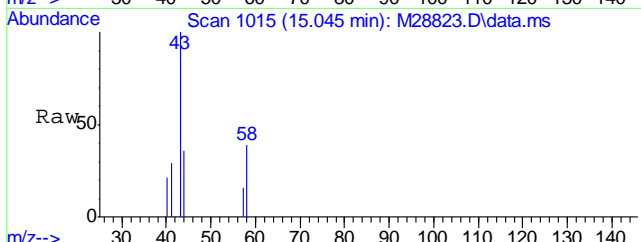
#50  
 4-Methyl-2-Pentanone (MIBK)  
 Concen: 0.71 ppb  
 RT: 14.032 min Scan# 919  
 Delta R.T. 0.001 min  
 Lab File: M28823.D  
 Acq: 31 Oct 2011 4:34 pm

Tgt Ion	Resp	Lower	Upper
43	100		
58	0.0	15.8	55.8#
100	0.0	0.0	30.5

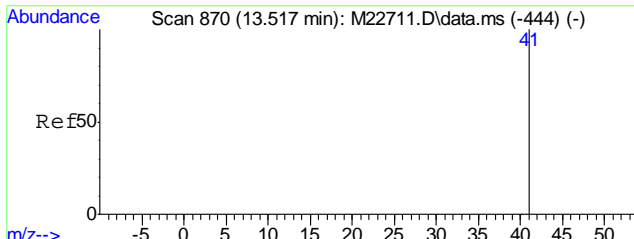


#57  
 2-Hexanone  
 Concen: 1.33 ppb  
 RT: 15.045 min Scan# 1015  
 Delta R.T. 0.011 min  
 Lab File: M28823.D  
 Acq: 31 Oct 2011 4:34 pm

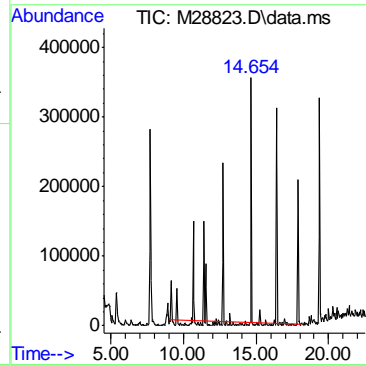
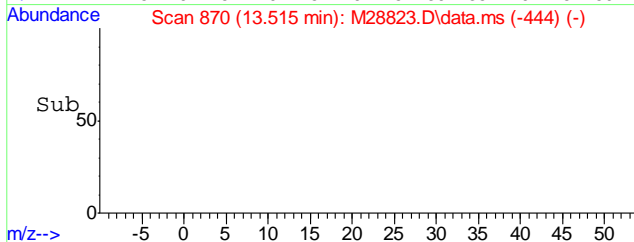
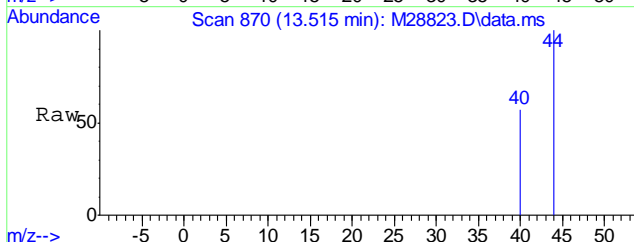
Tgt Ion	Resp	Lower	Upper
43	100		
58	39.0	29.9	69.9
57	0.0	0.0	36.6
100	0.0	0.0	28.8







#96  
TPH-GRO (C6-C10)  
Concen: 71.31 ppb m  
RT: 13.519 min Scan# 870  
Delta R.T. 0.000 min  
Lab File: M28823.D  
Acq: 31 Oct 2011 4:34 pm  
Tgt Ion:TIC Resp: 1615176



5.1.1  
5

## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
 Data File : M28828.D  
 Acq On : 31 Oct 2011 7:01 pm  
 Operator : XINGB  
 Sample : C18677-2  
 Misc : MS1499,VM912,5.41,,50,5,1  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 01 08:46:49 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.416	168	172261	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.724	114	293603	20.00	ppb	0.00
52) Chlorobenzene-d5	16.407	117	270123	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.372	152	139551	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.372	152	139551	20.00	ppb	0.00

## System Monitoring Compounds

34) Dibromofluoromethane	11.532	111	90119	19.46	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	97.30%		
53) Toluene-d8	14.655	98	374918	20.76	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	103.80%		
71) 4-Bromofluorobenzene	17.895	95	146643	20.75	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	103.75%		

## Target Compounds

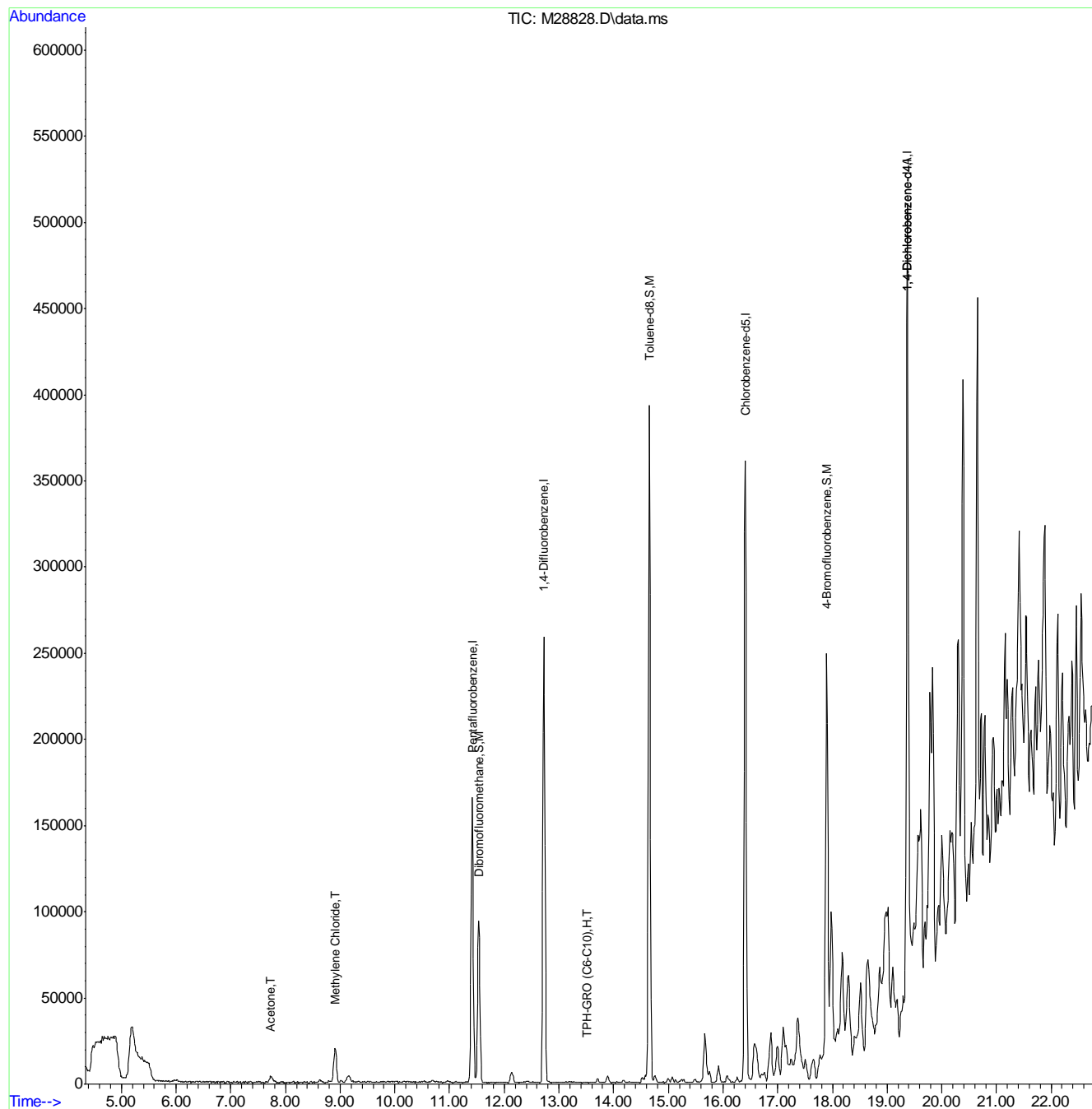
					Qvalue
9) Acetone	7.733	58	3400	4.56	ppb 97
18) Methylene Chloride	8.915	84	16611	2.45	ppb 95
96) TPH-GRO (C6-C10)	13.519	TIC	920286m	31.84	ppb

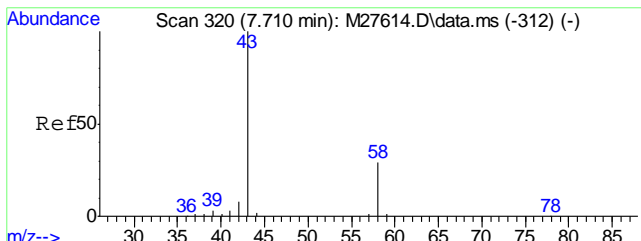
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
Data File : M28828.D  
Acq On : 31 Oct 2011 7:01 pm  
Operator : XINGB  
Sample : C18677-2  
Misc : MS1499,VM912,5.41,,50,5,1  
ALS Vial : 23 Sample Multiplier: 1

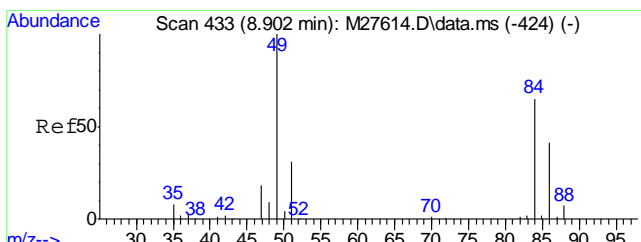
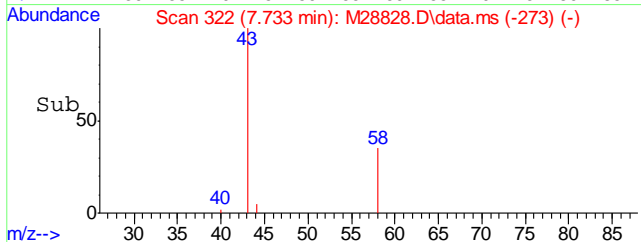
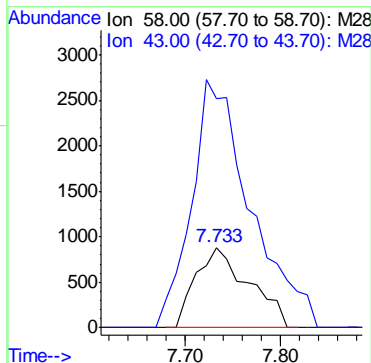
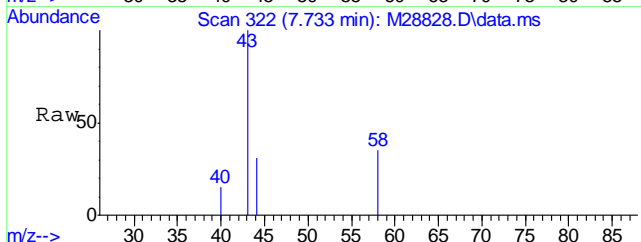
Quant Time: Nov 01 08:46:49 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration





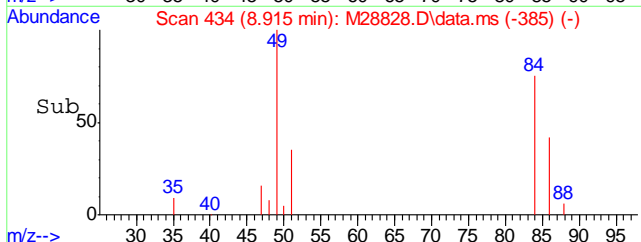
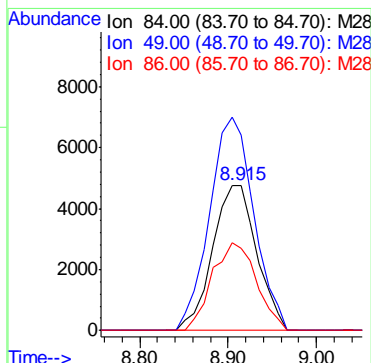
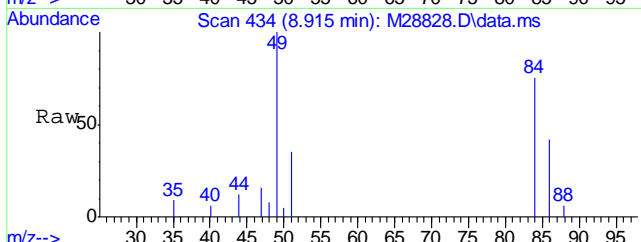
#9  
Acetone  
Concen: 4.56 ppb  
RT: 7.733 min Scan# 322  
Delta R.T. 0.012 min  
Lab File: M28828.D  
Acq: 31 Oct 2011 7:01 pm

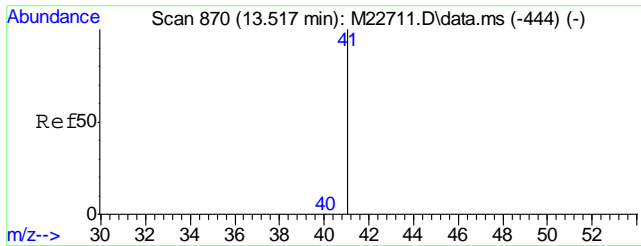
Tgt Ion	Resp	Lower	Upper
58	3400		
58	100		
43	342.7	328.9	368.9



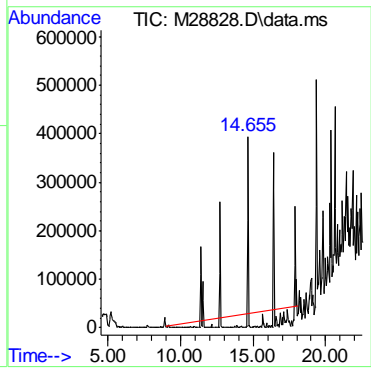
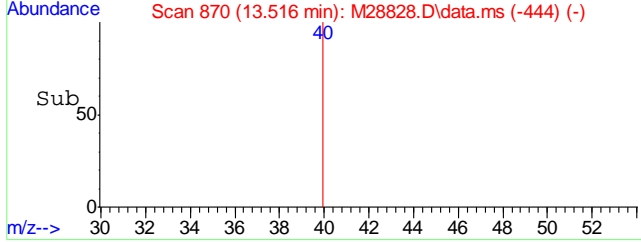
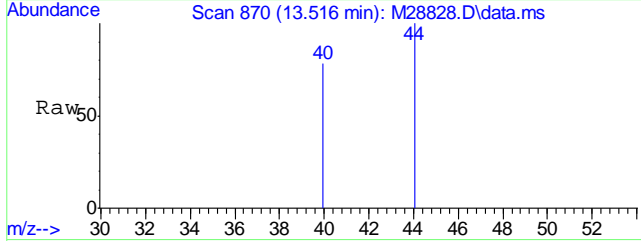
#18  
Methylene Chloride  
Concen: 2.45 ppb  
RT: 8.915 min Scan# 434  
Delta R.T. 0.012 min  
Lab File: M28828.D  
Acq: 31 Oct 2011 7:01 pm

Tgt Ion	Resp	Lower	Upper
84	16611		
84	100		
49	147.0	134.7	174.7
86	60.8	43.0	83.0





#96  
 TPH-GRO (C6-C10)  
 Concen: 31.84 ppb m  
 RT: 13.519 min Scan# 870  
 Delta R.T. 0.000 min  
 Lab File: M28828.D  
 Acq: 31 Oct 2011 7:01 pm  
 Tgt Ion:TIC Resp: 920286



5.1.2  
 5

## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
 Data File : M28824.D  
 Acq On : 31 Oct 2011 5:04 pm  
 Operator : XINGB  
 Sample : C18677-3  
 Misc : MS1499,VM912,6.18,,,,,1  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 01 08:43:56 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.414	168	151814	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.733	114	256067	20.00	ppb	0.00
52) Chlorobenzene-d5	16.405	117	236004	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.370	152	114270	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.370	152	114270	20.00	ppb	0.00

## System Monitoring Compounds

34) Dibromofluoromethane	11.530	111	83754	20.52	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	102.60%		
53) Toluene-d8	14.653	98	329071	20.85	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	104.25%		
71) 4-Bromofluorobenzene	17.893	95	127324	20.62	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	103.10%		

## Target Compounds

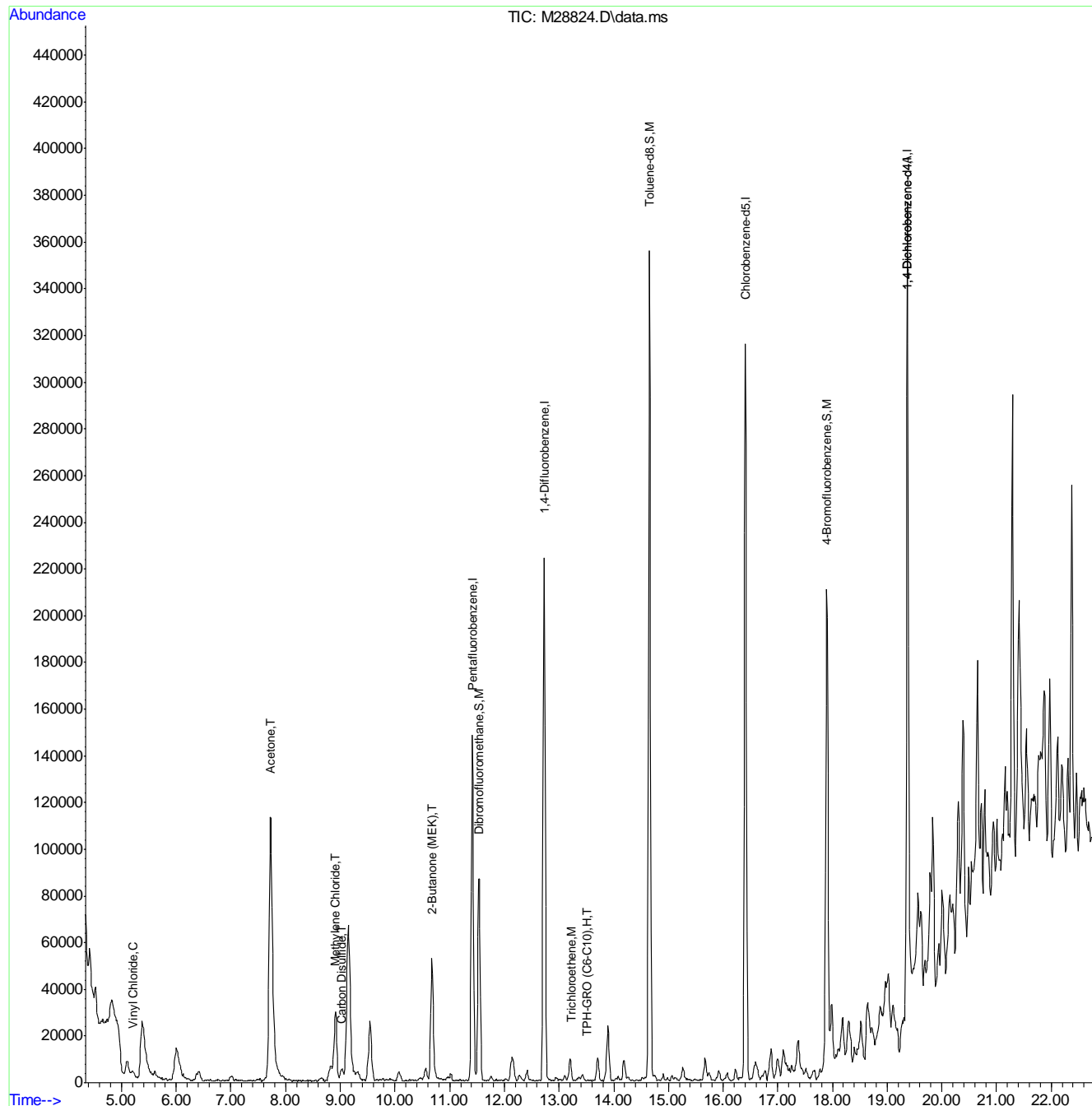
						Qvalue
4) Vinyl Chloride	5.219	62	3089	0.36	ppb	# 43
9) Acetone	7.731	58	110411	168.07	ppb	# 85
18) Methylene Chloride	8.913	84	22660	3.79	ppb	97
20) Carbon Disulfide	9.029	76	15693	0.96	ppb	88
29) 2-Butanone (MEK)	10.675	72	25820	33.97	ppb	# 74
43) Trichloroethene	13.218	130	2129	0.42	ppb	# 72
96) TPH-GRO (C6-C10)	13.519	TIC	1307573m	55.25	ppb	

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

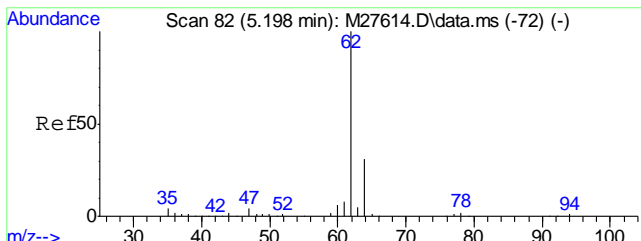
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
 Data File : M28824.D  
 Acq On : 31 Oct 2011 5:04 pm  
 Operator : XINGB  
 Sample : C18677-3  
 Misc : MS1499,VM912,6.18,,,,,1  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 01 08:43:56 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

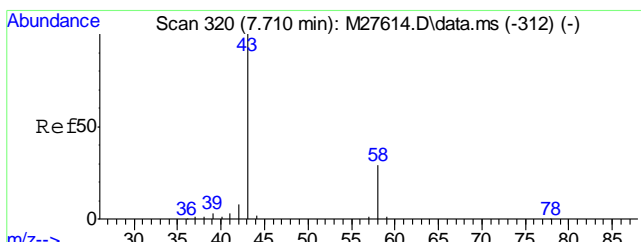
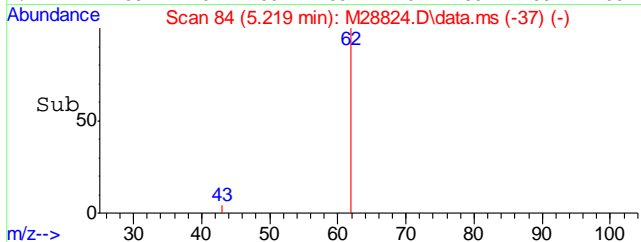
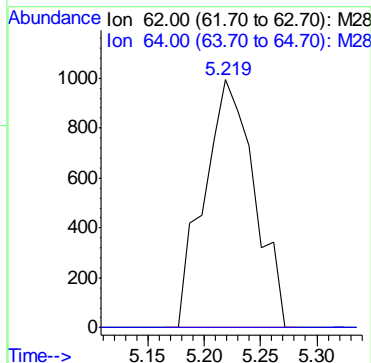
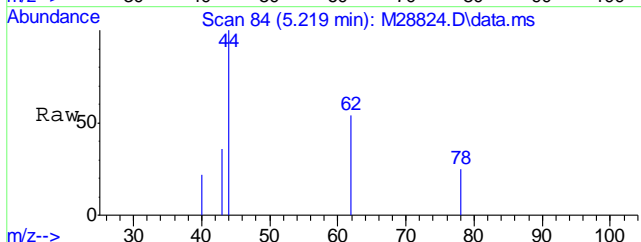


5.1.3  
 5



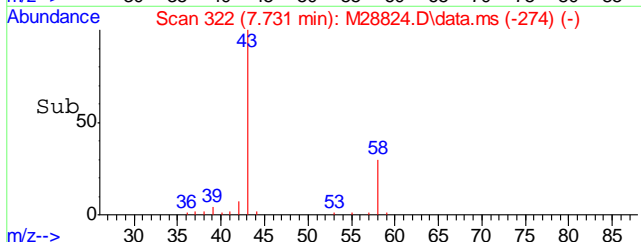
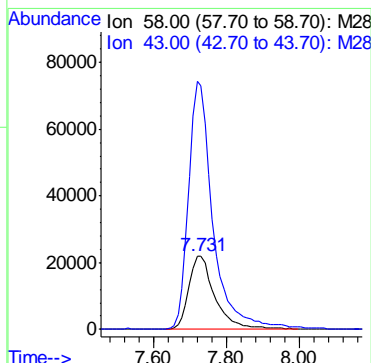
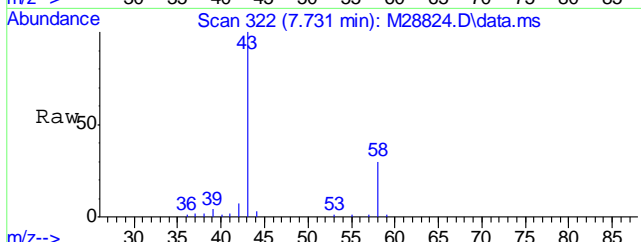
#4  
 Vinyl Chloride  
 Concen: 0.36 ppb  
 RT: 5.219 min Scan# 84  
 Delta R.T. -0.000 min  
 Lab File: M28824.D  
 Acq: 31 Oct 2011 5:04 pm

Tgt Ion	Resp	Lower	Upper
62	3089	100	
64	0.0	11.5	51.5#

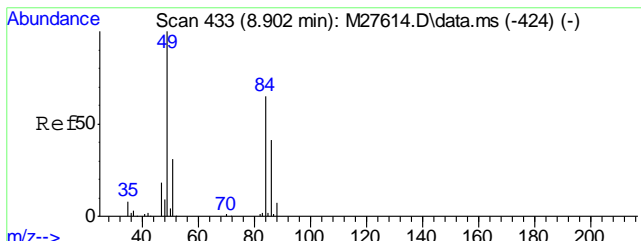


#9  
 Acetone  
 Concen: 168.07 ppb  
 RT: 7.731 min Scan# 322  
 Delta R.T. 0.010 min  
 Lab File: M28824.D  
 Acq: 31 Oct 2011 5:04 pm

Tgt Ion	Resp	Lower	Upper
58	110411	100	
43	315.5	328.9	368.9#

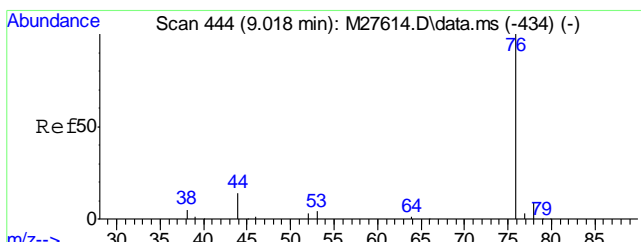
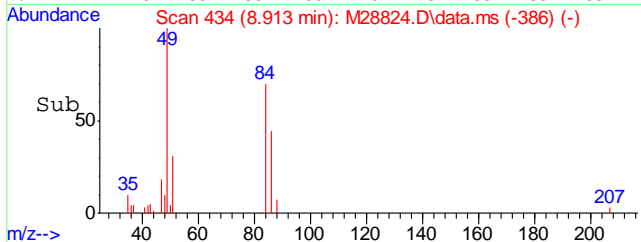
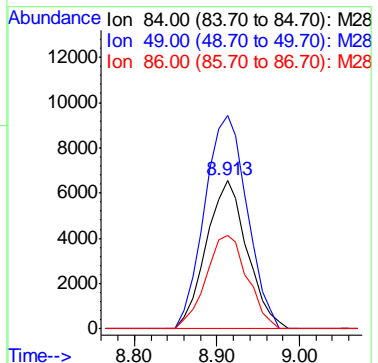
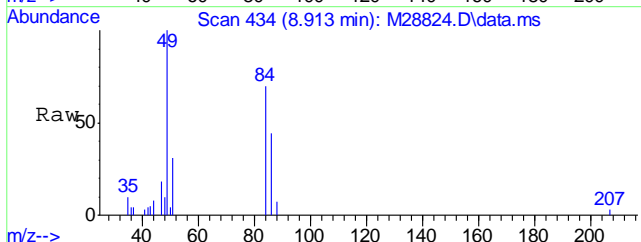






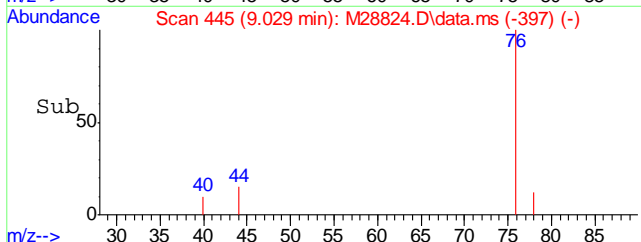
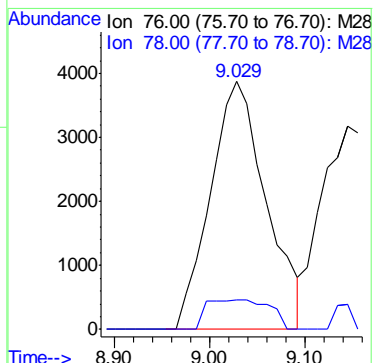
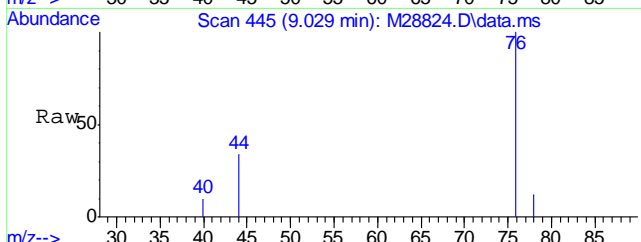
#18  
Methylene Chloride  
Concen: 3.79 ppb  
RT: 8.913 min Scan# 434  
Delta R.T. 0.010 min  
Lab File: M28824.D  
Acq: 31 Oct 2011 5:04 pm

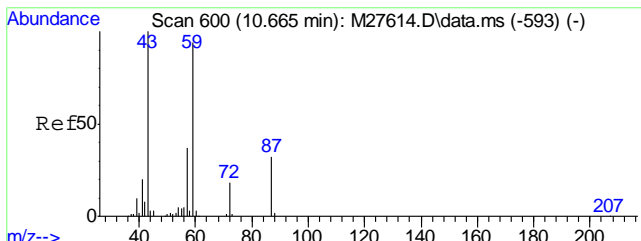
Tgt Ion	Resp	Lower	Upper
84	22660		
49	149.2	134.7	174.7
86	63.7	43.0	83.0



#20  
Carbon Disulfide  
Concen: 0.96 ppb  
RT: 9.029 min Scan# 445  
Delta R.T. 0.010 min  
Lab File: M28824.D  
Acq: 31 Oct 2011 5:04 pm

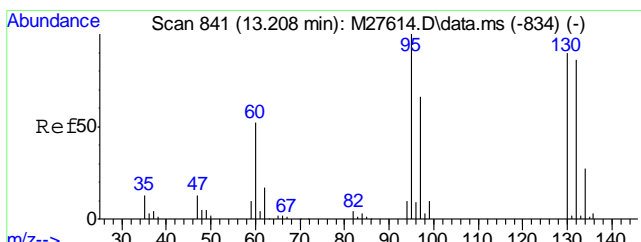
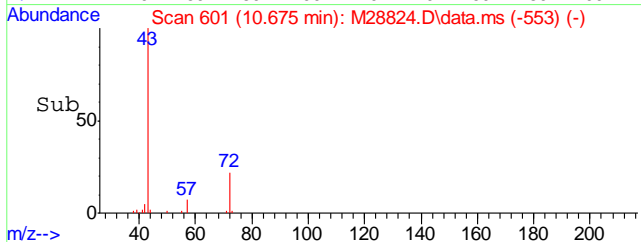
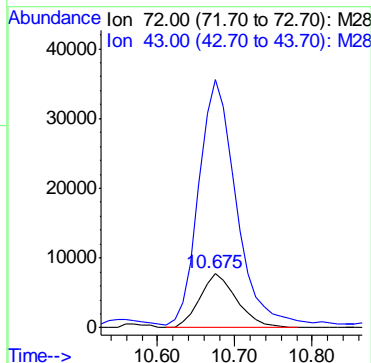
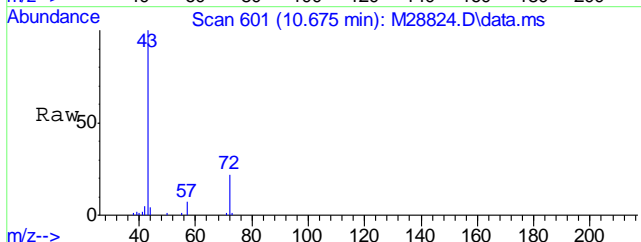
Tgt Ion	Resp	Lower	Upper
76	15693		
78	13.6	0.0	29.2





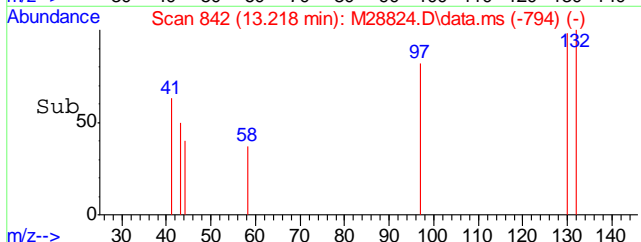
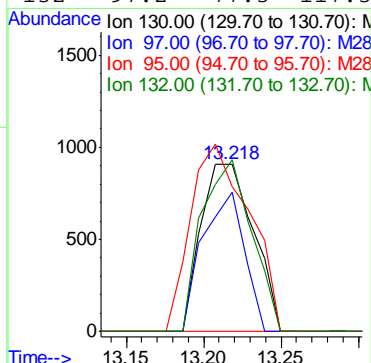
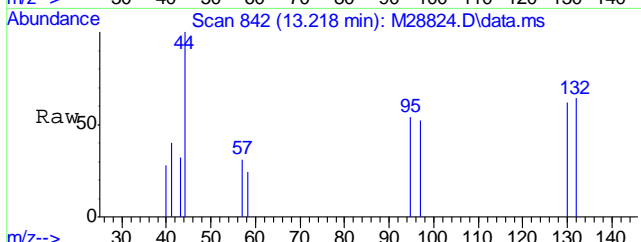
#29  
2-Butanone (MEK)  
Concen: 33.97 ppb  
RT: 10.675 min Scan# 601  
Delta R.T. 0.010 min  
Lab File: M28824.D  
Acq: 31 Oct 2011 5:04 pm

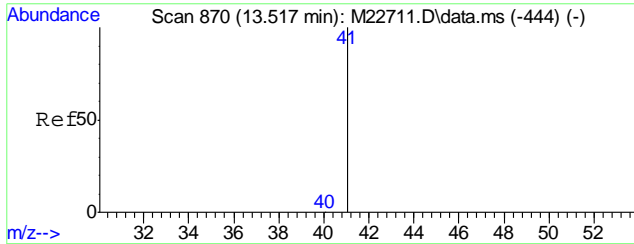
Tgt Ion	Resp	Lower	Upper
72	25820		
72	100		
43	483.6	540.5	580.5#



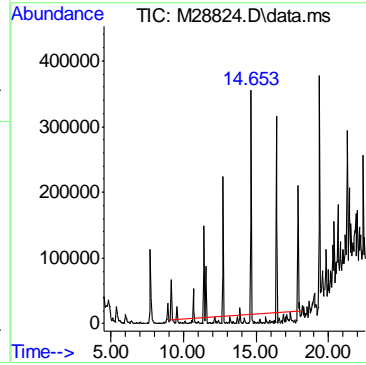
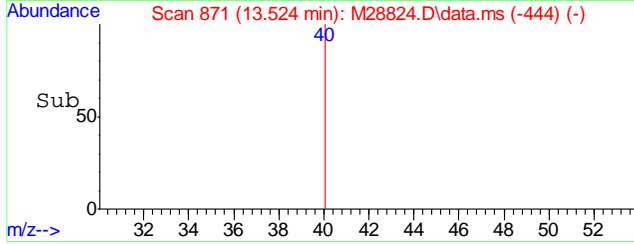
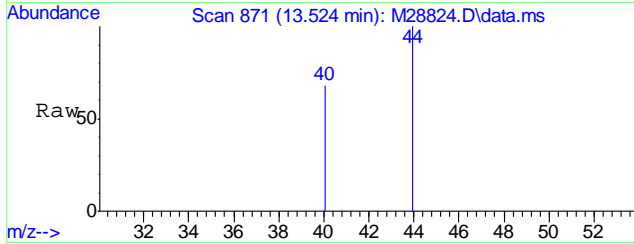
#43  
Trichloroethene  
Concen: 0.42 ppb  
RT: 13.218 min Scan# 842  
Delta R.T. 0.010 min  
Lab File: M28824.D  
Acq: 31 Oct 2011 5:04 pm

Tgt Ion	Resp	Lower	Upper
130	2129		
130	100		
97	0.0	52.9	92.9#
95	125.4	90.9	130.9
132	97.2	77.3	117.3





#96  
 TPH-GRO (C6-C10)  
 Concen: 55.25 ppb m  
 RT: 13.519 min Scan# 871  
 Delta R.T. 0.000 min  
 Lab File: M28824.D  
 Acq: 31 Oct 2011 5:04 pm  
 Tgt Ion:TIC Resp: 1307573



5.1.3  
 5

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
Data File : M28825.D  
Acq On : 31 Oct 2011 5:33 pm  
Operator : XINGB  
Sample : C18677-4  
Misc : MS1499,VM912,7.25,,,,,1  
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 01 08:44:47 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.414	168	159027	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.722	114	272868	20.00	ppb	-0.01
52) Chlorobenzene-d5	16.405	117	248514	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.371	152	119660	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.371	152	119660	20.00	ppb	0.00

System Monitoring Compounds						
34) Dibromofluoromethane	11.530	111	88860	20.78	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	103.90%		
53) Toluene-d8	14.653	98	344812	20.75	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	103.75%		
71) 4-Bromofluorobenzene	17.893	95	132016	20.30	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	101.50%		

Target Compounds						Qvalue
9) Acetone	7.720	58	138051	200.61	ppb	# 79
18) Methylene Chloride	8.902	84	46451	7.42	ppb	97
20) Carbon Disulfide	9.018	76	20505	1.19	ppb	82
21) Methyl-t-butyl Ether	9.293	73	6222	0.37	ppb	70
29) 2-Butanone (MEK)	10.664	72	32625	40.97	ppb	# 64
96) TPH-GRO (C6-C10)	13.519	TIC	2601004m	104.95	ppb	

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

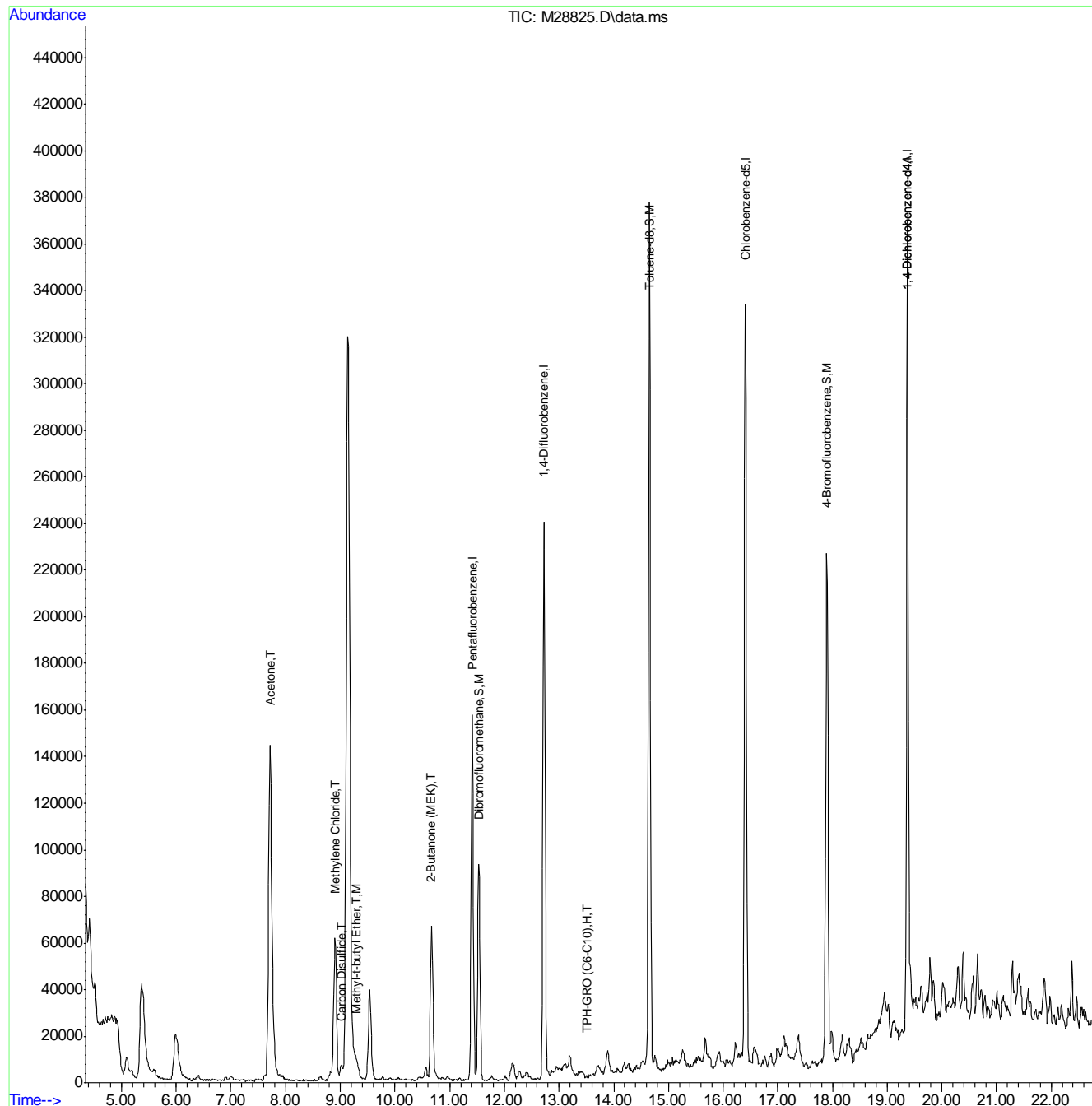
5.14  
5

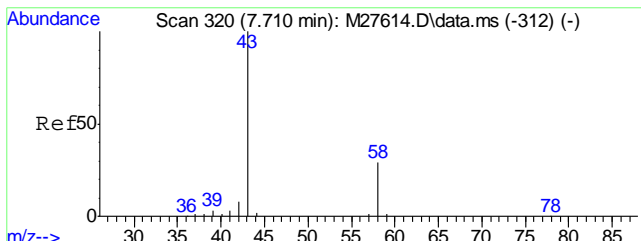
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
 Data File : M28825.D  
 Acq On : 31 Oct 2011 5:33 pm  
 Operator : XINGB  
 Sample : C18677-4  
 Misc : MS1499,VM912,7.25,,,,,1  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 01 08:44:47 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

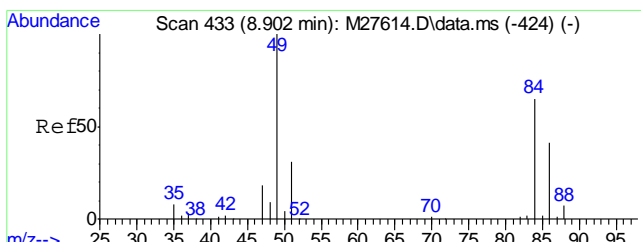
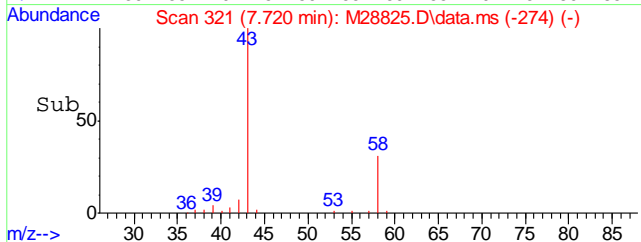
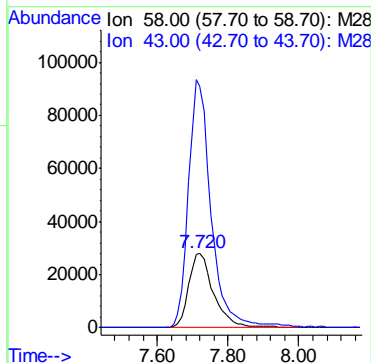
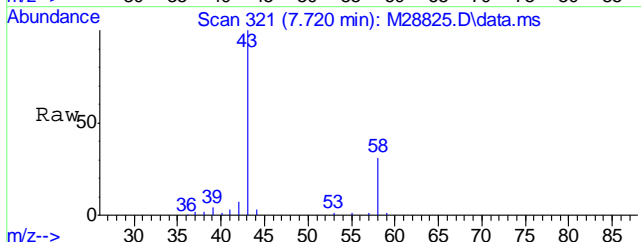
5.1.4  
5





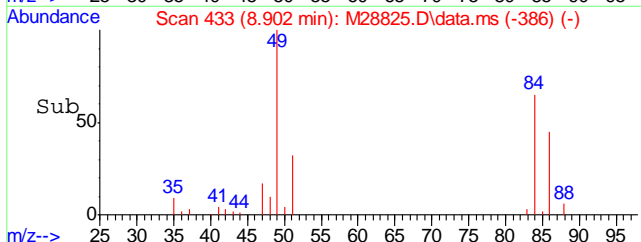
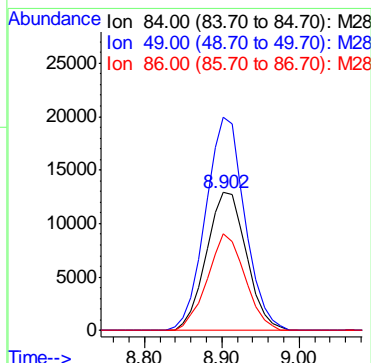
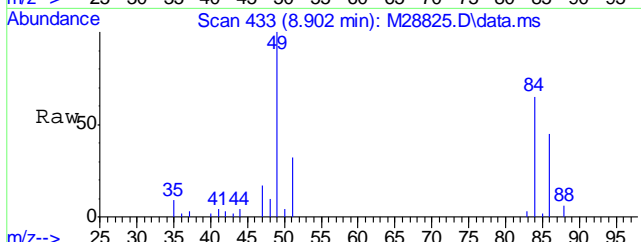
#9  
Acetone  
Concen: 200.61 ppb  
RT: 7.720 min Scan# 321  
Delta R.T. -0.000 min  
Lab File: M28825.D  
Acq: 31 Oct 2011 5:33 pm

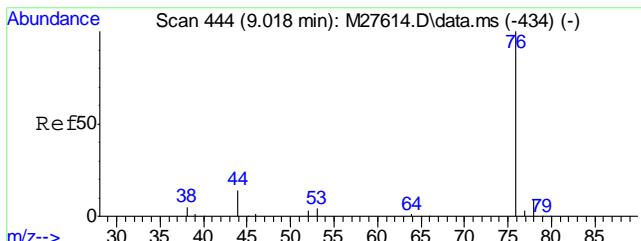
Tgt Ion	Resp	Lower	Upper
58	138051		
58	100		
43	302.5	328.9	368.9#



#18  
Methylene Chloride  
Concen: 7.42 ppb  
RT: 8.902 min Scan# 433  
Delta R.T. -0.000 min  
Lab File: M28825.D  
Acq: 31 Oct 2011 5:33 pm

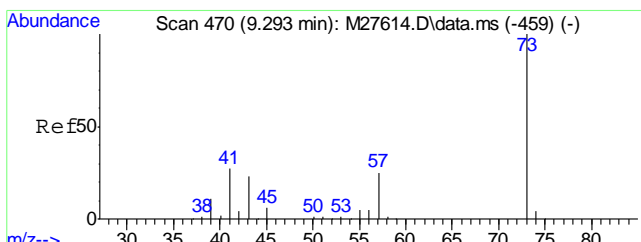
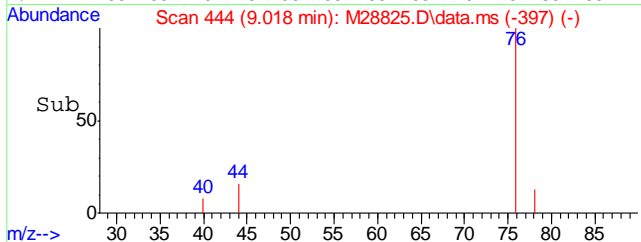
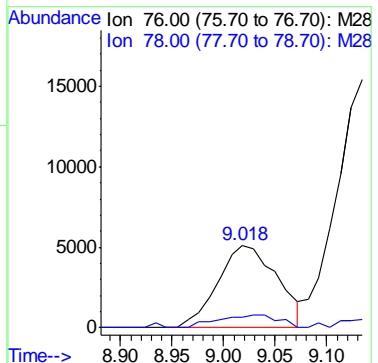
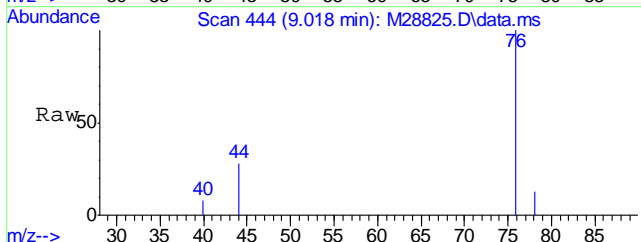
Tgt Ion	Resp	Lower	Upper
84	46451		
84	100		
49	150.5	134.7	174.7
86	65.6	43.0	83.0





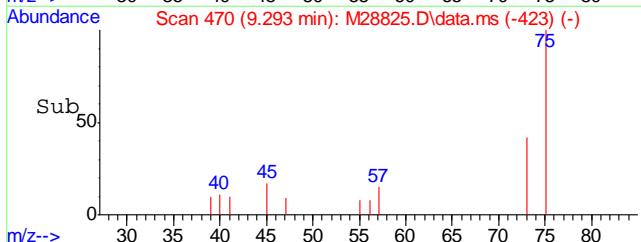
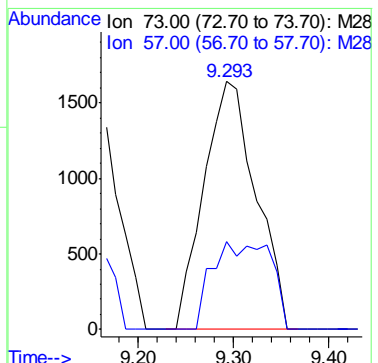
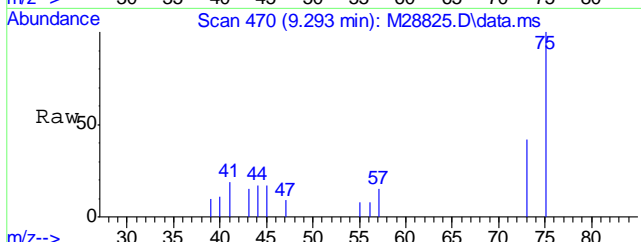
#20  
Carbon Disulfide  
Concen: 1.19 ppb  
RT: 9.018 min Scan# 444  
Delta R.T. -0.000 min  
Lab File: M28825.D  
Acq: 31 Oct 2011 5:33 pm

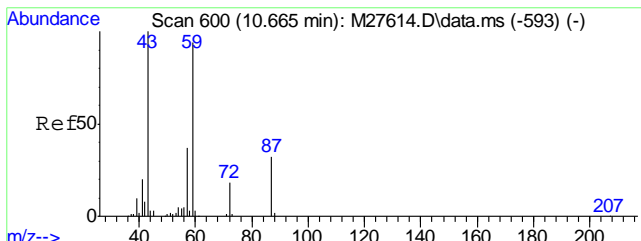
Tgt Ion	Resp	Lower	Upper
76	20505	100	
78	15.8	0.0	29.2



#21  
Methyl-t-butyl Ether  
Concen: 0.37 ppb  
RT: 9.293 min Scan# 470  
Delta R.T. -0.000 min  
Lab File: M28825.D  
Acq: 31 Oct 2011 5:33 pm

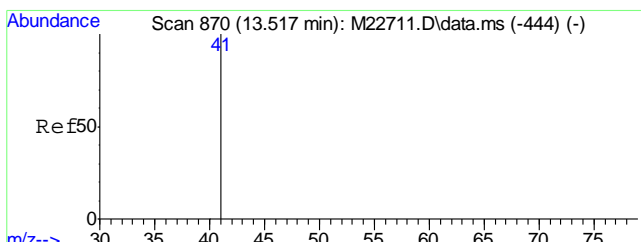
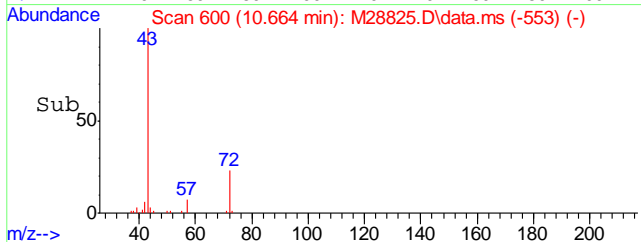
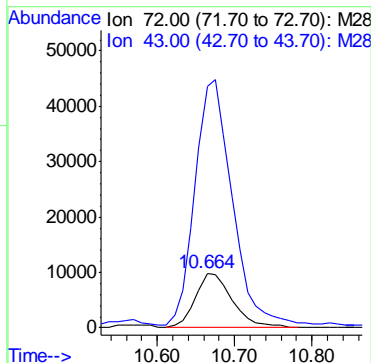
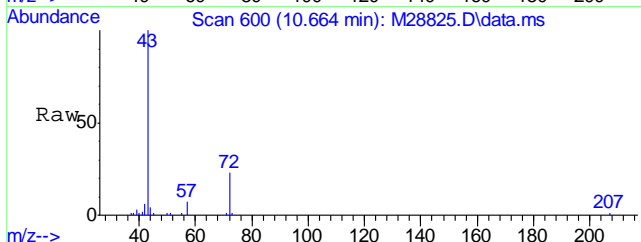
Tgt Ion	Resp	Lower	Upper
73	6222	100	
57	39.7	4.7	44.7





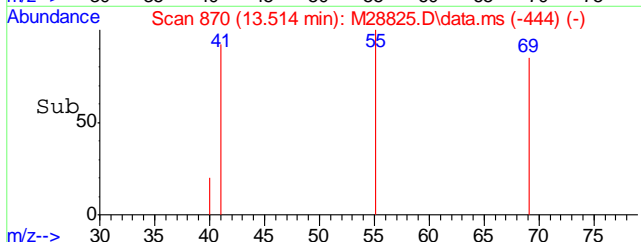
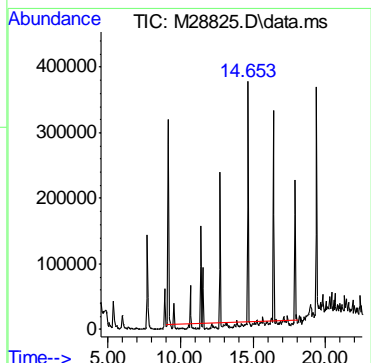
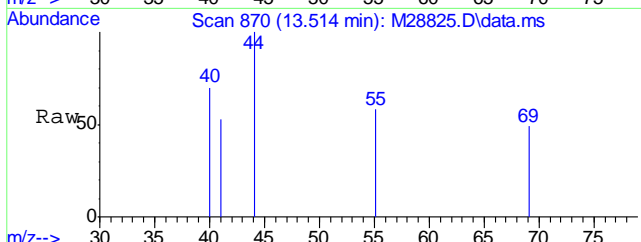
#29  
2-Butanone (MEK)  
Concen: 40.97 ppb  
RT: 10.664 min Scan# 600  
Delta R.T. -0.000 min  
Lab File: M28825.D  
Acq: 31 Oct 2011 5:33 pm

Tgt Ion: 72 Resp: 32625  
Ion Ratio Lower Upper  
72 100  
43 452.6 540.5 580.5#



#96  
TPH-GRO (C6-C10)  
Concen: 104.95 ppb m  
RT: 13.519 min Scan# 870  
Delta R.T. 0.000 min  
Lab File: M28825.D  
Acq: 31 Oct 2011 5:33 pm

Tgt Ion:TIC Resp: 2601004





## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
 Data File : M28826.D  
 Acq On : 31 Oct 2011 6:02 pm  
 Operator : XINGB  
 Sample : C18677-5  
 Misc : MS1499,VM912,4.40,,,,,1  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 01 08:45:35 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.414	168	171610	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.723	114	293973	20.00	ppb	-0.01
52) Chlorobenzene-d5	16.406	117	273196	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.371	152	135972	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.371	152	135972	20.00	ppb	0.00

## System Monitoring Compounds

34) Dibromofluoromethane	11.531	111	92163	19.98	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	99.90%		
53) Toluene-d8	14.654	98	371290	20.32	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	101.60%		
71) 4-Bromofluorobenzene	17.894	95	143365	20.06	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	100.30%		

## Target Compounds

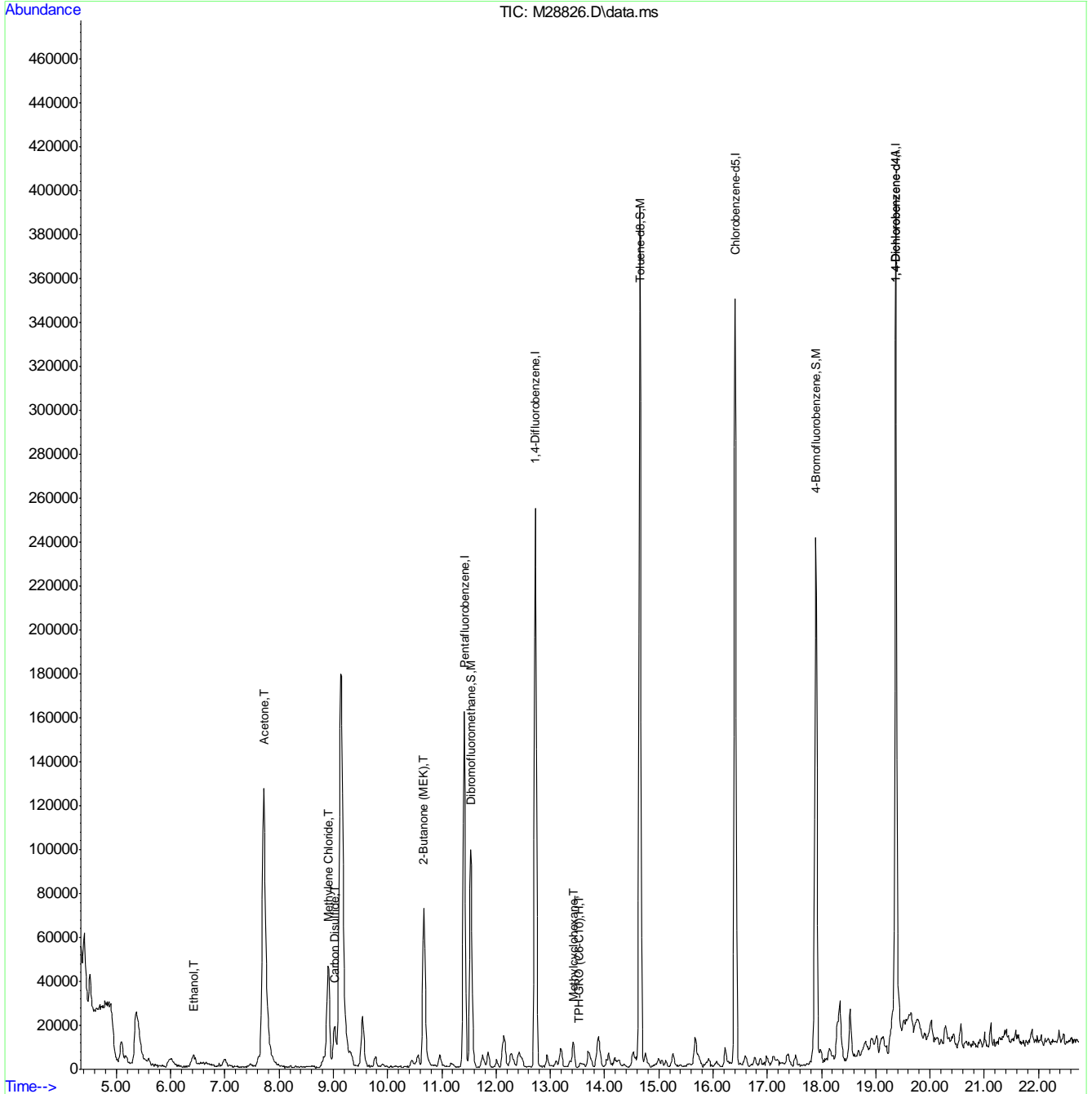
						Qvalue
7) Ethanol	6.434	45	23423m	312.44	ppb	
9) Acetone	7.721	58	131088	176.52	ppb	# 81
18) Methylene Chloride	8.903	84	37268	5.51	ppb	94
20) Carbon Disulfide	9.019	76	57385	3.10	ppb	93
29) 2-Butanone (MEK)	10.665	72	37587	43.74	ppb	# 62
45) Methylcyclohexane	13.430	55	6805	0.60	ppb	88
96) TPH-GRO (C6-C10)	13.519	TIC	2075078m	73.69	ppb	

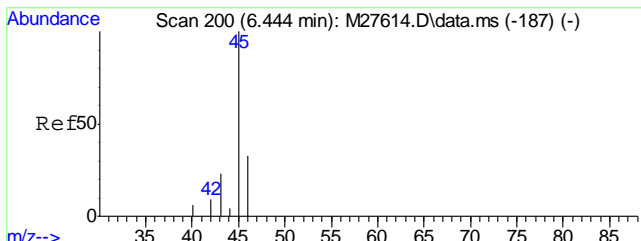
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
 Data File : M28826.D  
 Acq On : 31 Oct 2011 6:02 pm  
 Operator : XINGB  
 Sample : C18677-5  
 Misc : MS1499,VM912,4.40,,,,,1  
 ALS Vial : 21 Sample Multiplier: 1

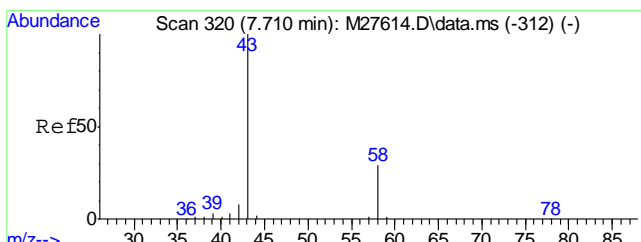
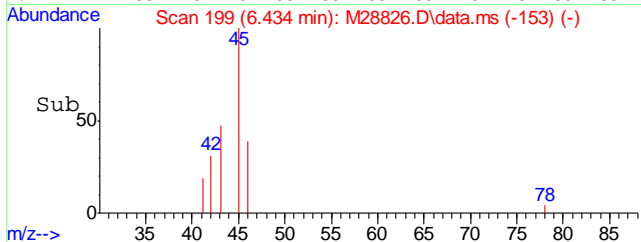
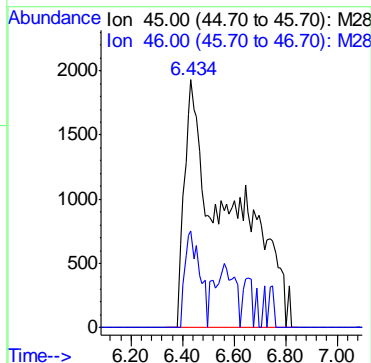
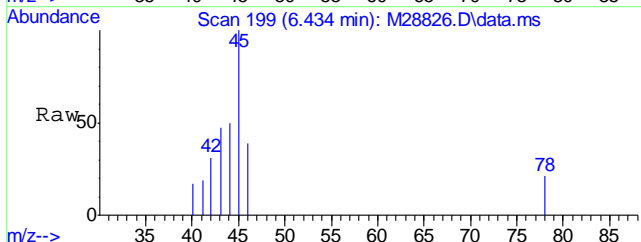
Quant Time: Nov 01 08:45:35 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration





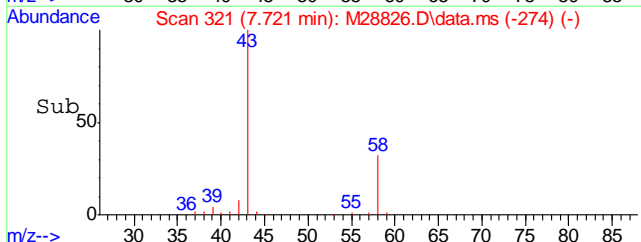
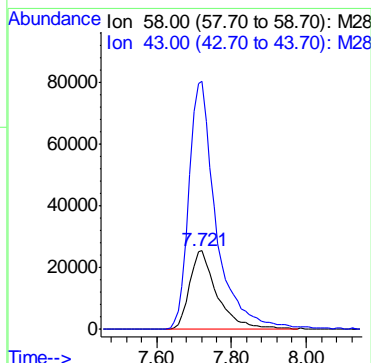
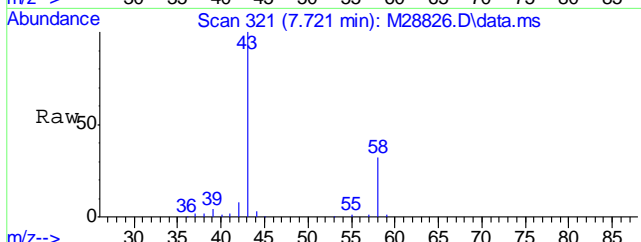
#7  
Ethanol  
Concen: 312.44 ppb m  
RT: 6.434 min Scan# 199  
Delta R.T. -0.009 min  
Lab File: M28826.D  
Acq: 31 Oct 2011 6:02 pm

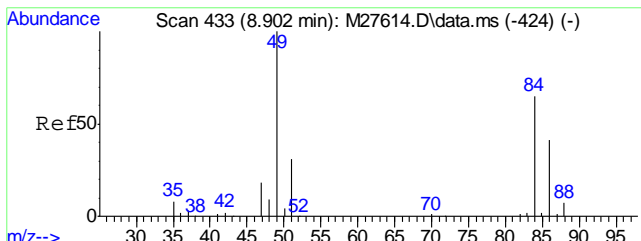
Tgt Ion	Resp	Lower	Upper
45	23423	100	
46	12.6	0.0	57.1



#9  
Acetone  
Concen: 176.52 ppb  
RT: 7.721 min Scan# 321  
Delta R.T. 0.000 min  
Lab File: M28826.D  
Acq: 31 Oct 2011 6:02 pm

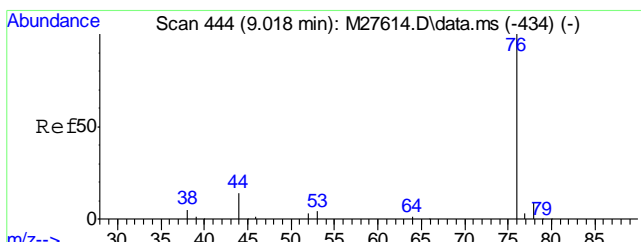
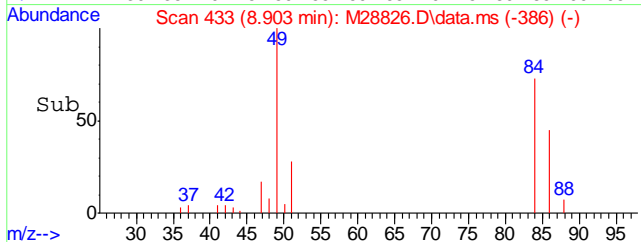
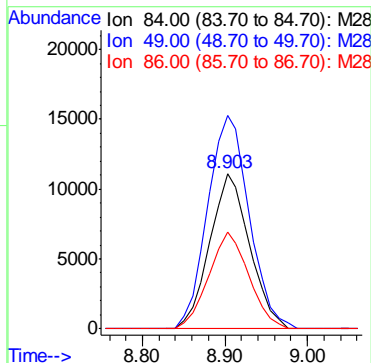
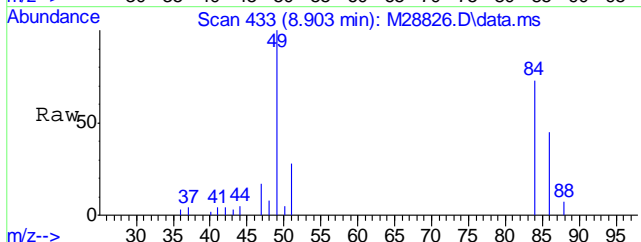
Tgt Ion	Resp	Lower	Upper
58	131088	100	
43	308.2	328.9	368.9#





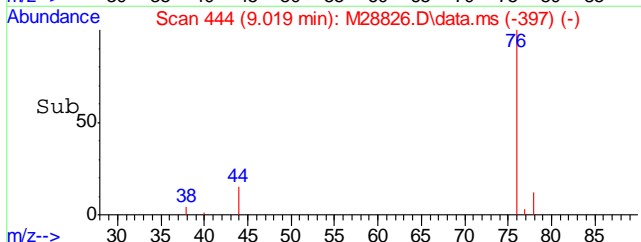
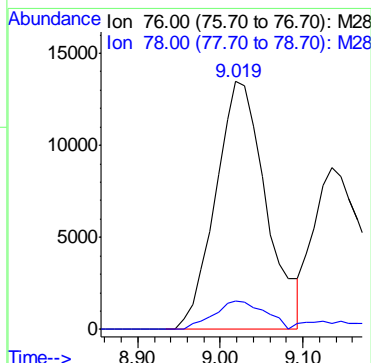
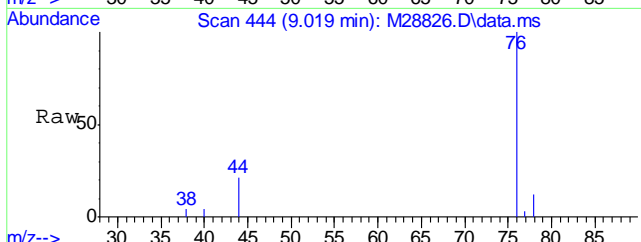
#18  
 Methylene Chloride  
 Concen: 5.51 ppb  
 RT: 8.903 min Scan# 433  
 Delta R.T. 0.000 min  
 Lab File: M28826.D  
 Acq: 31 Oct 2011 6:02 pm

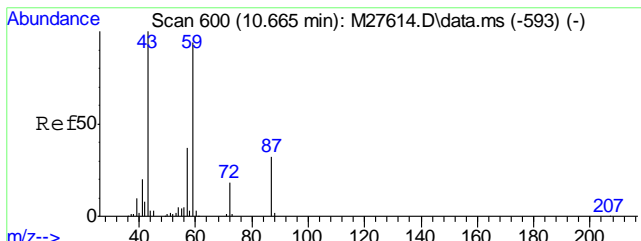
Tgt Ion	Resp	Lower	Upper
84	37268		
84	100		
49	143.3	134.7	174.7
86	62.9	43.0	83.0



#20  
 Carbon Disulfide  
 Concen: 3.10 ppb  
 RT: 9.019 min Scan# 444  
 Delta R.T. 0.000 min  
 Lab File: M28826.D  
 Acq: 31 Oct 2011 6:02 pm

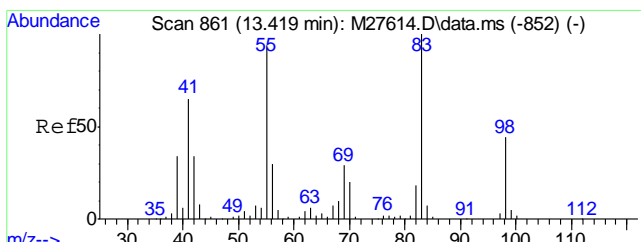
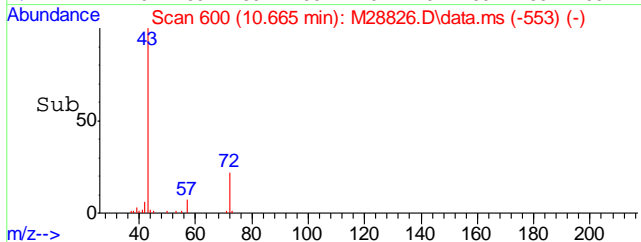
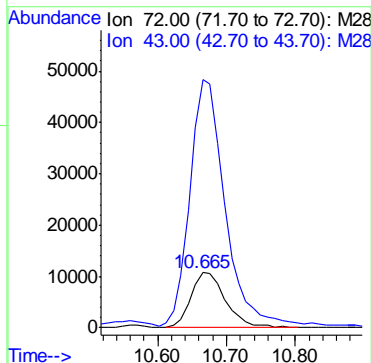
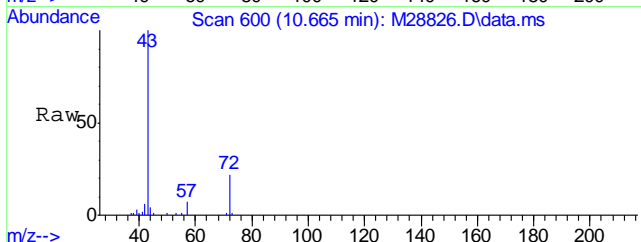
Tgt Ion	Resp	Lower	Upper
76	57385		
76	100		
78	11.6	0.0	29.2





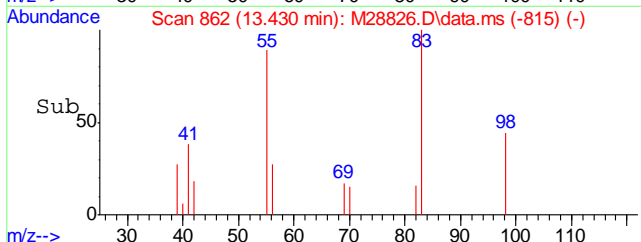
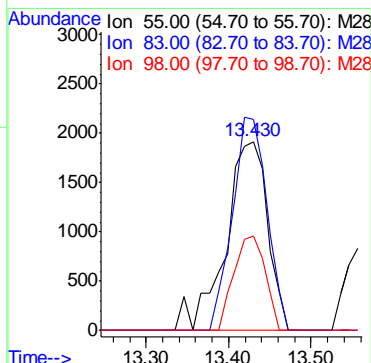
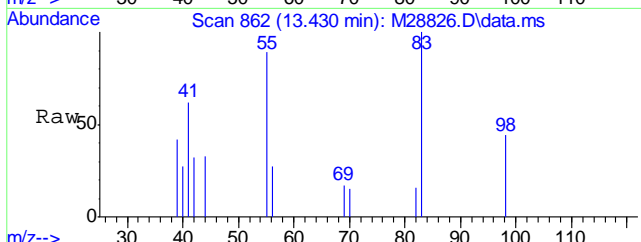
#29  
 2-Butanone (MEK)  
 Concen: 43.74 ppb  
 RT: 10.665 min Scan# 600  
 Delta R.T. 0.000 min  
 Lab File: M28826.D  
 Acq: 31 Oct 2011 6:02 pm

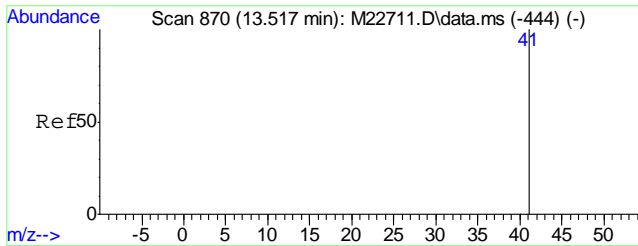
Tgt Ion	Resp	Lower	Upper
72	37587	100	
43	448.5	540.5	580.5#



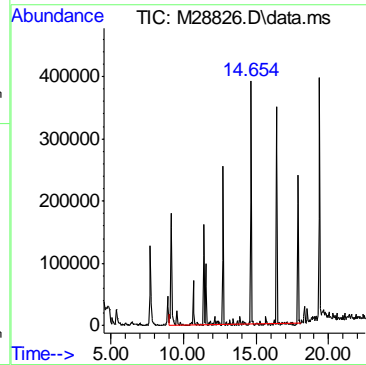
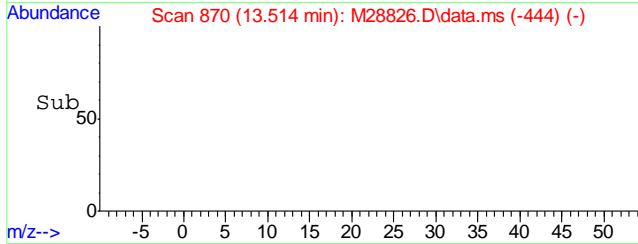
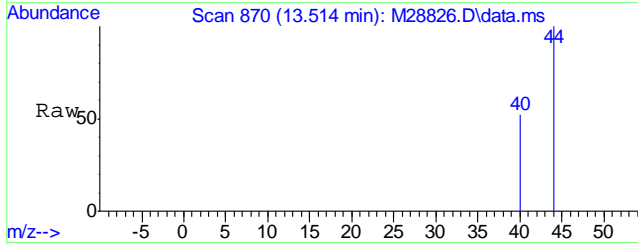
#45  
 Methylcyclohexane  
 Concen: 0.60 ppb  
 RT: 13.430 min Scan# 862  
 Delta R.T. 0.000 min  
 Lab File: M28826.D  
 Acq: 31 Oct 2011 6:02 pm

Tgt Ion	Resp	Lower	Upper
55	6805	100	
83	92.9	84.2	124.2
98	37.3	26.1	66.1





#96  
TPH-GRO (C6-C10)  
Concen: 73.69 ppb m  
RT: 13.519 min Scan# 870  
Delta R.T. 0.000 min  
Lab File: M28826.D  
Acq: 31 Oct 2011 6:02 pm  
Tgt Ion:TIC Resp: 2075078



5.1.5  
5

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
Data File : M28830.D  
Acq On : 31 Oct 2011 7:59 pm  
Operator : XINGB  
Sample : C18677-6  
Misc : MS1499,VM912,4.89,,50,5,1  
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 01 08:49:35 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.415	168	188470	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.723	114	323226	20.00	ppb	0.00
52) Chlorobenzene-d5	16.406	117	299934	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.372	152	152872	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.372	152	152872	20.00	ppb	0.00

System Monitoring Compounds						
34) Dibromofluoromethane	11.531	111	97165	19.18	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	95.90%		
53) Toluene-d8	14.654	98	410609	20.47	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	102.35%		
71) 4-Bromofluorobenzene	17.894	95	158276	20.17	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	100.85%		

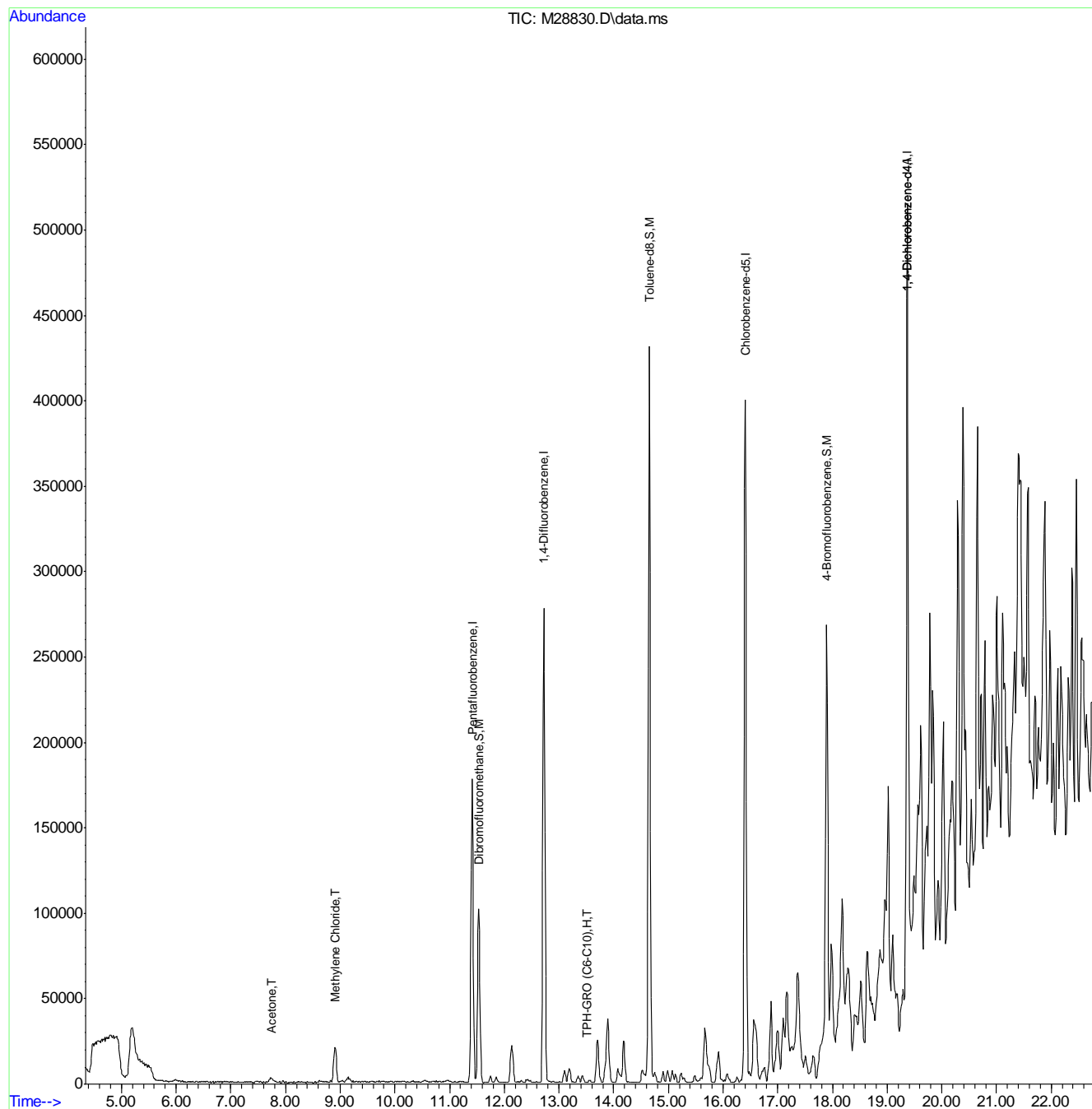
Target Compounds						Qvalue
9) Acetone	7.742	58	2692	3.30	ppb	95
18) Methylene Chloride	8.903	84	18124	2.44	ppb	86
96) TPH-GRO (C6-C10)	13.519	TIC	2019428m	63.78	ppb	

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

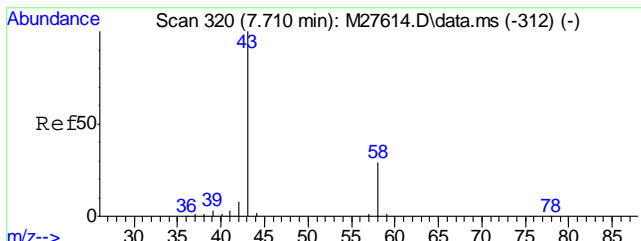
## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
Data File : M28830.D  
Acq On : 31 Oct 2011 7:59 pm  
Operator : XINGB  
Sample : C18677-6  
Misc : MS1499,VM912,4.89,,50,5,1  
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 01 08:49:35 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration

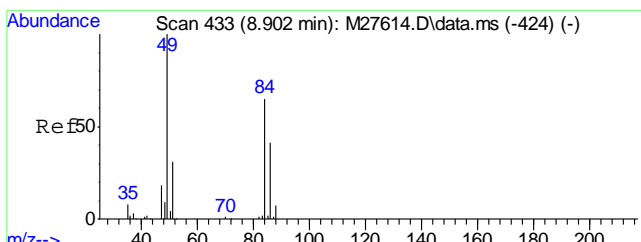
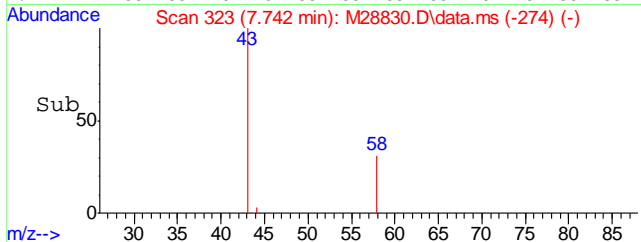
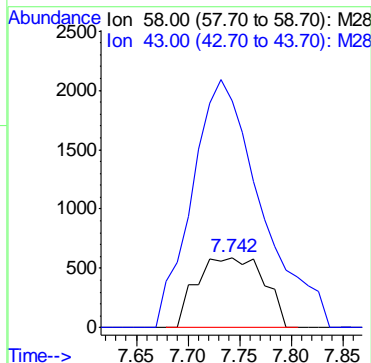
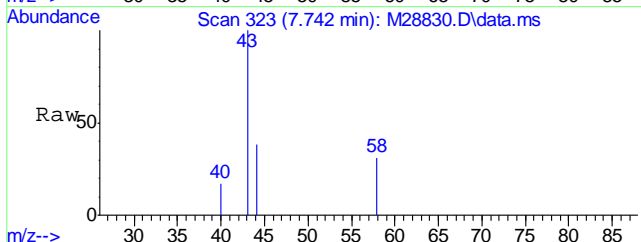






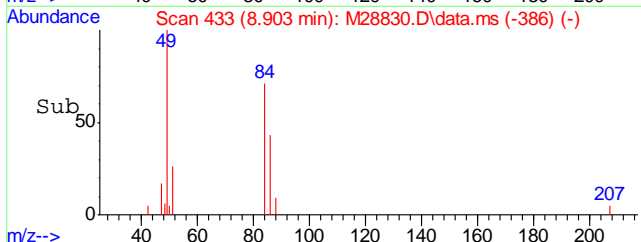
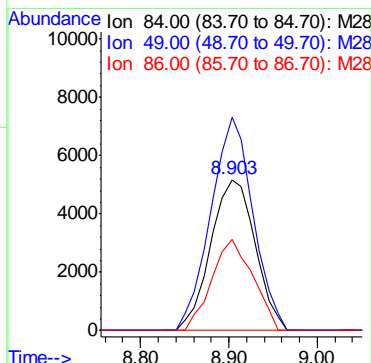
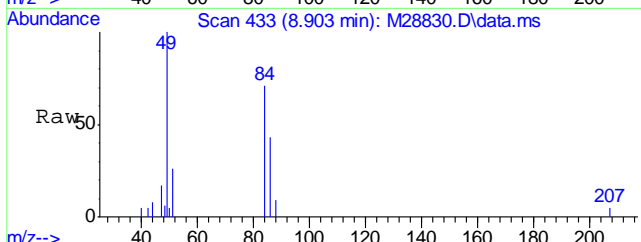
#9  
Acetone  
Concen: 3.30 ppb  
RT: 7.742 min Scan# 323  
Delta R.T. 0.022 min  
Lab File: M28830.D  
Acq: 31 Oct 2011 7:59 pm

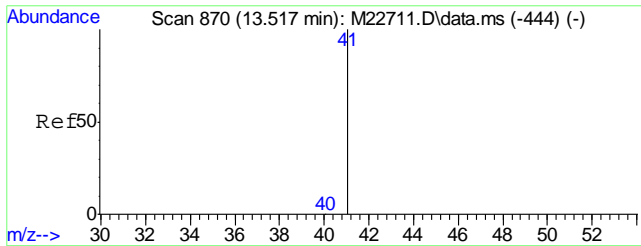
Tgt Ion	Resp	Lower	Upper
58	2692		
58	100		
43	360.0	328.9	368.9



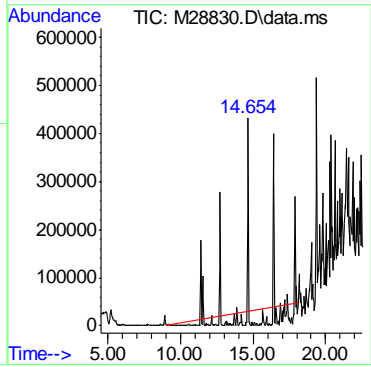
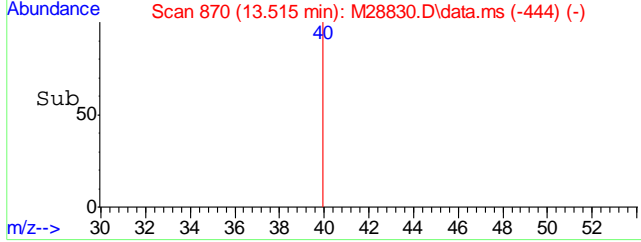
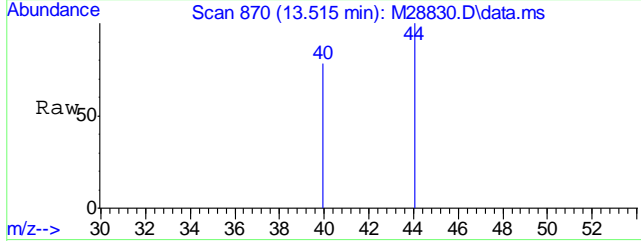
#18  
Methylene Chloride  
Concen: 2.44 ppb  
RT: 8.903 min Scan# 433  
Delta R.T. 0.001 min  
Lab File: M28830.D  
Acq: 31 Oct 2011 7:59 pm

Tgt Ion	Resp	Lower	Upper
84	18124		
84	100		
49	134.7	134.7	174.7
86	55.8	43.0	83.0





#96  
TPH-GRO (C6-C10)  
Concen: 63.78 ppb m  
RT: 13.519 min Scan# 870  
Delta R.T. 0.000 min  
Lab File: M28830.D  
Acq: 31 Oct 2011 7:59 pm  
Tgt Ion:TIC Resp: 2019428



5.1.6  
5

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
Data File : M28827.D  
Acq On : 31 Oct 2011 6:32 pm  
Operator : XINGB  
Sample : C18677-7  
Misc : MS1499,VM912,5.16,,,,,1  
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 01 08:46:12 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.414	168	174248	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.722	114	299499	20.00	ppb	-0.01
52) Chlorobenzene-d5	16.405	117	276834	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.370	152	135033	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.370	152	135033	20.00	ppb	0.00

System Monitoring Compounds						
34) Dibromofluoromethane	11.530	111	95764	20.44	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	102.20%		
53) Toluene-d8	14.653	98	377106	20.37	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	101.85%		
71) 4-Bromofluorobenzene	17.893	95	144101	19.90	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	99.50%		

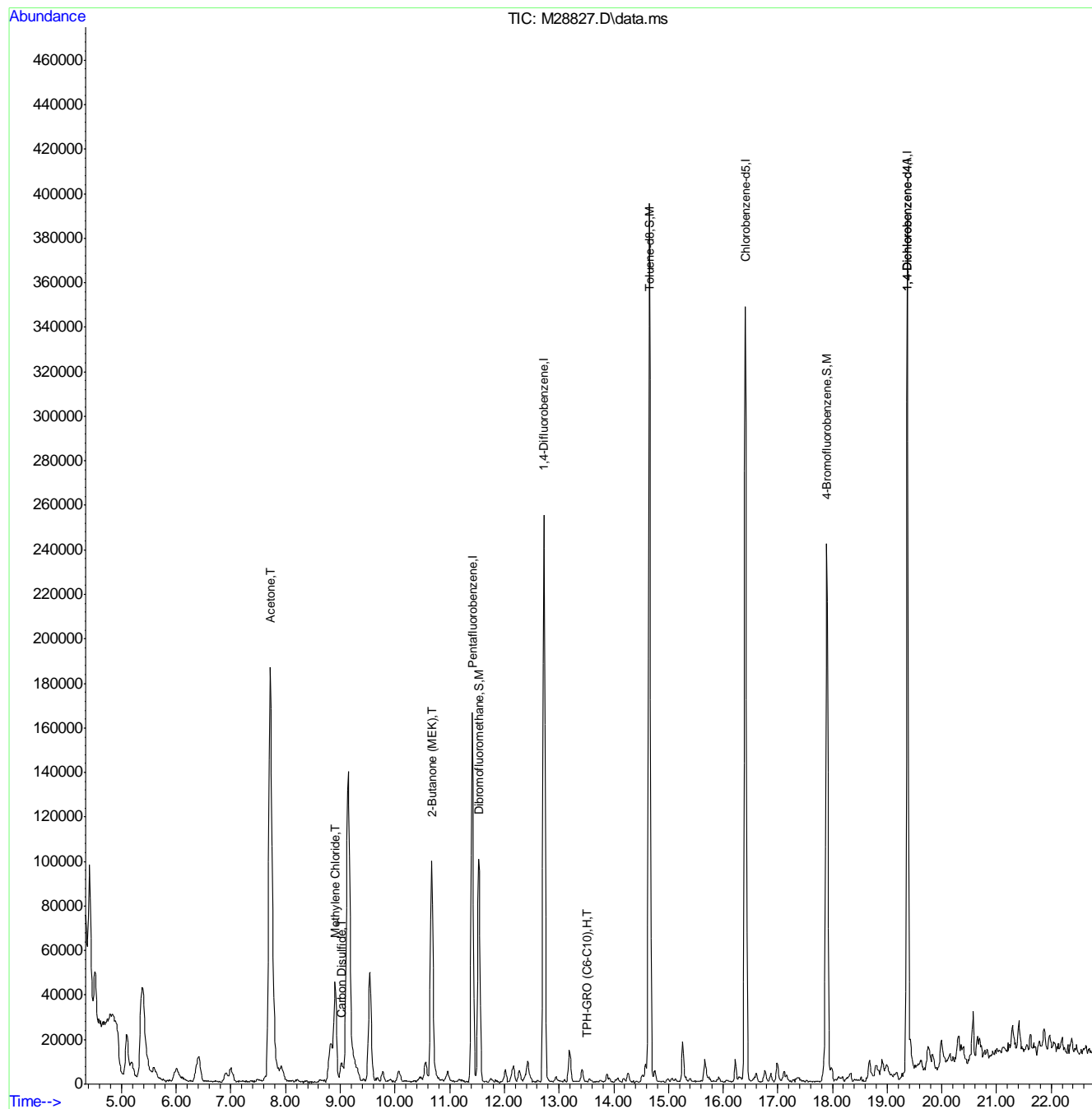
Target Compounds						Qvalue
9) Acetone	7.720	58	195511	259.29	ppb	# 71
18) Methylene Chloride	8.902	84	33558	4.89	ppb	93
20) Carbon Disulfide	9.029	76	25835	1.37	ppb	85
29) 2-Butanone (MEK)	10.675	72	52313	59.96	ppb	# 60
96) TPH-GRO (C6-C10)	13.519	TIC	1760231m	62.94	ppb	

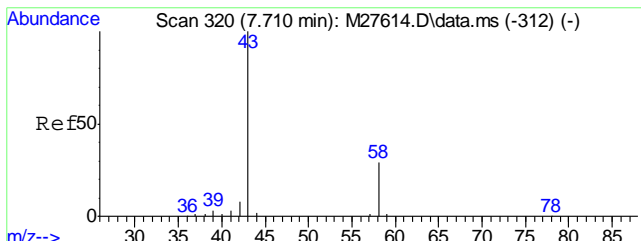
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
Data File : M28827.D  
Acq On : 31 Oct 2011 6:32 pm  
Operator : XINGB  
Sample : C18677-7  
Misc : MS1499,VM912,5.16,,,,,1  
ALS Vial : 22 Sample Multiplier: 1

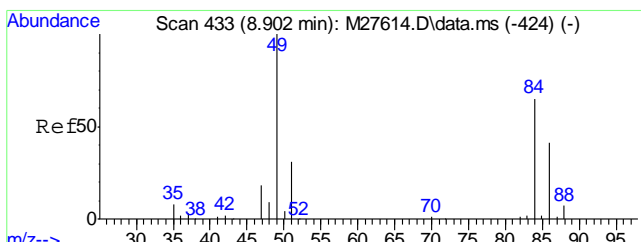
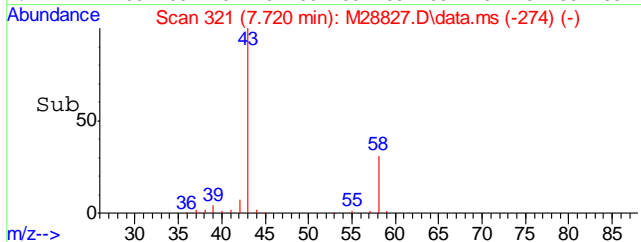
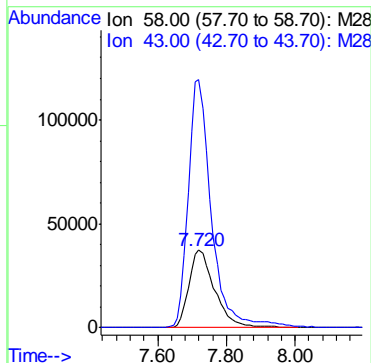
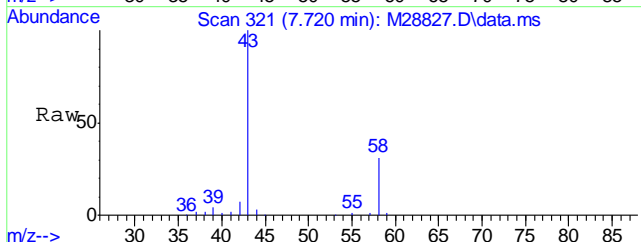
Quant Time: Nov 01 08:46:12 2011  
Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
Quant Title : EPA 8260B  
QLast Update : Thu Sep 15 15:04:15 2011  
Response via : Initial Calibration





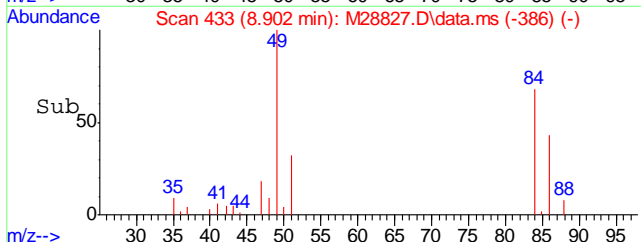
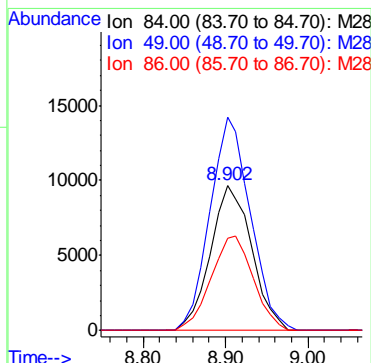
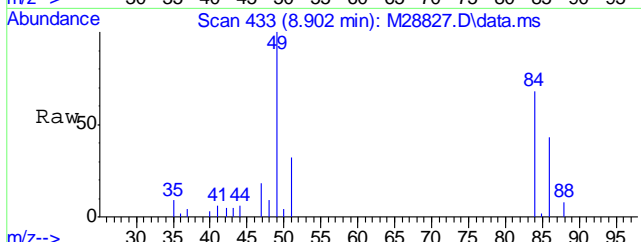
#9  
Acetone  
Concen: 259.29 ppb  
RT: 7.720 min Scan# 321  
Delta R.T. -0.000 min  
Lab File: M28827.D  
Acq: 31 Oct 2011 6:32 pm

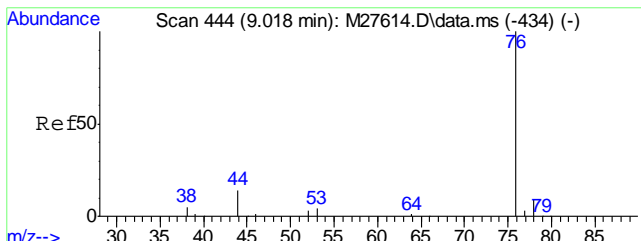
Tgt Ion	Resp	Lower	Upper
58	195511		
58	100		
43	286.2	328.9	368.9#



#18  
Methylene Chloride  
Concen: 4.89 ppb  
RT: 8.902 min Scan# 433  
Delta R.T. -0.000 min  
Lab File: M28827.D  
Acq: 31 Oct 2011 6:32 pm

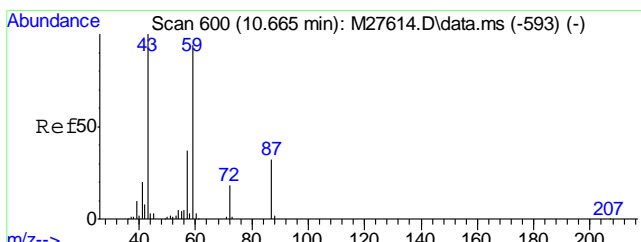
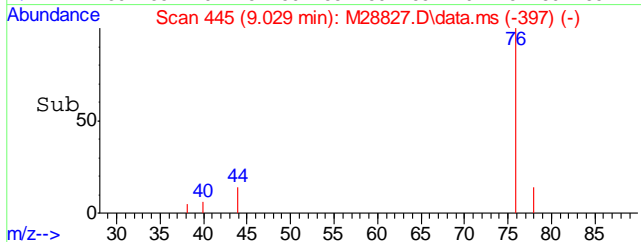
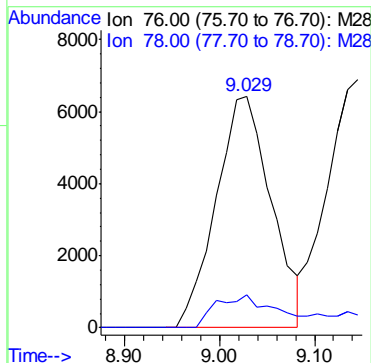
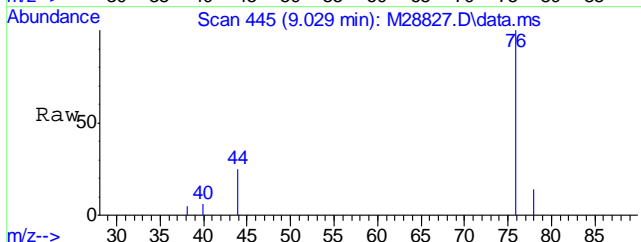
Tgt Ion	Resp	Lower	Upper
84	33558		
84	100		
49	144.7	134.7	174.7
86	66.4	43.0	83.0





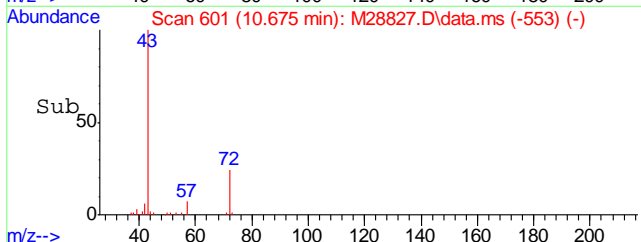
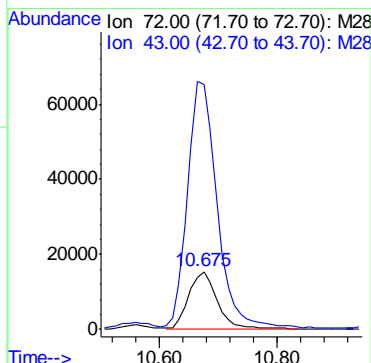
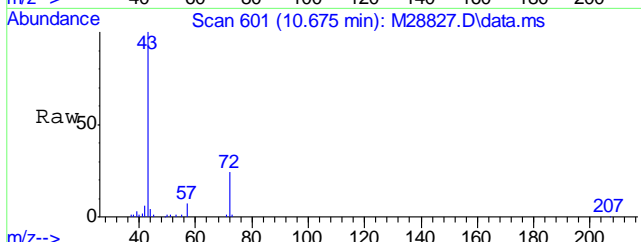
#20  
Carbon Disulfide  
Concen: 1.37 ppb  
RT: 9.029 min Scan# 445  
Delta R.T. 0.010 min  
Lab File: M28827.D  
Acq: 31 Oct 2011 6:32 pm

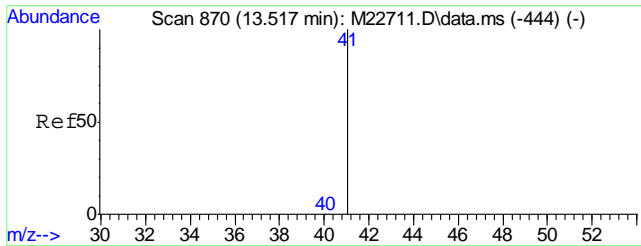
Tgt Ion	Resp	Lower	Upper
76	25835	100	
78	14.5	0.0	29.2



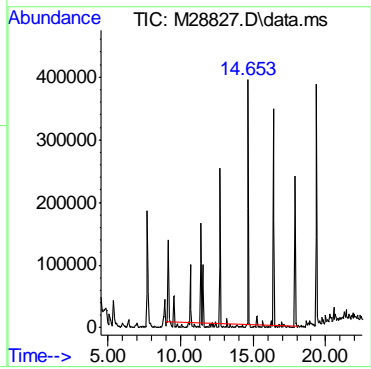
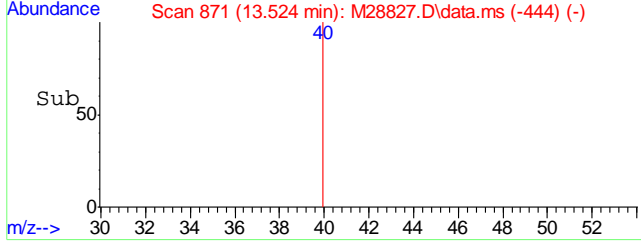
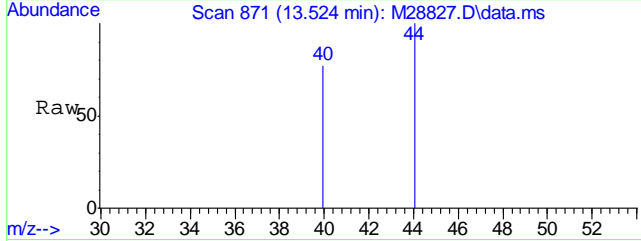
#29  
2-Butanone (MEK)  
Concen: 59.96 ppb  
RT: 10.675 min Scan# 601  
Delta R.T. 0.010 min  
Lab File: M28827.D  
Acq: 31 Oct 2011 6:32 pm

Tgt Ion	Resp	Lower	Upper
72	52313	100	
43	441.5	540.5	580.5#





#96  
 TPH-GRO (C6-C10)  
 Concen: 62.94 ppb m  
 RT: 13.519 min Scan# 871  
 Delta R.T. 0.000 min  
 Lab File: M28827.D  
 Acq: 31 Oct 2011 6:32 pm  
 Tgt Ion:TIC Resp: 1760231



5.17  
 5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\N111031\
Data File : N26076.D
Acq On : 31 Oct 2011 1:49 pm
Operator : titiaf
Sample : C18677-8
Misc : MS1531,VN864,10,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 01 09:44:24 2011
Quant Method : C:\MSDCHEM\1\METHODS\VN844W.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Oct 07 10:59:38 2011
Response via : Initial Calibration

Table with 7 columns: Internal Standards, R.T., QIon, Response, Conc, Units, Dev(Min). Rows include 1) Pentafluorobenzene, 43) 1,4-Difluorobenzene, 59) Chlorobenzene-d5, 82) 1,4-Dichlorobenzene-d4, 103) 1,4-Dichlorobenzene-d4A.

Table with 7 columns: System Monitoring Compounds, R.T., QIon, Response, Conc, Units, Dev(Min). Rows include 40) Dibromofluoromethane, 60) Toluene-d8, 79) 4-Bromofluorobenzene.

Table with 7 columns: Target Compounds, R.T., QIon, Response, Conc, Units, Qvalue. Rows include 4) Vinyl Chloride, 7) Ethanol, 11) Acetone, 14) tert-Butanol (TBA), 19) Methylene Chloride, 21) Carbon Disulfide, 22) Methyl-t-butyl Ether, 25) Diisopropyl Ether, 34) 2-Butanone (MEK), 37) cis-1,2-Dichloroethene, 48) Trichloroethene, 101) Naphthalene, 104) TPH-GRO (C6-C10).

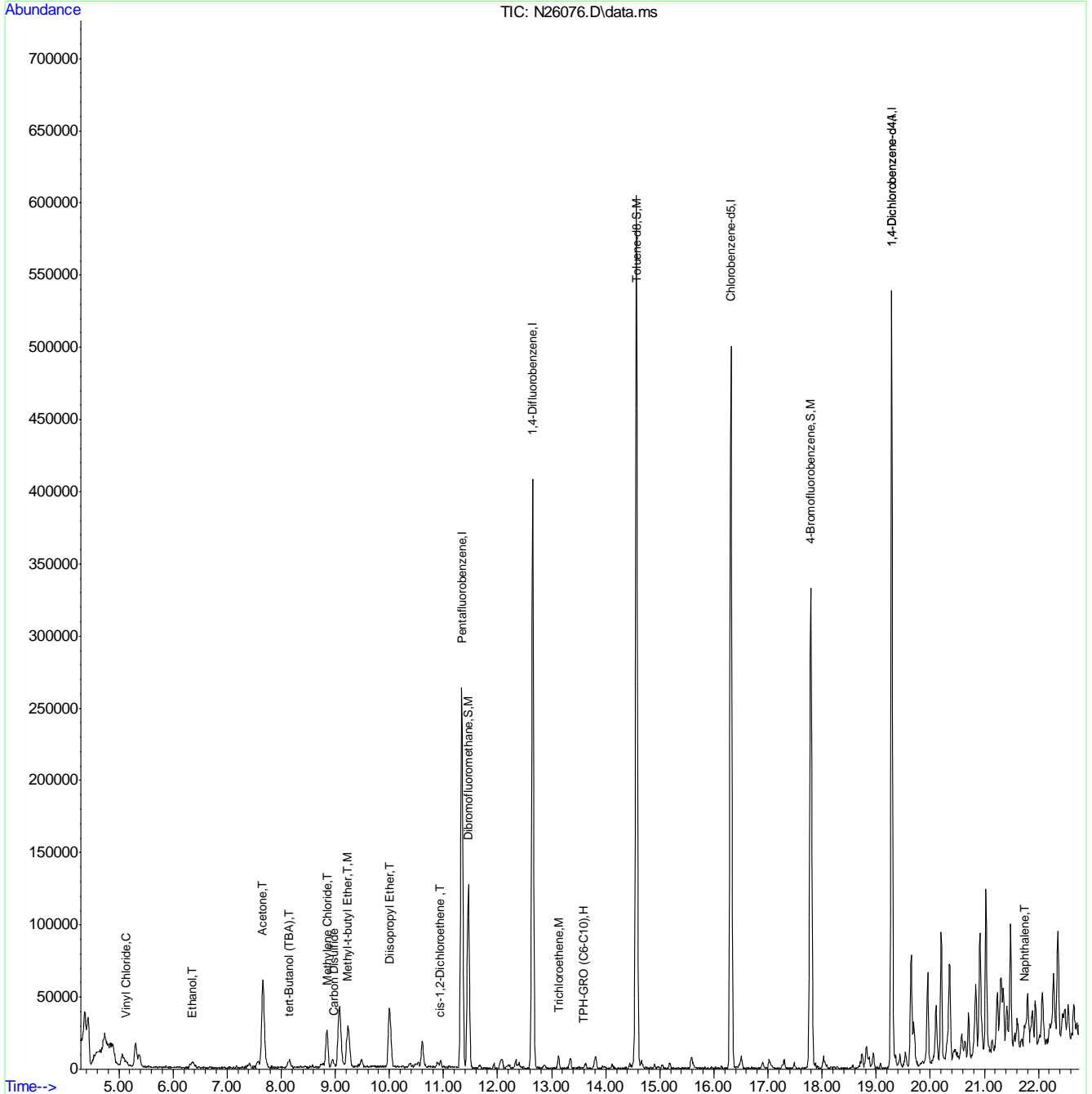
(#) = qualifier out of range (m) = manual integration (+) = signals summed

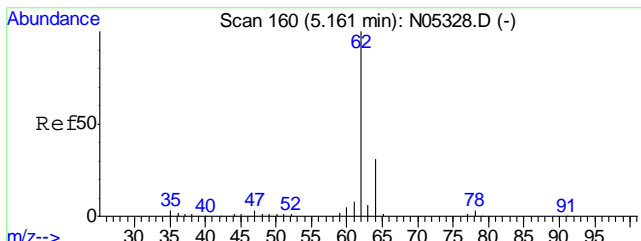


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\N111031\  
Data File : N26076.D  
Acq On : 31 Oct 2011 1:49 pm  
Operator : titiaf  
Sample : C18677-8  
Misc : MS1531,VN864,10,,,,1  
ALS Vial : 10 Sample Multiplier: 1

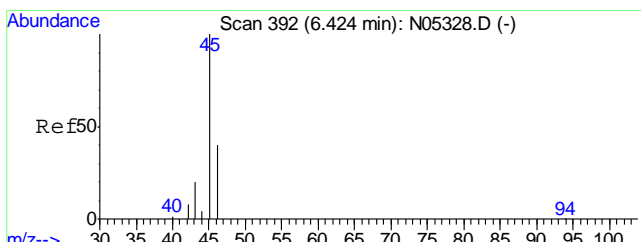
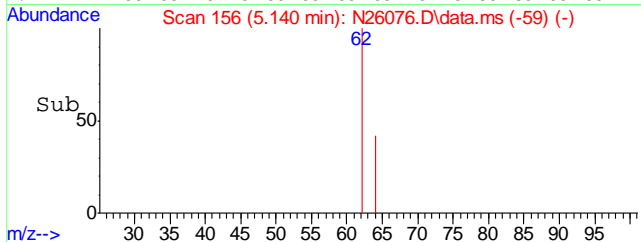
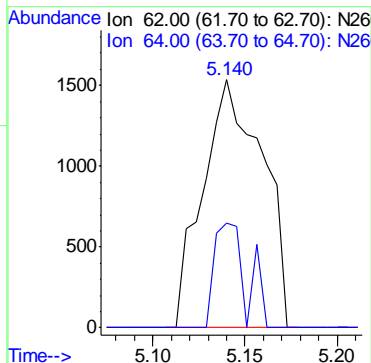
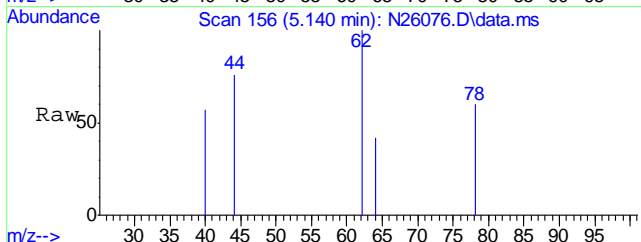
Quant Time: Nov 01 09:44:24 2011  
Quant Method : C:\MSDCHEM\1\METHODS\VN844W.M  
Quant Title : WATER-EPA 8260B  
QLast Update : Fri Oct 07 10:59:38 2011  
Response via : Initial Calibration





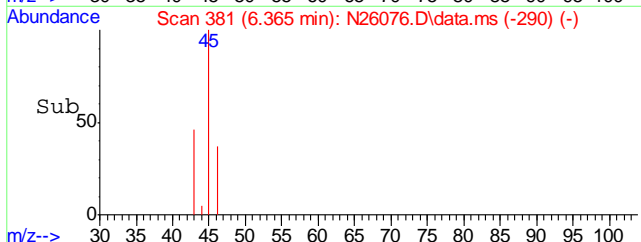
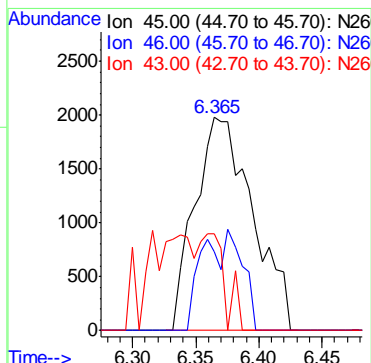
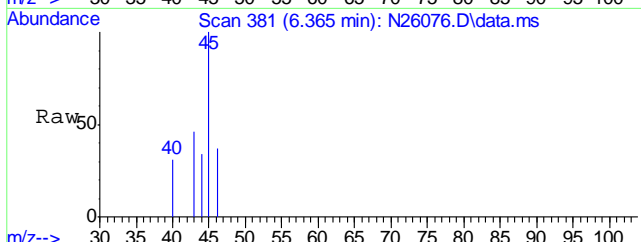
#4  
 Vinyl Chloride  
 Concen: 0.12 ppb  
 RT: 5.140 min Scan# 156  
 Delta R.T. 0.030 min  
 Lab File: N26076.D  
 Acq: 31 Oct 2011 1:49 pm

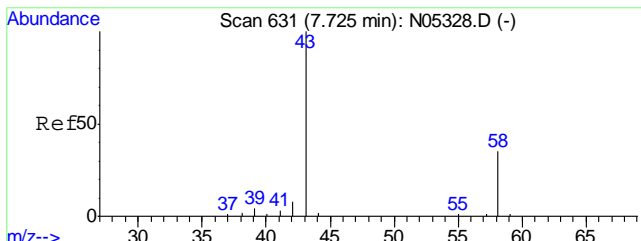
Tgt Ion	Resp	Lower	Upper
62	34422	100	
64	0.0	12.8	52.8#



#7  
 Ethanol  
 Concen: 23.26 ppb  
 RT: 6.365 min Scan# 381  
 Delta R.T. -0.003 min  
 Lab File: N26076.D  
 Acq: 31 Oct 2011 1:49 pm

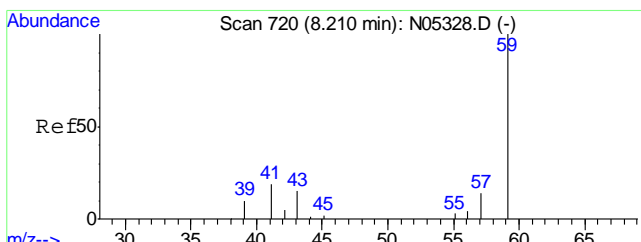
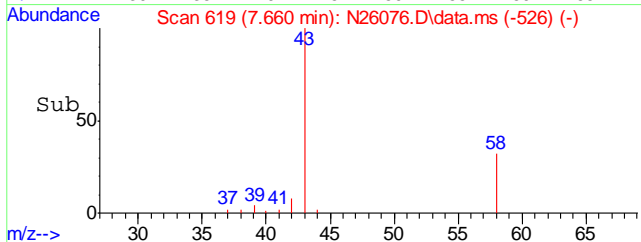
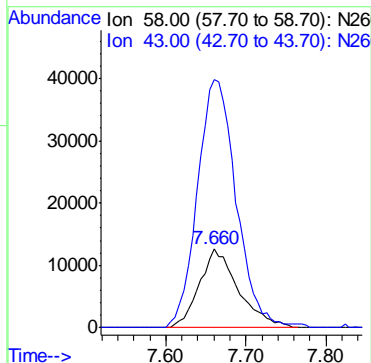
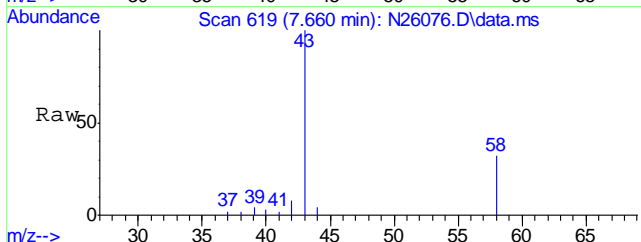
Tgt Ion	Resp	Lower	Upper
45	63043	100	
46	0.0	19.1	59.1#
43	0.0	0.0	39.8





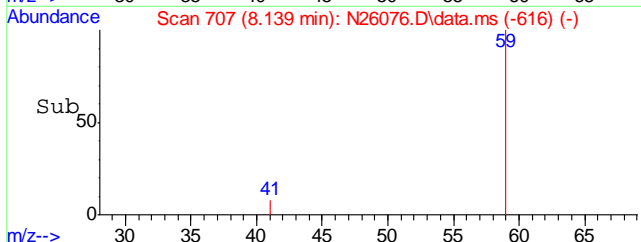
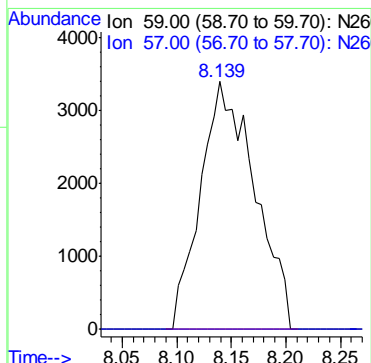
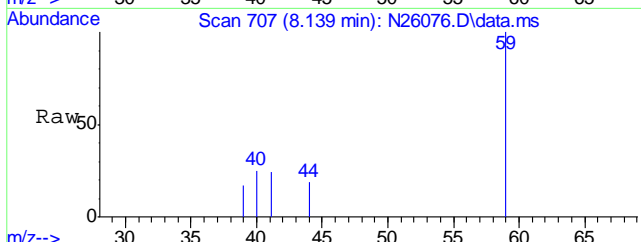
#11  
Acetone  
Concen: 27.23 ppb  
RT: 7.660 min Scan# 619  
Delta R.T. 0.008 min  
Lab File: N26076.D  
Acq: 31 Oct 2011 1:49 pm

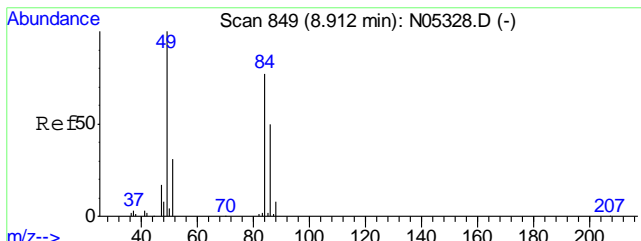
Tgt Ion	Resp	Lower	Upper
58	427369		
58	100		
43	314.0	343.3	383.3#



#14  
tert-Butanol (TBA)  
Concen: 5.49 ppb  
RT: 8.139 min Scan# 707  
Delta R.T. -0.003 min  
Lab File: N26076.D  
Acq: 31 Oct 2011 1:49 pm

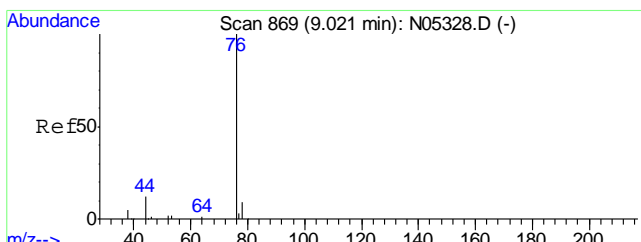
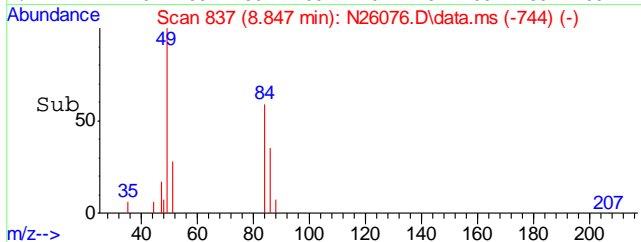
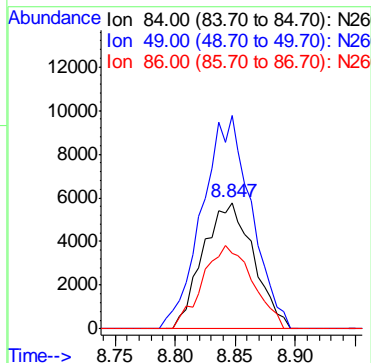
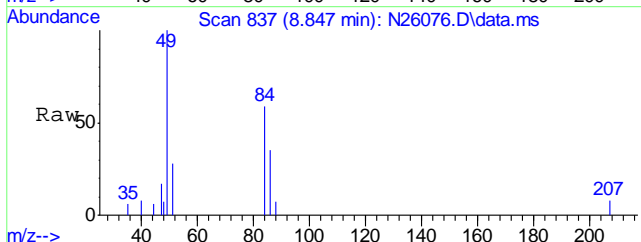
Tgt Ion	Resp	Lower	Upper
59	117814		
59	100		
57	0.0	0.0	49.0





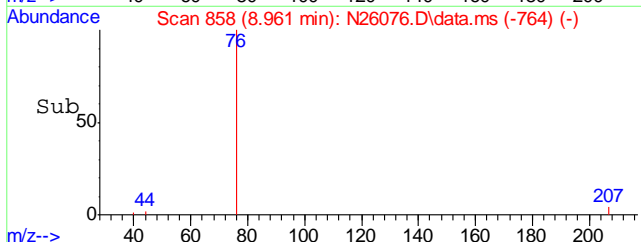
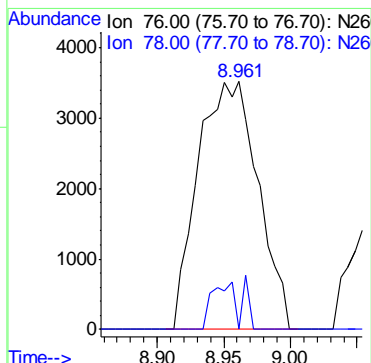
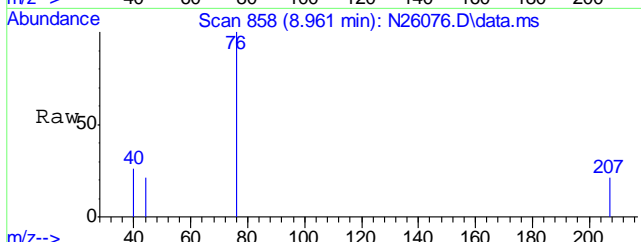
#19  
Methylene Chloride  
Concen: 0.80 ppb  
RT: 8.847 min Scan# 837  
Delta R.T. 0.008 min  
Lab File: N26076.D  
Acq: 31 Oct 2011 1:49 pm

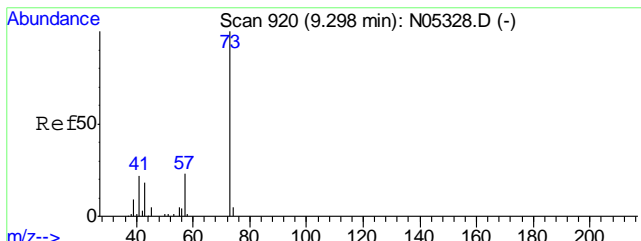
Tgt Ion	Resp	Lower	Upper
84	168725		
49	165.6	145.6	185.6
86	65.5	43.3	83.3



#21  
Carbon Disulfide  
Concen: 0.15 ppb  
RT: 8.961 min Scan# 858  
Delta R.T. 0.013 min  
Lab File: N26076.D  
Acq: 31 Oct 2011 1:49 pm

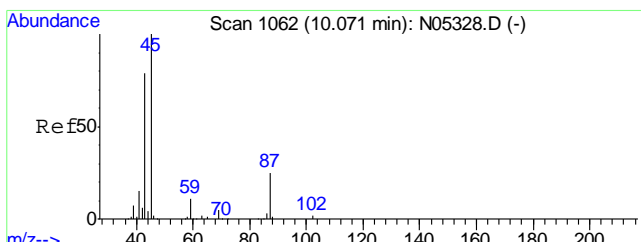
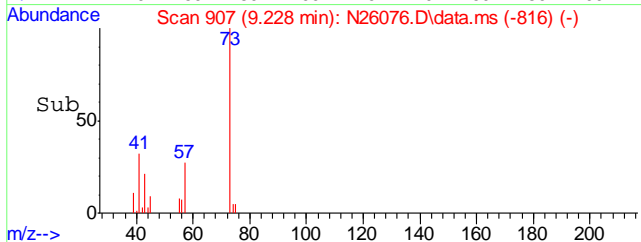
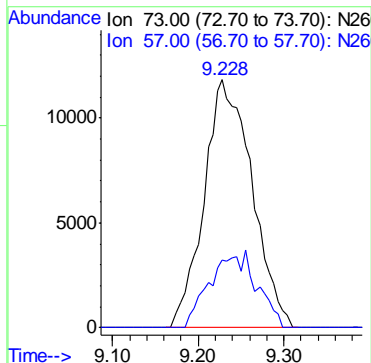
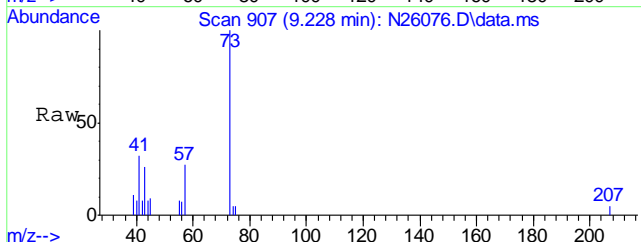
Tgt Ion	Resp	Lower	Upper
76	110299		
78	0.0	0.0	29.2





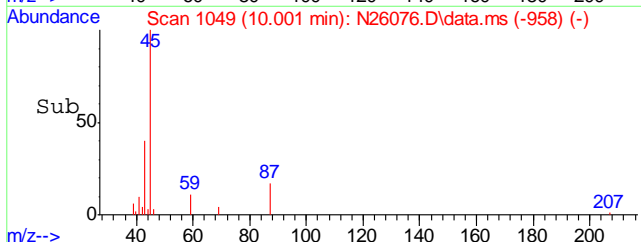
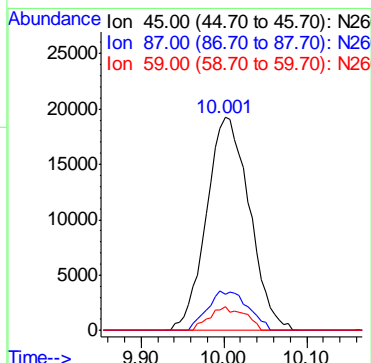
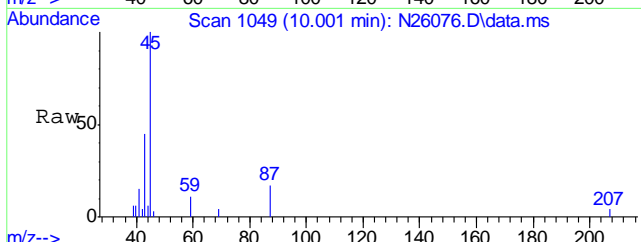
#22  
Methyl-t-butyl Ether  
Concen: 0.87 ppb  
RT: 9.228 min Scan# 907  
Delta R.T. -0.003 min  
Lab File: N26076.D  
Acq: 31 Oct 2011 1:49 pm

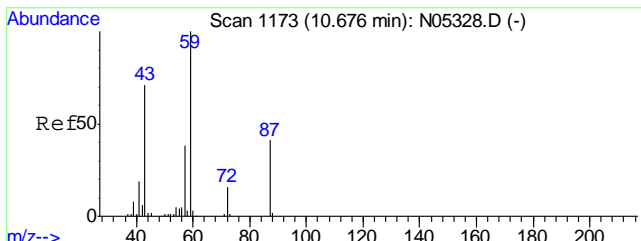
Tgt Ion	Resp	Lower	Upper
73	458961		
73	100		
57	29.9	0.0	55.1



#25  
Diisopropyl Ether  
Concen: 0.69 ppb  
RT: 10.001 min Scan# 1049  
Delta R.T. -0.003 min  
Lab File: N26076.D  
Acq: 31 Oct 2011 1:49 pm

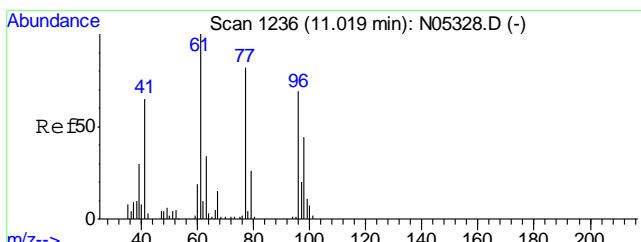
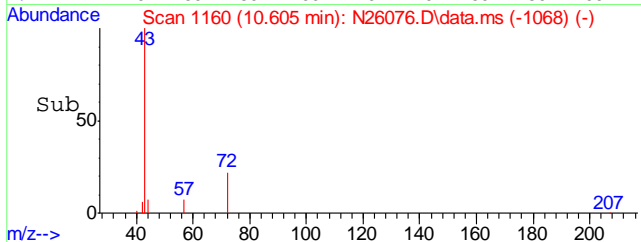
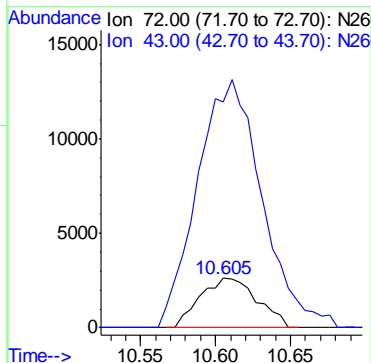
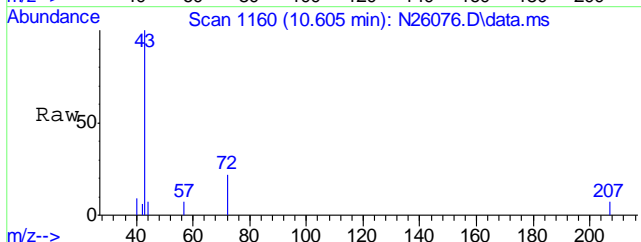
Tgt Ion	Resp	Lower	Upper
45	683587		
45	100		
87	17.3	0.0	270.1
59	9.2	0.0	310.1





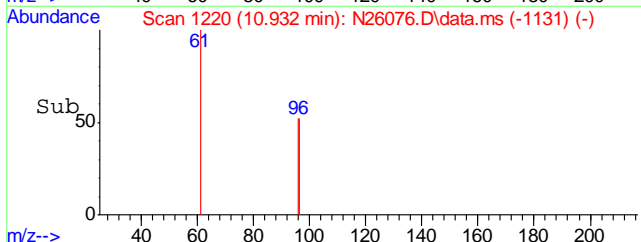
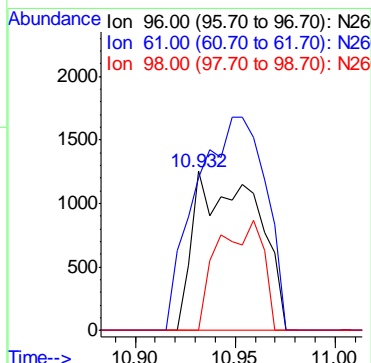
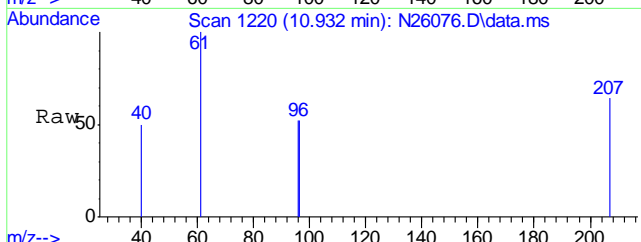
#34  
 2-Butanone (MEK)  
 Concen: Below Cal  
 RT: 10.605 min Scan# 1160  
 Delta R.T. 0.003 min  
 Lab File: N26076.D  
 Acq: 31 Oct 2011 1:49 pm

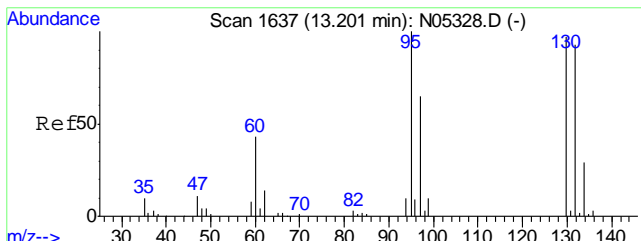
Tgt Ion	Resp	Lower	Upper
72	70130		
43	561.3	545.6	585.6



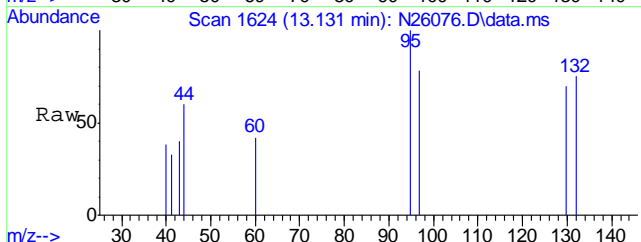
#37  
 cis-1,2-Dichloroethene  
 Concen: 0.12 ppb  
 RT: 10.932 min Scan# 1220  
 Delta R.T. -0.014 min  
 Lab File: N26076.D  
 Acq: 31 Oct 2011 1:49 pm

Tgt Ion	Resp	Lower	Upper
96	27309		
61	148.4	172.6	212.6#
98	0.0	43.7	83.7#



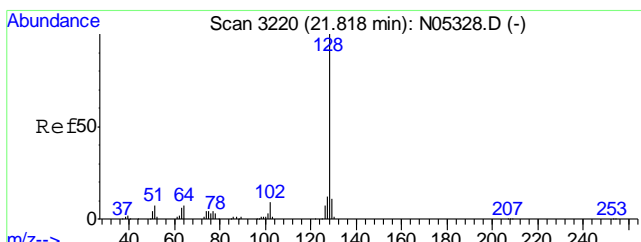
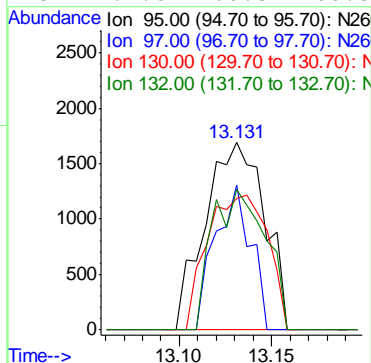
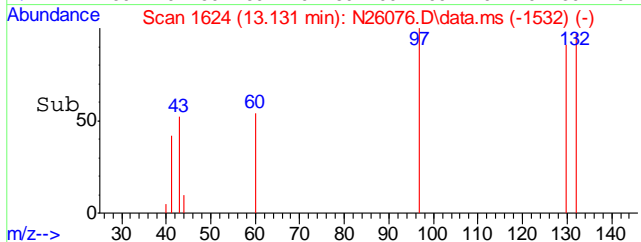


#48  
 Trichloroethene  
 Concen: 0.17 ppb  
 RT: 13.131 min Scan# 1624  
 Delta R.T. 0.003 min  
 Lab File: N26076.D  
 Acq: 31 Oct 2011 1:49 pm

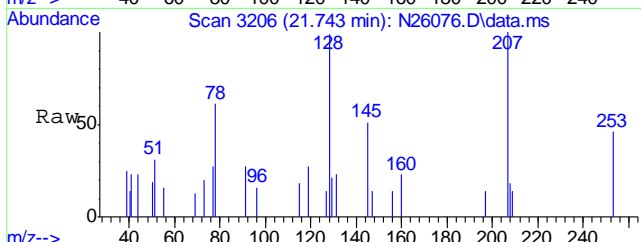


Tgt Ion: 95 Resp: 37695

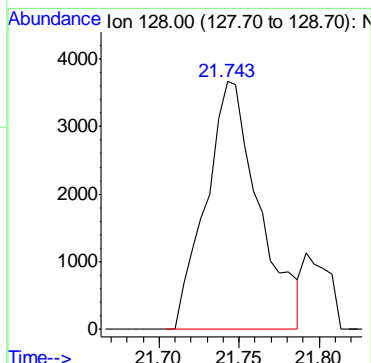
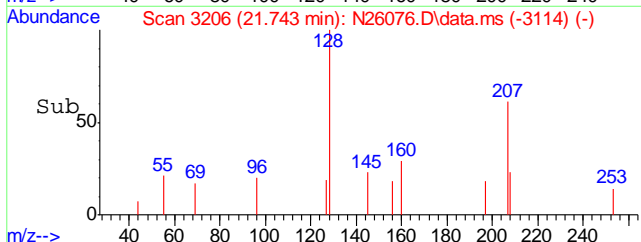
Ion	Ratio	Lower	Upper
95	100		
97	0.0	42.7	82.7#
130	73.0	64.6	104.6
132	67.0	60.5	100.5

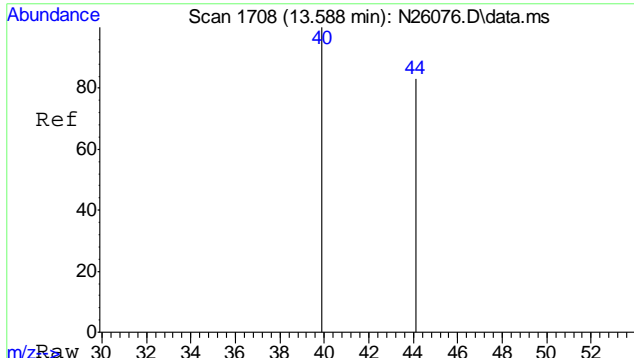


#101  
 Naphthalene  
 Concen: 0.19 ppb  
 RT: 21.743 min Scan# 3206  
 Delta R.T. 0.002 min  
 Lab File: N26076.D  
 Acq: 31 Oct 2011 1:49 pm

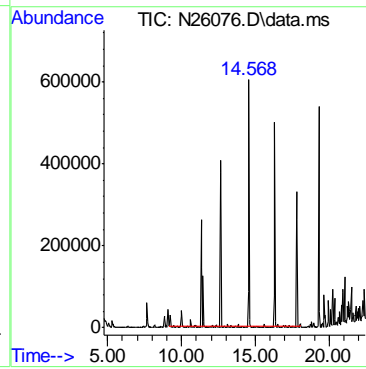
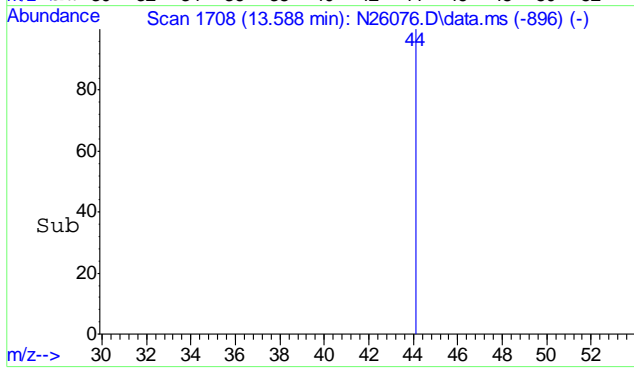


Tgt Ion: 128 Resp: 84511





#104  
TPH-GRO (C6-C10)  
Concen: 6.88 ppb m  
RT: 13.590 min Scan# 1708  
Delta R.T. 0.000 min  
Lab File: N26076.D  
Acq: 31 Oct 2011 1:49 pm  
Tgt Ion:TIC Resp: 6963285



5.1.8  
5



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\N111031\  
 Data File : N26075.D  
 Acq On : 31 Oct 2011 1:20 pm  
 Operator : titiaf  
 Sample : C18677-9  
 Misc : MS1531,VN864,10,,,,,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 01 09:42:15 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\VN844W.M  
 Quant Title : WATER-EPA 8260B  
 QLast Update : Fri Oct 07 10:59:38 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.343	168	2518067	10.00	ppb	0.00
43) 1,4-Difluorobenzene	12.649	114	4204461	10.00	ppb	0.00
59) Chlorobenzene-d5	16.313	117	3740377	10.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	19.285	152	1797668	10.00	ppb	0.00
103) 1,4-Dichlorobenzene-d4A	19.285	152	1797668	10.00	ppb	0.00

## System Monitoring Compounds

40) Dibromofluoromethane	11.463	111	1150929	9.81	ppb	0.01
Spiked Amount	10.000	Range 70 - 130	Recovery =	98.10%		
60) Toluene-d8	14.565	98	5295674	9.87	ppb	0.00
Spiked Amount	10.000	Range 70 - 130	Recovery =	98.70%		
79) 4-Bromofluorobenzene	17.788	95	1944939	10.10	ppb	0.00
Spiked Amount	10.000	Range 70 - 130	Recovery =	101.00%		

## Target Compounds

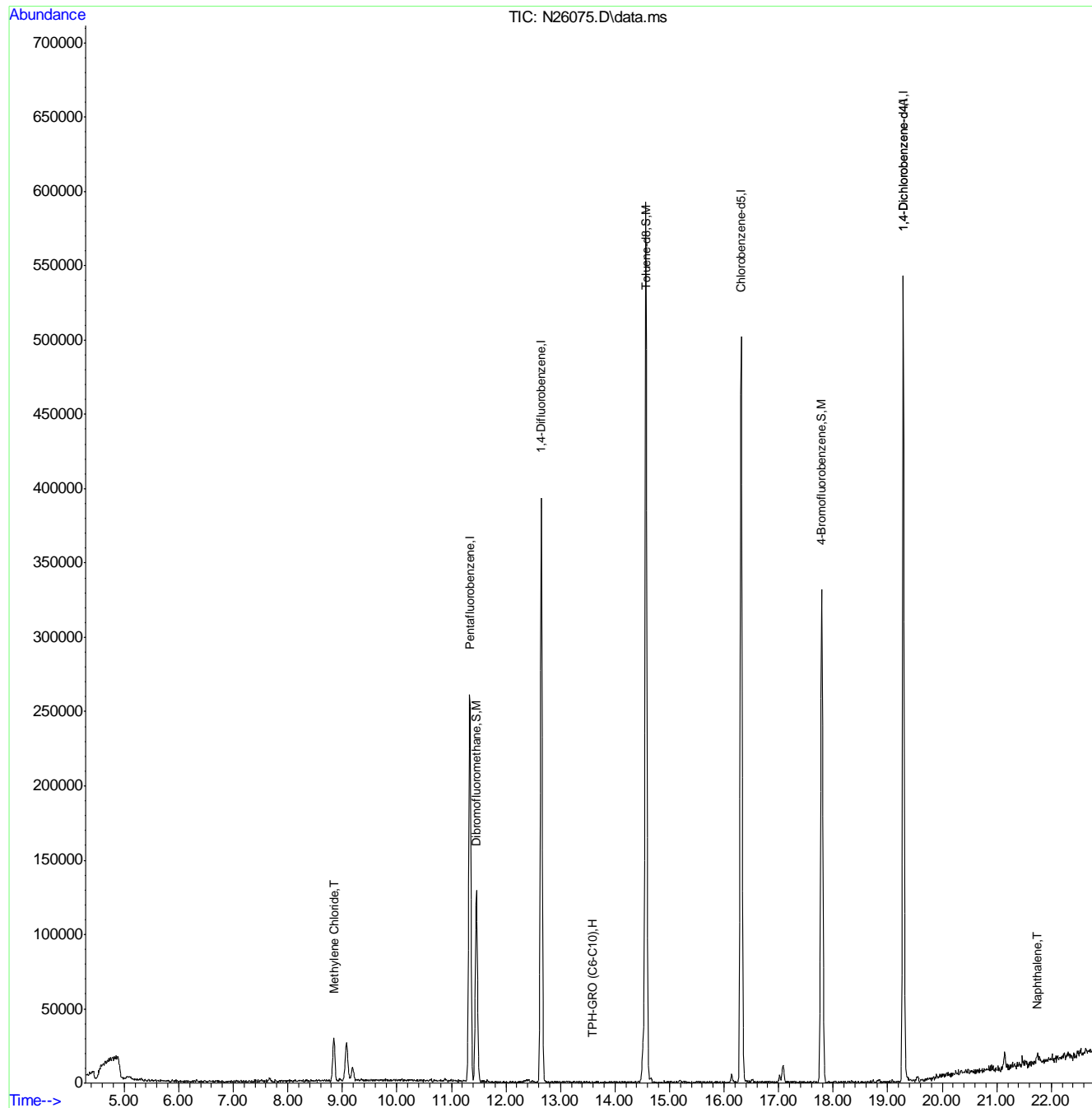
					Qvalue
19) Methylene Chloride	8.850	84	192090	0.89	ppb 98
101) Naphthalene	21.740	128	80389	0.18	ppb 100
104) TPH-GRO (C6-C10)	13.590	TIC	1990269m	1.96	ppb

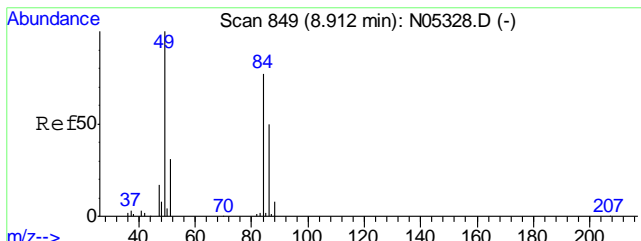
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\N111031\  
Data File : N26075.D  
Acq On : 31 Oct 2011 1:20 pm  
Operator : titiaf  
Sample : C18677-9  
Misc : MS1531,VN864,10,,,,,1  
ALS Vial : 9 Sample Multiplier: 1

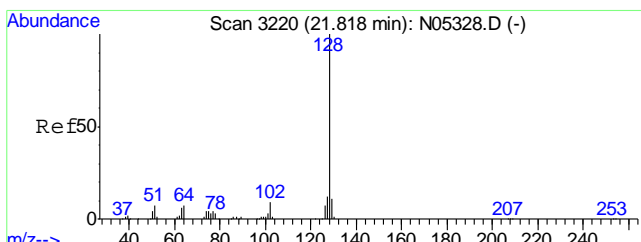
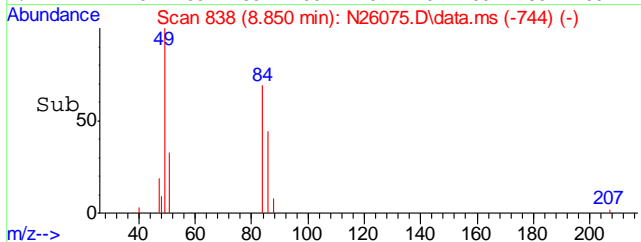
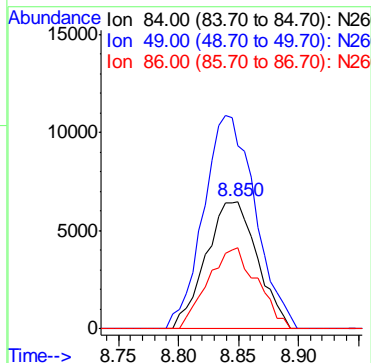
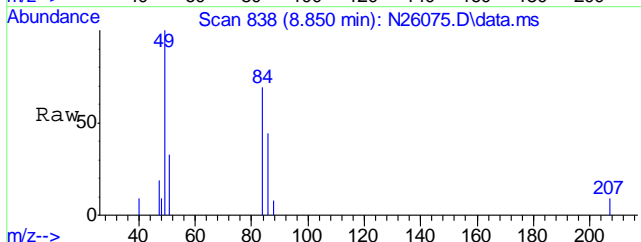
Quant Time: Nov 01 09:42:15 2011  
Quant Method : C:\MSDCHEM\1\METHODS\VN844W.M  
Quant Title : WATER-EPA 8260B  
QLast Update : Fri Oct 07 10:59:38 2011  
Response via : Initial Calibration





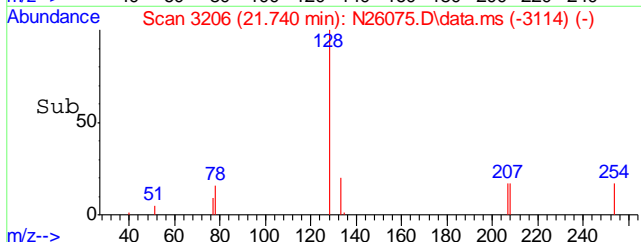
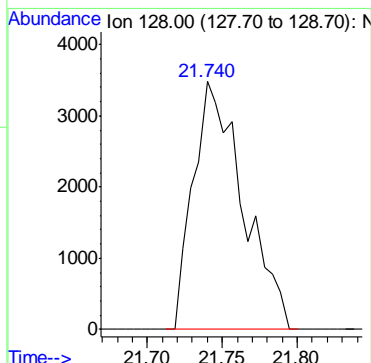
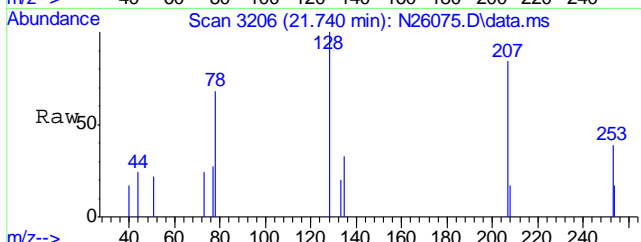
#19  
Methylene Chloride  
Concen: 0.89 ppb  
RT: 8.850 min Scan# 838  
Delta R.T. 0.011 min  
Lab File: N26075.D  
Acq: 31 Oct 2011 1:20 pm

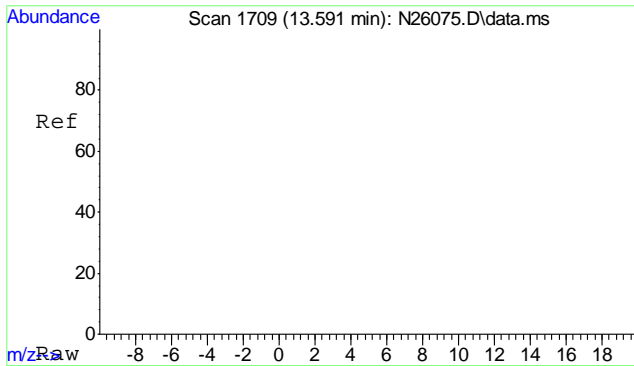
Tgt Ion:	84	Resp:	192090
Ion Ratio	Lower	Upper	
84	100		
49	168.8	145.6	185.6
86	61.4	43.3	83.3



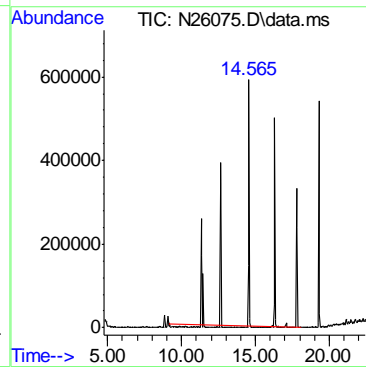
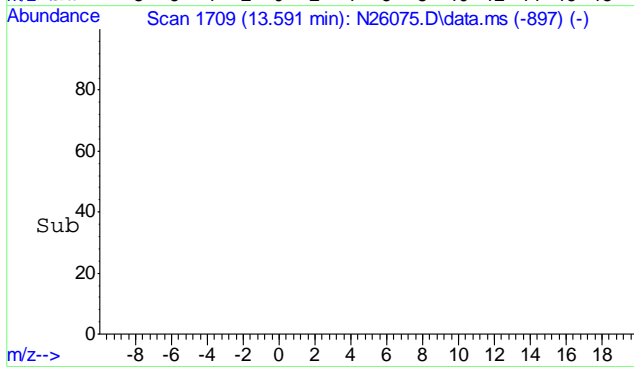
#101  
Naphthalene  
Concen: 0.18 ppb  
RT: 21.740 min Scan# 3206  
Delta R.T. -0.000 min  
Lab File: N26075.D  
Acq: 31 Oct 2011 1:20 pm

Tgt Ion: 128 Resp: 80389





#104  
TPH-GRO (C6-C10)  
Concen: 1.96 ppb m  
RT: 13.590 min Scan# 1709  
Delta R.T. 0.000 min  
Lab File: N26075.D  
Acq: 31 Oct 2011 1:20 pm  
  
Tgt Ion:TIC Resp: 1990269



5.1.9  
5

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
 Data File : M28812.D  
 Acq On : 31 Oct 2011 11:10 am  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VM912,5,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 01 07:44:30 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.416	168	193774	20.00	ppb	0.00
38) 1,4-Difluorobenzene	12.725	114	326346	20.00	ppb	0.00
52) Chlorobenzene-d5	16.408	117	303025	20.00	ppb	0.00
74) 1,4-Dichlorobenzene-d4	19.373	152	153274	20.00	ppb	0.00
95) 1,4-Dichlorobenzene-d4A	19.373	152	153274	20.00	ppb	0.00

System Monitoring Compounds

34) Dibromofluoromethane	11.533	111	102262	19.63	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	98.15%		
53) Toluene-d8	14.656	98	417073	20.58	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	102.90%		
71) 4-Bromofluorobenzene	17.896	95	154570	19.50	ppb	0.00
Spiked Amount	20.000	Range 60 - 130	Recovery =	97.50%		

Target Compounds

						Qvalue
18) Methylene Chloride	8.905	84	3849	0.50	ppb	94
96) TPH-GRO (C6-C10)	13.519	TIC	-23211m	Below	Cal	

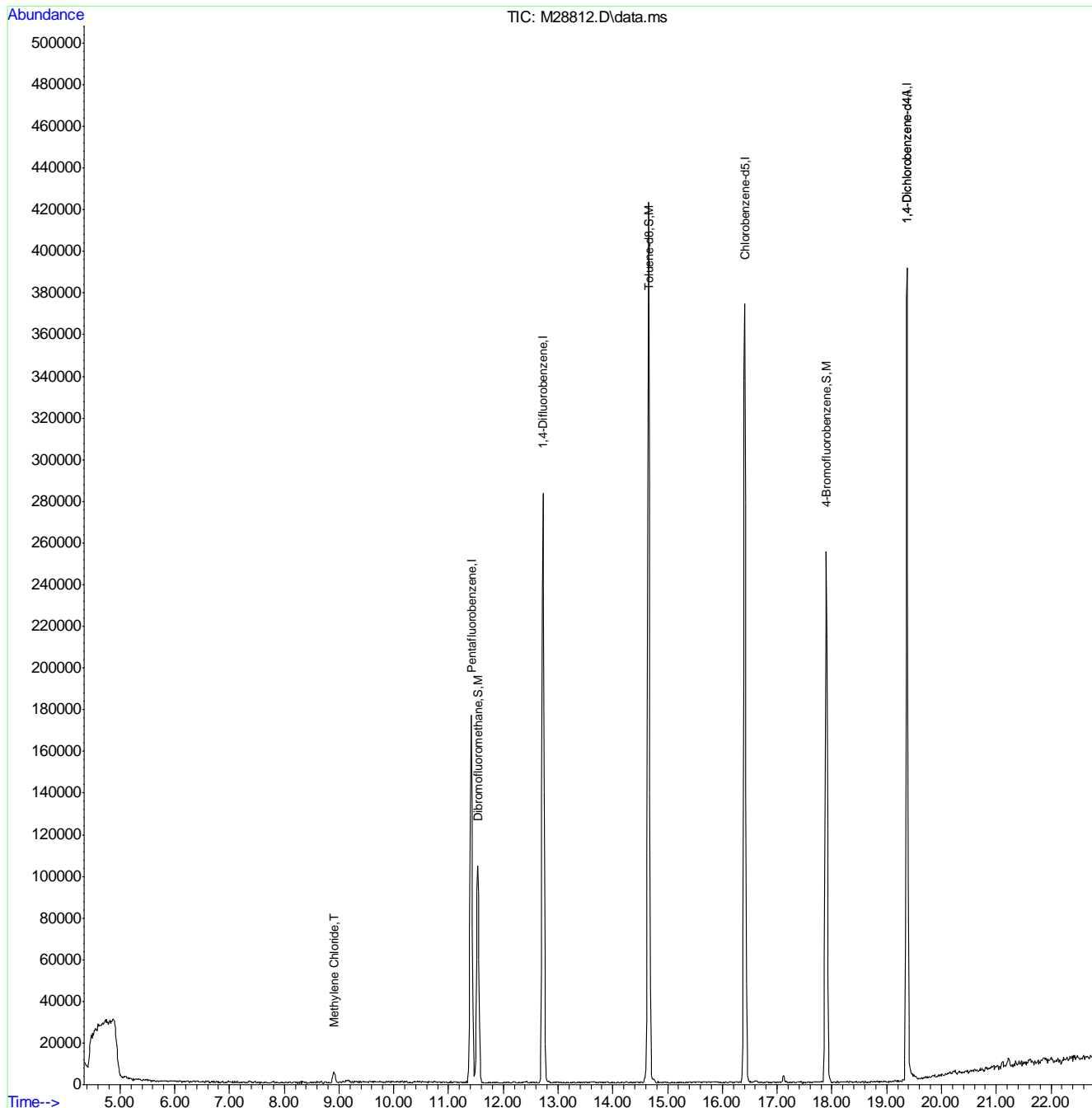
(#) = qualifier out of range (m) = manual integration (+) = signals summed

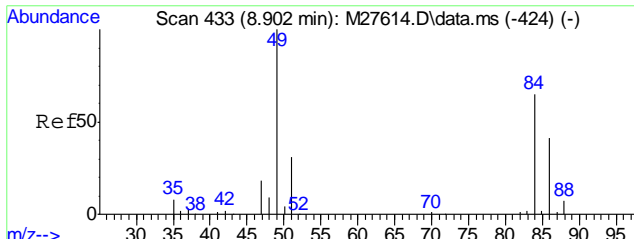
5.2.1  
5

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\M111031\  
 Data File : M28812.D  
 Acq On : 31 Oct 2011 11:10 am  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VM912,5,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

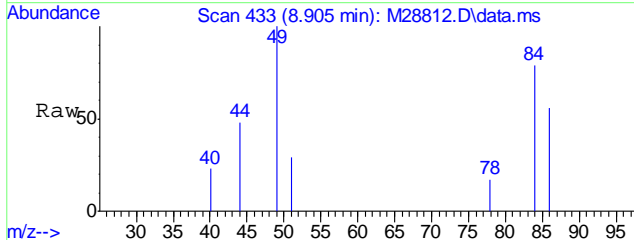
Quant Time: Nov 01 07:44:30 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\vm876s.m  
 Quant Title : EPA 8260B  
 QLast Update : Thu Sep 15 15:04:15 2011  
 Response via : Initial Calibration



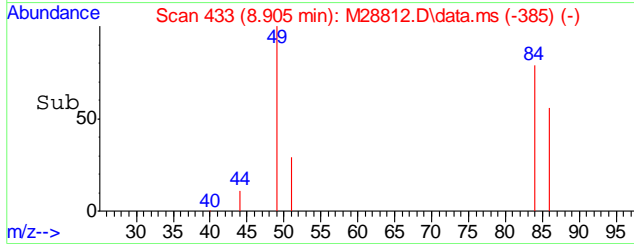
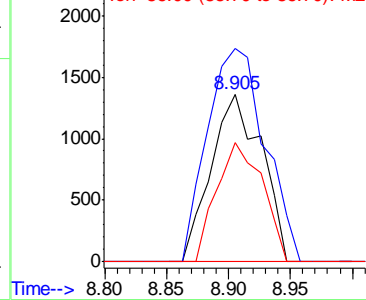


#18  
 Methylene Chloride  
 Concen: 0.50 ppb  
 RT: 8.905 min Scan# 433  
 Delta R.T. 0.003 min  
 Lab File: M28812.D  
 Acq: 31 Oct 2011 11:10 am

Tgt Ion	Resp	Lower	Upper
84	3849		
49	145.9	134.7	174.7
86	64.8	43.0	83.0



Abundance  
 Ion 84.00 (83.70 to 84.70): M28  
 Ion 49.00 (48.70 to 49.70): M28  
 Ion 86.00 (85.70 to 86.70): M28



5.2.1  
 5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\N111031\  
 Data File : N26071.D  
 Acq On : 31 Oct 2011 11:21 am  
 Operator : titiaf  
 Sample : MB R9 10/24/11  
 Misc : MS1530,VN864,10,,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 01 09:39:01 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\VN844W.M  
 Quant Title : WATER-EPA 8260B  
 QLast Update : Fri Oct 07 10:59:38 2011  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.340	168	2525458	10.00	ppb	0.00
43) 1,4-Difluorobenzene	12.646	114	4168043	10.00	ppb	0.00
59) Chlorobenzene-d5	16.315	117	3627503	10.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	19.287	152	1745954	10.00	ppb	0.00
103) 1,4-Dichlorobenzene-d4A	19.287	152	1745954	10.00	ppb	0.00

System Monitoring Compounds

40) Dibromofluoromethane	11.460	111	1126765	9.57	ppb	0.00
Spiked Amount	10.000	Range 70 - 130	Recovery =	95.70%		
60) Toluene-d8	14.568	98	5245020	10.08	ppb	0.00
Spiked Amount	10.000	Range 70 - 130	Recovery =	100.80%		
79) 4-Bromofluorobenzene	17.785	95	1903361	10.20	ppb	0.00
Spiked Amount	10.000	Range 70 - 130	Recovery =	102.00%		

Target Compounds

						Qvalue
11) Acetone	7.671	58	16163	1.01	ppb	# 30
19) Methylene Chloride	8.841	84	262609	1.22	ppb	98
101) Naphthalene	21.742	128	69410	0.16	ppb	100
104) TPH-GRO (C6-C10)	13.590	TIC	655931m	0.67	ppb	

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

5.2.2  
5

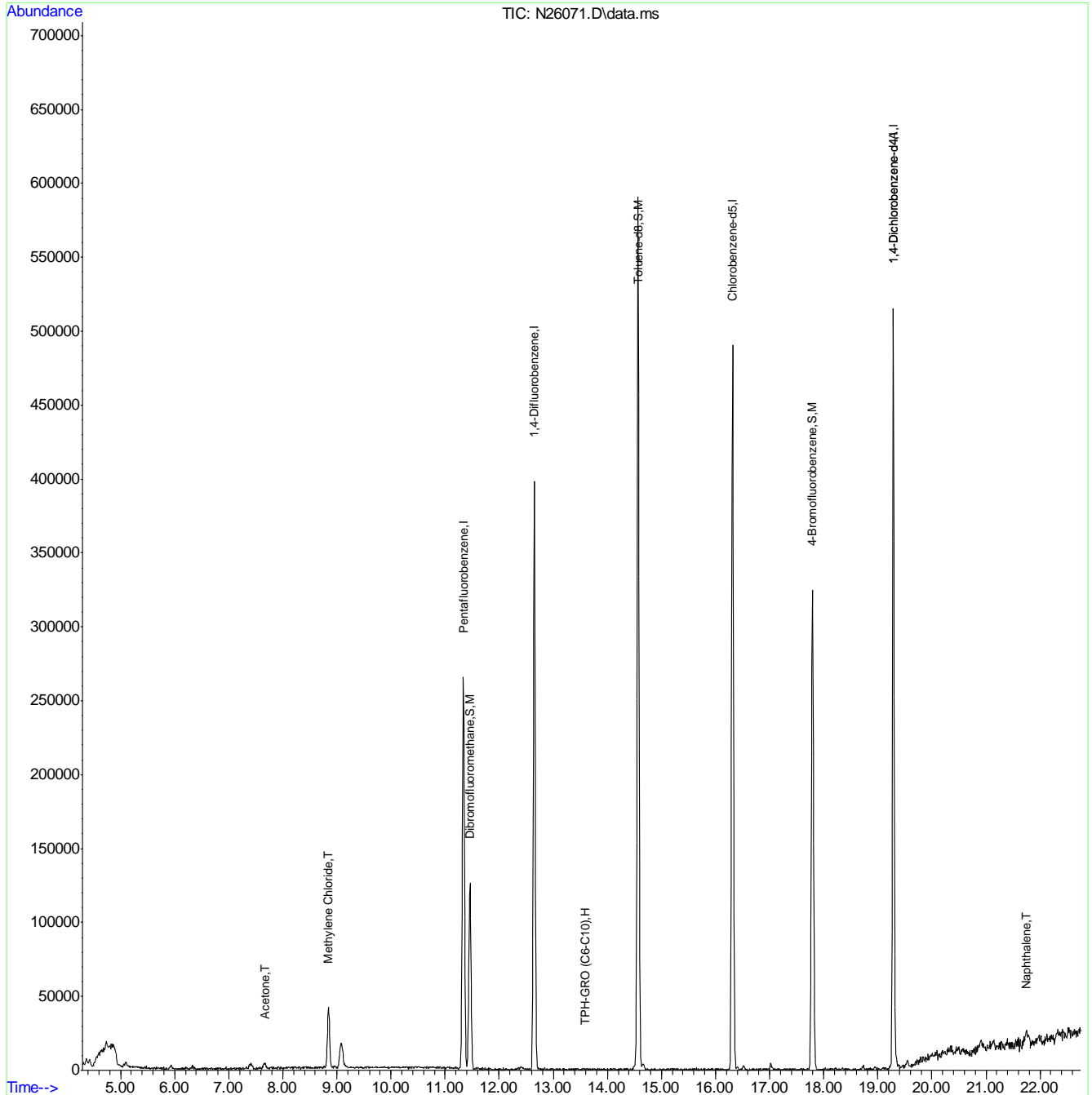


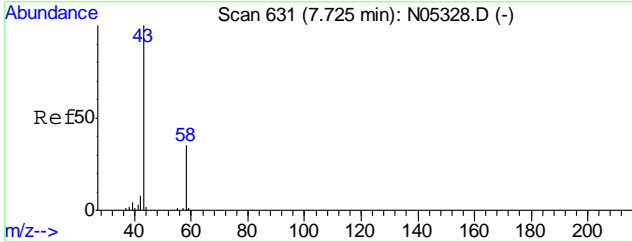
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\N111031\  
 Data File : N26071.D  
 Acq On : 31 Oct 2011 11:21 am  
 Operator : titiaf  
 Sample : MB R9 10/24/11  
 Misc : MS1530,VN864,10,,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 01 09:39:01 2011  
 Quant Method : C:\MSDCHEM\1\METHODS\VN844W.M  
 Quant Title : WATER-EPA 8260B  
 QLast Update : Fri Oct 07 10:59:38 2011  
 Response via : Initial Calibration

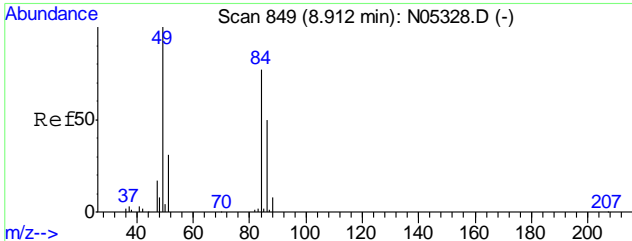
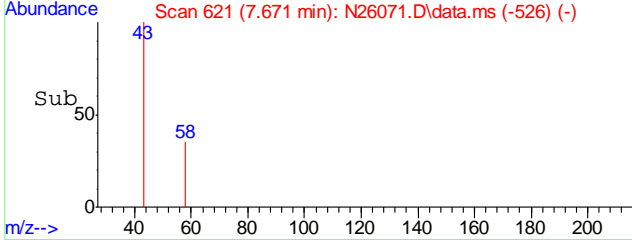
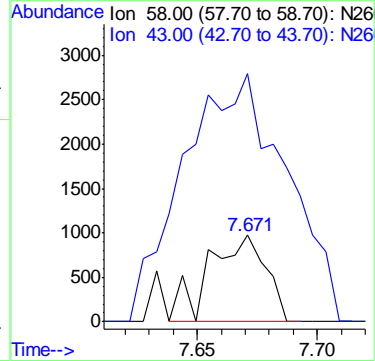
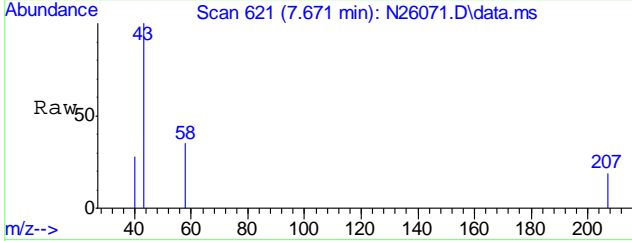
5.2.2  
 5





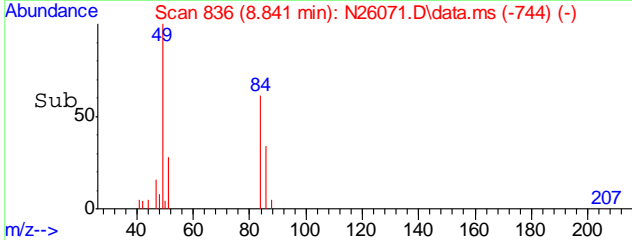
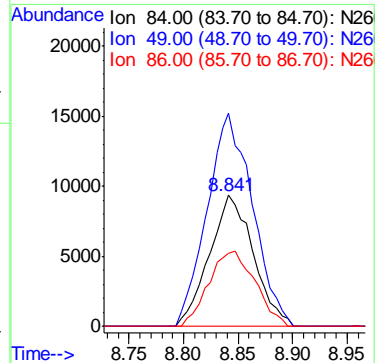
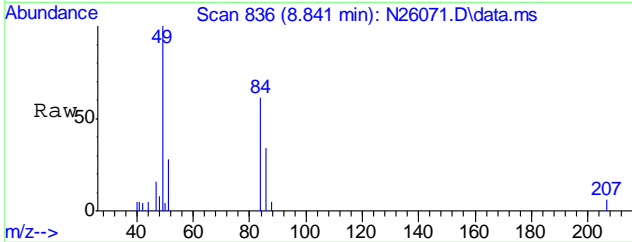
#11  
Acetone  
Concen: 1.01 ppb  
RT: 7.671 min Scan# 621  
Delta R.T. 0.019 min  
Lab File: N26071.D  
Acq: 31 Oct 2011 11:21 am

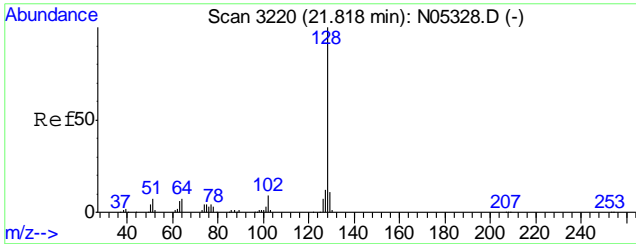
Tgt Ion	Resp	Lower	Upper
58	16163		
43	518.6	343.3	383.3#



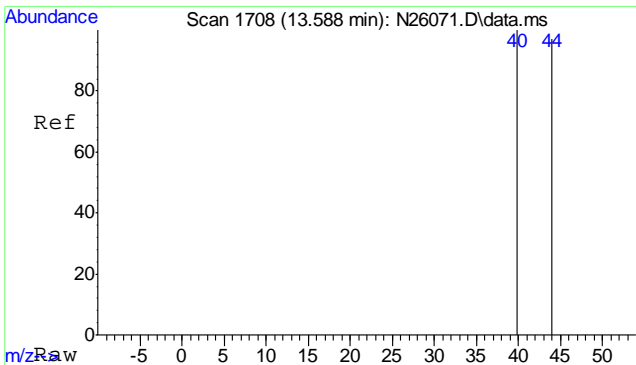
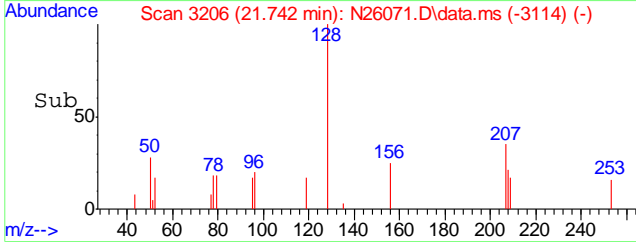
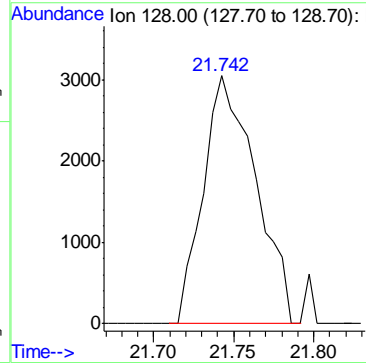
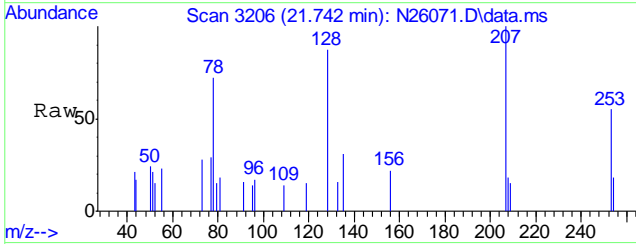
#19  
Methylene Chloride  
Concen: 1.22 ppb  
RT: 8.841 min Scan# 836  
Delta R.T. 0.002 min  
Lab File: N26071.D  
Acq: 31 Oct 2011 11:21 am

Tgt Ion	Resp	Lower	Upper
84	262609		
49	167.3	145.6	185.6
86	60.4	43.3	83.3

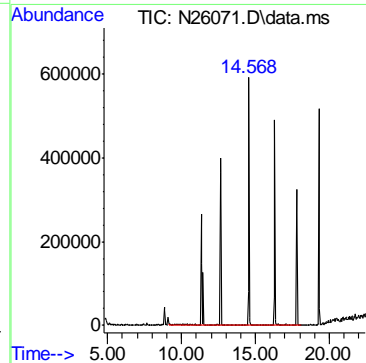
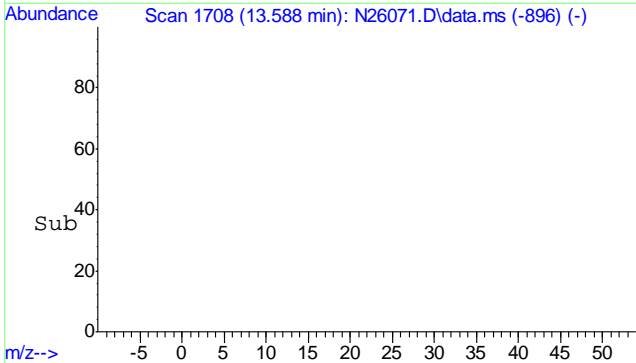




#101  
Naphthalene  
Concen: 0.16 ppb  
RT: 21.742 min Scan# 3206  
Delta R.T. 0.002 min  
Lab File: N26071.D  
Acq: 31 Oct 2011 11:21 am  
Tgt Ion:128 Resp: 69410



#104  
TPH-GRO (C6-C10)  
Concen: 0.67 ppb m  
RT: 13.590 min Scan# 1708  
Delta R.T. 0.000 min  
Lab File: N26071.D  
Acq: 31 Oct 2011 11:21 am  
Tgt Ion:TIC Resp: 655931



## GC Volatiles

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary**

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GJK963-MB	JK23447.D	1	11/01/11	TT	n/a	n/a	GJK963

The QC reported here applies to the following samples:

Method: SW846 8015B

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.10	0.050	mg/kg	

CAS No.	Surrogate Recoveries	Limits
98-08-8	aaa-Trifluorotoluene	90% 60-157%

**Method Blank Summary**

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GJK965-MB	JK23489.D	1	11/02/11	TT	n/a	n/a	GJK965

The QC reported here applies to the following samples:

Method: SW846 8015B

C18677-8, C18677-9

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.020	mg/l	

CAS No.	Surrogate Recoveries	Limits
98-08-8	aaa-Trifluorotoluene	88% 64-153%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GJK963-BS	JK23445.D	1	11/01/11	TT	n/a	n/a	GJK963
GJK963-BSD	JK23446.D	1	11/01/11	TT	n/a	n/a	GJK963

The QC reported here applies to the following samples: Method: SW846 8015B

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	0.5	0.538	108	0.571	114	6	65-135/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
98-08-8	aaa-Trifluorotoluene	94%	95%	60-157%

6.2.1  
6

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GJK965-BS	JK23487.D	1	11/02/11	TT	n/a	n/a	GJK965
GJK965-BSD	JK23488.D	1	11/02/11	TT	n/a	n/a	GJK965

The QC reported here applies to the following samples:

Method: SW846 8015B

C18677-8, C18677-9

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	0.25	0.268	107	0.279	112	4	65-135/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
98-08-8	aaa-Trifluorotoluene	89%	89%	64-153%



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18626-1MS <sup>a</sup>	JK23483.D	1	11/02/11	TT	n/a	n/a	GJK963
C18626-1MSD <sup>a</sup>	JK23484.D	1	11/02/11	TT	n/a	n/a	GJK963
C18626-1	JK23467.D	1	11/02/11	TT	n/a	n/a	GJK963

The QC reported here applies to the following samples: Method: SW846 8015B

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	C18626-1 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	0.474	0.195	41* <sup>b</sup>	0.139	28* <sup>b</sup>	34* <sup>b</sup>	65-135/25

CAS No.	Surrogate Recoveries	MS	MSD	C18626-1	Limits
98-08-8	aaa-Trifluorotoluene	87%	88%	90%	60-157%

- (a) Outside control limits due to matrix interference.
- (b) Outside control limits due to matrix interference and/or sample nonhomogeneity.

6.3.1  
6

GC Volatiles

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Raw Data

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7

Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111101\JK23450.D Vial: 9  
 Acq On : 11-1-11 4:28:39 PM Operator: tiat  
 Sample : C18677-1 Inst : GC - JJ  
 Misc : gc941,gjk963,5.20,,,,,1 Multiplr: 1.00  
 IntFile : AUTOINT1.E  
 Quant Time: Nov 1 16:57 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
 Title : BTEXM and TPH by 8021/8015  
 Last Update : Wed Oct 12 09:02:35 2011  
 Response via : Initial Calibration  
 DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
 Signal Phase : DB-VRX  
 Signal Info : FID

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S a,a,a-Trifluorotoluene	7.57	278908	17.682 ug/kg
Spiked Amount 20.000	Range 73 - 118	Recovery =	88.41%
2) S 4-Bromofluorobenzene	14.07	241175	NoCal ug/L
Spiked Amount 20.000		Recovery =	0.00%
<b>Target Compounds</b>			
3) H TPH (Gasoline)	9.99	2752736	38.388 ug/kg
4) H TPH-GRO (C6-C10)	9.99	1859641	32.263 ug/kg

7.11  
7

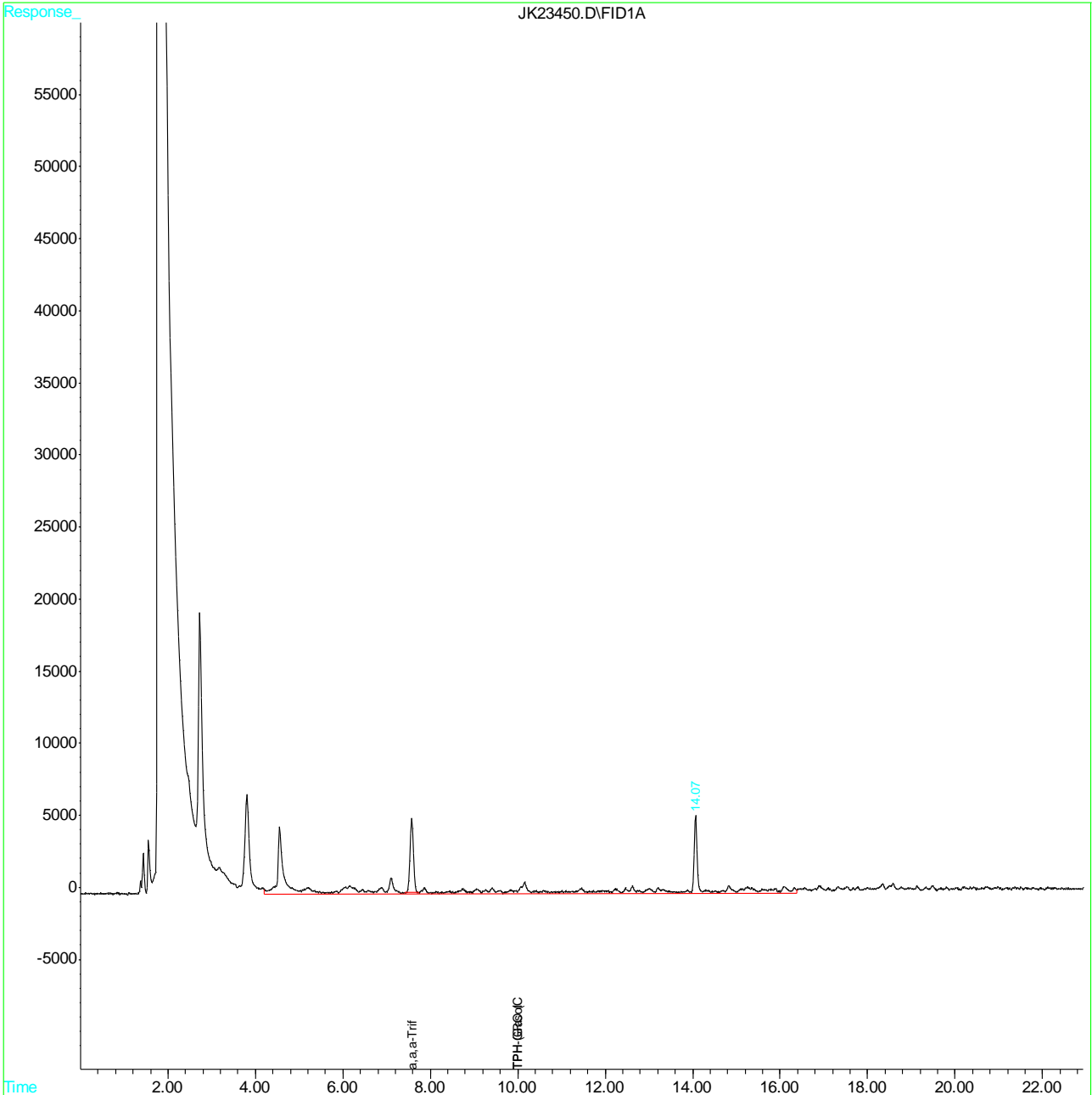
(f)=RT Delta > 1/2 Window (m)=manual int.  
 JK23450.D VJK951S.M Tue Nov 01 16:57:45 2011

Quantitation Report

Data File : D:\JJ-DATA\20111101\JK23450.D Vial: 9  
Acq On : 11-1-11 4:28:39 PM Operator: tiat  
Sample : C18677-1 Inst : GC - JJ  
Misc : gc941,gjk963,5.20,,,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 1 16:57 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 12 09:02:35 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



7.1.1  
7

Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111101\JK23451.D Vial: 10  
 Acq On : 11-1-11 5:05:38 PM Operator: tiat  
 Sample : C18677-2 Inst : GC - JJ  
 Misc : gc941,gjk963,5.41,,,,,1 Multiplr: 1.00  
 IntFile : AUTOINT1.E  
 Quant Time: Nov 1 17:34 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
 Title : BTEXM and TPH by 8021/8015  
 Last Update : Wed Oct 12 09:02:35 2011  
 Response via : Initial Calibration  
 DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
 Signal Phase : DB-VRX  
 Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S a,a,a-Trifluorotoluene	7.57	288204	18.272 ug/kg
Spiked Amount 20.000	Range 73 - 118	Recovery =	91.36%
2) S 4-Bromofluorobenzene	14.08	542342	NoCal ug/L
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
3) H TPH (Gasoline)	9.99	29809998	1001.928 ug/kg
4) H TPH-GRO (C6-C10)	9.99	7870833	260.526 ug/kg

7.12  
7

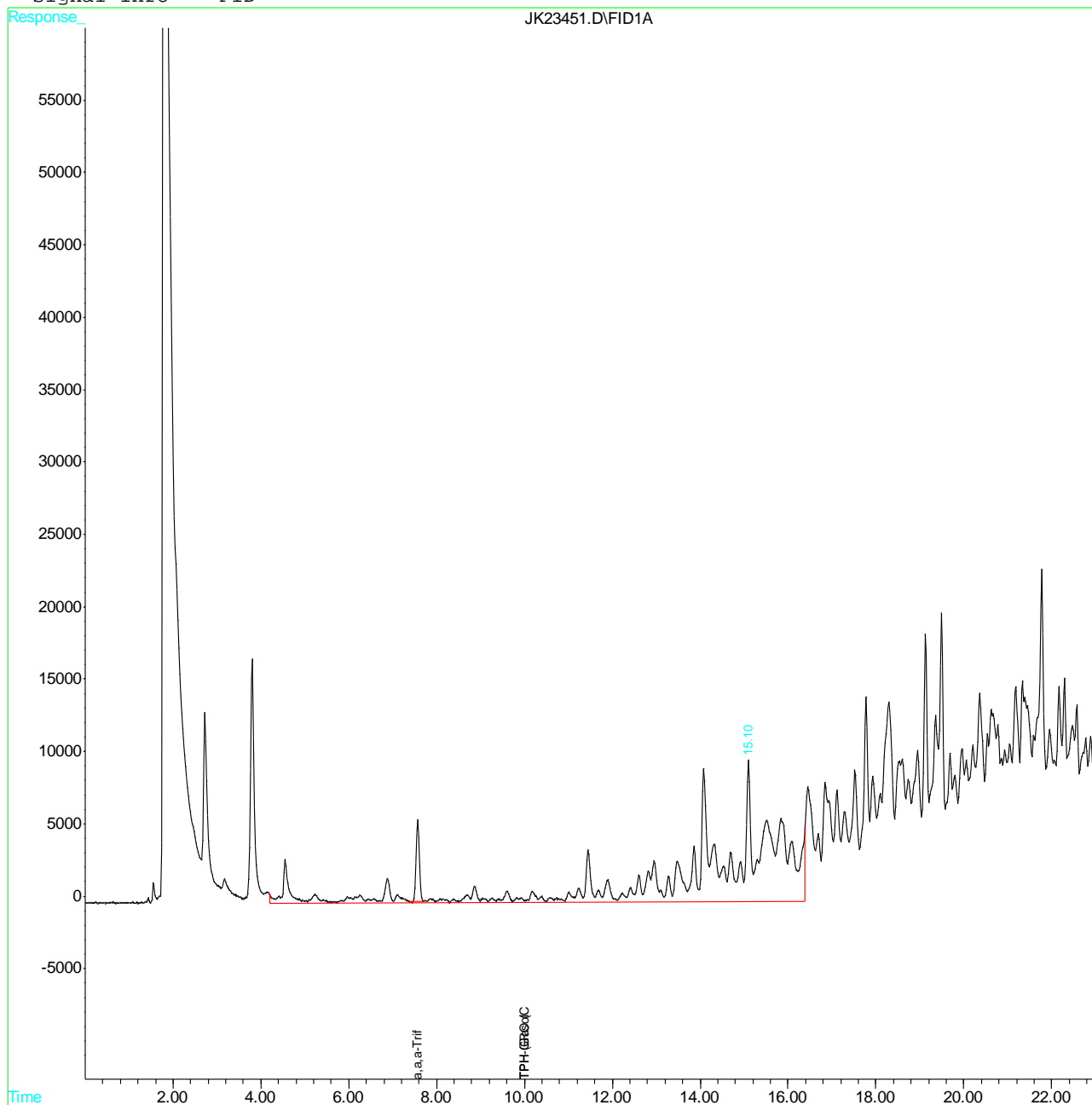
(f)=RT Delta > 1/2 Window (m)=manual int.  
 JK23451.D VJK951S.M Tue Nov 01 17:34:54 2011

## Quantitation Report

Data File : D:\JJ-DATA\20111101\JK23451.D Vial: 10  
Acq On : 11-1-11 5:05:38 PM Operator: tiat  
Sample : C18677-2 Inst : GC - JJ  
Misc : gc941,gjk963,5.41,,,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 1 17:34 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 12 09:02:35 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111101\JK23452.D Vial: 11
Acq On : 11-1-11 5:42:31 PM Operator: tiat
Sample : C18677-3 Inst : GC - JJ
Misc : gc941,gjk963,6.92,,,,,1 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Nov 1 18:05 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)
Title : BTEXM and TPH by 8021/8015
Last Update : Wed Oct 12 09:02:35 2011
Response via : Initial Calibration
DataAcq Meth : GC18015T.M

Volume Inj. : n/a
Signal Phase : DB-VRX
Signal Info : FID

Table with 4 columns: Compound, R.T., Response, Conc Units. Includes System Monitoring Compounds (a,a,a-Trifluorotoluene, 4-Bromofluorobenzene) and Target Compounds (TPH (Gasoline), TPH-GRO (C6-C10)).

7.1.3
7

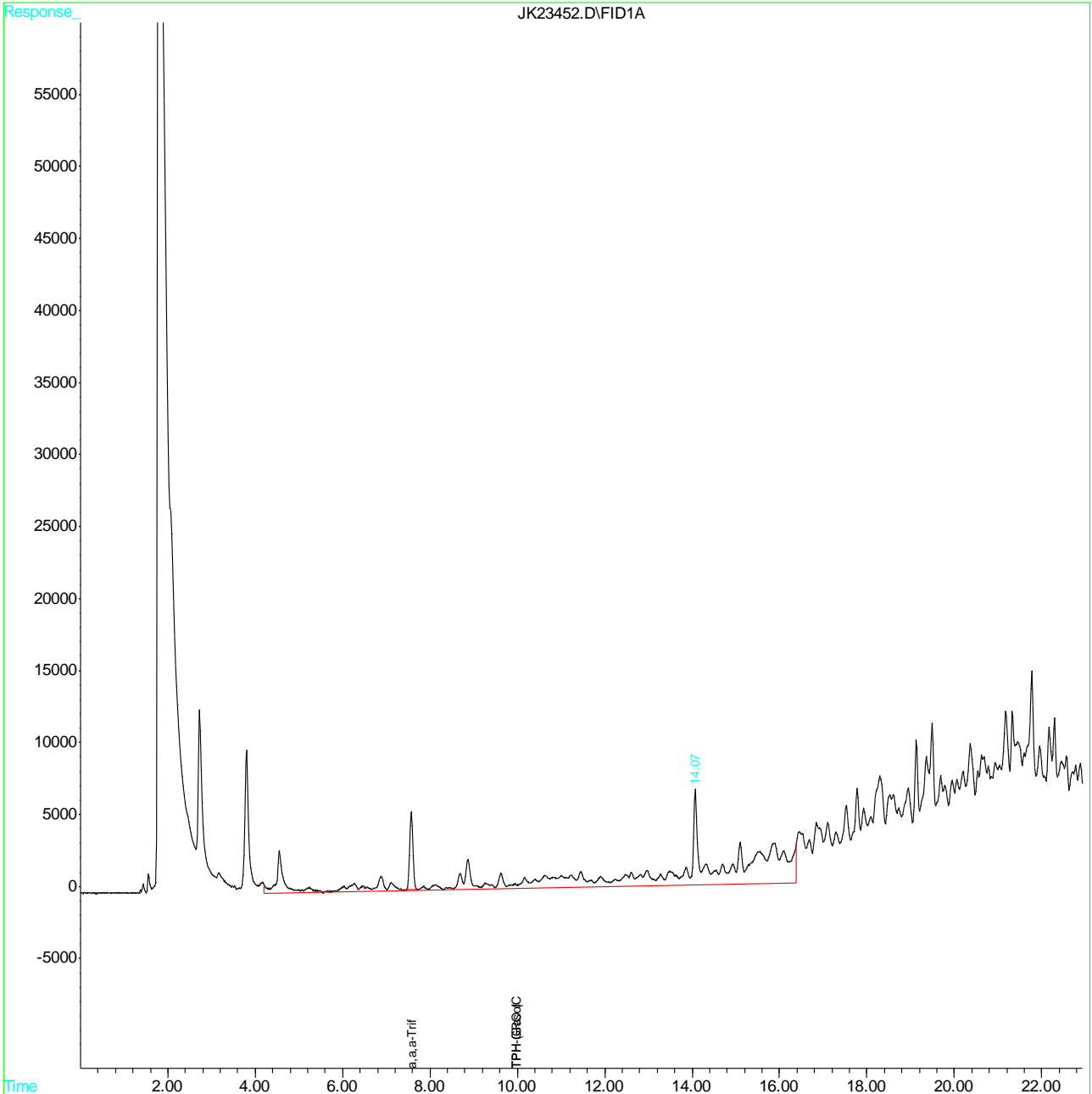
(f)=RT Delta > 1/2 Window (m)=manual int.
JK23452.D VJK951S.M Wed Nov 02 08:43:51 2011

Quantitation Report

Data File : D:\JJ-DATA\20111101\JK23452.D Vial: 11  
Acq On : 11-1-11 5:42:31 PM Operator: tiat  
Sample : C18677-3 Inst : GC - JJ  
Misc : gc941,gjk963,6.92,,,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 1 18:05 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 12 09:02:35 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



7.1.3  
7



Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111101\JK23453.D Vial: 12
Acq On : 11-1-11 6:18:59 PM Operator: tiat
Sample : C18677-4 Inst : GC - JJ
Misc : gc941,gjk963,7.19,,,,,1 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Nov 2 8:44 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)
Title : BTEXM and TPH by 8021/8015
Last Update : Wed Oct 12 09:02:35 2011
Response via : Initial Calibration
DataAcq Meth : GC18015T.M

Volume Inj. : n/a
Signal Phase : DB-VRX
Signal Info : FID

Table with 4 columns: Compound, R.T., Response, Conc Units. Rows include System Monitoring Compounds (a,a,a-Trifluorotoluene, 4-Bromofluorobenzene) and Target Compounds (TPH (Gasoline), TPH-GRO (C6-C10)).

7.14
7

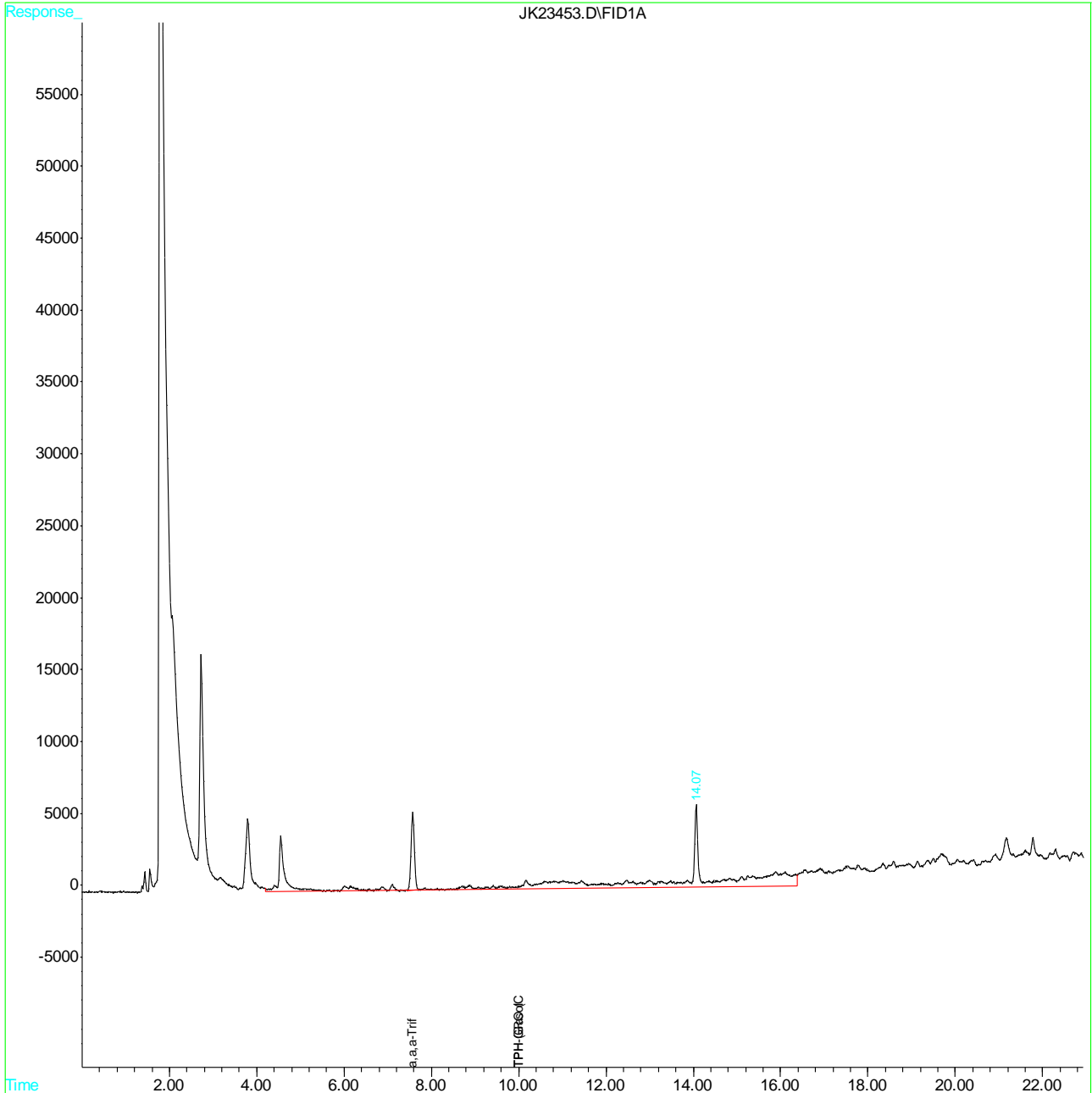
(f)=RT Delta > 1/2 Window (m)=manual int.
JK23453.D VJK951S.M Wed Nov 02 08:45:06 2011

## Quantitation Report

Data File : D:\JJ-DATA\20111101\JK23453.D Vial: 12  
Acq On : 11-1-11 6:18:59 PM Operator: tiat  
Sample : C18677-4 Inst : GC - JJ  
Misc : gc941,gjk963,7.19,,,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 2 8:44 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 12 09:02:35 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111101\JK23454.D Vial: 13
Acq On : 11-1-11 6:55:22 PM Operator: tiat
Sample : C18677-5 Inst : GC - JJ
Misc : gc941,gjk963,5.31,,,,,1 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Nov 2 8:46 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)
Title : BTEXM and TPH by 8021/8015
Last Update : Wed Oct 12 09:02:35 2011
Response via : Initial Calibration
DataAcq Meth : GC18015T.M

Volume Inj. : n/a
Signal Phase : DB-VRX
Signal Info : FID

Table with 4 columns: Compound, R.T., Response, Conc Units. Rows include System Monitoring Compounds (1) S a,a,a-Trifluorotoluene, (2) S 4-Bromofluorobenzene and Target Compounds (3) H TPH (Gasoline), (4) H TPH-GRO (C6-C10).

7.15
7

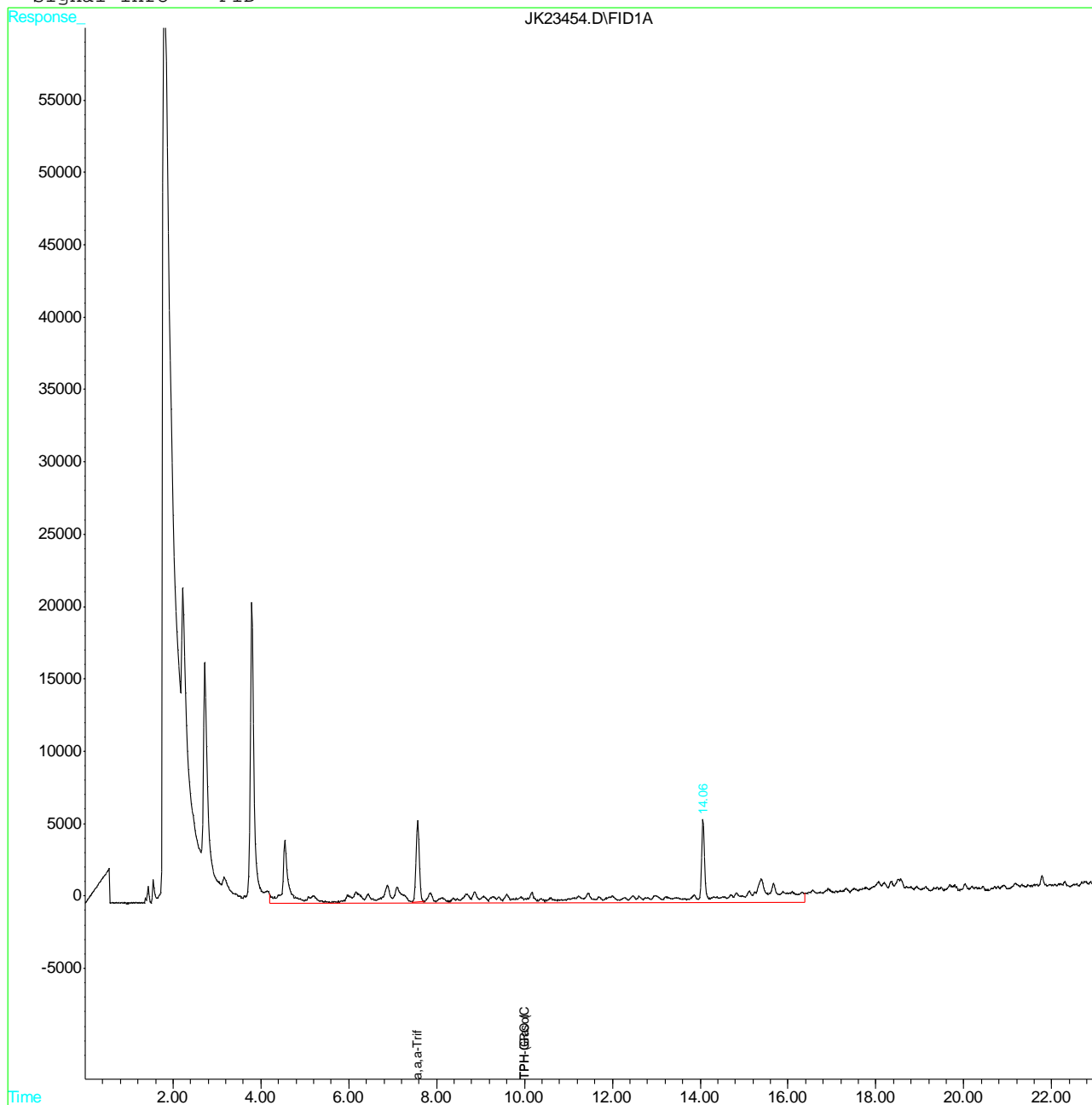
(f)=RT Delta > 1/2 Window (m)=manual int.
JK23454.D VJK951S.M Wed Nov 02 08:57:47 2011

## Quantitation Report

Data File : D:\JJ-DATA\20111101\JK23454.D Vial: 13  
Acq On : 11-1-11 6:55:22 PM Operator: tiat  
Sample : C18677-5 Inst : GC - JJ  
Misc : gc941,gjk963,5.31,,,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 2 8:46 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 12 09:02:35 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111101\JK23455.D Vial: 14  
 Acq On : 11-1-11 7:31:31 PM Operator: tiat  
 Sample : C18677-6 Inst : GC - JJ  
 Misc : gc941,gjk963,3.40,,,,,1 Multiplr: 1.00  
 IntFile : AUTOINT1.E  
 Quant Time: Nov 2 8:46 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
 Title : BTEXM and TPH by 8021/8015  
 Last Update : Wed Oct 12 09:02:35 2011  
 Response via : Initial Calibration  
 DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
 Signal Phase : DB-VRX  
 Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S a,a,a-Trifluorotoluene	7.56	295371	18.726 ug/kg
Spiked Amount 20.000	Range 73 - 118	Recovery =	93.63%
2) S 4-Bromofluorobenzene	14.09	829405	NoCal ug/L
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
3) H TPH (Gasoline)	9.99	38918615	1326.297 ug/kg
4) H TPH-GRO (C6-C10)	9.99	11828564	410.812 ug/kg

7.1.6  
7

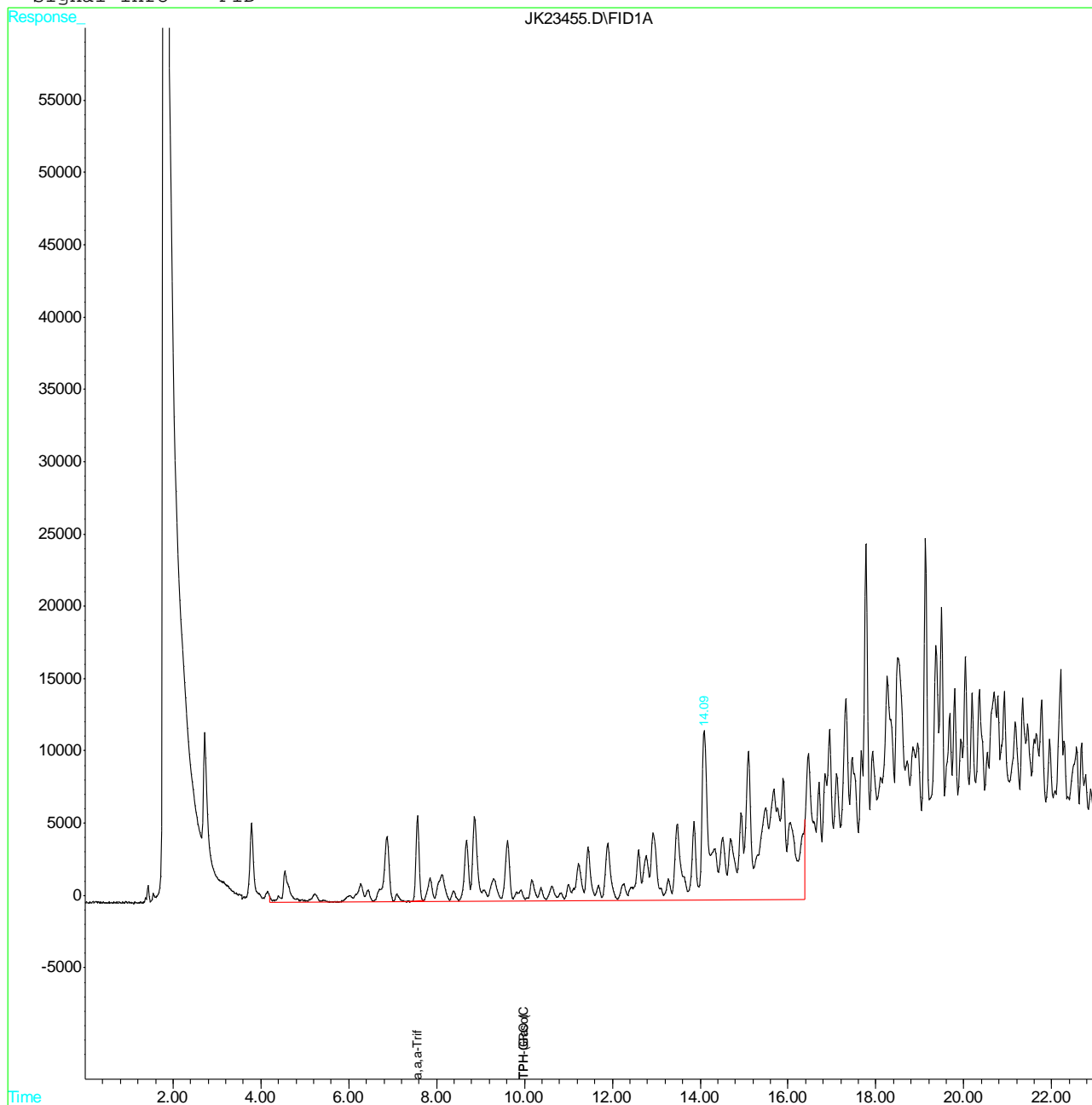
(f)=RT Delta > 1/2 Window (m)=manual int.  
 JK23455.D VJK951S.M Wed Nov 02 08:58:17 2011

## Quantitation Report

Data File : D:\JJ-DATA\20111101\JK23455.D Vial: 14  
Acq On : 11-1-11 7:31:31 PM Operator: tiat  
Sample : C18677-6 Inst : GC - JJ  
Misc : gc941,gjk963,3.40,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 2 8:46 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 12 09:02:35 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111101\JK23456.D Vial: 15
Acq On : 11-1-11 8:07:53 PM Operator: tiat
Sample : C18677-7 Inst : GC - JJ
Misc : gc941,gjk963,5.80,,,,,1 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Nov 2 8:46 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)
Title : BTEXM and TPH by 8021/8015
Last Update : Wed Oct 12 09:02:35 2011
Response via : Initial Calibration
DataAcq Meth : GC18015T.M

Volume Inj. : n/a
Signal Phase : DB-VRX
Signal Info : FID

Table with 4 columns: Compound, R.T., Response, Conc Units. Rows include System Monitoring Compounds (1) S a,a,a-Trifluorotoluene, (2) S 4-Bromofluorobenzene and Target Compounds (3) H TPH (Gasoline), (4) H TPH-GRO (C6-C10).

7.17
7

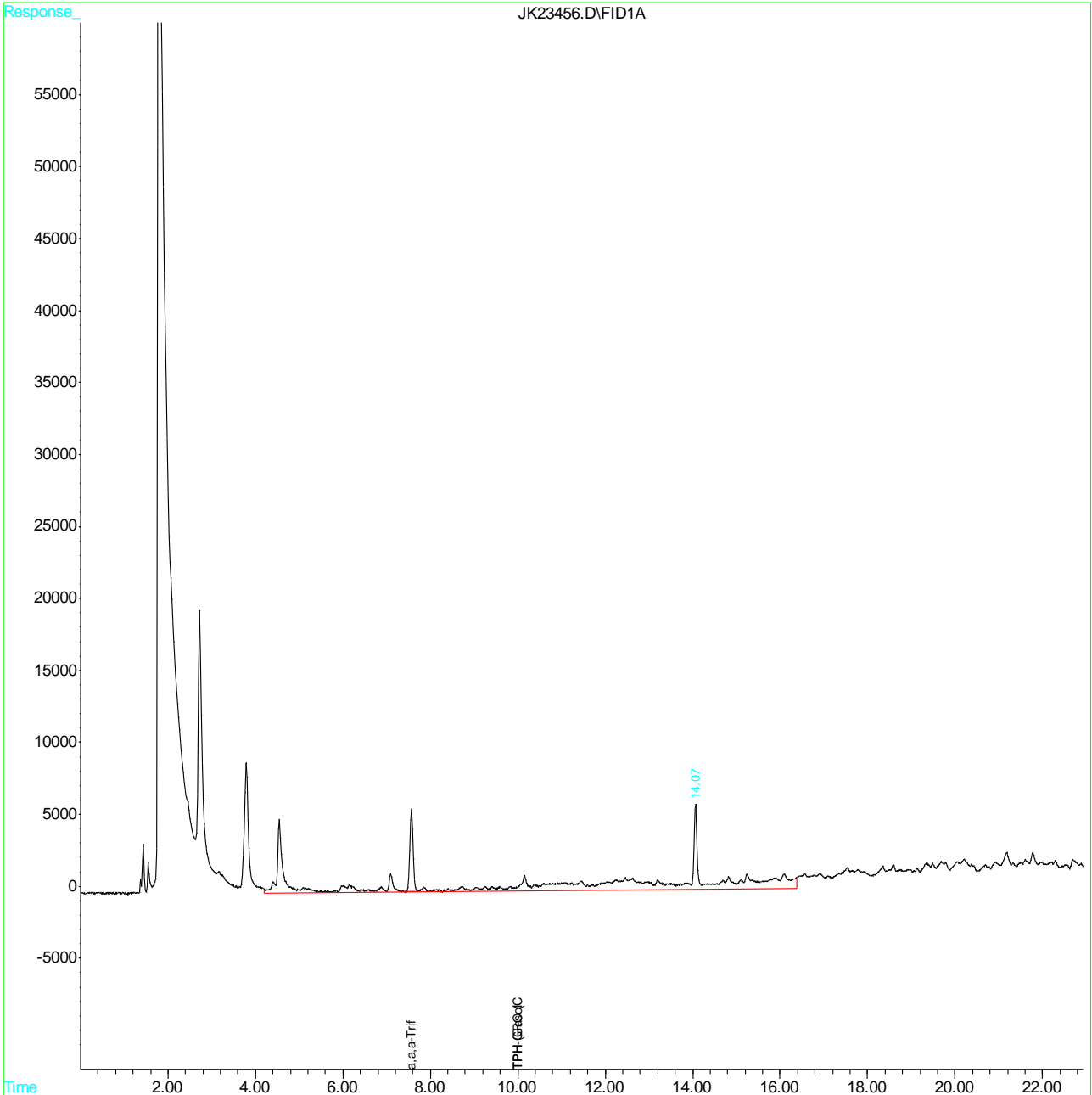
(f)=RT Delta > 1/2 Window (m)=manual int.
JK23456.D VJK951S.M Wed Nov 02 08:58:50 2011

## Quantitation Report

Data File : D:\JJ-DATA\20111101\JK23456.D Vial: 15  
Acq On : 11-1-11 8:07:53 PM Operator: tiat  
Sample : C18677-7 Inst : GC - JJ  
Misc : gc941,gjk963,5.80,,,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 2 8:46 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 12 09:02:35 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID





Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\201111102\JK23490.D Vial: 5  
 Acq On : 11-2-11 6:06:25 PM Operator: tiat  
 Sample : C18677-8 Inst : GC - JJ  
 Misc : gc939,gjk964,10,,,1 Multiplr: 1.00  
 IntFile : AUTOINT1.E  
 Quant Time: Nov 3 8:41 2011 Quant Results File: VJK946W.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK946W.M (Chemstation Integrator)  
 Title : BTEXM and TPH by 8021/8015  
 Last Update : Wed Oct 05 10:44:43 2011  
 Response via : Initial Calibration  
 DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
 Signal Phase : DB-VRX  
 Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S a,a,a-Trifluorotoluene	7.57	290663	8.821 ug/L
Spiked Amount 10.000		Recovery =	88.21%
2) S 4-Bromofluorobenzene	14.06	249455	NoCal ug/L
Spiked Amount 10.000		Recovery =	0.00%
Target Compounds			
3) H TPH (Gasoline)	9.99	2640963	27.592 ug/L
4) H TPH-GRO (C6-C10)	9.99	1105989	4.263 ug/L

7.1.8  
7

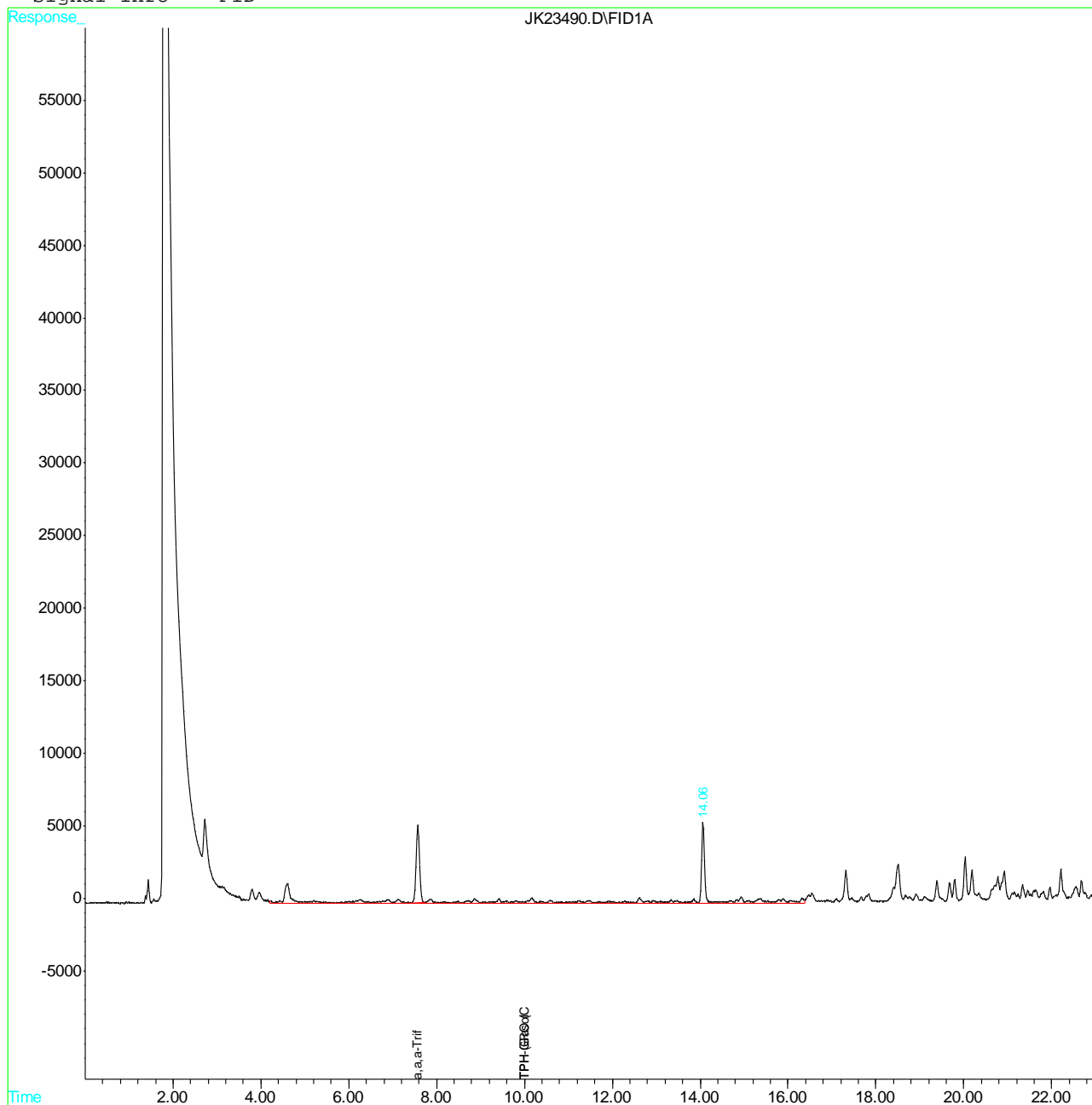
(f)=RT Delta > 1/2 Window (m)=manual int.  
 JK23490.D VJK946W.M Thu Nov 03 08:53:58 2011

## Quantitation Report

Data File : D:\JJ-DATA\20111102\JK23490.D Vial: 5  
Acq On : 11-2-11 6:06:25 PM Operator: tiat  
Sample : C18677-8 Inst : GC - JJ  
Misc : gc939,gjk964,10,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 3 8:41 2011 Quant Results File: VJK946W.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK946W.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 05 10:44:43 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111102\JK23491.D Vial: 6
Acq On : 11-2-11 6:42:55 PM Operator: tiat
Sample : C18677-9 Inst : GC - JJ
Misc : gc939,gjk964,10,,,1 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Nov 3 8:41 2011 Quant Results File: VJK946W.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK946W.M (Chemstation Integrator)
Title : BTEXM and TPH by 8021/8015
Last Update : Wed Oct 05 10:44:43 2011
Response via : Initial Calibration
DataAcq Meth : GC18015T.M

Volume Inj. : n/a
Signal Phase : DB-VRX
Signal Info : FID

Table with 4 columns: Compound, R.T., Response, Conc Units. Rows include System Monitoring Compounds (1) S a,a,a-Trifluorotoluene, (2) S 4-Bromofluorobenzene and Target Compounds (3) H TPH (Gasoline), (4) H TPH-GRO (C6-C10).

7.1.9
7

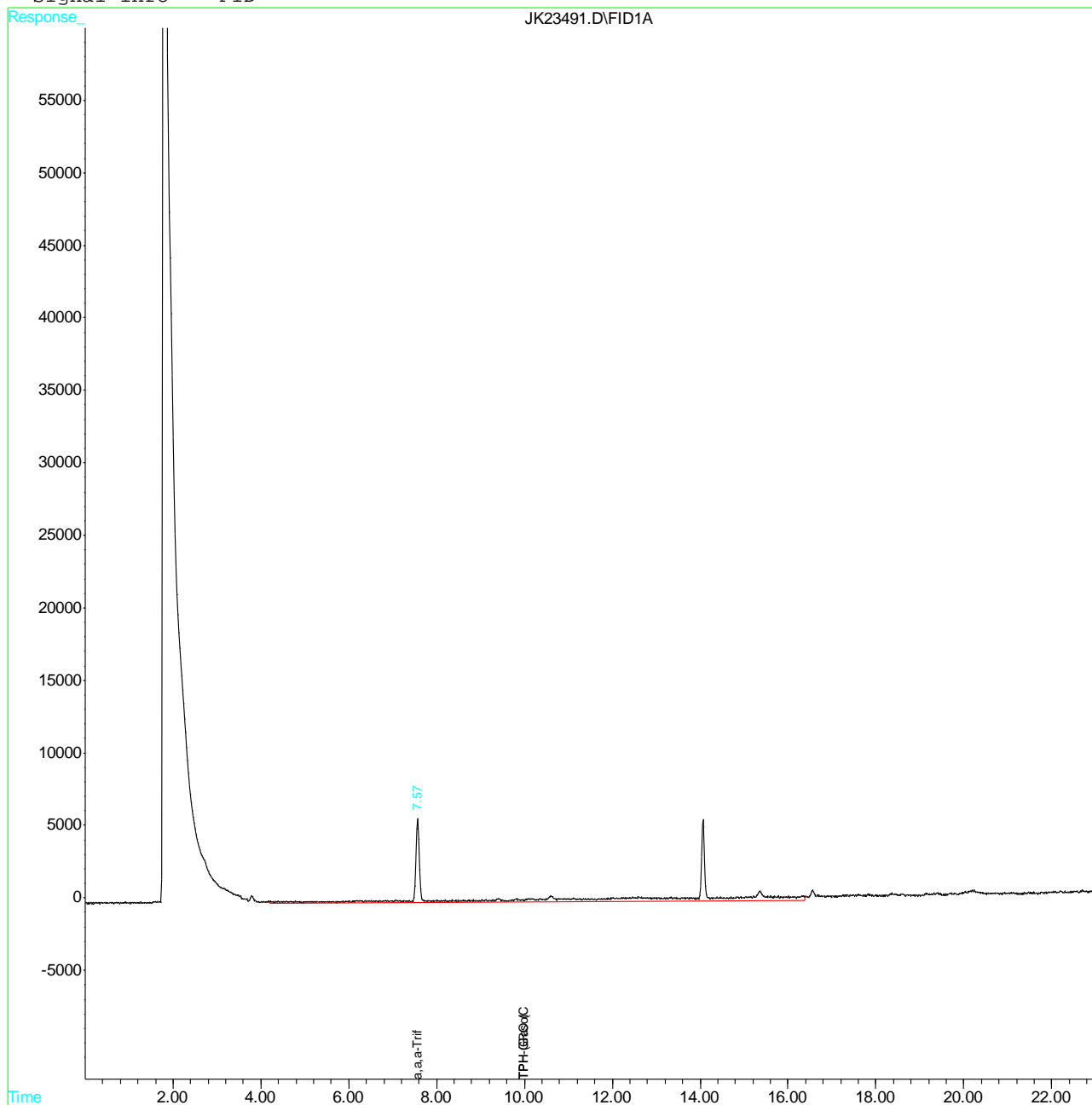
(f)=RT Delta > 1/2 Window (m)=manual int.
JK23491.D VJK946W.M Thu Nov 03 08:54:24 2011

## Quantitation Report

Data File : D:\JJ-DATA\20111102\JK23491.D Vial: 6  
Acq On : 11-2-11 6:42:55 PM Operator: tiat  
Sample : C18677-9 Inst : GC - JJ  
Misc : gc939,gjk964,10,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 3 8:41 2011 Quant Results File: VJK946W.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK946W.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 05 10:44:43 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111101\JK23447.D Vial: 6  
 Acq On : 11-1-11 2:26:05 PM Operator: tiat  
 Sample : MB Inst : GC - JJ  
 Misc : gc941,gjk963,5,,,,,1 Multiplr: 1.00  
 IntFile : AUTOINT1.E  
 Quant Time: Nov 1 14:49 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
 Title : BTEXM and TPH by 8021/8015  
 Last Update : Wed Oct 12 09:02:35 2011  
 Response via : Initial Calibration  
 DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
 Signal Phase : DB-VRX  
 Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S a,a,a-Trifluorotoluene	7.57	283651	17.983 ug/kg
Spiked Amount 20.000	Range 73 - 118	Recovery =	89.92%
2) S 4-Bromofluorobenzene	14.06	240166	NoCal ug/L
Spiked Amount 20.000	Recovery =		0.00%
Target Compounds			
3) H TPH (Gasoline)	9.99	1443373	N.D. ug/kg
4) H TPH-GRO (C6-C10)	9.99	883336	N.D. ug/kg

(f)=RT Delta > 1/2 Window (m)=manual int.  
 JK23447.D VJK951S.M Tue Nov 01 14:50:19 2011

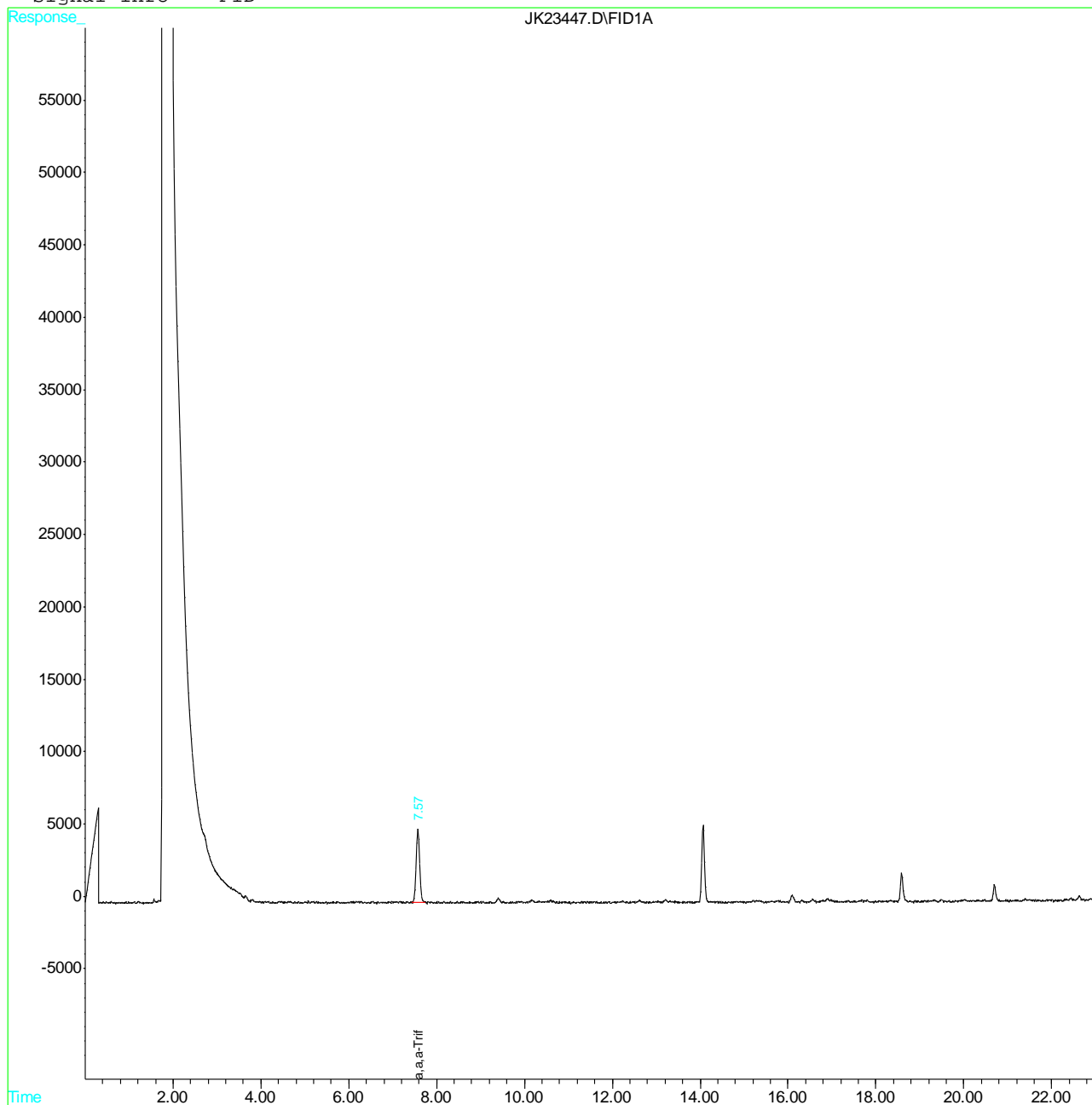
7.2.1  
 7

## Quantitation Report

Data File : D:\JJ-DATA\20111101\JK23447.D Vial: 6  
Acq On : 11-1-11 2:26:05 PM Operator: tiat  
Sample : MB Inst : GC - JJ  
Misc : gc941,gjk963,5,,,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 1 14:49 2011 Quant Results File: VJK951S.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK951S.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 12 09:02:35 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID



Quantitation Report (QT Reviewed)

Data File : D:\JJ-DATA\20111102\JK23489.D Vial: 4
Acq On : 11-2-11 5:20:35 PM Operator: tiat
Sample : MB Inst : GC - JJ
Misc : gc939,gjk964,10,,,1 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Nov 2 17:45 2011 Quant Results File: VJK946W.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK946W.M (Chemstation Integrator)
Title : BTEXM and TPH by 8021/8015
Last Update : Wed Oct 05 10:44:43 2011
Response via : Initial Calibration
DataAcq Meth : GC18015T.M

Volume Inj. : n/a
Signal Phase : DB-VRX
Signal Info : FID

Table with 4 columns: Compound, R.T., Response, Conc Units. Rows include System Monitoring Compounds (a,a,a-Trifluorotoluene, 4-Bromofluorobenzene) and Target Compounds (TPH (Gasoline), TPH-GRO (C6-C10)).

7.22
7

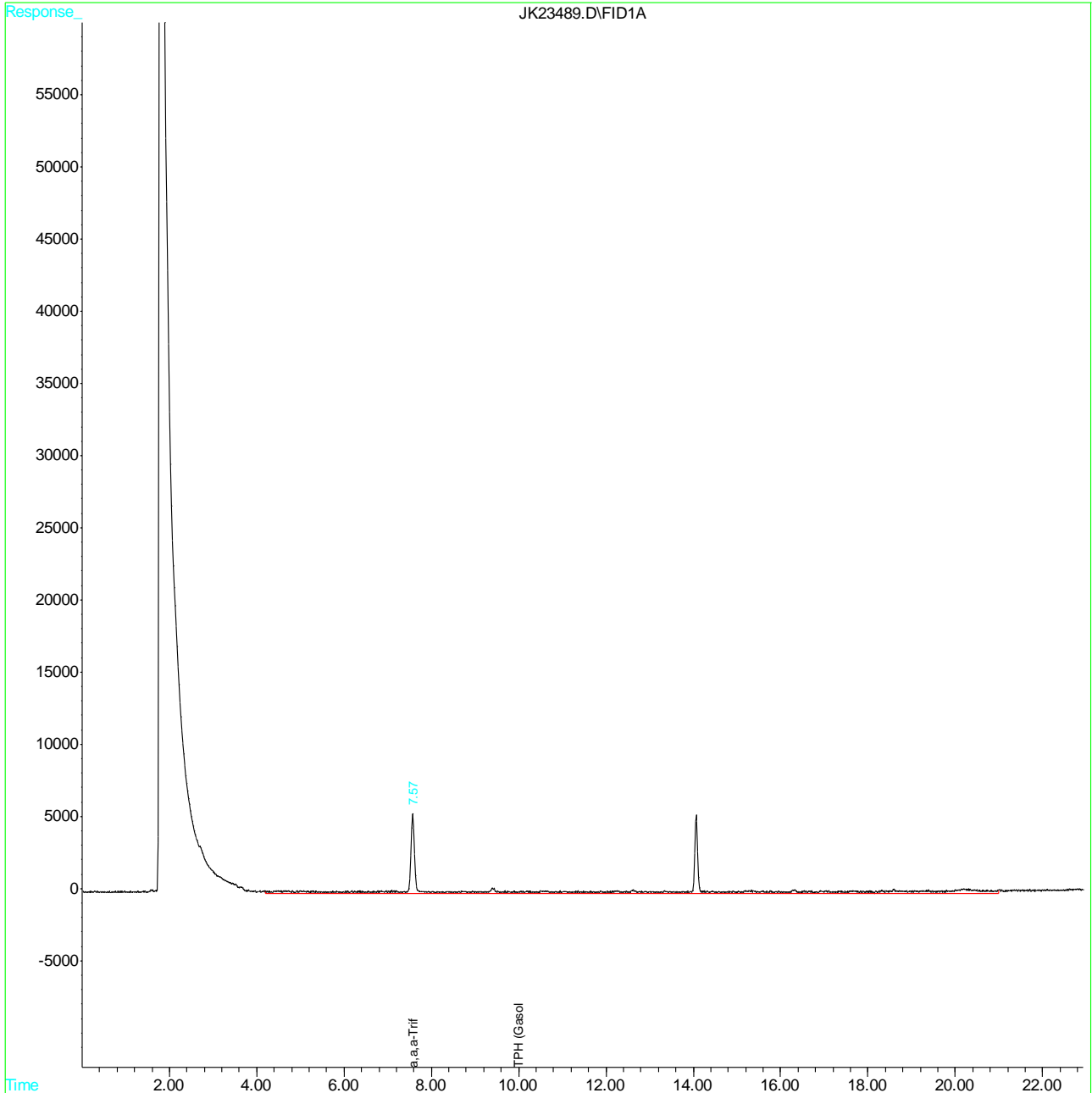
(f)=RT Delta > 1/2 Window (m)=manual int.
JK23489.D VJK946W.M Wed Nov 02 17:49:27 2011

## Quantitation Report

Data File : D:\JJ-DATA\20111102\JK23489.D Vial: 4  
Acq On : 11-2-11 5:20:35 PM Operator: tiat  
Sample : MB Inst : GC - JJ  
Misc : gc939,gjk964,10,,,1 Multiplr: 1.00  
IntFile : AUTOINT1.E  
Quant Time: Nov 2 17:45 2011 Quant Results File: VJK946W.RES

Quant Method : C:\HPCHEM\1\METHODS\VJK946W.M (Chemstation Integrator)  
Title : BTEXM and TPH by 8021/8015  
Last Update : Wed Oct 05 10:44:43 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : GC18015T.M

Volume Inj. : n/a  
Signal Phase : DB-VRX  
Signal Info : FID





## GC Semi-volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary**

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4806-MB	GG29413.D	1	10/29/11	JH	10/28/11	OP4806	GGG786

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	81% 45-140%

**Method Blank Summary**

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4807-MB	GG29416.D	1	10/29/11	JH	10/28/11	OP4807	GGG786

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18677-8

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.050	mg/l	
	TPH (> C28-C40)	ND	0.20	0.10	mg/l	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	75% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4806-BS	GG29414.D	1	10/29/11	JH	10/28/11	OP4806	GGG786
OP4806-BSD	GG29415.D	1	10/29/11	JH	10/28/11	OP4806	GGG786

**The QC reported here applies to the following samples:** **Method:** SW846 8015B M

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	60.3	60	56.7	57	6	45-140/30
	TPH (> C28-C40)	100	66.0	66	57.9	58	13	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	82%	63%	45-140%

8.2.1  
8

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4807-BS	GG29417.D	1	10/29/11	JH	10/28/11	OP4807	GGG786
OP4807-BSD	GG29418.D	1	10/29/11	JH	10/28/11	OP4807	GGG786

The QC reported here applies to the following samples: Method: SW846 8015B M

C18677-8

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.728	73	0.684	68	6	45-140/30
	TPH (> C28-C40)	1	0.755	76	0.769	77	2	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	92%	85%	45-140%

8.2.2  
8

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18677  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4806-MS	HH18295.D	5	10/31/11	JH	10/28/11	OP4806	GHH597
OP4806-MSD	HH18296.D	5	10/31/11	JH	10/28/11	OP4806	GHH597
C18677-7	HH18269.D	5	10/31/11	JH	10/28/11	OP4806	GHH597

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

CAS No.	Compound	C18677-7 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	114	99	189	76	197	85	4	45-140/30
	TPH (> C28-C40)	453	99	538	86	533	82	1	45-140/30

CAS No.	Surrogate Recoveries	MS	MSD	C18677-7	Limits
630-01-3	Hexacosane	83%	82%	74%	45-140%

8.3.1  
8

GC Semi-volatiles

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Raw Data

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Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18267.D Vial: 4  
 Acq On : 31 Oct 2011 9:26 am Operator: JAMESH  
 Sample : C18677-1 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.2,,,1,5,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:32 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.34	304596	13.234 ppm
Spiked Amount 100.000		Recovery =	13.23%
Target Compounds			
2) H TPH (C10-C28)	5.82	2883598	142.684 ppm
3) H TPH (>C28-C40)	14.51	8433182	553.041 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	0.00	0	N.D. ppm
7) H TPH (Motor Oil)	14.51	10536822	688.022 ppm

9.1.1  
 9

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18267.D GHH583.M Tue Nov 01 11:49:17 2011

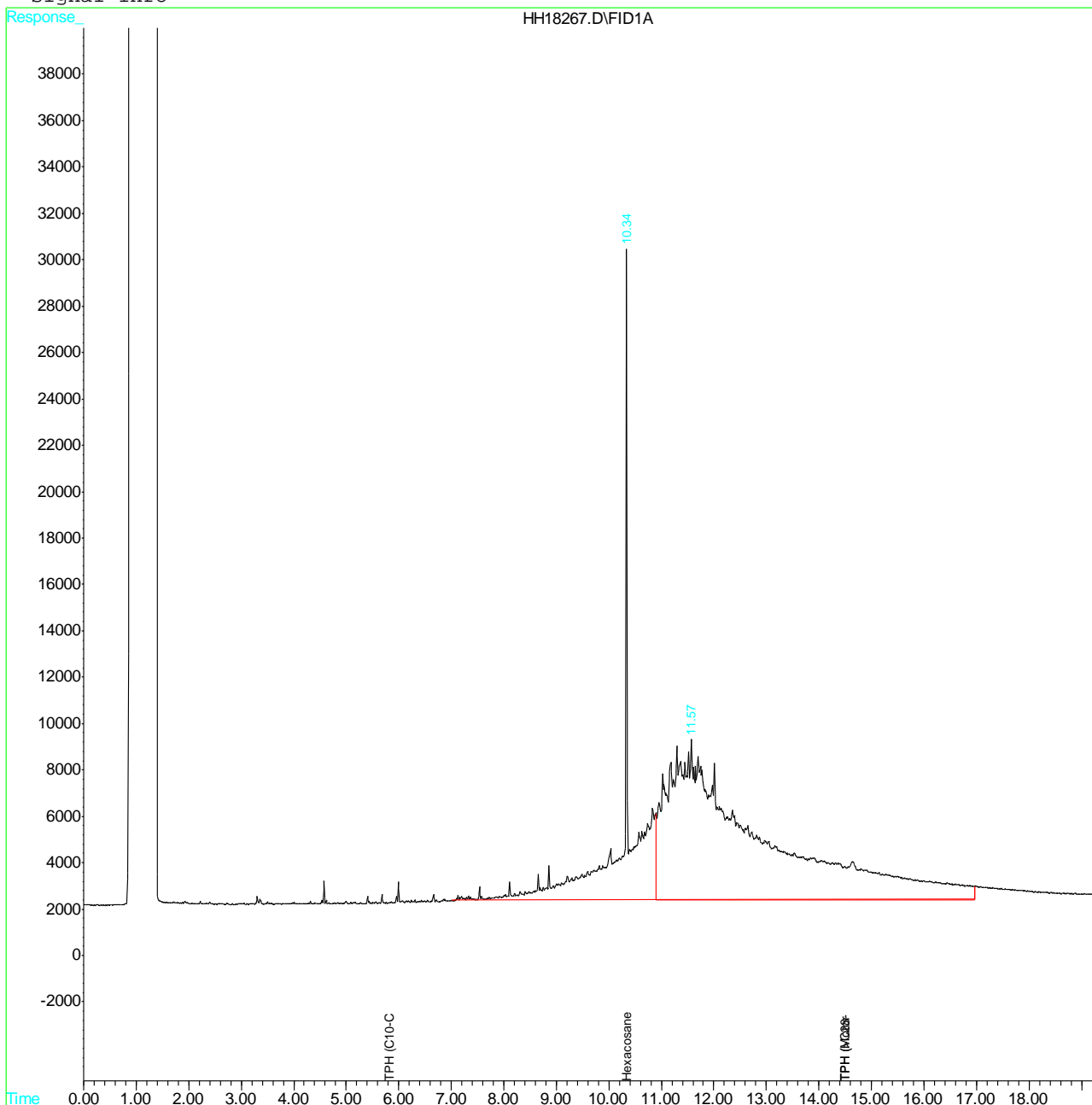


Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18267.D Vial: 4  
Acq On : 31 Oct 2011 9:26 am Operator: JAMESH  
Sample : C18677-1 Inst : Diesel 3  
Misc : OP4806,GHH597,10.2,,1,5,SOIL Multiplr: 1.00  
IntFile : EVENTS.E  
Quant Time: Nov 1 7:32 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
Title : TPH-Extractable by SW-846 Method 8015B  
Last Update : Thu Oct 13 15:01:07 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
Signal Phase :  
Signal Info :



9.1.1  
9

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18270.D Vial: 7  
 Acq On : 31 Oct 2011 9:46 am Operator: JAMESH  
 Sample : C18677-2 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.1,,,1,25,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:41 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.34	70969	3.083 ppm
Spiked Amount 100.000		Recovery =	3.08%
Target Compounds			
2) H TPH (C10-C28)	5.82	11570647	572.530 ppm
3) H TPH (>C28-C40)	14.51	14180604	929.952 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	11640172	573.157 ppm
7) H TPH (Motor Oil)	14.51	14121853	922.113 ppm

9.12  
**9**

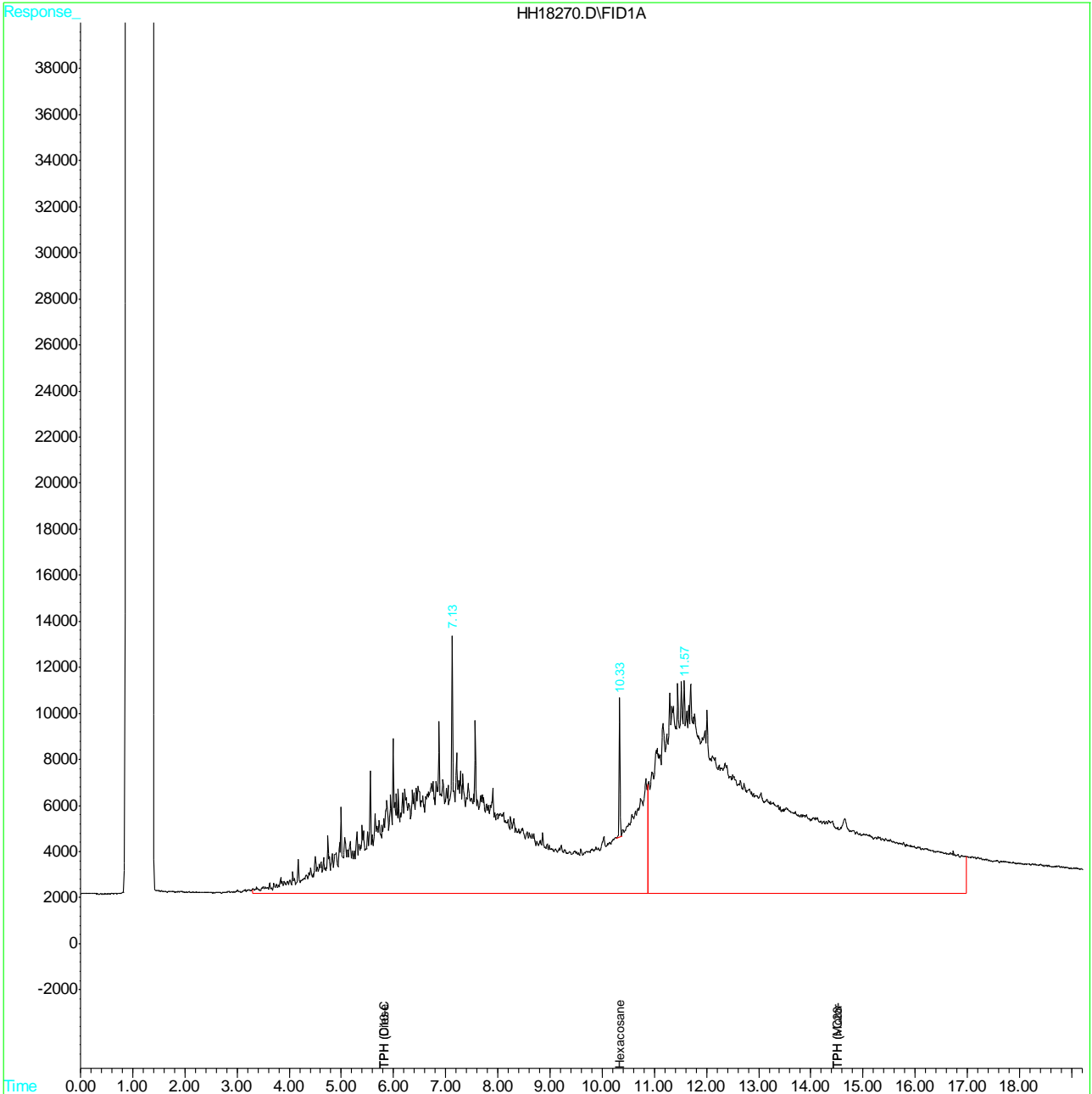
(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18270.D GHH583.M Tue Nov 01 11:49:20 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18270.D Vial: 7  
 Acq On : 31 Oct 2011 9:46 am Operator: JAMESH  
 Sample : C18677-2 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.1,,1,25,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:41 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



9.12  
9

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18271.D Vial: 8  
 Acq On : 31 Oct 2011 10:13 am Operator: JAMESH  
 Sample : C18677-3 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.2,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:44 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S Hexacosane	10.34	1553309	67.485 ppm
Spiked Amount 100.000		Recovery =	67.48%
<b>Target Compounds</b>			
2) H TPH (C10-C28)	5.82	5752324	284.632 ppm
3) H TPH (>C28-C40)	14.51	12128070	795.348 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	0.00	0	N.D. ppm
7) H TPH (Motor Oil)	14.51	16110273	1051.951 ppm

9.1.3  
**9**

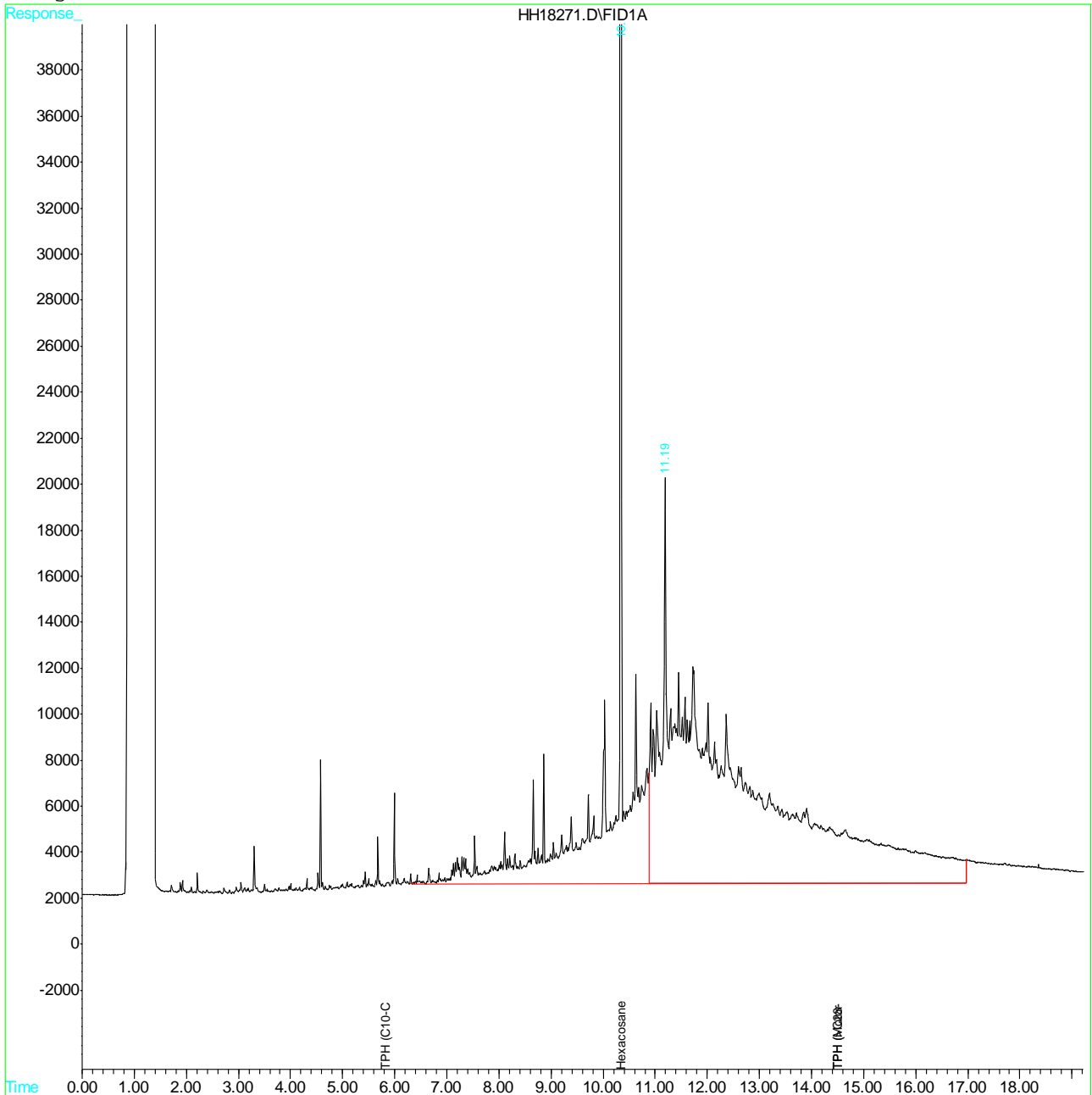
(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18271.D GHH583.M Tue Nov 01 11:49:20 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18271.D Vial: 8  
 Acq On : 31 Oct 2011 10:13 am Operator: JAMESH  
 Sample : C18677-3 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.2,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:44 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



9.1.3  
**9**

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18272.D Vial: 9  
 Acq On : 31 Oct 2011 10:40 am Operator: JAMESH  
 Sample : C18677-4 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.2,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:46 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S Hexacosane	10.35	1798294	78.129 ppm
Spiked Amount 100.000		Recovery =	78.13%
<b>Target Compounds</b>			
2) H TPH (C10-C28)	5.82	8219307	406.701 ppm
3) H TPH (>C28-C40)	14.51	11847431	776.944 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	0.00	0	N.D. ppm
7) H TPH (Motor Oil)	14.51	18995679	1240.359 ppm

9.14  
 9

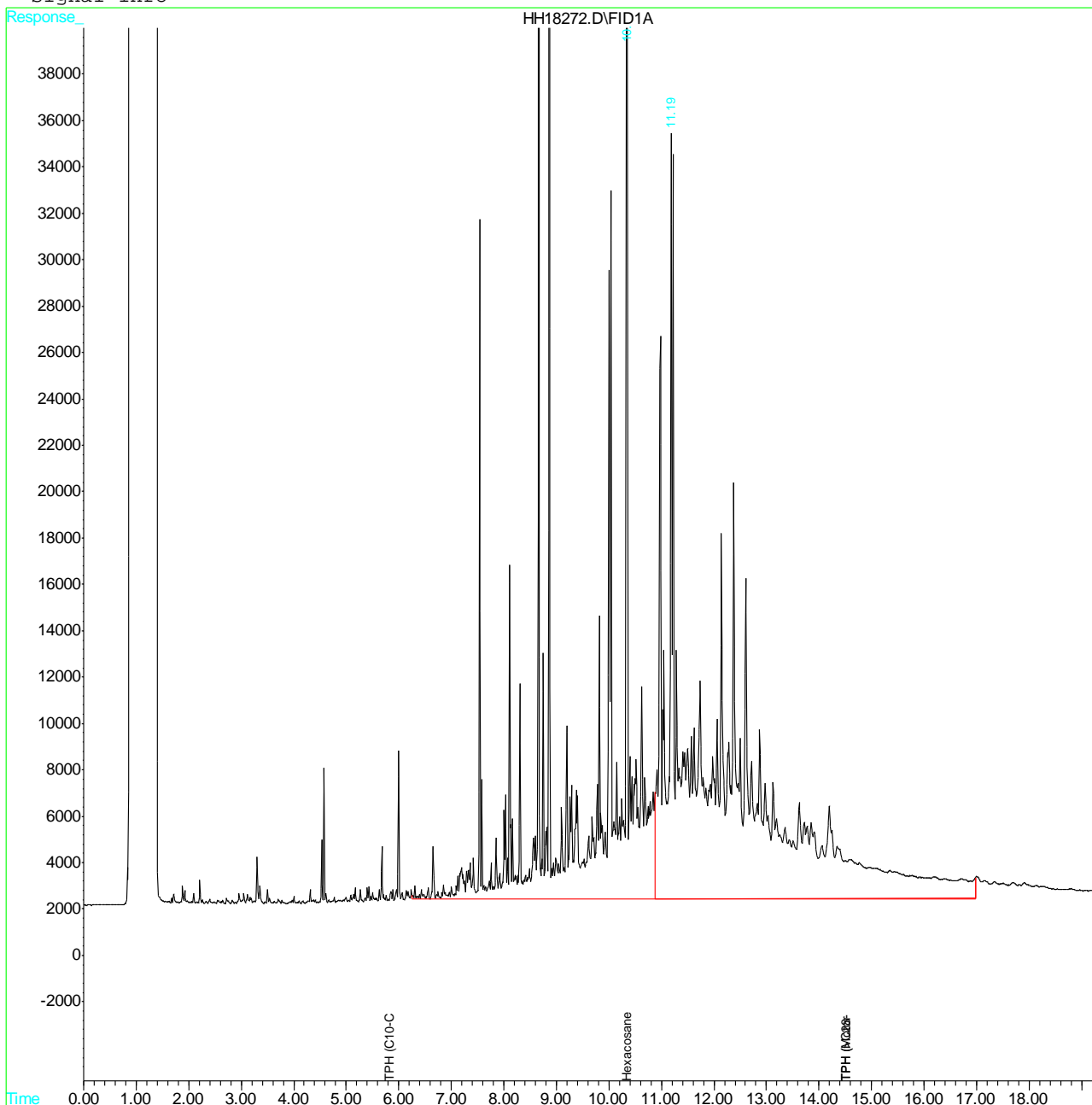
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 HH18272.D GHH583.M Tue Nov 01 11:49:21 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18272.D Vial: 9  
 Acq On : 31 Oct 2011 10:40 am Operator: JAMESH  
 Sample : C18677-4 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.2,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:46 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



9.1.4  
**9**

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18273.D Vial: 10  
 Acq On : 31 Oct 2011 11:07 am Operator: JAMESH  
 Sample : C18677-5 Inst : Diesel 3  
 Misc : OP4806,GHH597,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:48 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.35	1459761	63.421 ppm
Spiked Amount 100.000		Recovery =	63.42%
Target Compounds			
2) H TPH (C10-C28)	5.82	11005111	544.546 ppm
3) H TPH (>C28-C40)	14.51	13557547	889.092 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	11315584	557.174 ppm
7) H TPH (Motor Oil)	14.51	13522236	882.960 ppm

9.15  
 9

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18273.D GHH583.M Tue Nov 01 11:49:22 2011

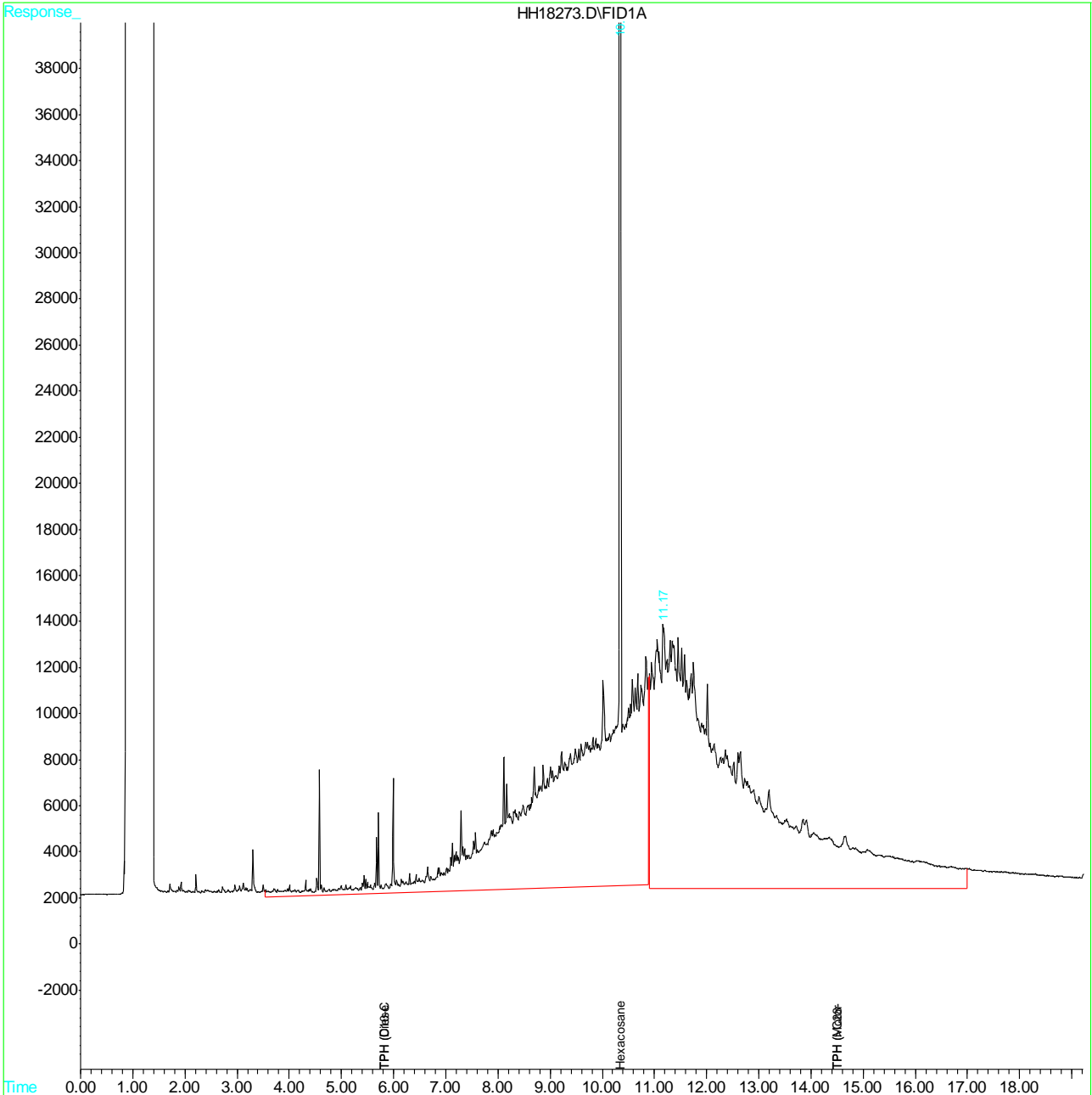


Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18273.D Vial: 10  
 Acq On : 31 Oct 2011 11:07 am Operator: JAMESH  
 Sample : C18677-5 Inst : Diesel 3  
 Misc : OP4806,GHH597,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:48 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



9.1.5  
**9**

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18268.D Vial: 5  
 Acq On : 31 Oct 2011 8:52 am Operator: JAMESH  
 Sample : C18677-6 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.1,,,1,10,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:35 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.34	128325	5.575 ppm
Spiked Amount 100.000		Recovery =	5.58%
Target Compounds			
2) H TPH (C10-C28)	5.82	12809245	633.817 ppm
3) H TPH (>C28-C40)	14.51	7848701	514.711 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	12964515	638.367 ppm
7) H TPH (Motor Oil)	14.51	7870254	513.903 ppm

9.1.6  
9

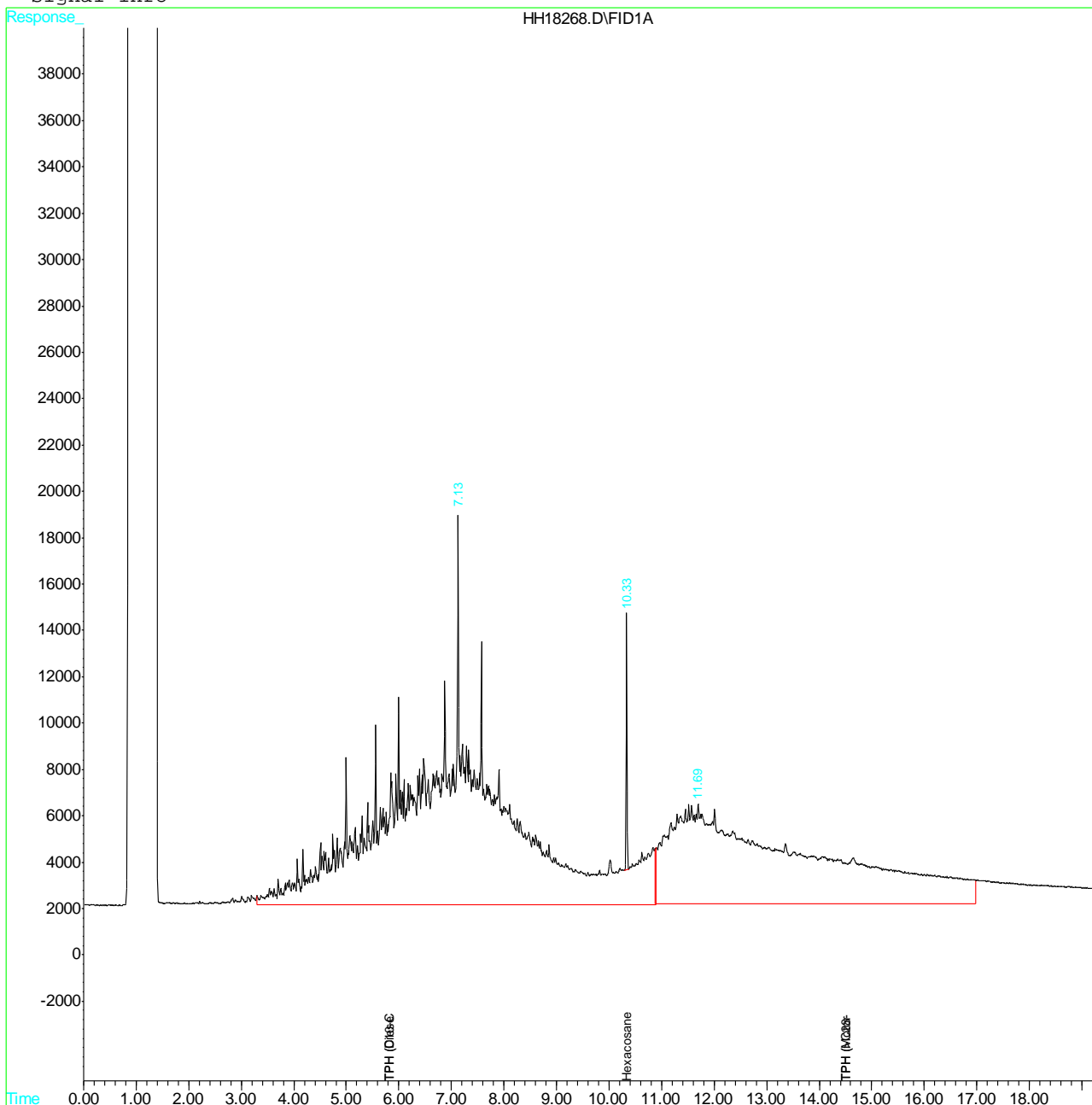
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 HH18268.D GHH583.M Tue Nov 01 11:49:18 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18268.D Vial: 5  
 Acq On : 31 Oct 2011 8:52 am Operator: JAMESH  
 Sample : C18677-6 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.1,,1,10,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:35 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



9.1.6  
 9

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18269.D Vial: 6  
 Acq On : 31 Oct 2011 9:20 am Operator: JAMESH  
 Sample : C18677-7 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.1,,,1,5,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:37 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S Hexacosane	10.34	339235	14.738 ppm
Spiked Amount	100.000	Recovery	= 14.74%
Target Compounds			
2) H TPH (C10-C28)	5.82	4665019	230.831 ppm
3) H TPH (>C28-C40)	14.51	13941391	914.264 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	0.00	0	N.D. ppm
7) H TPH (Motor Oil)	14.51	17698282	1155.643 ppm

9.17  
 9

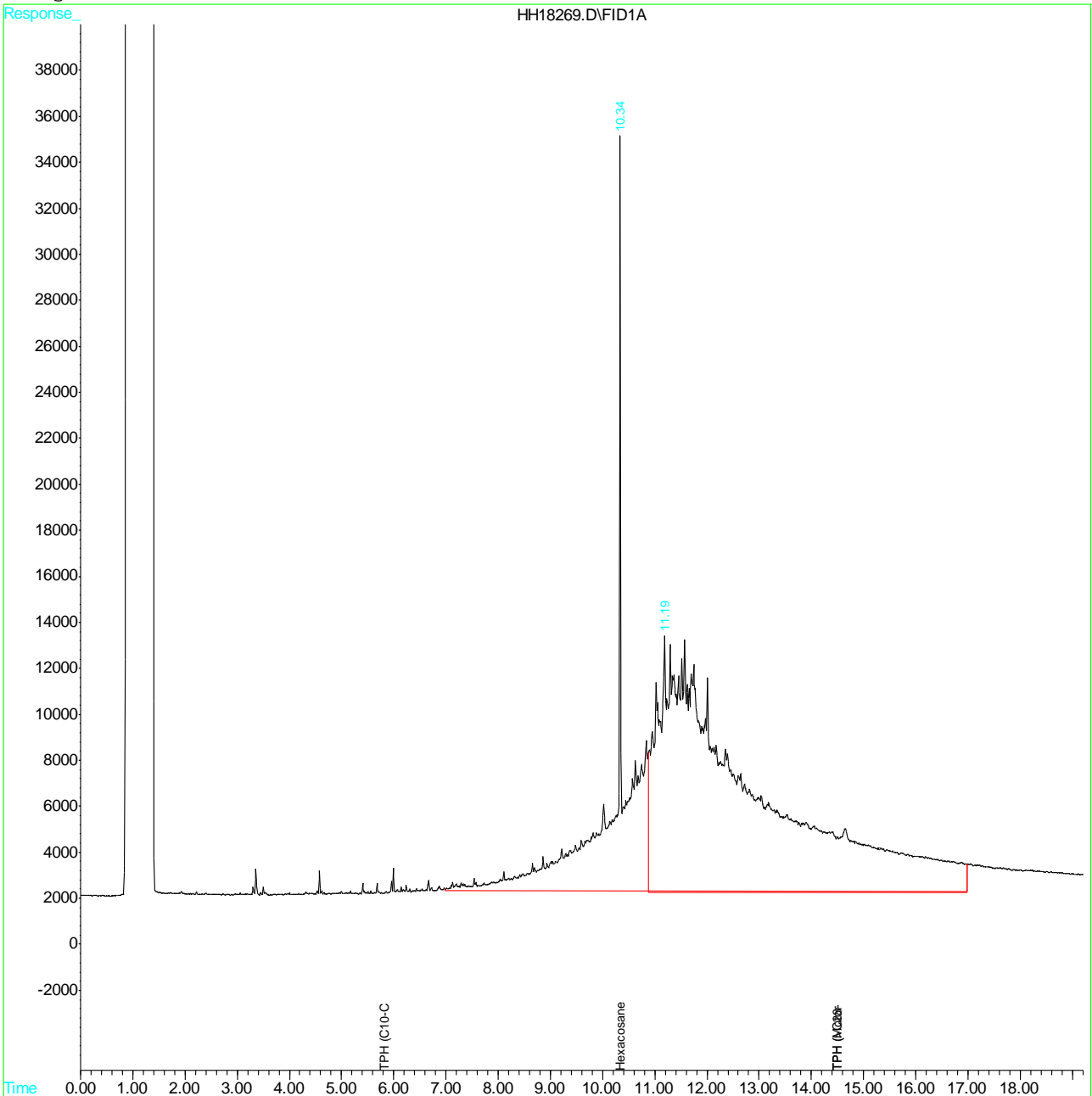
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 HH18269.D GHH583.M Tue Nov 01 11:49:19 2011

Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH597\HH18269.D Vial: 6  
 Acq On : 31 Oct 2011 9:20 am Operator: JAMESH  
 Sample : C18677-7 Inst : Diesel 3  
 Misc : OP4806,GHH597,10.1,,1,5,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 1 7:37 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



9.17  
 9

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG786\GG29448.D Vial: 36  
 Acq On : 10-29-11 10:51:21 PM Operator: JAMESH  
 Sample : C18677-8 Inst : Diesel #2  
 Misc : OP4807,GGG786,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 31 7:31 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	97539833	68.604 ppm
Spiked Amount 100.000		Recovery =	68.60%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	252534130	196.679 ppm
3) H TPH (>C28-C40)	11.83	20873265	23.406 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	252534130	192.987 ppm
7) H TPH (Motor Oil)	11.83	20873265	23.330 ppm

9.18  
9

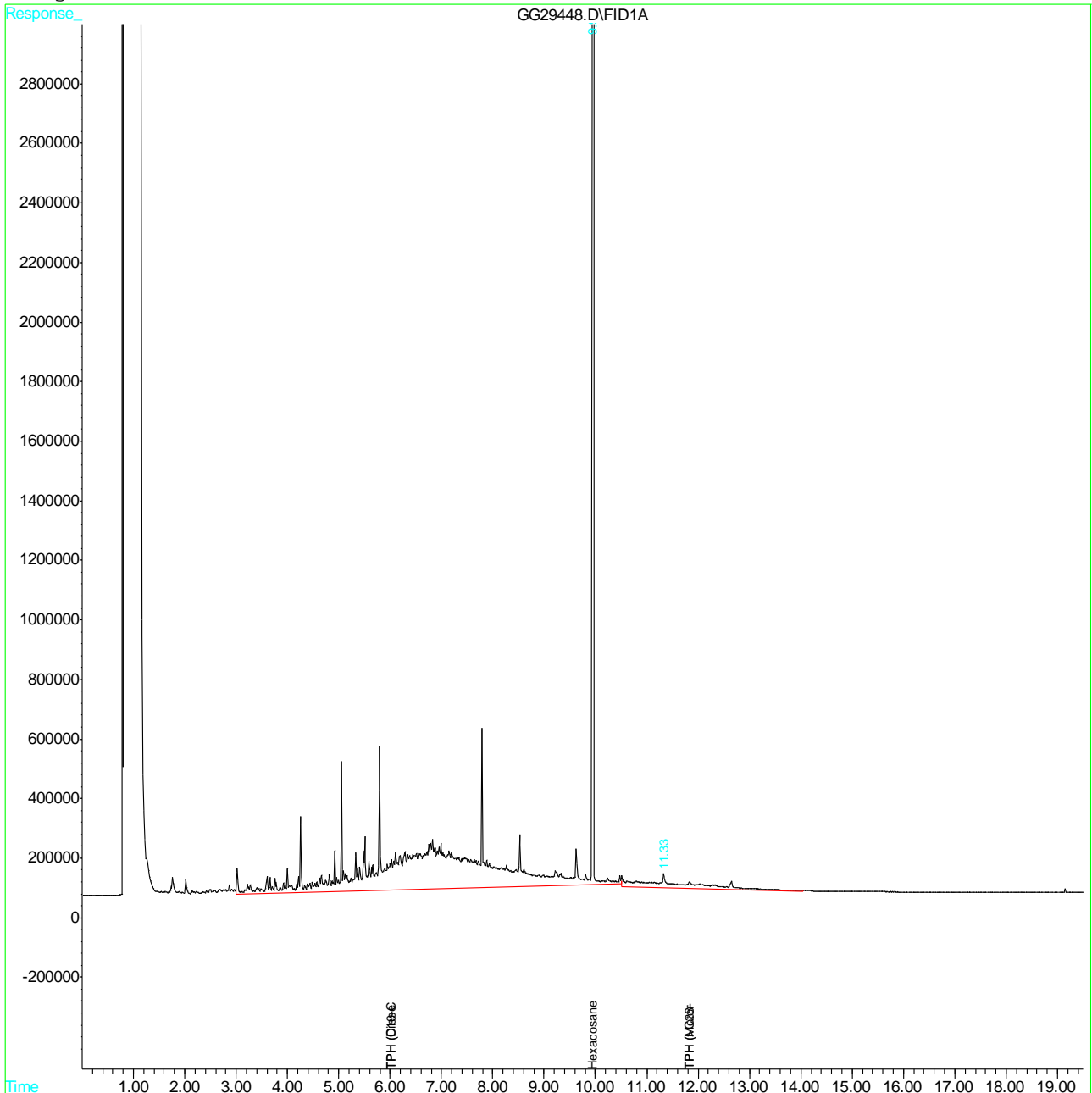
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29448.D GGG709.M Tue Nov 01 12:26:15 2011

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG786\GG29448.D Vial: 36  
 Acq On : 10-29-11 10:51:21 PM Operator: JAMESH  
 Sample : C18677-8 Inst : Diesel #2  
 Misc : OP4807,GGG786,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 31 7:31 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



9.1.8  
 9

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG786\GG29413.D Vial: 4  
 Acq On : 10-29-11 7:46:07 AM Operator: JAMESH  
 Sample : OP4806-MB Inst : Diesel #2  
 Misc : OP4806,GGG786,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 31 7:19 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	115249910	81.060 ppm
Spiked Amount 100.000		Recovery =	81.06%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	32543755	25.346 ppm
3) H TPH (>C28-C40)	11.83	12689755	14.230 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	32543755	24.870 ppm
7) H TPH (Motor Oil)	11.83	12689755	14.183 ppm

9.2.1  
9

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29413.D GGG709.M Wed Nov 02 08:19:18 2011

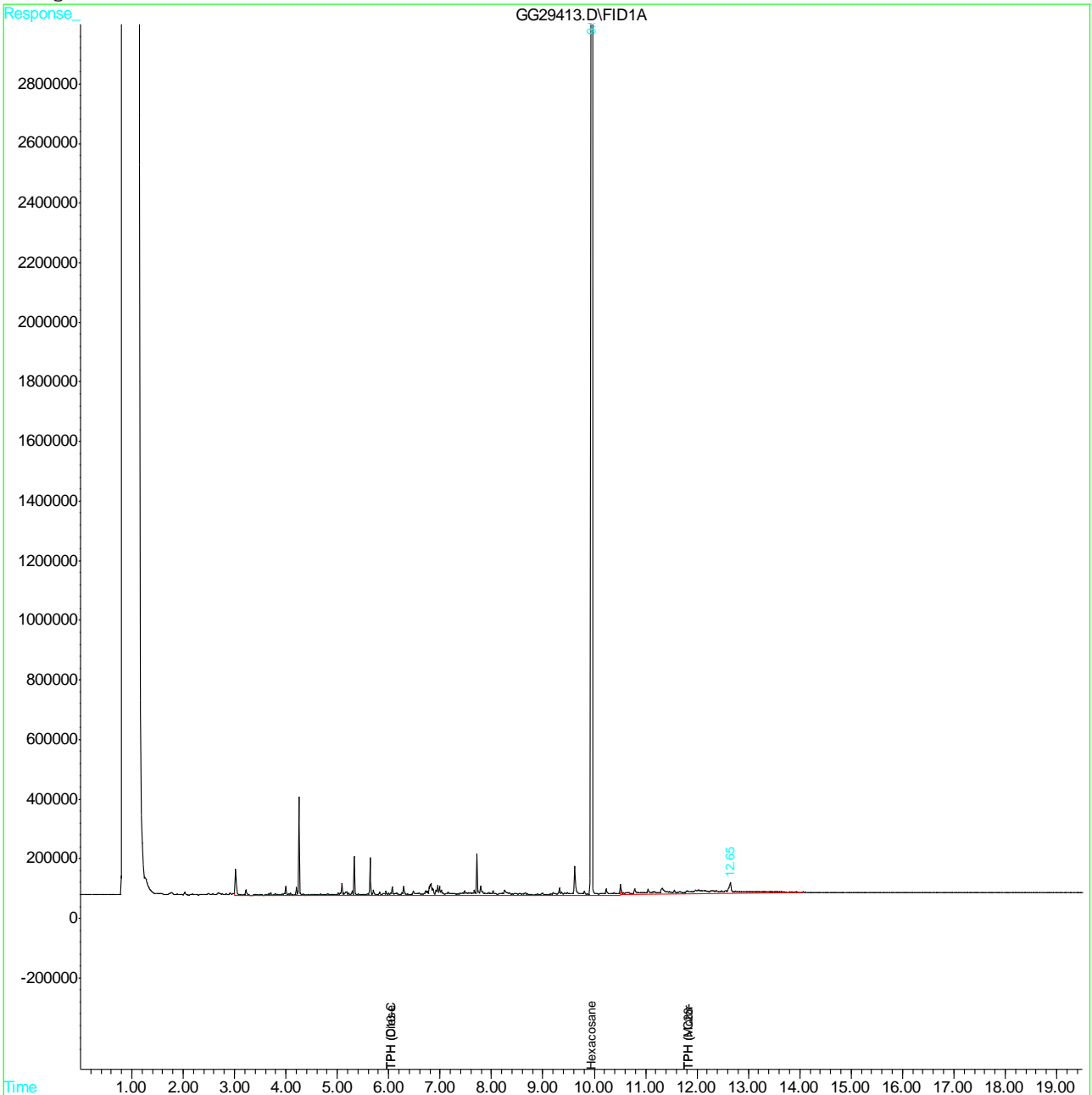


Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG786\GG29413.D Vial: 4  
 Acq On : 10-29-11 7:46:07 AM Operator: JAMESH  
 Sample : OP4806-MB Inst : Diesel #2  
 Misc : OP4806,GGG786,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 31 7:19 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



9.2.1  
 9

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG786\GG29416.D Vial: 7  
 Acq On : 10-29-11 9:03:35 AM Operator: JAMESH  
 Sample : OP4807-MB Inst : Diesel #2  
 Misc : OP4807,GGG786,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 29 9:09 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	107123805	75.344 ppm
Spiked Amount 100.000		Recovery =	75.34%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	27880526	21.714 ppm
3) H TPH (>C28-C40)	11.83	10416661	11.681 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	27880526	21.306 ppm
7) H TPH (Motor Oil)	11.83	10416661	11.642 ppm

9.22  
9

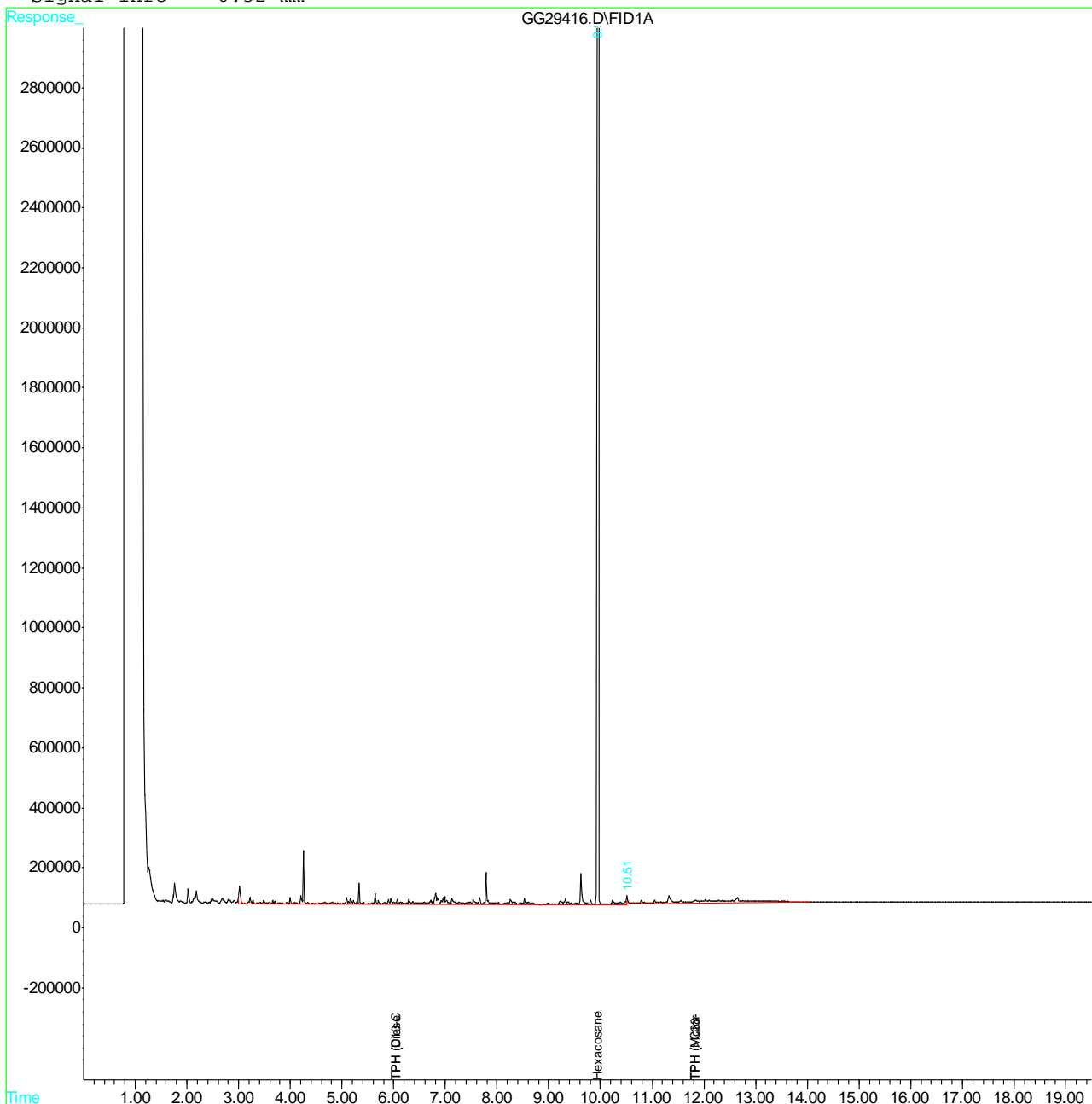
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29416.D GGG709.M Wed Nov 02 08:19:22 2011

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG786\GG29416.D Vial: 7  
 Acq On : 10-29-11 9:03:35 AM Operator: JAMESH  
 Sample : OP4807-MB Inst : Diesel #2  
 Misc : OP4807,GGG786,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Oct 29 9:09 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



9.2.2  
 9

## Metals Analysis

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C18677  
Account: BMECASF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4134  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 10/28/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.12		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15	0.0	<2.0
Calcium	5000	7.1	12		
Chromium	10	.3	.41	0.10	<10
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	0.40	<10
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12	0.0	<5.0
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	23		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2	2.4	<20

Associated samples MP4134: C18677-8

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

10.1.1  
10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18677  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4134  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 10/28/11

Metal	C18613-5F Original MS	SpikeLot MPIR4	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	0.0	495	500	99.0 75-125
Calcium	anr			
Chromium	2.6	517	500	102.9 75-125
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	0.80	495	500	98.8 75-125
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	0.20	505	500	101.0 75-125
Potassium				
Selenium	anr			
Silicon	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	0.0	526	500	105.2 75-125

Associated samples MP4134: C18677-8

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

10.1.2  
10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18677  
 Account: BMECAF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4134  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 10/28/11

Metal	C18613-5F Original MSD	SpikeLot MPIR4	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	0.0	497	500	99.4	0.4	20
Calcium	anr					
Chromium	2.6	521	500	103.7	0.8	20
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	0.80	498	500	99.4	0.6	20
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	0.20	506	500	101.2	0.2	20
Potassium						
Selenium	anr					
Silicon	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	0.0	533	500	106.6	1.3	20

Associated samples MP4134: C18677-8

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

10.1.2  
10

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C18677  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4134  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 10/28/11 10/28/11

Metal	BSP Result	Spikelot MPIR4	% Rec	QC Limits	BSD Result	Spikelot MPIR4	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Boron									
Cadmium	983	1000	98.3	80-120	490	500	98.0	66.9	
Calcium	anr								
Chromium	1050	1000	105.0	80-120	516	500	103.2	68.2	
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	982	1000	98.2	80-120	488	500	97.6	67.2	
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	973	1000	97.3	80-120	484	500	96.8	67.1	
Potassium									
Selenium	anr								
Silicon	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	1040	1000	104.0	80-120	512	500	102.4	68.0	

Associated samples MP4134: C18677-8

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

10.1.3  
10



SERIAL DILUTION RESULTS SUMMARY

Login Number: C18677  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4134  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 10/28/11

Metal	C18613-5F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	anr			
Chromium	2.60	2.30	11.5 (a)	0-10
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	0.800	0.00	100.0(a)	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	0.200	0.00	100.0(a)	0-10
Potassium				
Selenium	anr			
Silicon	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	0.00	1.50		0-10

Associated samples MP4134: C18677-8

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

10.1.4  
10

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C18677  
Account: BMECASF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4139  
Matrix Type: SOLID

Methods: SW846 6010B  
Units: mg/kg

Prep Date: 10/28/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015	0.0	<1.0
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054	-0.010	<1.0
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	-0.060	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024	0.060	<1.0
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098	0.45	<2.0

Associated samples MP4139: C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

10.2.1  
10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18677  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4139  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 10/28/11

Metal	C18677-1 Original MS		Spike lot MP1R4A	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium	0.25	40.2	46.3	86.3	75-125
Calcium					
Chromium	30.0	69.5	46.3	85.3	75-125
Cobalt					
Copper					
Iron					
Lead	57.0	94.5	46.3	81.0	75-125
Magnesium					
Manganese					
Molybdenum					
Nickel	35.0	72.2	46.3	80.4	75-125
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	102	136	46.3	73.4N(a)	75-125

Associated samples MP4139: C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested  
 (a) Spike recovery indicates possible matrix interference.

10.2.2  
 10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18677  
 Account: BMECAF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4139  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 10/28/11

Metal	C18677-1 Original MSD		SpikeLot MPIR4A % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium	0.25	39.5	46.3	84.8	1.8	20
Calcium						
Chromium	30.0	67.5	46.3	81.0	2.9	20
Cobalt						
Copper						
Iron						
Lead	57.0	94.4	46.3	80.8	0.1	20
Magnesium						
Manganese						
Molybdenum						
Nickel	35.0	69.2	46.3	73.9N(a)	4.2	20
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	102	128	46.3	56.2N(a)	6.1	20

Associated samples MP4139: C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested  
 (a) Spike recovery indicates possible matrix interference.

10.2.2  
 10

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C18677  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4139  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 10/28/11 10/28/11

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits	BSD Result	Spikelot MPIR4A	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Boron									
Cadmium	44.6	50	89.2	80-120	44.5	50	89.0	0.2	
Calcium									
Chromium	48.7	50	97.4	80-120	48.9	50	97.8	0.4	
Cobalt									
Copper									
Iron									
Lead	45.8	50	91.6	80-120	46.0	50	92.0	0.4	
Magnesium									
Manganese									
Molybdenum									
Nickel	45.4	50	90.8	80-120	45.6	50	91.2	0.4	
Potassium									
Selenium									
Silicon									
Silver									
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc	49.3	50	98.6	80-120	49.4	50	98.8	0.2	

Associated samples MP4139: C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

10.2.3  
10

SERIAL DILUTION RESULTS SUMMARY

Login Number: C18677  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4139  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 10/28/11

Metal	C18677-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	2.70	3.40	25.9 (a)	0-10
Calcium				
Chromium	327	360	9.8	0-10
Cobalt				
Copper				
Iron				
Lead	622	620	0.2	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	381	374	2.0	0-10
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	1120	1200	7.4	0-10

Associated samples MP4139: C18677-1, C18677-2, C18677-3, C18677-4, C18677-5, C18677-6, C18677-7

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

10.2.4  
10

**Technical Report for**

**Burns and McDonnell Engineering**

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA  
63142

Accutest Job Number: C18698

Sampling Date: 10/31/11

**Report to:**

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ATTN: Simon Barber

Total number of pages in report: **148**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

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Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Sample Results .....</b>	<b>4</b>
<b>2.1: C18698-1: ETANK GRAB .....</b>	5
<b>2.2: C18698-2: WTANK GRAB .....</b>	8
<b>2.3: C18698-3: WEST-W16 .....</b>	11
<b>2.4: C18698-4: WEST-E16 .....</b>	14
<b>2.5: C18698-5: EAST-W15.6 .....</b>	17
<b>2.6: C18698-6: EAST-E16 .....</b>	20
<b>2.7: C18698-7: WEST STOCK .....</b>	23
<b>2.8: C18698-8: EAST STOCK .....</b>	26
<b>2.9: C18698-9: TRIP BLANK .....</b>	29
<b>Section 3: Misc. Forms .....</b>	<b>30</b>
<b>3.1: Chain of Custody .....</b>	31
<b>Section 4: GC/MS Volatiles - QC Data Summaries .....</b>	<b>33</b>
<b>4.1: Method Blank Summary .....</b>	34
<b>4.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	36
<b>4.3: Laboratory Control Sample Summary .....</b>	38
<b>4.4: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	40
<b>Section 5: GC/MS Volatiles - Raw Data .....</b>	<b>42</b>
<b>5.1: Samples .....</b>	43
<b>5.2: Method Blanks .....</b>	105
<b>Section 6: GC Semi-volatiles - QC Data Summaries .....</b>	<b>111</b>
<b>6.1: Method Blank Summary .....</b>	112
<b>6.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	114
<b>6.3: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	116
<b>Section 7: GC Semi-volatiles - Raw Data .....</b>	<b>117</b>
<b>7.1: Samples .....</b>	118
<b>7.2: Method Blanks .....</b>	134
<b>Section 8: Metals Analysis - QC Data Summaries .....</b>	<b>138</b>
<b>8.1: Prep QC MP4151: Cd,Cr,Pb,Ni,Zn .....</b>	139
<b>8.2: Prep QC MP4152: Cd,Cr,Pb,Ni,Zn .....</b>	144

1

2

3

4

5

6

7

8





## Sample Summary

Burns and McDonnell Engineering

Job No: C18698

T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Project No: 63142

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C18698-1	10/31/11	10:20 SB	11/01/11	AQ	Water	ETANK GRAB
C18698-2	10/31/11	10:35 SB	11/01/11	AQ	Water	WTANK GRAB
C18698-3	10/31/11	11:15 SB	11/01/11	SO	Soil	WEST-W16
C18698-4	10/31/11	11:25 SB	11/01/11	SO	Soil	WEST-E16
C18698-5	10/31/11	12:05 SB	11/01/11	SO	Soil	EAST-W15.6
C18698-6	10/31/11	12:25 SB	11/01/11	SO	Soil	EAST-E16
C18698-7	10/31/11	11:55 SB	11/01/11	SO	Soil	WEST STOCK
C18698-8	10/31/11	12:30 SB	11/01/11	SO	Soil	EAST STOCK
C18698-9	10/31/11	00:00 SB	11/01/11	AQ	Trip Blank Water	TRIP BLANK

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Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Results

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Report of Analysis

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	ETANK GRAB	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-1	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	AQ - Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R5577.D	1	11/02/11	BD	n/a	n/a	VR195
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	0.74	1.0	0.30	ug/l	J
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	182	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		60-130%
2037-26-5	Toluene-D8	106%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) Sample was not preserved to a pH < 2. Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	ETANK GRAB	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-1	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	AQ - Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B M SW846 3510C		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29519.D	1	11/01/11	JH	11/01/11	OP4818	GGG788
Run #2							

Run #	Initial Volume	Final Volume
Run #1	480 ml	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	2.18	0.21	0.10	mg/l	
	TPH (> C28-C40)	0.368	0.42	0.21	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	94%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> ETANK GRAB	<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-1	<b>Date Received:</b> 11/01/11
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 2.0	2.0	ug/l	1	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Chromium	54.6	10	ug/l	1	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Lead	38.0	10	ug/l	1	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Nickel	59.6	5.0	ug/l	1	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Zinc	167	20	ug/l	1	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2171

(2) Prep QC Batch: MP4151

RL = Reporting Limit

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WTANK GRAB	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-2	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	AQ - Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R5576.D	2	11/02/11	BD	n/a	n/a	VR195
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5.2	2.0	0.60	ug/l	
108-88-3	Toluene	111	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	10.7	2.0	0.60	ug/l	
1330-20-7	Xylene (total)	61.6	4.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
	TPH-GRO (C6-C10)	598	100	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		60-130%
2037-26-5	Toluene-D8	106%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WTANK GRAB		<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-2		<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	AQ - Water		<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B M SW846 3510C			
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29520.D	1	11/01/11	JH	11/01/11	OP4818	GGG788
Run #2							

Run #	Initial Volume	Final Volume
Run #1	500 ml	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	2.25	0.20	0.10	mg/l	
	TPH (> C28-C40)	0.218	0.40	0.20	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	97%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> WTANK GRAB	<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-2	<b>Date Received:</b> 11/01/11
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	14.7	4.0	ug/l	2	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Chromium	866	20	ug/l	2	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Lead	2050	20	ug/l	2	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Nickel	1010	10	ug/l	2	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Zinc	3070	40	ug/l	2	11/01/11	11/02/11 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2171

(2) Prep QC Batch: MP4151

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b>	WEST-W16	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-3	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L11976.D	1	11/01/11	XB	n/a	n/a	VL369
Run #2							

Run #	Initial Weight
Run #1	3.24 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	7.7	2.3	ug/kg	
108-88-3	Toluene	ND	7.7	2.3	ug/kg	
100-41-4	Ethylbenzene	ND	7.7	2.3	ug/kg	
1330-20-7	Xylene (total)	ND	15	6.2	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	7.7	1.5	ug/kg	
	TPH-GRO (C6-C10)	ND	150	77	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	93%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WEST-W16	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-3	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29533.D	1	11/02/11	JH	11/01/11	OP4823	GGG789
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	78%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> WEST-W16	<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-3	<b>Date Received:</b> 11/01/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.88	0.88	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	51.8	0.88	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	5.6	1.8	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	49.2	0.88	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	44.5	1.8	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2177

(2) Prep QC Batch: MP4152

(a) All results reported on wet weight basis.

RL = Reporting Limit

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## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WEST-E16	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-4	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L11977.D	1	11/01/11	XB	n/a	n/a	VL369
Run #2							

Run #	Initial Weight
Run #1	4.76 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.3	1.6	ug/kg	
108-88-3	Toluene	ND	5.3	1.6	ug/kg	
100-41-4	Ethylbenzene	ND	5.3	1.6	ug/kg	
1330-20-7	Xylene (total)	ND	11	4.2	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.3	1.1	ug/kg	
	TPH-GRO (C6-C10)	ND	110	53	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		60-130%
2037-26-5	Toluene-D8	93%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WEST-E16	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-4	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29534.D	1	11/02/11	JH	11/01/11	OP4823	GGG789
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	9.9	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	9.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	73%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> WEST-E16	<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-4	<b>Date Received:</b> 11/01/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.89	0.89	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	47.9	0.89	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	5.0	1.8	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	45.3	0.89	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	41.0	1.8	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2177

(2) Prep QC Batch: MP4152

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EAST-W15.6	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-5	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L11978.D	1	11/01/11	XB	n/a	n/a	VL369
Run #2							

Run #	Initial Weight
Run #1	4.93 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.1	1.5	ug/kg	
108-88-3	Toluene	ND	5.1	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.1	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.1	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	51	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	94%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EAST-W15.6	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-5	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29535.D	1	11/02/11	JH	11/01/11	OP4823	GGG789
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	9.9	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	9.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	80%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> EAST-W15.6	<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-5	<b>Date Received:</b> 11/01/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.93	0.93	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	49.6	0.93	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	5.3	1.9	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	47.9	0.93	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	43.8	1.9	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2177

(2) Prep QC Batch: MP4152

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EAST-E16	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-6	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L11979.D	1	11/01/11	XB	n/a	n/a	VL369
Run #2							

Run #	Initial Weight
Run #1	4.52 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.5	1.7	ug/kg	
108-88-3	Toluene	ND	5.5	1.7	ug/kg	
100-41-4	Ethylbenzene	ND	5.5	1.7	ug/kg	
1330-20-7	Xylene (total)	ND	11	4.4	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.5	1.1	ug/kg	
	TPH-GRO (C6-C10)	ND	110	55	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		60-130%
2037-26-5	Toluene-D8	93%		60-130%
460-00-4	4-Bromofluorobenzene	96%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EAST-E16	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-6	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29536.D	1	11/02/11	JH	11/01/11	OP4823	GGG789
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	9.9	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	9.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	63%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> EAST-E16		<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-6		<b>Date Received:</b> 11/01/11
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

**Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.90	0.90	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	46.3	0.90	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	3.9	1.8	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	37.0	0.90	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	35.7	1.8	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2177

(2) Prep QC Batch: MP4152

(a) All results reported on wet weight basis.

---

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b> WEST STOCK	
<b>Lab Sample ID:</b> C18698-7	<b>Date Sampled:</b> 10/31/11
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 11/01/11
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L11986.D	1	11/01/11	XB	n/a	n/a	VL369
Run #2							

Run #	Initial Weight
Run #1	3.61 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	6.9	2.1	ug/kg	
108-88-3	Toluene	ND	6.9	2.1	ug/kg	
100-41-4	Ethylbenzene	ND	6.9	2.1	ug/kg	
1330-20-7	Xylene (total)	ND	14	5.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	6.9	1.4	ug/kg	
	TPH-GRO (C6-C10)	192	140	69	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WEST STOCK		<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-7		<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil		<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A			
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH18341.D	1	11/02/11	JH	11/01/11	OP4823	GHH599
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	12.6	9.9	5.0	mg/kg	
	TPH (> C28-C40)	21.6	20	9.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	72%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> WEST STOCK	<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-7	<b>Date Received:</b> 11/01/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.90	0.90	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	49.3	0.90	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	11.0	1.8	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	51.9	0.90	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	52.0	1.8	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2177

(2) Prep QC Batch: MP4152

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EAST STOCK	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-8	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L11980.D	1	11/01/11	XB	n/a	n/a	VL369
Run #2							

Run #	Initial Weight
Run #1	4.84 g
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.2	1.5	ug/kg	
108-88-3	Toluene	ND	5.2	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.2	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.2	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	52	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	93%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	EAST STOCK	<b>Date Sampled:</b>	10/31/11
<b>Lab Sample ID:</b>	C18698-8	<b>Date Received:</b>	11/01/11
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG29539.D	1	11/02/11	JH	11/01/11	OP4823	GGG789
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

## TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	9.8	4.9	mg/kg	
	TPH (> C28-C40)	ND	20	9.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	80%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> EAST STOCK	<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-8	<b>Date Received:</b> 11/01/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.94	0.94	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	50.5	0.94	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	6.3	1.9	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	47.8	0.94	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	44.5	1.9	mg/kg	1	11/01/11	11/03/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2177

(2) Prep QC Batch: MP4152

(a) All results reported on wet weight basis.

RL = Reporting Limit

Accutest Laboratories

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b> TRIP BLANK	<b>Date Sampled:</b> 10/31/11
<b>Lab Sample ID:</b> C18698-9	<b>Date Received:</b> 11/01/11
<b>Matrix:</b> AQ - Trip Blank Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B	
<b>Project:</b> T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R5574.D	1	11/02/11	BD	n/a	n/a	VR195
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		60-130%
2037-26-5	Toluene-D8	103%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



03/08/2011 Form WCD-KC1-SDO

### Request for Chemical Analysis and Chain of Custody Record

BME-CASF-736

Burns & McDonnell Engineering  
 400 Oyster Point Blvd, Suite 533  
 South San Francisco, CA 94080  
 Phone: (650) 871-2926 Fax: (650) 871-2653  
 Attention: *Rosly Mozafar*  
*Simon Barber*

Laboratory: *Accutest*  
 Address: *2105 Lundy Ave*  
 City/State/Zip: *San Jose, CA*  
 Telephone:

Document Control No: *C18698*  
 Lab. Reference No. or Episode No.:

Project Number: *63142*

Sample Type

Client Name: *Yrc. 1708 wood st.*

Group or SWMU Name	Sample Point	Sample Designator	Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Remarks
			Round	Year	From	To	Date	Time	Liquid	Solid	Gas		
-1	Etank Grab		Oct	2011			10-31	1020	W			6	<i>3-Vials (w/HC) 1-5035 KIT            48 hour turn around time</i>  <div style="font-size: 48px; opacity: 0.5; text-align: center;">2 DAYS</div>
-2	Wtank Grab		Oct	2011			10-31	1035	W			6	
-3	West-wilb		Oct	2011		16	10-31	1115		S		4	
-4	West-Elb		Oct	2011		16	10-31	1125		S		4	
-5	East-w15.6		Oct	2011		15.6	10-31	1205		S		4	
-6	East-Elb		Oct	2011		16	10-31	1225		S		4	
-7	West Stock		Oct	2011			10-31	1125		S		4	
-8	East Stock		Oct	2011			10-31	1230		S		4	
-9	trip Blank		-	-			-	-	W			3	

Sampler (signature): *Jim Bar*

Sampler (signature):

Special Instructions: *EDF + EOD Get + track 107 TO 600102107*

Relinquished By (signature): *Jim Bar*

Date/Time: *10-31-11 0925*

Received By (signature): *[Signature]*

Date/Time: *11-1-11 8:25*

Ice Present in Container: Yes  No

Temperature Upon Receipt: *6.3-1.0 = 5.3 C*

Relinquished By (signature):

Date/Time:

Received By (signature):

Date/Time:

Laboratory Comments:



## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C18698**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL369-MB	L11972.D	1	11/01/11	XB	n/a	n/a	VL369

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Result	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	94%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%



**Method Blank Summary****Job Number:** C18698**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR195-MB	R5573.D	1	11/02/11	BD	n/a	n/a	VR195

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C18698-1, C18698-2, C18698-9

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	106%	60-130%
2037-26-5	Toluene-D8	106%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL369-BS	L11969.D	1	11/01/11	XB	n/a	n/a	VL369
VL369-BSD	L11970.D	1	11/01/11	XB	n/a	n/a	VL369

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	40.7	102	39.7	99	2	60-130/30
100-41-4	Ethylbenzene	40	37.7	94	37.2	93	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	42.4	106	40.1	100	6	60-130/30
108-88-3	Toluene	40	38.8	97	38.0	95	2	60-130/30
1330-20-7	Xylene (total)	120	116	97	114	95	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	96%	60-130%
2037-26-5	Toluene-D8	93%	93%	60-130%
460-00-4	4-Bromofluorobenzene	98%	99%	60-130%

4.2.1  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR195-BS	R5569.D	1	11/02/11	BD	n/a	n/a	VR195
VR195-BSD	R5570.D	1	11/02/11	BD	n/a	n/a	VR195

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

C18698-1, C18698-2, C18698-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	19.9	100	19.5	98	2	60-130/30
100-41-4	Ethylbenzene	20	21.2	106	20.9	105	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	20.8	104	20.4	102	2	60-130/30
108-88-3	Toluene	20	20.4	102	20.1	101	1	60-130/30
1330-20-7	Xylene (total)	60	62.0	103	61.1	102	1	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	109%	107%	60-130%
2037-26-5	Toluene-D8	104%	105%	60-130%
460-00-4	4-Bromofluorobenzene	102%	101%	60-130%

4.2.2  
4

# Laboratory Control Sample Summary

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL369-LCS	L11971.D	1	11/01/11	XB	n/a	n/a	VL369

The QC reported here applies to the following samples:

Method: SW846 8260B

C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	206	82	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	92%	60-130%
2037-26-5	Toluene-D8	94%	60-130%
460-00-4	4-Bromofluorobenzene	96%	60-130%

4.3.1  
4

# Laboratory Control Sample Summary

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR195-LCS	R5572.D	1	11/02/11	BD	n/a	n/a	VR195

The QC reported here applies to the following samples:

Method: SW846 8260B

C18698-1, C18698-2, C18698-9

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	118	94	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	108%	60-130%
2037-26-5	Toluene-D8	106%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

4.3.2  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18698  
**Account:** BMECASFS Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18652-28MS	L11987.D	1	11/01/11	XB	n/a	n/a	VL369
C18652-28MSD	L11988.D	1	11/01/11	XB	n/a	n/a	VL369
C18652-28	L11983.D	1	11/01/11	XB	n/a	n/a	VL369

The QC reported here applies to the following samples:

Method: SW846 8260B

C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

CAS No.	Compound	C18652-28 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	39.7	35.7	90	34.7	87	3	60-130/30
100-41-4	Ethylbenzene	ND	39.7	34.1	86	33.3	84	2	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	39.7	40.0	101	38.4	97	4	60-130/30
108-88-3	Toluene	ND	39.7	35.2	89	34.4	87	2	60-130/30
1330-20-7	Xylene (total)	ND	119	104	87	102	86	2	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C18652-28	Limits
1868-53-7	Dibromofluoromethane	97%	96%	98%	60-130%
2037-26-5	Toluene-D8	94%	95%	93%	60-130%
460-00-4	4-Bromofluorobenzene	96%	94%	98%	60-130%

4.4.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C18625-1MS	R5591.D	1	11/02/11	BD	n/a	n/a	VR195
C18625-1MSD	R5592.D	1	11/02/11	BD	n/a	n/a	VR195
C18625-1	R5584.D	1	11/02/11	BD	n/a	n/a	VR195

The QC reported here applies to the following samples:

Method: SW846 8260B

C18698-1, C18698-2, C18698-9

CAS No.	Compound	C18625-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	20.2	101	19.3	97	5	60-130/25
100-41-4	Ethylbenzene	ND	20	22.0	110	21.0	105	5	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	20.3	102	19.3	97	5	60-130/25
108-88-3	Toluene	ND	20	21.1	106	20.1	101	5	60-130/25
1330-20-7	Xylene (total)	ND	60	63.1	105	60.1	100	5	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C18625-1	Limits
1868-53-7	Dibromofluoromethane	106%	103%	106%	60-130%
2037-26-5	Toluene-D8	106%	106%	106%	60-130%
460-00-4	4-Bromofluorobenzene	102%	101%	99%	60-130%

4.4.2  
4

GC/MS Volatiles

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Raw Data

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5



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111102\  
 Data File : R5577.D  
 Acq On : 2 Nov 2011 1:35 pm  
 Operator : belad  
 Sample : C18698-1  
 Misc : MS1527,VR195,50,,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 02 14:03:09 2011  
 Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Sep 09 09:14:12 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	10.937	168	7757974	10.00	ug/L	-0.02
43) 1,4-Difluorobenzene	12.268	114	14838207	10.00	ug/L	-0.02
58) Chlorobenzene-d5	15.967	117	13442201	10.00	ug/L	-0.02
82) 1,4-Dichlorobenzene-d4	18.963	152	7185017	10.00	ug/L	-0.02
103) 1,4-Dichlorobenzene-d4A	18.963	152	7185017	10.00	ug/L	-0.01
System Monitoring Compounds						
39) Dibromofluoromethane	11.046	111	5405500	10.64	ug/L	-0.02
Spiked Amount	10.000	Range	70 - 130	Recovery	=	106.40%
59) Toluene-d8	14.210	98	19307318	10.58	ug/L	-0.02
Spiked Amount	10.000	Range	70 - 130	Recovery	=	105.80%
79) 4-Bromofluorobenzene	17.408	95	7786965	10.05	ug/L	-0.02
Spiked Amount	10.000	Range	70 - 130	Recovery	=	100.50%
Target Compounds						
10) Acetone	7.172	58	639595	12.34	ug/L	88
13) tert-Butanol (TBA)	7.668	59	130995	2.27	ug/L #	76
21) Carbon Disulfide	8.476	76	432544	0.27	ug/L	100
22) Methyl-t-butyl Ether	8.776	73	701297	0.45	ug/L #	1
25) Diisopropyl Ether	9.578	45	316770	0.16	ug/L	83
32) 2-Butanone (MEK)	10.189	72	101478	1.58	ug/L #	67
34) cis-1,2-Dichloroethene	10.522	96	189406	0.30	ug/L	94
71) Ethyl Benzene	16.076	91	1783139	0.74	ug/L	80
72) Xylene, m+p	16.169	106	135219	0.14	ug/L	17
73) Xylene, o	16.682	106	95133	0.10	ug/L #	49
78) Isopropylbenzene	17.119	105	2967697	1.34	ug/L	88
84) n-Propylbenzene	17.637	91	17723497	6.48	ug/L	85
86) 1,3,5-Trimethylbenzene	17.839	105	546075	0.29	ug/L	90
89) tert-Butylbenzene	18.341	119	656319	0.37	ug/L	91
91) 1,2,4-Trimethylbenzene	18.384	105	606064	0.31	ug/L	87
92) sec-Butylbenzene	18.614	105	3550488	1.53	ug/L	87
93) p-Isopropyltoluene	18.766	119	400449	0.21	ug/L	93
96) n-Butylbenzene	19.241	91	8383745	4.14	ug/L	77
101) Naphthalene	21.435	128	2790767	1.76	ug/L	100
104) TPH-GRO (C6-C10)	14.462	TIC	438326202m	181.52	ug/L	

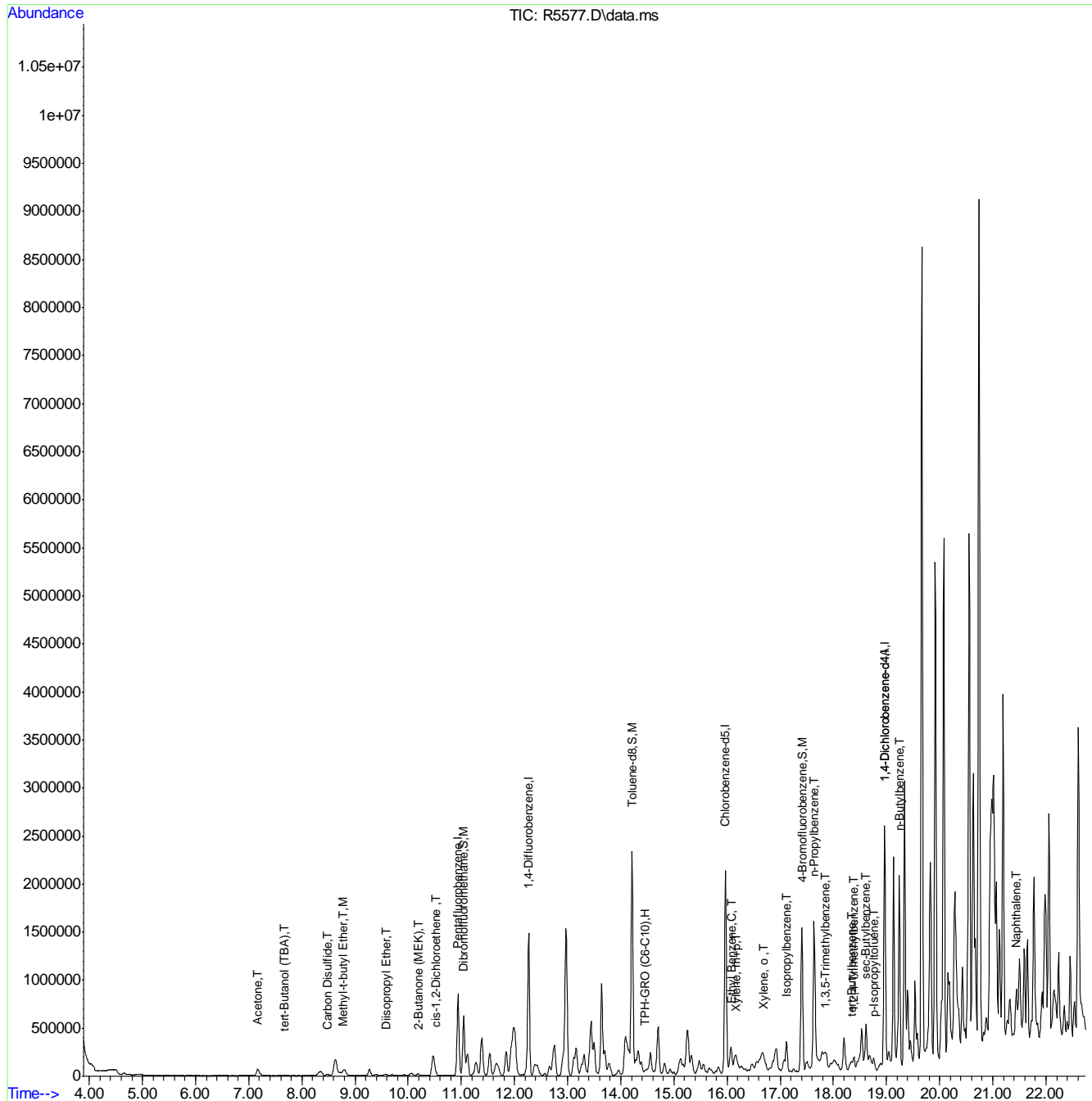
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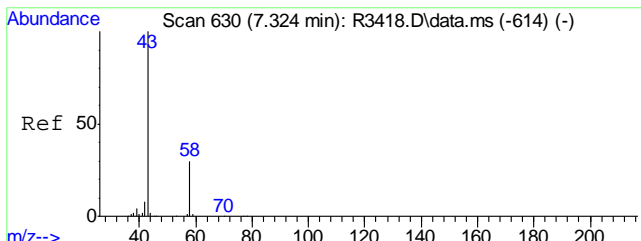
Quantitation Report (QT Reviewed)

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Data File : R5577.D  
Acq On : 2 Nov 2011 1:35 pm  
Operator : belad  
Sample : C18698-1  
Misc : MS1527,VR195,50,,,,,1  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 02 14:03:09 2011  
Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
Quant Title : EPA -8260B  
QLast Update : Fri Sep 09 09:14:12 2011  
Response via : Initial Calibration

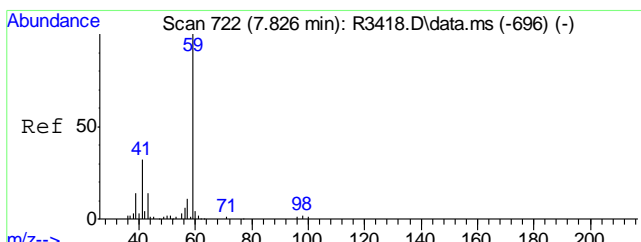
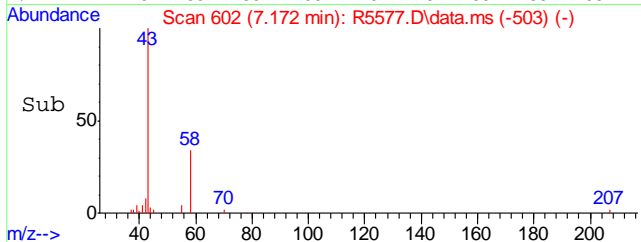
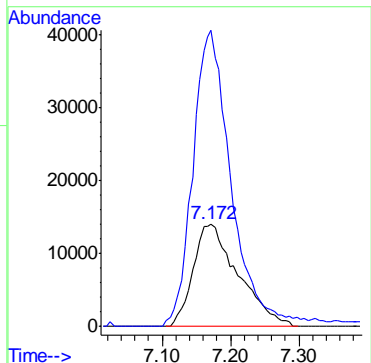
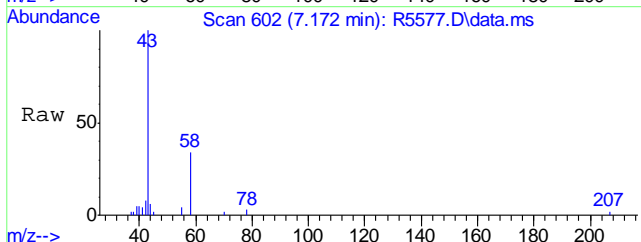
5.1.1  
5





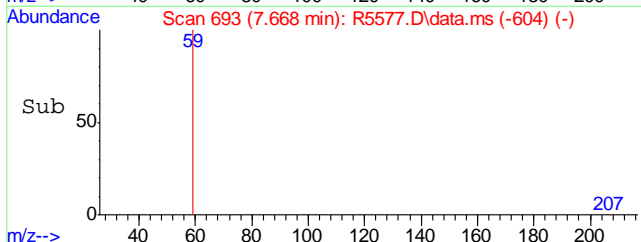
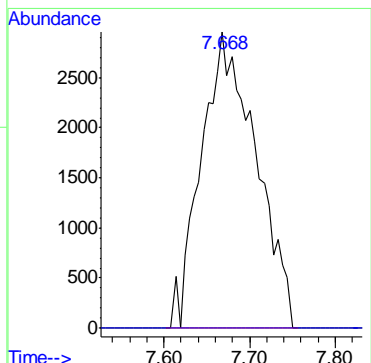
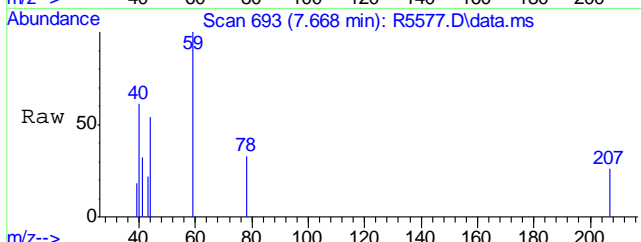
#10  
 Acetone  
 Concen: 12.34 ug/L  
 RT: 7.172 min Scan# 602  
 Delta R.T. -0.010 min  
 Lab File: R5577.D  
 Acq: 2 Nov 2011 1:35 pm

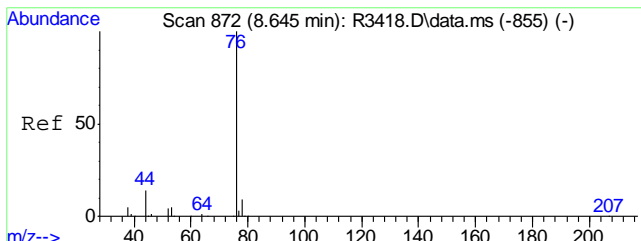
Tgt Ion	Resp	Lower	Upper
58	639595		
58	100		
43	246.9	0.0	621.8



#13  
 tert-Butanol (TBA)  
 Concen: 2.27 ug/L  
 RT: 7.668 min Scan# 693  
 Delta R.T. -0.016 min  
 Lab File: R5577.D  
 Acq: 2 Nov 2011 1:35 pm

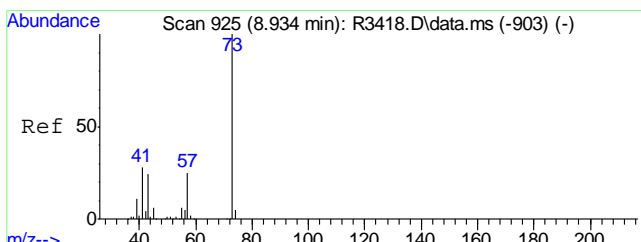
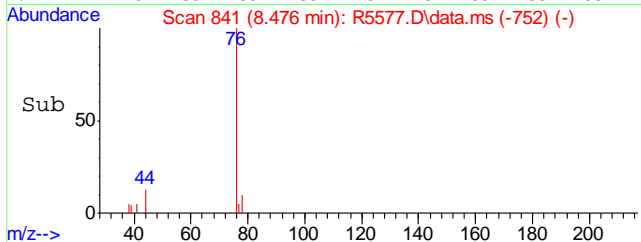
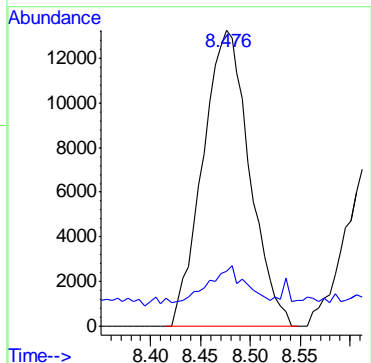
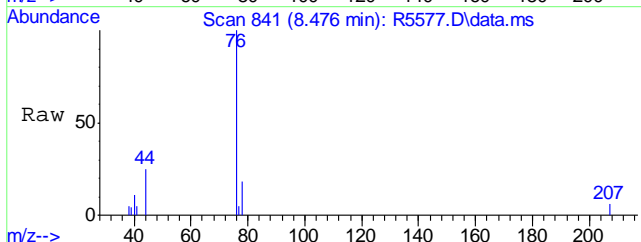
Tgt Ion	Resp	Lower	Upper
59	130995		
59	100		
57	0.0	0.0	48.9





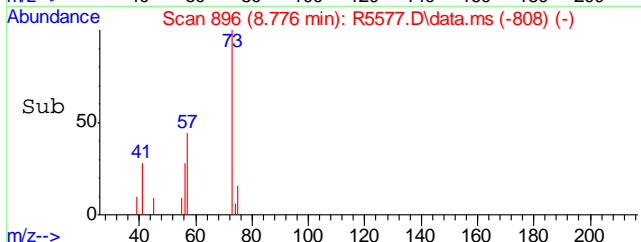
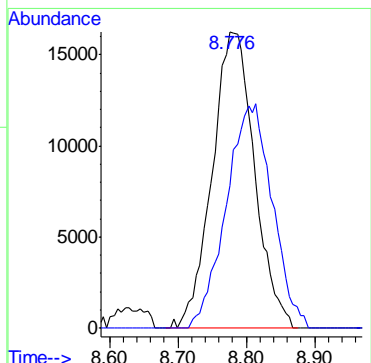
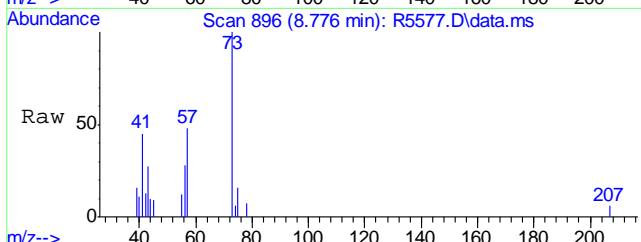
#21  
Carbon Disulfide  
Concen: 0.27 ug/L  
RT: 8.476 min Scan# 841  
Delta R.T. -0.016 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

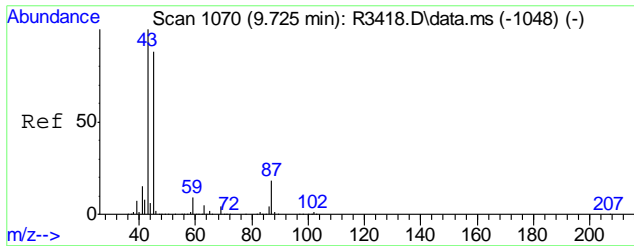
Tgt Ion	Resp	Lower	Upper
76	432544		
76	100		
78	9.2	0.0	29.1



#22  
Methyl-t-butyl Ether  
Concen: 0.45 ug/L  
RT: 8.776 min Scan# 896  
Delta R.T. -0.021 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

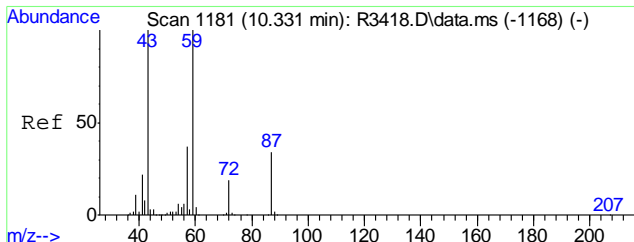
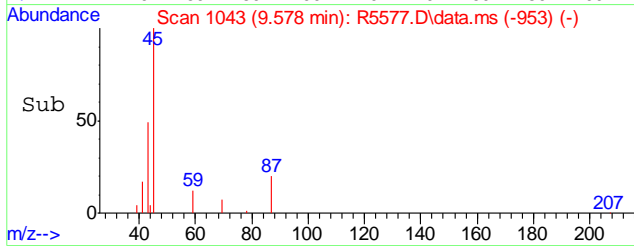
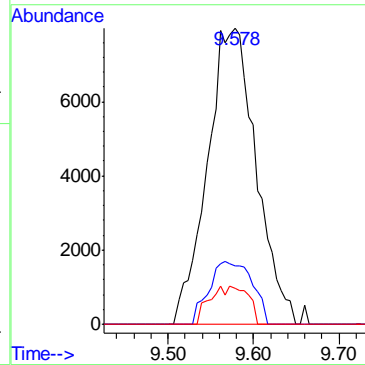
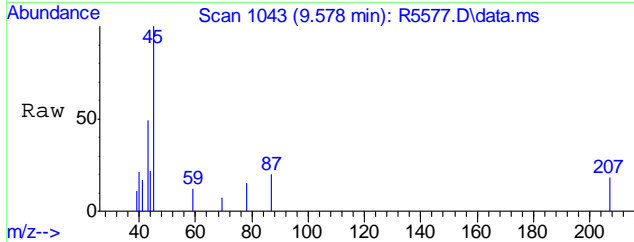
Tgt Ion	Resp	Lower	Upper
73	701297		
73	100		
57	82.4	0.0	53.5#





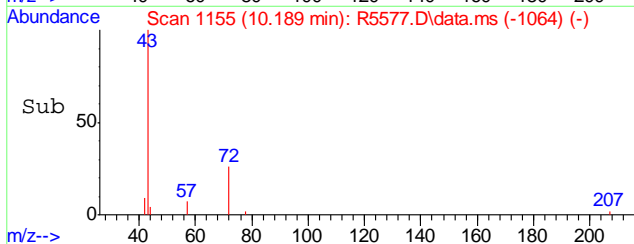
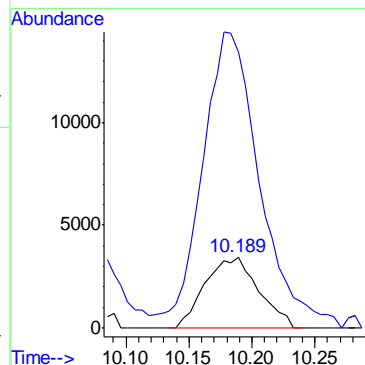
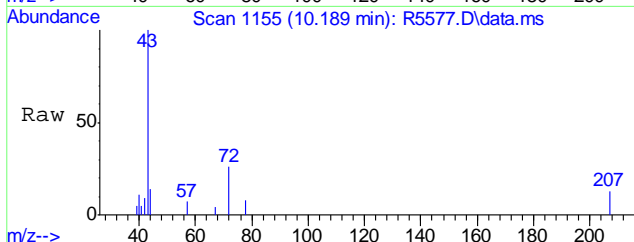
#25  
Diisopropyl Ether  
Concen: 0.16 ug/L  
RT: 9.578 min Scan# 1043  
Delta R.T. -0.011 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

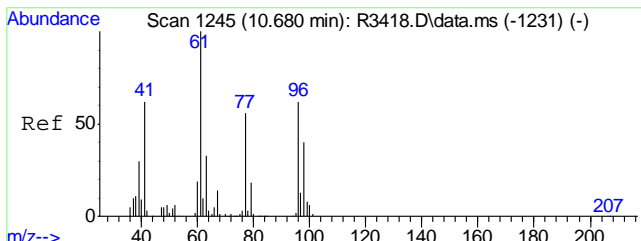
Tgt Ion	Ratio	Lower	Upper
45	100		
87	18.8	0.0	280.4
59	10.1	0.0	313.2



#32  
2-Butanone (MEK)  
Concen: 1.58 ug/L  
RT: 10.189 min Scan# 1155  
Delta R.T. -0.005 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

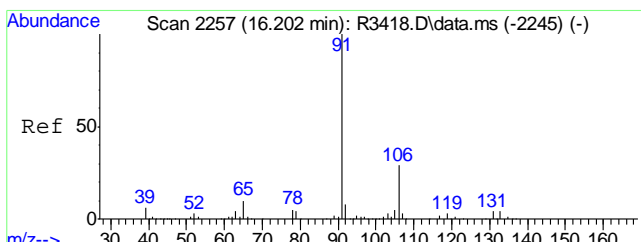
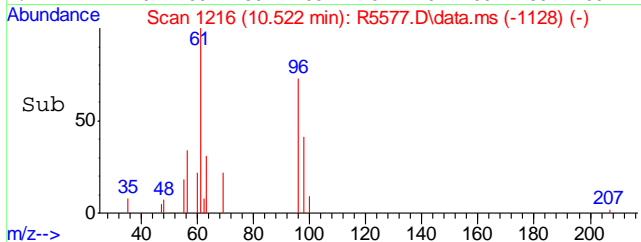
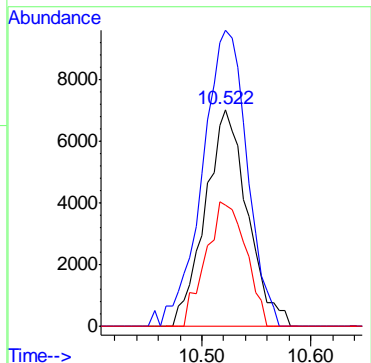
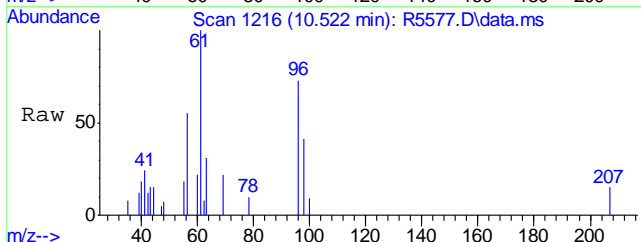
Tgt Ion	Ratio	Lower	Upper
72	100		
43	448.6	353.2	393.2#





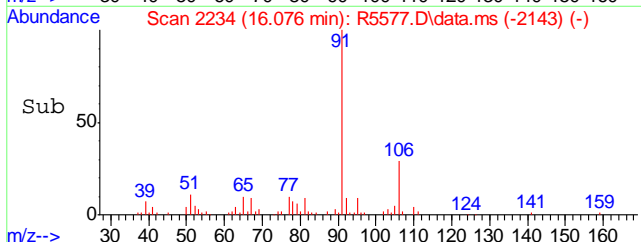
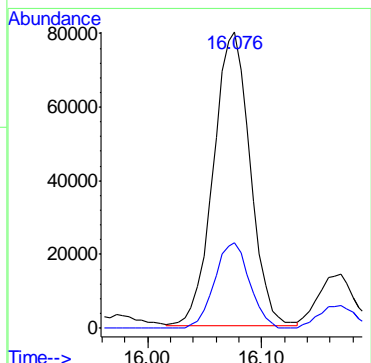
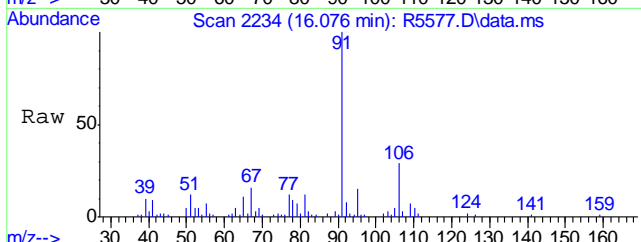
#34  
 cis-1,2-Dichloroethene  
 Concen: 0.30 ug/L  
 RT: 10.522 min Scan# 1216  
 Delta R.T. -0.022 min  
 Lab File: R5577.D  
 Acq: 2 Nov 2011 1:35 pm

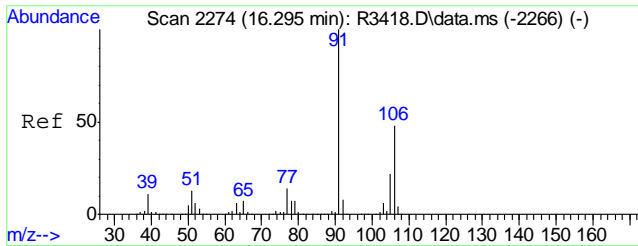
Tgt Ion	Resp	Lower	Upper
96	189406		
96	100		
61	144.8	121.0	161.0
98	54.3	44.2	84.2



#71  
 Ethyl Benzene  
 Concen: 0.74 ug/L  
 RT: 16.076 min Scan# 2234  
 Delta R.T. -0.006 min  
 Lab File: R5577.D  
 Acq: 2 Nov 2011 1:35 pm

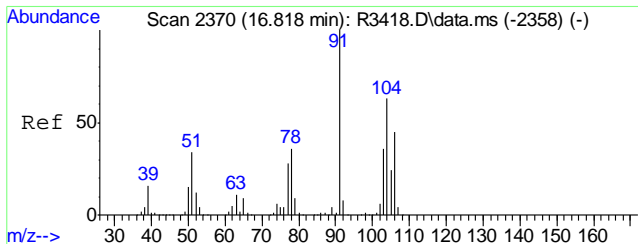
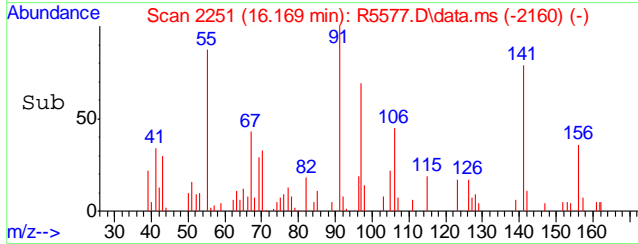
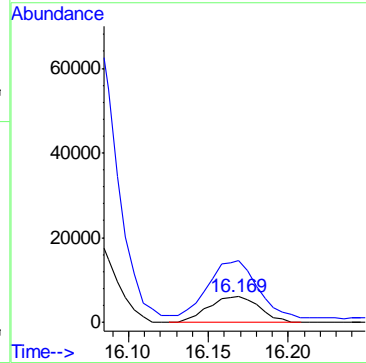
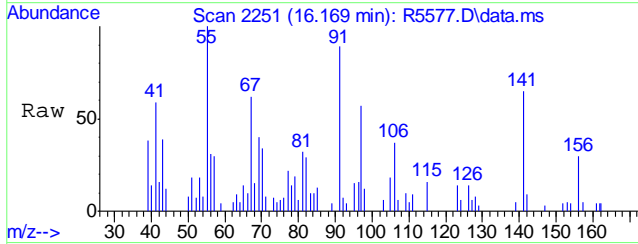
Tgt Ion	Resp	Lower	Upper
91	1783139		
91	100		
106	27.8	9.5	70.9





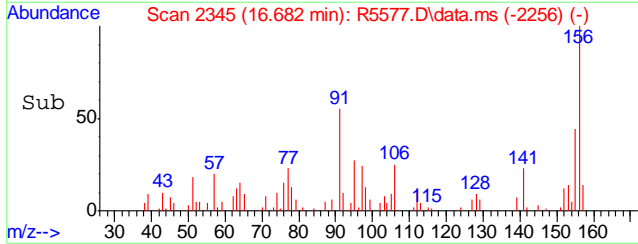
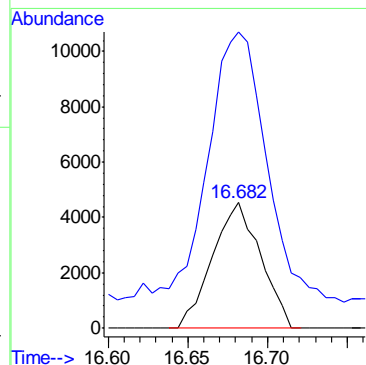
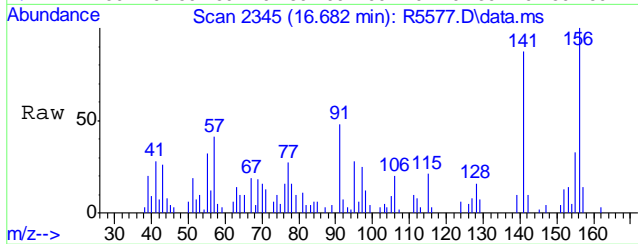
#72  
Xylene, m+p  
Concen: 0.14 ug/L  
RT: 16.169 min Scan# 2251  
Delta R.T. -0.005 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

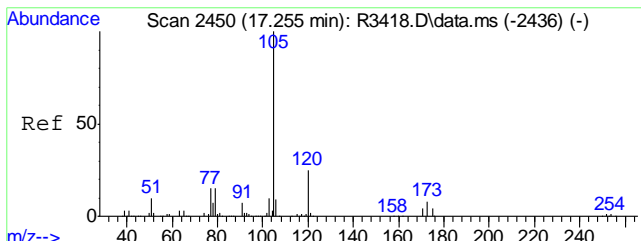
Tgt Ion	Ratio	Lower	Upper
106	100		
91	225.2	0.0	335.1



#73  
Xylene, o  
Concen: 0.10 ug/L  
RT: 16.682 min Scan# 2345  
Delta R.T. -0.016 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

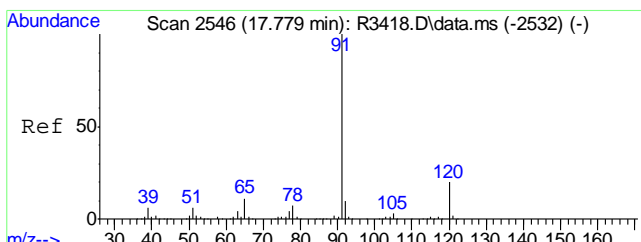
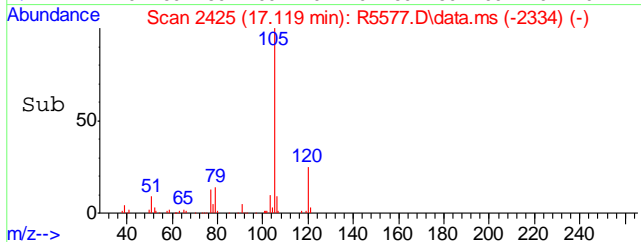
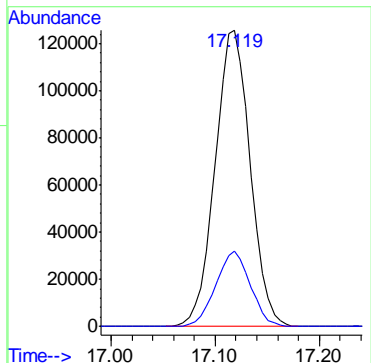
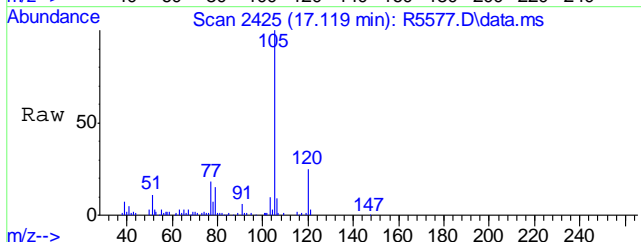
Tgt Ion	Ratio	Lower	Upper
106	100		
91	266.3	170.8	210.8#





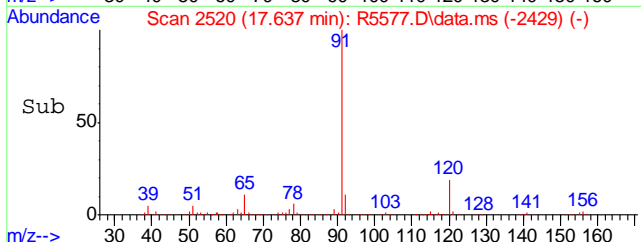
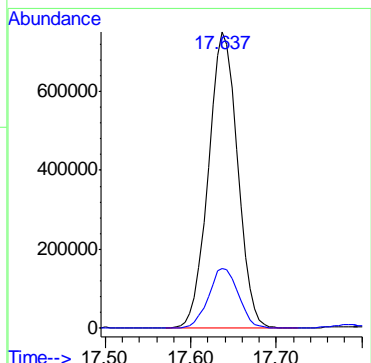
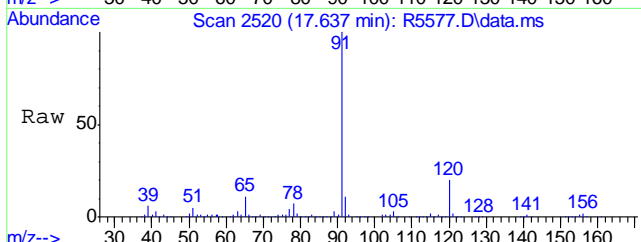
#78  
 Isopropylbenzene  
 Concen: 1.34 ug/L  
 RT: 17.119 min Scan# 2425  
 Delta R.T. -0.005 min  
 Lab File: R5577.D  
 Acq: 2 Nov 2011 1:35 pm

Tgt Ion	Resp	Lower	Upper
105	2967697	100	100
120	24.9	11.3	51.3

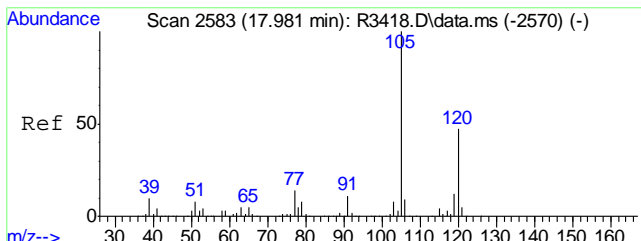


#84  
 n-Propylbenzene  
 Concen: 6.48 ug/L  
 RT: 17.637 min Scan# 2520  
 Delta R.T. -0.005 min  
 Lab File: R5577.D  
 Acq: 2 Nov 2011 1:35 pm

Tgt Ion	Resp	Lower	Upper
91	17723497	100	100
120	20.6	8.5	48.5

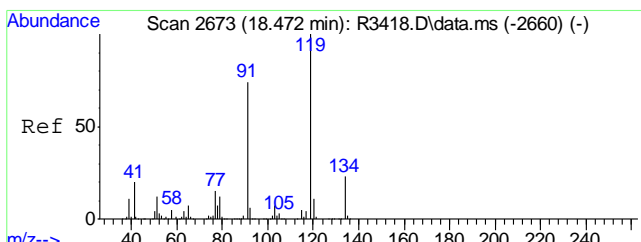
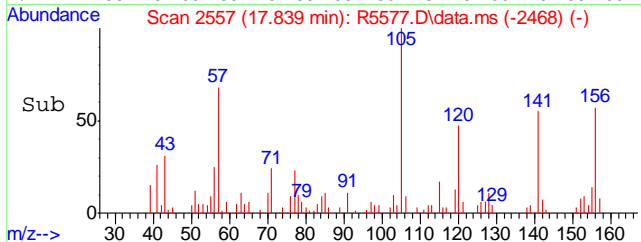
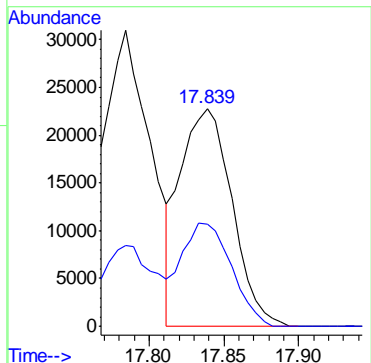
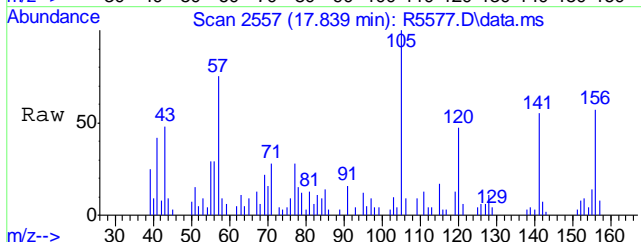






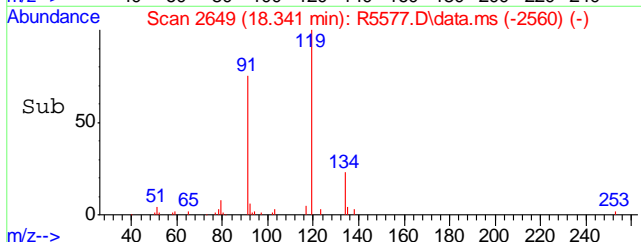
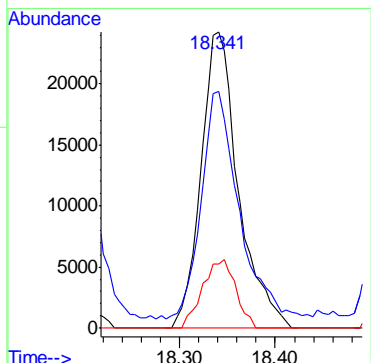
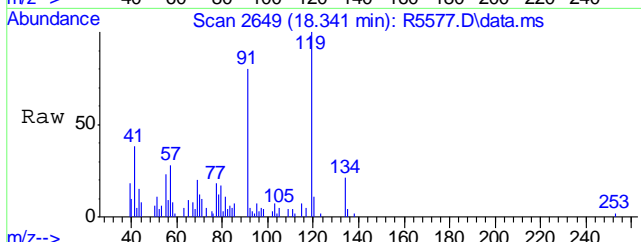
#86  
1,3,5-Trimethylbenzene  
Concen: 0.29 ug/L  
RT: 17.839 min Scan# 2557  
Delta R.T. -0.016 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

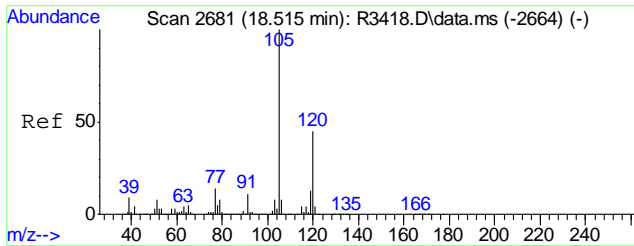
Tgt Ion	Resp	Lower	Upper
105	546075	100	
120	46.0	33.2	73.2



#89  
tert-Butylbenzene  
Concen: 0.37 ug/L  
RT: 18.341 min Scan# 2649  
Delta R.T. -0.016 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

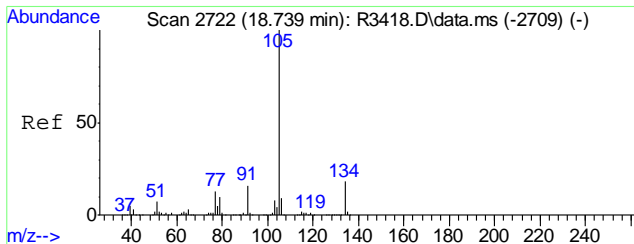
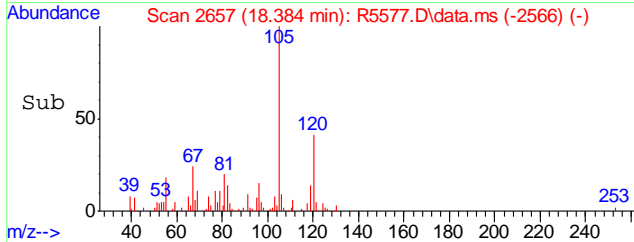
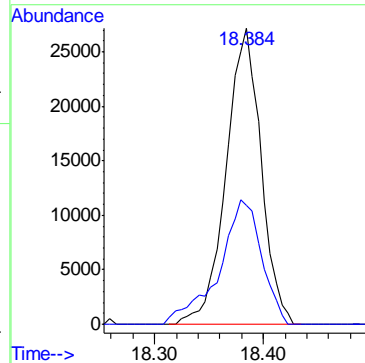
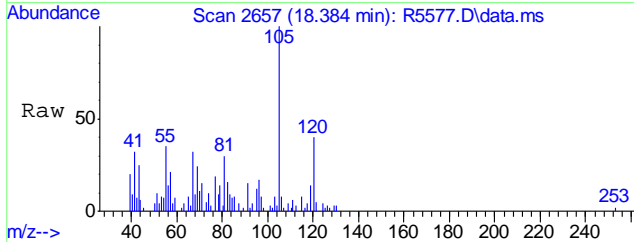
Tgt Ion	Resp	Lower	Upper
119	656319	100	
91	77.8	48.3	88.3
134	20.3	1.4	41.4





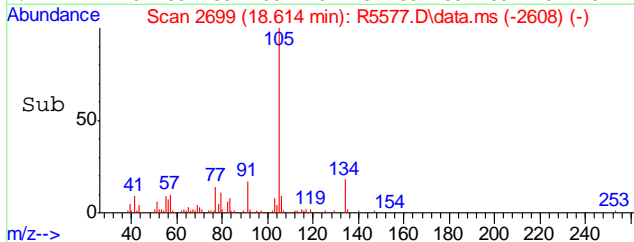
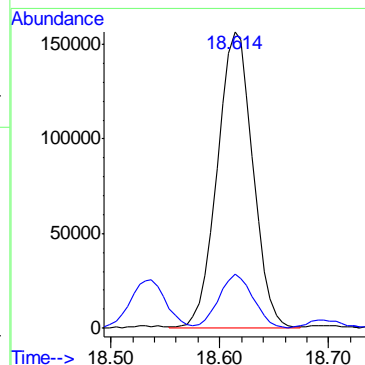
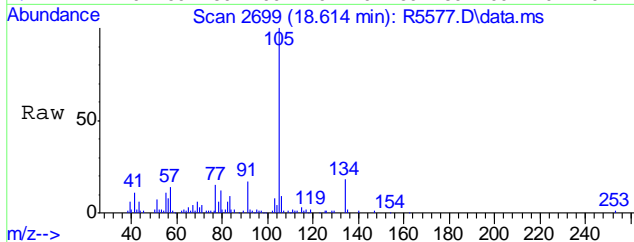
#91  
1,2,4-Trimethylbenzene  
Concen: 0.31 ug/L  
RT: 18.384 min Scan# 2657  
Delta R.T. -0.006 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

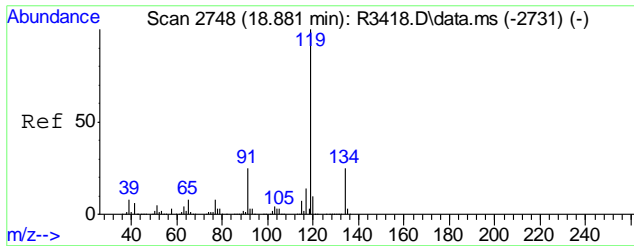
Tgt Ion	Resp	Lower	Upper
105	606064		
105	100		
120	51.1	41.3	81.3



#92  
sec-Butylbenzene  
Concen: 1.53 ug/L  
RT: 18.614 min Scan# 2699  
Delta R.T. -0.005 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

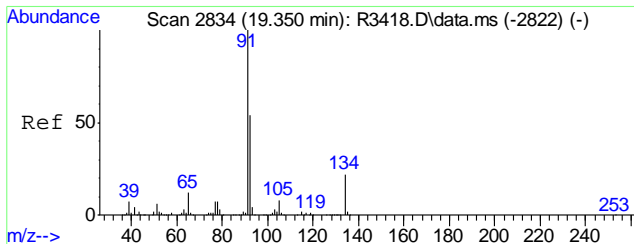
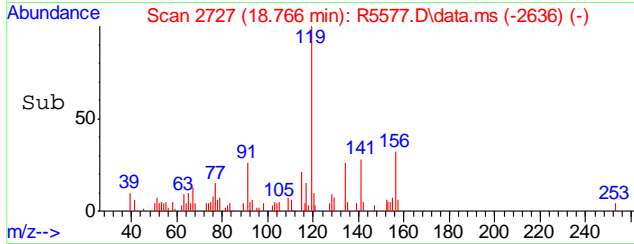
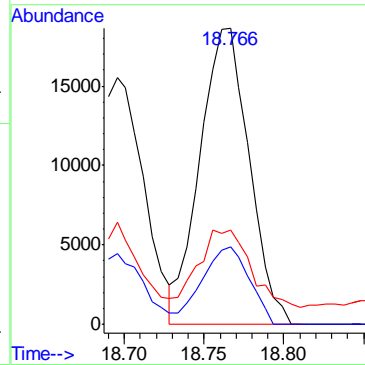
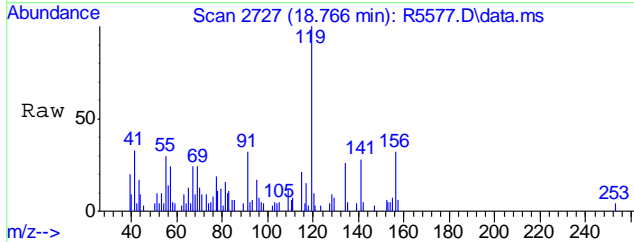
Tgt Ion	Resp	Lower	Upper
105	3550488		
105	100		
134	17.6	3.8	43.8





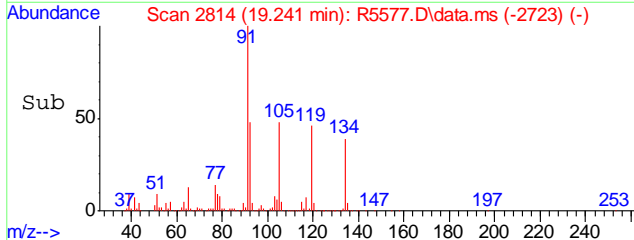
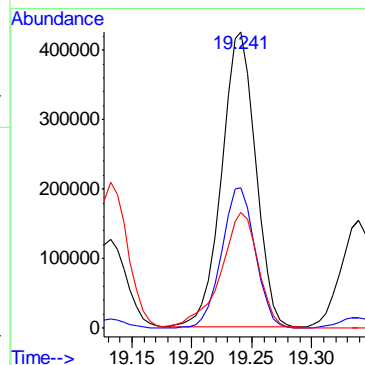
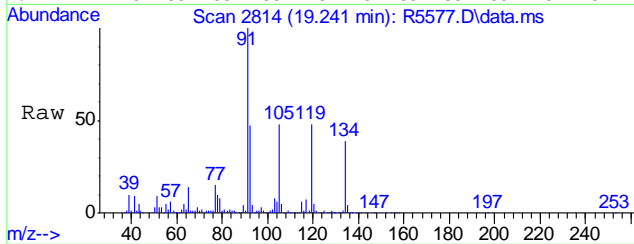
#93  
p-Isopropyltoluene  
Concen: 0.21 ug/L  
RT: 18.766 min Scan# 2727  
Delta R.T. -0.006 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

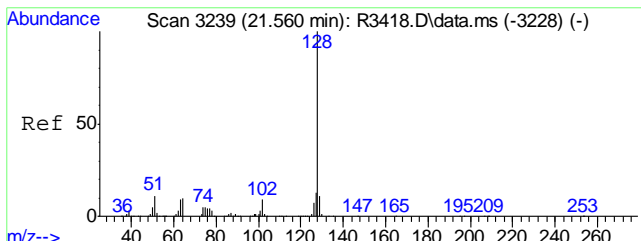
Tgt Ion	Resp	Lower	Upper
119	400449	100	
134	25.4	11.6	51.6
91	27.6	6.6	46.6



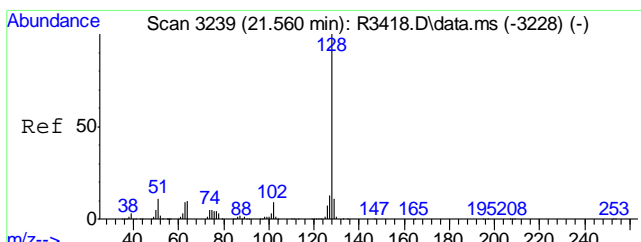
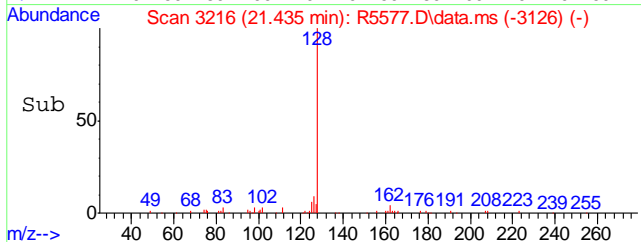
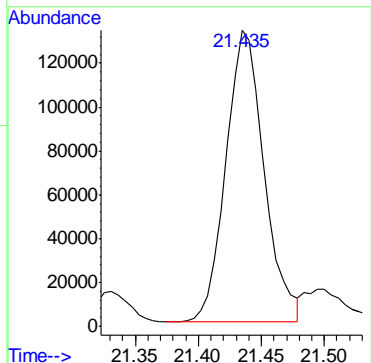
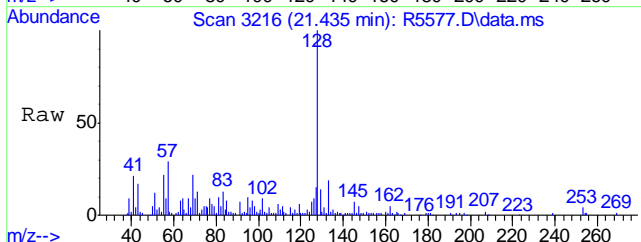
#96  
n-Butylbenzene  
Concen: 4.14 ug/L  
RT: 19.241 min Scan# 2814  
Delta R.T. -0.005 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm

Tgt Ion	Resp	Lower	Upper
91	8383745	100	
92	47.2	45.4	85.4
134	43.3	10.4	50.4

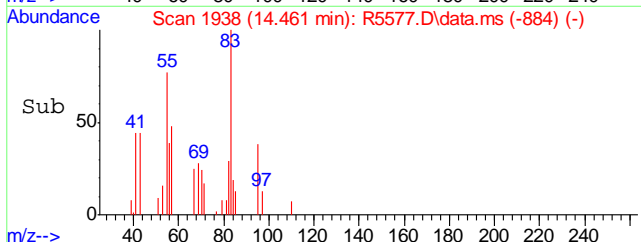
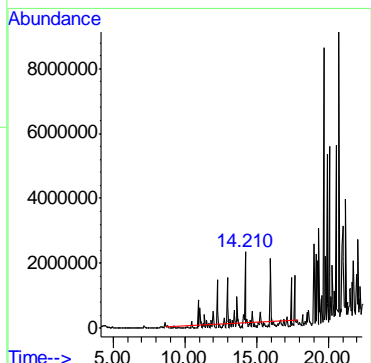
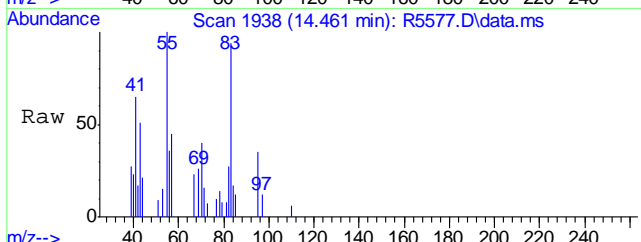




#101  
Naphthalene  
Concen: 1.76 ug/L  
RT: 21.435 min Scan# 3216  
Delta R.T. -0.010 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm  
Tgt Ion:128 Resp: 2790767



#104  
TPH-GRO (C6-C10)  
Concen: 181.52 ug/L m  
RT: 14.462 min Scan# 1938  
Delta R.T. 0.000 min  
Lab File: R5577.D  
Acq: 2 Nov 2011 1:35 pm  
Tgt Ion:TIC Resp:438326202



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111102\  
 Data File : R5576.D  
 Acq On : 2 Nov 2011 1:09 pm  
 Operator : belad  
 Sample : C18698-2  
 Misc : MS1527,VR195,25,,,,,2  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 02 13:42:41 2011  
 Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Sep 09 09:14:12 2011  
 Response via : Initial Calibration

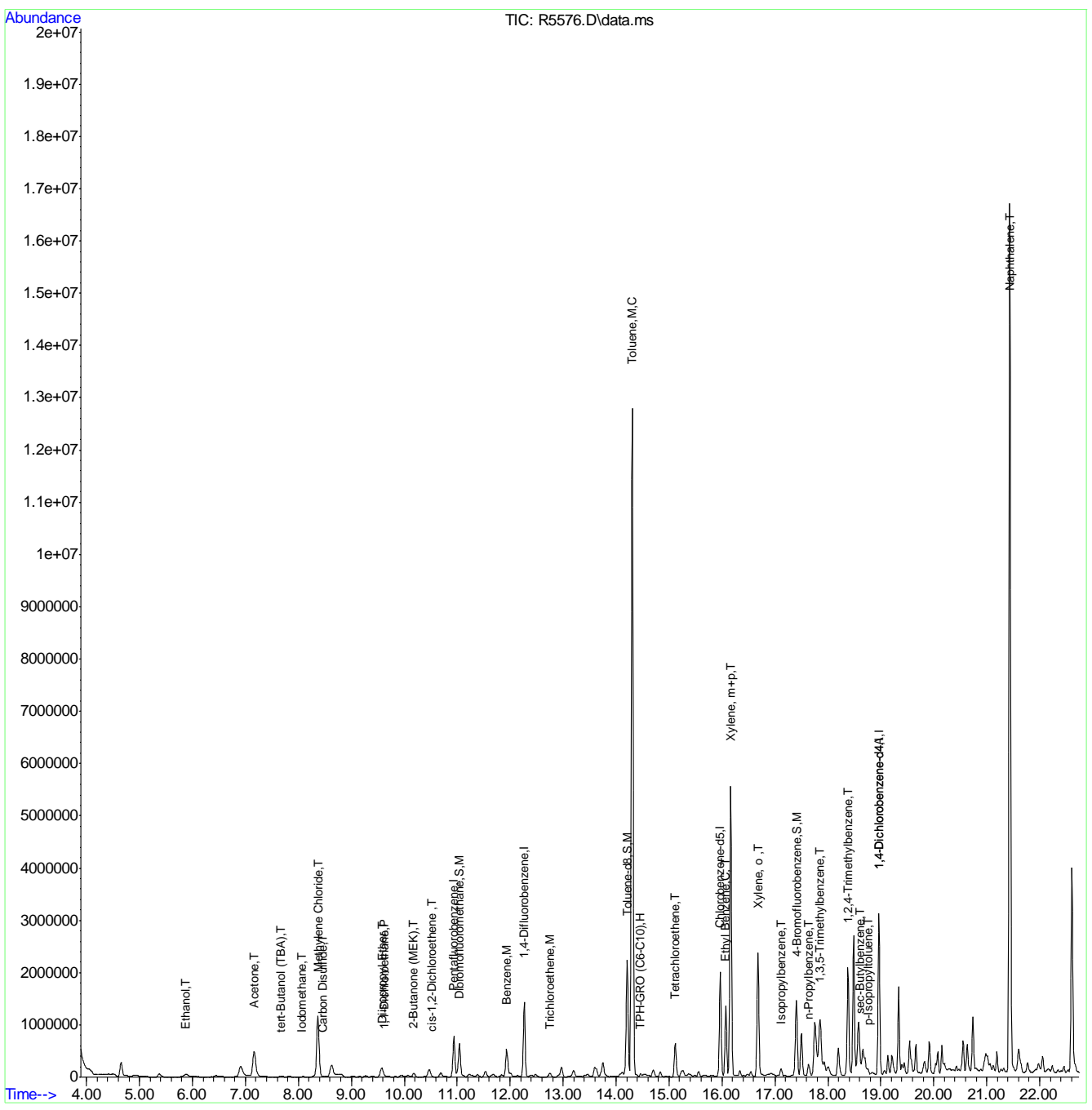
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Pentafluorobenzene	10.936	168	7239111	10.00	ug/L	-0.02	
43) 1,4-Difluorobenzene	12.268	114	14343052	10.00	ug/L	-0.02	
58) Chlorobenzene-d5	15.967	117	12985036	10.00	ug/L	-0.02	
82) 1,4-Dichlorobenzene-d4	18.963	152	6933961	10.00	ug/L	-0.02	
103) 1,4-Dichlorobenzene-d4A	18.963	152	6933961	10.00	ug/L	-0.01	
System Monitoring Compounds							
39) Dibromofluoromethane	11.040	111	5241143	11.06	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	110.60%	
59) Toluene-d8	14.210	98	18727058	10.62	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	106.20%	
79) 4-Bromofluorobenzene	17.408	95	7678789	10.26	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	102.60%	
Target Compounds							
7) Ethanol	5.878	45	1147686	307.84	ug/L		98
10) Acetone	7.166	58	4100112	84.78	ug/L		92
13) tert-Butanol (TBA)	7.668	59	435749	8.08	ug/L		85
17) Iodomethane	8.072	142	74270	0.11	ug/L #		87
19) Methylene Chloride	8.372	84	8240094	14.26	ug/L		89
21) Carbon Disulfide	8.470	76	242780	0.16	ug/L		68
25) Diisopropyl Ether	9.578	45	2902218	1.58	ug/L		87
26) 1,1-Dichloroethane	9.616	63	204780	0.20	ug/L		94
32) 2-Butanone (MEK)	10.178	72	328870	5.50	ug/L #		75
34) cis-1,2-Dichloroethene	10.527	96	61596	0.10	ug/L #		51
47) Benzene	11.935	78	5947219	2.58	ug/L		100
48) Trichloroethene	12.742	95	157736	0.29	ug/L #		77
60) Toluene	14.303	92	71532433	55.71	ug/L		86
66) Tetrachloroethene	15.116	164	1705967	4.67	ug/L		98
71) Ethyl Benzene	16.071	91	12449983	5.33	ug/L		83
72) Xylene, m+p	16.164	106	19743675	21.71	ug/L		32
73) Xylene, o	16.682	106	8297711	9.10	ug/L #		78
78) Isopropylbenzene	17.113	105	1147922	0.54	ug/L		88
84) n-Propylbenzene	17.637	91	2640105	1.00	ug/L		84
86) 1,3,5-Trimethylbenzene	17.839	105	4006706	2.22	ug/L		95
91) 1,2,4-Trimethylbenzene	18.379	105	15985559	8.37	ug/L		78
92) sec-Butylbenzene	18.613	105	466061	0.21	ug/L		89
93) p-Isopropyltoluene	18.761	119	400267	0.22	ug/L		91
101) Naphthalene	21.434	128	151359754	98.92	ug/L		100
104) TPH-GRO (C6-C10)	14.462	TIC	697003986m	299.10	ug/L		

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

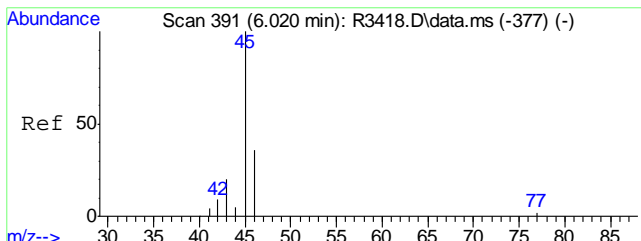
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111102\  
Data File : R5576.D  
Acq On : 2 Nov 2011 1:09 pm  
Operator : belad  
Sample : C18698-2  
Misc : MS1527,VR195,25,,,,,2  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 02 13:42:41 2011  
Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
Quant Title : EPA -8260B  
QLast Update : Fri Sep 09 09:14:12 2011  
Response via : Initial Calibration

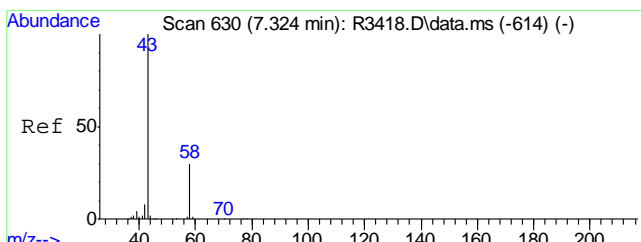
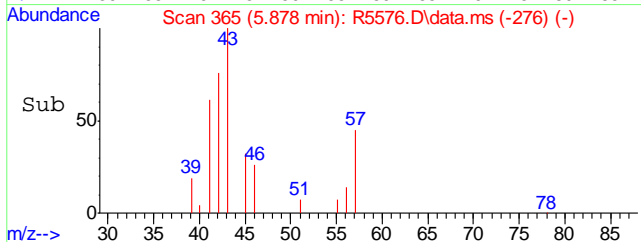
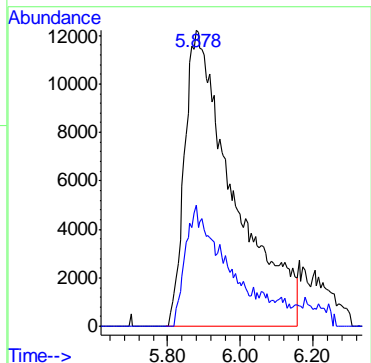
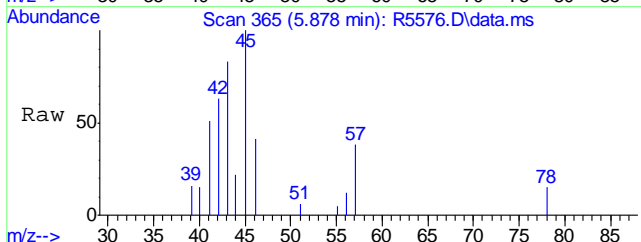


5.1.2  
5



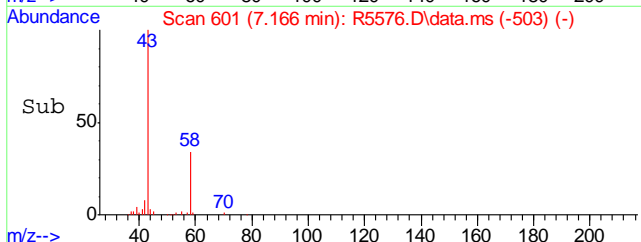
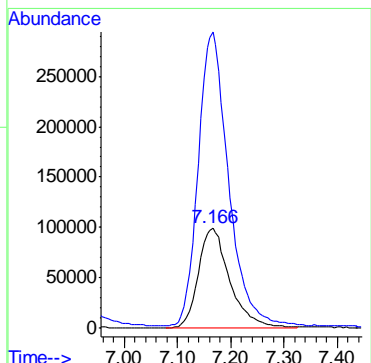
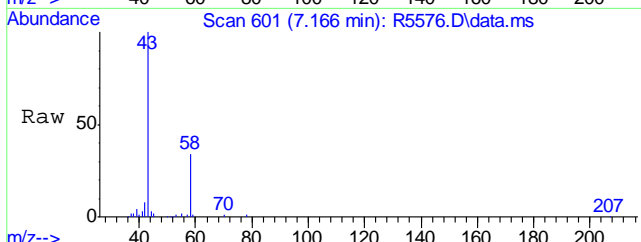
#7  
Ethanol  
Concen: 307.84 ug/L  
RT: 5.878 min Scan# 365  
Delta R.T. -0.017 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

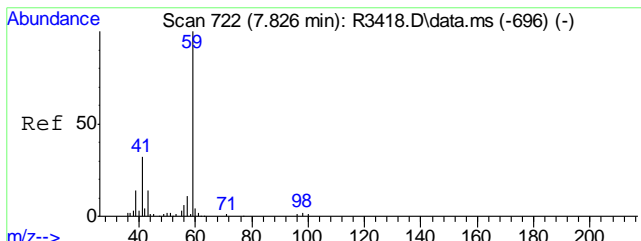
Tgt Ion	Resp	Lower	Upper
45	1147686		
46	35.5	0.0	76.6



#10  
Acetone  
Concen: 84.78 ug/L  
RT: 7.166 min Scan# 601  
Delta R.T. -0.016 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

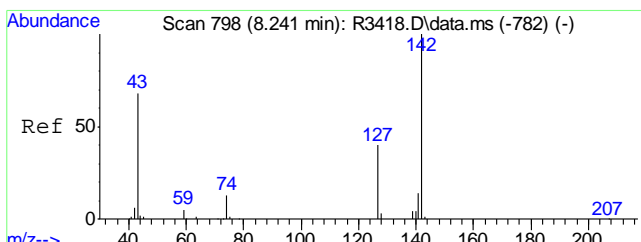
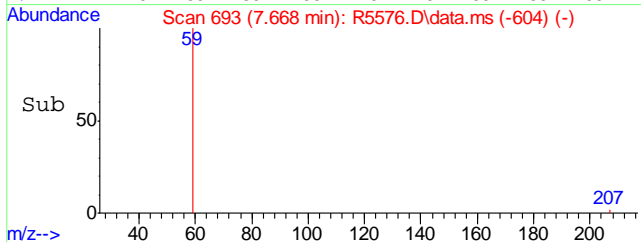
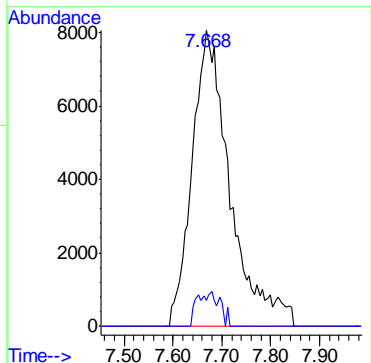
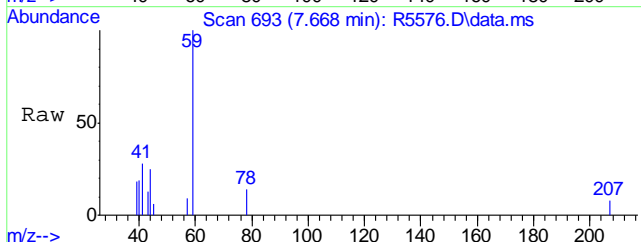
Tgt Ion	Resp	Lower	Upper
58	4100112		
43	283.3	0.0	621.8





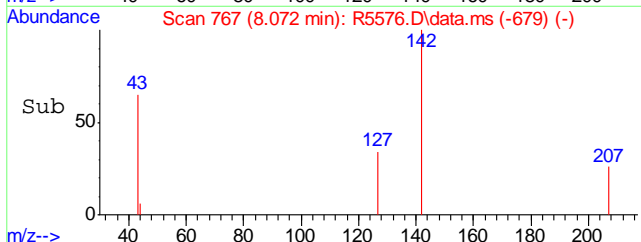
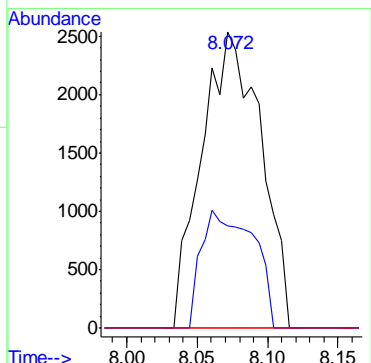
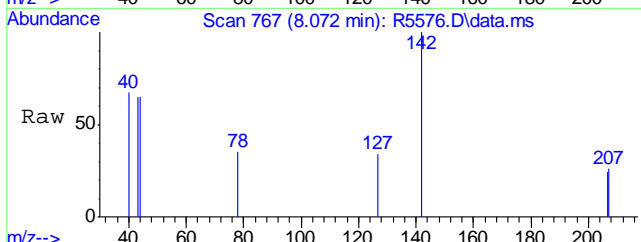
#13  
tert-Butanol (TBA)  
Concen: 8.08 ug/L  
RT: 7.668 min Scan# 693  
Delta R.T. -0.016 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

Tgt Ion	Resp	Lower	Upper
59	435749	100	
57	3.3	0.0	48.9

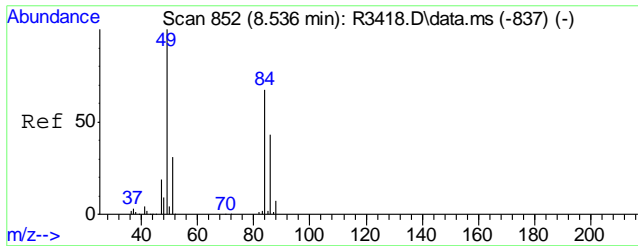


#17  
Iodomethane  
Concen: 0.11 ug/L  
RT: 8.072 min Scan# 767  
Delta R.T. -0.022 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

Tgt Ion	Resp	Lower	Upper
142	74270	100	
127	35.2	17.9	57.9
141	0.0	0.0	34.0

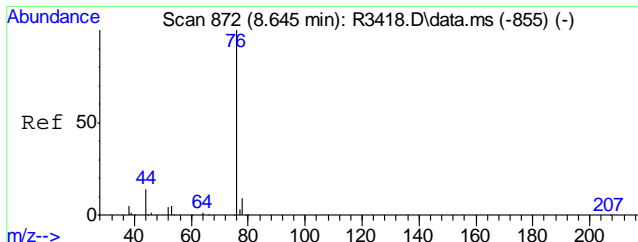
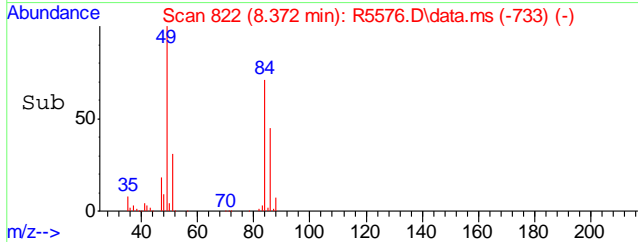
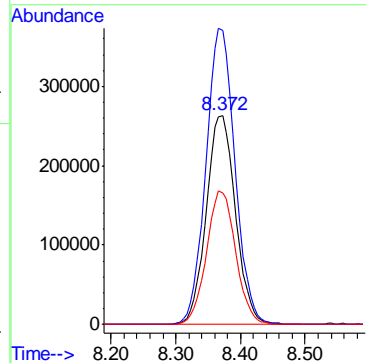
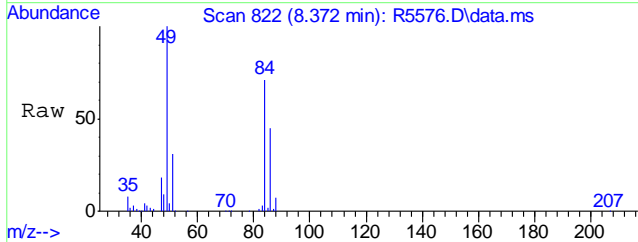






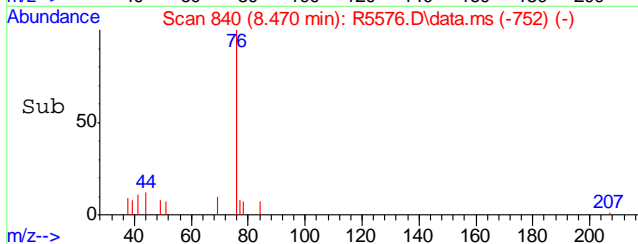
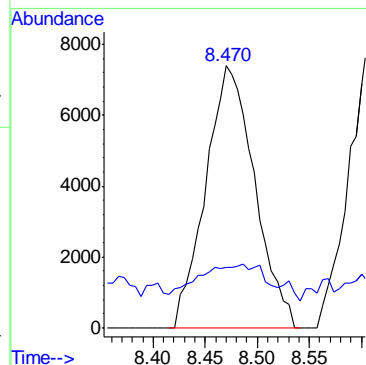
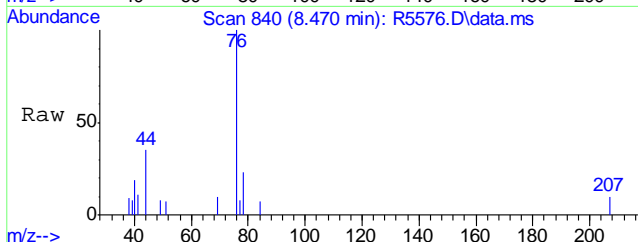
#19  
Methylene Chloride  
Concen: 14.26 ug/L  
RT: 8.372 min Scan# 822  
Delta R.T. -0.016 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

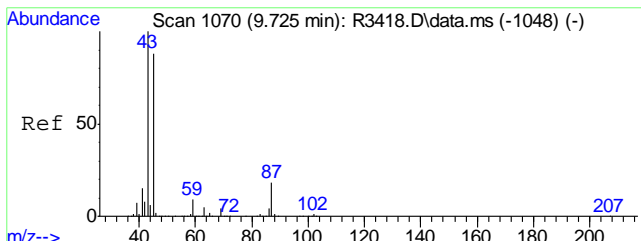
Tgt Ion	Resp	Lower	Upper
84	100		
49	140.6	101.6	141.6
86	63.6	43.6	83.6



#21  
Carbon Disulfide  
Concen: 0.16 ug/L  
RT: 8.470 min Scan# 840  
Delta R.T. -0.022 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

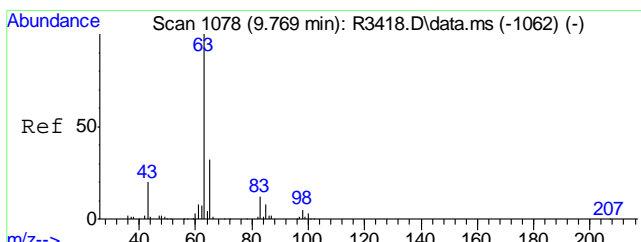
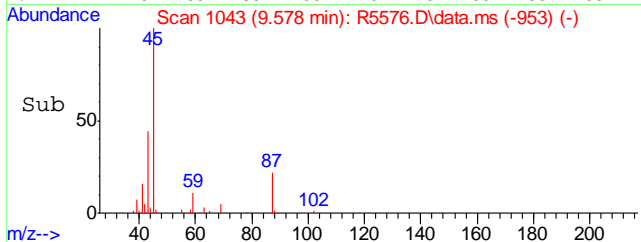
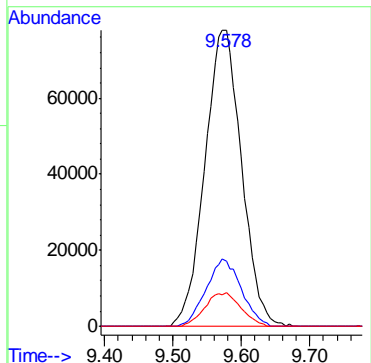
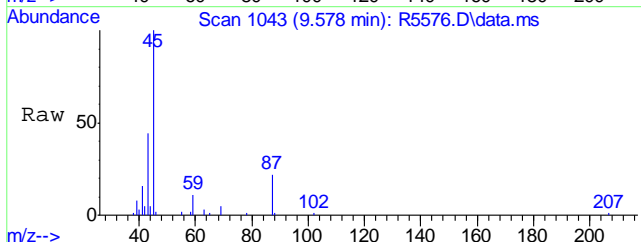
Tgt Ion	Resp	Lower	Upper
76	100		
78	20.7	0.0	29.1





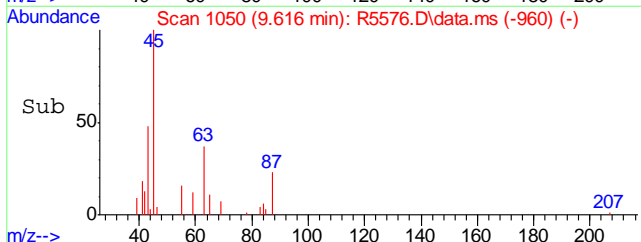
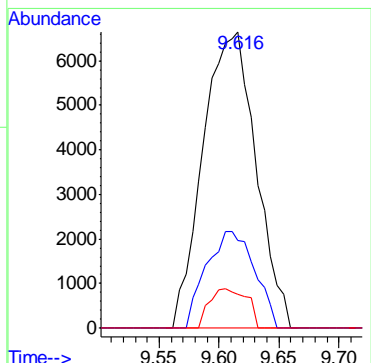
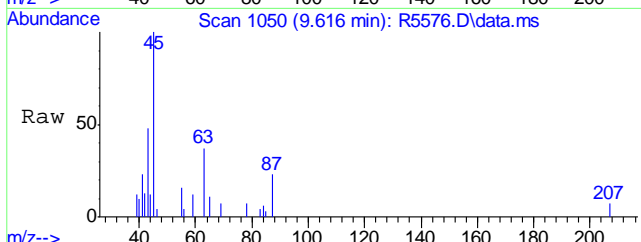
#25  
Diisopropyl Ether  
Concen: 1.58 ug/L  
RT: 9.578 min Scan# 1043  
Delta R.T. -0.011 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

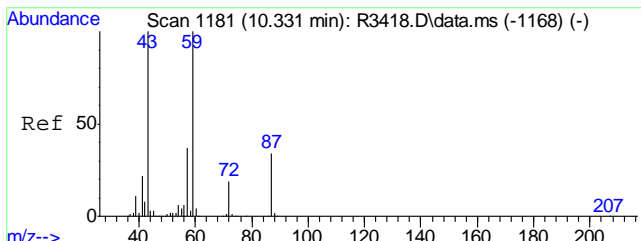
Tgt Ion	Ratio	Lower	Upper
45	100		
87	21.8	0.0	280.4
59	11.1	0.0	313.2



#26  
1,1-Dichloroethane  
Concen: 0.20 ug/L  
RT: 9.616 min Scan# 1050  
Delta R.T. -0.011 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

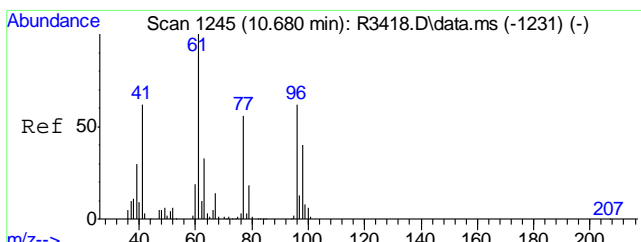
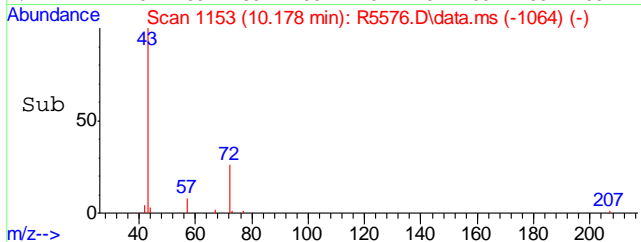
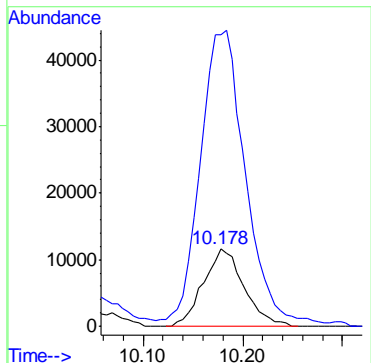
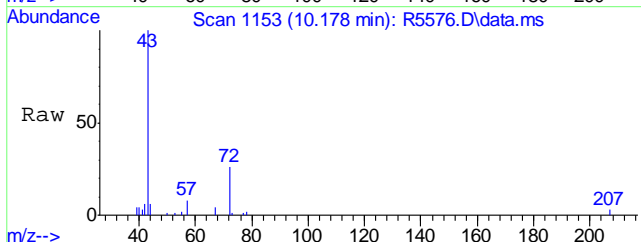
Tgt Ion	Ratio	Lower	Upper
63	100		
65	29.8	12.2	52.2
83	9.3	0.0	42.9





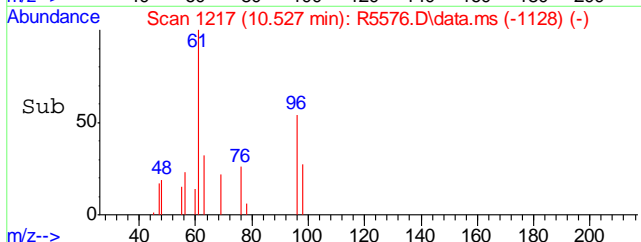
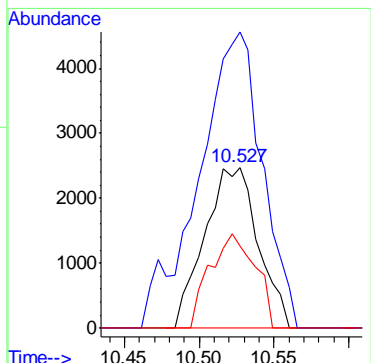
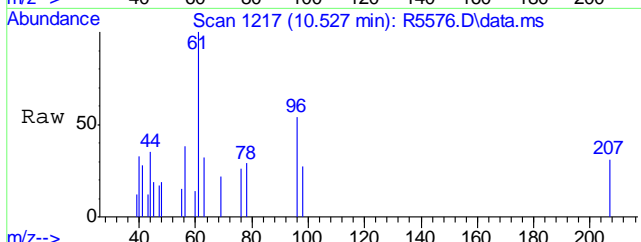
#32  
 2-Butanone (MEK)  
 Concen: 5.50 ug/L  
 RT: 10.178 min Scan# 1153  
 Delta R.T. -0.016 min  
 Lab File: R5576.D  
 Acq: 2 Nov 2011 1:09 pm

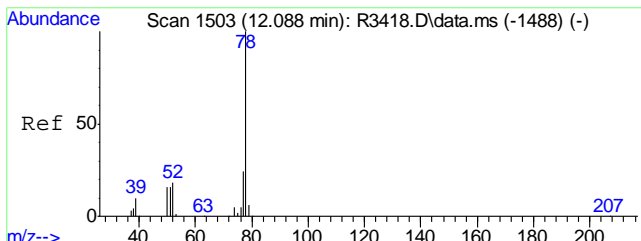
Tgt Ion	Resp	Lower	Upper
72	328870		
43	430.7	353.2	393.2#



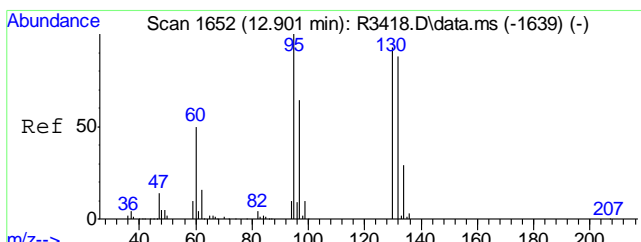
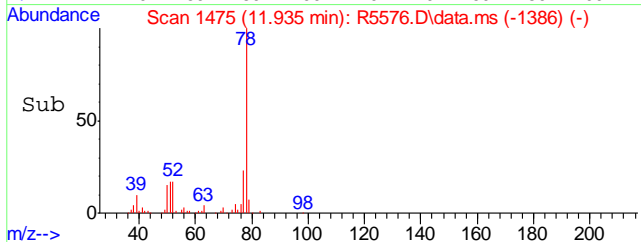
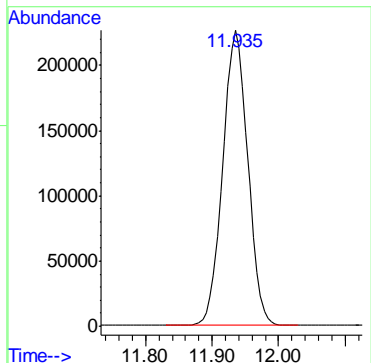
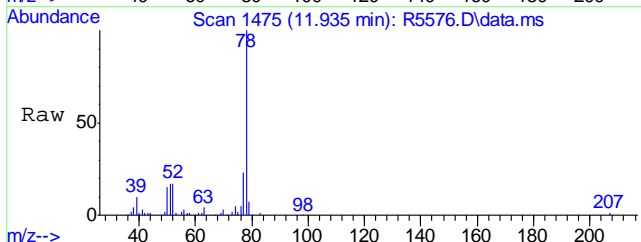
#34  
 cis-1,2-Dichloroethene  
 Concen: 0.10 ug/L  
 RT: 10.527 min Scan# 1217  
 Delta R.T. -0.017 min  
 Lab File: R5576.D  
 Acq: 2 Nov 2011 1:09 pm

Tgt Ion	Resp	Lower	Upper
96	61596		
61	218.0	121.0	161.0#
98	49.2	44.2	84.2





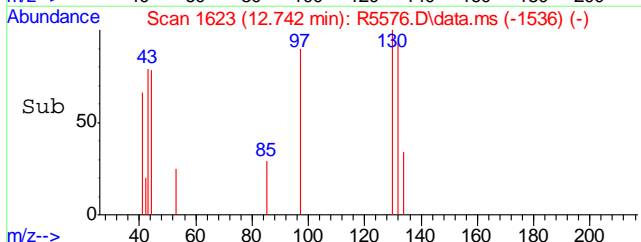
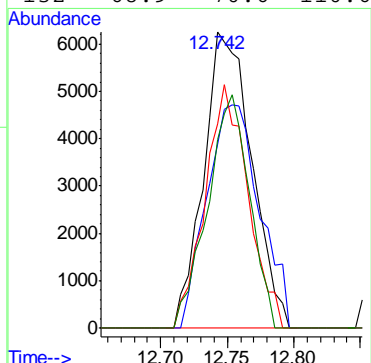
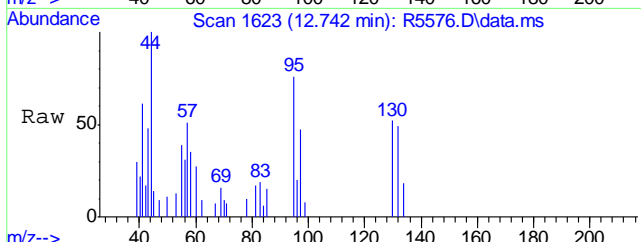
#47  
Benzene  
Concen: 2.58 ug/L  
RT: 11.935 min Scan# 1475  
Delta R.T. -0.016 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm  
Tgt Ion: 78 Resp: 5947219

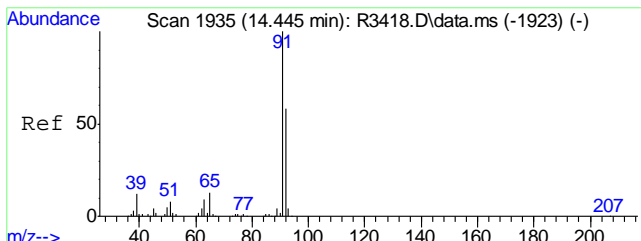


#48  
Trichloroethene  
Concen: 0.29 ug/L  
RT: 12.742 min Scan# 1623  
Delta R.T. -0.028 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

Tgt Ion: 95 Resp: 157736

Ion	Ratio	Lower	Upper
95	100		
97	83.2	44.7	84.7
130	73.2	74.5	114.5#
132	68.9	70.6	110.6#

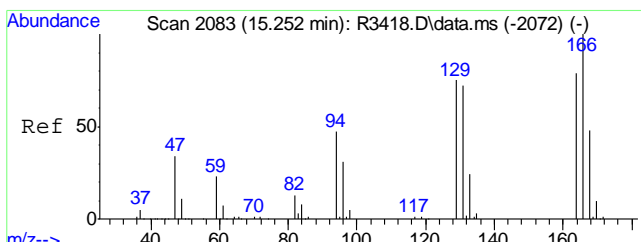
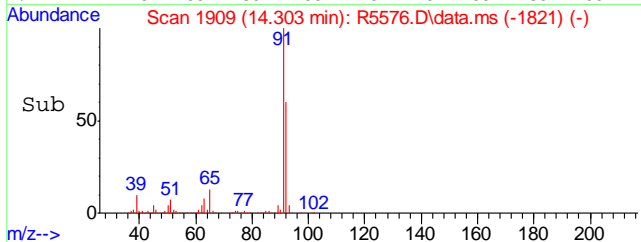
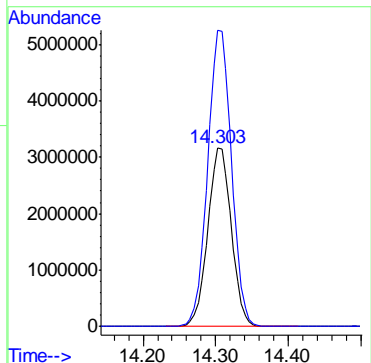
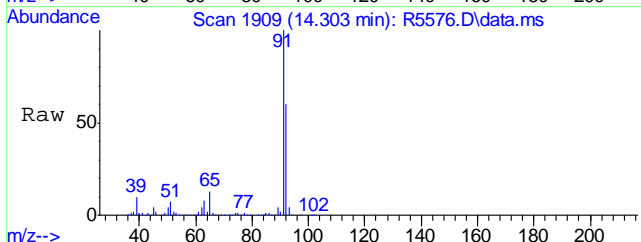




#60  
Toluene  
Concen: 55.71 ug/L  
RT: 14.303 min Scan# 1909  
Delta R.T. -0.022 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

Tgt Ion: 92 Resp: 71532433

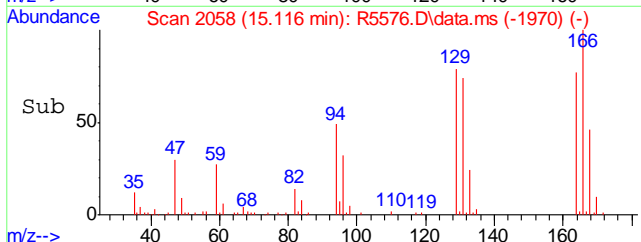
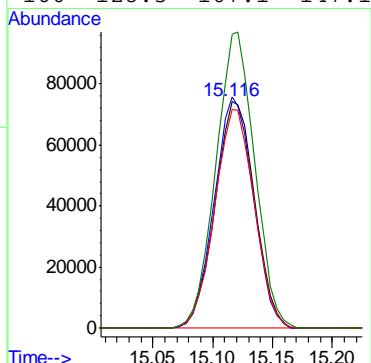
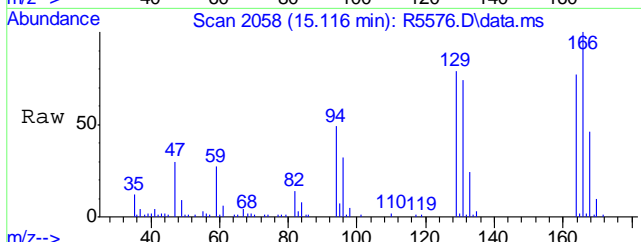
Ion	Ratio	Lower	Upper
92	100		
91	168.2	130.0	170.0

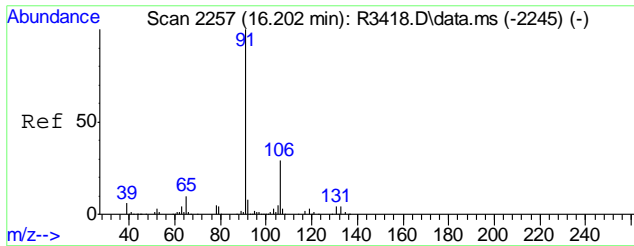


#66  
Tetrachloroethene  
Concen: 4.67 ug/L  
RT: 15.116 min Scan# 2058  
Delta R.T. -0.022 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

Tgt Ion: 164 Resp: 1705967

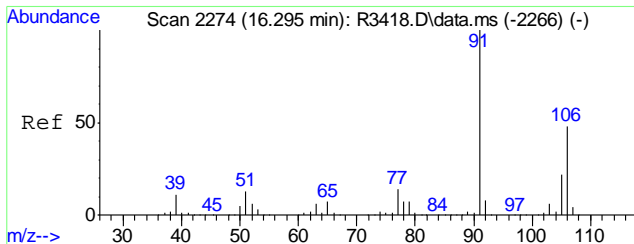
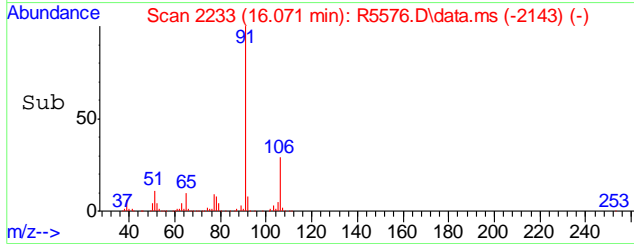
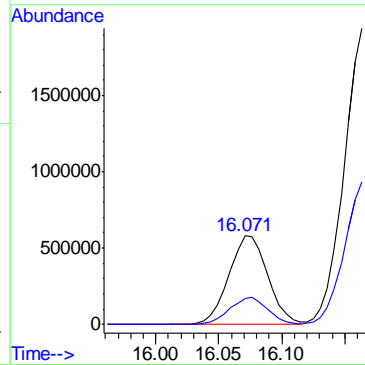
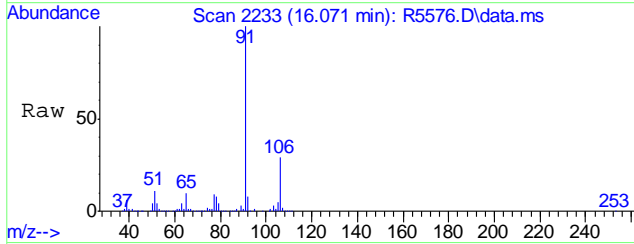
Ion	Ratio	Lower	Upper
164	100		
129	100.6	78.1	118.1
131	96.2	73.9	113.9
166	128.5	107.1	147.1





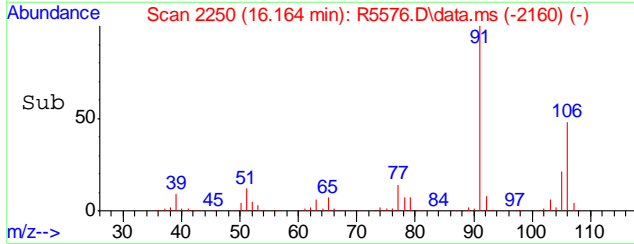
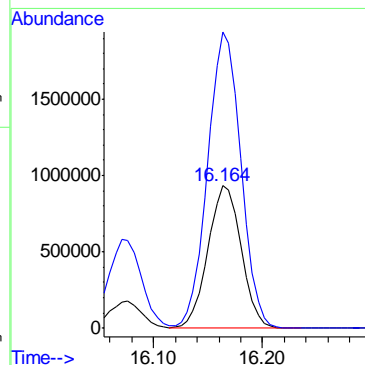
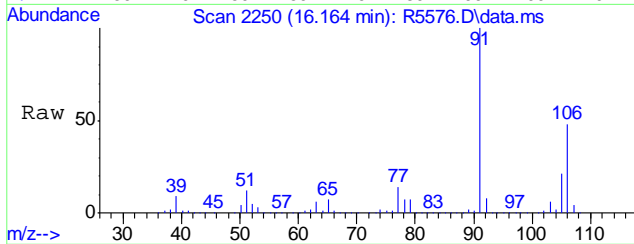
#71  
Ethyl Benzene  
Concen: 5.33 ug/L  
RT: 16.071 min Scan# 2233  
Delta R.T. -0.011 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

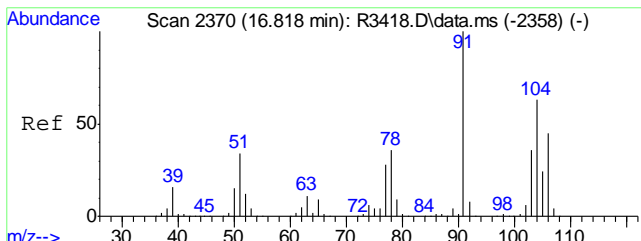
Tgt Ion: 91 Resp:12449983  
Ion Ratio Lower Upper  
91 100  
106 29.7 9.5 70.9



#72  
Xylene, m+p  
Concen: 21.71 ug/L  
RT: 16.164 min Scan# 2250  
Delta R.T. -0.010 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

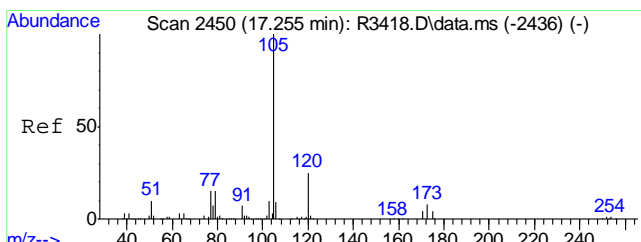
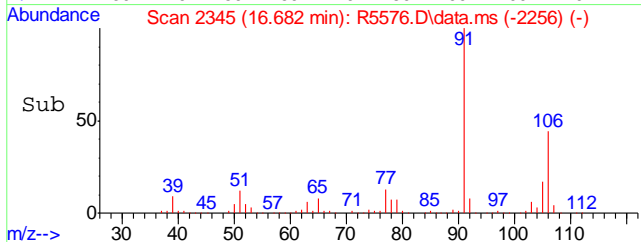
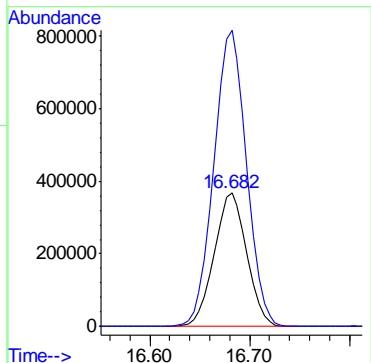
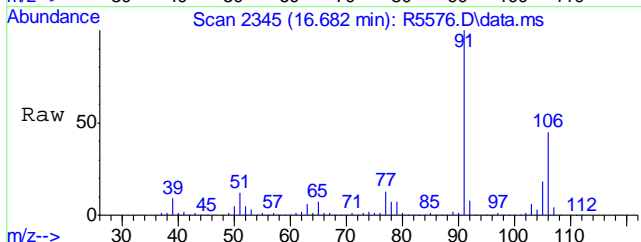
Tgt Ion:106 Resp:19743675  
Ion Ratio Lower Upper  
106 100  
91 208.2 0.0 335.1





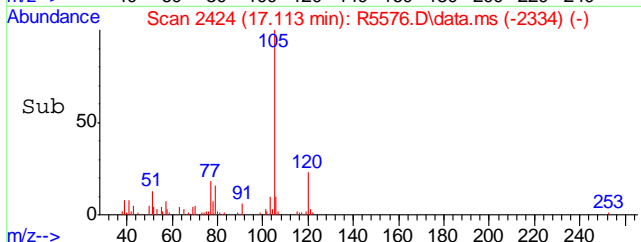
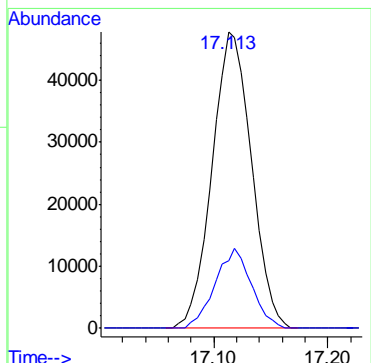
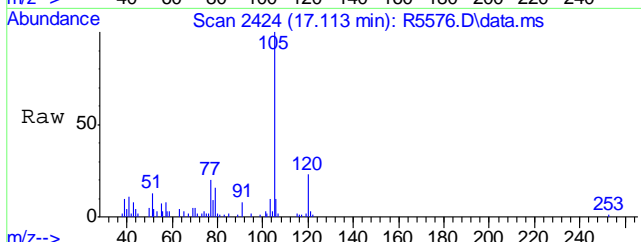
#73  
Xylene, o  
Concen: 9.10 ug/L  
RT: 16.682 min Scan# 2345  
Delta R.T. -0.016 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

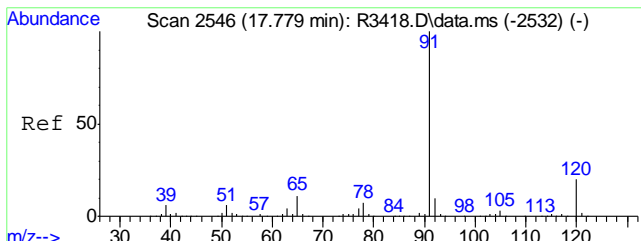
Tgt Ion	Resp	Lower	Upper
106	100		
91	223.4	170.8	210.8#



#78  
Isopropylbenzene  
Concen: 0.54 ug/L  
RT: 17.113 min Scan# 2424  
Delta R.T. -0.011 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm

Tgt Ion	Resp	Lower	Upper
105	100		
120	24.8	11.3	51.3

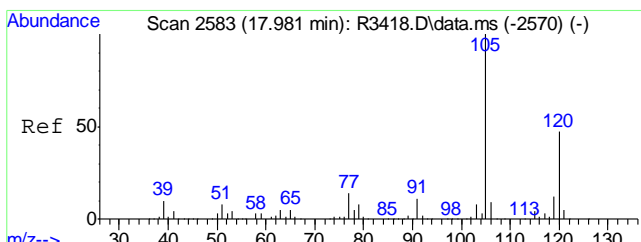
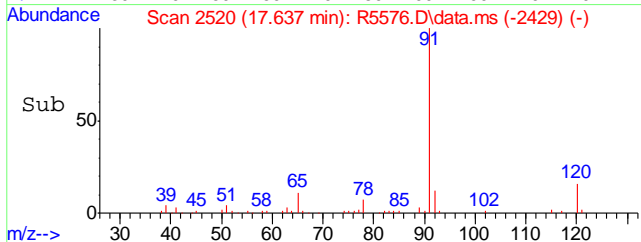
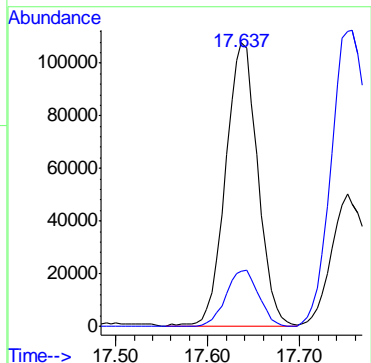
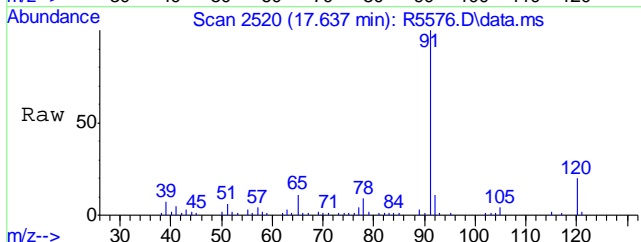




#84  
 n-Propylbenzene  
 Concen: 1.00 ug/L  
 RT: 17.637 min Scan# 2520  
 Delta R.T. -0.005 min  
 Lab File: R5576.D  
 Acq: 2 Nov 2011 1:09 pm

Tgt Ion: 91 Resp: 2640105

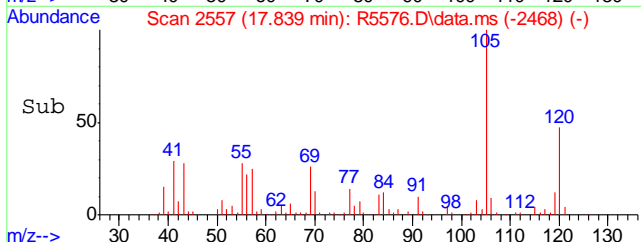
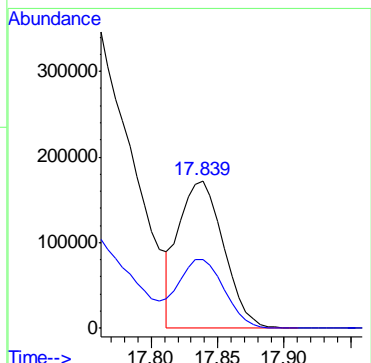
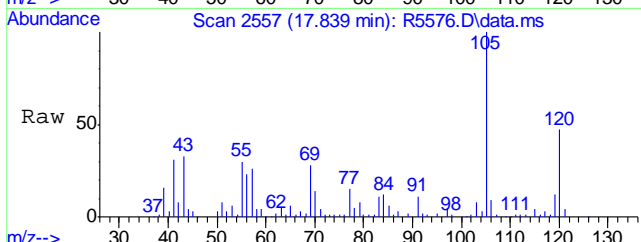
Ion	Ratio	Lower	Upper
91	100		
120	20.1	8.5	48.5



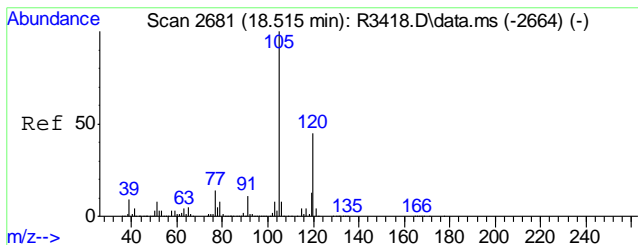
#86  
 1,3,5-Trimethylbenzene  
 Concen: 2.22 ug/L  
 RT: 17.839 min Scan# 2557  
 Delta R.T. -0.016 min  
 Lab File: R5576.D  
 Acq: 2 Nov 2011 1:09 pm

Tgt Ion: 105 Resp: 4006706

Ion	Ratio	Lower	Upper
105	100		
120	49.7	33.2	73.2

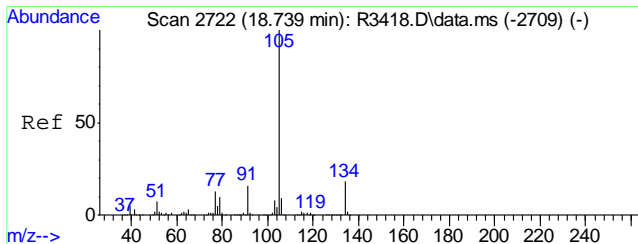
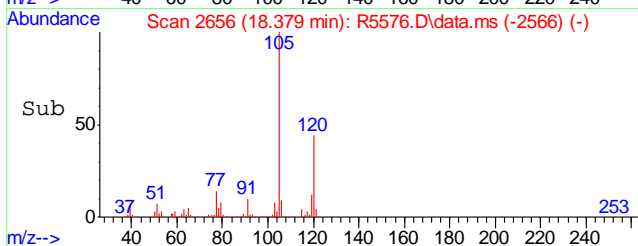
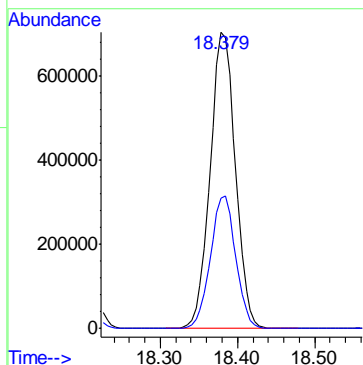
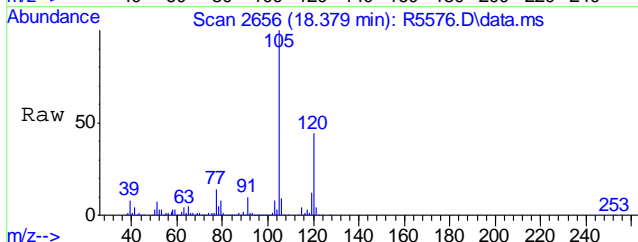






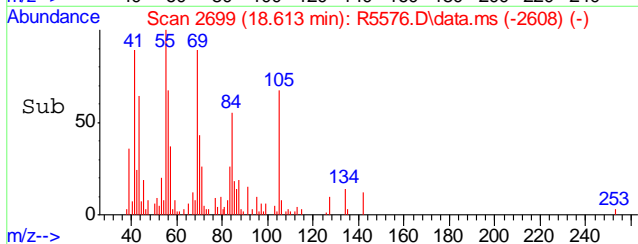
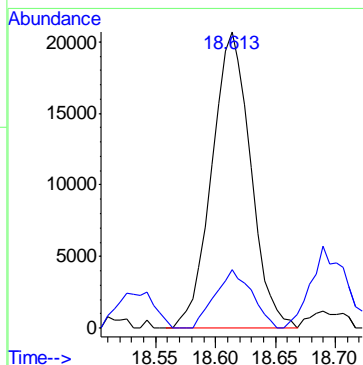
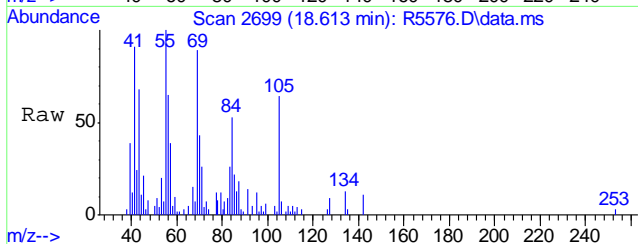
#91  
 1,2,4-Trimethylbenzene  
 Concen: 8.37 ug/L  
 RT: 18.379 min Scan# 2656  
 Delta R.T. -0.011 min  
 Lab File: R5576.D  
 Acq: 2 Nov 2011 1:09 pm

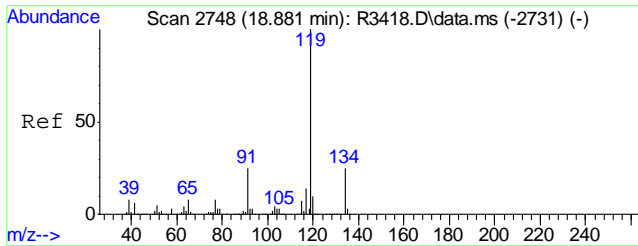
Tgt Ion:105 Resp:15985559  
 Ion Ratio Lower Upper  
 105 100  
 120 44.6 41.3 81.3



#92  
 sec-Butylbenzene  
 Concen: 0.21 ug/L  
 RT: 18.613 min Scan# 2699  
 Delta R.T. -0.006 min  
 Lab File: R5576.D  
 Acq: 2 Nov 2011 1:09 pm

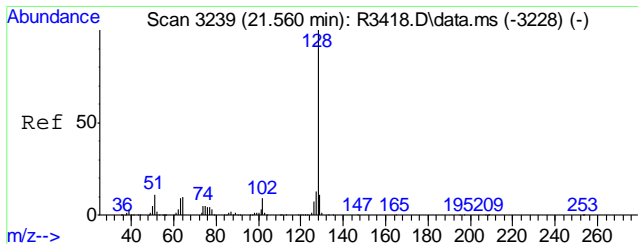
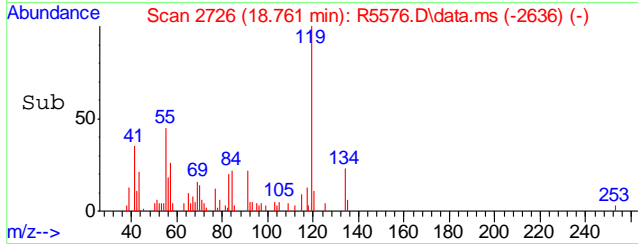
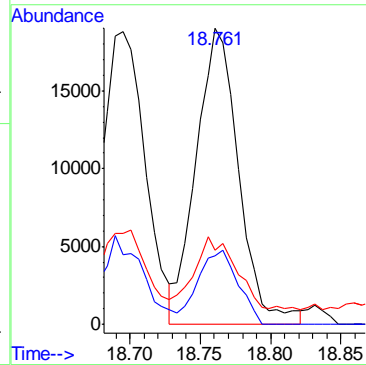
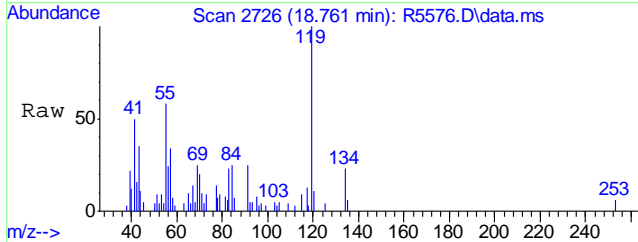
Tgt Ion:105 Resp: 466061  
 Ion Ratio Lower Upper  
 105 100  
 134 18.6 3.8 43.8





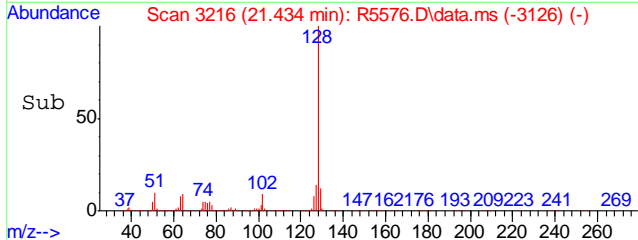
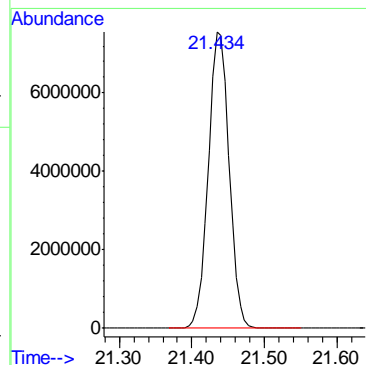
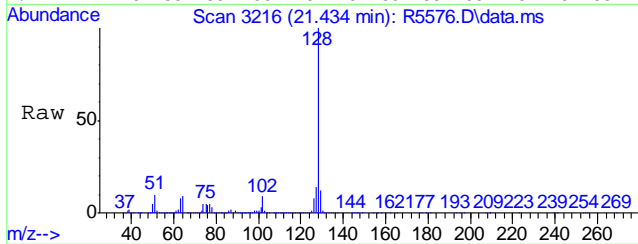
#93  
 p-Isopropyltoluene  
 Concen: 0.22 ug/L  
 RT: 18.761 min Scan# 2726  
 Delta R.T. -0.011 min  
 Lab File: R5576.D  
 Acq: 2 Nov 2011 1:09 pm

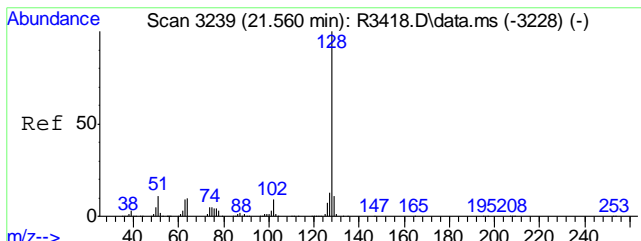
Tgt Ion	Resp	Lower	Upper
119	400267		
134	23.5	11.6	51.6
91	25.5	6.6	46.6



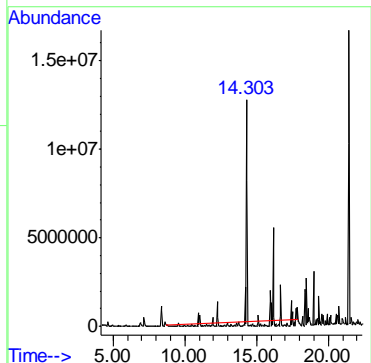
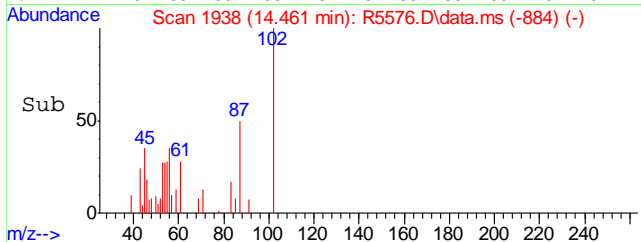
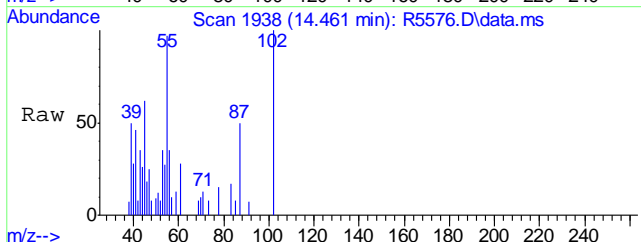
#101  
 Naphthalene  
 Concen: 98.92 ug/L  
 RT: 21.434 min Scan# 3216  
 Delta R.T. -0.011 min  
 Lab File: R5576.D  
 Acq: 2 Nov 2011 1:09 pm

Tgt Ion:128 Resp:151359754





#104  
TPH-GRO (C6-C10)  
Concen: 299.10 ug/L m  
RT: 14.462 min Scan# 1938  
Delta R.T. 0.000 min  
Lab File: R5576.D  
Acq: 2 Nov 2011 1:09 pm  
Tgt Ion:TIC Resp:697003986



5.1.2  
5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
Data File : L11976.D  
Acq On : 1 Nov 2011 12:39 pm  
Operator : XINGB  
Sample : C18698-3  
Misc : MS1499,VL369,3.24,,,,,1  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 02 07:48:06 2011  
Quant Method : C:\msdchem\1\METHODS\VL362S.M  
Quant Title : EPA -8260B  
QLast Update : Mon Oct 24 13:55:38 2011  
Response via : Initial Calibration

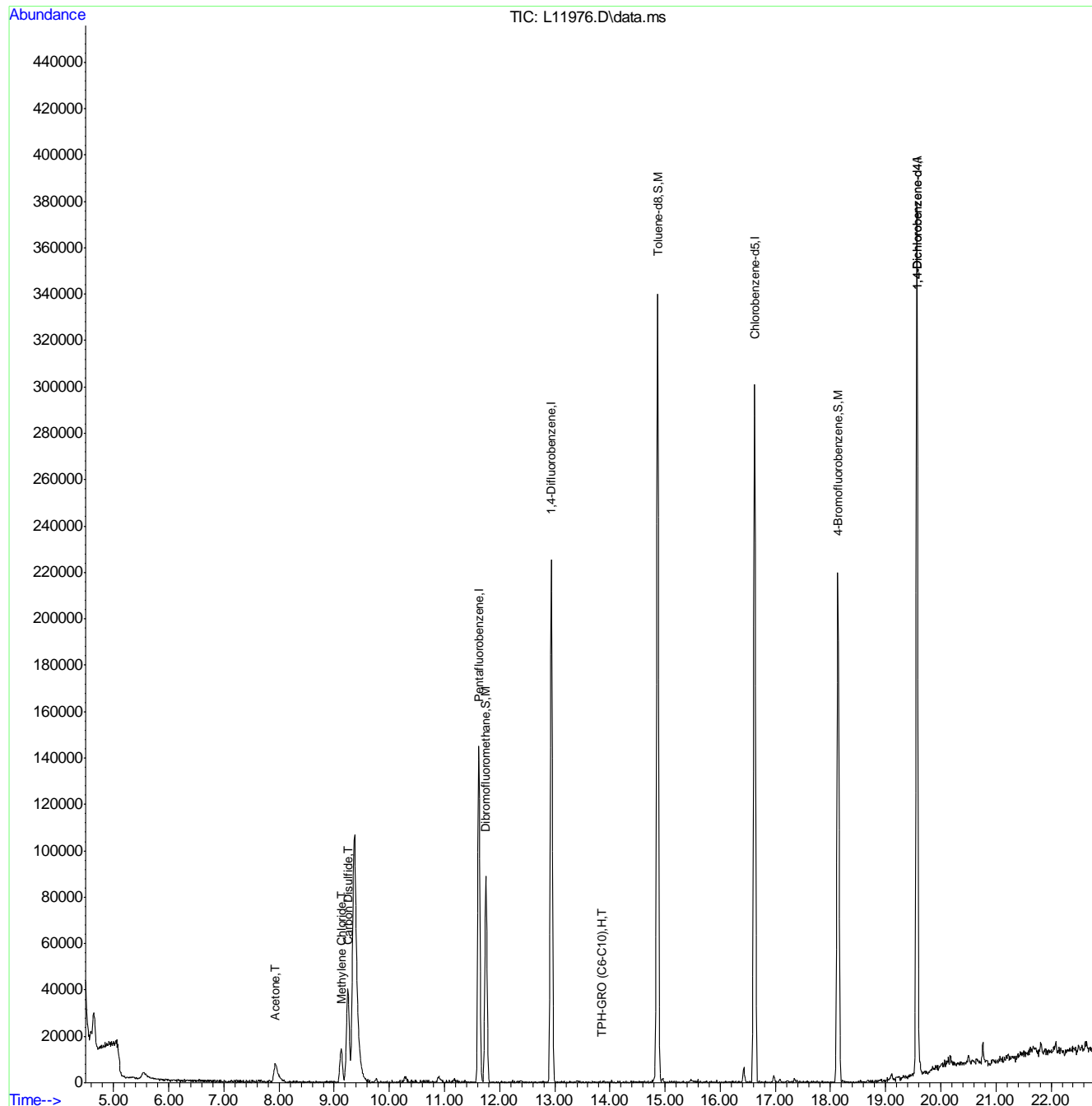
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.624	168	1385223	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	2378621	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2177381	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1169874	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1169874	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.749	111	807873	19.57	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	97.85%
53) Toluene-d8	14.865	98	3033270	18.55	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	92.75%
71) 4-Bromofluorobenzene	18.139	95	1239134	19.48	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	97.40%
Target Compounds						
10) Acetone	7.935	58	64769	10.30	ug/Kg#	64
18) Methylene Chloride	9.130	84	112594	1.85	ug/Kg	96
20) Carbon Disulfide	9.245	76	1056202	5.67	ug/Kg	94
96) TPH-GRO (C6-C10)	13.850	TIC	831905m	3.00	ug/Kg	

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

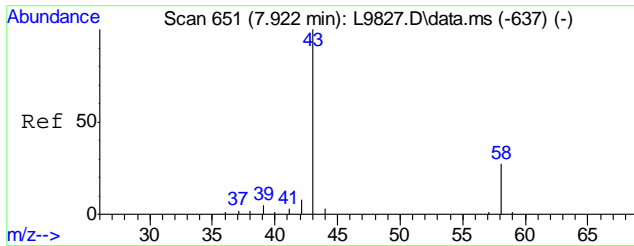
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
 Data File : L11976.D  
 Acq On : 1 Nov 2011 12:39 pm  
 Operator : XINGB  
 Sample : C18698-3  
 Misc : MS1499,VL369,3.24,,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 02 07:48:06 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration

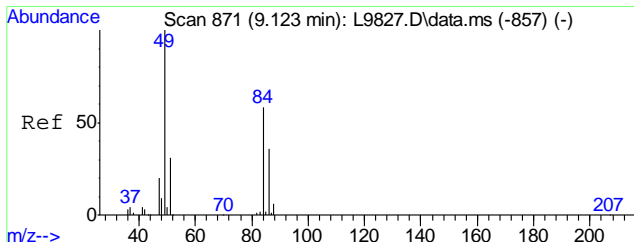
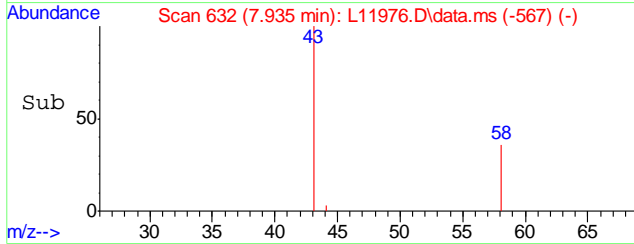
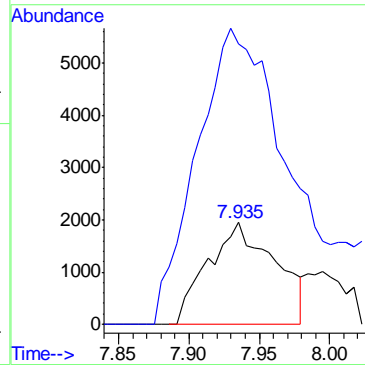
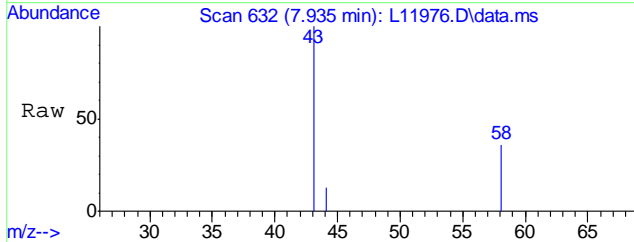


5.1.3  
 5



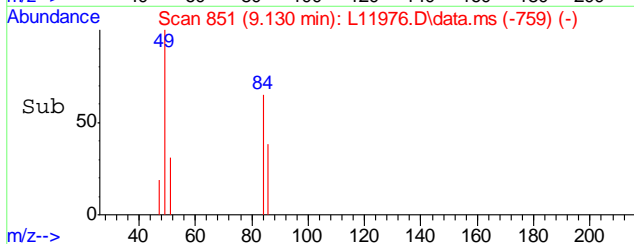
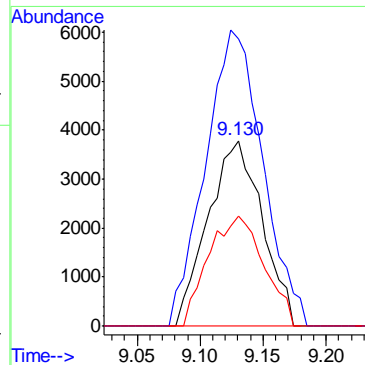
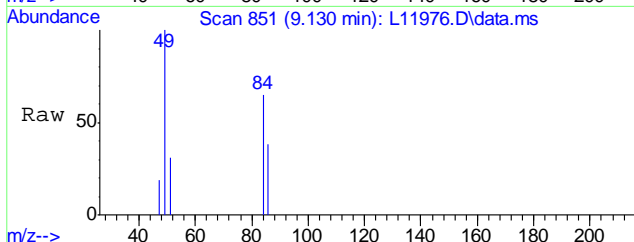
#10  
Acetone  
Concen: 10.30 ug/Kg  
RT: 7.935 min Scan# 632  
Delta R.T. 0.006 min  
Lab File: L11976.D  
Acq: 1 Nov 2011 12:39 pm

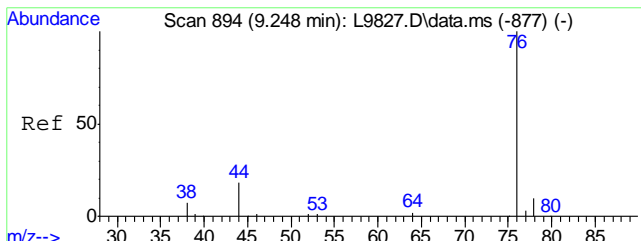
Tgt Ion: 58 Resp: 64769  
Ion Ratio Lower Upper  
58 100  
43 476.0 370.9 410.9#



#18  
Methylene Chloride  
Concen: 1.85 ug/Kg  
RT: 9.130 min Scan# 851  
Delta R.T. 0.000 min  
Lab File: L11976.D  
Acq: 1 Nov 2011 12:39 pm

Tgt Ion: 84 Resp: 112594  
Ion Ratio Lower Upper  
84 100  
49 169.4 155.6 195.6  
86 60.8 43.3 83.3

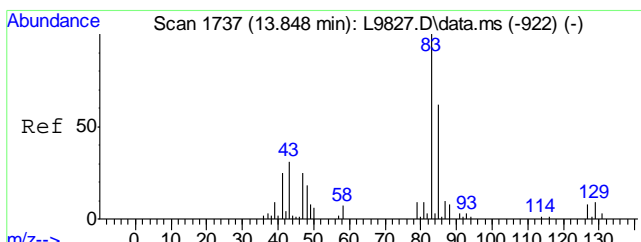
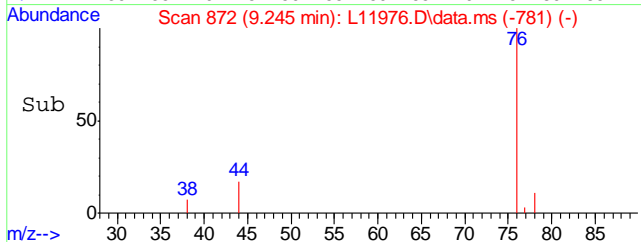
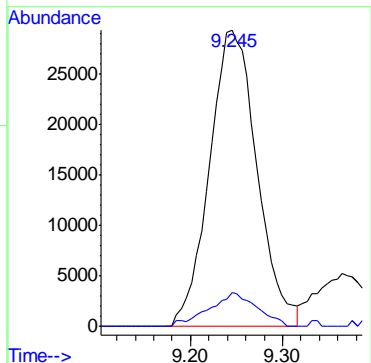
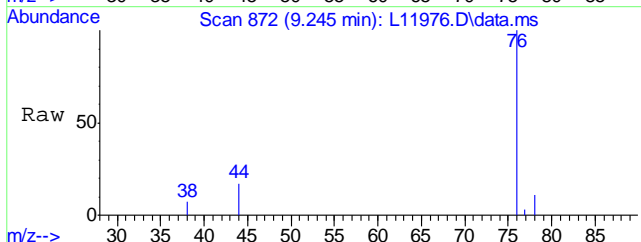




#20  
 Carbon Disulfide  
 Concen: 5.67 ug/Kg  
 RT: 9.245 min Scan# 872  
 Delta R.T. -0.005 min  
 Lab File: L11976.D  
 Acq: 1 Nov 2011 12:39 pm

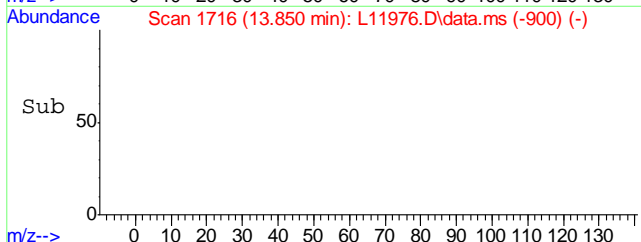
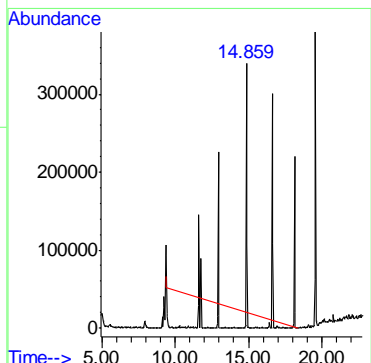
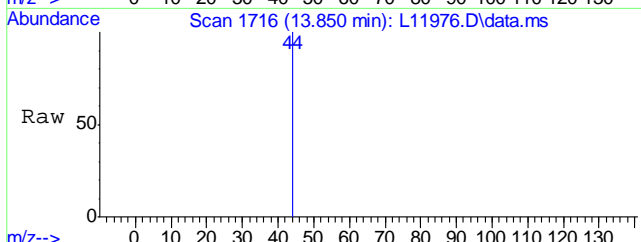
Tgt Ion: 76 Resp: 1056202

Ion	Ratio	Lower	Upper
76	100		
78	11.4	0.0	29.3



#96  
 TPH-GRO (C6-C10)  
 Concen: 3.00 ug/Kg m  
 RT: 13.850 min Scan# 1716  
 Delta R.T. 0.000 min  
 Lab File: L11976.D  
 Acq: 1 Nov 2011 12:39 pm

Tgt Ion:TIC Resp: 831905



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
 Data File : L11977.D  
 Acq On : 1 Nov 2011 1:09 pm  
 Operator : XINGB  
 Sample : C18698-4  
 Misc : MS1499,VL369,4.76,,,,,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 02 09:42:53 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1329309	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	2331247	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2107030	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1115122	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1115122	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	802305	20.25	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	101.25%		
53) Toluene-d8	14.865	98	2956170	18.68	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	93.40%		
71) 4-Bromofluorobenzene	18.139	95	1198479	19.47	ug/Kg	0.00
Spiked Amount	20.000	Range 70 - 130	Recovery =	97.35%		
Target Compounds						
						Qvalue
10) Acetone	7.941	58	176269	29.22	ug/Kg#	82
18) Methylene Chloride	9.130	84	167554	2.87	ug/Kg	95
20) Carbon Disulfide	9.256	76	1615297	9.04	ug/Kg	98
29) 2-Butanone (MEK)	10.893	72	19953	3.00	ug/Kg#	40
36) Cyclohexane	12.240	56	234952	1.93	ug/Kg	98
45) Methylcyclohexane	13.637	55	250350	2.41	ug/Kg	97
70) Isopropylbenzene	17.817	105	258865	1.02	ug/Kg	98
83) 1,2,4-Trimethylbenzene	19.028	105	236846	1.08	ug/Kg	88
93) Naphthalene	22.051	128	435211	2.20	ug/Kg	100
96) TPH-GRO (C6-C10)	13.850	TIC	7656304m	29.01	ug/Kg	

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

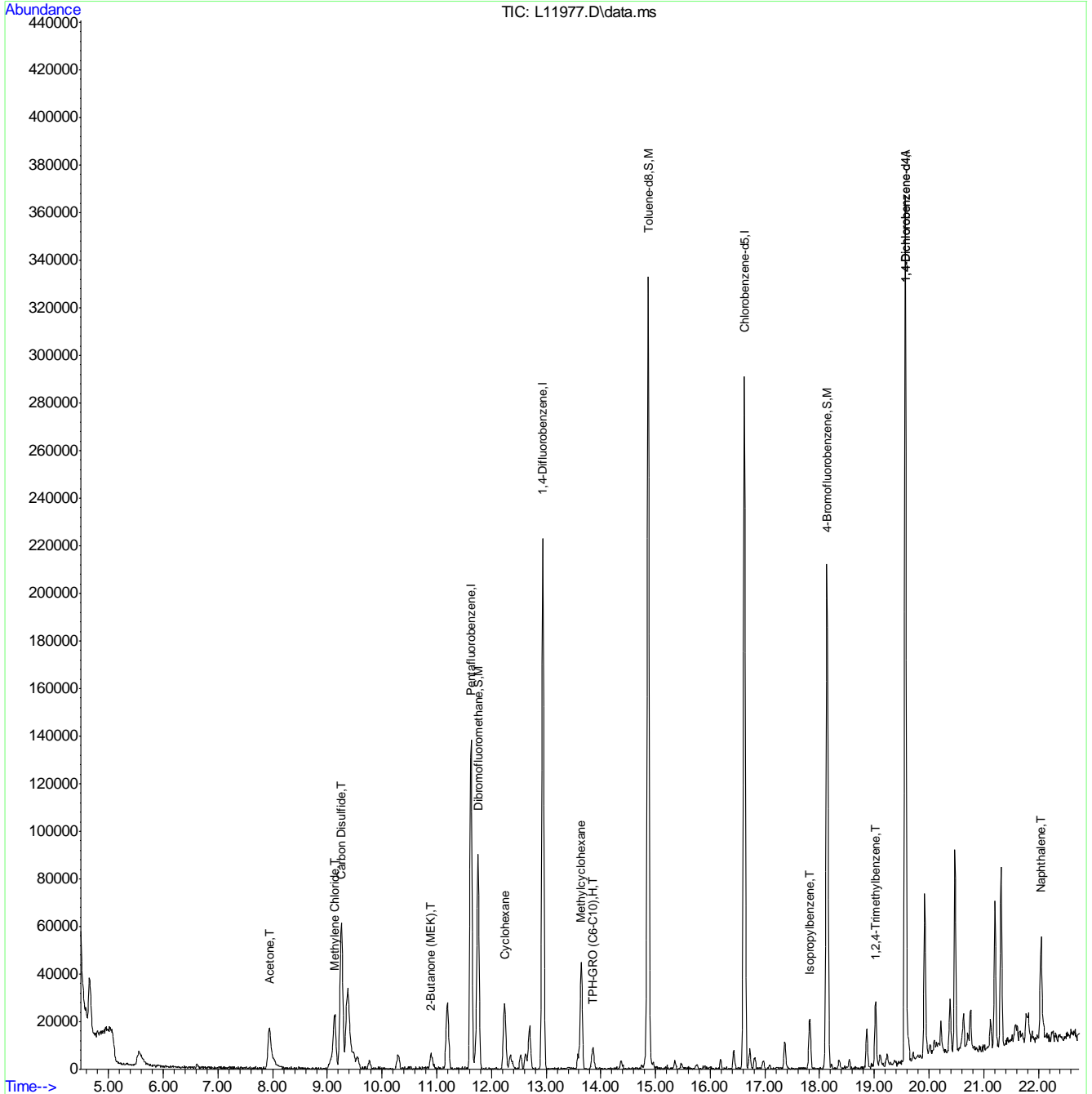


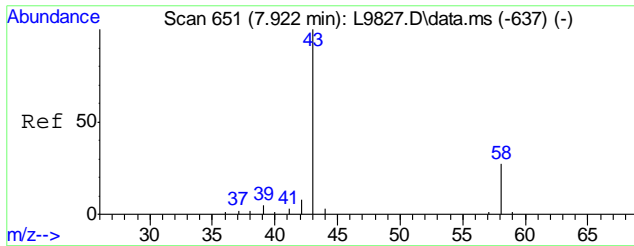
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
Data File : L11977.D  
Acq On : 1 Nov 2011 1:09 pm  
Operator : XINGB  
Sample : C18698-4  
Misc : MS1499,VL369,4.76,,,,,1  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 02 09:42:53 2011  
Quant Method : C:\msdchem\1\METHODS\VL362S.M  
Quant Title : EPA -8260B  
QLast Update : Mon Oct 24 13:55:38 2011  
Response via : Initial Calibration

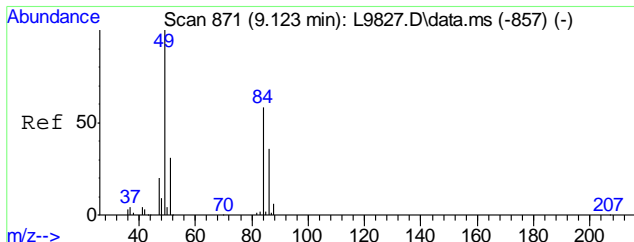
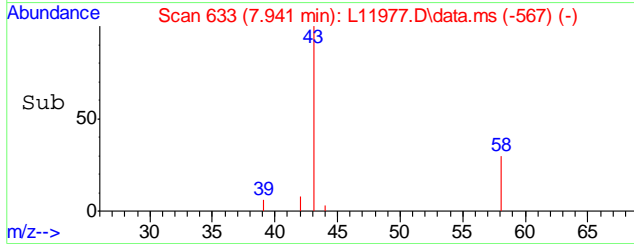
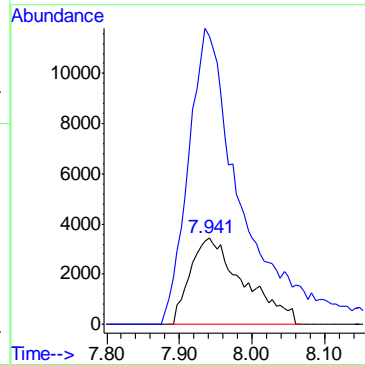
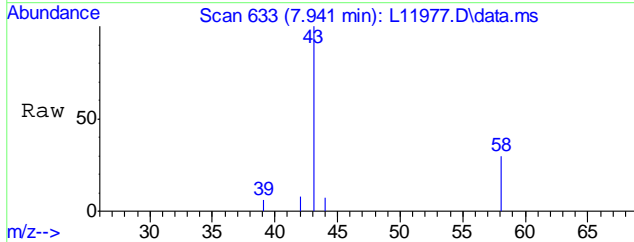
5.14  
5





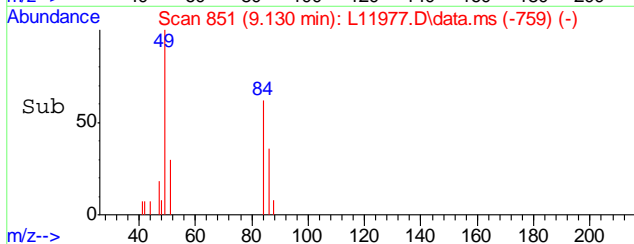
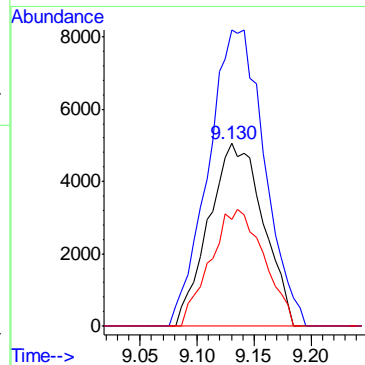
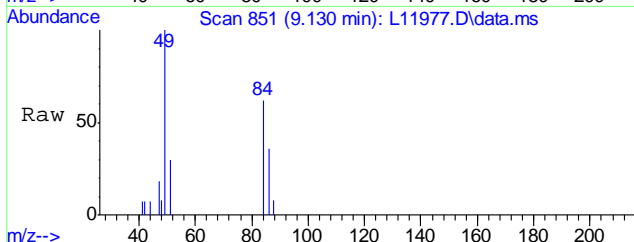
#10  
Acetone  
Concen: 29.22 ug/Kg  
RT: 7.941 min Scan# 633  
Delta R.T. 0.011 min  
Lab File: L11977.D  
Acq: 1 Nov 2011 1:09 pm

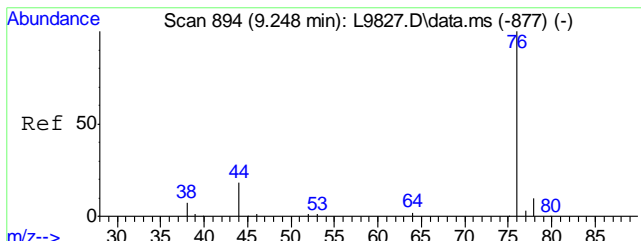
Tgt Ion	Resp	Lower	Upper
58	176269		
58	100		
43	347.8	370.9	410.9#



#18  
Methylene Chloride  
Concen: 2.87 ug/Kg  
RT: 9.130 min Scan# 851  
Delta R.T. 0.000 min  
Lab File: L11977.D  
Acq: 1 Nov 2011 1:09 pm

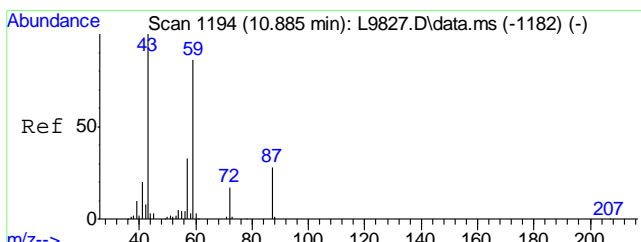
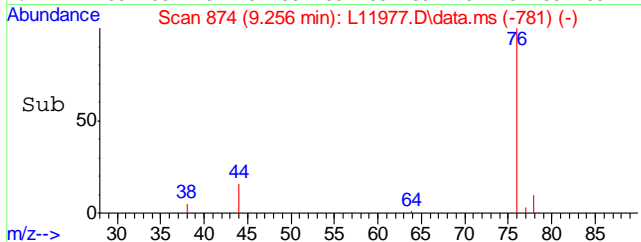
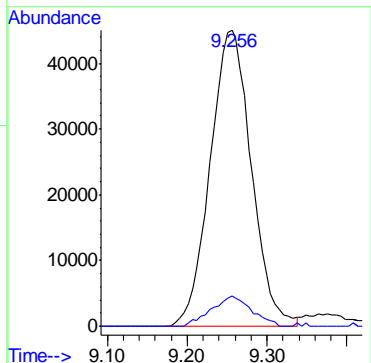
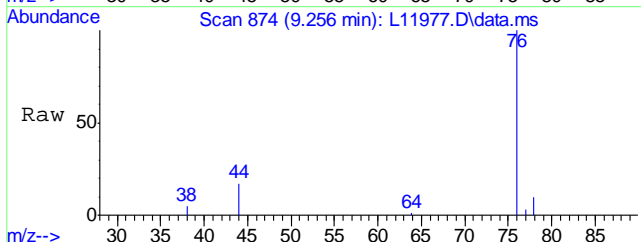
Tgt Ion	Resp	Lower	Upper
84	167554		
84	100		
49	167.5	155.6	195.6
86	62.3	43.3	83.3





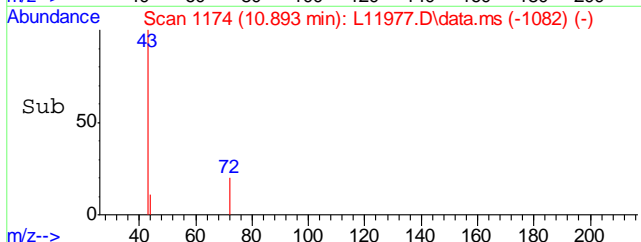
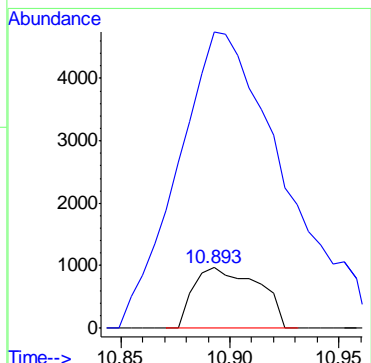
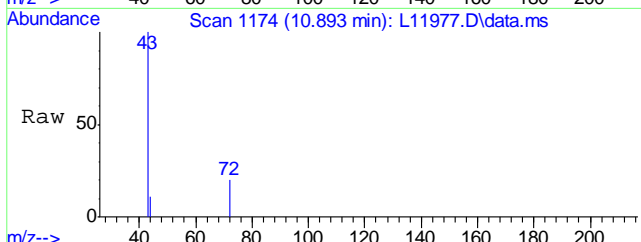
#20  
 Carbon Disulfide  
 Concen: 9.04 ug/Kg  
 RT: 9.256 min Scan# 874  
 Delta R.T. 0.006 min  
 Lab File: L11977.D  
 Acq: 1 Nov 2011 1:09 pm

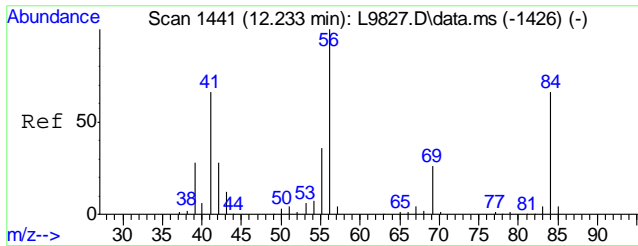
Tgt Ion	Resp	Lower	Upper
76	1615297		
76	100		
78	10.0	0.0	29.3



#29  
 2-Butanone (MEK)  
 Concen: 3.00 ug/Kg  
 RT: 10.893 min Scan# 1174  
 Delta R.T. 0.000 min  
 Lab File: L11977.D  
 Acq: 1 Nov 2011 1:09 pm

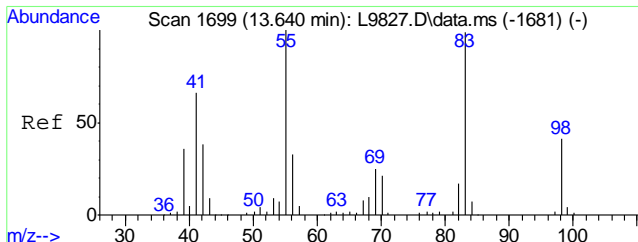
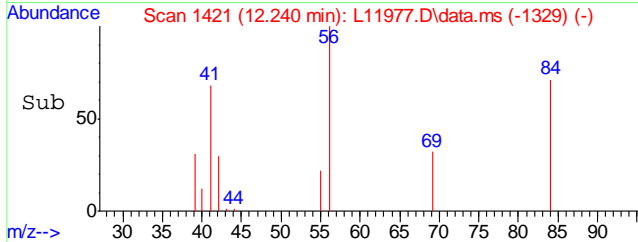
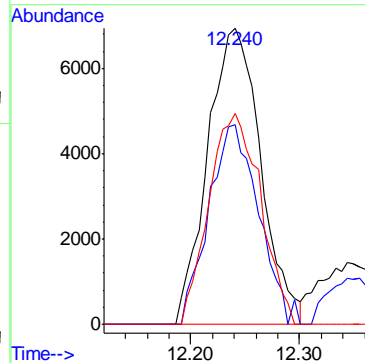
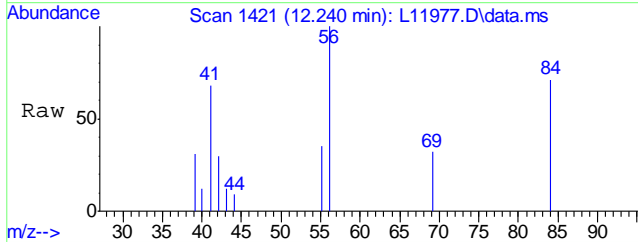
Tgt Ion	Resp	Lower	Upper
72	19953		
72	100		
43	802.6	591.6	631.6#





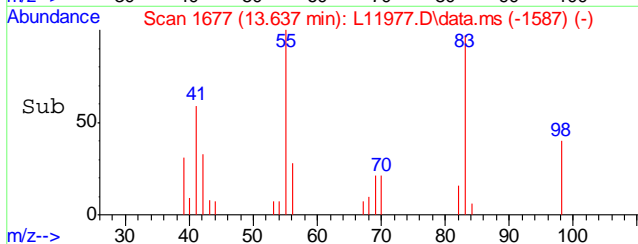
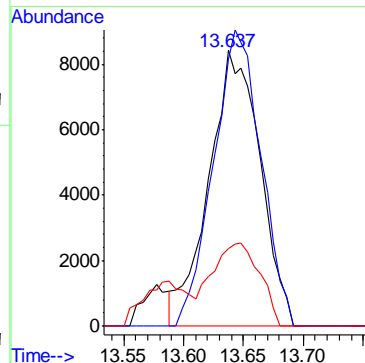
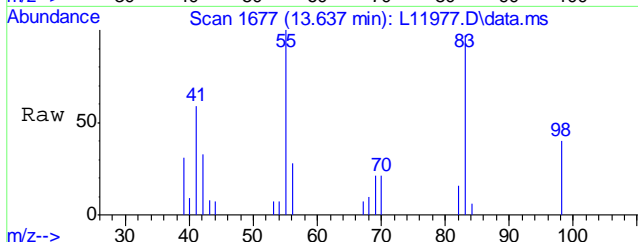
#36  
Cyclohexane  
Concen: 1.93 ug/Kg  
RT: 12.240 min Scan# 1421  
Delta R.T. 0.000 min  
Lab File: L11977.D  
Acq: 1 Nov 2011 1:09 pm

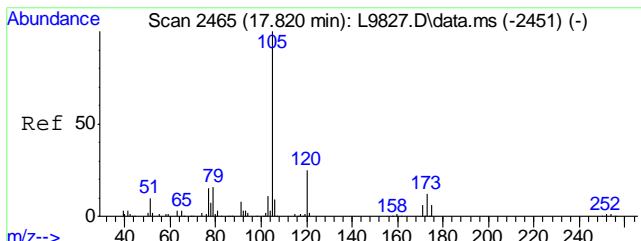
Tgt Ion	Resp	Lower	Upper
56	234952		
41	63.3	52.6	79.0
84	69.1	55.5	83.3



#45  
Methylcyclohexane  
Concen: 2.41 ug/Kg  
RT: 13.637 min Scan# 1677  
Delta R.T. -0.011 min  
Lab File: L11977.D  
Acq: 1 Nov 2011 1:09 pm

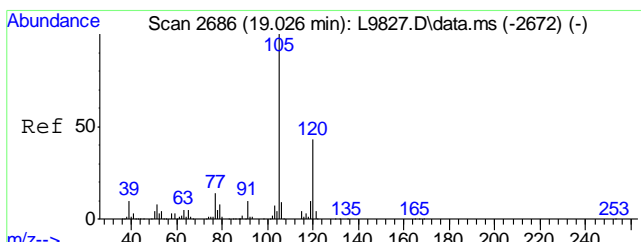
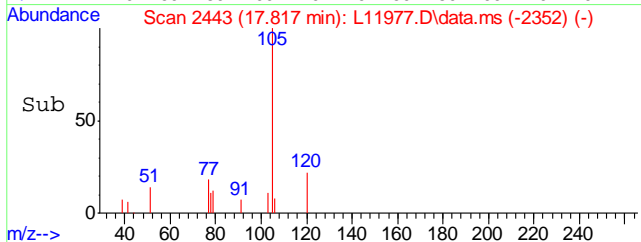
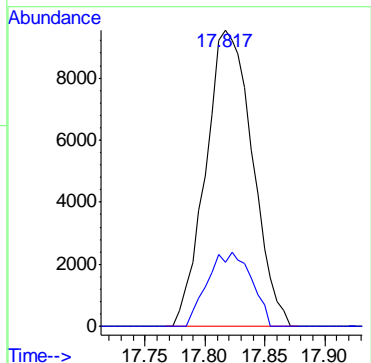
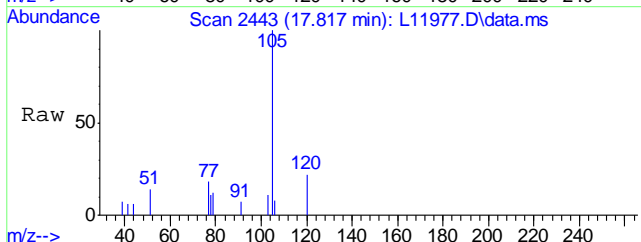
Tgt Ion	Resp	Lower	Upper
55	250350		
83	100.0	78.1	118.1
56	28.2	12.2	52.2





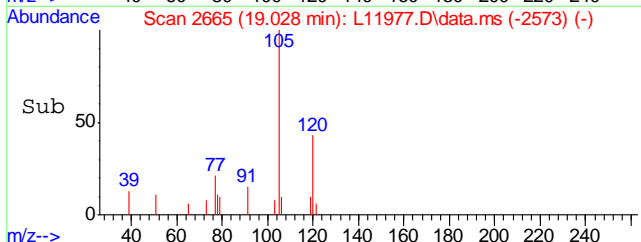
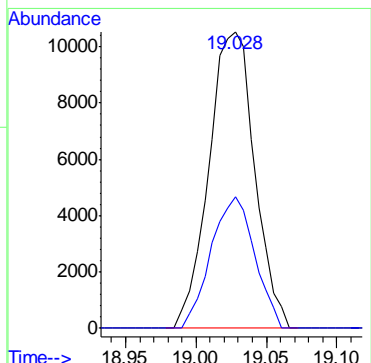
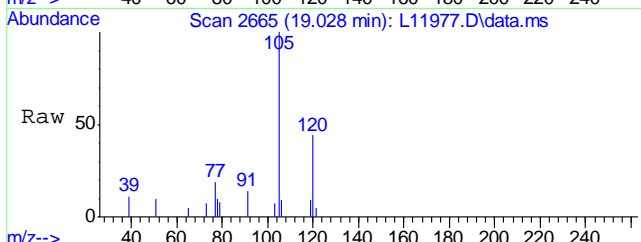
#70  
 Isopropylbenzene  
 Concen: 1.02 ug/Kg  
 RT: 17.817 min Scan# 2443  
 Delta R.T. -0.005 min  
 Lab File: L11977.D  
 Acq: 1 Nov 2011 1:09 pm

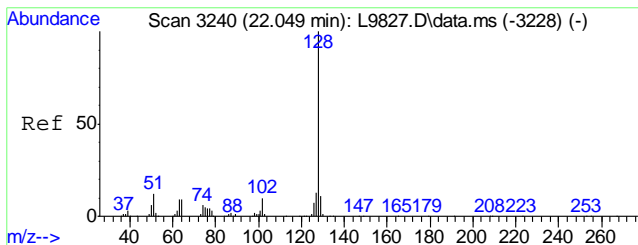
Tgt Ion	Resp	Lower	Upper
105	258865	100	
120	23.6	4.6	44.6



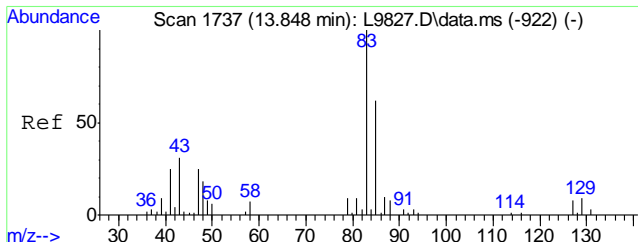
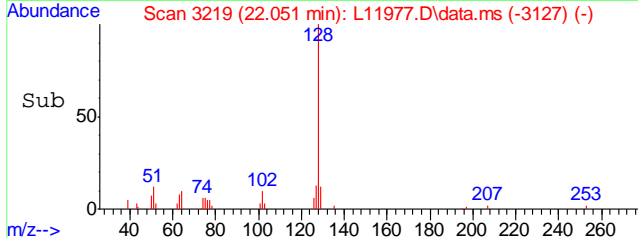
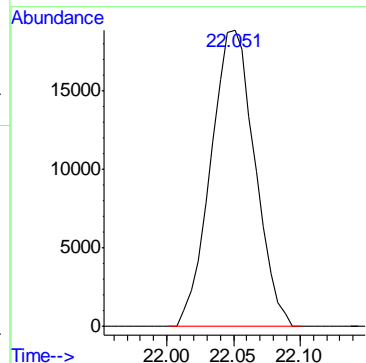
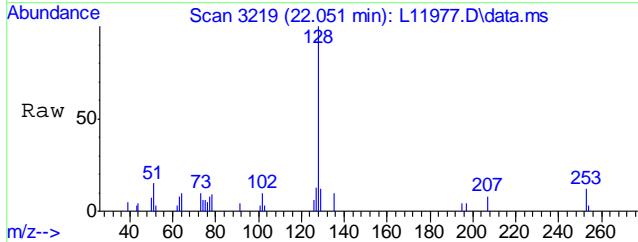
#83  
 1,2,4-Trimethylbenzene  
 Concen: 1.08 ug/Kg  
 RT: 19.028 min Scan# 2665  
 Delta R.T. 0.000 min  
 Lab File: L11977.D  
 Acq: 1 Nov 2011 1:09 pm

Tgt Ion	Resp	Lower	Upper
105	236846	100	
120	42.2	30.7	70.7

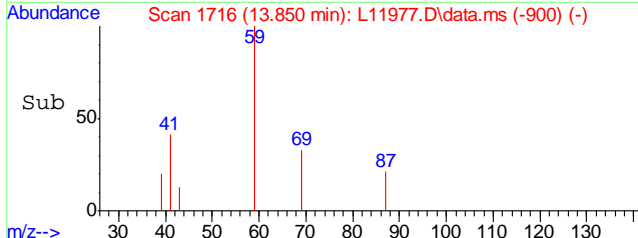
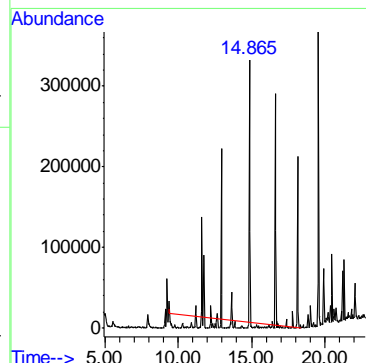
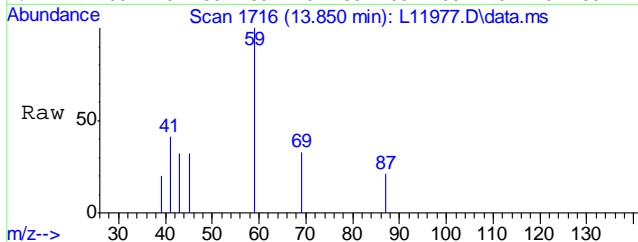




#93  
Naphthalene  
Concen: 2.20 ug/Kg  
RT: 22.051 min Scan# 3219  
Delta R.T. 0.000 min  
Lab File: L11977.D  
Acq: 1 Nov 2011 1:09 pm  
Tgt Ion:128 Resp: 435211



#96  
TPH-GRO (C6-C10)  
Concen: 29.01 ug/Kg m  
RT: 13.850 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: L11977.D  
Acq: 1 Nov 2011 1:09 pm  
Tgt Ion:TIC Resp: 7656304



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
Data File : L11978.D  
Acq On : 1 Nov 2011 1:38 pm  
Operator : XINGB  
Sample : C18698-5  
Misc : MS1499,VL369,4.93,,,,,1  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 02 07:48:10 2011  
Quant Method : C:\msdchem\1\METHODS\VL362S.M  
Quant Title : EPA -8260B  
QLast Update : Mon Oct 24 13:55:38 2011  
Response via : Initial Calibration

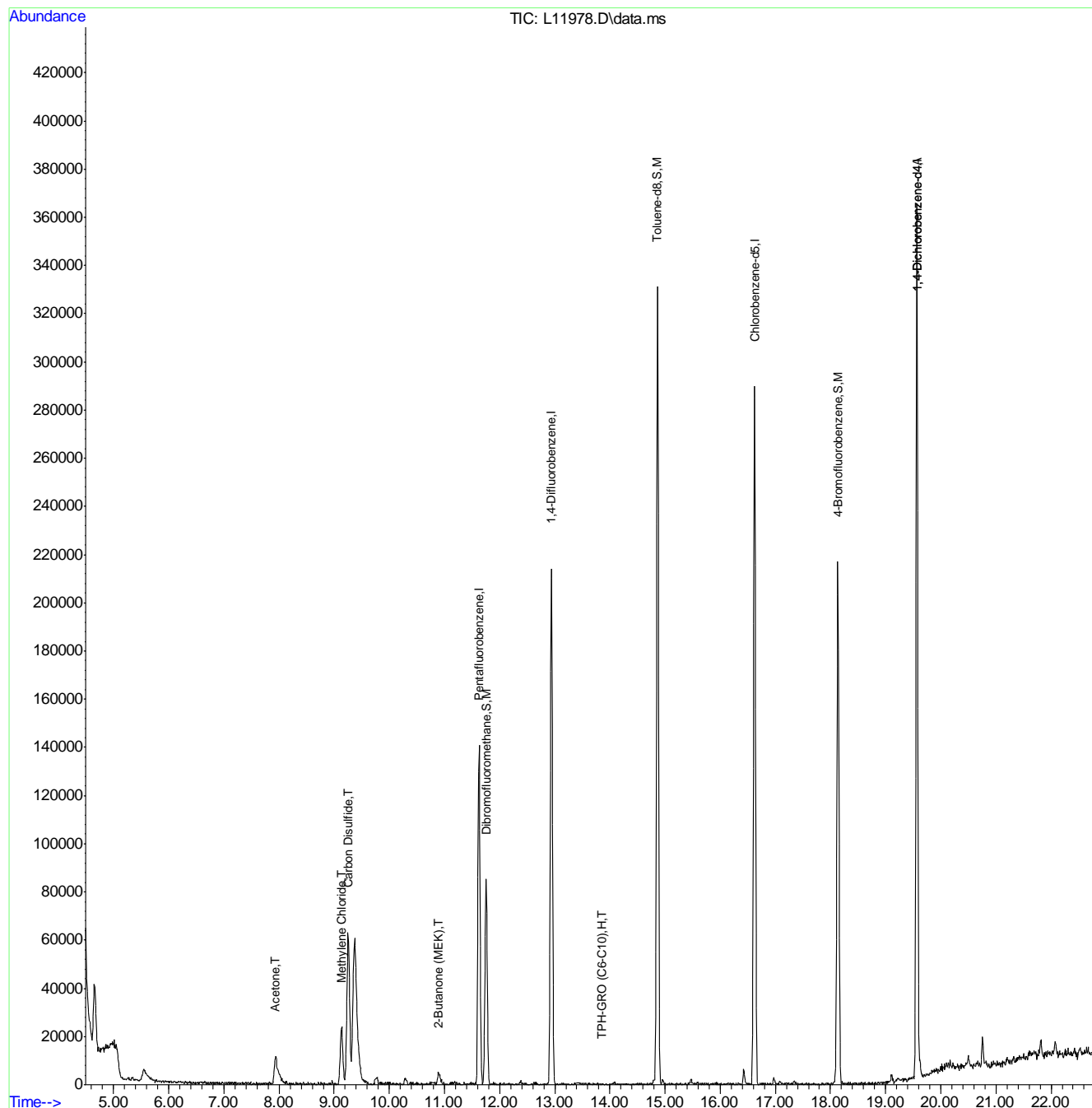
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1356831	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	2324624	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2097242	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1132533	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1132533	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	796169	19.69	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	98.45%
53) Toluene-d8	14.859	98	2961775	18.80	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	94.00%
71) 4-Bromofluorobenzene	18.133	95	1192077	19.45	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	97.25%
Target Compounds						
10) Acetone	7.935	58	119004	19.33	ug/Kg#	88
18) Methylene Chloride	9.130	84	176115	2.95	ug/Kg	92
20) Carbon Disulfide	9.250	76	1621077	8.89	ug/Kg	98
29) 2-Butanone (MEK)	10.898	72	13528	1.99	ug/Kg#	1
96) TPH-GRO (C6-C10)	13.850	TIC	701365m	2.62	ug/Kg	

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

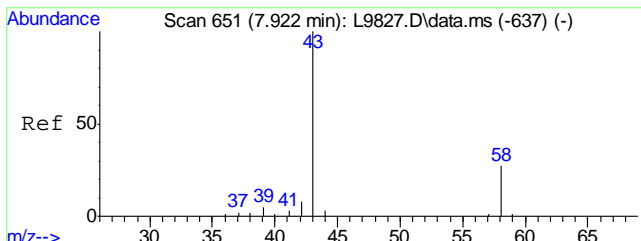
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
Data File : L11978.D  
Acq On : 1 Nov 2011 1:38 pm  
Operator : XINGB  
Sample : C18698-5  
Misc : MS1499,VL369,4.93,,,,,1  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 02 07:48:10 2011  
Quant Method : C:\msdchem\1\METHODS\VL362S.M  
Quant Title : EPA -8260B  
QLast Update : Mon Oct 24 13:55:38 2011  
Response via : Initial Calibration

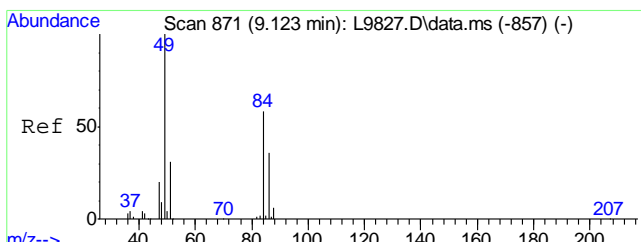
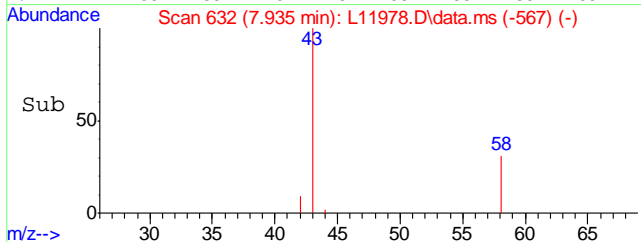
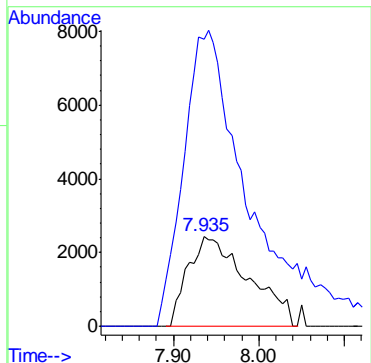
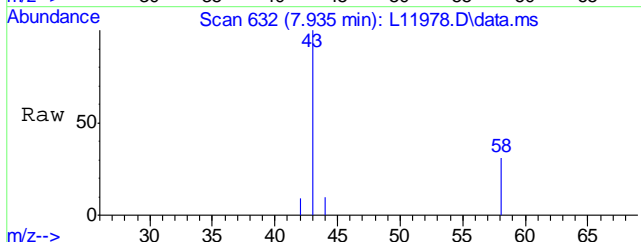






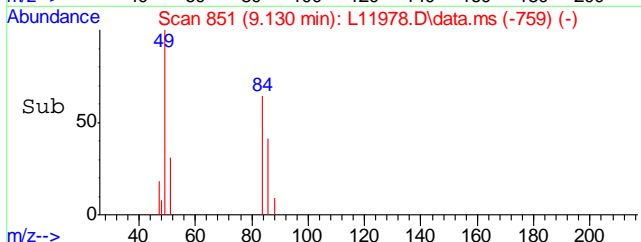
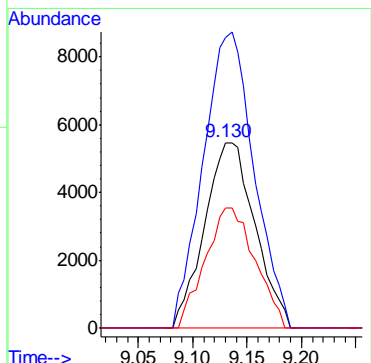
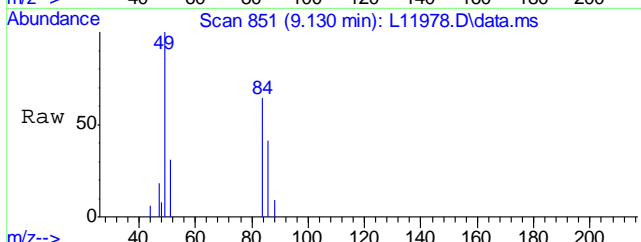
#10  
 Acetone  
 Concen: 19.33 ug/Kg  
 RT: 7.935 min Scan# 632  
 Delta R.T. 0.006 min  
 Lab File: L11978.D  
 Acq: 1 Nov 2011 1:38 pm

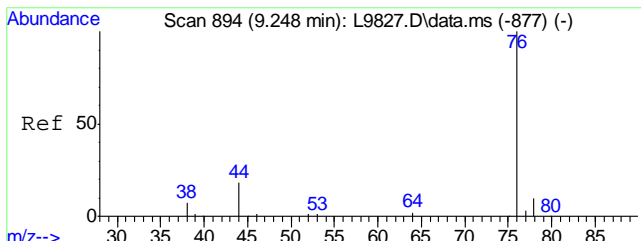
Tgt Ion	Resp	Lower	Upper
58	119004		
58	100		
43	363.5	370.9	410.9#



#18  
 Methylene Chloride  
 Concen: 2.95 ug/Kg  
 RT: 9.130 min Scan# 851  
 Delta R.T. 0.000 min  
 Lab File: L11978.D  
 Acq: 1 Nov 2011 1:38 pm

Tgt Ion	Resp	Lower	Upper
84	176115		
84	100		
49	161.1	155.6	195.6
86	63.8	43.3	83.3

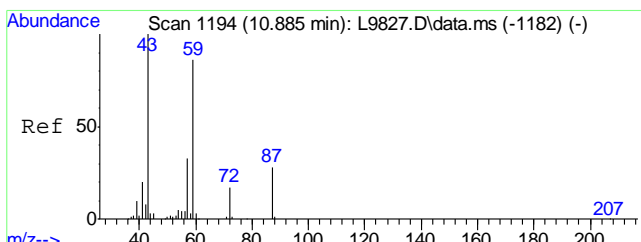
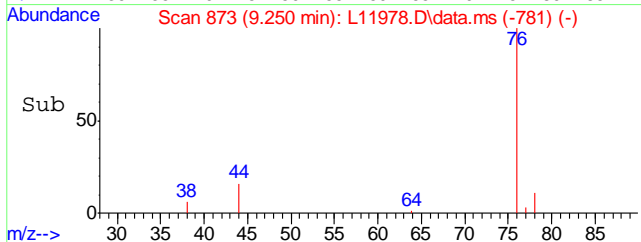
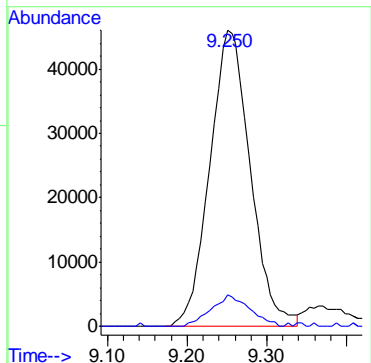
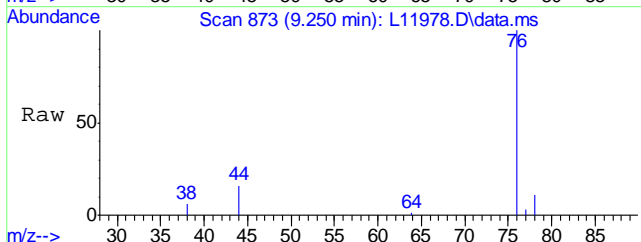




#20  
Carbon Disulfide  
Concen: 8.89 ug/Kg  
RT: 9.250 min Scan# 873  
Delta R.T. 0.000 min  
Lab File: L11978.D  
Acq: 1 Nov 2011 1:38 pm

Tgt Ion: 76 Resp: 1621077

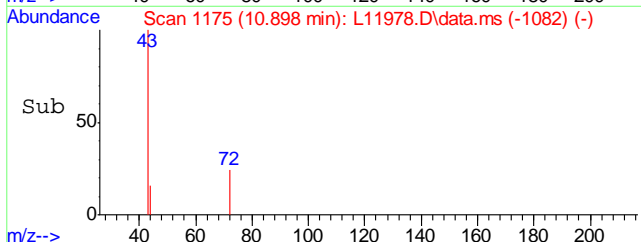
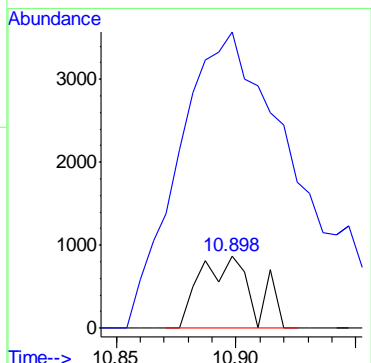
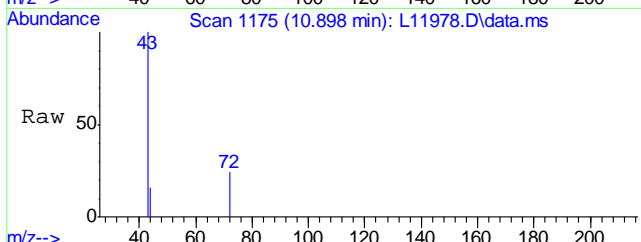
Ion	Ratio	Lower	Upper
76	100		
78	10.0	0.0	29.3

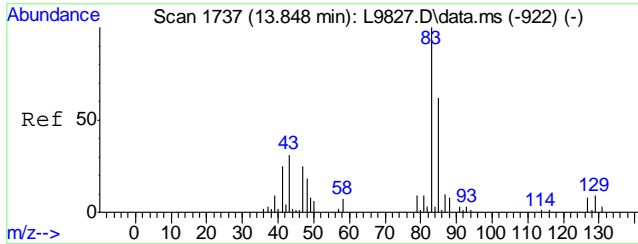


#29  
2-Butanone (MEK)  
Concen: 1.99 ug/Kg  
RT: 10.898 min Scan# 1175  
Delta R.T. 0.006 min  
Lab File: L11978.D  
Acq: 1 Nov 2011 1:38 pm

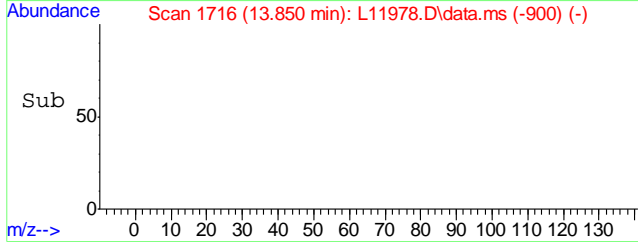
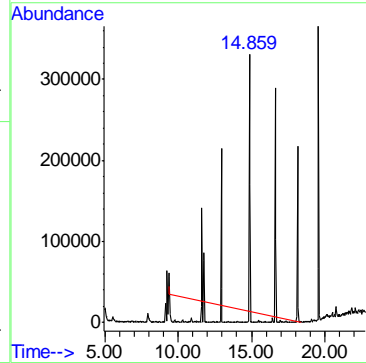
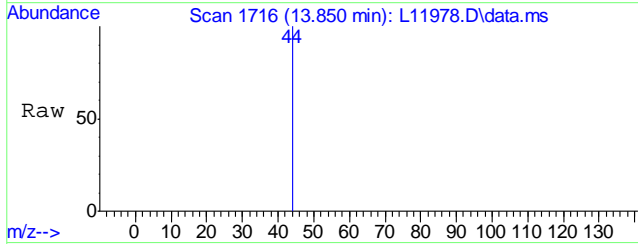
Tgt Ion: 72 Resp: 13528

Ion	Ratio	Lower	Upper
72	100		
43	928.9	591.6	631.6#





#96  
 TPH-GRO (C6-C10)  
 Concen: 2.62 ug/Kg m  
 RT: 13.850 min Scan# 1716  
 Delta R.T. 0.000 min  
 Lab File: L11978.D  
 Acq: 1 Nov 2011 1:38 pm  
 Tgt Ion:TIC Resp: 701365



5.1.5  
5

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
 Data File : L11979.D  
 Acq On : 1 Nov 2011 2:07 pm  
 Operator : XINGB  
 Sample : C18698-6  
 Misc : MS1499,VL369,4.52,,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 02 07:48:12 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration

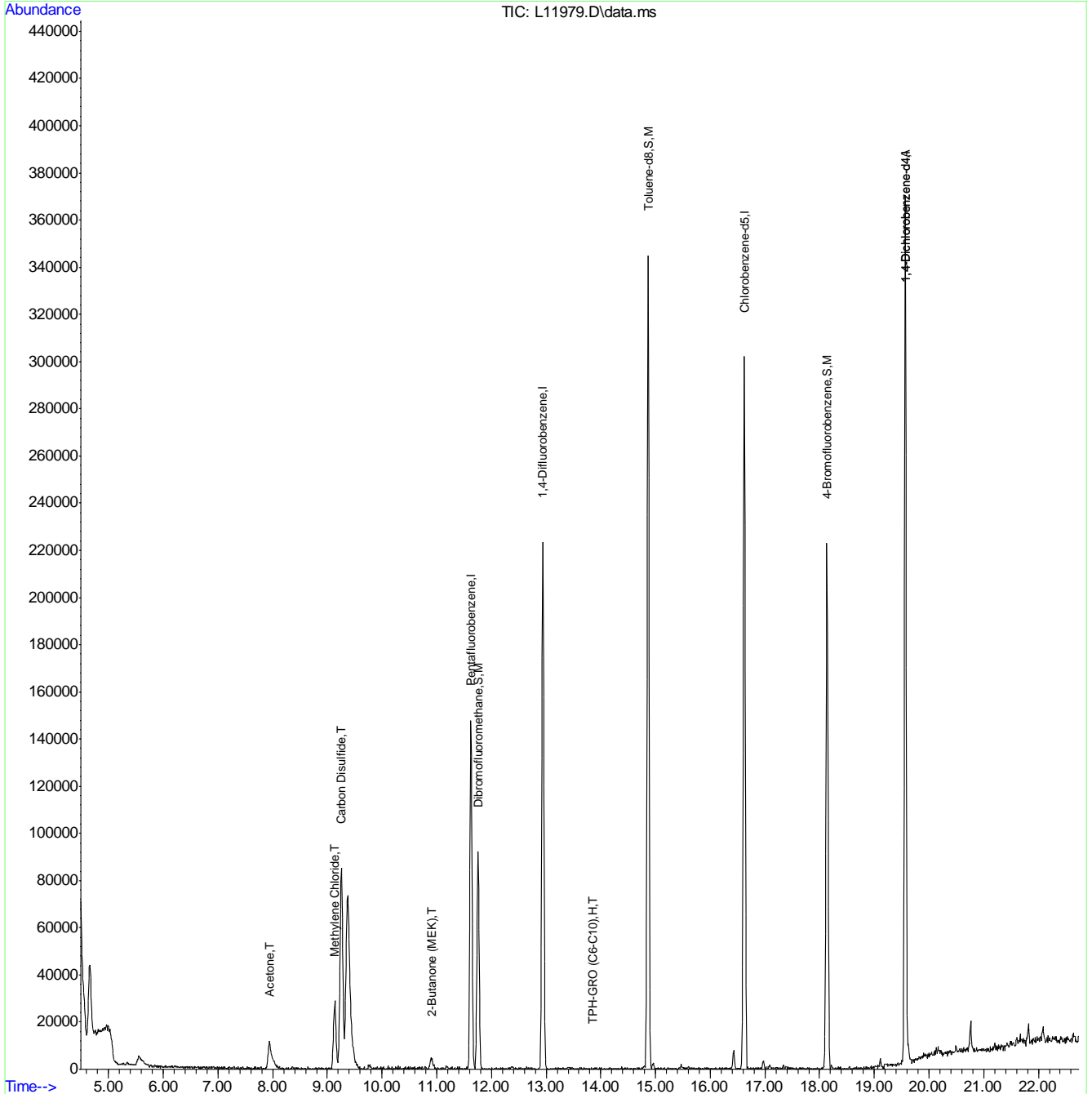
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1394472	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	2407657	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2198583	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1164453	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1164453	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	839595	20.20	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	101.00%
53) Toluene-d8	14.865	98	3058769	18.52	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	92.60%
71) 4-Bromofluorobenzene	18.133	95	1229361	19.14	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	95.70%
Target Compounds						
10) Acetone	7.941	58	110465	17.46	ug/Kg#	89
18) Methylene Chloride	9.136	84	213700	3.48	ug/Kg	94
20) Carbon Disulfide	9.256	76	2170148	11.58	ug/Kg	98
29) 2-Butanone (MEK)	10.903	72	16450	2.36	ug/Kg#	68
96) TPH-GRO (C6-C10)	13.850	TIC	1169510m	4.24	ug/Kg	

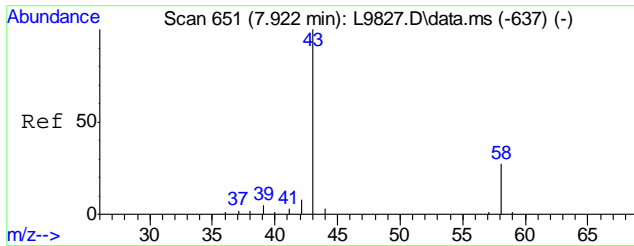
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
Data File : L11979.D  
Acq On : 1 Nov 2011 2:07 pm  
Operator : XINGB  
Sample : C18698-6  
Misc : MS1499,VL369,4.52,,,,,1  
ALS Vial : 14 Sample Multiplier: 1

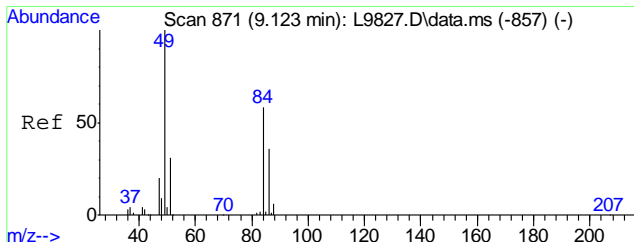
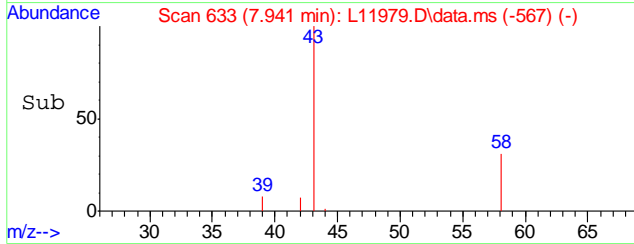
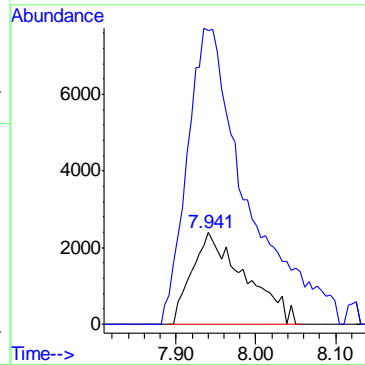
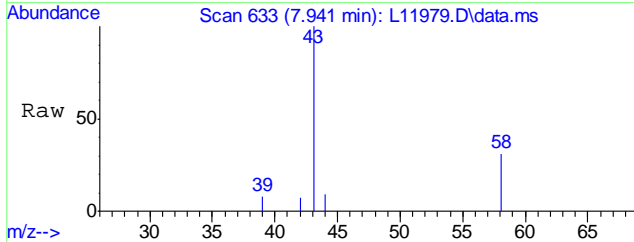
Quant Time: Nov 02 07:48:12 2011  
Quant Method : C:\msdchem\1\METHODS\VL362S.M  
Quant Title : EPA -8260B  
QLast Update : Mon Oct 24 13:55:38 2011  
Response via : Initial Calibration





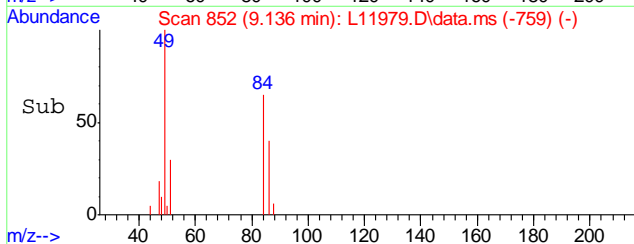
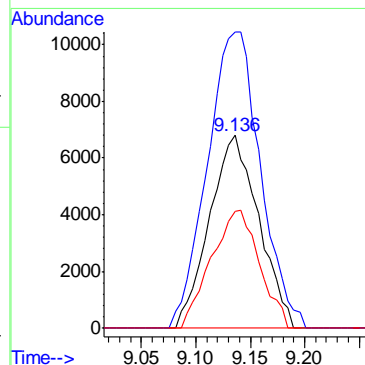
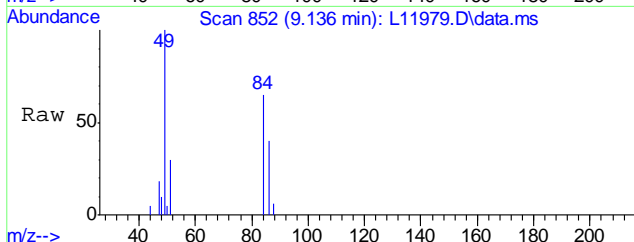
#10  
Acetone  
Concen: 17.46 ug/Kg  
RT: 7.941 min Scan# 633  
Delta R.T. 0.011 min  
Lab File: L11979.D  
Acq: 1 Nov 2011 2:07 pm

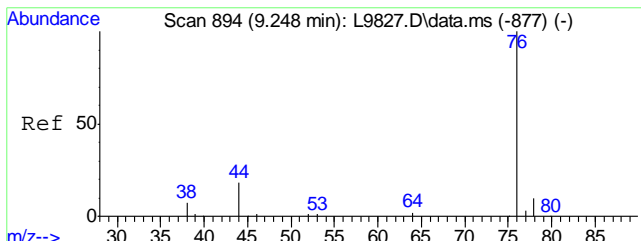
Tgt Ion	Resp	Lower	Upper
58	110465		
58	100		
43	366.2	370.9	410.9#



#18  
Methylene Chloride  
Concen: 3.48 ug/Kg  
RT: 9.136 min Scan# 852  
Delta R.T. 0.006 min  
Lab File: L11979.D  
Acq: 1 Nov 2011 2:07 pm

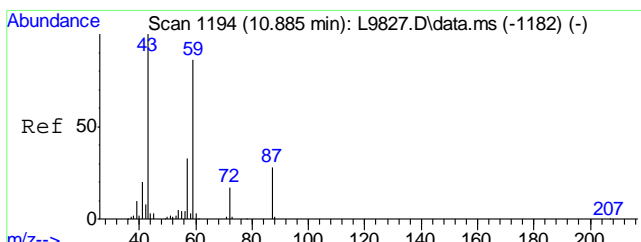
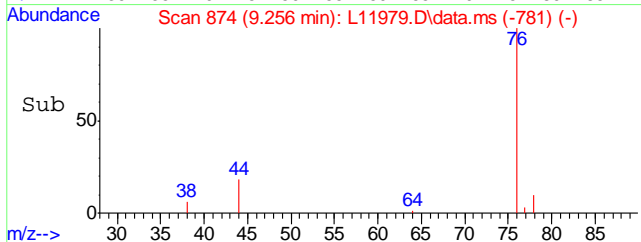
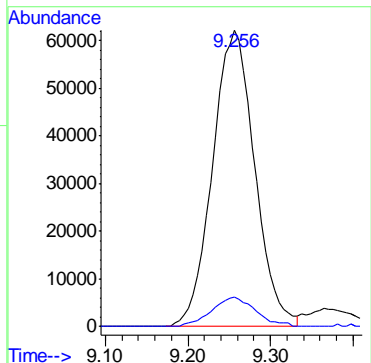
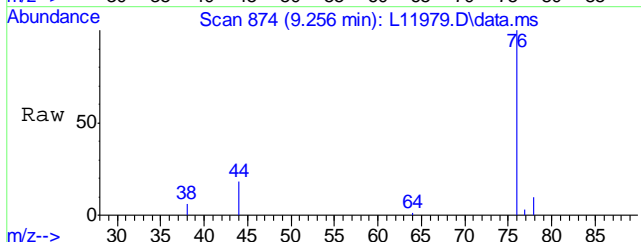
Tgt Ion	Resp	Lower	Upper
84	213700		
84	100		
49	165.7	155.6	195.6
86	59.7	43.3	83.3





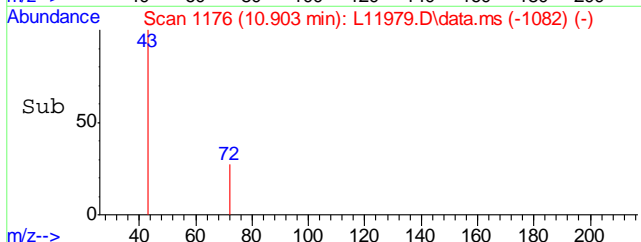
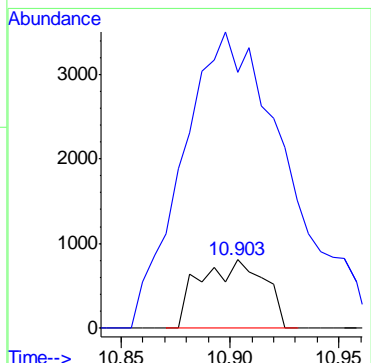
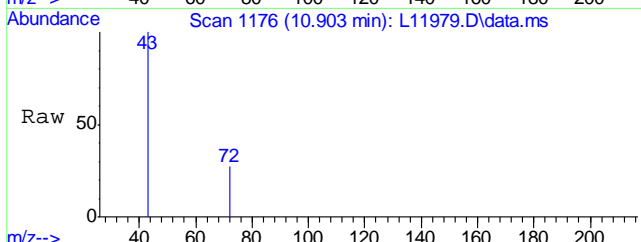
#20  
Carbon Disulfide  
Concen: 11.58 ug/Kg  
RT: 9.256 min Scan# 874  
Delta R.T. 0.006 min  
Lab File: L11979.D  
Acq: 1 Nov 2011 2:07 pm

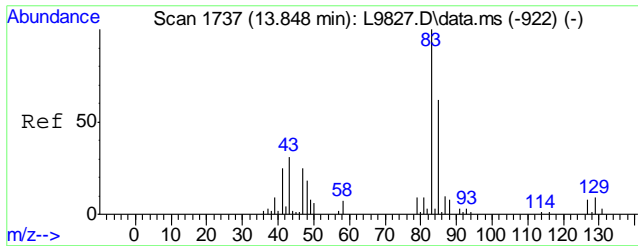
Tgt Ion	Resp	Lower	Upper
76	2170148		
76	100		
78	10.2	0.0	29.3



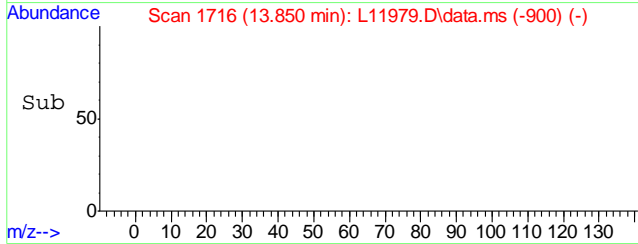
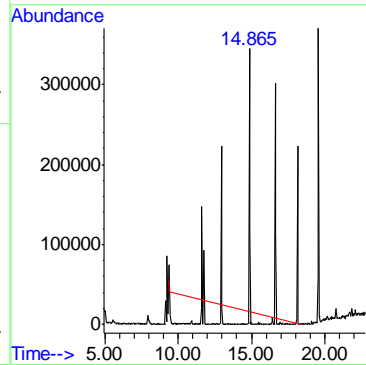
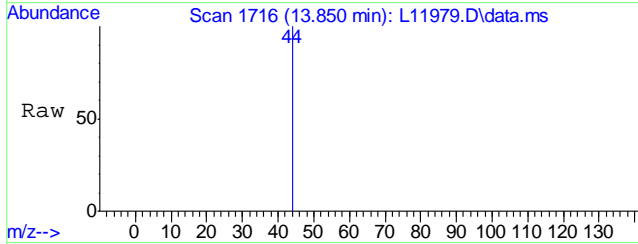
#29  
2-Butanone (MEK)  
Concen: 2.36 ug/Kg  
RT: 10.903 min Scan# 1176  
Delta R.T. 0.011 min  
Lab File: L11979.D  
Acq: 1 Nov 2011 2:07 pm

Tgt Ion	Resp	Lower	Upper
72	16450		
72	100		
43	711.5	591.6	631.6#





#96  
 TPH-GRO (C6-C10)  
 Concen: 4.24 ug/Kg m  
 RT: 13.850 min Scan# 1716  
 Delta R.T. 0.000 min  
 Lab File: L11979.D  
 Acq: 1 Nov 2011 2:07 pm  
 Tgt Ion:TIC Resp: 1169510



5.1.6  
 5



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
 Data File : L11986.D  
 Acq On : 1 Nov 2011 5:32 pm  
 Operator : XINGB  
 Sample : C18698-7  
 Misc : MS1499,VL369,3.61,,,,,1  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 02 09:47:11 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration

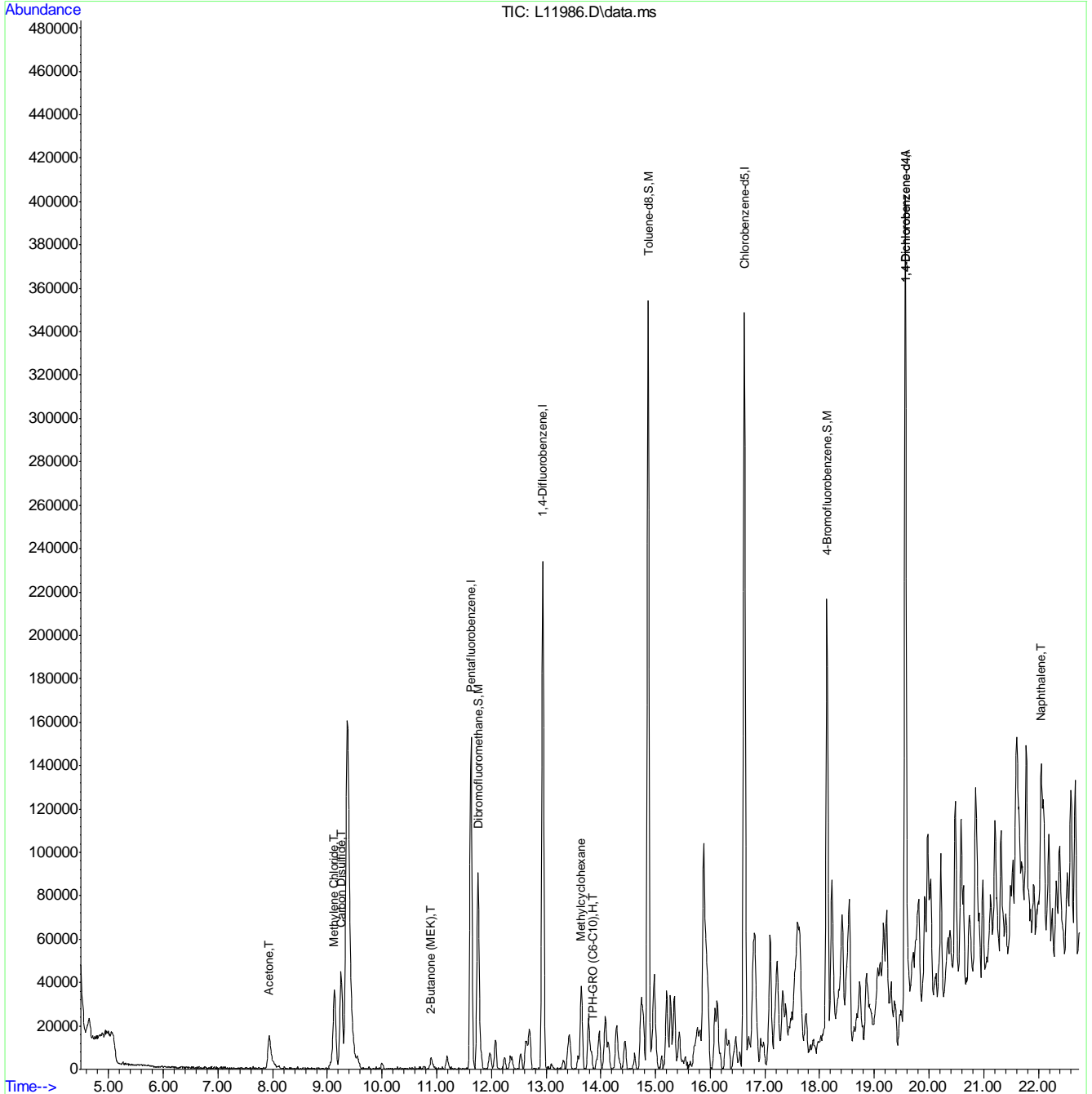
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.629	168	1433689	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	2460220	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2118814	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1106930	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1106930	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	830929	19.45	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	97.25%
53) Toluene-d8	14.865	98	3041248	19.11	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	95.55%
71) 4-Bromofluorobenzene	18.133	95	1204802	19.46	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	97.30%
Target Compounds						
10) Acetone	7.930	58	122180	18.78	ug/Kg#	90
18) Methylene Chloride	9.125	84	257243	4.08	ug/Kg	96
20) Carbon Disulfide	9.250	76	1124841	5.84	ug/Kg	97
29) 2-Butanone (MEK)	10.893	72	15231	2.13	ug/Kg#	21
45) Methylcyclohexane	13.643	55	202418	1.85	ug/Kg	98
93) Naphthalene	22.051	128	506907	2.59	ug/Kg	100
96) TPH-GRO (C6-C10)	13.850	TIC	36409453m	138.98	ug/Kg	

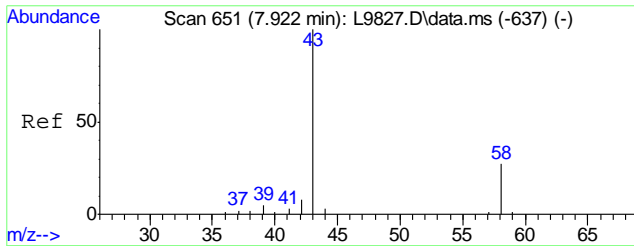
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
 Data File : L11986.D  
 Acq On : 1 Nov 2011 5:32 pm  
 Operator : XINGB  
 Sample : C18698-7  
 Misc : MS1499,VL369,3.61,,,,,1  
 ALS Vial : 21 Sample Multiplier: 1

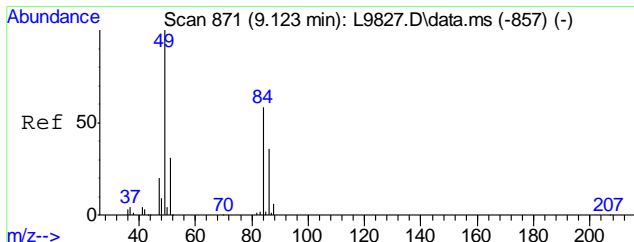
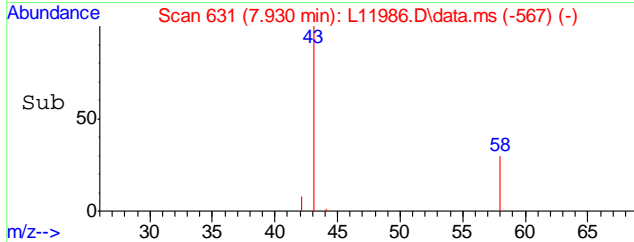
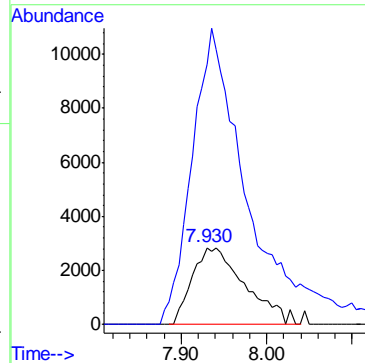
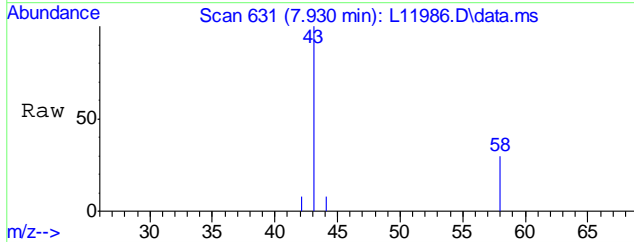
Quant Time: Nov 02 09:47:11 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration





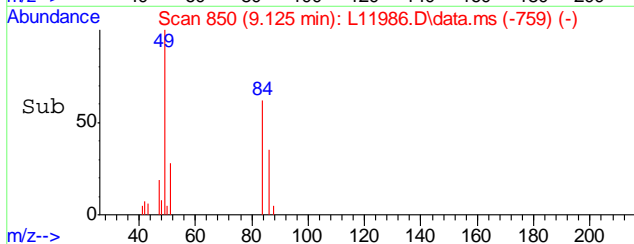
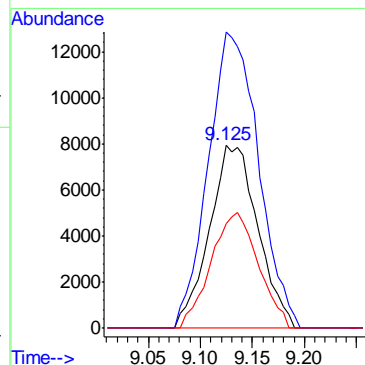
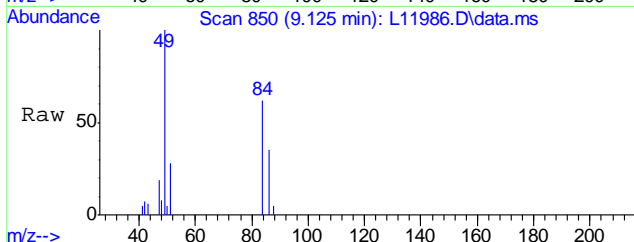
#10  
Acetone  
Concen: 18.78 ug/Kg  
RT: 7.930 min Scan# 631  
Delta R.T. 0.000 min  
Lab File: L11986.D  
Acq: 1 Nov 2011 5:32 pm

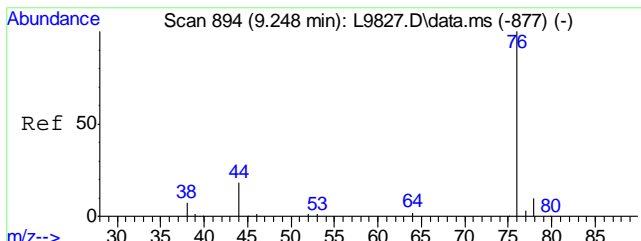
Tgt Ion	Resp	Lower	Upper
58	122180		
58	100		
43	415.4	370.9	410.9#



#18  
Methylene Chloride  
Concen: 4.08 ug/Kg  
RT: 9.125 min Scan# 850  
Delta R.T. -0.005 min  
Lab File: L11986.D  
Acq: 1 Nov 2011 5:32 pm

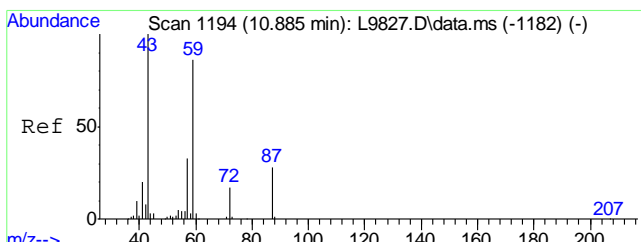
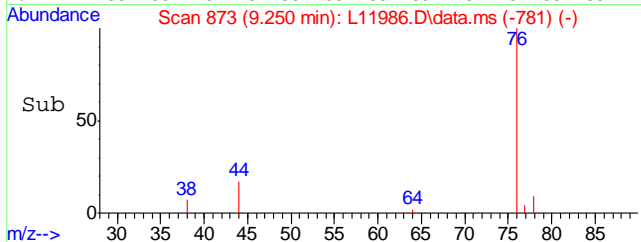
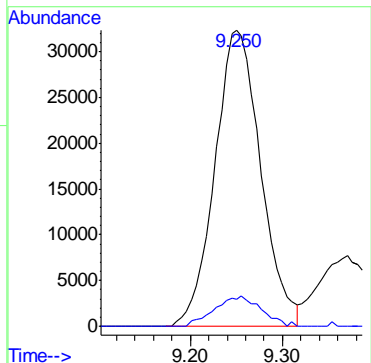
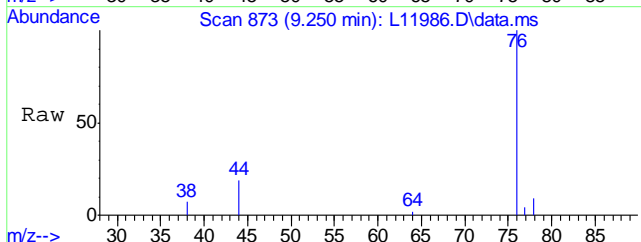
Tgt Ion	Resp	Lower	Upper
84	257243		
84	100		
49	168.2	155.6	195.6
86	61.8	43.3	83.3





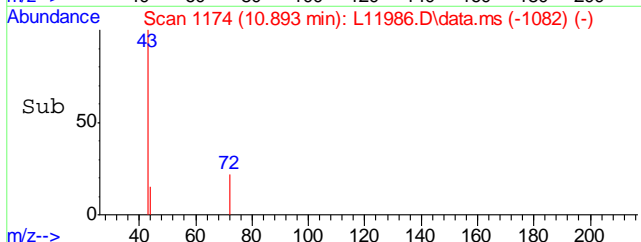
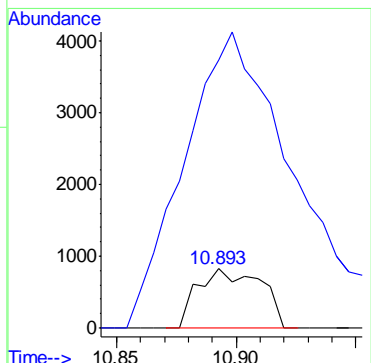
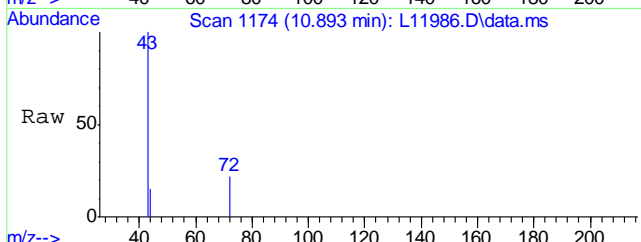
#20  
Carbon Disulfide  
Concen: 5.84 ug/Kg  
RT: 9.250 min Scan# 873  
Delta R.T. 0.000 min  
Lab File: L11986.D  
Acq: 1 Nov 2011 5:32 pm

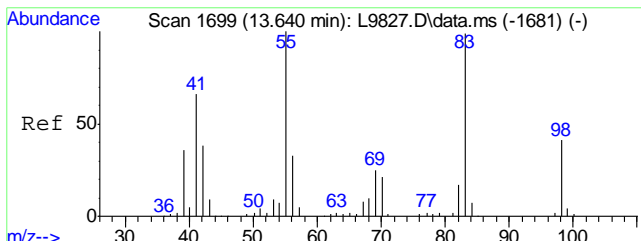
Tgt Ion	Resp	Lower	Upper
76	1124841		
78	10.4	0.0	29.3



#29  
2-Butanone (MEK)  
Concen: 2.13 ug/Kg  
RT: 10.893 min Scan# 1174  
Delta R.T. 0.000 min  
Lab File: L11986.D  
Acq: 1 Nov 2011 5:32 pm

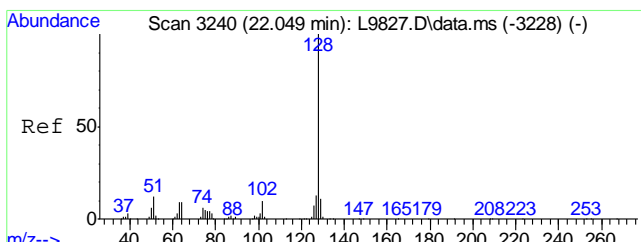
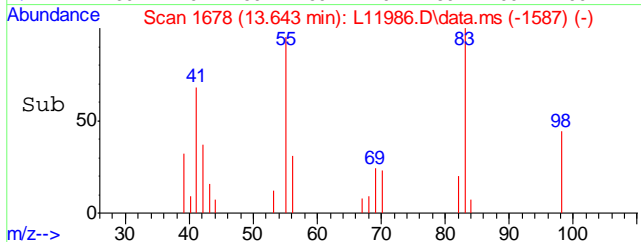
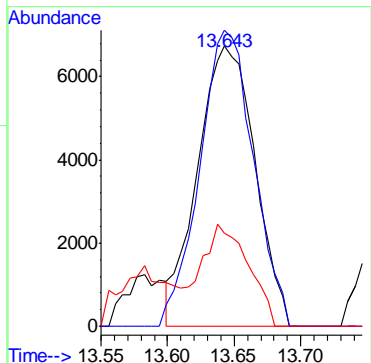
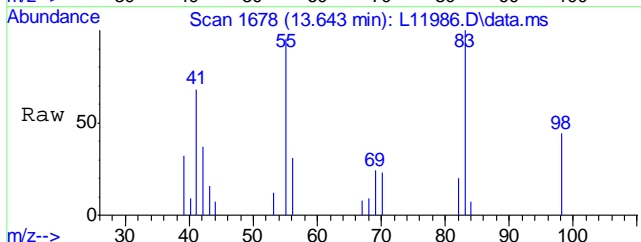
Tgt Ion	Resp	Lower	Upper
72	15231		
43	862.4	591.6	631.6#





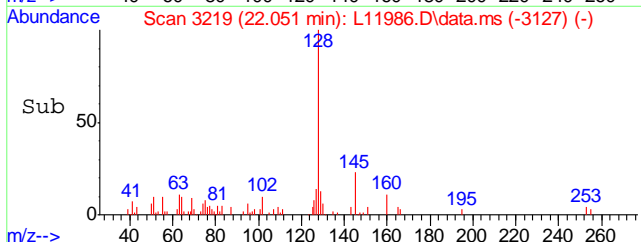
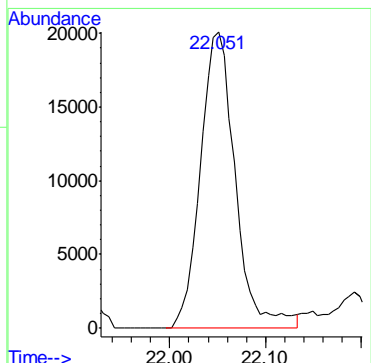
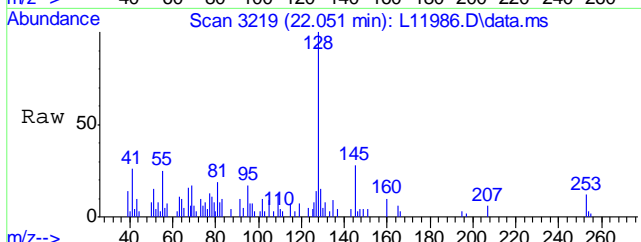
#45  
Methylcyclohexane  
Concen: 1.85 ug/Kg  
RT: 13.643 min Scan# 1678  
Delta R.T. -0.005 min  
Lab File: L11986.D  
Acq: 1 Nov 2011 5:32 pm

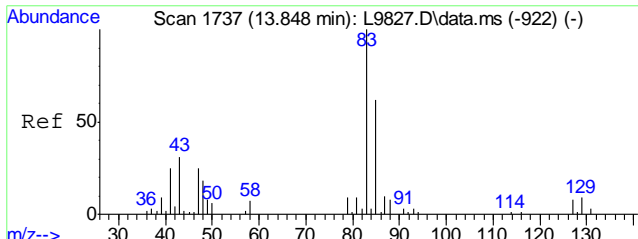
Tgt Ion	Resp	Lower	Upper
55	202418		
55	100		
83	99.3	78.1	118.1
56	30.2	12.2	52.2



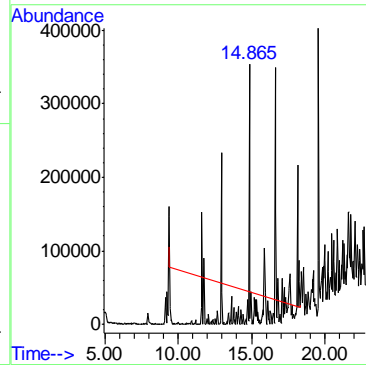
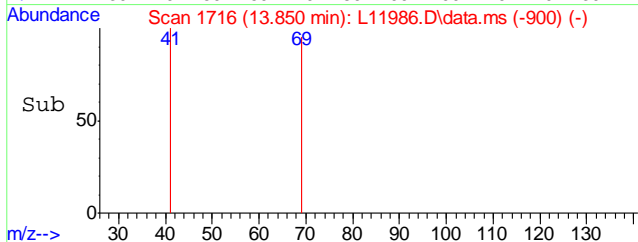
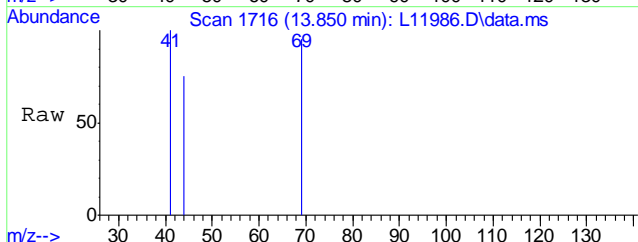
#93  
Naphthalene  
Concen: 2.59 ug/Kg  
RT: 22.051 min Scan# 3219  
Delta R.T. 0.000 min  
Lab File: L11986.D  
Acq: 1 Nov 2011 5:32 pm

Tgt Ion:128 Resp: 506907





#96  
 TPH-GRO (C6-C10)  
 Concen: 138.98 ug/Kg m  
 RT: 13.850 min Scan# 1716  
 Delta R.T. 0.000 min  
 Lab File: L11986.D  
 Acq: 1 Nov 2011 5:32 pm  
 Tgt Ion:TIC Resp:36409453



5.1.7  
 5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
Data File : L11980.D  
Acq On : 1 Nov 2011 2:37 pm  
Operator : XINGB  
Sample : C18698-8  
Misc : MS1499,VL369,4.84,,,,,1  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 02 09:44:16 2011  
Quant Method : C:\msdchem\1\METHODS\VL362S.M  
Quant Title : EPA -8260B  
QLast Update : Mon Oct 24 13:55:38 2011  
Response via : Initial Calibration

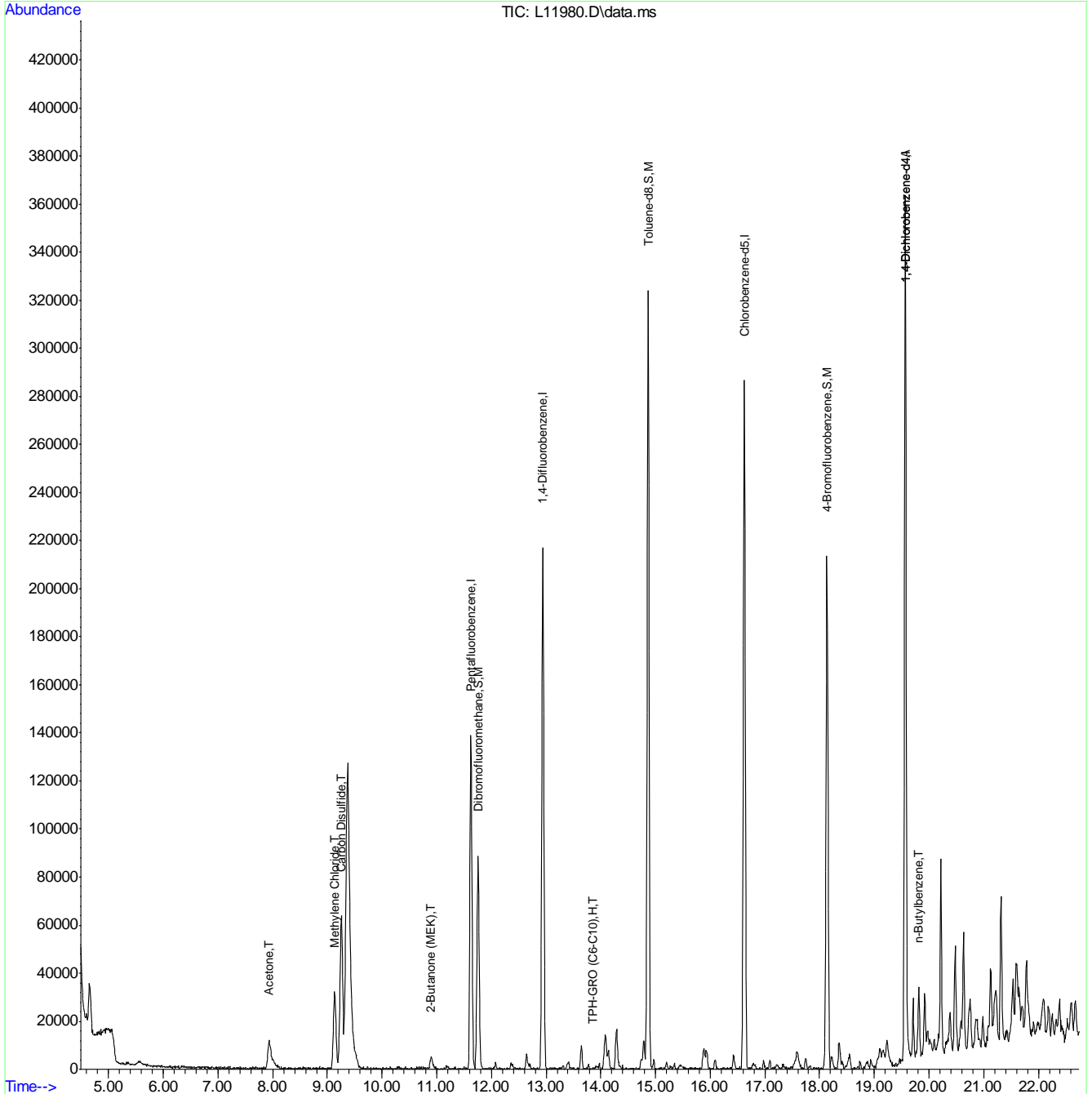
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	11.624	168	1296432	20.00	ug/Kg	0.00
38) 1,4-Difluorobenzene	12.939	114	2254042	20.00	ug/Kg	0.00
52) Chlorobenzene-d5	16.622	117	2028365	20.00	ug/Kg	0.00
74) 1,4-Dichlorobenzene-d4	19.568	152	1112959	20.00	ug/Kg	0.00
95) 1,4-Dichlorobenzene-d4A	19.568	152	1112959	20.00	ug/Kg	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.755	111	784348	20.30	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	101.50%
53) Toluene-d8	14.865	98	2841828	18.65	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	93.25%
71) 4-Bromofluorobenzene	18.133	95	1179958	19.91	ug/Kg	0.00
Spiked Amount	20.000	Range	70 - 130	Recovery	=	99.55%
Target Compounds						
10) Acetone	7.935	58	107093	18.20	ug/Kg#	90
18) Methylene Chloride	9.130	84	233721	4.10	ug/Kg	96
20) Carbon Disulfide	9.256	76	1653049	9.49	ug/Kg	98
29) 2-Butanone (MEK)	10.893	72	15170	2.34	ug/Kg#	36
88) n-Butylbenzene	19.814	91	146919	0.59	ug/Kg	81
96) TPH-GRO (C6-C10)	13.850	TIC	4042874m	15.35	ug/Kg	

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

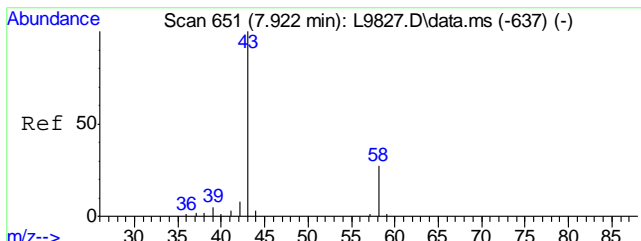
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
Data File : L11980.D  
Acq On : 1 Nov 2011 2:37 pm  
Operator : XINGB  
Sample : C18698-8  
Misc : MS1499,VL369,4.84,,,,,1  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 02 09:44:16 2011  
Quant Method : C:\msdchem\1\METHODS\VL362S.M  
Quant Title : EPA -8260B  
QLast Update : Mon Oct 24 13:55:38 2011  
Response via : Initial Calibration

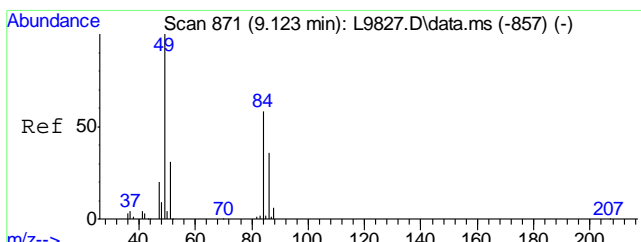
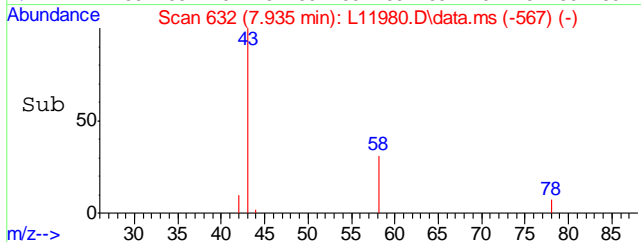
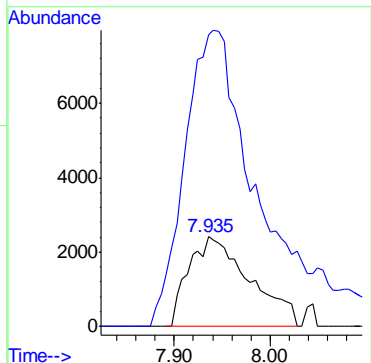
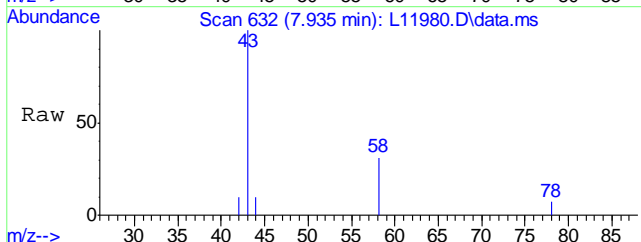






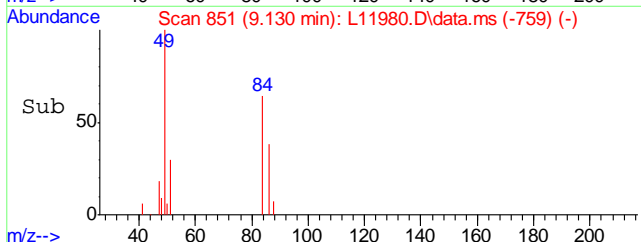
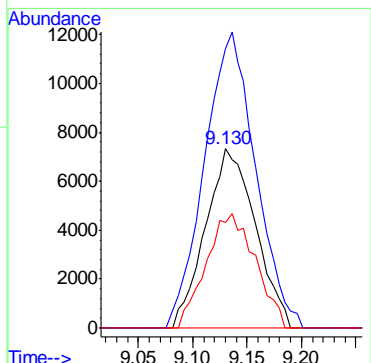
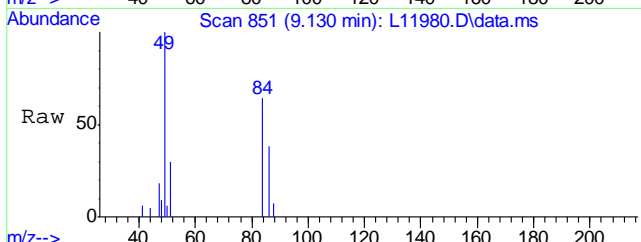
#10  
Acetone  
Concen: 18.20 ug/Kg  
RT: 7.935 min Scan# 632  
Delta R.T. 0.006 min  
Lab File: L11980.D  
Acq: 1 Nov 2011 2:37 pm

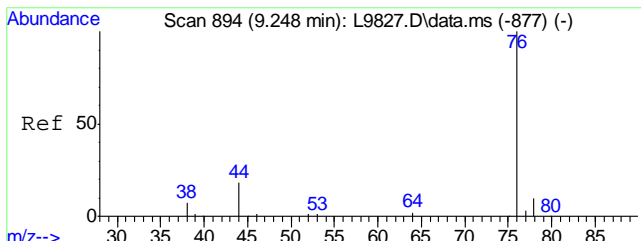
Tgt Ion	Resp	Lower	Upper
58	107093		
58	100		
43	414.5	370.9	410.9#



#18  
Methylene Chloride  
Concen: 4.10 ug/Kg  
RT: 9.130 min Scan# 851  
Delta R.T. 0.000 min  
Lab File: L11980.D  
Acq: 1 Nov 2011 2:37 pm

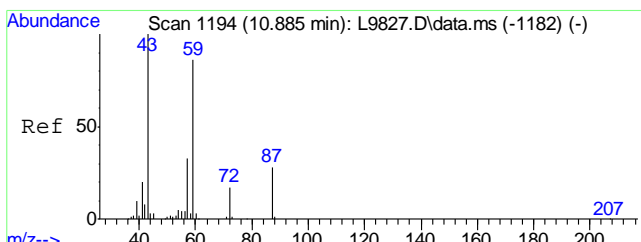
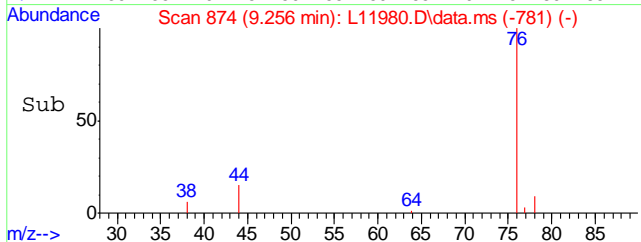
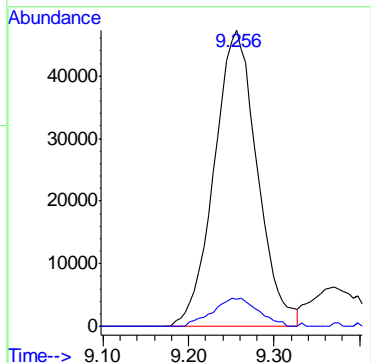
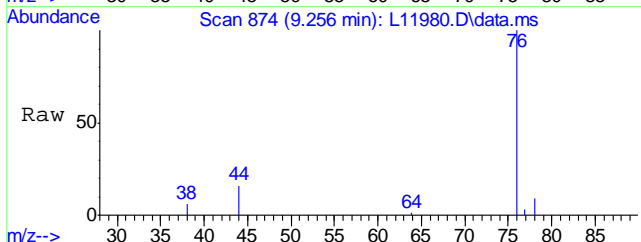
Tgt Ion	Resp	Lower	Upper
84	233721		
84	100		
49	168.9	155.6	195.6
86	62.6	43.3	83.3





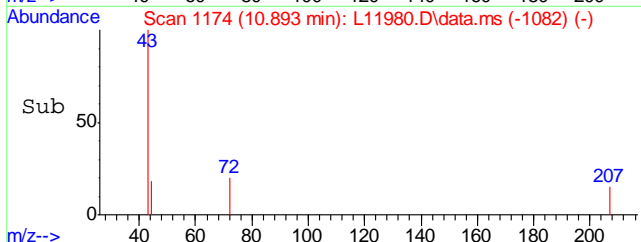
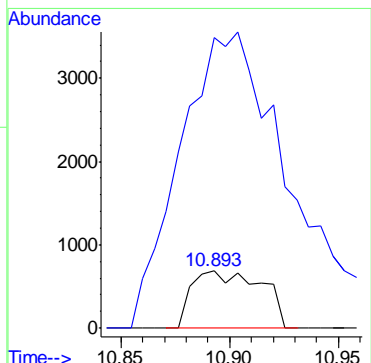
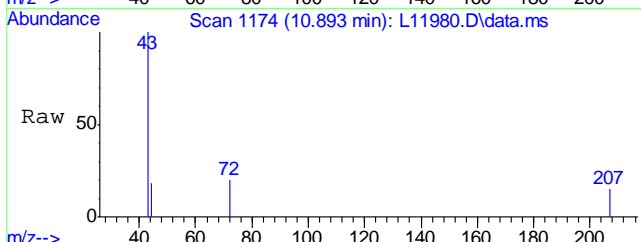
#20  
 Carbon Disulfide  
 Concen: 9.49 ug/Kg  
 RT: 9.256 min Scan# 874  
 Delta R.T. 0.006 min  
 Lab File: L11980.D  
 Acq: 1 Nov 2011 2:37 pm

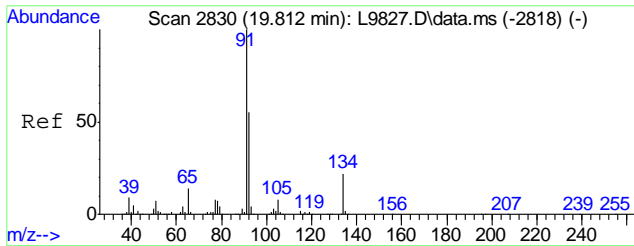
Tgt Ion	Resp	Lower	Upper
76	1653049		
76	100		
78	10.0	0.0	29.3



#29  
 2-Butanone (MEK)  
 Concen: 2.34 ug/Kg  
 RT: 10.893 min Scan# 1174  
 Delta R.T. 0.000 min  
 Lab File: L11980.D  
 Acq: 1 Nov 2011 2:37 pm

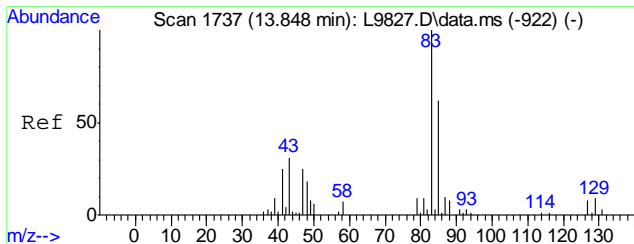
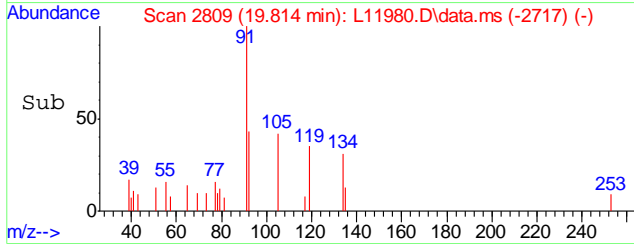
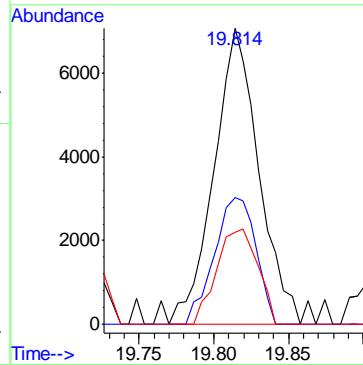
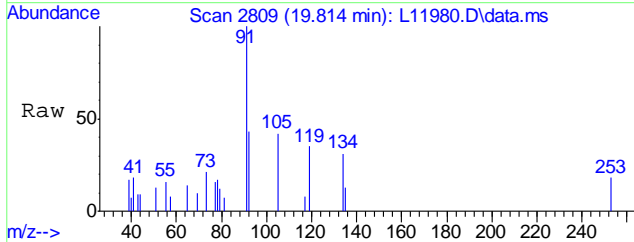
Tgt Ion	Resp	Lower	Upper
72	15170		
72	100		
43	812.5	591.6	631.6#





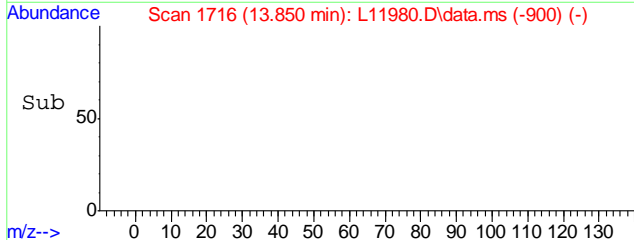
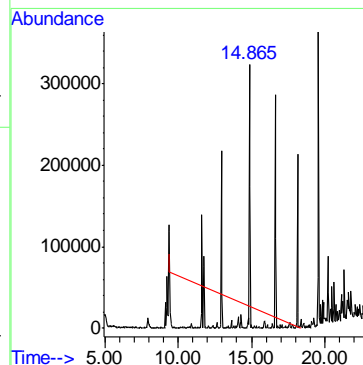
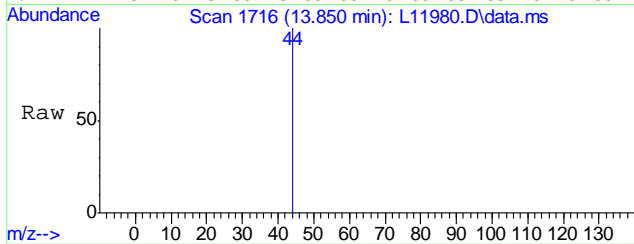
#88  
 n-Butylbenzene  
 Concen: 0.59 ug/Kg  
 RT: 19.814 min Scan# 2809  
 Delta R.T. 0.000 min  
 Lab File: L11980.D  
 Acq: 1 Nov 2011 2:37 pm

Tgt Ion	Resp	Lower	Upper
91	146919		
92	39.9	34.2	74.2
134	29.7	1.5	41.5



#96  
 TPH-GRO (C6-C10)  
 Concen: 15.35 ug/Kg m  
 RT: 13.850 min Scan# 1716  
 Delta R.T. 0.000 min  
 Lab File: L11980.D  
 Acq: 1 Nov 2011 2:37 pm

Tgt Ion:TIC Resp: 4042874



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111102\  
Data File : R5574.D  
Acq On : 2 Nov 2011 12:16 pm  
Operator : belad  
Sample : C18698-9  
Misc : MS1527,VR195,50,,,,,1  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 02 13:04:35 2011  
Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
Quant Title : EPA -8260B  
QLast Update : Fri Sep 09 09:14:12 2011  
Response via : Initial Calibration

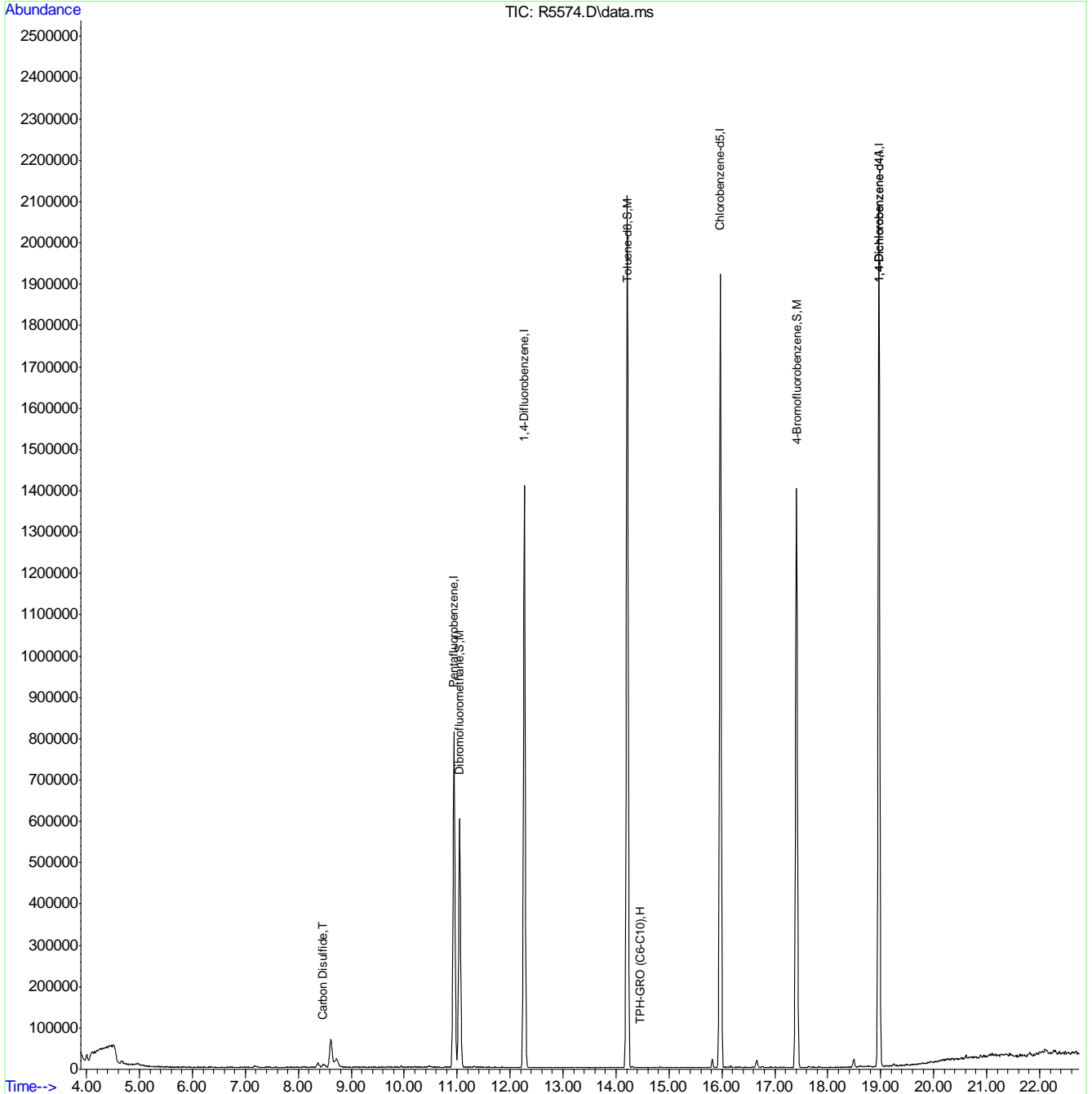
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Pentafluorobenzene	10.942	168	7448678	10.00	ug/L	-0.02	
43) 1,4-Difluorobenzene	12.268	114	14292568	10.00	ug/L	-0.02	
58) Chlorobenzene-d5	15.967	117	12878363	10.00	ug/L	-0.02	
82) 1,4-Dichlorobenzene-d4	18.963	152	6651235	10.00	ug/L	-0.02	
103) 1,4-Dichlorobenzene-d4A	18.963	152	6651235	10.00	ug/L	-0.01	
System Monitoring Compounds							
39) Dibromofluoromethane	11.046	111	5213910	10.69	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	106.90%	
59) Toluene-d8	14.210	98	17945552	10.26	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	102.60%	
79) 4-Bromofluorobenzene	17.408	95	7345965	9.90	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	99.00%	
Target Compounds							
21) Carbon Disulfide	8.470	76	189200	0.12	ug/L		Qvalue 97
104) TPH-GRO (C6-C10)	14.462	TIC	4004990m	1.79	ug/L		

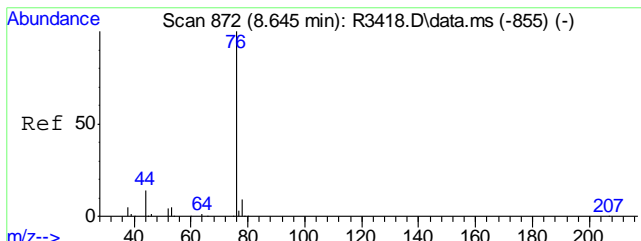
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111102\  
Data File : R5574.D  
Acq On : 2 Nov 2011 12:16 pm  
Operator : belad  
Sample : C18698-9  
Misc : MS1527,VR195,50,,,1  
ALS Vial : 8 Sample Multiplier: 1

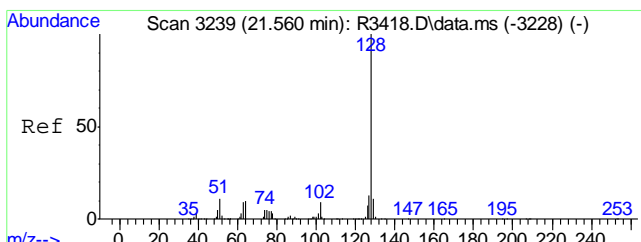
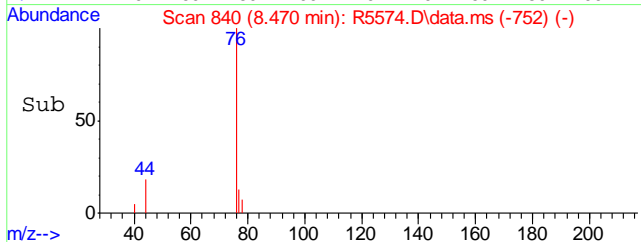
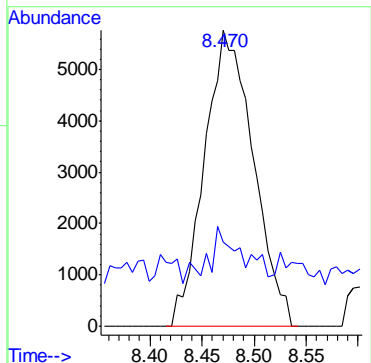
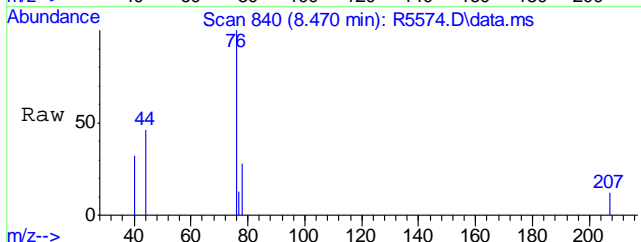
Quant Time: Nov 02 13:04:35 2011  
Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
Quant Title : EPA -8260B  
QLast Update : Fri Sep 09 09:14:12 2011  
Response via : Initial Calibration





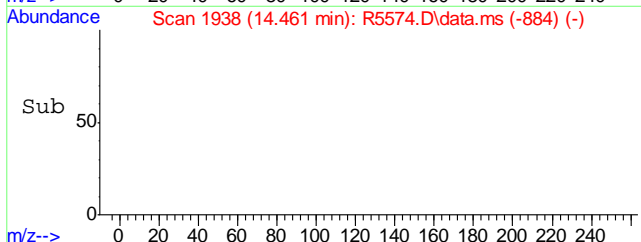
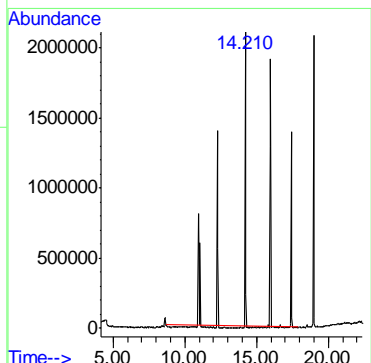
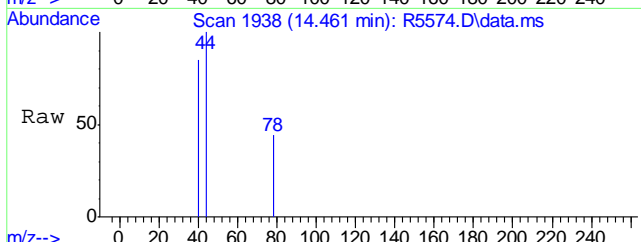
#21  
Carbon Disulfide  
Concen: 0.12 ug/L  
RT: 8.470 min Scan# 840  
Delta R.T. -0.022 min  
Lab File: R5574.D  
Acq: 2 Nov 2011 12:16 pm

Tgt Ion	Resp	Lower	Upper
76	189200		
76	100		
78	10.2	0.0	29.1



#104  
TPH-GRO (C6-C10)  
Concen: 1.79 ug/L m  
RT: 14.462 min Scan# 1938  
Delta R.T. 0.000 min  
Lab File: R5574.D  
Acq: 2 Nov 2011 12:16 pm

Tgt Ion:TIC Resp: 4004990



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
 Data File : L11972.D  
 Acq On : 1 Nov 2011 10:42 am  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VL369,5,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 02 07:47:58 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Pentafluorobenzene	11.624	168	1601615	20.00	ug/Kg	0.00	
38) 1,4-Difluorobenzene	12.939	114	2714525	20.00	ug/Kg	0.00	
52) Chlorobenzene-d5	16.622	117	2455102	20.00	ug/Kg	0.00	
74) 1,4-Dichlorobenzene-d4	19.568	152	1352840	20.00	ug/Kg	0.00	
95) 1,4-Dichlorobenzene-d4A	19.568	152	1352840	20.00	ug/Kg	0.00	
System Monitoring Compounds							
34) Dibromofluoromethane	11.749	111	890197	18.65	ug/Kg	0.00	
Spiked Amount	20.000	Range	70 - 130	Recovery	=	93.25%	
53) Toluene-d8	14.865	98	3455315	18.74	ug/Kg	0.00	
Spiked Amount	20.000	Range	70 - 130	Recovery	=	93.70%	
71) 4-Bromofluorobenzene	18.133	95	1389641	19.37	ug/Kg	0.00	
Spiked Amount	20.000	Range	70 - 130	Recovery	=	96.85%	
Target Compounds							
18) Methylene Chloride	9.125	84	58829	0.83	ug/Kg		Qvalue 98
96) TPH-GRO (C6-C10)	13.850	TIC	195107m	0.61	ug/Kg		

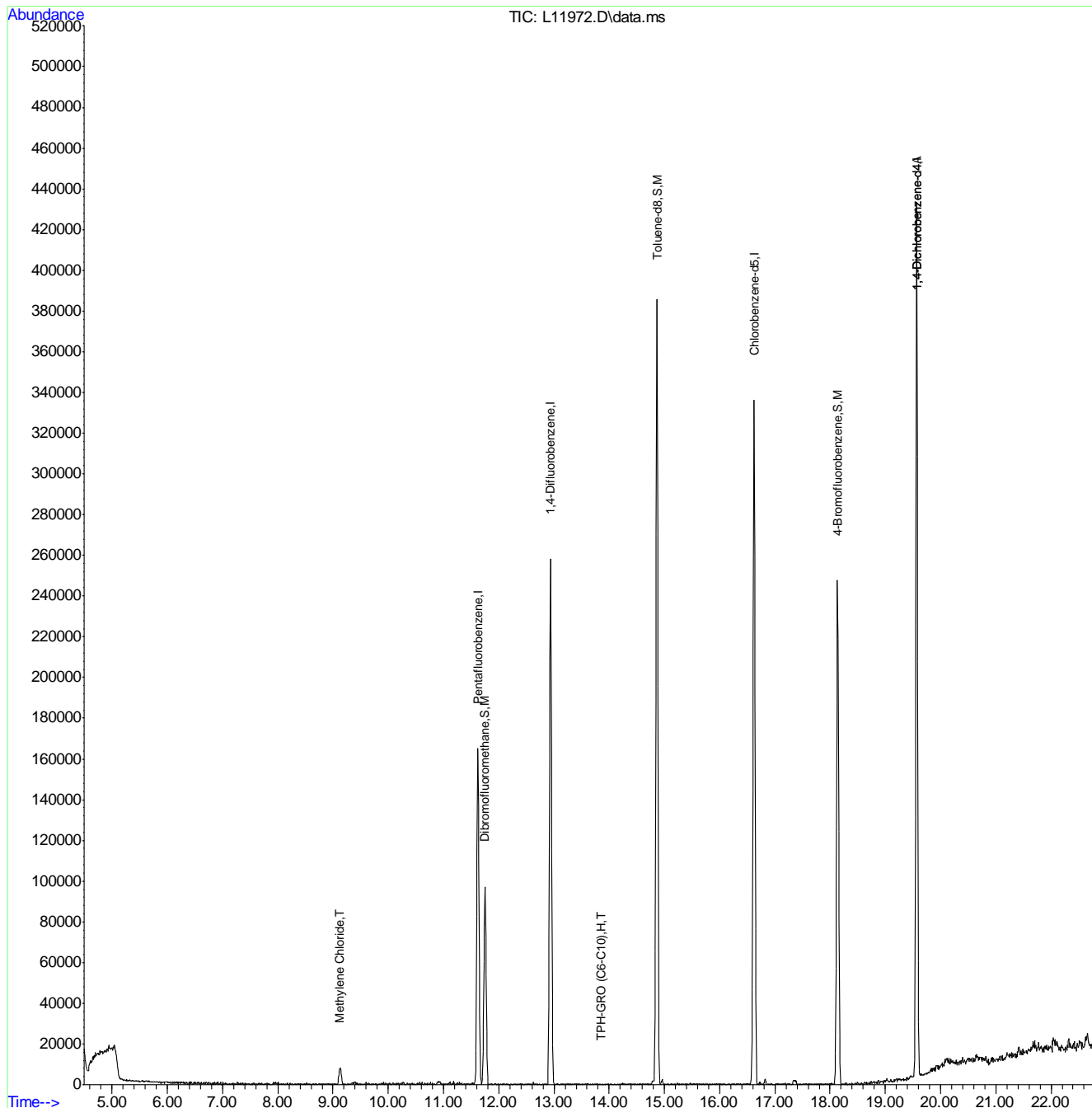
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2.1  
5

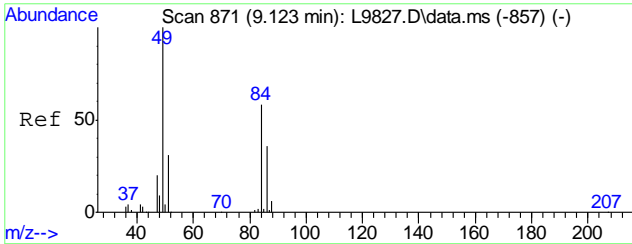
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L111101\  
 Data File : L11972.D  
 Acq On : 1 Nov 2011 10:42 am  
 Operator : XINGB  
 Sample : MB  
 Misc : MS1499,VL369,5,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 02 07:47:58 2011  
 Quant Method : C:\msdchem\1\METHODS\VL362S.M  
 Quant Title : EPA -8260B  
 QLast Update : Mon Oct 24 13:55:38 2011  
 Response via : Initial Calibration

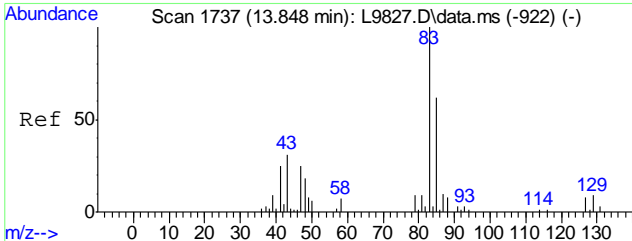
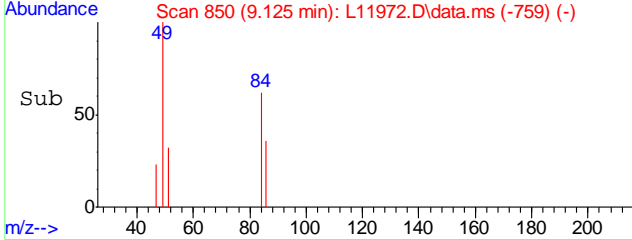
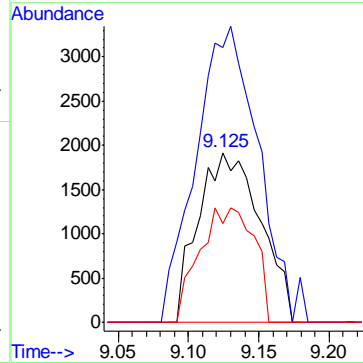
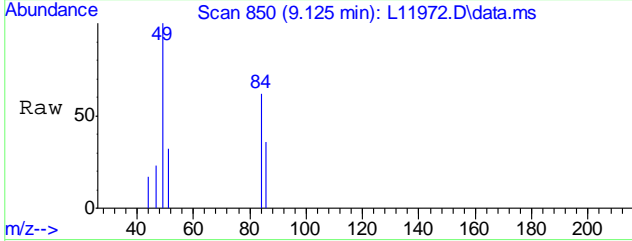






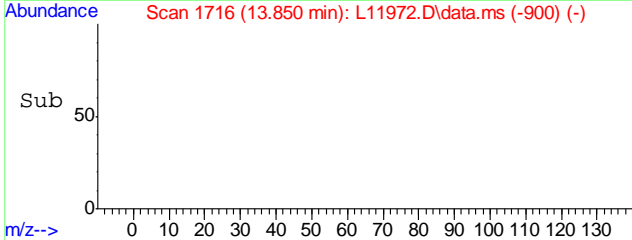
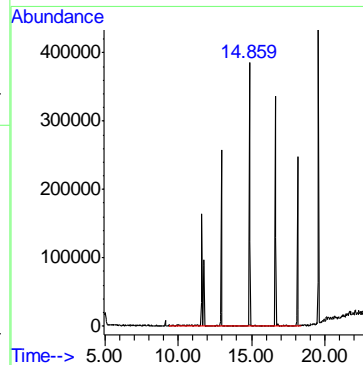
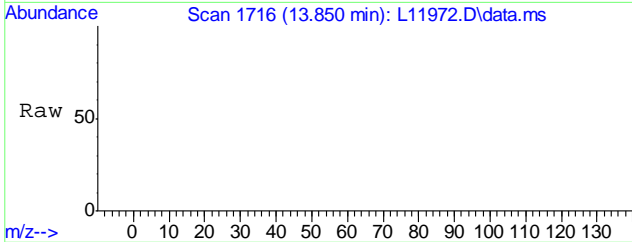
#18  
Methylene Chloride  
Concen: 0.83 ug/Kg  
RT: 9.125 min Scan# 850  
Delta R.T. -0.005 min  
Lab File: L11972.D  
Acq: 1 Nov 2011 10:42 am

Tgt Ion	Resp	Lower	Upper
84	58829		
49	175.4	155.6	195.6
86	59.1	43.3	83.3



#96  
TPH-GRO (C6-C10)  
Concen: 0.61 ug/Kg m  
RT: 13.850 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: L11972.D  
Acq: 1 Nov 2011 10:42 am

Tgt Ion:TIC Resp: 195107



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111102\  
 Data File : R5573.D  
 Acq On : 2 Nov 2011 11:44 am  
 Operator : belad  
 Sample : MB  
 Misc : MS1527,VR195,50,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 02 13:07:59 2011  
 Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Sep 09 09:14:12 2011  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Pentafluorobenzene	10.942	168	7624760	10.00	ug/L	-0.02	
43) 1,4-Difluorobenzene	12.268	114	14577255	10.00	ug/L	-0.02	
58) Chlorobenzene-d5	15.967	117	13088153	10.00	ug/L	-0.02	
82) 1,4-Dichlorobenzene-d4	18.963	152	6807707	10.00	ug/L	-0.02	
103) 1,4-Dichlorobenzene-d4A	18.963	152	6807707	10.00	ug/L	-0.01	
System Monitoring Compounds							
39) Dibromofluoromethane	11.040	111	5307058	10.63	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	106.30%	
59) Toluene-d8	14.210	98	18818414	10.59	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	105.90%	
79) 4-Bromofluorobenzene	17.408	95	7486398	9.92	ug/L	-0.02	
Spiked Amount	10.000	Range	70 - 130	Recovery	=	99.20%	
Target Compounds							
48) Trichloroethene	12.748	95	128614	0.23	ug/L		Qvalue 95
104) TPH-GRO (C6-C10)	14.462	TIC	3388025m	1.48	ug/L		

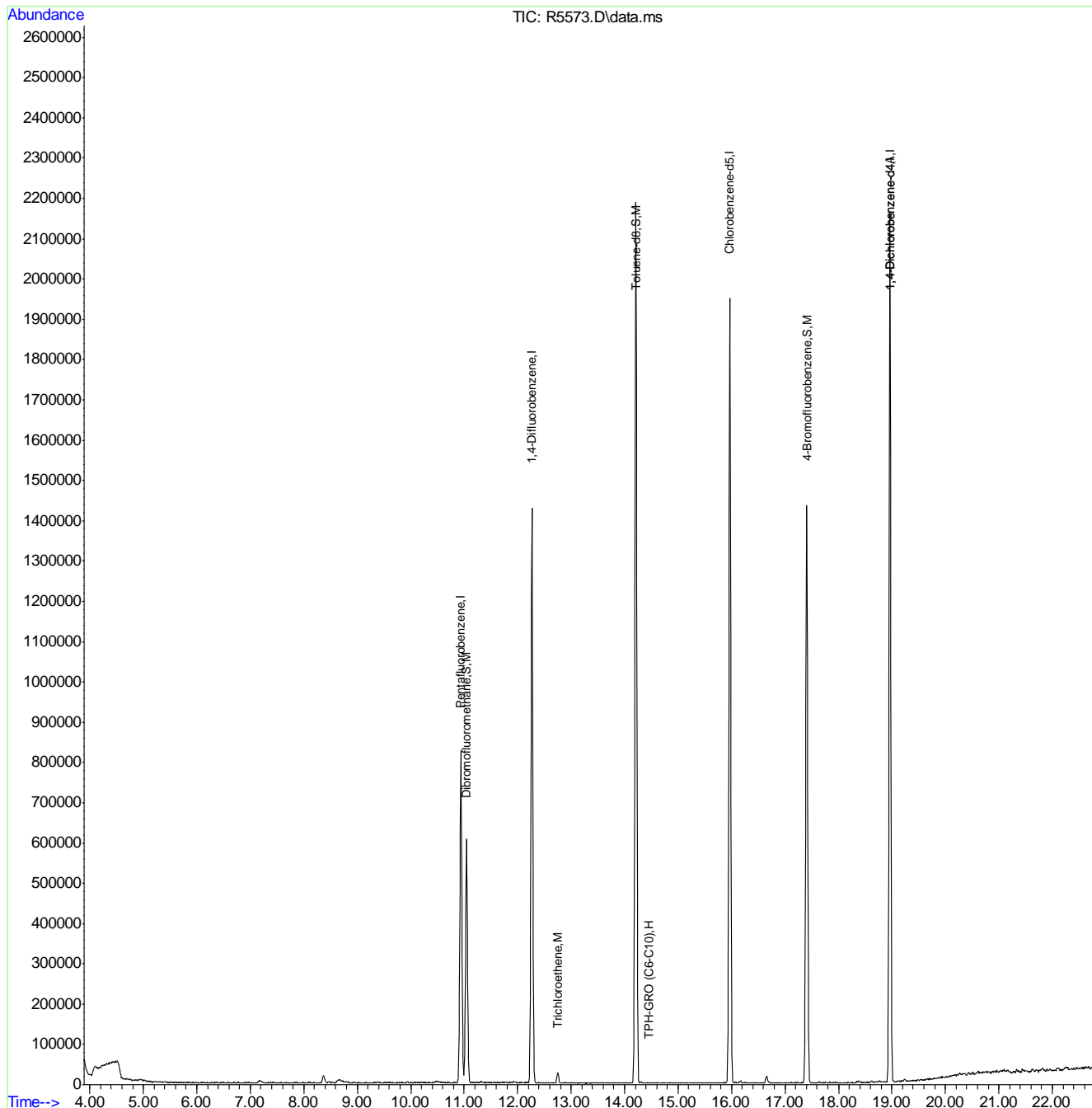
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2.2  
5

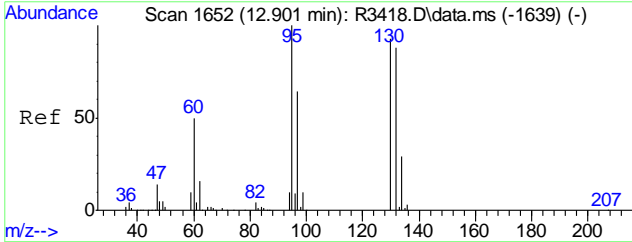
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111102\  
 Data File : R5573.D  
 Acq On : 2 Nov 2011 11:44 am  
 Operator : belad  
 Sample : MB  
 Misc : MS1527,VR195,50,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 02 13:07:59 2011  
 Quant Method : C:\msdchem\1\METHODS\VR156\_110908.M  
 Quant Title : EPA -8260B  
 QLast Update : Fri Sep 09 09:14:12 2011  
 Response via : Initial Calibration

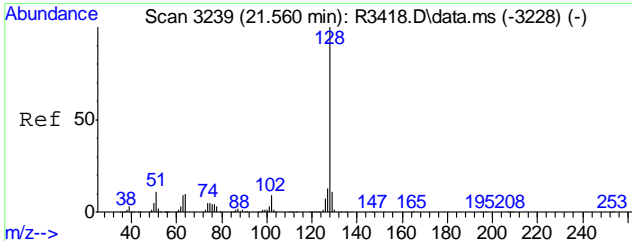
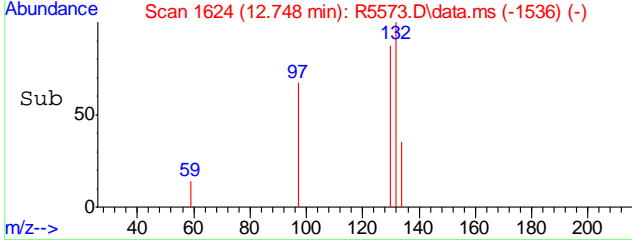
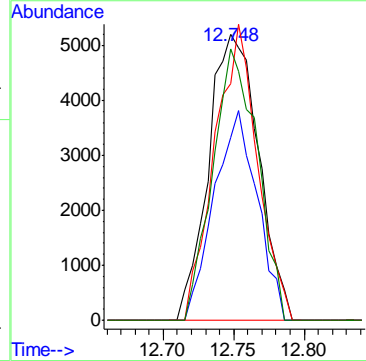
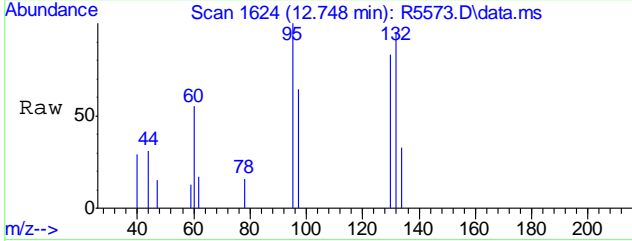


5.2.2  
 5



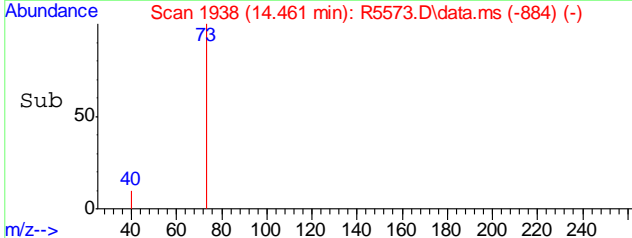
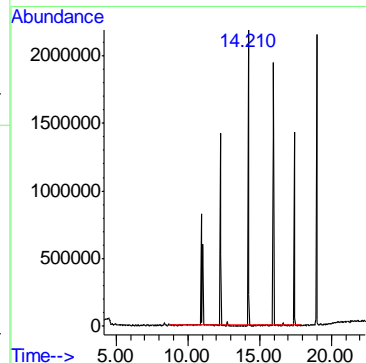
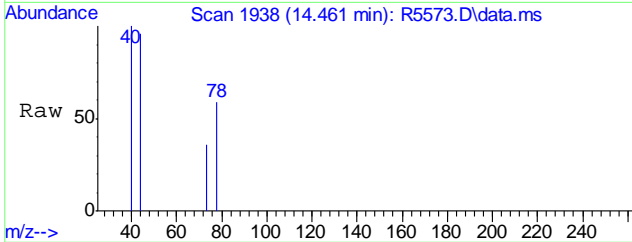
#48  
Trichloroethene  
Concen: 0.23 ug/L  
RT: 12.748 min Scan# 1624  
Delta R.T. -0.022 min  
Lab File: R5573.D  
Acq: 2 Nov 2011 11:44 am

Tgt Ion	Resp	Lower	Upper
95	128614		
95	100		
97	62.9	44.7	84.7
130	88.3	74.5	114.5
132	84.2	70.6	110.6



#104  
TPH-GRO (C6-C10)  
Concen: 1.48 ug/L m  
RT: 14.462 min Scan# 1938  
Delta R.T. 0.000 min  
Lab File: R5573.D  
Acq: 2 Nov 2011 11:44 am

Tgt Ion:TIC Resp: 3388025



## GC Semi-volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary****Job Number:** C18698**Account:** BMECASF Burns and McDonnell Engineering**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4818-MB	GG29508.D	1	11/01/11	JH	11/01/11	OP4818	GGG788

**The QC reported here applies to the following samples:****Method:** SW846 8015B M

C18698-1, C18698-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.050	mg/l	
	TPH (> C28-C40)	ND	0.20	0.10	mg/l	

CAS No.	Surrogate Recoveries	Limits	
630-01-3	Hexacosane	81%	45-140%

**Method Blank Summary**

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4823-MB	GG29527.D	1	11/02/11	JH	11/01/11	OP4823	GGG789

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	5.0	mg/kg	
	TPH (> C28-C40)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	66% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4818-BS	GG29509.D	1	11/01/11	JH	11/01/11	OP4818	GGG788
OP4818-BSD	GG29510.D	1	11/01/11	JH	11/01/11	OP4818	GGG788

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18698-1, C18698-2

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.702	70	0.741	74	5	45-140/30
	TPH (> C28-C40)	1	0.765	77	0.811	81	6	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	86%	91%	45-140%

6.2.1  
6



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4823-BS	GG29528.D	1	11/02/11	JH	11/01/11	OP4823	GGG789
OP4823-BSD	GG29529.D	1	11/02/11	JH	11/01/11	OP4823	GGG789

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	65.8	66	64.9	65	1	45-140/30
	TPH (> C28-C40)	100	75.5	76	71.0	71	6	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	83%	77%	45-140%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C18698  
**Account:** BMECASF Burns and McDonnell Engineering  
**Project:** T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4823-MS	GG29544.D	1	11/02/11	JH	11/01/11	OP4823	GGG789
OP4823-MSD	GG29545.D	1	11/02/11	JH	11/01/11	OP4823	GGG789
C18698-8	GG29539.D	1	11/02/11	JH	11/01/11	OP4823	GGG789

The QC reported here applies to the following samples:

Method: SW846 8015B M

C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

CAS No.	Compound	C18698-8 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	99	58.5	59	61.4	63	5		45-140/30
	TPH (> C28-C40)	ND	99	76.2	77	78.5	80	3		45-140/30

CAS No.	Surrogate Recoveries	MS	MSD	C18698-8	Limits
630-01-3	Hexacosane	82%	85%	80%	45-140%

6.3.1  
6

GC Semi-volatiles

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Raw Data

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7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG788\GG29519.D Vial: 22  
 Acq On : 11-1-11 5:20:25 PM Operator: JAMESH  
 Sample : C18698-1 Inst : Diesel #2  
 Misc : OP4818,GGG788,480,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 9:49 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S,M Hexacosane	9.95	134181149	94.375 ppm
Spiked Amount 100.000		Recovery =	94.38%
<b>Target Compounds</b>			
2) H,M TPH (C10-C28)	6.03	1342950931	1045.917 ppm
3) H TPH (>C28-C40)	11.83	157313625	176.403 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	1337578732	1022.178 ppm
7) H TPH (Motor Oil)	11.83	161545231	180.556 ppm

7.1.1  
7

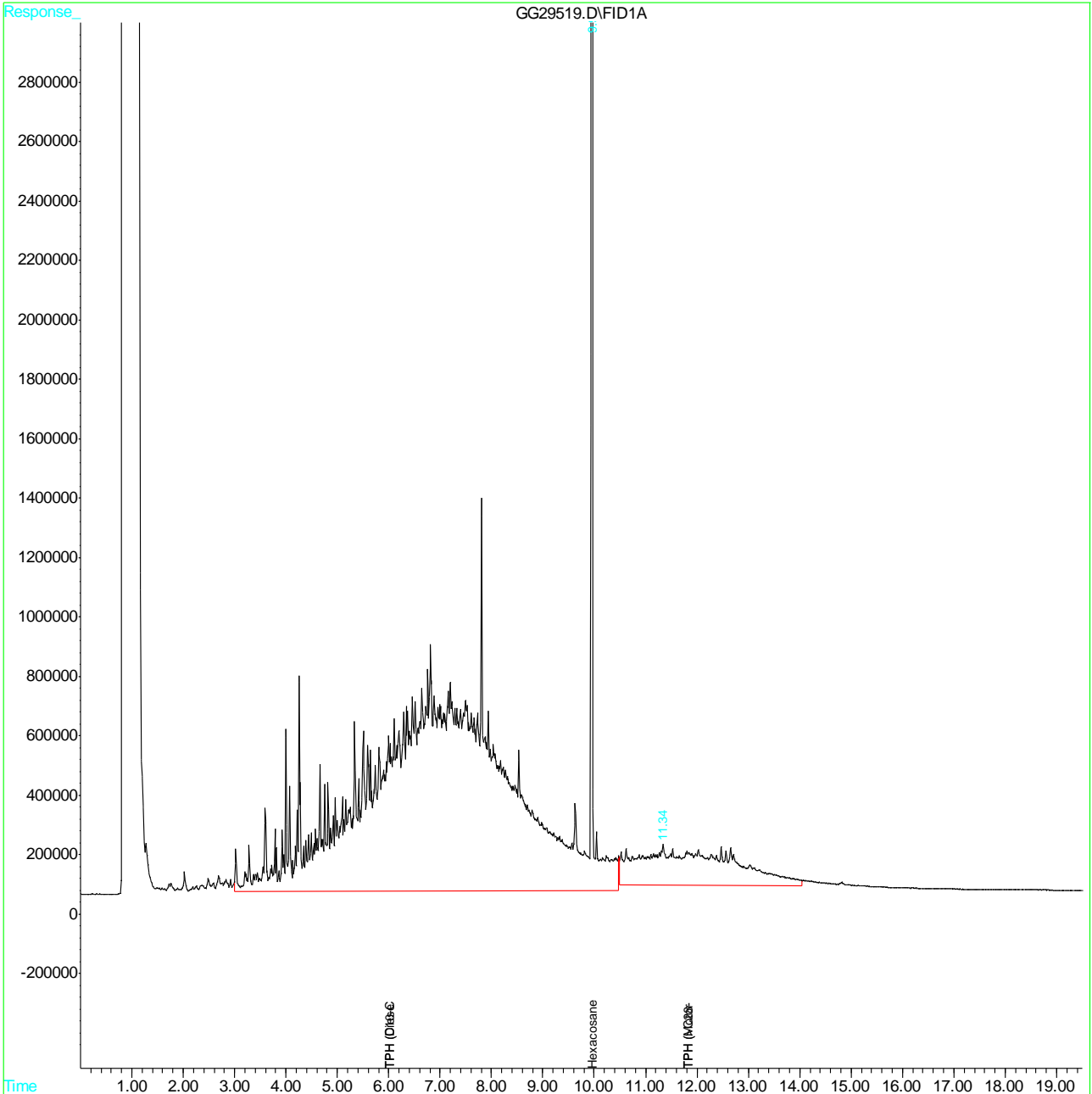
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29519.D GGG709.M Thu Nov 03 08:45:02 2011

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG788\GG29519.D Vial: 22  
 Acq On : 11-1-11 5:20:25 PM Operator: JAMESH  
 Sample : C18698-1 Inst : Diesel #2  
 Misc : OP4818,GGG788,480,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 9:49 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.1.1  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG788\GG29520.D Vial: 23  
 Acq On : 11-1-11 5:46:11 PM Operator: JAMESH  
 Sample : C18698-2 Inst : Diesel #2  
 Misc : OP4818,GGG788,500,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 9:51 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S,M Hexacosane	9.95	137419733	96.653 ppm
Spiked Amount	100.000	Recovery	= 96.65%
<b>Target Compounds</b>			
2) H,M TPH (C10-C28)	6.03	1443968537	1124.591 ppm
3) H TPH (>C28-C40)	11.83	97168645	108.960 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	1477237533	1128.905 ppm
7) H TPH (Motor Oil)	11.83	90849844	101.541 ppm

7.12  
7

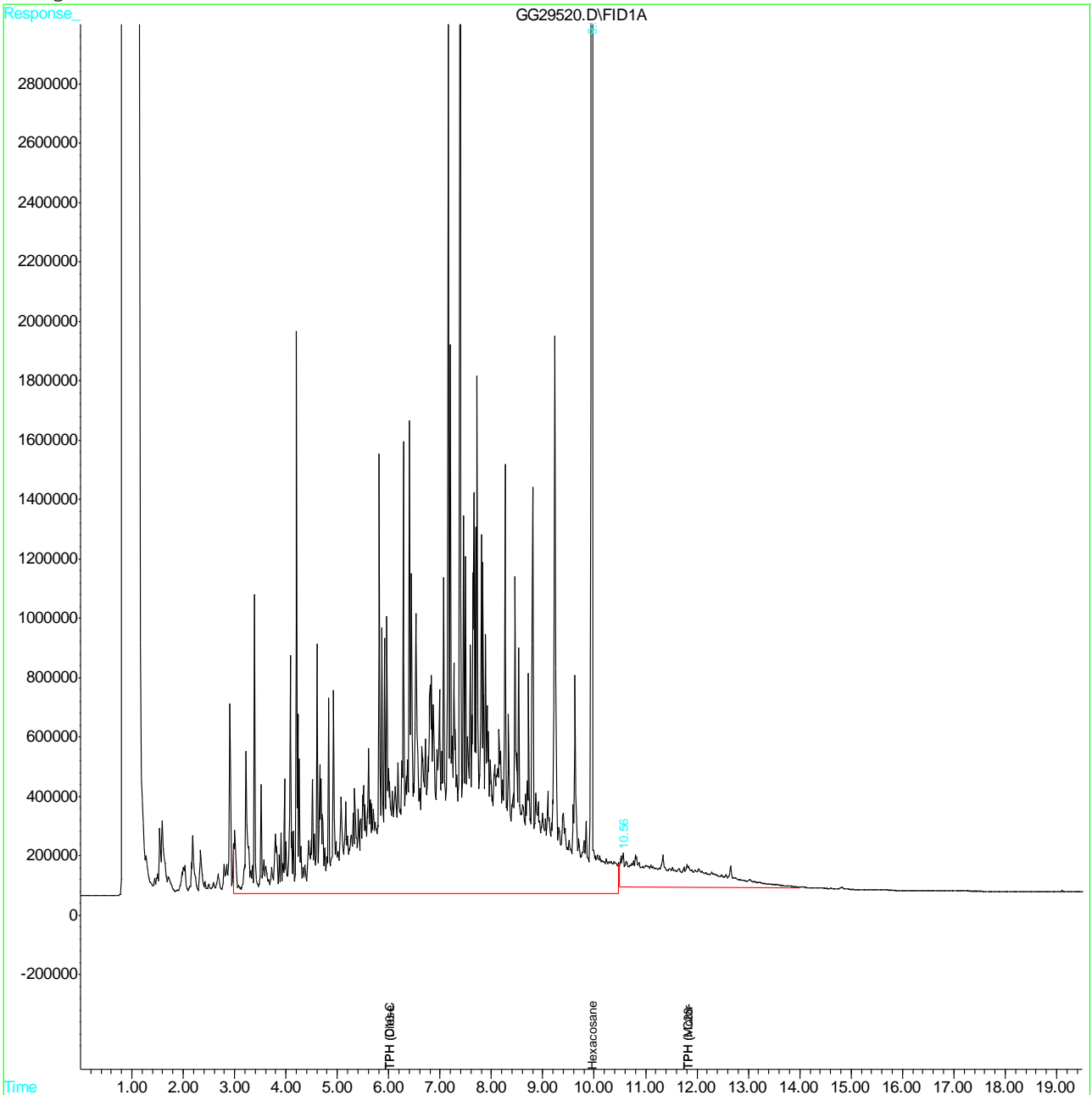
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29520.D GGG709.M Thu Nov 03 08:45:03 2011

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG788\GG29520.D Vial: 23  
 Acq On : 11-1-11 5:46:11 PM Operator: JAMESH  
 Sample : C18698-2 Inst : Diesel #2  
 Misc : OP4818,GGG788,500,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 9:51 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.1.2  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29533.D Vial: 10  
 Acq On : 11-2-11 10:54:41 AM Operator: JAMESH  
 Sample : C18698-3 Inst : Diesel #2  
 Misc : OP4823,GGG789,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 11:42 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S,M Hexacosane	9.95	111514552	78.433 ppm
Spiked Amount 100.000		Recovery =	78.43%
<b>Target Compounds</b>			
2) H,M TPH (C10-C28)	6.03	28370632	22.096 ppm
3) H TPH (>C28-C40)	11.83	20729979	23.245 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	28370632	21.681 ppm
7) H TPH (Motor Oil)	11.83	20729979	23.169 ppm

7.1.3  
7

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29533.D GGG709.M Thu Nov 03 08:56:35 2011

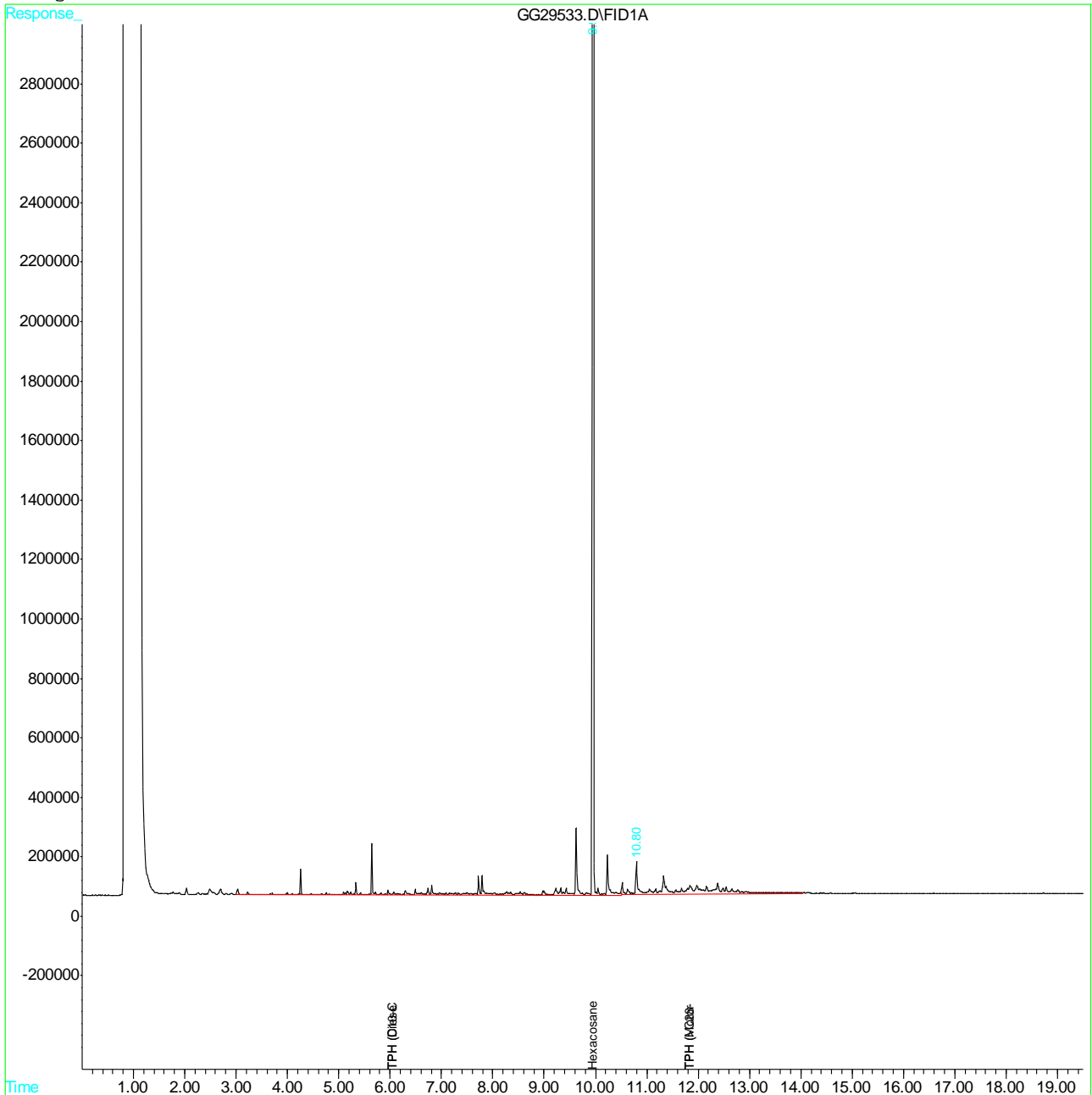


Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29533.D Vial: 10  
 Acq On : 11-2-11 10:54:41 AM Operator: JAMESH  
 Sample : C18698-3 Inst : Diesel #2  
 Misc : OP4823,GGG789,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 11:42 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.1.3

7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29534.D Vial: 11  
 Acq On : 11-2-11 11:20:31 AM Operator: JAMESH  
 Sample : C18698-4 Inst : Diesel #2  
 Misc : OP4823,GGG789,10.1,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 11:42 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	103271161	72.635 ppm
Spiked Amount	100.000	Recovery	= 72.64%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	38115694	29.685 ppm
3) H TPH (>C28-C40)	11.83	44542061	49.947 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	38115694	29.128 ppm
7) H TPH (Motor Oil)	11.83	44542061	49.784 ppm

7.14  
7

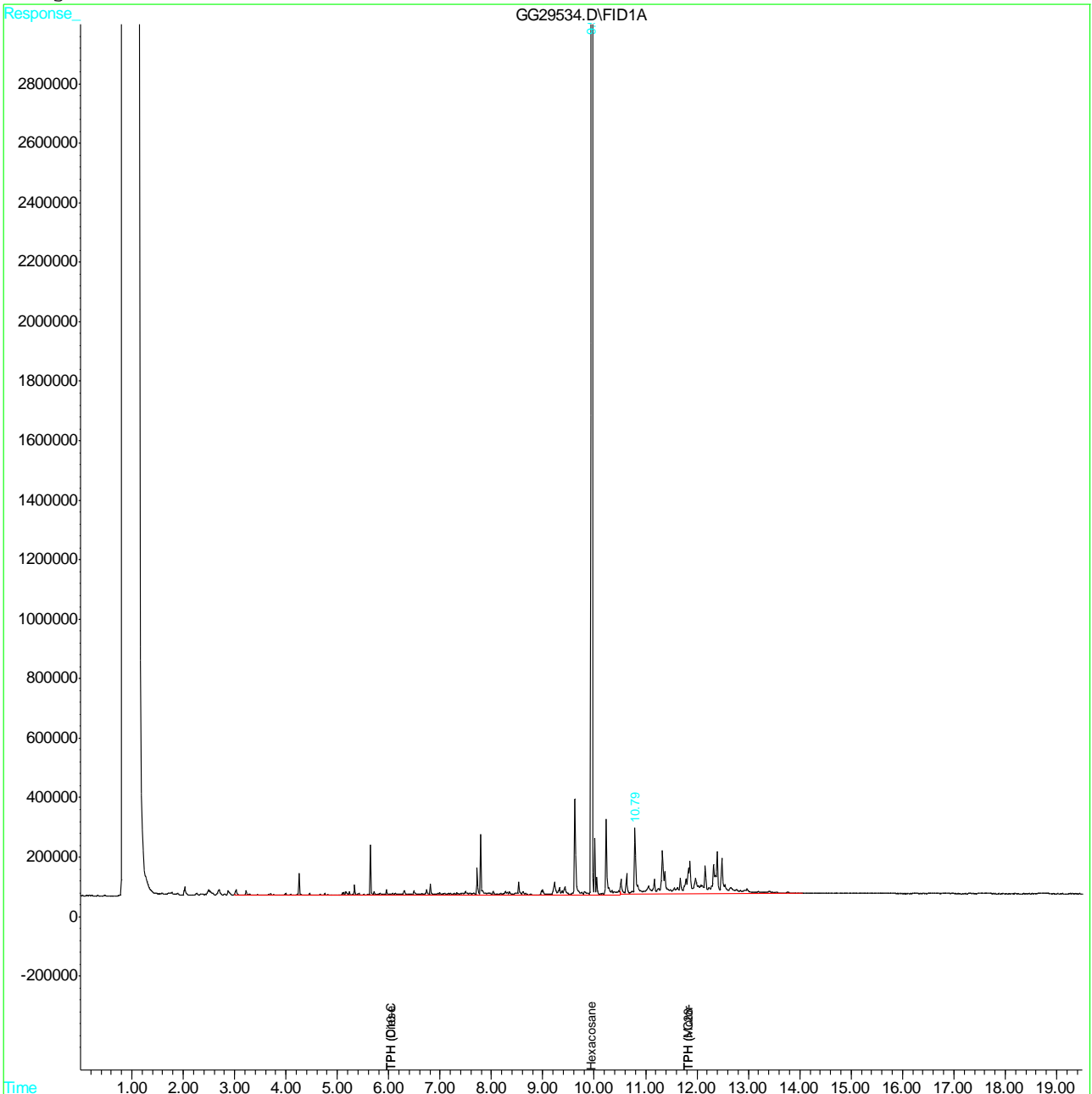
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29534.D GGG709.M Thu Nov 03 08:56:36 2011

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29534.D Vial: 11  
Acq On : 11-2-11 11:20:31 AM Operator: JAMESH  
Sample : C18698-4 Inst : Diesel #2  
Misc : OP4823,GGG789,10.1,,,1,1,SOIL Multiplr: 1.00  
IntFile : autoint1.e  
Quant Time: Nov 2 11:42 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
Title : DRO calibration: Back column  
Last Update : Mon Sep 26 10:23:25 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
Signal Phase : HP-5  
Signal Info : 0.32 mm



7.1.4  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29535.D Vial: 12  
 Acq On : 11-2-11 11:46:28 AM Operator: JAMESH  
 Sample : C18698-5 Inst : Diesel #2  
 Misc : OP4823,GGG789,10.1,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 13:15 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	113079934	79.533 ppm
Spiked Amount 100.000		Recovery =	79.53%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	29677401	23.113 ppm
3) H TPH (>C28-C40)	11.83	20145632	22.590 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	29677401	22.679 ppm
7) H TPH (Motor Oil)	11.83	20145632	22.516 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29535.D GGG709.M Thu Nov 03 08:56:37 2011

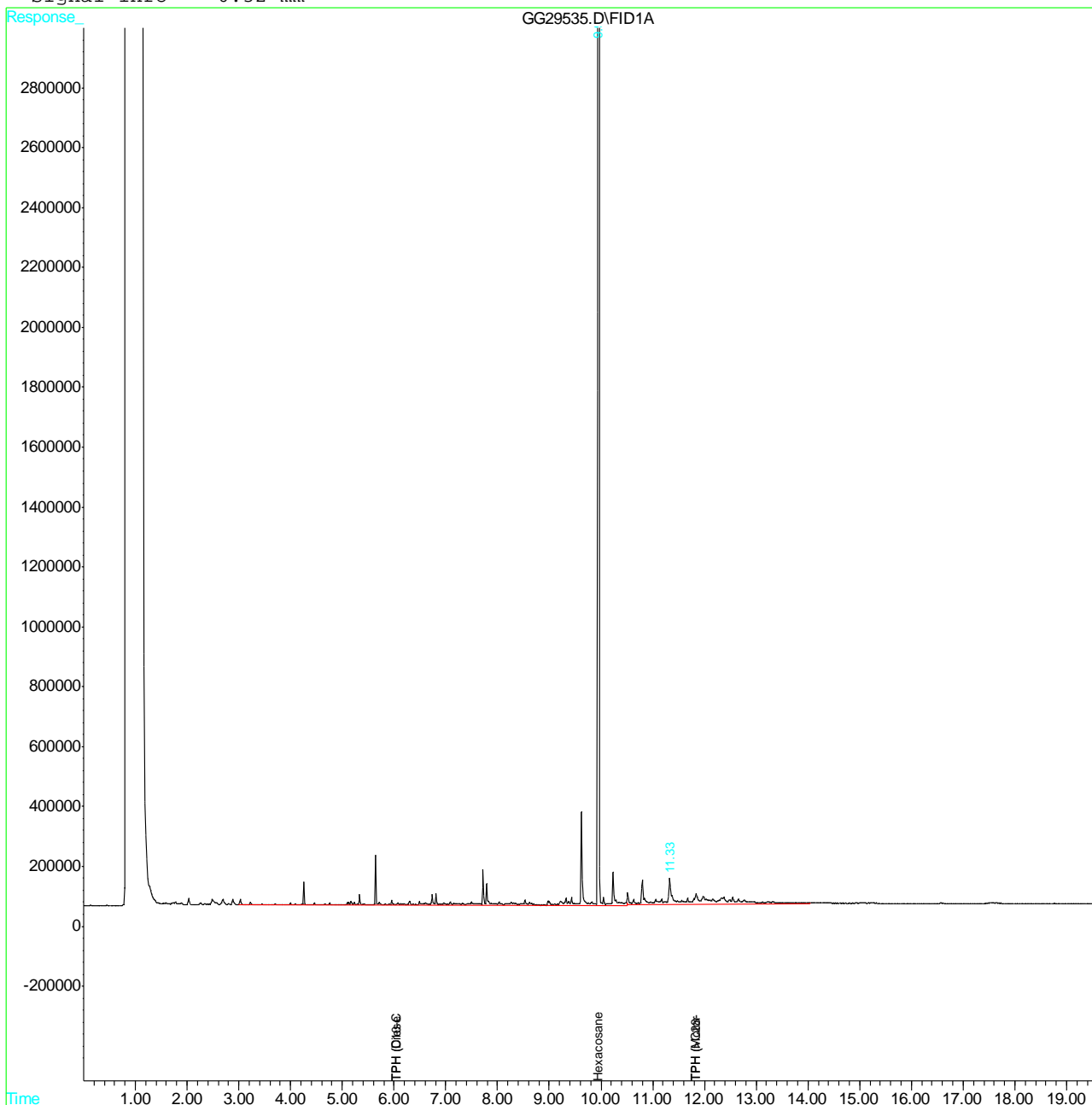
7.15  
 7

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29535.D Vial: 12  
 Acq On : 11-2-11 11:46:28 AM Operator: JAMESH  
 Sample : C18698-5 Inst : Diesel #2  
 Misc : OP4823,GGG789,10.1,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 13:15 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.1.5  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29536.D Vial: 13  
 Acq On : 11-2-11 12:12:18 PM Operator: JAMESH  
 Sample : C18698-6 Inst : Diesel #2  
 Misc : OP4823,GGG789,10.1,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 13:15 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	90223575	63.458 ppm
Spiked Amount 100.000		Recovery =	63.46%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	32984491	25.689 ppm
3) H TPH (>C28-C40)	11.83	27118380	30.409 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	32984491	25.207 ppm
7) H TPH (Motor Oil)	11.83	27118380	30.310 ppm

7.1.6  
7

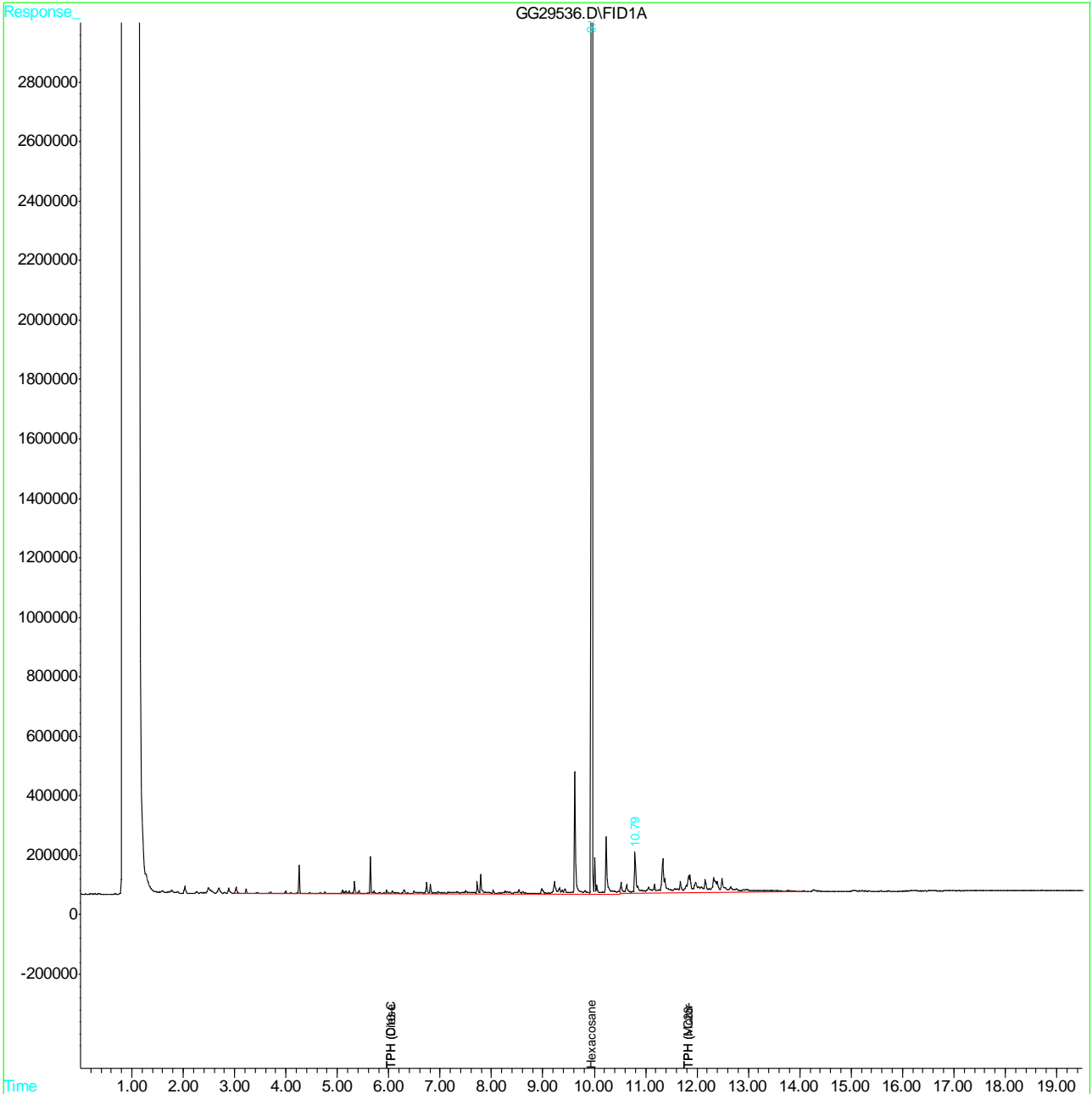
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29536.D GGG709.M Thu Nov 03 08:56:38 2011

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29536.D Vial: 13  
 Acq On : 11-2-11 12:12:18 PM Operator: JAMESH  
 Sample : C18698-6 Inst : Diesel #2  
 Misc : OP4823,GGG789,10.1,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 13:15 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.1.6  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#3\DATA\GHH599\HH18341.D Vial: 15  
 Acq On : 2 Nov 2011 1:38 pm Operator: JAMESH  
 Sample : C18698-7 Inst : Diesel 3  
 Misc : OP4823,GHH599,10.1,,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 3 7:58 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
<b>System Monitoring Compounds</b>			
1) S Hexacosane	10.35	1652309	71.787 ppm
Spiked Amount 100.000		Recovery =	71.79%
<b>Target Compounds</b>			
2) H TPH (C10-C28)	5.82	2577330	127.529 ppm
3) H TPH (>C28-C40)	14.51	3321803	217.841 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H TPH (Diesel)	5.82	2435464	119.921 ppm
7) H TPH (Motor Oil)	14.51	3270174	213.532 ppm

7.17  
7

(f)=RT Delta > 1/2 Window (m)=manual int.  
 HH18341.D GHH583.M Thu Nov 03 12:13:56 2011

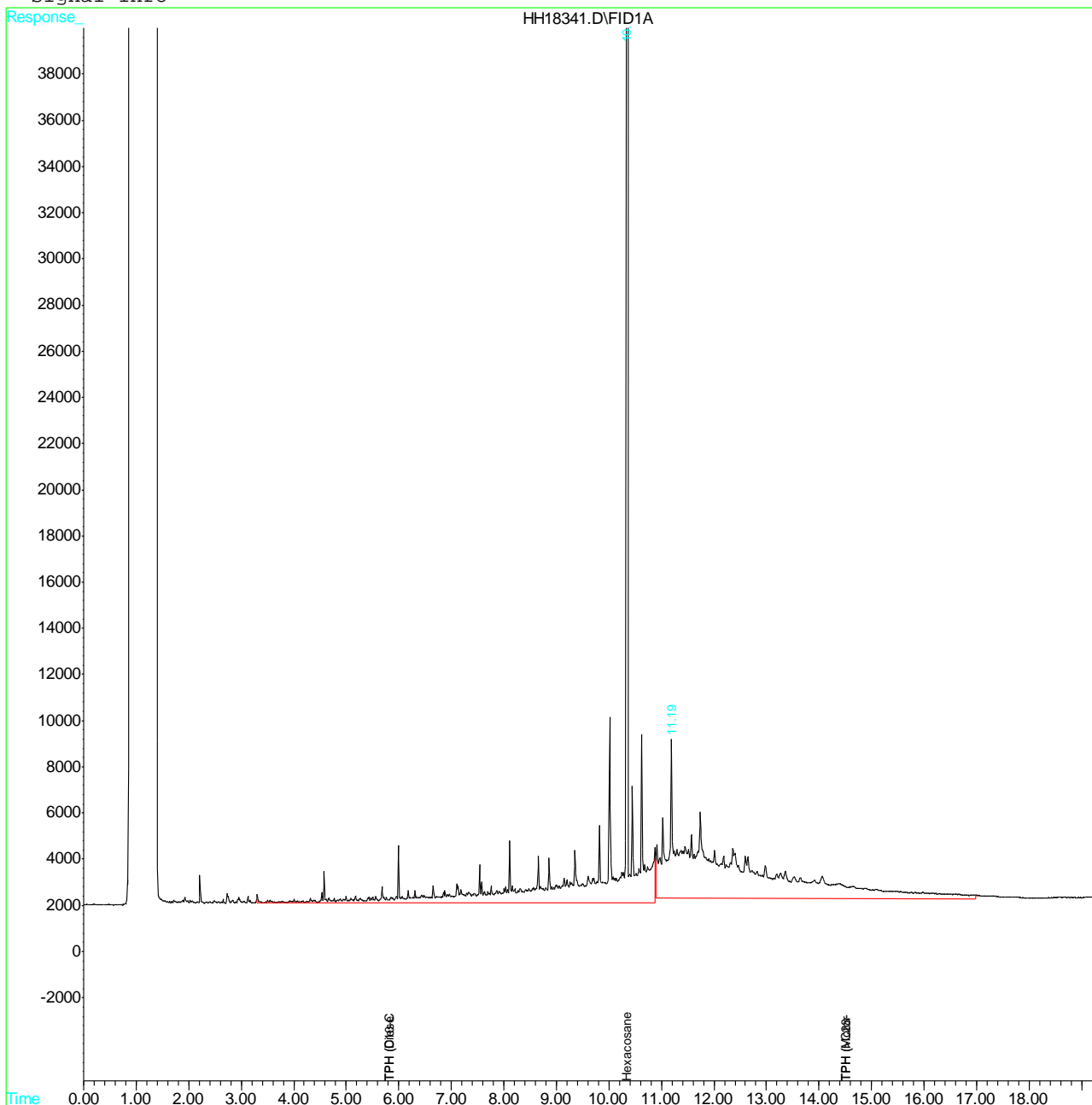


Quantitation Report

Data File : C:\DIESEL\D#3\DATA\GHH599\HH18341.D Vial: 15  
 Acq On : 2 Nov 2011 1:38 pm Operator: JAMESH  
 Sample : C18698-7 Inst : Diesel 3  
 Misc : OP4823,GHH599,10.1,,1,1,SOIL Multiplr: 1.00  
 IntFile : EVENTS.E  
 Quant Time: Nov 3 7:58 2011 Quant Results File: GHH583.RES

Quant Method : C:\DIESEL\D#3\METHODS\GHH583.M (Chemstation Integrator)  
 Title : TPH-Extractable by SW-846 Method 8015B  
 Last Update : Thu Oct 13 15:01:07 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_TPH5.M

Volume Inj. :  
 Signal Phase :  
 Signal Info :



7.17  
 7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29539.D Vial: 15  
 Acq On : 11-2-11 1:30:06 PM Operator: JAMESH  
 Sample : C18698-8 Inst : Diesel #2  
 Misc : OP4823,GGG789,10.2,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 3 7:00 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	113815122	80.051 ppm
Spiked Amount 100.000		Recovery =	80.05%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	25401268	19.783 ppm
3) H TPH (>C28-C40)	11.83	23587088	26.449 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	25401268	19.412 ppm
7) H TPH (Motor Oil)	11.83	23587088	26.363 ppm

7.1.8  
7

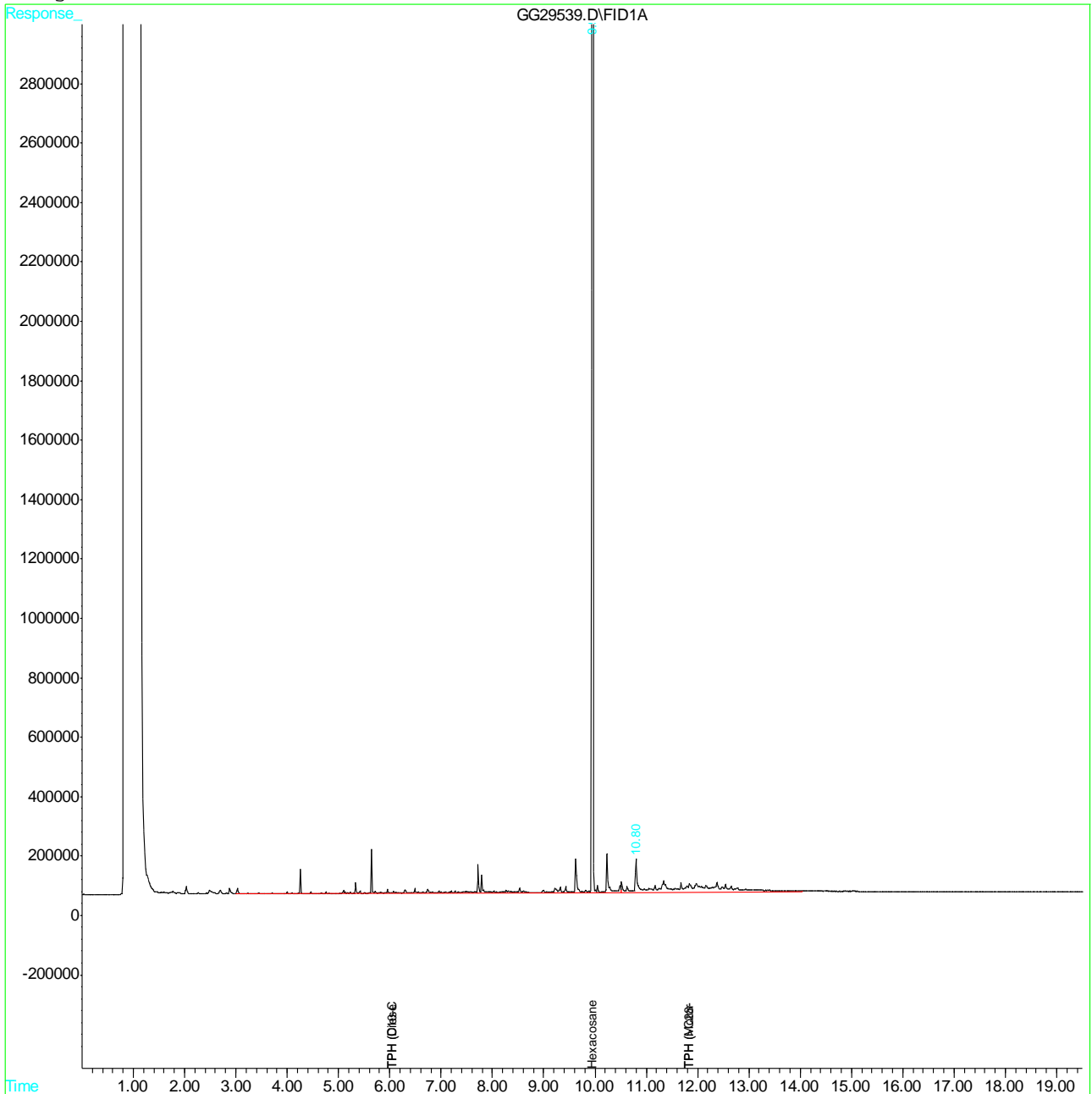
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29539.D GGG709.M Thu Nov 03 08:56:41 2011

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29539.D Vial: 15  
 Acq On : 11-2-11 1:30:06 PM Operator: JAMESH  
 Sample : C18698-8 Inst : Diesel #2  
 Misc : OP4823,GGG789,10.2,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 3 7:00 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.1.8  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG788\GG29508.D Vial: 12  
 Acq On : 11-1-11 12:36:14 PM Operator: JAMESH  
 Sample : OP4818-MB Inst : Diesel #2  
 Misc : OP4818,GGG788,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 7:48 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	115541092	81.265 ppm
Spiked Amount 100.000		Recovery =	81.27%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	39602527	30.843 ppm
3) H TPH (>C28-C40)	11.83	19153630	21.478 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	39602527	30.264 ppm
7) H TPH (Motor Oil)	11.83	19153630	21.408 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29508.D GGG709.M Thu Nov 03 08:44:53 2011

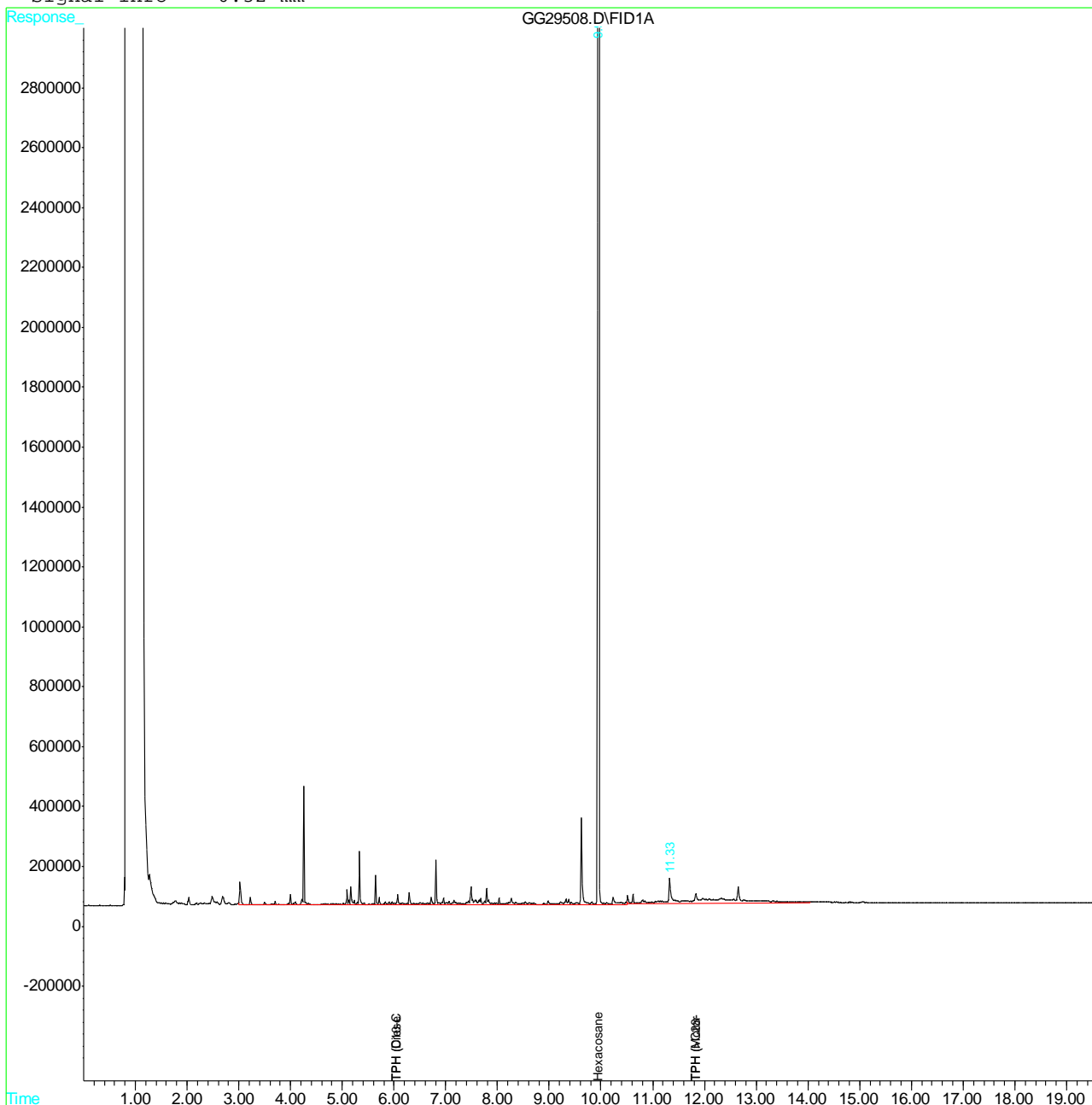
7.2.1  
 7

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG788\GG29508.D Vial: 12  
 Acq On : 11-1-11 12:36:14 PM Operator: JAMESH  
 Sample : OP4818-MB Inst : Diesel #2  
 Misc : OP4818,GGG788,1000,,,1,1,WATER Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 7:48 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.2.1  
7

Quantitation Report (QT Reviewed)

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29527.D Vial: 4  
 Acq On : 11-2-11 8:19:45 AM Operator: JAMESH  
 Sample : OP4823-MB Inst : Diesel #2  
 Misc : OP4823,GGG789,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 13:16 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Initial Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S,M Hexacosane	9.95	93188558	65.543 ppm
Spiked Amount 100.000		Recovery =	65.54%
Target Compounds			
2) H,M TPH (C10-C28)	6.03	22041108	17.166 ppm
3) H TPH (>C28-C40)	11.83	11350643	12.728 ppm
4) H TPH (Mineral Spirits)	0.00	0	N.D. ppm
5) H TPH (Kerosene)	0.00	0	N.D. ppm
6) H,M TPH (Diesel)	6.03	22041108	16.844 ppm
7) H TPH (Motor Oil)	11.83	11350643	12.686 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GG29527.D GGG709.M Thu Nov 03 08:56:30 2011

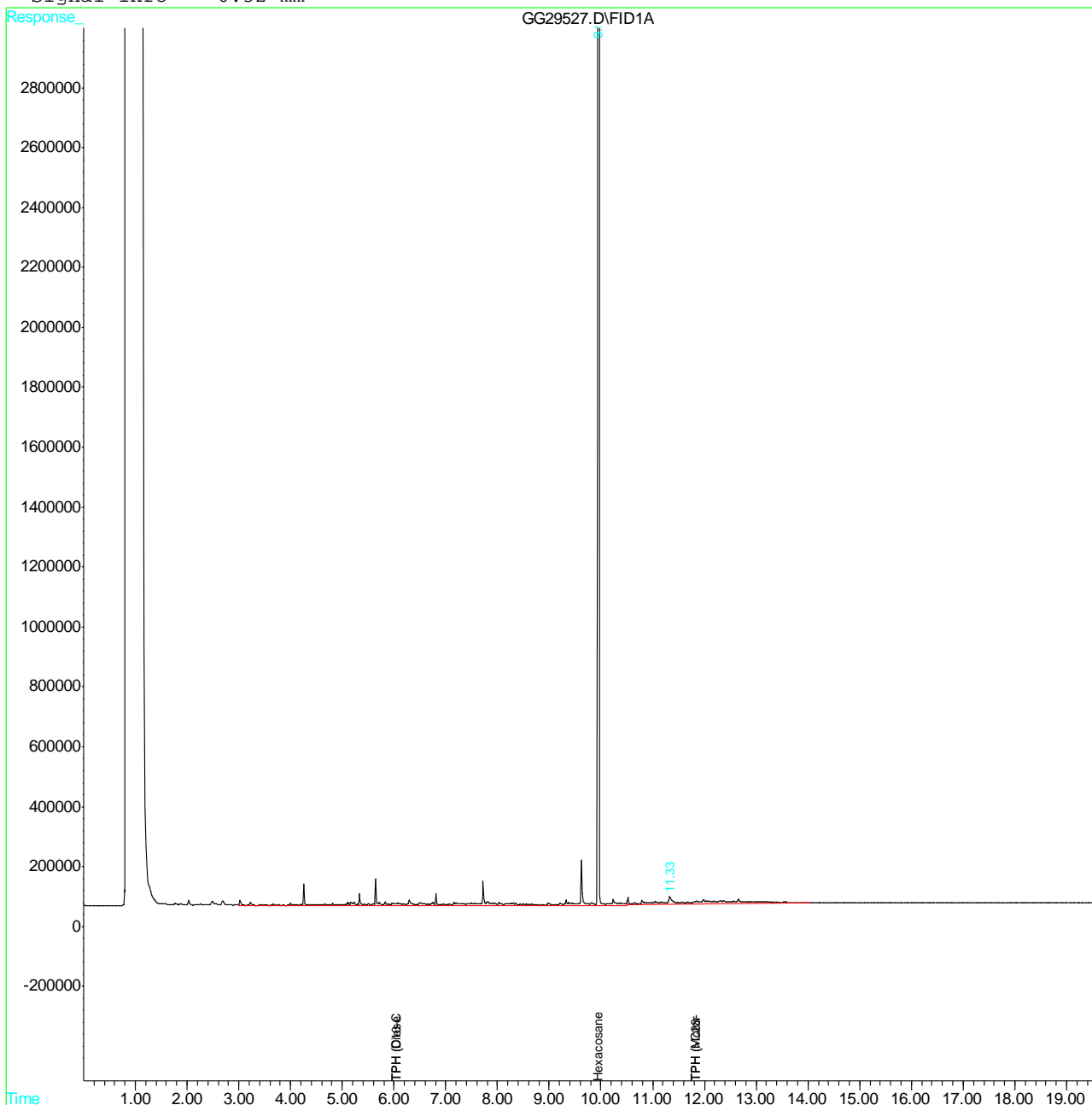
7.22  
 7

Quantitation Report

Data File : C:\DIESEL\D#2\DATA\GGG789\GG29527.D Vial: 4  
 Acq On : 11-2-11 8:19:45 AM Operator: JAMESH  
 Sample : OP4823-MB Inst : Diesel #2  
 Misc : OP4823,GGG789,10,,,1,1,SOIL Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 2 13:16 2011 Quant Results File: GGG709.RES

Quant Method : C:\DIESEL\D#2\METHODS\GGG709.M (Chemstation Integrator)  
 Title : DRO calibration: Back column  
 Last Update : Mon Sep 26 10:23:25 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : ACQ\_GG1.M

Volume Inj. : 1.0 uL  
 Signal Phase : HP-5  
 Signal Info : 0.32 mm



7.22  
7

## Metals Analysis

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C18698  
Account: BMECASF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4151  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 11/01/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.12		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15	0.10	<2.0
Calcium	5000	7.1	12		
Chromium	10	.3	.41	0.0	<10
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	-0.20	<10
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12	0.20	<5.0
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	23		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2	9.2	<20

Associated samples MP4151: C18698-1, C18698-2

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

8.1.1  
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18698  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4151  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/01/11

Metal	C18699-1 Original MS		Spike MPIR4	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium	11.8	521	500	101.8	75-125
Calcium	anr				
Chromium	12.5	540	500	105.5	75-125
Cobalt					
Copper	anr				
Iron	anr				
Lead	4.5	517	500	102.5	75-125
Magnesium	anr				
Manganese	anr				
Molybdenum					
Nickel	15.0	525	500	102.0	75-125
Potassium					
Selenium					
Silicon					
Silver	anr				
Sodium	anr				
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	67.3	579	500	102.3	75-125

Associated samples MP4151: C18698-1, C18698-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.12  
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18698  
 Account: BMECAF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4151  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/01/11

Metal	C18699-1 Original MSD	SpikeLot MPIR4	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium	11.8	528	500	103.2	1.3	20
Calcium	anr					
Chromium	12.5	549	500	107.3	1.7	20
Cobalt						
Copper	anr					
Iron	anr					
Lead	4.5	526	500	104.3	1.7	20
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	15.0	533	500	103.6	1.5	20
Potassium						
Selenium						
Silicon						
Silver	anr					
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	67.3	589	500	104.3	1.7	20

Associated samples MP4151: C18698-1, C18698-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.12  
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C18698  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4151  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/01/11

Metal	BSP Result	Spikelot MPIR4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	505	500	101.0	80-120
Calcium	anr			
Chromium	542	500	108.4	80-120
Cobalt				
Copper	anr			
Iron	anr			
Lead	518	500	103.6	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	511	500	102.2	80-120
Potassium				
Selenium				
Silicon				
Silver	anr			
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	547	500	109.4	80-120

Associated samples MP4151: C18698-1, C18698-2

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

8.1.3  
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: C18698  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4151  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/01/11

Metal	C18699-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	11.8	11.6	1.7	0-10
Calcium	anr			
Chromium	12.5	11.4	8.8	0-10
Cobalt				
Copper	anr			
Iron	anr			
Lead	4.50	7.30	62.2 (a)	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	15.0	14.5	3.3	0-10
Potassium				
Selenium				
Silicon				
Silver	anr			
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	67.3	66.9	0.6	0-10

Associated samples MP4151: C18698-1, C18698-2

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.1.4  
8

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C18698  
Account: BMECAF - Burns and McDonnell Engineering  
Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4152  
Matrix Type: SOLID

Methods: SW846 6010B  
Units: mg/kg

Prep Date: 11/01/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015	-0.010	<1.0
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054	0.030	<1.0
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	0.030	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024	0.0	<1.0
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098	0.25	<2.0

Associated samples MP4152: C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18698  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4152  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/01/11

Metal	C18681-1 Original MS		Spike/lot MPIR4A % Rec		QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	0.38	39.5	44.6	87.6	75-125
Calcium					
Chromium	59.2	101	44.6	93.6	75-125
Cobalt	anr				
Copper	anr				
Iron					
Lead	12.0	54.7	44.6	95.6	75-125
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	81.9	118	44.6	80.9	75-125
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	59.0	99.3	44.6	90.3	75-125

Associated samples MP4152: C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

8.2.2  
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C18698  
 Account: BMECAF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4152  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/01/11

Metal	C18681-1 Original MSD	SpikeLot MPiR4A	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	0.38	41.7	46.7	88.4	5.4	20
Calcium						
Chromium	59.2	104	46.7	95.9	2.9	20
Cobalt	anr					
Copper	anr					
Iron						
Lead	12.0	58.4	46.7	99.3	6.5	20
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	81.9	141	46.7	126.5N(a)	17.8	20
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	59.0	103	46.7	94.2	3.7	20

Associated samples MP4152: C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested  
 (a) Spike recovery indicates possible matrix interference.

8.2.2  
 8



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C18698  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4152  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 11/01/11

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	46.8	50	93.6	80-120
Calcium				
Chromium	50.7	50	101.4	80-120
Cobalt	anr			
Copper	anr			
Iron				
Lead	47.6	50	95.2	80-120
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	47.0	50	94.0	80-120
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	51.4	50	102.8	80-120

Associated samples MP4152: C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

8.2.3  
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: C18698  
 Account: BMECASF - Burns and McDonnell Engineering  
 Project: T0600102107-YRC-Roadway Express, 1708 Wood Street, Oakland, CA

QC Batch ID: MP4152  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 11/01/11

Metal	C18681-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	4.10	3.70	9.8	0-10
Calcium				
Chromium	645	753	16.7*(a)	0-10
Cobalt	anr			
Copper	anr			
Iron				
Lead	131	142	8.3	0-10
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	893	930	4.1	0-10
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	643	747	16.1*(a)	0-10

Associated samples MP4152: C18698-3, C18698-4, C18698-5, C18698-6, C18698-7, C18698-8

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested  
 (a) Serial dilution indicates possible matrix interference.

8.2.4  
8

**APPENDIX E**

**San Francisco Bay-State water Resources Quality Control Board  
Environmental Screening Levels (ESLs)**

**Table B. Environmental Screening Levels (ESLs)  
Shallow Soils ( $\leq 3$  m bgs)  
Groundwater is not a Current or Potential Source of Drinking Water**

Chemical	<sup>1</sup> Shallow Soil		<sup>3</sup> Groundwater (ug/L)
	<sup>2</sup> Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
Acenaphthene	1.9E+01	1.9E+01	2.3E+01
Acenaphthylene	1.3E+01	1.3E+01	3.0E+01
Acetone	5.0E-01	5.0E-01	1.5E+03
Aldrin	3.2E-02	1.3E-01	1.3E-01
Anthracene	2.8E+00	2.8E+00	7.3E-01
Antimony	6.3E+00	4.0E+01	3.0E+01
Arsenic	3.9E-01	1.6E+00	3.6E+01
Barium	7.5E+02	1.5E+03	1.0E+03
Benzene	1.2E-01	2.7E-01	4.6E+01
Benzo(a)anthracene	3.8E-01	1.3E+00	2.7E-02
Benzo(b)fluoranthene	3.8E-01	1.3E+00	2.9E-02
Benzo(k)fluoranthene	3.8E-01	1.3E+00	4.0E-01
Benzo(g,h,i)perylene	2.7E+01	2.7E+01	1.0E-01
Benzo(a)pyrene	3.8E-02	1.3E-01	1.4E-02
Beryllium	4.0E+00	8.0E+00	5.3E-01
1,1-Biphenyl	6.5E+00	6.5E+00	5.0E+00
Bis(2-chloroethyl) ether	1.5E-01	1.6E-01	1.2E+01
Bis(2-chloroisopropyl) ether	3.4E-02	7.7E-02	1.2E+01
Bis(2-ethylhexyl) phthalate	3.5E+01	1.2E+02	3.2E+01
Boron	1.6E+00	2.0E+00	1.6E+00
Bromodichloromethane	5.7E-01	1.3E+00	1.7E+02
Bromoform (Tribromomethane)	2.4E+01	2.4E+01	1.1E+03
Bromomethane	7.0E-01	2.3E+00	1.6E+02
Cadmium	1.7E+00	7.4E+00	2.5E-01
Carbon tetrachloride	2.0E-02	4.4E-02	9.3E+00
Chlordane	4.4E-01	1.7E+00	4.0E-03
p-Chloroaniline	5.3E-02	5.3E-02	5.0E+00
Chlorobenzene	1.5E+00	1.5E+00	2.5E+01
Chloroethane	8.5E-01	8.5E-01	1.2E+01
Chloroform	6.8E-01	1.5E+00	3.3E+02
Chloromethane	6.4E+00	6.4E+00	4.1E+01
2-Chlorophenol	1.2E-01	1.2E-01	1.8E+00
Chromium (total)			1.8E+02
Chromium III	7.5E+02	7.5E+02	1.8E+02
Chromium VI	8.0E+00	8.0E+00	1.1E+01
Chrysene	2.3E+01	2.3E+01	3.5E-01
Cobalt	4.0E+01	8.0E+01	3.0E+00
Copper	2.3E+02	2.3E+02	3.1E+00
Cyanide	3.6E-03	3.6E-03	1.0E+00
Dibenz(a,h)anthracene	6.2E-02	2.1E-01	2.5E-01
Dibromochloromethane	7.6E+00	1.4E+01	1.7E+02
1,2-dibromo-3-chloropropane	4.5E-03	4.5E-03	2.0E-01
1,2-Dibromoethane	1.9E-02	4.4E-02	1.5E+02
1,2-Dichlorobenzene	1.6E+00	1.6E+00	1.4E+01

**Table B. Environmental Screening Levels (ESLs)  
Shallow Soils ( $\leq 3$  m bgs)  
Groundwater is not a Current or Potential Source of Drinking Water**

Chemical	<sup>1</sup> Shallow Soil		<sup>3</sup> Groundwater (ug/L)
	<sup>2</sup> Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
1,3-Dichlorobenzene	7.4E+00	7.4E+00	6.5E+01
1,4-Dichlorobenzene	1.2E+00	1.8E+00	1.5E+01
3,3-Dichlorobenzidine	5.3E-01	2.4E+00	2.5E+02
Dichlorodiphenyldichloroethane (DDD)	2.4E+00	1.0E+01	1.0E-03
Dichlorodiphenyldichloroethene (DDE)	1.7E+00	4.0E+00	1.0E-03
Dichlorodiphenyltrichloroethane (DDT)	1.7E+00	4.0E+00	1.0E-03
1,1-Dichloroethane	1.9E+00	1.9E+00	4.7E+01
1,2-Dichloroethane	2.2E-01	4.8E-01	2.0E+02
1,1-Dichloroethene	4.3E+00	4.3E+00	2.5E+01
<i>cis</i> -1,2-Dichloroethene	6.5E+00	1.8E+01	5.9E+02
<i>trans</i> -1,2-Dichloroethene	1.0E+01	3.4E+01	5.9E+02
2,4-Dichlorophenol	3.0E+00	3.0E+00	3.0E+00
1,2-Dichloropropane	4.6E-01	1.0E+00	1.0E+02
1,3-Dichloropropene	1.7E-01	3.6E-01	2.4E+01
Dieldrin	2.3E-03	2.3E-03	1.9E-03
Diethyl phthalate	3.5E-02	3.5E-02	1.5E+00
Dimethyl phthalate	3.5E-02	3.5E-02	1.5E+00
2,4-Dimethylphenol	7.4E-01	7.4E-01	1.1E+02
2,4-Dinitrophenol	4.2E-02	4.2E-02	1.5E+01
2,4-Dinitrotoluene	8.6E-01	8.6E-01	1.2E+02
1,4-Dioxane	2.4E+01	3.0E+01	5.0E+04
Dioxin (2,3,7,8-TCDD)	4.5E-06	1.8E-05	1.0E-06
Endosulfan	4.6E-03	4.6E-03	8.7E-03
Endrin	6.5E-04	6.5E-04	2.3E-03
Ethylbenzene	2.3E+00	4.7E+00	4.3E+01
Fluoranthene	4.0E+01	4.0E+01	8.0E+00
Fluorene	8.9E+00	8.9E+00	3.9E+00
Heptachlor	1.3E-02	1.3E-02	3.6E-03
Heptachlor epoxide	1.4E-02	1.4E-02	3.6E-03
Hexachlorobenzene	3.4E-01	1.3E+00	3.7E+00
Hexachlorobutadiene	3.1E+00	4.6E+00	9.3E-01
$\gamma$ -Hexachlorocyclohexane (Lindane)	9.8E-03	9.8E-03	1.6E-02
Hexachloroethane	1.2E+01	4.1E+01	1.2E+01
Indeno(1,2,3-c,d)pyrene	6.2E-01	2.1E+00	4.8E-02
Lead	2.0E+02	7.5E+02	2.5E+00
Mercury (elemental)	1.3E+00	1.0E+01	2.5E-02
Methoxychlor	1.9E+01	1.9E+01	3.0E-03
Methylene chloride	7.2E+00	1.7E+01	2.2E+03
Methyl ethyl ketone	1.3E+01	1.3E+01	1.4E+04
Methyl isobutyl ketone	3.9E+00	3.9E+00	1.7E+02
Methyl mercury	1.2E+00	1.2E+01	3.0E-03
2-Methylnaphthalene	2.5E-01	2.5E-01	2.1E+00
<i>tert</i> -Butyl methyl ether	8.4E+00	8.4E+00	1.8E+03
Molybdenum	4.0E+01	4.0E+01	2.4E+02

**Table B. Environmental Screening Levels (ESLs)  
Shallow Soils ( $\leq 3$  m bgs)  
Groundwater is not a Current or Potential Source of Drinking Water**

Chemical	<sup>1</sup> Shallow Soil		<sup>3</sup> Groundwater (ug/L)
	<sup>2</sup> Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
Naphthalene	1.3E+00	2.8E+00	2.4E+01
Nickel	1.5E+02	1.5E+02	8.2E+00
Pentachlorophenol	3.0E+00	5.0E+00	7.9E+00
Perchlorate	1.1E+01	1.4E+02	6.0E+02
Phenanthrene	1.1E+01	1.1E+01	4.6E+00
Phenol	3.9E+00	3.9E+00	2.6E+02
Polychlorinated biphenyls (PCBs)	2.2E-01	7.4E-01	1.4E-02
Pyrene	8.5E+01	8.5E+01	2.0E+00
Selenium	1.0E+01	1.0E+01	5.0E+00
Silver	2.0E+01	4.0E+01	1.9E-01
Styrene	1.5E+01	1.5E+01	1.0E+02
tert-Butyl alcohol	1.0E+02	1.1E+02	1.8E+04
1,1,1,2-Tetrachloroethane	2.0E+00	4.5E+00	9.3E+02
1,1,2,2-Tetrachloroethane	2.7E-01	6.0E-01	1.9E+02
Tetrachloroethene	3.7E-01	9.5E-01	1.2E+02
Thallium	1.3E+00	1.6E+01	4.0E+00
Toluene	9.3E+00	9.3E+00	1.3E+02
Toxaphene	4.2E-04	4.2E-04	2.0E-04
TPH (gasolines)	1.0E+02	1.8E+02	2.1E+02
TPH (middle distillates)	1.0E+02	1.8E+02	2.1E+02
<b>TPH (residual fuels)</b>	<b>3.7E+02</b>	<b>2.5E+03</b>	<b>2.1E+02</b>
1,2,4-Trichlorobenzene	7.6E+00	7.6E+00	2.5E+01
1,1,1-Trichloroethane	7.8E+00	7.8E+00	6.2E+01
1,1,2-Trichloroethane	5.0E-01	1.1E+00	3.5E+02
Trichloroethene	1.9E+00	4.1E+00	3.6E+02
2,4,5-Trichlorophenol	1.8E-01	1.8E-01	1.1E+01
2,4,6-Trichlorophenol	1.6E+00	1.0E+01	9.7E+01
Vanadium	1.6E+01	2.0E+02	1.9E+01
Vinyl chloride	2.2E-02	4.7E-02	3.8E+00
Xylenes	1.1E+01	1.1E+01	1.0E+02
Zinc	6.0E+02	6.0E+02	8.1E+01

**Notes:**

1. Shallow soils defined as soils less than or equal to 3 meters (approximately 10 feet) below ground surface.
  2. Category "Residential Land Use" generally considered adequate for other sensitive uses.
  3. Assumes potential discharge of groundwater into a freshwater, marine or estuary surface water system.
- Soil ESLs intended to address direct-exposure, groundwater protection, ecologic (urban areas) and nuisance concerns under noted land-use scenarios. **Soil gas data should be collected for additional evaluation of potential indoor-air impacts at sites with areas of VOC-contaminated soil.**
- Groundwater ESLs intended to be address drinking water, surface water, indoor-air and nuisance concerns. **Use in conjunction with soil gas screening levels to more closely evaluate potential impacts to indoor-air if groundwater screening levels for this concern approached or exceeded.**
- Aquatic habitat goals for bioaccumulation concerns not considered in selection of groundwater goals.
- TPH - Total Petroleum Hydrocarbons. TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g., BTEX, PAHs, oxidizers, etc.).

**Table D. Environmental Screening Levels (ESLs)  
Deep Soils (>3m bgs)  
Groundwater is not a Current or Potential Source of Drinking Water**

Chemical	<sup>1</sup> Deep Soil		<sup>3</sup> Groundwater (µg/L)
	<sup>2</sup> Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
Acenaphthene	1.9E+01	1.9E+01	2.3E+01
Acenaphthylene	1.3E+01	1.3E+01	3.0E+01
Acetone	5.0E-01	5.0E-01	1.5E+03
Aldrin	1.5E+00	1.5E+00	1.3E-01
Anthracene	2.8E+00	2.8E+00	7.3E-01
Antimony	3.1E+02	3.1E+02	3.0E+01
Arsenic	1.5E+01	1.5E+01	3.6E+01
Barium	2.5E+03	2.6E+03	1.0E+03
Benzene	2.0E+00	2.0E+00	4.6E+01
Benzo(a)anthracene	1.2E+01	1.2E+01	2.7E-02
Benzo(b)fluoranthene	1.5E+01	1.5E+01	2.9E-02
Benzo(k)fluoranthene	1.5E+01	1.5E+01	4.0E-01
Benzo(g,h,i)perylene	2.7E+01	2.7E+01	1.0E-01
Benzo(a)pyrene	1.5E+00	1.5E+00	1.4E-02
Beryllium	9.8E+01	9.8E+01	5.3E-01
1,1-Biphenyl	6.5E+00	6.5E+00	5.0E+00
Bis(2-chloroethyl) ether	1.6E-01	1.6E-01	1.2E+01
Bis(2-chloroisopropyl) ether	1.3E-01	1.3E-01	1.2E+01
Bis(2-ethylhexyl) phthalate	7.8E+02	7.8E+02	3.2E+01
Boron	6.3E+04	6.3E+04	1.6E+00
Bromodichloromethane	3.2E+00	3.2E+00	1.7E+02
Bromoform (Tribromomethane)	2.4E+01	2.4E+01	1.1E+03
Bromomethane	6.4E+00	6.4E+00	1.6E+02
Cadmium	3.9E+01	3.9E+01	2.5E-01
Carbon tetrachloride	1.9E+00	1.9E+00	9.3E+00
Chlordane	1.5E+01	1.5E+01	4.0E-03
p-Chloroaniline	5.3E-02	5.3E-02	5.0E+00
Chlorobenzene	1.5E+00	1.5E+00	2.5E+01
Chloroethane	8.5E-01	8.5E-01	1.2E+01
Chloroform	9.8E+00	9.8E+00	3.3E+02
Chloromethane	6.4E+00	6.4E+00	4.1E+01
2-Chlorophenol	1.2E-01	1.2E-01	1.8E+00
Chromium (total)	2.5E+03	5.0E+03	1.8E+02
Chromium III	2.5E+03	5.0E+03	1.8E+02
Chromium VI	5.3E-01	5.3E-01	1.1E+01
Chrysene	2.3E+01	2.3E+01	3.5E-01
Cobalt	9.4E+01	9.4E+01	3.0E+00
Copper	2.5E+03	5.0E+03	3.1E+00
Cyanide	3.6E-03	3.6E-03	1.0E+00
Dibenz(a,h)anthracene	2.4E+00	2.4E+00	2.5E-01
Dibromochloromethane	1.4E+01	1.4E+01	1.7E+02
1,2-dibromo-3-chloropropane	4.5E-03	4.5E-03	2.0E-01
1,2-Dibromoethane	1.0E+00	1.0E+00	1.5E+02
1,2-Dichlorobenzene	1.6E+00	1.6E+00	1.4E+01
1,3-Dichlorobenzene	7.4E+00	7.4E+00	6.5E+01
1,4-Dichlorobenzene	1.8E+00	1.8E+00	1.5E+01

**Table D. Environmental Screening Levels (ESLs)  
Deep Soils (>3m bgs)  
Groundwater is not a Current or Potential Source of Drinking Water**

Chemical	<sup>1</sup> Deep Soil		<sup>3</sup> Groundwater (µg/L)
	<sup>2</sup> Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
3,3-Dichlorobenzidine	3.1E+01	3.1E+01	2.5E+02
Dichlorodiphenyldichloroethane (DDD)	1.2E+02	1.2E+02	1.0E-03
Dichlorodiphenyldichloroethene (DDE)	8.7E+01	8.7E+01	1.0E-03
Dichlorodiphenyltrichloroethane (DDT)	4.3E+00	4.3E+00	1.0E-03
1,1-Dichloroethane	1.9E+00	1.9E+00	4.7E+01
1,2-Dichloroethane	1.8E+00	1.8E+00	2.0E+02
1,1-Dichloroethene	4.3E+00	4.3E+00	2.5E+01
<i>cis</i> -1,2-Dichloroethene	1.8E+01	1.8E+01	5.9E+02
<i>trans</i> -1,2-Dichloroethene	3.9E+01	3.9E+01	5.9E+02
2,4-Dichlorophenol	3.0E+00	3.0E+00	3.0E+00
1,2-Dichloropropane	2.5E+00	2.5E+00	1.0E+02
1,3-Dichloropropene	2.9E+00	2.9E+00	2.4E+01
Dieldrin	2.3E-03	2.3E-03	1.9E-03
Diethyl phthalate	3.5E-02	3.5E-02	1.5E+00
Dimethyl phthalate	3.5E-02	3.5E-02	1.5E+00
2,4-Dimethylphenol	7.4E-01	7.4E-01	1.1E+02
2,4-Dinitrophenol	4.2E-02	4.2E-02	1.5E+01
2,4-Dinitrotoluene	8.6E-01	8.6E-01	1.2E+02
1,4-Dioxane	3.0E+01	3.0E+01	5.0E+04
Dioxin (2,3,7,8-TCDD)	2.3E-04	2.3E-04	1.0E-06
Endosulfan	4.6E-03	4.6E-03	8.7E-03
Endrin	6.5E-04	6.5E-04	2.3E-03
Ethylbenzene	4.7E+00	4.7E+00	4.3E+01
Fluoranthene	6.0E+01	6.0E+01	8.0E+00
Fluorene	8.9E+00	8.9E+00	3.9E+00
Heptachlor	1.3E-02	1.3E-02	3.6E-03
Heptachlor epoxide	1.4E-02	1.4E-02	3.6E-03
Hexachlorobenzene	1.6E+01	1.6E+01	3.7E+00
Hexachlorobutadiene	4.6E+00	4.6E+00	9.3E-01
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	9.8E-03	1.6E-02
Hexachloroethane	4.1E+01	4.1E+01	1.2E+01
Indeno(1,2,3-c,d)pyrene	1.3E+01	1.3E+01	4.8E-02
Lead	7.5E+02	7.5E+02	2.5E+00
Mercury (elemental)	5.8E+01	5.8E+01	2.5E-02
Methoxychlor	1.9E+01	1.9E+01	3.0E-03
Methylene chloride	3.4E+01	3.4E+01	2.2E+03
Methyl ethyl ketone	1.3E+01	1.3E+01	1.4E+04
Methyl isobutyl ketone	3.9E+00	3.9E+00	1.7E+02
Methyl mercury	4.1E+01	4.1E+01	3.0E-03
2-Methylnaphthalene	2.5E-01	2.5E-01	2.1E+00
<i>tert</i> -Butyl methyl ether	8.4E+00	8.4E+00	1.8E+03
Molybdenum	2.5E+03	3.9E+03	2.4E+02



**Table D. Environmental Screening Levels (ESLs)  
Deep Soils (>3m bgs)  
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Chemical	<sup>1</sup> Deep Soil		<sup>3</sup> Groundwater (µg/L)
	<sup>2</sup> Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
Naphthalene	4.8E+00	4.8E+00	2.4E+01
Nickel	2.6E+02	2.6E+02	8.2E+00
Pentachlorophenol	9.9E+01	9.9E+01	7.9E+00
Perchlorate	5.4E+02	5.4E+02	6.0E+02
Phenanthrene	1.1E+01	1.1E+01	4.6E+00
Phenol	3.9E+00	3.9E+00	2.6E+02
Polychlorinated biphenyls (PCBs)	6.3E+00	6.3E+00	1.4E-02
Pyrene	8.5E+01	8.5E+01	2.0E+00
Selenium	2.5E+03	3.9E+03	5.0E+00
Silver	2.5E+03	3.9E+03	1.9E-01
Styrene	1.5E+01	1.5E+01	1.0E+02
<i>tert</i> -Butyl alcohol	1.1E+02	1.1E+02	1.8E+04
1,1,1,2-Tetrachloroethane	1.6E+01	1.6E+01	9.3E+02
1,1,2,2-Tetrachloroethane	3.4E+00	3.4E+00	1.9E+02
Tetrachloroethene	1.7E+01	1.7E+01	1.2E+02
Thallium	6.2E+01	6.2E+01	4.0E+00
Toluene	9.3E+00	9.3E+00	1.3E+02
Toxaphene	4.2E-04	4.2E-04	2.0E-04
TPH (gasolines)	1.8E+02	1.8E+02	2.1E+02
TPH (middle distillates)	1.8E+02	1.8E+02	2.1E+02
TPH (residual fuels)	5.0E+03	5.0E+03	2.1E+02
1,2,4-Trichlorobenzene	7.6E+00	7.6E+00	2.5E+01
1,1,1-Trichloroethane	7.8E+00	7.8E+00	6.2E+01
1,1,2-Trichloroethane	4.8E+00	4.8E+00	3.5E+02
Trichloroethene	3.3E+01	3.3E+01	3.6E+02
2,4,5-Trichlorophenol	1.8E-01	1.8E-01	1.1E+01
2,4,6-Trichlorophenol	3.2E+01	3.2E+01	9.7E+01
Vanadium	7.7E+02	7.7E+02	1.9E+01
Vinyl chloride	6.6E-01	6.6E-01	3.8E+00
Xylenes	1.1E+01	1.1E+01	1.0E+02
Zinc	2.5E+03	5.0E+03	8.1E+01

**Notes:**

1. Shallow soils defined as soils less than or equal to 3 meters (approximately 10 feet) below ground surface.
  2. Category "Residential Land Use" generally considered adequate for other sensitive uses.
  3. Assumes potential discharge of groundwater into a freshwater, marine or estuary surface water system.
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- Aquatic habitat goals for bioaccumulation concerns not considered in selection of groundwater goals.
- TPH -Total Petroleum Hydrocarbons. TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g., BTEX, PAHs, oxidizers, etc.).