

**Interim Remedial Action Plan  
Site B Portion of Verbeek Wrecking Yard  
Bothell, Washington**

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**Prepared for:  
Puget Sound Energy and  
City of Seattle**

**Dalton, Olmsted & Fuglevand, Inc. *Environmental Consultants***

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Ecology Review Draft: January 15, 2010

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- Attachment A – Laboratory Data Sheets – 2008 GreenCo Excavation Area
- Attachment B – Floyd/Snider Sampling Report and Laboratory Data Sheets
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- Attachment D – Preliminary Sampling Results Report, April 2009 Sampling
- Attachment E - Field Procedures, Geologic Logs, Analytical Procedures, and Laboratory  
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- Attachment F - Compliance Monitoring Plan

property as generally illustrated on Figure 2. This interpretation is consistent with a sample location sketch apparently developed by GreenCo and provided by the owner (Figure 3). The excavated soil currently lies in a stockpile located within the western portion of the Verbeek property and is covered by plastic (Figures 2 and 4).

The GreenCo site sketch (Figure 3) and laboratory data sheets (Attachment A) indicated that GreenCo collected soil samples in August 2008 from the bottom and sidewalls of the excavated area and had samples analyzed for a number of constituents. These constituents included petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene and xylenes, polychlorinated biphenyls (PCBs) and metals (lead, chromium, cadmium, arsenic and mercury). The samples appear to have been obtained after soil excavation was completed. The analytical results are summarized in Table 1.

In September 2008, Floyd/Snider made a site visit and observed the potential presence of additional impacted soil in certain fill layers exposed on the side walls of the limits of the GreenCo excavation. Floyd/Snider collected a number of soil samples from the stockpile/ biopile and of three in-situ locations in Site B. The soil samples were analyzed for semivolatile organic compounds (SVOCs) including PAHs. Floyd/Snider's sampling report and laboratory data sheets are presented in Attachment B. The analytical results are summarized in Tables 2 and 3.

GreenCo contracted for the installation of two monitoring wells that were installed by ESM-NW on September 22, 2008 (Figure 4). Samples were obtained from the wells on September 23 or 24 for analysis to assess whether site activities have impacted groundwater quality. Resource Protection Well Reports submitted to Ecology by the driller (Attachment C), indicate the wells range in depth from 39 feet (BAF236) to 48 feet (BAF 235). Screens were set from 34 to 39 feet and 38 to 48 feet, below ground level. No geologic logs appear to have been prepared. Groundwater samples were collected and analyzed for polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs). Laboratory data sheets are presented in Attachment C and analytical results are summarized in Table 4.

There is little documentation of the work completed by GreenCo in 2008. To provide data to prepare this IRAP, DOF completed additional site sampling and testing in April 2009. The work included excavating test pits, collecting/analyzing soil samples from the pits and collecting groundwater from the two existing monitoring wells. The report that documents this work (DOF 2009) is presented in Attachment D.

Additional supplemental exploration and testing work was completed in late August/early September 2009 to further define the extent of GWP fill within Site B. This work included sampling seven push-probes along the eastern and southeastern boundary of Site B and the excavation/sampling of nine additional test pits. Field sampling procedures, geologic logs and analytical procedures are presented in Attachment E.

Sampling locations are shown on Figure 5. Groundwater quality results are summarized in Table 4. The analytical soil results are summarized in Tables 5 and 6. Analytical Resources Inc. (ARI) completed the laboratory analyses. Laboratory data sheets are presented on CD in Attachments D (April 09 sampling) and E (August/September sampling).

## SITE DESCRIPTION

The overall former wrecking yard site is approximately 3 to 3.5 acres in size (Figure 4). Access to the site is from the Bothell-Everett Highway located along the east site boundary. Two structures are present in the eastern portion of the site including a former residence and a shop building. Most of the site is unpaved.

Elevations along the eastern portion of the property range between approximately 280 and 284 feet and are somewhat higher in the area surrounding the former residence. Surface elevations generally slope downward in a westerly direction to as low as 268 feet within the northwestern portion of the site.

As part of the previous work, a stormwater sewer line was installed through the GreenCo excavation area (Figures 4 and 5). A number of stockpiles are present within the western portion of the site (Figure 4). These include two gravel and two crushed concrete stockpiles and a soil stockpile that contains GWP-Fill material excavated by GreenCo in 2008. It is estimated that the soil stockpile contains approximately 6,000 to 6,500 cubic yards of material.

## SITE B (GWP FILL) CONTAMINANTS OF POTENTIAL CONCERN (COPCS)

DOF completed soil sampling within Site B in April and September 2009. Analyses were conducted for petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, semivolatile organic compounds (SVOCs) and metals. The results of laboratory analyses were compared to unrestricted site use Cleanup Levels (CULs) contained in the Washington State Model Toxics Control Act (MTCA); Chapter 173-349 WAC (Table 5).

CULs were exceeded for the constituents listed below. Where the maximum concentration was exceeded, further analysis was completed using the cleanup criteria listed in WAC 173-340-740(7)(e) to assess whether the CULs were exceeded.

Constituent	Human Health CUL (mg/kg)	Terrestrial CUL (3) (mg/kg)
Gasoline-Range Hydrocarbons	30/100 (A)(1)	200
Diesel-Range Hydrocarbons	2000 (A)	460
Motor Oil-Range Hydrocarbons	2000 (A)	Not available
Benzene	0.03 (A)	Not available
Total Naphthalenes	5.0 (A)	Not available
Carcinogenic PAHs (2)	0.14 (B)	30 [as benzo(a)pyrene]
Arsenic	20 (A)	20
Nickel	1600 (B)	100

Notes: (A) – Method A (WAC 173-340-900-Table 740-1)

(B) Method B (CLARC)

(1) – 30 mg/kg w/benzene present; 100 mg/kg w/o benzene present.

(2) – Based on benzo(a)pyrene equivalent concentration (Ecology 2007).

(3) – Table 749-2

In addition to the constituents listed above, the maximum concentrations in one or more samples of barium, chromium, and lead, exceeded a terrestrial CUL. However, these metal constituents are not considered Site B COPCs based on the following discussion.

- Barium** - The maximum concentration of barium exceeded the terrestrial CUL of 1,250 mg/kg in only one of forty-one samples (TP12-1 at 1,550 mg/kg). The remaining concentrations were less than 435 mg/kg. The maximum concentration is less than two times the cleanup level and the number of exceedances was less than 10% of the sample set. High barium concentrations (above CULs) are not associated with GWP-Fill. Using MTCA-Stat., if the TP12-1 barium concentration value is eliminated from the statistical calculation, the log-transformed data is log-normally distributed and an Upper 95% Concentration on the Mean (UCL95%) of approximately 86 mg/kg is estimated. The UCL95% concentration for barium is well below the terrestrial CUL of 1,250 mg/kg. Based on these considerations, barium is not a Site B COPC.
- Chromium** - The maximum concentration of total chromium (55 mg/kg), slightly exceeded the terrestrial CUL of 42 mg/kg (4 of 41 samples) or Puget Sound background concentration of 48 mg/kg (3 of 41 samples). The maximum concentration is less than two times the cleanup level and the number of exceedances of either concentration level was less than 10% of the sample set. The data appears to be normally distributed. Using MTCA-Stat. a total chromium UCL95% concentration of approximately 33 mg/kg is estimated. The UCL95% total chromium concentration is below the terrestrial CUL of 42 mg/kg. Based on these considerations, total chromium is not a Site B COPC.
- Lead** - The maximum concentration of lead exceeded the terrestrial CUL of 220 mg/kg in only one of forty-one samples (TP5-3 at 238 mg/kg). The maximum

concentration is less than two times the cleanup level and the number of exceedances of the CUL was less than 10% of the sample set. Lead was not detected (reporting limit 2 mg/kg) in nine samples. Using a log-transform of the detected concentrations (N=32), the data is estimated to be log-normally distributed with a UCL95% concentration of approximately 15 mg/kg. The UCL95% concentration for lead is well below the terrestrial CUL. Based on these considerations, lead is not a Site B COPC.

## SUMMARY OF SITE B IN-SITU SOIL QUALITY CONDITIONS

### *GreenCo Excavation Area*

In August 2008, GreenCo completed remedial excavation in a portion of Site B (Figures 2 and 5). After excavation was completed, soil samples were collected and analyzed for a variety of constituents including petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, polycyclic aromatic hydrocarbons (PAHs), other SVOCs, polychlorinated biphenyls (PCBs), and metals (Table 1). Sample locations are shown on Figure 3. A comparison of the results with CULs indicated that concentrations were below CULs except at three locations as follows:

- Gasoline-Range Hydrocarbons – Samples 5B (260 mg/kg) and 6B (310 mg/kg) exceeded the CUL of 100 mg/kg (Figure 3). These samples appear to have been bottom samples obtained from the east end of the GreenCo. excavation.
- Total Naphthalenes – Sample 4B (130 mg/kg) exceeded the CUL of 5 mg/kg. Sample 4B appears to have been a south sidewall sample obtained near the east end of the GreenCo excavation.
- CPAHs (based on BaPEq. concentrations) – Sample 4B (1.6 mg/kg) exceeded the Method B (0.14 mg/kg) CUL.

In April 2009 DOF collected samples from two test pits (TP6 and TP7) in the GreenCo excavation area (Figure 5). No visual indications of GWP-Fill were observed. Two samples from each pit were obtained. Analyses were conducted for the identified COPCs (Table 5). None of the constituent concentrations exceeded CULs.

In August 2009, DOF excavated a test pit (TP-27) at the approximate location of GreenCo samples 5B and 6B where the CUL for gasoline range hydrocarbons was exceeded. No GWP fill material was observed. Two samples were collected for laboratory analysis from depths of between four and six feet near the estimated GreenCo sample interval. No gasoline range hydrocarbon constituents were detected.

### *Outside GreenCo Excavation Area*

Sampling and soil analyses completed by DOF in April 2009 were initially used to estimate the extent and remaining volume of GWP-Fill in the Site B area (Attachment D).

These estimates were modified by supplemental data collected in August and September 2009. Field observations were used to select soil samples for analysis. Based on the field observations and analytical data, the remaining extent of GWP-Fill exceeding CULs on Site B was estimated (Figure 6). Data from probe P6 and TP-20 indicate that some GWP-Fill may be present on the Gold's Gym property, located south of Site B.

As illustrated on Figure 6, the GreenCo excavation in 2008 appears to have bisected the GWP fill area on Site B. Interpretative geologic sections were developed to generally illustrate the vertical extent of GWP-Fill (Figures 7 and 8).

GWP-Fill is, for the most part, visually obvious based on field evidence. Analysis of obvious GWP material indicated BaPEq concentrations of approximately 7 mg/kg (TP-9) to 109 mg/kg (TP-3). As illustrated on Figures 7 and 8, BaPEq concentrations were not detected in samples of soil collected from just beneath GWP Fill (e.g. TP11, TP17, TP21). The reporting limits for these samples (<0.05 mg/kg) were below the CUL of 0.14 mg/kg.

The logs and analytical results indicate that most, if not all, the GWP-Fill materials exist above a depth below ground surface of 15 feet. At TP-1 near the western edge of the GWP-Fill material, a BaPEq concentration of 0.20 mg/kg was detected in a sample from a depth of 18 feet. This concentration is slightly above the CUL of 0.14 mg/kg. However, no GWP-Fill material was visually identified in the test pit excavation. Based on the available data, it is likely that the sample result is not representative of the soil quality conditions at this depth. Compliance sampling will be completed during remedial excavation to confirm conditions along the western edge of GWP-Fill.

The log Geotech boring B-B8, indicated the possible presence of GWP-Fill at a depth of 8.5 to 9 feet. B-B8 is located on the west end of the GreenCo excavation and was completed before GreenCo worked on the site. The depth of the possible GWP-fill encountered in the boring is consistent with observations made in test pit locations. It is assumed that Green Co removed GWP-Fill from this area, especially as they installed a stormwater line through this general area. However, the final extent of GWP-Fill excavation in this area and elsewhere within Site B will be based on laboratory analysis of compliance samples.

In-situ GWP-Fill is present north and south of the 2008 excavation area. The north GWP-Fill area is estimated to be approximately 13,700 square feet in size. The approximate GWP fill interval ranged from 4 to 8 feet below existing grade at TP25, 0.5 to 4.5 feet below existing grade at TP-11 and TP-17, and thins to the east to 3 to 3.5 feet at TP-9. GWP-Fill declines in elevation and depth below ground surface in a westerly direction as illustrated on Section A-A' on Figure 7. For volume estimating purposes, one half of the north area was assumed to be underlain by four feet of GWP fill and the remaining area by 0.5 feet of GWP-Fill. Based on these assumptions, an in-situ GWP fill volume of 1,000 to 1,500 in-situ cubic yards is estimated.



The south GWP fill area is estimated to be approximately 25,000 square feet in size. The approximate GWP fill thickness ranged between approximately 1 and 5 feet. GWP-Fill depth intervals ranged from 5 to 10 feet below existing grade at TP-4 and appears to thin in a southward and westward direction to approximately 9.5 to 12 feet at TP-18 and 11 to 12 feet at TP-23 (Figure 6). At TP-19, GWP was observed in the depth interval of 8 to 10 feet. In April 2009, no GWP-Fill was observed at the TP-2 location. In August 2009, a second pit was excavated at the TP2 location and the original observations were confirmed.

For volume estimating purposes in the south area, the eight thickness measurements were statistically analyzed using Ecology's MTCA-Stat program. The measurements are lognormally distributed with a log normal mean of 2.4 feet and a 95% upper confidence limit on the mean (UCL95%) of 4.0 feet. Using these values, in-situ GWP-Fill volumes of approximately 2,200 to 3,700 cubic yards are estimated. Using the statistical calculations and spatial extent of the measurements (Figure 6), it is our opinion that the actual volume is likely in the 2,000 to 2,500 cubic yard range.

In addition to the areas noted above, Landau identified an area of surface soils where cPAHs exceeded the cPAH CUL of 0.14 mg/kg (see Figure 14 of the Landau Cleanup Action Plan) above and in the immediate vicinity of the north GWP-Fill area noted above. Landau speculates that the cause of the surface soil cPAH contamination was the result of exploration test pits completed in this area. The logs of test pits in this area indicate that in a portion of the area, a thin fill layer (0.5 feet) was placed over GWP-Fill containing cPAHs. It is more likely that the GWP-Fill was disturbed during placement of this fill, causing cPAH contamination of the surface fill layer. As part of the GWP-fill remediation, surface soils containing cPAH contamination (associated with GWP-Fill) above the cPAH CUL will be excavated and disposed of off-site.

## SOIL STOCKPILE

Soil excavated by GreenCo in 2008 was placed in a stockpile within the western portion of the Verbeek property (Figures 2 and 4). Using a topographic map prepared by Western Engineers, Inc. for the property owner, it is estimated that the stockpile contains approximately 6,000 to 6,500 cubic yards of soil.

The stockpile was sampled by representatives of Floyd/Snider in September 2008. Samples were analyzed for petroleum hydrocarbons and SVOCs. The Floyd/Snider sampling report (Floyd Snider 2009) and laboratory data sheets are contained in Attachment B. The analytical results are summarized in Table 2. A review of the analytical data indicate that the stockpile contains excavated GWP-Fill.

## RESULTS OF GROUNDWATER SAMPLING

The two existing wells on Verbeek property that GreenCo had installed have been sampled on two occasions; by GreenCo in September 2008 (Attachment C) and by DOF in April 2009 (Attachment D). The results of both samplings are summarized in Table 4. Comparison of the results with MTCA CULs indicates that groundwater at the well locations meets CULs. However, as discussed below and in Attachment D, additional work is necessary to establish the site specific hydrogeology.

## INTERIM REMEDIAL ACTION

### *Permitting*

A grading permit will likely be required from Snohomish County to complete the remedial work. This permit will be obtained by the site owner.

### *Locate Utilities*

Previous work on the site indicates that the recently installed storm sewer line is the only buried utility in the target remedial area. This line will be marked in the field prior to any excavation work and the inlets will be blocked, as necessary, to prevent any stormwater runoff from entering the sewer line while the remedial work is being conducted.

### *Health and Safety Plan*

The existing DOF health and safety plan will be modified for work anticipated by DOF staff. Prior to the start of the remedial excavation, the selected contractor will be required to prepare a health and safety plan. The plan will contain the necessary information to comply with OSHA and WISHA requirements. Contractor field staff will have the appropriate training (40 hours with annual refreshers) to complete the remedial portion of the project.

### *Sample Stockpile for Disposal Purposes*

Samples of stockpile material will be obtained at three locations on the stockpile. At each location, three samples will be obtained and mixed. Three composite samples will be submitted for laboratory analysis of the following constituents:

- Petroleum hydrocarbons
- PAHs
- PCBs
- Total arsenic, cadmium, chromium, lead and mercury

If the total concentrations of any the above COCs exceed maximum allowable levels for Subtitle D landfill disposal, TCLP analyses will be conducted.

### ***Excavation***

The general remediation area will be marked in the field by DOF and the work area will be cordoned off as appropriate from public access along the Bothell-Everett Highway. Any paving will be removed, as necessary, from the targeted remedial areas. Paving would be stockpiled separately for disposal as non-contaminated material.

Excavation will generally proceed outward from the GreenCo excavation area. Observations will be made of the soils removed from the excavation for indications of GWP contamination (odor, soil color, sheens). Soil samples may be periodically obtained for laboratory analysis from excavation sidewalls and bottom to further guide the extent of excavation. If appropriate, these samples will be analyzed on a rapid turn-around basis.

Obviously contaminated soils will be directly loaded into trucks for disposal or be placed into the existing stockpile or a lined stockpile. Any soils that appear uncontaminated will be stockpiled separately and be used as backfill, as appropriate, following analytical confirmation. Any stockpile soils will need to be covered at the end of a work day. Care will be taken to prevent any runoff from the piles that contacts contaminated material.

The contractor will work with geologists from DOF with respect to determining the extent of excavation and sampling. Some delay between excavation and backfilling may occur because of laboratory turn-around. Any disruption in work flow will be minimized with close coordination between the contractor and consultant.

### ***Compliance Monitoring Plan***

As visually obvious GWP-Fill is excavated, compliance samples will be obtained to confirm that GWP-Fill has been removed to meet cleanup levels. A compliance monitoring plan (CMP) is presented in Attachment F.

### ***Handling of Water***

It is not anticipated that large quantities of groundwater will be encountered in the excavations, depending on when remedial excavation is conducted. Excavation subgrades will be managed to handle the influx of water to minimize the amount of water that needs to be pumped from the excavation. Excavation water will be pumped to a Baker tank. The water will be tested and disposed in an appropriate manner.

Surface water management will consist of berming and sloping the excavation area such that all runoff is directed into the excavation. Under no circumstances will any construction runoff be allowed to exit the work site or enter existing stormdrains. The contractor will provide an acceptable approach/plan to deal with this issue.

### ***Handling Debris***

Some large debris may be encountered during the remedial work. If encountered, the contractor will make diligent efforts to segregate this material during excavation for two reasons; 1) So that the material is acceptable to the disposal company, and 2) To possibly

qualify as non-contaminated at a reduced disposal fee.

#### *Disposal of Contaminated Materials*

Contaminated soil and water, if any, will be disposed off-site. Soil would be transported to a municipal landfill such as Rabanco/Allied Waste Company or Waste Management. The disposal facility and unit cost of disposal will be identified by the contractor. DOF and PSE would assist the contractor in completing the required waste profiles and obtaining acceptance from the selected landfill.

Contaminated water, if any, will need to be transported off-site to a treatment facility. The treatment facility and unit cost of disposal will be identified by the contractor.

The contractor will provide PSE with trip tickets, manifests and/or disposal certificates. These will be included with the remedial report.

#### *Backfilling*

Backfill will be placed and graded to the contours required by the grading permit. Backfill will consist of clean on-site soils set aside during excavation and clean imported pit-run sand and gravel. The backfill will be placed in lifts of 1-foot or less and compacted using vibratory equipment. At least two passes with a vibratory roller will be completed. The backfill will be compacted to a density equivalent or better than the existing fill soils onsite.

#### *Reporting*

After the remedial excavation work is completed, a remedial report will be prepared to document the GWP Fill cleanup. The report will include:

- Narrative description of remedial work.
- Figure showing extent of remedial excavation and compliance sample locations.
- Results of compliance samples (in table) and laboratory data sheets.
- Comparison of compliance sample results with MTCA CULs (see Appendix F).
- Disposal volumes and documentation from the disposal facility.

#### REFERENCES

DOF (Dalton, Olmsted & Fuglevand, Inc.), 2009, Results of Preliminary Sampling, Former Verbeek Wrecking Yard, Bothell, Washington, Draft: May 27, 2009.

Floyd/Snider, 2009, Summary of Field Sampling Activities, Prepared for City of Seattle Law Department, Project No. COS-LAW-VERBEEK, March 31, 2009.

## CLOSING

This plan was prepared consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with our client. This plan is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this plan apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this plan.

Dalton, Olmsted & Fuglevand, Inc.

Matthew G. Dalton  
Sr. Consulting Hydrogeologist

**TABLE 1 - Soil Quality Data Collected by GreenCo. - August 2008**

Location		1B	2B	3B	4B	5B	6B	7B	8	
Sample Date		Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	
Sample Depth (feet)		(a)	(a)	(a)	(a)	(a)	(a)	(a)	5 (b)	
Laboratory		AAL	AAL	AAL	AAL	AAL	AAL	AAL	AAL	
Constituents		Method								
<b>Petroleum Hydrocarbons (mg/kg)</b>										
Mineral Spirits/Stoddard Solvent Range Hydrocarbons	NW-TPH-Gx	<5	<5	<5	<5	<5	<5	<20	<5	
Gasoline Range Hydrocarbons	NW-TPH-Gx	11	<5	<5	71	260	310	<20	<5	
Kerosene/Jet fuel Range Hydrocabons	NWTPH-Dx	<20	<20	<20	<20	<20	<20	<20	<20	
Diesel/Fuel Oil Range Hydrocarbons	NWTPH-Dx	<20	<20	<20	<20	<20	<20	<50	94	
Creosote Range Hydrocarbons	NWTPH-Dx	180	24	45	650	220	360	----	----	
Heavy Oil Range Hydrocarbons	NWTPH-Dx	<50	<50	<50	<50	<50	<50	<100	830	
<b>BTEX (ug/kg)</b>										
Benzene	8021B	<20	<20	<20	<20	<20	<20	----	<20	
Toluene	8021B	<50	<50	<50	110	70	130	----	<50	
Ethylbenzene	8021B	71	<50	<50	270	1400	2200	----	<50	
Xylenes	8021B	160	<50	<50	1900	2000	2900	----	<50	
<b>Other Organic Compounds (ug/kg)</b>										
MTBE	8260B	----	<20	----	<20	----	----	----	----	
1,2-Dichloroethane (EDC)	8260B	----	<20	----	<20	----	----	----	----	
1,2-Dichloromethane (EDB)	8260B	----	<5	----	<5	----	----	----	----	
Naphthalene	8260B	----	880	----	130000	----	----	----	----	
<b>Polycyclic Aromatic Hydrocarbons (mg/kg)</b>										
Acenaphthylene	8270	----	<0.10	----	3.3	----	----	----	----	
Acenaphthene	8270	----	<0.10	----	3.5	----	----	----	----	
Fluorene	8270	----	<0.10	----	5.3	----	----	----	----	
Phenanthrene	8270	----	0.12	----	20	----	----	----	----	
Anthracene	8270	----	<0.10	----	3.1	----	----	----	----	
Fluoranthene	8270	----	0.17	----	9.3	----	----	----	----	
Pyrene	8270	----	0.28	----	15	----	----	----	----	
Benzo(a)anthracene	8270	----	<0.10	----	3.4	----	----	----	----	
Chrysene	8270	----	<0.10	----	4.8	----	----	----	----	
Benzo(b)fluoranthene	8270	----	<0.10	----	1.6	----	----	----	----	
Benzo(k)fluoranthene	8270	----	<0.10	----	1.8	----	----	----	----	

**TABLE 1 - Soil Quality Data Collected by GreenCo. - August 2008**

Location		1B	2B	3B	4B	5B	6B	7B	8
Sample Date		Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08
Sample Depth (feet)		(a)	(a)	(a)	(a)	(a)	(a)	(a)	5 (b)
Laboratory		AAL	AAL	AAL	AAL	AAL	AAL	AAL	AAL
<b>Constituents</b>	<b>Method</b>								
Benzo(a)pyrene	8270	---	<0.10	---	0.67	---	---	---	---
Indeno(1,2,3-cd)pyrene	8270	---	<0.10	---	1.8	---	---	---	---
Dibenzo(ah)anthracene	8270	---	<0.10	---	0.38	---	---	---	---
Benzo(ghi)perylene	8270	---	<0.10	---	2.8	---	---	---	---
Total PAHs (inc. naphthalene)	---	---	1.5	---	207	---	---	---	---
Benzo(a)Pyrene Equivalents	Ecology Guidance	---	<0.10	---	1.6	---	---	---	---
<b>Polychlorinated Biphenyls (mg/kg)</b>									
A1221	8082	---	<0.20	---	<0.20	---	---	---	---
A1232	8082	---	<0.20	---	<0.20	---	---	---	---
A1242	8082	---	<0.20	---	<0.20	---	---	---	---
A1248	8082	---	<0.20	---	<0.20	---	---	---	---
A1254	8082	---	<0.20	---	<0.20	---	---	---	---
A1260	8082	---	<0.20	---	<0.20	---	---	---	---
Total PCBs	---	---	<0.20	---	<0.20	---	---	---	---
<b>Metals (mg/kg)</b>									
Lead	7010	---	6.8	---	68	---	---	---	---
Chromium	7010	---	<2	---	2.9	---	---	---	---
Cadmium	7010	---	<1	---	<1	---	---	---	---
Arsenic	7010	---	<2	---	3.4	---	---	---	---
Mercury	7470A	---	<0.5	---	<0.5	---	---	---	---

**Notes:** (a) - Depth not known. Assumed to be either bottom or sidewall of excavation  
 (b) - Depth 5' in "parking lot".  
 < - Less than indicated value  
 CUL - Cleanup Level  
 --- - Not available  
 (A) - Method A CUL; (B) - Method B CUL  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present  
 AAL - Advanced Analytical Laboratory

**TABLE 1 - Soil Quality Data Collected by GreenCo. - August 2008**

Verbeek Wrecking Yard  
Bothell, WA

Location	9	10	11	12	13	14	15	19	20	21
Sample Date	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	8/15/08	8/15/08	8/15/08
Sample Depth (feet)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Laboratory	AAL	AAL	AAL	AAL	AAL	AAL	AAL	ESN NW	ESN NW	ESN NW
<b>Constituents</b>										
<b>Petroleum Hydrocarbons (mg/kg)</b>										
Mineral Spirits/Stoddard Solvent Range Hydrocarbons	---	---	---	---	<5	<5	<5	<40	<40	<40
Gasoline Range Hydrocarbons	---	---	---	---	<5	<5	<5	<5	<5	<5
Kerosene/Jet fuel Range Hydrocarbons	<20	<20	<20	<20	<20	<20	<20	---	---	---
Diesel/Fuel Oil Range Hydrocarbons	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Creosote Range Hydrocarbons	<20	<20	<20	<20	<20	<20	<20	---	---	---
Heavy Oil Range Hydrocarbons	<50	<50	<50	<50	<50	<50	<50	<40	<40	<40
<b>BTEX (ug/kg)</b>										
Benzene	---	---	---	---	<20	<20	<20	---	---	---
Toluene	---	---	---	---	<50	<50	<50	---	---	---
Ethylbenzene	---	---	---	---	<50	<50	<50	---	---	---
Xylenes	---	---	---	---	<50	<50	<50	---	---	---
<b>Other Organic Compounds (ug/kg)</b>										
MTBE	---	---	---	---	<20	<20	<20	---	---	---
1,2-Dichloroethane (EDC)	---	---	---	---	<20	<20	<20	---	---	---
1,2-Dichloromethane (EDB)	---	---	---	---	<5	<5	<5	---	---	---
Naphthalene	---	---	---	---	<50	<50	<50	---	---	---
<b>Polycyclic Aromatic Hydrocarbons (mg/kg)</b>										
Acenaphthylene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluorene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Phenanthrene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.23
Anthracene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.23
Fluoranthene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.31
Pyrene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.48
Benzo(a)anthracene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10



**TABLE 1 - Soil Quality Data Collected by GreenCo. - August 2008**

Verbeek Wrecking Yard  
Bothell, WA

Location	9	10	11	12	13	14	15	19	20	21
Sample Date	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	Aug-08	8/15/08	8/15/08	8/15/08
Sample Depth (feet)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Laboratory	AAL	AAL	AAL	AAL	AAL	AAL	AAL	ESN NW	ESN NW	ESN NW
<b>Constituents</b>										
Benzo(a)pyrene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Indeno(1,2,3-cd)pyrene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenzo(ah)anthracene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(ghi)perylene	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total PAHs (inc. naphthalene)	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)Pyrene Equivalents	---	---	---	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
<b>Polychlorinated Biphenyls (mg/kg)</b>										
A1221	---	---	---	---	<0.20	<0.20	<0.20	<0.10	<0.10	<0.10
A1232	---	---	---	---	<0.20	<0.20	<0.20	<0.10	<0.10	<0.10
A1242	---	---	---	---	<0.20	<0.20	<0.20	<0.10	<0.10	<0.10
A1248	---	---	---	---	<0.20	<0.20	<0.20	<0.10	<0.10	<0.10
A1254	---	---	---	---	<0.20	<0.20	<0.20	<0.10	<0.10	<0.10
A1260	---	---	---	---	<0.20	<0.20	<0.20	<0.10	<0.10	<0.10
Total PCBs	---	---	---	---	<0.20	<0.20	<0.20	<0.10	<0.10	<0.10
<b>Metals (mg/kg)</b>										
Lead	---	---	---	---	9.3	3.9	4.7	<5	37	19
Chromium	---	---	---	---	11	5.6	14	6.4	11	10
Cadmium	---	---	---	---	<1	<1	<1	<1	<1	<1
Arsenic	---	---	---	---	<2	<2	<2	<5	<5	<5
Mercury	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**Notes:** (a) - Depth not known. Assumed to be either bottom or sidewall of excavation  
 (b) - Depth 5' in "parking lot".  
 < - Less than indicated value  
 CUL - Cleanup Level  
 --- - Not available  
 (A) - Method A CUL; (B) - Method B CUL  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present  
 AAL - Advanced Analytical Laboratory

**TABLE 1 - Soil Quality Data Collected by GreenCo. - August 2008**

Location	22	23	24	Maximum Conc.	Unrestricted CUL	Risk Pathway
Sample Date	8/15/08	8/15/08	8/15/08			
Sample Depth (feet)	(a)	(a)	(a)			
Laboratory	ESN NW	ESN NW	ESN NW			
<b>Constituents</b>						
<b>Petroleum Hydrocarbons (mg/kg)</b>						
Mineral Spirits/Stoddard Solvent Range Hydrocarbons	<40	<40	<40	<40	4000 (A)	GW Quality
Gasoline Range Hydrocarbons	<5	<5	<5	310	30/100 (A)(1)	GW Quality
Kerosene/Jet fuel Range Hydrocarbons	----	----	----	<20	----	
Diesel/Fuel Oil Range Hydrocarbons	<20	<20	<20	94	2000 (A)	GW Quality
Creosote Range Hydrocarbons	----	----	----	650	----	
Heavy Oil Range Hydrocarbons	<40	<40	<40	830	2000 (A)	GW Quality
<b>BTEX (ug/kg)</b>						
Benzene	----	----	----	<20	30 (A)	GW Quality
Toluene	----	----	----	130	7000 (A)	GW Quality
Ethylbenzene	----	----	----	2200	6000 (A)	GW Quality
Xylenes	----	----	----	2900	9000 (A)	GW Quality
<b>Other Organic Compounds (ug/kg)</b>						
MTBE	----	----	----	<20		
1,2-Dichloroethane (EDC)	----	----	----	<20		
1,2-Dichloromethane (EDB)	----	----	----	<5		
Naphthalene	----	----	----	130000	5000 (A)	GW Quality
<b>Polycyclic Aromatic Hydrocarbons (mg/kg)</b>						
Acenaphthylene	<0.10	<0.10	<0.10	3.3	----	----
Acenaphthene	<0.10	<0.10	<0.10	3.5	4800 (B)	Soil Contact
Fluorene	<0.10	<0.10	<0.10	5.3	3200 (B)	Soil Contact
Phenanthrene	<0.10	<0.10	<0.10	20	----	----
Anthracene	<0.10	<0.10	<0.10	3.1	24000 (B)	Soil Contact
Fluoranthene	<0.10	<0.10	<0.10	9.3	3200 (B)	Soil Contact
Pyrene	<0.10	<0.10	0.1	15	2400 (B)	Soil Contact
Benzo(a)anthracene	<0.10	<0.10	0.1	3.4	----	----
Chrysene	<0.10	<0.10	0.1	4.8	----	----
Benzo(b)fluoranthene	<0.10	<0.10	0.1	1.6	----	----
Benzo(k)fluoranthene	<0.10	<0.10	0.1	1.8	----	----

**TABLE 1 - Soil Quality Data Collected by GreenCo. - August 2008**

Location	22	23	24	Maximum Conc.	Unrestricted CUL	Risk Pathway
Sample Date	8/15/08	8/15/08	8/15/08			
Sample Depth (feet)	(a)	(a)	(a)			
Laboratory	ESN NW	ESN NW	ESN NW			
Constituents						
Benzo(a)pyrene	<0.10	<0.10	0.1	0.67	0.1 (A)	Soil Contact
Indeno(1,2,3-cd)pyrene	<0.10	<0.10	0.1	1.8	----	----
Dibenzo(ah)anthracene	<0.10	<0.10	0.1	0.38	----	----
Benzo(ghi)perylene	<0.10	<0.10	0.1	2.8	----	----
Total PAHs (inc. naphthalene)	<0.10	<0.10	0.1	207	----	----
Benzo(a)Pyrene Equivalents	<0.10	<0.10	0.1	1.6	0.1 (A)	Soil Contact
Polychlorinated Biphenyls (mg/kg)						
A1221	<0.10	<0.10	<0.10	<0.20	----	----
A1232	<0.10	<0.10	<0.10	<0.20	----	----
A1242	<0.10	<0.10	<0.10	<0.20	----	----
A1248	<0.10	<0.10	<0.10	<0.20	----	----
A1254	<0.10	<0.10	<0.10	<0.20	----	----
A1260	<0.10	<0.10	<0.10	<0.20	----	----
Total PCBs	<0.10	<0.10	<0.10	<0.20	1 (A)	Soil Contact
Metals (mg/kg)						
Lead	<5	<5	<5	68	250 (A)	Soil Contact
Chromium	12	10	10	14	19(IV);2000(III)(A)	GW Quality
Cadmium	<1	<1	<1	<1	2 (A)	GW Quality
Arsenic	<5	<5	<5	<5	20 (A)	Background
Mercury	<0.5	<0.5	<0.5	<1	2 (A)	GW Quality

**Notes:** (a) - Depth not known. Assumed to be either bottom or sidewall of excavation  
 (b) - Depth 5' in "parking lot".  
 < - Less than indicated value  
 CUL - Cleanup Level  
 ---- - Not available  
 (A) - Method A CUL; (B) - Method B CUL  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present  
 AAL - Advanced Analytical Laboratory

**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Location	B10-1	B10-2	B10-3	B10-4	B10-5	B10-6
Sample Date	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08
Sample Depth (feet)	(a)	(a)	(a)	(a)	(a)	(a)
Laboratory	FA	FA	FA	FA	FA	FA
Constituents	Method					
<b>Petroleum Hydrocarbons (mg/kg)</b>						
Mineral Oil	NWTPH-Dx	<40	<40	<40	<40	<40
Diesel Range Organics	NWTPH-Dx	370	130	60	36	54
Heavy Oil Range Organics	NWTPH-Dx	450	130	120	66	120
<b>SVOCs (mg/kg)</b>						
Aniline	8270C	<0.4	<0.4	<0.4	<0.4	<0.4
Phenol	8270C	<0.4	<0.4	<0.4	<0.4	<0.4
Bis(2-chloroethyl)ether	8270C	<0.4	<0.4	<0.4	<0.4	<0.4
2-Chlorophenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
1,3-Dichlorobenzene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
1,4-Dichlorobenzene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
1,2-Dichlorobenzene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
Benzyl alcohol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
Bis(2-chloroisopropyl)ether	8270C	0.34	<0.2	<0.2	<0.2	<0.2
2-Methylphenol (o-cresol)	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
Hexachloroethane	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
N-Nitroso-di-n-propylamine	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
4-Methylphenol (p-cresol)	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
3-Methylphenol (p-cresol)	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrobenzene	8270C	<0.4	<0.4	<0.4	<0.4	<0.4
Isophorone	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
2-Nitrophenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
2,4-Dimethylphenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
Bis(2-chloroethoxy)methane	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
2,4-Dichlorophenol	8270C	<0.4	<0.4	<0.4	<0.4	<0.4
1,2,3-Trichlorobenzene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Naphthalene</b>	8270C	35	5.7	6.6	7.7	7.1
4-Chloroaniline	8270C	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2
4-Chloro-3-methylphenol	8270C	<0.5	<0.5	<0.5	<0.5	<0.5

**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Verbeek Wrecking Yard  
Bothell, WA

Location		B10-1	B10-2	B10-3	B10-4	B10-5	B10-6
Sample Date		Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08
Sample Depth (feet)		(a)	(a)	(a)	(a)	(a)	(a)
Laboratory		FA	FA	FA	FA	FA	FA
Constituents	Method						
<b>2-Methylnaphthalene</b>	8270C	<b>15</b>	<b>1.7</b>	<b>2</b>	<b>2.3</b>	<b>2.8</b>	<b>0.24</b>
<b>1-Methylnaphthalene</b>	8270C	<b>13</b>	<b>1.7</b>	<b>2.1</b>	<b>1.9</b>	<b>2.8</b>	<b>0.28</b>
Hexachlorocyclopentadiene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,4,6-Trichlorophenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,4,5-Trichlorophenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2-Chloronaphthalene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2-Nitroaniline	8270C	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dinitrobenzene	8270C	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Acenaphthylene</b>	8270C	<b>11</b>	<b>2.2</b>	<b>2</b>	<b>2.5</b>	<b>1.8</b>	<b>0.75</b>
1,3-Dinitrobenzene	8270C	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethylphthalate	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,6-Dinitrotoluene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1,2-Dinitrobenzene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Acenaphthene</b>	8270C	<b>11</b>	<b>1.6</b>	<b>1.8</b>	<b>1.2</b>	<b>2.3</b>	<b>0.46</b>
3-Nitroaniline	8270C	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dinitrophenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dibenzofuran	8270C	<b>1.9</b>	<0.2	<b>0.24</b>	<b>0.27</b>	<b>0.36</b>	<0.2
2,4-Dinitrotoluene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-Nitrophenol	8270C	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6-Tetrachlorophenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,3,5,6-Tetrachlorophenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Fluorene</b>	8270C	<b>8.7</b>	<b>1.7</b>	<b>1.4</b>	<b>1.1</b>	<b>1.6</b>	<b>0.6</b>
4-Chlorophenyl phenyl ether	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diethylphthalate	8270C	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
4,6-Dinitro-2-methylphenol	8270C	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2
Diphenylamine	8270C	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2
Azobenzene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-Bromo phenyl phenyl ether	8270C	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pentachlorophenol	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Verbeek Wrecking Yard  
Bothell, WA

Location	B10-1	B10-2	B10-3	B10-4	B10-5	B10-6	
Sample Date	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	
Sample Depth (feet)	(a)	(a)	(a)	(a)	(a)	(a)	
Laboratory	FA	FA	FA	FA	FA	FA	
Constituents	Method						
Phenanthrene	8270C	38	10	9.4	8.3	10	4.6
Anthracene	8270C	11	2.3	0.8	2.2	2.8	2.6
Carbazole	8270C	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Di-n-butylphthalate	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	0.91
Fluoranthene	8270C	56	18	20	17	19	11
Pyrene	8270C	150	27	30	26	27	16
Benzyl Butyl phthalate	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
bis (2-Ethylhexyl) adipate	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)anthracene	8270C	29	7.5	9	8.6	6.3	6.4
Chrysene	8270C	29	6.1	6.9	7.3	5.6	3.4
bis(2-Ethylhexyl)phthalate	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Di-n-octyl phthalate	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(b)fluoranthene	8270C	25	5	7.6	8.2	3.9	4.9
Benzo(k)fluoranthene	8270C	13	3.3	7.8	8.9	2.7	3.9
Benzo(a)pyrene	8270C	30	7.1	6.8	8.1	5.3	5.8
Indeno(1,2,3-cd)pyrene	8270C	25	4.9	4.8	5.1	4.5	3.7
Dibenzo(ah)anthracene	8270C	2.8	0.5	0.9	0.7	0.6	1.6
Benzo(ghi)perylene	8270C	43	7.9	7.8	8.6	7.3	4.8
Benzoic Acid	8270C	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,2,4-Trichlorobenzene	8270C	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Total Naphthalenes (c)</b>	----	<b>63</b>	<b>9.1</b>	<b>10.7</b>	<b>11.9</b>	<b>12.7</b>	<b>1.62</b>
<b>Total PAHs (WAC 173-340-200)</b>	----	<b>518</b>	<b>111</b>	<b>124</b>	<b>122</b>	<b>108</b>	<b>72</b>

**Notes:** (a) - General Stockpile  
 (b) - Bio-Pilot (North End of Stockpile)  
 (c) - Sum of naphthalene, 1-methylnaphthalene, 2-methylnaphthalene  
 FA - Fremont Analytical  
 B - Detected in laboratory blank

**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Verbeek Wrecking Yard  
Bothell, WA

Location	B10-7	B10-8	B10-9	B10-10	B10-11	B10-12	B10-13	B10-14
Sample Date	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08
Sample Depth (feet)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Laboratory	FA	FA	FA	FA	FA	FA	FA	FA
<b>Constituents</b>								
<b>Petroleum Hydrocarbons (mg/kg)</b>								
Mineral Oil	<40	<40	<40	<40	<40	<40	<40	<40
Diesel Range Organics	59	87	52	63	57	140	240	280
Heavy Oil Range Organics	98	110	100	110	95	170	230	390
<b>SVOCs (mg/kg)</b>								
Aniline	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Phenol	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bis(2-chloroethyl)ether	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
2-Chlorophenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1,3-Dichlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1,4-Dichlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1,2-Dichlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzyl alcohol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bis(2-chloroisopropyl)ether	<0.32 B	<0.31 B	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2-Methylphenol (o-cresol)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Hexachloroethane	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
N-Nitroso-di-n-propylamine	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-Methylphenol (p-cresol)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
3-Methylphenol (p-cresol)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrobenzene	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Isophorone	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2-Nitrophenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,4-Dimethylphenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bis(2-chloroethoxy)methane	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,4-Dichlorophenol	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,2,3-Trichlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Naphthalene</b>	<b>2.5</b>	<b>1</b>	<b>8.3</b>	<b>14</b>	<b>9.3</b>	<b>17</b>	<b>12</b>	<b>55</b>
4-Chloroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-Chloro-3-methylphenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Verbeek Wrecking Yard  
Bothell, WA

Location	B10-7	B10-8	B10-9	B10-10	B10-11	B10-12	B10-13	B10-14
Sample Date	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08
Sample Depth (feet)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Laboratory	FA	FA	FA	FA	FA	FA	FA	FA
<b>Constituents</b>								
<b>2-Methylnaphthalene</b>	<b>0.63</b>	<b>0.29</b>	<b>2.7</b>	<b>5.4</b>	<b>2.8</b>	<b>5.9</b>	<b>4</b>	<b>20</b>
<b>1-Methylnaphthalene</b>	<b>0.78</b>	<b>0.34</b>	<b>2.3</b>	<b>4.5</b>	<b>2.8</b>	<b>5.8</b>	<b>3.8</b>	<b>16</b>
Hexachlorocyclopentadiene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,4,6-Trichlorophenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,4,5-Trichlorophenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2-Chloronaphthalene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dinitrobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Acenaphthylene</b>	<b>0.44</b>	<b>0.3</b>	<b>2.6</b>	<b>3.5</b>	<b>2.4</b>	<b>4</b>	<b>2.6</b>	<b>8.9</b>
1,3-Dinitrobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethylphthalate	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,6-Dinitrotoluene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1,2-Dinitrobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Acenaphthene</b>	<b>0.54</b>	<b>0.32</b>	<b>2.4</b>	<b>3.6</b>	<b>2.3</b>	<b>4</b>	<b>2.7</b>	<b>11</b>
3-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dinitrophenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dibenzofuran	<0.2	<0.2	<b>0.37</b>	<b>0.5</b>	<b>0.36</b>	<b>0.75</b>	<b>0.42</b>	<b>2.4</b>
2,4-Dinitrotoluene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-Nitrophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6-Tetrachlorophenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,3,5,6-Tetrachlorophenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Fluorene</b>	<b>0.78</b>	<b>0.7</b>	<b>1.8</b>	<b>2.8</b>	<b>1.6</b>	<b>2.5</b>	<b>2.1</b>	<b>8.4</b>
4-Chlorophenyl phenyl ether	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diethylphthalate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4,6-Dinito-2-methylphenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diphenylamine	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-Bromo phenyl phenyl ether	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pentachlorophenol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2



**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Verbeek Wrecking Yard  
Bothell, WA

Location	B10-7	B10-8	B10-9	B10-10	B10-11	B10-12	B10-13	B10-14
Sample Date	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08
Sample Depth (feet)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Laboratory	FA	FA	FA	FA	FA	FA	FA	FA
<b>Constituents</b>								
<b>Phenanthrene</b>	2.4	2.2	10	16	9.2	17	12	42
<b>Anthracene</b>	2.3	2.3	3.1	1.4	0.6	3.9	3.7	10
Carbazole	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Di-n-butylphthalate	0.37	1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Fluoranthene</b>	5.3	6.8	23	26	19	38	22	68
<b>Pyrene</b>	7.6	9.3	35	37	30	48	32	85
Benzyl Butyl phthalate	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
bis (2-Ethylhexyl) adipate	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Benzo(a)anthracene</b>	3.9	4.6	10	9.6	7.8	17	8.1	27
<b>Chrysene</b>	2.3	2.6	8.7	8.7	7.8	15	8.1	28
bis(2-Ethylhexyl)phthalate	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Di-n-octyl phthalate	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Benzo(b)fluoranthene</b>	3.2	3.6	6.2	8.9	8.2	16	4.7	19
<b>Benzo(k)fluoranthene</b>	2.5	2.4	4.1	9.4	8.5	17	3.7	12
<b>Benzo(a)pyrene</b>	4	4.1	8.8	8.6	7.3	12	7.5	28
<b>Indeno(1,2,3-cd)pyrene</b>	2.3	2.4	6.7	6.3	6	11	6	20
<b>Dibenzo(ah)anthracene</b>	1.2	1.2	0.8	1.3	0.7	2.1	0.79	3.7
<b>Benzo(ghi)perylene</b>	2.7	2.9	12	11	10	18	11	35
Benzoic Acid	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,2,4-Trichlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
<b>Total Naphthalenes (c)</b>	3.91	1.63	13.3	23.9	14.9	28.7	19.8	91
<b>Total PAHs (WAC 173-340-200)</b>	44	47	144	168	131	243	139	461

Notes: (a) - General Stockpile  
 (b) - Bio-Pilot (North End of Stockpile)  
 (c) - Sum of naphthalene, 1-methylnaphthalene, 2-methylnaphthalene  
 FA - Fremont Analytical  
 B - Detected in laboratory blank

**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Location	B10-15	Bio-Pilot 1	Bio-Pilot 2	Bio-Pilot 3	Bio-Pilot 4
Sample Date	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08
Sample Depth (feet)	(a)	(b)	(b)	(b)	(b)
Laboratory	FA	FA	FA	FA	FA
<b>Constituents</b>					
<b>Petroleum Hydrocarbons (mg/kg)</b>					
Mineral Oil	<40	---	---	---	---
Diesel Range Organics	120	---	---	---	---
Heavy Oil Range Organics	130	---	---	---	---
<b>SVOCs (mg/kg)</b>					
Aniline	<0.4	---	---	---	---
Phenol	<0.4	---	---	---	---
Bis(2-chloroethyl)ether	<0.4	---	---	---	---
2-Chlorophenol	<0.2	---	---	---	---
1,3-Dichlorobenzene	<0.2	---	---	---	---
1,4-Dichlorobenzene	<0.2	---	---	---	---
1,2-Dichlorobenzene	<0.2	---	---	---	---
Benzyl alcohol	<0.2	---	---	---	---
Bis(2-chloroisopropyl)ether	<0.2	---	---	---	---
2-Methylphenol (o-cresol)	<0.2	---	---	---	---
Hexachloroethane	<0.2	---	---	---	---
N-Nitroso-di-n-propylamine	<0.2	---	---	---	---
4-Methylphenol (p-cresol)	<0.2	---	---	---	---
3-Methylphenol (p-cresol)	<0.2	---	---	---	---
Nitrobenzene	<0.4	---	---	---	---
Isophorone	<0.2	---	---	---	---
2-Nitrophenol	<0.2	---	---	---	---
2,4-Dimethylphenol	<0.2	---	---	---	---
Bis(2-chloroethoxy)methane	<0.2	---	---	---	---
2,4-Dichlorophenol	<0.4	---	---	---	---
1,2,3-Trichlorobenzene	<0.2	---	---	---	---
<b>Naphthalene</b>	<b>8.7</b>	<b>2.5</b>	<b>6</b>	<b>4.6</b>	<b>1.3</b>
4-Chloroaniline	<0.5	---	---	---	---
Hexachlorobutadiene	<0.2	---	---	---	---
4-Chloro-3-methylphenol	<0.5	---	---	---	---

**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Location	B10-15	Bio-Pilot 1	Bio-Pilot 2	Bio-Pilot 3	Bio-Pilot 4
Sample Date	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08
Sample Depth (feet)	(a)	(b)	(b)	(b)	(b)
Laboratory	FA	FA	FA	FA	FA
Constituents					
<b>2-Methylnaphthalene</b>	<b>3</b>	<b>0.7</b>	<b>0.3</b>	<b>1.9</b>	<b>0.4</b>
<b>1-Methylnaphthalene</b>	<b>3.2</b>	<b>0.9</b>	<b>1.1</b>	<b>1.7</b>	<b>0.4</b>
Hexachlorocyclopentadiene	<0.5	----	----	----	----
2,4,6-Trichlorophenol	<0.2	----	----	----	----
2,4,5-Trichlorophenol	<0.5	----	----	----	----
2-Chloronaphthalene	<0.5	----	----	----	----
2-Nitroaniline	<0.2	----	----	----	----
1,4-Dinitrobenzene	<0.5	----	----	----	----
<b>Acenaphthylene</b>	<b>3.2</b>	<b>1.1</b>	<b>17</b>	<b>0.8</b>	<b>0.4</b>
1,3-Dinitrobenzene	<0.5	----	----	----	----
Dimethylphthalate	<0.2	----	----	----	----
2,6-Dinitrotoluene	<0.2	----	----	----	----
1,2-Dinitrobenzene	<0.2	----	----	----	----
<b>Acenaphthene</b>	<b>1.9</b>	<b>0.6</b>	<b>1.4</b>	<b>1.3</b>	<b>0.3</b>
3-Nitroaniline	<0.5	----	----	----	----
2,4-Dinitrophenol	<0.2	----	----	----	----
Dibenzofuran	<b>0.41</b>	----	----	----	----
2,4-Dinitrotoluene	<0.5	----	----	----	----
4-Nitrophenol	<0.2	----	----	----	----
2,3,4,6-Tetrachlorophenol	<0.5	----	----	----	----
2,3,5,6-Tetrachlorophenol	<0.2	----	----	----	----
<b>Fluorene</b>	<b>1.6</b>	<b>0.5</b>	<b>11</b>	<b>1.1</b>	<b>0.4</b>
4-Chlorophenyl phenyl ether	<0.5	----	----	----	----
Diethylphthalate	<0.2	----	----	----	----
4,6-Dinitro-2-methylphenol	<0.5	----	----	----	----
Diphenylamine	<0.2	----	----	----	----
Azobenzene	<0.5	----	----	----	----
4-Bromo phenyl phenyl ether	<0.2	----	----	----	----
Hexachlorobenzene	<0.5	----	----	----	----
Pentachlorophenol	<0.2	----	----	----	----

**TABLE 2 - Stockpile Soil Quality Data Collected by Floyd/Snider -September 2008**

Location	B10-15	Bio-Pilot 1	Bio-Pilot 2	Bio-Pilot 3	Bio-Pilot 4
Sample Date	Sep-08	Sep-08	Sep-08	Sep-08	Sep-08
Sample Depth (feet)	(a)	(b)	(b)	(b)	(b)
Laboratory	FA	FA	FA	FA	FA
Constituents					
Phenanthrene	11	2.9	140	8.6	2.6
Anthracene	3.2	1.4	25	1.3	0.7
Carbazole	<0.5	----	----	----	----
Di-n-butylphthalate	<0.2	----	----	----	----
Fluoranthene	22	7.2	130	13	5.8
Pyrene	32	13	200	20	9.8
Benzyl Butyl phthalate	<0.2	----	----	----	----
bis (2-Ethylhexyl) adipate	<0.2	----	----	----	----
Benzo(a)anthracene	9.1	1.9	34	5.6	2
Chrysene	8.7	3.8	44	4.6	2.5
bis(2-Ethylhexyl)phthalate	<0.2	----	----	----	----
Di-n-octyl phthalate	<0.2	----	----	----	----
Benzo(b)fluoranthene	4	1.9	19	5	2.7
Benzo(k)fluoranthene	3.1	2.5	29	2.9	1.8
Benzo(a)pyrene	7.5	4.2	44	4.8	2.9
Indeno(1,2,3-cd)pyrene	6.2	3.1	28	3.1	1.8
Dibenzo(ah)anthracene	0.8	0.8	5.6	0.6	0.4
Benzo(ghi)perylene	10	4.9	46	4.3	2.7
Benzoic Acid	<0.4	----	----	----	----
1,2,4-Trichlorobenzene	<0.2	----	----	----	----
<b>Total Naphthalenes (c)</b>	<b>14.9</b>	<b>4.1</b>	<b>7.4</b>	<b>8.2</b>	<b>2.1</b>
<b>Total PAHs (WAC 173-340-200)</b>	<b>133</b>	<b>52</b>	<b>780</b>	<b>82</b>	<b>38</b>

**Notes:** (a) - General Stockpile  
 (b) - Bio-Pilot (North End of Stockpile)  
 (c) - Sum of naphthalene, 1-methylnaphthalene, 2-methylnaphthalene  
 FA - Fremont Analytical  
 B - Detected in laboratory blank

**TABLE 3 - GWP (In-Situ) Fill Samples Collected by Floyd/Snider - September 2008** Grbeek Wrecking Yard  
Bothell, WA

Location	Grab1	Grab2	Grab3	
Sample Date	Sep-08	Sep-08	Sep-08	
Sample Depth (feet)	2 (a)	3 (a)	2-3 (a)	
Laboratory	FA	FA	FA	
Constituents	Method			
<b>Polycyclic Aromatic Hydrocarbons (mg/kg)</b>				
Naphthalene	8270C	38000	2800	370
2-Methylnaphthalene	8270C	15800	490	120
1-Methylnaphthalene	8270C	21800	390	100
Acenaphthylene	8270C	1140	190	40
Acenaphthene	8270C	3000	400	240
Fluorene	8270C	5000	250	85
Phenanthrene	8270C	15800	2200	550
Anthracene	8270C	3600	520	230
Fluoranthene	8270C	12200	3200	1400
Pyrene	8270C	23800	4400	1900
Benzo(a)anthracene	8270C	4600	890	440
Chrysene	8270C	4000	870	400
Benzo(b)fluoranthene	8270C	2200	440	250
Benzo(k)fluoranthene	8270C	1420	470	190
Benzo(a)pyrene	8270C	3600	870	390
Indeno(1,2,3-cd)pyrene	8270C	2800	670	290
Dibenzo(ah)anthracene	8270C	660	120	40
Benzo(ghi)perylene	8270C	4200	1200	490
<b>Total Naphthalenes (b)</b>	----	<b>75600</b>	<b>3680</b>	<b>590</b>
<b>Total PAHs (WAC 173-340-200)</b>	----	<b>126020</b>	<b>19490</b>	<b>7305</b>

**Notes:**

- (a) - Samples of visually contaminated material assumed to be GWP Fill
- (c) - Sum of naphthalene, 1-methylnaphthalene, 2-methylnaphthalene
- FA - Fremont Analytical

**TABLE 4 - Summary of Groundwater Quality Data (Through April 2009)**

Verbeek Site  
Bothell, WA

Number Laboratory Date	BAF235(a) ESN Sep-08	BAF236(a) ESN Sep-08	MW-South ARI 4/13/2009	MW-North ARI 4/13/2009	CULs
<b>Field Parameters</b>					
Well Depth (feet TOC)	---	---	37.8	37.7	---
Water Level (feet TOC)	---	---	8.63	8.85	---
pH	---	---	6.7	6.6	---
Electrical Conductivity (uS)	---	---	288	262	---
Temperature (C)	---	---	12.2	11.9	---
Turbidity (NTU)	---	---	3.8	1.4	---
Dissolved Oxygen (mg/l)	---	---	0.68	0.55	---
<b>Petroleum Hydrocarbons (mg/l)</b>					
Gasoline Range	---	---	<0.25	<0.25	1000 (A)
Type	---	---	---	---	---
Diesel Range	---	---	<0.25	<0.25	500 (A)
Motor Oil Range	---	---	<0.5	<0.5	500 (A)
Type	---	---	---	---	---
<b>VOCs (ug/l)</b>					
Benzene	<1.0	<1.0	<0.2	<0.2	5 (A)
Toluene	<1.0	<1.0	<0.2	<0.2	1000 (A)
Ethylbenzene	<1.0	<1.0	<0.2	<0.2	700 (A)
m,p-Xylenes	<1.0	<1.0	<0.4	<0.4	1000 (A)
o-Xylene	<1.0	<1.0	<0.2	<0.2	1000 (A)
Other VOCs (EPA 8260)	nd (b)	nd (b)	---	---	---
<b>SVOCs (ug/l)</b>					
<b>Non-Carcinogenic PAHs</b>					
Naphthalene	<0.2	<0.2	<0.1	<0.1	---
2-Methylnaphthalene	<0.2	<0.2	<0.1	<0.1	---
1-Methylnaphthalene	<0.2	<0.2	<0.1	<0.1	---
Total Naphthalenes	<0.2	<0.2	<0.1	<0.1	160 (A)
Acenaphthylene	<0.2	<0.2	<0.1	<0.1	---
Acenaphthene	<0.2	<0.2	<0.1	<0.1	960 (B)
Fluorene	<0.2	<0.2	<0.1	<0.1	640 (B)
Phenanthrene	<0.2	<0.2	<0.1	<0.1	---
Anthracene	<0.2	<0.2	<0.1	<0.1	4800 (B)
Fluoranthene	<0.2	<0.2	<0.1	<0.1	640 (B)
Pyrene	<0.2	<0.2	<0.1	<0.1	480 (B)
Benzo(g,h,i)perylene	<0.2	<0.2	<0.1	<0.1	---
<b>Carcinogenic PAHs</b>					
Benzo(a)anthracene	<0.2	<0.2	<0.1	<0.1	---
Chrysene	<0.2	<0.2	<0.1	<0.1	---
Benzo(b)fluoranthene	<0.2	<0.2	<0.1	<0.1	---
Benzo(k)fluoranthene	<0.2	<0.2	<0.1	<0.1	---
Benzo(a)pyrene	<0.2	<0.2	<0.1	<0.1	0.1 (A)
Indeno(1,2,3-cd)pyrene	<0.2	<0.2	<0.1	<0.1	---
Dibenzo(a,h)anthracene	<0.2	<0.2	<0.1	<0.1	---
BaP <sub>eq</sub> Sum	nd	nd	nd	nd	0.1 (A)
Total PAHs (detected)	nd	nd	nd	nd	---

**TABLE 4 - Summary of Groundwater Quality Data (Through April 2009)**

Verbeek Site  
Bothell, WA

Number Laboratory Date	BAF235(a)	BAF236(a)	MW-South	MW-North	CULs
	ESN	ESN	ARI	ARI	
	Sep-08	Sep-08	4/13/2009	4/13/2009	
<b>Other SOVCs</b>					
Phenol	---	---	<0.1	<0.1	4800 (B)
2-Methylphenol	---	---	<0.1	<0.1	---
4-Methylphenol	---	---	<0.1	<0.1	---
2,4-Dimethylphenol	---	---	<0.1	<0.1	160 (B)
Dimethylphthalate	---	---	<0.1	<0.1	16000 (B)
Dibenzofuran	---	---	<0.1	<0.1	320 (B)
Diethylphthalate	---	---	<0.1	<0.1	13000 (B)
Carbazole	---	---	<0.1	<0.1	4.4 (B)
Di-n-butylphthalate	---	---	<0.1	<0.1	1600 (B)
Butylbenzylphthalate	---	---	<0.1	<0.1	3200 (B)
bis (2-Ethylhexyl)phthalate	---	---	0.7	<0.1	6.3 (B)
Di-n-octylphthalate	---	---	<0.1	<0.1	320 (B)
Retene	---	---	<0.1	<0.1	---
<b>Total Metals (ug/l)</b>					
Arsenic	---	---	0.9	0.5	5 (A)
Barium	---	---	10.2	12	3200 (B)
Cadmium	---	---	<0.2	<0.2	5 (A)
Chromium	---	---	<1	<1	50 (A)
Lead	---	---	<1	<1	15 (A)
Mercury	---	---	<0.1	<0.1	2 (A)
Nickel	---	---	0.7	1.1	320 (B)
Zinc	---	---	<4	<4	4800 (B)
<b>Dissolved Metals (ug/l)</b>					
Arsenic	---	---	0.9	0.5	5 (A)
Barium	---	---	10.4	11.7	3200 (B)
Cadmium	---	---	<0.2	<0.2	5 (A)
Chromium	---	---	<1	<1	50 (A)
Lead	---	---	<1	<1	15 (A)
Mercury	---	---	<0.1	<0.1	2 (A)
Nickel	---	---	0.7	1.1	320 (B)
Zinc	---	---	<4	<4	4800 (B)

**Notes:** (a) - Specific location of well (north or south) is not documented  
 (b) - Reporting limits 1 ug/l to 10 ug/l (Attachment C)  
 < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level (CLARC)  
 ---- - Not available  
 (A) - Method A CUL; (B) - Method B CUL  
 ARI - Analytical Resources Inc., Tukwila, WA

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP1-3	DOF-TP1-18	DOF-TP2-3	DOF-TP2-9	DOF-TP3-3	DOF-TP3-8	DOF-TP3-12	DOF-TP4-4	DOF-TP4-6	DOF-TP4-8
Date	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09
<b>Petroleum Hydrocarbons (mg/kg)</b>										
Gasoline Range	<7.8	<7.5	<7.7	<7.6	<6.3	45	<6.5	<6.2	49	<6.9
Type	----	----	----	----	----	GRO	----	----	GRO	----
Diesel Range	<5.9	15	<5.9	7.6	<5.4	3700	8.7	<5.3	5000	7.6
Motor Oil Range	13	39	12	<12	<11	3100	18	<10	3900	14
Type	RRO	DRO/MO	RRO	DRO	----	DRO/RRO	DRO/RRO	----	DRO/RRO	DRO/RRO
<b>VOCs (ug/kg)</b>										
Benzene	<1.0	<1.0	<1.0	<1.0	<0.9	45	<1.0	<1.0	7.2	<1.1
Toluene	<1.0	<1.0	<1.0	<1.0	<0.9	41	1.3	<1.0	6.7	<1.1
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.9	370	<1.0	<1.0	15	<1.1
m,p-Xylenes	<1.0	<1.0	<1.0	<1.0	<0.9	330	1.4	<1.0	90	<1.1
o-Xylene	<1.0	<1.0	<1.0	<1.0	<0.9	530	1.7	<1.0	140	<1.1
<b>SVOCs (ug/kg)</b>										
<b>Non-Carcinogenic PAHs</b>										
Naphthalene	<66	100	<65	<63	<59	61000	<58	<58	190000	7100
2-Methylnaphthalene	<66	<59	<65	<63	<59	16000	<58	<58	50000	3200
1-Methylnaphthalene	<66	<59	<65	<63	<59	15000	<58	<58	34000	2300
Total Naphthalenes	nd	100	nd	nd	nd	92000	nd	nd	274000	12600
Acenaphthylene	<66	<59	<65	<63	<59	46000	<58	<58	44000	2800
Acenaphthene	<66	<59	<65	<63	<59	4500	<58	<58	5100	1400
Fluorene	<66	<59	<65	<63	<59	23000	<58	<58	25000	2600
Phenanthrene	<66	110	<65	<63	<59	260000	<58	<58	170000	20000
Anthracene	<66	<59	<65	<63	<59	29000	<58	<58	34000	3300
Fluoranthene	<66	390	<65	<63	<59	370000	<58	<58	400000	20000
Pyrene	<66	410	<65	<63	<59	380000 J	<58	<58	410000 J	21000 J
Benzo(g,h,i)perylene	<66	170	<65	<63	<59	72000	<58	<58	72000 J	3300 J
<b>Carcinogenic PAHs</b>										
Benzo(a)anthracene	<66	82	<65	<63	<59	60000	<58	<58	76000	4900
Chrysene	<66	110	<65	<63	<59	77000	<58	<58	94000 J	5800 J
Benzo(b)fluoranthene	<66	96	<65	<63	<59	59000	<58	<58	83000	3500
Benzo(k)fluoranthene	<66	100	<65	<63	<59	41000	<58	<58	48000	3300
Benzo(a)pyrene	<66	160	<65	<63	<59	86000	<58	<58	110000	6200
Indeno(1,2,3-cd)pyrene	<66	110	<65	<63	<59	50000	<58	<58	50000	2400
Dibenzo(a,h)anthracene	<66	<59	<65	<63	<59	9400	<58	<58	9800	470
Total PAHs (detected)	nd	1838	nd	nd	nd	1658900	nd	nd	1904900	113570
BaPeq. Sum	<50	203	<49	<48	<45	108710	<44	<44	137620	7715



**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP1-3	DOF-TP1-18	DOF-TP2-3	DOF-TP2-9	DOF-TP3-3	DOF-TP3-8	DOF-TP3-12	DOF-TP4-4	DOF-TP4-6	DOF-TP4-8
Date	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09
<b>Other SOVCs</b>										
Phenol	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
2-Methylphenol	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
4-Methylphenol	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
2,4-Dimethylphenol	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
Dimethylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
Dibenzofuran	<66	<59	<65	<63	<59	2700	<58	<58	3500	280
Diethylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
Carbazole	<66	<59	<65	<63	<59	5300	<58	<58	5400	240
Di-n-butylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
Butylbenzylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
bis (2-Ethylhexyl)phthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
Di-n-octylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
Retene	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63
<b>Metals (mg/kg)</b>										
Arsenic	<10	<5	<6	<6	<5	11	<5	<5	26	<5
Barium	107	71.6	101	85.3	47	94	61.1	45.2	172	60.5
Cadmium	<0.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	55	31.9	56	31.6	27.2	22.8	37.3	33.8	22.8	27.2
Lead	7	9	5	3	3	62	4	<2	53	3
Mercury	0.06	<0.05	0.07	<0.05	<0.04	0.09	0.06	<0.05	0.2	<0.05
Nickel	65	42	57	39	39	130	37	44	98	35
Zinc	66	53	58	42	38	63	38	43	55	40

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 — - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP5-3	DOF-TP5-8	DOF-TP6-2	DOF-TP6-6	DOF-TP7-1	DOF-TP7-3	DOF-TP8-4	DOF-TP8-8	DOF-TP9-2	DOF-TP9-3	DOF-TP9-7
Date	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09
<b>Petroleum Hydrocarbons (mg/kg)</b>											
Gasoline Range	<8.0	<8.8	<6.4	<7.3	<6.4	<5.7	<6.1	<7.2	<6.4	16	<5.9
Type	-----	-----	-----	-----	-----	-----	-----	-----	-----	GRO	-----
Diesel Range	57	<6.2	<5.3	<5.4	7.6	<5.1	46	6.5	11	770	<5.5
Motor Oil Range	220	<12	<11	14	19	<10	200	12	30	3000	<10
Type	DRO/MO	-----	-----	RRO	DRO/MO	-----	DRO/MO	DRO/RRO	DRO/MO	Di/MO	-----
<b>VOCs (ug/kg)</b>											
Benzene	<1.2	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	<1.1	<1.0
Toluene	1.2	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	1.3	<1.0
Ethylbenzene	<1.2	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	2.0	<1.0
m,p-Xylenes	<1.2	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	3.2	<1.0
o-Xylene	<1.2	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	2.2	<1.0
<b>SVOCs (ug/kg)</b>											
<b>Non-Carcinogenic PAHs</b>											
Naphthalene	<64	<59	<56	<61	<57	<65	<56	<60	<60	1800	<67
2-Methylnaphthalene	<64	<59	<56	<61	<57	<65	<56	<60	<60	960	<67
1-Methylnaphthalene	<64	<59	<56	<61	<57	<65	<56	<60	<60	1000	<67
Total Naphthalenes	nd	nd	nd	nd	nd	nd	nd	nd	nd	3760	nd
Acenaphthylene	<64	<59	<56	<61	<57	<65	<56	<60	<60	1300	<67
Acenaphthene	<64	<59	<56	<61	<57	<65	<56	<60	<60	540	<67
Fluorene	<64	<59	<56	<61	<57	<65	<56	<60	<60	1100	<67
Phenanthrene	98	<59	<56	<61	<57	<65	68	<60	<60	8000	<67
Anthracene	<64	<59	<56	<61	<57	<65	<56	<60	<60	1600	<67
Fluoranthene	280	<59	<56	<61	130	<65	120	<60	210	11000	<67
Pyrene	280 J	<59	<56	<61	140	<65	110	<60	250	11000	<67
Benzo(g,h,i)perylene	<64	<59	<56	<61	<57	<65	<56	<60	150	3700	<67
<b>Carcinogenic PAHs</b>											
Benzo(a)anthracene	<64	<59	<56	<61	<57	<65	<56	<60	67	3400	<67
Chrysene	75	<59	<56	<61	<57	<65	<56	<60	94	4600	<67
Benzo(b)fluoranthene	<64	<59	<56	<61	<57	<65	<56	<60	93	3200	<67
Benzo(k)fluoranthene	<64	<59	<56	<61	<57	<65	<56	<60	77	3500	<67
Benzo(a)pyrene	<64	<59	<56	<61	<57	<65	<56	<60	130	5400	<67
Indeno(1,2,3-cd)pyrene	<64	<59	<56	<61	<57	<65	<56	<60	96	2700	<67
Dibenzo(a,h)anthracene	<64	<59	<56	<61	<57	<65	<56	<60	<60	430	<67
Total PAHs (detected)	733	nd	nd	nd	270	nd	298	nd	1167	65230	nd
BaPeq. Sum	49	<45	<42	<46	<43	<49	<42	<45	167	6769	<51

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP5-3	DOF-TP5-8	DOF-TP6-2	DOF-TP6-6	DOF-TP7-1	DOF-TP7-3	DOF-TP8-4	DOF-TP8-8	DOF-TP9-2	DOF-TP9-3	DOF-TP9-7
Date	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09
<b>Other SOVCs</b>											
Phenol	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
2-Methylphenol	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
4-Methylphenol	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
2,4-Dimethylphenol	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
Dimethylphthalate	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
Dibenzofuran	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
Diethylphthalate	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
Carbazole	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
Di-n-butylphthalate	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
Butylbenzylphthalate	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
bis(2-Ethylhexyl)phthalate	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
Di-n-octylphthalate	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
Retene	<64	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67
<b>Metals (mg/kg)</b>											
Arsenic	<6	<6	<5	<5	<5	<5	<5	<6	<5	<5	<5
Barium	132	101	52.1	77.3	83	52.2	42	40.2	46.2	66	52.2
Cadmium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	34.1	55.3	29	40.6	36.1	26.5	18.1	19.6	23.7	27.3	30.2
Lead	238	5	3	5	6	<2	3	<2	<2	17	3
Mercury	0.22	0.08	<0.04	<0.05	<0.05	<0.04	<0.05	<0.05	<0.04	<0.04	<0.02
Nickel	38	60	39	46	43	34	27	27	31	33	36
Zinc	91	69	50	58	65	41	31	31	32	73	37

**Notes:** < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 — - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP10-2	DOF-TP10-14	DOF-TP11-1/3	DOF-TP11-6	DOF-TP12-1	DOF-TP12-3	DOF-TP13-2	DOF-TP13-6	DOF-TP13-9	DOF-TP14-1.5	DOF-TP14-6
Date	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09
<b>Petroleum Hydrocarbons (mg/kg)</b>											
Gasoline Range	<6.9	<7.4	360	<7.5	10	<6.2	<6.6	36	<8.4	<6.6	<6.3
Type	----	----	GRO	----	GRO	----	----	GRO	----	----	----
Diesel Range	<5.6	<5.7	3600	50	940	2800	9.5	350	<6.0	7.8	37
Motor Oil Range	<11	<11	2300	140	9800	19000	12	<13	<12	24	300
Type	----	----	DRO/RRO	DRO/MO	DRO/MO	DI/MO	DRO/RRO	DI	----	DRO/MO	DRO/MO
<b>VOCs (ug/kg)</b>											
Benzene	<0.9	<1.1	130	<1.2	<1.0	2.0	<1.1	<5.4	<1.2	<1.0	<1.0
Toluene	<0.9	<1.1	44	<1.2	<1.0	1.1	<1.1	<5.4	<1.2	<1.0	<1.0
Ethylbenzene	<0.9	<1.1	570	<1.2	<1.0	2.6	<1.1	<5.4	<1.2	<1.0	<1.0
m,p-Xylenes	<0.9	<1.1	590	<1.2	1.7	4.7	<1.1	<5.4	<1.2	<1.0	<1.0
o-Xylene	<0.9	<1.1	640	<1.2	<1.0	2.6	<1.1	<5.4	<1.2	<1.0	<1.0
<b>SVOCs (ug/kg)</b>											
<b>Non-Carcinogenic PAHs</b>											
Naphthalene	<64	<64	92000	220	<600	<78	<62	<65	<62	<62	<610
2-Methylnaphthalene	<64	<64	32000	85	<600	<78	<62	<65	<62	<62	<610
1-Methylnaphthalene	<64	<64	29000	<66	<600	<78	<62	<65	<62	<62	<610
Total Naphthalenes	nd	nd	153000	305	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene	<64	<64	11000	<66	<600	<78	<62	<65	<62	<62	<610
Acenaphthene	<64	<64	23000	<66	<600	<78	<62	<65	<62	<62	<610
Fluorene	<64	<64	17000	<66	<600	<78	<62	<65	<62	<62	<610
Phenanthrene	<64	<64	110000	150	<600	<78	<62	<65	<62	<62	<610
Anthracene	<64	<64	21000	<66	<600	<78	<62	<65	<62	<62	<610
Fluoranthene	<64	<64	140000	150	<600	<78	<62	<65	<62	<62	<610
Pyrene	<64	<64	140000	140	630 J	<78	<62	<65	<62	<62	<610
Benzo(g,h,i)perylene	<64	<64	53000	<66	<600	<78	<62	<65	<62	<62	<610
<b>Carcinogenic PAHs</b>											
Benzo(a)anthracene	<64	<64	40000	<66	<600	<78	<62	<65	<62	<62	<610
Chrysene	<64	<64	53000	<66	<600	<78	<62	<65	<62	<62	<610
Benzo(b)fluoranthene	<64	<64	47000	<66	<600	<78	<62	<65	<62	<62	<610
Benzo(k)fluoranthene	<64	<64	28000	<66	<600	<78	<62	<65	<62	<62	<610
Benzo(a)pyrene	<64	<64	61000	<66	<600	<78	<62	<65	<62	<62	<610
Indeno(1,2,3-cd)pyrene	<64	<64	35000	<66	<600	<78	<62	<65	<62	<62	<610
Dibenzo(a,h)anthracene	<64	<64	6400	<66	<600	<78	<62	<65	<62	<62	<610
Total PAHs (detected)	nd	nd	938400	745	630	nd	nd	nd	nd	nd	nd
BaPeq. Sum	<48	<48	77170	<50	<453	<59	<47	<49	<47	<47	<461

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP10-2	DOF-TP10-14	DOF-TP11-1/3	DOF-TP11-6	DOF-TP12-1	DOF-TP12-3	DOF-TP13-2	DOF-TP13-6	DOF-TP13-9	DOF-TP14-1.5	DOF-TP14-6
Date	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09
<b>Other SOVCs</b>											
Phenol	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
2-Methylphenol	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
4-Methylphenol	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
2,4-Dimethylphenol	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
Dimethylphthalate	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
Dibenzofuran	<64	<64	2400	<66	<600	<78	<62	<65	<62	<62	<610
Diethylphthalate	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
Carbazole	<64	<64	2400	<66	<600	<78	<62	<65	<62	<62	<610
Di-n-butylphthalate	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
Butylbenzylphthalate	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
bis (2-Ethylhexyl)phthalate	<64	<64	<1900	<66	1100	<78	<62	<65	<62	<62	<610
Di-n-octylphthalate	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
Retene	<64	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610
<b>Metals (mg/kg)</b>											
Arsenic	<6	<6	10	<6	<5	<5	<5	<7	<6	<5	<5
Barium	87.8	42.3	283	73.8	1550	81.5	67	86.8	30.2	64.2	51.2
Cadmium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2
Chromium	44.9	24.1	27	30.8	14.9	25	31.9	29.2	21.1	28.6	26.6
Lead	4	<2	29	21	12	2	4	12	<2	4	9
Mercury	0.04	<0.02	0.13	0.04	0.02	0.02	0.03	0.33	<0.02	0.03	0.04
Nickel	51	32	49	36	17	35	44	34	31	35	30
Zinc	40	28	46	48	34	30	37	78	24	27	50

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 — - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP15-1.5	DOF-TP15-10	DOF-TP16-1.5	DOF-TP16-3	DOF-TP17-2	DOF-TP17-5	DOF-TP18-4	DOF-TP18-10	DOF-TP18-13	DOF-TP19-7	DOF-TP19-9
Date	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	9/2/09	9/2/09
<b>Petroleum Hydrocarbons (mg/kg)</b>											
Gasoline Range	<6.3	<6.4	<6.6	<7.4	150	16	<5.5	780	<6.6	<7.8	48
Type	---	---	---	---	GRO	GRO	---	GRO	---	---	GRO
Diesel Range	<5.2	6.6	1000	9.4	600	48	<5.0	7500	<5.5	<5.9	1700
Motor Oil Range	<10	<10	7800	38	370	110	<10	3900	<11	<12	1400
Type	---	DRO	DRO/MO	DRO/MO	DRO/RRO	DRO/MO	---	DRO/RRO	---	---	Diesel/RRO
<b>VOCs (ug/kg)</b>											
Benzene	<1.1	<1.0	<1.1	<1.0	2.5	<1.0	<1.0	200	<1.0	<1.1	4.4
Toluene	<1.1	<1.0	<1.1	<1.0	12	<1.0	<1.0	120	<1.0	<1.1	2.5
Ethylbenzene	<1.1	<1.0	2.0	<1.0	170	<1.0	<1.0	910	<1.0	<1.1	27
m,p-Xylenes	<1.1	<1.0	6.9	<1.0	220	<1.0	<1.0	1200	<1.0	<1.1	22
o-Xylene	<1.1	<1.0	1.7	<1.0	150	<1.0	<1.0	2300	<1.0	<1.1	27
<b>SVOCs (ug/kg)</b>											
<b>Non-Carcinogenic PAHs</b>											
Naphthalene	<60	<61	<190	<65	170000	<63	<65	370000	<62	<67	12000
2-Methylnaphthalene	<60	<61	<190	<65	53000	<63	<65	99000	<62	<67	6100
1-Methylnaphthalene	<60	<61	<190	<65	32000	<63	<65	67000	<62	<67	5400
Total Naphthalenes	nd	nd	nd	nd	255000	nd	nd	536000	nd	nd	23500
Acenaphthylene	<60	<61	<190	<65	21000	<63	<65	97000	<62	<67	2400
Acenaphthene	<60	<61	<190	<65	6300	<63	<65	8100	<62	<67	6100
Fluorene	<60	<61	<190	<65	20000	<63	<65	66000	<62	<67	5100
Phenanthrene	<60	<61	<190	<65	140000	<63	<65	260000	<62	<67	28000
Anthracene	<60	<61	<190	<65	16000	<63	<65	41000	<62	<67	5300
Fluoranthene	<60	<61	<190	<65	93000	<63	<65	320000	<62	<67	44000
Pyrene	<60	<61	<190	<65	110000	<63	<65	330000	<62	83	63000
Benzo(g,h,i)perylene	<60	<61	<190	<65	22000 J	<63	<65	62000 J	<62	<67	26000
<b>Carcinogenic PAHs</b>											
Benzo(a)anthracene	<60	<61	<190	<65	26000	<63	<65	60000	<62	<67	15000
Chrysene	<60	<61	<190	<65	30000 J	<63	<65	71000 J	<62	<67	19000
Benzo(b)fluoranthene	<60	<61	<190	<65	20000	<63	<65	54000	<62	<67	13000
Benzo(k)fluoranthene	<60	<61	<190	<65	18000	<63	<65	49000	<62	<67	13000
Benzo(a)pyrene	<60	<61	<190	<65	36000	<63	<65	80000	<62	<67	24000
Indeno(1,2,3-cd)pyrene	<60	<61	<190	<65	17000	<63	<65	53000	<62	<67	16000
Dibenzo(a,h)anthracene	<60	<61	<190	<65	4400	<63	<65	12000	<62	<67	3500
Total PAHs (detected)	nd	nd	nd	nd	834700	nd	nd	2099100	nd	83	306900
BaPeq. Sum	<45	<46	<143	<49	44840	<48	<49	103510	<47	<51	30240

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP15-1.5	DOF-TP15-10	DOF-TP16-1.5	DOF-TP16-3	DOF-TP17-2	DOF-TP17-5	DOF-TP18-4	DOF-TP18-10	DOF-TP18-13	DOF-TP19-7	DOF-TP19-9
Date	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	9/2/09	9/2/09
<b>Other SOVCs</b>											
Phenol	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
2-Methylphenol	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
4-Methylphenol	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
2,4-Dimethylphenol	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
Dimethylphthalate	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
Dibenzofuran	<60	<61	<190	<65	2200	<63	<65	6300	<62	<67	<660
Diethylphthalate	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
Carbazole	<60	<61	<190	<65	3200	<63	<65	8500	<62	<67	540
Di-n-butylphthalate	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
Butylbenzylphthalate	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
bis(2-Ethylhexyl)phthalate	<60	<61	990	<65	<620	<63	<65	<1800	<62	<67	<120
Di-n-octylphthalate	<60	<61	<190	<65	<620	<63	<65	<1800	<62	<67	<120
Retene	<60	<61	<190	<65	<620	160	<65	<2000	<62	<130	<250
<b>Metals (mg/kg)</b>											
Arsenic	<5	<6	<5	<5	<5	<5	<5	70	<5	<6	6
Barium	38.6	48	66	74.6	61	79.9	43	435	421	-----	-----
Cadmium	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2	<0.6	<0.2	-----	-----
Chromium	20	22.8	27.1	32.4	30.7	30.1	38.8	37	6.6	-----	-----
Lead	<2	<2	13	19	17	61	3	139	<2	-----	-----
Mercury	<0.02	<0.02	0.04	0.04	0.04	0.04	<0.02	1.63	<0.04	-----	-----
Nickel	27	28	36	40	37	36	43	302	10	-----	-----
Zinc	21	24	45	42	45	88	41	88	9	-----	-----

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 ----- - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)

Number	DOF-TP19-11	DOF-TP19-15	DOF-TP20-6	DOF-TP20-11	DOF-TP20-15	DOF-TP21-4	DOF-TP21-7	DOF-TP21-11	DOF-TP22-7	DOF-TP22-15
Date	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09
<b>Petroleum Hydrocarbons (mg/kg)</b>										
Gasoline Range	18	<9.1	<7.9	<7.5	<11.0	<7.6	<6.7	<7.1	11	<7.5
Type	GRO	----	----	----	----	----	----	----	GRO	----
Diesel Range	96	<6.3	<6.0	46	<7.0	<5.9	<5.5	<5.8	120	<5.6
Motor Oil Range	330	<12	<12	280	<14	<12	<11	<12	420	<11
Type	DRO/MO	----	----	DRO/MO	----	----	----	----	DRO/MO	----
<b>VOCs (ug/kg)</b>										
Benzene	<1.2	<1.2	<1.2	<1.2	<1.4	<1.1	<1.1	<1.1	<1.2	<1.1
Toluene	<1.2	<1.2	<1.2	<1.2	<1.4	<1.1	<1.1	<1.1	<1.2	<1.1
Ethylbenzene	<1.2	<1.2	<1.2	<1.2	<1.4	1.3	<1.1	<1.1	9.6	<1.1
m,p-Xylenes	<1.2	<1.2	<1.2	<1.2	<1.4	2.0	<1.1	<1.1	9.8	<1.1
o-Xylene	<1.2	<1.2	<1.2	<1.2	<1.4	3.1	<1.1	<1.1	10	<1.1
<b>SVOCs (ug/kg)</b>										
<b>Non-Carcinogenic PAHs</b>										
Naphthalene	<62	<62	<56	<60	<62	360	<62	<63	2100	120
2-Methylnaphthalene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
1-Methylnaphthalene	<62	<62	<56	<60	<62	<66	<62	<63	910	<63
Total Naphthalenes	nd	nd	nd	nd	nd	360	nd	nd	3010	120
Acenaphthylene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Acenaphthene	<62	<62	<56	<60	<62	<66	<62	<63	710	<63
Fluorene	<62	<62	<56	<60	<62	<66	<62	<63	120	<63
Phenanthrene	68	<62	<56	<60	<62	<66	<62	<63	120	68
Anthracene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Fluoranthene	72	<62	<56	<60	<62	<66	<62	<63	96	88
Pyrene	87	<62	<56	<60	<62	<66	68	<63	120	120
Benzo(g,h,i)perylene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
<b>Carcinogenic PAHs</b>										
Benzo(a)anthracene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Chrysene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Benzo(b)fluoranthene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Benzo(k)fluoranthene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Benzo(a)pyrene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Indeno(1,2,3-cd)pyrene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Dibenzo(a,h)anthracene	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Total PAHs (detected)	227	nd	nd	nd	nd	360	68	nd	4176	396
BaPeq. Sum	<47	<47	<42	<45	<47	<50	<47	<48	<46	<48



**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP19-11	DOF-TP19-15	DOF-TP20-6	DOF-TP20-11	DOF-TP20-15	DOF-TP21-4	DOF-TP21-7	DOF-TP21-11	DOF-TP22-7	DOF-TP22-15
Date	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09
<b>Other SOVCs</b>										
Phenol	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
2-Methylphenol	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
4-Methylphenol	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
2,4-Dimethylphenol	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Dimethylphthalate	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Dibenzofuran	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Diethylphthalate	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Carbazole	<62	<62	<56	<60	<62	<66	<62	<63	96	<63
Di-n-butylphthalate	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Butylbenzylphthalate	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
bis (2-Ethylhexyl)phthalate	<62	<62	<56	<60	<62	<66	<62	<63	160	<63
Di-n-octylphthalate	<62	<62	<56	<60	<62	<66	<62	<63	<61	<63
Retene	<120	<120	<110	<120	<120	<130	<120	<120	<120	<130
<b>Metals (mg/kg)</b>										
Arsenic	<5	<6	<10	<6	<7	<10	<7	<6	8	<7
Barium	----	----	----	----	----	----	----	----	----	----
Cadmium	----	----	----	----	----	----	----	----	----	----
Chromium	----	----	----	----	----	----	----	----	----	----
Lead	----	----	----	----	----	----	----	----	----	----
Mercury	----	----	----	----	----	----	----	----	----	----
Nickel	----	----	----	----	----	----	----	----	----	----
Zinc	----	----	----	----	----	----	----	----	----	----

**Notes:** < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
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 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
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 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP23-8	DOF-TP23-12	DOF-TP23-15	DOF-TP24-10	DOF-TP24-15	DOF-TP25-4	DOF-TP25-11	DOF-TP25-13	DOF-TP26-4	DOF-TP26-9
Date	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09
<b>Petroleum Hydrocarbons (mg/kg)</b>										
Gasoline Range	<8.2	43	<15.0	<7.9	<9.2	<7.5	<8.5	<7.4	<6.2	<6.8
Type	----	GRO	----	----	----	----	----	----	----	----
Diesel Range	<6.1	2000	95	<6.0	9	40	<6.0	<5.6	<5.3	200
Motor Oil Range	<12	2000	90	<12	30	330	<12	<11	<10	1200
Type	----	Diesel/RRO	DRO/MO	----	DRO/RRO	DRO/MO	----	----	----	DRO/MO
<b>VOCs (ug/kg)</b>										
Benzene	<1.2	29	<1.7	<1.1	<1.2	<1.1	<1.2	<1.1	<1.0	<1.1
Toluene	<1.2	3.8	<1.7	<1.1	<1.2	<1.1	<1.2	<1.1	<1.0	<1.1
Ethylbenzene	<1.2	100	<1.7	<1.1	<1.2	3.3	<1.2	<1.1	<1.0	<1.1
m,p-Xylenes	<1.2	39	<1.7	<1.1	<1.2	7.6	<1.2	<1.1	<1.0	<1.1
o-Xylene	<1.2	56	<1.7	<1.1	<1.2	<1.1	<1.2	<1.1	<1.0	<1.1
<b>SVOCs (ug/kg)</b>										
<b>Non-Carcinogenic PAHs</b>										
Naphthalene	<59	4400	<63	<57	<60	810	<60	<59	<59	64
2-Methylnaphthalene	<59	1500	<63	<57	<60	<64	<60	<59	<59	<62
1-Methylnaphthalene	<59	1500	<63	<57	<60	<64	<60	<59	<59	<62
Total Naphthalenes	nd	7400	nd	nd	nd	810	nd	nd	nd	64
Acenaphthylene	<59	1500	<63	<57	<60	<64	<60	<59	<59	<62
Acenaphthene	<59	1300	<63	<57	<60	<64	<60	<59	<59	<62
Fluorene	<59	1200	<63	<57	<60	<64	<60	<59	<59	<62
Phenanthrene	<59	9000	<63	<57	<60	<64	<60	<59	<59	<62
Anthracene	<59	1800	<63	<57	<60	<64	<60	<59	<59	<62
Fluoranthene	<59	21000	<63	<57	<60	71	<60	<59	<59	160
Pyrene	<59	32000	<63	<57	<60	76	<60	<59	<59	220
Benzo(g,h,i)perylene	<59	14000	<63	<57	<60	<64	<60	<59	<59	<62
<b>Carcinogenic PAHs</b>										
Benzo(a)anthracene	<59	7900	<63	<57	<60	<64	<60	<59	<59	<62
Chrysene	<59	10000	<63	<57	<60	<64	<60	<59	<59	<62
Benzo(b)fluoranthene	<59	7200	<63	<57	<60	<64	<60	<59	<59	<62
Benzo(k)fluoranthene	<59	7200	<63	<57	<60	<64	<60	<59	<59	<62
Benzo(a)pyrene	<59	14000	<63	<57	<60	<64	<60	<59	<59	<62
Indeno(1,2,3-cd)pyrene	<59	8800	<63	<57	<60	<64	<60	<59	<59	<62
Dibenzo(a,h)anthracene	<59	1700	<63	<57	<60	<64	<60	<59	<59	<62
Total PAHs (detected)	nd	146000	nd	nd	nd	957	nd	nd	nd	444
BaPeq. Sum	<45	17380	<48	<43	<45	<48	<45	<45	<45	<47

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF- TP23-8	DOF- TP23-12	DOF- TP23-15	DOF- TP24-10	DOF- TP24-15	DOF- TP25-4	DOF- TP25-11	DOF- TP25-13	DOF- TP26-4	DOF- TP26-9
Date	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09	9/2/09
<b>Other SOVCs</b>										
Phenol	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
2-Methylphenol	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
4-Methylphenol	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
2,4-Dimethylphenol	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
Dimethylphthalate	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
Dibenzofuran	<59	190	<63	<57	<60	<64	<60	<59	<59	<62
Diethylphthalate	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
Carbazole	<59	240	<63	<57	<60	<64	<60	<59	<59	<62
Di-n-butylphthalate	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
Butylbenzylphthalate	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
bis(2-Ethylhexyl)phthalate	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
Di-n-octylphthalate	<59	<120	<63	<57	<60	<64	<60	<59	<59	<62
Retene	<120	<240	<130	<110	<120	<130	<120	<120	<120	140
<b>Metals (mg/kg)</b>										
Arsenic	<6	8	<7	<10	<6	7	<7	<6	<5	<6
Barium	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cadmium	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chromium	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Lead	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mercury	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nickel	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Zinc	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 --- - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP26-13	DOF-TP27-4	DOF-TP27-6	Maximum Conc	Unrestricted CUL	Industrial CUL	Risk Pathway	Terrestrial CUL (Table 749-1)
Date	9/2/09	9/2/09	9/2/09					
<b>Petroleum Hydrocarbons (mg/kg)</b>								
Gasoline Range	<7.4	<5.8	<5.8	780	30/100 (A)(1)	30/100 (A)(1)	GW Quality	200
Type	----	----	----	----	----	----	----	----
Diesel Range	<5.5	----	----	7500	2000 (A)	2000 (A)	GW Quality	460
Motor Oil Range	<11	----	----	19000	2000 (A)	2000 (A)	GW Quality	----
Type	----	----	----	----	----	----	----	----
<b>VOCs (ug/kg)</b>								
Benzene	<1.1	<0.9	<1.0	200	30 (A)	30 (A)	GW Quality	----
Toluene	<1.1	<0.9	<1.0	120	7000 (A)	7000 (A)	GW Quality	----
Ethylbenzene	<1.1	<0.9	<1.0	910	6000 (A)	6000 (A)	GW Quality	----
m,p-Xylenes	<1.1	<0.9	<1.0	1200	9000 (A)	9000 (A)	GW Quality	----
o-Xylene	<1.1	<0.9	<1.0	2300	9000 (A)	9000 (A)	GW Quality	----
<b>SVOCs (ug/kg)</b>								
<b>Non-Carcinogenic PAHs</b>								
Naphthalene	<65	----	----	370000	----	----	----	----
2-Methylnaphthalene	<65	----	----	99000	----	----	----	----
1-Methylnaphthalene	<65	----	----	67000	----	----	----	----
Total Naphthalenes	nd	----	----	536000	5000 (A)	5000 (A)	GW Quality	----
Acenaphthylene	<65	----	----	97000	----	----	----	----
Acenaphthene	<65	----	----	23000	4800000 (B)	210000000 (C)	Soil Contact	----
Fluorene	<65	----	----	66000	3200000 (B)	140000000 (C)	Soil Contact	----
Phenanthrene	<65	----	----	260000	----	----	----	----
Anthracene	<65	----	----	41000	24000000 (B)	1100000000 (C)	Soil Contact	----
Fluoranthene	<65	----	----	400000	3200000 (B)	140000000 (C)	Soil Contact	----
Pyrene	<65	----	----	410000	2400000 (B)	110000000 (C)	Soil Contact	----
Benzo(g,h,i)perylene	<65	----	----	72000	----	----	----	----
<b>Carcinogenic PAHs</b>								
Benzo(a)anthracene	<65	----	----	76000	----	----	----	----
Chrysene	<65	----	----	94000	----	----	----	----
Benzo(b)fluoranthene	<65	----	----	83000	----	----	----	----
Benzo(k)fluoranthene	<65	----	----	49000	----	----	----	----
Benzo(a)pyrene	<65	----	----	110000	100 (A)	2000 (A)	Soil Contact	30000
Indeno(1,2,3-cd)pyrene	<65	----	----	53000	----	----	----	----
Dibenzo(a,h)anthracene	<65	----	----	12000	----	----	----	----
Total PAHs (detected)	nd	----	----	2099100	----	----	----	----
BaPeq. Sum	<49	----	----	137620	100 (A)	2000 (A)	Soil Contact	30000

**TABLE 5 - Summary of Test Pit Soil Quality Data (April and September 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP26-13	DOF-TP27-4	DOF-TP27-6	Maximum Conc	Unrestricted CUL	Industrial CUL	Risk Pathway	Terrestrial CUL (Table 749-1)
Date	9/2/09	9/2/09	9/2/09					
<b>Other SOVCs</b>								
Phenol	<65	----	----	<1900	48000000 (B)	2100000000 (C)	Soil Contact	----
2-Methylphenol	<65	----	----	<1900	----	----	----	----
4-Methylphenol	<65	----	----	<1900	----	----	----	----
2,4-Dimethylphenol	<65	----	----	<1900	1600000 (B)	70000000 (C)	Soil Contact	----
Dimethylphthalate	<65	----	----	<1900	80000000 (B)	3500000000 (C)	Soil Contact	----
Dibenzofuran	<65	----	----	6300	160000 (B)	7000000 (C)	Soil Contact	----
Diethylphthalate	<65	----	----	<1900	64000000 (B)	2800000000 (C)	Soil Contact	----
Carbazole	<65	----	----	8500	50000 (B)	6600000 (C)	Soil Contact	----
Di-n-butylphthalate	<65	----	----	<1900	8000000 (B)	350000000 (C)	Soil Contact	200000
Butylbenzylphthalate	<65	----	----	<1900	16000000 (B)	700000000 (C)	Soil Contact	----
bis (2-Ethylhexyl)phthalate	<65	----	----	1100	71000 (B)	9400000 (C)	Soil Contact	----
Di-n-octylphthalate	<65	----	----	<1900	1600000 (B)	70000000 (C)	Soil Contact	----
Retene	<130	----	----	160	----	----	----	----
<b>Metals (mg/kg)</b>								
Arsenic	<6	----	----	70	20 (A)	20 (A)	Background	20
Barium	----	----	----	1550	----	----	----	1250
Cadmium	----	----	----	0.6	2 (A)	2 (A)	GW Quality	25
Chromium	----	----	----	56	19(IV);2000(III) (A)	19(IV);2000(III) (A)	GW Quality	42
Lead	----	----	----	238	250 (A)	1000 (A)	Soil Contact	220
Mercury	----	----	----	1.63	2 (A)	2 (A)	GW Quality	9
Nickel	----	----	----	302	1600 (B)	70000 (C)	Soil Contact	100
Zinc	----	----	----	91	24000 (B)	1100000 (C)	Soil Contact	270

**Notes:** < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 ---- - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 6 - Summary of Push-Probe Soil Quality Data (August 2009)**

Verbeek Site  
Bothell, WA

Number	DOF P1-A	DOF P1-B	DOF P4-A	DOF P4-B	DOF P4-C	DOF P5-A	DOF P5-B	DOF P5-C	DOF P7-A	DOF P7-B	DOF P7-C
Date	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09
Depth Interval (feet)	2.5-3.5	7-10	4-5	9-10	13.5-14.5	4-5	8-9	14-15	4-5	9-10	14-15
<b>Petroleum Hydrocarbons (mg/kg)</b>											
Gasoline Range	<5.3	<5.2	<6.0	<6.1	<6.5	<5.9	<6.8	<7.5	<5.7	52	53
Type	----	----	----	----	----	----	----	----	----	GRO	GRO
Diesel Range	<5.2	8.8	<5.3	<5.4	<5.5	16	9.9	49	<5.2	66	<5.3
Motor Oil Range	16	10	11	11	11	110	47	110	10	44	11
Type	RRO	DRO	----	----	----	DRO/MO	DRO/MO	Diesel/MC	----	Diesel/MC	----
<b>VOCs (ug/kg)</b>											
Benzene	<1.0	<0.9	<0.9	<1.0	<0.9	<1.0	<1.0	<1.1	<1.1	<1.0	<1.1
Toluene	<1.0	<0.9	<0.9	<1.0	<0.9	<1.0	<1.0	<1.1	<1.1	1.3	1.4
Ethylbenzene	<1.0	<0.9	<0.9	<1.0	<0.9	<1.0	<1.0	<1.1	<1.1	<1.0	<1.1
m,p-Xylenes	<1.0	<0.9	<0.9	<1.0	<0.9	<1.0	<1.0	<1.1	<1.1	1.1	1.2
o-Xylene	<1.0	<0.9	<0.9	<1.0	<0.9	<1.0	<1.0	<1.1	<1.1	<1.0	<1.1
<b>SVOCs (ug/kg)</b>											
<b>Non-Carcinogenic PAHs</b>											
Naphthalene	<65	<63	<55	<58	<59	<54	<59	150	<61	<59	<61
2-Methylnaphthalene	<65	<63	<55	<58	<59	<54	<59	170	<61	<59	<61
1-Methylnaphthalene	<65	<63	<55	<58	<59	<54	<59	170	<61	<59	<61
Total Naphthalenes	nd	nd	nd	nd	nd	nd	nd	490	nd	nd	nd
Acenaphthylene	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61
Acenaphthene	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61
Fluorene	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61
Phenanthrene	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61
Anthracene	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61
Fluoranthene	<65	<63	<55	<58	<59	<54	<59	160	<61	110	<61
Pyrene	<65	<63	<55	<58	<59	<54	<59	180	<61	190	<61
Benzo(g,h,i)perylene	<65	<63	<55	<58	<59	<54	<59	68	<61	<59	<61
<b>Carcinogenic PAHs</b>											
Benzo(a)anthracene	<65	<63	<55	<58	<59	<54	<59	83	<61	<59	<61
Chrysene	<65	<63	<55	<58	<59	<54	<59	120	<61	<59	<61
Benzo(b)fluoranthene	<65	<63	<55	<58	<59	<54	<59	81	<61	<59	<61
Benzo(k)fluoranthene	<65	<63	<55	<58	<59	<54	<59	65	<61	<59	<61
Benzo(a)pyrene	<65	<63	<55	<58	<59	<54	<59	84	<61	<59	<61
Indeno(1,2,3-cd)pyrene	<65	<63	<55	<58	<59	<54	<59	65	<61	<59	<61
Dibenzo(a,h)anthracene	<65	<63	<55	<58	<59	<54	<59	65	<61	<59	<61
Total PAHs (detected)	nd	nd	nd	nd	nd	nd	nd	1266	nd	300	nd
BaPeq. Sum	<49	<48	<42	<44	<45	<41	<45	111	<46	<45	<46

**TABLE 6 - Summary of Push-Probe Soil Quality Data (August 2009)**

Verbeek Site  
Bothell, WA

Number	DOF P1-A	DOF P1-B	DOF P4-A	DOF P4-B	DOF P4-C	DOF P5-A	DOF P5-B	DOF P5-C	DOF P7-A	DOF P7-B	DOF P7-C	
Date	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	8/31/09	
<b>Other SOVCs</b>												
Phenol	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
2-Methylphenol	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
4-Methylphenol	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
2,4-Dimethylphenol	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
Dimethylphthalate	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
Dibenzofuran	<65	<63	<55	<58	<59	<54	<59	100	<61	<59	<61	
Diethylphthalate	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
Carbazole	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
Di-n-butylphthalate	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
Butylbenzylphthalate	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
<i>δ</i> /s (2-Ethylhexyl)phthalate	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
Di-n-octylphthalate	<65	<63	<55	<58	<59	<54	<59	<65	<61	<59	<61	
Retene	<130	<130	<110	<120	<120	<110	<120	720 Q	<120	<120	<120	
<b>Metals (mg/kg)</b>												
Arsenic	<5	<5	<5	<5	<5	<5	<5	6	<5	<5	<5	
Barium	----	----	----	----	----	----	----	----	----	----	----	
Cadmium	----	----	----	----	----	----	----	----	----	----	----	
Chromium	----	----	----	----	----	----	----	----	----	----	----	
Lead	----	----	----	----	----	----	----	----	----	----	----	
Mercury	----	----	----	----	----	----	----	----	----	----	----	
Nickel	----	----	----	----	----	----	----	----	----	----	----	
Zinc	----	----	----	----	----	----	----	----	----	----	----	

**Notes:** < - Less than indicated value  
 J - Estimated value  
 Q - Continuing calibrations were outside of control limits low  
 nd - Not detected  
 CUL - Cleanup Level  
 ---- - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present  
 and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 6 - Summary of Push-Probe Soil Quality Data (August 2009)**

Number	Maximum Conc	Unrestricted CUL	Industrial CUL	Risk Pathway
Date				
Depth Interval (feet)	----	----	----	----
<b>Petroleum Hydrocarbons (mg/kg)</b>				
Gasoline Range	53	30/100 (A)(1)	30/100 (A)(1)	GW Quality
Type	----	----	----	
Diesel Range	66	2000 (A)	2000 (A)	GW Quality
Motor Oil Range	110	2000 (A)	2000 (A)	GW Quality
Type	----	----	----	
<b>VOCs (ug/kg)</b>				
Benzene	<1.1	30 (A)	30 (A)	GW Quality
Toluene	1.4	7000 (A)	7000 (A)	GW Quality
Ethylbenzene	<1.1	6000 (A)	6000 (A)	GW Quality
m,p-Xylenes	1.2	9000 (A)	9000 (A)	GW Quality
o-Xylene	<1.1	9000 (A)	9000 (A)	GW Quality
<b>SVOCs (ug/kg)</b>				
<b>Non-Carcinogenic PAHs</b>				
Naphthalene	150	----	----	----
2-Methylnaphthalene	170	----	----	----
1-Methylnaphthalene	170	----	----	----
Total Naphthalenes	490	5000 (A)	5000 (A)	GW Quality
Acenaphthylene	<65	----	----	----
Acenaphthene	<65	4800000 (B)	210000000 (C)	Soil Contact
Fluorene	<65	3200000 (B)	140000000 (C)	Soil Contact
Phenanthrene	<65	----	----	----
Anthracene	<65	24000000 (B)	1100000000 (C)	Soil Contact
Fluoranthene	160	3200000 (B)	140000000 (C)	Soil Contact
Pyrene	190	2400000 (B)	110000000 (C)	Soil Contact
Benzo(g,h,i)perylene	68	----	----	----
<b>Carcinogenic PAHs</b>				
Benzo(a)anthracene	83	----	----	----
Chrysene	120	----	----	----
Benzo(b)fluoranthene	81	----	----	----
Benzo(k)fluoranthene	65	----	----	----
Benzo(a)pyrene	84	100 (A)	2000 (A)	Soil Contact
Indeno(1,2,3-cd)pyrene	65	----	----	----
Dibenzo(a,h)anthracene	65	----	----	----
Total PAHs (detected)	1266	----	----	----
BaPeq. Sum	111.35	100 (A)	2000 (A)	Soil Contact

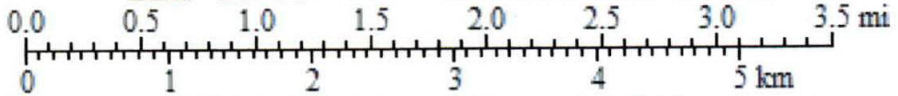
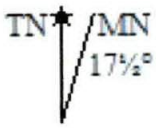
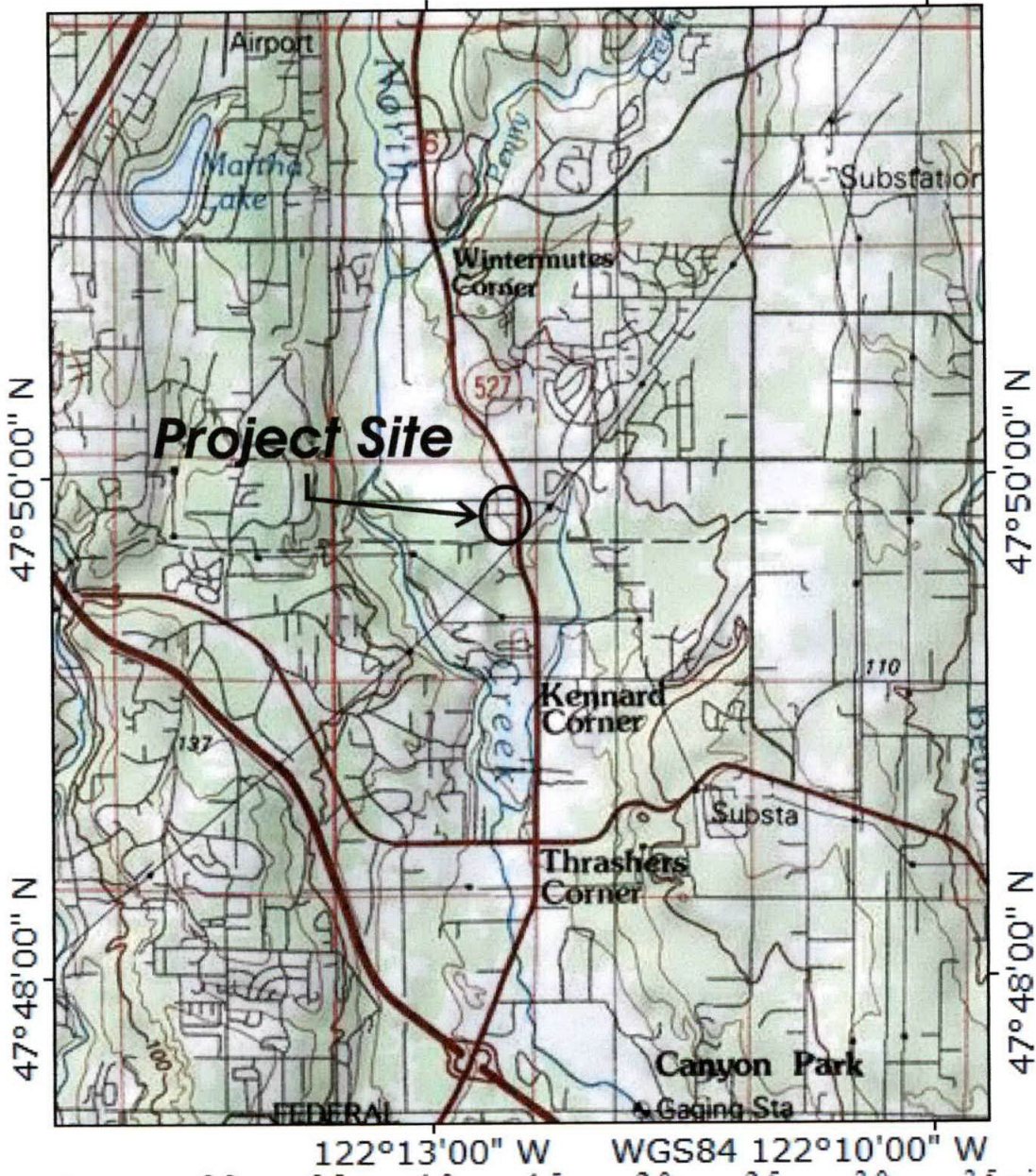


**TABLE 6 - Summary of Push-Probe Soil Quality Data (August 2009)**

Number	Maximum Conc	Unrestricted CUL	Industrial CUL	Risk Pathway
Date				
<b>Other SOVCs</b>				
Phenol	<65	48000000 (B)	2100000000 (C)	Soil Contact
2-Methylphenol	<65	-----	-----	-----
4-Methylphenol	<65	-----	-----	-----
2,4-Dimethylphenol	<65	1600000 (B)	70000000 (C)	Soil Contact
Dimethylphthalate	<65	80000000 (B)	3500000000 (C)	Soil Contact
Dibenzofuran	100	160000 (B)	7000000 (C)	Soil Contact
Diethylphthalate	<65	64000000 (B)	2800000000 (C)	Soil Contact
Carbazole	<65	50000 (B)	6600000 (C)	Soil Contact
Di-n-butylphthalate	<65	8000000 (B)	350000000 (C)	Soil Contact
Butylbenzylphthalate	<65	16000000 (B)	700000000 (C)	Soil Contact
b/s (2-Ethylhexyl)phthalate	<65	71000 (B)	9400000 (C)	Soil Contact
Di-n-octylphthalate	<65	1600000 (B)	70000000 (C)	Soil Contact
Retene	720 Q	-----	-----	-----
<b>Metals (mg/kg)</b>				
Arsenic	6	20 (A)	20 (A)	Background
Barium	-----	-----	-----	-----
Cadmium	-----	2 (A)	2 (A)	GW Quality
Chromium	-----	19(IV);2000(III) (A)	19(IV);2000(III) (A)	GW Quality
Lead	-----	250 (A)	1000 (A)	Soil Contact
Mercury	-----	2 (A)	2 (A)	GW Quality
Nickel	-----	1600 (B)	70000 (C)	Soil Contact
Zinc	-----	24000 (B)	1100000 (C)	Soil Contact

**Notes:** < - Less than indicated value  
 J - Estimated value  
 Q - Continuing calibrations were outside of control limits low  
 nd - Not detected  
 CUL - Cleanup Level  
 ----- - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable.  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

map printed on 03/20/09 from "Washington.tpo" and "Untitled  
122°13'00" W WGS84 122°10'00" W



Printed from TOPO! ©2000 National Geographic Holdings (www.topo.com)



Former Verbeek Wrecking Yard  
Bothell, WA

**Vicinity Map**

PSE-004-00 **FIGURE 1** March 2009  
Dalton, Olmsted & Fuglevand, Inc.

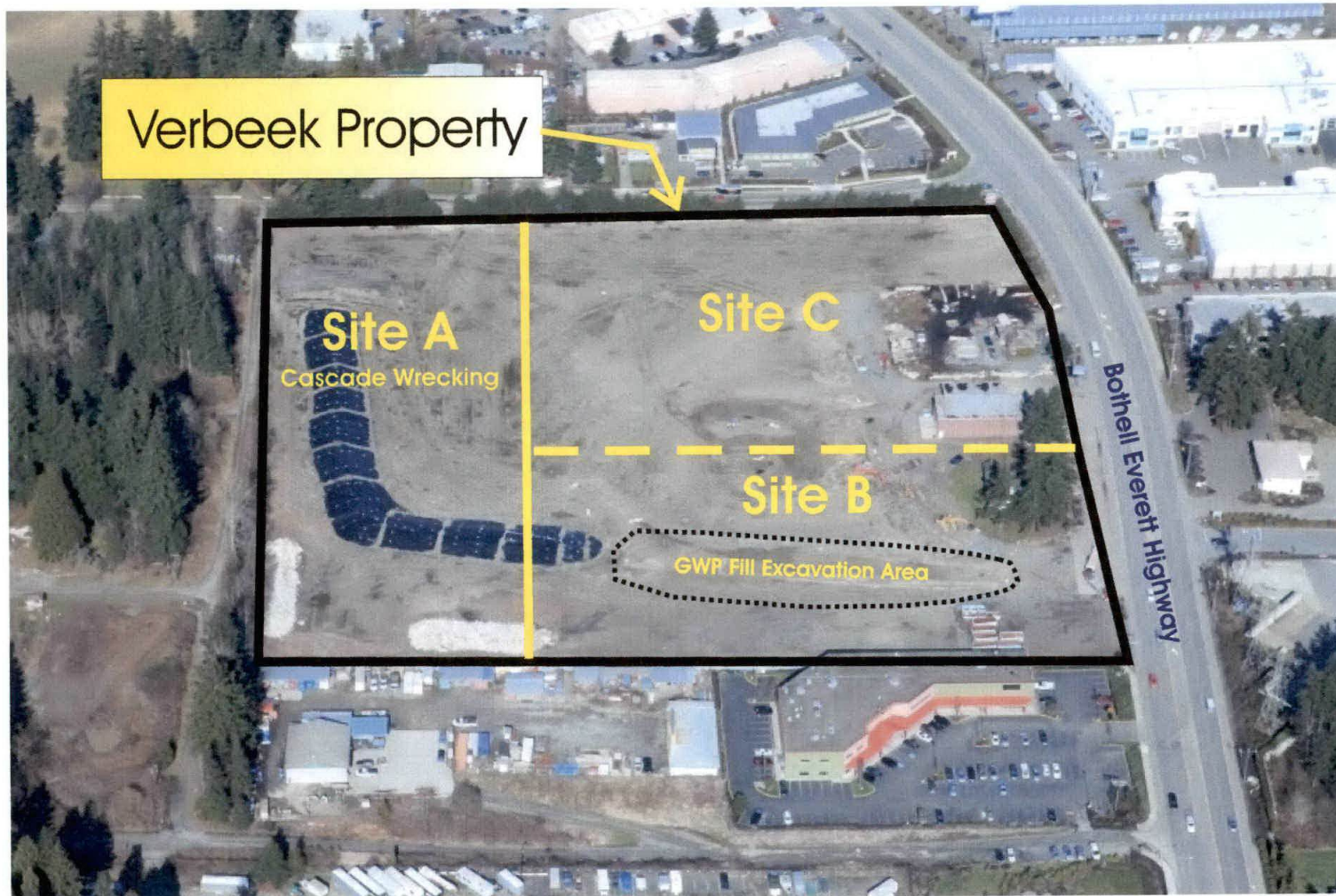


Photo by Aequalis Photography  
3-6-09

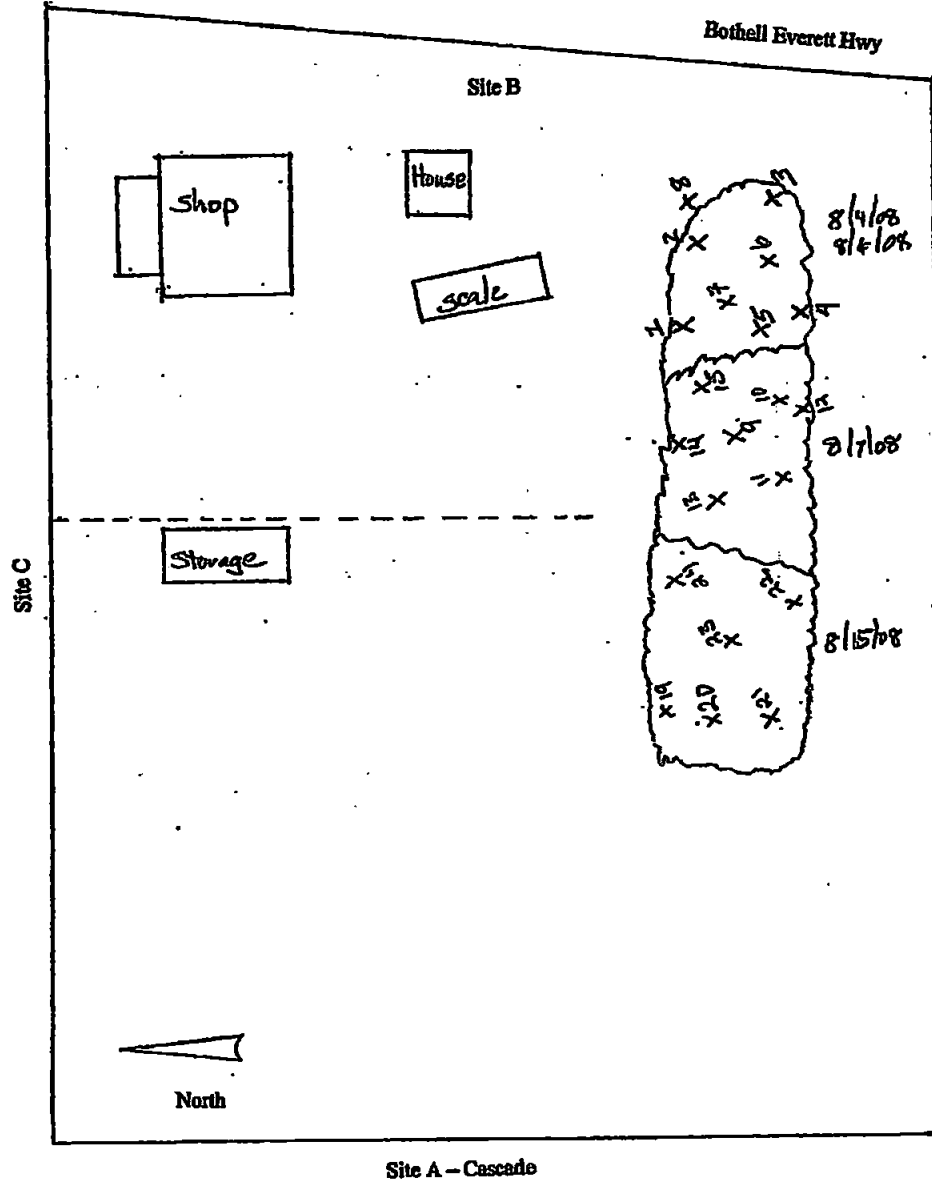


Verbeek Site B  
Bothell, Washington  
**Site Photo and Estimate of  
Previous GWP Excavation Area**

PSE-004-00 **FIGURE 2** June 2009  
Dalton, Olmsted & Fuglevand, Inc.

Verbeek  
Site Remediation Sketch, Site B  
18614 Bothell Everett Hwy.  
Bothell, WA

Soil Sample Locations

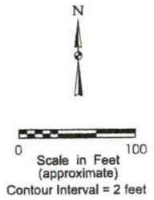


Verbeek Site B  
Bothell, WA

Sample Locations - Site B  
August 2008

Document provided by Groff Murphy  
Ref: Sketch Spl Loc 8-08 by GreenCo IRAP.cdr

PSE-004-00 **FIGURE 3** June 2009  
Dalton, Olmsted & Fuglevand, Inc.



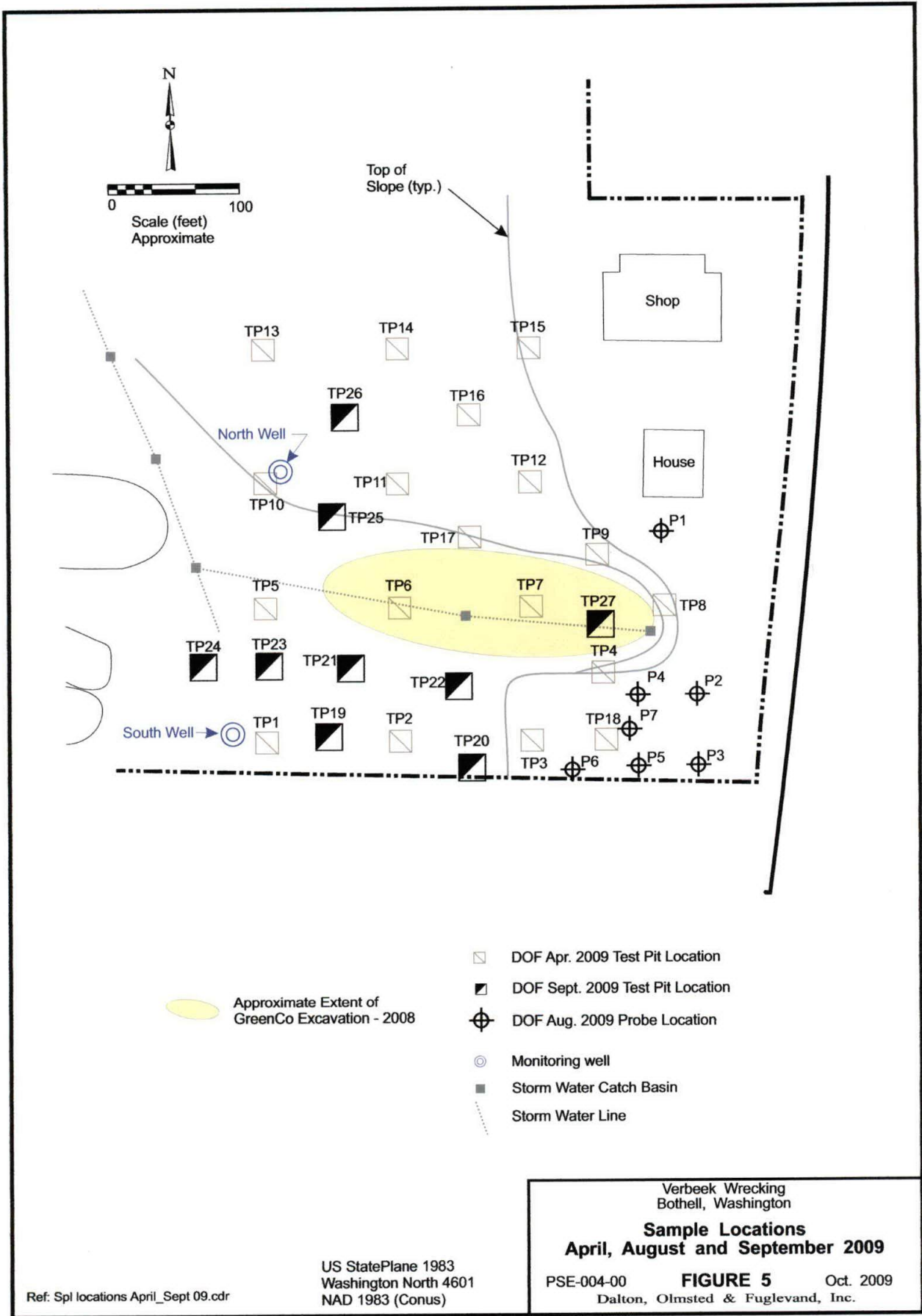
Monitoring Well Installed  
September 2008

Site B Portion Verbeek Wrecking Yard  
Bothell, WA

Site Features Map

PSE-004 **FIGURE 4** June 2009  
Dalton, Olmsted & Fuglevand, Inc.

Ref: Site Features Map 6-17-09.cdr



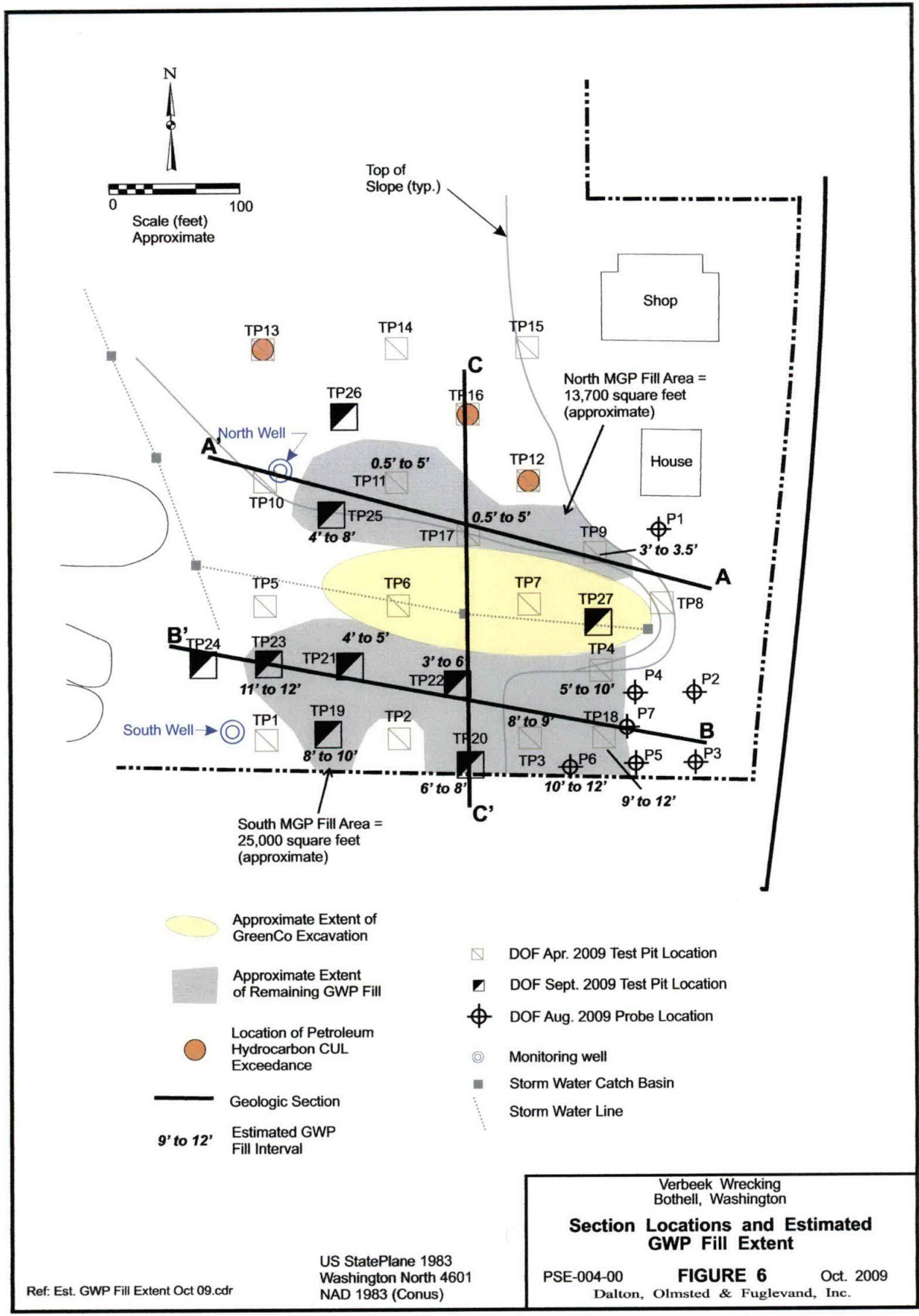
Ref: Spl locations April\_Sept 09.cdr

US StatePlane 1983  
Washington North 4601  
NAD 1983 (Conus)

Verbeek Wrecking  
Bothell, Washington

**Sample Locations**  
**April, August and September 2009**

PSE-004-00 **FIGURE 5** Oct. 2009  
Dalton, Olmsted & Fuglevand, Inc.



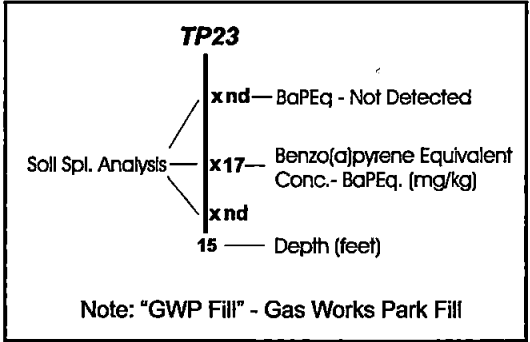
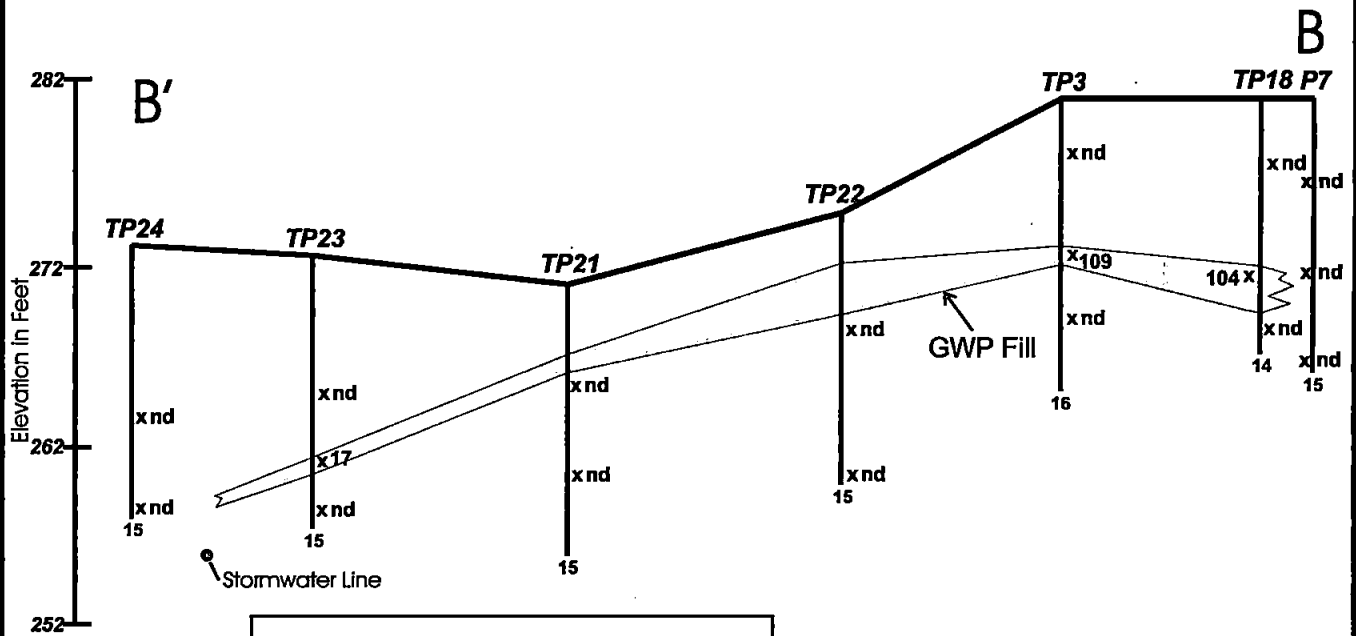
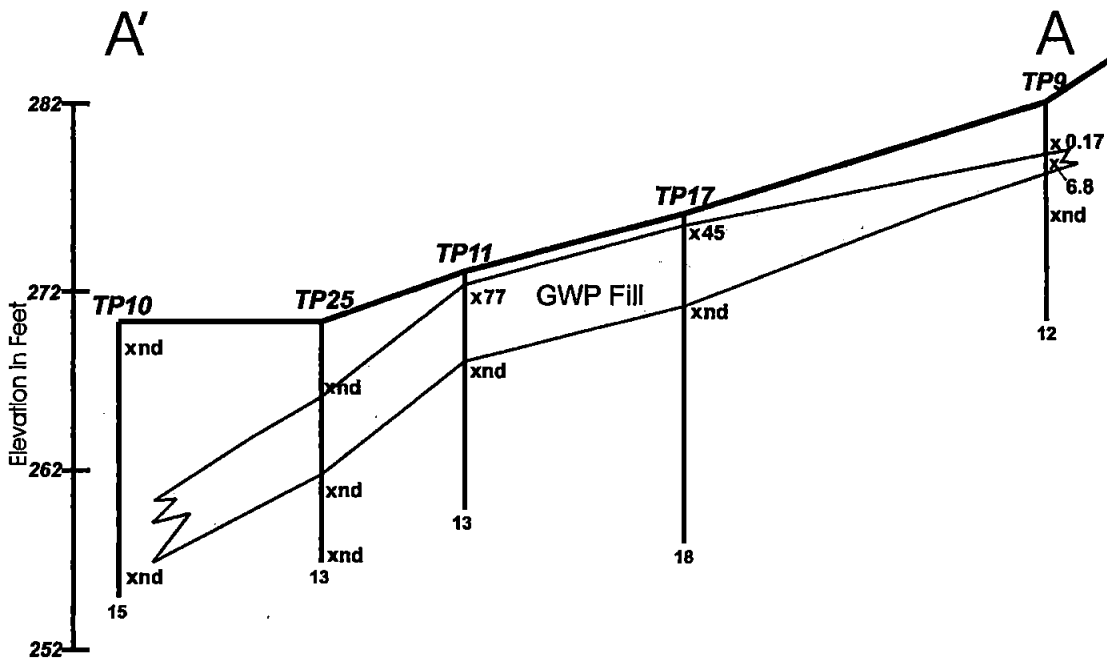
Ref: Est. GWP Fill Extent Oct 09.cdr

US StatePlane 1983  
 Washington North 4601  
 NAD 1983 (Conus)

Verbeek Wrecking  
 Bothell, Washington

**Section Locations and Estimated  
 GWP Fill Extent**

PSE-004-00      **FIGURE 6**      Oct. 2009  
 Dalton, Olmsted & Fuglevand, Inc.



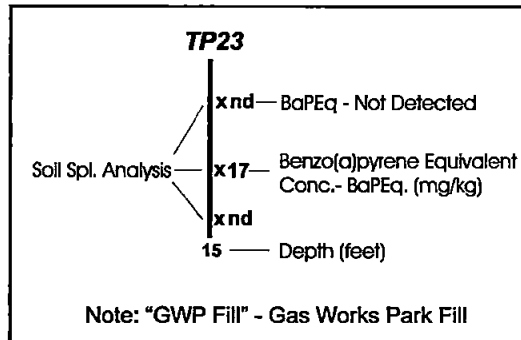
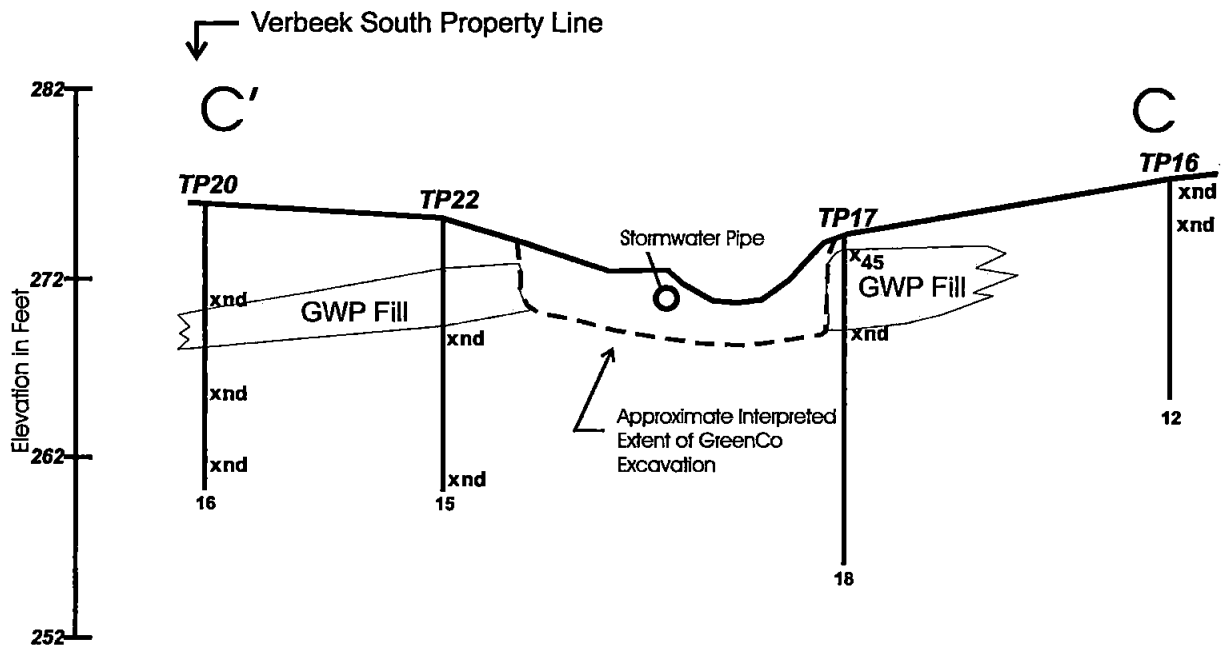
Verbeek Wrecking  
Bothell, WA

**Sections A-A' and B-B'**

PSE-004-00 **FIGURE 7** October 2009  
Dalton, Olmsted & Fuglevand, Inc.

Ref: Sections A and B.cdr





Verbeek Wrecking  
Bothell, WA

Section C-C'

**ATTACHMENT A**  
**Laboratory Data Sheets**  
**2008 GreenCo Excavation Area**

**Former Verbeek Wrecking Yard**  
**Bothell, Washington**



**Verbeek**

**Site B**

**Report on Work To Date  
And  
Options For Further Actions**

10/07/08

**BIOREMEDIATION SERVICES**

**Supplementary Analytical Data**

13110 NE 177th PL., Suite 114 Woodinville, WA 98072

Cell 206-234-4414 Fax 425-885-1282

[Www.GreenCoEnviro.com](http://www.GreenCoEnviro.com)

B

Advanced Analytical Laboratory  
(425)497-0110, fax(425)497-8089

AAL Job Number:	A80804-1
Client:	Greenco Environmental, Inc
Project Manager:	Randy Perkins
Client Project Name:	Verbeek-B
Client Project Number:	na
Date received:	08/04/08

AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

**Analytical Results**

NWTPH-Dx, mg/kg		MTH BLK	1B	2B	3B	4B
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/04/08	08/04/08	08/04/08	08/04/08	08/04/08
Date analyzed	Limits	08/04/08	08/04/08	08/04/08	08/04/08	08/04/08
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd
Creosote	20	nd	180	24	45	650
Heavy oil	50	nd	nd	nd	nd	nd

**Surrogate recoveries:**

Fluorobiphenyl	111%	125%	119%	124%	123%
o-Terphenyl	109%	121%	116%	122%	120%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits  
 na - not analyzed  
 C - coelution with sample peaks  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

Analytical Results		Dupl		RPD	
NWTPH-Dx, mg/kg		5B	6B	6B	6B
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/04/08	08/04/08	08/04/08	08/04/08
Date analyzed	Limits	08/04/08	08/04/08	08/04/08	08/04/08
Kerosene/Jet fuel	20	nd	nd	nd	
Diesel/Fuel oil	20	nd	nd	nd	
Creosote	20	220	360	410	13%
Heavy oil	50	nd	nd	nd	

Surrogate recoveries:

Fluorobiphenyl	101%	123%	130%
o-Terphenyl	99%	119%	127%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

Analytical Results		Dupl		
NWTPH-HCID, mg/kg		MTH BLK	7B	7B
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/04/08	08/04/08	08/04/08
Date analyzed	Limits	08/04/08	08/04/08	08/04/08
Gasoline	20	nd	nd	nd
Stoddard/Mineral spirits	20	nd	nd	nd
Kensol	20	nd	nd	nd
Kerosene/Jet fuel	20	nd	nd	nd
Diesel/Fuel oil	50	nd	nd	nd
Bunker C	50	nd	nd	nd
Heavy oil	100	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	111%	83%	128%
o-Terphenyl	109%	83%	124%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 D - detected at or above listed reporting limits  
 C - coelution with sample peaks  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

**Analytical Results**

NWTPH-Gx / BTEX		MTH BLK	LCS	1B	2B	3B
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/04/08	08/04/08	08/04/08	08/04/08	08/04/08
Date analyzed	Limits	08/04/08	08/04/08	08/04/08	08/04/08	08/04/08

**NWTPH-Gx, mg/kg**

Mineral spirits/Stoddard	5.0	nd		nd	nd	nd
Gasoline	5.0	nd		11	nd	nd

**BTEX 8021B, µg/kg**

Benzene	20	nd	72%	nd	nd	nd
Toluene	50	nd	73%	nd	nd	nd
Ethylbenzene	50	nd		71	nd	nd
Xylenes	50	nd		160	nd	nd

**Surrogate recoveries:**

Trifluorotoluene	79%	87%	77%	75%	79%
Bromofluorobenzene	86%	98%	88%	86%	88%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits

na - not analyzed

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%



AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

Analytical Results

NWTPH-Gx / BTEX		4B	5B	6B
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/04/08	08/04/08	08/04/08
Date analyzed	Limits	08/04/08	08/04/08	08/04/08

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard	5.0	nd	nd	nd
Gasoline	5.0	71	260	310

BTEX 8021B, µg/kg

Benzene	20	nd	nd	nd
Toluene	50	110	70	130
Ethylbenzene	50	270	1,400	2,200
Xylenes	50	1,900	2,000	2,900

Surrogate recoveries:

Trifluorotoluene	74%	76%	73%
Bromofluorobenzene	87%	89%	90%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

Analytical Results		MS		MSD		RPD	
8260B, µg/kg		MTH BLK	LCS	2B	4B	4B	4B
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08
Date analyzed	Limits	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08
MTBE	20	nd		nd	nd		
1,2-Dichloroethane(EDC)	20	nd	110%	nd	nd	107%	115%
1,2-Dibromoethane (EDB)*	5	nd		nd	nd		
Naphtalene	50	nd		880	130,000		

\*-instrument detection limits

Surrogate recoveries							
1,2-Dichloroethane-d4		115%	114%	121%	114%	120%	113%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

Analytical Results				Dupl		RPD	
PAH(8270), mg/kg		MTH BLK	LCS	2B	2B	2B	4B
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08
Date analyzed	Limits	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08
Acenaphthylene	0.10	nd		nd	nd		3.3
Acenaphthene	0.10	nd	85%	nd	nd		3.5
Fluorene	0.10	nd		nd	nd		5.3
Phenanthrene	0.10	nd		0.12	0.13	10%	20
Anthracene	0.10	nd		nd	nd		3.1
Fluoranthene	0.10	nd		0.17	0.18	3%	9.3
Pyrene	0.10	nd	77%	0.28	0.28	0%	15
Benzo(a)anthracene	0.10	nd		nd	nd		3.4
Chrysene	0.10	nd		nd	nd		4.8
Benzo(b)fluoranthene	0.10	nd		nd	nd		1.6
Benzo(k)fluoranthene	0.10	nd		nd	nd		1.8
Benzo(a)pyrene	0.10	nd		nd	nd		0.67
Indeno(1,2,3-cd)pyrene	0.10	nd		nd	nd		1.8
Dibenzo(ah)anthracene	0.10	nd		nd	nd		0.38
Benzo(ghi)perylene	0.10	nd		nd	nd		2.8

Surrogate recoveries:							
Fluorobiphenyl		89%	83%	67%	69%		71%
o-Terphenyl		118%	107%	93%	104%		88%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 na - not analyzed  
 C - coelution with sample peaks  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

Analytical Results						Dupl
8082(PCBs), mg/kg		MTH BLK	LCS	2B	4B	4B
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/04/08	08/04/08	08/04/08	08/04/08	08/04/08
Date analyzed	Limits	08/04/08	08/04/08	08/04/08	08/04/08	08/04/08
A1221	0.20	nd		nd	nd	nd
A1232	0.20	nd		nd	nd	nd
A1242 (A1016)	0.20	nd		nd	nd	nd
A1248	0.20	nd		nd	nd	nd
A1254	0.20	nd	89%	nd	nd	nd
A1260	0.20	nd		nd	nd	nd

Surrogate recoveries:

Tetrachloro-m-xylene	114%	99%	102%	103%	81%
Decachlorobiphenyl	92%	104%	120%	103%	116%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

AAL Job Number: A80804-1  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/04/08

Analytical Results				Dupl		RPD	
Metals (7010), mg/kg		MTH BLK	LCS	2B	2B	2B	4B
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08
Date analyzed	Limits	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08	08/05/08
Lead (Pb)	1.0	nd	94%	6.8	5.6	19%	68
Chromium (Cr)	2.0	nd	110%	nd	nd		2.9
Cadmium (Cd)	1.0	nd	92%	nd	nd		nd
Arsenic (As)	2.0	nd	111%	nd	nd		3.4
Mercury (Hg) (7470A)	0.5	nd	127%	nd	nd		nd

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

B

Advanced Analytical Laboratory  
(425)497-0110, fax(425)497-8089

AAL Job Number: A80807-7  
Client: Greenco  
Project Manager: Randy Perkins  
Client Project Name: Verbeek-B  
Client Project Number: na  
Date received: 08/07/08

B  
9-15

AAL Job Number: A80807-7  
 Client: Greenco  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/07/08

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	9	10	11	12	13	14
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Date analyzed	Limits	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd	nd
Creosote	20	nd	nd	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	89%	98%	111%	106%	113%	129%	129%
o-Terphenyl	104%	84%	95%	93%	98%	109%	109%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 na - not analyzed  
 C - coelution with sample peaks  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A80807-7  
 Client: Greenco  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/07/08

Analytical Results		Dupl	
NWTPH-Dx, mg/kg		15	15
Matrix	Soil	Soil	Soil
Date extracted	Reporting	08/08/08	08/08/08
Date analyzed	Limits	08/08/08	08/08/08
Kerosene/Jet fuel	20	nd	nd
Diesel/Fuel oil	20	nd	nd
Creosote	20	nd	nd
Heavy oil	50	nd	nd

Surrogate recoveries:

Fluorobiphenyl	115%	108%
o-Terphenyl	99%	94%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%



AAL Job Number: A80807-7  
 Client: Greenco  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/07/08

Analytical Results

NWTPH-Gx / BTEX		MTH BLK	LCS	13	14	15
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Date analyzed	Limits	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	nd	nd	nd	nd	nd

BTEX 8021B, µg/kg

Benzene	20	nd	82%	nd	nd	nd
Toluene	50	nd	104%	nd	nd	nd
Ethylbenzene	50	nd		nd	nd	nd
Xylenes	50	nd		nd	nd	nd

Surrogate recoveries:

Trifluorotoluene	78%	71%	81%	77%	78%
Bromofluorobenzene	85%	82%	89%	85%	88%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

AAL Job Number: A80807-7  
 Client: Greenco  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/07/08

**Analytical Results**

8260B, µg/kg		MTH BLK	LCS	13	14	15
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Date analyzed	Limits	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
MTBE	20	nd		nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	84%	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd		nd	nd	nd
Naphtalene	50	nd		nd	nd	nd

\*-instrument detection limits

**Surrogate recoveries**

1,2-Dichloroethane-d4	116%	113%	120%	115%	112%
-----------------------	------	------	------	------	------

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A80807-7  
 Client: Greenco  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/07/08

Analytical Results

PAH(8270), mg/kg		MTH BLK	LCS	13	14	15
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Date analyzed	Limits	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Acenaphthylene	0.10	nd		nd	nd	nd
Acenaphthene	0.10	nd	85%	nd	nd	nd
Fluorene	0.10	nd		nd	nd	nd
Phenanthrene	0.10	nd		nd	nd	nd
Anthracene	0.10	nd		nd	nd	nd
Fluoranthene	0.10	nd		nd	nd	nd
Pyrene	0.10	nd	71%	nd	nd	nd
Benzo(a)anthracene	0.10	nd		nd	nd	nd
Chrysene	0.10	nd		nd	nd	nd
Benzo(b)fluoranthene	0.10	nd		nd	nd	nd
Benzo(k)fluoranthene	0.10	nd		nd	nd	nd
Benzo(a)pyrene	0.10	nd		nd	nd	nd
Indeno(1,2,3-cd)pyrene	0.10	nd		nd	nd	nd
Dibenzo(ah)anthracene	0.10	nd		nd	nd	nd
Benzo(ghi)perylene	0.10	nd		nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	77%	64%	77%	90%	74%
o-Terphenyl	82%	73%	123%	112%	110%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 na - not analyzed  
 C - coelution with sample peaks  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 50% TO 150%  
 Acceptable RPD limit: 30%

AAL Job Number: A80807-7  
 Client: Greenco  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/07/08

**Analytical Results**

8082(PCBs), mg/kg		MTH BLK	LCS	13	14	15
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Date analyzed	Limits	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
A1221	0.20	nd		nd	nd	nd
A1232	0.20	nd		nd	nd	nd
A1242 (A1016)	0.20	nd		nd	nd	nd
A1248	0.20	nd		nd	nd	nd
A1254	0.20	nd	87%	nd	nd	nd
A1260	0.20	nd		nd	nd	nd

**Surrogate recoveries:**

Tetrachloro-m-xylene	96%	98%	93%	93%	95%
Decachlorobiphenyl	100%	99%	86%	86%	86%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits  
 na - not analyzed  
 C - coelution with sample peaks  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A80807-7  
 Client: Greenco  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek-B  
 Client Project Number: na  
 Date received: 08/07/08

Analytical Results							Dupl	RPD
Metals (7010), mg/kg		MTH BLK	LCS	13	14	15	15	15
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Date analyzed	Limits	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08	08/08/08
Lead (Pb)	1.0	nd	108%	9.3	3.9	4.7	4.4	8%
Chromium (Cr)	2.0	nd	110%	11	5.6	14	14	3%
Cadmium (Cd)	1.0	nd	92%	nd	nd	nd	nd	
Arsenic (As)	2.0	nd	96%	nd	nd	nd	nd	
Mercury (Hg) (7470A)	0.5	nd	88%	nd	nd	nd	nd	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

**ADVANCED ANALYTICAL**

*Environmental Testing Laboratory*

B

August 08, 2008

*Randy Perkins  
Greenco Environmental, Inc.  
13110 NE 177 Pl. #114  
Woodinville, WA 98072*

#8

Dear Mr. Perkins:

Please find enclosed the analytical data report for the *Verbeek-B (A80806-4)* Project.

Samples were received on *August 06, 2008*. The results of the analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. A copy of the chain-of-custody and an invoice for the work is also enclosed.

ADVANCED ANALYTICAL LABORATORY appreciates the opportunity to provide analytical services for this project. Should there be any questions regarding this report, please contact me at (425) 497-0110.

It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

*V. Ivanov*

Val G. Ivanov, Ph.D.  
Laboratory Manager

---

Overlake Business Center ■ 2821 152 Avenue NE ■ Redmond, WA 98052  
ph 425.497.0110 fax 425.497.8089  
E-mail: [aachemlab@yahoo.com](mailto:aachemlab@yahoo.com)

*This report is issued solely for the use of the person or company to whom it is addressed.  
Any use, copying or disclosure other than by the intended recipient is unauthorized.*

Laboratory Job #: A80806-4

2821 152 Avenue NE  
Redmond, WA 98052  
(425) 497-0110 fax: (425) 497-8089  
aachemlab@yahoo.com

Client: GreenCO

Project Name: Veerbeek

Project Manager: Randy Perkins

Project Number: B-site, Parking lot

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

Collector: Robert Simmons rscmsi@kotrail.com

Phone: 253-234-4414 Fax: \_\_\_\_\_

Date of collection: 8/6/08

Sample ID	Time	Matrix	Container type	Analytes											Notes, comments	# of containers				
				8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides			RCRA 6 Metals	Lead		
1	11:50	soil	#102				X	X											adv - Roelbeek	
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Relinquished by:	Date/Time	Received by:	Date/Time
<u>Robert Simmons</u>	<u>8/6/08 1:29</u>	<u>[Signature]</u>	<u>8/6/08 13:35</u>
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info:

Total # of containers: \_\_\_\_\_  
Condition (temp, °C) \_\_\_\_\_  
Seals (intact?, Y/N) \_\_\_\_\_  
Comments: \_\_\_\_\_

Turnaround time:

Same day   
24 hr   
48 hr   
Standard

Advanced Analytical Laboratory  
(425)497-0110, fax(425)497-8089

AAL Job Number: A80806-4  
Client: Greenco Environmental, Inc  
Project Manager: Randy Perkins  
Client Project Name: Verbeek - B Site Parking Lot  
Client Project Number: na  
Date received: 08/06/08

# 8



AAL Job Number: A80806-4  
 Client: Greenco Environmental, Inc  
 Project Manager: Randy Perkins  
 Client Project Name: Verbeek - B Site Parking Lot  
 Client Project Number: na  
 Date received: 08/06/08

#8

Analytical Results		Dupl	
NWTPH-Gx/8021B		Parking Lot-5'	Parking Lot-5'
Matrix	Soil	Soil	Soil
Date extracted	Reporting	08/06/08	08/06/08
Date analyzed	Limits	08/06/08	08/06/08

NWTPH-Gx, mg/kg			
Mineral spirits/Stoddard	5.0	nd	nd
Gasoline	5.0	nd	nd

BTEX 8021B, µg/kg			
Benzene	20	nd	nd
Toluene	50	nd	nd
Ethylbenzene	50	nd	nd
Xylenes	50	nd	nd

Surrogate recoveries:			
Trifluorotoluene		86%	84%
Bromofluorobenzene		110%	100%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 na - not analyzed  
 C - coelution with sample peaks  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A80806-4  
Client: Greenco Environmental, Inc  
Project Manager: Randy Perkins  
Client Project Name: Verbeek - B Site Parking Lot  
Client Project Number: na  
Date received: 08/06/08

Analytical Results

<u>NWTPH-Dx, mg/kg</u>		<u>Parking Lot-5'</u>
<u>Matrix</u>	<u>Soil</u>	<u>Soil</u>
<u>Date extracted</u>	<u>Reporting</u>	<u>08/06/08</u>
<u>Date analyzed</u>	<u>Limits</u>	<u>08/06/08</u>
Kerosene/Jet fuel	20	nd
Diesel/Fuel oil	20	94
Heavy oil	50	830

Surrogate recoveries:

Fluorobiphenyl	104%
o-Terphenyl	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Results reported on dry-weight basis  
Acceptable Recovery limits: 70% TO 130%  
Acceptable RPD limit: 30%

Advanced Analytical Laboratory  
(425)497-0110, fax(425)497-8089

AAL Job Number:	A80804-1
Client:	Greenco Environmental, Inc
Project Manager:	Randy Perkins
Client Project Name:	Verbeek-B
Client Project Number:	na
Date received:	08/04/08

AAL Job Number: A80806-3  
Client: Greenco Environmental, Inc  
Project Manager: Randy Perkins  
Client Project Name: Verbeek - A Site  
Client Project Number: na  
Date received: 08/06/08

Analytical Results		Remediation Test
NWTPH-Dx, mg/kg		25
Matrix	Soil	Soil
Date extracted	Reporting	08/06/08
Date analyzed	Limits	08/06/08
Kerosene/Jet fuel	20	nd
Diesel/Fuel oil	20	nd
Heavy oil	50	nd

Surrogate recoveries:

Fluorobiphenyl	101%
o-Terphenyl	99%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Results reported on dry-weight basis  
Acceptable Recovery limits: 70% TO 130%  
Acceptable RPD limit: 30%

B

**ESN NORTHWEST CHEMISTRY LABORATORY**

Greenco  
VERBEEK PROJECT  
Washington

ESN Northwest  
1210 Eastside Street SE Suite 200  
Olympia, WA 98501  
(360) 459-4670 (360) 459-3432 Fax  
lab@esnnw.com

**Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil**

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	8/15/2008	110	nd	nd	nd
19	8/15/2008	126	nd	nd	nd
20	8/15/2008	89	nd	nd	nd
21	8/15/2008	76	nd	nd	nd
21 Dup.	8/15/2008	84	nd	nd	nd
22	8/15/2008	84	nd	nd	nd
23 (9:08)	8/15/2008	104	nd	nd	nd
24	8/15/2008	102	nd	nd	nd
23 (8:27)	8/15/2008	126	nd	nd	nd
<b>Method Detection Limits</b>			20	40	40

"nd" Indicates not detected at the listed detection limits.  
"int" Indicates that interference prevents determination

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ESN NORTHWEST CHEMISTRY LABORATORY

Greenco  
 VERBEEK PROJECT  
 Washington

ESN Northwest  
 1210 Eastside Street SE Suite 200  
 Olympia, WA 98501  
 (360) 459-4670 (360) 459-3432 Fax  
 lab@esnnw.com

PCB Analyses of Soil (EPA Method 8082)

Sample Description	Method Blank	19	20	21	22	23-9:08	23-9:08 Dup.	24	23-8:27
Date Sampled		8/15/2008	8/15/2008	8/15/2008	8/15/2008	8/15/2008	8/15/2008	8/15/2008	8/15/2008
Date Analyzed	8/18/2008	8/18/2008	8/18/2008	8/18/2008	8/18/2008	8/18/2008	8/18/2008	8/18/2008	8/18/2008
	MDL (ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
PCB-1016	100	nd	nd	nd	nd	nd	nd	nd	nd
PCB-1221	100	nd	nd	nd	nd	nd	nd	nd	nd
PCB-1232	100	nd	nd	nd	nd	nd	nd	nd	nd
PCB-1242	100	nd	nd	nd	nd	nd	nd	nd	nd
PCB-1248	100	nd	nd	nd	nd	nd	nd	nd	nd
PCB-1254	100	nd	nd	nd	nd	nd	nd	nd	nd
PCB-1260	100	nd	nd	nd	nd	nd	nd	nd	nd
Total	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Surrogate Recovery (TCMX) (%)	83	125	96	91	91	96	109	104	109
Surrogate Recovery (DCBP) (%)	89	86	69	int.	92	103	68	108	69

"nd" Indicates not detected at listed detection limit  
 "int" Indicates that interference prevents determination

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (TCMX) AND (DCBP): 65% - 135%

# ESN NORTHWEST CHEMISTRY LABORATORY

Greenco  
VERBEEK PROJECT  
Washington

ESN Northwest  
1210 Eastside Street SE Suite 200  
Olympia, WA 98501  
(360) 459-4670 (360) 459-3432 Fax  
lab@esnnw.com

## Total Metals in Soil by EPA-6020 Method

Sample Number	Date Analyzed	Lead (Pb) (mg/kg)	Cadmium (Cd) (mg/kg)	Chromium (Cr) (mg/kg)	Arsenic (As) (mg/kg)	Mercury (Hg) (mg/kg)
Method Blank	8/18/2008	nd	nd	nd	nd	nd
19	8/18/2008	nd	nd	6.4	nd	nd
20	8/18/2008	37	nd	11	nd	nd
21	8/18/2008	19	nd	10	nd	nd
21 Dup.	8/18/2008	54	nd	13	nd	nd
22	8/18/2008	nd	nd	12	nd	nd
23 (9:08)	8/18/2008	nd	nd	10	nd	nd
24	8/18/2008	nd	nd	10	nd	nd
23 (8:27)	8/18/2008	nd	nd	8.8	nd	nd
Method Detection Limits		5.0	1.0	5.0	5.0	0.5

"nd" Indicates not detected at listed detection limits.

**ESN NORTHWEST CHEMISTRY LABORATORY**

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 VERBEEK PROJECT  
 Washington

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 Olympia, WA 98501  
 (360) 459-4670 (360) 459-3432 Fax  
 lab@esnnw.com

**QA/QC Data - Total Metals EPA-6020**

Sample Number: 21							RPD
Matrix Spike			Matrix Spike Duplicate				
Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)	
Lead	100	116	116	100	103	103	11.87
Cadmium	100	97	97	100	86	86	12.02
Chromium	100	92	92	100	87	87	5.59
Arsenic	100	55	55M	100	51	51M	na

Laboratory Control Sample			
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Lead	100	93	93
Cadmium	100	93	93
Chromium	100	124	124
Arsenic	100	89	89

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%  
 ACCEPTABLE RPD IS 35%

M-Matrix Spike recovery failed due to matrix interference.



ESN NW BELLEVUE CHEMISTRY LABORATORY  
 Tel:(425) 957-9872, Fax: (425) 957-9904

ESN Job Number: S80818.1  
 Client: Green Co.  
 Client Job Name: Verbeek  
 Client Job Number: -

**NWTPH-Gx**

**Analytical Results**

NWTPH-Gx, mg/kg		MTH BLK	LCS	19	20	21	22	23 9:08	24	23 8:27
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08
Date analyzed	Limits	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08
Moisture, %				21%	33%	17%	27%	19%	18%	10%
Gasoline	5.0	nd	92%	nd	nd	nd	nd	nd	nd	nd
<b>Surrogate recoveries</b>										
Dibromofluoromethane		134%	126%	131%	131%	130%	131%	130%	132%	128%
Toluene-d8		113%	117%	116%	121%	117%	119%	121%	122%	121%
4-Bromofluorobenzene		98%	99%	99%	98%	94%	100%	100%	100%	98%

**Data Qualifiers and Analytical Comment**

nd - not detected at listed reporting limit  
 na - not analyzed  
 C - co-elution with sample peak  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 65% TO 135%  
 Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
 (425) 957-9872, fax (425) 957-9904

ESN Job Number: S80818.1  
 Client: Green Co.  
 Client Job Name: Verbeek  
 Client Job Number:

Analytical Results

PAH(8270), mg/kg		MTH BLK	LCS	19	20	21	22	23 9:08
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08
Date analyzed	Limits	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08
Moisture, %				21%	33%	17%	27%	19%
Acenaphthene	0.10	nd	119%	nd	nd	nd	nd	nd
Acenaphthylene	0.10	nd		nd	nd	nd	nd	nd
Anthracene	0.10	nd		nd	nd	0.23	nd	nd
Benzo(a)anthracene	0.10	nd		nd	nd	nd	nd	nd
Benzo(a)pyrene	0.10	nd	70%	nd	nd	nd	nd	nd
Benzo(b)fluoranthene	0.10	nd		nd	nd	nd	nd	nd
Benzo(ghi)perylene	0.10	nd		nd	nd	nd	nd	nd
Benzo(k)fluoranthene	0.10	nd		nd	nd	nd	nd	nd
Chrysene	0.10	nd		nd	nd	nd	nd	nd
Dibenzo(a,h)anthracene	0.10	nd		nd	nd	nd	nd	nd
Fluorene	0.10	nd		nd	nd	nd	nd	nd
Fluoranthene	0.10	nd	125%	nd	nd	0.31	nd	nd
Indeno(1,2,3-cd)pyrene	0.10	nd		nd	nd	nd	nd	nd
Naphthalene	0.10	nd		nd	nd	nd	nd	nd
1-Methylnaphthalene	0.10	nd		nd	nd	nd	nd	nd
2-Methylnaphthalene	0.10	nd		nd	nd	nd	nd	nd
Phenanthrene	0.10	nd		nd	nd	0.23	nd	nd
Pyrene	0.10	nd		nd	nd	0.48	nd	nd
Total Carcinogens				nd	nd	nd	nd	nd
Surrogate recoveries								
2-Fluorobiphenyl		90%	130%	132%	113%	101%	103%	104%
p-Terphenyl-d14		94%	129%	122%	118%	130%	132%	129%

Data Qualifiers and Analytical Comment

\* - Carcinogenic Analyte  
 nd - not detected at listed reporting limit  
 na - not analyzed  
 C - coelution with sample peak  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 50% TO 150%  
 Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
 (425) 957-9872, fax (425) 957-9904

ESN Job Number: S80818.1  
 Client: Green Co.  
 Client Job Name: Verbeek  
 Client Job Number: -

Analytical Results

PAH(8270), mg/kg		24	23 8:27	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	
Date extracted	Reporting	08/18/08	08/18/08	08/18/08	08/18/08	
Date analyzer	Limits	08/18/08	08/18/08	08/18/08	08/18/08	
Moisture, %		18%	10%			
Acenaphthene	0.10	nd	nd	99%	104%	5%
Acenaphthylene	0.10	nd	nd			
Anthracene	0.10	nd	nd			
Benzo(a)anthracene*	0.10	nd	nd			
Benzo(a)pyrene*	0.10	nd	nd			
Benzo(b)fluoranthene*	0.10	nd	nd			
Benzo(ghi)perylene	0.10	nd	nd			
Benzo(k)fluoranthene*	0.10	nd	nd			
Chrysene*	0.10	nd	nd			
Dibenzo(a,h)anthracene	0.10	nd	nd			
Fluorene	0.10	nd	nd			
Fluoranthene	0.10	nd	nd			
Indeno(1,2,3-cd)pyrene*	0.10	nd	nd			
Naphthalene	0.10	nd	nd			
1-Methylnaphthalene	0.10	nd	nd			
2-Methylnaphthalene	0.10	nd	nd			
Phenanthrene	0.10	nd	nd			
Pyrene	0.10	nd	nd	96%	104%	8%
Total Carcinogens		nd	nd			
Surrogate recoveries						
2-Fluorobiphenyl		94%	89%	88%	90%	
p-Terphenyl-d14		126%	121%	91%	95%	

Data Qualifiers and Analytical Comment

\* - Carcinogenic Analyte  
 nd - not detected at listed reporting limit  
 na - not analyzed  
 C - coelution with sample peak  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 50% TO 150%  
 Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
 (425) 957-9872, fax (425) 957-9904

ESN Job Number: S80818.1  
 Client: Green Co.  
 Client Job Name: Verbeek  
 Client Job Number:

Analytical Results		MTH BLK		LCS	19	20	21	22
8260, mg/kg		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Matrix	Reporting	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08
Date extracted	Limits	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08
Date analyzed					21%	33%	17%	27%
Moisture, %								
Dichlorodifluoromethane	0.05	nd	nd		nd	nd	nd	nd
Chloromethane	0.05	nd	nd		nd	nd	nd	nd
Vinyl chloride	0.01	nd	nd		nd	nd	nd	nd
Bromomethane	0.05	nd	nd		nd	nd	nd	nd
Chloroethane	0.05	nd	nd		nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd		nd	nd	nd	nd
Acetone	0.50	nd		90%	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd			nd	nd	nd	nd
Methylene chloride	0.50	nd			nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	0.05	nd			nd	nd	nd	nd
trans-1,2-Dichloroethene	0.05	nd			nd	nd	nd	nd
1,1-Dichloroethane	0.05	nd			nd	nd	nd	nd
n-Hexane	0.05	nd			nd	nd	nd	nd
2-Butanone (MEK)	0.50	nd			nd	nd	nd	nd
cis-1,2-Dichloroethene	0.05	nd			nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd			nd	nd	nd	nd
Chloroform	0.05	nd			nd	nd	nd	nd
Bromochloromethane	0.05	nd			nd	nd	nd	nd
1,1,1-Trichloroethane	0.05	nd			nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.05	nd			nd	nd	nd	nd
1,1-Dichloropropene	0.05	nd			nd	nd	nd	nd
Carbon tetrachloride	0.05	nd		109%	nd	nd	nd	nd
Benzene	0.02	nd		93%	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd			nd	nd	nd	nd
1,2-Dichloropropane	0.05	nd			nd	nd	nd	nd
Dibromomethane	0.05	nd			nd	nd	nd	nd
Bromodichloromethane	0.05	nd			nd	nd	nd	nd
4-Methyl-2-pentanone (MIBK)	0.05	nd			nd	nd	nd	nd
cis-1,3-Dichloropropene	0.05	nd		107%	nd	nd	nd	nd
Toluene	0.05	nd			nd	nd	nd	nd
trans-1,3-Dichloropropene	0.05	nd			nd	nd	nd	nd
1,1,2-Trichloroethane	0.05	nd			nd	nd	nd	nd
2-Hexanone	0.05	nd			nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd			nd	nd	nd	nd
Dibromochloromethane	0.05	nd			nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd			nd	nd	nd	nd
1,2-Dibromoethane (EDB)	0.01	nd		107%	nd	nd	nd	nd
Chlorobenzene	0.05	nd			nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd			nd	nd	nd	nd
Ethylbenzene	0.05	nd			nd	nd	nd	nd
Xylenes	0.05	nd			nd	nd	nd	nd
Styrene	0.05	nd			nd	nd	nd	nd
Bromoform	0.05	nd			nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd			nd	nd	nd	nd
Isopropylbenzene	0.05	nd			nd	nd	nd	nd
1,2,3-Trichloropropane	0.05	nd			nd	nd	nd	nd
Bromobenzene	0.05	nd			nd	nd	nd	nd

ESN SEATTLE CHEMISTRY LABORATORY  
 (425) 957-9872, fax (425) 957-9904

ESN Job Number: S80818.1  
 Client: Green Co.  
 Client Job Name: Verbeek  
 Client Job Number: -

Analytical Results

8260, mg/kg	MTH BLK		LCS	19	20	21	22
	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Matrix	Reporting	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08
Date extracted	Limits	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08
Date analyzed				21%	33%	17%	27%
Moisture, %							
n-Propylbenzene	0.05	nd		nd	nd	nd	nd
2-Chlorotoluene	0.05	nd		nd	nd	nd	nd
4-Chlorotoluene	0.05	nd		nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.05	nd		nd	nd	nd	nd
tert-Butylbenzene	0.05	nd		nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.05	nd		nd	nd	nd	nd
sec-Butylbenzene	0.05	nd		nd	nd	nd	nd
1,3-Dichlorobenzene	0.05	nd		nd	nd	nd	nd
1,4-Dichlorobenzene	0.05	nd		nd	nd	nd	nd
Isopropyltoluene	0.05	nd		nd	nd	nd	nd
1,2-Dichlorobenzene	0.05	nd		nd	nd	nd	nd
n-Butylbenzene	0.05	nd		nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd		nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.05	nd		nd	nd	nd	nd
Naphthalene	0.05	nd		nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.05	nd		nd	nd	nd	nd
1,2,3-Trichlorobenzene	0.05	nd		nd	nd	nd	nd

\*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	133%	130%	132%	128%	131%	131%
Toluene-d8	110%	111%	112%	117%	114%	115%
4-Bromofluorobenzene	95%	93%	95%	95%	93%	96%

Data Qualifiers and Analytical Comment

nd - not detected at listed reporting limit  
 J - estimated quantitation, below listed reporting limit  
 Acceptable Recovery limits: 65% TO 135%  
 Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
 (425) 957-9872, fax (425) 957-9904

ESN Job Number: S80818.1  
 Client: Green Co.  
 Client Job Name: Verbeek  
 Client Job Number:

Analytical Results

8260, mg/kg		23 9:08	24	23 8:27	MS	MSD	RPD
	Soil	Soil	Soil	Soil	Soil	Soil	
Matrix	Reporting	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	
Date extracted	Limits	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	
Date analyzed		19%	18%	10%			
Moisture, %							
Dichlorodifluoromethane	0.05	nd	nd	nd			
Chloromethane	0.05	nd	nd	nd			
Vinyl chloride	0.01	nd	nd	nd			
Bromomethane	0.05	nd	nd	nd			
Chloroethane	0.05	nd	nd	nd			
Trichlorofluoromethane	0.05	nd	nd	nd			
Acetone	0.50	nd	nd	nd	104%	99%	5%
1,1-Dichloroethene	0.05	nd	nd	nd			
Methylene chloride	0.50	nd	nd	nd			
Methyl-t-butyl ether (MTBE)	0.05	nd	nd	nd			
trans-1,2-Dichloroethene	0.05	nd	nd	nd			
1,1-Dichloroethane	0.05	nd	nd	nd			
n-Hexane	0.05	nd	nd	nd			
2-Butanone (MEK)	0.50	nd	nd	nd			
cis-1,2-Dichloroethene	0.05	nd	nd	nd			
2,2-Dichloropropane	0.05	nd	nd	nd			
Chloroform	0.05	nd	nd	nd			
Bromochloromethane	0.05	nd	nd	nd			
1,1,1-Trichloroethane	0.05	nd	nd	nd			
1,2-Dichloroethane (EDC)	0.05	nd	nd	nd			
1,1-Dichloropropene	0.05	nd	nd	nd			
Carbon tetrachloride	0.05	nd	nd	nd	104%	101%	3%
Benzene	0.02	nd	nd	nd	87%	85%	2%
Trichloroethene (TCE)	0.02	nd	nd	nd			
1,2-Dichloropropane	0.05	nd	nd	nd			
Dibromomethane	0.05	nd	nd	nd			
Bromodichloromethane	0.05	nd	nd	nd			
4-Methyl-2-pentanone (MIBK)	0.05	nd	nd	nd			
cis-1,3-Dichloropropene	0.05	nd	nd	nd	99%	95%	4%
Toluene	0.05	nd	nd	nd			
trans-1,3-Dichloropropene	0.05	nd	nd	nd			
1,1,2-Trichloroethane	0.05	nd	nd	nd			
2-Hexanone	0.05	nd	nd	nd			
1,3-Dichloropropane	0.05	nd	nd	nd			
Dibromochloromethane	0.05	nd	nd	nd			
Tetrachloroethene (PCE)	0.02	nd	nd	nd			
1,2-Dibromoethane (EDB)	0.01	nd	nd	nd			
Chlorobenzene	0.05	nd	nd	nd	98%	95%	3%
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd			
Ethylbenzene	0.05	nd	nd	nd			
Xylenes	0.05	nd	nd	nd			
Styrene	0.05	nd	nd	nd			
Bromoform	0.05	nd	nd	nd			
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd			
Isopropylbenzene	0.05	nd	nd	nd			
1,2,3-Trichloropropane	0.05	nd	nd	nd			
Bromobenzene	0.05	nd	nd	nd			

ESN SEATTLE CHEMISTRY LABORATORY  
 (425) 957-9872, fax (425) 957-9904

ESN Job Number: S80818.1  
 Client: Green Co.  
 Client Job Name: Verbeek  
 Client Job Number:

Analytical Results

8260, mg/kg		23 9:08	24	23 8:27	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	
Date extracted	Reporting	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	
Date analyzed	Limits	08/18/08	08/18/08	08/18/08	08/18/08	08/18/08	
Moisture, %		19%	18%	10%			

n-Propylbenzene	0.05	nd	nd	nd
2-Chlorotoluene	0.05	nd	nd	nd
4-Chlorotoluene	0.05	nd	nd	nd
1,3,5-Trimethylbenzene	0.05	nd	nd	nd
tert-Butylbenzene	0.05	nd	nd	nd
1,2,4-Trimethylbenzene	0.05	nd	nd	nd
sec-Butylbenzene	0.05	nd	nd	nd
1,3-Dichlorobenzene	0.05	nd	nd	nd
1,4-Dichlorobenzene	0.05	nd	nd	nd
Isopropyltoluene	0.05	nd	nd	nd
1,2-Dichlorobenzene	0.05	nd	nd	nd
n-Butylbenzene	0.05	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd	nd	nd
1,2,4-Trichlorobenzene	0.05	nd	nd	nd
Naphthalene	0.05	nd	nd	nd
Hexachloro-1,3-butadiene	0.05	nd	nd	nd
1,2,3-Trichlorobenzene	0.05	nd	nd	nd

\*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	131%	128%	129%	122%	123%
Toluene-d8	117%	118%	118%	108%	110%
4-Bromofluorobenzene	96%	97%	95%	93%	92%

Data Qualifiers and Analytical Comment

nd - not detected at listed reporting limit  
 J - estimated quantitation, below listed reporting limit  
 Acceptable Recovery limits: 65% TO 135%  
 Acceptable RPD limit: 35%

**ESN NORTHWEST CHEMISTRY LABORATORY**

Greenco  
 VERBEEK PROJECT  
 Washington

ESN Northwest  
 1210 Eastside Street SE Suite 200  
 Olympia, WA 98501  
 (360) 459-4670 (360) 459-3432 Fax  
 lab@esnw.com

**QA/QC Data - PCB Analyses - Soils**

Sample Description: 22							
Matrix Spike			Matrix Spike Duplicate			RPD	
Spiked Conc. (ug/kg)	Measured Conc. (ug/kg)	Spike Recovery (%)	Spiked Conc. (ug/kg)	Measured Conc. (ug/kg)	Spike Recovery (%)	RPD (%)	
PCB 1260	150	180	120	150	160	106	12.39
TCMX						76	28.25
DCBP						100	10.53

Laboratory Control Sample			
	Spiked Conc. (ug/kg)	Measured Conc. (ug/kg)	Spike Recovery (%)
PCB 1260	150	110	73
TCMX			88
DCBP			72

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 80%-120%  
 ACCEPTABLE RPD IS 20%



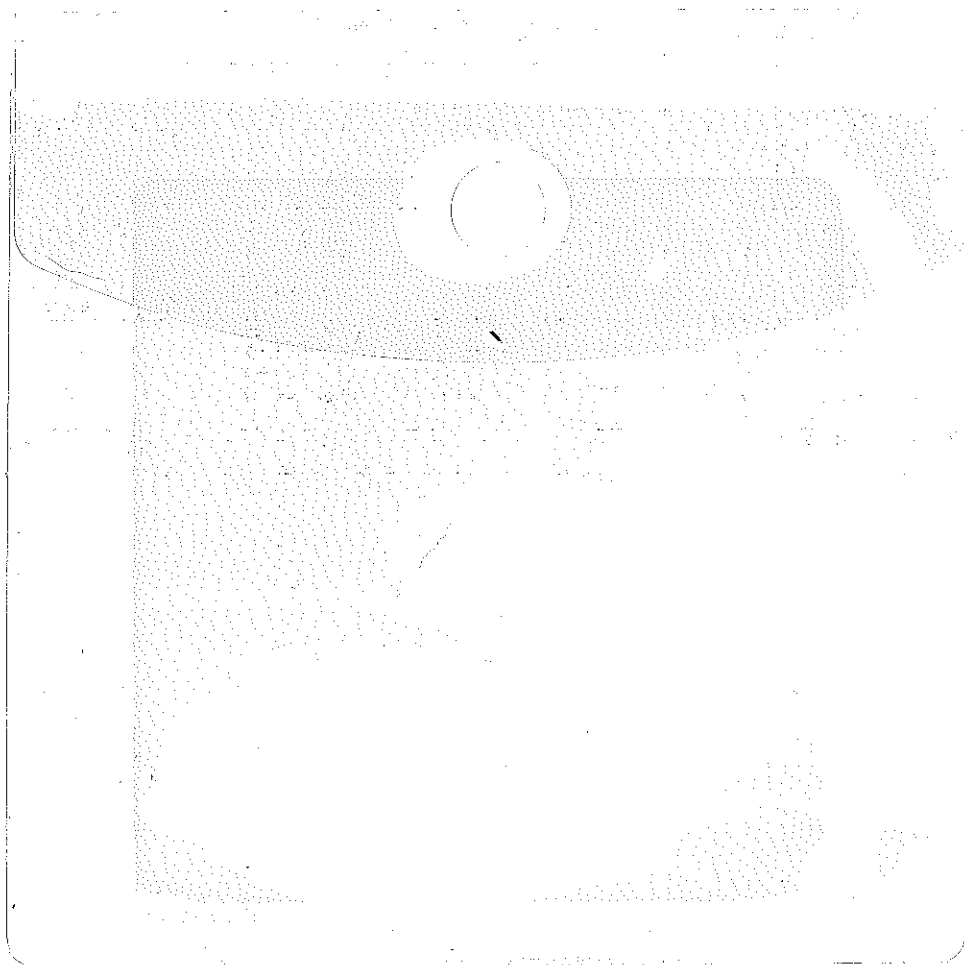
**ATTACHMENT B**

LABORATORY DATA SHEETS (on CD)

APRIL 2009

Verbeek Wrecking Yard

Bothell, WA





**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

May 13, 2009

Matt Dalton  
Dalton, Olmsted, & Fuglevand  
10827 NE 68th, Suite B  
Kirkland, WA 98033

**RE: Client Project: Verbeek Wrecking**  
**ARI Job No.: OU25**

Dear Matt:

Please find enclosed the original Chain-of-Custody record, sample receipt documentation, and the final analytical results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted twenty soil samples as part of a larger sample delivery group on April 6, 2009. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

Selected samples were placed on hold; the remaining samples were analyzed for volatiles, semivolatiles, NWTPH-D, NWTPH-G, and total metals as requested on the COC.

For the volatiles analyses of sample **DOF-TP12-3**, the internal standard d5-chlorobenzene and the surrogate d4-1,2-DCA were outside of control limits. This sample was reanalyzed with the same results, indicating matrix effect. Surrogate d8-toluene was also outside of control limits. Both runs were submitted.

For the semivolatiles analyses, several internal standards were outside of control limits for samples **DOF-TP12-1** and **DOF-TP16-1.5**. The samples were diluted and reanalyzed. The areas for all internal standards were within acceptable QC limits for the reanalysis of sample **DOF-TP12-1**. For sample **DOF-TP16-1.5** the internal standards were still outside of compliance, indicating matrix interference. Both sets of results have been reported. The continuing calibrations were within the control limits for the 4/25/09 analysis with several outliers acceptable under ARI SOP as marginal exceedances. No corrective action was required. No further anomalies are noted for these analyses

The method blank for the metals analyses contained zinc above the reporting limit. Not all sample results are greater than ten times the method blank level. Because the sample results were well below the action level, no corrective action was taken.

There were no further anomalies associated with these analyses.



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

An electronic copy of this report will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Susan Dunnihoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile OU25

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **025** Turn-around Requested: **Normal**

ARI Client Company: **DOF** Phone: \_\_\_\_\_

Client Contact: **MATT ANDREW / ANNE COOPER**

Client Project Name: **VERBENA WRECKING**

Client Project #: **REL-004-00** Samplers: **DA COOPER**

Page: **4** of **6**

Date: **4/6/09** Ice Present? **YES**

No. of Coolers: **1** Cooler Temps: **9.2**

Analytical Resources, Incorporated  
Analytical Chemists and Consultants  
4611 South 134th Place, Suite 100  
Tukwila, WA 98168  
206-695-6200 206-695-6201 (fax)



Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					MTHS As, Cd, Cr, Pb Hg, Ni, Zn	MTHS B70	FULL SW	MTHS DX	
DOF-TP14-1.5	4/3/09	1015	SOIL	2	X	X	X	X	
DOF-TP14-6		1025			X	X	X	X	
DOF-TP15-1.5		1150			X	X	X	X	
DOF-TP15-10		1155			X	X	X	X	
DOF-TP16-1.5		1200			X	X	X	X	
DOF-TP16-3		1305			X	X	X	X	
DOF-TP17-2		1400			X	X	X	X	
DOF-TP17-5		1335			X	X	X	X	
DOF-TP18-4		1425			X	X	X	X	
DOF-TP18-10		1430			X	X	X	X	* MTHS 6100/7000
Comments/Special Instructions	Relinquished by: <b>DA Cooper</b> (Signature) Printed Name: <b>DA Cooper</b> Company: <b>DOF</b> Date & Time: <b>4/6/09 1430</b>				Relinquished by: <b>Dami Hays</b> (Signature) Printed Name: <b>Dami Hays</b> Company: <b>ARI</b> Date & Time: <b>4/6/09 1450</b>				Received by: _____ (Signature) Printed Name: _____ Company: _____ Date & Time: _____

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **NR0472**  
 Turn-around Requested: **NR0472**  
 ARI Client Company: **DOF**  
 Phone: **NR0472**  
 Client Contact: **MTT ANDON / DAVE COOPER**  
 Client Project Name: **WINDSEEN WEEKEND**  
 Client Project #: **RSE-004-00**  
 Samplers: **DL COOPER**

Page: **3** of **6**  
 Date: **4/6/09**  
 Ice Present? **YES**  
 No. of Coolers: **1**  
 Cooler Temps: **9.2**

ANALYSIS REQUESTED

Analysis Requested

Notes/Comments

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					MEANS * AS, Cd, Cr, Pb Hg, Ni, Zn	PATHS BZTO FULL SCAN	MMPH+DX **		
DOF-TP9-7	4/2/09	1450	SOIL	2	X	X	X	X	
DOF-TP10-2	4/3/09	0850			X	X	X	X	
DOF-TP10-14		0900			X	X	X	X	
DOF-TP11-1/3		1055			X	X	X	X	*METHOD 600/7000
DOF-TP11-6		1105			X	X	X	X	
DOF-TP12-1		1100			X	X	X	X	
DOF-TP12-3		1135			X	X	X	X	
DOF-TP13-2		0925			X	X	X	X	
DOF-TP13-5		0930			X	X	X	X	*SILICA GEL CLEANUP
DOF-TP13-9		0940			X	X	X	X	
Comments/Special Instructions	Relinquished by: <b>Dami Hays</b> (Signature) Printed Name: <b>Dami Hays</b> Company: <b>ARI</b>				Relinquished by: <b>Dami Hays</b> (Signature) Printed Name: <b>Dami Hays</b> Company: <b>ARI</b>				Received by: <b>Dami Hays</b> (Signature) Printed Name: <b>Dami Hays</b> Company: <b>ARI</b>
	Date & Time: <b>4/6/09 1450</b>				Date & Time: <b>4/6/09 1450</b>				Date & Time: <b>4/6/09 1450</b>

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



# Cooler Receipt Form

ARI Client: DOF

Project Name: Verbeek Wrecking

COC No(s): \_\_\_\_\_ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_

Assigned ARI Job No: OU 25

Tracking No: \_\_\_\_\_ NA

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 9.2

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 121886

Cooler Accepted by: JIT Date: 4/16/09 Time: 1450

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? ..... YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? ..... NA YES NO

Were all bottles sealed in individual plastic bags? ..... YES NO

Did all bottles arrive in good condition (unbroken)? ..... YES NO

Were all bottle labels complete and legible? ..... YES NO

Did the number of containers listed on COC match with the number of containers received? ..... YES NO

Did all bottle labels and tags agree with custody papers? ..... YES NO

Were all bottles used correct for the requested analyses? ..... YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? ..... NA YES NO

Was sufficient amount of sample sent in each bottle? ..... YES NO

Samples Logged by: JW Date: 4/17/09 Time: 0934

**\*\* Notify Project Manager of discrepancies or concerns \*\***

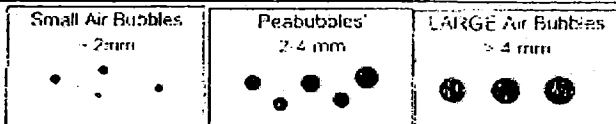
Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
<u>DOF-TP13-6</u>	<u>DOF-TP13-5</u>		
<u>DOF-TP9-7 (lid)</u>	<u>DOF-TP9-7</u>		
<u>DOF-DURL-1</u>	<u>DOF-TP9-7</u>		

*same date*

**Additional Notes, Discrepancies, & Resolutions:**

Contacted client and DOF-TP13-6 is the correct ID  
DOF-TP9-7 was used due to sample date and time

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



Small → "sm"  
Peabubbles → "pb"  
Large → "lg"  
Headspace → "hs"



# Cooler Temperature Compliance Form

Cooler#: 1		Temperature(°C): 9.2	
Sample ID	Bottle Count	Bottle Type	
DOF-TP9-7	2	1 2oz WMB w/septa, 1 8oz WMB	
DOF-TP10-2	2	↓	
DOF-TP10-14	2		
DOF-TP11-1/3	2		
DOF-TP11-6	2		
DOF-TP12-1	2		
DOF-TP12-3	2		
DOF-TP13-2	2		
Cooler#: 1		Temperature(°C): 9.2	
Sample ID	Bottle Count	Bottle Type	
DOF-TP13-6	2	1 2oz WMB w/septa, 1 8oz WMB	
DOF-TP13-9	2	↓	
DOF-TP14-1.5	2		
DOF-TP14-6	2		
DOF-TP15-1.5	2		
DOF-TP15-10	2		
DOF-TP16-1.5	2		
DOF-TP16-3	2		
Cooler#: 1		Temperature(°C): 9.2	
Sample ID	Bottle Count	Bottle Type	
DOF-TP17-2	2	1 2oz WMB w/septa, 1 8oz WMB	
DOF-TP17-5	2	↓	
DOF-TP18-4	2		
DOF-TP18-10	2		
Cooler#:		Temperature(°C):	
Sample ID	Bottle Count	Bottle Type	

Completed by: JW Date: 4/7/09 Time: 0934



## Data Reporting Qualifiers

Effective 12/28/04

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- NR Spiked compound recovery is not reported due to chromatographic interference
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for





- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference

### Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: MB-041009

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-041009


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8684

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 04/10/09 17:04

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	102%
Bromofluorobenzene	97.7%
d4-1,2-Dichlorobenzene	99.3%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: MB-041309

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-041309

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8690

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: *AS*

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 04/13/09 10:38

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	106%
d8-Toluene	101%
Bromofluorobenzene	99.1%
d4-1,2-Dichlorobenzene	97.8%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260B**

**Sample ID: MB-041409**

Page 1 of 1

**METHOD BLANK**

Lab Sample ID: MB-041409


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8703

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 100 mg-dry-wt

Date Analyzed: 04/14/09 10:52

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	50	< 50	U
108-88-3	Toluene	50	< 50	U
100-41-4	Ethylbenzene	50	< 50	U
179601-23-1	m,p-Xylene	50	< 50	U
95-47-6	o-Xylene	50	< 50	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	102%
Bromofluorobenzene	98.5%
d4-1,2-Dichlorobenzene	98.2%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP9-7

Page 1 of 1

SAMPLE

Lab Sample ID: OU25A

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8684

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.11 g-dry-wt

Date Analyzed: 04/10/09 18:36

Purge Volume: 5.0 mL

Moisture: 6.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	109%
d8-Toluene	101%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	99.3%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP10-2

Page 1 of 1

SAMPLE

Lab Sample ID: OU25B


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8685

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.32 g-dry-wt

Date Analyzed: 04/10/09 19:03

Purge Volume: 5.0 mL

Moisture: 12.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
179601-23-1	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	106%
d8-Toluene	101%
Bromofluorobenzene	98.9%
d4-1,2-Dichlorobenzene	98.9%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP10-14

Page 1 of 1

SAMPLE

Lab Sample ID: OU25C


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8686

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.49 g-dry-wt

Date Analyzed: 04/10/09 19:30

Purge Volume: 5.0 mL

Moisture: 14.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	101%
Bromofluorobenzene	99.9%
d4-1,2-Dichlorobenzene	99.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP11-1/3

Page 1 of 1

SAMPLE

Lab Sample ID: OU25D


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8687

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 1.43 g-dry-wt

Date Analyzed: 04/10/09 19:56

Purge Volume: 5.0 mL

Moisture: 13.7%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	3.5	130	
108-88-3	Toluene	3.5	44	
100-41-4	Ethylbenzene	3.5	570	
179601-23-1	m,p-Xylene	3.5	590	
95-47-6	o-Xylene	3.5	640	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	113%
d8-Toluene	100%
Bromofluorobenzene	94.0%
d4-1,2-Dichlorobenzene	108%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP11-6

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU25E


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8688

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.23 g-dry-wt

Date Analyzed: 04/10/09 20:23

Purge Volume: 5.0 mL

Moisture: 16.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	99.5%
Bromofluorobenzene	96.1%
d4-1,2-Dichlorobenzene	98.9%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: DOF-TP12-1  
SAMPLE

Lab Sample ID: OU25F  
LIMS ID: 09-8689  
Matrix: Soil  
Data Release Authorized:  
Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/10/09 20:49

Sample Amount: 4.76 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 6.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
<b>179601-23-1</b>	<b>m,p-Xylene</b>	<b>1.0</b>	<b>1.7</b>	
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	121%
d8-Toluene	85.4%
Bromofluorobenzene	80.2%
d4-1,2-Dichlorobenzene	94.6%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP12-3

Page 1 of 1

SAMPLE

Lab Sample ID: OU25G


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8690

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.01 g-dry-wt

Date Analyzed: 04/10/09 21:16

Purge Volume: 5.0 mL

Moisture: 8.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	2.0	
108-88-3	Toluene	1.0	1.1	
100-41-4	Ethylbenzene	1.0	2.6	
179601-23-1	m,p-Xylene	1.0	4.7	
95-47-6	o-Xylene	1.0	2.6	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	136%
d8-Toluene	78.4%
Bromofluorobenzene	83.2%
d4-1,2-Dichlorobenzene	93.4%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP12-3

Page 1 of 1

REANALYSIS

Lab Sample ID: OU25G


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8690

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.32 g-dry-wt

Date Analyzed: 04/13/09 11:17

Purge Volume: 5.0 mL

Moisture: 8.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	2.4	
108-88-3	Toluene	0.9	1.0	
100-41-4	Ethylbenzene	0.9	2.4	
179601-23-1	m,p-Xylene	0.9	4.1	
95-47-6	o-Xylene	0.9	2.4	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	134%
d8-Toluene	75.4%
Bromofluorobenzene	77.0%
d4-1,2-Dichlorobenzene	93.2%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP13-2

Page 1 of 1

SAMPLE

Lab Sample ID: OU25H


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8691

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.61 g-dry-wt

Date Analyzed: 04/10/09 21:42

Purge Volume: 5.0 mL

Moisture: 10.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	107%
d8-Toluene	101%
Bromofluorobenzene	97.0%
d4-1,2-Dichlorobenzene	98.8%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP13-6

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU25I


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8692

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 0.935 g-dry-wt

Date Analyzed: 04/10/09 22:09

Purge Volume: 5.0 mL

Moisture: 23.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	5.4	< 5.4	U
108-88-3	Toluene	5.4	< 5.4	U
100-41-4	Ethylbenzene	5.4	< 5.4	U
179601-23-1	m,p-Xylene	5.4	< 5.4	U
95-47-6	o-Xylene	5.4	< 5.4	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	111%
d8-Toluene	98.7%
Bromofluorobenzene	96.0%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP13-9

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU25J


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8693

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.21 g-dry-wt

Date Analyzed: 04/10/09 22:36

Purge Volume: 5.0 mL

Moisture: 19.3%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	100%
Bromofluorobenzene	99.1%
d4-1,2-Dichlorobenzene	98.0%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260B**

**Sample ID: DOF-TP14-1.5**

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU25K


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8694

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.76 g-dry-wt

Date Analyzed: 04/10/09 23:02

Purge Volume: 5.0 mL

Moisture: 11.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**


d4-1,2-Dichloroethane	109%
d8-Toluene	99.9%
Bromofluorobenzene	94.1%
d4-1,2-Dichlorobenzene	100%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: DOF-TP14-6  
SAMPLE

Lab Sample ID: OU25L  
LIMS ID: 09-8695  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/10/09 23:29

Sample Amount: 4.98 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 8.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	111%
d8-Toluene	101%
Bromofluorobenzene	95.1%
d4-1,2-Dichlorobenzene	97.6%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP15-1.5

Page 1 of 1

SAMPLE

Lab Sample ID: OU25M

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8696

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: *AS*

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.68 g-dry-wt

Date Analyzed: 04/10/09 23:55

Purge Volume: 5.0 mL

Moisture: 8.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	115%
d8-Toluene	100%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	99.1%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP15-10

Page 1 of 1

SAMPLE

Lab Sample ID: OU25N

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8697

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.78 g-dry-wt

Date Analyzed: 04/11/09 00:22

Purge Volume: 5.0 mL

Moisture: 9.3%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)


**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	112%
d8-Toluene	101%
Bromofluorobenzene	99.8%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: DOF-TP16-1.5  
SAMPLE

Lab Sample ID: OU250  
LIMS ID: 09-8698  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/11/09 00:48

Sample Amount: 4.58 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 10.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	2.0	
179601-23-1	m,p-Xylene	1.1	6.9	
95-47-6	o-Xylene	1.1	1.7	

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	116%
d8-Toluene	90.9%
Bromofluorobenzene	88.0%
d4-1,2-Dichlorobenzene	99.8%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP16-3

Page 1 of 1

SAMPLE

Lab Sample ID: OU25P


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8699

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.93 g-dry-wt

Date Analyzed: 04/11/09 02:08

Purge Volume: 5.0 mL

Moisture: 15.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	112%
d8-Toluene	101%
Bromofluorobenzene	96.1%
d4-1,2-Dichlorobenzene	99.9%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP17-2

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU25Q


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8700

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.59 g-dry-wt

Date Analyzed: 04/13/09 11:45

Purge Volume: 5.0 mL

Moisture: 10.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	2.5	
108-88-3	Toluene	1.1	12	
100-41-4	Ethylbenzene	1.1	170	
179601-23-1	m,p-Xylene	1.1	220	
95-47-6	o-Xylene	1.1	150	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	120%
d8-Toluene	93.8%
Bromofluorobenzene	88.0%
d4-1,2-Dichlorobenzene	103%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP17-5

Page 1 of 1

SAMPLE

Lab Sample ID: OU25R


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8701

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.03 g-dry-wt

Date Analyzed: 04/13/09 12:12

Purge Volume: 5.0 mL

Moisture: 12.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)


**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	99.4%
Bromofluorobenzene	93.2%
d4-1,2-Dichlorobenzene	97.4%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: DOF-TP18-4  
SAMPLE

Lab Sample ID: OU25S  
LIMS ID: 09-8702  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/13/09 12:38

Sample Amount: 4.89 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 4.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	100%
Bromofluorobenzene	99.5%
d4-1,2-Dichlorobenzene	98.0%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP18-10

Page 1 of 1

SAMPLE

Lab Sample ID: OU25T


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8703

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 1.08 g-dry-wt

Date Analyzed: 04/13/09 13:05

Purge Volume: 5.0 mL

Moisture: 19.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	4.6	120	
108-88-3	Toluene	4.6	88	
100-41-4	Ethylbenzene	4.6	700	
179601-23-1	m,p-Xylene	4.6	950	E
95-47-6	o-Xylene	4.6	1,700	ES

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	116%
d8-Toluene	96.2%
Bromofluorobenzene	89.0%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP18-10

Page 1 of 1

REANALYSIS

Lab Sample ID: OU25T

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8703

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: *B*

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 68.3 mg-dry-wt

Date Analyzed: 04/14/09 19:46

Purge Volume: 5.0 mL

Moisture: 19.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	73	200	
108-88-3	Toluene	73	120	
100-41-4	Ethylbenzene	73	910	
179601-23-1	m,p-Xylene	73	1,200	
95-47-6	o-Xylene	73	2,300	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	107%
d8-Toluene	102%
Bromofluorobenzene	98.0%
d4-1,2-Dichlorobenzene	100%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**VOA SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-041009	Method Blank	Low	108%	102%	97.7%	99.3%	0
LCS-041009	Lab Control	Low	103%	99.4%	100%	103%	0
LCSD-041009	Lab Control Dup	Low	104%	101%	100%	101%	0
OU25A	DOF-TP9-7	Low	109%	101%	101%	99.3%	0
OU25AMS	DOF-TP9-7	Low	113%	102%	102%	103%	0
OU25AMSD	DOF-TP9-7	Low	112%	102%	102%	103%	0
OU25B	DOF-TP10-2	Low	106%	101%	98.9%	98.9%	0
OU25C	DOF-TP10-14	Low	110%	101%	99.9%	99.5%	0
OU25D	DOF-TP11-1/3	Low	113%	100%	94.0%	108%	0
OU25E	DOF-TP11-6	Low	108%	99.5%	96.1%	98.9%	0
OU25F	DOF-TP12-1	Low	121%	85.4%	80.2%	94.6%	0
MB-041309	Method Blank	Low	106%	101%	99.1%	97.8%	0
LCS-041309	Lab Control	Low	103%	100%	102%	101%	0
LCSD-041309	Lab Control Dup	Low	103%	101%	101%	101%	0
OU25G	DOF-TP12-3	Low	136%*	78.4%	83.2%	93.4%	1
OU25GRE	DOF-TP12-3	Low	134%*	75.4%*	77.0%	93.2%	2
OU25H	DOF-TP13-2	Low	107%	101%	97.0%	98.8%	0
OU25I	DOF-TP13-6	Low	111%	98.7%	96.0%	101%	0
OU25J	DOF-TP13-9	Low	110%	100%	99.1%	98.0%	0
OU25K	DOF-TP14-1.5	Low	109%	99.9%	94.1%	100%	0
OU25L	DOF-TP14-6	Low	111%	101%	95.1%	97.6%	0
OU25M	DOF-TP15-1.5	Low	115%	100%	101%	99.1%	0
OU25N	DOF-TP15-10	Low	112%	101%	99.8%	100%	0
OU25O	DOF-TP16-1.5	Low	116%	90.9%	88.0%	99.8%	0
OU25P	DOF-TP16-3	Low	112%	101%	96.1%	99.9%	0
OU25Q	DOF-TP17-2	Low	120%	93.8%	88.0%	103%	0
OU25R	DOF-TP17-5	Low	104%	99.4%	93.2%	97.4%	0
OU25S	DOF-TP18-4	Low	110%	100%	99.5%	98.0%	0
MB-041409	Method Blank	Med	104%	102%	98.5%	98.2%	0
LCS-041409	Lab Control	Med	105%	101%	101%	102%	0
LCSD-041409	Lab Control Dup	Med	108%	101%	100%	102%	0
OU25T	DOF-TP18-10	Low	116%	96.2%	89.0%	100%	0
OU25TRE	DOF-TP18-10	Med	107%	102%	98.0%	100%	0

**LCS/MB LIMITS**

**QC LIMITS**

	Low	Med	Low	Med
<b>SW8260B</b>				
(DCE) = d4-1,2-Dichloroethane	75-120	76-120	72-134	69-120
(TOL) = d8-Toluene	80-122	80-120	78-124	80-120
(BFB) = Bromofluorobenzene	79-120	80-120	66-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	79-120	80-120

Log Number Range: 09-8684 to 09-8703

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP9-7

MATRIX SPIKE

Page 1 of 1

Lab Sample ID: OU25A


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8684

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst MS: FINN5/PAB

Sample Amount MS: 5.17 g-dry-wt

MSD: FINN5/PAB

MSD: 5.07 g-dry-wt

Date Analyzed MS: 04/11/09 01:15

Purge Volume MS: 5.0 mL

MSD: 04/11/09 01:41

MSD: 5.0 mL

Moisture: 6.2%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 1.0 U	41.2	48.4	85.1%	45.7	49.3	92.7%	10.4%
Toluene	< 1.0 U	39.4	48.4	81.4%	44.1	49.3	89.5%	11.3%
Ethylbenzene	< 1.0 U	41.2	48.4	85.1%	45.8	49.3	92.9%	10.6%
m,p-Xylene	< 1.0 U	78.3	96.7	81.0%	87.8	98.6	89.0%	11.4%
o-Xylene	< 1.0 U	39.0	48.4	80.6%	43.6	49.3	88.4%	11.1%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP9-7

Page 1 of 1

**MATRIX SPIKE**

Lab Sample ID: OU25A


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8684

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.17 g-dry-wt

Date Analyzed: 04/11/09 01:15

Purge Volume: 5.0 mL

Moisture: 6.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	---	
108-88-3	Toluene	1.0	---	
100-41-4	Ethylbenzene	1.0	---	
179601-23-1	m,p-Xylene	1.0	---	
95-47-6	o-Xylene	1.0	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	113%
d8-Toluene	102%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	103%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP9-7

Page 1 of 1

MATRIX SPIKE DUP

Lab Sample ID: OU25A

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8684

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.07 g-dry-wt

Date Analyzed: 04/11/09 01:41

Purge Volume: 5.0 mL

Moisture: 6.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	---	
108-88-3	Toluene	1.0	---	
100-41-4	Ethylbenzene	1.0	---	
179601-23-1	m,p-Xylene	1.0	---	
95-47-6	o-Xylene	1.0	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	112%
d8-Toluene	102%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	103%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: LCS-041009  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-041009  
LIMS ID: 09-8684  
Matrix: Soil  
Data Release Authorized: *AB*  
Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: NA  
Date Received: NA

Instrument/Analyst LCS: FINN5/PAB  
LCSD: FINN5/PAB  
Date Analyzed LCS: 04/10/09 16:03  
LCSD: 04/10/09 16:37

Sample Amount LCS: 5.00 g-dry-wt  
LCSD: 5.00 g-dry-wt  
Purge Volume LCS: 5.0 mL  
LCSD: 5.0 mL  
Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	50.6	50.0	101%	49.3	50.0	98.6%	2.6%
Toluene	50.2	50.0	100%	47.7	50.0	95.4%	5.1%
Ethylbenzene	54.7	50.0	109%	51.2	50.0	102%	6.6%
m,p-Xylene	108	100	108%	99.6	100	99.6%	8.1%
o-Xylene	52.1	50.0	104%	48.8	50.0	97.6%	6.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	103%	104%
d8-Toluene	99.4%	101%
Bromofluorobenzene	100%	100%
d4-1,2-Dichlorobenzene	103%	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: LCS-041309

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-041309


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8690

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCSD: FINN5/PAB

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 04/13/09 09:37

Purge Volume LCS: 5.0 mL

LCSD: 04/13/09 10:12

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	47.7	50.0	95.4%	46.4	50.0	92.8%	2.8%
Toluene	47.3	50.0	94.6%	44.7	50.0	89.4%	5.7%
Ethylbenzene	50.8	50.0	102%	48.5	50.0	97.0%	4.6%
m,p-Xylene	100	100	100%	95.1	100	95.1%	5.0%
o-Xylene	48.9	50.0	97.8%	46.6	50.0	93.2%	4.8%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	103%	103%
d8-Toluene	100%	101%
Bromofluorobenzene	102%	101%
d4-1,2-Dichlorobenzene	101%	101%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: LCS-041409

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-041409

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8703

Project: Verbeek Wrecking

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

Sample Amount LCS: 100 mg-dry-wt

LCSD: FINN5/PAB

LCSD: 100 mg-dry-wt

Date Analyzed LCS: 04/14/09 09:51

Purge Volume LCS: 5.0 mL

LCSD: 04/14/09 10:25

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	2450	2500	98.0%	2460	2500	98.4%	0.4%
Toluene	2450	2500	98.0%	2460	2500	98.4%	0.4%
Ethylbenzene	2650	2500	106%	2600	2500	104%	1.9%
m,p-Xylene	5140	5000	103%	5060	5000	101%	1.6%
o-Xylene	2480	2500	99.2%	2490	2500	99.6%	0.4%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	105%	108%
d8-Toluene	101%	101%
Bromofluorobenzene	101%	100%
d4-1,2-Dichlorobenzene	102%	102%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: MB-041309  
METHOD BLANK

Lab Sample ID: MB-041309  
LIMS ID: 09-8684  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: NA  
Date Received: NA

Date Extracted: 04/13/09  
Date Analyzed: 04/17/09 14:22  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.50 g  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	86.4%	2-Fluorobiphenyl	90.0%
d14-p-Terphenyl	99.6%	d4-1,2-Dichlorobenzene	88.8%
d5-Phenol	84.5%	2-Fluorophenol	86.1%
2,4,6-Tribromophenol	81.6%	d4-2-Chlorophenol	87.5%

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP9-7**  
**SAMPLE**

Lab Sample ID: OU25A  
 LIMS ID: 09-8684  
 Matrix: Soil  
 Data Release Authorized: **VTS**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/17/09 21:19  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.50 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 6.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	80.0%	2-Fluorobiphenyl	84.4%
d14-p-Terphenyl	91.6%	d4-1,2-Dichlorobenzene	81.6%
d5-Phenol	77.3%	2-Fluorophenol	77.1%
2,4,6-Tribromophenol	68.8%	d4-2-Chlorophenol	79.7%

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP10-2**  
**SAMPLE**

Lab Sample ID: OU25B  
 LIMS ID: 09-8685  
 Matrix: Soil  
 Data Release Authorized: **VIS**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/17/09 23:21  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.87 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 12.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	< 64 U
95-48-7	2-Methylphenol	64	< 64 U
106-44-5	4-Methylphenol	64	< 64 U
105-67-9	2,4-Dimethylphenol	64	< 64 U
91-20-3	Naphthalene	64	< 64 U
91-57-6	2-Methylnaphthalene	64	< 64 U
131-11-3	Dimethylphthalate	64	< 64 U
208-96-8	Acenaphthylene	64	< 64 U
83-32-9	Acenaphthene	64	< 64 U
132-64-9	Dibenzofuran	64	< 64 U
84-66-2	Diethylphthalate	64	< 64 U
86-73-7	Fluorene	64	< 64 U
85-01-8	Phenanthrene	64	< 64 U
86-74-8	Carbazole	64	< 64 U
120-12-7	Anthracene	64	< 64 U
84-74-2	Di-n-Butylphthalate	64	< 64 U
206-44-0	Fluoranthene	64	< 64 U
129-00-0	Pyrene	64	< 64 U
85-68-7	Butylbenzylphthalate	64	< 64 U
56-55-3	Benzo(a)anthracene	64	< 64 U
117-81-7	bis(2-Ethylhexyl)phthalate	64	< 64 U
218-01-9	Chrysene	64	< 64 U
117-84-0	Di-n-Octyl phthalate	64	< 64 U
205-99-2	Benzo(b)fluoranthene	64	< 64 U
207-08-9	Benzo(k)fluoranthene	64	< 64 U
50-32-8	Benzo(a)pyrene	64	< 64 U
193-39-5	Indeno(1,2,3-cd)pyrene	64	< 64 U
53-70-3	Dibenz(a,h)anthracene	64	< 64 U
191-24-2	Benzo(g,h,i)perylene	64	< 64 U
483-65-8	Retene	64	< 64 U
90-12-0	1-Methylnaphthalene	64	< 64 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	75.6%	2-Fluorobiphenyl	78.4%
d14-p-Terphenyl	72.4%	d4-1,2-Dichlorobenzene	73.6%
d5-Phenol	75.7%	2-Fluorophenol	74.7%
2,4,6-Tribromophenol	70.4%	d4-2-Chlorophenol	74.7%

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP10-14**  
**SAMPLE**

Lab Sample ID: OU25C  
 LIMS ID: 09-8686  
 Matrix: Soil  
 Data Release Authorized: **VJS**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/18/09 00:02  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.75 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 14.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	< 64 U
95-48-7	2-Methylphenol	64	< 64 U
106-44-5	4-Methylphenol	64	< 64 U
105-67-9	2,4-Dimethylphenol	64	< 64 U
91-20-3	Naphthalene	64	< 64 U
91-57-6	2-Methylnaphthalene	64	< 64 U
131-11-3	Dimethylphthalate	64	< 64 U
208-96-8	Acenaphthylene	64	< 64 U
83-32-9	Acenaphthene	64	< 64 U
132-64-9	Dibenzofuran	64	< 64 U
84-66-2	Diethylphthalate	64	< 64 U
86-73-7	Fluorene	64	< 64 U
85-01-8	Phenanthrene	64	< 64 U
86-74-8	Carbazole	64	< 64 U
120-12-7	Anthracene	64	< 64 U
84-74-2	Di-n-Butylphthalate	64	< 64 U
206-44-0	Fluoranthene	64	< 64 U
129-00-0	Pyrene	64	< 64 U
85-68-7	Butylbenzylphthalate	64	< 64 U
56-55-3	Benzo(a)anthracene	64	< 64 U
117-81-7	bis(2-Ethylhexyl)phthalate	64	< 64 U
218-01-9	Chrysene	64	< 64 U
117-84-0	Di-n-Octyl phthalate	64	< 64 U
205-99-2	Benzo(b)fluoranthene	64	< 64 U
207-08-9	Benzo(k)fluoranthene	64	< 64 U
50-32-8	Benzo(a)pyrene	64	< 64 U
193-39-5	Indeno(1,2,3-cd)pyrene	64	< 64 U
53-70-3	Dibenz(a,h)anthracene	64	< 64 U
191-24-2	Benzo(g,h,i)perylene	64	< 64 U
483-65-8	Retene	64	< 64 U
90-12-0	1-Methylnaphthalene	64	< 64 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	77.2%	2-Fluorobiphenyl	80.8%
d14-p-Terphenyl	77.2%	d4-1,2-Dichlorobenzene	81.2%
d5-Phenol	76.0%	2-Fluorophenol	76.5%
2,4,6-Tribromophenol	62.9%	d4-2-Chlorophenol	77.6%

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP11-1/3**  
**SAMPLE**

Lab Sample ID: OU25D  
 LIMS ID: 09-8687  
 Matrix: Soil  
 Data Release Authorized: **VIS**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/18/09 00:42  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.79 g-dry-wt  
 Final Extract Volume: 5.0 mL  
 Dilution Factor: 3.00  
 Percent Moisture: 13.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1,900	< 1,900 U
95-48-7	2-Methylphenol	1,900	< 1,900 U
106-44-5	4-Methylphenol	1,900	< 1,900 U
105-67-9	2,4-Dimethylphenol	1,900	< 1,900 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>1,900</b>	<b>92,000</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>1,900</b>	<b>32,000</b>
131-11-3	Dimethylphthalate	1,900	< 1,900 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>1,900</b>	<b>11,000</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>1,900</b>	<b>23,000</b>
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>1,900</b>	<b>2,400</b>
84-66-2	Diethylphthalate	1,900	< 1,900 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>1,900</b>	<b>17,000</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>1,900</b>	<b>110,000</b>
<b>86-74-8</b>	<b>Carbazole</b>	<b>1,900</b>	<b>2,400</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>1,900</b>	<b>21,000</b>
84-74-2	Di-n-Butylphthalate	1,900	< 1,900 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>1,900</b>	<b>140,000</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1,900</b>	<b>140,000</b>
85-68-7	Butylbenzylphthalate	1,900	< 1,900 U
<b>56-55-3</b>	<b>Benzo(a)anthracene</b>	<b>1,900</b>	<b>40,000</b>
117-81-7	bis(2-Ethylhexyl)phthalate	1,900	< 1,900 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>1,900</b>	<b>53,000</b>
117-84-0	Di-n-Octyl phthalate	1,900	< 1,900 U
<b>205-99-2</b>	<b>Benzo(b)fluoranthene</b>	<b>1,900</b>	<b>47,000</b>
<b>207-08-9</b>	<b>Benzo(k)fluoranthene</b>	<b>1,900</b>	<b>28,000</b>
<b>50-32-8</b>	<b>Benzo(a)pyrene</b>	<b>1,900</b>	<b>61,000</b>
<b>193-39-5</b>	<b>Indeno(1,2,3-cd)pyrene</b>	<b>1,900</b>	<b>35,000</b>
<b>53-70-3</b>	<b>Dibenz(a,h)anthracene</b>	<b>1,900</b>	<b>6,400</b>
<b>191-24-2</b>	<b>Benzo(g,h,i)perylene</b>	<b>1,900</b>	<b>53,000</b>
483-65-8	Retene	1,900	< 1,900 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>1,900</b>	<b>29,000</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	82.8%	2-Fluorobiphenyl	85.2%
d14-p-Terphenyl	63.6%	d4-1,2-Dichlorobenzene	78.0%
d5-Phenol	73.6%	2-Fluorophenol	77.6%
2,4,6-Tribromophenol	57.6%	d4-2-Chlorophenol	74.4%

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**Sample ID: DOF-TP11-6**  
**SAMPLE**

Lab Sample ID: OU25E  
 LIMS ID: 09-8688  
 Matrix: Soil  
 Data Release Authorized: **VTD**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/18/09 01:23  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.54 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 16.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	66	< 66 U
95-48-7	2-Methylphenol	66	< 66 U
106-44-5	4-Methylphenol	66	< 66 U
105-67-9	2,4-Dimethylphenol	66	< 66 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>66</b>	<b>220</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>66</b>	<b>85</b>
131-11-3	Dimethylphthalate	66	< 66 U
208-96-8	Acenaphthylene	66	< 66 U
83-32-9	Acenaphthene	66	< 66 U
132-64-9	Dibenzofuran	66	< 66 U
84-66-2	Diethylphthalate	66	< 66 U
86-73-7	Fluorene	66	< 66 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>66</b>	<b>150</b>
86-74-8	Carbazole	66	< 66 U
120-12-7	Anthracene	66	< 66 U
84-74-2	Di-n-Butylphthalate	66	< 66 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>66</b>	<b>150</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>66</b>	<b>140</b>
85-68-7	Butylbenzylphthalate	66	< 66 U
56-55-3	Benzo(a)anthracene	66	< 66 U
117-81-7	bis(2-Ethylhexyl)phthalate	66	< 66 U
218-01-9	Chrysene	66	< 66 U
117-84-0	Di-n-Octyl phthalate	66	< 66 U
205-99-2	Benzo(b)fluoranthene	66	< 66 U
207-08-9	Benzo(k)fluoranthene	66	< 66 U
50-32-8	Benzo(a)pyrene	66	< 66 U
193-39-5	Indeno(1,2,3-cd)pyrene	66	< 66 U
53-70-3	Dibenz(a,h)anthracene	66	< 66 U
191-24-2	Benzo(g,h,i)perylene	66	< 66 U
483-65-8	Retene	66	< 66 U
90-12-0	1-Methylnaphthalene	66	< 66 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	72.0%	2-Fluorobiphenyl	78.4%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	71.2%
d5-Phenol	73.1%	2-Fluorophenol	70.7%
2,4,6-Tribromophenol	68.5%	d4-2-Chlorophenol	72.0%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP12-1  
SAMPLE

Lab Sample ID: OU25F  
LIMS ID: 09-8689  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 05/13/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/25/09 12:44  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.40 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Percent Moisture: 6.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	600	< 600 U
95-48-7	2-Methylphenol	600	< 600 U
106-44-5	4-Methylphenol	600	< 600 U
105-67-9	2,4-Dimethylphenol	600	< 600 U
91-20-3	Naphthalene	600	< 600 U
91-57-6	2-Methylnaphthalene	600	< 600 U
131-11-3	Dimethylphthalate	600	< 600 U
208-96-8	Acenaphthylene	600	< 600 U
83-32-9	Acenaphthene	600	< 600 U
132-64-9	Dibenzofuran	600	< 600 U
84-66-2	Diethylphthalate	600	< 600 U
86-73-7	Fluorene	600	< 600 U
85-01-8	Phenanthrene	600	< 600 U
86-74-8	Carbazole	600	< 600 U
120-12-7	Anthracene	600	< 600 U
84-74-2	Di-n-Butylphthalate	600	< 600 U
206-44-0	Fluoranthene	600	< 600 U
<b>129-00-0</b>	<b>Pyrene</b>	<b>600</b>	<b>630</b>
85-68-7	Butylbenzylphthalate	600	< 600 U
56-55-3	Benzo(a)anthracene	600	< 600 U
<b>117-81-7</b>	<b>bis(2-Ethylhexyl)phthalate</b>	<b>600</b>	<b>1,100</b>
218-01-9	Chrysene	600	< 600 U
117-84-0	Di-n-Octyl phthalate	600	< 600 U
205-99-2	Benzo(b)fluoranthene	600	< 600 U
207-08-9	Benzo(k)fluoranthene	600	< 600 U
50-32-8	Benzo(a)pyrene	600	< 600 U
193-39-5	Indeno(1,2,3-cd)pyrene	600	< 600 U
53-70-3	Dibenz(a,h)anthracene	600	< 600 U
191-24-2	Benzo(g,h,i)perylene	600	< 600 U
483-65-8	Retene	600	< 600 U
90-12-0	1-Methylnaphthalene	600	< 600 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	92.4%	2-Fluorobiphenyl	76.4%
d14-p-Terphenyl	46.0%	d4-1,2-Dichlorobenzene	74.4%
d5-Phenol	79.5%	2-Fluorophenol	64.8%
2,4,6-Tribromophenol	71.7%	d4-2-Chlorophenol	72.8%



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**Sample ID: DOF-TP12-1**  
**DILUTION**

Lab Sample ID: OU25F  
 LIMS ID: 09-8689  
 Matrix: Soil  
 Data Release Authorized: *VIS*  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/28/09 15:26  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 8.40 g-dry-wt  
 Final Extract Volume: 5.0 mL  
 Dilution Factor: 5.00  
 Percent Moisture: 6.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	3,000	< 3,000 U
95-48-7	2-Methylphenol	3,000	< 3,000 U
106-44-5	4-Methylphenol	3,000	< 3,000 U
105-67-9	2,4-Dimethylphenol	3,000	< 3,000 U
91-20-3	Naphthalene	3,000	< 3,000 U
91-57-6	2-Methylnaphthalene	3,000	< 3,000 U
131-11-3	Dimethylphthalate	3,000	< 3,000 U
208-96-8	Acenaphthylene	3,000	< 3,000 U
83-32-9	Acenaphthene	3,000	< 3,000 U
132-64-9	Dibenzofuran	3,000	< 3,000 U
84-66-2	Diethylphthalate	3,000	< 3,000 U
86-73-7	Fluorene	3,000	< 3,000 U
85-01-8	Phenanthrene	3,000	< 3,000 U
86-74-8	Carbazole	3,000	< 3,000 U
120-12-7	Anthracene	3,000	< 3,000 U
84-74-2	Di-n-Butylphthalate	3,000	< 3,000 U
206-44-0	Fluoranthene	3,000	< 3,000 U
129-00-0	Pyrene	3,000	< 3,000 U
85-68-7	Butylbenzylphthalate	3,000	< 3,000 U
56-55-3	Benzo(a)anthracene	3,000	< 3,000 U
117-81-7	bis(2-Ethylhexyl)phthalate	3,000	< 3,000 U
218-01-9	Chrysene	3,000	< 3,000 U
117-84-0	Di-n-Octyl phthalate	3,000	< 3,000 U
205-99-2	Benzo(b)fluoranthene	3,000	< 3,000 U
207-08-9	Benzo(k)fluoranthene	3,000	< 3,000 U
50-32-8	Benzo(a)pyrene	3,000	< 3,000 U
193-39-5	Indeno(1,2,3-cd)pyrene	3,000	< 3,000 U
53-70-3	Dibenz(a,h)anthracene	3,000	< 3,000 U
191-24-2	Benzo(g,h,i)perylene	3,000	< 3,000 U
483-65-8	Retene	3,000	< 3,000 U
90-12-0	1-Methylnaphthalene	3,000	< 3,000 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP12-3  
SAMPLE

Lab Sample ID: OU25G  
LIMS ID: 09-8690  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/25/09 13:25  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 6.38 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 8.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	78	< 78 U
95-48-7	2-Methylphenol	78	< 78 U
106-44-5	4-Methylphenol	78	< 78 U
105-67-9	2,4-Dimethylphenol	78	< 78 U
91-20-3	Naphthalene	78	< 78 U
91-57-6	2-Methylnaphthalene	78	< 78 U
131-11-3	Dimethylphthalate	78	< 78 U
208-96-8	Acenaphthylene	78	< 78 U
83-32-9	Acenaphthene	78	< 78 U
132-64-9	Dibenzofuran	78	< 78 U
84-66-2	Diethylphthalate	78	< 78 U
86-73-7	Fluorene	78	< 78 U
85-01-8	Phenanthrene	78	< 78 U
86-74-8	Carbazole	78	< 78 U
120-12-7	Anthracene	78	< 78 U
84-74-2	Di-n-Butylphthalate	78	< 78 U
206-44-0	Fluoranthene	78	< 78 U
129-00-0	Pyrene	78	< 78 U
85-68-7	Butylbenzylphthalate	78	< 78 U
56-55-3	Benzo(a)anthracene	78	< 78 U
117-81-7	bis(2-Ethylhexyl)phthalate	78	< 78 U
218-01-9	Chrysene	78	< 78 U
117-84-0	Di-n-Octyl phthalate	78	< 78 U
205-99-2	Benzo(b)fluoranthene	78	< 78 U
207-08-9	Benzo(k)fluoranthene	78	< 78 U
50-32-8	Benzo(a)pyrene	78	< 78 U
193-39-5	Indeno(1,2,3-cd)pyrene	78	< 78 U
53-70-3	Dibenz(a,h)anthracene	78	< 78 U
191-24-2	Benzo(g,h,i)perylene	78	< 78 U
483-65-8	Retene	78	< 78 U
90-12-0	1-Methylnaphthalene	78	< 78 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	98.0%	2-Fluorobiphenyl	85.6%
d14-p-Terphenyl	85.2%	d4-1,2-Dichlorobenzene	82.0%
d5-Phenol	89.1%	2-Fluorophenol	80.5%
2,4,6-Tribromophenol	84.5%	d4-2-Chlorophenol	82.4%

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP13-2**  
**SAMPLE**

Lab Sample ID: OU25H  
 LIMS ID: 09-8691  
 Matrix: Soil  
 Data Release Authorized: **VBS**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 14:06  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 8.06 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 10.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	93.2%	2-Fluorobiphenyl	78.0%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	76.4%
d5-Phenol	86.7%	2-Fluorophenol	75.5%
2,4,6-Tribromophenol	88.0%	d4-2-Chlorophenol	78.9%

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP13-6**  
**SAMPLE**

Lab Sample ID: OU25I  
 LIMS ID: 09-8692  
 Matrix: Soil  
 Data Release Authorized: *VIS*  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 14:47  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.67 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 23.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
91-57-6	2-Methylnaphthalene	65	< 65 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
83-32-9	Acenaphthene	65	< 65 U
132-64-9	Dibenzofuran	65	< 65 U
84-66-2	Diethylphthalate	65	< 65 U
86-73-7	Fluorene	65	< 65 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
205-99-2	Benzo(b)fluoranthene	65	< 65 U
207-08-9	Benzo(k)fluoranthene	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
483-65-8	Retene	65	< 65 U
90-12-0	1-Methylnaphthalene	65	< 65 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	97.6%	2-Fluorobiphenyl	90.4%
d14-p-Terphenyl	78.4%	d4-1,2-Dichlorobenzene	79.2%
d5-Phenol	85.6%	2-Fluorophenol	80.0%
2,4,6-Tribromophenol	84.3%	d4-2-Chlorophenol	81.1%

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP13-9**  
**SAMPLE**

Lab Sample ID: OU25J  
 LIMS ID: 09-8693  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 15:28  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 8.09 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 19.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	94.0%	2-Fluorobiphenyl	80.0%
d14-p-Terphenyl	80.0%	d4-1,2-Dichlorobenzene	77.2%
d5-Phenol	88.0%	2-Fluorophenol	77.1%
2,4,6-Tribromophenol	84.0%	d4-2-Chlorophenol	79.5%

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**Sample ID: DOF-TP14-1.5**  
**SAMPLE**

Lab Sample ID: OU25K  
 LIMS ID: 09-8694  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 16:10  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 8.00 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 11.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	114%	2-Fluorobiphenyl	97.6%
d14-p-Terphenyl	106%	d4-1,2-Dichlorobenzene	91.2%
d5-Phenol	101%	2-Fluorophenol	88.5%
2,4,6-Tribromophenol	107%	d4-2-Chlorophenol	92.8%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP14-6  
SAMPLE

Lab Sample ID: OU25L  
LIMS ID: 09-8695  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/25/09 16:51  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.22 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Percent Moisture: 8.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	610	< 610 U
95-48-7	2-Methylphenol	610	< 610 U
106-44-5	4-Methylphenol	610	< 610 U
105-67-9	2,4-Dimethylphenol	610	< 610 U
91-20-3	Naphthalene	610	< 610 U
91-57-6	2-Methylnaphthalene	610	< 610 U
131-11-3	Dimethylphthalate	610	< 610 U
208-96-8	Acenaphthylene	610	< 610 U
83-32-9	Acenaphthene	610	< 610 U
132-64-9	Dibenzofuran	610	< 610 U
84-66-2	Diethylphthalate	610	< 610 U
86-73-7	Fluorene	610	< 610 U
85-01-8	Phenanthrene	610	< 610 U
86-74-8	Carbazole	610	< 610 U
120-12-7	Anthracene	610	< 610 U
84-74-2	Di-n-Butylphthalate	610	< 610 U
206-44-0	Fluoranthene	610	< 610 U
129-00-0	Pyrene	610	< 610 U
85-68-7	Butylbenzylphthalate	610	< 610 U
56-55-3	Benzo(a)anthracene	610	< 610 U
117-81-7	bis(2-Ethylhexyl)phthalate	610	< 610 U
218-01-9	Chrysene	610	< 610 U
117-84-0	Di-n-Octyl phthalate	610	< 610 U
205-99-2	Benzo(b)fluoranthene	610	< 610 U
207-08-9	Benzo(k)fluoranthene	610	< 610 U
50-32-8	Benzo(a)pyrene	610	< 610 U
193-39-5	Indeno(1,2,3-cd)pyrene	610	< 610 U
53-70-3	Dibenz(a,h)anthracene	610	< 610 U
191-24-2	Benzo(g,h,i)perylene	610	< 610 U
483-65-8	Retene	610	< 610 U
90-12-0	1-Methylnaphthalene	610	< 610 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	108%	2-Fluorobiphenyl	79.2%
d14-p-Terphenyl	78.0%	d4-1,2-Dichlorobenzene	80.8%
d5-Phenol	83.5%	2-Fluorophenol	74.9%
2,4,6-Tribromophenol	75.2%	d4-2-Chlorophenol	78.9%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP15-1.5**  
**SAMPLE**

Lab Sample ID: OU25M  
 LIMS ID: 09-8696  
 Matrix: Soil  
 Data Release Authorized: **VTD**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 17:32  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 8.26 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 8.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
91-57-6	2-Methylnaphthalene	60	< 60 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
83-32-9	Acenaphthene	60	< 60 U
132-64-9	Dibenzofuran	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
86-73-7	Fluorene	60	< 60 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
205-99-2	Benzo(b)fluoranthene	60	< 60 U
207-08-9	Benzo(k)fluoranthene	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
483-65-8	Retene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	< 60 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	97.6%	2-Fluorobiphenyl	86.8%
d14-p-Terphenyl	81.2%	d4-1,2-Dichlorobenzene	81.2%
d5-Phenol	88.8%	2-Fluorophenol	77.6%
2,4,6-Tribromophenol	85.6%	d4-2-Chlorophenol	81.9%



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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP15-10  
SAMPLE

Lab Sample ID: OU25N  
LIMS ID: 09-8697  
Matrix: Soil  
Data Release Authorized: *VIS*  
Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/25/09 18:13  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.16 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 9.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
91-57-6	2-Methylnaphthalene	61	< 61 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
83-32-9	Acenaphthene	61	< 61 U
132-64-9	Dibenzofuran	61	< 61 U
84-66-2	Diethylphthalate	61	< 61 U
86-73-7	Fluorene	61	< 61 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
205-99-2	Benzo(b)fluoranthene	61	< 61 U
207-08-9	Benzo(k)fluoranthene	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
483-65-8	Retene	61	< 61 U
90-12-0	1-Methylnaphthalene	61	< 61 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	82.4%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	80.4%	d4-1,2-Dichlorobenzene	69.6%
d5-Phenol	75.5%	2-Fluorophenol	66.7%
2,4,6-Tribromophenol	92.5%	d4-2-Chlorophenol	68.3%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP16-1.5**  
**SAMPLE**

Lab Sample ID: OU250  
 LIMS ID: 09-8698  
 Matrix: Soil  
 Data Release Authorized: *WTS*  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/24/09 20:23  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 8.06 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 3.00  
 Percent Moisture: 10.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	190	< 190 U
95-48-7	2-Methylphenol	190	< 190 U
106-44-5	4-Methylphenol	190	< 190 U
105-67-9	2,4-Dimethylphenol	190	< 190 U
91-20-3	Naphthalene	190	< 190 U
91-57-6	2-Methylnaphthalene	190	< 190 U
131-11-3	Dimethylphthalate	190	< 190 U
208-96-8	Acenaphthylene	190	< 190 U
83-32-9	Acenaphthene	190	< 190 U
132-64-9	Dibenzofuran	190	< 190 U
84-66-2	Diethylphthalate	190	< 190 U
86-73-7	Fluorene	190	< 190 U
85-01-8	Phenanthrene	190	< 190 U
86-74-8	Carbazole	190	< 190 U
120-12-7	Anthracene	190	< 190 U
84-74-2	Di-n-Butylphthalate	190	< 190 U
206-44-0	Fluoranthene	190	< 190 U
129-00-0	Pyrene	190	< 190 U
85-68-7	Butylbenzylphthalate	190	< 190 U
56-55-3	Benzo(a)anthracene	190	< 190 U
<b>117-81-7</b>	<b>bis(2-Ethylhexyl)phthalate</b>	<b>190</b>	<b>990</b>
218-01-9	Chrysene	190	< 190 U
117-84-0	Di-n-Octyl phthalate	190	< 190 U
205-99-2	Benzo(b)fluoranthene	190	< 190 U
207-08-9	Benzo(k)fluoranthene	190	< 190 U
50-32-8	Benzo(a)pyrene	190	< 190 U
193-39-5	Indeno(1,2,3-cd)pyrene	190	< 190 U
53-70-3	Dibenz(a,h)anthracene	190	< 190 U
191-24-2	Benzo(g,h,i)perylene	190	< 190 U
483-65-8	Retene	190	< 190 U
90-12-0	1-Methylnaphthalene	190	< 190 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	101%	2-Fluorobiphenyl	80.0%
d14-p-Terphenyl	42.6%	d4-1,2-Dichlorobenzene	73.8%
d5-Phenol	82.4%	2-Fluorophenol	68.9%
2,4,6-Tribromophenol	75.4%	d4-2-Chlorophenol	76.6%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP16-1.5  
DILUTION

Lab Sample ID: OU250  
LIMS ID: 09-8698  
Matrix: Soil  
Data Release Authorized: *VJS*  
Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/25/09 21:38  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.06 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 6.00  
Percent Moisture: 10.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	370	< 370 U
95-48-7	2-Methylphenol	370	< 370 U
106-44-5	4-Methylphenol	370	< 370 U
105-67-9	2,4-Dimethylphenol	370	< 370 U
91-20-3	Naphthalene	370	< 370 U
91-57-6	2-Methylnaphthalene	370	< 370 U
131-11-3	Dimethylphthalate	370	< 370 U
208-96-8	Acenaphthylene	370	< 370 U
83-32-9	Acenaphthene	370	< 370 U
132-64-9	Dibenzofuran	370	< 370 U
84-66-2	Diethylphthalate	370	< 370 U
86-73-7	Fluorene	370	< 370 U
85-01-8	Phenanthrene	370	< 370 U
86-74-8	Carbazole	370	< 370 U
120-12-7	Anthracene	370	< 370 U
84-74-2	Di-n-Butylphthalate	370	< 370 U
206-44-0	Fluoranthene	370	< 370 U
129-00-0	Pyrene	370	< 370 U
85-68-7	Butylbenzylphthalate	370	< 370 U
56-55-3	Benzo(a)anthracene	370	< 370 U
<b>117-81-7</b>	<b>bis(2-Ethylhexyl)phthalate</b>	<b>370</b>	<b>1,100</b>
218-01-9	Chrysene	370	< 370 U
117-84-0	Di-n-Octyl phthalate	370	< 370 U
205-99-2	Benzo(b)fluoranthene	370	< 370 U
207-08-9	Benzo(k)fluoranthene	370	< 370 U
50-32-8	Benzo(a)pyrene	370	< 370 U
193-39-5	Indeno(1,2,3-cd)pyrene	370	< 370 U
53-70-3	Dibenz(a,h)anthracene	370	< 370 U
191-24-2	Benzo(g,h,i)perylene	370	< 370 U
483-65-8	Retene	370	< 370 U
90-12-0	1-Methylnaphthalene	370	< 370 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	113%	2-Fluorobiphenyl	85.7%
d14-p-Terphenyl	43.0%	d4-1,2-Dichlorobenzene	81.8%
d5-Phenol	90.2%	2-Fluorophenol	77.0%
2,4,6-Tribromophenol	89.3%	d4-2-Chlorophenol	83.8%

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP16-3**  
**SAMPLE**

Lab Sample ID: OU25P  
 LIMS ID: 09-8699  
 Matrix: Soil  
 Data Release Authorized: **VTD**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/24/09 21:04  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.68 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 15.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
91-57-6	2-Methylnaphthalene	65	< 65 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
83-32-9	Acenaphthene	65	< 65 U
132-64-9	Dibenzofuran	65	< 65 U
84-66-2	Diethylphthalate	65	< 65 U
86-73-7	Fluorene	65	< 65 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
205-99-2	Benzo(b)fluoranthene	65	< 65 U
207-08-9	Benzo(k)fluoranthene	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
483-65-8	Retene	65	< 65 U
90-12-0	1-Methylnaphthalene	65	< 65 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	98.4%	2-Fluorobiphenyl	79.2%
d14-p-Terphenyl	90.4%	d4-1,2-Dichlorobenzene	76.8%
d5-Phenol	86.1%	2-Fluorophenol	77.3%
2,4,6-Tribromophenol	81.6%	d4-2-Chlorophenol	78.4%

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Semivolatiles by SW8270D GC/MS  
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**Sample ID: DOF-TP17-2**  
**SAMPLE**

Lab Sample ID: OU25Q  
LIMS ID: 09-8700  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 05/13/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/25/09 18:54  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.05 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Percent Moisture: 10.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	620	< 620 U
95-48-7	2-Methylphenol	620	< 620 U
106-44-5	4-Methylphenol	620	< 620 U
105-67-9	2,4-Dimethylphenol	620	< 620 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>620</b>	<b>120,000 ES</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>620</b>	<b>64,000 E</b>
131-11-3	Dimethylphthalate	620	< 620 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>620</b>	<b>21,000</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>620</b>	<b>6,300</b>
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>620</b>	<b>2,200</b>
84-66-2	Diethylphthalate	620	< 620 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>620</b>	<b>20,000</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>620</b>	<b>140,000 ES</b>
<b>86-74-8</b>	<b>Carbazole</b>	<b>620</b>	<b>3,200</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>620</b>	<b>20,000</b>
84-74-2	Di-n-Butylphthalate	620	< 620 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>620</b>	<b>88,000 ES</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>620</b>	<b>87,000 ES</b>
85-68-7	Butylbenzylphthalate	620	< 620 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>620</b>	<b>33,000</b>
117-81-7	bis(2-Ethylhexyl)phthalate	620	< 620 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>620</b>	<b>40,000</b>
117-84-0	Di-n-Octyl phthalate	620	< 620 U
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>620</b>	<b>38,000</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>620</b>	<b>19,000</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>620</b>	<b>59,000 E</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>620</b>	<b>17,000</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>620</b>	<b>4,400</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>620</b>	<b>22,000</b>
483-65-8	Retene	620	< 620 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>620</b>	<b>37,000</b>

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	97.6%	2-Fluorobiphenyl	80.0%
d14-p-Terphenyl	49.2%	d4-1,2-Dichlorobenzene	78.4%
d5-Phenol	82.7%	2-Fluorophenol	74.9%
2,4,6-Tribromophenol	68.3%	d4-2-Chlorophenol	77.1%

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Sample ID: DOF-TP17-2  
DILUTION

Lab Sample ID: OU25Q  
LIMS ID: 09-8700  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/24/09 21:45  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.05 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 5.00  
Percent Moisture: 10.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	3,100	< 3,100 U
95-48-7	2-Methylphenol	3,100	< 3,100 U
106-44-5	4-Methylphenol	3,100	< 3,100 U
105-67-9	2,4-Dimethylphenol	3,100	< 3,100 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>3,100</b>	<b>170,000</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>3,100</b>	<b>53,000</b>
131-11-3	Dimethylphthalate	3,100	< 3,100 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>3,100</b>	<b>16,000</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>3,100</b>	<b>5,800</b>
132-64-9	Dibenzofuran	3,100	< 3,100 U
84-66-2	Diethylphthalate	3,100	< 3,100 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>3,100</b>	<b>18,000</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>3,100</b>	<b>140,000</b>
<b>86-74-8</b>	<b>Carbazole</b>	<b>3,100</b>	<b>3,200</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>3,100</b>	<b>16,000</b>
84-74-2	Di-n-Butylphthalate	3,100	< 3,100 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>3,100</b>	<b>93,000</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>3,100</b>	<b>110,000</b>
85-68-7	Butylbenzylphthalate	3,100	< 3,100 U
<b>56-55-3</b>	<b>Benzo(a)anthracene</b>	<b>3,100</b>	<b>26,000</b>
117-81-7	bis(2-Ethylhexyl)phthalate	3,100	< 3,100 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>3,100</b>	<b>30,000</b>
117-84-0	Di-n-Octyl phthalate	3,100	< 3,100 U
<b>205-99-2</b>	<b>Benzo(b)fluoranthene</b>	<b>3,100</b>	<b>20,000</b>
<b>207-08-9</b>	<b>Benzo(k)fluoranthene</b>	<b>3,100</b>	<b>18,000</b>
<b>50-32-8</b>	<b>Benzo(a)pyrene</b>	<b>3,100</b>	<b>36,000</b>
<b>193-39-5</b>	<b>Indeno(1,2,3-cd)pyrene</b>	<b>3,100</b>	<b>13,000</b>
53-70-3	Dibenz(a,h)anthracene	3,100	< 3,100 U
<b>191-24-2</b>	<b>Benzo(g,h,i)perylene</b>	<b>3,100</b>	<b>17,000</b>
483-65-8	Retene	3,100	< 3,100 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>3,100</b>	<b>32,000</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

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**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP17-5**  
**SAMPLE**

Lab Sample ID: OU25R  
 LIMS ID: 09-8701  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 19:35  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.90 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 12.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
91-57-6	2-Methylnaphthalene	63	< 63 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
83-32-9	Acenaphthene	63	< 63 U
132-64-9	Dibenzofuran	63	< 63 U
84-66-2	Diethylphthalate	63	< 63 U
86-73-7	Fluorene	63	< 63 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
205-99-2	Benzo(b)fluoranthene	63	< 63 U
207-08-9	Benzo(k)fluoranthene	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
<b>483-65-8</b>	<b>Retene</b>	<b>63</b>	<b>160</b>
90-12-0	1-Methylnaphthalene	63	< 63 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	88.4%	2-Fluorobiphenyl	77.6%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	66.4%
d5-Phenol	74.4%	2-Fluorophenol	65.9%
2,4,6-Tribromophenol	75.2%	d4-2-Chlorophenol	69.1%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-TP18-4**  
**SAMPLE**

Lab Sample ID: OU25S  
 LIMS ID: 09-8702  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 20:16  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.68 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 4.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
91-57-6	2-Methylnaphthalene	65	< 65 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
83-32-9	Acenaphthene	65	< 65 U
132-64-9	Dibenzofuran	65	< 65 U
84-66-2	Diethylphthalate	65	< 65 U
86-73-7	Fluorene	65	< 65 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
205-99-2	Benzo(b)fluoranthene	65	< 65 U
207-08-9	Benzo(k)fluoranthene	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
483-65-8	Retene	65	< 65 U
90-12-0	1-Methylnaphthalene	65	< 65 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	98.4%	2-Fluorobiphenyl	82.0%
d14-p-Terphenyl	88.4%	d4-1,2-Dichlorobenzene	79.2%
d5-Phenol	84.5%	2-Fluorophenol	78.4%
2,4,6-Tribromophenol	98.1%	d4-2-Chlorophenol	78.9%



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP18-10  
SAMPLE

Lab Sample ID: OU25T  
LIMS ID: 09-8703  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 05/13/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/25/09 20:57  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.13 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 3.00  
Percent Moisture: 19.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1,800	< 1,800 U
95-48-7	2-Methylphenol	1,800	< 1,800 U
106-44-5	4-Methylphenol	1,800	< 1,800 U
105-67-9	2,4-Dimethylphenol	1,800	< 1,800 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>1,800</b>	<b>320,000 ES</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>1,800</b>	<b>170,000 E</b>
131-11-3	Dimethylphthalate	1,800	< 1,800 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>1,800</b>	<b>97,000</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>1,800</b>	<b>8,100</b>
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>1,800</b>	<b>6,300</b>
84-66-2	Diethylphthalate	1,800	< 1,800 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>1,800</b>	<b>66,000</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>1,800</b>	<b>280,000 ES</b>
<b>86-74-8</b>	<b>Carbazole</b>	<b>1,800</b>	<b>8,500</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>1,800</b>	<b>65,000</b>
84-74-2	Di-n-Butylphthalate	1,800	< 1,800 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>1,800</b>	<b>290,000 ES</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1,800</b>	<b>250,000 ES</b>
85-68-7	Butylbenzylphthalate	1,800	< 1,800 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>1,800</b>	<b>91,000</b>
117-81-7	bis(2-Ethylhexyl)phthalate	1,800	< 1,800 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>1,800</b>	<b>120,000</b>
117-84-0	Di-n-Octyl phthalate	1,800	< 1,800 U
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>1,800</b>	<b>130,000</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>1,800</b>	<b>100,000</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>1,800</b>	<b>180,000 E</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>1,800</b>	<b>53,000</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>1,800</b>	<b>12,000</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>1,800</b>	<b>62,000</b>
483-65-8	Retene	2,000	< 2,000 Y
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>1,800</b>	<b>110,000</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	92.4%	2-Fluorobiphenyl	67.2%
d14-p-Terphenyl	49.2%	d4-1,2-Dichlorobenzene	69.6%
d5-Phenol	72.8%	2-Fluorophenol	70.4%
2,4,6-Tribromophenol	60.0%	d4-2-Chlorophenol	70.4%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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**Sample ID: DOF-TP18-10**  
**DILUTION**

Lab Sample ID: OU25T  
LIMS ID: 09-8703  
Matrix: Soil  
Data Release Authorized: **VIS**  
Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/24/09 22:27  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.13 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 15.0  
Percent Moisture: 19.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	9,200	< 9,200 U
95-48-7	2-Methylphenol	9,200	< 9,200 U
106-44-5	4-Methylphenol	9,200	< 9,200 U
105-67-9	2,4-Dimethylphenol	9,200	< 9,200 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>9,200</b>	<b>370,000</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>9,200</b>	<b>99,000</b>
131-11-3	Dimethylphthalate	9,200	< 9,200 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>9,200</b>	<b>69,000</b>
83-32-9	Acenaphthene	9,200	< 9,200 U
132-64-9	Dibenzofuran	9,200	< 9,200 U
84-66-2	Diethylphthalate	9,200	< 9,200 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>9,200</b>	<b>40,000</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>9,200</b>	<b>260,000</b>
86-74-8	Carbazole	9,200	< 9,200 U
<b>120-12-7</b>	<b>Anthracene</b>	<b>9,200</b>	<b>41,000</b>
84-74-2	Di-n-Butylphthalate	9,200	< 9,200 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>9,200</b>	<b>320,000</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>9,200</b>	<b>330,000</b>
85-68-7	Butylbenzylphthalate	9,200	< 9,200 U
<b>56-55-3</b>	<b>Benzo(a)anthracene</b>	<b>9,200</b>	<b>60,000</b>
117-81-7	bis(2-Ethylhexyl)phthalate	9,200	< 9,200 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>9,200</b>	<b>71,000</b>
117-84-0	Di-n-Octyl phthalate	9,200	< 9,200 U
<b>205-99-2</b>	<b>Benzo(b)fluoranthene</b>	<b>9,200</b>	<b>54,000</b>
<b>207-08-9</b>	<b>Benzo(k)fluoranthene</b>	<b>9,200</b>	<b>49,000</b>
<b>50-32-8</b>	<b>Benzo(a)pyrene</b>	<b>9,200</b>	<b>80,000</b>
<b>193-39-5</b>	<b>Indeno(1,2,3-cd)pyrene</b>	<b>9,200</b>	<b>33,000</b>
53-70-3	Dibenz(a,h)anthracene	9,200	< 9,200 U
<b>191-24-2</b>	<b>Benzo(g,h,i)perylene</b>	<b>9,200</b>	<b>42,000</b>
483-65-8	Retene	9,200	< 9,200 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>9,200</b>	<b>67,000</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

**SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
MB-041309	86.4%	90.0%	99.6%	88.8%	84.5%	86.1%	81.6%	87.5%	0	
LCS-041309	90.8%	94.0%	91.2%	89.2%	88.3%	89.3%	92.8%	89.6%	0	
DOF-TP9-7	80.0%	84.4%	91.6%	81.6%	77.3%	77.1%	68.8%	79.7%	0	
DOF-TP9-7 MS	78.4%	81.6%	67.2%	78.8%	78.4%	77.1%	76.5%	78.4%	0	
DOF-TP9-7 MSD	84.0%	86.0%	72.8%	82.4%	84.0%	81.9%	83.7%	81.9%	0	
DOF-TP10-2	75.6%	78.4%	72.4%	73.6%	75.7%	74.7%	70.4%	74.7%	0	
DOF-TP10-14	77.2%	80.8%	77.2%	81.2%	76.0%	76.5%	62.9%	77.6%	0	
DOF-TP11-1/3	82.8%	85.2%	63.6%	78.0%	73.6%	77.6%	57.6%	74.4%	0	
DOF-TP11-6	72.0%	78.4%	74.8%	71.2%	73.1%	70.7%	68.5%	72.0%	0	
DOF-TP12-1	92.4%	76.4%	46.0%	74.4%	79.5%	64.8%	71.7%	72.8%	0	
DOF-TP12-1 DL	D	D	D	D	D	D	D	D	0	
DOF-TP12-3	98.0%	85.6%	85.2%	82.0%	89.1%	80.5%	84.5%	82.4%	0	
DOF-TP13-2	93.2%	78.0%	86.0%	76.4%	86.7%	75.5%	88.0%	78.9%	0	
DOF-TP13-6	97.6%	90.4%	78.4%	79.2%	85.6%	80.0%	84.3%	81.1%	0	
DOF-TP13-9	94.0%	80.0%	80.0%	77.2%	88.0%	77.1%	84.0%	79.5%	0	
DOF-TP14-1.5	114%	97.6%	106%	91.2%	101%	88.5%	107%	92.8%	0	
DOF-TP14-6	108%	79.2%	78.0%	80.8%	83.5%	74.9%	75.2%	78.9%	0	
DOF-TP15-1.5	97.6%	86.8%	81.2%	81.2%	88.8%	77.6%	85.6%	81.9%	0	
DOF-TP15-10	82.4%	70.8%	80.4%	69.6%	75.5%	66.7%	92.5%	68.3%	0	
DOF-TP16-1.5	101%	80.0%	42.6%	73.8%	82.4%	68.9%	75.4%	76.6%	0	
DOF-TP16-1.5 DL	113%	85.7%	43.0%	81.8%	90.2%	77.0%	89.3%	83.8%	0	
DOF-TP16-3	98.4%	79.2%	90.4%	76.8%	86.1%	77.3%	81.6%	78.4%	0	
DOF-TP17-2	97.6%	80.0%	49.2%	78.4%	82.7%	74.9%	68.3%	77.1%	0	
DOF-TP17-2 DL	D	D	D	D	D	D	D	D	0	
DOF-TP17-5	88.4%	77.6%	70.4%	66.4%	74.4%	65.9%	75.2%	69.1%	0	
DOF-TP18-4	98.4%	82.0%	88.4%	79.2%	84.5%	78.4%	98.1%	78.9%	0	
DOF-TP18-10	92.4%	67.2%	49.2%	69.6%	72.8%	70.4%	60.0%	70.4%	0	
DOF-TP18-10 DL	D	D	D	D	D	D	D	D	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(30-160)	(30-160)
(FBP) = 2-Fluorobiphenyl	(30-160)	(30-160)
(TPH) = d14-p-Terphenyl	(30-160)	(30-160)
(DCB) = d4-1,2-Dichlorobenzene	(30-160)	(30-160)
(PHL) = d5-Phenol	(30-160)	(30-160)
(2FP) = 2-Fluorophenol	(30-160)	(30-160)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)
(2CP) = d4-2-Chlorophenol	(30-160)	(30-160)

Prep Method: SW3546  
Log Number Range: 09-8684 to 09-8703

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP9-7**  
**MS/MSD**

Lab Sample ID: OU25A  
 LIMS ID: 09-8684  
 Matrix: Soil  
 Data Release Authorized: **VTD**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted MS/MSD: 04/13/09  
 Date Analyzed MS: 04/17/09 22:00  
 MSD: 04/17/09 22:40  
 Instrument/Analyst MS: NT6/LJR  
 MSD: NT6/LJR  
 GPC Cleanup: NO

Sample Amount MS: 7.50 g-dry-wt  
 MSD: 7.50 g-dry-wt  
 Final Extract Volume MS: 0.5 mL  
 MSD: 0.5 mL  
 Dilution Factor MS: 1.00  
 MSD: 1.00  
 Percent Moisture: 6.2 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 66.7	1220	1670	73.1%	1320	1670	79.0%	7.9%
2-Methylphenol	< 66.7	1310	1670	78.4%	1430	1670	85.6%	8.8%
4-Methylphenol	< 66.7	2670	3330	80.2%	2950	3330	88.6%	10.0%
2,4-Dimethylphenol	< 66.7	1310	1670	78.4%	1440	1670	86.2%	9.5%
Naphthalene	< 66.7	1360	1670	81.4%	1460	1670	87.4%	7.1%
2-Methylnaphthalene	< 66.7	1340	1670	80.2%	1450	1670	86.8%	7.9%
Dimethylphthalate	< 66.7	1440	1670	86.2%	1550	1670	92.8%	7.4%
Acenaphthylene	< 66.7	1420	1670	85.0%	1520	1670	91.0%	6.8%
Acenaphthene	< 66.7	1390	1670	83.2%	1500	1670	89.8%	7.6%
Dibenzofuran	< 66.7	1390	1670	83.2%	1480	1670	88.6%	6.3%
Diethylphthalate	< 66.7	1430	1670	85.6%	1560	1670	93.4%	8.7%
Fluorene	< 66.7	1390	1670	83.2%	1520	1670	91.0%	8.9%
Phenanthrene	< 66.7	1430	1670	85.6%	1560	1670	93.4%	8.7%
Carbazole	< 66.7	1390	1670	83.2%	1560	1670	93.4%	11.5%
Anthracene	< 66.7	1380	1670	82.6%	1530	1670	91.6%	10.3%
Di-n-Butylphthalate	< 66.7	1470	1670	88.0%	1620	1670	97.0%	9.7%
Fluoranthene	< 66.7	1770	1670	106%	1890	1670	113%	6.6%
Pyrene	< 66.7	1230	1670	73.7%	1310	1670	78.4%	6.3%
Butylbenzylphthalate	< 66.7	1220	1670	73.1%	1350	1670	80.8%	10.1%
Benzo(a)anthracene	< 66.7	1460	1670	87.4%	1560	1670	93.4%	6.6%
bis(2-Ethylhexyl)phthalate	< 66.7	1230	1670	73.7%	1390	1670	83.2%	12.2%
Chrysene	< 66.7	1380	1670	82.6%	1490	1670	89.2%	7.7%
Di-n-Octyl phthalate	< 66.7	1410	1670	84.4%	1510	1670	90.4%	6.8%
Benzo(b)fluoranthene	< 66.7	1570	1670	94.0%	1550	1670	92.8%	1.3%
Benzo(k)fluoranthene	< 66.7	1440	1670	86.2%	1700	1670	102%	16.6%
Benzo(a)pyrene	< 66.7	1460	1670	87.4%	1590	1670	95.2%	8.5%
Indeno(1,2,3-cd)pyrene	< 66.7	1330	1670	79.6%	1460	1670	87.4%	9.3%
Dibenz(a,h)anthracene	< 66.7	1300	1670	77.8%	1440	1670	86.2%	10.2%
Benzo(g,h,i)perylene	< 66.7	1240	1670	74.3%	1340	1670	80.2%	7.8%
1-Methylnaphthalene	< 66.7	1430	1670	85.6%	1560	1670	93.4%	8.7%

Results reported in µg/kg  
 RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP9-7  
MATRIX SPIKE

Lab Sample ID: OU25A  
LIMS ID: 09-8684  
Matrix: Soil  
Data Release Authorized: *VIS*  
Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/13/09  
Date Analyzed: 04/17/09 22:00  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.50 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 6.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	---
95-48-7	2-Methylphenol	67	---
106-44-5	4-Methylphenol	67	---
105-67-9	2,4-Dimethylphenol	67	---
91-20-3	Naphthalene	67	---
91-57-6	2-Methylnaphthalene	67	---
131-11-3	Dimethylphthalate	67	---
208-96-8	Acenaphthylene	67	---
83-32-9	Acenaphthene	67	---
132-64-9	Dibenzofuran	67	---
84-66-2	Diethylphthalate	67	---
86-73-7	Fluorene	67	---
85-01-8	Phenanthrene	67	---
86-74-8	Carbazole	67	---
120-12-7	Anthracene	67	---
84-74-2	Di-n-Butylphthalate	67	---
206-44-0	Fluoranthene	67	---
129-00-0	Pyrene	67	---
85-68-7	Butylbenzylphthalate	67	---
56-55-3	Benzo(a)anthracene	67	---
117-81-7	bis(2-Ethylhexyl)phthalate	67	---
218-01-9	Chrysene	67	---
117-84-0	Di-n-Octyl phthalate	67	---
205-99-2	Benzo(b)fluoranthene	67	---
207-08-9	Benzo(k)fluoranthene	67	---
50-32-8	Benzo(a)pyrene	67	---
193-39-5	Indeno(1,2,3-cd)pyrene	67	---
53-70-3	Dibenz(a,h)anthracene	67	---
191-24-2	Benzo(g,h,i)perylene	67	---
483-65-8	Retene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	---

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	78.4%	2-Fluorobiphenyl	81.6%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	78.8%
d5-Phenol	78.4%	2-Fluorophenol	77.1%
2,4,6-Tribromophenol	76.5%	d4-2-Chlorophenol	78.4%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-TP9-7**  
**MATRIX SPIKE DUPLICATE**

Lab Sample ID: OU25A  
 LIMS ID: 09-8684  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/17/09 22:40  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.50 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 6.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	---
95-48-7	2-Methylphenol	67	---
106-44-5	4-Methylphenol	67	---
105-67-9	2,4-Dimethylphenol	67	---
91-20-3	Naphthalene	67	---
91-57-6	2-Methylnaphthalene	67	---
131-11-3	Dimethylphthalate	67	---
208-96-8	Acenaphthylene	67	---
83-32-9	Acenaphthene	67	---
132-64-9	Dibenzofuran	67	---
84-66-2	Diethylphthalate	67	---
86-73-7	Fluorene	67	---
85-01-8	Phenanthrene	67	---
86-74-8	Carbazole	67	---
120-12-7	Anthracene	67	---
84-74-2	Di-n-Butylphthalate	67	---
206-44-0	Fluoranthene	67	---
129-00-0	Pyrene	67	---
85-68-7	Butylbenzylphthalate	67	---
56-55-3	Benzo(a)anthracene	67	---
117-81-7	bis(2-Ethylhexyl)phthalate	67	---
218-01-9	Chrysene	67	---
117-84-0	Di-n-Octyl phthalate	67	---
205-99-2	Benzo(b)fluoranthene	67	---
207-08-9	Benzo(k)fluoranthene	67	---
50-32-8	Benzo(a)pyrene	67	---
193-39-5	Indeno(1,2,3-cd)pyrene	67	---
53-70-3	Dibenz(a,h)anthracene	67	---
191-24-2	Benzo(g,h,i)perylene	67	---
483-65-8	Retene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	---

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	84.0%	2-Fluorobiphenyl	86.0%
d14-p-Terphenyl	72.8%	d4-1,2-Dichlorobenzene	82.4%
d5-Phenol	84.0%	2-Fluorophenol	81.9%
2,4,6-Tribromophenol	83.7%	d4-2-Chlorophenol	81.9%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 2

**Sample ID: LCS-041309**  
**LAB CONTROL**

Lab Sample ID: LCS-041309  
 LIMS ID: 09-8684  
 Matrix: Soil  
 Data Release Authorized: **VTS**  
 Reported: 04/29/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/17/09 15:04  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: NO

Sample Amount: 7.50 g  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	1330	1670	79.6%
2-Methylphenol	1430	1670	85.6%
4-Methylphenol	2930	3330	88.0%
2,4-Dimethylphenol	1470	1670	88.0%
Naphthalene	1530	1670	91.6%
2-Methylnaphthalene	1490	1670	89.2%
Dimethylphthalate	1550	1670	92.8%
Acenaphthylene	1580	1670	94.6%
Acenaphthene	1560	1670	93.4%
Dibenzofuran	1550	1670	92.8%
Diethylphthalate	1560	1670	93.4%
Fluorene	1570	1670	94.0%
Phenanthrene	1570	1670	94.0%
Carbazole	1560	1670	93.4%
Anthracene	1530	1670	91.6%
Di-n-Butylphthalate	1570	1670	94.0%
Fluoranthene	2300	1670	138%
Pyrene	1560	1670	93.4%
Butylbenzylphthalate	1540	1670	92.2%
Benzo(a)anthracene	1600	1670	95.8%
bis(2-Ethylhexyl)phthalate	1540	1670	92.2%
Chrysene	1530	1670	91.6%
Di-n-Octyl phthalate	1550	1670	92.8%
Benzo(b)fluoranthene	1600	1670	95.8%
Benzo(k)fluoranthene	1630	1670	97.6%
Benzo(a)pyrene	1640	1670	98.2%
Indeno(1,2,3-cd)pyrene	1650	1670	98.8%
Dibenz(a,h)anthracene	1590	1670	95.2%
Benzo(g,h,i)perylene	1580	1670	94.6%
1-Methylnaphthalene	1610	1670	96.4%

Sample ID: LCS-041309  
LAB CONTROL

Lab Sample ID: LCS-041309  
LIMS ID: 09-8684  
Matrix: Soil  
Date Analyzed: 04/17/09 15:04

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00

Analyte	Lab Control	Spike Added	Recovery
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**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	90.8%
2-Fluorobiphenyl	94.0%
d14-p-Terphenyl	91.2%
d4-1,2-Dichlorobenzene	89.2%
d5-Phenol	88.3%
2-Fluorophenol	89.3%
2,4,6-Tribromophenol	92.8%
d4-2-Chlorophenol	89.6%

Results reported in  $\mu\text{g}/\text{kg}$



**ORGANICS ANALYSIS DATA SHEET**

**TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned


Page 1 of 1

Matrix: Soil

QC Report No: OU25-Dalton, Olmsted & Fuglevan

Project: Verbeek Wrecking

PSE-004-00

Data Release Authorized: 

Reported: 04/16/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-041009 09-8692	Method Blank HC ID: ---	04/10/09	04/14/09 FID4B	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 90.7%
OU25I 09-8692	DOF-TP13-6 HC ID: <b>DIESEL</b>	04/10/09	04/14/09 FID4B	1.00 1.0	<b>Diesel</b> Motor Oil o-Terphenyl	<b>6.5</b> 13	<b>340 E</b> < 13 U 99.6%
OU25I DL 09-8692	DOF-TP13-6 HC ID: <b>DIESEL</b>	04/10/09	04/15/09 FID4B	1.00 5.0	<b>Diesel</b> Motor Oil o-Terphenyl	<b>33</b> 65	<b>350</b> < 65 U 98.2%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.

Motor Oil quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

**CLEANED TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-041009	90.7%	0
LCS-041009	99.1%	0
LCSD-041009	101%	0
DOF-TP13-6	99.6%	0
DOF-TP13-6 DL	98.2%	0
DOF-TP13-6 MS	94.7%	0
DOF-TP13-6 MSD	99.3%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(62-118)

(49-125)

Prep Method: SW3546  
Log Number Range: 09-8692 to 09-8692

**ORGANICS ANALYSIS DATA SHEET**  
**NWTPHD by GC/FID-Silica and Acid Cleaned**  
 Page 1 of 1

**Sample ID: DOF-TP13-6**  
**MS/MSD**

Lab Sample ID: OU25I  
 LIMS ID: 09-8692  
 Matrix: Soil  
 Data Release Authorized *AB*  
 Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted MS/MSD: 04/10/09  
 Date Analyzed MS: 04/14/09 22:45  
 MSD: 04/14/09 22:59  
 Instrument/Analyst MS: FID/PKC  
 MSD: FID/PKC

Sample Amount MS: 8.00 g-dry-wt  
 MSD: 8.19 g-dry-wt  
 Final Extract Volume MS: 1.0 mL  
 MSD: 1.0 mL  
 Dilution Factor MS: 1.0  
 MSD: 1.0  
 Percent Moisture: 23.4%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	336	418	188	43.6%	439	183	56.3%	4.9%


**TPHD Surrogate Recovery**

	MS	MSD
o-Terphenyl	94.7%	99.3%

Results reported in mg/kg  
 RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**NWTPHD by GC/FID-Silica and Acid Cleaned**  
 Page 1 of 1

**Sample ID: LCS-041009**  
**LCS/LCSD**

Lab Sample ID: LCS-041009  
 LIMS ID: 09-8692  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted LCS/LCSD: 04/10/09

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 04/14/09 21:20

Final Extract Volume LCS: 1.0 mL

LCSD: 04/14/09 21:34

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/PKC

Dilution Factor LCS: 1.0

LCSD: FID/PKC

LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	119	150	79.3%	122	150	81.3%	2.5%

**TPHD Surrogate Recovery**

	LCS	LCSD
o-Terphenyl	99.1%	101%

Results reported in mg/kg  
 RPD calculated using sample concentrations per SW846.

**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Soil  
Date Received: 04/06/09

ARI Job: OU25  
Project: Verbeek Wrecking  
PSE-004-00

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
09-8692-041009MB1	Method Blank	10.0 g	1.00 mL	-	04/10/09
09-8692-041009LCS1	Lab Control	10.0 g	1.00 mL	-	04/10/09
09-8692-041009LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	04/10/09
09-8692-OU25I	DOF-TP13-6	7.66 g	1.00 mL	D	04/10/09
09-8692-OU25IMS	DOF-TP13-6	8.00 g	1.00 mL	D	04/10/09
09-8692-OU25IMSD	DOF-TP13-6	8.19 g	1.00 mL	D	04/10/09

Basis: D=Dry Weight W=As Received  
**Diesel Extraction Report**

Analytical Resources Inc.  
TPH Quantitation Report

PL  
4/16/09

Data file: /chem3/fid4b.i/20090414.b/0414b033.d  
Method: /chem3/fid4b.i/20090414.b/ftphfid4b.m  
Instrument: fid4b.i  
Operator: pc  
Report Date: 04/16/2009  
Macro: 14-APR-2009

ARI ID: OU48MBS1  
Client ID: OU48MBS1  
Injection: 14-APR-2009 21:06  
Dilution Factor: 1

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	194305	10
C8	1.307	-0.008	5881	12044	DIESEL (C12-C24)	60218	5
C10	2.037	0.004	2068	2061	M.OIL (C24-C38)	140308	12
C12	2.569	0.002	1907	1680	AK-102 (C10-C25)	110447	7
C14	3.008	0.010	412	253	AK-103 (C25-C36)	110247	10
C16	3.374	0.006	796	733	OR.DIES (C10-C28)	128505	8
C18	3.701	-0.003	280	176	OR.MOIL (C28-C40)	143252	14
C20	4.130	0.017	446	559			
C22	4.525	0.002	487	402			
C24	4.846	0.000	675	475			
C25	4.979	-0.005	244	258			
C26	5.116	0.006	1301	2104			
C28	5.338	0.005	2553	4691			
C32	5.724	0.006	1856	2210			
C34	5.920	-0.013	1168	531	BUNKERC (C10-C38)	250373	30
Filter Peak	7.762	0.004	649	669			
C36	6.185	-0.002	1494	2271			
C38	6.542	0.028	1580	6901			
C40	6.956	0.014	1072	3915			
o-terph	3.849	0.001	1170960	703516	JET-A (C10-C18)	92624	6
Triacon Surr	5.541	0.008	1410375	681305			

Range Times: NW Diesel(2.567 - 4.846) AK102(2.03 - 4.98) Jet A(2.03 - 3.70)  
NW M.Oil(4.85 - 6.51) AK103(4.98 - 6.19) OR Diesel(2.03 - 5.33)

Surrogate	Area	Amount	%Rec
o-Terphenyl	703516	40.8	90.6
Triacontane	681305	38.5	85.7

Analyte	RF	Curve Date
o-Terph Surr	17251.6	14-APR-2009
Triacon Surr	17674.1	14-APR-2009
Gas	20140.0	14-JAN-2009
Diesel	13088.0	14-APR-2009
Motor Oil	11742.0	14-APR-2009

Data File: /chem3/fid4b.i/20090414.b/0414b033.d

Date: 14-APR-2009 21:06

Client ID: 0U48HBS1

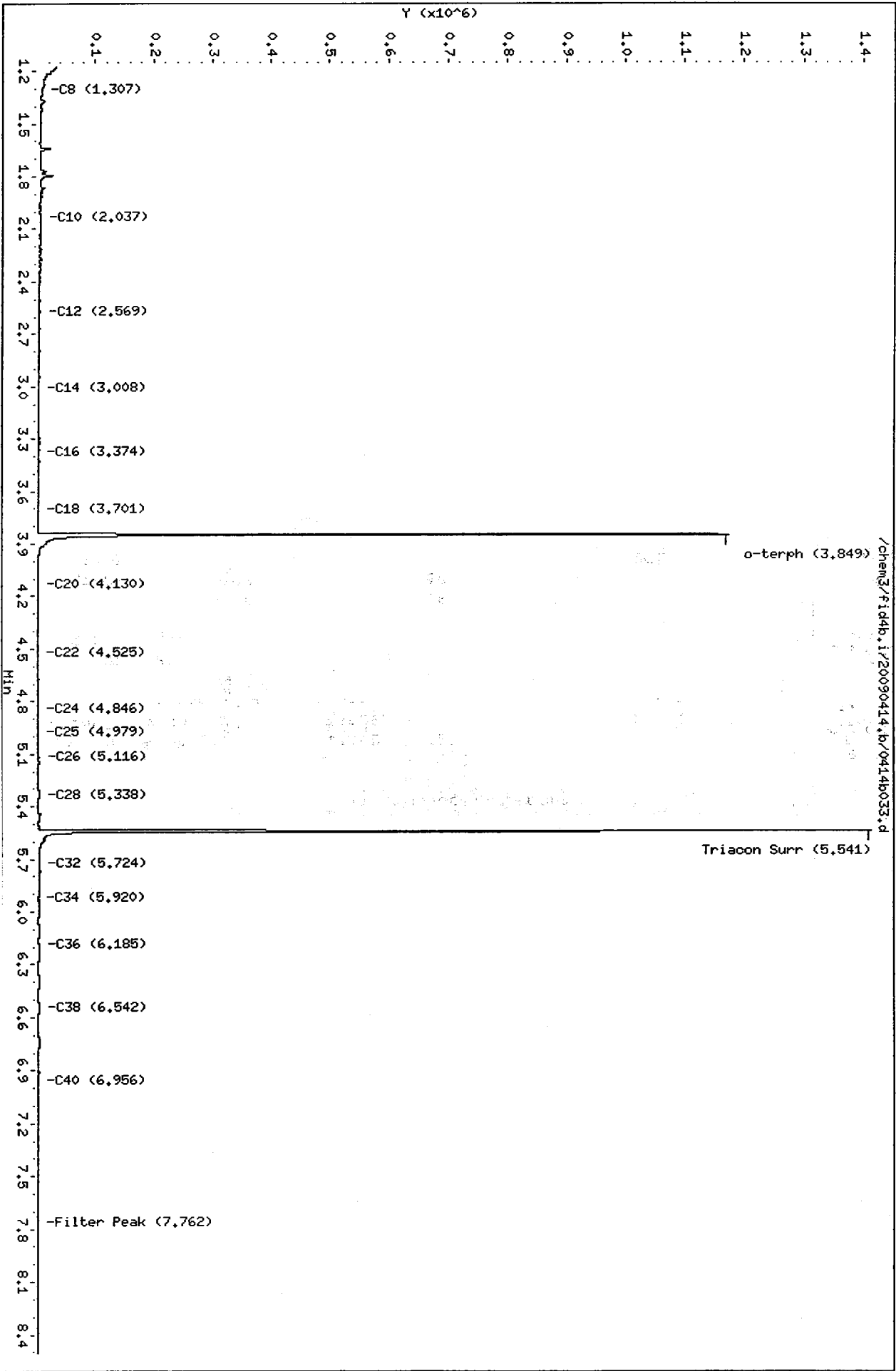
Sample Info: 0U48HBS1

Instrument: fid4b.i

Column phase: RTX-1

Operator: pc

Column diameter: 2.00



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid4b.i/20090414.b/0414b034.d  
Method: /chem3/fid4b.i/20090414.b/ftphfid4b.m  
Instrument: fid4b.i  
Operator: pc  
Report Date: 04/16/2009  
Macro: 14-APR-2009

ARI ID: OU48LCSS1  
Client ID: OU48LCSS1  
Injection: 14-APR-2009 21:20  
Dilution Factor: 1

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.182	0.010	40638	91266	GAS (Tol-C12)	3751026	186
C8	1.323	0.007	12926	22780	DIESEL (C12-C24)	15529141	1187
C10	2.040	0.006	282897	188178	M.OIL (C24-C38)	345549	29
C12	2.572	0.005	600109	277805	AK-102 (C10-C25)	18640614	1186
C14	2.999	0.001	856949	507536	AK-103 (C25-C36)	305959	29
C16	3.369	0.001	898737	464734	OR.DIES (C10-C28)	18871488	1191
C18	3.707	0.003	647077	422599	OR.MOIL (C28-C40)	92362	9
C20	4.116	0.003	318868	252764			
C22	4.525	0.002	144062	98093			
C24	4.847	0.001	62193	58517			
C25	4.985	0.001	36943	52678			
C26	5.110	0.001	21860	27593			
C28	5.335	0.002	6799	8907			
C32	5.720	0.002	1597	2731			
C34	5.911	-0.022	1115	2738	BUNKERC (C10-C38)	18955985	2268
Filter Peak	7.755	-0.004	124	74			
C36	6.181	-0.007	1040	1183			
C38	6.542	0.027	410	460			
C40	6.942	-0.001	301	579			
o-terph	3.852	0.004	1514571	768790	JET-A (C10-C18)	14424107	864
Triacon Surr	5.538	0.005	1573467	719014			

Range Times: NW Diesel(2.567 - 4.846) AK102(2.03 - 4.98) Jet A(2.03 - 3.70)  
NW M.Oil(4.85 - 6.51) AK103(4.98 - 6.19) OR Diesel(2.03 - 5.33)

Surrogate	Area	Amount	%Rec
o-Terphenyl	768790	44.6	99.0
Triacontane	719014	40.7	90.4

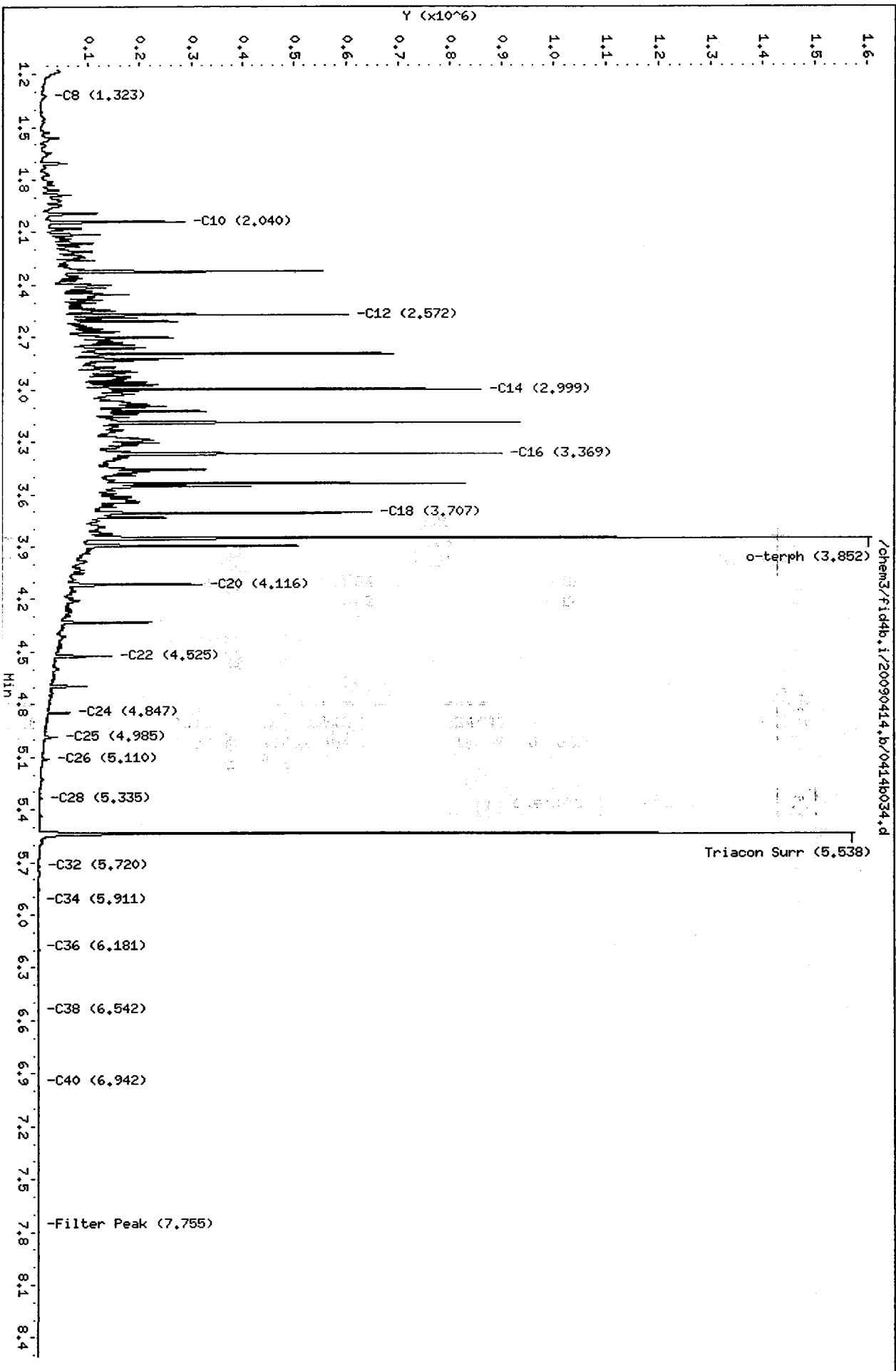
Analyte	RF	Curve Date
o-Terph Surr	17251.6	14-APR-2009
Triacon Surr	17674.1	14-APR-2009
Gas	20140.0	14-JAN-2009
Diesel	13088.0	14-APR-2009
Motor Oil	11742.0	14-APR-2009



Data File: /chem3/fid4b.i/20090414.b/0414b034.d  
Date: 14-APR-2009 21:20  
Client ID: 0U48LCSS1  
Sample Info: 0U48LCSS1

Column phase: RTX-1

Instrument: fid4b.i  
Operator: pc  
Column diameter: 2.00



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid4b.i/20090414.b/0414b035.d  
Method: /chem3/fid4b.i/20090414.b/ftphfid4b.m  
Instrument: fid4b.i  
Operator: pc  
Report Date: 04/16/2009  
Macro: 14-APR-2009

ARI ID: OU48LCSDS1  
Client ID: OU48LCSDS1  
Injection: 14-APR-2009 21:34  
Dilution Factor: 1

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.184	0.012	47993	101322	GAS (Tol-C12)	3961974	197
C8	1.324	0.009	14870	28844	DIESEL (C12-C24)	15912251	1216
C10	2.039	0.006	296894	199094	M.OIL (C24-C38)	336432	29
C12	2.572	0.004	655373	287713	AK-102 (C10-C25)	19156164	1219
C14	2.999	0.001	886857	431139	AK-103 (C25-C36)	298263	28
C16	3.368	0.000	941650	473733	OR.DIES (C10-C28)	19379883	1223
C18	3.707	0.003	685106	433732	OR.MOIL (C28-C40)	88788	9
C20	4.115	0.003	327290	281189			
C22	4.524	0.001	142016	114573			
C24	4.847	0.001	63520	59352			
C25	4.984	0.000	37393	53582			
C26	5.110	0.000	21718	23953			
C28	5.333	0.000	6518	9732			
C32	5.713	-0.005	1915	3018			
C34	5.932	-0.001	786	404	BUNKERC (C10-C38)	19461493	2328
Filter Peak	7.765	0.007	90	100			
C36	6.191	0.004	1452	2607			
C38	6.513	-0.002	395	547			
C40	6.945	0.003	208	272			
o-terph	3.852	0.004	1576219	786419	JET-A (C10-C18)	14910779	893
Triacon Surr	5.533	0.001	1572135	736834			

Range Times: NW Diesel(2.567 - 4.846) AK102(2.03 - 4.98) Jet A(2.03 - 3.70)  
NW M.Oil(4.85 - 6.51) AK103(4.98 - 6.19) OR Diesel(2.03 - 5.33)

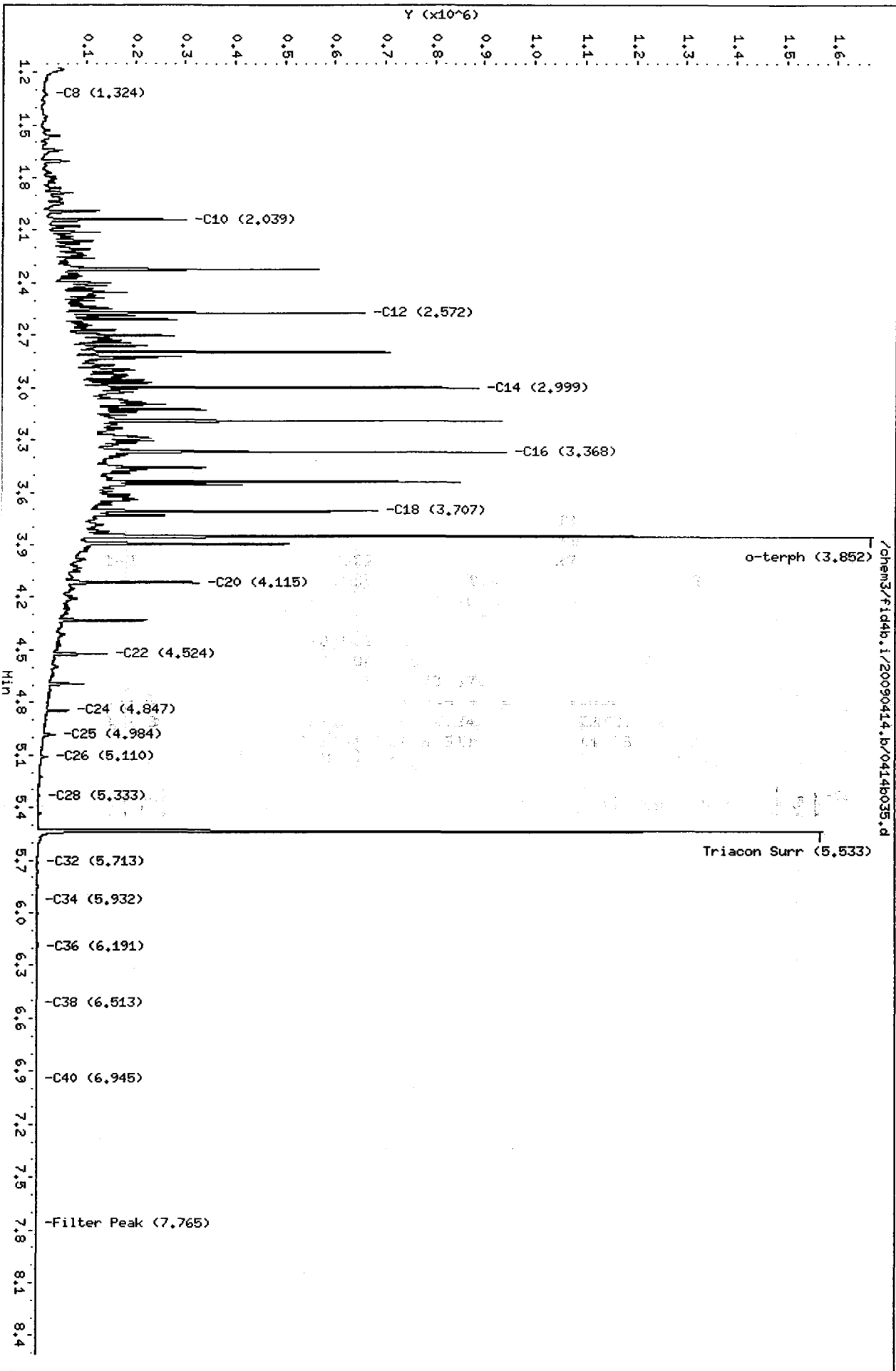
Surrogate	Area	Amount	%Rec
o-Terphenyl	786419	45.6	101.3
Triacotane	736834	41.7	92.6

Analyte	RF	Curve Date
o-Terph Surr	17251.6	14-APR-2009
Triacon Surr	17674.1	14-APR-2009
Gas	20140.0	14-JAN-2009
Diesel	13088.0	14-APR-2009
Motor Oil	11742.0	14-APR-2009

Data File: /chem3/fid4b.i/20090414.b/0414b035.d  
Date: 14-APR-2009 21:34  
Client ID: 0U48LCSDS1  
Sample Info: 0U48LCSDS1

Column phase: RTX-1

Instrument: fid4b.i  
Operator: pc  
Column diameter: 2.00



Analytical Resources Inc.  
TPH Quantitation Report

PL  
4/16/09

Data file: /chem3/fid4b.i/20090414.b/0414b039.d  
Method: /chem3/fid4b.i/20090414.b/ftphfid4b.m  
Instrument: fid4b.i  
Operator: pc  
Report Date: 04/16/2009  
Macro: 14-APR-2009

ARI ID: OU25I  
Client ID: DOF-TP13-6  
Injection: 14-APR-2009 22:31  
Dilution Factor: 1

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.181	0.010	27962	66704	GAS (Tol-C12)	1100476	55
C8	1.309	-0.006	4417	8307	DIESEL (C12-C24)	33717678	2576 <i>diesel</i>
C10	2.041	0.007	4590	3643	M.OIL (C24-C38)	713014	61
C12	2.573	0.006	63259	38685	AK-102 (C10-C25)	34573341	2201
C14	2.997	-0.001	526921	633728	AK-103 (C25-C36)	623814	59
C16	3.370	0.002	608349	526113	OR.DIES (C10-C28)	34777735	2195
C18	3.703	-0.001	355865	505339	OR.MOIL (C28-C40)	571045	57
C20	4.115	0.003	105869	159023			
C22	4.549	0.026	33504	9267			
C24	4.844	-0.002	13023	18043			
C25	4.983	-0.001	10123	17269			
C26	5.109	0.000	8830	14272			
C28	5.332	-0.001	11027	12045			
C32	5.717	-0.001	13785	13198			
C34	5.934	0.001	7698	9040	BUNKERC (C10-C38)	35273175	4220
Filter Peak	7.767	0.009	749	339			
C36	6.188	0.000	6784	8059			
C38	6.512	-0.003	4704	2945			
C40	6.924	-0.019	4483	19616			
o-terph	3.853	0.004	1518278	773703	JET-A (C10-C18)	29420341	1763
Triacon Surr	5.533	0.000	1694333	748478			

Range Times: NW Diesel(2.567 - 4.846) AK102(2.03 - 4.98) Jet A(2.03 - 3.70)  
NW M.Oil(4.85 - 6.51) AK103(4.98 - 6.19) OR Diesel(2.03 - 5.33)

Surrogate	Area	Amount	%Rec
o-Terphenyl	773703	44.8	99.7
Triacontane	748478	42.3	94.1

Analyte	RF	Curve Date
o-Terph Surr	17251.6	14-APR-2009
Triacon Surr	17674.1	14-APR-2009
Gas	20140.0	14-JAN-2009
Diesel	13088.0	14-APR-2009
Motor Oil	11742.0	14-APR-2009

Data File: /chem3/fid4b.i/20090414.b/0414b039.d

Date: 14-APR-2009 22:31

Client ID: DOF-TP13-6

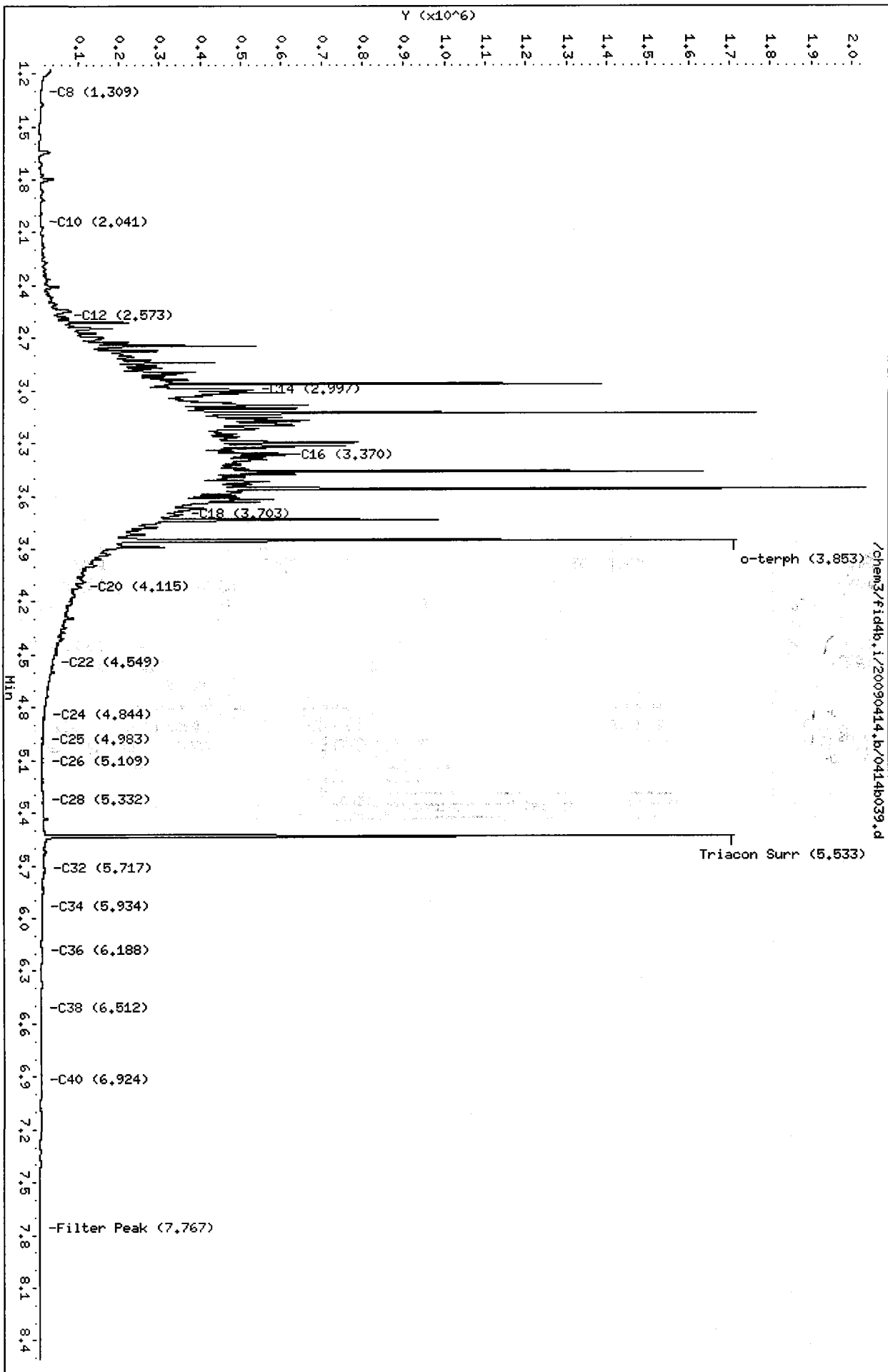
Sample Info: 0U251

Instrument: fid4b.i

Column phase: RTX-1

Operator: po

Column diameter: 2.00



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid4b.i/20090414.b/0414b040.d  
Method: /chem3/fid4b.i/20090414.b/ftphfid4b.m  
Instrument: fid4b.i  
Operator: pc  
Report Date: 04/16/2009  
Macro: 14-APR-2009

ARI ID: OU25IMS  
Client ID: DOF-TP13-6 MS  
Injection: 14-APR-2009 22:45  
Dilution Factor: 1

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.180	0.008	41127	73256	GAS (Tol-C12)	3930765	195
C8	1.323	0.007	12500	18079	DIESEL (C12-C24)	43710099	3340
C10	2.038	0.005	250174	177516	M.OIL (C24-C38)	1359646	116
C12	2.573	0.006	599585	298577	AK-102 (C10-C25)	47117132	2999
C14	3.001	0.003	1151709	894801	AK-103 (C25-C36)	1144405	108
C16	3.371	0.003	1315038	947549	OR.DIES (C10-C28)	47571836	3002
C18	3.709	0.005	869343	842715	OR.MOIL (C28-C40)	912117	91
C20	4.115	0.002	388456	420530			
C22	4.524	0.001	166180	144262			
C24	4.846	0.000	74630	98290			
C25	4.983	-0.001	48255	83961			
C26	5.109	0.000	31477	37607			
C28	5.333	0.000	20350	26563			
C32	5.721	0.003	18677	17703			
C34	5.936	0.004	12193	15643	BUNKERC (C10-C38)	48392751	5790
Filter Peak	7.759	0.000	982	812			
C36	6.179	-0.009	8093	13584			
C38	6.515	0.001	6051	5575			
C40	6.932	-0.010	5279	20306			
o-terph	3.853	0.005	1416039	735148	JET-A (C10-C18)	38103661	2283
Triacon Surr	5.536	0.003	1647063	714390			

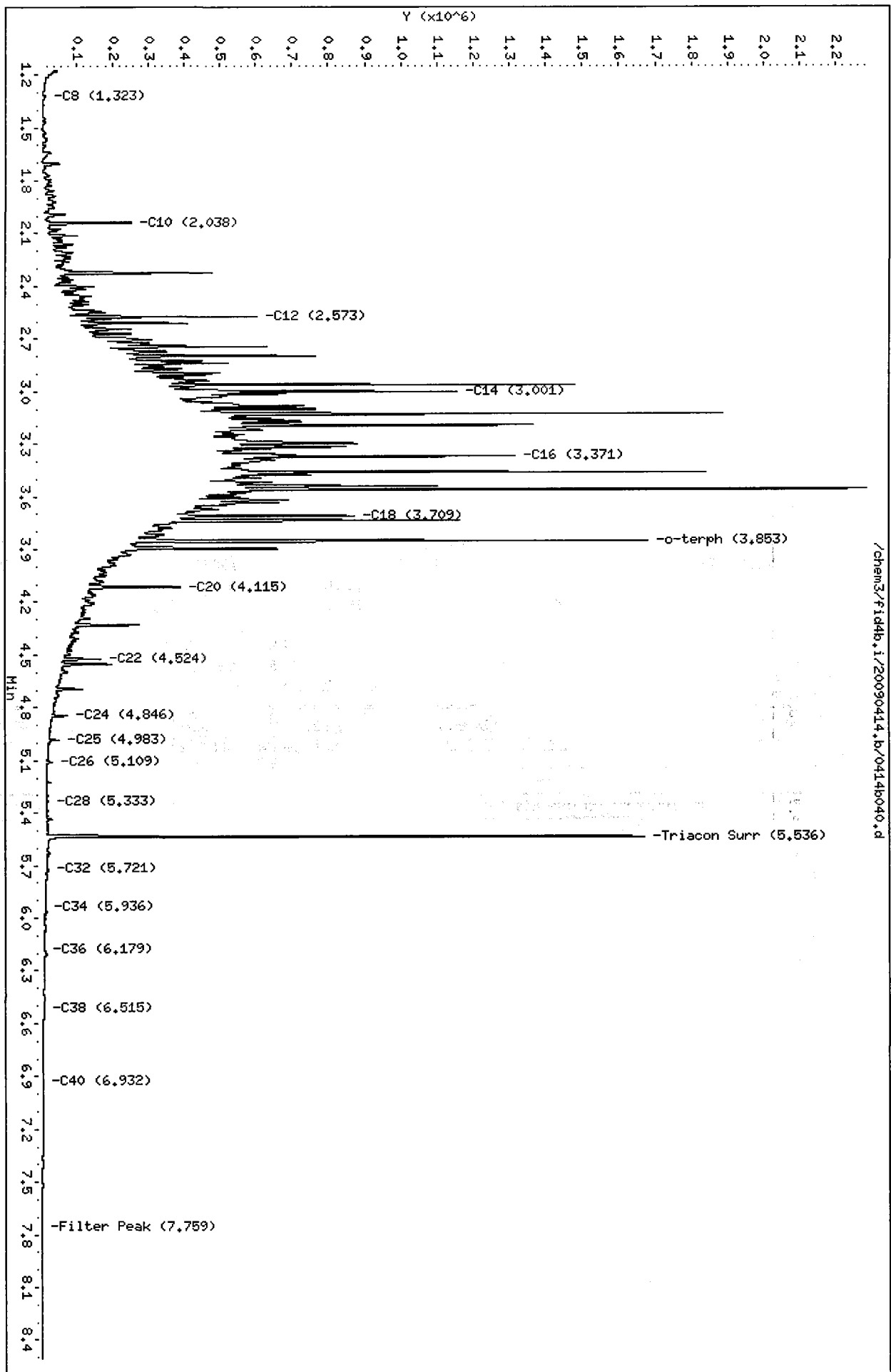
Range Times: NW Diesel(2.567 - 4.846) AK102(2.03 - 4.98) Jet A(2.03 - 3.70)  
NW M.Oil(4.85 - 6.51) AK103(4.98 - 6.19) OR Diesel(2.03 - 5.33)

Surrogate	Area	Amount	%Rec
o-Terphenyl	735148	42.6	94.7
Triacotane	714390	40.4	89.8

Analyte	RF	Curve Date
o-Terph Surr	17251.6	14-APR-2009
Triacon Surr	17674.1	14-APR-2009
Gas	20140.0	14-JAN-2009
Diesel	13088.0	14-APR-2009
Motor Oil	11742.0	14-APR-2009

Data File: /chem3/fid4b,i/20090414,b/0414b040.d  
Date : 14-APR-2009 22:45  
Client ID: DOF-TP13-6 MS  
Sample Info: OU25IHS  
Column phase: RTX-1

Instrument: fid4b.i  
Operator: po  
Column diameter: 2.00



Analytical Resources Inc.  
TPH Quantitation Report

PL  
4/16/09

Data file: /chem3/fid4b.i/20090414.b/0414b041.d  
Method: /chem3/fid4b.i/20090414.b/ftphfid4b.m  
Instrument: fid4b.i  
Operator: pc  
Report Date: 04/16/2009  
Macro: 14-APR-2009

ARI ID: OU25IMSD  
Client ID: DOF-TP13-6 MSD  
Injection: 14-APR-2009 22:59  
Dilution Factor: 1

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.182	0.011	54106	89137	GAS (Tol-C12)	4588215	228
C8	1.325	0.009	14708	25319	DIESEL (C12-C24)	47035145	3594
C10	2.040	0.006	271344	199907	M.OIL (C24-C38)	712165	61
C12	2.573	0.006	629157	319877	AK-102 (C10-C25)	50876747	3238
C14	3.000	0.002	1207636	919747	AK-103 (C25-C36)	622282	59
C16	3.371	0.003	1352825	981551	OR.DIES (C10-C28)	51213624	3232
C18	3.709	0.005	917992	905156	OR.MOIL (C28-C40)	378783	38
C20	4.116	0.003	414669	399785			
C22	4.524	0.001	178216	177062			
C24	4.847	0.001	74177	80640			
C25	4.985	0.001	46825	72378			
C26	5.111	0.001	27512	40555			
C28	5.335	0.002	13362	18187			
C32	5.726	0.008	9450	19425			
C34	5.942	0.009	5371	7740	BUNKERC (C10-C38)	51546160	6167
Filter Peak	7.752	-0.006	656	1408			
C36	6.197	0.009	5544	9643			
C38	6.527	0.013	2886	4576			
C40	6.933	-0.010	4310	15628			
o-terph	3.854	0.006	1430745	771472	JET-A (C10-C18)	41839685	2507
Triacon Surr	5.538	0.005	1625691	751716			

Range Times: NW Diesel(2.567 - 4.846) AK102(2.03 - 4.98) Jet A(2.03 - 3.70)  
NW M.Oil(4.85 - 6.51) AK103(4.98 - 6.19) OR Diesel(2.03 - 5.33)

Surrogate	Area	Amount	%Rec
o-Terphenyl	771472	44.7	99.4
Triacotane	751716	42.5	94.5

Analyte	RF	Curve Date
o-Terph Surr	17251.6	14-APR-2009
Triacon Surr	17674.1	14-APR-2009
Gas	20140.0	14-JAN-2009
Diesel	13088.0	14-APR-2009
Motor Oil	11742.0	14-APR-2009



Data File: /chem3/fid4b.i/20090414.b/0414b041.d

Date : 14-APR-2009 22:59

Client ID: DOF-TP13-6 HSD

Sample Info: OU25IHMSD

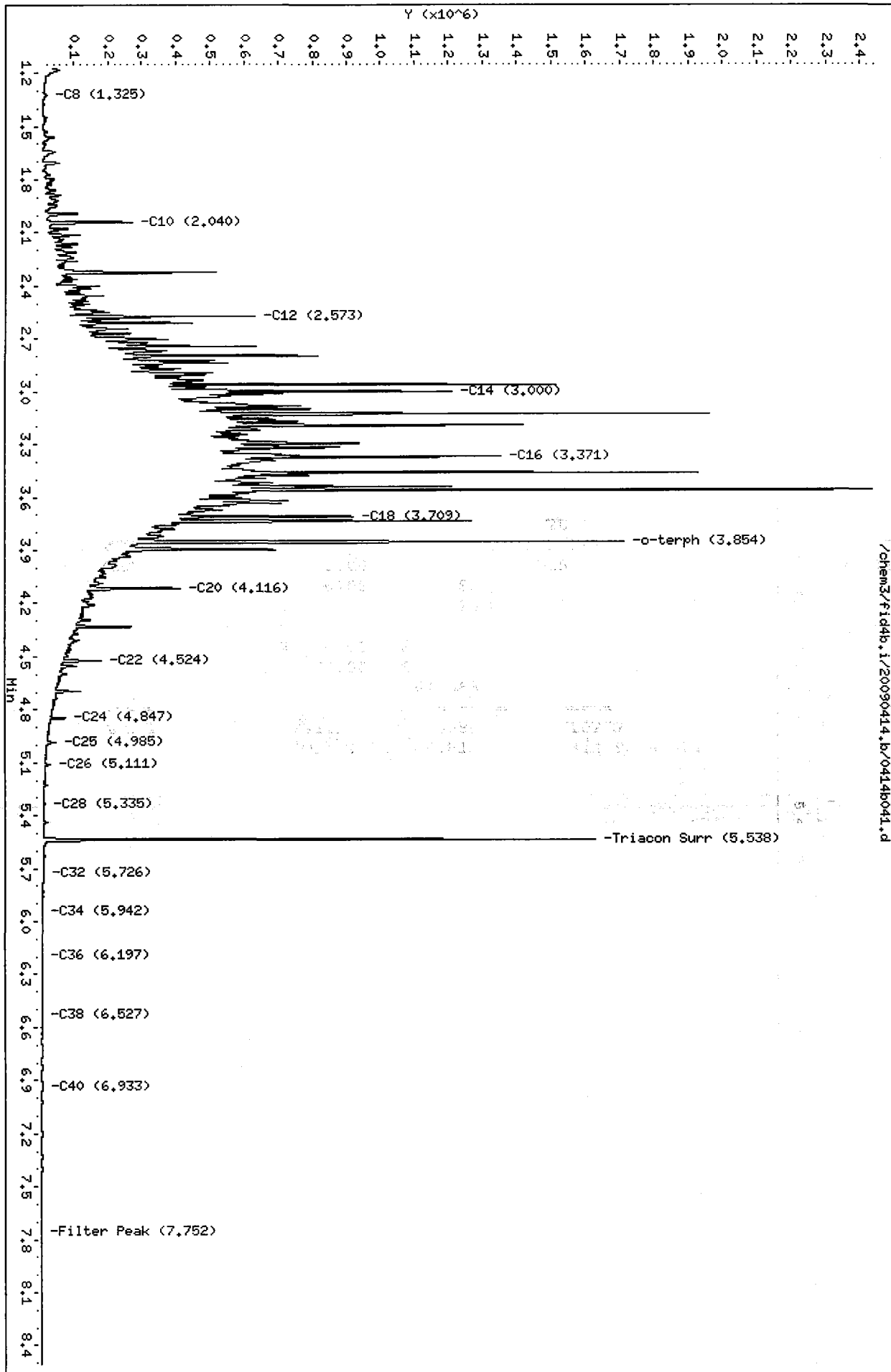
Column phase: RTX-1

Instrument: fid4b.i

Operator: pc

Column diameter: 2.00

/chem3/fid4b.i/20090414.b/0414b041.d



Analytical Resources Inc.  
TPH Quantitation Report

*PC*  
*4/16/09*  
*DL*

Data file: /chem3/fid4b.i/20090415.b/0415b007.d  
Method: /chem3/fid4b.i/20090415.b/ftphfid4b.m  
Instrument: fid4b.i  
Operator: pc  
Report Date: 04/16/2009  
Macro: 14-APR-2009

ARI ID: OU25I  
Client ID: DOF-TP13-6  
Injection: 15-APR-2009 17:46  
Dilution Factor: 5

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.180	0.009	27390	70880	GAS (Tol-C12)	326360	16
C8	1.321	0.007	3173	6391	DIESEL (C12-C24)	6952680	531 <i>diesel</i>
C10	2.037	0.004	1245	781	M.OIL (C24-C38)	157198	13
C12	2.570	0.003	13344	7340	AK-102 (C10-C25)	7130545	454
C14	2.995	-0.002	109425	130009	AK-103 (C25-C36)	132661	13
C16	3.368	0.000	129571	112414	OR.DIES (C10-C28)	7173505	453
C18	3.701	-0.003	73062	59128	OR.MOIL (C28-C40)	130673	13
C20	4.118	0.005	22105	42945			
C22	4.523	-0.001	7602	4230			
C24	4.850	0.004	2594	2133			
C25	4.989	0.005	1900	3237			
C26	5.113	0.004	1823	3363			
C28	5.334	0.000	2567	3324			
C32	5.716	-0.006	2775	2697			
C34	5.933	-0.004	1759	1106	BUNKERC (C10-C38)	7283638	871
Filter Peak	7.758	-0.003	207	191			
C36	6.174	-0.018	1789	3368			
C38	6.531	0.011	1470	2506			
C40	6.929	-0.019	1111	4760			
o-terph	3.848	-0.001	311685	152422	JET-A (C10-C18)	6019176	361
Triacon Surr	5.531	-0.004	271900	165956			

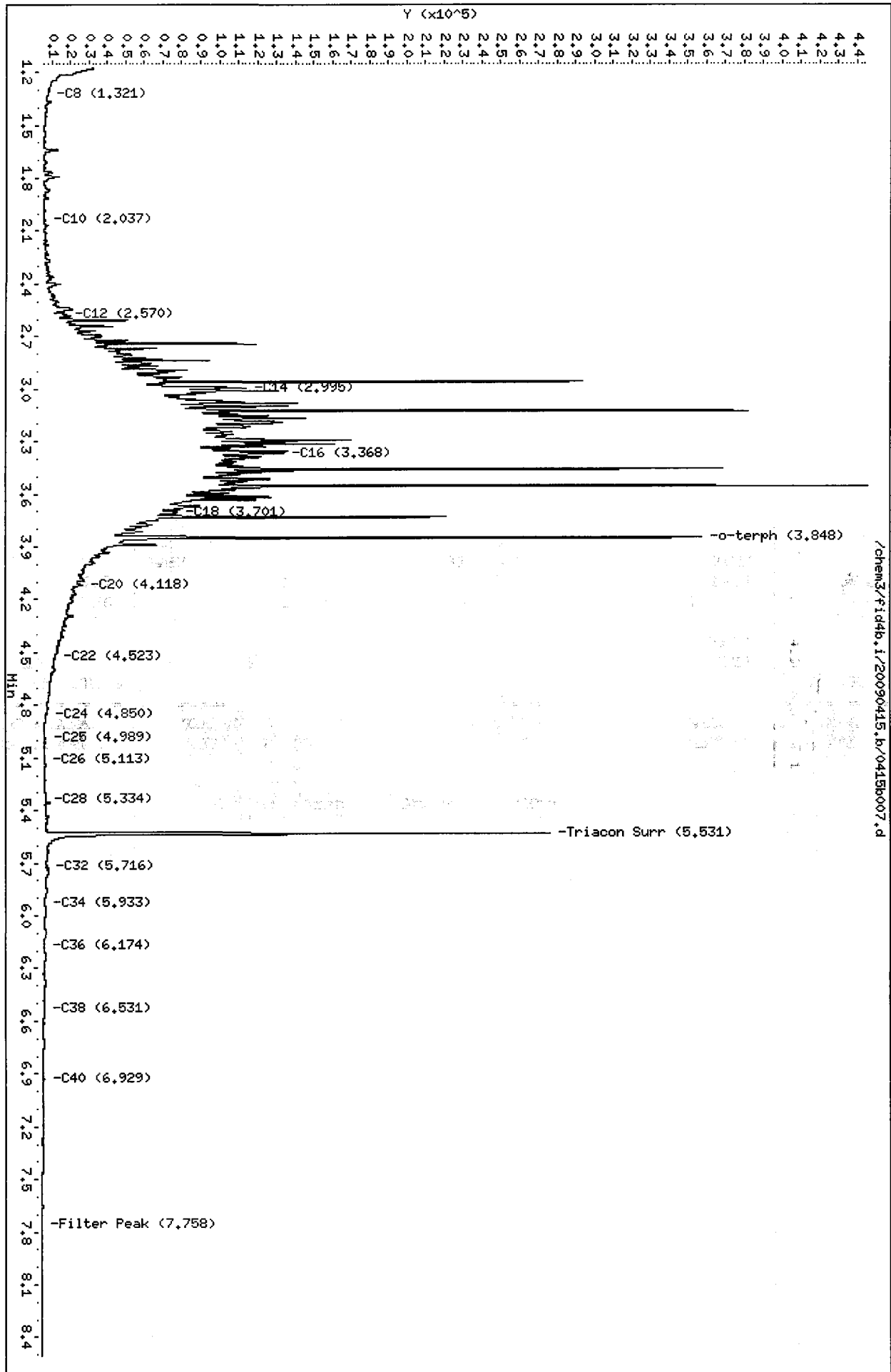
Range Times: NW Diesel (2.568 - 4.846) AK102 (2.03 - 4.98) Jet A (2.03 - 3.70)  
NW M.Oil (4.85 - 6.52) AK103 (4.98 - 6.19) OR Diesel (2.03 - 5.33)

Surrogate	Area	Amount	%Rec
o-Terphenyl	152422	8.8	98.2
Triacontane	165956	9.4	104.3

Analyte	RF	Curve Date
o-Terph Surr	17251.6	14-APR-2009
Triacon Surr	17674.1	14-APR-2009
Gas	20140.0	14-JAN-2009
Diesel	13088.0	14-APR-2009
Motor Oil	11742.0	14-APR-2009

Data File: /chem3/fid4b.i/20090415.b/0415b007.d  
Date: 15-APR-2009 17:46  
Client ID: DOF-TP13-6  
Sample Info: 0U251,5  
Column phase: RTX-1


Instrument: fid4b.i  
Operator: pc  
Column diameter: 2.00



**ORGANICS ANALYSIS DATA SHEET  
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID  
Page 1 of 2  
Matrix: Soil


QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Received: 04/06/09

Data Release Authorized:  
Reported: 04/16/09 

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-041009 09-8684	Method Blank HC ID: ---	04/10/09	04/14/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 97.3%
OU25A 09-8684	DOF-TP9-7 HC ID: ---	04/10/09	04/14/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.2 10	< 5.2 U < 10 U 95.6%
OU25B 09-8685	DOF-TP10-2 HC ID: ---	04/10/09	04/14/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.6 11	< 5.6 U < 11 U 93.3%
OU25C 09-8686	DOF-TP10-14 HC ID: ---	04/10/09	04/14/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.7 11	< 5.7 U < 11 U 93.1%
OU25D 09-8687	DOF-TP11-1/3 HC ID: <b>DIESEL/MOTOR OIL</b>	04/10/09	04/14/09 FID3A	1.00 50	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>280</b> <b>570</b>	<b>3,600</b> <b>2,300</b> D
OU25E 09-8688	DOF-TP11-6 HC ID: <b>DIESEL/MOTOR OIL</b>	04/10/09	04/14/09 FID3A	1.00 1.0	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>5.9</b> <b>12</b>	<b>50</b> <b>140</b> 94.4%
OU25F 09-8689	DOF-TP12-1 HC ID: <b>DIESEL/MOTOR OIL</b>	04/10/09	04/14/09 FID3A	1.00 20	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>100</b> <b>210</b>	<b>940</b> <b>9,800</b> 85.8%
OU25G 09-8690	DOF-TP12-3 HC ID: <b>DIESEL/MOTOR OIL</b>	04/10/09	04/14/09 FID3A	1.00 50	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>270</b> <b>540</b>	<b>2,800</b> <b>19,000</b> D
OU25H 09-8691	DOF-TP13-2 HC ID: <b>DIESEL/MOTOR OIL</b>	04/10/09	04/14/09 FID3A	1.00 1.0	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>5.4</b> <b>11</b>	<b>9.5</b> <b>12</b> 90.2%
OU25J 09-8693	DOF-TP13-9 HC ID: ---	04/10/09	04/14/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.0 12	< 6.0 U < 12 U 97.3%
OU25K 09-8694	DOF-TP14-1.5 HC ID: <b>DRO/MOTOR OIL</b>	04/10/09	04/15/09 FID3A	1.00 1.0	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>5.5</b> <b>11</b>	<b>7.8</b> <b>24</b> 93.8%
OU25L 09-8695	DOF-TP14-6 HC ID: <b>DRO/MOTOR OIL</b>	04/10/09	04/15/09 FID3A	1.00 5.0	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>27</b> <b>53</b>	<b>37</b> <b>300</b> 93.2%
OU25M 09-8696	DOF-TP15-1.5 HC ID: ---	04/10/09	04/15/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.2 10	< 5.2 U < 10 U 92.9%

**ORGANICS ANALYSIS DATA SHEET**  
**TOTAL DIESEL RANGE HYDROCARBONS**  
 NWTPHD by GC/FID  
 Page 2 of 2  
 Matrix: Soil

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 PSE-004-00  
 Date Received: 04/06/09

Data Release Authorized:  
 Reported: 04/16/09 

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
OU25N 09-8697	DOF-TP15-10 HC ID: <b>DIESEL</b>	04/10/09	04/15/09 FID3A	1.00 1.0	<b>Diesel</b> Motor Oil o-Terphenyl	5.2 10	6.6 < 10 U 98.9%
OU25O 09-8698	DOF-TP16-1.5 HC ID: <b>DIESEL/MOTOR OIL</b>	04/10/09	04/15/09 FID3A	1.00 20	<b>Diesel</b> Motor Oil o-Terphenyl	100 210	1,000 7,800 98.2%
OU25P 09-8699	DOF-TP16-3 HC ID: <b>DRO/MOTOR OIL</b>	04/10/09	04/15/09 FID3A	1.00 1.0	<b>Diesel</b> Motor Oil o-Terphenyl	5.8 12	9.4 38 100%
OU25Q 09-8700	DOF-TP17-2 HC ID: <b>DIESEL/MOTOR OIL</b>	04/10/09	04/15/09 FID3A	1.00 10	<b>Diesel</b> Motor Oil o-Terphenyl	56 110	600 370 97.3%
OU25R 09-8701	DOF-TP17-5 HC ID: <b>DRO/MOTOR OIL</b>	04/10/09	04/15/09 FID3A	1.00 5.0	<b>Diesel</b> Motor Oil o-Terphenyl	28 55	48 110 83.7%
OU25S 09-8702	DOF-TP18-4 HC ID: ---	04/10/09	04/15/09 FID3A	1.00 1.0	<b>Diesel</b> Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 101%
OU25T 09-8703	DOF-TP18-10 HC ID: <b>DIESEL/MOTOR OIL</b>	04/10/09	04/15/09 FID3A	1.00 100	<b>Diesel</b> Motor Oil o-Terphenyl	590 1,200	7,500 3,900 D

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.  
 DL-Dilution of extract prior to analysis.  
 RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.  
 Motor Oil quantitation on total peaks in the range from C24 to C38.  
 HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

**TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
041009MBS	97.3%	0
041009LCS	99.3%	0
DOF-TP9-7	95.6%	0
DOF-TP9-7 MS	103%	0
DOF-TP9-7 MSD	103%	0
DOF-TP10-2	93.3%	0
DOF-TP10-14	93.1%	0
DOF-TP11-1/3	D	0
DOF-TP11-6	94.4%	0
DOF-TP12-1	85.8%	0
DOF-TP12-3	D	0
DOF-TP13-2	90.2%	0
DOF-TP13-9	97.3%	0
DOF-TP14-1.5	93.8%	0
DOF-TP14-6	93.2%	0
DOF-TP15-1.5	92.9%	0
DOF-TP15-10	98.9%	0
DOF-TP16-1.5	98.2%	0
DOF-TP16-3	100%	0
DOF-TP17-2	97.3%	0
DOF-TP17-5	83.7%	0
DOF-TP18-4	101%	0
DOF-TP18-10	D	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(52-121)


(48-119)

Prep Method: SW3546  
Log Number Range: 09-8684 to 09-8703

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID  
Page 1 of 1

Sample ID: DOF-TP9-7  
MS/MSD

Lab Sample ID: OU25A  
LIMS ID: 09-8684  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted MS/MSD: 04/10/09  
Date Analyzed MS: 04/14/09 19:46  
MSD: 04/14/09 21:00  
Instrument/Analyst MS: FID3A/PKC  
MSD: FID3A/PKC

Sample Amount MS: 9.59 g-dry-wt  
MSD: 9.70 g-dry-wt  
Final Extract Volume MS: 1.0 mL  
MSD: 1.0 mL  
Dilution Factor MS: 1.00  
MSD: 1.00  
Percent Moisture: 6.2%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 5.2 U	142	156	91.0%	138	155	89.0%	2.9%

**TPHD Surrogate Recovery**

	MS	MSD
o-Terphenyl	103 %	103 %

Results reported in mg/kg  
RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1


Sample ID: LCS-041009

LAB CONTROL

Lab Sample ID: LCS-041009

LIMS ID: 09-8684

Matrix: Soil

Data Release Authorized: 

Reported: 04/16/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: NA

Date Received: NA

Date Extracted: 04/10/09

Date Analyzed: 04/14/09 19:09

Instrument/Analyst: FID3A/PKC

Sample Amount: 10.0 g

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	130	150	86.7%

**TPHD Surrogate Recovery**

o-Terphenyl	99.3%
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Results reported in mg/kg



**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Soil  
Date Received: 04/06/09

ARI Job: OU25  
Project: Verbeek Wrecking  
PSE-004-00

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
09-8684-041009MB1	Method Blank	10.0 g	1.00 mL	-	04/10/09
09-8684-041009LCS1	Lab Control	10.0 g	1.00 mL	-	04/10/09
09-8684-OU25A	DOF-TP9-7	9.64 g	1.00 mL	D	04/10/09
09-8684-OU25AMS	DOF-TP9-7	9.59 g	1.00 mL	D	04/10/09
09-8684-OU25AMSD	DOF-TP9-7	9.70 g	1.00 mL	D	04/10/09
09-8685-OU25B	DOF-TP10-2	8.93 g	1.00 mL	D	04/10/09
09-8686-OU25C	DOF-TP10-14	8.77 g	1.00 mL	D	04/10/09
09-8687-OU25D	DOF-TP11-1/3	8.80 g	1.00 mL	D	04/10/09
09-8688-OU25E	DOF-TP11-6	8.51 g	1.00 mL	D	04/10/09
09-8689-OU25F	DOF-TP12-1	9.65 g	1.00 mL	D	04/10/09
09-8690-OU25G	DOF-TP12-3	9.22 g	1.00 mL	D	04/10/09
09-8691-OU25H	DOF-TP13-2	9.23 g	1.00 mL	D	04/10/09
09-8692-041009MB1	Method Blank	10.0 g	1.00 mL	-	04/10/09
09-8692-041009LCS1	Lab Control	10.0 g	1.00 mL	-	04/10/09
09-8692-041009LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	04/10/09
09-8692-OU25I	DOF-TP13-6	7.66 g	1.00 mL	D	04/10/09
09-8692-OU25IMS	DOF-TP13-6	8.00 g	1.00 mL	D	04/10/09
09-8692-OU25IMSD	DOF-TP13-6	8.19 g	1.00 mL	D	04/10/09
09-8693-OU25J	DOF-TP13-9	8.26 g	1.00 mL	D	04/10/09
09-8694-OU25K	DOF-TP14-1.5	9.08 g	1.00 mL	D	04/10/09
09-8695-OU25L	DOF-TP14-6	9.38 g	1.00 mL	D	04/10/09
09-8696-OU25M	DOF-TP15-1.5	9.67 g	1.00 mL	D	04/10/09
09-8697-OU25N	DOF-TP15-10	9.56 g	1.00 mL	D	04/10/09
09-8698-OU25O	DOF-TP16-1.5	9.53 g	1.00 mL	D	04/10/09
09-8699-OU25P	DOF-TP16-3	8.62 g	1.00 mL	D	04/10/09
09-8700-OU25Q	DOF-TP17-2	8.98 g	1.00 mL	D	04/10/09
09-8701-OU25R	DOF-TP17-5	9.03 g	1.00 mL	D	04/10/09
09-8702-OU25S	DOF-TP18-4	10.3 g	1.00 mL	D	04/10/09
09-8703-OU25T	DOF-TP18-10	8.43 g	1.00 mL	D	04/10/09

Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/15/09

Data file: /chem3/fid3a.i/20090414.b/0414a038.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25MBS1  
Client ID: OU25MBS1  
Injection: 14-APR-2009 18:50  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.490	0.003	61425	80587	GAS (Tol-C12)	319390	16
C8	1.617	-0.014	6538	7974	DIESEL (C12-C24)	114768	7
C10	2.413	0.003	2544	3110	M.OIL (C24-C38)	361933	28
C12	3.073	0.000	666	586	AK-102 (C10-C25)	147663	7
C14	3.629	0.001	984	1723	AK-103 (C25-C36)	272476	31
C16	4.117	0.002	860	1155	OR.DIES (C10-C28)	211109	10
C18	4.550	0.000	1256	1273	OR.MOIL (C28-C40)	378951	34
C20	4.930	0.002	1053	1152	JET-A (C10-C18)	91898	5
C22	5.263	0.004	1510	1250			
C24	5.552	-0.005	1354	919			
C25	5.700	0.004	1666	1280			
C26	5.825	-0.002	1700	1319			
C28	6.083	0.009	3229	5306			
C32	6.525	-0.002	8850	7349			
C34	6.766	0.000	3622	1080			
Filter Peak	8.672	-0.002	3167	504			
C36	7.044	0.002	7646	16863	CREOSOT (C8-C22)	269275	42
C38	7.379	0.002	3503	488			
C40	7.789	-0.008	4966	14628	BUNKERC (C10-C38)	505609	52

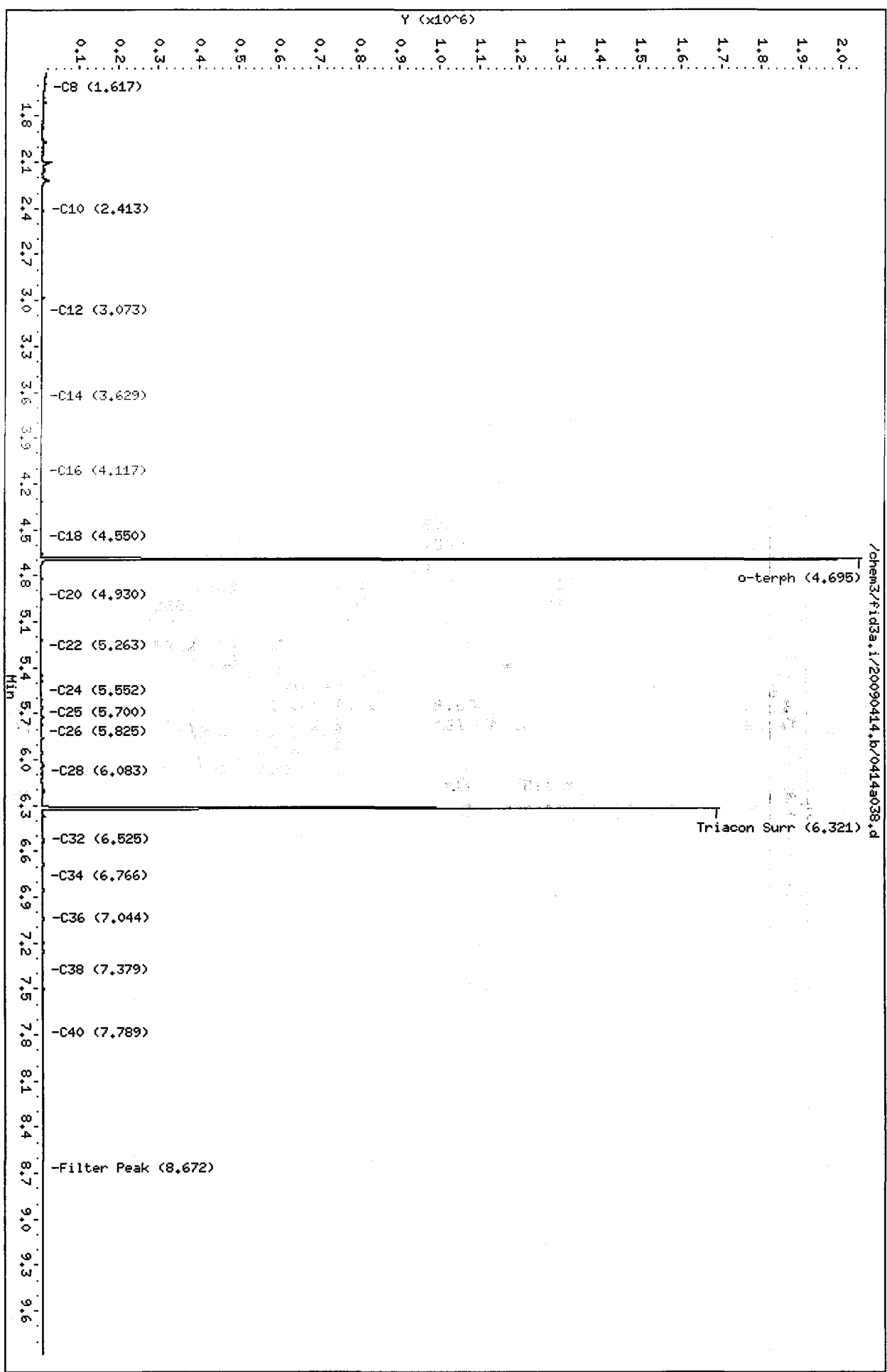
Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	942052	43.8	97.4
Triacontane	907247	53.5	118.8

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a,i/20090414,b/0414a038.d  
Date : 14-APR-2009 18:50  
Client ID: 0U25HBS1  
Sample Info: 0U25HBS1  
Column phase: ZBI-HT

Instrument: fid3a,i  
Operator: ms  
Column diameter: 0.25



PL  
4/16/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090414.b/0414a039.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25LCSS1  
Client ID: OU25LCSS1  
Injection: 14-APR-2009 19:09  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.490	0.003	92164	65278	GAS (Tol-C12)	4869408	248
C8	1.633	0.002	35028	20394	DIESEL (C12-C24)	21193383	1305
C10	2.409	0.000	266850	216356	M.OIL (C24-C38)	717693	56
C12	3.073	0.000	647148	331115	AK-102 (C10-C25)	24980143	1263
C14	3.627	-0.001	761541	652490	AK-103 (C25-C36)	603220	69
C16	4.116	0.001	868319	497147	OR.DIES (C10-C28)	25363473	1203
C18	4.553	0.003	734463	481657	OR.MOIL (C28-C40)	359428	32
C20	4.931	0.003	512398	341157	JET-A (C10-C18)	16954401	1196
C22	5.263	0.004	206447	136819			
C24	5.562	0.005	84375	60463			
C25	5.701	0.006	49908	51344			
C26	5.833	0.006	29007	24294			
C28	6.083	0.008	9656	9349			
C32	6.524	-0.004	8855	9826			
C34	6.769	0.003	3487	554			
Filter Peak	8.678	0.004	2964	707			
C36	7.044	0.003	6932	16011	CREOSOT (C8-C22)	25119293	3927
C38	7.374	-0.003	3102	1856			
C40	7.789	-0.007	4511	13413	BUNKERC (C10-C38)	25646367	2656

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	959775	44.7	99.3
Triacontane	912013	53.7	119.4

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414a039.d

Date: 14-APR-2009 19:09

Client ID: 0U25LCSS1

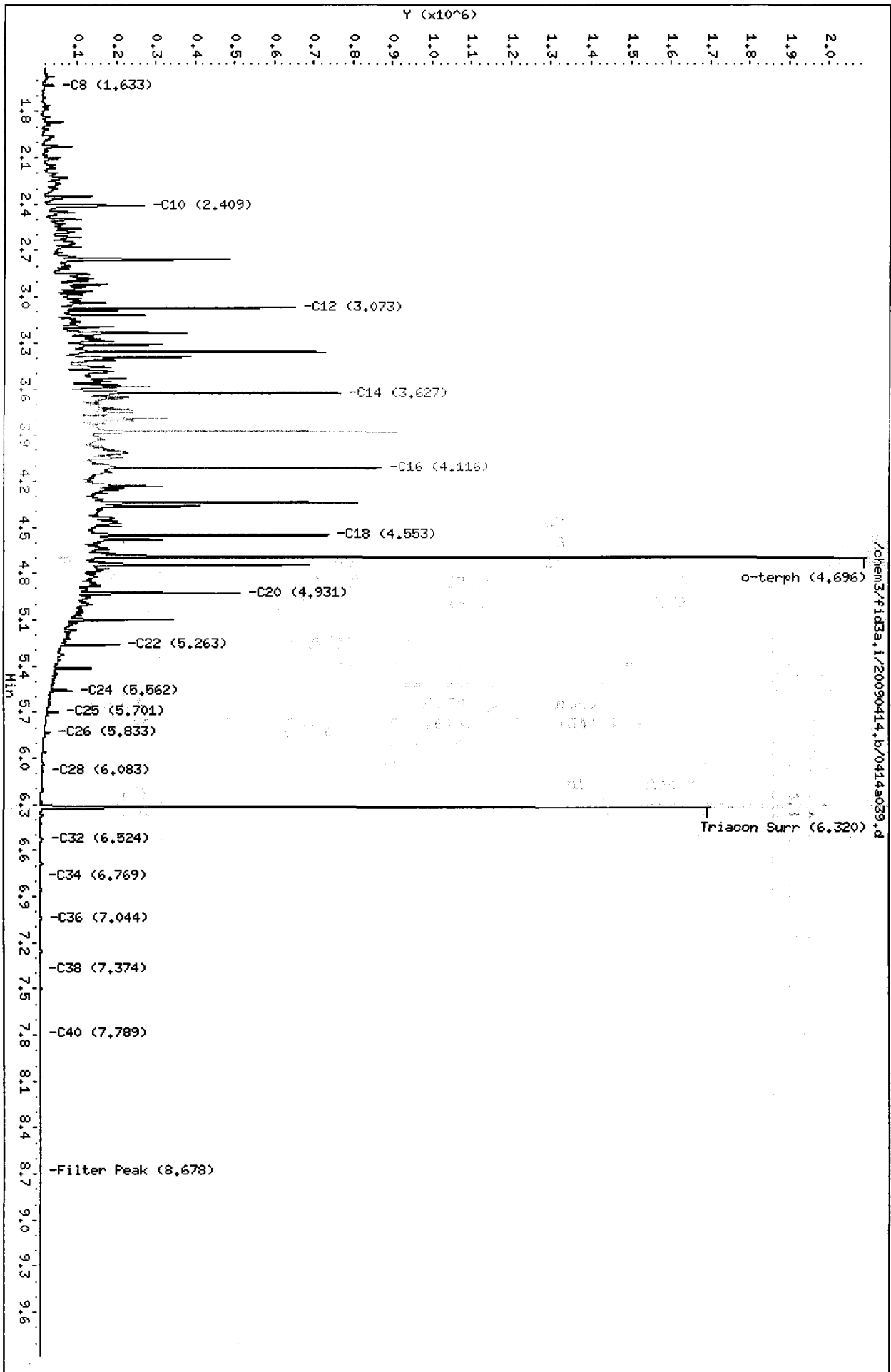
Sample Info: 0U25LCSS1

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



PL  
4/16/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090414.b/0414a040.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25A  
Client ID: DOF-TP9-7  
Injection: 14-APR-2009 19:27  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	-0.001	26748	32441	GAS (Tol-C12)	246475	13
C8	1.624	-0.006	3039	1910	DIESEL (C12-C24)	291861	18
C10	2.406	-0.003	6004	5515	M.OIL (C24-C38)	537247	42
C12	3.073	-0.001	1324	1032	AK-102 (C10-C25)	341014	17
C14	3.625	-0.002	7831	5882	AK-103 (C25-C36)	464961	53
C16	4.113	-0.002	32918	18126	OR.DIESL (C10-C28)	486719	23
C18	4.549	-0.001	45209	22425	OR.MOIL (C28-C40)	457352	41
C20	4.928	0.000	32017	16721	JET-A (C10-C18)	175537	11
C22	5.262	0.002	15490	9832			
C24	5.562	0.005	7176	4752			
C25	5.701	0.005	6203	4326			
C26	5.833	0.006	5187	4432			
C28	6.067	-0.008	8926	6625			
C32	6.525	-0.002	9418	8238			
C34	6.755	-0.011	6987	7792			
Filter Peak	8.674	0.001	2947	1407			
C36	7.048	0.006	8985	16989	CREOSOT (C8-C22)	400735	63
C38	7.374	-0.003	3171	2021			
C40	7.789	-0.008	5033	14777	BUNKERC (C10-C38)	870677	90

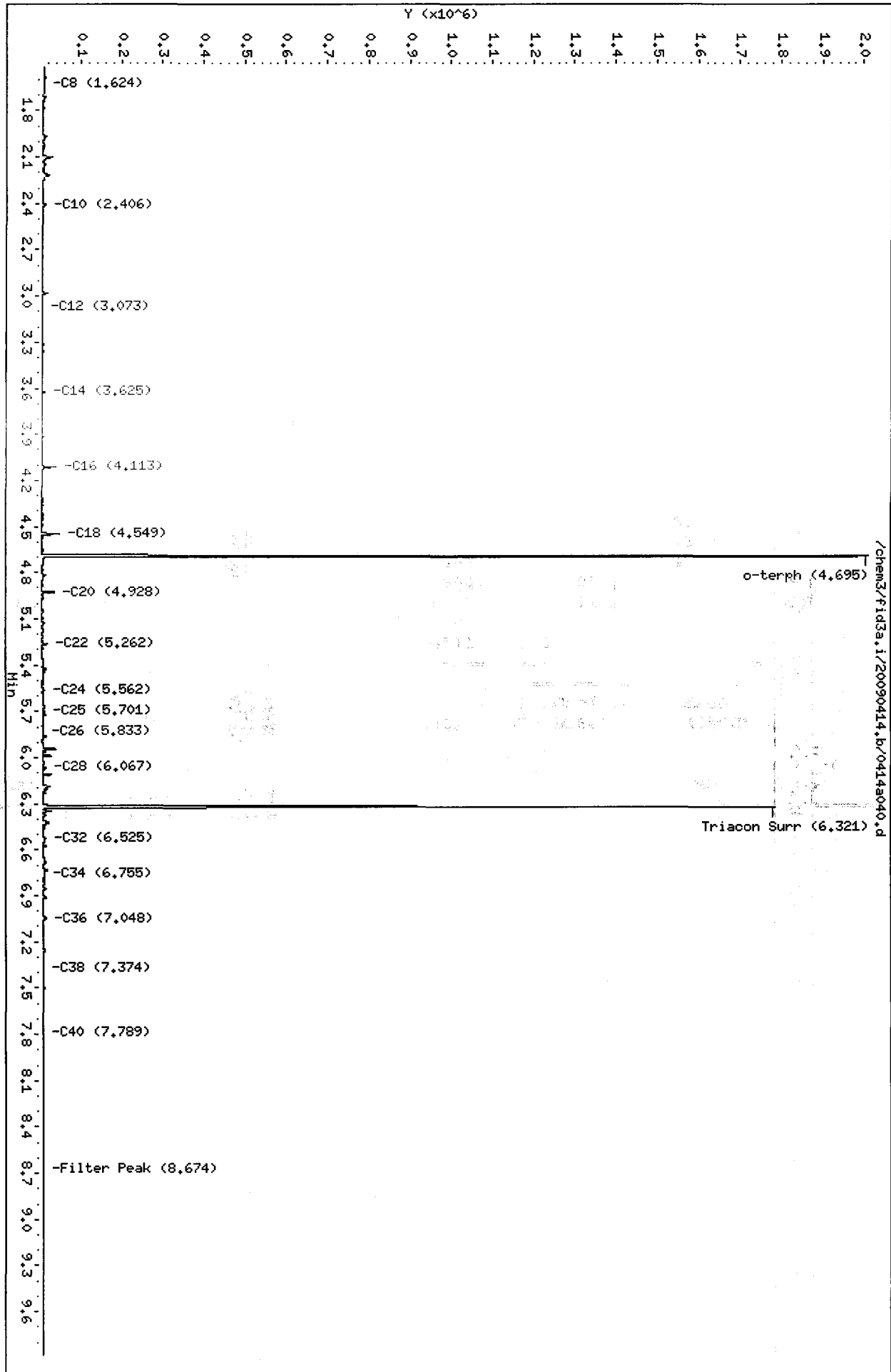
Range Times: NW Diesel (3.123 - 5.607) NW Gas (1.437 - 3.123) NW M.Oil (5.607 - 7.427)  
AK102 (2.360 - 5.646) AK103 (5.646 - 7.091) Jet A (2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	923612	43.0	95.5
Triacontane	899081	53.0	117.7

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a,i/20090414,b/04143040.d  
Date: 14-APR-2009 19:27  
Client ID: DDF-TP9-7  
Sample Info: QJ25A  
Column phase: ZBL-HT

Instrument: fid3a,i  
Operator: ms  
Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a046.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25B  
Client ID: DOF-TP10-2  
Injection: 14-APR-2009 21:19  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.490	0.003	55371	55681	GAS (Tol-C12)	362984	18
C8	1.628	-0.003	5368	5564	DIESEL (C12-C24)	249634	15
C10	2.406	-0.004	7897	7185	M.OIL (C24-C38)	707108	55
C12	3.073	0.000	1066	1469	AK-102 (C10-C25)	315250	16
C14	3.624	-0.004	1449	2442	AK-103 (C25-C36)	625957	72
C16	4.113	-0.002	1350	1284	OR.DIESEL (C10-C28)	498151	24
C18	4.550	0.000	2588	2417	OR.MOIL (C28-C40)	595312	53
C20	4.900	0.000	1824	1312	JET-A (C10-C18)	352126	10
C22	5.263	0.004	2459	1979			
C24	5.563	0.006	2939	2349			
C25	5.701	0.005	13193	9332			
C26	5.831	0.004	5807	5959			
C28	6.077	0.002	5639	2210			
C32	6.525	-0.003	10655	9154			
C34	6.777	0.012	19627	18082			
Filter Peak	8.668	-0.006	3074	2196			
C36	7.043	0.001	8847	9789	CREOSOT (C8-C22)	389565	61
C38	7.378	0.001	3339	729			
C40	7.790	-0.006	5584	16217	BUNKERC (C10-C38)	1011674	105

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	902121	42.0	93.3
Triacontane	855180	50.4	112.0

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090414.b/04143046.d

Date: 14-APR-2009 21:19

Client ID: DDF-TP10-2

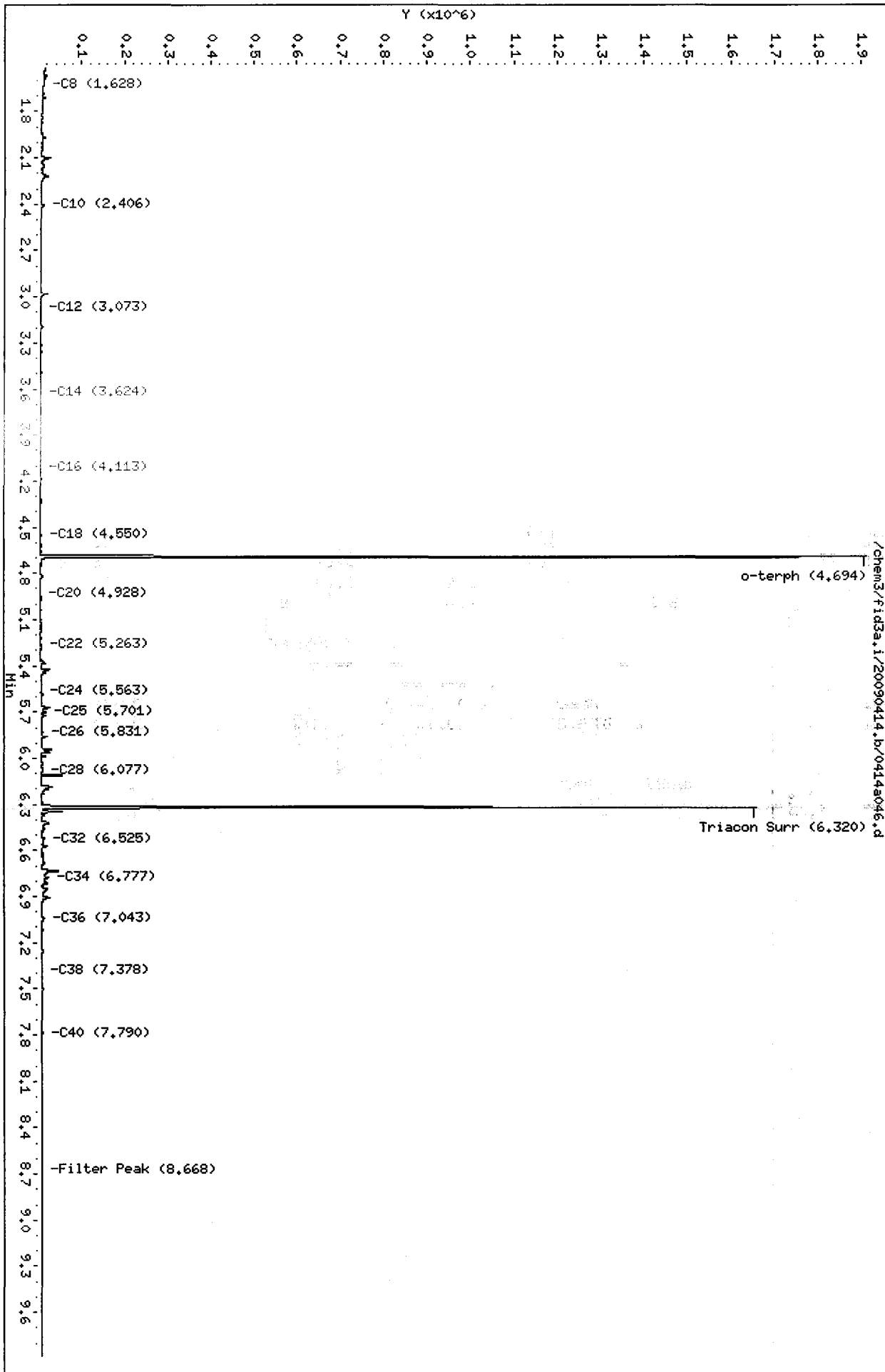
Sample Info: 0U25B

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a047.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25C  
Client ID: DOF-TP10-14  
Injection: 14-APR-2009 21:38  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.485	-0.002	75436	45124	GAS (Tol-C12)	285077	15
C8	1.626	-0.004	2857	1462	DIESEL (C12-C24)	111332	7
C10	2.406	-0.003	6131	5462	M.OIL (C24-C38)	272294	21
C12	3.073	0.000	843	1042	AK-102 (C10-C25)	156363	8
C14	3.622	-0.006	1273	1542	AK-103 (C25-C36)	204262	23
C16	4.115	0.000	967	1053	OR.DIES (C10-C28)	200795	10
C18	4.552	0.002	2286	1596	OR.MOIL (C28-C40)	305893	27
C20	4.933	0.005	291	822	JET-A (C10-C18)	104459	7
C22	5.266	0.006	1032	1003			
C24	5.553	-0.004	1007	668			
C25	5.690	-0.005	1161	1087			
C26	5.827	0.000	1162	661			
C28	6.067	-0.007	1366	459			
C32	6.527	-0.001	7866	8335			
C34	6.759	-0.007	3011	1910			
Filter Peak	8.674	0.000	3107	2348			
C36	7.047	0.006	7030	13212	CREOSOT (C8-C22)	267334	42
C38	7.378	0.001	3108	927			
C40	7.793	-0.003	4697	14815	BUNKERC (C10-C38)	426240	44

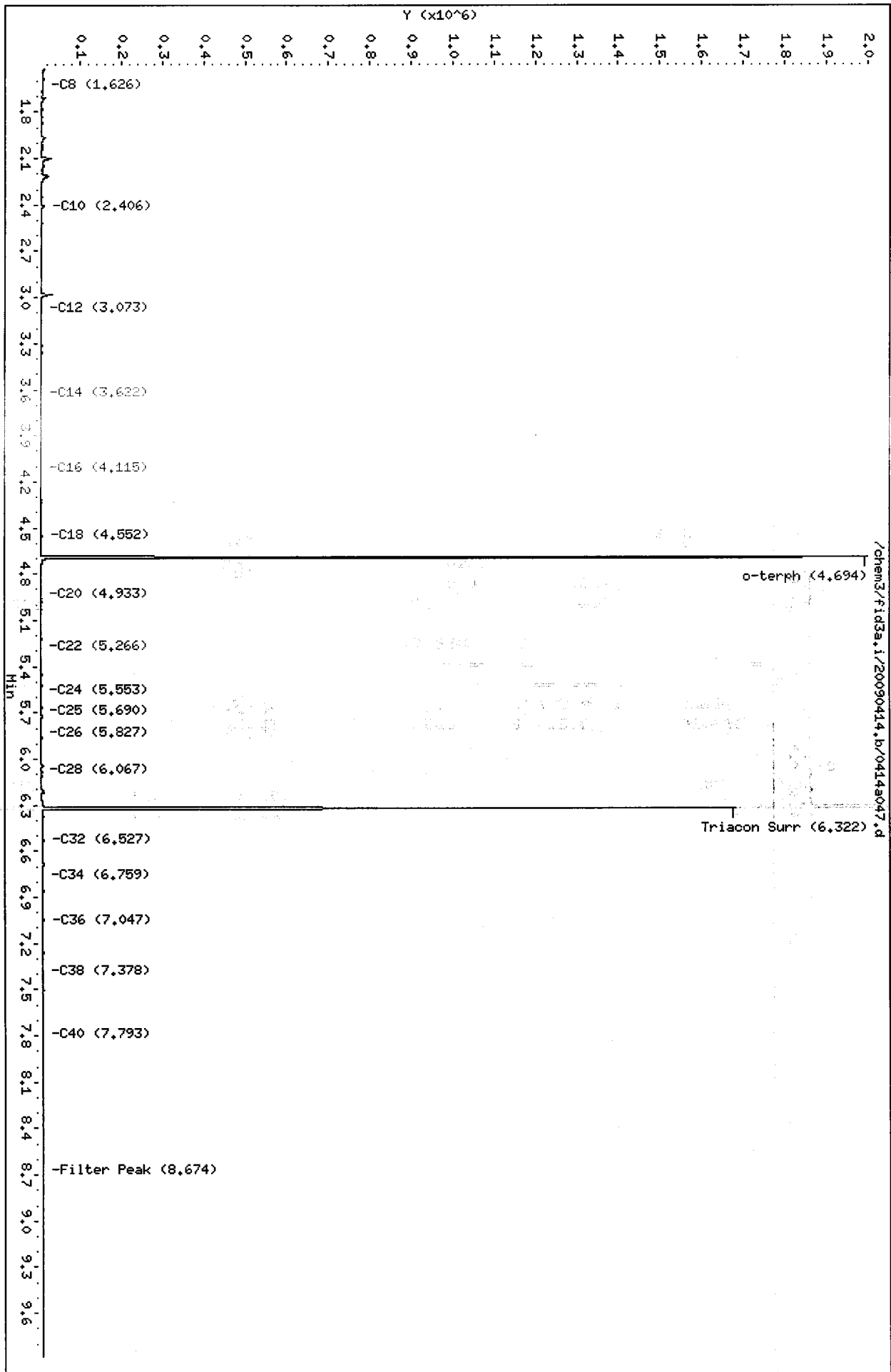
Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	899894	41.9	93.1
Triacontane	854360	50.3	111.9

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414s047.d  
Date: 14-APR-2009 21:38  
Client ID: DDF-TP10-14  
Sample Info: 0U25C  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a048.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25D  
Client ID: DOF-TP11-1/3  
Injection: 14-APR-2009 21:56  
Dilution Factor: 50

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.489	0.002	22121	52429	GAS (Tol-C12)	1067797	54
C8	1.628	-0.003	5880	9272	DIESEL (C12-C24)	10421082	642 <i>Handwritten</i>
C10	2.409	-0.001	3742	4586	M.OIL (C24-C38)	5224203	409 <i>Handwritten</i>
C12	3.072	-0.002	23558	14881	AK-102 (C10-C25)	11597280	586
C14	3.617	-0.010	160003	162328	AK-103 (C25-C36)	4675127	538
C16	4.114	-0.002	128525	80175	OR.DIESEL (C10-C28)	13854179	657
C18	4.550	0.000	92406	53388	OR.MOIL (C28-C40)	2766040	245
C20	4.931	0.002	95907	93275	JET-A (C10-C18)	5697227	359
C22	5.258	-0.001	52045	25857			
C24	5.562	0.005	204120	109200			
C25	5.687	-0.008	118921	118382			
C26	5.829	0.002	112251	75213			
C28	6.068	-0.007	532295	450011			
C32	6.515	-0.012	58359	55436			
C34	6.763	-0.003	18573	4789			
Filter Peak	8.669	-0.005	3992	3019			
C36	7.036	-0.005	23324	28349	CREOSOT (C8-C22)	10285162	1608
C38	7.373	-0.003	7364	6225			
C40	7.798	0.001	6118	1572	BUNKERC (C10-C38)	16475033	1706

Range Times: NW Diesel (3.123 - 5.607) NW Gas (1.437 - 3.123) NW M.Oil (5.607 - 7.427)  
AK102 (2.360 - 5.646) AK103 (5.646 - 7.091) Jet A (2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	19112	0.9	98.8 <i>D</i>
Triacontane	18186	1.1	119.1 <i>D</i>

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/04145048.d

Date: 14-APR-2009 21:56

Client ID: DOF-TP11-1/3

Sample Info: 0U25D,50

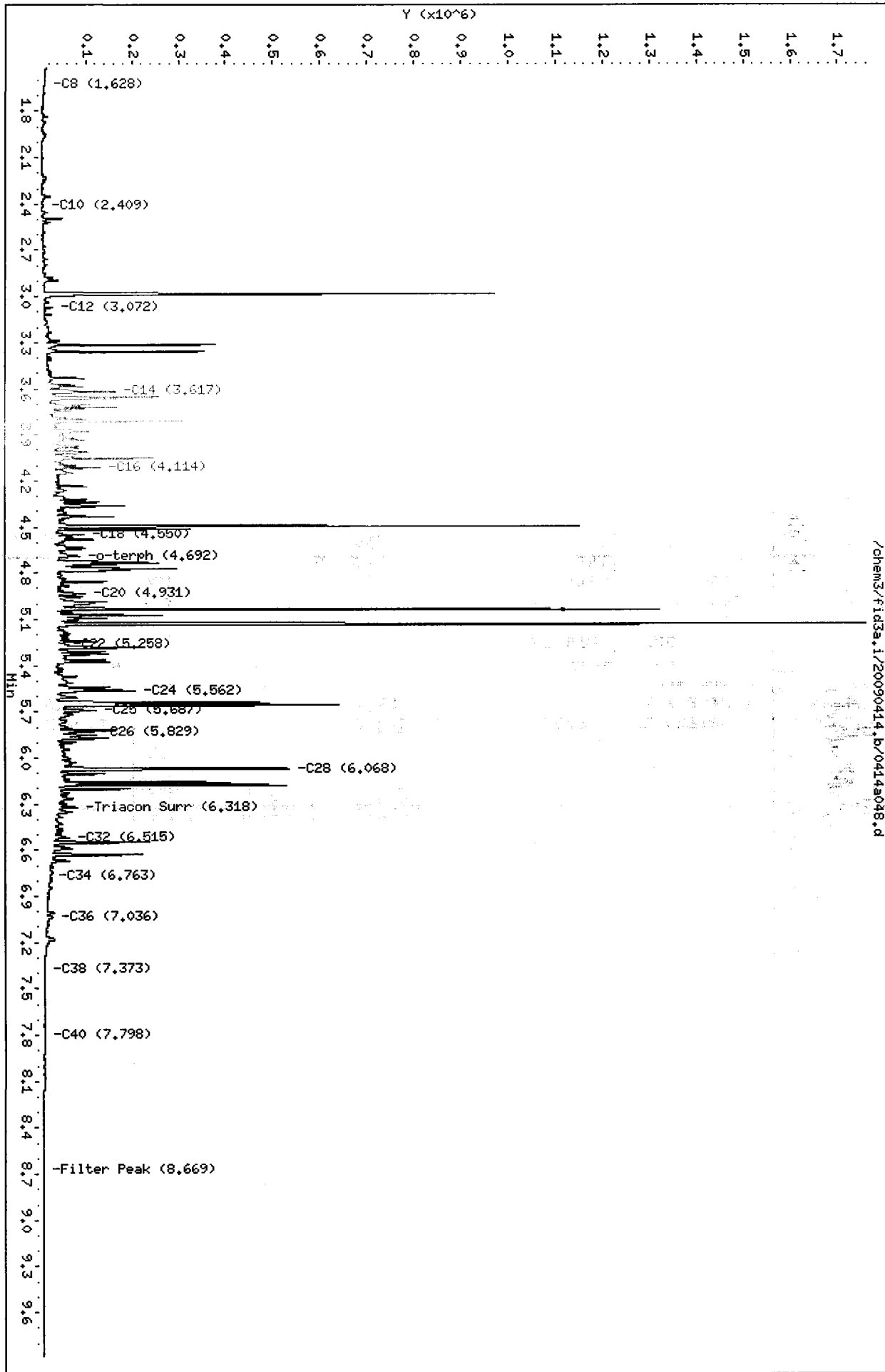
Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

/chem3/fid3a.i/20090414.b/04145048.d



Analytical Resources Inc.  
TPH Quantitation Report

*PL*  
*4/16/09*

Data file: /chem3/fid3a.i/20090414.b/0414a049.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25E  
Client ID: DOF-TP11-6  
Injection: 14-APR-2009 22:15  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.001	74262	45763	GAS (Tol-C12)	910262	46
C8	1.629	-0.001	5623	5592	DIESEL (C12-C24)	6891729	424 <i>Diesel</i>
C10	2.409	-0.001	7607	8097	M.OIL (C24-C38)	14672505	1150 <i>M.O.</i>
C12	3.072	-0.002	13033	9372	AK-102 (C10-C25)	7687413	389
C14	3.640	0.012	17730	7294	AK-103 (C25-C36)	13514830	1555
C16	4.112	-0.003	69201	46405	OR.DIES (C10-C28)	11698184	555
C18	4.549	-0.001	54418	33804	OR.MOIL (C28-C40)	11017882	977
C20	4.930	0.002	57857	64587	JET-A (C10-C18)	3410674	215
C22	5.265	0.006	54348	53135			
C24	5.560	0.003	143964	135736			
C25	5.701	0.005	93583	38781			
C26	5.829	0.002	135107	122833			
C28	6.066	-0.009	403780	479427			
C32	6.528	0.001	196665	73002			
C34	6.768	0.002	125307	37215			
Filter Peak	8.679	0.006	8730	4997			
C36	7.042	0.001	74615	23438	CREOSOT (C8-C22)	6401822	1001
C38	7.376	-0.001	36840	13761			
C40	7.790	-0.006	23212	22437	BUNKERC (C10-C38)	22109372	2290

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	912743	42.5	94.4
Triacontane	836918	49.3	109.6

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414a049.d

Date : 14-APR-2009 22:15

Client ID: D0F-TP11-6

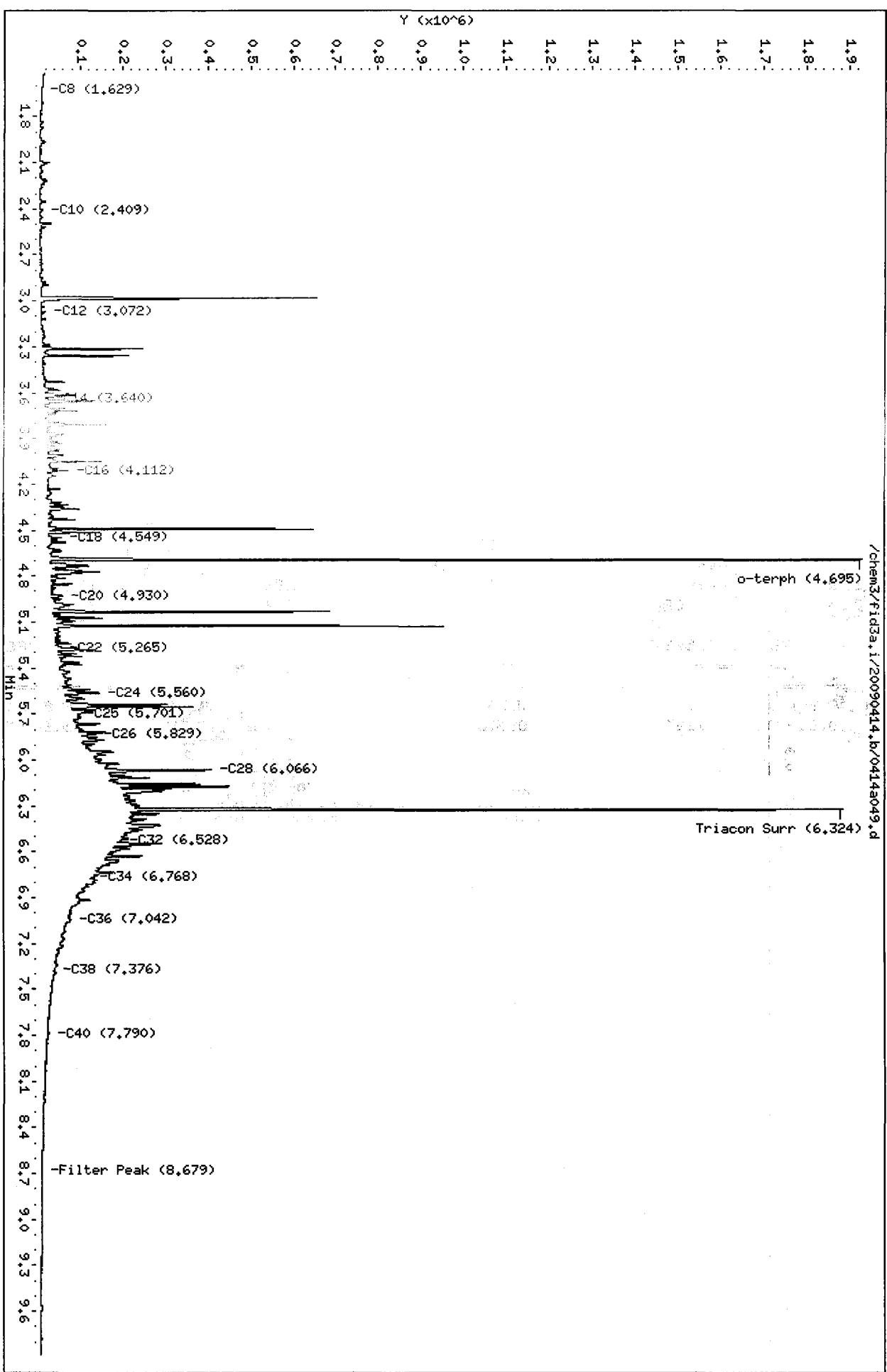
Sample Info: 0U25E

Column phase: ZBI-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



PC  
4/16/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090414.b/0414a050.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25F  
Client ID: DOF-TP12-1  
Injection: 14-APR-2009 22:34  
Dilution Factor: 20

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.487	0.000	14421	31181	GAS (Tol-C12)	245493	13
C8	1.613	-0.017	7745	8109	DIESEL (C12-C24)	7361868	453 <i>Diesel</i>
C10	2.414	0.005	958	943	M.OIL (C24-C38)	60046684	4707 <i>MO</i>
C12	3.072	-0.001	5195	4806	AK-102 (C10-C25)	8083664	409
C14	3.623	-0.005	20045	25694	AK-103 (C25-C36)	54536595	6273
C16	4.113	-0.002	37389	36959	OR.DIES (C10-C28)	21522789	1021
C18	4.549	-0.001	46803	56064	OR.MOIL (C28-C40)	48734679	4323
C20	4.929	0.001	60154	80679	JET-A (C10-C18)	1888874	119
C22	5.254	0.004	106990	90120			
C24	5.554	-0.003	223582	185429			
C25	5.694	-0.002	301727	112288			
C26	5.830	0.003	412730	145603			
C28	6.077	0.002	664028	145598			
C32	6.530	0.002	902001	475668			
C34	6.764	-0.001	627070	173433			
Filter Peak	8.678	0.004	25323	7544			
C36	7.041	0.000	394176	176702	CREOSOT (C8-C22)	4603679	720
C38	7.381	0.004	195728	168710			
C40	7.799	0.003	81685	17886	BUNKERC (C10-C38)	67491432	6991

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

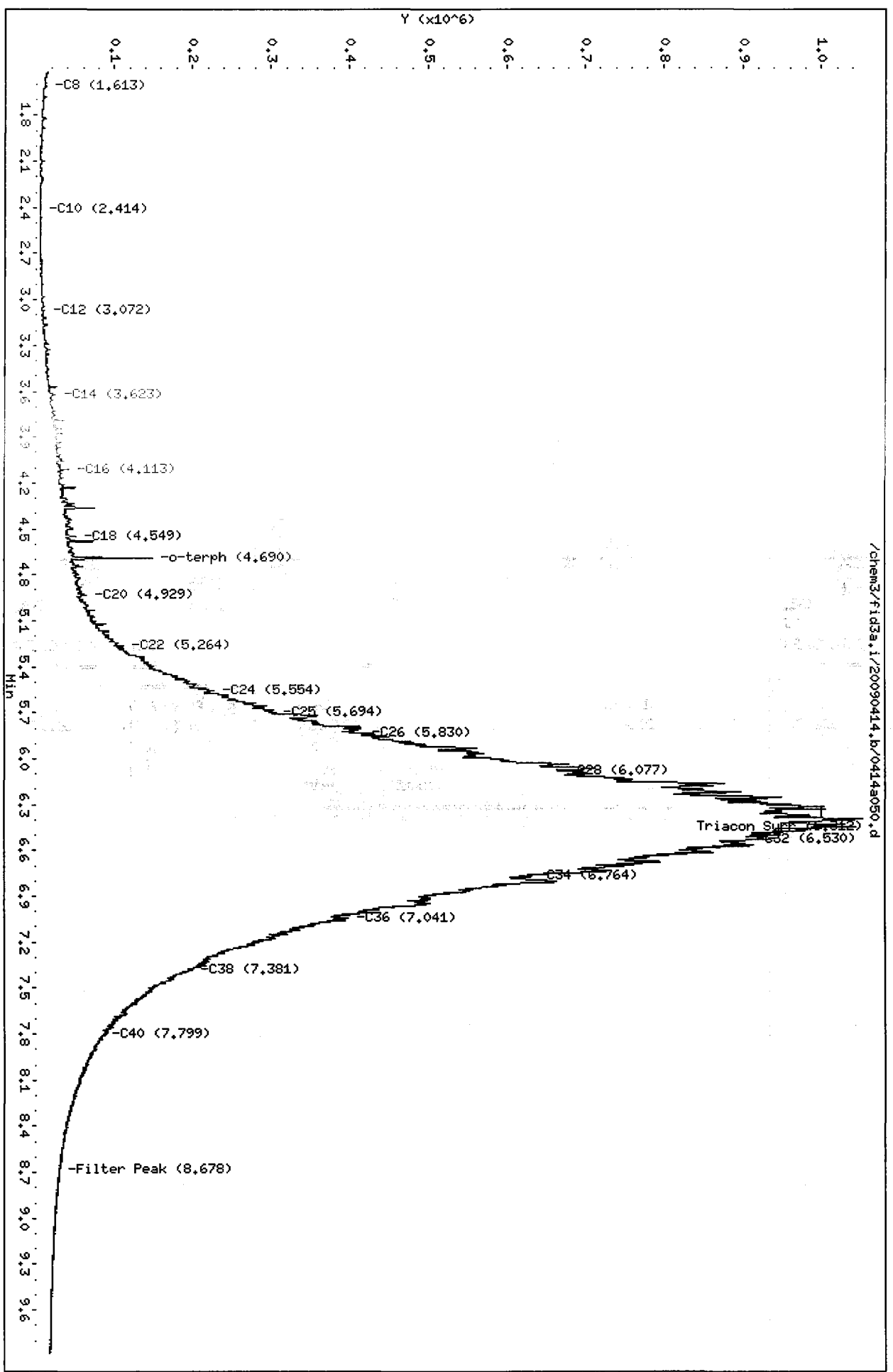
Surrogate	Area	Amount	%Rec
o-Terphenyl	41459	1.9	85.8
Triacontane	34791	2.1	91.1

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a,1/20090414,b/0414a050.d  
Date : 14-APR-2009 22:34  
Client ID: DDF-TP12-1  
Sample Info: 0U25F,20  
Column phase: ZB1-HT

Instrument: fid3a,1  
Operator: ms  
Column diameter: 0.25



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4/16/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090414.b/0414a051.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25G  
Client ID: DOF-TP12-3  
Injection: 14-APR-2009 22:52  
Dilution Factor: 50

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.481	-0.006	12970	6980	GAS (Tol-C12)	163402	8
C8	1.627	-0.003	6049	13876	DIESEL (C12-C24)	8572100	528
C10	2.412	0.003	777	834	M.OIL (C24-C38)	44867798	3517
C12	3.072	-0.001	2104	1345	AK-102 (C10-C25)	9036420	457
C14	3.624	-0.003	37499	22428	AK-103 (C25-C36)	40480634	4656
C16	4.113	-0.002	218442	114529	OR.DIESEL (C10-C28)	19360117	918
C18	4.550	0.000	274539	185016	OR.MOIL (C28-C40)	36350895	3224
C20	4.920	0.002	230269	164467	JET-A (C10-C18)	2829146	172
C22	5.266	0.006	154719	134911			
C24	5.552	-0.005	196797	159431			
C25	5.699	0.003	242818	182268			
C26	5.821	-0.006	298547	99638			
C28	6.077	0.002	474111	177912			
C32	6.530	0.003	628175	199340			
C34	6.763	-0.002	460102	137102			
Filter Peak	8.672	-0.002	24725	10823			
C36	7.042	0.001	293625	70076	CREOSOT (C8-C22)	6251579	977
C38	7.372	-0.005	162088	104223			
C40	7.793	-0.004	73713	71665	BUNKERC (C10-C38)	53458702	5537

*Handwritten notes:*  
Diesel  
MO

Range Times: NW Diesel (3.123 - 5.607) NW Gas (1.437 - 3.123) NW M.Oil (5.607 - 7.427)  
AK102 (2.360 - 5.646) AK103 (5.646 - 7.091) Jet A (2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	27432	1.3	141.9
Triacontane	11110	0.7	72.7

*Handwritten initials:* P  
D

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414a051.d

Date: 14-APR-2009 22:52

Client ID: DDF-TP12-3

Sample Info: 00250.50

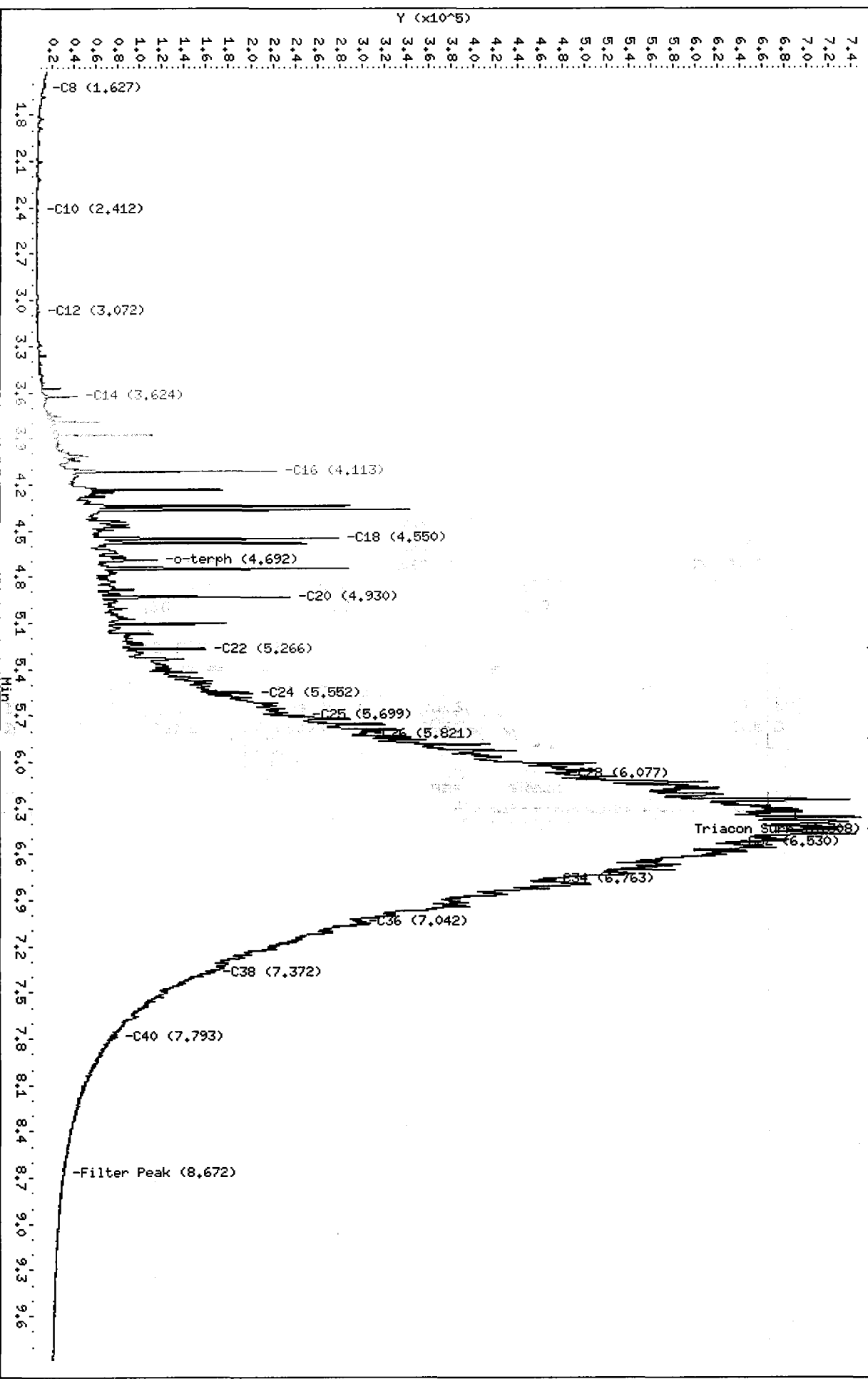
Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

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Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a052.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25H  
Client ID: DOF-TP13-2  
Injection: 14-APR-2009 23:11  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.001	47434	65856	GAS (Tol-C12)	317003	16
C8	1.628	-0.002	4810	11129	DIESEL (C12-C24)	1431366	88 <i>diesel</i>
C10	2.407	-0.002	6714	5663	M.OIL (C24-C38)	1416638	111 <i>no</i>
C12	3.072	-0.001	2166	1609	AK-102 (C10-C25)	1529817	77
C14	3.624	-0.003	8581	9004	AK-103 (C25-C36)	1241840	143
C16	4.112	-0.003	26265	16778	OR.DIES (C10-C28)	1890310	90
C18	4.549	-0.001	39563	27693	OR.MOIL (C28-C40)	1184661	105
C20	4.929	0.001	34667	26628	JET-A (C10-C18)	632212	40
C22	5.263	0.004	23240	23962			
C24	5.563	0.006	19595	16613			
C25	5.700	0.004	17147	19111			
C26	5.831	0.004	14213	14973			
C28	6.084	0.010	14049	25140			
C32	6.523	-0.004	17322	15278			
C34	6.776	0.011	19346	20868			
Filter Peak	8.674	0.000	6669	2262			
C36	7.052	0.011	13663	25540	CREOSOT (C8-C22)	1354349	212
C38	7.381	0.005	6785	3104			
C40	7.786	-0.011	10113	31433	BUNKERC (C10-C38)	2907375	301

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	871568	40.6	90.1
Triacontane	837679	49.4	109.7

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a,i/20090414,b/0414s052.d

Date: 14-APR-2009 23:11

Client ID: DDF-TP13-2

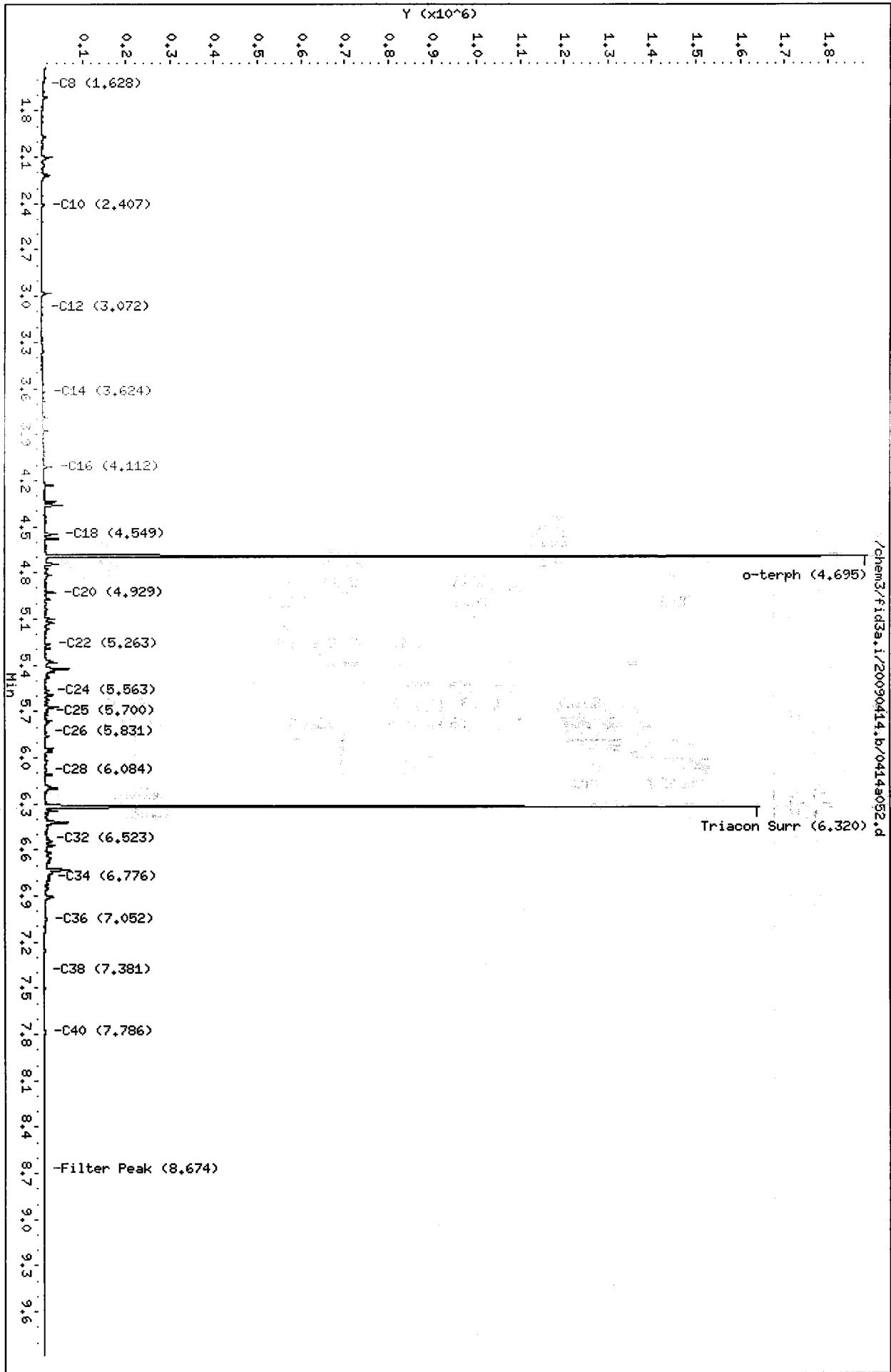
Sample Info: 0U25H

Column phase: ZB1-HT

Instrument: fid3a,i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

PL  
4/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a053.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25J  
Client ID: DOF-TP13-9  
Injection: 14-APR-2009 23:30  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.489	0.002	65552	42737	GAS (Tol-C12)	315041	16
C8	1.632	0.002	4910	3454	DIESEL (C12-C24)	417144	26
C10	2.409	-0.001	4624	4514	M.OIL (C24-C38)	630429	49
C12	3.073	-0.001	1261	1015	AK-102 (C10-C25)	499716	25
C14	3.617	-0.011	4863	4631	AK-103 (C25-C36)	484870	56
C16	4.113	-0.002	3843	3451	OR.DIES (C10-C28)	618102	29
C18	4.549	-0.001	4977	4204	OR.MOIL (C28-C40)	662659	59
C20	4.929	0.001	3708	3936	JET-A (C10-C18)	281631	18
C22	5.263	0.003	3230	2763			
C24	5.560	0.003	5558	5292			
C25	5.700	0.005	3605	2855			
C26	5.830	0.003	4043	3560			
C28	6.082	0.007	4810	3064			
C32	6.522	-0.005	11297	16310			
C34	6.768	0.002	6831	1500			
Filter Peak	8.677	0.004	7569	1511			
C36	7.042	0.001	10349	25277	CREOSOT (C8-C22)	574393	90
C38	7.375	-0.001	6677	2263			
C40	7.785	-0.011	8461	18004	BUNKERC (C10-C38)	1118111	116

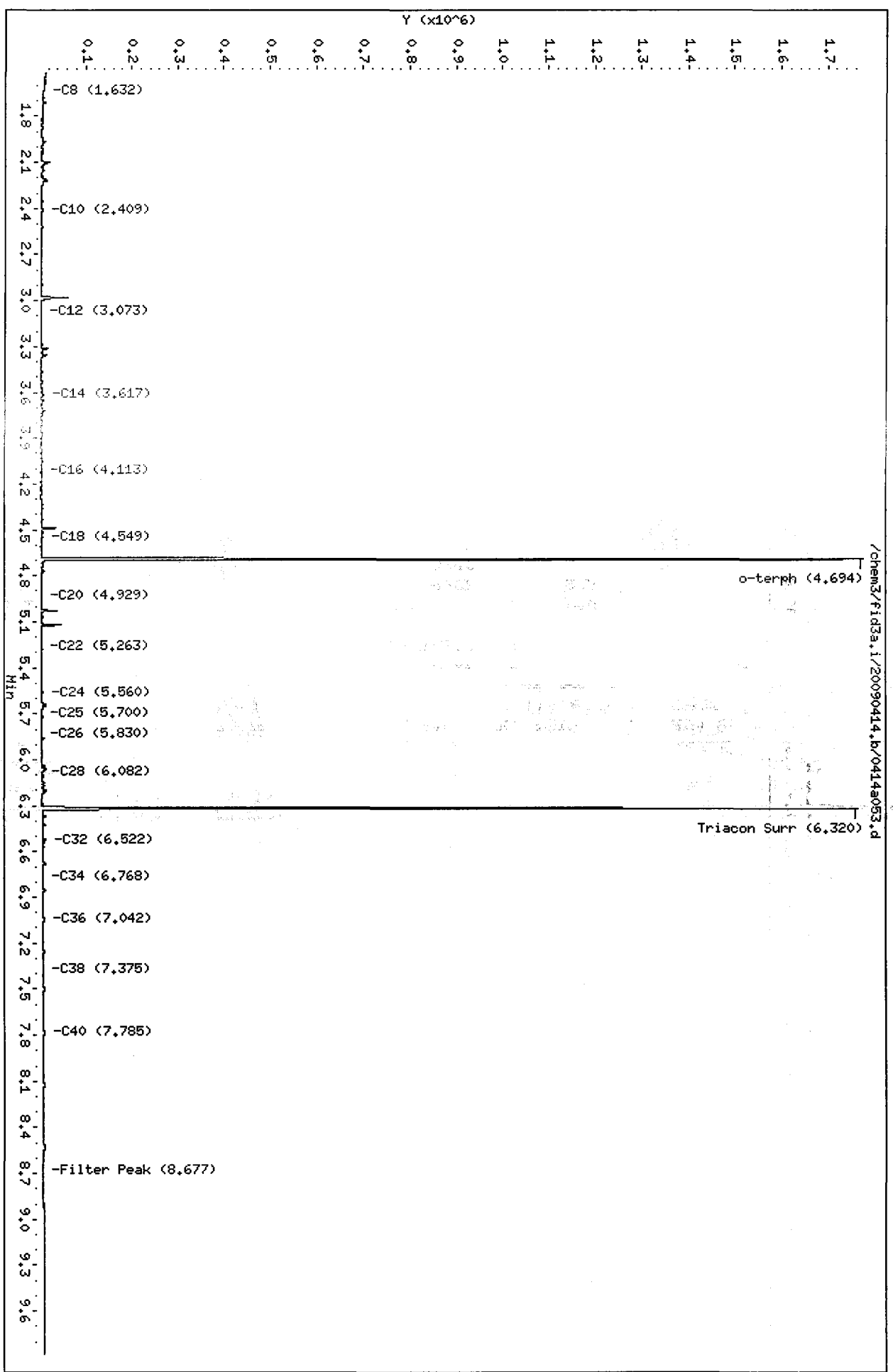
Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	941360	43.8	97.4
Triacontane	899486	53.0	117.8

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.1/20090414.b/0414a053.d  
Date: 14-APR-2009 23:30  
Client ID: DDF-TP13-9  
Sample Info: 00253  
Column phase: ZBL-HT

Instrument: fid3a.1  
Operator: ms  
Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a057.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25K  
Client ID: DOF-TP14-1.5  
Injection: 15-APR-2009 00:44  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.487	0.000	72081	48734	GAS (Tol-C12)	392307	20
C8	1.628	-0.003	5043	6961	DIESEL (C12-C24)	1156514	71 <i>ppm</i>
C10	2.408	-0.001	4754	4992	M.OIL (C24-C38)	2760502	216 <i>ppm</i>
C12	3.072	-0.002	2084	1551	AK-102 (C10-C25)	1319508	67
C14	3.621	-0.007	4496	5747	AK-103 (C25-C36)	2501822	288
C16	4.112	-0.003	7676	6589	OR.DIES (C10-C28)	2138295	101
C18	4.548	-0.002	11846	10040	OR.MOIL (C28-C40)	2026458	180
C20	4.923	0.000	12283	13171	JET-A (C10-C18)	381710	24
C22	5.263	0.003	14651	13758			
C24	5.552	-0.005	18066	4659			
C25	5.697	0.001	30926	23608			
C26	5.830	0.003	30740	36938			
C28	6.075	0.000	28877	7910			
C32	6.522	-0.005	30457	25395			
C34	6.776	0.011	42745	41528			
Filter Peak	8.673	0.000	5104	609			
C36	7.044	0.003	17543	25808	CREOSOT (C8-C22)	973309	152
C38	7.376	0.000	8159	3250			
C40	7.788	-0.009	10949	31019	BUNKERC (C10-C38)	4006516	415

Range Times: NW Diesel (3.123 - 5.607) NW Gas (1.437 - 3.123) NW M.Oil (5.607 - 7.427)  
AK102 (2.360 - 5.646) AK103 (5.646 - 7.091) Jet A (2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	906614	42.2	93.8
Triacontane	865197	51.0	113.3

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090414.b/0414a057.d

Date: 15-APR-2009 00:44

Client ID: DDF-TP14-1.5

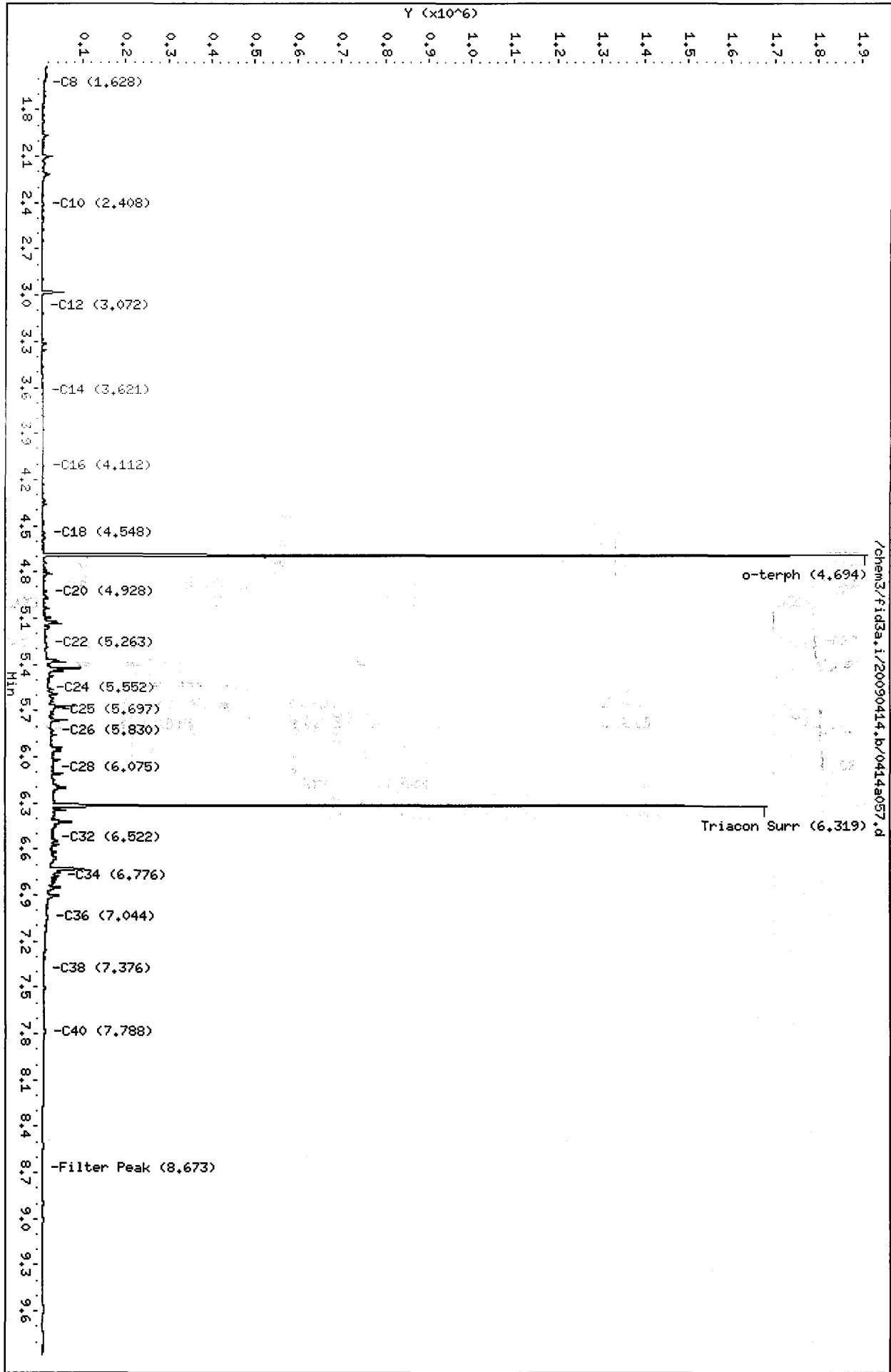
Sample Info: 0026K

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

VC  
4/17/09

Data file: /chem3/fid3a.i/20090414.b/0414a058.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25L  
Client ID: DOF-TP14-6  
Injection: 15-APR-2009 01:03  
Dilution Factor: 5

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.001	18492	32551	GAS (Tol-C12)	193131	10
C8	1.625	-0.005	5344	6909	DIESEL (C12-C24)	1142330	70 <i>ppm</i>
C10	2.414	0.005	1055	765	M.OIL (C24-C38)	7234963	567 <i>me</i>
C12	3.073	-0.001	828	741	AK-102 (C10-C25)	1259762	64
C14	3.624	-0.003	2000	2698	AK-103 (C25-C36)	6356568	731
C16	4.113	-0.003	2723	2893	OR.DIES (C10-C28)	3047992	145
C18	4.549	-0.001	5312	5927	OR.MOIL (C28-C40)	5933089	526
C20	4.930	0.002	9674	9849	JET-A (C10-C18)	195749	12
C22	5.264	0.005	19639	12601			
C24	5.562	0.005	35608	24438			
C25	5.690	-0.006	45901	22789			
C26	5.828	0.001	55891	29522			
C28	6.074	-0.001	82912	27732			
C32	6.521	-0.006	92211	48499			
C34	6.756	-0.010	71860	48328			
Filter Peak	8.670	-0.003	9085	3077			
C36	7.041	0.000	50612	16021	CREOSOT (C8-C22)	747805	117
C38	7.377	0.001	33552	9317			
C40	7.790	-0.006	20205	16877	BUNKERC (C10-C38)	8412720	871

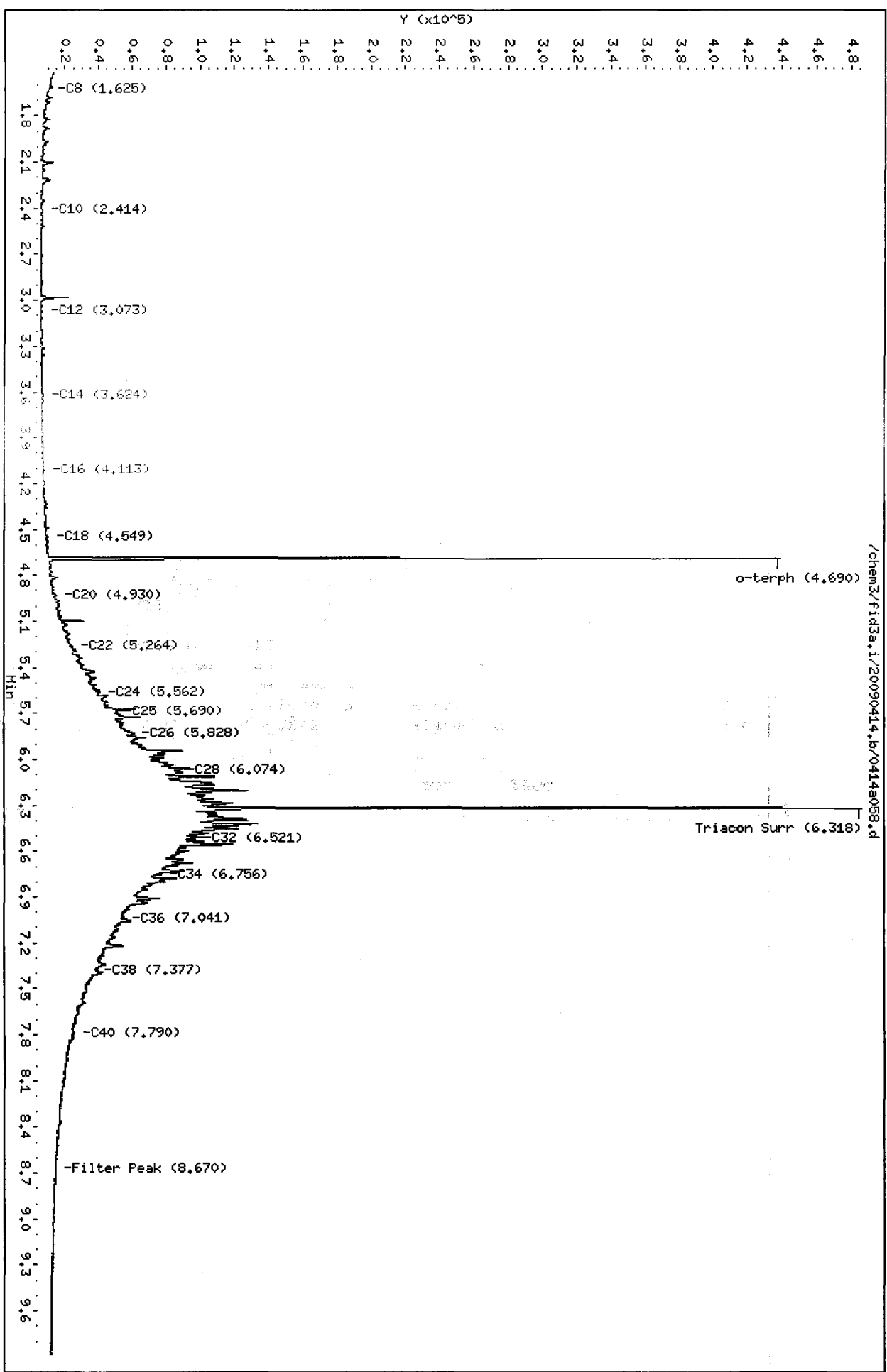
Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	180195	8.4	93.2
Triacontane	181752	10.7	119.0

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414s058.d  
Date: 15-APR-2009 01:03  
Client ID: DDF-TP14-6  
Sample Info: 0025L/5  
Column phase: ZBI-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a059.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25M  
Client ID: DOF-TP15-1.5  
Injection: 15-APR-2009 01:21  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	-0.001	59513	43991	GAS (Tol-C12)	221730	11
C8	1.626	-0.004	3109	4608	DIESEL (C12-C24)	243702	15
C10	2.406	-0.004	5481	4909	M.OIL (C24-C38)	643147	50
C12	3.072	-0.001	1037	896	AK-102 (C10-C25)	317814	16
C14	3.618	-0.009	1823	1125	AK-103 (C25-C36)	531063	61
C16	4.115	0.000	1348	1482	OR.DIES (C10-C28)	480648	23
C18	4.550	0.000	1798	2666	OR.MOIL (C28-C40)	574181	51
C20	4.930	0.002	1964	1982	JET-A (C10-C18)	145705	9
C22	5.264	0.005	3042	2899			
C24	5.556	-0.001	3924	2628			
C25	5.697	0.001	6500	6267			
C26	5.822	-0.005	4592	1442			
C28	6.067	-0.007	5689	904			
C32	6.523	-0.004	11105	14299			
C34	6.770	0.005	6174	2561			
Filter Peak	8.675	0.002	4779	2572			
C36	7.043	0.002	8566	17157	CREOSOT (C8-C22)	307441	48
C38	7.373	-0.004	4770	2191			
C40	7.786	-0.011	6322	11989	BUNKERC (C10-C38)	946221	98

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	898834	41.8	93.0
Triacontane	864242	50.9	113.2

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414s059.d

Date: 15-APR-2009 01:21

Client ID: DDF-TP15-1.5

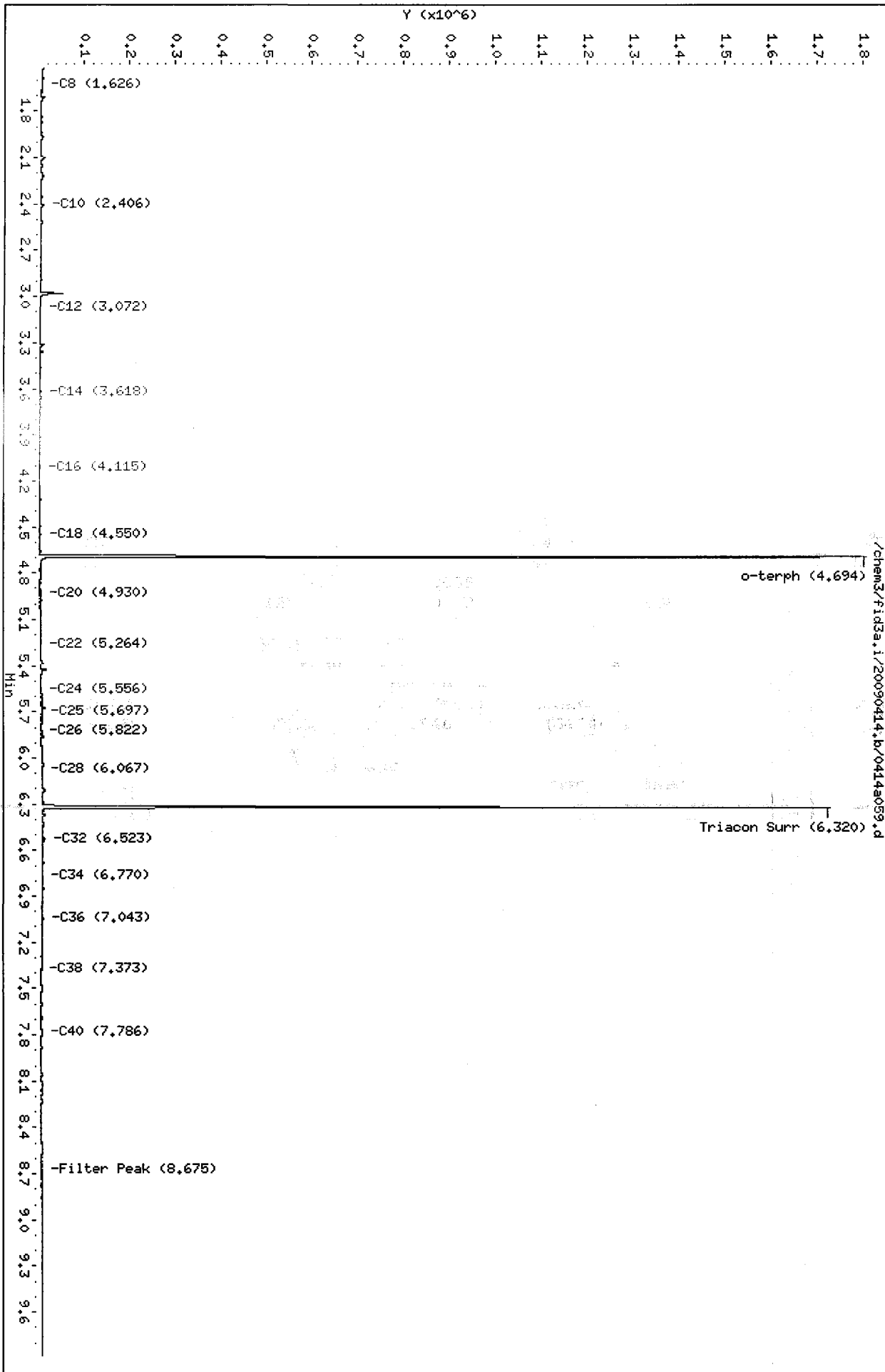
Sample Info: 0025M

Instrument: fid3a.i

Column phase: ZBL-HT

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

PC  
3/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a060.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25N  
Client ID: DOF-TP15-10  
Injection: 15-APR-2009 01:40  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.001	92414	53451	GAS (Tol-C12)	405150	21
C8	1.627	-0.004	5235	3281	DIESEL (C12-C24)	1026663	63 <i>diesel</i>
C10	2.409	-0.001	4570	4504	M.OIL (C24-C38)	767067	60
C12	3.071	-0.003	1903	1483	AK-102 (C10-C25)	1177596	60
C14	3.616	-0.011	12462	13078	AK-103 (C25-C36)	636927	73
C16	4.112	-0.003	8890	6779	OR.DIES (C10-C28)	1406583	67
C18	4.549	-0.001	9646	6184	OR.MOIL (C28-C40)	639487	57
C20	4.929	0.001	8929	9362	JET-A (C10-C18)	599751	38
C22	5.264	0.004	6503	6409			
C24	5.560	0.003	16041	14040			
C25	5.701	0.006	6389	3699			
C26	5.828	0.001	9233	7708			
C28	6.083	0.009	6792	3658			
C32	6.525	-0.002	11319	8988			
C34	6.768	0.002	5707	796			
Filter Peak	8.676	0.002	5287	3585			
C36	7.045	0.004	9740	21103	CREOSOT (C8-C22)	1158700	181
C38	7.374	-0.003	5115	2243			
C40	7.793	-0.004	6448	22131	BUNKERC (C10-C38)	1917003	199

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	956862	44.5	99.0
Triacontane	910799	53.7	119.3

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a,i/20090414,b/04149060.d

Date: 15-APR-2009 01:40

Client ID: DDF-TP15-10

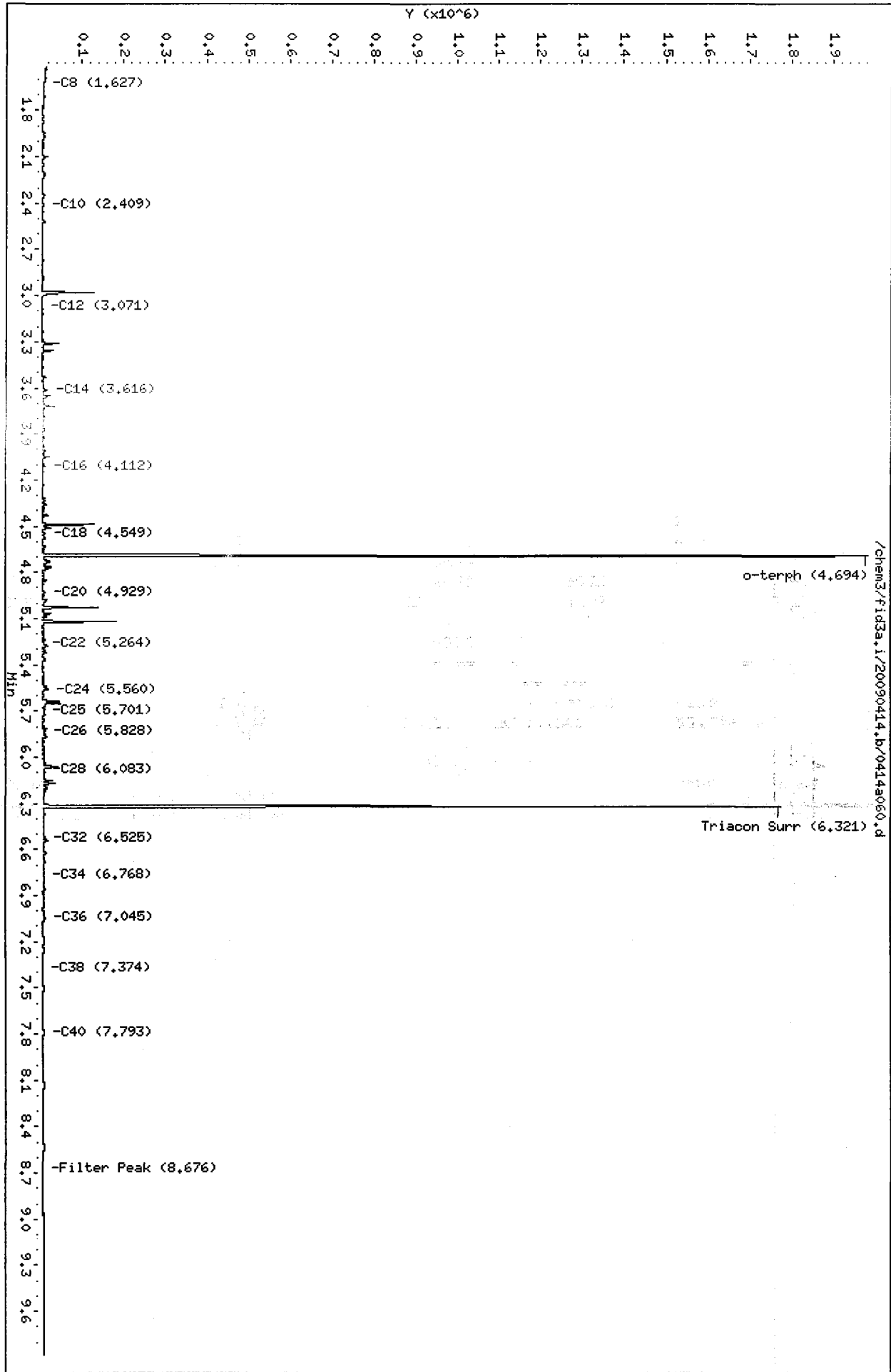
Sample Info: QJ25N

Column phase: ZB1-HT

Instrument: fid3a,i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

100  
2/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a061.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU250  
Client ID: DOF-TP16-1.5  
Injection: 15-APR-2009 01:59  
Dilution Factor: 20

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.001	13779	34289	GAS (Tol-C12)	261129	13
C8	1.627	-0.004	5781	10951	DIESEL (C12-C24)	7936878	489 <i>Diesel</i>
C10	2.412	0.002	1137	1096	M.OIL (C24-C38)	47097292	3692 <i>M.O</i>
C12	3.070	-0.003	10207	6622	AK-102 (C10-C25)	8931800	451
C14	3.623	-0.005	27220	18942	AK-103 (C25-C36)	43836159	5042
C16	4.111	-0.004	42613	27888	OR.DIES (C10-C28)	24747280	1173
C18	4.547	-0.003	45867	38546	OR.MOIL (C28-C40)	31673072	2809
C20	4.929	0.001	70260	82159	JET-A (C10-C18)	1294271	92
C22	5.264	0.005	147019	134538			
C24	5.553	-0.004	306293	256897			
C25	5.701	0.006	455396	411456			
C26	5.829	0.002	516270	282976			
C28	6.069	-0.006	751273	648733			
C32	6.535	0.008	547151	151494			
C34	6.770	0.004	324522	90397			
Filter Peak	8.673	0.000	12830	3574			
C36	7.040	-0.002	199758	47616	CREOSOT (C8-C22)	4053069	634
C38	7.378	0.001	94426	65592			
C40	7.795	-0.002	39244	20670	BUNKERC (C10-C38)	55133970	5711

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	47541	2.2	98.3
Triacontane	21796	1.3	57.1

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090414,b/0414a061.d

Date: 15-APR-2009 01:59

Client ID: D0F-TP16-1.5

Sample Info: 0U250,20

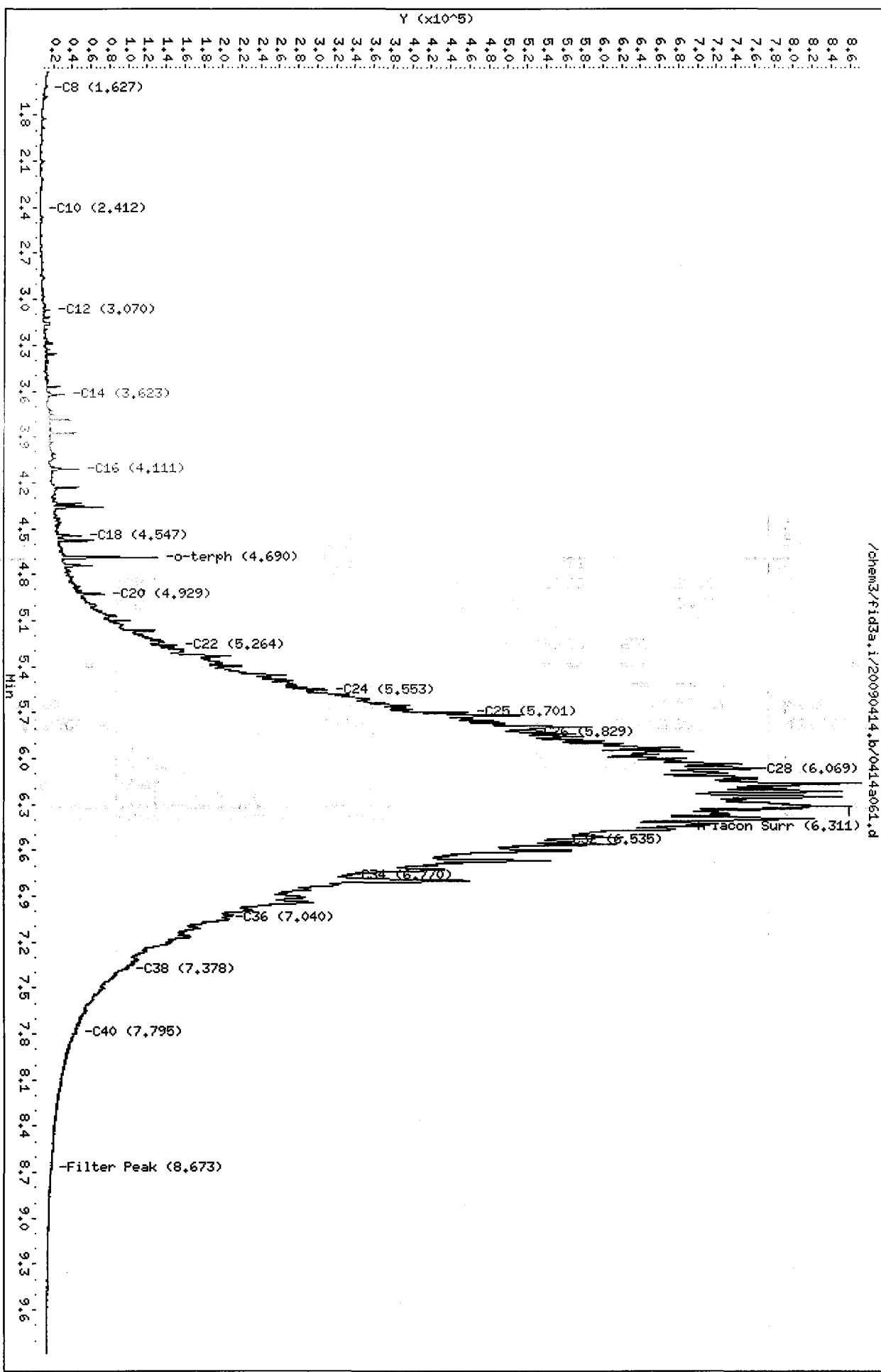
Column phase: ZBI-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

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PC  
4/16/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090415.b/0415a007.d  
Method: /chem3/fid3a.i/20090415.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25P  
Client ID: DOF-TP16-3  
Injection: 15-APR-2009 18:07  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.489	0.005	54382	42225	GAS (Tol-C12)	437398	22
C8	1.631	0.005	8323	9868	DIESEL (C12-C24)	1311438	81 <i>ppm</i>
C10	2.408	-0.001	5704	6591	M.OIL (C24-C38)	4145738	325 <i>ppm</i>
C12	3.070	0.000	3164	2667	AK-102 (C10-C25)	1482524	75
C14	3.622	-0.001	6555	7959	AK-103 (C25-C36)	3784871	435
C16	4.109	-0.002	7452	6904	OR.DIES (C10-C28)	2711221	129
C18	4.546	-0.001	13189	10553	OR.MOIL (C28-C40)	3042458	270
C20	4.925	-0.001	11190	14138	JET-A (C10-C18)	4482297	28
C22	5.259	-0.002	17864	13617			
C24	5.558	-0.001	32796	35201			
C25	5.695	-0.004	44779	44242			
C26	5.827	-0.004	43265	43515			
C28	6.080	0.000	51077	65546			
C32	6.537	0.002	48962	37627			
C34	6.774	-0.001	51400	45997			
Filter Peak	8.673	-0.002	5034	1888			
C36	7.050	-0.004	24600	23759	CREOSOT (C8-C22)	1105487	173
C38	7.387	-0.003	12251	10480			
C40	7.809	-0.005	7639	5275	BUNKERC (C10-C38)	5543989	574

Range Times: NW Diesel(3.120 - 5.610) NW Gas(1.434 - 3.120) NW M.Oil(5.610 - 7.440)  
AK102(2.359 - 5.649) AK103(5.649 - 7.104) Jet A(2.359 - 4.597)

Surrogate	Area	Amount	%Rec
o-Terphenyl	967957	45.1	100.1
Triacontane	897255	52.9	117.5

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090415.b/0415a007.d

Date: 15-APR-2009 18:07

Client ID: DDF-TP16-3

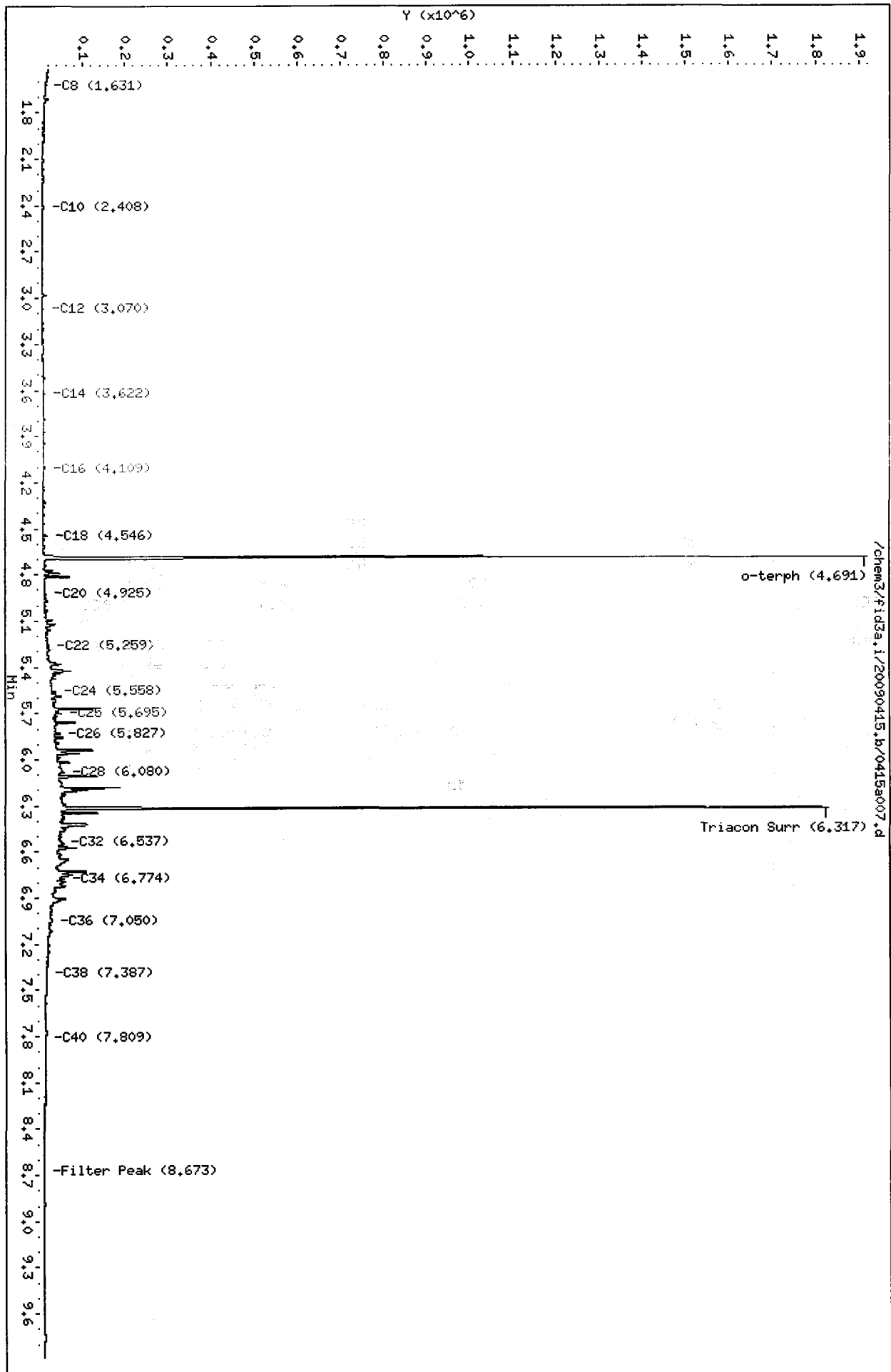
Sample Info: 0U25P

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



PC  
4/16/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090414.b/0414a063.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25Q  
Client ID: DOF-TP17-2  
Injection: 15-APR-2009 02:36  
Dilution Factor: 10

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.001	18498	44643	GAS (Tol-C12)	843246	43
C8	1.625	-0.005	5438	11631	DIESEL (C12-C24)	8693951	535
C10	2.408	-0.001	4688	4884	M.OIL (C24-C38)	4289331	336
C12	3.070	-0.003	54240	32062	AK-102 (C10-C25)	9564269	483
C14	3.622	-0.005	145593	74560	AK-103 (C25-C36)	3836222	441
C16	4.112	-0.003	182851	105419	OR.DIES (C10-C28)	11267759	534
C18	4.548	-0.002	134427	101178	OR.MOIL (C28-C40)	2554346	227
C20	1.929	0.001	118833	96894	JET-A (C10-C18)	5096687	322
C22	5.264	0.004	69733	58412			
C24	5.560	0.003	134711	100939			
C25	5.687	-0.009	76805	83841			
C26	5.827	0.000	76881	57006			
C28	6.065	-0.010	353927	288526			
C32	6.541	0.013	146015	122602			
C34	6.769	0.004	21386	10858			
Filter Peak	8.668	-0.006	5867	4089			
C36	7.037	-0.004	20431	33409	CREOSOT (C8-C22)	8586902	1343
C38	7.376	0.000	9523	3394			
C40	7.797	0.000	8230	8461	BUNKERC (C10-C38)	13627291	1412

*diesel  
NO*

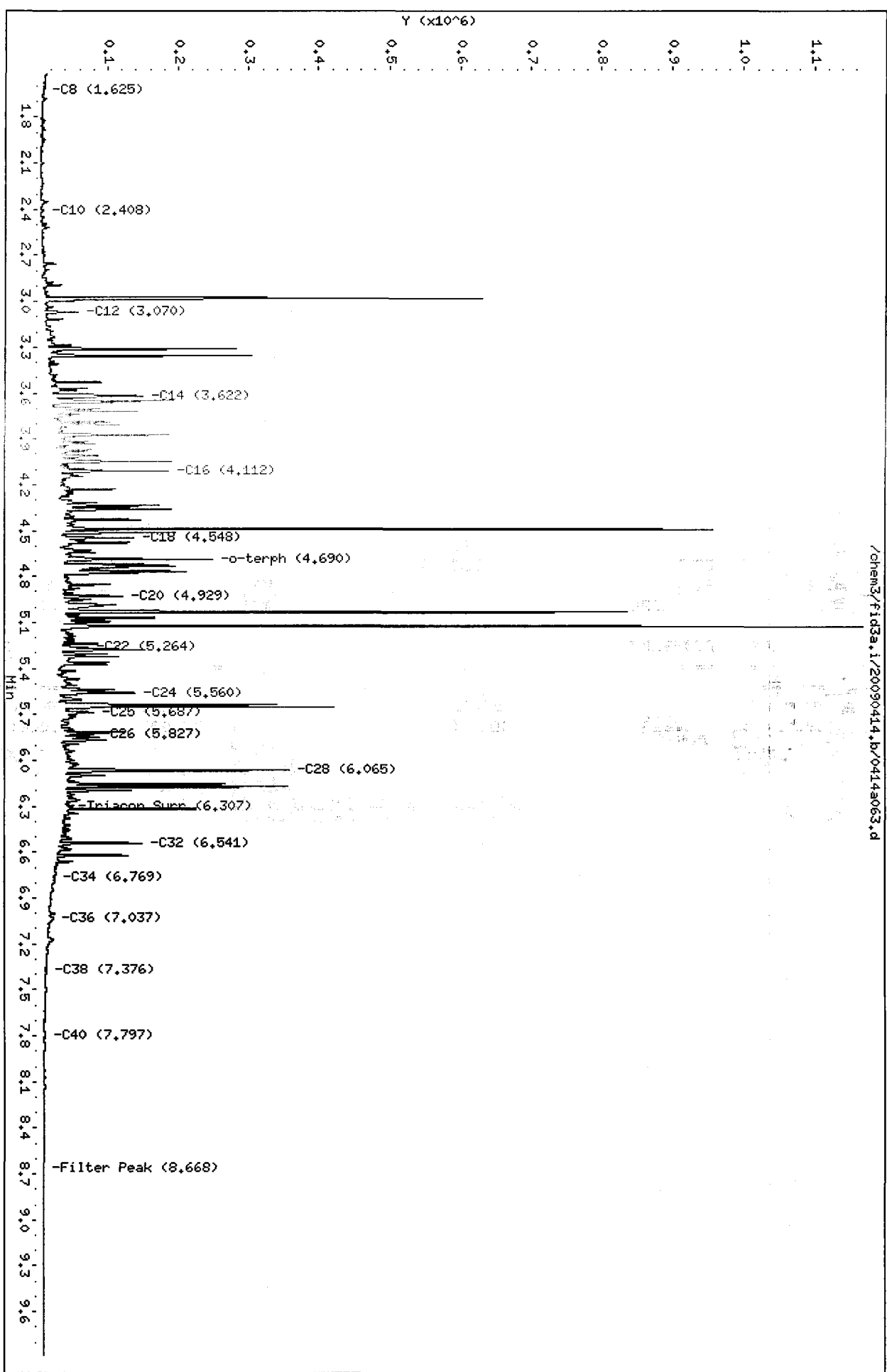
Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	94052	4.4	97.3
Triacotane	50781	3.0	66.5

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414a063.d  
Date: 15-APR-2009 02:36  
Client ID: DDF-TP17-2  
Sample Info: 00250,10  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



PC  
4/16/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090414.b/0414a064.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25R  
Client ID: DOF-TP17-5  
Injection: 15-APR-2009 02:55  
Dilution Factor: 5

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.001	17650	32777	GAS (Tol-C12)	314470	16
C8	1.626	-0.004	5878	11328	DIESEL (C12-C24)	1406479	87
C10	2.413	0.004	4143	6919	M.OIL (C24-C38)	2515711	197
C12	3.072	-0.001	1951	1646	AK-102 (C10-C25)	1575200	80
C14	3.633	0.005	3285	647	AK-103 (C25-C36)	2307410	265
C16	4.112	-0.003	3734	4173	OR.DIES (C10-C28)	2428777	115
C18	4.547	-0.003	6992	8330	OR.MOIL (C28-C40)	1773812	157
C20	4.929	0.001	15047	18834	JET-A (C10-C18)	424062	27
C22	5.262	0.003	26284	26070			
C24	5.562	0.005	39487	43882			
C25	5.699	0.004	37229	31203			
C26	5.832	0.005	35799	38649			
C28	6.069	-0.005	30609	7925			
C32	6.523	-0.004	26587	8435			
C34	6.758	-0.007	32539	28426			
Filter Peak	8.677	0.003	5293	2007			
C36	7.043	0.002	13346	32843	CREOSOT (C8-C22)	1187734	186
C38	7.375	-0.002	7802	3866			
C40	7.787	-0.010	7546	22261	BUNKERC (C10-C38)	4042559	419

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	161875	7.5	83.7
Triacotane	157513	9.3	103.1

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.1/20090414.b/0414s064.d

Date: 15-APR-2009 02:55

Client ID: D0F-TP17-5

Sample Info: 0025R,5

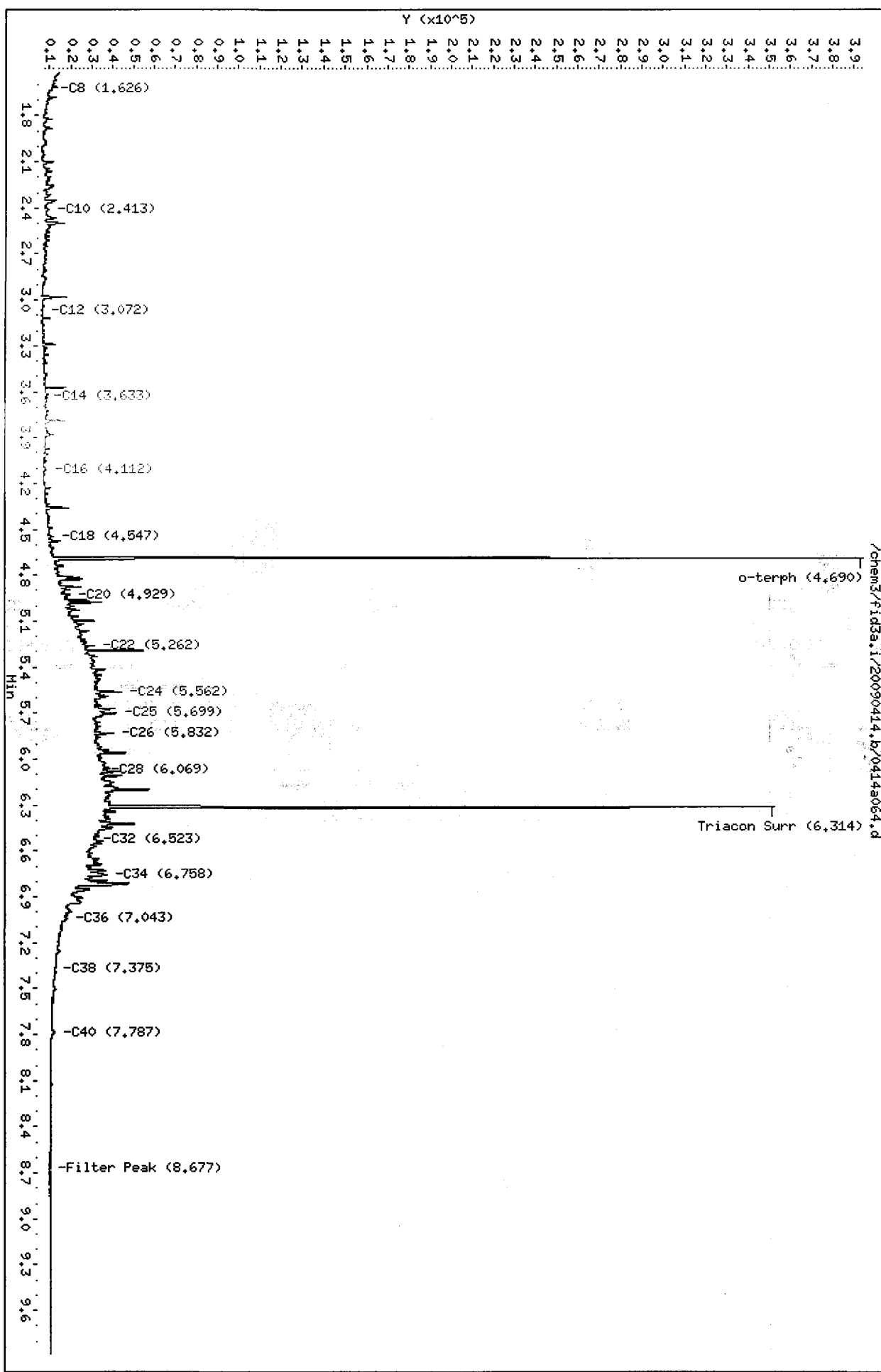
Column phase: ZB1-HT

Instrument: fid3a.1

Operator: ms

Column diameter: 0.25

/chem3/fid3a.1/20090414.b/0414s064.d



Analytical Resources Inc.  
TPH Quantitation Report

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2/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a065.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25S  
Client ID: DOF-TP18-4  
Injection: 15-APR-2009 03:13  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.489	0.002	52713	35732	GAS (Tol-C12)	240261	12
C8	1.616	-0.014	5480	6167	DIESEL (C12-C24)	327589	20
C10	2.406	-0.003	6953	6304	M.OIL (C24-C38)	1068432	84
C12	3.072	-0.002	757	724	AK-102 (C10-C25)	392438	20
C14	3.622	-0.006	1288	1445	AK-103 (C25-C36)	919151	106
C16	4.114	-0.001	1236	1341	OR.DIESL (C10-C28)	681032	32
C18	4.549	-0.001	2437	2242	OR.MOIL (C28-C40)	886939	79
C20	4.928	0.000	3354	3634	JET-A (C10-C18)	110378	7
C22	5.262	0.003	6313	5899			
C24	5.562	0.005	8622	8126			
C25	5.698	0.002	9937	10500			
C26	5.830	0.003	9980	13543			
C28	6.072	-0.002	11024	1974			
C32	6.522	-0.006	16688	16552			
C34	6.775	0.009	10613	12019			
Filter Peak	8.673	-0.001	5175	826			
C36	7.042	0.001	11477	22526	CREOSOT (C8-C22)	340496	53
C38	7.375	-0.001	5848	2210			
C40	7.787	-0.009	7353	23682	BUNKERC (C10-C38)	1433018	148

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

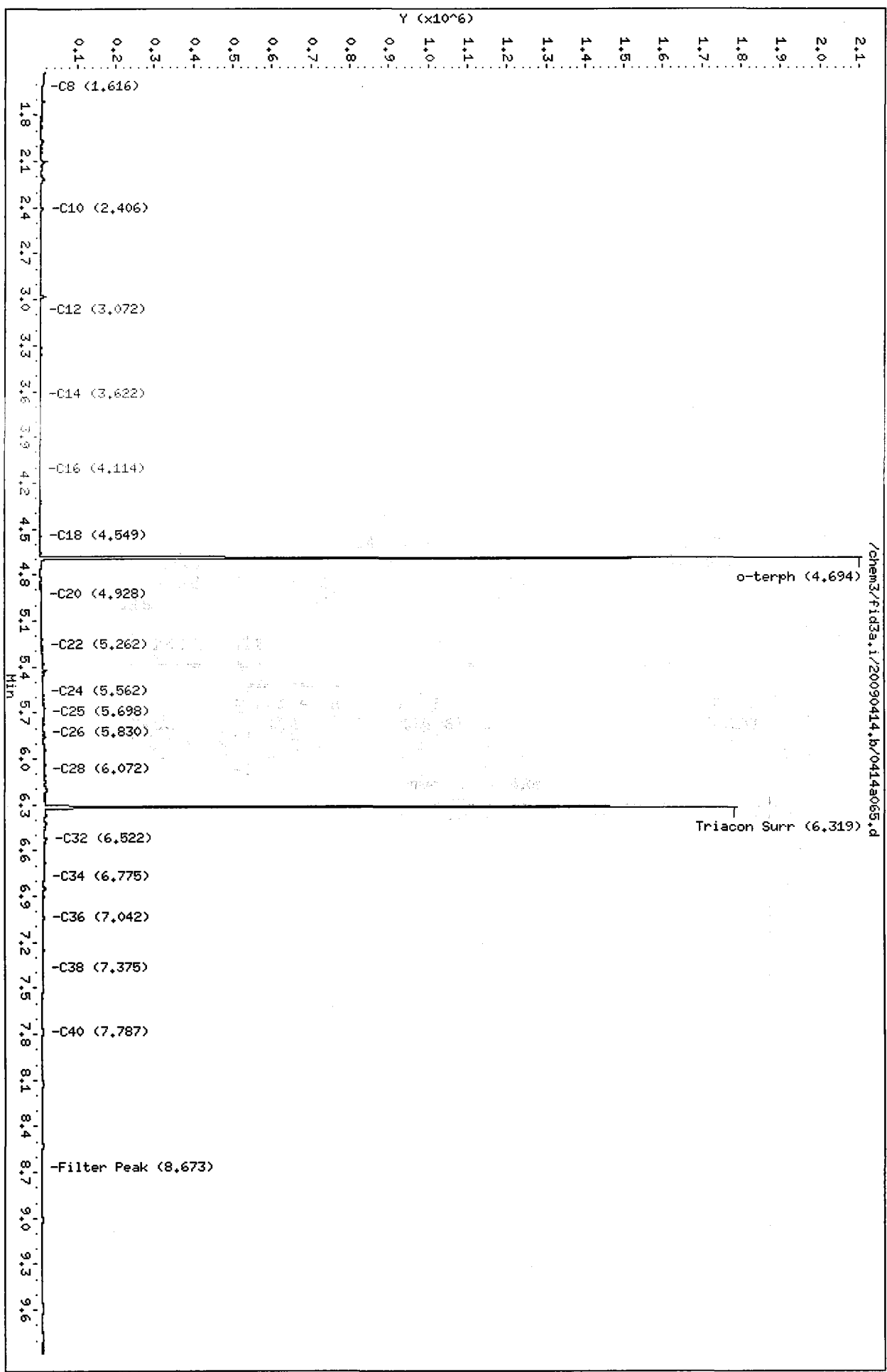
Surrogate	Area	Amount	%Rec
o-Terphenyl	976330	45.4	101.0
Triacontane	928565	54.7	121.6

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a,1/20090414,b/0414a065.d  
 Date: 15-APR-2009 03:13  
 Client ID: DDF-TP18-4  
 Sample Info: 00255  
 Column phase: ZB1-HT

Instrument: fid3a,1  
 Operator: ms  
 Column diameter: 0.25



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Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090414.b/0414a066.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25T  
Client ID: DOF-TP18-10  
Injection: 15-APR-2009 03:32  
Dilution Factor: 100

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.489	0.002	31354	23868	GAS (Tol-C12)	1753844	89
C8	1.630	0.000	6755	11187	DIESEL (C12-C24)	10236635	630 <i>diexl</i>
C10	2.407	-0.002	2825	3952	M.OIL (C24-C38)	4201792	329 <i>M.O</i>
C12	3.071	-0.003	14042	10513	AK-102 (C10-C25)	11903497	602
C14	3.640	0.012	28082	11162	AK-103 (C25-C36)	3740031	430
C16	4.112	-0.004	91816	63900	OR.DIESEL (C10-C28)	13834836	656
C18	4.548	-0.002	83304	47134	OR.MOIL (C28-C40)	2108896	187
C20	4.929	0.001	86888	88015	JET-A (C10-C18)	6453747	407
C22	5.263	0.003	57869	52638			
C24	5.560	0.003	176576	97316			
C25	5.686	-0.010	109611	108478			
C26	5.827	0.000	86088	62733			
C28	6.065	-0.010	431538	340110			
C32	6.540	0.013	146557	107962			
C34	6.774	0.008	16592	23882			
Filter Peak	8.679	0.006	5130	2548			
C36	7.031	-0.010	15804	30525	CREOSOT (C8-C22)	10894258	1703
C38	7.372	-0.004	6878	3274			
C40	7.798	0.001	6142	2822	BUNKERC (C10-C38)	15806826	1637

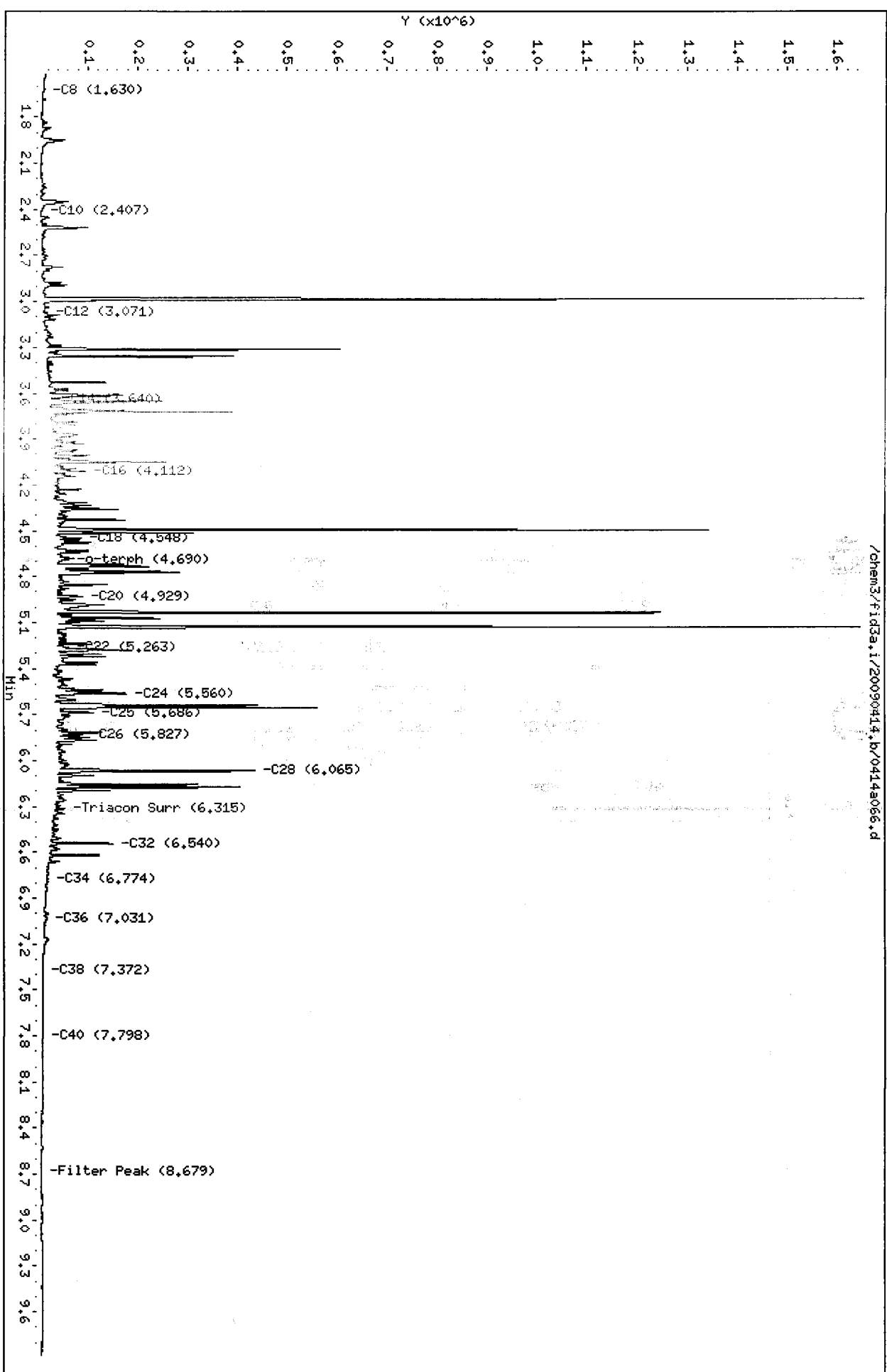
Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	9369	0.4	96.9 <i>D</i>
Triacontane	8589	0.5	112.5 <i>D</i>

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414a056.d  
Date: 15-APR-2009 03:32  
Client ID: DDF-TP18-10  
Sample Info: 0025T.100  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090414.b/0414a056.d

Analytical Resources Inc.  
TPH Quantitation Report

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Data file: /chem3/fid3a.i/20090414.b/0414a041.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25AMS  
Client ID: DOF-TP9-7 MS  
Injection: 14-APR-2009 19:46  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	-0.001	66450	47644	GAS (Tol-C12)	4773108	243
C8	1.629	-0.001	26075	15674	DIESEL (C12-C24)	22174654	1365
C10	2.408	-0.002	273753	211589	M.OIL (C24-C38)	945502	74
C12	3.072	-0.001	591788	334708	AK-102 (C10-C25)	25980774	1313
C14	3.626	-0.002	821854	675107	AK-103 (C25-C36)	825294	95
C16	4.116	0.000	933593	529441	OR.DIESEL (C10-C28)	26451017	1254
C18	4.553	0.003	837718	516921	OR.MOIL (C28-C40)	502788	45
C20	4.932	0.004	536224	382094	JET-A (C10-C18)	19601897	1237
C22	5.265	0.005	227607	149842			
C24	5.551	-0.006	33985	21544			
C25	5.701	0.006	57229	55096			
C26	5.834	0.007	34583	26180			
C28	6.067	-0.008	11963	10575			
C32	6.525	-0.002	10315	8158			
C34	6.754	-0.011	7610	8582			
Filter Peak	8.671	-0.002	3010	1439			
C36	7.047	0.006	8454	12806	CREOSOT (C8-C22)	25997393	4065
C38	7.375	-0.002	3273	1176			
C40	7.791	-0.006	4740	14715	BUNKERC (C10-C38)	26876428	2784

Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	998913	46.5	103.3
Triacontane	947696	55.8	124.1

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090414.b/0414s041.d

Date: 14-APR-2009 19:46

Client ID: DDF-TP9-7 HS

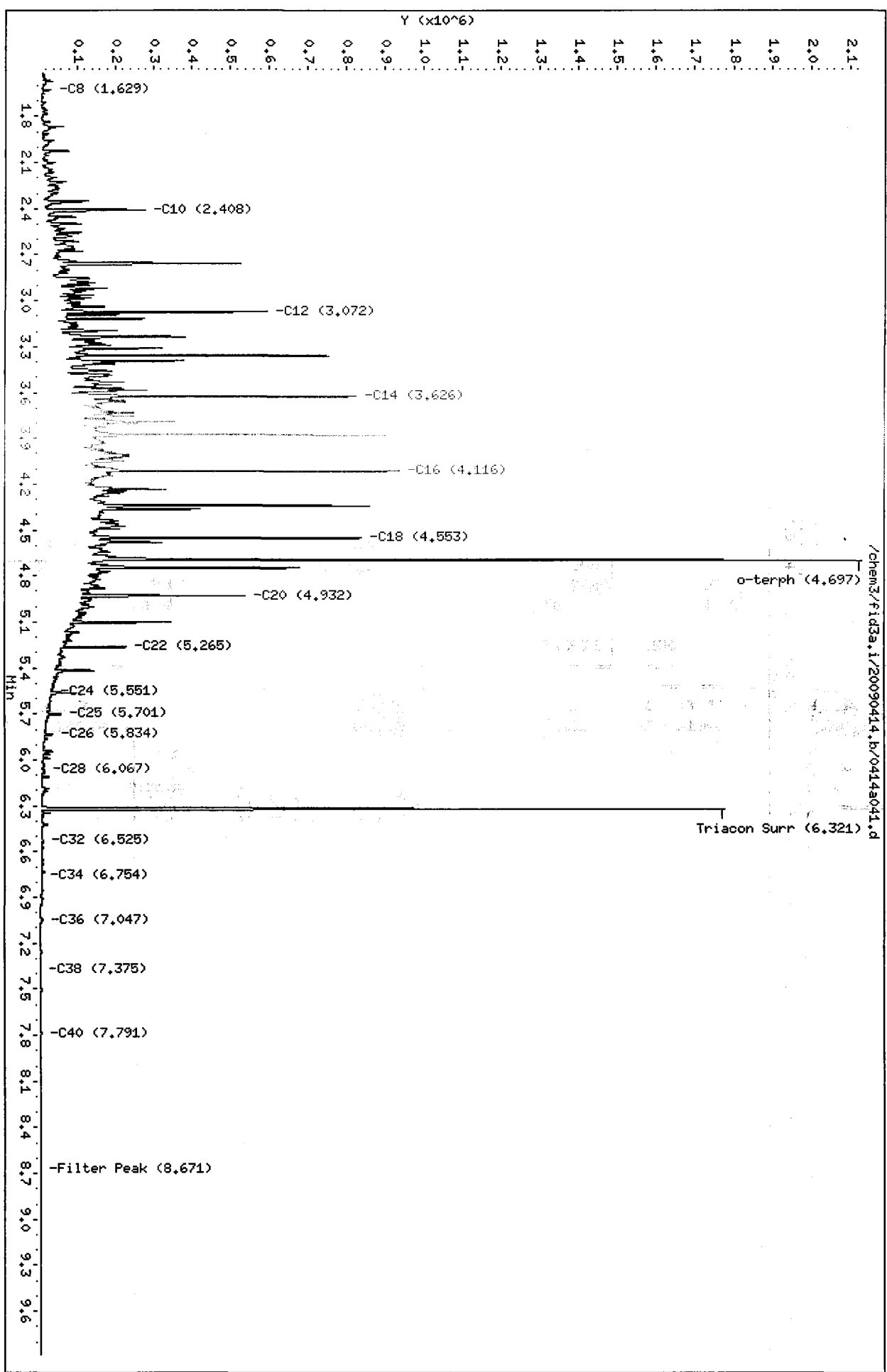
Sample Info: 0U25AHS

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

PL  
4/16/09

Data file: /chem3/fid3a.i/20090414.b/0414a045.d  
Method: /chem3/fid3a.i/20090414.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/16/2009  
Macro: FID:3A030309

ARI ID: OU25AMSD  
Client ID: DOF-TP9-7 MSD  
Injection: 14-APR-2009 21:00  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.487	0.000	97384	55454	GAS (Tol-C12)	4808678	245
C8	1.630	0.000	28895	17101	DIESEL (C12-C24)	21786954	1341
C10	2.409	0.000	276802	224898	M.OIL (C24-C38)	907531	71
C12	3.072	-0.001	648669	333389	AK-102 (C10-C25)	25596484	1294
C14	3.627	-0.001	821791	671217	AK-103 (C25-C36)	776380	89
C16	4.116	0.000	893734	528754	OR.DIES (C10-C28)	26038223	1235
C18	4.552	0.002	776688	515529	OR.MOIL (C28-C40)	482540	43
C20	4.931	0.003	566952	269700	JET-A (C10-C18)	19391287	1216
C22	5.264	0.004	228549	147946			
C24	5.563	0.006	90724	69244			
C25	5.702	0.006	54688	51602			
C26	5.834	0.007	31780	26607			
C28	6.068	-0.007	10354	9053			
C32	6.527	0.000	9840	11112			
C34	6.756	-0.010	6496	7261			
Filter Peak	8.672	-0.002	3204	1468			
C36	7.049	0.008	8451	17221	CREOSOT (C8-C22)	25636381	4008
C38	7.375	-0.001	3350	867			
C40	7.793	-0.004	5177	16862	BUNKERC (C10-C38)	26436839	2738

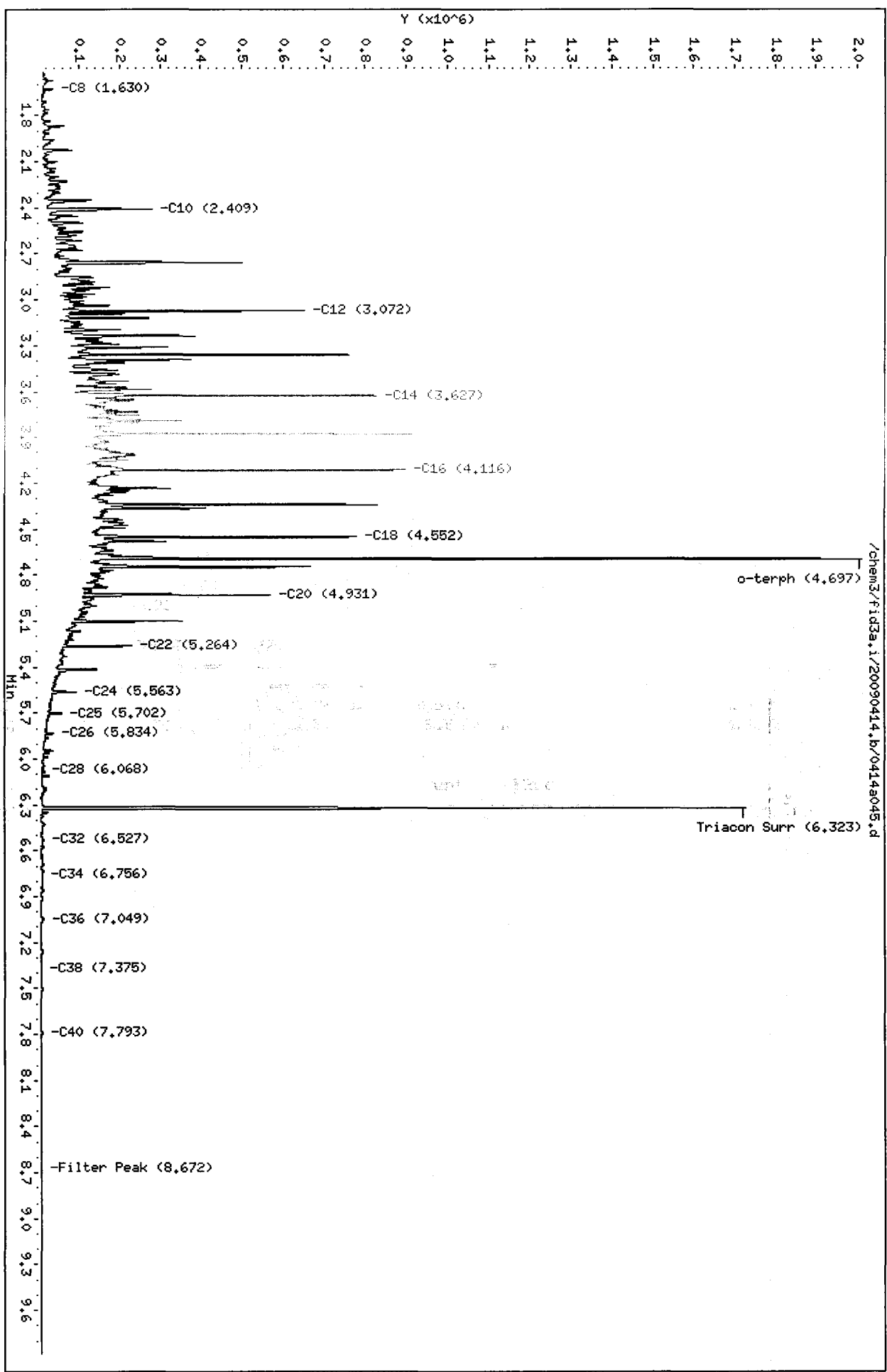
Range Times: NW Diesel(3.123 - 5.607) NW Gas(1.437 - 3.123) NW M.Oil.(5.607 - 7.427)  
AK102(2.360 - 5.646) AK103(5.646 - 7.091) Jet A(2.360 - 4.600)

Surrogate	Area	Amount	%Rec
o-Terphenyl	992118	46.2	102.6
Triacontane	905426	53.4	118.6

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a,1/20090414,b/0414a045.d  
Date: 14-APR-2009 21:00  
Client ID: D0F-TP9-7 HSD  
Sample Info: 0U25AHSD  
Column phase: ZBI-HT

Instrument: fid3a,1  
Operator: ms  
Column diameter: 0.25



ORGANICS ANALYSIS DATA SHEET  
 TPHG by Method NWTPHG  
 Matrix: Soil



QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 Event: PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Data Release Authorized: *AB*  
 Reported: 04/13/09


ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-040909 09-8684	Method Blank	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.0 U --- 94.9% 94.2%
OU25A 09-8684	DOF-TP9-7	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.9 U --- 109% 108%
OU25B 09-8685	DOF-TP10-2	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.9 U --- 120% 118%
OU25C 09-8686	DOF-TP10-14	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.4 U --- 111% 112%
OU25D 09-8687	DOF-TP11-1/3	04/09/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>360</b> GRO 115% 112%
OU25E 09-8688	DOF-TP11-6	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.5 U --- 121% 119%
OU25F 09-8689	DOF-TP12-1	04/09/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>10</b> GRO 118% 114%
OU25G 09-8690	DOF-TP12-3	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.2 U --- 107% 102%
OU25H 09-8691	DOF-TP13-2	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.6 U --- 137% 137%
OU25I 09-8692	DOF-TP13-6	04/09/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>36</b> GRO 128% 124%



ORGANICS ANALYSIS DATA SHEET  
 TPHG by Method NWTPHG  
 Matrix: Soil




QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 Event: PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Data Release Authorized:   
 Reported: 04/13/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
OU25J 09-8693	DOF-TP13-9	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 8.4 U --- 131% 131%
OU25K 09-8694	DOF-TP14-1.5	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.6 U --- 129% 128%
OU25L 09-8695	DOF-TP14-6	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.3 U --- 115% 115%
OU25M 09-8696	DOF-TP15-1.5	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.3 U --- 118% 117%
OU25N 09-8697	DOF-TP15-10	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.4 U --- 102% 102%
OU25O 09-8698	DOF-TP16-1.5	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.6 U --- 109% 106%
OU25P 09-8699	DOF-TP16-3	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.4 U --- 134% 133%
OU25Q 09-8700	DOF-TP17-2	04/09/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>150</b> GRO 119% 118%
OU25R 09-8701	DOF-TP17-5	04/09/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>16</b> GRO 108% 112%
OU25S 09-8702	DOF-TP18-4	04/09/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.5 U --- 102% 102%

**ORGANICS ANALYSIS DATA SHEET**  
**TPHG by Method NWTPHG**  
 Matrix: Soil

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 Event: PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Data Release Authorized:   
 Reported: 04/13/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
OU25T 09-8703	DOF-TP18-10	04/09/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>780</b> GRO 115% 110%

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**TPHG SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: OU25  
Matrix: Soil

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek Wrecking  
Event: PSE-004-00

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-040909	NA	94.9%	94.2%	0
LCS-040909	NA	98.2%	94.8%	0
LCS-040909	NA	96.0%	94.2%	0
DOF-TP9-7	NA	109%	108%	0
DOF-TP9-7 MS	NA	115%	111%	0
DOF-TP9-7 MSD	NA	120%	114%	0
DOF-TP10-2	NA	120%	118%	0
DOF-TP10-14	NA	111%	112%	0
DOF-TP11-1/3	NA	115%	112%	0
DOF-TP11-6	NA	121%	119%	0
DOF-TP12-1	NA	118%	114%	0
DOF-TP12-3	NA	107%	102%	0
DOF-TP13-2	NA	137%	137%	0
DOF-TP13-6	NA	128%	124%	0
DOF-TP13-9	NA	131%	131%	0
DOF-TP14-1.5	NA	129%	128%	0
DOF-TP14-6	NA	115%	115%	0
DOF-TP15-1.5	NA	118%	117%	0
DOF-TP15-10	NA	102%	102%	0
DOF-TP16-1.5	NA	109%	106%	0
DOF-TP16-3	NA	134%	133%	0
DOF-TP17-2	NA	119%	118%	0
DOF-TP17-5	NA	108%	112%	0
DOF-TP18-4	NA	102%	102%	0
DOF-TP18-10	NA	115%	110%	0

(BFB) = Bromofluorobenzene  
(TFT) = Trifluorotoluene  
(BBZ) = Bromobenzene

<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(70-130)	(70-130)
(80-120)	(65-137)
(80-120)	(54-144)

Log Number Range: 09-8684 to 09-8703

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DOF-TP9-7

MATRIX SPIKE

Lab Sample ID: OU25A

LIMS ID: 09-8684

Matrix: Soil

Data Release Authorized: *AB*

Reported: 04/13/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

Event: PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Date Analyzed MS: 04/09/09 09:58

MSD: 04/09/09 10:23

Instrument/Analyst MS: PID3/MH

MSD: PID3/MH

Purge Volume: 5.0 mL

Sample Amount MS: 87.1 mg-dry-wt

MSD: 86.4 mg-dry-wt

Analyte	Sample	Spike		MS		Spike		MSD	
		MS	Added-MS	Recovery	MSD	Added-MSD	Recovery	RPD	
Gasoline Range Hydrocarbons <	5.89 U	55.4	50.8	109%	57.6	51.2	112%	3.9%	

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	MS	MSD
Trifluorotoluene	115%	120%
Bromobenzene	111%	114%

**ORGANICS ANALYSIS DATA SHEET**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: LCS-040909**  
**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-040909  
 LIMS ID: 09-8684  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 04/13/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek Wrecking  
 Event: PSE-004-00  
 Date Sampled: NA  
 Date Received: NA

Date Analyzed LCS: 04/09/09 08:04  
 LCSD: 04/09/09 08:28  
 Instrument/Analyst LCS: PID3/MH  
 LCSD: PID3/MH

Purge Volume: 5.0 mL  
 Sample Amount LCS: 100 mg-dry-wt  
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	46.3	50.0	92.6%	46.5	50.0	93.0%	0.4%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	98.2%	96.0%
Bromobenzene	94.8%	94.2%

MH  
4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a006.d      ARI ID: MB0409  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a006.d      Client ID:  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 08:53  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 10-DEC-2008                                Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.011	6057	71685	94.9	TFT(Surr)
14.963	0.006	3677	30703	94.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	11807	0.017
8015B (2MP-TMB)	11798	0.008
AKGas (nC6-nC10)	9159	0.008
NWGas (Tol-Nap)	14324	0.020

\* Surrogate areas are subtracted from Total Area  
=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.012	19978	94.9	TFT(Surr)
14.961	0.007	42548	94.4	BB(Surr)

AROMATICICS (PID)

-----

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090409-2.b/0409a006.d

Date: 09-APR-2009 08:53

Client ID:

Sample Info: HB0409

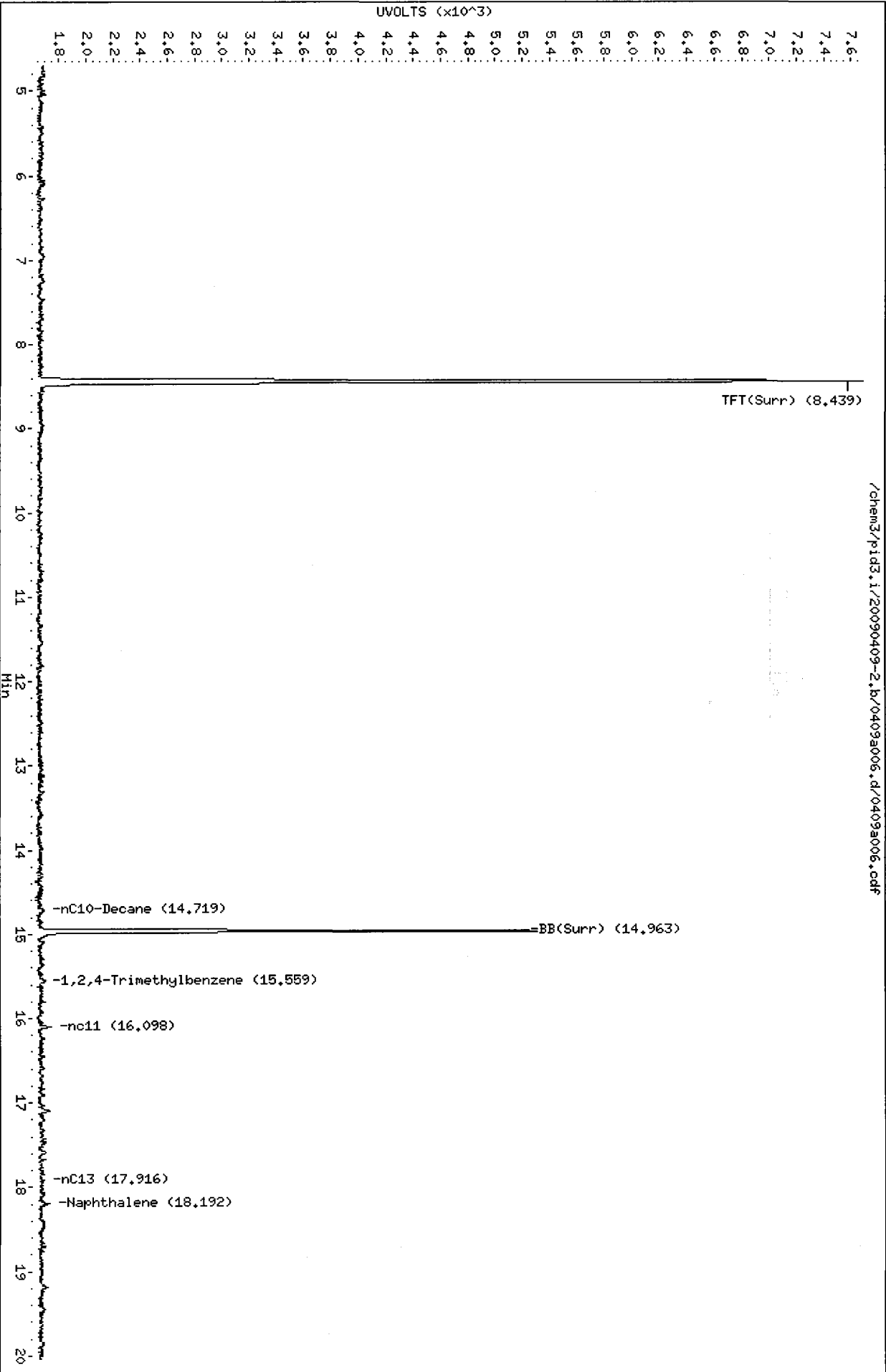
Instrument: pid3.i

Operator: PKC

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090409-2.b/0409a006.d/0409a006.cdf



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4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a004.d      ARI ID: LCS0409  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a004.d      Client ID:  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 08:04  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.437	0.008	6268	74168	98.2	TFT(Surr)
14.961	0.004	3699	30929	94.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	626225	0.913
8015B (2MP-TMB)	1193860	0.856
AKGas (nC6-nC10)	956686	0.864
NWGas (Tol-Nap)	671517	0.926

\* Surrogate areas are subtracted from Total Area  
=====

RT	Shift	PID Surrogates Response	%Rec	Compound
8.435	0.009	20662	98.1	TFT(Surr)
14.960	0.005	43180	95.8	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
7.703	0.008	6082	4.37	Benzene
10.319	0.010	45755	33.83	Toluene
12.878	0.009	10009	8.17	Ethylbenzene
13.019	0.011	46662	35.16	M/P-Xylene
13.799	0.008	16240	12.69	O-Xylene
5.260	-0.011	1974	4.68	MTBE

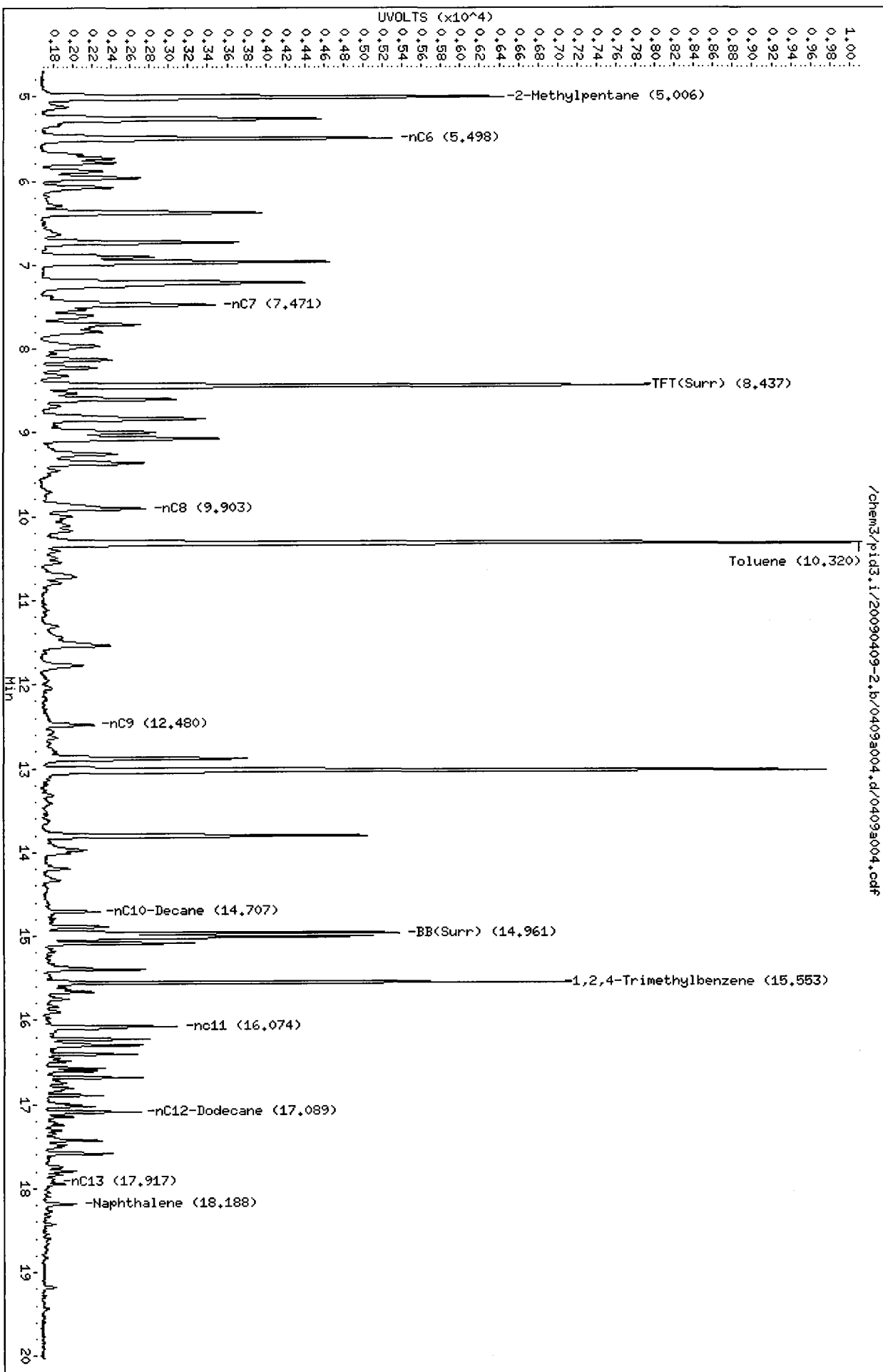
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20090409-2.b/0409a004.d  
Date : 09-APR-2009 08:04  
Client ID:  
Sample Info: LCS0409

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: PKC  
Column diameter: 0.18



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4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a005.d      ARI ID: LCSD0409  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a005.d      Client ID:  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 08:28  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.438	0.010	6126	72647	96.0	TFT(Surr)
14.962	0.005	3676	30256	94.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	631190	0.920
8015B (2MP-TMB)	1193493	0.856
AKGas (nC6-nC10)	960272	0.867
NWGas (Tol-Nap)	674948	0.930

\* Surrogate areas are subtracted from Total Area

=====  
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.437	0.011	20378	96.8	TFT(Surr)
14.961	0.006	42499	94.3	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.706	0.010	5951	4.28	Benzene
10.320	0.011	46366	34.28	Toluene
12.879	0.010	10093	8.24	Ethylbenzene
13.020	0.012	47184	35.56	M/P-Xylene
13.800	0.009	16439	12.84	O-Xylene
5.263	-0.008	1929	4.57	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090409-2.b/0409a005.d

Date : 09-APR-2009 08:28

Client ID:

Sample Info: LCSD0409

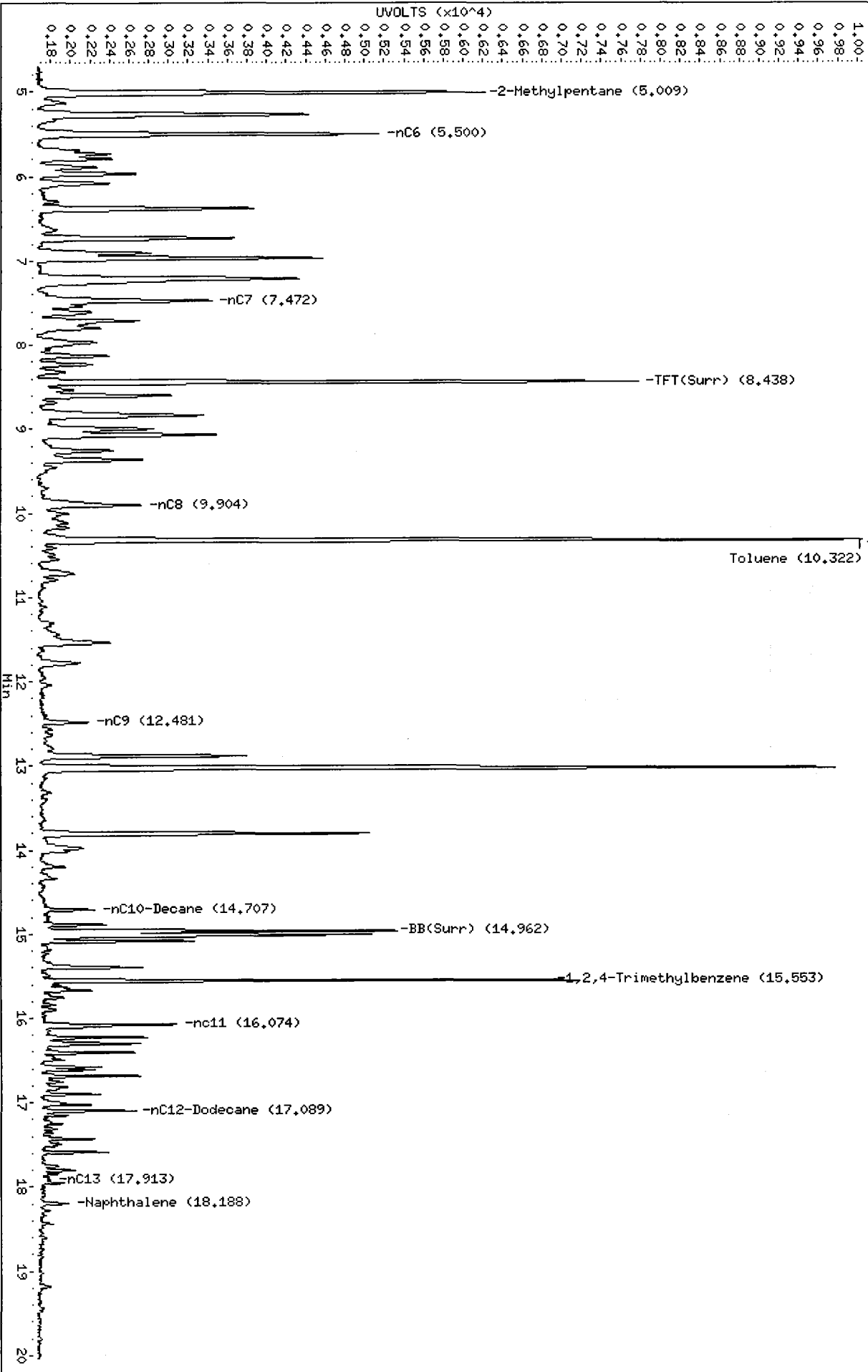
Instrument: pid3.i

Operator: PKC

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090409-2.b/0409a005.d/0409a005.cdf



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4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a012.d      ARI ID: OU25D  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a012.d      Client ID: DOF-TP11-1/3  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 11:35  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                                      Dilution Factor: ~~1.000~~  
BETX Ical Date: 25-FEB-2009                                      2.0 MH 4/13/09

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.011	2831	33314	44.4	TFT(Surr)
14.962	0.005	1702	13807	43.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	393277	0.574
8015B (2MP-TMB)	148285	0.106
AKGas (nC6-nC10)	63532	0.057
NWGas (Tol-Nap)	939196	1.295

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.012	9272	44.0	TFT(Surr)
14.961	0.006	19574	43.4	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.705	0.010	1183	0.85	Benzene
10.321	0.012	519	0.38	Toluene
12.880	0.011	6044	4.93	Ethylbenzene
13.017	0.009	5595	4.22	M/P-Xylene
13.801	0.010	6215	4.86	O-Xylene
ND	---	---	---	MTBE

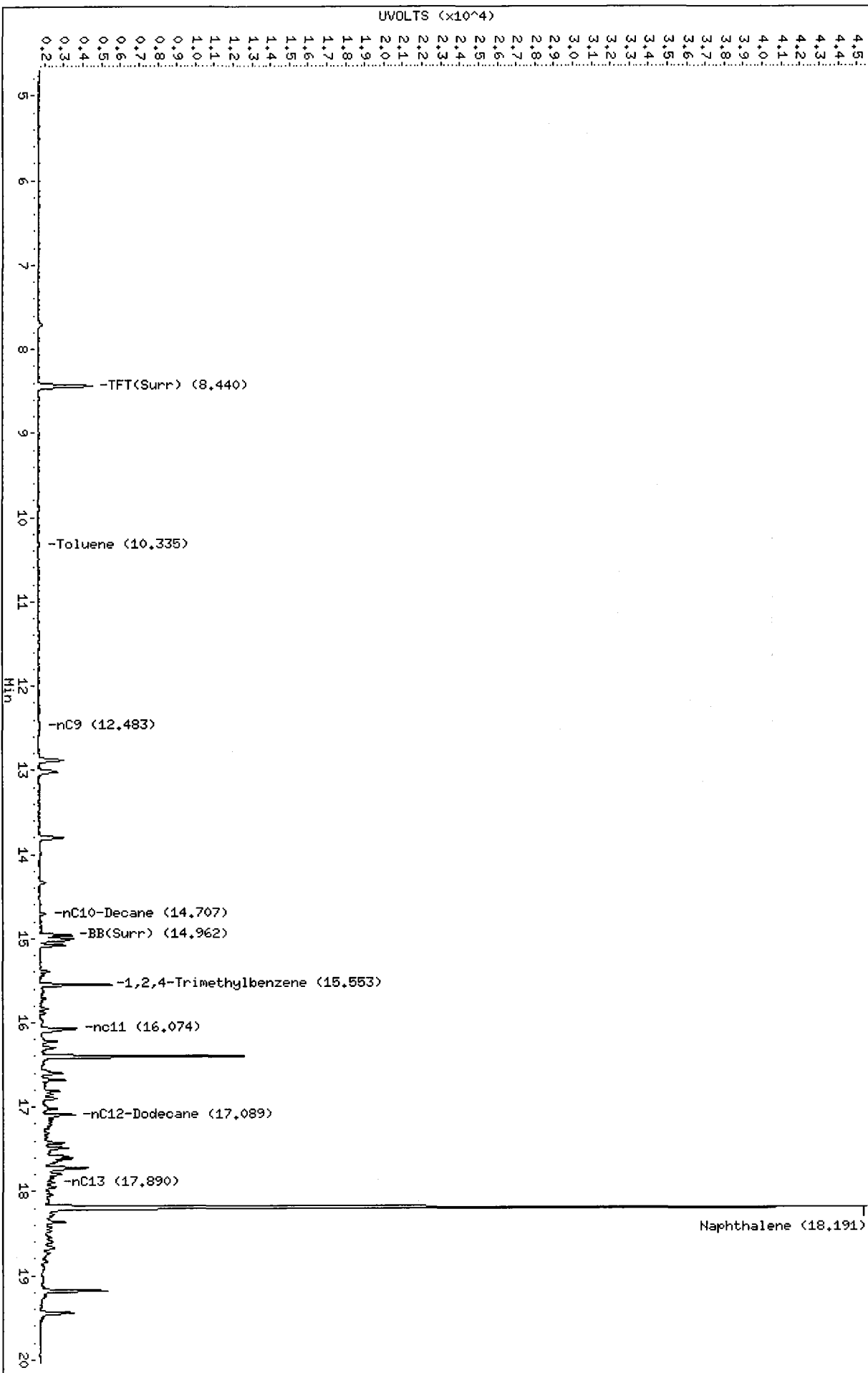
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090409-2.b/0409a012.d  
Date : 09-APR-2009 11:35  
Client ID: DDF-TP11-1/3  
Sample Info: 0U25D

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090409-2.b/0409a012.d/0409a012.cdf

Instrument: pid3.i  
Operator: PKC  
Column diameter: 0.18



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4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a016.d      ARI ID: OU25F  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a016.d      Client ID: DOF-TP12-1  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 13:13  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.011	6624	77953	103.8	TFT(Surr)
14.962	0.005	3915	33367	100.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	74488	0.109
8015B (2MP-TMB)	51762	0.037
AKGas (nC6-nC10)	44561	0.040
NWGas (Tol-Nap)	126762	0.175

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.012	22043	104.7	TFT(Surr)
14.961	0.006	45788	101.6	BB(Surr)

AROMATICS (PID)

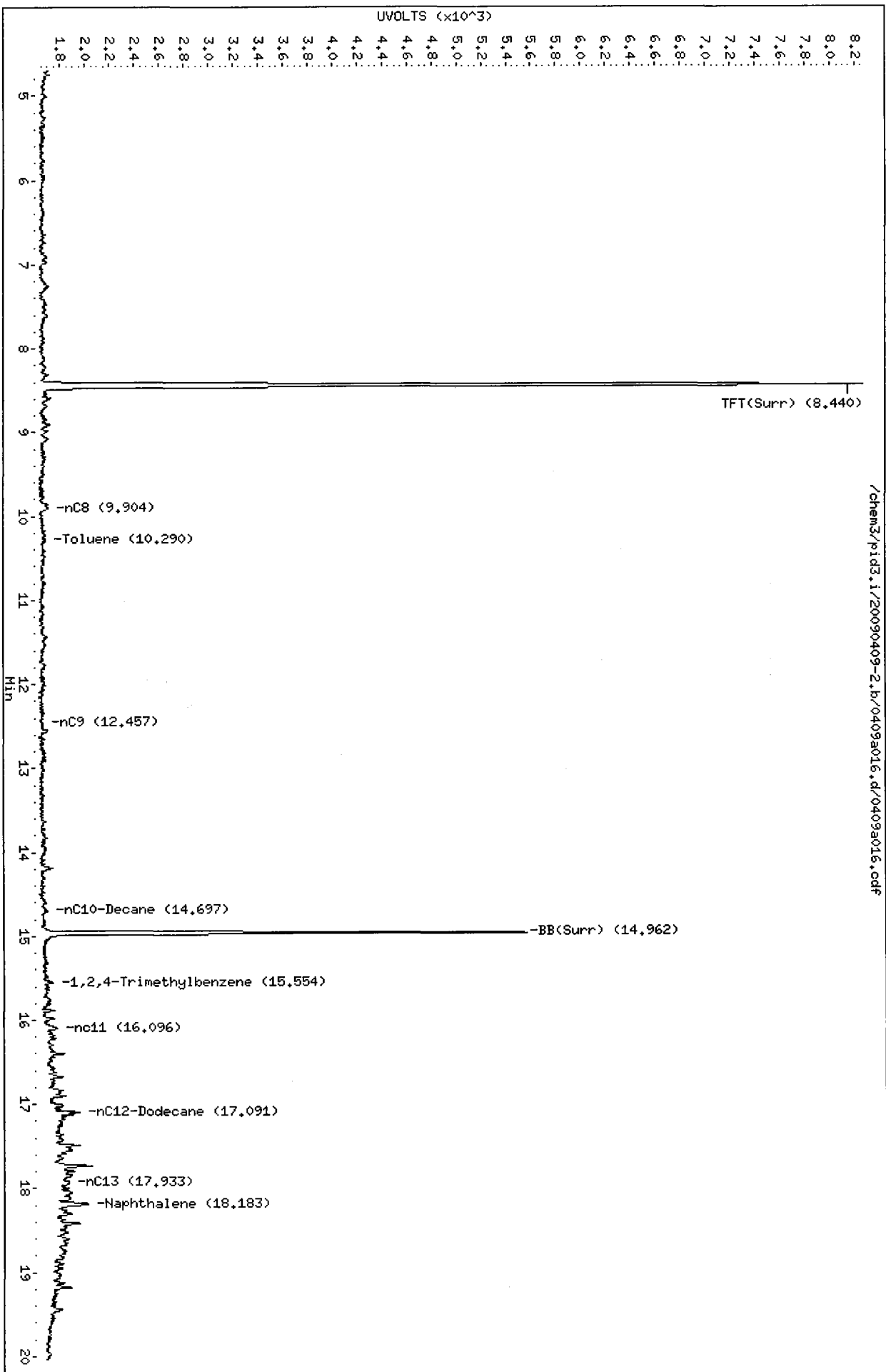
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090409-2.b/0409a016.d  
Date: 09-APR-2009 13:13  
Client ID: DDF-TP12-1  
Sample Info: 0U25F

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: PKC  
Column diameter: 0.18



MH  
4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a019.d      ARI ID: OU25I  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a019.d      Client ID: DOF-TP13-6  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 14:26  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.438	0.010	5458	64244	85.5	TFT(Surr)
14.962	0.005	3228	27989	82.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	124208	0.181
8015B (2MP-TMB)	23214	0.017
AKGas (nC6-nC10)	4305	0.004
NWGas (Tol-Nap)	286040	0.394

\* Surrogate areas are subtracted from Total Area

=====

RT	Shift	PID Surrogates Response	%Rec	Compound
--	----	-----	----	-----
8.436	0.010	18090	85.9	TFT(Surr)
14.960	0.005	37204	82.5	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20090409-2.b/0409a019.d

Date : 09-APR-2009 14:26

Client ID: D0F-TP13-6

Sample Infor: 0U251

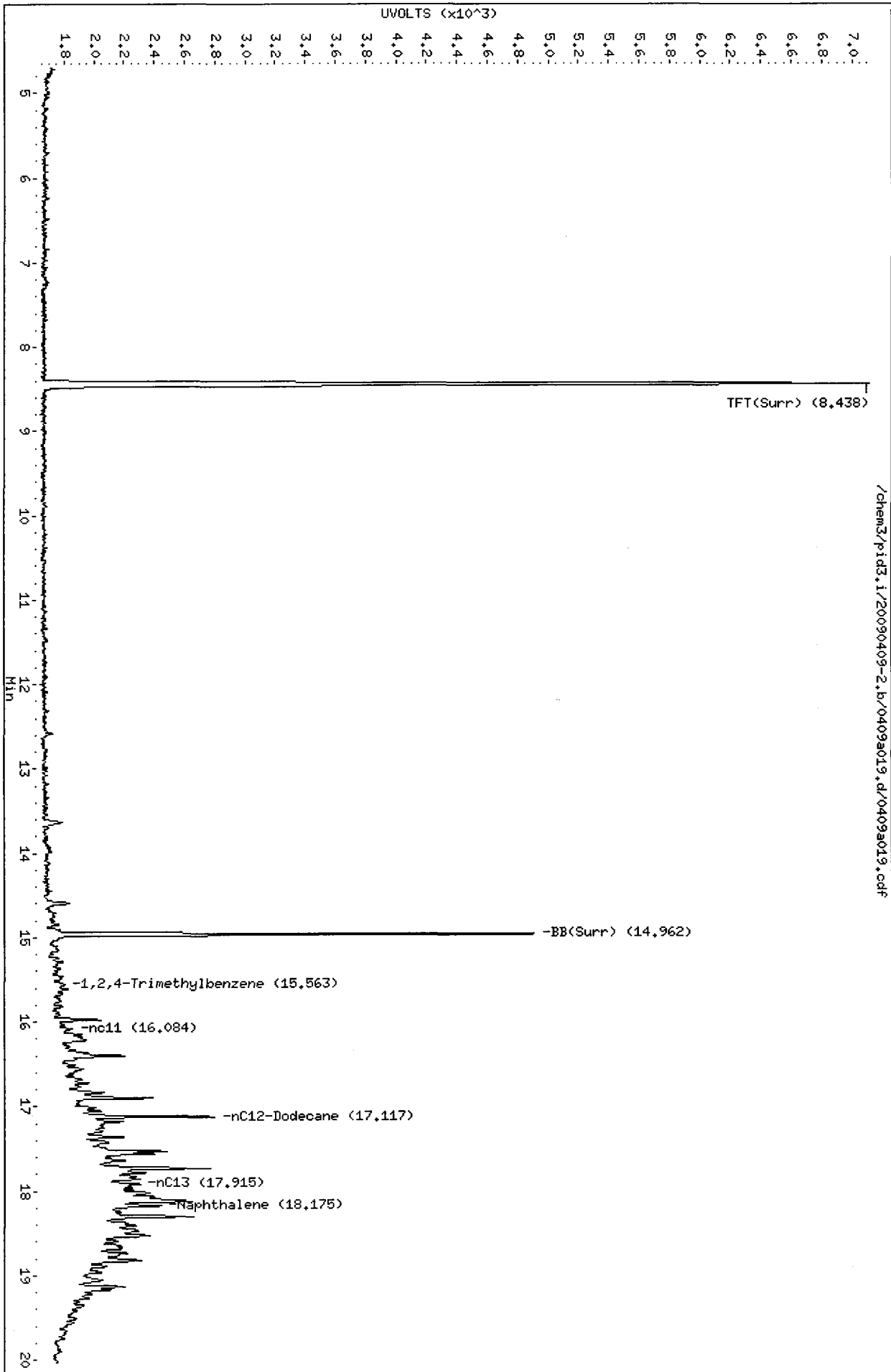
Instrument: pid3.i

Operator: PKC

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090409-2.b/0409a019.d/0409a019.cdf



MH  
4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a032.d      ARI ID: OU25Q  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a032.d      Client ID: DOF-TP17-2  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 19:43  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.438	0.009	6166	72368	96.6	TFT(Surr)
14.959	0.002	3736	30950	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	739416	1.078
8015B (2MP-TMB)	226652	0.163
AKGas (nC6-nC10)	80188	0.072
NWGas (Tol-Nap)	1709472	2.356

\* Surrogate areas are subtracted from Total Area

=====  
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
8.436	0.010	19764	93.9	TFT(Surr)
14.958	0.003	42073	93.3	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.706	0.010	394	0.28	Benzene
10.320	0.011	676	0.50	Toluene
12.876	0.007	4924	4.02	Ethylbenzene
13.016	0.008	6040	4.55	M/P-Xylene
13.799	0.008	4146	3.24	O-Xylene
ND	---	---	---	MTBE

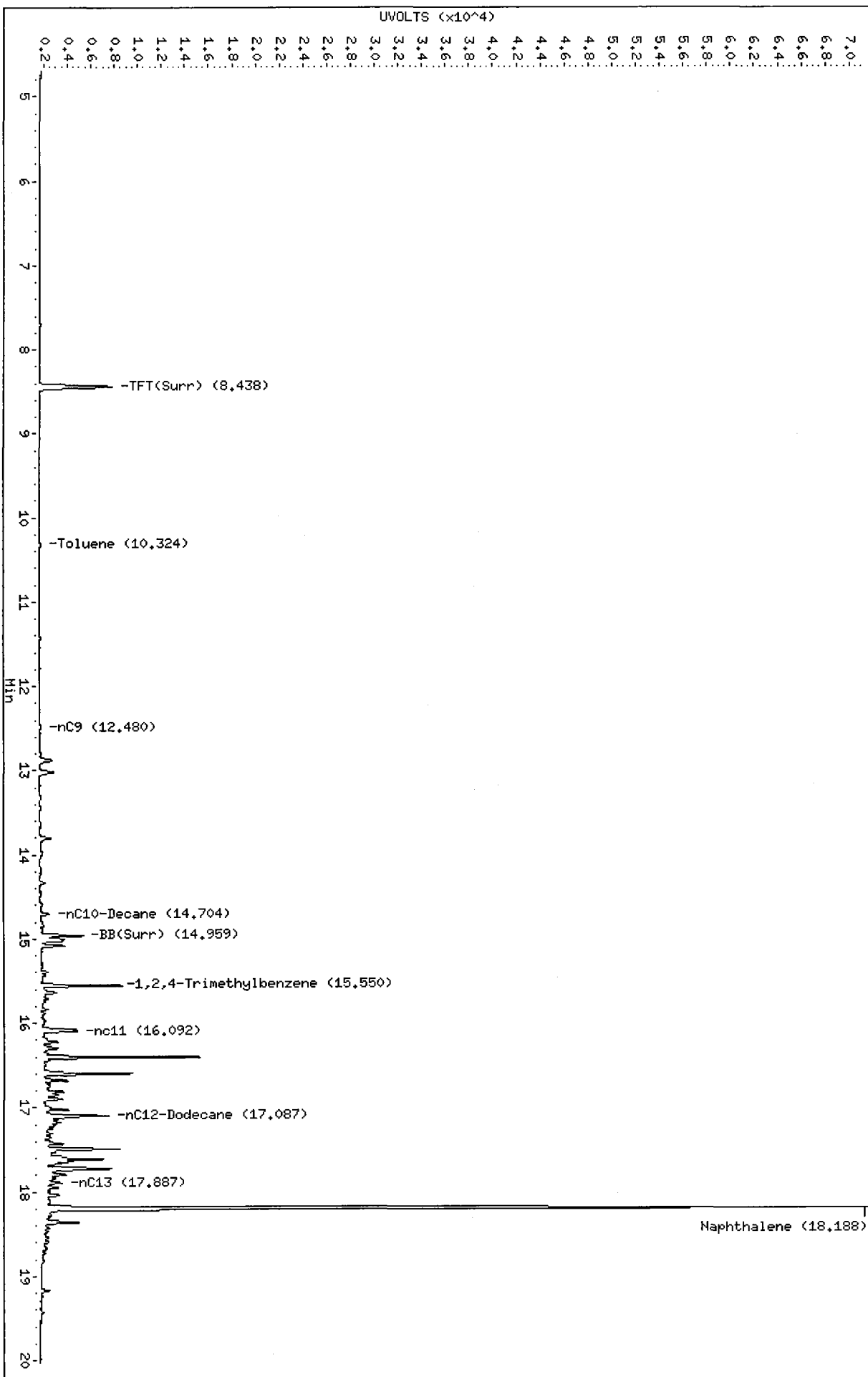
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090409-2.b/0409a032.d  
Date : 09-APR-2009 19:43  
Client ID: DOF-TP17-2  
Sample Info: 0U250

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: PKC  
Column diameter: 0.18

/chem3/pid3.i/20090409-2.b/0409a032.d/0409a032.cdf



MH  
4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a029.d      ARI ID: OU25R  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a029.d      Client ID: DOF-TP17-5  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 18:30  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.438	0.009	5488	64582	86.0	TFT(Surr)
14.960	0.003	3470	29675	88.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	151070	0.220
8015B (2MP-TMB)	89850	0.064
AKGas (nC6-nC10)	41015	0.037
NWGas (Tol-Nap)	172424	0.238

\* Surrogate areas are subtracted from Total Area  
=====

RT	Shift	PID Surrogates Response	%Rec	Compound
8.437	0.010	17437	82.8	TFT(Surr)
14.958	0.004	37669	83.6	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090409-2.b/0409a029.d

Date : 09-APR-2009 18:30

Client ID: DDF-TP17-5

Sample Info: 0U25R

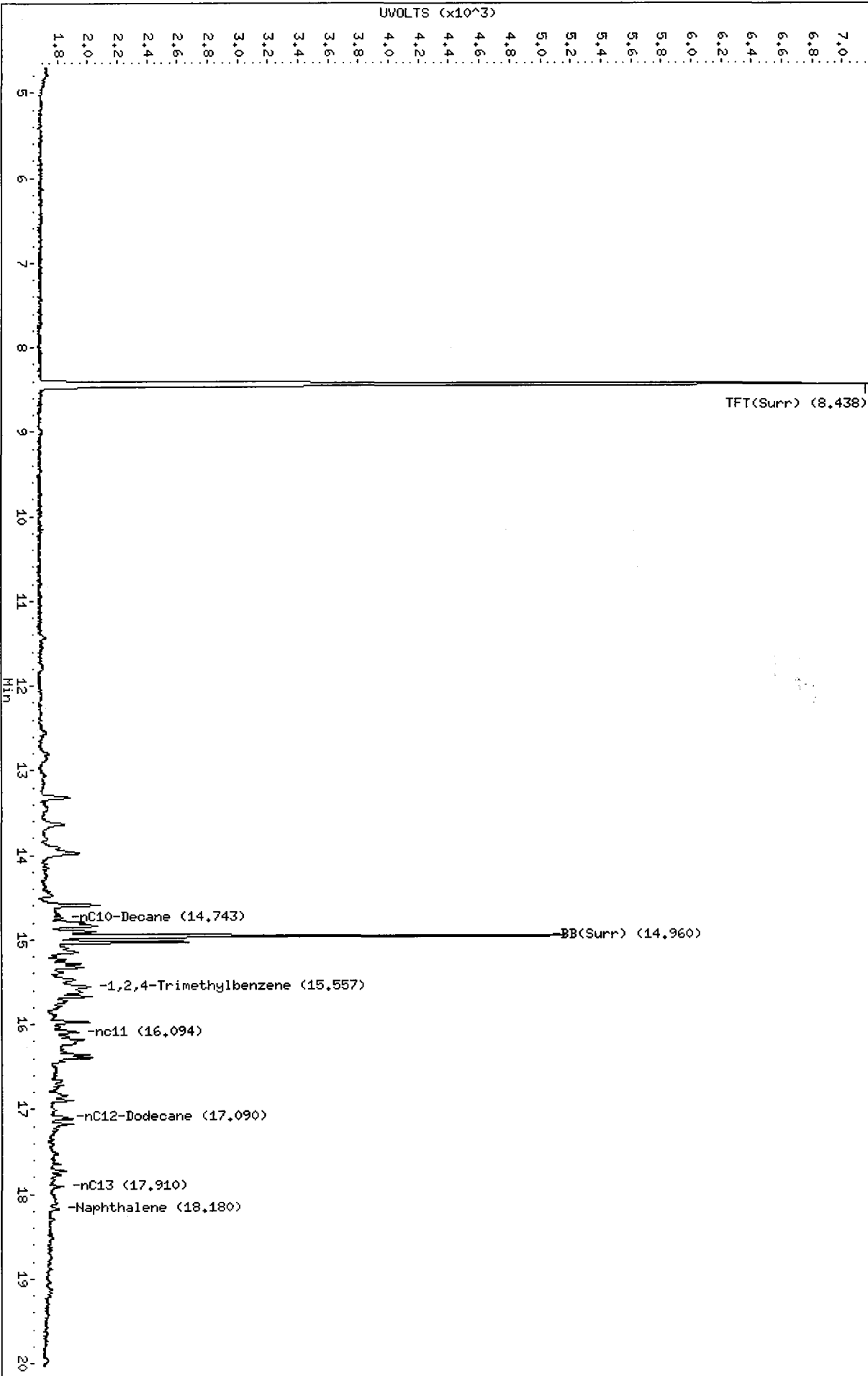
Instrument: pid3.i

Operator: PKC

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090409-2.b/0409a029.d/0409a029.cdf



MH  
4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a031.d      ARI ID: OU25T  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a031.d      Client ID: DOF-TP18-10  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 19:19  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: ~~1.000~~  
BETX Ical Date: 25-FEB-2009                                  2.0 MH 4/13/09

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.437	0.008	2616	30837	41.0	TFT(Surr)
14.960	0.003	1536	12818	39.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	811624	1.184
8015B (2MP-TMB)	328880	0.236
AKGas (nC6-nC10)	134953	0.122
NWGas (Tol-Nap)	1701742	2.346

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.435	0.009	8173	38.8	TFT(Surr)
14.959	0.004	17062	37.8	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.704	0.008	4012	2.88	Benzene
10.319	0.010	1850	1.37	Toluene
12.877	0.008	8522	6.96	Ethylbenzene
13.013	0.005	12958	9.76	M/P-Xylene
13.799	0.007	23616	18.45	O-Xylene
ND	---	---	---	MTBE

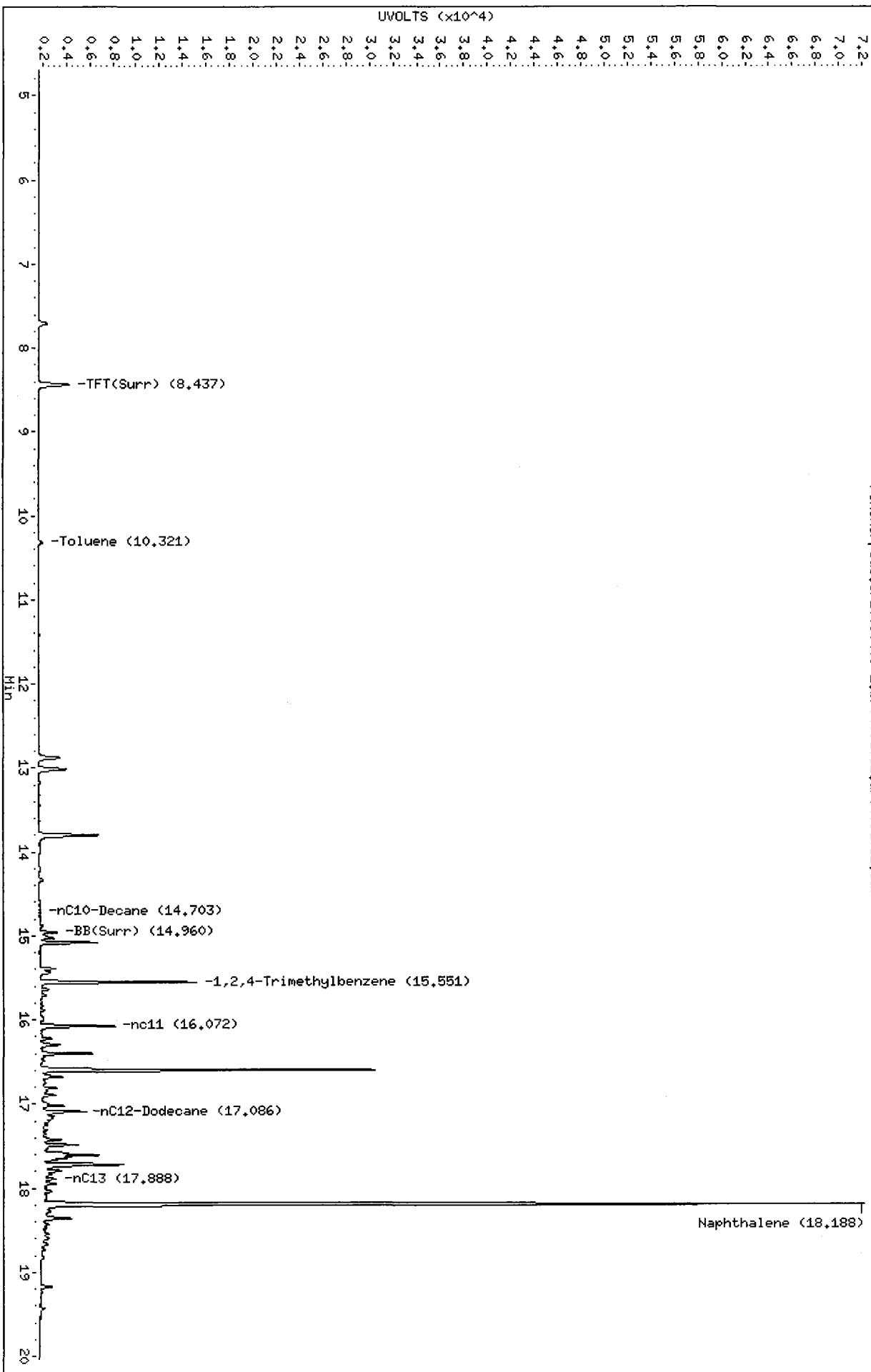
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090409-2.b/0409a031.d  
Date: 09-APR-2009 19:19  
Client ID: DDF-TP18-10  
Sample Info: 0U25T

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090409-2.b/0409a031.d/0409a031.cdf

Instrument: pid3.i  
Operator: PKC  
Column diameter: 0.18



MH  
4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a008.d      ARI ID: OU25AMS  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a008.d      Client ID:  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 09:58  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.433	0.004	6516	77095	102.1	TFT(Surr)
14.959	0.002	3821	31219	97.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	658594	0.960
8015B (2MP-TMB)	1332592	0.956
AKGas (nC6-nC10)	1060776	0.958
NWGas (Tol-Nap)	701140	0.966

\* Surrogate areas are subtracted from Total Area  
=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.432	0.005	21525	102.2	TFT(Surr)
14.957	0.003	44196	98.0	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
7.700	0.005	6603	4.74	Benzene
10.315	0.006	48591	35.93	Toluene
12.874	0.005	10759	8.78	Ethylbenzene
13.015	0.007	49436	37.25	M/P-Xylene
13.796	0.005	17238	13.47	O-Xylene
5.258	-0.013	2429	5.76	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20090409-2.b/04093008.d

Date : 09-APR-2009 09:58

Client ID:

Sample Info: 0U259HS

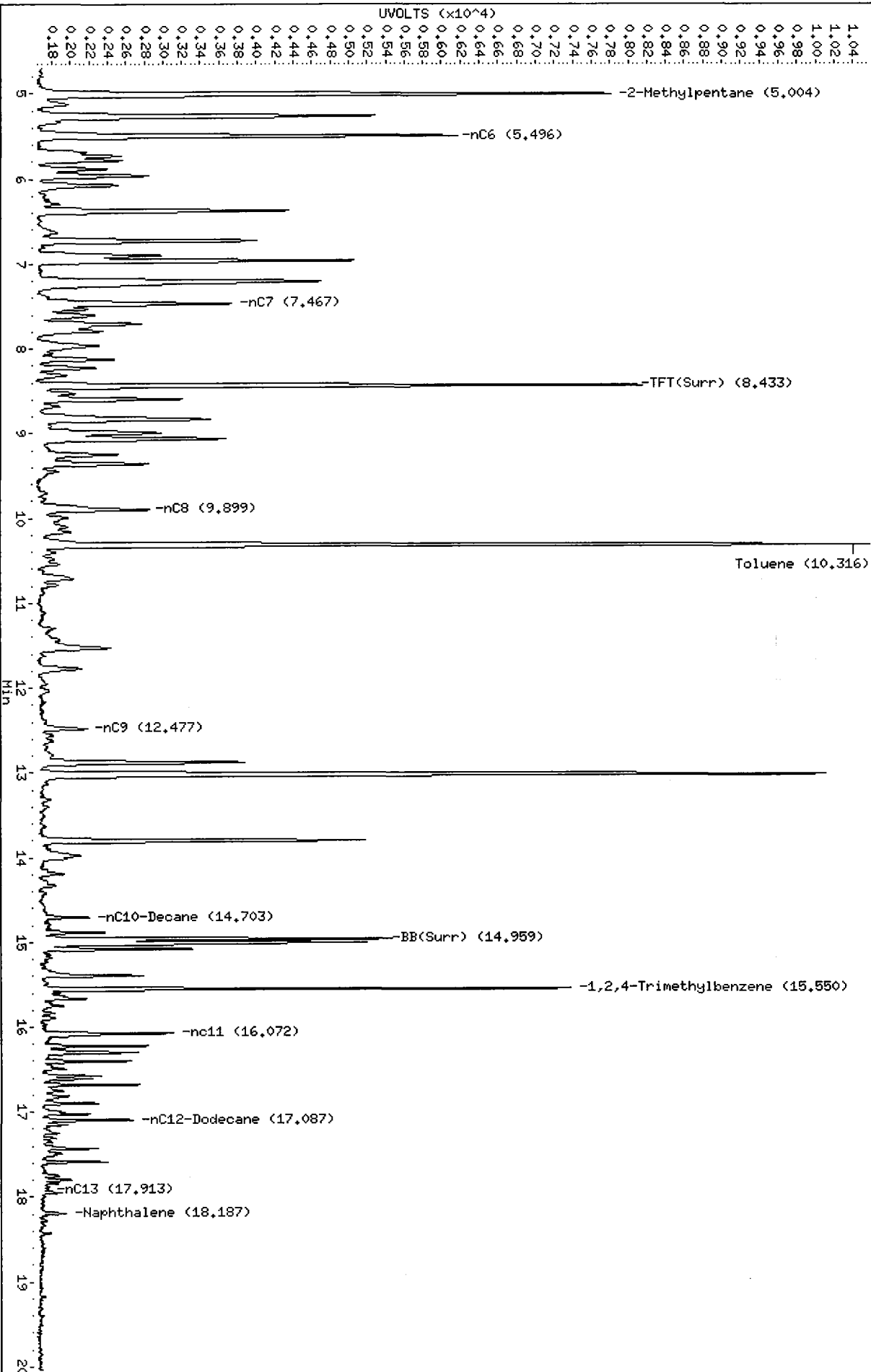
Instrument: pid3.i

Operator: PKC

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090409-2.b/04093008.d/04093008.cdf



MH  
4/13/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090409-2.b/0409a009.d      ARI ID: OU25AMSD  
Data file 2: /chem3/pid3.i/20090409-1.b/0409a009.d      Client ID:  
Method: /chem3/pid3.i/20090409-1.b/PIDB.m              Injection Date: 09-APR-2009 10:23  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 10-DEC-2008                                   Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.437	0.008	6812	80692	106.7	TFT(Surr)
14.961	0.004	3948	33050	101.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	677252	0.988
8015B (2MP-TMB)	1370404	0.983
AKGas (nC6-nC10)	1088482	0.983
NWGas (Tol-Nap)	722488	0.996

\* Surrogate areas are subtracted from Total Area

=====  
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.435	0.009	22521	107.0	TFT(Surr)
14.960	0.005	46138	102.3	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.704	0.008	6735	4.84	Benzene
10.319	0.010	50940	37.66	Toluene
12.878	0.009	11191	9.14	Ethylbenzene
13.019	0.011	52210	39.34	M/P-Xylene
13.799	0.008	17847	13.94	O-Xylene
5.261	-0.010	2490	5.90	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090409-2.b/0409a009.d

Date : 09-APR-2009 10:23

Client ID:

Sample Info: 0U25AHSD

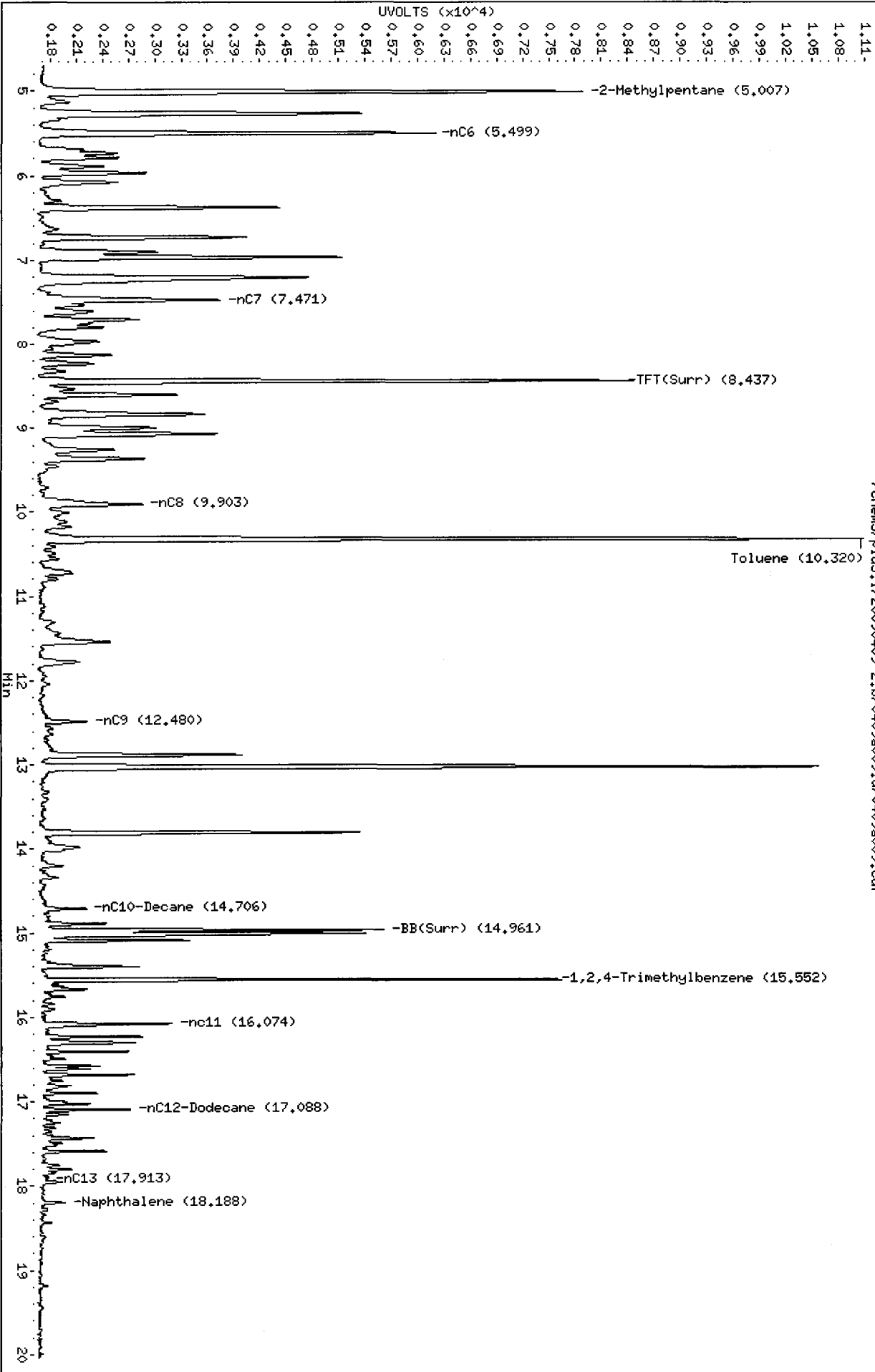
Instrument: pid3.i

Operator: PKC

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090409-2.b/0409a009.d/0409a009.cdf



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP9-7  
SAMPLE

Lab Sample ID: OU25A

LIMS ID: 09-8684

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 92.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>52.2</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>30.2</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>3</b>	
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	0.02	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>36</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>37</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP9-7  
DUPLICATE

Lab Sample ID: OU25A

LIMS ID: 09-8684

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	5 U	5 U	0.0%	+/- 5	L
Barium	6010B	52.2	65.0	21.8%	+/- 20%	*
Cadmium	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Chromium	6010B	30.2	29.0	4.1%	+/- 20%	
Lead	6010B	3	2	40.0%	+/- 2	L
Mercury	7471A	0.02 U	0.02	0.0%	+/- 0.02	L
Nickel	6010B	36	33	8.7%	+/- 20%	
Zinc	6010B	37	34	8.5%	+/- 20%	

Reported in mg/kg-dry

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

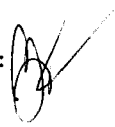
Sample ID: DOF-TP9-7

**MATRIX SPIKE**

Lab Sample ID: OU25A

LIMS ID: 09-8684

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	5 U	183	198	92.4%	
Barium	6010B	52.2	230	198	89.8%	
Cadmium	6010B	0.2 U	46.7	49.6	94.2%	
Chromium	6010B	30.2	74.9	49.6	90.1%	
Lead	6010B	3	179	198	88.9%	
Mercury	7471A	0.02 U	0.24	0.207	116%	
Nickel	6010B	36	76	49.6	80.6%	
Zinc	6010B	37	77	49.6	80.6%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

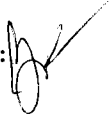
Page 1 of 1

Sample ID: DOF-TP10-2  
SAMPLE

Lab Sample ID: OU25B

LIMS ID: 09-8685

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 86.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>87.8</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>44.9</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>4</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.04</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>51</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>40</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

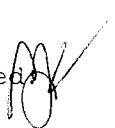
Page 1 of 1

**Sample ID: DOF-TP10-14  
SAMPLE**

Lab Sample ID: OU25C

LIMS ID: 09-8686

Matrix: Soil

Data Release Authorized 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 84.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>42.3</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>24.1</b>	
3050B	04/22/09	6010B	05/01/09	7439-92-1	Lead	2	2	U
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	0.02	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>32</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>28</b>	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP11-1/3  
SAMPLE**

Lab Sample ID: OU25D

LIMS ID: 09-8687

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 85.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	10	
3050B	04/22/09	6010B	04/24/09	7440-39-3	Barium	0.3	283	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	7440-47-3	Chromium	0.5	27.0	
3050B	04/22/09	6010B	04/24/09	7439-92-1	Lead	2	29	
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	0.13	
3050B	04/22/09	6010B	04/24/09	7440-02-0	Nickel	1	49	
3050B	04/22/09	6010B	04/24/09	7440-66-6	Zinc	1	46	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: DOF-TP11-6  
SAMPLE**

Lab Sample ID: OU25E

LIMS ID: 09-8688

Matrix: Soil

Data Release Authorized: *AM*

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 83.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>73.8</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>30.8</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>21</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.04</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>36</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>48</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP12-1  
SAMPLE**

Lab Sample ID: OU25F

LIMS ID: 09-8689

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 92.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>1,550</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>14.9</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>12</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.02</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>17</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>34</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

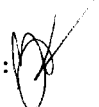
Page 1 of 1

Sample ID: DOF-TP12-3  
SAMPLE

Lab Sample ID: OU25G

LIMS ID: 09-8690

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 91.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>81.5</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>25.0</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>2</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.02</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>35</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>30</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP13-2  
SAMPLE**

Lab Sample ID: OU25H

LIMS ID: 09-8691

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 89.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>67.0</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>31.9</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>4</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.03</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>44</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>37</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP13-6  
SAMPLE**

Lab Sample ID: OU25I

LIMS ID: 09-8692

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 69.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	7	7	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.4	<b>86.8</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.7	<b>29.2</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	3	<b>12</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.03	<b>0.33</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>34</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>78</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP13-9  
SAMPLE

Lab Sample ID: OU25J

LIMS ID: 09-8693

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 84.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/27/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	04/27/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>30.2</b>	
3050B	04/22/09	6010B	04/27/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/27/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>21.1</b>	
3050B	04/22/09	6010B	04/27/09	7439-92-1	Lead	2	2	U
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	0.02	U
3050B	04/22/09	6010B	04/27/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>31</b>	
3050B	04/22/09	6010B	04/27/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>24</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP14-1.5  
SAMPLE**

Lab Sample ID: OU25K

LIMS ID: 09-8694

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 89.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>64.2</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>28.6</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>4</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.03</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>35</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>27</b>	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

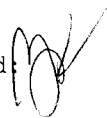
Page 1 of 1

**Sample ID: DOF-TP14-6  
SAMPLE**

Lab Sample ID: OU25L

LIMS ID: 09-8695

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 89.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>51.2</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>26.6</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>9</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.04</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>30</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>50</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

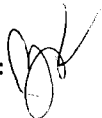
Page 1 of 1

Sample ID: DOF-TP15-1.5  
SAMPLE

Lab Sample ID: OU25M

LIMS ID: 09-8696

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 91.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>38.6</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>20.0</b>	
3050B	04/22/09	6010B	04/24/09	7439-92-1	Lead	2	2	U
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	0.02	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>27</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>21</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP15-10  
SAMPLE**

Lab Sample ID: OU25N

LIMS ID: 09-8697

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 86.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>48.0</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>22.8</b>	
3050B	04/22/09	6010B	04/24/09	7439-92-1	Lead	2	2	U
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	0.02	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>28</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>24</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP16-1.5  
SAMPLE

Lab Sample ID: OU250

LIMS ID: 09-8698

Matrix: Soil

Data Release Authorized 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 88.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/27/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/27/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>66.0</b>	
3050B	04/22/09	6010B	04/27/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/27/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>27.1</b>	
3050B	04/22/09	6010B	04/27/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>13</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.04</b>	
3050B	04/22/09	6010B	04/27/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>36</b>	
3050B	04/22/09	6010B	04/27/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>45</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP16-3  
SAMPLE

Lab Sample ID: OU25P

LIMS ID: 09-8699

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 85.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>74.6</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>32.4</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>19</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.03	<b>0.04</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>40</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>42</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP17-2  
SAMPLE

Lab Sample ID: OU25Q

LIMS ID: 09-8700

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 88.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>61.0</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>30.7</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>17</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.04</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>37</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>45</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

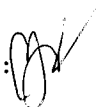
Page 1 of 1

Sample ID: DOF-TP17-5  
SAMPLE

Lab Sample ID: OU25R

LIMS ID: 09-8701

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 87.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>79.9</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-43-9</b>	<b>Cadmium</b>	0.2	<b>0.3</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>30.1</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>61</b>	
CLP	04/15/09	7471A	04/17/09	<b>7439-97-6</b>	<b>Mercury</b>	0.02	<b>0.04</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>36</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>88</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

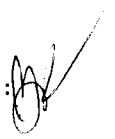
Page 1 of 1

**Sample ID: DOF-TP18-4  
SAMPLE**

Lab Sample ID: OU25S

LIMS ID: 09-8702

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 95.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>43.0</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>38.8</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>3</b>	
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	0.02	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>43</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>41</b>	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP18-10  
SAMPLE

Lab Sample ID: OU25T

LIMS ID: 09-8703

Matrix: Soil

Data Release Authorized 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 80.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	10	70	
3050B	04/22/09	6010B	04/24/09	7440-39-3	Barium	0.9	435	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.6	0.6	U
3050B	04/22/09	6010B	04/24/09	7440-47-3	Chromium	1	37	
3050B	04/22/09	6010B	04/24/09	7439-92-1	Lead	6	139	
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	1.63	
3050B	04/22/09	6010B	04/24/09	7440-02-0	Nickel	3	302	
3050B	04/22/09	6010B	04/24/09	7440-66-6	Zinc	3	88	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: METHOD BLANK**

Lab Sample ID: OU25MB

LIMS ID: 09-8685

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	7440-39-3	Barium	0.3	0.3	U
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	7440-47-3	Chromium	0.5	0.5	U
3050B	04/22/09	6010B	04/24/09	7439-92-1	Lead	2	2	U
CLP	04/15/09	7471A	04/17/09	7439-97-6	Mercury	0.02	0.02	U
3050B	04/22/09	6010B	04/24/09	7440-02-0	Nickel	1	1	U
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>6</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: OU25LCS

LIMS ID: 09-8685

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU25-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek Wrecking

PSE-004-00

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	175	200	87.5%	
Barium	6010B	172	200	86.0%	
Cadmium	6010B	44.9	50.0	89.8%	
Chromium	6010B	44.6	50.0	89.2%	
Lead	6010B	180	200	90.0%	
Mercury	7471A	0.50	0.50	100%	
Nickel	6010B	43	50	86.0%	
Zinc	6010B	49	50	98.0%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

May 14, 2009

Matt Dalton  
Dalton, Olmsted, & Fuglevand  
10827 NE 68th, Suite B  
Kirkland, WA 98033

**RE: Client Project: Verbeek Wrecking**  
**ARI Job No.: OU21**

Dear Matt:

Please find enclosed the original Chain-of-Custody record, sample receipt documentation, and the final analytical results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted twenty soil samples as part of a larger sample delivery group on April 6, 2009. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for volatiles, semivolatiles, NWTPH-D, NWTPH-G, and total metals as requested on the COC.

For the semivolatiles analysis, the continuing calibrations were within the control limits for the 4/16/09 and 4/24/09 analyses with several outliers acceptable under ARI SOP as marginal exceedances. No corrective action was required. No further anomalies are noted for these analyses.

An electronic copy of this report will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Susan D. Dunning".

Susan Dunning  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile OU21

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **0221**  
 Turn-around Requested: **NORMAL**  
 ARI Client Company: **DAVID CRUSSETT & FUGLEMAN**  
 Phone: **MATT DUTTON / DAVE COOPER**  
 Client Contact: **MATT DUTTON / DAVE COOPER**  
 Client Project Name: **VERBEX WRECKING**  
 Client Project #: **PSE-004-00**  
 Samplers: **06606H**

Page: **1** of **6**  
 Date: **4/6/09**  
 No. of Coolers: **1**  
 Cooler Temps: **9.2**  
 Ice Present? **YES**

Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments	
					NUMPH-IX	BZTO FULL-IX	PAHs	AS, Cd, Cr, Pb, Hg, Ni, Zn		MEHMS * BTEX
DOF-TP1-3	4/2/09	0930	SOIL	2	X	X	X	X	X	
DOF-TP1-1B		1005			X	X	X	X	X	
DOF-TP2-3		1025			X	X	X	X	X	
DOF-TP2-9		1030			X	X	X	X	X	
DOF-TP3-3		1035			X	X	X	X	X	
DOF-TP3-B		1040			X	X	X	X	X	* MEHMS 60107000
DOF-TP3-12		1045			X	X	X	X	X	
DOF-TP4-4		1230			X	X	X	X	X	
DOF-TP4-6		1240			X	X	X	X	X	
DOF-TP4-B		1245			X	X	X	X	X	
Comments/Special Instructions	Relinquished by: <b>Yumi Hayas</b> (Signature) Printed Name: <b>Yumi Hayas</b> Company: <b>ARI</b> Date & Time: <b>4/6/09 1450</b>				Relinquished by: <b>Yumi Hayas</b> (Signature) Printed Name: <b>Yumi Hayas</b> Company: <b>ARI</b> Date & Time: <b>4/6/09 1450</b>				Received by: <b>Yumi Hayas</b> (Signature) Printed Name: <b>Yumi Hayas</b> Company: <b>ARI</b> Date & Time: <b>4/6/09 1450</b>	

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

# Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



Page: 2 of 6  
 Date: 4/6/09 Ice Present? yes  
 No. of Coolers: 1 Cooler Temps: 9.2

ARI Assigned Number: NONMTR  
 Turn-around Requested:  
 ARI Client Company: DOF Phone:  
 Client Contact: MAT DUNN / ALB COOK

Client Project Name: VERBEN WIREMUNG  
 Client Project #: ASE-004-00  
 Samplers: ALB COOK

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested	Notes/Comments
DOF-TP5-3	4/2/09	1305	SOIL	2	*METHS AS, Cd, Cu, Pb Hg, Ni, Zn PHTS BZD FULL CONC MURPH-DK	
DOF-TP5-B		1310			X	
DOF-TP6-Z		1330			X	
DOF-TP6-b		1335			X	
DOF-TP7-1		1570			X	
DOF-TP7-3		1515			X	
DOF-TP8-4		1410			X	
DOF-TP8-B		1415			X	
DOF-TP9-Z		1440			X	
DOF-TP9-3		1445			X	

Comments/Special Instructions

Relinquished by: (Signature) <u>Alb Cook</u>	Relinquished by: (Signature) <u>Sammi Hayes</u>
Printed Name: <u>Alb Cook</u>	Printed Name: <u>Sammi Hayes</u>
Company: <u>DOF</u>	Company: <u>ARI</u>
Date & Time: <u>4/6/09 1430</u>	Date & Time: <u>4/6/09 1450</u>

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



# Cooler Receipt Form

ARI Client: DOF

Project Name: VERBEEK WRECK INUGT

COC No(s): \_\_\_\_\_ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_

Assigned ARI Job No: 0021

Tracking No: \_\_\_\_\_ NA

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? ..... YES NO

Were custody papers properly filled out (ink, signed, etc.) ..... YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 9.2

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: \_\_\_\_\_

Cooler Accepted by: JH Date: 4/6/09 Time: 1450

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? ..... YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: N

Was sufficient ice used (if appropriate)? ..... NA YES NO

Were all bottles sealed in individual plastic bags? ..... YES NO

Did all bottles arrive in good condition (unbroken)? ..... YES NO

Were all bottle labels complete and legible? ..... YES NO

Did the number of containers listed on COC match with the number of containers received? ..... YES NO

Did all bottle labels and tags agree with custody papers? ..... YES NO

Were all bottles used correct for the requested analyses? ..... YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? ..... NA YES NO

Was sufficient amount of sample sent in each bottle? ..... YES NO

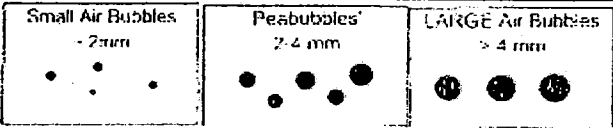
Samples Logged by: MH Date: 4/7/09 Time: 808

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

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



Small → "sm"  
Peabubbles → "pb"  
Large → "lg"  
Headspace → "hs"



## Data Reporting Qualifiers

Effective 12/28/04

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- NR Spiked compound recovery is not reported due to chromatographic interference
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for





- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference

### Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: MB-040909

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-040909


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8656

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 04/09/09 10:58

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	102%
d8-Toluene	101%
Bromofluorobenzene	98.6%
d4-1,2-Dichlorobenzene	98.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: MB-041009

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-041009


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8659

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 04/10/09 17:04

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	102%
Bromofluorobenzene	97.7%
d4-1,2-Dichlorobenzene	99.3%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP1-3

Page 1 of 1

SAMPLE

Lab Sample ID: OU21A

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8641

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.87 g-dry-wt

Date Analyzed: 04/09/09 11:58

Purge Volume: 5.0 mL

Moisture: 16.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	106%
d8-Toluene	99.5%
Bromofluorobenzene	92.7%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP1-18

Page 1 of 1

SAMPLE

Lab Sample ID: OU21B


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8642

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.86 g-dry-wt

Date Analyzed: 04/09/09 13:20

Purge Volume: 5.0 mL

Moisture: 15.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	107%
d8-Toluene	100%
Bromofluorobenzene	97.4%
d4-1,2-Dichlorobenzene	97.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP2-3

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU21C

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8643

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.85 g-dry-wt

Date Analyzed: 04/09/09 13:47

Purge Volume: 5.0 mL

Moisture: 16.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	101%
Bromofluorobenzene	96.4%
d4-1,2-Dichlorobenzene	98.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP2-9

Page 1 of 1

SAMPLE

Lab Sample ID: OU21D

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8644

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.77 g-dry-wt

Date Analyzed: 04/09/09 14:13

Purge Volume: 5.0 mL

Moisture: 17.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	99.9%
Bromofluorobenzene	96.6%
d4-1,2-Dichlorobenzene	99.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP3-3

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU21E


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8645

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.66 g-dry-wt

Date Analyzed: 04/09/09 14:47

Purge Volume: 5.0 mL

Moisture: 8.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
179601-23-1	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	102%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	98.6%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP3-8

Page 1 of 1

SAMPLE

Lab Sample ID: OU21F


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8646

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 0.852 g-dry-wt

Date Analyzed: 04/09/09 12:31

Purge Volume: 5.0 mL

Moisture: 12.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	5.9	45	
108-88-3	Toluene	5.9	41	
100-41-4	Ethylbenzene	5.9	370	
179601-23-1	m,p-Xylene	5.9	330	
95-47-6	o-Xylene	5.9	530	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)


**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	114%
d8-Toluene	98.9%
Bromofluorobenzene	91.9%
d4-1,2-Dichlorobenzene	97.9%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: DOF-TP3-12  
SAMPLE

Lab Sample ID: OU21G  
LIMS ID: 09-8647  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/16/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/09/09 15:08

Sample Amount: 5.05 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 10.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	1.3	
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	1.4	
95-47-6	o-Xylene	1.0	1.7	

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	109%
d8-Toluene	99.9%
Bromofluorobenzene	94.4%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP4-4

Page 1 of 1

SAMPLE

Lab Sample ID: OU21H


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8648

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.99 g-dry-wt

Date Analyzed: 04/09/09 15:35

Purge Volume: 5.0 mL

Moisture: 8.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	107%
d8-Toluene	101%
Bromofluorobenzene	99.7%
d4-1,2-Dichlorobenzene	98.9%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP4-6

Page 1 of 1

SAMPLE

Lab Sample ID: OU21I

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8649

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 1.34 g-dry-wt

Date Analyzed: 04/09/09 12:53

Purge Volume: 5.0 mL

Moisture: 14.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	3.7	7.2	
108-88-3	Toluene	3.7	6.7	
100-41-4	Ethylbenzene	3.7	15	
179601-23-1	m,p-Xylene	3.7	90	
95-47-6	o-Xylene	3.7	140	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	98.0%
Bromofluorobenzene	89.5%
d4-1,2-Dichlorobenzene	96.9%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP4-8

Page 1 of 1

SAMPLE

Lab Sample ID: OU21J


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8650

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.61 g-dry-wt

Date Analyzed: 04/09/09 16:02

Purge Volume: 5.0 mL

Moisture: 11.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	101%
Bromofluorobenzene	98.0%
d4-1,2-Dichlorobenzene	98.0%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP5-3

Page 1 of 1

SAMPLE

Lab Sample ID: OU21K


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8651

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.19 g-dry-wt

Date Analyzed: 04/09/09 16:28

Purge Volume: 5.0 mL

Moisture: 17.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
<b>108-88-3</b>	<b>Toluene</b>	<b>1.2</b>	<b>1.2</b>	
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	98.8%
Bromofluorobenzene	89.3%
d4-1,2-Dichlorobenzene	97.6%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP5-8

Page 1 of 1

SAMPLE

Lab Sample ID: OU21L

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8652

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.45 g-dry-wt

Date Analyzed: 04/09/09 16:55

Purge Volume: 5.0 mL

Moisture: 20.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	100%
Bromofluorobenzene	97.8%
d4-1,2-Dichlorobenzene	99.6%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP6-2

Page 1 of 1

SAMPLE

Lab Sample ID: OU21M


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8653

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.84 g-dry-wt

Date Analyzed: 04/09/09 17:22

Purge Volume: 5.0 mL

Moisture: 9.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	106%
d8-Toluene	101%
Bromofluorobenzene	98.3%
d4-1,2-Dichlorobenzene	97.6%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP6-6

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU21N

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8654

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.93 g-dry-wt

Date Analyzed: 04/09/09 17:48

Purge Volume: 5.0 mL

Moisture: 13.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	106%
d8-Toluene	99.4%
Bromofluorobenzene	96.6%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260B**

**Sample ID: DOF-TP7-1**

Page 1 of 1

**SAMPLE**

Lab Sample ID: OU210


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8655

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.15 g-dry-wt

Date Analyzed: 04/09/09 18:15

Purge Volume: 5.0 mL

Moisture: 10.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	100%
Bromofluorobenzene	94.8%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP7-3

Page 1 of 1

SAMPLE

Lab Sample ID: OU21P


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8656

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.04 g-dry-wt

Date Analyzed: 04/09/09 18:41

Purge Volume: 5.0 mL

Moisture: 4.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	118%
d8-Toluene	101%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: DOF-TP8-4  
SAMPLE

Lab Sample ID: OU21Q  
LIMS ID: 09-8657  
Matrix: Soil  
Data Release Authorized: *[Signature]*  
Reported: 04/16/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/09/09 20:01

Sample Amount: 4.86 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 8.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	112%
d8-Toluene	99.4%
Bromofluorobenzene	94.0%
d4-1,2-Dichlorobenzene	98.9%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP8-8

Page 1 of 1

SAMPLE

Lab Sample ID: OU21R


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8658

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.56 g-dry-wt

Date Analyzed: 04/09/09 20:28

Purge Volume: 5.0 mL

Moisture: 14.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	102%
Bromofluorobenzene	98.1%
d4-1,2-Dichlorobenzene	98.6%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP9-2

Page 1 of 1

SAMPLE

Lab Sample ID: OU21S

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8659

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.57 g-dry-wt

Date Analyzed: 04/10/09 17:46

Purge Volume: 5.0 mL

Moisture: 10.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	112%
d8-Toluene	101%
Bromofluorobenzene	95.9%
d4-1,2-Dichlorobenzene	98.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP9-3

Page 1 of 1

SAMPLE

Lab Sample ID: OU21T

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8660

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *AS*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.69 g-dry-wt

Date Analyzed: 04/10/09 18:10

Purge Volume: 5.0 mL

Moisture: 8.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	1.3	
100-41-4	Ethylbenzene	1.1	2.0	
179601-23-1	m,p-Xylene	1.1	3.2	
95-47-6	o-Xylene	1.1	2.2	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	115%
d8-Toluene	95.3%
Bromofluorobenzene	85.8%
d4-1,2-Dichlorobenzene	97.9%

**VOA SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
OU21A	DOF-TP1-3	Low	106%	99.5%	92.7%	102%	0
OU21B	DOF-TP1-18	Low	107%	100%	97.4%	97.5%	0
OU21C	DOF-TP2-3	Low	104%	101%	96.4%	98.5%	0
OU21D	DOF-TP2-9	Low	110%	99.9%	96.6%	99.5%	0
OU21E	DOF-TP3-3	Low	110%	102%	101%	98.6%	0
OU21F	DOF-TP3-8	Low	114%	98.9%	91.9%	97.9%	0
OU21G	DOF-TP3-12	Low	109%	99.9%	94.4%	101%	0
OU21H	DOF-TP4-4	Low	107%	101%	99.7%	98.9%	0
OU21I	DOF-TP4-6	Low	108%	98.0%	89.5%	96.9%	0
OU21J	DOF-TP4-8	Low	108%	101%	98.0%	98.0%	0
OU21K	DOF-TP5-3	Low	110%	98.8%	89.3%	97.6%	0
OU21L	DOF-TP5-8	Low	108%	100%	97.8%	99.6%	0
OU21M	DOF-TP6-2	Low	106%	101%	98.3%	97.6%	0
OU21N	DOF-TP6-6	Low	106%	99.4%	96.6%	101%	0
OU21O	DOF-TP7-1	Low	110%	100%	94.8%	100%	0
MB-040909	Method Blank	Low	102%	101%	98.6%	98.5%	0
LCS-040909	Lab Control	Low	102%	98.3%	99.6%	100%	0
LCSD-040909	Lab Control Dup	Low	105%	102%	101%	102%	0
OU21P	DOF-TP7-3	Low	118%	101%	100%	100%	0
OU21PMS	DOF-TP7-3	Low	114%	103%	100%	104%	0
OU21PMSD	DOF-TP7-3	Low	113%	102%	101%	104%	0
OU21Q	DOF-TP8-4	Low	112%	99.4%	94.0%	98.9%	0
OU21R	DOF-TP8-8	Low	110%	102%	98.1%	98.6%	0
MB-041009	Method Blank	Low	108%	102%	97.7%	99.3%	0
LCS-041009	Lab Control	Low	103%	99.4%	100%	103%	0
LCSD-041009	Lab Control Dup	Low	104%	101%	100%	101%	0
OU21S	DOF-TP9-2	Low	112%	101%	95.9%	98.5%	0
OU21T	DOF-TP9-3	Low	115%	95.3%	85.8%	97.9%	0

**LCS/MB LIMITS**

**QC LIMITS**

SW8260B	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	75-120	76-120	72-134	69-120
(TOL) = d8-Toluene	80-122	80-120	78-124	80-120
(BFB) = Bromofluorobenzene	79-120	80-120	66-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	79-120	80-120

Log Number Range: 09-8641 to 09-8660



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP7-3

Page 1 of 1

**MATRIX SPIKE**

Lab Sample ID: OU21P

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8656

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst MS: FINN5/PAB

Sample Amount MS: 5.36 g-dry-wt

MSD: FINN5/PAB

MSD: 5.11 g-dry-wt

Date Analyzed MS: 04/09/09 19:08

Purge Volume MS: 5.0 mL

MSD: 04/09/09 19:35

MSD: 5.0 mL

Moisture: 4.8%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 1.0 U	45.4	46.6	97.4%	45.0	48.9	92.0%	0.9%
Toluene	< 1.0 U	44.5	46.6	95.5%	44.6	48.9	91.2%	0.2%
Ethylbenzene	< 1.0 U	45.7	46.6	98.1%	45.2	48.9	92.4%	1.1%
m,p-Xylene	< 1.0 U	88.7	93.3	95.1%	88.1	97.8	90.1%	0.7%
o-Xylene	< 1.0 U	43.4	46.6	93.1%	43.1	48.9	88.1%	0.7%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP7-3

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MATRIX SPIKE

Lab Sample ID: OU21P


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8656

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.36 g-dry-wt

Date Analyzed: 04/09/09 19:08

Purge Volume: 5.0 mL

Moisture: 4.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	---	
108-88-3	Toluene	0.9	---	
100-41-4	Ethylbenzene	0.9	---	
179601-23-1	m,p-Xylene	0.9	---	
95-47-6	o-Xylene	0.9	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	114%
d8-Toluene	103%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	104%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP7-3

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MATRIX SPIKE DUP

Lab Sample ID: OU21P

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8656

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.11 g-dry-wt

Date Analyzed: 04/09/09 19:35

Purge Volume: 5.0 mL

Moisture: 4.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	---	
108-88-3	Toluene	1.0	---	
100-41-4	Ethylbenzene	1.0	---	
179601-23-1	m,p-Xylene	1.0	---	
95-47-6	o-Xylene	1.0	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	113%
d8-Toluene	102%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	104%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: LCS-040909

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LAB CONTROL SAMPLE

Lab Sample ID: LCS-040909


QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8656

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCSD: FINN5/PAB

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 04/09/09 09:41

Purge Volume LCS: 5.0 mL

LCSD: 04/09/09 11:22

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	51.6	50.0	103%	50.0	50.0	100%	3.1%
Toluene	50.8	50.0	102%	49.6	50.0	99.2%	2.4%
Ethylbenzene	54.2	50.0	108%	52.3	50.0	105%	3.6%
m,p-Xylene	106	100	106%	102	100	102%	3.8%
o-Xylene	51.0	50.0	102%	49.5	50.0	99.0%	3.0%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	102%	105%
d8-Toluene	98.3%	102%
Bromofluorobenzene	99.6%	101%
d4-1,2-Dichlorobenzene	100%	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: LCS-041009

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LAB CONTROL SAMPLE

Lab Sample ID: LCS-041009

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8659

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCSD: FINN5/PAB

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 04/10/09 16:03

Purge Volume LCS: 5.0 mL

LCSD: 04/10/09 16:37

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	50.6	50.0	101%	49.3	50.0	98.6%	2.6%
Toluene	50.2	50.0	100%	47.7	50.0	95.4%	5.1%
Ethylbenzene	54.7	50.0	109%	51.2	50.0	102%	6.6%
m,p-Xylene	108	100	108%	99.6	100	99.6%	8.1%
o-Xylene	52.1	50.0	104%	48.8	50.0	97.6%	6.5%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	103%	104%
d8-Toluene	99.4%	101%
Bromofluorobenzene	100%	100%
d4-1,2-Dichlorobenzene	103%	101%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: MB-041109  
METHOD BLANK

Lab Sample ID: MB-041109  
LIMS ID: 09-8656  
Matrix: Soil  
Data Release Authorized: **UTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: NA  
Date Received: NA

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 15:30  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.50 g  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	88.8%	2-Fluorobiphenyl	89.6%
d14-p-Terphenyl	90.8%	d4-1,2-Dichlorobenzene	89.2%
d5-Phenol	85.1%	2-Fluorophenol	86.7%
2,4,6-Tribromophenol	78.4%	d4-2-Chlorophenol	87.7%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-TP1-3**  
**SAMPLE**

Lab Sample ID: OU21A  
 LIMS ID: 09-8641  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/11/09  
 Date Analyzed: 04/16/09 16:54  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 7.58 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 16.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	66	< 66 U
95-48-7	2-Methylphenol	66	< 66 U
106-44-5	4-Methylphenol	66	< 66 U
105-67-9	2,4-Dimethylphenol	66	< 66 U
91-20-3	Naphthalene	66	< 66 U
91-57-6	2-Methylnaphthalene	66	< 66 U
131-11-3	Dimethylphthalate	66	< 66 U
208-96-8	Acenaphthylene	66	< 66 U
83-32-9	Acenaphthene	66	< 66 U
132-64-9	Dibenzofuran	66	< 66 U
84-66-2	Diethylphthalate	66	< 66 U
86-73-7	Fluorene	66	< 66 U
85-01-8	Phenanthrene	66	< 66 U
86-74-8	Carbazole	66	< 66 U
120-12-7	Anthracene	66	< 66 U
84-74-2	Di-n-Butylphthalate	66	< 66 U
206-44-0	Fluoranthene	66	< 66 U
129-00-0	Pyrene	66	< 66 U
85-68-7	Butylbenzylphthalate	66	< 66 U
56-55-3	Benzo(a)anthracene	66	< 66 U
117-81-7	bis(2-Ethylhexyl)phthalate	66	< 66 U
218-01-9	Chrysene	66	< 66 U
117-84-0	Di-n-Octyl phthalate	66	< 66 U
205-99-2	Benzo(b)fluoranthene	66	< 66 U
207-08-9	Benzo(k)fluoranthene	66	< 66 U
50-32-8	Benzo(a)pyrene	66	< 66 U
193-39-5	Indeno(1,2,3-cd)pyrene	66	< 66 U
53-70-3	Dibenz(a,h)anthracene	66	< 66 U
191-24-2	Benzo(g,h,i)perylene	66	< 66 U
483-65-8	Retene	66	< 66 U
90-12-0	1-Methylnaphthalene	66	< 66 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	76.0%	2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	81.6%	d4-1,2-Dichlorobenzene	76.4%
d5-Phenol	71.5%	2-Fluorophenol	72.3%
2,4,6-Tribromophenol	64.5%	d4-2-Chlorophenol	74.1%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP1-18  
SAMPLE

Lab Sample ID: OU21B  
LIMS ID: 09-8642  
Matrix: Soil  
Data Release Authorized: *VDS*  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 17:37  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.48 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 13.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>59</b>	<b>100</b>
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>59</b>	<b>110</b>
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>59</b>	<b>390</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>59</b>	<b>410</b>
85-68-7	Butylbenzylphthalate	59	< 59 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>59</b>	<b>82</b>
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>59</b>	<b>110</b>
117-84-0	Di-n-Octyl phthalate	59	< 59 U
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>59</b>	<b>96</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>59</b>	<b>100</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>59</b>	<b>160</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>59</b>	<b>110</b>
53-70-3	Dibenz (a, h) anthracene	59	< 59 U
<b>191-24-2</b>	<b>Benzo (g, h, i) perylene</b>	<b>59</b>	<b>170</b>
483-65-8	Retene	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	82.0%	2-Fluorobiphenyl	83.6%
d14-p-Terphenyl	86.8%	d4-1,2-Dichlorobenzene	82.0%
d5-Phenol	78.7%	2-Fluorophenol	81.1%
2,4,6-Tribromophenol	70.4%	d4-2-Chlorophenol	81.1%



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP2-3  
SAMPLE

Lab Sample ID: OU21C  
LIMS ID: 09-8643  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 18:19  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.68 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 15.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
91-57-6	2-Methylnaphthalene	65	< 65 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
83-32-9	Acenaphthene	65	< 65 U
132-64-9	Dibenzofuran	65	< 65 U
84-66-2	Diethylphthalate	65	< 65 U
86-73-7	Fluorene	65	< 65 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
205-99-2	Benzo(b)fluoranthene	65	< 65 U
207-08-9	Benzo(k)fluoranthene	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
483-65-8	Retene	65	< 65 U
90-12-0	1-Methylnaphthalene	65	< 65 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	69.2%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	71.2%
d5-Phenol	65.6%	2-Fluorophenol	66.9%
2,4,6-Tribromophenol	60.0%	d4-2-Chlorophenol	68.0%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP2-9  
SAMPLE

Lab Sample ID: OU21D  
LIMS ID: 09-8644  
Matrix: Soil  
Data Release Authorized: VTS  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 19:02  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.94 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 15.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
91-57-6	2-Methylnaphthalene	63	< 63 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
83-32-9	Acenaphthene	63	< 63 U
132-64-9	Dibenzofuran	63	< 63 U
84-66-2	Diethylphthalate	63	< 63 U
86-73-7	Fluorene	63	< 63 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
205-99-2	Benzo(b)fluoranthene	63	< 63 U
207-08-9	Benzo(k)fluoranthene	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
483-65-8	Retene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	82.0%	2-Fluorobiphenyl	82.4%
d14-p-Terphenyl	80.0%	d4-1,2-Dichlorobenzene	82.4%
d5-Phenol	78.1%	2-Fluorophenol	79.5%
2,4,6-Tribromophenol	71.7%	d4-2-Chlorophenol	80.5%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP3-3  
SAMPLE

Lab Sample ID: OU21E  
LIMS ID: 09-8645  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 19:43  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.47 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 8.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
483-65-8	Retene	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	82.4%	2-Fluorobiphenyl	82.8%
d14-p-Terphenyl	85.6%	d4-1,2-Dichlorobenzene	82.4%
d5-Phenol	78.1%	2-Fluorophenol	79.5%
2,4,6-Tribromophenol	72.5%	d4-2-Chlorophenol	80.8%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP3-8  
SAMPLE

Lab Sample ID: OU21F  
LIMS ID: 09-8646  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 20:25  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.87 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 3.00  
Percent Moisture: 12.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1,900	< 1,900 U
95-48-7	2-Methylphenol	1,900	< 1,900 U
106-44-5	4-Methylphenol	1,900	< 1,900 U
105-67-9	2,4-Dimethylphenol	1,900	< 1,900 U
91-20-3	<b>Naphthalene</b>	<b>1,900</b>	<b>61,000</b>
91-57-6	<b>2-Methylnaphthalene</b>	<b>1,900</b>	<b>16,000</b>
131-11-3	Dimethylphthalate	1,900	< 1,900 U
208-96-8	<b>Acenaphthylene</b>	<b>1,900</b>	<b>46,000</b>
83-32-9	<b>Acenaphthene</b>	<b>1,900</b>	<b>4,500</b>
132-64-9	<b>Dibenzofuran</b>	<b>1,900</b>	<b>2,700</b>
84-66-2	Diethylphthalate	1,900	< 1,900 U
86-73-7	<b>Fluorene</b>	<b>1,900</b>	<b>23,000</b>
85-01-8	<b>Phenanthrene</b>	<b>1,900</b>	<b>210,000 E</b>
86-74-8	<b>Carbazole</b>	<b>1,900</b>	<b>5,300</b>
120-12-7	<b>Anthracene</b>	<b>1,900</b>	<b>36,000</b>
84-74-2	Di-n-Butylphthalate	1,900	< 1,900 U
206-44-0	<b>Fluoranthene</b>	<b>1,900</b>	<b>270,000 E</b>
129-00-0	<b>Pyrene</b>	<b>1,900</b>	<b>240,000 E</b>
85-68-7	Butylbenzylphthalate	1,900	< 1,900 U
56-55-3	<b>Benzo (a) anthracene</b>	<b>1,900</b>	<b>60,000</b>
117-81-7	bis(2-Ethylhexyl)phthalate	1,900	< 1,900 U
218-01-9	<b>Chrysene</b>	<b>1,900</b>	<b>77,000</b>
117-84-0	Di-n-Octyl phthalate	1,900	< 1,900 U
205-99-2	<b>Benzo (b) fluoranthene</b>	<b>1,900</b>	<b>59,000</b>
207-08-9	<b>Benzo (k) fluoranthene</b>	<b>1,900</b>	<b>41,000</b>
50-32-8	<b>Benzo (a) pyrene</b>	<b>1,900</b>	<b>86,000</b>
193-39-5	<b>Indeno (1,2,3-cd) pyrene</b>	<b>1,900</b>	<b>50,000</b>
53-70-3	<b>Dibenz (a,h) anthracene</b>	<b>1,900</b>	<b>9,400</b>
191-24-2	<b>Benzo (g,h,i) perylene</b>	<b>1,900</b>	<b>72,000</b>
483-65-8	Retene	1,900	< 1,900 U
90-12-0	<b>1-Methylnaphthalene</b>	<b>1,900</b>	<b>15,000</b>

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	82.8%	2-Fluorobiphenyl	87.6%
d14-p-Terphenyl	79.2%	d4-1,2-Dichlorobenzene	81.6%
d5-Phenol	72.0%	2-Fluorophenol	77.6%
2,4,6-Tribromophenol	57.6%	d4-2-Chlorophenol	80.0%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP3-8  
DILUTION

Lab Sample ID: OU21F  
LIMS ID: 09-8646  
Matrix: Soil  
Data Release Authorized: **VIS**  
Reported: 05/13/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/24/09 17:35  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.87 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 10.0  
Percent Moisture: 12.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	6,400	< 6,400 U
95-48-7	2-Methylphenol	6,400	< 6,400 U
106-44-5	4-Methylphenol	6,400	< 6,400 U
105-67-9	2,4-Dimethylphenol	6,400	< 6,400 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>6,400</b>	<b>54,000</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>6,400</b>	<b>14,000</b>
131-11-3	Dimethylphthalate	6,400	< 6,400 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>6,400</b>	<b>41,000</b>
83-32-9	Acenaphthene	6,400	< 6,400 U
132-64-9	Dibenzofuran	6,400	< 6,400 U
84-66-2	Diethylphthalate	6,400	< 6,400 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>6,400</b>	<b>21,000</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>6,400</b>	<b>260,000</b>
86-74-8	Carbazole	6,400	< 6,400 U
<b>120-12-7</b>	<b>Anthracene</b>	<b>6,400</b>	<b>29,000</b>
84-74-2	Di-n-Butylphthalate	6,400	< 6,400 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>6,400</b>	<b>370,000</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>6,400</b>	<b>380,000</b>
85-68-7	Butylbenzylphthalate	6,400	< 6,400 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>6,400</b>	<b>50,000</b>
117-81-7	bis(2-Ethylhexyl)phthalate	6,400	< 6,400 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>6,400</b>	<b>60,000</b>
117-84-0	Di-n-Octyl phthalate	6,400	< 6,400 U
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>6,400</b>	<b>58,000</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>6,400</b>	<b>29,000</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>6,400</b>	<b>73,000</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>6,400</b>	<b>36,000</b>
53-70-3	Dibenz (a,h) anthracene	6,400	< 6,400 U
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>6,400</b>	<b>54,000</b>
483-65-8	Retene	6,400	< 6,400 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>6,400</b>	<b>14,000</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP3-12  
SAMPLE

Lab Sample ID: OU21G  
LIMS ID: 09-8647  
Matrix: Soil  
Data Release Authorized: VTS  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 21:07  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.55 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
91-20-3	Naphthalene	58	< 58 U
91-57-6	2-Methylnaphthalene	58	< 58 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	Acenaphthylene	58	< 58 U
83-32-9	Acenaphthene	58	< 58 U
132-64-9	Dibenzofuran	58	< 58 U
84-66-2	Diethylphthalate	58	< 58 U
86-73-7	Fluorene	58	< 58 U
85-01-8	Phenanthrene	58	< 58 U
86-74-8	Carbazole	58	< 58 U
120-12-7	Anthracene	58	< 58 U
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	Fluoranthene	58	< 58 U
129-00-0	Pyrene	58	< 58 U
85-68-7	Butylbenzylphthalate	58	< 58 U
56-55-3	Benzo (a) anthracene	58	< 58 U
117-81-7	bis (2-Ethylhexyl) phthalate	58	< 58 U
218-01-9	Chrysene	58	< 58 U
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	Benzo (b) fluoranthene	58	< 58 U
207-08-9	Benzo (k) fluoranthene	58	< 58 U
50-32-8	Benzo (a) pyrene	58	< 58 U
193-39-5	Indeno (1,2,3-cd) pyrene	58	< 58 U
53-70-3	Dibenz (a, h) anthracene	58	< 58 U
191-24-2	Benzo (g, h, i) perylene	58	< 58 U
483-65-8	Retene	58	< 58 U
90-12-0	1-Methylnaphthalene	58	< 58 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	82.0%	2-Fluorobiphenyl	85.2%
d14-p-Terphenyl	85.2%	d4-1,2-Dichlorobenzene	82.0%
d5-Phenol	76.8%	2-Fluorophenol	77.9%
2,4,6-Tribromophenol	76.0%	d4-2-Chlorophenol	79.2%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
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**Sample ID: DOF-TP4-4**  
**SAMPLE**

Lab Sample ID: OU21H  
 LIMS ID: 09-8648  
 Matrix: Soil  
 Data Release Authorized: *VIS*  
 Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/11/09  
 Date Analyzed: 04/16/09 21:49  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 8.57 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 8.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
91-20-3	Naphthalene	58	< 58 U
91-57-6	2-Methylnaphthalene	58	< 58 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	Acenaphthylene	58	< 58 U
83-32-9	Acenaphthene	58	< 58 U
132-64-9	Dibenzofuran	58	< 58 U
84-66-2	Diethylphthalate	58	< 58 U
86-73-7	Fluorene	58	< 58 U
85-01-8	Phenanthrene	58	< 58 U
86-74-8	Carbazole	58	< 58 U
120-12-7	Anthracene	58	< 58 U
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	Fluoranthene	58	< 58 U
129-00-0	Pyrene	58	< 58 U
85-68-7	Butylbenzylphthalate	58	< 58 U
56-55-3	Benzo(a)anthracene	58	< 58 U
117-81-7	bis(2-Ethylhexyl)phthalate	58	< 58 U
218-01-9	Chrysene	58	< 58 U
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	Benzo(b)fluoranthene	58	< 58 U
207-08-9	Benzo(k)fluoranthene	58	< 58 U
50-32-8	Benzo(a)pyrene	58	< 58 U
193-39-5	Indeno(1,2,3-cd)pyrene	58	< 58 U
53-70-3	Dibenz(a,h)anthracene	58	< 58 U
191-24-2	Benzo(g,h,i)perylene	58	< 58 U
483-65-8	Retene	58	< 58 U
90-12-0	1-Methylnaphthalene	58	< 58 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	84.8%	2-Fluorobiphenyl	87.6%
d14-p-Terphenyl	86.8%	d4-1,2-Dichlorobenzene	86.4%
d5-Phenol	82.1%	2-Fluorophenol	82.9%
2,4,6-Tribromophenol	76.5%	d4-2-Chlorophenol	84.3%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP4-6  
SAMPLE

Lab Sample ID: OU21I  
LIMS ID: 09-8649  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 22:30  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.60 g-dry-wt  
Final Extract Volume: 2.5 mL  
Dilution Factor: 3.00  
Percent Moisture: 18.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	870	< 870 U
95-48-7	2-Methylphenol	870	< 870 U
106-44-5	4-Methylphenol	870	< 870 U
105-67-9	2,4-Dimethylphenol	870	< 870 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>870</b>	<b>120,000 E</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>870</b>	<b>50,000</b>
131-11-3	Dimethylphthalate	870	< 870 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>870</b>	<b>44,000</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>870</b>	<b>5,100</b>
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>870</b>	<b>3,500</b>
84-66-2	Diethylphthalate	870	< 870 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>870</b>	<b>25,000</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>870</b>	<b>120,000 E</b>
<b>86-74-8</b>	<b>Carbazole</b>	<b>870</b>	<b>5,400</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>870</b>	<b>39,000</b>
84-74-2	Di-n-Butylphthalate	870	< 870 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>870</b>	<b>180,000 SE</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>870</b>	<b>160,000 SE</b>
85-68-7	Butylbenzylphthalate	870	< 870 U
<b>56-55-3</b>	<b>Benzo(a)anthracene</b>	<b>870</b>	<b>74,000 E</b>
117-81-7	bis(2-Ethylhexyl)phthalate	870	< 870 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>870</b>	<b>94,000 E</b>
117-84-0	Di-n-Octyl phthalate	870	< 870 U
<b>205-99-2</b>	<b>Benzo(b)fluoranthene</b>	<b>870</b>	<b>88,000 E</b>
<b>207-08-9</b>	<b>Benzo(k)fluoranthene</b>	<b>870</b>	<b>45,000</b>
<b>50-32-8</b>	<b>Benzo(a)pyrene</b>	<b>870</b>	<b>100,000 E</b>
<b>193-39-5</b>	<b>Indeno(1,2,3-cd)pyrene</b>	<b>870</b>	<b>48,000</b>
<b>53-70-3</b>	<b>Dibenz(a,h)anthracene</b>	<b>870</b>	<b>13,000</b>
<b>191-24-2</b>	<b>Benzo(g,h,i)perylene</b>	<b>870</b>	<b>59,000</b>
483-65-8	Retene	870	< 870 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>870</b>	<b>34,000</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	88.2%	2-Fluorobiphenyl	90.6%
d14-p-Terphenyl	64.8%	d4-1,2-Dichlorobenzene	84.0%
d5-Phenol	76.8%	2-Fluorophenol	96.0%
2,4,6-Tribromophenol	68.8%	d4-2-Chlorophenol	80.8%



ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP4-6  
DILUTION

Lab Sample ID: OU21I  
LIMS ID: 09-8649  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 05/13/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/24/09 18:17  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.60 g-dry-wt  
Final Extract Volume: 2.5 mL  
Dilution Factor: 20.0  
Percent Moisture: 18.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	5,800	< 5,800 U
95-48-7	2-Methylphenol	5,800	< 5,800 U
106-44-5	4-Methylphenol	5,800	< 5,800 U
105-67-9	2,4-Dimethylphenol	5,800	< 5,800 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>5,800</b>	<b>190,000</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>5,800</b>	<b>46,000</b>
131-11-3	Dimethylphthalate	5,800	< 5,800 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>5,800</b>	<b>39,000</b>
83-32-9	Acenaphthene	5,800	< 5,800 U
132-64-9	Dibenzofuran	5,800	< 5,800 U
84-66-2	Diethylphthalate	5,800	< 5,800 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>5,800</b>	<b>22,000</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>5,800</b>	<b>170,000</b>
86-74-8	Carbazole	5,800	< 5,800 U
<b>120-12-7</b>	<b>Anthracene</b>	<b>5,800</b>	<b>34,000</b>
84-74-2	Di-n-Butylphthalate	5,800	< 5,800 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>5,800</b>	<b>400,000</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>5,800</b>	<b>410,000</b>
85-68-7	Butylbenzylphthalate	5,800	< 5,800 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>5,800</b>	<b>76,000</b>
117-81-7	bis(2-Ethylhexyl)phthalate	5,800	< 5,800 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>5,800</b>	<b>94,000</b>
117-84-0	Di-n-Octyl phthalate	5,800	< 5,800 U
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>5,800</b>	<b>83,000</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>5,800</b>	<b>48,000</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>5,800</b>	<b>110,000</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>5,800</b>	<b>50,000</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>5,800</b>	<b>9,800</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>5,800</b>	<b>72,000</b>
483-65-8	Retene	5,800	< 5,800 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>5,800</b>	<b>31,000</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP4-8  
SAMPLE

Lab Sample ID: OU21J  
LIMS ID: 09-8650  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 23:11  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.93 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 12.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>63</b>	<b>5,300 E</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>63</b>	<b>3,000</b>
131-11-3	Dimethylphthalate	63	< 63 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>63</b>	<b>2,800</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>63</b>	<b>1,400</b>
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>63</b>	<b>280</b>
84-66-2	Diethylphthalate	63	< 63 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>63</b>	<b>2,600</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>63</b>	<b>10,000 ES</b>
<b>86-74-8</b>	<b>Carbazole</b>	<b>63</b>	<b>240</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>63</b>	<b>3,400</b>
84-74-2	Di-n-Butylphthalate	63	< 63 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>63</b>	<b>9,400 ES</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>63</b>	<b>8,600 ES</b>
85-68-7	Butylbenzylphthalate	63	< 63 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>63</b>	<b>4,500</b>
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>63</b>	<b>5,500 E</b>
117-84-0	Di-n-Octyl phthalate	63	< 63 U
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>63</b>	<b>4,300</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>63</b>	<b>2,600</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>63</b>	<b>5,800 E</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>63</b>	<b>1,900</b>
<b>53-70-3</b>	<b>Dibenz (a, h) anthracene</b>	<b>63</b>	<b>500</b>
<b>191-24-2</b>	<b>Benzo (g, h, i) perylene</b>	<b>63</b>	<b>2,100</b>
483-65-8	Retene	63	< 63 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>63</b>	<b>2,200</b>

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	84.0%	2-Fluorobiphenyl	88.4%
d14-p-Terphenyl	60.8%	d4-1,2-Dichlorobenzene	84.0%
d5-Phenol	82.1%	2-Fluorophenol	80.8%
2,4,6-Tribromophenol	77.9%	d4-2-Chlorophenol	83.7%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP4-8  
DILUTION

Lab Sample ID: OU21J  
LIMS ID: 09-8650  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 05/13/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/24/09 18:59  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.93 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 6.00  
Percent Moisture: 12.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	380	< 380 U
95-48-7	2-Methylphenol	380	< 380 U
106-44-5	4-Methylphenol	380	< 380 U
105-67-9	2,4-Dimethylphenol	380	< 380 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>380</b>	<b>7,100</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>380</b>	<b>3,200</b>
131-11-3	Dimethylphthalate	380	< 380 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>380</b>	<b>3,000</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>380</b>	<b>1,200</b>
132-64-9	Dibenzofuran	380	< 380 U
84-66-2	Diethylphthalate	380	< 380 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>380</b>	<b>2,500</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>380</b>	<b>20,000</b>
86-74-8	Carbazole	380	< 380 U
<b>120-12-7</b>	<b>Anthracene</b>	<b>380</b>	<b>3,300</b>
84-74-2	Di-n-Butylphthalate	380	< 380 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>380</b>	<b>20,000</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>380</b>	<b>21,000</b>
85-68-7	Butylbenzylphthalate	380	< 380 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>380</b>	<b>4,900</b>
117-81-7	bis(2-Ethylhexyl)phthalate	380	< 380 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>380</b>	<b>5,800</b>
117-84-0	Di-n-Octyl phthalate	380	< 380 U
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>380</b>	<b>3,500</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>380</b>	<b>3,300</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>380</b>	<b>6,200</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>380</b>	<b>2,400</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>380</b>	<b>470</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>380</b>	<b>3,300</b>
483-65-8	Retene	380	< 380 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>380</b>	<b>2,300</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	110%	2-Fluorobiphenyl	82.6%
d14-p-Terphenyl	70.1%	d4-1,2-Dichlorobenzene	85.9%
d5-Phenol	88.2%	2-Fluorophenol	80.8%
2,4,6-Tribromophenol	76.6%	d4-2-Chlorophenol	84.3%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP5-3  
DILUTION

Lab Sample ID: OU21K  
LIMS ID: 09-8651  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 23:52  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.76 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 3.00  
Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	190	< 190 U
95-48-7	2-Methylphenol	190	< 190 U
106-44-5	4-Methylphenol	190	< 190 U
105-67-9	2,4-Dimethylphenol	190	< 190 U
91-20-3	Naphthalene	190	< 190 U
91-57-6	2-Methylnaphthalene	190	< 190 U
131-11-3	Dimethylphthalate	190	< 190 U
208-96-8	Acenaphthylene	190	< 190 U
83-32-9	Acenaphthene	190	< 190 U
132-64-9	Dibenzofuran	190	< 190 U
84-66-2	Diethylphthalate	190	< 190 U
86-73-7	Fluorene	190	< 190 U
85-01-8	Phenanthrene	190	< 190 U
86-74-8	Carbazole	190	< 190 U
120-12-7	Anthracene	190	< 190 U
84-74-2	Di-n-Butylphthalate	190	< 190 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>190</b>	<b>320</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>190</b>	<b>330</b>
85-68-7	Butylbenzylphthalate	190	< 190 U
56-55-3	Benzo(a)anthracene	190	< 190 U
117-81-7	bis(2-Ethylhexyl)phthalate	190	< 190 U
218-01-9	Chrysene	190	< 190 U
117-84-0	Di-n-Octyl phthalate	190	< 190 U
205-99-2	Benzo(b)fluoranthene	190	< 190 U
207-08-9	Benzo(k)fluoranthene	190	< 190 U
50-32-8	Benzo(a)pyrene	190	< 190 U
193-39-5	Indeno(1,2,3-cd)pyrene	190	< 190 U
53-70-3	Dibenz(a,h)anthracene	190	< 190 U
191-24-2	Benzo(g,h,i)perylene	190	< 190 U
483-65-8	Retene	190	< 190 U
90-12-0	1-Methylnaphthalene	190	< 190 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	78.0%	2-Fluorobiphenyl	84.8%
d14-p-Terphenyl	67.6%	d4-1,2-Dichlorobenzene	72.8%
d5-Phenol	74.4%	2-Fluorophenol	69.2%
2,4,6-Tribromophenol	72.0%	d4-2-Chlorophenol	75.8%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP5-3  
SAMPLE

Lab Sample ID: OU21K  
LIMS ID: 09-8651  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 05/13/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/24/09 19:41  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.76 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	< 64 U
95-48-7	2-Methylphenol	64	< 64 U
106-44-5	4-Methylphenol	64	< 64 U
105-67-9	2,4-Dimethylphenol	64	< 64 U
91-20-3	Naphthalene	64	< 64 U
91-57-6	2-Methylnaphthalene	64	< 64 U
131-11-3	Dimethylphthalate	64	< 64 U
208-96-8	Acenaphthylene	64	< 64 U
83-32-9	Acenaphthene	64	< 64 U
132-64-9	Dibenzofuran	64	< 64 U
84-66-2	Diethylphthalate	64	< 64 U
86-73-7	Fluorene	64	< 64 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>64</b>	<b>98</b>
86-74-8	Carbazole	64	< 64 U
120-12-7	Anthracene	64	< 64 U
84-74-2	Di-n-Butylphthalate	64	< 64 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>64</b>	<b>280</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>64</b>	<b>280</b>
85-68-7	Butylbenzylphthalate	64	< 64 U
56-55-3	Benzo(a)anthracene	64	< 64 U
117-81-7	bis(2-Ethylhexyl)phthalate	64	< 64 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>64</b>	<b>75</b>
117-84-0	Di-n-Octyl phthalate	64	< 64 U
205-99-2	Benzo(b)fluoranthene	64	< 64 U
207-08-9	Benzo(k)fluoranthene	64	< 64 U
50-32-8	Benzo(a)pyrene	64	< 64 U
193-39-5	Indeno(1,2,3-cd)pyrene	64	< 64 U
53-70-3	Dibenz(a,h)anthracene	64	< 64 U
191-24-2	Benzo(g,h,i)perylene	64	< 64 U
483-65-8	Retene	64	< 64 U
90-12-0	1-Methylnaphthalene	64	< 64 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	93.2%	2-Fluorobiphenyl	83.2%
d14-p-Terphenyl	73.2%	d4-1,2-Dichlorobenzene	71.2%
d5-Phenol	81.1%	2-Fluorophenol	68.3%
2,4,6-Tribromophenol	90.4%	d4-2-Chlorophenol	75.7%

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Semivolatiles by SW8270D GC/MS  
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**Sample ID: DOF-TP5-8**  
**SAMPLE**

Lab Sample ID: OU21L  
LIMS ID: 09-8652  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 00:33  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.51 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 20.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
483-65-8	Retene	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	78.4%	2-Fluorobiphenyl	80.4%
d14-p-Terphenyl	61.6%	d4-1,2-Dichlorobenzene	78.8%
d5-Phenol	75.5%	2-Fluorophenol	76.5%
2,4,6-Tribromophenol	70.4%	d4-2-Chlorophenol	77.9%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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**Sample ID: DOF-TP6-2**  
**SAMPLE**

Lab Sample ID: OU21M  
LIMS ID: 09-8653  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 01:14  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.89 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 9.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	56	< 56 U
95-48-7	2-Methylphenol	56	< 56 U
106-44-5	4-Methylphenol	56	< 56 U
105-67-9	2,4-Dimethylphenol	56	< 56 U
91-20-3	Naphthalene	56	< 56 U
91-57-6	2-Methylnaphthalene	56	< 56 U
131-11-3	Dimethylphthalate	56	< 56 U
208-96-8	Acenaphthylene	56	< 56 U
83-32-9	Acenaphthene	56	< 56 U
132-64-9	Dibenzofuran	56	< 56 U
84-66-2	Diethylphthalate	56	< 56 U
86-73-7	Fluorene	56	< 56 U
85-01-8	Phenanthrene	56	< 56 U
86-74-8	Carbazole	56	< 56 U
120-12-7	Anthracene	56	< 56 U
84-74-2	Di-n-Butylphthalate	56	< 56 U
206-44-0	Fluoranthene	56	< 56 U
129-00-0	Pyrene	56	< 56 U
85-68-7	Butylbenzylphthalate	56	< 56 U
56-55-3	Benzo(a)anthracene	56	< 56 U
117-81-7	bis(2-Ethylhexyl)phthalate	56	< 56 U
218-01-9	Chrysene	56	< 56 U
117-84-0	Di-n-Octyl phthalate	56	< 56 U
205-99-2	Benzo(b)fluoranthene	56	< 56 U
207-08-9	Benzo(k)fluoranthene	56	< 56 U
50-32-8	Benzo(a)pyrene	56	< 56 U
193-39-5	Indeno(1,2,3-cd)pyrene	56	< 56 U
53-70-3	Dibenz(a,h)anthracene	56	< 56 U
191-24-2	Benzo(g,h,i)perylene	56	< 56 U
483-65-8	Retene	56	< 56 U
90-12-0	1-Methylnaphthalene	56	< 56 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	84.0%	2-Fluorobiphenyl	84.4%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	84.0%
d5-Phenol	79.5%	2-Fluorophenol	80.5%
2,4,6-Tribromophenol	72.8%	d4-2-Chlorophenol	81.3%

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Sample ID: DOF-TP6-6  
SAMPLE

Lab Sample ID: OU21N  
LIMS ID: 09-8654  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 01:55  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.25 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 9.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
91-57-6	2-Methylnaphthalene	61	< 61 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
83-32-9	Acenaphthene	61	< 61 U
132-64-9	Dibenzofuran	61	< 61 U
84-66-2	Diethylphthalate	61	< 61 U
86-73-7	Fluorene	61	< 61 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
205-99-2	Benzo(b)fluoranthene	61	< 61 U
207-08-9	Benzo(k)fluoranthene	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
483-65-8	Retene	61	< 61 U
90-12-0	1-Methylnaphthalene	61	< 61 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	76.8%	2-Fluorobiphenyl	80.0%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	77.6%
d5-Phenol	74.7%	2-Fluorophenol	74.4%
2,4,6-Tribromophenol	70.1%	d4-2-Chlorophenol	75.2%



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**Sample ID: DOF-TP7-1**  
**SAMPLE**

Lab Sample ID: OU210  
 LIMS ID: 09-8655  
 Matrix: Soil  
 Data Release Authorized: **VTS**  
 Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/11/09  
 Date Analyzed: 04/17/09 15:46  
 Instrument/Analyst: NT6/LJR  
 GPC Cleanup: No

Sample Amount: 8.75 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 10.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	57	< 57 U
95-48-7	2-Methylphenol	57	< 57 U
106-44-5	4-Methylphenol	57	< 57 U
105-67-9	2,4-Dimethylphenol	57	< 57 U
91-20-3	Naphthalene	57	< 57 U
91-57-6	2-Methylnaphthalene	57	< 57 U
131-11-3	Dimethylphthalate	57	< 57 U
208-96-8	Acenaphthylene	57	< 57 U
83-32-9	Acenaphthene	57	< 57 U
132-64-9	Dibenzofuran	57	< 57 U
84-66-2	Diethylphthalate	57	< 57 U
86-73-7	Fluorene	57	< 57 U
85-01-8	Phenanthrene	57	< 57 U
86-74-8	Carbazole	57	< 57 U
120-12-7	Anthracene	57	< 57 U
84-74-2	Di-n-Butylphthalate	57	< 57 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>57</b>	<b>130</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>57</b>	<b>140</b>
85-68-7	Butylbenzylphthalate	57	< 57 U
56-55-3	Benzo(a)anthracene	57	< 57 U
117-81-7	bis(2-Ethylhexyl)phthalate	57	< 57 U
218-01-9	Chrysene	57	< 57 U
117-84-0	Di-n-Octyl phthalate	57	< 57 U
205-99-2	Benzo(b)fluoranthene	57	< 57 U
207-08-9	Benzo(k)fluoranthene	57	< 57 U
50-32-8	Benzo(a)pyrene	57	< 57 U
193-39-5	Indeno(1,2,3-cd)pyrene	57	< 57 U
53-70-3	Dibenz(a,h)anthracene	57	< 57 U
191-24-2	Benzo(g,h,i)perylene	57	< 57 U
483-65-8	Retene	57	< 57 U
90-12-0	1-Methylnaphthalene	57	< 57 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	80.4%	2-Fluorobiphenyl	82.8%
d14-p-Terphenyl	89.6%	d4-1,2-Dichlorobenzene	82.8%
d5-Phenol	76.5%	2-Fluorophenol	79.2%
2,4,6-Tribromophenol	73.1%	d4-2-Chlorophenol	79.7%

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Semivolatiles by SW8270D GC/MS  
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**Sample ID: DOF-TP7-3**  
**SAMPLE**

Lab Sample ID: OU21P  
LIMS ID: 09-8656  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 16:28  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.70 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 5.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
91-57-6	2-Methylnaphthalene	65	< 65 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
83-32-9	Acenaphthene	65	< 65 U
132-64-9	Dibenzofuran	65	< 65 U
84-66-2	Diethylphthalate	65	< 65 U
86-73-7	Fluorene	65	< 65 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
205-99-2	Benzo(b)fluoranthene	65	< 65 U
207-08-9	Benzo(k)fluoranthene	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
483-65-8	Retene	65	< 65 U
90-12-0	1-Methylnaphthalene	65	< 65 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	84.8%	2-Fluorobiphenyl	88.0%
d14-p-Terphenyl	94.0%	d4-1,2-Dichlorobenzene	86.4%
d5-Phenol	83.5%	2-Fluorophenol	82.4%
2,4,6-Tribromophenol	79.5%	d4-2-Chlorophenol	85.1%

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Semivolatiles by SW8270D GC/MS  
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**Sample ID: DOF-TP8-4**  
**SAMPLE**

Lab Sample ID: OU21Q  
LIMS ID: 09-8657  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 18:34  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.88 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 9.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	56	< 56 U
95-48-7	2-Methylphenol	56	< 56 U
106-44-5	4-Methylphenol	56	< 56 U
105-67-9	2,4-Dimethylphenol	56	< 56 U
91-20-3	Naphthalene	56	< 56 U
91-57-6	2-Methylnaphthalene	56	< 56 U
131-11-3	Dimethylphthalate	56	< 56 U
208-96-8	Acenaphthylene	56	< 56 U
83-32-9	Acenaphthene	56	< 56 U
132-64-9	Dibenzofuran	56	< 56 U
84-66-2	Diethylphthalate	56	< 56 U
86-73-7	Fluorene	56	< 56 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>56</b>	<b>68</b>
86-74-8	Carbazole	56	< 56 U
120-12-7	Anthracene	56	< 56 U
84-74-2	Di-n-Butylphthalate	56	< 56 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>56</b>	<b>120</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>56</b>	<b>110</b>
85-68-7	Butylbenzylphthalate	56	< 56 U
56-55-3	Benzo(a)anthracene	56	< 56 U
117-81-7	bis(2-Ethylhexyl)phthalate	56	< 56 U
218-01-9	Chrysene	56	< 56 U
117-84-0	Di-n-Octyl phthalate	56	< 56 U
205-99-2	Benzo(b)fluoranthene	56	< 56 U
207-08-9	Benzo(k)fluoranthene	56	< 56 U
50-32-8	Benzo(a)pyrene	56	< 56 U
193-39-5	Indeno(1,2,3-cd)pyrene	56	< 56 U
53-70-3	Dibenz(a,h)anthracene	56	< 56 U
191-24-2	Benzo(g,h,i)perylene	56	< 56 U
483-65-8	Retene	56	< 56 U
90-12-0	1-Methylnaphthalene	56	< 56 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	75.2%	2-Fluorobiphenyl	80.4%
d14-p-Terphenyl	71.2%	d4-1,2-Dichlorobenzene	74.4%
d5-Phenol	72.0%	2-Fluorophenol	71.2%
2,4,6-Tribromophenol	71.5%	d4-2-Chlorophenol	73.3%

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Sample ID: DOF-TP8-8  
SAMPLE

Lab Sample ID: OU21R  
LIMS ID: 09-8658  
Matrix: Soil  
Data Release Authorized: *VDS*  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 19:15  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.38 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 10.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
91-57-6	2-Methylnaphthalene	60	< 60 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
83-32-9	Acenaphthene	60	< 60 U
132-64-9	Dibenzofuran	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
86-73-7	Fluorene	60	< 60 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
205-99-2	Benzo(b)fluoranthene	60	< 60 U
207-08-9	Benzo(k)fluoranthene	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
483-65-8	Retene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	< 60 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	75.2%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	86.4%	d4-1,2-Dichlorobenzene	77.2%
d5-Phenol	72.8%	2-Fluorophenol	72.5%
2,4,6-Tribromophenol	72.8%	d4-2-Chlorophenol	74.7%

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Sample ID: DOF-TP9-2  
SAMPLE

Lab Sample ID: OU21S  
LIMS ID: 09-8659  
Matrix: Soil  
Data Release Authorized: **VTS**  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 19:57  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 8.40 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 8.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
91-57-6	2-Methylnaphthalene	60	< 60 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
83-32-9	Acenaphthene	60	< 60 U
132-64-9	Dibenzofuran	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
86-73-7	Fluorene	60	< 60 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>60</b>	<b>210</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>60</b>	<b>250</b>
85-68-7	Butylbenzylphthalate	60	< 60 U
<b>56-55-3</b>	<b>Benzo(a)anthracene</b>	<b>60</b>	<b>67</b>
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>60</b>	<b>94</b>
117-84-0	Di-n-Octyl phthalate	60	< 60 U
<b>205-99-2</b>	<b>Benzo(b)fluoranthene</b>	<b>60</b>	<b>93</b>
<b>207-08-9</b>	<b>Benzo(k)fluoranthene</b>	<b>60</b>	<b>77</b>
<b>50-32-8</b>	<b>Benzo(a)pyrene</b>	<b>60</b>	<b>130</b>
<b>193-39-5</b>	<b>Indeno(1,2,3-cd)pyrene</b>	<b>60</b>	<b>96</b>
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
<b>191-24-2</b>	<b>Benzo(g,h,i)perylene</b>	<b>60</b>	<b>150</b>
483-65-8	Retene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	< 60 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	76.0%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	86.8%	d4-1,2-Dichlorobenzene	77.2%
d5-Phenol	73.3%	2-Fluorophenol	73.6%
2,4,6-Tribromophenol	68.0%	d4-2-Chlorophenol	74.7%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP9-3  
SAMPLE

Lab Sample ID: OU21T  
LIMS ID: 09-8660  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 20:38  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.92 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 3.00  
Percent Moisture: 5.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	190	< 190 U
95-48-7	2-Methylphenol	190	< 190 U
106-44-5	4-Methylphenol	190	< 190 U
105-67-9	2,4-Dimethylphenol	190	< 190 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>190</b>	<b>1,800</b>
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>190</b>	<b>960</b>
131-11-3	Dimethylphthalate	190	< 190 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>190</b>	<b>1,300</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>190</b>	<b>540</b>
132-64-9	Dibenzofuran	190	< 190 U
84-66-2	Diethylphthalate	190	< 190 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>190</b>	<b>1,100</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>190</b>	<b>8,000</b>
86-74-8	Carbazole	190	< 190 U
<b>120-12-7</b>	<b>Anthracene</b>	<b>190</b>	<b>1,600</b>
84-74-2	Di-n-Butylphthalate	190	< 190 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>190</b>	<b>11,000</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>190</b>	<b>11,000</b>
85-68-7	Butylbenzylphthalate	190	< 190 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>190</b>	<b>3,400</b>
117-81-7	bis(2-Ethylhexyl)phthalate	190	< 190 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>190</b>	<b>4,600</b>
117-84-0	Di-n-Octyl phthalate	190	< 190 U
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>190</b>	<b>3,200</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>190</b>	<b>3,500</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>190</b>	<b>5,400</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>190</b>	<b>2,700</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>190</b>	<b>430</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>190</b>	<b>3,700</b>
483-65-8	Retene	190	< 190 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>190</b>	<b>1,000</b>

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	80.2%	2-Fluorobiphenyl	83.0%
d14-p-Terphenyl	58.2%	d4-1,2-Dichlorobenzene	75.0%
d5-Phenol	74.1%	2-Fluorophenol	73.7%
2,4,6-Tribromophenol	67.8%	d4-2-Chlorophenol	73.8%

**SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
DOF-TP1-3	76.0%	77.2%	81.6%	76.4%	71.5%	72.3%	64.5%	74.1%	0	
DOF-TP1-18	82.0%	83.6%	86.8%	82.0%	78.7%	81.1%	70.4%	81.1%	0	
DOF-TP2-3	69.2%	67.6%	74.0%	71.2%	65.6%	66.9%	60.0%	68.0%	0	
DOF-TP2-9	82.0%	82.4%	80.0%	82.4%	78.1%	79.5%	71.7%	80.5%	0	
DOF-TP3-3	82.4%	82.8%	85.6%	82.4%	78.1%	79.5%	72.5%	80.8%	0	
DOF-TP3-8	82.8%	87.6%	79.2%	81.6%	72.0%	77.6%	57.6%	80.0%	0	
DOF-TP3-8 DL	D	D	D	D	D	D	D	D	0	
DOF-TP3-12	82.0%	85.2%	85.2%	82.0%	76.8%	77.9%	76.0%	79.2%	0	
DOF-TP4-4	84.8%	87.6%	86.8%	86.4%	82.1%	82.9%	76.5%	84.3%	0	
DOF-TP4-6	88.2%	90.6%	64.8%	84.0%	76.8%	96.0%	68.8%	80.8%	0	
DOF-TP4-6 DL	D	D	D	D	D	D	D	D	0	
DOF-TP4-8	84.0%	88.4%	60.8%	84.0%	82.1%	80.8%	77.9%	83.7%	0	
DOF-TP4-8 DL	110%	82.6%	70.1%	85.9%	88.2%	80.8%	76.6%	84.3%	0	
DOF-TP5-3	93.2%	83.2%	73.2%	71.2%	81.1%	68.3%	90.4%	75.7%	0	
DOF-TP5-3 DL	78.0%	84.8%	67.6%	72.8%	74.4%	69.2%	72.0%	75.8%	0	
DOF-TP5-8	78.4%	80.4%	61.6%	78.8%	75.5%	76.5%	70.4%	77.9%	0	
DOF-TP6-2	84.0%	84.4%	70.4%	84.0%	79.5%	80.5%	72.8%	81.3%	0	
DOF-TP6-6	76.8%	80.0%	66.0%	77.6%	74.7%	74.4%	70.1%	75.2%	0	
DOF-TP7-1	80.4%	82.8%	89.6%	82.8%	76.5%	79.2%	73.1%	79.7%	0	
MB-041109	88.8%	89.6%	90.8%	89.2%	85.1%	86.7%	78.4%	87.7%	0	
LCS-041109	85.6%	86.0%	93.2%	86.4%	86.1%	85.1%	86.9%	85.6%	0	
DOF-TP7-3	84.8%	88.0%	94.0%	86.4%	83.5%	82.4%	79.5%	85.1%	0	
DOF-TP7-3 MS	76.8%	79.6%	77.2%	77.6%	75.7%	76.5%	77.3%	75.7%	0	
DOF-TP7-3 MSD	80.4%	82.0%	70.8%	79.6%	76.8%	77.6%	77.3%	78.1%	0	
DOF-TP8-4	75.2%	80.4%	71.2%	74.4%	72.0%	71.2%	71.5%	73.3%	0	
DOF-TP8-8	75.2%	79.6%	86.4%	77.2%	72.8%	72.5%	72.8%	74.7%	0	
DOF-TP9-2	76.0%	79.6%	86.8%	77.2%	73.3%	73.6%	68.0%	74.7%	0	
DOF-TP9-3	80.2%	83.0%	58.2%	75.0%	74.1%	73.7%	67.8%	73.8%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(30-160)	(30-160)
(FBP) = 2-Fluorobiphenyl	(30-160)	(30-160)
(TPH) = d14-p-Terphenyl	(30-160)	(30-160)
(DCB) = d4-1,2-Dichlorobenzene	(30-160)	(30-160)
(PHL) = d5-Phenol	(30-160)	(30-160)
(2FP) = 2-Fluorophenol	(30-160)	(30-160)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)
(2CP) = d4-2-Chlorophenol	(30-160)	(30-160)

Prep Method: SW3546  
Log Number Range: 09-8641 to 09-8660

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP7-3  
MS/MSD

Lab Sample ID: OU21P  
LIMS ID: 09-8656  
Matrix: Soil  
Data Release Authorized: UTS  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted MS/MSD: 04/11/09  
Date Analyzed MS: 04/17/09 17:10  
MSD: 04/17/09 17:52  
Instrument/Analyst MS: NT6/LJR  
MSD: NT6/LJR  
GPC Cleanup: NO

Sample Amount MS: 7.79 g-dry-wt  
MSD: 7.63 g-dry-wt  
Final Extract Volume MS: 0.5 mL  
MSD: 0.5 mL  
Dilution Factor MS: 1.00  
MSD: 1.00  
Percent Moisture: 5.0 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 64.9	1180	1600	73.8%	1170	1640	71.3%	0.9%
2-Methylphenol	< 64.9	1220	1600	76.2%	1260	1640	76.8%	3.2%
4-Methylphenol	< 64.9	2490	3210	77.6%	2570	3280	78.4%	3.2%
2,4-Dimethylphenol	< 64.9	1220	1600	76.2%	1320	1640	80.5%	7.9%
Naphthalene	< 64.9	1280	1600	80.0%	1380	1640	84.1%	7.5%
2-Methylnaphthalene	< 64.9	1270	1600	79.4%	1330	1640	81.1%	4.6%
Dimethylphthalate	< 64.9	1330	1600	83.1%	1360	1640	82.9%	2.2%
Acenaphthylene	< 64.9	1330	1600	83.1%	1400	1640	85.4%	5.1%
Acenaphthene	< 64.9	1310	1600	81.9%	1380	1640	84.1%	5.2%
Dibenzofuran	< 64.9	1310	1600	81.9%	1360	1640	82.9%	3.7%
Diethylphthalate	< 64.9	1340	1600	83.8%	1350	1640	82.3%	0.7%
Fluorene	< 64.9	1330	1600	83.1%	1370	1640	83.5%	3.0%
Phenanthrene	< 64.9	1340	1600	83.8%	1410	1640	86.0%	5.1%
Carbazole	< 64.9	1320	1600	82.5%	1400	1640	85.4%	5.9%
Anthracene	< 64.9	1320	1600	82.5%	1400	1640	85.4%	5.9%
Di-n-Butylphthalate	< 64.9	1370	1600	85.6%	1440	1640	87.8%	5.0%
Fluoranthene	< 64.9	1960	1600	122%	1790	1640	109%	9.1%
Pyrene	< 64.9	1320	1600	82.5%	1240	1640	75.6%	6.2%
Butylbenzylphthalate	< 64.9	1300	1600	81.2%	1280	1640	78.0%	1.6%
Benzo(a)anthracene	< 64.9	1370	1600	85.6%	1420	1640	86.6%	3.6%
bis(2-Ethylhexyl)phthalate	< 64.9	1290	1600	80.6%	1250	1640	76.2%	3.1%
Chrysene	< 64.9	1290	1600	80.6%	1360	1640	82.9%	5.3%
Di-n-Octyl phthalate	< 64.9	1310	1600	81.9%	1360	1640	82.9%	3.7%
Benzo(b)fluoranthene	< 64.9	1400	1600	87.5%	1440	1640	87.8%	2.8%
Benzo(k)fluoranthene	< 64.9	1290	1600	80.6%	1420	1640	86.6%	9.6%
Benzo(a)pyrene	< 64.9	1370	1600	85.6%	1430	1640	87.2%	4.3%
Indeno(1,2,3-cd)pyrene	< 64.9	1360	1600	85.0%	1420	1640	86.6%	4.3%
Dibenz(a,h)anthracene	< 64.9	1300	1600	81.2%	1360	1640	82.9%	4.5%
Benzo(g,h,i)perylene	< 64.9	1310	1600	81.9%	1360	1640	82.9%	3.7%
1-Methylnaphthalene	< 64.9	1360	1600	85.0%	1430	1640	87.2%	5.0%

Results reported in µg/kg  
RPD calculated using sample concentrations per SW846.



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP7-3  
MATRIX SPIKE

Lab Sample ID: OU21P  
LIMS ID: 09-8656  
Matrix: Soil  
Data Release Authorized: VTS  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 17:10  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.79 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 5.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	---
95-48-7	2-Methylphenol	64	---
106-44-5	4-Methylphenol	64	---
105-67-9	2,4-Dimethylphenol	64	---
91-20-3	Naphthalene	64	---
91-57-6	2-Methylnaphthalene	64	---
131-11-3	Dimethylphthalate	64	---
208-96-8	Acenaphthylene	64	---
83-32-9	Acenaphthene	64	---
132-64-9	Dibenzofuran	64	---
84-66-2	Diethylphthalate	64	---
86-73-7	Fluorene	64	---
85-01-8	Phenanthrene	64	---
86-74-8	Carbazole	64	---
120-12-7	Anthracene	64	---
84-74-2	Di-n-Butylphthalate	64	---
206-44-0	Fluoranthene	64	---
129-00-0	Pyrene	64	---
85-68-7	Butylbenzylphthalate	64	---
56-55-3	Benzo(a)anthracene	64	---
117-81-7	bis(2-Ethylhexyl)phthalate	64	---
218-01-9	Chrysene	64	---
117-84-0	Di-n-Octyl phthalate	64	---
205-99-2	Benzo(b)fluoranthene	64	---
207-08-9	Benzo(k)fluoranthene	64	---
50-32-8	Benzo(a)pyrene	64	---
193-39-5	Indeno(1,2,3-cd)pyrene	64	---
53-70-3	Dibenz(a,h)anthracene	64	---
191-24-2	Benzo(g,h,i)perylene	64	---
483-65-8	Retene	64	< 64 U
90-12-0	1-Methylnaphthalene	64	---

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	76.8%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	77.2%	d4-1,2-Dichlorobenzene	77.6%
d5-Phenol	75.7%	2-Fluorophenol	76.5%
2,4,6-Tribromophenol	77.3%	d4-2-Chlorophenol	75.7%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP7-3  
MATRIX SPIKE DUPLICATE

Lab Sample ID: OU21P  
LIMS ID: 09-8656  
Matrix: Soil  
Data Release Authorized: VTS  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/17/09 17:52  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: No

Sample Amount: 7.63 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 5.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	66	---
95-48-7	2-Methylphenol	66	---
106-44-5	4-Methylphenol	66	---
105-67-9	2,4-Dimethylphenol	66	---
91-20-3	Naphthalene	66	---
91-57-6	2-Methylnaphthalene	66	---
131-11-3	Dimethylphthalate	66	---
208-96-8	Acenaphthylene	66	---
83-32-9	Acenaphthene	66	---
132-64-9	Dibenzofuran	66	---
84-66-2	Diethylphthalate	66	---
86-73-7	Fluorene	66	---
85-01-8	Phenanthrene	66	---
86-74-8	Carbazole	66	---
120-12-7	Anthracene	66	---
84-74-2	Di-n-Butylphthalate	66	---
206-44-0	Fluoranthene	66	---
129-00-0	Pyrene	66	---
85-68-7	Butylbenzylphthalate	66	---
56-55-3	Benzo(a)anthracene	66	---
117-81-7	bis(2-Ethylhexyl)phthalate	66	---
218-01-9	Chrysene	66	---
117-84-0	Di-n-Octyl phthalate	66	---
205-99-2	Benzo(b)fluoranthene	66	---
207-08-9	Benzo(k)fluoranthene	66	---
50-32-8	Benzo(a)pyrene	66	---
193-39-5	Indeno(1,2,3-cd)pyrene	66	---
53-70-3	Dibenz(a,h)anthracene	66	---
191-24-2	Benzo(g,h,i)perylene	66	---
483-65-8	Retene	66	< 66 U
90-12-0	1-Methylnaphthalene	66	---

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	80.4%	2-Fluorobiphenyl	82.0%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	79.6%
d5-Phenol	76.8%	2-Fluorophenol	77.6%
2,4,6-Tribromophenol	77.3%	d4-2-Chlorophenol	78.1%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 2

Sample ID: LCS-041109  
LAB CONTROL

Lab Sample ID: LCS-041109  
LIMS ID: 09-8656  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 04/28/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted: 04/11/09  
Date Analyzed: 04/16/09 16:12  
Instrument/Analyst: NT6/LJR  
GPC Cleanup: NO

Sample Amount: 7.50 g  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	1430	1670	85.6%
2-Methylphenol	1420	1670	85.0%
4-Methylphenol	2920	3330	87.7%
2,4-Dimethylphenol	1410	1670	84.4%
Naphthalene	1460	1670	87.4%
2-Methylnaphthalene	1450	1670	86.8%
Dimethylphthalate	1520	1670	91.0%
Acenaphthylene	1500	1670	89.8%
Acenaphthene	1490	1670	89.2%
Dibenzofuran	1490	1670	89.2%
Diethylphthalate	1550	1670	92.8%
Fluorene	1520	1670	91.0%
Phenanthrene	1520	1670	91.0%
Carbazole	1540	1670	92.2%
Anthracene	1500	1670	89.8%
Di-n-Butylphthalate	1590	1670	95.2%
Fluoranthene	2340	1670	140%
Pyrene	1600	1670	95.8%
Butylbenzylphthalate	1580	1670	94.6%
Benzo(a)anthracene	1550	1670	92.8%
bis(2-Ethylhexyl)phthalate	1560	1670	93.4%
Chrysene	1490	1670	89.2%
Di-n-Octyl phthalate	1490	1670	89.2%
Benzo(b)fluoranthene	1400	1670	83.8%
Benzo(k)fluoranthene	1680	1670	101%
Benzo(a)pyrene	1550	1670	92.8%
Indeno(1,2,3-cd)pyrene	1520	1670	91.0%
Dibenz(a,h)anthracene	1440	1670	86.2%
Benzo(g,h,i)perylene	1460	1670	87.4%
1-Methylnaphthalene	1560	1670	93.4%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 2 of 2

**Sample ID: LCS-041109**  
**LAB CONTROL**

Lab Sample ID: LCS-041109  
 LIMS ID: 09-8656  
 Matrix: Soil  
 Date Analyzed: 04/16/09 16:12

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00

<b>Analyte</b>	<b>Lab Control</b>	<b>Spike Added</b>	<b>Recovery</b>
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**Semivolatile Surrogate Recovery**


d5-Nitrobenzene	85.6%
2-Fluorobiphenyl	86.0%
d14-p-Terphenyl	93.2%
d4-1,2-Dichlorobenzene	86.4%
d5-Phenol	86.1%
2-Fluorophenol	85.1%
2,4,6-Tribromophenol	86.9%
d4-2-Chlorophenol	85.6%

Results reported in  $\mu\text{g}/\text{kg}$

ORGANICS ANALYSIS DATA SHEET  
 TPHG by Method NWTPHG  
 Matrix: Soil



QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 Event: PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Data Release Authorized:   
 Reported: 04/14/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-040809 09-8641	Method Blank	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.0 U --- 95.0% 94.9%
OU21A 09-8641	DOF-TP1-3	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.8 U --- 106% 102%
OU21B 09-8642	DOF-TP1-18	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.5 U --- 115% 112%
OU21C 09-8643	DOF-TP2-3	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.7 U --- 106% 106%
OU21D 09-8644	DOF-TP2-9	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.6 U --- 104% 104%
OU21E 09-8645	DOF-TP3-3	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.3 U --- 99.6% 99.8%
OU21F 09-8646	DOF-TP3-8	04/08/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>45</b> GRO 115% 112%
OU21G 09-8647	DOF-TP3-12	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.5 U --- 102% 102%
OU21H 09-8648	DOF-TP4-4	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.2 U --- 110% 111%
OU21I 09-8649	DOF-TP4-6	04/08/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>49</b> GRO 101% 98.1%

**ORGANICS ANALYSIS DATA SHEET**

**TPHG by Method NWTPHG**

Matrix: Soil

Data Release Authorized:

Reported: 04/14/09



QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

Event: PSE-004-00


Date Sampled: 04/02/09

Date Received: 04/06/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
OU21J 09-8650	DOF-TP4-8	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.9 U --- 101% 102%
OU21K 09-8651	DOF-TP5-3	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 8.0 U --- 116% 116%
OU21L 09-8652	DOF-TP5-8	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 8.8 U --- 108% 112%
MB-040909 09-8653	Method Blank	04/09/09 PID2	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.0 U --- 100% 104%
OU21M 09-8653	DOF-TP6-2	04/09/09 PID2	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.4 U --- 115% 116%
OU21N 09-8654	DOF-TP6-6	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.3 U --- 102% 104%
OU21O 09-8655	DOF-TP7-1	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.4 U --- 103% 111%
OU21P 09-8656	DOF-TP7-3	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.7 U --- 99.1% 97.3%
OU21Q 09-8657	DOF-TP8-4	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.1 U --- 108% 108%
OU21R 09-8658	DOF-TP8-8	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.2 U --- 101% 104%

**ORGANICS ANALYSIS DATA SHEET**  
**TPHG by Method NWTPHG**  
 Matrix: Soil

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 Event: PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Data Release Authorized:   
 Reported: 04/14/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
OU21S 09-8659	DOF-TP9-2	04/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.4 U --- 105% 106%
OU21T 09-8660	DOF-TP9-3	04/08/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>16</b> GRO 113% 114%

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**TPHG SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: OU21  
Matrix: Soil

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
Event: PSE-004-00

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-040809	NA	95.0%	94.9%	0
LCS-040809	NA	102%	99.2%	0
LCS-040809	NA	95.1%	92.8%	0
DOF-TP1-3	NA	106%	102%	0
DOF-TP1-18	NA	115%	112%	0
DOF-TP2-3	NA	106%	106%	0
DOF-TP2-9	NA	104%	104%	0
DOF-TP3-3	NA	99.6%	99.8%	0
DOF-TP3-3 MS	NA	105%	103%	0
DOF-TP3-3 MSD	NA	101%	101%	0
DOF-TP3-8	NA	115%	112%	0
DOF-TP3-12	NA	102%	102%	0
DOF-TP4-4	NA	110%	111%	0
DOF-TP4-6	NA	101%	98.1%	0
DOF-TP4-8	NA	101%	102%	0
DOF-TP5-3	NA	116%	116%	0
DOF-TP5-8	NA	108%	112%	0
MB-040909	NA	100%	104%	0
LCS-040909	NA	102%	106%	0
LCS-040909	NA	99.5%	103%	0
DOF-TP6-2	NA	115%	116%	0
DOF-TP6-6	NA	102%	104%	0
DOF-TP7-1	NA	103%	111%	0
DOF-TP7-3	NA	99.1%	97.3%	0
DOF-TP8-4	NA	108%	108%	0
DOF-TP8-8	NA	101%	104%	0
DOF-TP9-2	NA	105%	106%	0
DOF-TP9-3	NA	113%	114%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(65-137)
(BBZ) = Bromobenzene	(80-120)	(54-144)

Log Number Range: 09-8641 to 09-8660



**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DOF-TP3-3

MATRIX SPIKE

Lab Sample ID: OU21E

LIMS ID: 09-8645

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 04/14/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

Event: PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Date Analyzed MS: 04/08/09 11:45

MSD: 04/08/09 12:10

Instrument/Analyst MS: PID3/MH

MSD: PID3/MH

Purge Volume: 5.0 mL

Sample Amount MS: 79.5 mg-dry-wt

MSD: 80.2 mg-dry-wt

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Gasoline Range Hydrocarbons < 6.34 U		49.8	54.0	92.2%	46.9	53.5	87.7%	6.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	MS	MSD
Trifluorotoluene	105%	101%
Bromobenzene	103%	101%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-040809

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040809

LIMS ID: 09-8641

Matrix: Soil

Data Release Authorized: *AS*

Reported: 04/14/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

Event: PSE-004-00

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/08/09 08:03

LCSD: 04/08/09 08:28

Instrument/Analyst LCS: PID3/MH

LCSD: PID3/MH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	48.2	50.0	96.4%	44.4	50.0	88.8%	8.2%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	102%	95.1%
Bromobenzene	99.2%	92.8%

**ORGANICS ANALYSIS DATA SHEET**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: LCS-040909**  
**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-040909  
 LIMS ID: 09-8653  
 Matrix: Soil  
 Data Release Authorized: *AB*  
 Reported: 04/14/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 Event: PSE-004-00  
 Date Sampled: NA  
 Date Received: NA

Date Analyzed LCS: 04/09/09 08:28  
 LCSD: 04/09/09 08:56  
 Instrument/Analyst LCS: PID2/MH  
 LCSD: PID2/MH

Purge Volume: 5.0 mL  
 Sample Amount LCS: 100 mg-dry-wt  
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	52.0	50.0	104%	51.2	50.0	102%	1.6%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	102%	99.5%
Bromobenzene	106%	103%

MH  
4/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090408-2.b/0408a006.d      ARI ID: MB0408  
Data file 2: /chem3/pid3.i/20090408-1.b/0408a006.d      Client ID:  
Method: /chem3/pid3.i/20090408-1.b/PIDB.m            Injection Date: 08-APR-2009 08:52  
Instrument: pid3.i                                        Matrix: WATER  
Gas Ical Date: 10-DEC-2008                            Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.009	6066	71539	95.0	TFT (Surr)
14.965	0.005	3704	30330	94.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	3330	0.005
8015B (2MP-TMB)	2180	0.002
AKGas (nC6-nC10)	2179	0.002
NWGas (Tol-Nap)	3330	0.005

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.009	20001	95.0	TFT (Surr)
14.963	0.005	42416	94.1	BB (Surr)

AROMATICICS (PID)

-----

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090408-2.b/0408a006.d

Date: 08-APR-2009 08:52

Client ID:

Sample Info: MB0408

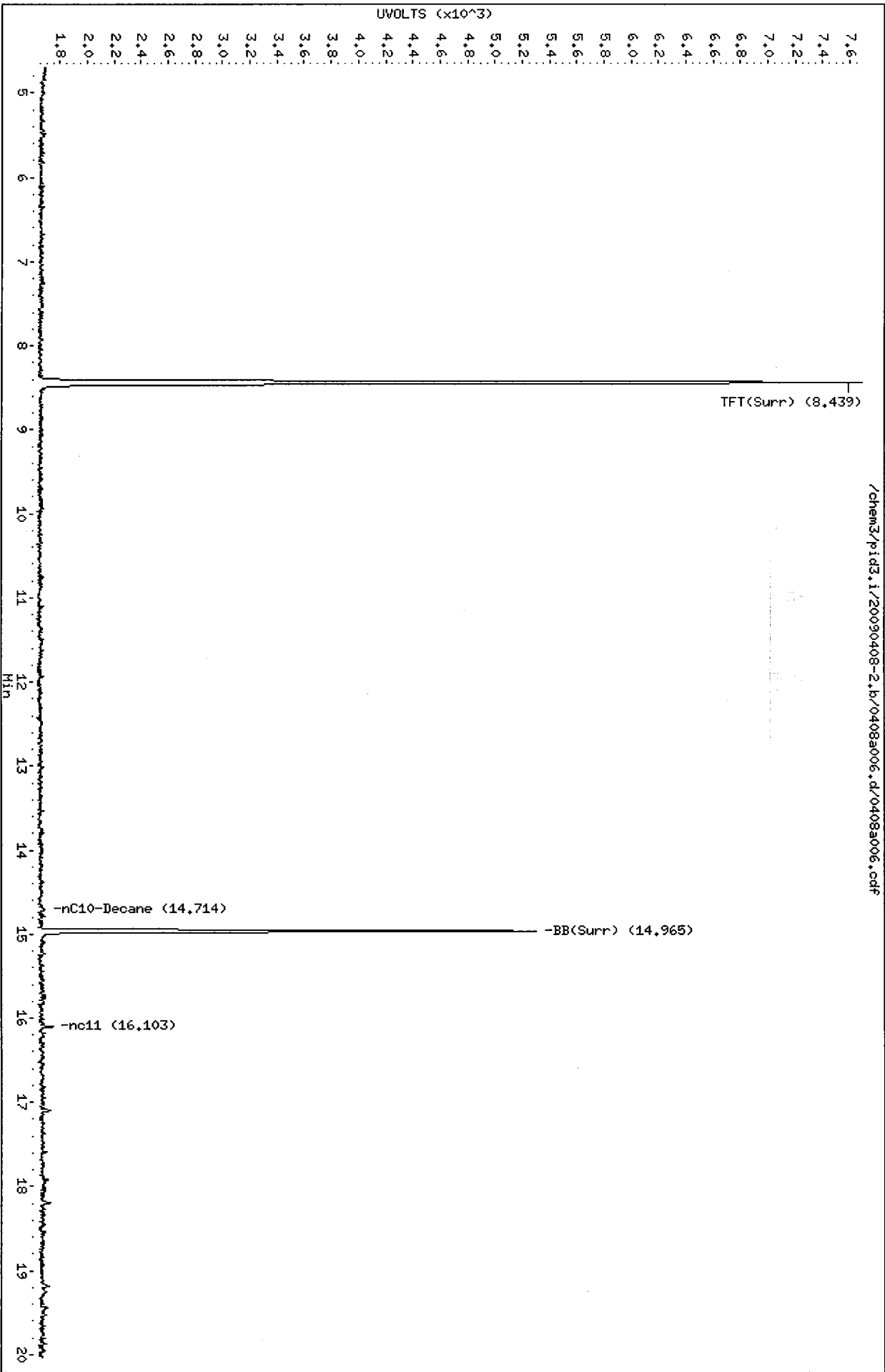
Instrument: pid3.i

Operator: PKC

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20090408-2.b/0408a006.d/0408a006.cdf



MH  
4/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090408-2.b/0408a004.d      ARI ID: LCS0408  
Data file 2: /chem3/pid3.i/20090408-1.b/0408a004.d      Client ID:  
Method: /chem3/pid3.i/20090408-1.b/PIDB.m            Injection Date: 08-APR-2009 08:03  
Instrument: pid3.i                                        Matrix: WATER  
Gas Ical Date: 10-DEC-2008                            Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.008	6544	77661	102.5	TFT (Surr)
14.965	0.005	3874	32167	99.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	658100	0.960
8015B (2MP-TMB)	1327084	0.952
AKGas (nC6-nC10)	1058052	0.956
NWGas (Tol-Nap)	700030	0.965

\* Surrogate areas are subtracted from Total Area  
=====

PID Surrogates

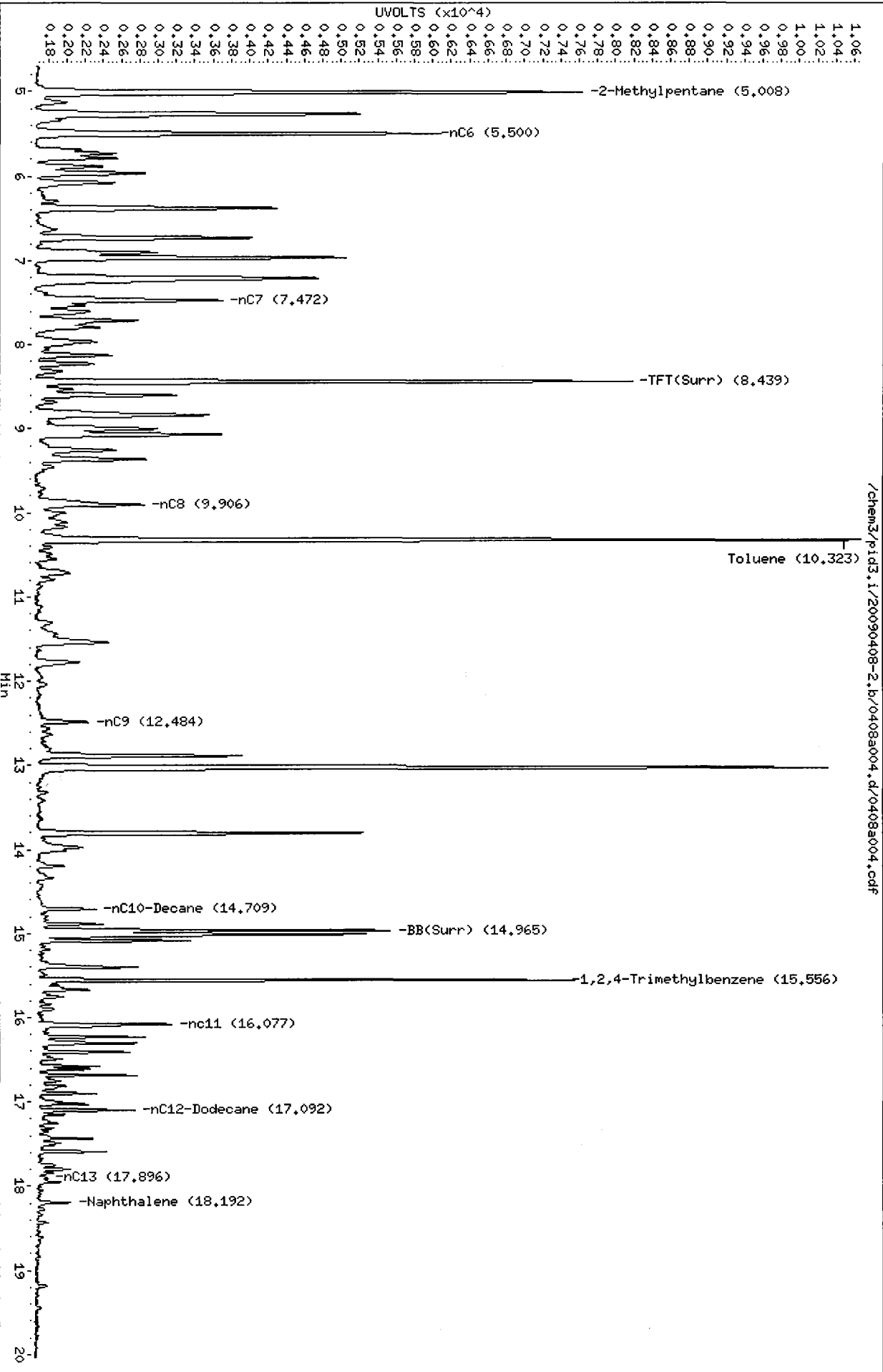
RT	Shift	Response	%Rec	Compound
8.437	0.009	21565	102.4	TFT (Surr)
14.963	0.005	45219	100.3	BB (Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
7.706	0.008	6569	4.72	Benzene
10.322	0.009	48708	36.01	Toluene
12.881	0.008	10603	8.66	Ethylbenzene
13.022	0.010	49886	37.59	M/P-Xylene
13.803	0.007	17242	13.47	O-Xylene
5.262	-0.010	2329	5.52	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



MH  
4/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090408-2.b/0408a016.d      ARI ID: OU21F  
Data file 2: /chem3/pid3.i/20090408-1.b/0408a016.d      Client ID: DOF-TP3-8  
Method: /chem3/pid3.i/20090408-1.b/PIDB.m              Injection Date: 08-APR-2009 13:23  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.010	5873	68958	92.0	TFT(Surr)
14.964	0.004	3494	28315	89.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	197932	0.289
8015B (2MP-TMB)	97070	0.070
AKGas (nC6-nC10)	63344	0.057
NWGas (Tol-Nap)	467455	0.644

\* Surrogate areas are subtracted from Total Area  
=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.010	19241	91.4	TFT(Surr)
14.963	0.004	40432	89.7	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
0.000	-7.698	0	0.00	Benzene
10.322	0.010	591	0.44	Toluene
0.000	-12.873	0	0.00	Ethylbenzene
0.000	-13.012	0	0.00	M/P-Xylene
0.000	-13.796	0	0.00	O-Xylene
0.000	-5.272	0	0.00	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20090408-2.b/0408a016.d

Date: 08-APR-2009 13:23

Client ID: DOF-TP3-8

Sample Info: 0U21F

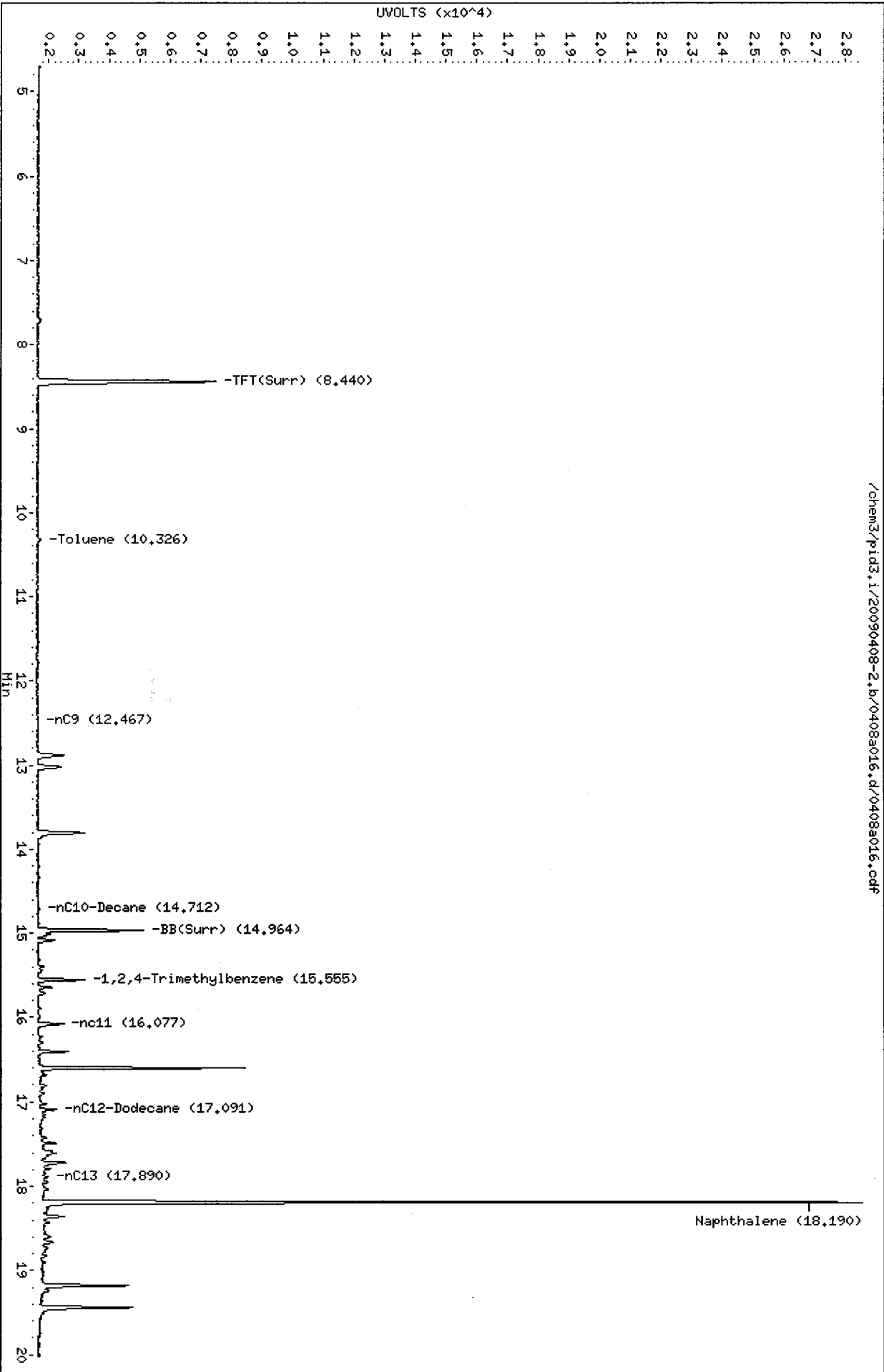
Instrument: pid3.i

Column phase: RTX 502-2 FID

Operator: PKC

Column diameter: 0.18

/chem3/pid3.i/20090408-2.b/0408a016.d/0408a016.cdf



MH  
4/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090408-2.b/0408a019.d      ARI ID: OU21I  
Data file 2: /chem3/pid3.i/20090408-1.b/0408a019.d      Client ID: DOF-TP4-6  
Method: /chem3/pid3.i/20090408-1.b/PIDB.m              Injection Date: 08-APR-2009 14:35  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                              Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.439	0.008	4938	58341	77.4	TFT(Surr)
14.963	0.003	2925	24297	74.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	231278	0.337
8015B (2MP-TMB)	69427	0.050
AKGas (nC6-nC10)	31048	0.028
NWGas (Tol-Nap)	483424	0.666

\* Surrogate areas are subtracted from Total Area  
=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
8.437	0.008	16316	77.5	TFT(Surr)
14.962	0.003	33412	74.1	BB(Surr)

AROMATICS (PID)

-----

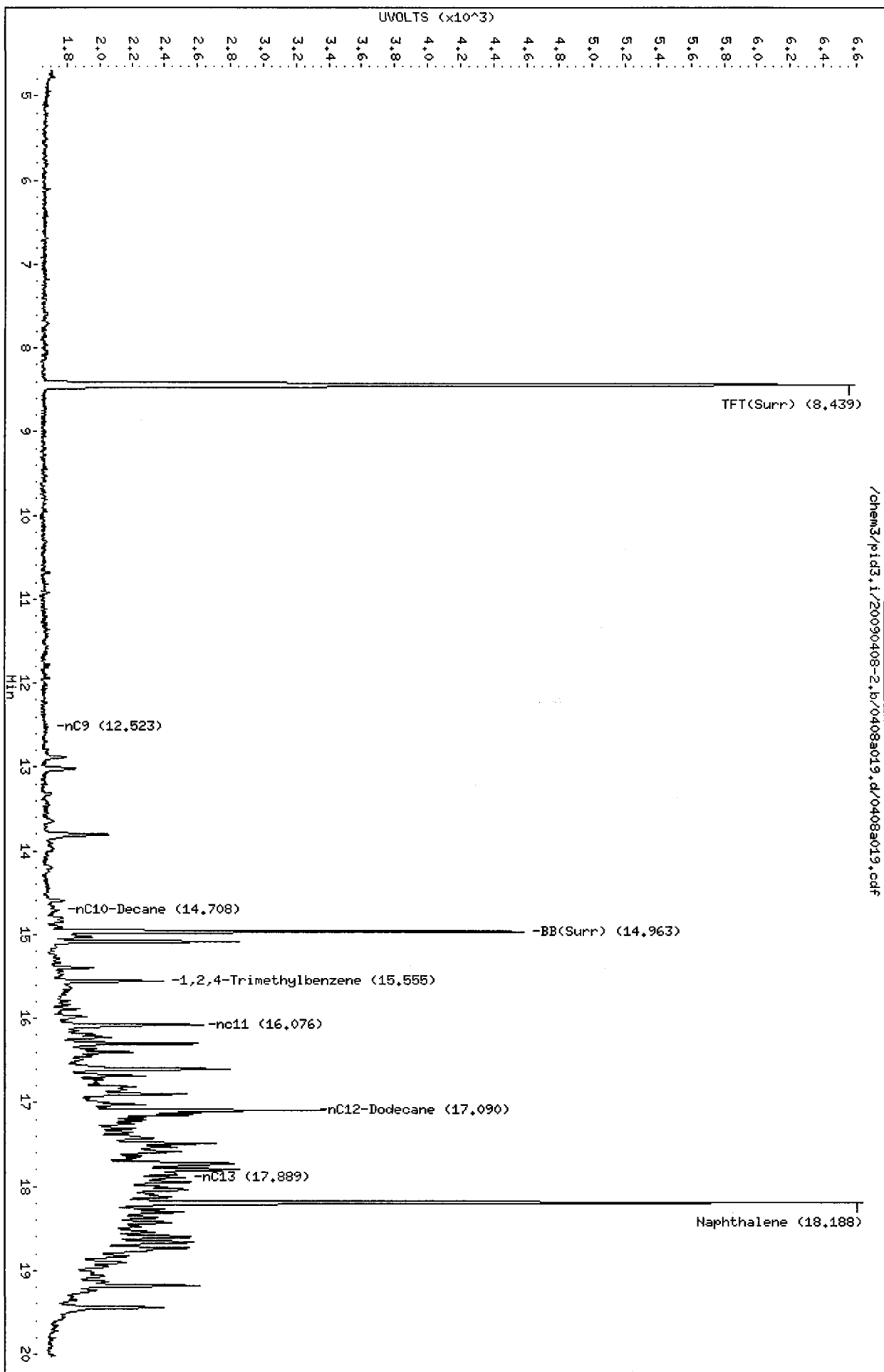
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
0.000	-7.698	0	0.00	Benzene
ND	---	---	---	Toluene
0.000	-12.873	0	0.00	Ethylbenzene
0.000	-13.012	0	0.00	M/P-Xylene
0.000	-13.796	0	0.00	O-Xylene
0.000	-5.272	0	0.00	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090408-2.b/0408a019.d  
Date: 08-APR-2009 14:35  
Client ID: DOF-TP4-6  
Sample Info: 0U211

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: PKC  
Column diameter: 0.18



MH  
4/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090408-2.b/0408a032.d      ARI ID: OU21T  
Data file 2: /chem3/pid3.i/20090408-1.b/0408a032.d      Client ID: DOF-TP9-3  
Method: /chem3/pid3.i/20090408-1.b/PIDB.m              Injection Date: 08-APR-2009 19:50  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 10-DEC-2008                                  Dilution Factor: 1.000  
BETX Ical Date: 25-FEB-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.010	6207	73116	97.3	TFT(Surr)
14.963	0.003	3804	31014	97.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	105293	0.154
8015B (2MP-TMB)	27792	0.020
AKGas (nC6-nC10)	13519	0.012
NWGas (Tol-Nap)	185739	0.256

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.010	20622	98.0	TFT(Surr)
14.962	0.003	44514	98.7	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
0.000	-7.698	0	0.00	Benzene
ND	---	---	---	Toluene
0.000	-12.873	0	0.00	Ethylbenzene
0.000	-13.012	0	0.00	M/P-Xylene
0.000	-13.796	0	0.00	O-Xylene
0.000	-5.272	0	0.00	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090408-2.b/0408a032.d

Date: 08-APR-2009 19:50

Client ID: JDF-TP9-3

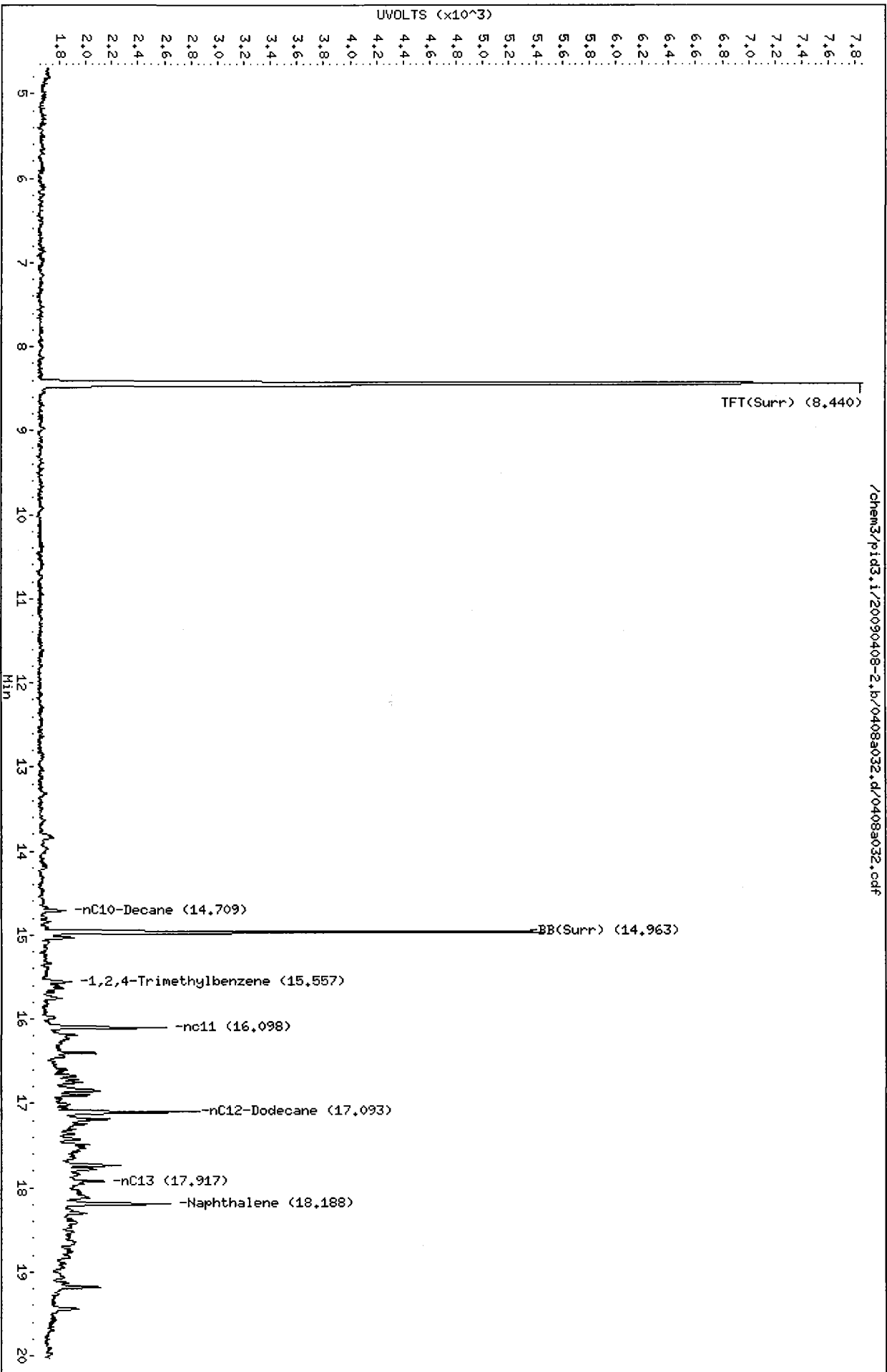
Sample Info: 0U21T

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: PKC


Column diameter: 0.18



/chem3/pid3.i/20090408-2.b/0408a032.d/0408a032.cdf

**ORGANICS ANALYSIS DATA SHEET**  
**TOTAL DIESEL RANGE HYDROCARBONS**  
 NWTPHD by GC/FID  
 Page 1 of 2  
 Matrix: Soil

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Received: 04/06/09

Data Release Authorized:   
 Reported: 04/13/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-041009 09-8641	Method Blank HC ID: ---	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 98.2%
OU21A 09-8641	DOF-TP1-3 HC ID: RRO	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.9 12	< 5.9 U 13 92.9%
OU21B 09-8642	DOF-TP1-18 HC ID: DRO/MOTOR OIL	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.5 11	15 39 86.9%
OU21C 09-8643	DOF-TP2-3 HC ID: RRO	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.9 12	< 5.9 U 12 94.2%
OU21D 09-8644	DOF-TP2-9 HC ID: DRO	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.8 12	7.6 < 12 U 89.6%
OU21E 09-8645	DOF-TP3-3 HC ID: ---	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.4 11	< 5.4 U < 11 U 102%
OU21F 09-8646	DOF-TP3-8 HC ID: DRO/RRO	04/10/09	04/11/09 FID3A	1.00 100	Diesel Motor Oil o-Terphenyl	550 1,100	3,700 3,100 D
OU21G 09-8647	DOF-TP3-12 HC ID: DRO/RRO	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.4 11	8.7 18 98.0%
OU21H 09-8648	DOF-TP4-4 HC ID: ---	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.3 10	< 5.3 U < 10 U 96.9%
OU21I 09-8649	DOF-TP4-6 HC ID: DRO/RRO	04/10/09	04/11/09 FID3A	1.00 100	Diesel Motor Oil o-Terphenyl	600 1,200	5,000 3,900 D
OU21J 09-8650	DOF-TP4-8 HC ID: DRO/RRO	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.6 11	7.6 14 98.9%
OU21K 09-8651	DOF-TP5-3 HC ID: DRO/MOTOR OIL	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.8 12	57 220 92.2%
OU21L 09-8652	DOF-TP5-8 HC ID: ---	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.2 12	< 6.2 U < 12 U 84.7%

**ORGANICS ANALYSIS DATA SHEET**  
**TOTAL DIESEL RANGE HYDROCARBONS**  
 NWTPHD by GC/FID  
 Page 2 of 2  
 Matrix: Soil

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Received: 04/06/09

Data Release Authorized: *AS*  
 Reported: 04/13/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
OU21M 09-8653	DOF-TP6-2 HC ID: ---	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.3 11	< 5.3 U < 11 U 93.1%
OU21N 09-8654	DOF-TP6-6 HC ID: RRO	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.4 11	< 5.4 U 14 90.2%
OU21O 09-8655	DOF-TP7-1 HC ID: DRO/MOTOR OIL	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.5 11	7.6 19 99.6%
OU21P 09-8656	DOF-TP7-3 HC ID: ---	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.1 10	< 5.1 U < 10 U 95.8%
OU21Q 09-8657	DOF-TP8-4 HC ID: DRO/MOTOR OIL	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.4 11	46 200 94.4%
OU21R 09-8658	DOF-TP8-8 HC ID: RRO	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.5 11	6.5 12 98.2%
OU21S 09-8659	DOF-TP9-2 HC ID: DRO/MOTOR OIL	04/10/09	04/11/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.3 11	11 30 99.6%
OU21T 09-8660	DOF-TP9-3 HC ID: DIESEL/MOTOR OIL	04/10/09	04/11/09 FID3A	1.00 20	Diesel Motor Oil o-Terphenyl	100 200	770 3,000 D

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.  
 DL-Dilution of extract prior to analysis.  
 RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.  
 Motor Oil quantitation on total peaks in the range from C24 to C38.  
 HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

**TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
041009MBS	98.2%	0
041009LCS	102%	0
DOF-TP1-3	92.9%	0
DOF-TP1-3 MS	90.4%	0
DOF-TP1-3 MSD	113%	0
DOF-TP1-18	86.9%	0
DOF-TP2-3	94.2%	0
DOF-TP2-9	89.6%	0
DOF-TP3-3	102%	0
DOF-TP3-8	D	0
DOF-TP3-12	98.0%	0
DOF-TP4-4	96.9%	0
DOF-TP4-6	D	0
DOF-TP4-8	98.9%	0
DOF-TP5-3	92.2%	0
DOF-TP5-8	84.7%	0
DOF-TP6-2	93.1%	0
DOF-TP6-6	90.2%	0
DOF-TP7-1	99.6%	0
DOF-TP7-3	95.8%	0
DOF-TP8-4	94.4%	0
DOF-TP8-8	98.2%	0
DOF-TP9-2	99.6%	0
DOF-TP9-3	D	0

**LCS/MB LIMITS**

**QC LIMITS**

(OTER) = o-Terphenyl

(52-121)

(48-119)

Prep Method: SW3546  
Log Number Range: 09-8641 to 09-8660



**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1


Sample ID: DOF-TP1-3

MS/MSD

Lab Sample ID: OU21A

LIMS ID: 09-8641

Matrix: Soil

Data Release Authorized: 

Reported: 04/13/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Date Extracted MS/MSD: 04/10/09

Sample Amount MS: 8.77 g-dry-wt

MSD: 8.61 g-dry-wt

Date Analyzed MS: 04/11/09 14:55

Final Extract Volume MS: 1.0 mL

MSD: 04/11/09 15:14

MSD: 1.0 mL

Instrument/Analyst MS: FID3A/JGR

Dilution Factor MS: 1.00

MSD: FID3A/JGR

MSD: 1.00

Percent Moisture: 16.2%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 5.9 U	146	171	85.4%	147	174	84.5%	0.7%

**TPHD Surrogate Recovery**

	MS	MSD
o-Terphenyl	90.4%	113 %

Results reported in mg/kg

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1

Sample ID: LCS-041009

LAB CONTROL

Lab Sample ID: LCS-041009

LIMS ID: 09-8641

Matrix: Soil

Data Release Authorized: *AB*

Reported: 04/13/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: NA

Date Received: NA

Date Extracted: 04/10/09

Date Analyzed: 04/11/09 14:18

Instrument/Analyst: FID3A/JGR

Sample Amount: 10.0 g

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	139	150	92.7%

**TPHD Surrogate Recovery**

o-Terphenyl	102%
-------------	------

Results reported in mg/kg

**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Soil  
Date Received: 04/06/09

ARI Job: OU21  
Project: VERBEEK WRECKING  
PSE-004-00

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
09-8641-041009MB1	Method Blank	10.0 g	1.00 mL	-	04/10/09
09-8641-041009LCS1	Lab Control	10.0 g	1.00 mL	-	04/10/09
09-8641-OU21A	DOF-TP1-3	8.48 g	1.00 mL	D	04/10/09
09-8641-OU21AMS	DOF-TP1-3	8.77 g	1.00 mL	D	04/10/09
09-8641-OU21AMSD	DOF-TP1-3	8.61 g	1.00 mL	D	04/10/09
09-8642-OU21B	DOF-TP1-18	9.13 g	1.00 mL	D	04/10/09
09-8643-OU21C	DOF-TP2-3	8.46 g	1.00 mL	D	04/10/09
09-8644-OU21D	DOF-TP2-9	8.61 g	1.00 mL	D	04/10/09
09-8645-OU21E	DOF-TP3-3	9.29 g	1.00 mL	D	04/10/09
09-8646-OU21F	DOF-TP3-8	9.03 g	1.00 mL	D	04/10/09
09-8647-OU21G	DOF-TP3-12	9.21 g	1.00 mL	D	04/10/09
09-8648-OU21H	DOF-TP4-4	9.50 g	1.00 mL	D	04/10/09
09-8649-OU21I	DOF-TP4-6	8.26 g	1.00 mL	D	04/10/09
09-8650-OU21J	DOF-TP4-8	8.99 g	1.00 mL	D	04/10/09
09-8651-OU21K	DOF-TP5-3	8.67 g	1.00 mL	D	04/10/09
09-8652-OU21L	DOF-TP5-8	8.00 g	1.00 mL	D	04/10/09
09-8653-OU21M	DOF-TP6-2	9.45 g	1.00 mL	D	04/10/09
09-8654-OU21N	DOF-TP6-6	9.20 g	1.00 mL	D	04/10/09
09-8655-OU21O	DOF-TP7-1	9.11 g	1.00 mL	D	04/10/09
09-8656-OU21P	DOF-TP7-3	9.77 g	1.00 mL	D	04/10/09
09-8657-OU21Q	DOF-TP8-4	9.25 g	1.00 mL	D	04/10/09
09-8658-OU21R	DOF-TP8-8	9.05 g	1.00 mL	D	04/10/09
09-8659-OU21S	DOF-TP9-2	9.40 g	1.00 mL	D	04/10/09
09-8660-OU21T	DOF-TP9-3	9.87 g	1.00 mL	D	04/10/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a008.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21MBS1  
Client ID: OU21MBS1  
Injection: 11-APR-2009 14:00  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.485	0.000	21983	36901	GAS (Tol-C12)	194019	10
C8	1.612	-0.014	4969	6164	DIESEL (C12-C24)	128097	8
C10	2.411	0.008	4303	4900	M.OIL (C24-C38)	458647	36
C12	3.069	0.001	867	733	AK-102 (C10-C25)	165003	8
C14	3.622	0.000	1048	1463	AK-103 (C25-C36)	337599	39
C16	4.108	-0.002	904	853	OR.DIES (C10-C28)	228933	11
C18	4.544	0.000	1349	1511	OR.MOIL (C28-C40)	545491	48
C20	4.921	-0.001	1028	868	JET-A (C10-C18)	100833	6
C22	5.251	-0.003	1249	1373			
C24	5.551	0.000	1416	1521			
C25	5.687	-0.002	1587	1468			
C26	5.817	-0.003	1832	1745			
C28	6.065	-0.003	3299	4908			
C32	6.512	-0.003	7343	5930			
C34	6.749	0.000	5435	2708			
Filter Peak	8.668	-0.003	5836	3955			
C36	7.007	-0.015	11601	22648	CREOSOT (C8-C22)	220747	35
C38	7.357	0.005	5987	2025			
C40	7.774	0.008	5834	2790	BUNKERC (C10-C38)	621355	64

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

*JK 04/13/09*

Surrogate	Area	Amount	%Rec
o-Terphenyl	949477	44.2	98.2
Triacontane	922524	54.4	120.8

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a008.d

Date: 11-APR-2009 14:00

Client ID: 0U21HBS1

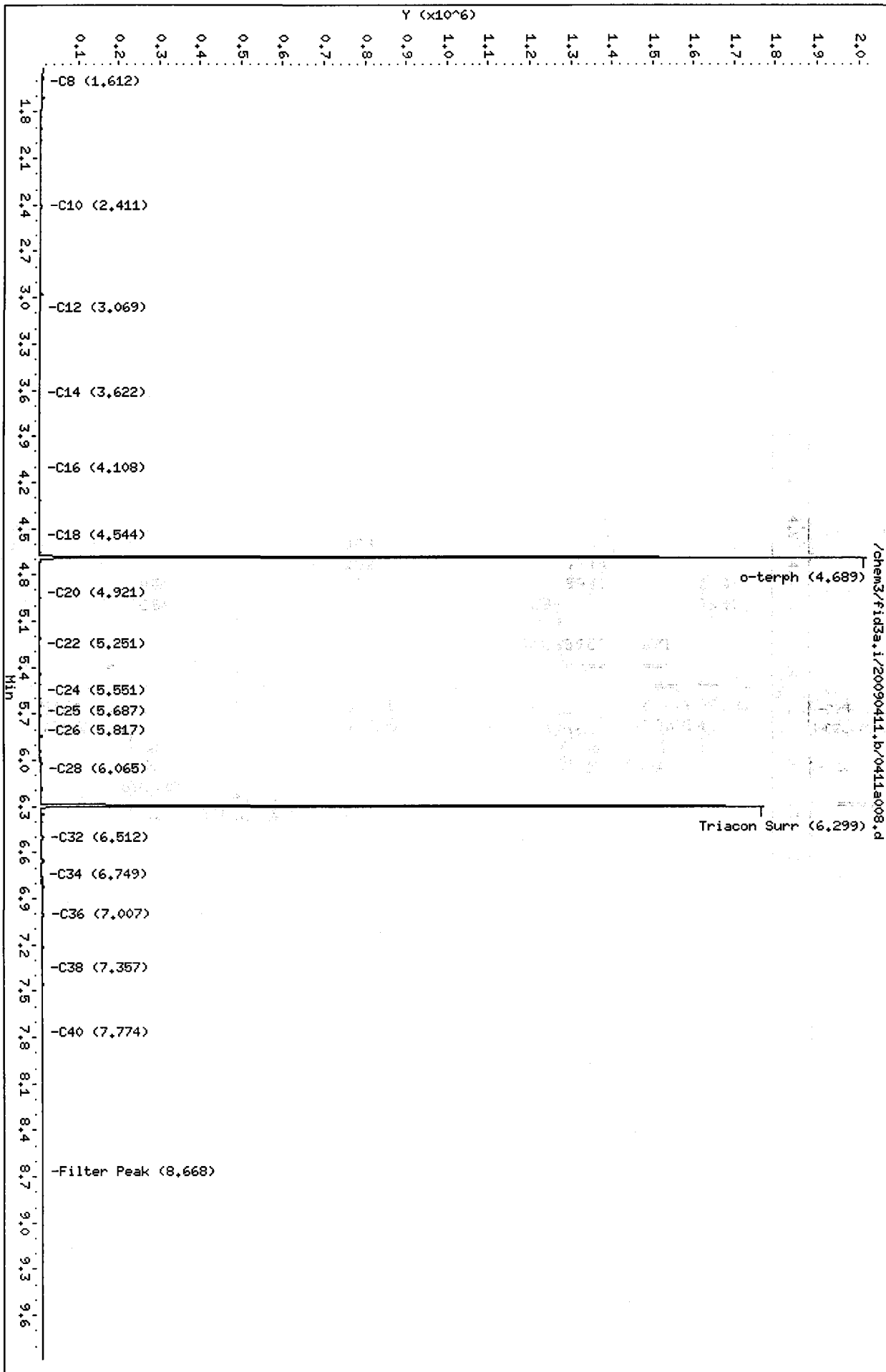
Sample Info: 0U21HBS1

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a009.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21LCSS1  
Client ID: OU21LCSS1  
Injection: 11-APR-2009 14:18  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	0.002	53379	48310	GAS (Tol-C12)	5031433	256
C8	1.628	0.002	34001	19762	DIESEL (C12-C24)	22566980	1389
C10	2.405	0.001	272009	242677	M.OIL (C24-C38)	867623	68
C12	3.070	0.002	594668	354681	AK-102 (C10-C25)	26543497	1342
C14	3.624	0.003	831934	595615	AK-103 (C25-C36)	698028	80
C16	4.113	0.003	932624	528897	OR.DIES (C10-C28)	26918863	1276
C18	4.548	0.003	752557	505964	OR.MOIL (C28-C40)	581806	52
C20	4.925	0.003	562939	369501	JET-A (C10-C18)	20237220	1277
C22	5.255	0.000	219381	145862			
C24	5.550	-0.001	88934	65681			
C25	5.688	-0.002	51243	54170			
C26	5.819	-0.001	31894	23793			
C28	6.065	-0.002	10363	12045			
C32	6.513	-0.001	7977	6808			
C34	6.751	0.002	5708	3511			
Filter Peak	8.673	0.002	5872	1756			
C36	7.008	-0.013	11311	21912	CREOSOT (C8-C22)	26656755	4168
C38	7.354	0.002	6117	5228			
C40	7.765	-0.001	5961	4377	BUNKERC (C10-C38)	27361171	2834

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	982819	45.7	101.6
Triacontane	955467	56.3	125.1

*J 04/13/09*

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a009.d

Date : 11-APR-2009 14:18

Client ID: 0U21LCSS1

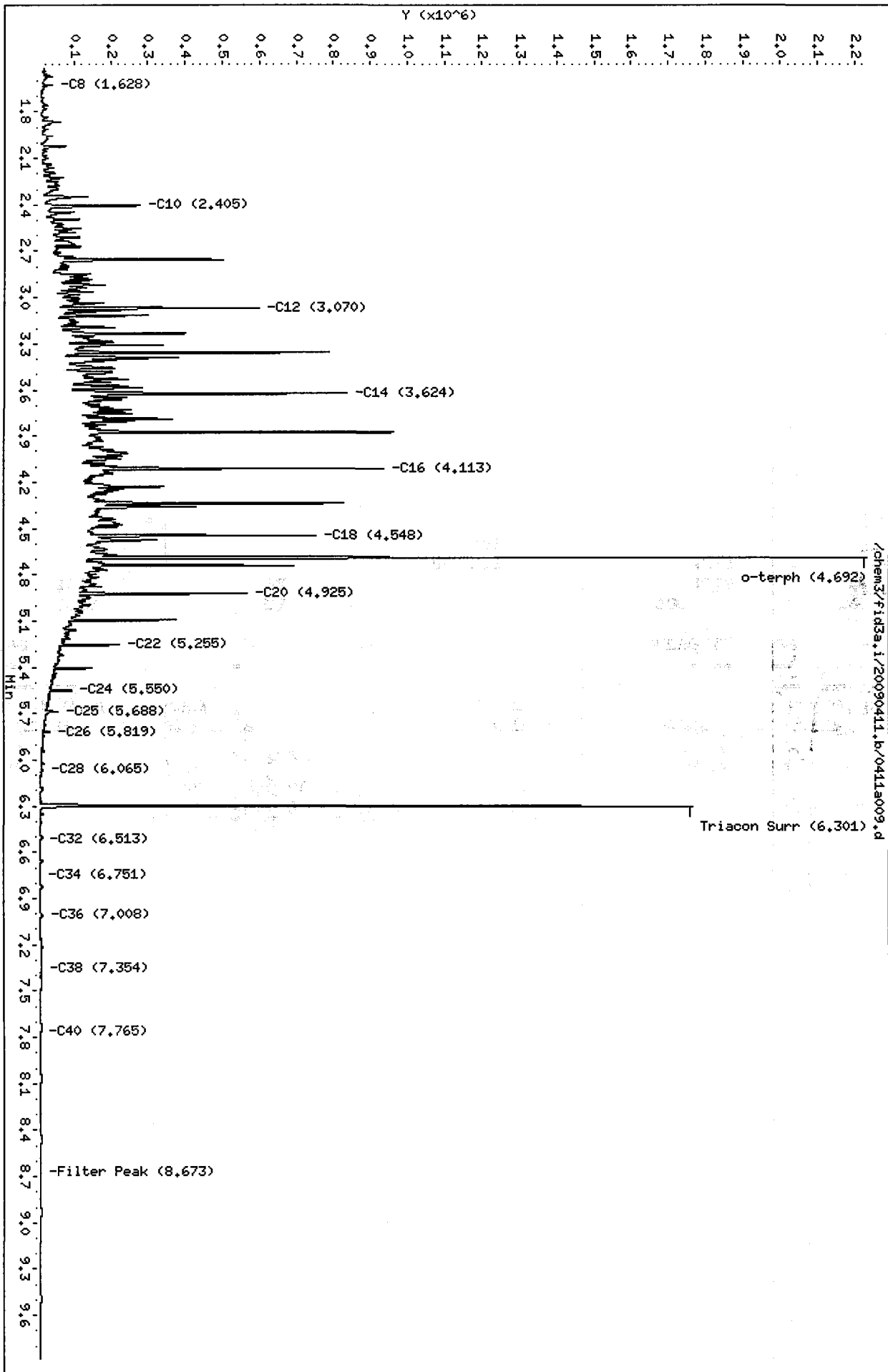
Sample Info: 0U21LCSS1

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a010.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21A  
Client ID: DOF-TP1-3  
Injection: 11-APR-2009 14:37  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.487	0.002	31940	63382	GAS (Tol-C12)	301663	15
C8	1.628	0.003	6655	9120	DIESEL (C12-C24)	592131	36
C10	2.413	0.009	6127	7052	M.OIL (C24-C38)	1421234	111
C12	3.069	0.001	4351	3141	AK-102 (C10-C25)	689175	35
C14	3.621	0.000	6481	7447	AK-103 (C25-C36)	1269375	146
C16	4.109	-0.001	6668	5688	OR.DIES (C10-C28)	1049450	50
C18	4.545	0.000	8784	7148	OR.MOIL (C28-C40)	1184312	105
C20	4.921	-0.001	8765	6996	JET-A (C10-C18)	336418	21
C22	5.254	-0.001	10070	6687			
C24	5.550	-0.002	13406	9388			
C25	5.687	-0.002	33992	22863			
C26	5.818	-0.002	18215	18174			
C28	6.066	-0.002	23864	31374			
C32	6.514	-0.001	18976	19725			
C34	6.754	0.005	15256	13962			
Filter Peak	8.670	-0.001	5402	1722			
C36	7.026	0.004	14161	17436	CREOSOT (C8-C22)	681203	107
C38	7.351	0.000	6470	4260			
C40	7.783	0.016	5623	2911	BUNKERC (C10-C38)	2087325	216

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	898388	41.8	92.9
Triacotane	871716	51.4	114.1

*JK 04/13/09*

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090411.b/0411a010.d

Date: 11-APR-2009 14:37

Client ID: DDF-TP1-3

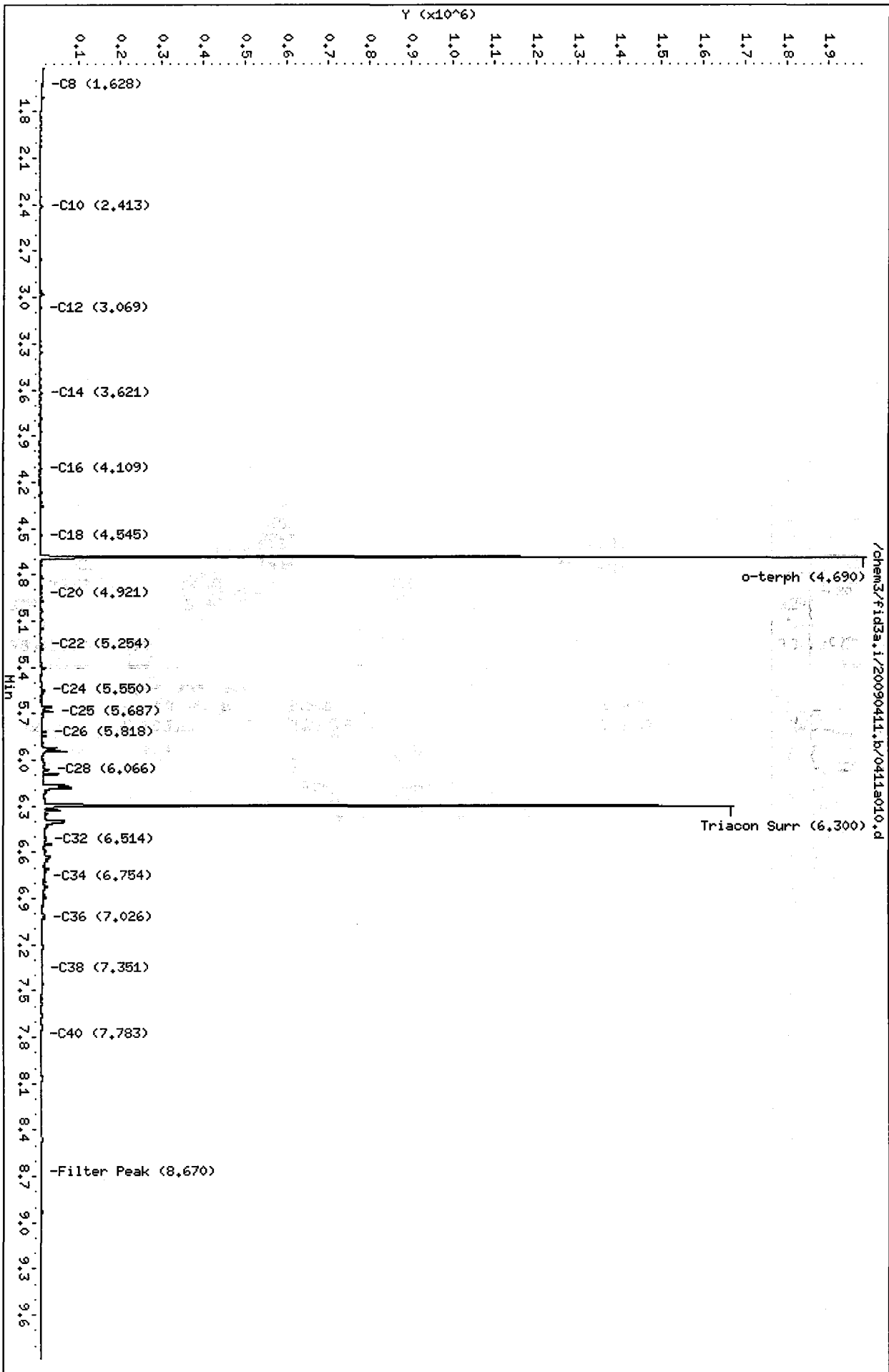
Sample Info: 0U21A

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a013.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21B  
Client ID: DOF-TP1-18  
Injection: 11-APR-2009 15:33  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	0.001	33640	50675	GAS (Tol-C12)	356452	18
C8	1.627	0.001	5974	11229	DIESEL (C12-C24)	2248298	138
C10	2.410	0.007	4522	6047	M.OIL (C24-C38)	4584246	359
C12	3.069	0.001	4836	3296	AK-102 (C10-C25)	2569515	130
C14	3.620	-0.001	13388	14539	AK-103 (C25-C36)	4105117	472
C16	4.109	-0.001	18420	13131	OR.DIES (C10-C28)	4010874	190
C18	4.544	-0.001	20684	18115	OR.MOIL (C28-C40)	3191687	283
C20	4.921	-0.001	25329	26945	JET-A (C10-C18)	756085	48
C22	5.253	-0.001	27964	24927			
C24	5.547	-0.004	59869	58781			
C25	5.686	-0.003	53904	35739			
C26	5.813	-0.008	53913	48990			
C28	6.067	-0.001	53496	26068			
C32	6.518	0.003	87169	76081			
C34	6.752	0.003	48848	44156			
Filter Peak	8.673	0.002	5593	2568			
C36	7.025	0.004	21835	12817	CREOSOT (C8-C22)	1883834	295
C38	7.353	0.001	12364	4390			
C40	7.769	0.002	8532	4521	BUNKERC (C10-C38)	6962507	721

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

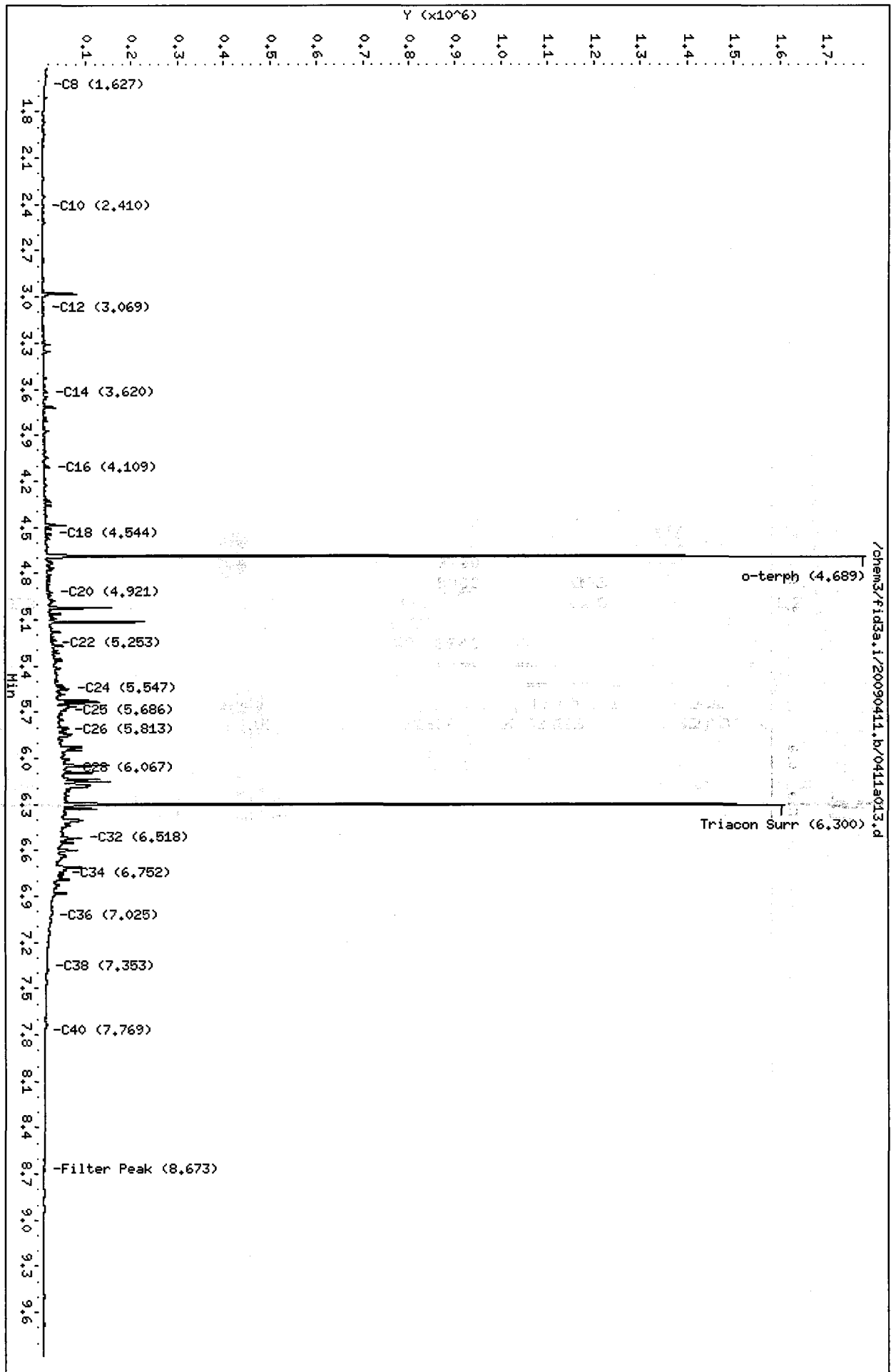
Surrogate	Area	Amount	%Rec
o-Terphenyl	839309	39.1	86.8
Triacontane	787619	46.4	103.1

JK 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a013.d  
Date : 11-APR-2009 15:33  
Client ID: DDF-TP1-18  
Sample Info: 0U21B  
Column phase: ZBL-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a014.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21C  
Client ID: DOF-TP2-3  
Injection: 11-APR-2009 15:51  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.487	0.002	30682	47627	GAS (Tol-C12)	314810	16
C8	1.627	0.001	6088	9033	DIESEL (C12-C24)	472329	29
C10	2.412	0.008	4375	5473	M.OIL (C24-C38)	1302468	102
C12	3.069	0.001	2447	2999	AK-102 (C10-C25)	564341	29
C14	3.622	0.000	3302	3301	AK-103 (C25-C36)	1186451	136
C16	4.110	0.000	3594	3440	OR.DIES (C10-C28)	903859	43
C18	4.545	0.000	5871	4733	OR.MOIL (C28-C40)	1072750	95
C20	4.921	-0.001	6777	5250	JET-A (C10-C18)	285619	18
C22	5.254	-0.001	8446	5393			
C24	5.550	-0.001	11512	8201			
C25	5.688	-0.002	28426	20109			
C26	5.818	-0.002	15287	14727			
C28	6.067	-0.001	20776	20094			
C32	6.516	0.001	17014	9560			
C34	6.752	0.003	15884	18929			
Filter Peak	8.674	0.002	4510	989			
C36	7.028	0.006	11922	12416	CREOSOT (C8-C22)	570371	89
C38	7.352	0.000	5348	3723			
C40	7.779	0.013	4772	2561	BUNKERC (C10-C38)	1855221	192

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	910314	42.4	94.1
Triacontane	874640	51.5	114.5

04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a014.d

Date : 11-APR-2009 15:51

Client ID: DDF-TP2-3

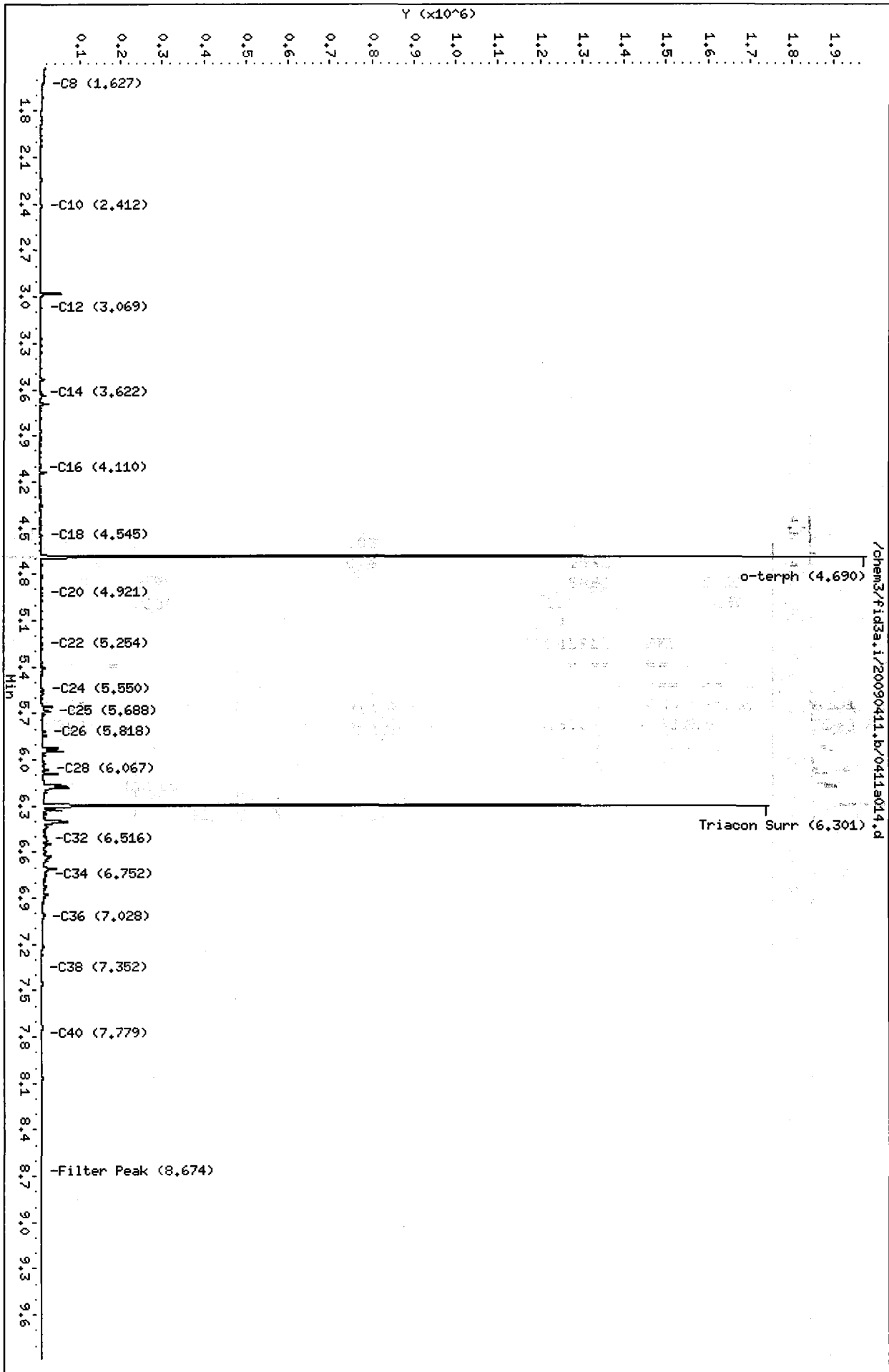
Sample Info: 0U21C

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a015.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21D  
Client ID: DOF-TP2-9  
Injection: 11-APR-2009 16:10  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.485	0.000	26665	25720	GAS (Tol-C12)	316124	16
C8	1.625	-0.001	5242	8383	DIESEL (C12-C24)	1055477	65
C10	2.396	-0.008	1432	426	M.OIL (C24-C38)	1250478	98
C12	3.068	0.000	1640	1474	AK-102 (C10-C25)	1186926	60
C14	3.615	-0.006	4297	3426	AK-103 (C25-C36)	1078959	124
C16	4.108	-0.002	3710	1378	OR.DIES (C10-C28)	1507361	71
C18	4.545	0.001	5491	4848	OR.MOIL (C28-C40)	1017968	90
C20	4.917	-0.005	6169	8558	JET-A (C10-C18)	394866	25
C22	5.257	0.002	8965	8920			
C24	5.550	-0.002	8044	7447			
C25	5.685	-0.004	13391	11698			
C26	5.815	-0.005	18857	16882			
C28	6.065	-0.002	12155	11958			
C32	6.523	0.009	26319	28964			
C34	6.751	0.002	17765	20899			
Filter Peak	8.671	-0.001	4368	3135			
C36	7.010	-0.012	16074	34655	CREOSOT (C8-C22)	814550	127
C38	7.360	0.008	5738	12632			
C40	7.780	0.013	4971	1680	BUNKERC (C10-C38)	2382133	247

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	865240	40.3	89.5
Triacontane	846589	49.9	110.9

*J* 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a015.d

Date : 11-APR-2009 16:10

Client ID: DDF-TP2-9

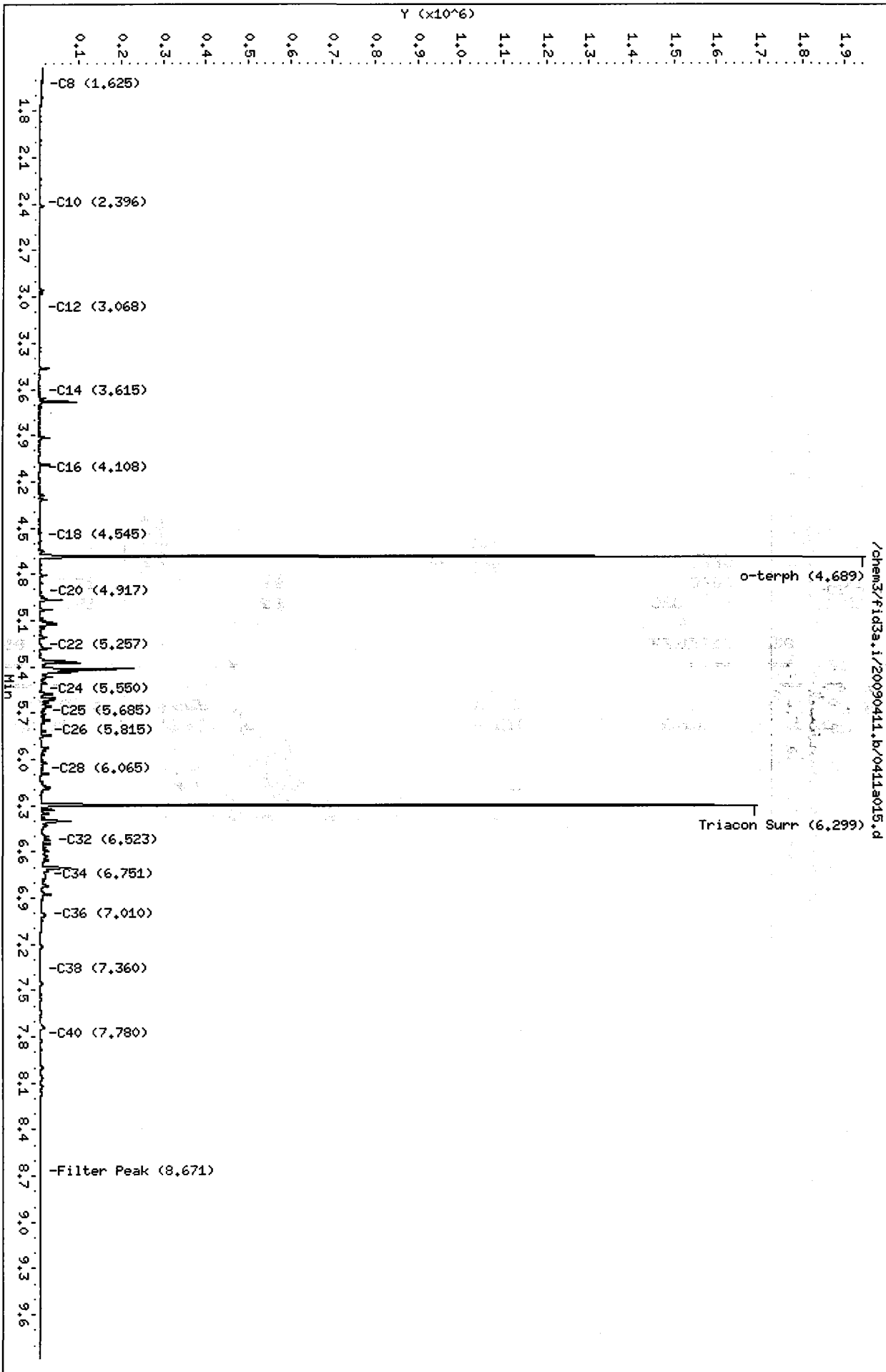
Sample Info: 0U21D

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a016.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21E  
Client ID: DOF-TP3-3  
Injection: 11-APR-2009 16:28  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	0.002	29537	32391	GAS (Tol-C12)	237446	12
C8	1.626	0.000	5279	9426	DIESEL (C12-C24)	563978	35
C10	2.411	0.007	4616	4246	M.OIL (C24-C38)	789570	62
C12	3.069	0.001	1043	1029	AK-102 (C10-C25)	620881	31
C14	3.619	-0.003	2658	3654	AK-103 (C25-C36)	675407	78
C16	4.110	0.000	4792	4703	OR.DIES (C10-C28)	835956	40
C18	4.545	0.000	7912	8781	OR.MOIL (C28-C40)	675603	60
C20	4.922	0.000	8034	9079	JET-A (C10-C18)	259793	16
C22	5.255	0.000	6977	6649			
C24	5.551	0.000	6856	5749			
C25	5.687	-0.003	8205	7566			
C26	5.817	-0.003	6952	7157			
C28	6.065	-0.002	7546	8845			
C32	6.513	-0.001	10253	11602			
C34	6.751	0.002	15065	14411			
Filter Peak	8.674	0.003	4161	2655			
C36	7.009	-0.013	9278	18557	CREOSOT (C8-C22)	582063	91
C38	7.350	-0.002	4661	1576			
C40	7.783	0.016	4469	1245	BUNKERC (C10-C38)	1395674	145

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	982743	45.7	101.6
Triacontane	949302	55.9	124.3

*JR* 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090411.b/0411a016.d

Date: 11-APR-2009 16:28

Client ID: DDF-TP3-3

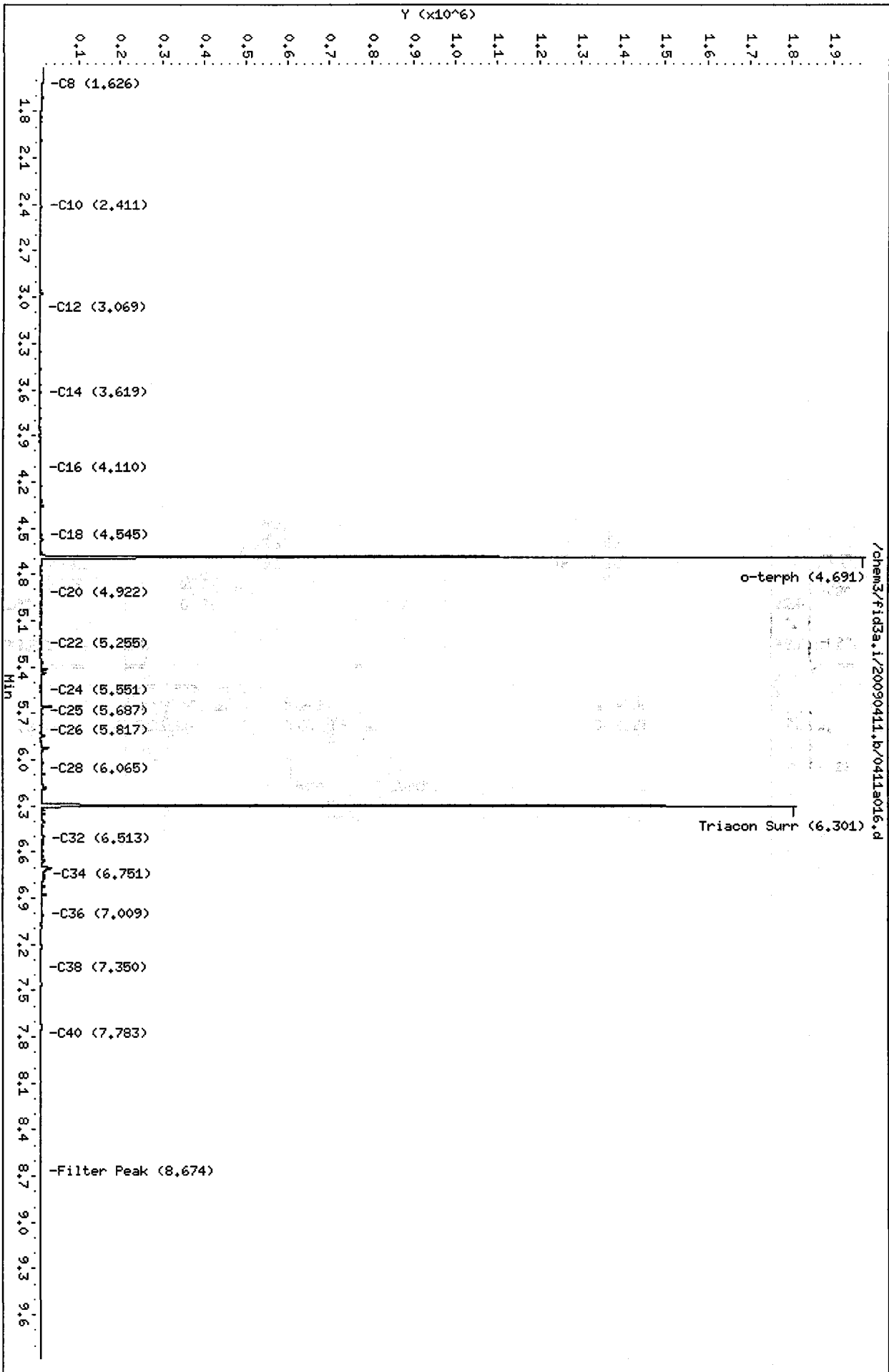
Sample Info: 0U21E

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a020.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21F  
Client ID: DOF-TP3-8  
Injection: 11-APR-2009 17:43  
Dilution Factor: 100

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.487	0.002	13172	28007	GAS (Tol-C12)	388727	20
C8	1.614	-0.012	6453	7858	DIESEL (C12-C24)	5474262	<u>337</u>
C10	2.409	0.006	1073	1040	M.OIL (C24-C38)	3593912	<u>282</u>
C12	3.071	0.003	2389	1908	AK-102 (C10-C25)	5929370	<u>300</u>
C14	3.615	-0.006	46423	39052	AK-103 (C25-C36)	3181291	366
C16	4.111	0.000	20148	15665	OR.DIES (C10-C28)	7457081	354
C18	4.545	0.000	22213	11802	OR.MOIL (C28-C40)	1942522	172
C20	4.926	0.004	37839	28213	JET-A (C10-C18)	2059016	130
C22	5.254	-0.001	33748	12024			
C24	5.550	-0.001	142668	72693			
C25	5.699	0.010	49504	32043			
C26	5.815	-0.005	60028	44315			
C28	6.083	0.016	88074	77052			
C32	6.521	0.006	167155	112444			
C34	6.751	0.001	14923	12288			
Filter Peak	8.669	-0.003	4692	2899			
C36	7.002	-0.019	17939	41102	CREOSOT (C8-C22)	5034719	787
C38	7.356	0.004	6739	11145			
C40	7.773	0.006	6058	7502	BUNKERC (C10-C38)	9270314	960

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

*JK* 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a020.d

Date : 11-APR-2009 17:43

Client ID: DOF-TP3-8

Sample Info: 0U21F.100

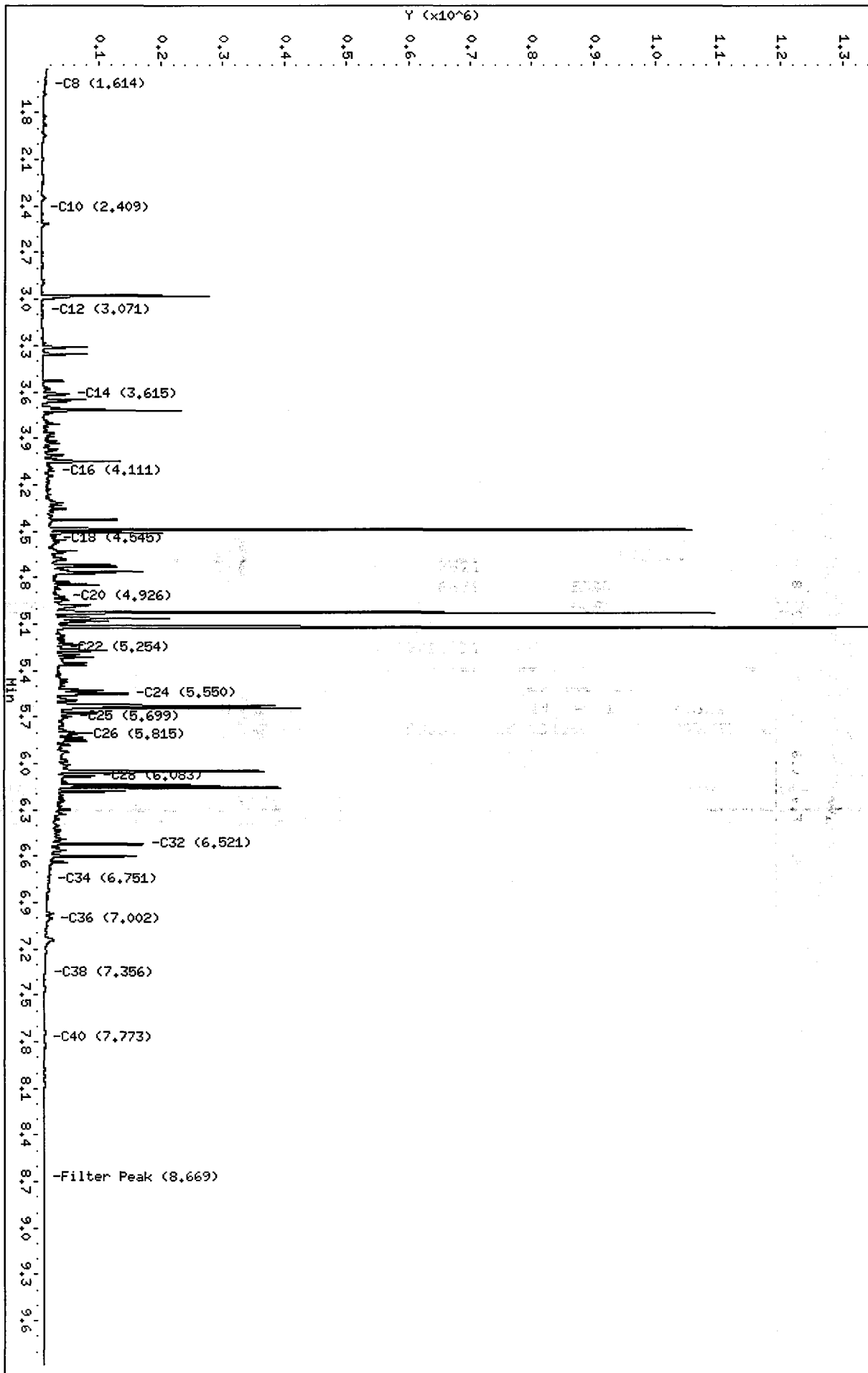
Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

/chem3/fid3a.i/20090411.b/0411a020.d



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a021.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21G  
Client ID: DOF-TP3-12  
Injection: 11-APR-2009 18:02  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.485	0.001	28652	54484	GAS (Tol-C12)	376806	19
C8	1.627	0.001	5011	8600	DIESEL (C12-C24)	1300954	80
C10	2.412	0.008	5696	6630	M.OIL (C24-C38)	2154018	169
C12	3.071	0.003	2670	3976	AK-102 (C10-C25)	1472635	74
C14	3.616	-0.006	6360	6120	AK-103 (C25-C36)	1954918	225
C16	4.110	0.000	4470	4249	OR.DIES (C10-C28)	2144737	102
C18	4.546	0.001	12213	9419	OR.MOIL (C28-C40)	1582923	140
C20	4.922	0.000	13389	7248	JET-A (C10-C18)	445641	28
C22	5.252	-0.003	13907	8044			
C24	5.554	0.002	46565	38302			
C25	5.684	-0.005	30180	23673			
C26	5.817	-0.003	24982	35408			
C28	6.067	0.000	19874	21578			
C32	6.526	0.011	57125	65390			
C34	6.755	0.006	27127	25681			
Filter Peak	8.674	0.002	4110	1311			
C36	7.015	-0.007	21566	35496	CREOSOT (C8-C22)	1104336	173
C38	7.365	0.013	7833	15717			
C40	7.775	0.008	5310	2527	BUNKERC (C10-C38)	3576919	370

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	948347	44.1	98.1
Triacontane	908417	53.5	119.0

*JR* 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a021.d

Date : 11-09-2009 18:02

Client ID: DOF-TP3-12

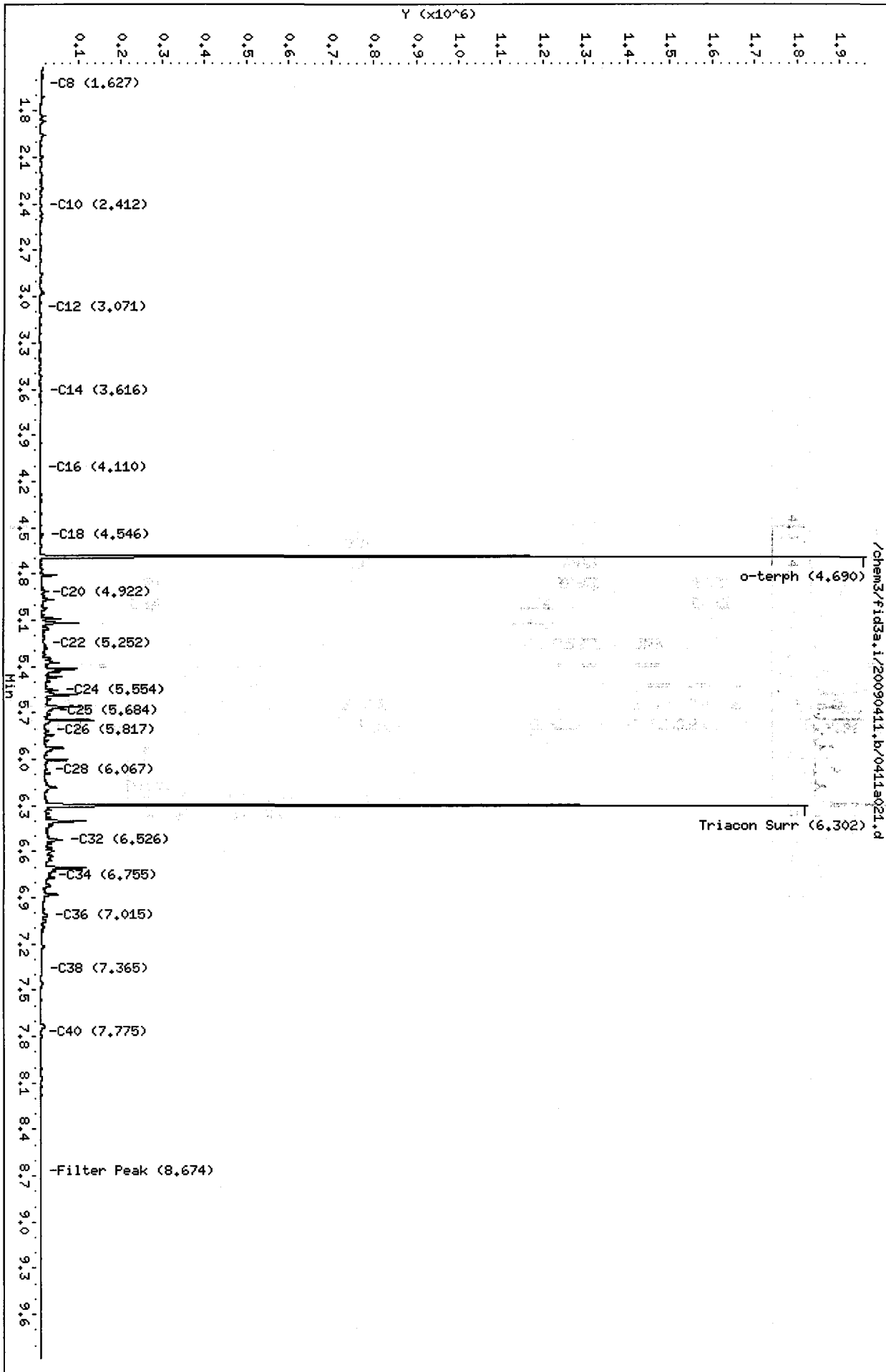
Sample Info: 0U21G

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a022.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21H  
Client ID: DOF-TP4-4  
Injection: 11-APR-2009 18:20  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	0.002	29336	62242	GAS (Tol-C12)	275691	14
C8	1.626	0.001	5111	7835	DIESEL (C12-C24)	270861	17
C10	2.412	0.009	5005	4374	M.OIL (C24-C38)	594537	47
C12	3.070	0.003	1265	1208	AK-102 (C10-C25)	329557	17
C14	3.622	0.001	1907	1945	AK-103 (C25-C36)	501744	58
C16	4.111	0.001	1706	1744	OR.DIES (C10-C28)	471236	22
C18	4.546	0.001	2581	2930	OR.MOIL (C28-C40)	547310	49
C20	4.923	0.001	2651	3657	JET-A (C10-C18)	152990	10
C22	5.254	-0.001	3572	3659			
C24	5.550	-0.001	4328	3751			
C25	5.688	-0.002	5254	4223			
C26	5.817	-0.003	5079	7574			
C28	6.066	-0.001	6650	7335			
C32	6.515	0.000	9184	8565			
C34	6.751	0.002	6564	5573			
Filter Peak	8.673	0.001	3805	2497			
C36	7.010	-0.012	10678	19341	CREOSOT (C8-C22)	376842	59
C38	7.351	-0.001	4395	3653			
C40	7.774	0.008	4026	1925	BUNKERC (C10-C38)	915523	95

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	937064	43.6	96.9
Triacontane	930203	54.8	121.8

*Handwritten:* JR 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a022.d

Date: 11-APR-2009 18:20

Client ID: DOF-TP4-4

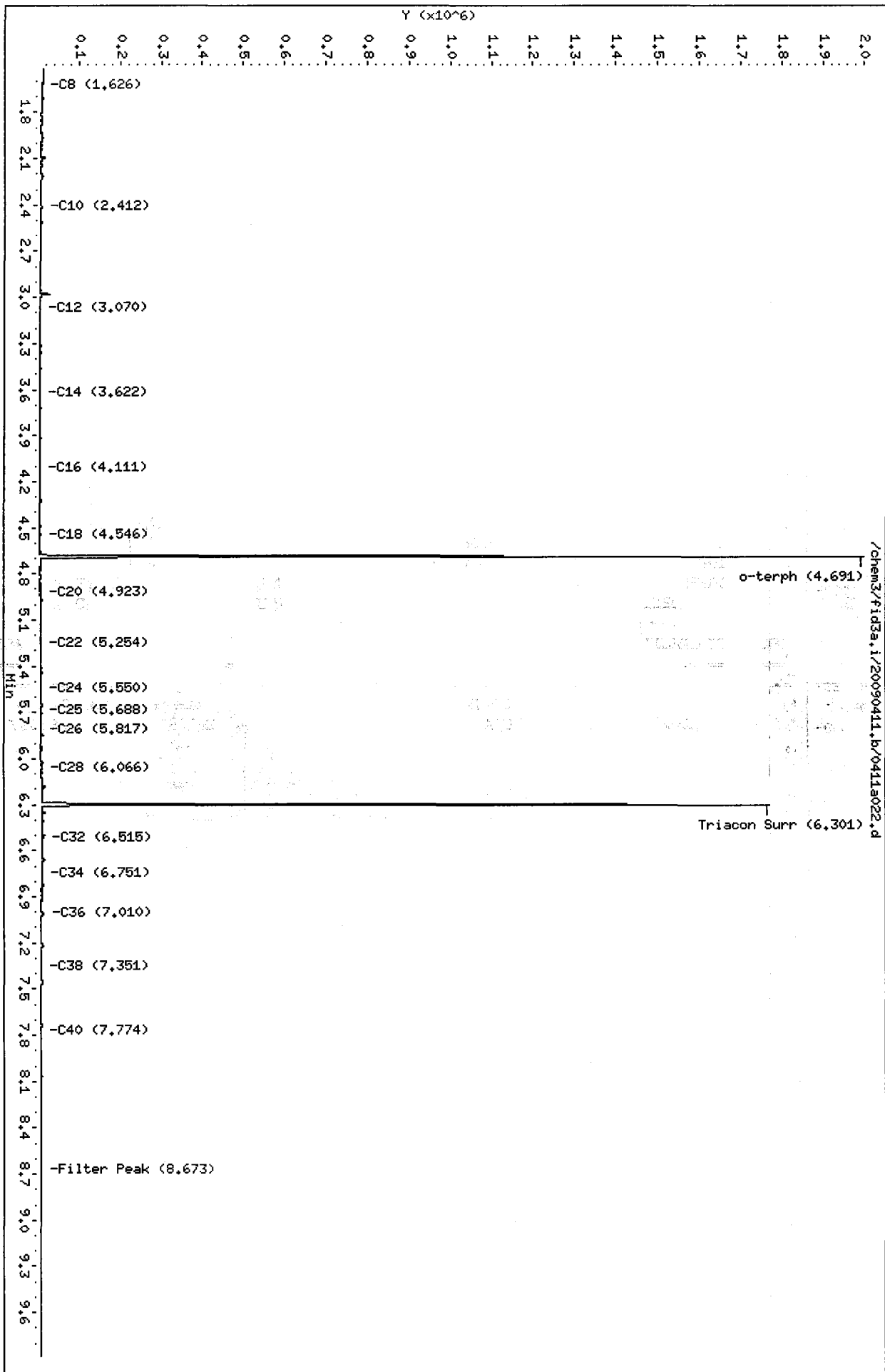
Sample Info: 0U24H

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a023.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21I  
Client ID: DOF-TP4-6  
Injection: 11-APR-2009 18:39  
Dilution Factor: 100

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.485	0.001	25846	25895	GAS (Tol-C12)	1114802	57
C8	1.613	-0.013	6909	7937	DIESEL (C12-C24)	6743816	<u>415</u>
C10	2.404	0.000	3392	3670	M.OIL (C24-C38)	4079302	<u>320</u>
C12	3.068	0.001	11883	8266	AK-102 (C10-C25)	7814024	<u>395</u>
C14	3.615	-0.007	75120	77945	AK-103 (C25-C36)	3632468	418
C16	4.111	0.001	53003	34755	OR.DIES (C10-C28)	9530426	452
C18	4.544	0.000	44243	24649	OR.MOIL (C28-C40)	2209678	196
C20	4.924	0.002	54657	59289	JET-A (C10-C18)	3474313	219
C22	5.254	-0.001	38298	35493			
C24	5.550	-0.002	177483	117173			
C25	5.697	0.008	48201	34000			
C26	5.814	-0.007	74342	48582			
C28	6.083	0.016	107657	85554			
C32	6.522	0.007	216569	142066			
C34	6.749	0.000	16883	24196			
Filter Peak	8.672	0.000	4198	1004			
C36	7.037	0.015	9288	1667	CREOSOT (C8-C22)	7010920	1096
C38	7.347	-0.004	6226	1366			
C40	7.774	0.008	5666	4595	BUNKERC (C10-C38)	11603769	1202

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

APR 04 / 13 / 09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090411.b/0411a023.d

Date : 11-APR-2009 18:39

Client ID: DDF-TP4-6

Sample Info: DU211,100

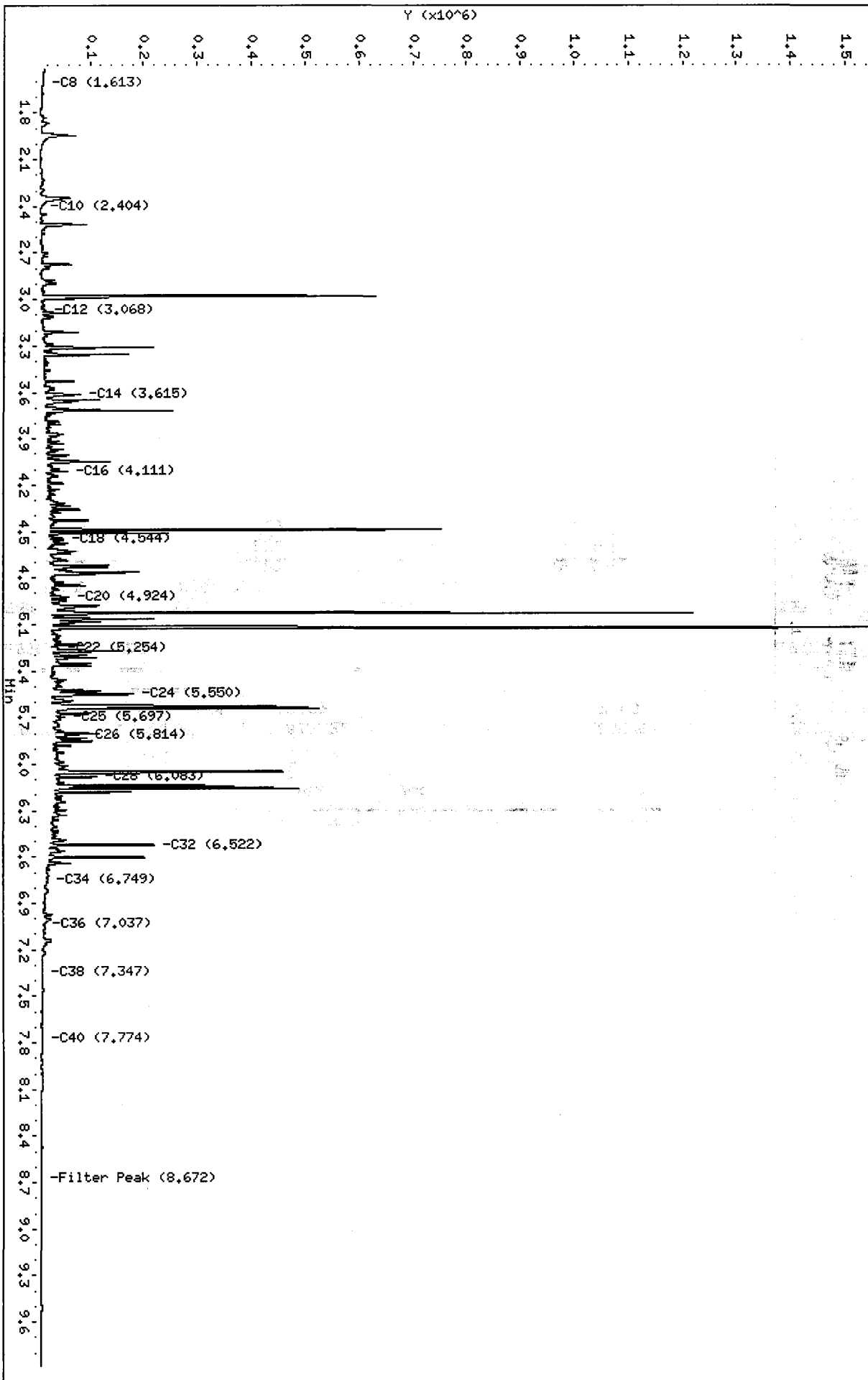
Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

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Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a024.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21J  
Client ID: DOF-TP4-8  
Injection: 11-APR-2009 18:58  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.487	0.002	31517	63419	GAS (Tol-C12)	390362	20
C8	1.628	0.002	5253	9718	DIESEL (C12-C24)	1098935	68
C10	2.398	-0.006	1005	159	M.OIL (C24-C38)	1566440	123
C12	3.071	0.003	2633	2228	AK-102 (C10-C25)	1265938	64
C14	3.615	-0.006	4921	6607	AK-103 (C25-C36)	1365545	157
C16	4.114	0.004	9461	8713	OR.DIES (C10-C28)	1749215	83
C18	4.545	0.001	6156	5380	OR.MOIL (C28-C40)	1185803	105
C20	4.924	0.002	9237	12909	JET-A (C10-C18)	455984	29
C22	5.267	0.012	17366	21966			
C24	5.552	0.001	33182	29892			
C25	5.684	-0.005	18150	14922			
C26	5.815	-0.006	16495	15091			
C28	6.067	-0.001	16442	6996			
C32	6.518	0.004	25684	35140			
C34	6.753	0.004	22526	24394			
Filter Peak	8.674	-0.002	4115	1966			
C36	7.010	-0.012	26825	43872	CREOSOT (C8-C22)	1001195	157
C38	7.348	-0.004	6467	3992			
C40	7.776	0.009	5171	3360	BUNKERC (C10-C38)	2778986	288

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	955485	44.5	98.8
Triacontane	952659	56.1	124.7

JK 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a024.d

Date: 11-APR-2009 18:58

Client ID: IOF-TP4-8

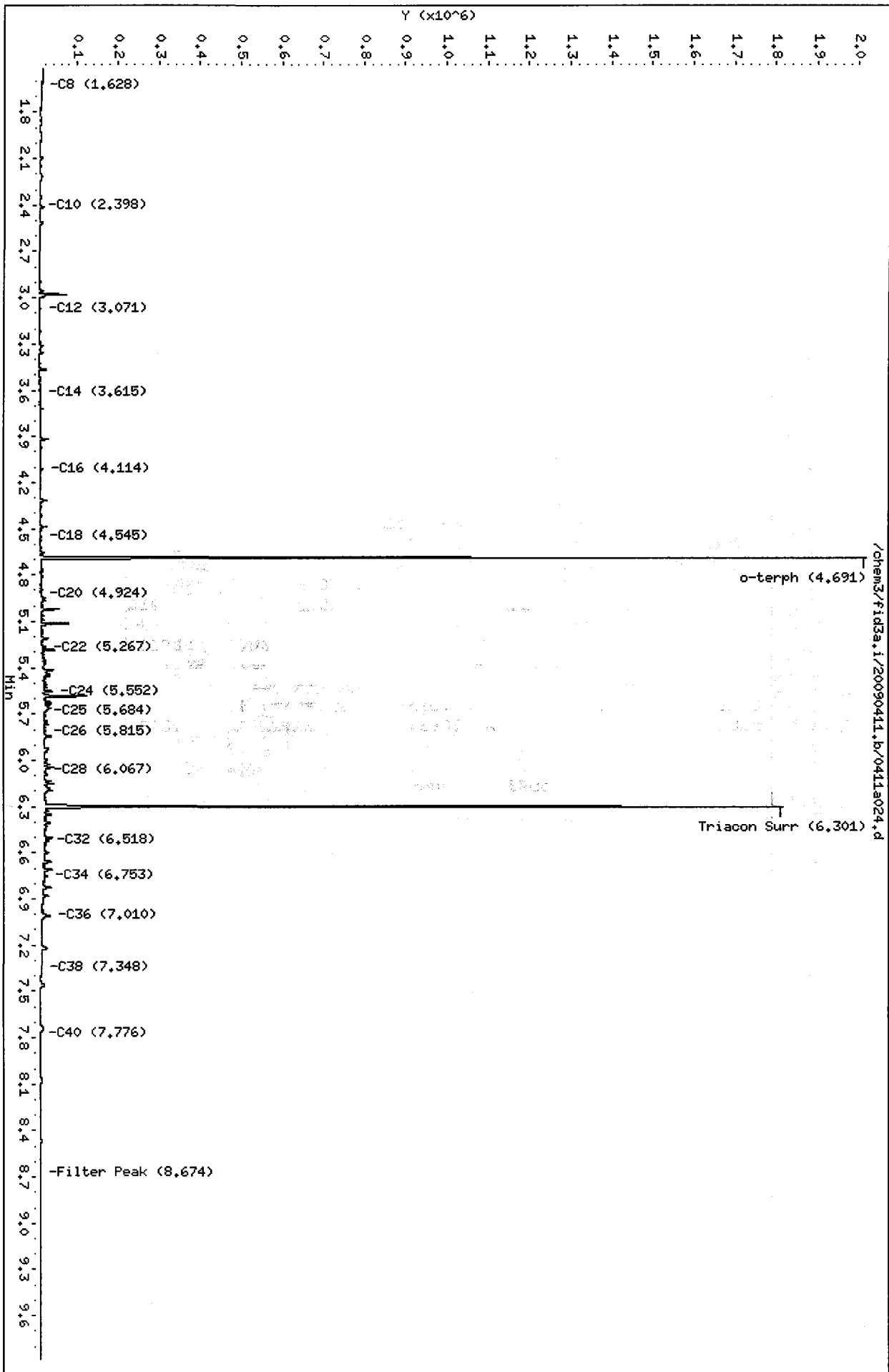
Sample Info: 0U21J

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a025.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21K  
Client ID: DOF-TP5-3  
Injection: 11-APR-2009 19:16  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	0.001	33260	24225	GAS (Tol-C12)	406607	21
C8	1.627	0.002	5379	6361	DIESEL (C12-C24)	8043598	495
C10	2.414	0.010	6260	7157	M.OIL (C24-C38)	23838399	1869
C12	3.071	0.003	3137	2570	AK-102 (C10-C25)	8471661	428
C14	3.621	-0.001	6019	4218	AK-103 (C25-C36)	22449250	2582
C16	4.112	0.002	10519	10891	OR.DIES (C10-C28)	17188494	815
C18	4.548	0.003	37261	43509	OR.MOIL (C28-C40)	15507495	1376
C20	4.923	0.001	74365	46435	JET-A (C10-C18)	1018409	64
C22	5.259	0.004	134418	55041			
C24	5.545	-0.006	206967	138325			
C25	5.687	-0.003	240470	42932			
C26	5.821	0.000	273846	121687			
C28	6.063	-0.005	333741	138110			
C32	6.506	-0.008	258400	196219			
C34	6.751	0.002	172593	34270			
Filter Peak	8.674	0.002	8619	3258			
C36	7.019	-0.002	89523	22800	CREOSOT (C8-C22)	4747984	742
C38	7.348	-0.003	44604	21989			
C40	7.772	0.005	21587	5965	BUNKERC (C10-C38)	32008106	3315

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	890767	41.5	92.1
Triacontane	852540	50.2	111.6

*JK 04/13/09*

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a025.d

Date: 11-APR-2009 19:16

Client ID: DDF-TP5-3

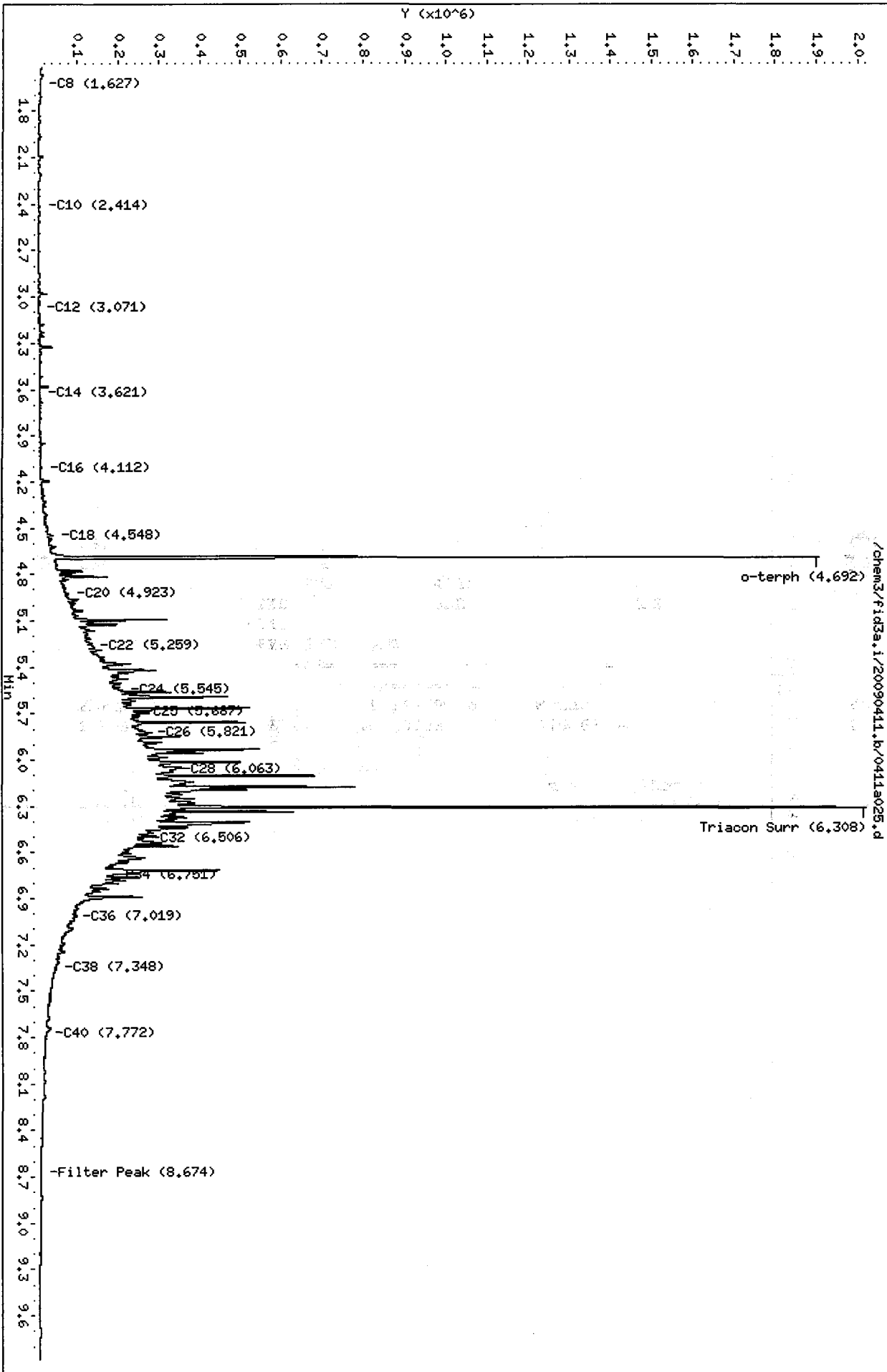
Sample Info: 0U21K

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a026.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21L  
Client ID: DOF-TP5-8  
Injection: 11-APR-2009 19:35  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.487	0.002	26483	47915	GAS (Tol-C12)	240978	12
C8	1.626	0.000	4259	4823	DIESEL (C12-C24)	372571	23
C10	2.393	-0.011	959	860	M.OIL (C24-C38)	834868	65
C12	3.072	0.004	1396	1197	AK-102 (C10-C25)	437387	22
C14	3.619	-0.002	1490	841	AK-103 (C25-C36)	720790	83
C16	4.114	0.004	2213	1248	OR.DIES (C10-C28)	647917	31
C18	4.549	0.004	3252	2561	OR.MOIL (C28-C40)	705048	63
C20	4.925	0.003	3725	4064	JET-A (C10-C18)	166204	10
C22	5.259	0.004	3869	3431			
C24	5.553	0.002	13170	10190			
C25	5.693	0.003	9438	6815			
C26	5.824	0.004	6660	5869			
C28	6.073	0.006	8454	5293			
C32	6.509	-0.005	16030	12852			
C34	6.742	-0.007	14389	17565			
Filter Peak	8.664	-0.008	3840	2824			
C36	7.022	0.001	13640	25587	CREOSOT (C8-C22)	451604	71
C38	7.355	0.003	4405	1493			
C40	7.761	-0.006	7240	21364	BUNKERC (C10-C38)	1255780	130

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	819207	38.1	84.7
Triacontane	767504	45.2	100.5

*JK 04/13/09*

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a026.d

Date : 11-APR-2009 19:35

Client ID: DOF-TP5-8

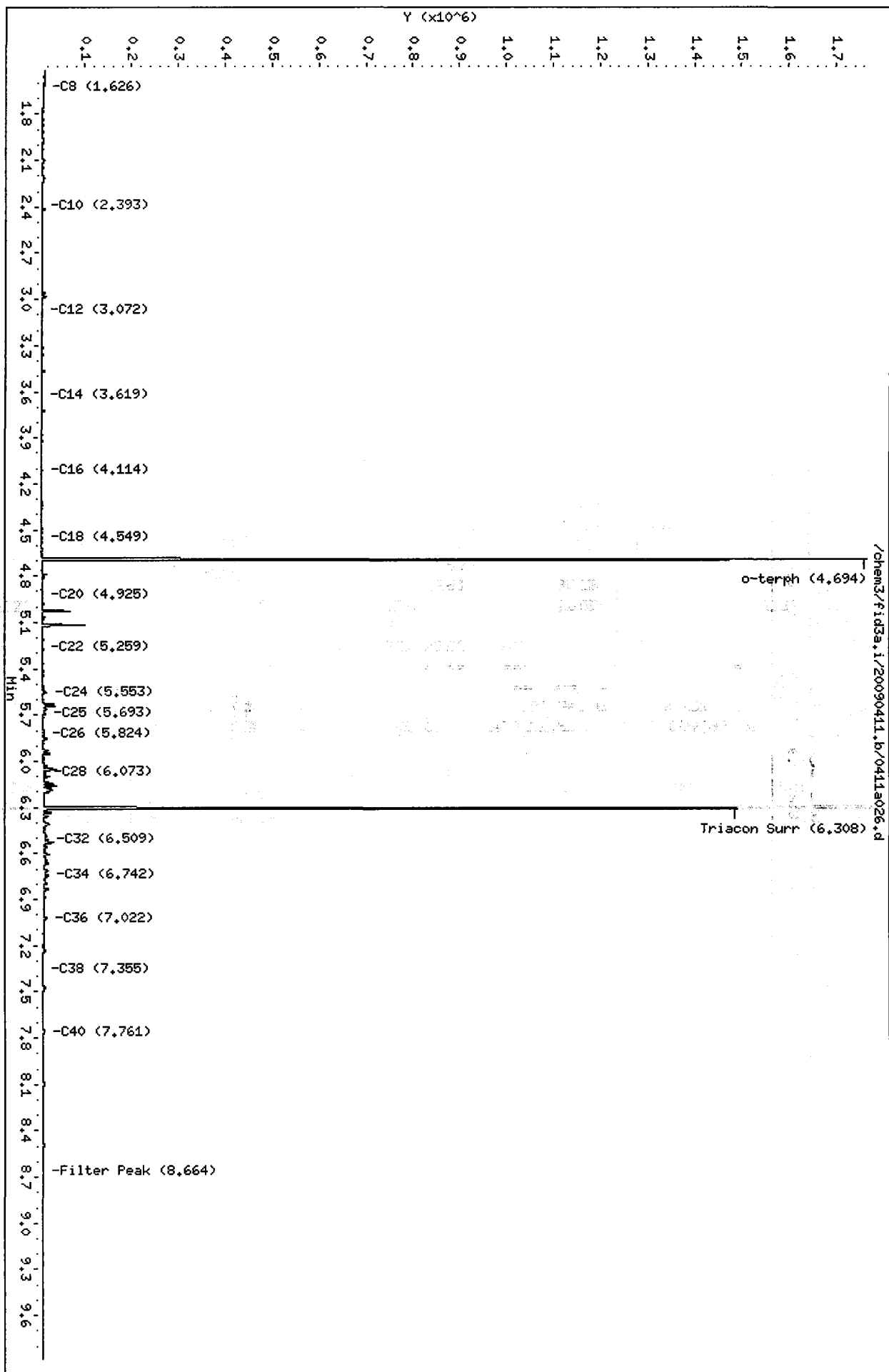
Sample Info: 0U21L

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a027.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21M  
Client ID: DOF-TP6-2  
Injection: 11-APR-2009 19:53  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.004	25748	38308	GAS (Tol-C12)	233592	12
C8	1.627	0.001	4513	2750	DIESEL (C12-C24)	442047	27
C10	2.394	-0.010	832	719	M.OIL (C24-C38)	1187333	93
C12	3.065	-0.002	491	57	AK-102 (C10-C25)	498679	25
C14	3.628	0.007	3250	3135	AK-103 (C25-C36)	1038976	120
C16	4.106	-0.004	2043	1043	OR.DIES (C10-C28)	828993	39
C18	4.551	0.006	12586	7732	OR.MOIL (C28-C40)	962971	85
C20	4.929	0.007	9909	7575	JET-A (C10-C18)	176931	11
C22	5.261	0.007	8441	6195			
C24	5.547	-0.004	8162	5402			
C25	5.696	0.006	9994	9231			
C26	5.826	0.006	11464	11096			
C28	6.073	0.006	14752	10886			
C32	6.512	-0.002	20425	19084			
C34	6.762	0.013	12159	14217			
Filter Peak	8.670	-0.001	3971	2771			
C36	7.026	0.004	13985	29668	CREOSOT (C8-C22)	454942	71
C38	7.350	-0.002	6006	3566			
C40	7.765	-0.002	7081	13363	BUNKERC (C10-C38)	1663530	172

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	901168	41.9	93.2
Triacontane	899066	53.0	117.7

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Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090411.b/0411a027.d

Date : 11-APR-2009 19:53

Client ID: DOF-TP6-2

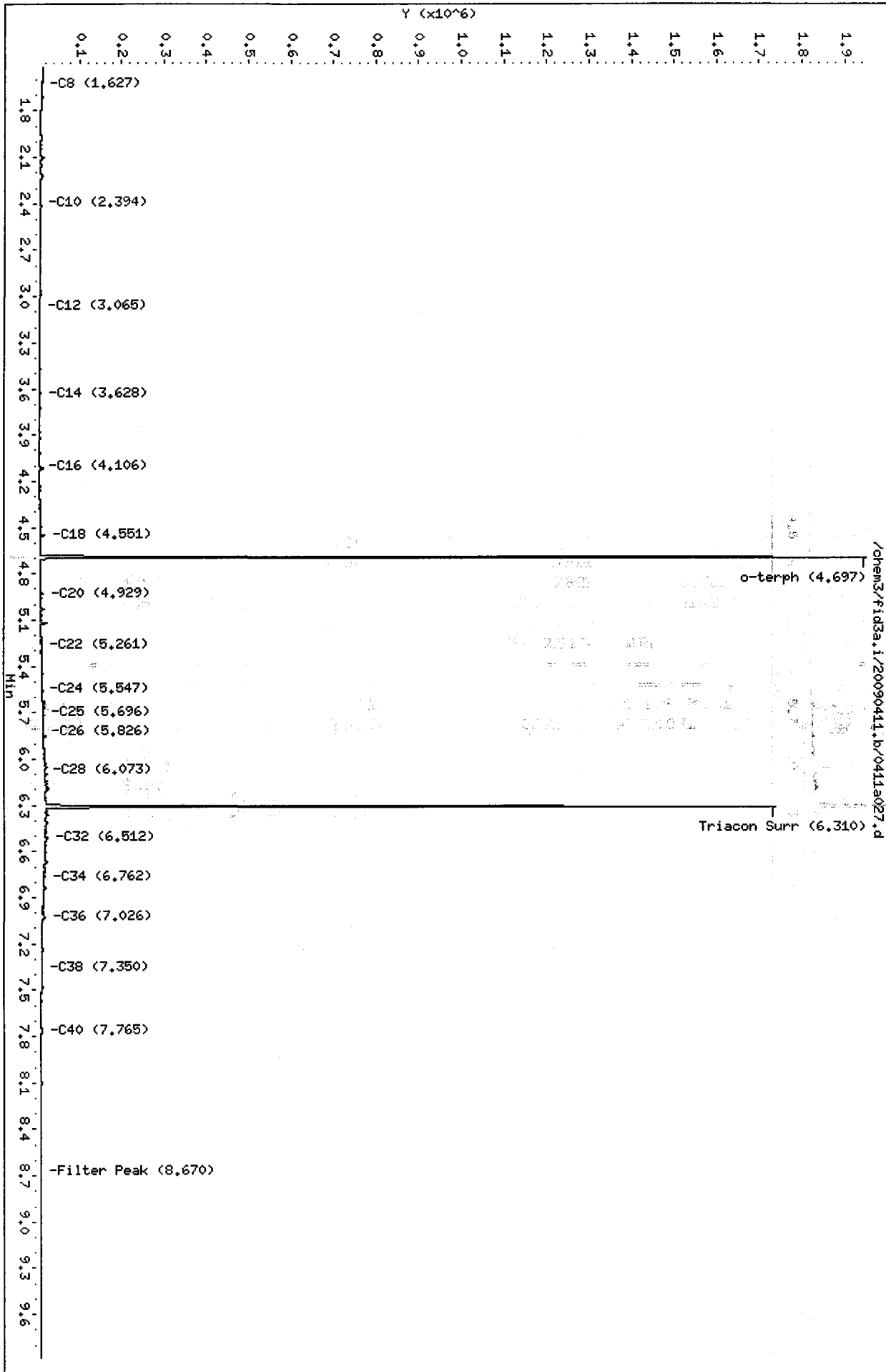
Sample Info: 0U21M

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a028.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21N  
Client ID: DOF-TP6-6  
Injection: 11-APR-2009 20:12  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	0.002	24530	39898	GAS (Tol-C12)	239365	12
C8	1.629	0.004	4208	9707	DIESEL (C12-C24)	656495	40
C10	2.394	-0.009	761	610	M.OIL (C24-C38)	1610624	126
C12	3.064	-0.004	547	118	AK-102 (C10-C25)	717480	36
C14	3.628	0.007	3024	3374	AK-103 (C25-C36)	1428183	164
C16	4.116	0.006	6661	5667	OR.DIES (C10-C28)	1154706	55
C18	4.551	0.006	9151	8577	OR.MOIL (C28-C40)	1292855	115
C20	4.928	0.006	9672	9054	JET-A (C10-C18)	245922	16
C22	5.260	0.005	10124	9223			
C24	5.547	-0.004	11028	6817			
C25	5.695	0.006	15706	15031			
C26	5.825	0.005	15162	15917			
C28	6.068	0.000	17927	2854			
C32	6.513	-0.001	23413	21863			
C34	6.749	0.000	14767	6604			
Filter Peak	8.675	0.003	4082	2269			
C36	7.030	0.008	15563	33852	CREOSOT (C8-C22)	614720	96
C38	7.357	0.005	6834	1762			
C40	7.772	0.005	7836	25639	BUNKERC (C10-C38)	2301280	238

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	873130	40.6	90.3
Triacotane	817048	48.1	107.0

*JK 04/13/09*

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a028.d

Date: 11-APR-2009 20:12

Client ID: DDF-TP6-6

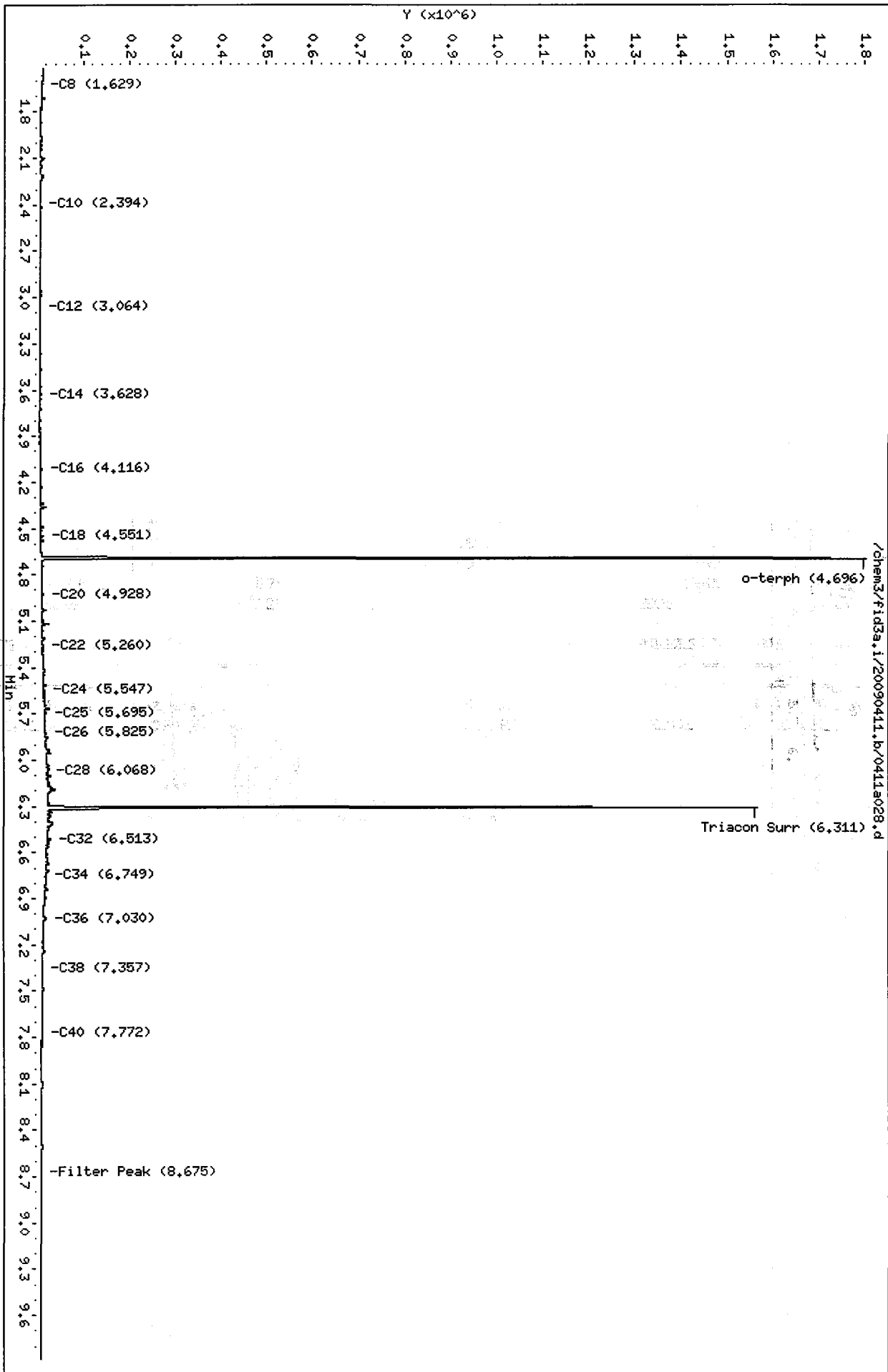
Sample Info: 0U21N

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a032.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU210  
Client ID: DOF-TP7-1  
Injection: 11-APR-2009 21:26  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	0.002	29553	44831	GAS (Tol-C12)	246839	13
C8	1.628	0.002	4767	8581	DIESEL (C12-C24)	1127122	69
C10	2.416	0.012	6060	6337	M.OIL (C24-C38)	2219796	174
C12	3.074	0.006	2359	1813	AK-102 (C10-C25)	1220999	62
C14	3.627	0.005	4316	4565	AK-103 (C25-C36)	2022029	233
C16	4.114	0.004	8202	7174	OR.DIES (C10-C28)	1920750	91
C18	4.550	0.005	12874	11152	OR.MOIL (C28-C40)	1634967	145
C20	4.928	0.006	14927	15671	JET-A (C10-C18)	369545	23
C22	5.260	0.005	15467	11590			
C24	5.557	0.006	25675	24114			
C25	5.695	0.005	25312	30916			
C26	5.824	0.004	25243	23703			
C28	6.075	0.008	28263	24627			
C32	6.512	-0.002	28279	25047			
C34	6.739	-0.010	25230	29667			
Filter Peak	8.669	-0.003	4067	2030			
C36	7.027	0.006	17826	38824	CREOSOT (C8-C22)	946351	148
C38	7.353	0.001	7439	5551			
C40	7.767	0.001	9367	25359	BUNKERC (C10-C38)	3400346	352

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	961881	44.8	99.5
Triacontane	896393	52.8	117.4

*JK 04/13/09*

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a032.d

Date: 11-APR-2009 21:26

Client ID: DDF-TP7-1

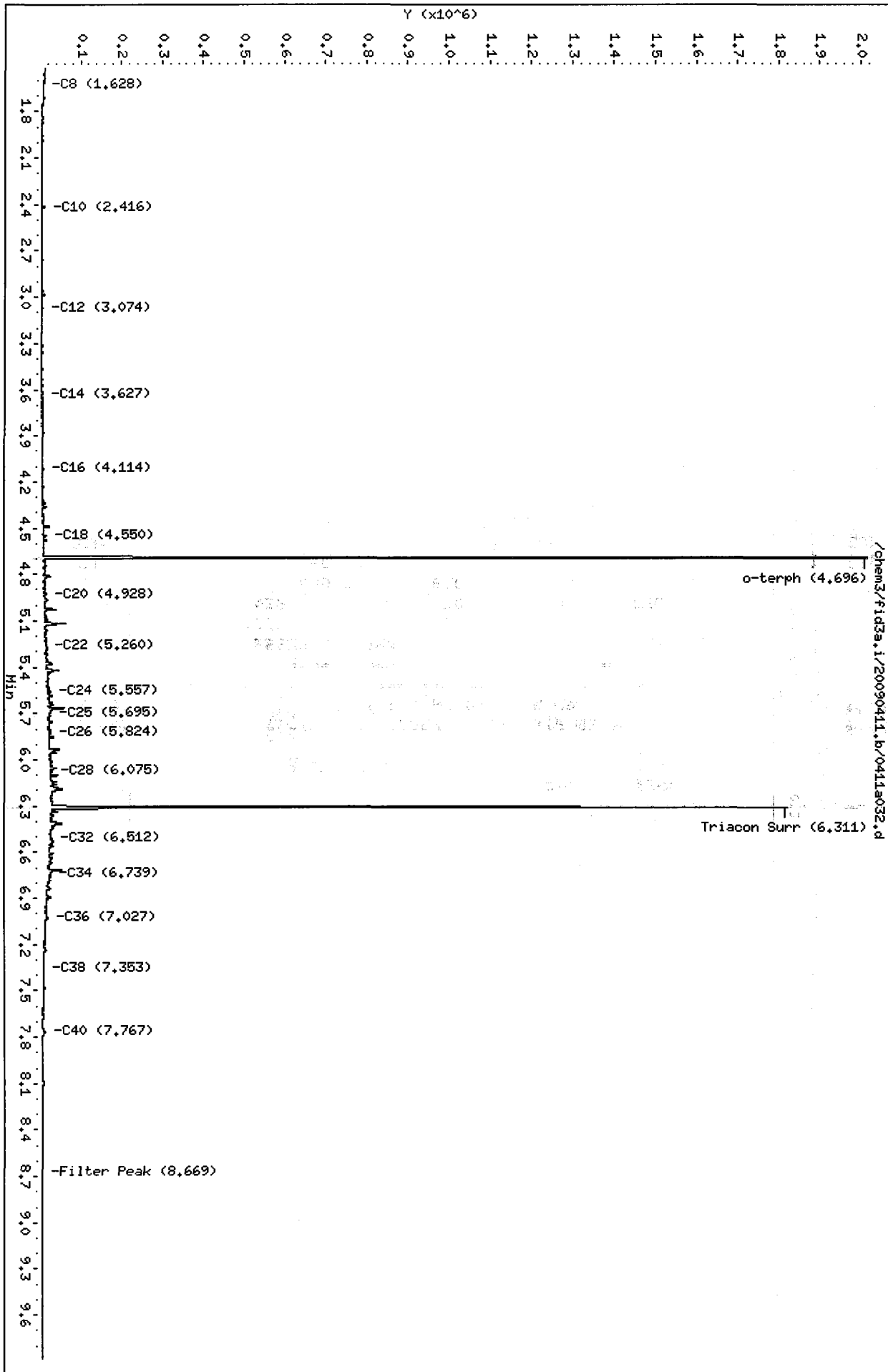
Sample Info: 0U210

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a033.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21P  
Client ID: DOF-TP7-3  
Injection: 11-APR-2009 21:45  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.003	31993	48690	GAS (Tol-C12)	237482	12
C8	1.626	0.000	4557	8947	DIESEL (C12-C24)	361160	22
C10	2.417	0.013	5322	5229	M.OIL (C24-C38)	453871	36
C12	3.075	0.007	1171	1130	AK-102 (C10-C25)	400119	20
C14	3.628	0.006	13718	8097	AK-103 (C25-C36)	381184	44
C16	4.115	0.005	70484	35421	OR.DIES (C10-C28)	502342	24
C18	4.551	0.006	94064	44303	OR.MOIL (C28-C40)	437701	39
C20	4.928	0.006	75742	35104	JET-A (C10-C18)	206570	13
C22	5.260	0.005	39234	20123			
C24	5.546	-0.005	2702	2414			
C25	5.694	0.005	3695	2841			
C26	5.827	0.006	8741	8622			
C28	6.074	0.007	6640	5902			
C32	6.512	-0.002	10910	9088			
C34	6.740	-0.009	5743	5099			
Filter Peak	8.669	-0.003	3597	1577			
C36	7.031	0.009	11052	21297	CREOSOT (C8-C22)	446746	70
C38	7.355	0.004	3692	1767			
C40	7.769	0.002	5988	17721	BUNKERC (C10-C38)	847992	88

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	925602	43.1	95.7
Triacontane	885172	52.2	115.9

*Handwritten:* 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a033.d

Date : 11-APR-2009 21:45

Client ID: DDF-TP7-3

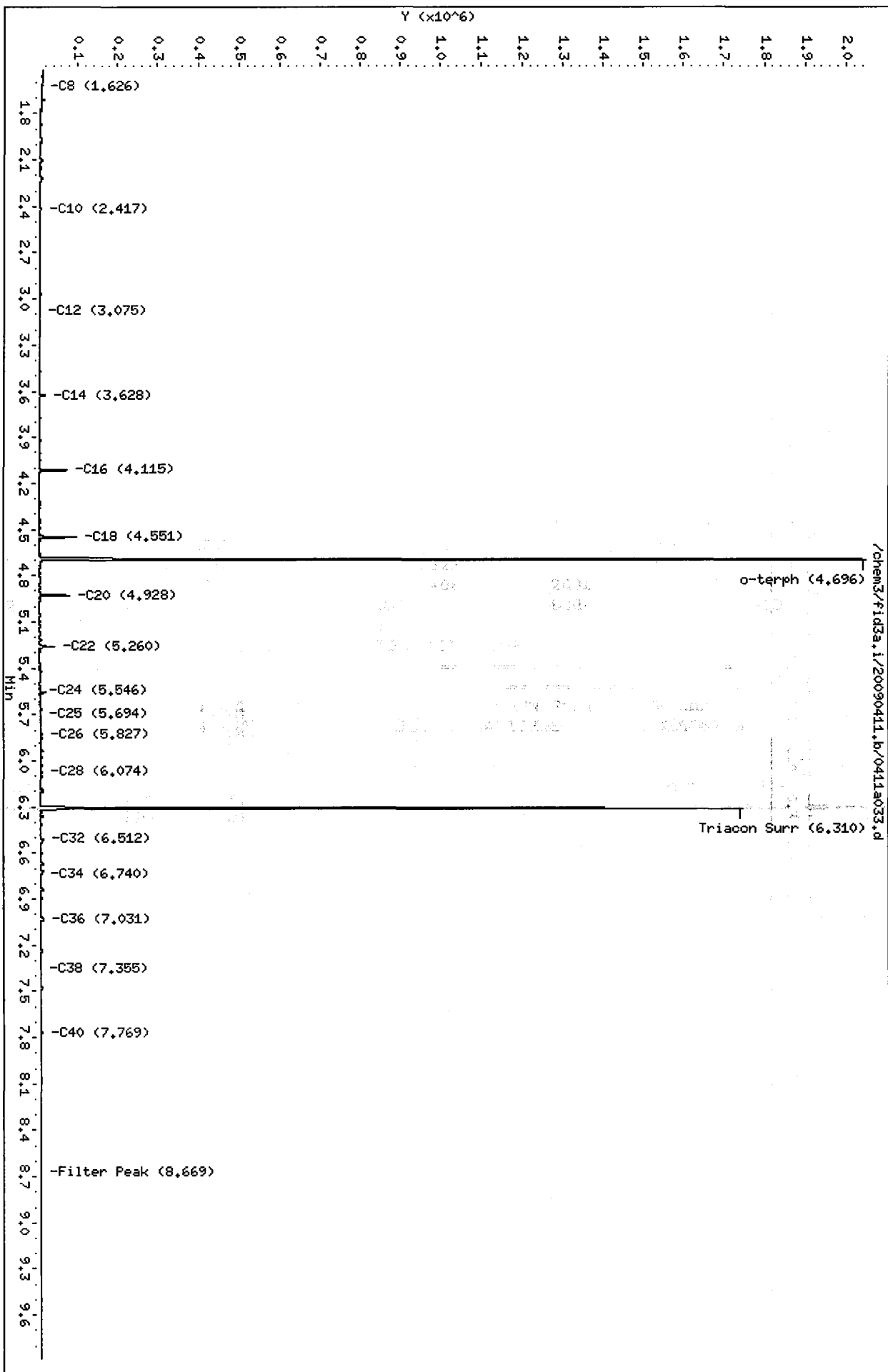
Sample Info: 0U21P

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a034.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21Q  
Client ID: DOF-TP8-4  
Injection: 11-APR-2009 22:03  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.003	27308	40538	GAS (Tol-C12)	285460	15
C8	1.628	0.002	4526	10536	DIESEL (C12-C24)	6834734	421
C10	2.416	0.013	4580	4768	M.OIL (C24-C38)	23902633	<del>1874</del>
C12	3.075	0.007	2204	1806	AK-102 (C10-C25)	7334323	<del>371</del>
C14	3.626	0.005	13818	14726	AK-103 (C25-C36)	21791813	2507
C16	4.115	0.005	51599	37790	OR.DIES (C10-C28)	14578230	691
C18	4.551	0.006	83246	66983	OR.MOIL (C28-C40)	17254719	1530
C20	4.928	0.006	94024	105090	JET-A (C10-C18)	1307190	82
C22	5.262	0.008	117797	120255			
C24	5.544	-0.007	176811	137755			
C25	5.694	0.005	225692	233509			
C26	5.815	-0.006	232821	78029			
C28	6.070	0.003	303368	108118			
C32	6.512	-0.002	286798	159752			
C34	6.745	-0.004	212959	157464			
Filter Peak	8.672	0.000	11159	2001			
C36	7.020	-0.001	130710	38779	CREOSOT (C8-C22)	4334506	678
C38	7.353	0.001	70159	16561			
C40	7.767	0.000	36304	28001	BUNKERC (C10-C38)	30807129	3191

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	913151	42.5	94.4
Triacontane	843550	49.7	110.5

*JK* 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090411.b/0411a034.d

Date : 11-APR-2009 22:03

Client ID: DDF-TP8-4

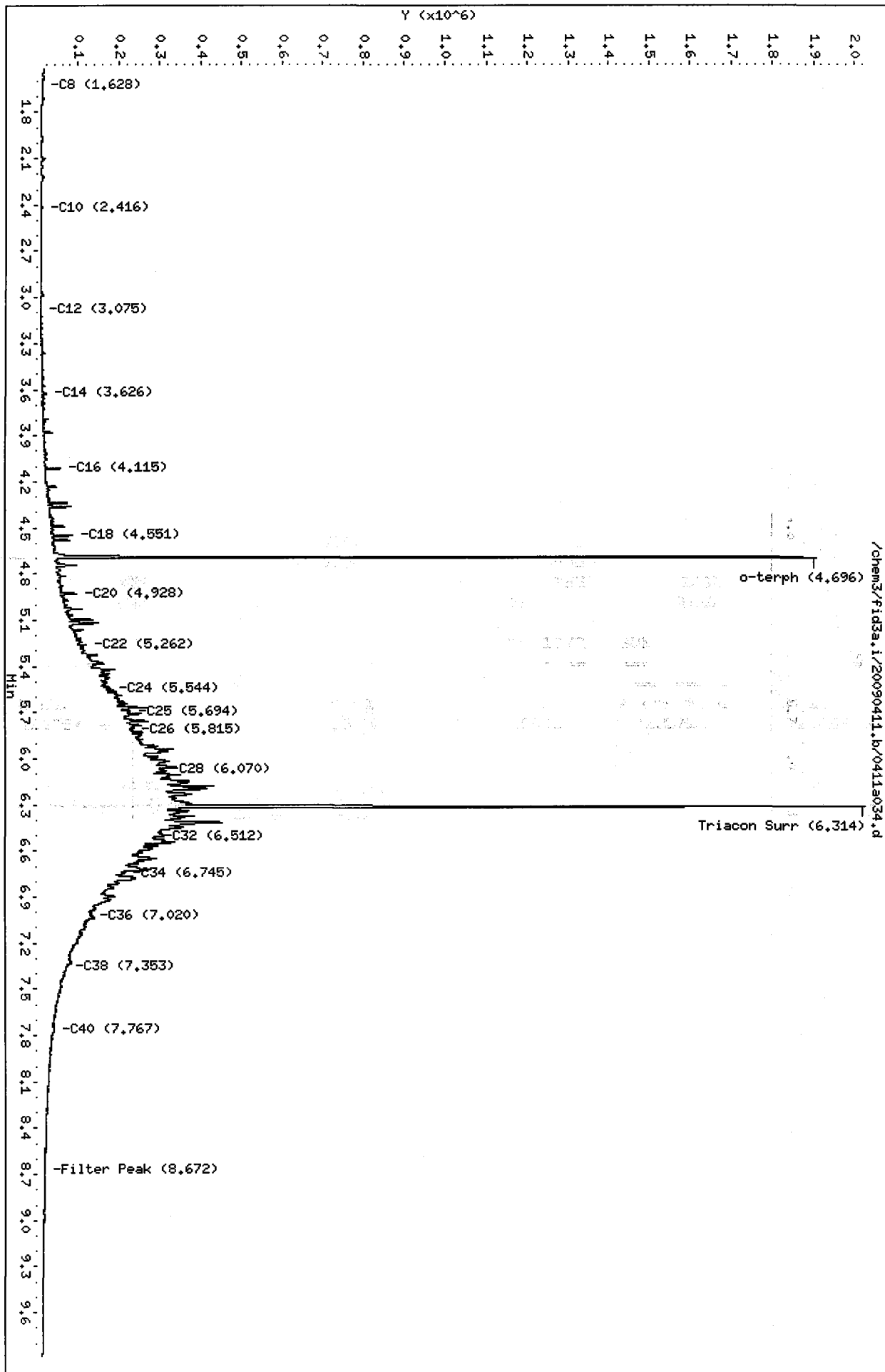
Sample Info: 00210

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a035.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21R  
Client ID: DOF-TP8-8  
Injection: 11-APR-2009 22:22  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.003	31220	46366	GAS (Tol-C12)	277957	14
C8	1.628	0.003	5122	5248	DIESEL (C12-C24)	956486	59
C10	2.393	-0.011	1286	575	M.OIL (C24-C38)	1410239	111
C12	3.075	0.007	1506	1317	AK-102 (C10-C25)	1084333	55
C14	3.627	0.006	2248	2423	AK-103 (C25-C36)	1224130	141
C16	4.105	-0.005	3210	2097	OR.DIES (C10-C28)	1480021	70
C18	4.551	0.006	6505	4930	OR.MOIL (C28-C40)	1096495	97
C20	4.928	0.006	5912	6406	JET-A (C10-C18)	246113	16
C22	5.261	0.007	10476	6749			
C24	5.558	0.007	10784	12247			
C25	5.694	0.004	16617	17942			
C26	5.824	0.003	21271	17048			
C28	6.074	0.007	17107	15543			
C32	6.512	-0.002	25400	20985			
C34	6.742	-0.007	28813	24577			
Filter Peak	8.676	0.005	3938	1960			
C36	7.028	0.006	33059	46722	CREOSOT (C8-C22)	757330	118
C38	7.347	-0.004	5233	5870			
C40	7.769	0.002	15702	39859	BUNKERC (C10-C38)	2429522	252

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

*JK 04/13/09*

Surrogate	Area	Amount	%Rec
o-Terphenyl	949271	44.2	98.2
Triacontane	935401	55.1	122.5

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a035.d

Date: 11-APR-2009 22:22

Client ID: DDF-TP8-8

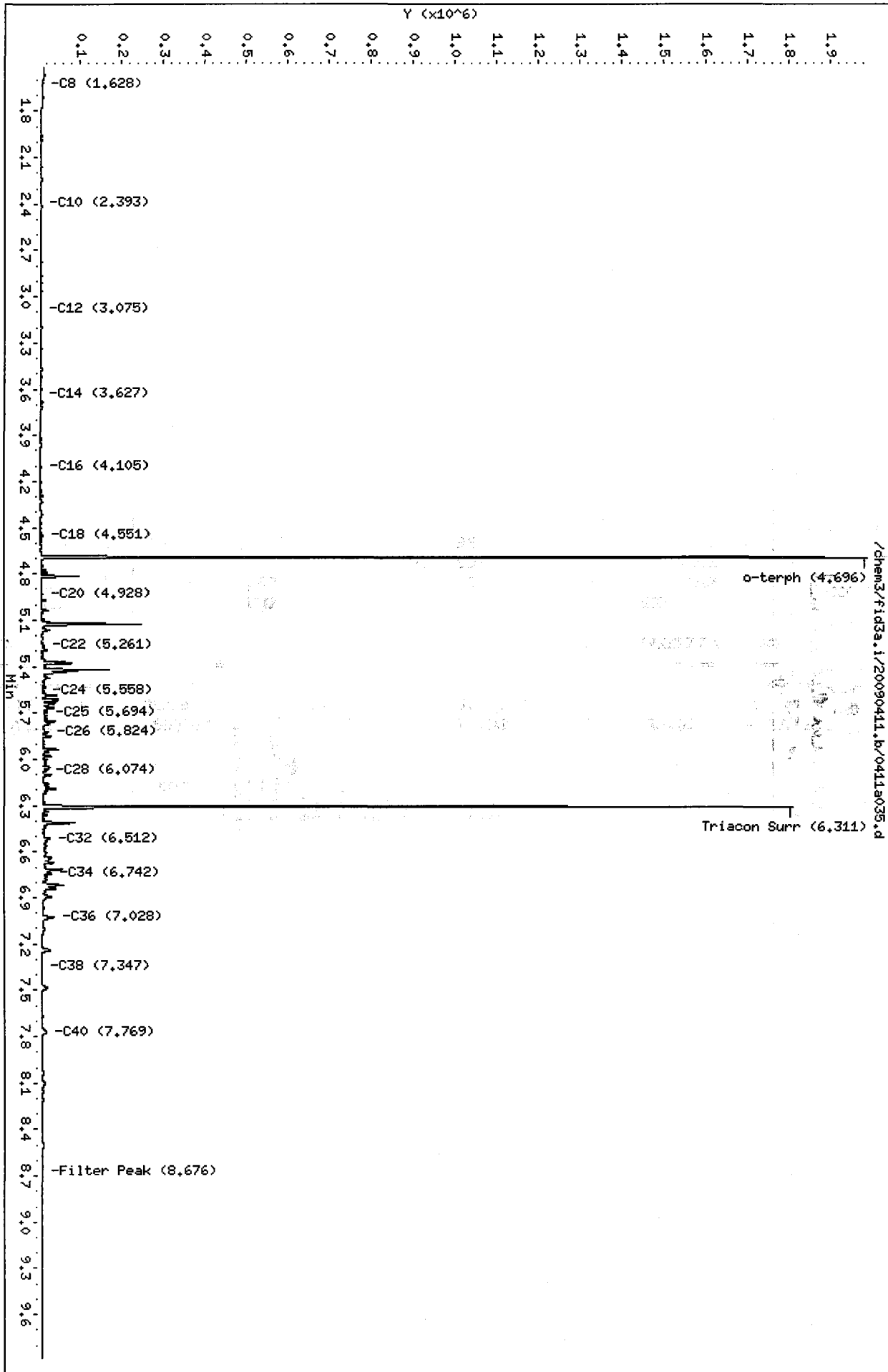
Sample Infc: 0U2LR

Column phase: ZBL-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a036.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21S  
Client ID: DOF-TP9-2  
Injection: 11-APR-2009 22:40  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.485	0.001	26958	30083	GAS (Tol-C12)	203691	10
C8	1.626	0.000	3313	4707	DIESEL (C12-C24)	1616010	<del>100</del>
C10	2.393	-0.010	789	893	M.OIL (C24-C38)	3619322	<del>284</del>
C12	3.074	0.007	1758	1380	AK-102 (C10-C25)	1717677	<del>87</del>
C14	3.627	0.006	8089	7398	AK-103 (C25-C36)	3278762	377
C16	4.115	0.005	19934	14019	OR.DIES (C10-C28)	2802245	133
C18	4.549	0.005	28830	20928	OR.MOIL (C28-C40)	2693462	239
C20	4.927	0.005	29859	26081	JET-A (C10-C18)	519836	33
C22	5.259	0.004	24516	21031			
C24	5.554	0.002	37773	27510			
C25	5.695	0.005	30024	10037			
C26	5.822	0.001	36763	36721			
C28	6.074	0.007	44942	21308			
C32	6.512	-0.003	48999	37045			
C34	6.756	0.007	28509	9673			
Filter Peak	8.674	0.003	4519	2159			
C36	7.027	0.005	27327	61783	CREOSOT (C8-C22)	1327475	208
C38	7.349	-0.002	12299	5066			
C40	7.768	0.001	10278	13948	BUNKERC (C10-C38)	5277673	547

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

*Handwritten:* 12 04/13/09

Surrogate	Area	Amount	%Rec
o-Terphenyl	961744	44.8	99.5
Triacontane	893722	52.7	117.0

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.1/20090411.b/0411a036.d

Date: 11-APR-2009 22:40

Client ID: DOF-TP9-2

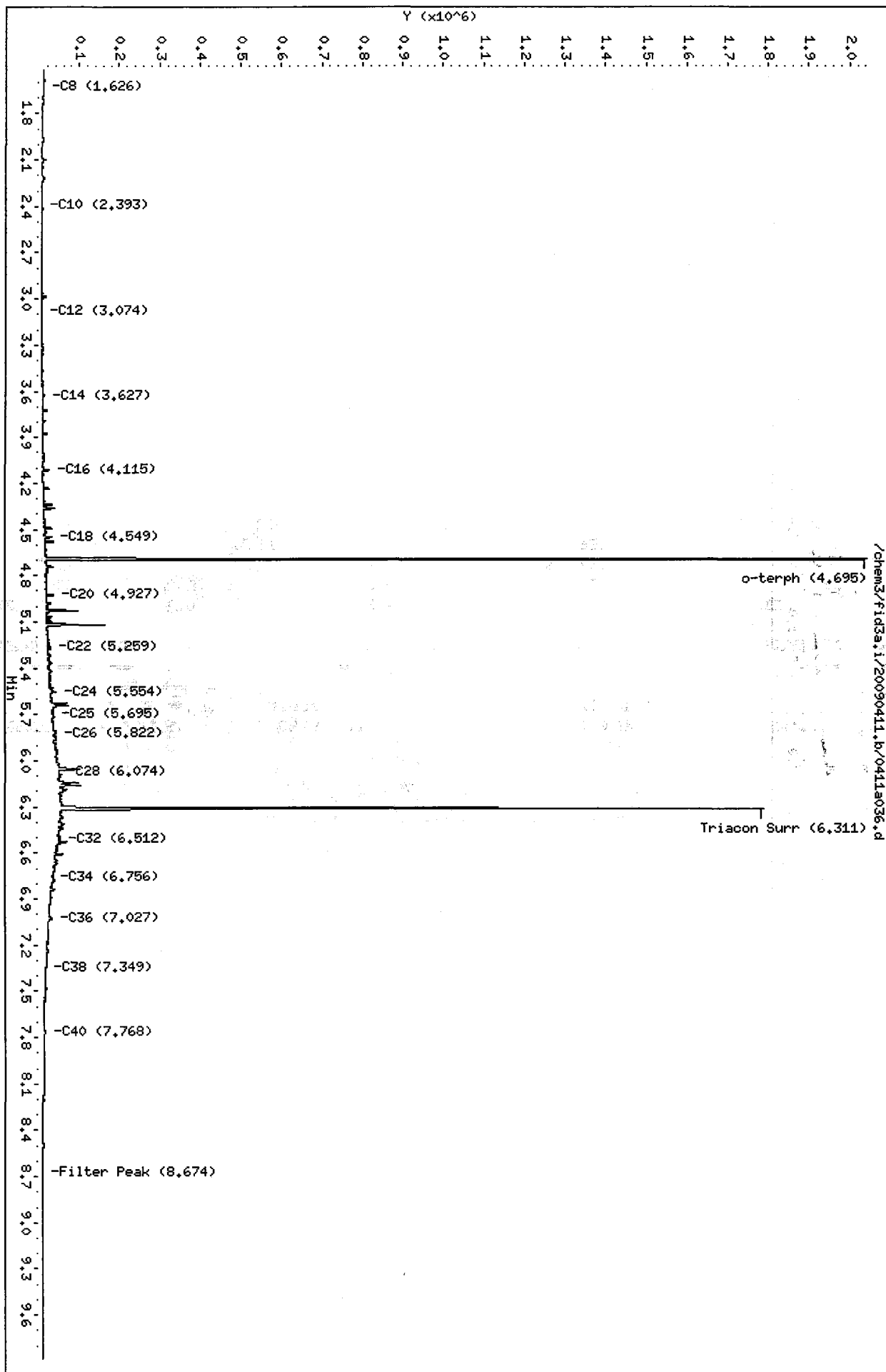
Sample Info: 00215

Instrument: fid3a.1

Page 1

Column phase: ZB1-HT

Operator: ms  
Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a037.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21T  
Client ID: DOF-TP9-3  
Injection: 11-APR-2009 22:59  
Dilution Factor: 20

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.486	0.002	12613	50857	GAS (Tol-C12)	246030	13
C8	1.615	-0.011	6420	7059	DIESEL (C12-C24)	6188648	381
C10	2.410	0.006	1568	2119	M.OIL (C24-C38)	18857564	1478
C12	3.073	0.005	12338	7710	AK-102 (C10-C25)	6484817	328
C14	3.626	0.005	45764	46621	AK-103 (C25-C36)	17108220	1968
C16	4.115	0.005	78087	58793	OR.DIES (C10-C28)	11673952	554
C18	4.550	0.005	77897	77185	OR.MOIL (C28-C40)	14493304	1286
C20	4.928	0.006	74579	82526	JET-A (C10-C18)	2215779	140
C22	5.260	0.005	70607	61921			
C24	5.554	0.003	121825	86591			
C25	5.689	0.000	127943	76774			
C26	5.822	0.001	168272	182166			
C28	6.072	0.004	233115	37044			
C32	6.514	0.000	237889	94175			
C34	6.751	0.002	164505	61664			
Filter Peak	8.674	0.002	13082	12576			
C36	7.021	-0.001	115864	65014	CREOSOT (C8-C22)	4827525	755
C38	7.355	0.003	67353	36947			
C40	7.766	-0.001	33585	15837	BUNKERC (C10-C38)	25141575	2604

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	43306	2.0	89.0
Triacontane	30175	1.8	79.0

*ms 04/13/09*

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090411.b/0411a037.d

Date: 11-APR-2009 22:59

Client ID: DDF-TP9-3

Sample Info: 0U21T/20

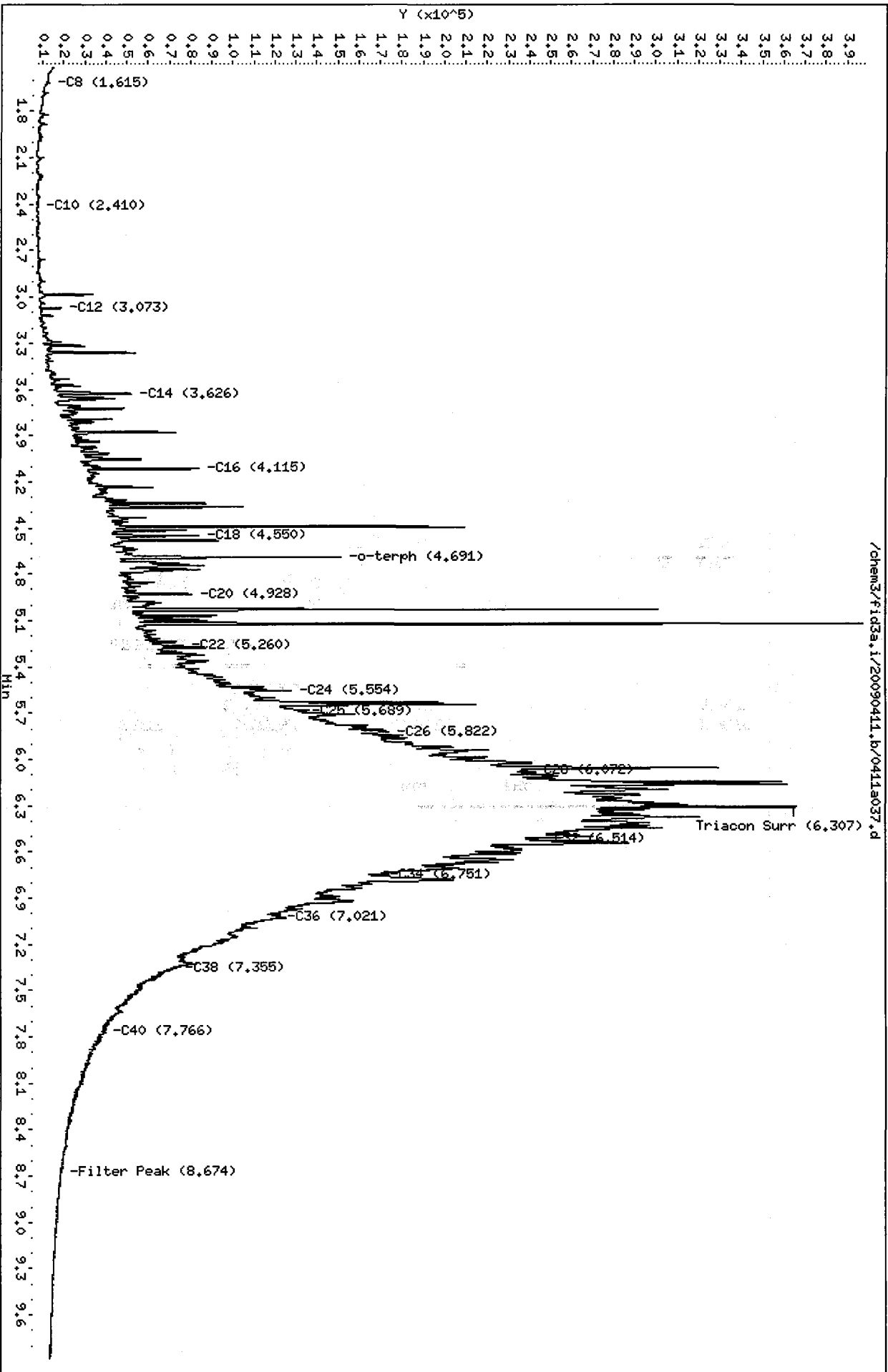
Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

Page 1



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a011.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21AMS  
Client ID: DOF-TP1-3 MS  
Injection: 11-APR-2009 14:55  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.004	54472	45276	GAS (Tol-C12)	4668337	238
C8	1.630	0.004	30811	19505	DIESEL (C12-C24)	20778414	<u>1279</u>
C10	2.406	0.002	279954	212881	M.OIL (C24-C38)	1888678	<u>148</u>
C12	3.069	0.001	595834	322778	AK-102 (C10-C25)	24502239	<u>1239</u>
C14	3.624	0.002	756064	534086	AK-103 (C25-C36)	1667653	192
C16	4.113	0.003	817120	473085	OR.DIES (C10-C28)	25165008	1193
C18	4.548	0.003	710434	478289	OR.MOIL (C28-C40)	1270420	113
C20	4.924	0.002	473554	342597	JET-A (C10-C18)	18430916	1163
C22	5.255	0.000	193706	141585			
C24	5.551	-0.001	94307	59520			
C25	5.688	-0.002	80357	71718			
C26	5.819	-0.002	45839	36013			
C28	6.066	-0.002	30519	43653			
C32	6.514	0.000	20059	21249			
C34	6.751	0.001	15600	13487			
Filter Peak	8.673	0.001	5135	2461			
C36	7.026	0.004	14798	19548	CREOSOT (C8-C22)	24477743	3827
C38	7.352	0.000	6269	4494			
C40	7.774	0.007	5534	2316	BUNKERC (C10-C38)	26302452	2724

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	873700	40.7	90.4
Triacontane	828286	48.8	108.5

*JK* 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090411.b/0411a011.d

Date : 11-APR-2009 14:55

Client ID: DDF-TP1-3 MS

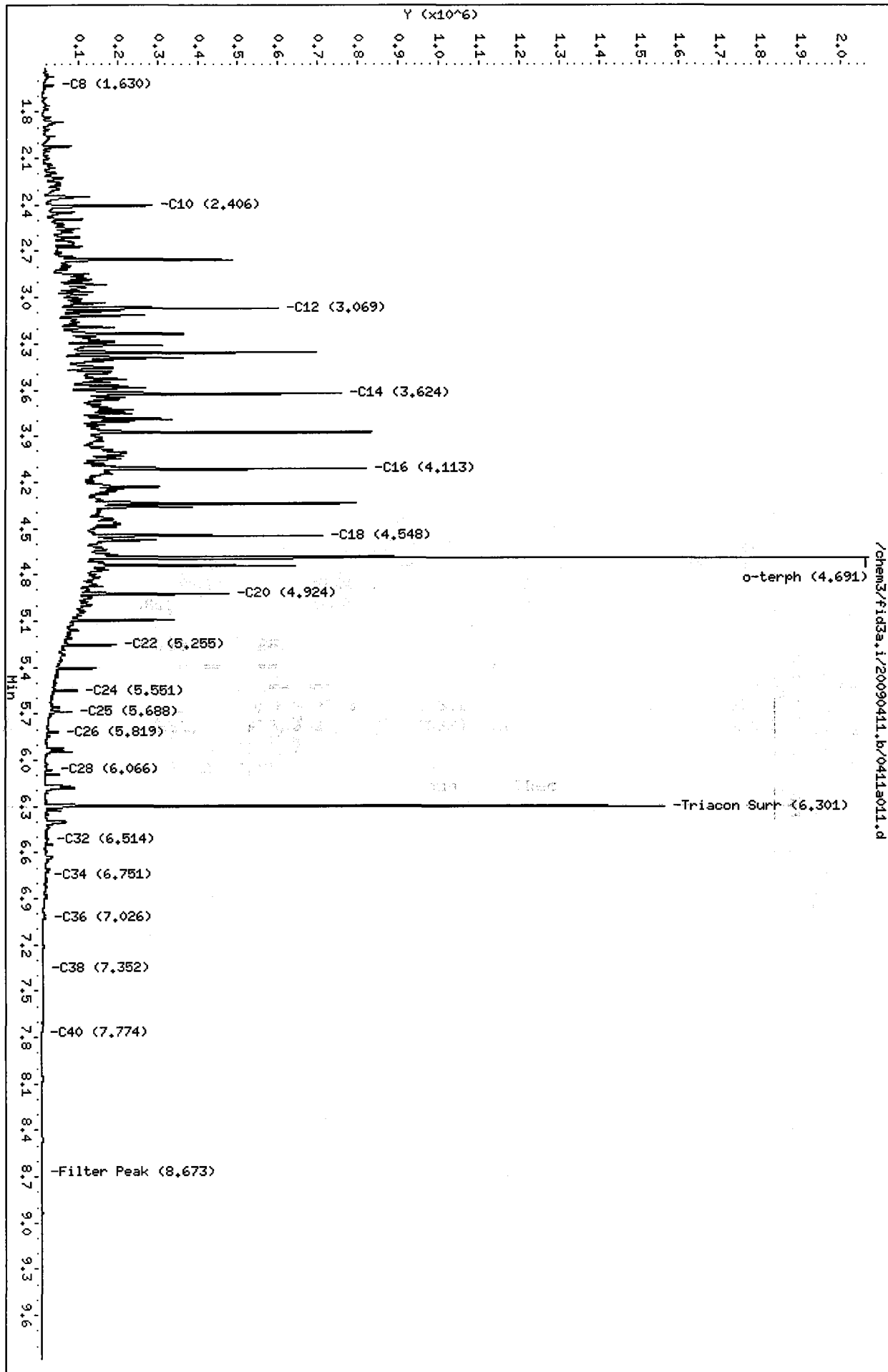
Sample Info: 0U21AHS

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090411.b/0411a012.d  
Method: /chem3/fid3a.i/20090411.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 04/13/2009  
Macro: FID:3A030309

ARI ID: OU21AMSD  
Client ID: DOF-TP1-3 MSD  
Injection: 11-APR-2009 15:14  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.488	0.003	56871	46806	GAS (Tol-C12)	4630949	236
C8	1.630	0.004	30808	19262	DIESEL (C12-C24)	20488569	1262
C10	2.406	0.002	265499	220026	M.OIL (C24-C38)	2138732	168
C12	3.069	0.001	582685	316318	AK-102 (C10-C25)	24157108	1221
C14	3.624	0.002	765227	529399	AK-103 (C25-C36)	1901207	219
C16	4.113	0.002	824136	478003	OR.DIES (C10-C28)	24871186	1179
C18	4.547	0.002	682342	434543	OR.MOIL (C28-C40)	1472653	131
C20	4.924	0.002	519940	335030	JET-A (C10-C18)	18333373	1157
C22	5.255	0.000	199555	137474			
C24	5.550	-0.001	95997	64459			
C25	5.687	-0.002	82000	65055			
C26	5.819	-0.001	48171	41750			
C28	6.067	-0.001	35480	46741			
C32	6.516	0.001	25295	16407			
C34	6.752	0.002	19120	17320			
Filter Peak	8.672	0.000	5000	2591			
C36	7.026	0.005	16826	17323	CREOSOT (C8-C22)	24173307	3779
C38	7.353	0.001	6734	5466			
C40	7.767	0.000	5540	4847	BUNKERC (C10-C38)	26204409	2714

Range Times: NW Diesel(3.118 - 5.601) NW Gas(1.434 - 3.118) NW M.Oil(5.601 - 7.402)  
AK102(2.354 - 5.639) AK103(5.639 - 7.072) Jet A(2.354 - 4.595)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1090560	50.8	112.8
Triacontane	869505	51.2	113.9

*JK* 04/13/09

Analyte	RF	Curve Date
o-Terph Surr	21486.2	26-JAN-2009
Triacon Surr	16970.7	25-FEB-2009
Gas	19623.9	03-MAR-2009
Diesel	16241.2	26-JAN-2009
Motor Oil	12758.0	25-FEB-2009
AK102	19783.1	26-JAN-2009
AK103	8694.0	03-FEB-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chems3/fid3a.i/20090411.b/0411a012.d

Date: 11-APR-2009 16:14

Client ID: DDF-TP1-3 MSD

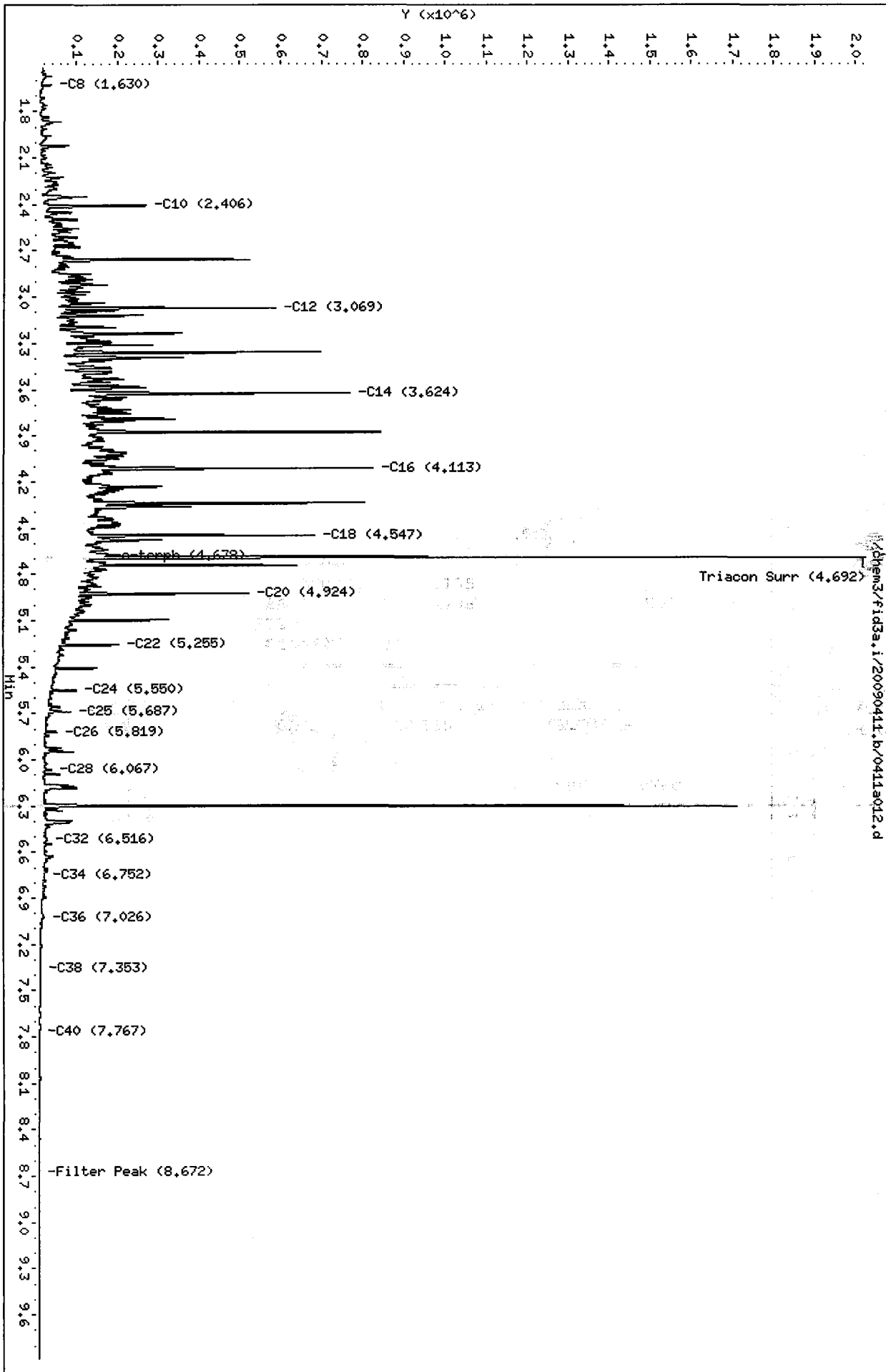
Sample Info: 0U21AHMSD

Instrument: fid3a.i

Page 1

Column phase: ZBL-HT

Operator: ms  
Column diameter: 0.25



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

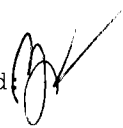
Sample ID: DOF-TP1-3

SAMPLE

Lab Sample ID: OU21A

LIMS ID: 09-8641

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 83.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/27/09	7440-38-2	Arsenic	10	10	U
3050B	04/22/09	6010B	04/27/09	<b>7440-39-3</b>	<b>Barium</b>	0.8	107	
3050B	04/22/09	6010B	04/27/09	7440-43-9	Cadmium	0.6	0.6	U
3050B	04/22/09	6010B	04/27/09	<b>7440-47-3</b>	<b>Chromium</b>	1	55	
3050B	04/22/09	6010B	04/27/09	<b>7439-92-1</b>	<b>Lead</b>	6	7	
CLP	04/08/09	7471A	04/10/09	<b>7439-97-6</b>	<b>Mercury</b>	0.05	0.06	
3050B	04/22/09	6010B	04/27/09	<b>7440-02-0</b>	<b>Nickel</b>	3	65	
3050B	04/22/09	6010B	04/27/09	<b>7440-66-6</b>	<b>Zinc</b>	3	66	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

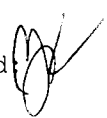
Page 1 of 1

**Sample ID: DOF-TP1-3  
DUPLICATE**

Lab Sample ID: OU21A

LIMS ID: 09-8641

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	10 U	10 U	0.0%	+/- 10	L
Barium	6010B	107	97.8	9.0%	+/- 20%	
Cadmium	6010B	0.6 U	0.6 U	0.0%	+/- 0.6	L
Chromium	6010B	55	52	5.6%	+/- 20%	
Lead	6010B	7	6	15.4%	+/- 6	L
Mercury	7471A	0.06	0.07	15.4%	+/- 0.05	L
Nickel	6010B	65	59	9.7%	+/- 20%	
Zinc	6010B	66	60	9.5%	+/- 20%	

Reported in mg/kg-dry

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


**Sample ID: DOF-TP1-3**

**MATRIX SPIKE**

Lab Sample ID: OU21A

LIMS ID: 09-8641

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	10 U	220	226	97.3%	
Barium	6010B	107	322	226	95.1%	
Cadmium	6010B	0.6 U	52.3	56.5	92.6%	
Chromium	6010B	55	112	56.5	101%	
Lead	6010B	7	220	226	94.2%	
Mercury	7471A	0.06	0.58	0.511	102%	
Nickel	6010B	65	122	56.5	101%	
Zinc	6010B	66	127	56.5	108%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP1-18  
SAMPLE

Lab Sample ID: OU21B

LIMS ID: 09-8642

Matrix: Soil

Data Release Authorized 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 84.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>71.6</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>31.9</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>9</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>42</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>53</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

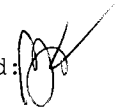
Page 1 of 1

Sample ID: DOF-TP2-3  
SAMPLE

Lab Sample ID: OU21C

LIMS ID: 09-8643

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 84.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>101</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>56.0</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>5</b>	
CLP	04/08/09	7471A	04/10/09	<b>7439-97-6</b>	<b>Mercury</b>	0.05	<b>0.07</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>57</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>58</b>	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP2-9  
SAMPLE

Lab Sample ID: OU21D

LIMS ID: 09-8644

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 82.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>85.3</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>31.6</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>3</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>39</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>42</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP3-3  
SAMPLE

Lab Sample ID: OU21E

LIMS ID: 09-8645

Matrix: Soil

Data Release Authorized 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 91.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>47.0</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>27.2</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>3</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.04	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>39</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>38</b>	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP3-8  
SAMPLE

Lab Sample ID: OU21F

LIMS ID: 09-8646

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 87.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	11	
3050B	04/22/09	6010B	05/01/09	7440-39-3	Barium	0.3	94.0	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	7440-47-3	Chromium	0.5	22.8	
3050B	04/22/09	6010B	05/01/09	7439-92-1	Lead	2	62	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.09	
3050B	04/22/09	6010B	05/01/09	7440-02-0	Nickel	1	130	
3050B	04/22/09	6010B	05/01/09	7440-66-6	Zinc	1	63	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

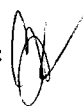
Page 1 of 1

Sample ID: DOF-TP3-12  
SAMPLE

Lab Sample ID: OU21G

LIMS ID: 09-8647

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 89.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>61.1</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>37.3</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>4</b>	
CLP	04/08/09	7471A	04/10/09	<b>7439-97-6</b>	<b>Mercury</b>	0.04	<b>0.06</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>37</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>38</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP4-4  
SAMPLE**

Lab Sample ID: OU21H

LIMS ID: 09-8648

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 91.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>45.2</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>33.8</b>	
3050B	04/22/09	6010B	05/01/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>44</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>43</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP4-6  
SAMPLE**

Lab Sample ID: OU21I

LIMS ID: 09-8649

Matrix: Soil

Data Release Authorized 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 85.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	6	26	
3050B	04/22/09	6010B	05/01/09	7440-39-3	Barium	0.3	172	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	7440-47-3	Chromium	0.6	22.8	
3050B	04/22/09	6010B	05/01/09	7439-92-1	Lead	2	53	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.20	
3050B	04/22/09	6010B	05/01/09	7440-02-0	Nickel	1	98	
3050B	04/22/09	6010B	05/01/09	7440-66-6	Zinc	1	55	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

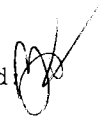
Page 1 of 1

**Sample ID: DOF-TP4-8  
SAMPLE**

Lab Sample ID: OU21J

LIMS ID: 09-8650

Matrix: Soil

Data Release Authorized 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 88.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>60.5</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>27.2</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>3</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>35</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>40</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP5-3  
SAMPLE

Lab Sample ID: OU21K

LIMS ID: 09-8651

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 82.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.4	<b>132</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>34.1</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>238</b>	
CLP	04/08/09	7471A	04/10/09	<b>7439-97-6</b>	<b>Mercury</b>	0.05	<b>0.22</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>38</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>91</b>	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: DOF-TP5-8  
SAMPLE**

Lab Sample ID: OU21L

LIMS ID: 09-8652

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 79.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.4	<b>101</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>55.3</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>5</b>	
CLP	04/08/09	7471A	04/10/09	<b>7439-97-6</b>	<b>Mercury</b>	0.06	<b>0.08</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>60</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>69</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP6-2  
SAMPLE

Lab Sample ID: OU21M

LIMS ID: 09-8653

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 90.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>52.1</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>29.0</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>3</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.04	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>39</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>50</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP6-6  
SAMPLE

Lab Sample ID: OU21N

LIMS ID: 09-8654

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 86.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>77.3</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>40.6</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>5</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>46</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>58</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

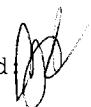
Page 1 of 1

**Sample ID: DOF-TP7-1  
SAMPLE**

Lab Sample ID: OU210

LIMS ID: 09-8655

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 89.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>83.0</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>36.1</b>	
3050B	04/22/09	6010B	05/01/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>6</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>43</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>65</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP7-3  
SAMPLE

Lab Sample ID: OU21P

LIMS ID: 09-8656

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 95.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	05/01/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	05/01/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>52.2</b>	
3050B	04/22/09	6010B	05/01/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	05/01/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>26.5</b>	
3050B	04/22/09	6010B	05/01/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.04	U
3050B	04/22/09	6010B	05/01/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>34</b>	
3050B	04/22/09	6010B	05/01/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>41</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

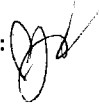
Page 1 of 1

Sample ID: DOF-TP8-4  
SAMPLE

Lab Sample ID: OU21Q

LIMS ID: 09-8657

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 91.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>42.0</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>18.1</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>3</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>27</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>31</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP8-8  
SAMPLE

Lab Sample ID: OU21R

LIMS ID: 09-8658

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 85.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	6	6	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.4	<b>40.2</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.6	<b>19.6</b>	
3050B	04/22/09	6010B	04/24/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>27</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>31</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: DOF-TP9-2  
SAMPLE**

Lab Sample ID: OU21S

LIMS ID: 09-8659

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 90.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>46.2</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>23.7</b>	
3050B	04/22/09	6010B	04/24/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.04	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>31</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>32</b>	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP9-3  
SAMPLE**

Lab Sample ID: OU21T

LIMS ID: 09-8660

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 91.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>66.0</b>	
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>27.3</b>	
3050B	04/22/09	6010B	04/24/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>17</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.04	U
3050B	04/22/09	6010B	04/24/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>33</b>	
3050B	04/22/09	6010B	04/24/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>73</b>	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: METHOD BLANK**

Lab Sample ID: OU21MB

LIMS ID: 09-8642

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/22/09	6010B	04/24/09	7440-38-2	Arsenic	5	5	U
3050B	04/22/09	6010B	04/24/09	7440-39-3	Barium	0.3	0.3	U
3050B	04/22/09	6010B	04/24/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/22/09	6010B	04/24/09	7440-47-3	Chromium	0.5	0.5	U
3050B	04/22/09	6010B	04/24/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/22/09	6010B	04/24/09	7440-02-0	Nickel	1	1	U
3050B	04/22/09	6010B	04/24/09	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: OU21LCS

LIMS ID: 09-8642

Matrix: Soil

Data Release Authorized: 

Reported: 05/04/09

QC Report No: OU21-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	197	200	98.5%	
Barium	6010B	195	200	97.5%	
Cadmium	6010B	49.4	50.0	98.8%	
Chromium	6010B	48.7	50.0	97.4%	
Lead	6010B	194	200	97.0%	
Mercury	7471A	1.04	1.00	104%	
Nickel	6010B	48	50	96.0%	
Zinc	6010B	49	50	98.0%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

May 13, 2009

Matt Dalton  
Dalton, Olmsted, & Fuglevand  
10827 NE 68th, Suite B  
Kirkland, WA 98033

**RE: Client Project: Verbeek Wrecking**  
**ARI Job No.: OV25 & OV74**

Dear Matt:

Please find enclosed the original Chain-of-Custody record, sample receipt documentation, and the final analytical results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted two samples and one trip blank on April 13, 2009. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for volatiles, NWTPH-D, NWTPH-G, and total and dissolved metals on ARI job number OV25. Additional volumes for the two samples were subcontracted to D.M.D. for centrifuging. Centrifuged samples were then returned to ARI and analyzed for semivolatiles under job number OV74.

There are no analytical anomalies associated with the analyses of job number OV25. BEHP was detected at the RL in the method blank associated with the semivolatiles analysis. Sample concentrations of this analyte are qualified with a "B" flag. As per Raleigh Farlow's request, the extract was evaporated from 200 $\mu$ L to 100 $\mu$ L in order to obtain the reporting limit. No further anomalies are noted.

An electronic copy of this report will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Susan Dunnihoo".

Susan Dunnihoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile OV25, OV74

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 0125 Turn-around Requested: ASAP

ARI Client Company: ARLON ALMSTED & FUGLEVANG Phone: 425 827 4388

Client Contact: MATT ANDERSON / ANNE COOPER

Client Project Name: VORSECK WRECKING

Client Project #: ACE-204-00

Samplers: DG COOPER

Sample ID	Date	Time	Matrix	No. Containers
MW-SOUTH	4/13/09	0900	WSTN	13
MW-NORTH	↓	1000	↓	13
TRIP BLANK	↓	-	↓	2

Analysis Requested	Notes/Comments
MWPH-6 RPT B260 MURPH-DX	
TEMP AS, Cd, Cr, Pb Hg, Ni, Zn DISC AS, Cd, Cr, Pb Hg, Ni, Zn PAHS * EPA B270 FULL SCAN	DISC FIELD METALS FIELD B270 AS, Cd, Cr, Pb Hg, Ni, Zn PAHS * EPA B270 FULL SCAN

Comments/Special Instructions  
 \* PAH SAMPLES TO BE  
 CENTRIFUGED BY D.M.A.  
 PRIOR TO ANALYSIS -  
 INCLUDE CASE OF EMPTY  
 AMBER LITENS

Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature]

Printed Name: DG COOPER Printed Name: A. Volgardsen

Company: DG COOPER Company: ARI

Date & Time: 4/13/09 Date & Time: 4/13/09 1215

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)





# Cooler Receipt Form

ARI Client: DOF  
 COC No(s): \_\_\_\_\_ (NA)  
 Assigned ARI Job No: OV25

Project Name: Verbeek Wrecking  
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_  
 Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of cooler? YES  NO

Were custody papers included with the cooler? ..... YES  NO

Were custody papers properly filled out (ink, signed, etc.) ..... YES  NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 11.4 13.2

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 108806

Cooler Accepted by: AV Date: 4/13/09 Time: 1215

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? ..... YES  NO

What kind of packing material was used? ...  Bubble Wrap  Wet Ice  Gel Packs  Baggies  Foam Block  Paper  Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? ..... NA  YES  NO

Were all bottles sealed in individual plastic bags? ..... YES  NO

Did all bottles arrive in good condition (unbroken)? ..... YES  NO

Were all bottle labels complete and legible? ..... YES  NO

Did the number of containers listed on COC match with the number of containers received? ..... YES  NO

Did all bottle labels and tags agree with custody papers? ..... YES  NO

Were all bottles used correct for the requested analyses? ..... YES  NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA  YES  NO

Were all VOC vials free of air bubbles? ..... NA  YES  NO

Was sufficient amount of sample sent in each bottle? ..... YES  NO

Samples Logged by: AV Date: 4/13/09 Time: 1244

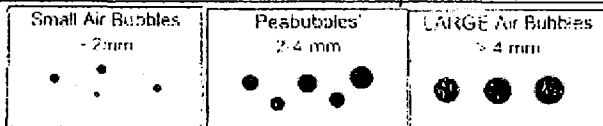
**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

mw-North = 1 pb mw-South = 1 Pb  
Tripblanks = 2 pb

By: AV Date: 4/13/09



Small → "sm"  
 Peabubbles → "pb"  
 Large → "lg"  
 Headspace → "hs"



# Cooler Temperature Compliance Form

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type
	11.4	
mw-South	7	2 1 LAG, 2 16oz HDPE, 3 40ml VOA
mw-North	7	" " "
or trip Blank	2	2 40ml VOA

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type
	13.2	
mw-South	6	6 1 LAG
mw-North	6	"

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Completed by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



ARI Job No: OV25

PC: Sue D.

VTSR: 04/13/09

Inquiry Number: NONE  
 Analysis Requested: 04/13/09  
 Contact: Dalton, Matt  
 Client: Dalton, Olmsted & Fuglevand, Inc  
 Logged by: AV  
 Sample Set Used: Yes-481  
 Validatable Package: No  
 Deliverables:

Project #: PSE-004-00  
 Project: VERBEEK WRECKING  
 Sample Site:  
 SDG No:  
 Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >1.2	WAD >1.2	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
09-9252 OV25A	MW-SOUTH						TOC OK														
09-9253 OV25B	MW-NORTH						TOC OK														
09-9255 OV25D	MW-SOUTH						DIS OK									Y					
09-9256 OV25E	MW-NORTH						DIS OK									Y					

Checked By AV Date 4/13/09





## Data Reporting Qualifiers

Effective 12/28/04

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- NR Spiked compound recovery is not reported due to chromatographic interference
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for



- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference

## Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260B**

**Sample ID: MB-041409**

Page 1 of 1

**METHOD BLANK**

Lab Sample ID: MB-041409

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-9252

Project: VERBEEK WRECKING

Matrix: Water

PSE-004-00

Data Release Authorized: *VTS*

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst: NT5/JZ

Sample Amount: 10.0 mL

Date Analyzed: 04/14/09 13:00

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U

Reported in  $\mu\text{g/L}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	87.5%
d8-Toluene	97.6%
Bromofluorobenzene	91.8%
d4-1,2-Dichlorobenzene	106%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260B**

**Sample ID: MW-SOUTH  
SAMPLE**

Page 1 of 1

Lab Sample ID: OV25A

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-9252

Project: VERBEEK WRECKING

Matrix: Water

PSE-004-00

Data Release Authorized: *VTB*

Date Sampled: 04/13/09

Reported: 04/16/09

Date Received: 04/13/09

Instrument/Analyst: NT5/JZ

Sample Amount: 10.0 mL

Date Analyzed: 04/14/09 14:42

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U

Reported in  $\mu\text{g/L}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	84.4%
d8-Toluene	98.4%
Bromofluorobenzene	88.2%
d4-1,2-Dichlorobenzene	105%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260B**

**Sample ID: MW-NORTH  
SAMPLE**

Page 1 of 1

Lab Sample ID: OV25B

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-9253

Project: VERBEEK WRECKING

Matrix: Water

PSE-004-00

Data Release Authorized: *VTS*

Date Sampled: 04/13/09

Reported: 04/16/09

Date Received: 04/13/09

Instrument/Analyst: NT5/JZ

Sample Amount: 10.0 mL

Date Analyzed: 04/14/09 15:09

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U

Reported in  $\mu\text{g/L}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	88.0%
d8-Toluene	97.6%
Bromofluorobenzene	87.4%
d4-1,2-Dichlorobenzene	107%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260B**

**Sample ID: TRIP BLANKS  
SAMPLE**

Page 1 of 1

Lab Sample ID: OV25C

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-9254

Project: VERBEEK WRECKING

Matrix: Water

PSE-004-00

Data Release Authorized: *VTS*

Date Sampled: 04/13/09

Reported: 04/16/09

Date Received: 04/13/09

Instrument/Analyst: NT5/JZ

Sample Amount: 10.0 mL

Date Analyzed: 04/14/09 13:48

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U

Reported in  $\mu\text{g/L}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	84.5%
d8-Toluene	98.5%
Bromofluorobenzene	92.3%
d4-1,2-Dichlorobenzene	105%

VOA SURROGATE RECOVERY SUMMARY



Matrix: Water

QC Report No: OV25-Dalton, Olmsted & Fuglevand, In  
 Project: VERBEEK WRECKING  
 PSE-004-00

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-041409	Method Blank	10	87.5%	97.6%	91.8%	106%	0
LCS-041409	Lab Control	10	79.3%	96.2%	96.5%	99.3%	0
LCSD-041409	Lab Control Dup	10	81.8%	94.3%	95.7%	101%	0
OV25A	MW-SOUTH	10	84.4%	98.4%	88.2%	105%	0
OV25B	MW-NORTH	10	88.0%	97.6%	87.4%	107%	0
OV25C	TRIP BLANKS	10	84.5%	98.5%	92.3%	105%	0

LCS/MB LIMITS

QC LIMITS

SW8260B

(DCE) = d4-1,2-Dichloroethane  
 (TOL) = d8-Toluene  
 (BFB) = Bromofluorobenzene  
 (DCB) = d4-1,2-Dichlorobenzene

70-130  
 70-130  
 70-130  
 70-130

70-130  
 70-130  
 70-130  
 70-130

Prep Method: SW5030B  
 Log Number Range: 09-9252 to 09-9254

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260B**

**Sample ID: LCS-041409**

Page 1 of 1

**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-041409

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-9252

Project: VERBEEK WRECKING

Matrix: Water

PSE-004-00

Data Release Authorized: *VIS*

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst LCS: NT5/JZ

Sample Amount LCS: 10.0 mL

LCSD: NT5/JZ

LCSD: 10.0 mL

Date Analyzed LCS: 04/14/09 12:06

Purge Volume LCS: 10.0 mL

LCSD: 04/14/09 12:33

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	10.8	10.0	108%	10.6	10.0	106%	1.9%
Toluene	11.0	10.0	110%	10.7	10.0	107%	2.8%
Ethylbenzene	11.4	10.0	114%	11.4	10.0	114%	0.0%
m,p-Xylene	23.3	20.0	116%	23.5	20.0	118%	0.9%
o-Xylene	11.6	10.0	116%	11.7	10.0	117%	0.9%

Reported in  $\mu\text{g/L}$  (ppb)


RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	79.3%	81.8%
d8-Toluene	96.2%	94.3%
Bromofluorobenzene	96.5%	95.7%
d4-1,2-Dichlorobenzene	99.3%	101%



ORGANICS ANALYSIS DATA SHEET  
TPHG by Method NWTPHG  
Matrix: Water

Data Release Authorized:   
Reported: 04/22/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
Event: PSE-004-00  
Date Sampled: 04/13/09  
Date Received: 04/13/09



ARI ID	Client ID	Analysis Date	DL	Range	Result
MB-041509 09-9252	Method Blank	04/15/09 PID3	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	< 0.25 U --- 94.0% 103%
OV25A 09-9252	MW-SOUTH	04/15/09 PID3	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	< 0.25 U --- 93.0% 102%
OV25B 09-9253	MW-NORTH	04/15/09 PID3	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	< 0.25 U --- 94.7% 102%
OV25C 09-9254	TRIP BLANKS	04/15/09 PID3	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	< 0.25 U --- 95.2% 103%

Gasoline values reported in mg/L (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

**TPHG WATER SURROGATE RECOVERY SUMMARY**

ARI Job: OV25  
Matrix: Water

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
Event: PSE-004-00

<b>Client ID</b>	<b>TFT</b>	<b>BBZ</b>	<b>TOT OUT</b>
MB-041509	94.0%	103%	0
LCS-041509	97.2%	103%	0
LCSD-041509	92.9%	100%	0
MW-SOUTH	93.0%	102%	0
MW-NORTH	94.7%	102%	0
TRIP BLANKS	95.2%	103%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 09-9252 to 09-9254

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: LCS-041509

LAB CONTROL SAMPLE

Lab Sample ID: LCS-041509

LIMS ID: 09-9252

Matrix: Water

Data Release Authorized: 

Reported: 04/22/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

Event: PSE-004-00

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/15/09 07:29

LCSD: 04/15/09 07:53

Instrument/Analyst LCS: PID3/MH

LCSD: PID3/MH

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	0.99	1.00	99.0%	0.94	1.00	94.0%	5.2%

Reported in mg/L (ppm)


RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	97.2%	92.9%
Bromobenzene	103%	100%

**ORGANICS ANALYSIS DATA SHEET**  
**TOTAL DIESEL RANGE HYDROCARBONS**  
 NWTPHD by GC/FID  
 Page 1 of 1  
 Matrix: Water

QC Report No: OV25-Dalton, Olmsted & Fuglevan  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Received: 04/13/09

Data Release Authorized:   
 Reported: 04/21/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-041309	Method Blank	04/13/09	04/15/09	1.00	Diesel	0.25	< 0.25 U
09-9252	HC ID: ---		FID4B	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		90.0%
OV25A	MW-SOUTH	04/13/09	04/15/09	1.00	Diesel	0.25	< 0.25 U
09-9252	HC ID: ---		FID4B	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		87.6%
OV25B	MW-NORTH	04/13/09	04/15/09	1.00	Diesel	0.25	< 0.25 U
09-9253	HC ID: ---		FID4B	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		90.9%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.  
 DL-Dilution of extract prior to analysis.  
 RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.  
 Motor Oil quantitation on total peaks in the range from C24 to C38.  
 HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

**TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-041309	90.0%	0
LCS-041309	90.4%	0
MW-SOUTH	87.6%	0
MW-SOUTH MS	93.6%	0
MW-SOUTH MSD	102%	0
MW-NORTH	90.9%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(63-115)

(64-111)

Prep Method: SW3510C  
Log Number Range: 09-9252 to 09-9253

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1

Sample ID: MW-SOUTH

MS/MSD

Lab Sample ID: OV25A

LIMS ID: 09-9252

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 04/21/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/13/09

Date Received: 04/13/09

Date Extracted MS/MSD: 04/13/09

Sample Amount MS: 500 mL

MSD: 500 mL

Date Analyzed MS: 04/15/09 03:40

Final Extract Volume MS: 1.0 mL

MSD: 04/15/09 03:54

MSD: 1.0 mL

Instrument/Analyst MS: FID4B/PKC

Dilution Factor MS: 1.00

MSD: FID4B/PKC

MSD: 1.00

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 0.25 U	2.42	3.00	80.7%	2.69	3.00	89.7%	10.6%

**TPHD Surrogate Recovery**

	MS	MSD
o-Terphenyl	93.6%	102%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**NWTPHD by GC/FID**  
 Page 1 of 1

**Sample ID: LCS-041309**  
**LAB CONTROL**

Lab Sample ID: LCS-041309  
 LIMS ID: 09-9252  
 Matrix: Water  
 Data Release Authorized: *B*  
 Reported: 04/21/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 04/13/09  
 Date Analyzed: 04/15/09 02:57  
 Instrument/Analyst: FID4B/PKC

Sample Amount: 500 mL  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	2.30	3.00	76.7%

**TPHD Surrogate Recovery**

o-Terphenyl	90.4%
-------------	-------

Results reported in mg/L

**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Water  
Date Received: 04/13/09

ARI Job: OV25  
Project: VERBEEK WRECKING  
PSE-004-00

<u>ARI ID</u>	<u>Client ID</u>	<u>Samp Amt</u>	<u>Final Vol</u>	<u>Prep Date</u>
09-9252-041309MB1	Method Blank	500 mL	1.00 mL	04/13/09
09-9252-041309LCS1	Lab Control	500 mL	1.00 mL	04/13/09
09-9252-OV25A	MW-SOUTH	500 mL	1.00 mL	04/13/09
09-9252-OV25AMS	MW-SOUTH	500 mL	1.00 mL	04/13/09
09-9252-OV25AMSD	MW-SOUTH	500 mL	1.00 mL	04/13/09
09-9253-OV25B	MW-NORTH	500 mL	1.00 mL	04/13/09



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: OV25MB

LIMS ID: 09-9252

Matrix: Water

Data Release Authorized: 

Reported: 04/23/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: NA

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	04/15/09	200.8	04/20/09	7440-38-2	Arsenic	0.2	0.2	U
200.8	04/15/09	200.8	04/20/09	7440-39-3	Barium	0.5	0.5	U
200.8	04/15/09	200.8	04/20/09	7440-43-9	Cadmium	0.2	0.2	U
200.8	04/15/09	200.8	04/20/09	7440-47-3	Chromium	0.5	0.5	U
200.8	04/15/09	200.8	04/20/09	7439-92-1	Lead	1	1	U
7470A	04/15/09	7470A	04/18/09	7439-97-6	Mercury	0.1	0.1	U
200.8	04/15/09	200.8	04/20/09	7440-02-0	Nickel	0.5	0.5	U
200.8	04/15/09	200.8	04/20/09	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: MW-SOUTH  
SAMPLE**

Lab Sample ID: OV25A

LIMS ID: 09-9252

Matrix: Water

Data Release Authorized: 

Reported: 04/23/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/13/09

Date Received: 04/13/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	04/15/09	200.8	04/20/09	7440-38-2	Arsenic	0.2	0.9	
200.8	04/15/09	200.8	04/20/09	7440-39-3	Barium	0.5	10.2	
200.8	04/15/09	200.8	04/20/09	7440-43-9	Cadmium	0.2	0.2	U
200.8	04/15/09	200.8	04/21/09	7440-47-3	Chromium	1	1	U
200.8	04/15/09	200.8	04/20/09	7439-92-1	Lead	1	1	U
7470A	04/15/09	7470A	04/18/09	7439-97-6	Mercury	0.1	0.1	U
200.8	04/15/09	200.8	04/20/09	7440-02-0	Nickel	0.5	0.7	
200.8	04/15/09	200.8	04/20/09	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: MW-NORTH  
SAMPLE

Lab Sample ID: OV25B

LIMS ID: 09-9253

Matrix: Water

Data Release Authorized: 

Reported: 04/23/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/13/09

Date Received: 04/13/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	04/15/09	200.8	04/20/09	7440-38-2	Arsenic	0.2	0.5	
200.8	04/15/09	200.8	04/20/09	7440-39-3	Barium	0.5	12.0	
200.8	04/15/09	200.8	04/20/09	7440-43-9	Cadmium	0.2	0.2	U
200.8	04/15/09	200.8	04/21/09	7440-47-3	Chromium	1	1	U
200.8	04/15/09	200.8	04/20/09	7439-92-1	Lead	1	1	U
7470A	04/15/09	7470A	04/18/09	7439-97-6	Mercury	0.1	0.1	U
200.8	04/15/09	200.8	04/20/09	7440-02-0	Nickel	0.5	1.1	
200.8	04/15/09	200.8	04/20/09	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

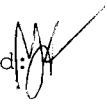
Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: OV25LCS

LIMS ID: 09-9252

Matrix: Water

Data Release Authorized: 

Reported: 04/23/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	26.2	25.0	105%	
Barium	200.8	25.0	25.0	100%	
Cadmium	200.8	25.3	25.0	101%	
Chromium	200.8	25.8	25.0	103%	
Lead	200.8	25	25	100%	
Mercury	7470A	2.3	2.0	115%	
Nickel	200.8	27.1	25.0	108%	
Zinc	200.8	81	80	101%	

Reported in µg/L

N-Control limit not met

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: OV25MB


QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-9255

Project: VERBEEK WRECKING

Matrix: Water

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/23/09

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	04/15/09	200.8	04/20/09	7440-38-2	Arsenic	0.2	0.2	U
200.8	04/15/09	200.8	04/20/09	7440-39-3	Barium	0.5	0.5	U
200.8	04/15/09	200.8	04/20/09	7440-43-9	Cadmium	0.2	0.2	U
200.8	04/15/09	200.8	04/20/09	7440-47-3	Chromium	0.5	0.5	U
200.8	04/15/09	200.8	04/20/09	7439-92-1	Lead	1	1	U
7470A	04/15/09	7470A	04/18/09	7439-97-6	Mercury	0.1	0.1	U
200.8	04/15/09	200.8	04/20/09	7440-02-0	Nickel	0.5	0.5	U
200.8	04/15/09	200.8	04/20/09	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**


Page 1 of 1

Sample ID: MW-SOUTH  
SAMPLE

Lab Sample ID: OV25D

LIMS ID: 09-9255

Matrix: Water

Data Release Authorized: 

Reported: 04/23/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/13/09

Date Received: 04/13/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	04/15/09	200.8	04/20/09	7440-38-2	Arsenic	0.2	0.9	
200.8	04/15/09	200.8	04/20/09	7440-39-3	Barium	0.5	10.4	
200.8	04/15/09	200.8	04/20/09	7440-43-9	Cadmium	0.2	0.2	U
200.8	04/15/09	200.8	04/21/09	7440-47-3	Chromium	1	1	U
200.8	04/15/09	200.8	04/20/09	7439-92-1	Lead	1	1	U
7470A	04/15/09	7470A	04/18/09	7439-97-6	Mercury	0.1	0.1	U
200.8	04/15/09	200.8	04/20/09	7440-02-0	Nickel	0.5	0.7	
200.8	04/15/09	200.8	04/20/09	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**


Page 1 of 1

Sample ID: MW-NORTH  
SAMPLE

Lab Sample ID: OV25E

LIMS ID: 09-9256

Matrix: Water

Data Release Authorized: 

Reported: 04/23/09

QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/13/09

Date Received: 04/13/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	04/15/09	200.8	04/20/09	7440-38-2	Arsenic	0.2	0.5	
200.8	04/15/09	200.8	04/20/09	7440-39-3	Barium	0.5	11.7	
200.8	04/15/09	200.8	04/20/09	7440-43-9	Cadmium	0.2	0.2	U
200.8	04/15/09	200.8	04/21/09	7440-47-3	Chromium	1	1	U
200.8	04/15/09	200.8	04/20/09	7439-92-1	Lead	1	1	U
7470A	04/15/09	7470A	04/18/09	7439-97-6	Mercury	0.1	0.1	U
200.8	04/15/09	200.8	04/20/09	7440-02-0	Nickel	0.5	1.1	
200.8	04/15/09	200.8	04/20/09	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: OV25LCS


QC Report No: OV25-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-9255

Project: VERBEEK WRECKING

Matrix: Water

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/23/09

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	26.3	25.0	105%	
Barium	200.8	25.2	25.0	101%	
Cadmium	200.8	25.5	25.0	102%	
Chromium	200.8	26.2	25.0	105%	
Lead	200.8	26	25	104%	
Mercury	7470A	2.1	2.0	105%	
Nickel	200.8	27.2	25.0	109%	
Zinc	200.8	82	80	102%	

Reported in µg/L

N-Control limit not met  
Control Limits: 80-120%









# Cooler Receipt Form

ARI Client: DOF  
 COC No(s): \_\_\_\_\_ (NA)  
 Assigned ARI Job No: OV25

Project Name: Verbeek Wrecking  
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_  
 Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES  NO   
 Were custody papers included with the cooler? ..... YES  NO   
 Were custody papers properly filled out (ink, signed, etc.) ..... YES  NO   
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 11.4 13.2  
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 10886

Cooler Accepted by: AV Date: 4/13/09 Time: 1215

*Complete custody forms and attach all shipping documents*

**Log-In Phase:**

Was a temperature blank included in the cooler? ..... YES  NO   
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_  
 Was sufficient ice used (if appropriate)? ..... NA  YES  NO   
 Were all bottles sealed in individual plastic bags? ..... YES  NO   
 Did all bottles arrive in good condition (unbroken)? ..... YES  NO   
 Were all bottle labels complete and legible? ..... YES  NO   
 Did the number of containers listed on COC match with the number of containers received? ..... YES  NO   
 Did all bottle labels and tags agree with custody papers? ..... YES  NO   
 Were all bottles used correct for the requested analyses? ..... YES  NO   
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA  YES  NO   
 Were all VOC vials free of air bubbles? ..... NA  YES  NO   
 Was sufficient amount of sample sent in each bottle? ..... YES  NO

Samples Logged by: AV Date: 4/13/09 Time: 1244

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

mw-North = 1 pb mw-South = 1 Pb  
Tripblanks = 2 pb

By: AV Date: 4/13/09

Small Air Bubbles - 2mm 	Peabubbles 2-4 mm 	LARGE Air Bubbles > 4 mm 	Small → "sm" Peabubbles → "pb" Large → "lg" Headspace → "hs"
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# Cooler Temperature Compliance Form

Cooler#: 1 Temperature(°C): 11.4

Sample ID	Bottle Count	Bottle Type
<u>mw-South</u>	<u>7</u>	<u>2 1L AG, 2 16oz HDPE, 3 40ml VOA</u>
<u>mw-North</u>	<u>7</u>	<u>" " "</u>
<u>pr trip Blank</u>	<u>2</u>	<u>2 40ml VOA</u>

Cooler#: 2 Temperature(°C): 13.2

Sample ID	Bottle Count	Bottle Type
<u>mw-South</u>	<u>6</u>	<u>6 1L AG</u>
<u>mw-North</u>	<u>6</u>	<u>"</u>

Cooler#: \_\_\_\_\_ Temperature(°C): \_\_\_\_\_

Sample ID	Bottle Count	Bottle Type

Cooler#: \_\_\_\_\_ Temperature(°C): \_\_\_\_\_

Sample ID	Bottle Count	Bottle Type

Completed by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: MB-041709**  
**METHOD BLANK**

Lab Sample ID: MB-041709  
 LIMS ID: 09-9503  
 Matrix: Water  
 Data Release Authorized: **VIS**  
 Reported: 05/01/09

QC Report No: OV74-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 NA  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 04/17/09  
 Date Analyzed: 04/30/09 14:49  
 Instrument/Analyst: NT4/LJR

Sample Amount: 3000 mL  
 Final Extract Volume: 0.25 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	0.1	< 0.1 U
95-48-7	2-Methylphenol	0.1	< 0.1 U
106-44-5	4-Methylphenol	0.1	< 0.1 U
105-67-9	2,4-Dimethylphenol	0.1	< 0.1 U
91-20-3	Naphthalene	0.1	< 0.1 U
91-57-6	2-Methylnaphthalene	0.1	< 0.1 U
131-11-3	Dimethylphthalate	0.1	< 0.1 U
208-96-8	Acenaphthylene	0.1	< 0.1 U
83-32-9	Acenaphthene	0.1	< 0.1 U
132-64-9	Dibenzofuran	0.1	< 0.1 U
84-66-2	Diethylphthalate	0.1	< 0.1 U
86-73-7	Fluorene	0.1	< 0.1 U
85-01-8	Phenanthrene	0.1	< 0.1 U
86-74-8	Carbazole	0.1	< 0.1 U
120-12-7	Anthracene	0.1	< 0.1 U
84-74-2	Di-n-Butylphthalate	0.1	< 0.1 U
206-44-0	Fluoranthene	0.1	< 0.1 U
129-00-0	Pyrene	0.1	< 0.1 U
85-68-7	Butylbenzylphthalate	0.1	< 0.1 U
56-55-3	Benzo(a)anthracene	0.1	< 0.1 U
<b>117-81-7</b>	<b>bis(2-Ethylhexyl)phthalate</b>	<b>0.1</b>	<b>0.1</b>
218-01-9	Chrysene	0.1	< 0.1 U
117-84-0	Di-n-Octyl phthalate	0.1	< 0.1 U
205-99-2	Benzo(b)fluoranthene	0.1	< 0.1 U
207-08-9	Benzo(k)fluoranthene	0.1	< 0.1 U
50-32-8	Benzo(a)pyrene	0.1	< 0.1 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.1	< 0.1 U
53-70-3	Dibenz(a,h)anthracene	0.1	< 0.1 U
191-24-2	Benzo(g,h,i)perylene	0.1	< 0.1 U
483-65-8	Retene	0.1	< 0.1 U
90-12-0	1-Methylnaphthalene	0.1	< 0.1 U

Reported in µg/L (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	61.0%	2-Fluorobiphenyl	68.2%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	67.6%
d5-Phenol	15.7%	2-Fluorophenol	25.9%
2,4,6-Tribromophenol	79.3%	d4-2-Chlorophenol	57.1%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

**Sample ID: MW-SOUTH  
SAMPLE**

Lab Sample ID: OV74A  
LIMS ID: 09-9503  
Matrix: Water  
Data Release Authorized: **VTS**  
Reported: 05/01/09

QC Report No: OV74-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
NA  
Date Sampled: 04/13/09  
Date Received: 04/16/09

Date Extracted: 04/17/09  
Date Analyzed: 04/30/09 18:51  
Instrument/Analyst: NT4/LJR

Sample Amount: 3000 mL  
Final Extract Volume: 0.25 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	0.1	< 0.1 U
95-48-7	2-Methylphenol	0.1	< 0.1 U
106-44-5	4-Methylphenol	0.1	< 0.1 U
105-67-9	2,4-Dimethylphenol	0.1	< 0.1 U
91-20-3	Naphthalene	0.1	< 0.1 U
91-57-6	2-Methylnaphthalene	0.1	< 0.1 U
131-11-3	Dimethylphthalate	0.1	< 0.1 U
208-96-8	Acenaphthylene	0.1	< 0.1 U
83-32-9	Acenaphthene	0.1	< 0.1 U
132-64-9	Dibenzofuran	0.1	< 0.1 U
84-66-2	Diethylphthalate	0.1	< 0.1 U
86-73-7	Fluorene	0.1	< 0.1 U
85-01-8	Phenanthrene	0.1	< 0.1 U
86-74-8	Carbazole	0.1	< 0.1 U
120-12-7	Anthracene	0.1	< 0.1 U
84-74-2	Di-n-Butylphthalate	0.1	< 0.1 U
206-44-0	Fluoranthene	0.1	< 0.1 U
129-00-0	Pyrene	0.1	< 0.1 U
85-68-7	Butylbenzylphthalate	0.1	< 0.1 U
56-55-3	Benzo(a)anthracene	0.1	< 0.1 U
<b>117-81-7</b>	<b>bis(2-Ethylhexyl)phthalate</b>	<b>0.1</b>	<b>0.7 B</b>
218-01-9	Chrysene	0.1	< 0.1 U
117-84-0	Di-n-Octyl phthalate	0.1	< 0.1 U
205-99-2	Benzo(b)fluoranthene	0.1	< 0.1 U
207-08-9	Benzo(k)fluoranthene	0.1	< 0.1 U
50-32-8	Benzo(a)pyrene	0.1	< 0.1 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.1	< 0.1 U
53-70-3	Dibenz(a,h)anthracene	0.1	< 0.1 U
191-24-2	Benzo(g,h,i)perylene	0.1	< 0.1 U
483-65-8	Retene	0.1	< 0.1 U
90-12-0	1-Methylnaphthalene	0.1	< 0.1 U

Reported in  $\mu\text{g/L}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	56.4%	2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	10.6%	2-Fluorophenol	18.5%
2,4,6-Tribromophenol	72.1%	d4-2-Chlorophenol	47.9%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: MW-NORTH  
SAMPLE

Lab Sample ID: OV74B  
LIMS ID: 09-9504  
Matrix: Water  
Data Release Authorized: *VTS*  
Reported: 05/01/09

QC Report No: OV74-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
NA  
Date Sampled: 04/13/09  
Date Received: 04/16/09

Date Extracted: 04/17/09  
Date Analyzed: 04/30/09 19:27  
Instrument/Analyst: NT4/LJR

Sample Amount: 3000 mL  
Final Extract Volume: 0.25 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	0.1	< 0.1 U
95-48-7	2-Methylphenol	0.1	< 0.1 U
106-44-5	4-Methylphenol	0.1	< 0.1 U
105-67-9	2,4-Dimethylphenol	0.1	< 0.1 U
91-20-3	Naphthalene	0.1	< 0.1 U
91-57-6	2-Methylnaphthalene	0.1	< 0.1 U
131-11-3	Dimethylphthalate	0.1	< 0.1 U
208-96-8	Acenaphthylene	0.1	< 0.1 U
83-32-9	Acenaphthene	0.1	< 0.1 U
132-64-9	Dibenzofuran	0.1	< 0.1 U
84-66-2	Diethylphthalate	0.1	< 0.1 U
86-73-7	Fluorene	0.1	< 0.1 U
85-01-8	Phenanthrene	0.1	< 0.1 U
86-74-8	Carbazole	0.1	< 0.1 U
120-12-7	Anthracene	0.1	< 0.1 U
84-74-2	Di-n-Butylphthalate	0.1	< 0.1 U
206-44-0	Fluoranthene	0.1	< 0.1 U
129-00-0	Pyrene	0.1	< 0.1 U
85-68-7	Butylbenzylphthalate	0.1	< 0.1 U
56-55-3	Benzo(a)anthracene	0.1	< 0.1 U
117-81-7	bis(2-Ethylhexyl)phthalate	0.1	< 0.1 U
218-01-9	Chrysene	0.1	< 0.1 U
117-84-0	Di-n-Octyl phthalate	0.1	< 0.1 U
205-99-2	Benzo(b)fluoranthene	0.1	< 0.1 U
207-08-9	Benzo(k)fluoranthene	0.1	< 0.1 U
50-32-8	Benzo(a)pyrene	0.1	< 0.1 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.1	< 0.1 U
53-70-3	Dibenz(a,h)anthracene	0.1	< 0.1 U
191-24-2	Benzo(g,h,i)perylene	0.1	< 0.1 U
483-65-8	Retene	0.1	< 0.1 U
90-12-0	1-Methylnaphthalene	0.1	< 0.1 U

Reported in µg/L (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	54.8%	2-Fluorobiphenyl	54.8%
d14-p-Terphenyl	58.8%	d4-1,2-Dichlorobenzene	63.8%
d5-Phenol	11.6%	2-Fluorophenol	22.3%
2,4,6-Tribromophenol	62.7%	d4-2-Chlorophenol	52.4%

**SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: OV74-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING

<b>Client ID</b>	<b>NBZ</b>	<b>FBP</b>	<b>TPH</b>	<b>DCB</b>	<b>PHL</b>	<b>2FP</b>	<b>TBP</b>	<b>2CP</b>	<b>TOT</b>	<b>OUT</b>
MB-041709	61.0%	68.2%	74.8%	67.6%	15.7%*	25.9%	79.3%	57.1%		1
LCS-041709	56.2%	59.6%	65.6%	67.4%	16.9%*	27.9%	66.5%	56.7%		1
LCS-D-041709	68.2%	73.8%	79.6%	73.2%	18.3%*	29.2%	83.9%	62.0%		1
MW-SOUTH	56.4%	61.6%	66.0%	59.6%	10.6%	18.5%*	72.1%	47.9%		1
MW-NORTH	54.8%	54.8%	58.8%	63.8%	11.6%	22.3%*	62.7%	52.4%		1

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(NBZ) = d5-Nitrobenzene	(50-104)	(45-98)
(FBP) = 2-Fluorobiphenyl	(49-98)	(53-89)
(TPH) = d14-p-Terphenyl	(48-120)	(46-119)
(DCB) = d4-1,2-Dichlorobenzene	(40-92)	(41-87)
(PHL) = d5-Phenol	(20-62)	(10-66)
(2FP) = 2-Fluorophenol	(17-98)	(23-74)
(TBP) = 2,4,6-Tribromophenol	(56-110)	(51-105)
(2CP) = d4-2-Chlorophenol	(51-97)	(42-93)

Prep Method: SW3510C  
Log Number Range: 09-9503 to 09-9504



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 2

Sample ID: LCS-041709  
LCS/LCSD

Lab Sample ID: LCS-041709  
LIMS ID: 09-9503  
Matrix: Water  
Data Release Authorized: **VTS**  
Reported: 05/01/09

QC Report No: OV74-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING

Date Sampled: 04/13/09  
Date Received: 04/16/09

Date Extracted LCS/LCSD: 04/17/09

Sample Amount LCS: 3000 mL  
LCSD: 3000 mL

Date Analyzed LCS: 04/30/09 15:25  
LCSD: 04/30/09 16:01

Final Extract Volume LCS: 0.25 mL  
LCSD: 0.25 mL

Instrument/Analyst LCS: NT4/LJR  
LCSD: NT4/LJR

Dilution Factor LCS: 1.00  
LCSD: 1.00

GPC Cleanup: NO

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	0.7	4.2	16.7%	0.7	4.2	16.7%	7.2%
2-Methylphenol	1.8	4.2	42.9%	2.0	4.2	47.6%	13.7%
4-Methylphenol	3.1	8.3	37.3%	3.5	8.3	42.2%	13.9%
2,4-Dimethylphenol	1.6	4.2	38.1%	2.0	4.2	47.6%	20.4%
Naphthalene	2.6	4.2	61.9%	3.2	4.2	76.2%	18.7%
2-Methylnaphthalene	2.5	4.2	59.5%	3.1	4.2	73.8%	21.7%
Dimethylphthalate	2.5	4.2	59.5%	3.1	4.2	73.8%	22.5%
Acenaphthylene	2.6	4.2	61.9%	3.1	4.2	73.8%	19.4%
Acenaphthene	2.5	4.2	59.5%	3.0	4.2	71.4%	18.8%
Dibenzofuran	2.6	4.2	61.9%	3.2	4.2	76.2%	20.8%
Diethylphthalate	2.4	4.2	57.1%	3.0	4.2	71.4%	22.1%
Fluorene	2.7	4.2	64.3%	3.3	4.2	78.6%	20.5%
Phenanthrene	2.7	4.2	64.3%	3.3	4.2	78.6%	19.9%
Carbazole	2.6	4.2	61.9%	3.2	4.2	76.2%	21.1%
Anthracene	2.6	4.2	61.9%	3.2	4.2	76.2%	21.0%
Di-n-Butylphthalate	2.4	4.2	57.1%	3.0	4.2	71.4%	21.7%
Fluoranthene	3.0	4.2	71.4%	3.7	4.2	88.1%	18.7%
Pyrene	3.0	4.2	71.4%	3.7	4.2	88.1%	19.8%
Butylbenzylphthalate	2.7	4.2	64.3%	3.4	4.2	81.0%	23.1%
Benzo(a)anthracene	2.8	4.2	66.7%	3.4	4.2	81.0%	21.4%
bis(2-Ethylhexyl)phthalate	2.9	4.2	69.0%	3.6	4.2	85.7%	22.7%
Chrysene	2.6	4.2	61.9%	3.2	4.2	76.2%	20.8%
Di-n-Octyl phthalate	2.7	4.2	64.3%	3.4	4.2	81.0%	22.4%
Benzo(b)fluoranthene	2.4	4.2	57.1%	3.2	4.2	76.2%	28.5%
Benzo(k)fluoranthene	3.0	4.2	71.4%	3.4	4.2	81.0%	14.1%
Benzo(a)pyrene	2.6	4.2	61.9%	3.3	4.2	78.6%	23.4%
Indeno(1,2,3-cd)pyrene	2.2	4.2	52.4%	2.9	4.2	69.0%	27.1%
Dibenz(a,h)anthracene	2.6	4.2	61.9%	3.3	4.2	78.6%	25.4%
Benzo(g,h,i)perylene	2.5	4.2	59.5%	3.2	4.2	76.2%	26.0%
1-Methylnaphthalene	2.7	4.2	64.3%	3.3	4.2	78.6%	21.1%

**Semivolatile Surrogate Recovery**

	LCS	LCSD
d5-Nitrobenzene	56.2%	68.2%
2-Fluorobiphenyl	59.6%	73.8%
d14-p-Terphenyl	65.6%	79.6%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 2 of 2

**Sample ID: LCS-041709**  
**LCS/LCSD**

Lab Sample ID: LCS-041709  
 LIMS ID: 09-9503  
 Matrix: Water  
 Date Analyzed: 04/30/09 15:25

QC Report No: OV74-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING

Analyte	Spike		LCS		LCSD		RPD
	LCS	Added-LCS	Recovery	LCS	Added-LCSD	Recovery	
			67.4%	73.2%			
			16.9%	18.3%			
			27.9%	29.2%			
			66.5%	83.9%			
			56.7%	62.0%			

Results reported in  $\mu\text{g/L}$   
 RPD calculated using sample concentrations per SW846.



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

May 13, 2009

Matt Dalton  
Dalton, Olmsted, & Fuglevand  
10827 NE 68th, Suite B  
Kirkland, WA 98033

**RE: Client Project: Verbeek Wrecking**  
**ARI Job No.: OU27**

Dear Matt:

Please find enclosed the original Chain-of-Custody record, sample receipt documentation, and the final analytical results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted eleven soil samples as part of a larger sample delivery group on April 6, 2009. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

Selected samples were placed on hold; the remaining samples were analyzed for volatiles, semivolatiles, NWTPH-D, NWTPH-G, and total metals as requested on the COC.

For the semivolatiles analysis, the PCP tailing factor was  $>2$  in the 4/16/09 continuing calibration. No corrective action was taken. For the metals analyses, the RPD for the matrix duplicate, and the percent recoveries for the matrix spike were outside control limits. No corrective action is required for matrix QC. No further anomalies were associated with these analyses.

An electronic copy of this report will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Susan Dunninghoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile OU27

# Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



Page: 5 of 6  
 Date: 4/16/09  
 No. of Coolers: 1  
 Cooler Temps: 9.2  
 Ice Present? Yes

Turn-around Requested: ASAP  
 Phone: \_\_\_\_\_  
 Client Contact: MTT WALTON / DAVE COOPER  
 Client Project Name: VERDEEN WRECKING

Client Project #: PSE-004-00  
 Samplers: D6 COOPER  
 Matrix: \_\_\_\_\_  
 No. Containers: \_\_\_\_\_

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested	Notes/Comments
DOF-TP18-13	4/3/09	1440	SOIL	2	MSPH-6 AS, CO, CR, Pb Hg, Ni, Zn PMTS BZD FULL SW MSPH-1X	
DOF-AUPL1	4/2/09	1331			X	
DOF-AUPL2	↓	1516			X	
DOF-AUPL3	↓	1457			X	
DOF-TP2-15	4/2/09	1040			X	HOLD/ARCHIVE
DOF-TP3-12	↓	1045			X	
DOF-TP6-11	↓	1340			X	
DOF-TP14-12	4/3/09	1030			X	
DOF-TP11-12	↓	1110			X	
DOF-TP12-10	↓	1140			X	

Comments/Special Instructions: \_\_\_\_\_

Relinquished by: (Signature) <u>Dave Cooper</u>	Relinquished by: (Signature) _____
Printed Name: <u>Dave Cooper</u>	Printed Name: _____
Company: <u>ARI</u>	Company: _____
Date & Time: <u>4/16/09 1450</u>	Date & Time: _____

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 027 Turn-around Requested: normal

ARI Client Company: DOF Phone: \_\_\_\_\_

Client Contact: MIT OLSON / OVE COOK

Client Project Name: VIABEIN WILLIAMS

Client Project #: ASL-004-00 Samplers: 16 Coors

Analytical Resources, Incorporated  
Analytical Chemists and Consultants  
4611 South 134th Place, Suite 100  
Tukwila, WA 98168  
206-695-6200 206-695-6201 (fax)



Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested					Notes/Comments
<u>DOF - TP16-11</u>	<u>4/13/09</u>	<u>1315</u>	<u>10L</u>	<u>2</u>						<u>NOV / ARCHIVE</u>
<u>DOF - TP17-16</u>	<u>↓</u>	<u>1340</u>	<u>↓</u>	<u>↓</u>						<u>Hold</u>

Comments/Special Instructions

Relinquished by: [Signature] (Signature)  
Printed Name: Olga Coors

Relinquished by: [Signature] (Signature)  
Printed Name: Sami Hayes

Company: DOF

Company: ARI

Date & Time: 4/16/09 1450

Date & Time: 4/16/09 1450

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



# Cooler Receipt Form

ARI Client: DOF  
 COC No(s): \_\_\_\_\_ NA  
 Assigned ARI Job No: 0227

Project Name: Verbeek Wrecking  
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_  
 Tracking No: \_\_\_\_\_ NA

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO  
 Were custody papers included with the cooler? YES NO  
 Were custody papers properly filled out (ink, signed, etc.) YES NO  
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 9.2  
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 101086

Cooler Accepted by: JH Date: 4/6/09 Time: 1450  
**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

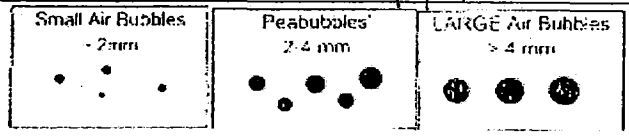
Was a temperature blank included in the cooler? YES NO  
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_  
 Was sufficient ice used (if appropriate)? NA YES NO  
 Were all bottles sealed in individual plastic bags? YES NO  
 Did all bottles arrive in good condition (unbroken)? YES NO  
 Were all bottle labels complete and legible? YES NO  
 Did the number of containers listed on COC match with the number of containers received? YES NO  
 Did all bottle labels and tags agree with custody papers? YES NO  
 Were all bottles used correct for the requested analyses? YES NO  
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO  
 Were all VOC vials free of air bubbles? NA YES NO  
 Was sufficient amount of sample sent in each bottle? YES NO

Samples Logged by: JH Date: 4/7/09 Time: 946  
**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**  
 Sample DOF-TP3-12 is on another C.O.C. for analyses so it wont be logged to hold on this job#.

By: JH Date: 4/7/09



Small → "sm"  
 Peabubbles → "pb"  
 Large → "lg"  
 Headspace → "hs"



# Cooler Temperature Compliance Form

Cooler#: 1 Temperature(°C): 9.2

Sample ID	Bottle Count	Bottle Type
DOF-TP18-13		8oz w/m glass and 2oz septa
DOF-DUPL1		
DOF-DUPL2		
DOF-DUPL3		
DOF-TP2-15		
DOF-TP6-11		
DOF-TP14-12		
DOF-TP11-12		

Cooler#: \_\_\_\_\_ Temperature(°C): \_\_\_\_\_

Sample ID	Bottle Count	Bottle Type
DOF-TP12-10		8oz w/m glass and 2oz septa

Cooler#: \_\_\_\_\_ Temperature(°C): \_\_\_\_\_

Sample ID	Bottle Count	Bottle Type

Cooler#: \_\_\_\_\_ Temperature(°C): \_\_\_\_\_

Sample ID	Bottle Count	Bottle Type

Completed by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



## Data Reporting Qualifiers

Effective 12/28/04

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- NR Spiked compound recovery is not reported due to chromatographic interference
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for





- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference

## Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: MB-041309

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-041309

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8721

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 04/13/09 10:38

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	106%
d8-Toluene	101%
Bromofluorobenzene	99.1%
d4-1,2-Dichlorobenzene	97.8%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: DOF-TP18-13  
SAMPLE

Lab Sample ID: OU27A


QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8721

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.76 g-dry-wt

Date Analyzed: 04/13/09 13:31

Purge Volume: 5.0 mL

Moisture: 10.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	102%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	99.3%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-DUPL1

Page 1 of 1

SAMPLE

Lab Sample ID: OU27B


QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8722

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINNS/PAB

Sample Amount: 5.30 g-dry-wt

Date Analyzed: 04/13/09 14:00

Purge Volume: 5.0 mL

Moisture: 9.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
179601-23-1	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	109%
d8-Toluene	101%
Bromofluorobenzene	99.4%
d4-1,2-Dichlorobenzene	97.8%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-DUPL2

Page 1 of 1

SAMPLE

Lab Sample ID: OU27C


QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8723

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.90 g-dry-wt

Date Analyzed: 04/13/09 14:25

Purge Volume: 5.0 mL

Moisture: 5.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	101%
Bromofluorobenzene	99.1%
d4-1,2-Dichlorobenzene	98.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-DUPL3

Page 1 of 1

SAMPLE

Lab Sample ID: OU27D

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8724

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *R*

Date Sampled: 04/02/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.98 g-dry-wt

Date Analyzed: 04/13/09 15:02

Purge Volume: 5.0 mL

Moisture: 6.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	100%
Bromofluorobenzene	99.1%
d4-1,2-Dichlorobenzene	98.5%

**VOA SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-041309	Method Blank	Low	106%	101%	99.1%	97.8%	0
LCS-041309	Lab Control	Low	103%	100%	102%	101%	0
LCSD-041309	Lab Control Dup	Low	103%	101%	101%	101%	0
OU27A	DOF-TP18-13	Low	110%	102%	100%	99.3%	0
OU27AMS	DOF-TP18-13	Low	111%	102%	102%	101%	0
OU27AMSD	DOF-TP18-13	Low	112%	102%	102%	103%	0
OU27B	DOF-DUPL1	Low	109%	101%	99.4%	97.8%	0
OU27C	DOF-DUPL2	Low	110%	101%	99.1%	98.5%	0
OU27D	DOF-DUPL3	Low	110%	100%	99.1%	98.5%	0

SW8260B	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	75-120	76-120	72-134	69-120
(TOL) = d8-Toluene	80-122	80-120	78-124	80-120
(BFB) = Bromofluorobenzene	79-120	80-120	66-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	79-120	80-120

Log Number Range: 09-8721 to 09-8724

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP18-13

Page 1 of 1

**MATRIX SPIKE**

Lab Sample ID: OU27A

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8721

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst MS: FINN5/PAB

Sample Amount MS: 4.85 g-dry-wt

MSD: FINN5/PAB

MSD: 4.67 g-dry-wt

Date Analyzed MS: 04/13/09 19:07

Purge Volume MS: 5.0 mL

MSD: 04/13/09 19:33

MSD: 5.0 mL

Moisture: 10.2%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 1.0 U	50.7	51.5	98.4%	49.7	53.5	92.9%	2.0%
Toluene	< 1.0 U	48.9	51.5	95.0%	47.8	53.5	89.3%	2.3%
Ethylbenzene	< 1.0 U	50.8	51.5	98.6%	50.4	53.5	94.2%	0.8%
m,p-Xylene	< 1.0 U	98.2	103	95.3%	96.8	107	90.5%	1.4%
o-Xylene	< 1.0 U	48.6	51.5	94.4%	47.4	53.5	88.6%	2.5%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B  
Page 1 of 1

Sample ID: DOF-TP18-13  
MATRIX SPIKE

Lab Sample ID: OU27A  
LIMS ID: 09-8721  
Matrix: Soil  
Data Release Authorized: *AS*  
Reported: 04/16/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/03/09  
Date Received: 04/06/09

Instrument/Analyst: FINNS/PAB  
Date Analyzed: 04/13/09 19:07

Sample Amount: 4.85 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 10.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	---	
108-88-3	Toluene	1.0	---	
100-41-4	Ethylbenzene	1.0	---	
179601-23-1	m,p-Xylene	1.0	---	
95-47-6	o-Xylene	1.0	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	111%
d8-Toluene	102%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: DOF-TP18-13

Page 1 of 1

MATRIX SPIKE DUP

Lab Sample ID: OU27A

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8721

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 04/03/09

Reported: 04/16/09

Date Received: 04/06/09

Instrument/Analyst: FINN5/PAB

Sample Amount: 4.67 g-dry-wt

Date Analyzed: 04/13/09 19:33

Purge Volume: 5.0 mL

Moisture: 10.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	---	
108-88-3	Toluene	1.1	---	
100-41-4	Ethylbenzene	1.1	---	
179601-23-1	m,p-Xylene	1.1	---	
95-47-6	o-Xylene	1.1	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	112%
d8-Toluene	102%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	103%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: LCS-041309

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-041309

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-8721

Project: VERBEEK WRECKING

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 04/16/09

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCSD: FINN5/PAB

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 04/13/09 09:37

Purge Volume LCS: 5.0 mL

LCSD: 04/13/09 10:12

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	47.7	50.0	95.4%	46.4	50.0	92.8%	2.8%
Toluene	47.3	50.0	94.6%	44.7	50.0	89.4%	5.7%
Ethylbenzene	50.8	50.0	102%	48.5	50.0	97.0%	4.6%
m,p-Xylene	100	100	100%	95.1	100	95.1%	5.0%
o-Xylene	48.9	50.0	97.8%	46.6	50.0	93.2%	4.8%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	103%	103%
d8-Toluene	100%	101%
Bromofluorobenzene	102%	101%
d4-1,2-Dichlorobenzene	101%	101%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: MB-041309**  
**METHOD BLANK**

Lab Sample ID: MB-041309  
 LIMS ID: 09-8723  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 04/13/09  
 Date Analyzed: 04/16/09 15:29  
 Instrument/Analyst: NT4/LJR  
 GPC Cleanup: No

Sample Amount: 7.50 g  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	90.4%	d4-1,2-Dichlorobenzene	72.4%
d5-Phenol	67.7%	2-Fluorophenol	63.2%
2,4,6-Tribromophenol	69.3%	d4-2-Chlorophenol	70.1%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-TP18-13**  
**SAMPLE**

Lab Sample ID: OU27A  
 LIMS ID: 09-8721  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 18:46  
 Instrument/Analyst: NT4/LJR  
 GPC Cleanup: No

Sample Amount: 8.06 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 10.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	67.2%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	79.2%	d4-1,2-Dichlorobenzene	76.4%
d5-Phenol	69.3%	2-Fluorophenol	69.6%
2,4,6-Tribromophenol	95.7%	d4-2-Chlorophenol	71.7%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-DUPL1**  
**SAMPLE**

Lab Sample ID: OU27B  
 LIMS ID: 09-8722  
 Matrix: Soil  
 Data Release Authorized: *UTS*  
 Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 19:28  
 Instrument/Analyst: NT4/LJR  
 GPC Cleanup: No

Sample Amount: 8.95 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 8.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	56	< 56 U
95-48-7	2-Methylphenol	56	< 56 U
106-44-5	4-Methylphenol	56	< 56 U
105-67-9	2,4-Dimethylphenol	56	< 56 U
91-20-3	Naphthalene	56	< 56 U
91-57-6	2-Methylnaphthalene	56	< 56 U
131-11-3	Dimethylphthalate	56	< 56 U
208-96-8	Acenaphthylene	56	< 56 U
83-32-9	Acenaphthene	56	< 56 U
132-64-9	Dibenzofuran	56	< 56 U
84-66-2	Diethylphthalate	56	< 56 U
86-73-7	Fluorene	56	< 56 U
85-01-8	Phenanthrene	56	< 56 U
86-74-8	Carbazole	56	< 56 U
120-12-7	Anthracene	56	< 56 U
84-74-2	Di-n-Butylphthalate	56	< 56 U
206-44-0	Fluoranthene	56	< 56 U
129-00-0	Pyrene	56	< 56 U
85-68-7	Butylbenzylphthalate	56	< 56 U
56-55-3	Benzo(a)anthracene	56	< 56 U
117-81-7	bis(2-Ethylhexyl)phthalate	56	< 56 U
218-01-9	Chrysene	56	< 56 U
117-84-0	Di-n-Octyl phthalate	56	< 56 U
205-99-2	Benzo(b)fluoranthene	56	< 56 U
207-08-9	Benzo(k)fluoranthene	56	< 56 U
50-32-8	Benzo(a)pyrene	56	< 56 U
193-39-5	Indeno(1,2,3-cd)pyrene	56	< 56 U
53-70-3	Dibenz(a,h)anthracene	56	< 56 U
191-24-2	Benzo(g,h,i)perylene	56	< 56 U
483-65-8	Retene	56	< 56 U
90-12-0	1-Methylnaphthalene	56	< 56 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	53.6%	2-Fluorobiphenyl	56.8%
d14-p-Terphenyl	60.4%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	54.7%	2-Fluorophenol	54.4%
2,4,6-Tribromophenol	72.3%	d4-2-Chlorophenol	57.3%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-DUPL2**  
**SAMPLE**

Lab Sample ID: OU27C  
 LIMS ID: 09-8723  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 20:10  
 Instrument/Analyst: NT4/LJR  
 GPC Cleanup: No

Sample Amount: 8.12 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 5.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	68.0%
d5-Phenol	64.0%	2-Fluorophenol	62.7%
2,4,6-Tribromophenol	88.8%	d4-2-Chlorophenol	66.1%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-DUPL3**  
**SAMPLE**

Lab Sample ID: OU27D  
 LIMS ID: 09-8724  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 22:14  
 Instrument/Analyst: NT4/LJR  
 GPC Cleanup: No

Sample Amount: 8.44 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 6.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
483-65-8	Retene	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	58.8%	2-Fluorobiphenyl	63.2%
d14-p-Terphenyl	72.4%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	56.3%	2-Fluorophenol	58.9%
2,4,6-Tribromophenol	40.5%	d4-2-Chlorophenol	61.3%



**SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00

<b>Client ID</b>	<b>NBZ</b>	<b>FBP</b>	<b>TPH</b>	<b>DCB</b>	<b>PHL</b>	<b>2FP</b>	<b>TBP</b>	<b>2CP</b>	<b>TOT</b>	<b>OUT</b>
DOF-TP18-13	67.2%	72.0%	79.2%	76.4%	69.3%	69.6%	95.7%	71.7%	0	
DOF-DUPL1	53.6%	56.8%	60.4%	60.8%	54.7%	54.4%	72.3%	57.3%	0	
MB-041309	63.6%	72.0%	90.4%	72.4%	67.7%	63.2%	69.3%	70.1%	0	
LCS-041309	66.4%	81.6%	95.2%	75.2%	71.2%	67.7%	80.8%	72.5%	0	
LCSD-041309	64.4%	75.2%	88.8%	72.4%	67.5%	64.5%	69.6%	69.1%	0	
DOF-DUPL2	61.2%	66.8%	74.8%	68.0%	64.0%	62.7%	88.8%	66.1%	0	
DOF-DUPL2 MS	63.2%	68.8%	76.8%	67.6%	68.3%	63.2%	86.1%	63.7%	0	
DOF-DUPL2 MSD	66.4%	72.0%	80.4%	71.6%	67.5%	65.9%	96.0%	67.7%	0	
DOF-DUPL3	58.8%	63.2%	72.4%	64.4%	56.3%	58.9%	40.5%	61.3%	0	

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(NBZ) = d5-Nitrobenzene	(30-160)	(30-160)
(FBP) = 2-Fluorobiphenyl	(30-160)	(30-160)
(TPH) = d14-p-Terphenyl	(30-160)	(30-160)
(DCB) = d4-1,2-Dichlorobenzene	(30-160)	(30-160)
(PHL) = d5-Phenol	(30-160)	(30-160)
(2FP) = 2-Fluorophenol	(30-160)	(30-160)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)
(2CP) = d4-2-Chlorophenol	(30-160)	(30-160)

Prep Method: SW3546  
Log Number Range: 09-8721 to 09-8724

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

**Sample ID: DOF-DUPL2  
MS/MSD**

Lab Sample ID: OU27C  
LIMS ID: 09-8723  
Matrix: Soil  
Data Release Authorized: *VTS*  
Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00  
Date Sampled: 04/02/09  
Date Received: 04/06/09

Date Extracted MS/MSD: 04/13/09  
Date Analyzed MS: 04/25/09 20:51  
MSD: 04/25/09 21:33  
Instrument/Analyst MS: NT4/LJR  
MSD: NT4/LJR  
GPC Cleanup: NO

Sample Amount MS: 8.26 g-dry-wt  
MSD: 7.80 g-dry-wt  
Final Extract Volume MS: 0.5 mL  
MSD: 0.5 mL  
Dilution Factor MS: 1.00  
MSD: 1.00  
Percent Moisture: 5.1 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 61.6	925	1510	61.3%	979	1600	61.2%	5.7%
2-Methylphenol	< 61.6	1050	1510	69.5%	1090	1600	68.1%	3.7%
4-Methylphenol	< 61.6	2180	3030	71.9%	2290	3210	71.3%	4.9%
2,4-Dimethylphenol	< 61.6	1090	1510	72.2%	1120	1600	70.0%	2.7%
Naphthalene	< 61.6	1130	1510	74.8%	1180	1600	73.8%	4.3%
2-Methylnaphthalene	< 61.6	1170	1510	77.5%	1210	1600	75.6%	3.4%
Dimethylphthalate	< 61.6	1120	1510	74.2%	1180	1600	73.8%	5.2%
Acenaphthylene	< 61.6	1110	1510	73.5%	1180	1600	73.8%	6.1%
Acenaphthene	< 61.6	1070	1510	70.9%	1120	1600	70.0%	4.6%
Dibenzofuran	< 61.6	1170	1510	77.5%	1230	1600	76.9%	5.0%
Diethylphthalate	< 61.6	1120	1510	74.2%	1170	1600	73.1%	4.4%
Fluorene	< 61.6	1220	1510	80.8%	1270	1600	79.4%	4.0%
Phenanthrene	< 61.6	1190	1510	78.8%	1240	1600	77.5%	4.1%
Carbazole	< 61.6	1220	1510	80.8%	1310	1600	81.9%	7.1%
Anthracene	< 61.6	1180	1510	78.1%	1210	1600	75.6%	2.5%
Di-n-Butylphthalate	< 61.6	1170	1510	77.5%	1210	1600	75.6%	3.4%
Fluoranthene	< 61.6	1180	1510	78.1%	1230	1600	76.9%	4.1%
Pyrene	< 61.6	1170	1510	77.5%	1220	1600	76.2%	4.2%
Butylbenzylphthalate	< 61.6	1110	1510	73.5%	1160	1600	72.5%	4.4%
Benzo(a)anthracene	< 61.6	1220	1510	80.8%	1270	1600	79.4%	4.0%
bis(2-Ethylhexyl)phthalate	< 61.6	1280	1510	84.8%	1320	1600	82.5%	3.1%
Chrysene	< 61.6	1210	1510	80.1%	1270	1600	79.4%	4.8%
Di-n-Octyl phthalate	< 61.6	1170	1510	77.5%	1210	1600	75.6%	3.4%
Benzo(b)fluoranthene	< 61.6	1280	1510	84.8%	1310	1600	81.9%	2.3%
Benzo(k)fluoranthene	< 61.6	1360	1510	90.1%	1400	1600	87.5%	2.9%
Benzo(a)pyrene	< 61.6	1230	1510	81.5%	1260	1600	78.8%	2.4%
Indeno(1,2,3-cd)pyrene	< 61.6	937 J	1510	62.1%	1160 J	1600	72.5%	21.3%
Dibenz(a,h)anthracene	< 61.6	1130	1510	74.8%	1170	1600	73.1%	3.5%
Benzo(g,h,i)perylene	< 61.6	1050	1510	69.5%	1090	1600	68.1%	3.7%
1-Methylnaphthalene	< 61.6	1230	1510	81.5%	1280	1600	80.0%	4.0%

Results reported in µg/kg  
RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-DUPL2**  
**MATRIX SPIKE**

Lab Sample ID: OU27C  
 LIMS ID: 09-8723  
 Matrix: Soil  
 Data Release Authorized: *VIS*  
 Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 20:51  
 Instrument/Analyst: NT4/LJR  
 GPC Cleanup: No

Sample Amount: 8.26 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 5.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	---
95-48-7	2-Methylphenol	60	---
106-44-5	4-Methylphenol	60	---
105-67-9	2,4-Dimethylphenol	60	---
91-20-3	Naphthalene	60	---
91-57-6	2-Methylnaphthalene	60	---
131-11-3	Dimethylphthalate	60	---
208-96-8	Acenaphthylene	60	---
83-32-9	Acenaphthene	60	---
132-64-9	Dibenzofuran	60	---
84-66-2	Diethylphthalate	60	---
86-73-7	Fluorene	60	---
85-01-8	Phenanthrene	60	---
86-74-8	Carbazole	60	---
120-12-7	Anthracene	60	---
84-74-2	Di-n-Butylphthalate	60	---
206-44-0	Fluoranthene	60	---
129-00-0	Pyrene	60	---
85-68-7	Butylbenzylphthalate	60	---
56-55-3	Benzo(a)anthracene	60	---
117-81-7	bis(2-Ethylhexyl)phthalate	60	---
218-01-9	Chrysene	60	---
117-84-0	Di-n-Octyl phthalate	60	---
205-99-2	Benzo(b)fluoranthene	60	---
207-08-9	Benzo(k)fluoranthene	60	---
50-32-8	Benzo(a)pyrene	60	---
193-39-5	Indeno(1,2,3-cd)pyrene	60	---
53-70-3	Dibenz(a,h)anthracene	60	---
191-24-2	Benzo(g,h,i)perylene	60	---
483-65-8	Retene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	---

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	76.8%	d4-1,2-Dichlorobenzene	67.6%
d5-Phenol	68.3%	2-Fluorophenol	63.2%
2,4,6-Tribromophenol	86.1%	d4-2-Chlorophenol	63.7%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 1

**Sample ID: DOF-DUPL2**  
**MATRIX SPIKE DUPLICATE**

Lab Sample ID: OU27C  
 LIMS ID: 09-8723  
 Matrix: Soil  
 Data Release Authorized: *VIS*  
 Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted: 04/13/09  
 Date Analyzed: 04/25/09 21:33  
 Instrument/Analyst: NT4/LJR  
 GPC Cleanup: No

Sample Amount: 7.80 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 5.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	---
95-48-7	2-Methylphenol	64	---
106-44-5	4-Methylphenol	64	---
105-67-9	2,4-Dimethylphenol	64	---
91-20-3	Naphthalene	64	---
91-57-6	2-Methylnaphthalene	64	---
131-11-3	Dimethylphthalate	64	---
208-96-8	Acenaphthylene	64	---
83-32-9	Acenaphthene	64	---
132-64-9	Dibenzofuran	64	---
84-66-2	Diethylphthalate	64	---
86-73-7	Fluorene	64	---
85-01-8	Phenanthrene	64	---
86-74-8	Carbazole	64	---
120-12-7	Anthracene	64	---
84-74-2	Di-n-Butylphthalate	64	---
206-44-0	Fluoranthene	64	---
129-00-0	Pyrene	64	---
85-68-7	Butylbenzylphthalate	64	---
56-55-3	Benzo(a)anthracene	64	---
117-81-7	bis(2-Ethylhexyl)phthalate	64	---
218-01-9	Chrysene	64	---
117-84-0	Di-n-Octyl phthalate	64	---
205-99-2	Benzo(b)fluoranthene	64	---
207-08-9	Benzo(k)fluoranthene	64	---
50-32-8	Benzo(a)pyrene	64	---
193-39-5	Indeno(1,2,3-cd)pyrene	64	---
53-70-3	Dibenz(a,h)anthracene	64	---
191-24-2	Benzo(g,h,i)perylene	64	---
483-65-8	Retene	64	< 64 U
90-12-0	1-Methylnaphthalene	64	---

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	80.4%	d4-1,2-Dichlorobenzene	71.6%
d5-Phenol	67.5%	2-Fluorophenol	65.9%
2,4,6-Tribromophenol	96.0%	d4-2-Chlorophenol	67.7%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 1 of 2

**Sample ID: LCS-041309**  
**LCS/LCSD**

Lab Sample ID: LCS-041309  
 LIMS ID: 09-8723  
 Matrix: Soil  
 Data Release Authorized: *VTS*  
 Reported: 04/29/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Sampled: 04/02/09  
 Date Received: 04/06/09

Date Extracted LCS/LCSD: 04/13/09  
 Date Analyzed LCS: 04/16/09 16:11  
 LCSD: 04/16/09 16:45  
 Instrument/Analyst LCS: NT4/LJR  
 LCSD: NT4/LJR  
 GPC Cleanup: NO

Sample Amount LCS: 7.50 g  
 LCSD: 7.50 g  
 Final Extract Volume LCS: 0.5 mL  
 LCSD: 0.5 mL  
 Dilution Factor LCS: 1.00  
 LCSD: 1.00  
 Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	987	1670	59.1%	997	1670	59.7%	1.0%
2-Methylphenol	1060	1670	63.5%	1120	1670	67.1%	5.5%
4-Methylphenol	2240	3330	67.3%	2250	3330	67.6%	0.4%
2,4-Dimethylphenol	1190	1670	71.3%	1100	1670	65.9%	7.9%
Naphthalene	1250	1670	74.9%	1280	1670	76.6%	2.4%
2-Methylnaphthalene	1220	1670	73.1%	1220	1670	73.1%	0.0%
Dimethylphthalate	1330	1670	79.6%	1300	1670	77.8%	2.3%
Acenaphthylene	1330	1670	79.6%	1320	1670	79.0%	0.8%
Acenaphthene	1310	1670	78.4%	1300	1670	77.8%	0.8%
Dibenzofuran	1310	1670	78.4%	1300	1670	77.8%	0.8%
Diethylphthalate	1300	1670	77.8%	1300	1670	77.8%	0.0%
Fluorene	1350	1670	80.8%	1340	1670	80.2%	0.7%
Phenanthrene	1370	1670	82.0%	1360	1670	81.4%	0.7%
Carbazole	1290	1670	77.2%	1300	1670	77.8%	0.8%
Anthracene	1330	1670	79.6%	1340	1670	80.2%	0.7%
Di-n-Butylphthalate	1320	1670	79.0%	1320	1670	79.0%	0.0%
Fluoranthene	1530	1670	91.6%	1510	1670	90.4%	1.3%
Pyrene	1500	1670	89.8%	1490	1670	89.2%	0.7%
Butylbenzylphthalate	1350	1670	80.8%	1360	1670	81.4%	0.7%
Benzo(a)anthracene	1420	1670	85.0%	1420	1670	85.0%	0.0%
bis(2-Ethylhexyl)phthalate	1430	1670	85.6%	1460	1670	87.4%	2.1%
Chrysene	1380	1670	82.6%	1370	1670	82.0%	0.7%
Di-n-Octyl phthalate	1360	1670	81.4%	1360	1670	81.4%	0.0%
Benzo(b)fluoranthene	1320	1670	79.0%	1300	1670	77.8%	1.5%
Benzo(k)fluoranthene	1490	1670	89.2%	1530	1670	91.6%	2.6%
Benzo(a)pyrene	1350	1670	80.8%	1350	1670	80.8%	0.0%
Indeno(1,2,3-cd)pyrene	1450	1670	86.8%	1410	1670	84.4%	2.8%

**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by SW8270D GC/MS**  
 Page 2 of 2

**Sample ID: LCSD-041309**  
**LCS/LCSD**

Lab Sample ID: LCS-041309  
 LIMS ID: 09-8723  
 Matrix: Soil  
 Date Analyzed LCS: 04/16/09 16:11  
 LCSD: 04/16/09 16:45

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dibenz(a,h)anthracene	1450	1670	86.8%	1400	1670	83.8%	3.5%
Benzo(g,h,i)perylene	1450	1670	86.8%	1380	1670	82.6%	4.9%
1-Methylnaphthalene	1330	1670	79.6%	1370	1670	82.0%	3.0%

**Semivolatile Surrogate Recovery**

	LCS	LCSD
d5-Nitrobenzene	66.4%	64.4%
2-Fluorobiphenyl	81.6%	75.2%
d14-p-Terphenyl	95.2%	88.8%
d4-1,2-Dichlorobenzene	75.2%	72.4%
d5-Phenol	71.2%	67.5%
2-Fluorophenol	67.7%	64.5%
2,4,6-Tribromophenol	80.8%	69.6%
d4-2-Chlorophenol	72.5%	69.1%

Results reported in  $\mu\text{g}/\text{kg}$   
 RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET  
 TPHG by Method NWTPHG  
 Matrix: Soil



QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 Event: PSE-004-00  
 Date Sampled: 04/03/09  
 Date Received: 04/06/09

Data Release Authorized: *AB*  
 Reported: 04/14/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-040909 09-8721	Method Blank	04/09/09 PID2	Dry	Gasoline	< 5.0 U
				HC ID	---
				Trifluorotoluene	100%
				Bromobenzene	104%
OU27A 09-8721	DOF-TP18-13	04/08/09 PID2	Dry	Gasoline	< 6.6 U
				HC ID	---
				Trifluorotoluene	112%
				Bromobenzene	120%
MB-040809 09-8722	Method Blank	04/08/09 PID2	Dry	Gasoline	< 5.0 U
				HC ID	---
				Trifluorotoluene	105%
				Bromobenzene	106%
OU27B 09-8722	DOF-DUPL1	04/08/09 PID2	Dry	Gasoline	< 6.4 U
				HC ID	---
				Trifluorotoluene	112%
				Bromobenzene	120%
OU27C 09-8723	DOF-DUPL2	04/08/09 PID2	Dry	Gasoline	< 5.7 U
				HC ID	---
				Trifluorotoluene	101%
				Bromobenzene	108%
OU27D 09-8724	DOF-DUPL3	04/08/09 PID2	Dry	Gasoline	< 5.8 U
				HC ID	---
				Trifluorotoluene	91.3%
				Bromobenzene	94.7%

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**TPHG SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: OU27  
Matrix: Soil

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
Event: PSE-004-00

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT</u>	<u>OUT</u>
MB-040909	NA	100%	104%		0
LCS-040909	NA	102%	106%		0
LCSD-040909	NA	99.5%	103%		0
DOF-TP18-13	NA	112%	120%		0
DOF-TP18-13 MS	NA	111%	96.6%		0
DOF-TP18-13 MSD	NA	112%	111%		0
MB-040809	NA	105%	106%		0
LCS-040809	NA	101%	102%		0
LCSD-040809	NA	102%	104%		0
DOF-DUPL1	NA	112%	120%		0
DOF-DUPL2	NA	101%	108%		0
DOF-DUPL3	NA	91.3%	94.7%		0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(65-137)
(BBZ) = Bromobenzene	(80-120)	(54-144)

Log Number Range: 09-8721 to 09-8724



**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: DOF-TP18-13

MATRIX SPIKE

Lab Sample ID: OU27A

LIMS ID: 09-8721

Matrix: Soil

Data Release Authorized: 

Reported: 04/14/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

Event: PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Date Analyzed MS: 04/09/09 12:35

MSD: 04/09/09 13:03

Instrument/Analyst MS: PID2/MH

MSD: PID2/MH

Purge Volume: 5.0 mL

Sample Amount MS: 75.8 mg-dry-wt

MSD: 78.9 mg-dry-wt

Analyte	Sample	Spike		MS		Spike		MSD	
		MS	Added-MS	Recovery	MSD	Added-MSD	Recovery	RPD	
Gasoline Range Hydrocarbons < 6.65 U	67.5	67.5	54.6	124%	69.9	52.5	133%	3.5%	

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	MS	MSD
Trifluorotoluene	111%	112%
Bromobenzene	96.6%	111%

**ORGANICS ANALYSIS DATA SHEET**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: LCS-040809**  
**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-040809  
 LIMS ID: 09-8722  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 04/14/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 Event: PSE-004-00  
 Date Sampled: NA  
 Date Received: NA

Date Analyzed LCS: 04/08/09 09:52  
 LCSD: 04/08/09 10:20  
 Instrument/Analyst LCS: PID2/MH  
 LCSD: PID2/MH

Purge Volume: 5.0 mL  
 Sample Amount LCS: 100 mg-dry-wt  
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	52.5	50.0	105%	53.1	50.0	106%	1.1%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.


**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	101%	102%
Bromobenzene	102%	104%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG  
Page 1 of 1

Sample ID: LCS-040909  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-040909  
LIMS ID: 09-8721  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/14/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
Event: PSE-004-00  
Date Sampled: NA  
Date Received: NA

Date Analyzed LCS: 04/09/09 08:28  
LCSD: 04/09/09 08:56  
Instrument/Analyst LCS: PID2/MH  
LCSD: PID2/MH

Purge Volume: 5.0 mL  
Sample Amount LCS: 100 mg-dry-wt  
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	52.0	50.0	104%	51.2	50.0	102%	1.6%

Reported in mg/kg (ppm)

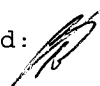
RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	102%	99.5%
Bromobenzene	106%	103%

**ORGANICS ANALYSIS DATA SHEET**  
**TOTAL DIESEL RANGE HYDROCARBONS**  
 NWTPHD by GC/FID  
 Page 1 of 1  
 Matrix: Soil

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK WRECKING  
 PSE-004-00  
 Date Received: 04/06/09

Data Release Authorized:   
 Reported: 04/17/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-041309 09-8721	Method Blank HC ID: ---	04/13/09	04/14/09 FID4A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 107%
OU27A 09-8721	DOF-TP18-13 HC ID: ---	04/13/09	04/14/09 FID4A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.5 11	< 5.5 U < 11 U 93.8%
OU27B 09-8722	DOF-DUPL1 HC ID: <b>MOTOR OIL</b>	04/13/09	04/14/09 FID4A	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.3 11	< 5.3 U <b>16</b> 97.8%
OU27C 09-8723	DOF-DUPL2 HC ID: ---	04/13/09	04/14/09 FID4A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 97.8%
OU27D 09-8724	DOF-DUPL3 HC ID: ---	04/13/09	04/14/09 FID4A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 96.4%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.  
 DL-Dilution of extract prior to analysis.  
 RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.  
 Motor Oil quantitation on total peaks in the range from C24 to C38.  
 HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

**TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK WRECKING  
PSE-004-00

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
041309MBS	107%	0
041309LCS	101%	0
DOF-TP18-13	93.8%	0
DOF-DUPL1	97.8%	0
DOF-DUPL2	97.8%	0
DOF-DUPL3	96.4%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(52-121)

(48-119)

Prep Method: SW3546  
Log Number Range: 09-8721 to 09-8724

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1


Sample ID: LCS-041309

LAB CONTROL

Lab Sample ID: LCS-041309

LIMS ID: 09-8721

Matrix: Soil

Data Release Authorized: 

Reported: 04/17/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: NA

Date Received: NA

Date Extracted: 04/13/09

Date Analyzed: 04/14/09 21:06

Instrument/Analyst: FID4A/PKC

Sample Amount: 10.0 g

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	135	150	90.0%

**TPHD Surrogate Recovery**

o-Terphenyl	101%
-------------	------

Results reported in mg/kg

**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Soil  
Date Received: 04/06/09

ARI Job: OU27  
Project: VERBEEK WRECKING  
PSE-004-00

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
09-8721-041309MB1	Method Blank	10.0 g	1.00 mL	-	04/13/09
09-8721-041309LCS1	Lab Control	10.0 g	1.00 mL	-	04/13/09
09-8721-OU27A	DOF-TP18-13	9.04 g	1.00 mL	D	04/13/09
09-8722-OU27B	DOF-DUPL1	9.47 g	1.00 mL	D	04/13/09
09-8723-OU27C	DOF-DUPL2	10.1 g	1.00 mL	D	04/13/09
09-8724-OU27D	DOF-DUPL3	9.93 g	1.00 mL	D	04/13/09

Basis: D=Dry Weight W=As Received  
**Diesel Extraction Report**

Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/17/09

Data file: /chem3/fid4a.i/20090414.b/0414a032.d  
Method: /chem3/fid4a.i/20090414.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: pc  
Report Date: 04/17/2009  
Macro: 14-APR-2009  
Calibration Dates: Gas:16-MAR-2009 Diesel:14-APR-2009 M.Oil:14-APR-2009

ARI ID: OU27MBS1  
Client ID: OU27MBS1  
Injection: 14-APR-2009 20:52

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	126275	9
C8	1.516	-0.013	11419	23602	DIESEL (C12-C24)	22982	2
C10	2.175	-0.005	1049	759	M.OIL (C24-C38)	134418	15
C12	2.701	0.001	756	799	AK-102 (C10-C25)	49154	4
C14	3.130	0.005	254	342	AK-103 (C25-C36)	119654	11
C16	3.485	-0.007	205	164	OR.DIES (C10-C28)	64405	5
C18	3.853	0.012	79	65	OR.MOIL (C28-C40)	139489	20
C20	4.304	0.043	1135	1316			
C22	4.641	0.000	176	284			
C24	4.969	0.016	279	345			
C25	5.097	0.010	352	422			
C26	5.216	0.006	503	571			
C28	5.433	0.001	1179	1484			
C32	5.818	-0.011	4284	9210			
C34	6.045	-0.009	1393	1574	BUNKERC (C10-C38)	183211	25
Filter Peak	7.744	0.004	792	1253			
C36	6.348	0.024	1298	4183			
C38	6.665	0.001	965	902			
C40	7.115	-0.001	898	778			
o-terph	4.021	-0.002	892426	717419	JET-A (C10-C18)	40802	3
Triacon Surr	5.634	0.001	1240423	670713			

Range Times: NW Diesel(2.699 - 4.954) AK102(2.18 - 5.09) Jet A(2.18 - 3.84)  
NW M.Oil(4.95 - 6.66) AK103(5.09 - 6.32) OR Diesel(2.18 - 5.43)

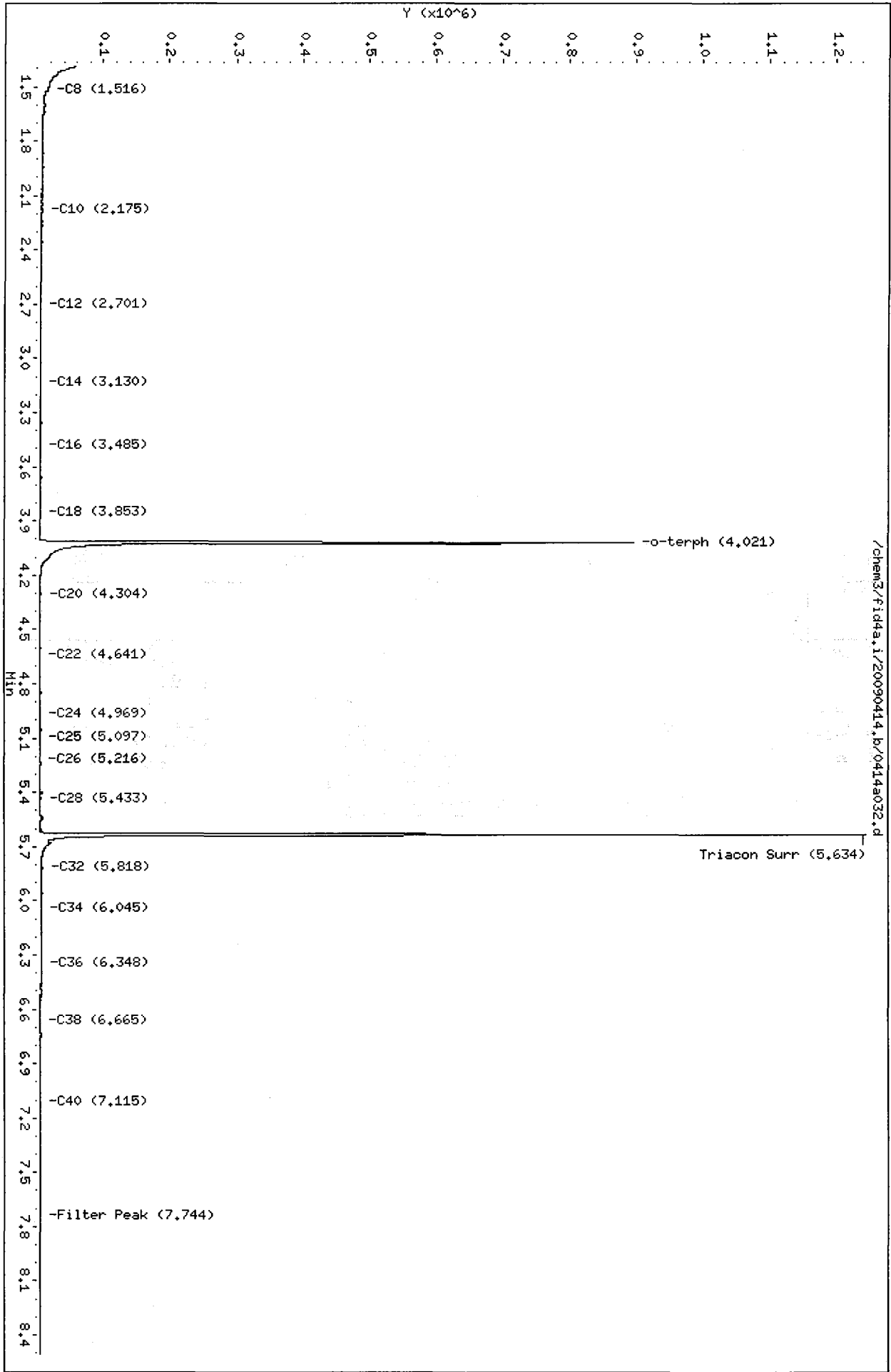
Surrogate	Area	Amount	%Rec
o-Terphenyl	717419	48.0	106.6
Triacotane	670713	45.2	100.5

Analyte	RF	Curve Date
o-Terph Surr	14957.9	14-APR-2009
Triacon Surr	14833.4	14-APR-2009
Gas	14487.1	16-MAR-2009
Diesel	11383.0	14-APR-2009
Motor Oil	9118.0	14-APR-2009
AK102	13656.0	14-APR-2009
AK103	10921.3	08-APR-2009
JetA	12632.0	07-JAN-2009
OR Diesel	13769.0	
OR M.Oil	6929.0	
Bunker C	7267.4	04-MAR-2009



Data File: /chem3/fid4a.i/20090414.b/0414a032.d  
Date: 14-APR-2009 20:52  
Client ID: 0U27HBS1  
Sample Info: 0U27HBS1  
Column phase: RTX-1

Instrument: fid4a.i  
Operator: pc  
Column diameter: 2.00



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/17/09

Data file: /chem3/fid4a.i/20090414.b/0414a033.d  
Method: /chem3/fid4a.i/20090414.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: pc  
Report Date: 04/17/2009  
Macro: 14-APR-2009  
Calibration Dates: Gas:16-MAR-2009 Diesel:14-APR-2009 M.Oil:14-APR-2009

ARI ID: OU27LCSS1  
Client ID: OU27LCSS1  
Injection: 14-APR-2009 21:06  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.413	0.002	33301	44503	GAS (Tol-C12)	3426486	237
C8	1.531	0.003	21246	16893	DIESEL (C12-C24)	15330704	1347
C10	2.182	0.001	275553	142537	M.OIL (C24-C38)	352487	39
C12	2.701	0.001	521756	262626	AK-102 (C10-C25)	18150730	1329
C14	3.123	-0.001	714589	304790	AK-103 (C25-C36)	315659	29
C16	3.491	-0.001	832203	367186	OR.DIES (C10-C28)	18386545	1335
C18	3.843	0.002	557445	314148	OR.MOIL (C28-C40)	87731	13
C20	4.262	0.001	342846	251626			
C22	4.641	0.000	134628	126791			
C24	4.956	0.002	54948	61619			
C25	5.089	0.002	32645	42969			
C26	5.213	0.003	18587	19387			
C28	5.436	0.005	5374	6450			
C32	5.825	-0.005	3617	6028			
C34	6.066	0.012	774	1116	BUNKERC (C10-C38)	18470464	2542
Filter Peak	7.736	-0.004	55	55			
C36	6.303	-0.020	992	1889			
C38	6.666	0.002	240	211			
C40	7.117	0.001	130	62			
o-terph	4.026	0.003	1212914	678308	JET-A (C10-C18)	13596573	1076
Triacon Surr	5.640	0.007	1157893	627357			

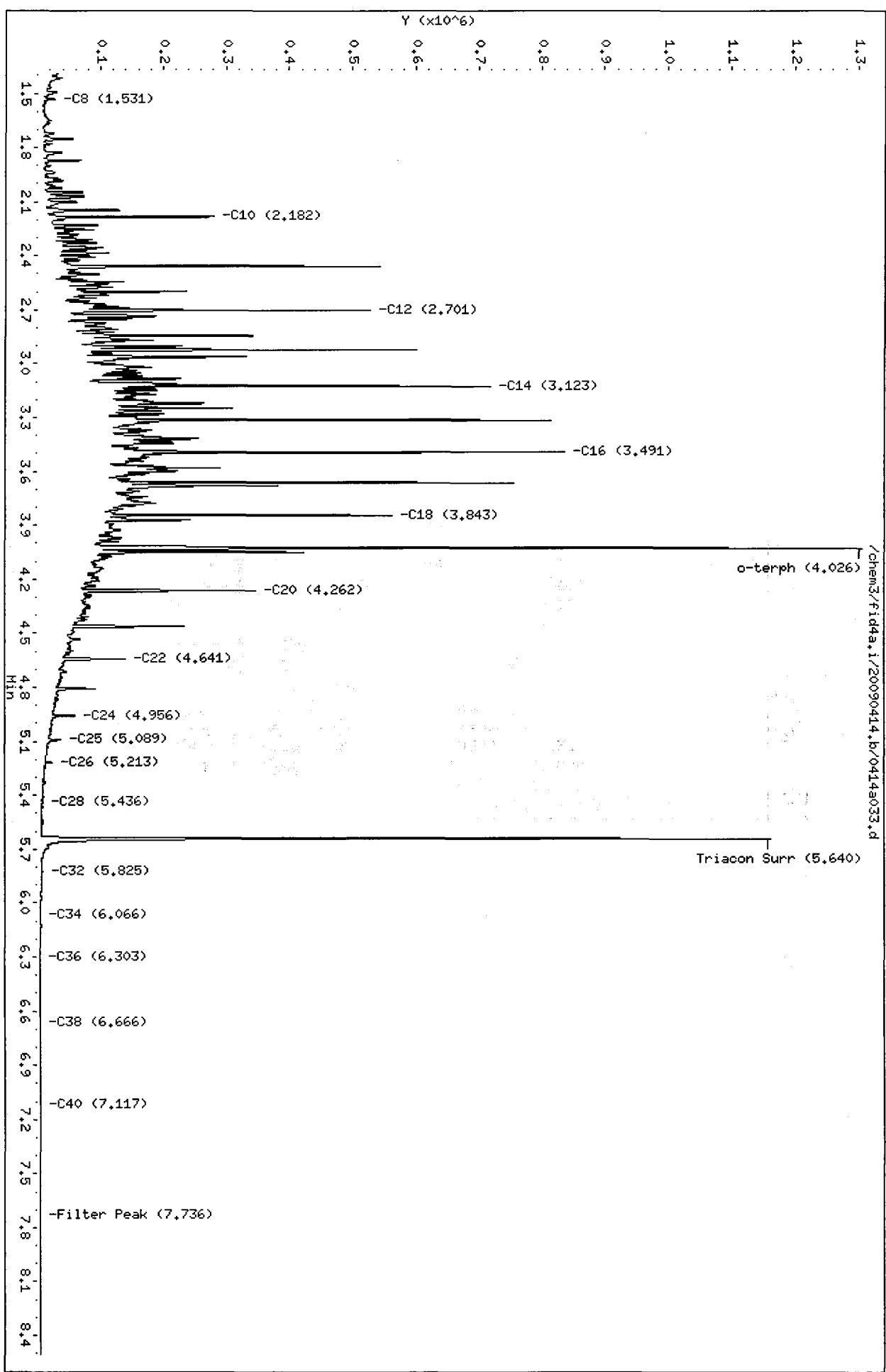
Range Times: NW Diesel(2.699 - 4.954) AK102(2.18 - 5.09) Jet A(2.18 - 3.84)  
NW M.Oil(4.95 - 6.66) AK103(5.09 - 6.32) OR Diesel(2.18 - 5.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	678308	45.3	100.8
Triacotane	627357	42.3	94.0

Analyte	RF	Curve Date
o-Terph Surr	14957.9	14-APR-2009
Triacon Surr	14833.4	14-APR-2009
Gas	14487.1	16-MAR-2009
Diesel	11383.0	14-APR-2009
Motor Oil	9118.0	14-APR-2009
AK102	13656.0	14-APR-2009
AK103	10921.3	08-APR-2009
JetA	12632.0	07-JAN-2009
OR Diesel	13769.0	
OR M.Oil	6929.0	
Bunker C	7267.4	04-MAR-2009

Data File: /chem3/fid4a.i/20090414.b/0414a033.d  
Date: 14-APR-2009 21:06  
Client ID: 0U27LCSS1  
Sample Info: 0U27LCSS1  
Column phase: RTX-1

Instrument: fid4a.i  
Operator: pc  
Column diameter: 2.00



Analytical Resources Inc.  
TPH Quantitation Report

PC  
4/17/09

Data file: /chem3/fid4a.i/20090414.b/0414a037.d  
Method: /chem3/fid4a.i/20090414.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: pc  
Report Date: 04/17/2009  
Macro: 14-APR-2009  
Calibration Dates: Gas:16-MAR-2009 Diesel:14-APR-2009 M.Oil:14-APR-2009

ARI ID: OU27B  
Client ID: DOF-DUPL1  
Injection: 14-APR-2009 22:02  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.413	0.002	19588	59912	GAS (Tol-C12)	143849	10
C8	1.546	0.017	3034	4451	DIESEL (C12-C24)	327821	29
C10	2.181	0.000	898	937	M.OIL (C24-C38)	1361316	149
C12	2.700	0.001	440	189	AK-102 (C10-C25)	355926	26
C14	3.135	0.011	177	150	AK-103 (C25-C36)	1235164	113
C16	3.498	0.006	3395	6766	OR.DIES (C10-C28)	708456	51
C18	3.842	0.001	6926	8565	OR.MOIL (C28-C40)	1052643	152
C20	4.264	0.003	6915	10464			
C22	4.643	0.002	7109	14666			
C24	4.954	0.001	9242	13446			
C25	5.087	-0.001	11408	16494			
C26	5.210	-0.001	12965	20176			
C28	5.431	0.000	17894	24082			
C32	5.829	-0.001	19513	29530			
C34	6.053	-0.001	16529	29152	BUNKERC (C10-C38)	1698433	234
Filter Peak	7.725	-0.015	1301	1561			
C36	6.341	0.018	11325	34840			
C38	6.664	0.001	6026	17664			
C40	7.164	0.047	2700	7098			
o-terph	4.021	-0.001	961642	658964	JET-A (C10-C18)	81074	6
Triacon Surr	5.633	0.000	1238312	597079			

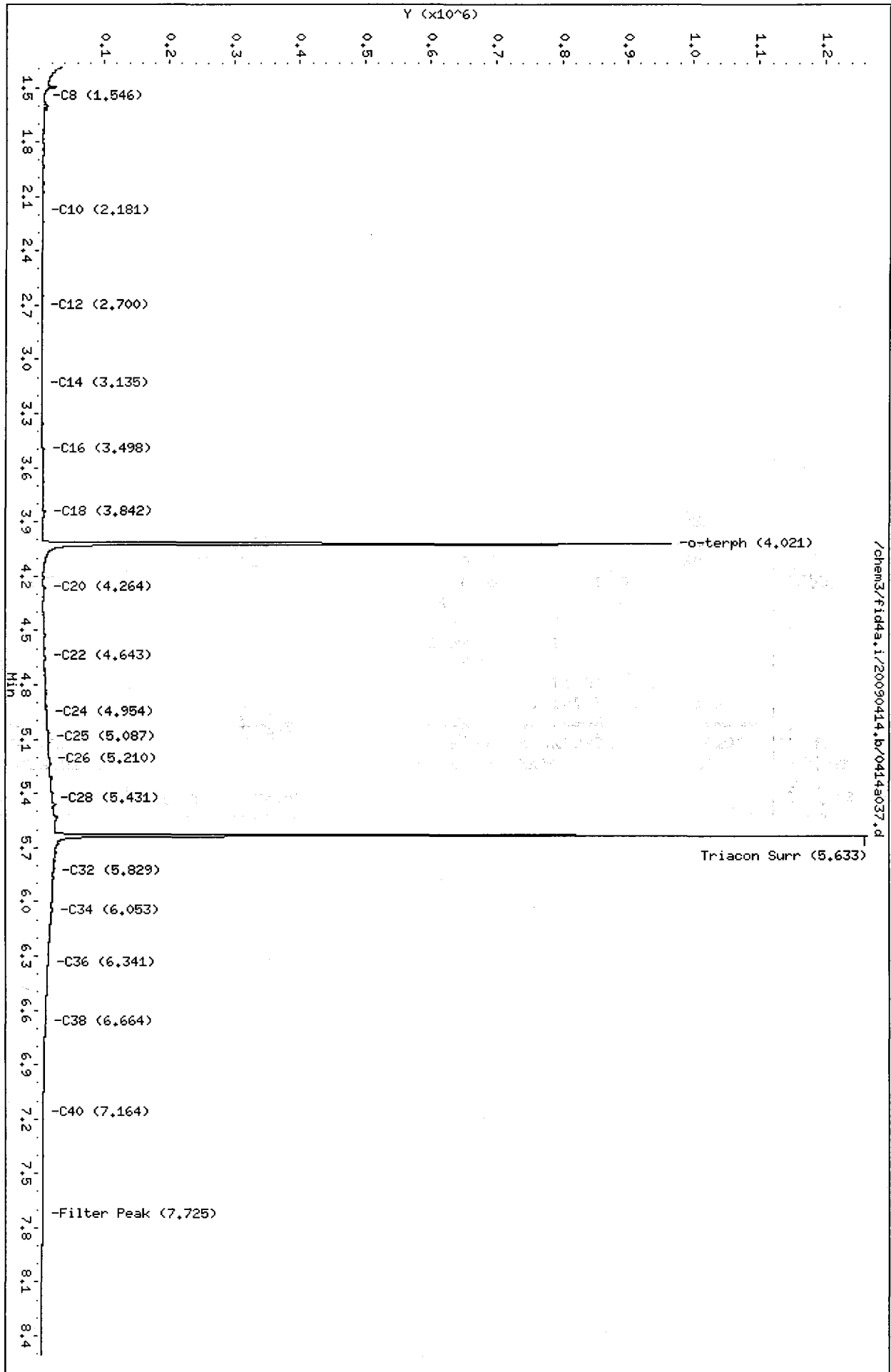
Range Times: NW Diesel(2.699 - 4.954) AK102(2.18 - 5.09) Jet A(2.18 - 3.84)  
NW M.Oil(4.95 - 6.66) AK103(5.09 - 6.32) OR Diesel(2.18 - 5.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	658964	44.1	97.9
Triacontane	597079	40.3	89.4

Analyte	RF	Curve Date
o-Terph Surr	14957.9	14-APR-2009
Triacon Surr	14833.4	14-APR-2009
Gas	14487.1	16-MAR-2009
Diesel	11383.0	14-APR-2009
Motor Oil	9118.0	14-APR-2009
AK102	13656.0	14-APR-2009
AK103	10921.3	08-APR-2009
JetA	12632.0	07-JAN-2009
OR Diesel	13769.0	
OR M.Oil	6929.0	
Bunker C	7267.4	04-MAR-2009

Data File: /chem3/fid4a.i/20090414.b/0414a037.d  
Date: 14-APR-2009 22:02  
Client ID: DDF-DUPL1  
Sample Info: 0U27B  
Column phase: RTX-1

Instrument: fid4a.i  
Operator: pc  
Column diameter: 2.00



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: OU27MB

LIMS ID: 09-8722

Matrix: Soil

Data Release Authorized: 

Reported: 04/20/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/08/09	6010B	04/16/09	7440-38-2	Arsenic	5	5	U
3050B	04/08/09	6010B	04/16/09	7440-39-3	Barium	0.3	0.3	U
3050B	04/08/09	6010B	04/16/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/08/09	6010B	04/16/09	7440-47-3	Chromium	0.5	0.5	U
3050B	04/08/09	6010B	04/16/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/08/09	6010B	04/16/09	7440-02-0	Nickel	1	1	U
3050B	04/08/09	6010B	04/16/09	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

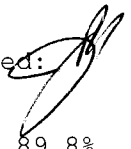
Page 1 of 1

Sample ID: DOF-TP18-13  
SAMPLE

Lab Sample ID: OU27A

LIMS ID: 09-8721

Matrix: Soil

Data Release Authorized: 

Reported: 04/20/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

Percent Total Solids: 89.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/08/09	6010B	04/16/09	7440-38-2	Arsenic	5	5	U
3050B	04/08/09	6010B	04/16/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>421</b>	
3050B	04/08/09	6010B	04/16/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/08/09	6010B	04/16/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>6.6</b>	
3050B	04/08/09	6010B	04/16/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.04	U
3050B	04/08/09	6010B	04/16/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>10</b>	
3050B	04/08/09	6010B	04/16/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>9</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP18-13  
DUPLICATE

Lab Sample ID: OU27A

LIMS ID: 09-8721

Matrix: Soil

Data Release Authorized: 

Reported: 04/20/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	5 U	5 U	0.0%	+/- 5	L
Barium	6010B	421	48.5	159%	+/- 20%	*
Cadmium	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Chromium	6010B	6.6	35.1	137%	+/- 20%	*
Lead	6010B	2 U	3	40.0%	+/- 2	L
Mercury	7471A	0.04 U	0.04 U	0.0%	+/- 0.04	L
Nickel	6010B	10	45	127%	+/- 20%	*
Zinc	6010B	9	35	118%	+/- 20%	*

Reported in mg/kg-dry

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: DOF-TP18-13

MATRIX SPIKE

Lab Sample ID: OU27A

LIMS ID: 09-8721

Matrix: Soil

Data Release Authorized: 

Reported: 04/20/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/03/09

Date Received: 04/06/09

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	5 U	204	215	94.9%	
Barium	6010B	421	256	215	-76.7%	N
Cadmium	6010B	0.2 U	50.7	53.7	94.4%	
Chromium	6010B	6.6	86.5	53.7	149%	N
Lead	6010B	2 U	196	215	91.2%	
Mercury	7471A	0.04 U	0.45	0.417	108%	
Nickel	6010B	10	102	53.7	171%	N
Zinc	6010B	9	80	53.7	132%	N

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-DUPL1  
SAMPLE

Lab Sample ID: OU27B

LIMS ID: 09-8722

Matrix: Soil

Data Release Authorized: 

Reported: 04/20/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 90.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/08/09	6010B	04/16/09	7440-38-2	Arsenic	5	5	U
3050B	04/08/09	6010B	04/16/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>29.7</b>	
3050B	04/08/09	6010B	04/16/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/08/09	6010B	04/16/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>13.6</b>	
3050B	04/08/09	6010B	04/16/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.05	0.05	U
3050B	04/08/09	6010B	04/16/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>18</b>	
3050B	04/08/09	6010B	04/16/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>25</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-DUPL2  
SAMPLE

Lab Sample ID: OU27C

LIMS ID: 09-8723

Matrix: Soil

Data Release Authorized:

Reported: 04/20/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 94.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/08/09	6010B	04/16/09	7440-38-2	Arsenic	5	5	U
3050B	04/08/09	6010B	04/16/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>1,390</b>	
3050B	04/08/09	6010B	04/16/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/08/09	6010B	04/16/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>6.1</b>	
3050B	04/08/09	6010B	04/16/09	7439-92-1	Lead	2	2	U
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.04	U
3050B	04/08/09	6010B	04/16/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>11</b>	
3050B	04/08/09	6010B	04/16/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>26</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-DUPL3  
SAMPLE

Lab Sample ID: OU27D

LIMS ID: 09-8724

Matrix: Soil

Data Release Authorized: 

Reported: 04/20/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: 04/02/09

Date Received: 04/06/09

Percent Total Solids: 93.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/08/09	6010B	04/16/09	7440-38-2	Arsenic	5	5	U
3050B	04/08/09	6010B	04/16/09	<b>7440-39-3</b>	<b>Barium</b>	0.3	<b>51.2</b>	
3050B	04/08/09	6010B	04/16/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/08/09	6010B	04/16/09	<b>7440-47-3</b>	<b>Chromium</b>	0.5	<b>25.6</b>	
3050B	04/08/09	6010B	04/16/09	<b>7439-92-1</b>	<b>Lead</b>	2	<b>3</b>	
CLP	04/08/09	7471A	04/10/09	7439-97-6	Mercury	0.04	0.04	U
3050B	04/08/09	6010B	04/16/09	<b>7440-02-0</b>	<b>Nickel</b>	1	<b>34</b>	
3050B	04/08/09	6010B	04/16/09	<b>7440-66-6</b>	<b>Zinc</b>	1	<b>40</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

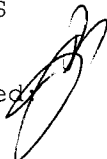
Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: OU27LCS

LIMS ID: 09-8722

Matrix: Soil

Data Release Authorized: 

Reported: 04/20/09

QC Report No: OU27-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK WRECKING

PSE-004-00

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	199	200	99.5%	
Barium	6010B	197	200	98.5%	
Cadmium	6010B	49.9	50.0	99.8%	
Chromium	6010B	48.4	50.0	96.8%	
Lead	6010B	196	200	98.0%	
Mercury	7471A	1.02	1.00	102%	
Nickel	6010B	48	50	96.0%	
Zinc	6010B	49	50	98.0%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

**ATTACHMENT C**  
**Resource Protection Well Reports and**  
**Laboratory Data Sheets for September 2008**  
**Groundwater Sample Analyses**

**Former Verbeek Wrecking Yard**  
**Bothell, Washington**

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. RE02665

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number: \_\_\_\_\_

Consulting Firm GreenCo

Property Owner Verbeek Properties

Unique Ecology Well ID Tag No. BAF 235

Site Address 18416 Bothell Everett Hwy

City Bothell County King

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Location NE 1/4-1/4 NE 1/4 Sec 18 Twn 27 R 05

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

Tax Parcel No. 27051800103700

- Driller  Engineer  Trainee

Name (Print Last, First Name) Knopf, Noel

Driller/Engineer/Trainee Signature [Signature]

Driller or Trainee License No. T2872

Cased or Uncased Diameter 9" Static Level 35"

Work/Decommission Start Date 9/22/08

If trainee, licensed driller's Signature and License Number:

[Signature] 2508

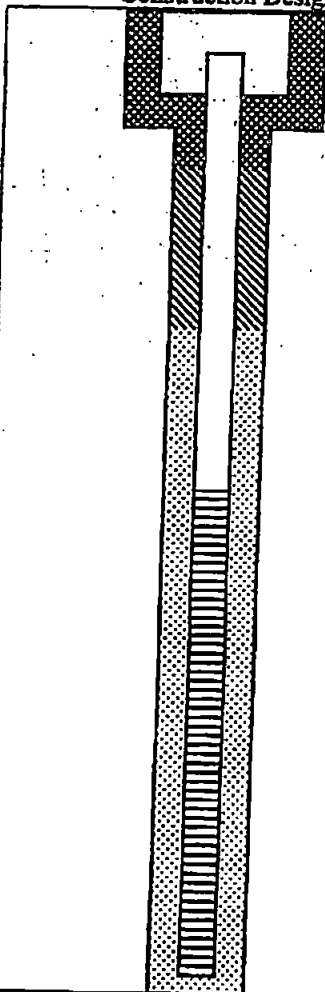
Work/Decommission Completed Date 9/22/08

ESN Driller

### Construction Design

### Well Data

### Formation Description



MONUMENT TYPE:

8' flush mount

CONCRETE SURFACE SEAL:

0-1'

ANNULAR SPACE:

BACKFILL: 1'-36'

TYPE: 3/8" bent chips

PVC BLANK: 0'-38'

SCREEN: 38'-48'

SLOT SIZE: 0.010

TYPE: 2" sch 40 PVC

SAND PACK: 36'-48'

MATERIAL: 10/20 silica

DRILLING METHOD: H.S.A

WELL DEPTH: 48'

BORING DIAMETER: 9"

N/A

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No: RE02665

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number: \_\_\_\_\_

Consulting Firm GreenCo

Unique Ecology Well IDTag No. BAF 236

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

- Driller  Engineer  Trainee

Name (Print Last, First Name) Knopf Noel

Driller/Engineer/Trainee Signature [Signature]

Driller or Trainee License No. T2872

Property Owner Verbeek Properties

Site Address 18416 Bothell Everett Hwy

City Bothell County King

Location NE1/4-1/4 NE1/4 Sec 18 Twn 27 R 05

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

Tax Parcel No. 27051800103700

Cased or Uncased Diameter 9" Static Level 35"

Work/Decommission Start Date 9/22/08

Work/Decommission Completed Date 9/22/08

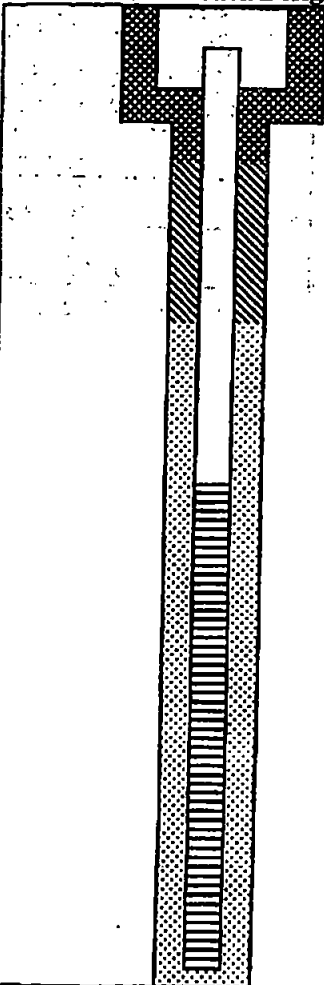
If trainee, licensed driller's Signature and License Number:

Amia Harnden 2508

### Construction Design

### Well Data

### Formation Description



MONUMENT TYPE:

8" flush mount  
CONCRETE SURFACE SEAL:

0'-1'

ANNULAR SPACE: \_\_\_\_\_

BACKFILL: 1'-32'  
TYPE: 3/8" bent chips

PVC BLANK: 0'-34'

SCREEN: 34'-39'  
SLOT SIZE: 0.010"  
TYPE: 2" sch 40 PVC

SAND PACK: 32'-39'  
MATERIAL: 10/20 silica

DRILLING METHOD: H.S.A.

WELL DEPTH: 39'

BORING DIAMETER: 9"

N/A

SCALE: 1"= \_\_\_\_\_ PAGE 2 OF 2



ESN NW BELLEVUE CHEMISTRY LABORATORY  
 Tel:(425) 957-9872, Fax (425) 957-9804

ESN Job Number: S80924.1  
 Client: Greenco  
 Client Job Name: Bothell Everett Hwy

Analytical Results

PAH(8270), ug/L	MTH BLK	LCS	BAF235	BAF236	MS	MSD	RPD	
Matrix	Water	Water	Water	Water	Water	Water	Water	
Date extracted	Reporting	09/24/08	09/24/08	09/24/08	09/24/08	09/22/08	09/22/08	
Date analyzed	Limits	09/24/08	09/24/08	09/24/08	09/24/08	09/22/08	09/22/08	
Acenaphthene	0.2	nd	113%	nd	nd	98%	99%	1%
Acenaphthylene	0.2	nd		nd	nd			
Anthracene	0.2	nd		nd	nd			
Benzo(a)anthracene*	0.2	nd		nd	nd			
Benzo(a)pyrene*	0.2	nd	74%	nd	nd			
Benzo(b)fluoranthene*	0.2	nd		nd	nd			
Benzo(ghi)perylene	0.2	nd		nd	nd			
Benzo(k)fluoranthene*	0.2	nd		nd	nd			
Chrysene*	0.2	nd		nd	nd			
Dibenzo(a,h)anthracene*	0.2	nd		nd	nd			
Fluorene	0.2	nd		nd	nd			
Fluoranthene	0.2	nd	101%	nd	nd			
Indeno(1,2,3-cd)pyrene*	0.2	nd		nd	nd			
Naphthalene	0.2	nd		nd	nd			
1-Methylnaphthalene	0.2	nd		nd	nd			
2-Methylnaphthalene	0.2	nd		nd	nd			
Phenanthrene	0.2	nd		nd	nd			
Pyrene	0.2	nd		nd	nd	95%	96%	1%
Total Carcinogens				nd	nd			
Surrogate recoveries:								
2-Fluorobiphenyl		94%	91%	92%	81%	86%	85%	
p-Terphenyl-d14		124%	118%	122%	109%	89%	86%	

Data Qualifiers and Analytical Comments

\* - Carcinogenic Analyte  
 nd - not detected at listed reporting limits  
 na - not analyzed  
 C - coelution with sample peaks  
 M - matrix interference  
 J - estimated value  
 Results reported on dry-weight basis  
 Acceptable Recovery limits: 50% TO 150%  
 Acceptable RPD limit: 35%

**ESN NORTHWEST CHEMISTRY LABORATORY**

Greenco  
18416 BOTHELL EVERETT HIGHWAY PROJECT

ESN Northwest  
1210 Eastside Street SE Suite 200  
Olympia, WA 98501  
(360) 459-4670 (360) 459-3432 Fax  
lab@esnw.com

**Analytical Results**

8260, µg/L	MTH BLK	LCS	BAF235	BAF236	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	
	Reporting						
Date analyzed	Limits	09/24/08	09/24/08	09/24/08	09/24/08	09/24/08	09/24/08
Dichlorodifluoromethane	1.0	nd		nd	nd		
Chloromethane	1.0	nd		nd	nd		
Vinyl chloride	0.2	nd		nd	nd		
Bromomethane	1.0	nd		nd	nd		
Chloroethane	1.0	nd		nd	nd		
Trichlorofluoromethane	1.0	nd		nd	nd		
Acetone	10.0	nd		nd	nd		
1,1-Dichloroethene	1.0	nd	112%	nd	nd	127%	140% 10%
Methylene chloride	10.0	nd		nd	nd		
Methyl-1-butyl ether (MTBE)	1.0	nd		nd	nd		
trans-1,2-Dichloroethane	1.0	nd		nd	nd		
1,1-Dichloroethane	1.0	nd		nd	nd		
n-Hexane	1.0	nd		nd	nd		
2-Butanone (MEK)	10.0	nd		nd	nd		
cis-1,2-Dichloroethane	1.0	nd		nd	nd		
2,2-Dichloropropane	1.0	nd		nd	nd		
Chloroform	1.0	nd		nd	nd		
Bromochloromethane	1.0	nd		nd	nd		
1,1,1-Trichloroethane	1.0	nd		nd	nd		
1,2-Dichloroethane (EDC)	1.0	nd		nd	nd		
1,1-Dichloropropane	1.0	nd		nd	nd		
Carbon tetrachloride	1.0	nd		nd	nd		
→ Benzene	1.0	nd	114%	nd	nd	139%	161% 15%
Trichloroethene (TCE)	1.0	nd	101%	nd	nd	123%	136% 10%
1,2-Dichloropropane	1.0	nd		nd	nd		
Dibromomethane	1.0	nd		nd	nd		
Bromodichloromethane	1.0	nd		nd	nd		
4-Methyl-2-pentanone (MIBK)	1.0	nd		nd	nd		
cis-1,3-Dichloropropene	1.0	nd		nd	nd		
→ Toluene	1.0	nd	122%	nd	nd	108%	121% 11%
trans-1,3-Dichloropropene	1.0	nd		nd	nd		
1,1,2-Trichloroethane	1.0	nd		nd	nd		
2-Hexanone	1.0	nd		nd	nd		
1,3-Dichloropropane	1.0	nd		nd	nd		
Dibromochloromethane	1.0	nd		nd	nd		
Tetrachloroethene (PCE)	1.0	nd		nd	nd		
1,2-Dibromoethane (EDB)	1.0	nd		nd	nd		
Chlorobenzene	1.0	nd	89%	nd	nd	108%	119% 12%
1,1,1,2-Tetrachloroethane	1.0	nd		nd	nd		
→ Ethylbenzene	1.0	nd		nd	nd		
→ Xylenes	1.0	nd		nd	nd		
Styrene	1.0	nd		nd	nd		
Bromoform	1.0	nd		nd	nd		
1,1,2,2-Tetrachloroethane	1.0	nd		nd	nd		
Isopropylbenzene	1.0	nd		nd	nd		
1,2,3-Trichloropropane	1.0	nd		nd	nd		
Bromobenzene	1.0	nd		nd	nd		

**ESN NORTHWEST CHEMISTRY LABORATORY**

Greenco  
18416 BOTHELL EVERETT HIGHWAY PROJECT

ESN Northwest  
1210 Eastside Street SE Suite 200  
Olympia, WA 98501  
(360) 459-4670 (360) 459-3432 Fax  
lab@esnww.com

**Analytical Results**

8260, µg/L	MTH BLK	LCS	BAF238	BAF238	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water
	Reporting						
Date analyzed	Limits	09/24/08	09/24/08	09/24/08	09/24/08	09/24/08	09/24/08
n-Propylbenzene	1.0	nd		nd	nd		
2-Chlorotoluene	1.0	nd		nd	nd		
4-Chlorotoluene	1.0	nd		nd	nd		
1,3,5-Trimethylbenzene	1.0	nd		nd	nd		
tert-Butylbenzene	1.0	nd		nd	nd		
1,2,4-Trimethylbenzene	1.0	nd		nd	nd		
sec-Butylbenzene	1.0	nd		nd	nd		
1,3-Dichlorobenzene	1.0	nd		nd	nd		
1,4-Dichlorobenzene	1.0	nd		nd	nd		
Isopropyltoluene	1.0	nd		nd	nd		
1,2-Dichlorobenzene	1.0	nd		nd	nd		
n-Butylbenzene	1.0	nd		nd	nd		
1,2-Dibromo-3-Chloropropane	1.0	nd		nd	nd		
1,2,4-Trichlorobenzene	1.0	nd		nd	nd		
Naphthalene	1.0	nd		nd	nd		
Hexachloro-1,3-butadiene	1.0	nd		nd	nd		
1,2,3-Trichlorobenzene	1.0	nd		nd	nd		

**Surrogate recoveries:**

Dibromofluoromethane	108%	100%	0%	0%
Toluene-d8	95%	98%	0%	0%
4-Bromofluorobenzene	93%	98%	0%	0%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits  
J - estimated quantitation, below listed reporting limits  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%

**ATTACHMENT D**  
Preliminary Sampling Results Report  
April 2009 Sampling  
Dalton, Olmsted & Fuglevand, Inc.

Former Verbeck Wrecking Yard  
Bothell, Washington

**Dalton, Olmsted & Fuglevand, Inc.** *Environmental Consultants*

---

6034 N Star Rd. • Ferndale, Washington 98248  
Telephone (360) 380-0862 (FAX 360-380-0862)  
Cell (206) 498-6616 e-mail: [mdalton@dofnw.com](mailto:mdalton@dofnw.com)  
(Kirkland, WA Office – 425-827-4588)

**MEMORANDUM**

---

TO: John Rork/Greg Andrina - PSE

FROM: Matt Dalton

DATE: June 30, 2009

SUBJECT: Results of Preliminary Sampling  
Former Verbeek Wrecking Yard  
Bothell, WA

REF. NO: PSE-004-00

CC: Dave Cooper - DOF

---

This report presents the results of preliminary sampling completed in April 2009 within Site B of the former Verbeek Wrecking Yard located at 18416 Bothell Everett Highway, Bothell, Washington (Figures 1 and 2). Site B lies within the southeastern portion of the Verbeek property and is generally defined as the area where soil from Gas Works Park (GWP) was previously placed as fill. Gas Works Park is the former location of a number of industrial activities including a manufactured gas plant (MGP) and a tar refinery. The Site B area is currently vacant following removal of debris, and excavation and grading that occurred in the late summer and fall of 2008. Soil excavated by Green Company Environmental (GreenCo) was placed in stockpiles on portions of the Verbeek site (Figure 2). Testing of the stockpiles indicates that some of the excavated soil contained relatively high concentrations of polycyclic aromatic hydrocarbons (PAHs).

Historic data indicate that fill soils containing high concentrations of polycyclic aromatic hydrocarbons (PAHs) from GWP were likely deposited within the Site B portion of the Verbeek site. Visible observations and other data indicated that fill from GWP (herein termed GWP fill) containing high concentrations of PAHs remained after the GreenCo work. However, there is little documentation of the work completed by GreenCo. The purpose of the work described in this report is to provide data to complete a preliminary assessment of the soil quality conditions generally within Site B so that a Interim Remedial Action Plan (IRAP) for this portion of the site can be prepared. The work described in this report was completed in general accordance with the Preliminary Assessment Plan prepared by Dalton, Olmsted & Fuglevand, Inc. (DOF 2009).

## SUMMARY OF FINDINGS

- Testing of soil within the southeastern portion of the former Verbeck Wrecking Yard (Site B) indicates the soil contaminants of potential concern (soil COPCs) include the following:

Gasoline-Range Hydrocarbons	Benzene
Diesel-Range Hydrocarbons	Total Naphthalenes
Motor Oil-Range Hydrocarbons	Carcinogenic PAHs
Arsenic	

The soil COPCs exceed soil (contact) cleanup levels (CULs) in one or more samples collected above the point of compliance [i.e. above a depth of 15 feet – WAC 173-340-740(6)(d)].

- Testing of groundwater samples from two on-site monitoring wells confirms that groundwater quality has not been adversely impacted from leaching of contaminated soils at the well locations. However, the site specific site hydrogeology, including groundwater flow directions, needs to be determined to assess whether Site B soil contamination has adversely impacted groundwater quality elsewhere beneath the site.
- In 2008, soils from Site B were excavated and stockpiled on-site. Portions of this soil contained GWP fill. A preliminary estimate indicates the soil stockpile contains approximately 6,000 to 6,500 cubic yards of material.
- Remaining soil contamination within the general Site B area appears to be derived from two sources. These include the GWP fill materials and the release of refined petroleum products, predominately motor oils. The volume of remaining GWP fill materials that exceed soil CULs is estimated to be approximately 2,000 to 3,000 in-situ cubic yards.

## BACKGROUND

In April and May 2008, Geotech Consultants, Inc. (Geotech) for RG Properties, a potential buyer, completed a geophysical survey, excavated/sampled twelve test pits and completed/sampled a number of direct-push borings (Figures 3 and 4). The Geotech report was never finalized and no test pit or boring logs are apparently available. Based on their sampling work, Geotech identified a number of areas with soil contamination (Figure 3).

Three of the Geotech test pits, TP-4, TP-5 and TP-6 were completed within Site B (Figures 3 and 4). Selected samples were analyzed for constituents typically associated with petroleum hydrocarbons. Soil samples from TP-4 detected relatively high

concentrations of oil range hydrocarbons (15,000 ppm) at a depth of 7-7.5 feet. Gasoline and diesel range hydrocarbons, xylene and naphthalene were also detected in soil samples from TP-4. These constituents were detected in samples from TP-5, but at generally lower concentrations and were not detected in samples from TP-6.

Shallow groundwater was observed in TP-5 and TP-6, but was not in TP-4. Geotech states that the groundwater did not appear to be contaminated. In May, groundwater samples were obtained from direct-push borings (Figure 4). The depth of the samples is not noted in the material provided by Geotech. Water samples from borings B6, B7 and B8 within the northern portion of Site B were sampled. Relatively high concentrations of gasoline range hydrocarbons (1,900 ppb), benzene (84 ppb), and naphthalene (3,700 ppb) were detected in the sample from B8. Toluene (5.4 ppb), ethylbenzene (77 ppb) and xylenes (70 ppb) were also detected. Lower concentrations of benzene (1.4 ppb) and naphthalene (3.7 ppb) were detected in the sample from B6 and no hydrocarbon constituents were detected in the sample from B7.

Based on information acquired from the site owner, it appears that Site B received an unknown quantity of impacted fill from Gas Works Park. A Snohomish County tax parcel map suggests that 10,000 cubic yards of oil impregnated fill may have been present near the southeast corner of the property at one time. The impacted fill, if derived from Gas Works Park, is believed to be associated with filling of a gully in the 1970s to bring the site to a level grade. The depth of fill was possibly as deep as 12 to 16 feet. A conversation on March 9, 2009 with Renee West (site owner representative), indicates the fill was end dumped near the southeast corner of the property and spread outward in a generally westward direction.

Randy Perkins of GreenCo was contracted by the site owner to complete remedial work during the summer months of 2008. GreenCo apparently excavated and stockpiled suspected impacted soil from Area B with the intent to remediate the soil using bioremediation. A review of air-photographs for March 6, 2009 indicates the excavation occurred in the southeast portion of the property as generally illustrated on Figure 2. The excavated soil currently lies within the western portion of the site and is covered by plastic (Figure 2). It is estimated that approximately 6,000 to 6,500 cubic yards of soil are contained in the stockpiles based on the area and thickness of the piles.

In August 2008, GreenCo collected samples from the excavated area. The samples were analyzed for a number of constituents including petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene and xylenes, polychlorinated biphenyls (PCBs) and metals (lead, chromium, cadmium, arsenic and mercury).

In September 2008, on behalf of the City of Seattle (owners of GWP), Floyd/Snider made a site visit and observed the potential presence of additional impacted soil in certain fill layers exposed on the side walls of the limits of the Site B excavation. Floyd/Snider

collected a number of soil samples from the biopile and of three locations in Site B. The soil samples were analyzed for semivolatile organic compounds (SVOCs).

Two monitoring wells were installed by GreenCo on the property in September 2008. Samples were obtained from the wells for analysis to assess whether site activities have impacted groundwater quality. Resource Protection Well Reports submitted to the Department of Ecology by the driller (ESM), indicate the wells to range in depth from 39 feet (BAF236) to 48 feet (BAF 235). Screens were reportedly set from 34 to 39 feet and 38 to 48 feet, below ground level. No geologic logs appear to have been prepared. Groundwater samples were collected and analyzed for PAHs and volatile organic compounds (VOCs). No PAHs or VOCs were detected in samples from these wells.

### **WORK COMPLETED – APRIL 2009**

Preliminary assessment work described in this report consisted of the following:

- Completing a field reconnaissance and preparing a site plan;
- Excavating and logging eighteen test pits;
- Collecting and analyzing soil samples from the test pits;
- Collecting and analyzing groundwater samples from two existing monitoring wells;
- Preparing this report.

### ***Site Layout***

A site plan was created using a differential GPS (Trimble GeoXT) to plot coordinates of visible site features (Figure 5). The general site includes a house, shop, stormwater drainage system and a number of stockpiles. The stockpiles include material excavated from the site (Covered Stockpile and Farmed Soil Stockpile). The farmed soil stockpile (or biopile) was created by GreenCo to assess the feasibility of using bioremediation to remediate soil containing contaminants believed to have originated from GWP. These materials were reportedly excavated from the area shown on Figures 2 and 6. In addition, the two wells installed in 2008 were located and plotted on the plan.

### ***Topography***

The eastern portion of the site is at a similar grade to the adjacent Bothell-Everett Highway (Figure 6). This grade benches out to the west in the vicinity of test pits TP-3 and -4. The top of slope at this grade carries north towards the former shop in the vicinity of Test Pits TP-4, -8, -9, and -15.

The central and southwestern explorations were lower than street grade by approximately eight feet. Test pits TP-1, -2, -5, -6, and -7 were advanced in this area which appeared to



be recently disturbed by excavation, reportedly by GreenCo. The depth of this excavation thinned/tapered to the west as evidenced by the presence of relic crushed rock from the original wrecking yard at grade in the vicinity of TP-1. A relatively new storm water line with new catch basins was observed that extended east to west from the vicinity of TP-8 to the west of TP-6. This pipe line was reportedly installed by GreenCo and ties into the existing system to the west.

The northern explorations were advanced across a topographic bench which sloped down to the southwest and was lower than street grade but higher than the central excavation. The majority of the surface was recently disturbed by earthwork, but the presence of relic crushed rock in the vicinity of TP-10, -13 and -14 suggest this area was closer to original wrecking yard grade.

### *Test Pit Excavations*

Test pit exploration locations were laid out to reflect the reported inclusion of GWP fill in the southeast corner of the site. The locations were based on historical information, aerial photographs showing former low-lying topography that would require fill, and the GreenCo excavation in 2008. Eighteen test pits were excavated on April 2 and 3, 2009 using a Komatsu PS-200 track-hoe operated by Wyser Construction.

Test pit locations are shown on Figures 5 and 6. Location coordinates are noted on the logs (Attachment A). Excavated soils were temporarily stockpiled adjacent to the excavation and segregated as clean or suspected contaminated, then backfilled in the same order as they were removed. As a practical matter, at locations where the contractor was not successful in preventing residual contaminated soils from remaining near the surface following backfilling (TP-4, -11, -16, -18), the backfilled test pit was covered with visqueen.

The test pits were sampled and logged in the field by Dave Cooper a licensed geologist with DOF using ASTM D-2488 as a general guide. Test pit logs are presented in Attachment A. Soil samples were collected using a stainless steel spoon directly from the test pit sidewall within four feet of the surface or from the track-hoe bucket at depths greater than four feet. Samples were placed in laboratory prepared containers. Samples were collected at discrete locations except for one sample collected from location TP-11. Sample TP-11 1/3 was taken as a sidewall scrape from one to three feet.

The sample depth interval indicated on the log and sample ID, represents a discrete location within plus and minus 0.5 feet of that depth (the samples were obtained over a depth interval of approximately one foot). Sample containers were labeled and placed in an iced cooler for transportation to ARI in Seattle, WA for analysis following standard chain-of-custody procedures.

## **SUBSURFACE CONDITIONS**

Surficial soils generally consisted of wet, gray to brown gravelly, silty, Sand fill or crushed rock that was generally disturbed by recent earthwork performed by GreenCo. At depth, a variety of fill soils consisting of fine to medium Sand or gravelly Sand with varying silt content were encountered across the entire area explored. Most explorations also contained debris consisting of wood, concrete, asphalt and metal within fill zones. Fill extended to depths of seven to seventeen feet below adjacent grade.

Fill soils containing visual evidence of potentially contaminated soil were observed in test pits TP-3, -4, -9, -11, -12, -16, -17 and -18. There were two general areas where visibly contaminated soil was encountered; the southeast corner (TP-3, -4 & -18) and the north (TP-11, -12, -16 and -17), separated by the GreenCo excavation, where no visual evidence was observed (TP-6, -7 and -8). These field observations indicated visually contaminated materials had been excavated/removed. The potentially contaminated fill material was generally granular in nature, mixed with other fill soils and more uniformly black as compared to other soil. In general, these soils appeared to consist of moist, black gravelly Sand with cinders, carbon black and a distinct odor of tar or naphthalene (moth balls). No non-aqueous phase liquid (NAPL) was observed associated with these soils at the exploration locations. The potentially visibly contaminated soil ranged in thickness from 0.5 feet to 4.5 feet. This material was covered by fill overburden ranging from 5 to 9 feet in the southeast, and 0.5 to 3 feet thick in the north.

Groundwater seepage was observed from five to twelve feet below ground surface at select locations. Generally groundwater was encountered in the northern test pits where granular native soils were relatively closer to the surface. In the majority of the southern test pits, where deeper and more varied fill soils were observed, groundwater was not observed within the depth of exploration.

## **RESULTS OF SOIL ANALYSES**

Based on the test pit logs and field observations, forty-one soil samples were selected for laboratory analysis. The samples were selected to provide a representative sample of the conditions observed in the test pits.

Soil samples were analyzed by Analytical Resources Inc. (ARI), Tukwila, Washington. The samples were analyzed for the following constituents:

- Gasoline Range Hydrocarbons – NWTPH-G
- Diesel and Motor Oil Range Hydrocarbons – NWTPH-Dx
- Volatile Organic Compounds (VOCs) – SW846 M. 8260B
- Semivolatile Organic Compounds (SVOCs) – SW846 M. 8270-D
- Metals (except mercury) – SW846 M. 6010B

- Mercury in soil – EPA 7471A

Soil sample results are summarized in Table 1. Laboratory data sheets are presented on CD in Attachment B.

A data quality review was completed by DMD Inc. (Attachment C). No soil data was qualified based on this review and the analytical results were found to be suitable for their intended purpose.

### ***Comparison to Cleanup Levels (CULs)***

CULs (based on soil contact) for both unrestricted and industrial site uses (WAC 173-340-740 and -745) were compiled from Ecology's CLARC on-line database. Method A values were used when available. When Method A values were not available, the analytical results were compared to Method B values. These values are applied above the point of compliance; that is soil located less than a depth of 15 feet below ground surface [WAC 173-340-740(6)(d)].

Consistent with Ecology guidance (Ecology 2007), concentrations of carcinogenic PAHs (cPAHs) were converted to a single concentration herein referred to as the benzo(a)pyrene equivalent concentration (BaPEq.). This approach accounts for the differences in toxicity of individual cPAHs. To make this conversion, individual cPAH concentrations are multiplied by a toxicity equivalency factor (TEF) and the results are summed for each sample. The summed converted concentration is compared to the soil CUL for benzo(a)pyrene. CPAHs and TEFs used in this analysis are listed below.

<b>cPAH</b>	<b>TEF</b>
Benzo(a)pyrene	1.0
Benzo(a)anthracene	0.1
Benzo(b)fluoranthene	0.1
Benzo(k)fluoranthene	0.1
Chrysene	0.01
Dibenzo(a,h)anthracene	0.1
Indeno(1,2,3-cd)pyrene	0.1

An initial screening comparison of the analytical results with soil CULs was made to identify contaminants of potential concern (COPCs) in soil. The end of Table 1 lists the maximum detected soil concentration along side the applicable CUL. Based on this comparison, COPCs are identified as follows.

### **Soil Contaminants of Potential Concern**

Gasoline-Range Hydrocarbons  
Diesel-Range Hydrocarbons  
Motor Oil-Range Hydrocarbons

Benzene  
Total Naphthalenes  
BaPEq.  
Arsenic

**Gasoline-Range Hydrocarbons.** Gasoline-range hydrocarbons (TPH-G) exceeded the Method A CUL of 30 mg/kg in soil samples from five locations (Figure 7). TPH-G concentrations above the CUL ranged between 45 mg/kg and 780 mg/kg. The highest concentration was detected in a sample from TP-18 collected at a depth of approximately ten feet.

**Diesel-Range Hydrocarbons.** Diesel-range hydrocarbons (TPH-D) exceeded the Method A CUL of 2,000 mg/kg in soil samples from five locations (Figure 8). TPH-D concentrations above the CUL ranged between 2,800 mg/kg and 7,500 mg/kg. The highest concentration was detected in a sample from TP-18 collected at a depth of approximately ten feet.

**Motor Oil-Range Hydrocarbons.** Motor oil-range hydrocarbons (TPH-O) exceeded the Method A CUL of 2,000 mg/kg in soil samples from seven locations (Figure 9). TPH-O concentrations above the CUL ranged between 2,300 mg/kg and 19,000 mg/kg. The highest concentration was detected in a sample from TP-12 collected at a depth of approximately three feet.

**Benzene.** Benzene exceeded the Method A CUL of 30 ug/kg in soil samples from three locations (Figure 10). Benzene concentrations above the CUL ranged between 36 ug/kg and 200 ug/kg. The highest concentration was detected in a sample from TP-18 collected at a depth of approximately ten feet.

**Total Naphthalenes.** Total naphthalenes include the sum of naphthalene, 1-methylnaphthalene and 2-methylnaphthalene concentrations (WAC 173-340-900, Table 740-1). Total naphthalenes exceeded the Method A CUL of 5,000 ug/kg in soil samples from five locations (Figure 11). Concentrations above the CUL ranged between 12,600 ug/kg and 536,000 ug/kg. The highest concentration was detected in a sample from TP-18 collected at a depth of approximately ten feet.

**BaPEq.** BaPEq. exceeded the Method A CUL of 100 ug/kg in soil samples from seven locations (Figure 12). Concentrations above the CUL ranged between 167 ug/kg and 13,7620 ug/kg. The highest concentration was detected in a sample from TP-4 collected at a depth of approximately six feet.

Deeper soil located at TP-1 had a BaPEq. concentrations of 207 ug/kg that is above the Method A CUL of 100 ug/kg. However, this sample was obtained below the soil contact point of compliance.

**Arsenic.** Arsenic exceeded the Method A CUL of 20 mg/kg in soil samples from two locations (Figure 13). Concentrations above the CUL ranged between 26 mg/kg and 70 mg/kg. The highest concentration was detected in a sample from TP-18 collected at a depth of approximately ten feet.

## GROUNDWATER SAMPLING AND RESULTS

Two monitoring wells were installed on September 22, 2008 by ESM for GreenCo. Resource Protection Well Reports filed with Ecology by the drilling contractor indicate the wells were given Unique Ecology Well IDTag Nos. of BAF235 and BAF236. However, data was not available in the field to differentiate between the wells. In this report the wells are designated MW-South and MW-North (Figure 6).

Well construction diagrams submitted to Ecology indicate the wells range in depth from 39 feet (BAF236) to 48 feet (BAF 235). No geologic logs were apparently prepared. The wells were installed using a hollow-stem auger and were constructed of 2-inch diameter, Schedule 40 PVC screen and riser pipe. Screens (0.010" slots) were reportedly set at depths of 34 to 39 feet and 38 to 48 feet. However, during the April 2009 sampling, well depths were measured to be approximately 37.7 to 37.8 feet (Table 2). Prior to sampling, water levels were measured to be 8.63 feet (MW-South) and 8.85 feet (MW-North) below the top of the PVC casing.

Previous sampling (September 2008) and analysis of samples from these wells did not detect the presence of PAHs or VOCs. To confirm these results, a second set of groundwater samples were obtained on April 13, 2009. The samples were collected using a small battery powered submersible pump using low-flow sampling methods. Purge water was pumped into a number of five gallon containers. After at least three casing volumes had been removed, samples were pumped directly into containers provided by the receiving laboratory (ARI). Samples for dissolved metals analysis were filtered in the field using an in-line 0.45 micron filter.

Groundwater samples were analyzed by Analytical Resources Inc. (ARI), Tukwila, Washington. The samples were analyzed for the following constituents:

- Gasoline Range Hydrocarbons – NWTPH-G
- Diesel and Motor Oil Range Hydrocarbons – NWTPH-Dx
- Volatile Organic Compounds (VOCs) – SW846 M. 8260B
- Semivolatile Organic Compounds (SVOCs) – SW846 M. 8270-D
- Metals (except mercury) – EPA 200.8 (total and dissolved)
- Mercury in groundwater – EPA 7470A (total and dissolved)

Samples for analysis of semivolatile organic compounds were centrifuged to remove any particulate matter prior to analysis. Groundwater sample results are summarized in Table 2. Laboratory data sheets are presented in Attachment B (on CD).

A data quality review was completed by DMD Inc. (Attachment C). No groundwater quality data was qualified based on this review and the analytical results were found to be suitable for their intended purpose.

The results of the groundwater sample analyses were compared to CULs developed using procedures in WAC 173-340-720 as summarized in Ecology's CLARC database. CULs are also listed in Table 2. The CULs are based on the drinking water ingestion exposure pathway. Method A values were used, when available. When Method A values were not available, the analytical results were compared to Method B values.

Bis(2-Ethylhexyl)phthalate (BEHP) was the only organic compound detected. BEHP was detected at a concentration of 0.7 ug/l in the sample from well MW-South. BEHP was not detected in the sample from MW-North at a reporting limit of 0.1 ug/l. These concentrations are well below the Method B CUL of 6.3 ug/l.

Arsenic, barium and nickel were the only metals detected. There was no appreciable difference between total and dissolved concentrations. As summarized in Table 2, the detected metals concentrations are well below applicable CULs.

Available CULs for the other analyzed constituents are also listed in Table 2. As summarized in Table 2, the reporting limits are equal to or well below the applicable CULs.

## **CONTAMINATED GWP FILL VOLUME**

A comparison of constituents detected in Site B soils indicates that constituents above CULs were likely derived from two sources; wrecking yard activities and imported GWP fill. The estimated fill areas based on available data are shown on Figure 14. Locations that appear to have been predominately impacted by wrecking yard activities (TP-12 and TP-16) are also shown on Figure 14. It appears that contamination above CULs in sample TP-9-3 is a mixture of both GWP fill and lubricating oil. A summary of analyzed constituents by material types is presented in Table 3.

Oily/tarry waste materials from MGPs and tar refinery's typically contain a suite of constituents. These constituents include PAHs and aromatic hydrocarbons (benzene, toluene, ethylbenzene and xylene). While refined petroleum products such as gasoline contain aromatic hydrocarbons, and diesel fuels and motor oils contain PAHs, MGP/tar refinery derived materials are enriched with naphthalenes and cPAHs compared to these other sources. Samples collected from test pits TP-3, TP-4, TP-9, TP-11, TP-17 and TP-

18 are interpreted to be derived predominately from GWP fill based on the presence of relatively high total naphthalene and BaPEq concentrations.

In contrast, samples that appear to have been impacted predominately by wrecking yard activities (TP-12 and TP-16) contain gasoline, diesel and/or motor oil range hydrocarbons, but do not contain detectable concentrations of total naphthalenes or BaPEq (cPAH) concentrations. For example, the highest motor oil-range hydrocarbon concentration of 19,000 mg/kg was detected in a sample collected at a depth of three feet from TP-12. In this same sample, PAHs were not detected. Furthermore, GC-FID chromatographic pattern traces are similar to diesel and motor oil petroleum products.

The north GWP fill area is estimated to be approximately 13,300 square feet in size (Figure 14). The approximate GWP fill interval ranged from 0.5 to 4.5 feet below existing grade at TP-11 and appears to thin in an eastward direction to approximately 3 to 3.5 feet at TP-9. For volume estimating purposes, one half of the area was assumed to be underlain by four feet of GWP fill and the remaining area by 0.5 feet of GWP fill. Based on these assumptions, an in-situ GWP fill volume of 1,000 to 1,500 in-situ cubic yards is estimated.

The south GWP fill area is estimated to be approximately 8,330 square feet in size (Figure 14). The approximate GWP fill interval ranged from 5 to 10 feet below existing grade at TP-4 and appears to thin in a southward direction to approximately 9.5 to 12 feet at TP-18 and 8 to 9 feet at TP-3. For volume estimating purposes, one half of the area was assumed to be underlain by five feet of GWP fill and the remaining area by 2.5 feet of GWP fill. Based on these assumptions, an in-situ GWP fill volume of 1,000 to 1,500 in-situ cubic yards is also estimated for the south GWP fill area.

## **RECOMMENDATIONS FOR ADDITIONAL SAMPLING**

This report presents the results of preliminary sampling directed at generally identifying the portion of the Verbeek site where GWP fill residues remain in subsurface soil. In our opinion, sufficient information is available to prepare a IRAP that could be submitted to Ecology for review and comment consistent with the VCP. As part of the IRAP, some additional testing would be recommended to assist in the remedial design and to further the characterization of site hydrogeology and groundwater quality conditions. It is anticipated this testing would generally include the following:

- Excavate and sample additional test pits at the approximate locations shown on Figure 15. The purpose of the sampling is to further refine the GWP fill remedial area, especially beneath the paved area to the east of the GreenCo excavation and adjacent to the south property line next to Gold's Gym. In addition, the quality of soil above a depth of fifteen feet in the vicinity of TP-1 would be further evaluated. Test pit excavation and sampling would be conducted using the same

procedures outlined in the Preliminary Assessment Plan. Soil samples would be analyzed by ARI using the same methods.

- The hydrogeology beneath the site and position of the existing wells with respect groundwater flow directions has not been assessed and will likely be required by Ecology as part of their voluntary cleanup program review. An additional well is required to assess flow directions. It is recommended that a well east of the GWP fill be drilled, logged, installed and sampled. The three well heads should be surveyed to a common datum and water level measurements made to assess groundwater flow directions. A groundwater sample from the well should be analyzed for the same parameters as the existing wells.

### **LIMITATIONS**

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

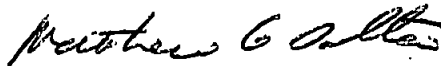
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*Dalton, Olmsted & Fuglevand, Inc.*



Matthew G. Dalton  
Sr. Consulting Hydrogeologist.



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- Attachment A – Test Pit Logs
- Attachment B – Laboratory Data Sheets (on CD)
- Attachment C – Data Quality Review (DMD Inc.)

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP1-3	DOF-TP1-18	DOF-TP2-3	DOF-TP2-9	DOF-TP3-3	DOF-TP3-8	DOF-TP3-12	DOF-TP4-4	DOF-TP4-6	DOF-TP4-8	DOF-TP5-3
Date	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09
<b>Petroleum Hydrocarbons (mg/kg)</b>											
Gasoline Range	<7.8	<7.5	<7.7	<7.6	<6.3	45	<6.5	<6.2	49	<6.9	<8.0
Type	---	---	---	---	---	GRO	---	---	GRO	---	---
Diesel Range	<5.9	15	<5.9	7.6	<5.4	3700	8.7	<5.3	5000	7.6	57
Motor Oil Range	13	39	12	<12	<11	3100	18	<10	3900	14	220
Type	RRO	DRO/MO	RRO	DRO	---	DRO/RRO	DRO/RRO	---	DRO/RRO	DRO/RRO	DRO/MO
<b>VOCs (ug/kg)</b>											
Benzene	<1.0	<1.0	<1.0	<1.0	<0.9	45	<1.0	<1.0	7.2	<1.1	<1.2
Toluene	<1.0	<1.0	<1.0	<1.0	<0.9	41	1.3	<1.0	6.7	<1.1	1.2
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.9	370	<1.0	<1.0	15	<1.1	<1.2
m,p-Xylenes	<1.0	<1.0	<1.0	<1.0	<0.9	330	1.4	<1.0	90	<1.1	<1.2
o-Xylene	<1.0	<1.0	<1.0	<1.0	<0.9	530	1.7	<1.0	140	<1.1	<1.2
<b>SVOCs (ug/kg)</b>											
<b>Non-Carcinogenic PAHs</b>											
Naphthalene	<66	100	<65	<63	<59	61000	<58	<58	190000	7100	<64
2-Methylnaphthalene	<66	<59	<65	<63	<59	16000	<58	<58	50000	3200	<64
1-Methylnaphthalene	<66	<59	<65	<63	<59	15000	<58	<58	34000	2300	<64
Total Naphthalenes	---	100	---	---	---	92000	---	---	274000	12600	---
Acenaphthylene	<66	<59	<65	<63	<59	46000	<58	<58	44000	2800	<64
Acenaphthene	<66	<59	<65	<63	<59	4500	<58	<58	5100	1400	<64
Fluorene	<66	<59	<65	<63	<59	23000	<58	<58	25000	2600	<64
Phenanthrene	<66	110	<65	<63	<59	260000	<58	<58	170000	20000	98
Anthracene	<66	<59	<65	<63	<59	29000	<58	<58	34000	3300	<64
Fluoranthene	<66	390	<65	<63	<59	370000	<58	<58	400000	20000	280
Pyrene	<66	410	<65	<63	<59	380000 J	<58	<58	410000 J	21000 J	280 J
Benzo(g,h,i)perylene	<66	170	<65	<63	<59	72000	<58	<58	72000 J	3300 J	<64
<b>Carcinogenic PAHs</b>											
Benzo(a)anthracene	<66	82	<65	<63	<59	60000	<58	<58	76000	4900	<64
Chrysene	<66	110	<65	<63	<59	77000	<58	<58	94000 J	5800 J	75
Benzo(b)fluoranthene	<66	96	<65	<63	<59	59000	<58	<58	83000	3500	<64
Benzo(k)fluoranthene	<66	100	<65	<63	<59	41000	<58	<58	48000	3300	<64
Benzo(a)pyrene	<66	160	<65	<63	<59	86000	<58	<58	110000	6200	<64
Indeno(1,2,3-cd)pyrene	<66	110	<65	<63	<59	50000	<58	<58	50000	2400	<64
Dibenzo(a,h)anthracene	<66	<59	<65	<63	<59	9400	<58	<58	9800	470	<64
Total PAHs (detected)	nd	1838	nd	nd	nd	1658900	nd	nd	1904900	113570	733
BaPeq. Sum	<50	203	<49	<48	<45	108710	<44	<44	137620	7715	49

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP1-3	DOF-TP1-18	DOF-TP2-3	DOF-TP2-9	DOF-TP3-3	DOF-TP3-8	DOF-TP3-12	DOF-TP4-4	DOF-TP4-6	DOF-TP4-8	DOF-TP5-3
Date	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09
<b>Other SOVCs</b>											
Phenol	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
2-Methylphenol	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
4-Methylphenol	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
2,4-Dimethylphenol	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
Dimethylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
Dibenzofuran	<66	<59	<65	<63	<59	2700	<58	<58	3500	280	<64
Diethylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
Carbazole	<66	<59	<65	<63	<59	5300	<58	<58	5400	240	<64
Di-n-butylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
Butylbenzylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
bis (2-Ethylhexyl)phthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
Di-n-octylphthalate	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
Retene	<66	<59	<65	<63	<59	<1900	<58	<58	<870	<63	<64
<b>Metals (mg/kg)</b>											
Arsenic	<10	<5	<6	<6	<5	11	<5	<5	26	<5	<6
Barium	107	71.6	101	85.3	47	94	61.1	45.2	172	60.5	132
Cadmium	<0.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	55	31.9	56	31.6	27.2	22.8	37.3	33.8	22.8	27.2	34.1
Lead	7	9	5	3	3	62	4	<2	53	3	238
Mercury	0.06	<0.05	0.07	<0.05	<0.04	0.09	0.06	<0.05	0.2	<0.05	0.22
Nickel	65	42	57	39	39	130	37	44	98	35	38
Zinc	66	53	58	42	38	63	38	43	55	40	91

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 — - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP5-8	DOF-TP6-2	DOF-TP6-6	DOF-TP7-1	DOF-TP7-3	DOF-TP8-4	DOF-TP8-8	DOF-TP9-2	DOF-TP9-3	DOF-TP9-7	DOF-TP10-2
Date	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/3/09
<b>Petroleum Hydrocarbons (mg/kg)</b>											
Gasoline Range	<8.8	<6.4	<7.3	<6.4	<5.7	<6.1	<7.2	<6.4	16	<5.9	<6.9
Type	---	---	---	---	---	---	---	---	GRO	---	---
Diesel Range	<6.2	<5.3	<5.4	7.6	<5.1	46	6.5	11	770	<5.5	<5.6
Motor Oil Range	<12	<11	14	19	<10	200	12	30	3000	<10	<11
Type	---	---	RRO	DRO/MO	---	DRO/MO	DRO/RRO	DRO/MO	Di/MO	---	---
<b>VOCs (ug/kg)</b>											
Benzene	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	<1.1	<1.0	<0.9
Toluene	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	1.3	<1.0	<0.9
Ethylbenzene	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	2.0	<1.0	<0.9
m,p-Xylenes	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	3.2	<1.0	<0.9
o-Xylene	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.1	2.2	<1.0	<0.9
<b>SVOCs (ug/kg)</b>											
<b>Non-Carcinogenic PAHs</b>											
Naphthalene	<59	<56	<61	<57	<65	<56	<60	<60	1800	<67	<64
2-Methylnaphthalene	<59	<56	<61	<57	<65	<56	<60	<60	960	<67	<64
1-Methylnaphthalene	<59	<56	<61	<57	<65	<56	<60	<60	1000	<67	<64
Total Naphthalenes	---	---	---	---	---	---	---	---	3760	---	---
Acenaphthylene	<59	<56	<61	<57	<65	<56	<60	<60	1300	<67	<64
Acenaphthene	<59	<56	<61	<57	<65	<56	<60	<60	540	<67	<64
Fluorene	<59	<56	<61	<57	<65	<56	<60	<60	1100	<67	<64
Phenanthrene	<59	<56	<61	<57	<65	68	<60	<60	8000	<67	<64
Anthracene	<59	<56	<61	<57	<65	<56	<60	<60	1600	<67	<64
Fluoranthene	<59	<56	<61	130	<65	120	<60	210	11000	<67	<64
Pyrene	<59	<56	<61	140	<65	110	<60	250	11000	<67	<64
Benzo(g,h,i)perylene	<59	<56	<61	<57	<65	<56	<60	150	3700	<67	<64
<b>Carcinogenic PAHs</b>											
Benzo(a)anthracene	<59	<56	<61	<57	<65	<56	<60	67	3400	<67	<64
Chrysene	<59	<56	<61	<57	<65	<56	<60	94	4600	<67	<64
Benzo(b)fluoranthene	<59	<56	<61	<57	<65	<56	<60	93	3200	<67	<64
Benzo(k)fluoranthene	<59	<56	<61	<57	<65	<56	<60	77	3500	<67	<64
Benzo(a)pyrene	<59	<56	<61	<57	<65	<56	<60	130	5400	<67	<64
Indeno(1,2,3-cd)pyrene	<59	<56	<61	<57	<65	<56	<60	96	2700	<67	<64
Dibenzo(a,h)anthracene	<59	<56	<61	<57	<65	<56	<60	<60	430	<67	<64
Total PAHs (detected)	nd	nd	nd	270	nd	298	nd	1167	65230	nd	nd
BaPeq. Sum	<45	<42	<46	<43	<49	<42	<45	167	6769	<51	<48

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP5-8	DOF-TP6-2	DOF-TP6-6	DOF-TP7-1	DOF-TP7-3	DOF-TP8-4	DOF-TP8-8	DOF-TP9-2	DOF-TP9-3	DOF-TP9-7	DOF-TP10-2
Date	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/2/09	4/3/09
<b>Other SOVCs</b>											
Phenol	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
2-Methylphenol	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
4-Methylphenol	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
2,4-Dimethylphenol	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
Dimethylphthalate	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
Dibenzofuran	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
Diethylphthalate	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
Carbazole	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
Di-n-butylphthalate	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
Butylbenzylphthalate	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
bis (2-Ethylhexyl)phthalate	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
Di-n-octylphthalate	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
Retene	<59	<56	<61	<57	<65	<56	<60	<60	<190	<67	<64
<b>Metals (mg/kg)</b>											
Arsenic	<6	<5	<5	<5	<5	<5	<6	<5	<5	<5	<6
Barium	101	52.1	77.3	83	52.2	42	40.2	46.2	66	52.2	87.8
Cadmium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	55.3	29	40.6	36.1	26.5	18.1	19.6	23.7	27.3	30.2	44.9
Lead	5	3	5	6	<2	3	<2	<2	17	3	4
Mercury	0.08	<0.04	<0.05	<0.05	<0.04	<0.05	<0.05	<0.04	<0.04	<0.02	0.04
Nickel	60	39	46	43	34	27	27	31	33	36	51
Zinc	69	50	58	65	41	31	31	32	73	37	40

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 — - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP10-14	DOF-TP11-1/3	DOF-TP11-6	DOF-TP12-1	DOF-TP12-3	DOF-TP13-2	DOF-TP13-6	DOF-TP13-9	DOF-TP14-1.5	DOF-TP14-6	DOF-TP15-1.5
Date	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09
<b>Petroleum Hydrocarbons (mg/kg)</b>											
Gasoline Range	<7.4	360	<7.5	10	<6.2	<6.6	36	<8.4	<6.6	<6.3	<6.3
Type	---	GRO	---	GRO	---	---	GRO	---	---	---	---
Diesel Range	<5.7	3600	50	940	2800	9.5	350	<6.0	7.8	37	<5.2
Motor Oil Range	<11	2300	140	9800	19000	12	<13	<12	24	300	<10
Type	---	DRO/RRO	DRO/MO	DRO/MO	Di/MO	DRO/RRO	Di	---	DRO/MO	DRO/MO	---
<b>VOCs (ug/kg)</b>											
Benzene	<1.1	130	<1.2	<1.0	2.0	<1.1	<5.4	<1.2	<1.0	<1.0	<1.1
Toluene	<1.1	44	<1.2	<1.0	1.1	<1.1	<5.4	<1.2	<1.0	<1.0	<1.1
Ethylbenzene	<1.1	570	<1.2	<1.0	2.6	<1.1	<5.4	<1.2	<1.0	<1.0	<1.1
m,p-Xylenes	<1.1	590	<1.2	1.7	4.7	<1.1	<5.4	<1.2	<1.0	<1.0	<1.1
o-Xylene	<1.1	640	<1.2	<1.0	2.6	<1.1	<5.4	<1.2	<1.0	<1.0	<1.1
<b>SVOCs (ug/kg)</b>											
<b>Non-Carcinogenic PAHs</b>											
Naphthalene	<64	92000	220	<600	<78	<62	<65	<62	<62	<610	<60
2-Methylnaphthalene	<64	32000	85	<600	<78	<62	<65	<62	<62	<610	<60
1-Methylnaphthalene	<64	29000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Total Naphthalenes	---	153000	305	---	---	---	---	---	---	---	---
Acenaphthylene	<64	11000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Acenaphthene	<64	23000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Fluorene	<64	17000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Phenanthrene	<64	110000	150	<600	<78	<62	<65	<62	<62	<610	<60
Anthracene	<64	21000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Fluoranthene	<64	140000	150	<600	<78	<62	<65	<62	<62	<610	<60
Pyrene	<64	140000	140	630 J	<78	<62	<65	<62	<62	<610	<60
Benzo(g,h,i)perylene	<64	53000	<66	<600	<78	<62	<65	<62	<62	<610	<60
<b>Carcinogenic PAHs</b>											
Benzo(a)anthracene	<64	40000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Chrysene	<64	53000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Benzo(b)fluoranthene	<64	47000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Benzo(k)fluoranthene	<64	28000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Benzo(a)pyrene	<64	61000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Indeno(1,2,3-cd)pyrene	<64	35000	<66	<600	<78	<62	<65	<62	<62	<610	<60
Dibenzo(a,h)anthracene	<64	6400	<66	<600	<78	<62	<65	<62	<62	<610	<60
Total PAHs (detected)	nd	938400	745	630	nd	nd	nd	nd	nd	nd	nd
BaPeq. Sum	<48	77170	<50	<453	<59	<47	<49	<47	<47	<461	<45

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP10-14	DOF-TP11-1/3	DOF-TP11-6	DOF-TP12-1	DOF-TP12-3	DOF-TP13-2	DOF-TP13-6	DOF-TP13-9	DOF-TP14-1.5	DOF-TP14-6	DOF-TP15-1.5
Date	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09
<b>Other SOVCs</b>											
Phenol	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
2-Methylphenol	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
4-Methylphenol	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
2,4-Dimethylphenol	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
Dimethylphthalate	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
Dibenzofuran	<64	2400	<66	<600	<78	<62	<65	<62	<62	<610	<60
Diethylphthalate	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
Carbazole	<64	2400	<66	<600	<78	<62	<65	<62	<62	<610	<60
Di-n-butylphthalate	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
Butylbenzylphthalate	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
bis (2-Ethylhexyl)phthalate	<64	<1900	<66	1100	<78	<62	<65	<62	<62	<610	<60
Di-n-octylphthalate	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
Retene	<64	<1900	<66	<600	<78	<62	<65	<62	<62	<610	<60
<b>Metals (mg/kg)</b>											
Arsenic	<6	10	<6	<5	<5	<5	<7	<6	<5	<5	<5
Barium	42.3	283	73.8	1550	81.5	67	86.8	30.2	64.2	51.2	38.6
Cadmium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2
Chromium	24.1	27	30.8	14.9	25	31.9	29.2	21.1	28.6	26.6	20
Lead	<2	29	21	12	2	4	12	<2	4	9	<2
Mercury	<0.02	0.13	0.04	0.02	0.02	0.03	0.33	<0.02	0.03	0.04	<0.02
Nickel	32	49	36	17	35	44	34	31	35	30	27
Zinc	28	46	48	34	30	37	78	24	27	50	21

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 — - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Verbeek Site  
Bothell, WA

Number	DOF-TP15-10	DOF-TP16-1.5	DOF-TP16-3	DOF-TP17-2	DOF-TP17-5	DOF-TP18-4	DOF-TP18-10	DOF-TP18-13
Date	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09
<b>Petroleum Hydrocarbons (mg/kg)</b>								
Gasoline Range	<6.4	<6.6	<7.4	150	16	<5.5	780	<6.6
Type	---	---	---	GRO	GRO	---	GRO	---
Diesel Range	6.6	1000	9.4	600	48	<5.0	7500	<5.5
Motor Oil Range	<10	7800	38	370	110	<10	3900	<11
Type	DRO	DRO/MO	DRO/MO	DRO/RRO	DRO/MO	---	DRO/RRO	---
<b>VOCs (ug/kg)</b>								
Benzene	<1.0	<1.1	<1.0	2.5	<1.0	<1.0	200	<1.0
Toluene	<1.0	<1.1	<1.0	12	<1.0	<1.0	120	<1.0
Ethylbenzene	<1.0	2.0	<1.0	170	<1.0	<1.0	910	<1.0
m,p-Xylenes	<1.0	6.9	<1.0	220	<1.0	<1.0	1200	<1.0
o-Xylene	<1.0	1.7	<1.0	150	<1.0	<1.0	2300	<1.0
<b>SVOCs (ug/kg)</b>								
<b>Non-Carcinogenic PAHs</b>								
Naphthalene	<61	<190	<65	170000	<63	<65	370000	<62
2-Methylnaphthalene	<61	<190	<65	53000	<63	<65	99000	<62
1-Methylnaphthalene	<61	<190	<65	32000	<63	<65	67000	<62
Total Naphthalenes	---	---	---	255000	---	---	536000	---
Acenaphthylene	<61	<190	<65	21000	<63	<65	97000	<62
Acenaphthene	<61	<190	<65	6300	<63	<65	8100	<62
Fluorene	<61	<190	<65	20000	<63	<65	66000	<62
Phenanthrene	<61	<190	<65	140000	<63	<65	260000	<62
Anthracene	<61	<190	<65	16000	<63	<65	41000	<62
Fluoranthene	<61	<190	<65	93000	<63	<65	320000	<62
Pyrene	<61	<190	<65	110000	<63	<65	330000	<62
Benzo(g,h,i)perylene	<61	<190	<65	22000 J	<63	<65	62000 J	<62
<b>Carcinogenic PAHs</b>								
Benzo(a)anthracene	<61	<190	<65	26000	<63	<65	60000	<62
Chrysene	<61	<190	<65	30000 J	<63	<65	71000 J	<62
Benzo(b)fluoranthene	<61	<190	<65	20000	<63	<65	54000	<62
Benzo(k)fluoranthene	<61	<190	<65	18000	<63	<65	49000	<62
Benzo(a)pyrene	<61	<190	<65	36000	<63	<65	80000	<62
Indeno(1,2,3-cd)pyrene	<61	<190	<65	17000	<63	<65	53000	<62
Dibenzo(a,h)anthracene	<61	<190	<65	4400	<63	<65	12000	<62
Total PAHs (detected)	nd	nd	nd	834700	nd	nd	2099100	nd
BaPeq. Sum	<46	<143	<49	44840	<48	<49	103510	<47



**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Number	DOF-TP15-10	DOF-TP16-1.5	DOF-TP16-3	DOF-TP17-2	DOF-TP17-5	DOF-TP18-4	DOF-TP18-10	DOF-TP18-13
Date	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09
<b>Other SOVCs</b>								
Phenol	<61	<190	<65	<620	<63	<65	<1800	<62
2-Methylphenol	<61	<190	<65	<620	<63	<65	<1800	<62
4-Methylphenol	<61	<190	<65	<620	<63	<65	<1800	<62
2,4-Dimethylphenol	<61	<190	<65	<620	<63	<65	<1800	<62
Dimethylphthalate	<61	<190	<65	<620	<63	<65	<1800	<62
Dibenzofuran	<61	<190	<65	2200	<63	<65	6300	<62
Diethylphthalate	<61	<190	<65	<620	<63	<65	<1800	<62
Carbazole	<61	<190	<65	3200	<63	<65	8500	<62
Di-n-butylphthalate	<61	<190	<65	<620	<63	<65	<1800	<62
Butylbenzylphthalate	<61	<190	<65	<620	<63	<65	<1800	<62
bis (2-Ethylhexyl)phthalate	<61	990	<65	<620	<63	<65	<1800	<62
Di-n-octylphthalate	<61	<190	<65	<620	<63	<65	<1800	<62
Retene	<61	<190	<65	<620	160	<65	<2000	<62
<b>Metals (mg/kg)</b>								
Arsenic	<6	<5	<5	<5	<5	<5	70	<5
Barium	48	66	74.6	61	79.9	43	435	421
Cadmium	<0.2	<0.2	<0.2	<0.2	0.3	<0.2	<0.6	<0.2
Chromium	22.8	27.1	32.4	30.7	30.1	38.8	37	6.6
Lead	<2	13	19	17	61	3	139	<2
Mercury	<0.02	0.04	0.04	0.04	0.04	<0.02	1.63	<0.04
Nickel	28	36	40	37	36	43	302	10
Zinc	24	45	42	45	88	41	88	9

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 — - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Number	Maximum Conc	Unrestricted CUL	Industrial CUL	Risk Pathway
Date				
<b>Petroleum Hydrocarbons (mg/kg)</b>				
Gasoline Range	780	30/100 (A)(1)	30/100 (A)(1)	GW Quality
Type	---	---	---	
Diesel Range	7500	2000 (A)	2000 (A)	GW Quality
Motor Oil Range	19000	2000 (A)	2000 (A)	GW Quality
Type	---	---	---	
<b>VOCs (ug/kg)</b>				
Benzene	200	30 (A)	30 (A)	GW Quality
Toluene	120	7000 (A)	7000 (A)	GW Quality
Ethylbenzene	910	6000 (A)	6000 (A)	GW Quality
m,p-Xylenes	1200	9000 (A)	9000 (A)	GW Quality
o-Xylene	2300	9000 (A)	9000 (A)	GW Quality
<b>SVOCs (ug/kg)</b>				
<b>Non-Carcinogenic PAHs</b>				
Naphthalene	370000	---	---	---
2-Methylnaphthalene	99000	---	---	---
1-Methylnaphthalene	67000	---	---	---
Total Naphthalenes	536000	5000 (A)	5000 (A)	GW Quality
Acenaphthylene	97000	---	---	---
Acenaphthene	23000	4800000 (B)	210000000 (C)	Soil Contact
Fluorene	66000	3200000 (B)	140000000 (C)	Soil Contact
Phenanthrene	260000	---	---	---
Anthracene	41000	24000000 (B)	1100000000 (C)	Soil Contact
Fluoranthene	400000	3200000 (B)	140000000 (C)	Soil Contact
Pyrene	410000	2400000 (B)	110000000 (C)	Soil Contact
Benzo(g,h,i)perylene	72000	---	---	---
<b>Carcinogenic PAHs</b>				
Benzo(a)anthracene	76000	---	---	---
Chrysene	94000	---	---	---
Benzo(b)fluoranthene	83000	---	---	---
Benzo(k)fluoranthene	49000	---	---	---
Benzo(a)pyrene	110000	100 (A)	2000 (A)	Soil Contact
Indeno(1,2,3-cd)pyrene	53000	---	---	---
Dibenzo(a,h)anthracene	12000	---	---	---
Total PAHs (detected)	2099100	---	---	---
BaPeq. Sum	137620	100 (A)	2000 (A)	Soil Contact

**TABLE 1 - Summary of Soil Quality Data (April 2009)**

Number	Maximum Conc	Unrestricted CUL	Industrial CUL	Risk Pathway
Date				
<b>Other SOVCs</b>				
Phenol	<1900	48000000 (B)	2100000000 (C)	Soil Contact
2-Methylphenol	<1900	-----	-----	-----
4-Methylphenol	<1900	-----	-----	-----
2,4-Dimethylphenol	<1900	1600000 (B)	70000000 (C)	Soil Contact
Dimethylphthalate	<1900	80000000 (B)	3500000000 (C)	Soil Contact
Dibenzofuran	<b>6300</b>	160000 (B)	7000000 (C)	Soil Contact
Diethylphthalate	<1900	64000000 (B)	2800000000 (C)	Soil Contact
Carbazole	<b>8500</b>	50000 (B)	6600000 (C)	Soil Contact
Di-n-butylphthalate	<1900	8000000 (B)	350000000 (C)	Soil Contact
Butylbenzylphthalate	<1900	16000000 (B)	700000000 (C)	Soil Contact
bis (2-Ethylhexyl)phthalate	<b>1100</b>	71000 (B)	9400000 (C)	Soil Contact
Di-n-octylphthalate	<1900	1600000 (B)	70000000 (C)	Soil Contact
Retene	<b>160</b>	-----	-----	-----
<b>Metals (mg/kg)</b>				
Arsenic	<b>70</b>	20 (A)	20 (A)	Background
Barium	<b>1550</b>	-----	-----	-----
Cadmium	<b>0.6</b>	2 (A)	2 (A)	GW Quality
Chromium	<b>56</b>	19(IV);2000(III) (A)	19(IV);2000(III) (A)	GW Quality
Lead	<b>238</b>	250 (A)	1000 (A)	Soil Contact
Mercury	<b>1.63</b>	2 (A)	2 (A)	GW Quality
Nickel	<b>302</b>	1600 (B)	70000 (C)	Soil Contact
Zinc	<b>91</b>	24000 (B)	1100000 (C)	Soil Contact

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level  
 ----- - Not available  
 (A) - Method A CUL; (B) - Method B CUL; (C) - Method C CUL  
 GRO - Does not match identifiable gasoline pattern  
 Di - Pattern matches diesel fuel pattern  
 MO - Pattern matches motor oil pattern  
 DRO/RRO - Pattern is not identifiable  
 (1) - TPH-G CUL; 30 mg/kg with benzene present; 100 mg/kg without benzene present and sum of toluene, ethylbenzene and xylenes less than 1% of mixture.  
 Analyses completed by ARI, Tukwila, WA

TABLE 2 - Summary of Groundwater Quality Data (April 2009)

Verbeek Site  
Bothell, WA

Number	MW-South	MW-North	CULs
Date	4/13/2009	4/13/2009	
<b>Field Parameters</b>			
Well Depth (feet TOC)	37.8	37.7	----
Water Level (feet TOC)	8.63	8.85	----
pH	6.7	6.6	----
Electrical Conductivity (uS)	288	262	----
Temperature (C)	12.2	11.9	----
Turbidity (NTU)	3.8	1.4	----
Dissolved Oxygen (mg/l)	0.68	0.55	----
<b>Petroleum Hydrocarbons (mg/l)</b>			
Gasoline Range	<0.25	<0.25	1000 (A)
Type	----	----	----
Diesel Range	<0.25	<0.25	500 (A)
Motor Oil Range	<0.5	<0.5	500 (A)
Type	----	----	----
<b>VOCs (ug/l)</b>			
Benzene	<0.2	<0.2	5 (A)
Toluene	<0.2	<0.2	1000 (A)
Ethylbenzene	<0.2	<0.2	700 (A)
m,p-Xylenes	<0.4	<0.4	1000 (A)
o-Xylene	<0.2	<0.2	1000 (A)
<b>SVOCs (ug/l)</b>			
<b>Non-Carcinogenic PAHs</b>			
Naphthalene	<0.1	<0.1	----
2-Methylnaphthalene	<0.1	<0.1	----
1-Methylnaphthalene	<0.1	<0.1	----
Total Naphthalenes	<0.1	<0.1	160 (A)
Acenaphthylene	<0.1	<0.1	----
Acenaphthene	<0.1	<0.1	960 (B)
Fluorene	<0.1	<0.1	640 (B)
Phenanthrene	<0.1	<0.1	----
Anthracene	<0.1	<0.1	4800 (B)
Fluoranthene	<0.1	<0.1	640 (B)
Pyrene	<0.1	<0.1	480 (B)
Benzo(g,h,i)perylene	<0.1	<0.1	----
<b>Carcinogenic PAHs</b>			
Benzo(a)anthracene	<0.1	<0.1	----
Chrysene	<0.1	<0.1	----
Benzo(b)fluoranthene	<0.1	<0.1	----
Benzo(k)fluoranthene	<0.1	<0.1	----
Benzo(a)pyrene	<0.1	<0.1	0.1 (A)
Indeno(1,2,3-cd)pyrene	<0.1	<0.1	----
Dibenzo(a,h)anthracene	<0.1	<0.1	----
BaPeq. Sum	nd	nd	0.1 (A)
Total PAHs (detected)	nd	nd	----

TABLE 2 - Summary of Groundwater Quality Data (April 2009)

Verbeek Site  
Bothell, WA

Number	MW-South	MW-North	CULs
Date	4/13/2009	4/13/2009	
<b>Other SOVCs</b>			
Phenol	<0.1	<0.1	4800 (B)
2-Methylphenol	<0.1	<0.1	-----
4-Methylphenol	<0.1	<0.1	-----
2,4-Dimethylphenol	<0.1	<0.1	160 (B)
Dimethylphthalate	<0.1	<0.1	16000 (B)
Dibenzofuran	<0.1	<0.1	320 (B)
Diethylphthalate	<0.1	<0.1	13000 (B)
Carbazole	<0.1	<0.1	4.4 (B)
Di-n-butylphthalate	<0.1	<0.1	1600 (B)
Butylbenzylphthalate	<0.1	<0.1	3200 (B)
bis (2-Ethylhexyl)phthalate	0.7	<0.1	6.3 (B)
Di-n-octylphthalate	<0.1	<0.1	320 (B)
Retene	<0.1	<0.1	-----
<b>Total Metals (ug/l)</b>			
Arsenic	0.9	0.5	5 (A)
Barium	10.2	12	3200 (B)
Cadmium	<0.2	<0.2	5 (A)
Chromium	<1	<1	50 (A)
Lead	<1	<1	15 (A)
Mercury	<0.1	<0.1	2 (A)
Nickel	0.7	1.1	320 (B)
Zinc	<4	<4	4800 (B)
<b>Dissolved Metals (ug/l)</b>			
Arsenic	0.9	0.5	5 (A)
Barium	10.4	11.7	3200 (B)
Cadmium	<0.2	<0.2	5 (A)
Chromium	<1	<1	50 (A)
Lead	<1	<1	15 (A)
Mercury	<0.1	<0.1	2 (A)
Nickel	0.7	1.1	320 (B)
Zinc	<4	<4	4800 (B)

Notes: < - Less than indicated value  
 J - Estimated value  
 nd - Not detected  
 CUL - Cleanup Level (CLARC)  
 ----- - Not available  
 (A) - Method A CUL; (B) - Method B CUL  
 Analyses completed by ARI, Tukwila, WA

**TABLE 3 - Location of Sample Exceedances**

**Locations With GWP Fill Exceedances**

Constituent	TP1-18	TP3-8	TP4-6	TP4-8	TP9-2	TP9-3	TP11 1/3	TP17-2	TP18-10
GRO	nd	X	X	nd	nd	—	X	X	X
DRO	—	X	X	—	—	—	X	—	X
RRO	—	X	X	—	—	(1)	X	—	X
Benzene	nd	X	—	nd	nd	nd	X	—	X
Total Naphtahlenes	—	X	X	X	nd	—	X	X	X
BaPEq.	X	X	X	X	X	X	X	X	X
Arsenic	nd	—	X	—	nd	nd	—	—	X

**Location With Petroleum Hydrocarbon Exceedances**

Constituent	TP12-1	TP12-3	TP13-6	TP16-1.5
TPH-G	—	nd	X	nd
DRO	—	X	—	—
RRO	X	X	nd	X
Benzene	nd	—	nd	nd
Total Naphtahlenes	nd	nd	nd	nd
BaPEq.	nd	nd	nd	nd
Arsenic	nd	nd	nd	nd

**Notes:** X - Exceedes CUL

— - Detected Below CUL

nd - Not detected

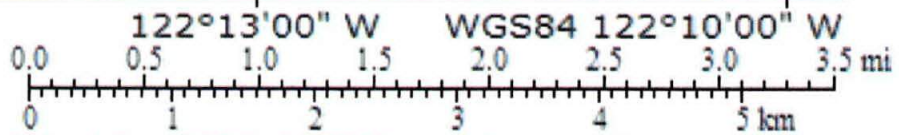
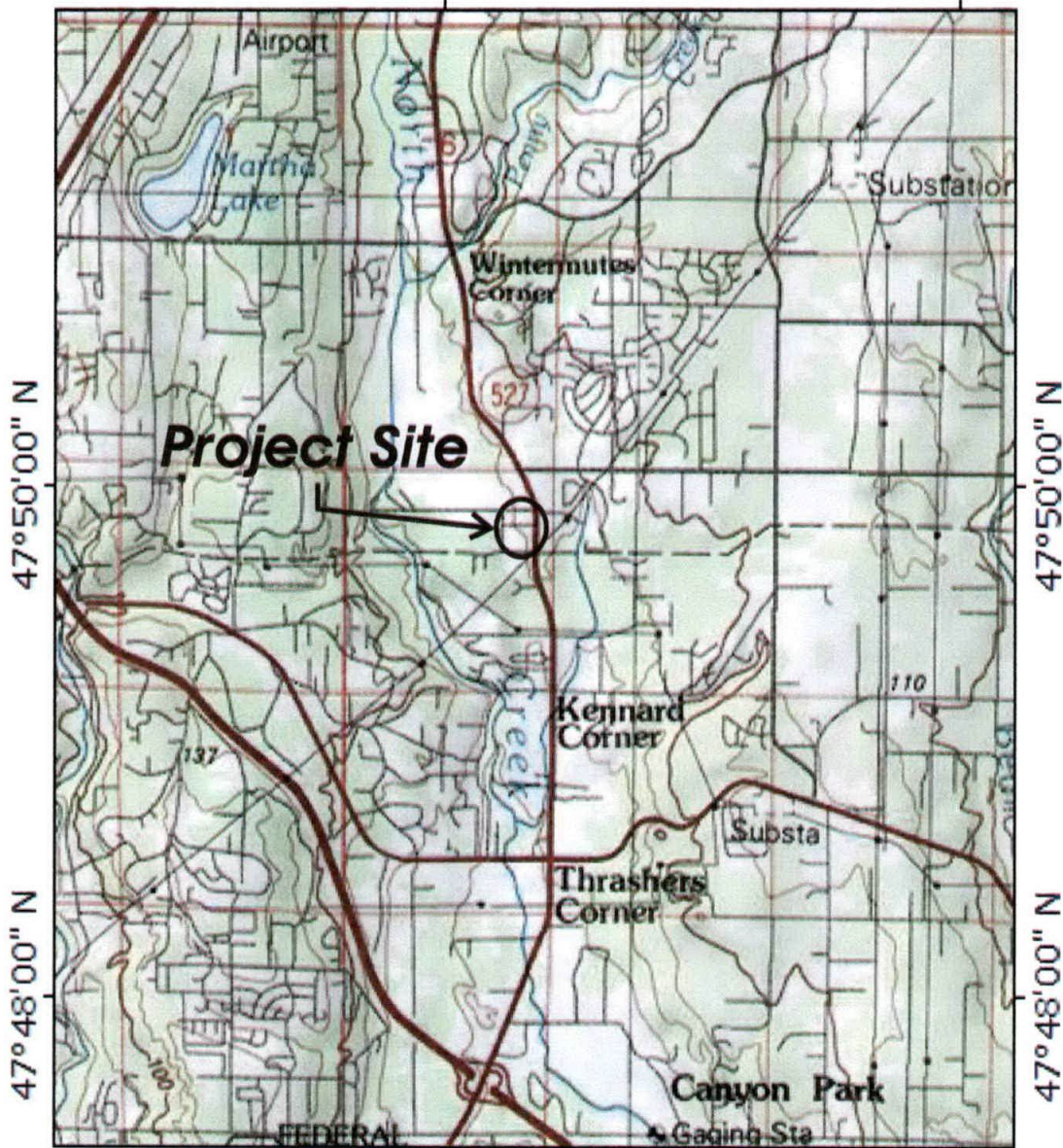
GRO - Gasoline Range Organics

DRO - Diesel Range Organics

RRO - Residual Oil (Motor Oil) Range Organics

(1) - GC-FID pattern indicates the presence of a lubricant oil, most likely motor oil

map printed on 03/20/09 from "Washington.tpo" and "Untitle  
122°13'00" W WGS84 122°10'00" W



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Former Verbeek Wrecking Yard  
Bothell, WA

Vicinity Map

PSE-004-00 **FIGURE 1** March 2009  
Dalton, Olmsted & Fuglevand, Inc.

Ref: Vicinity Map.cdr



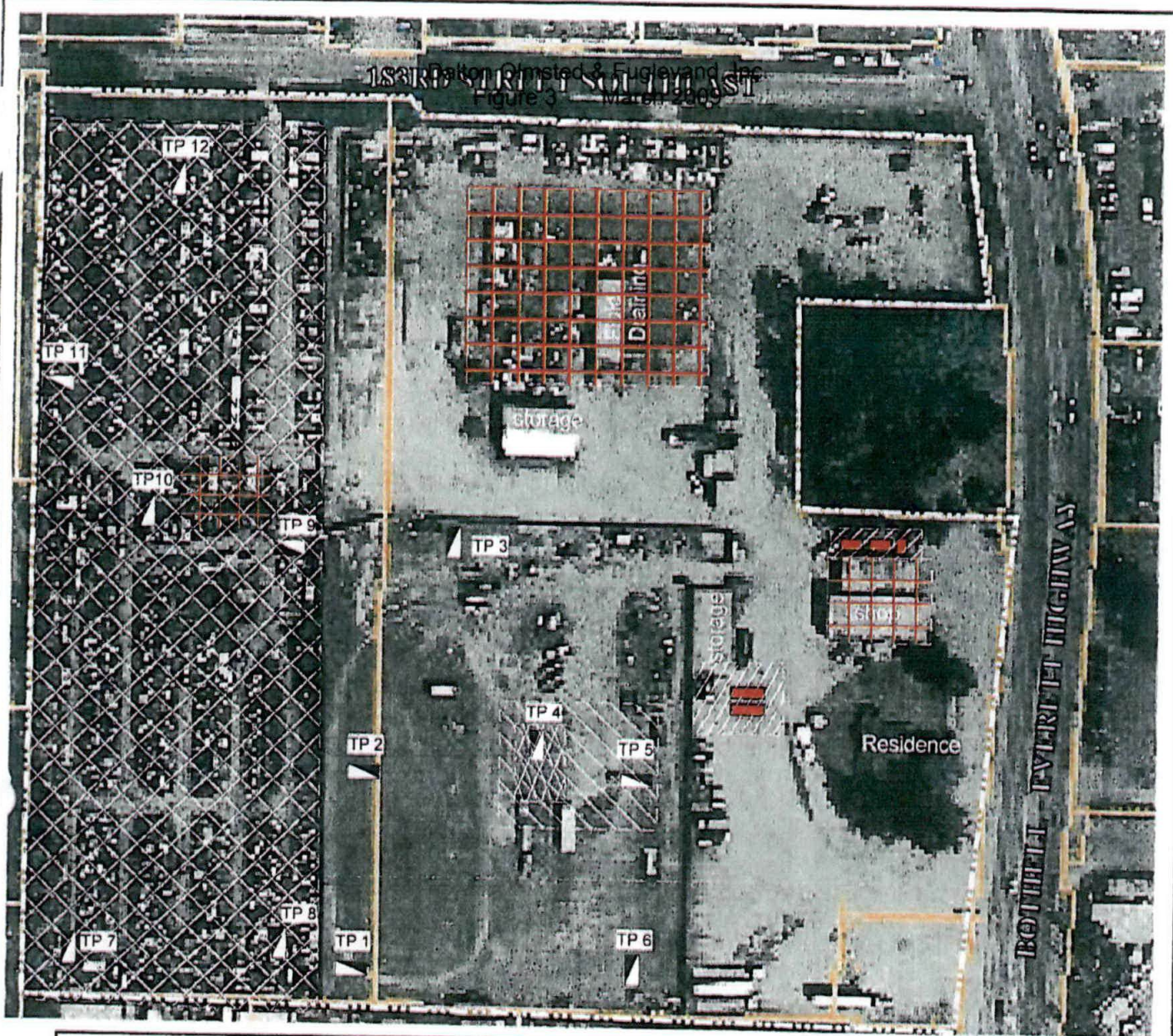
*Photo by Aequalis Photography  
3-6-09*











Verbeek Site B  
Bothell, Washington  
**Site Photo and Estimate of  
GreenCo Excavation Area**

PSE-004-00 **FIGURE 2** May 2009  
Dalton, Olmsted & Fuglevand, Inc.





**LEGEND:**

- 
**TP 1** Approximate Location of Geotech Consultants Test Pit, April 2008
- 
 1 Approximate shallow contamination (0 to 1 foot, boundaries not confirmed)
- 
 2 Approximate near surface contamination (0 to 5 feet, boundaries not confirmed)
- 
 3 Approximate mid depth contamination (4 to 10 feet, boundaries not confirmed)
- 
 4 Approximate deep contamination (5 to 10 feet, boundaries not confirmed)
- 
 Approximate project boundary
- 
 Inferred Direction of Shallow Groundwater Flow
- 
 Area of suspected groundwater contamination (boundaries not confirmed)



SOURCE: Snohomish County, 2005 Aerial

Scale 1" = 130'

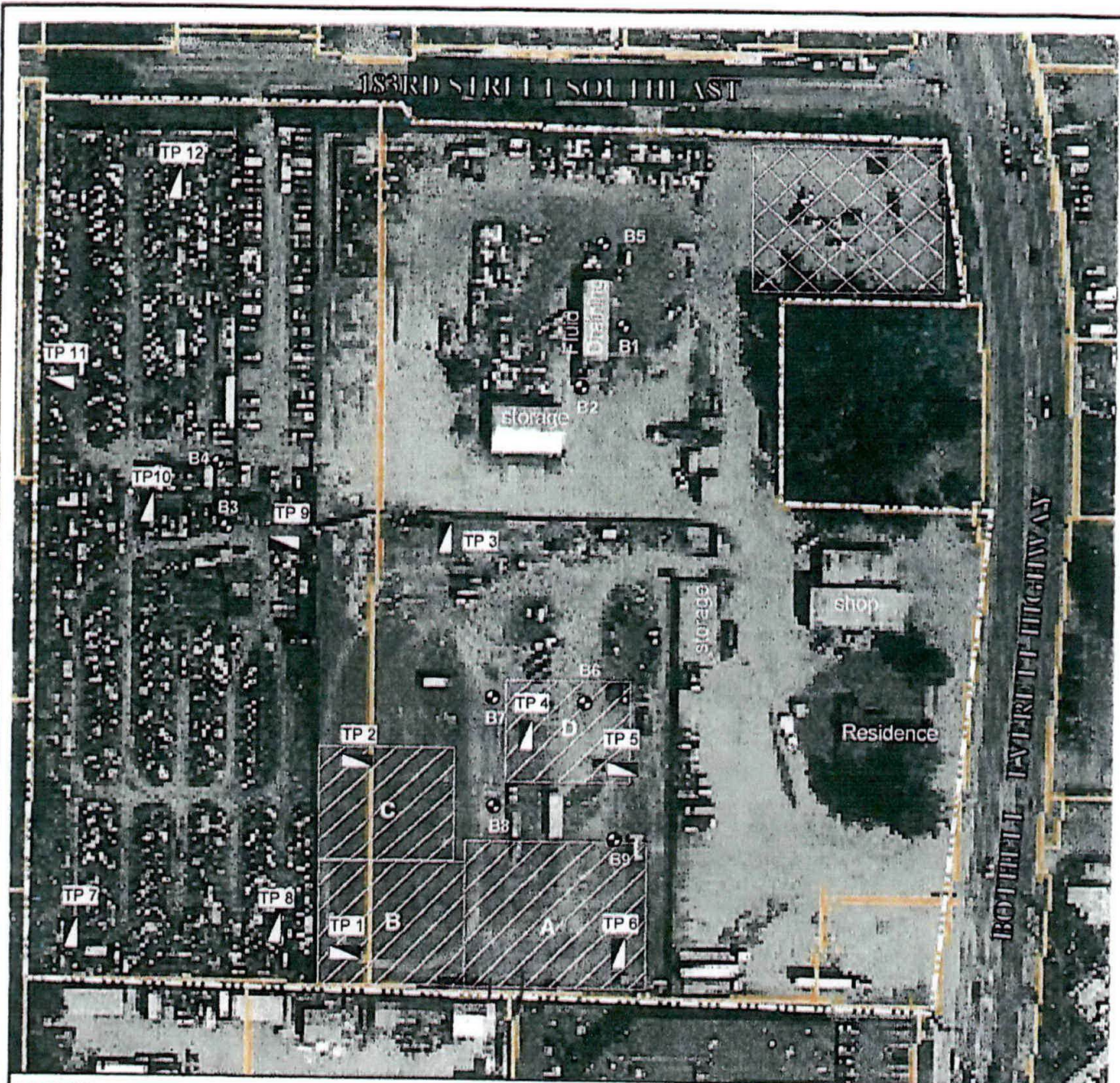


**GEOTECH**  
 CONSULTANTS, INC.  
 Dalton, Olmsted & Fuglevand, Inc.  
 Figure 3

**CONTAMINATED AREAS MAP**

Verbeek Wrecking  
 18416 Bothell - Everett Highway  
 Bothell, Washington

<b>Job No:</b> 08094E	<b>Date:</b> May 2008	<b>Plate:</b> 7
--------------------------	--------------------------	--------------------



**LEGEND:**

TP 1 Approximate location of test pit excavated, April 2008

Approximate location of direct push boring drilled May 2008.  
B1

Approximate project boundary

*with an* Inferred Direction of Shallow Groundwater Flow

Electromagnetic Profile Survey Area  
(refer to Appendix A of report for details)

Ground Penetrating Radar Survey Area  
(refer to Appendix A of report for details)



SOURCE: Snohomish County, 2005 Aerial

Scale 1" = 130'

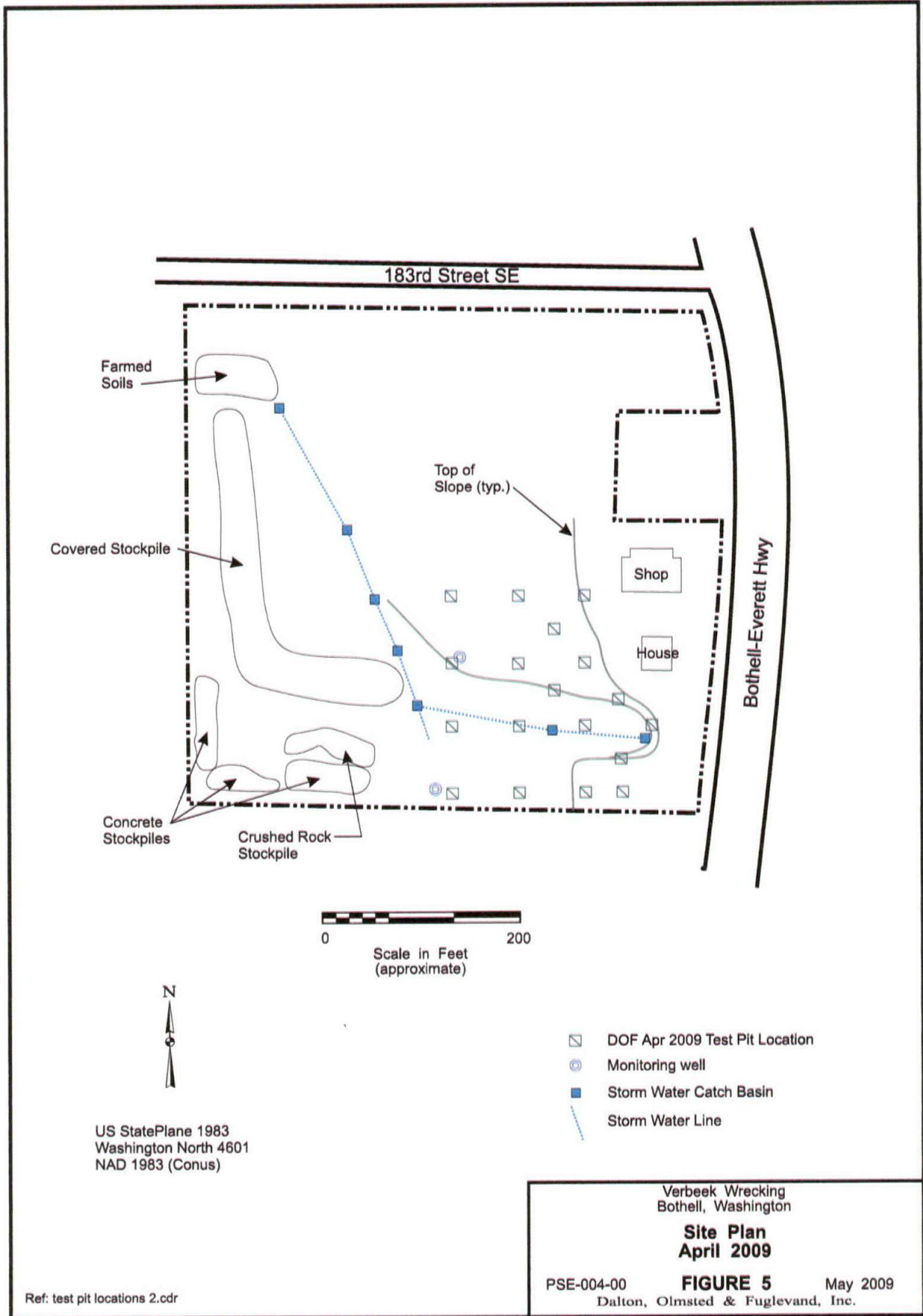


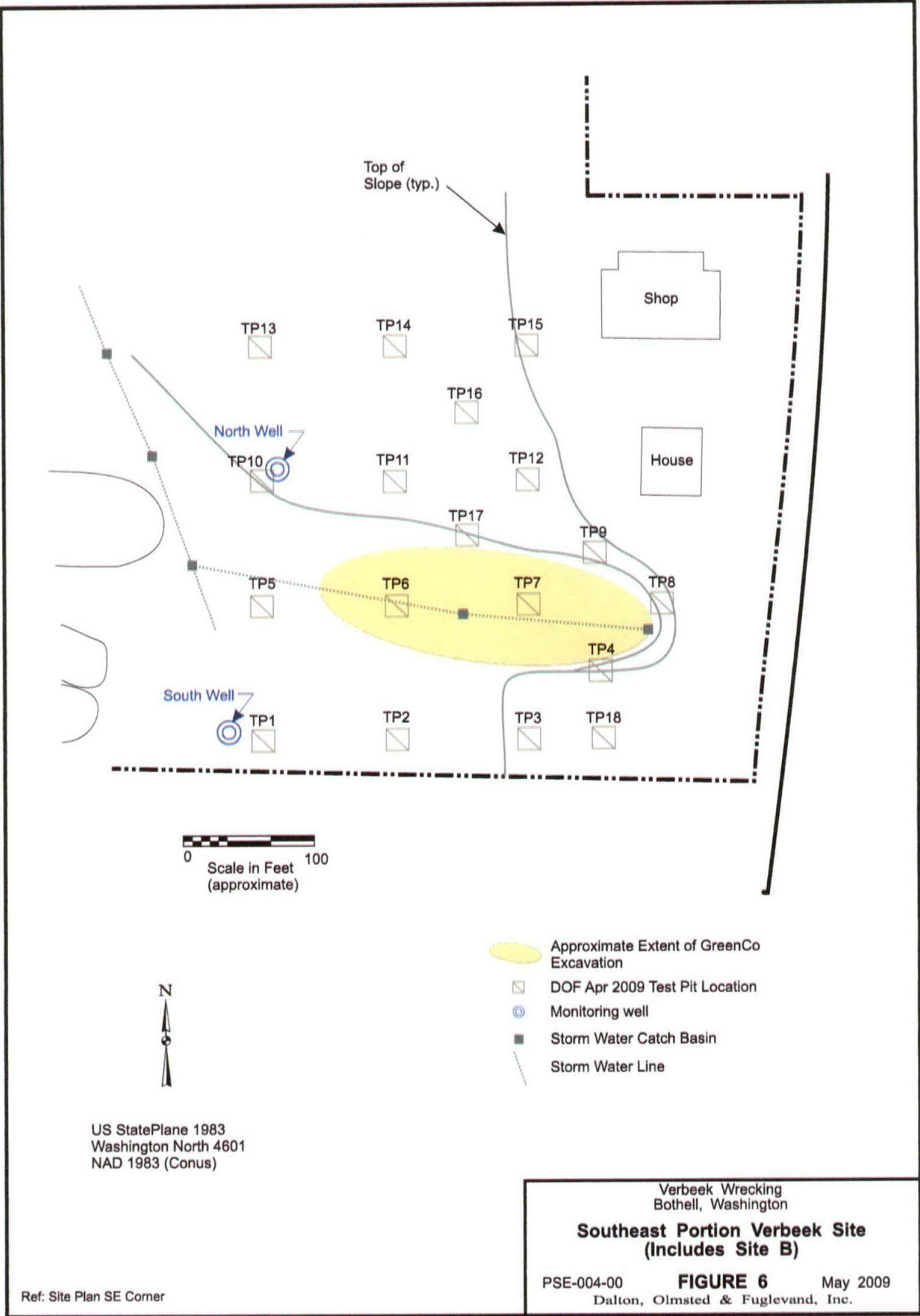
**GEOTECH**  
CONSULTANTS, INC.  
Dalton, Olmsted & Fuglevand, Inc.  
Figure 4

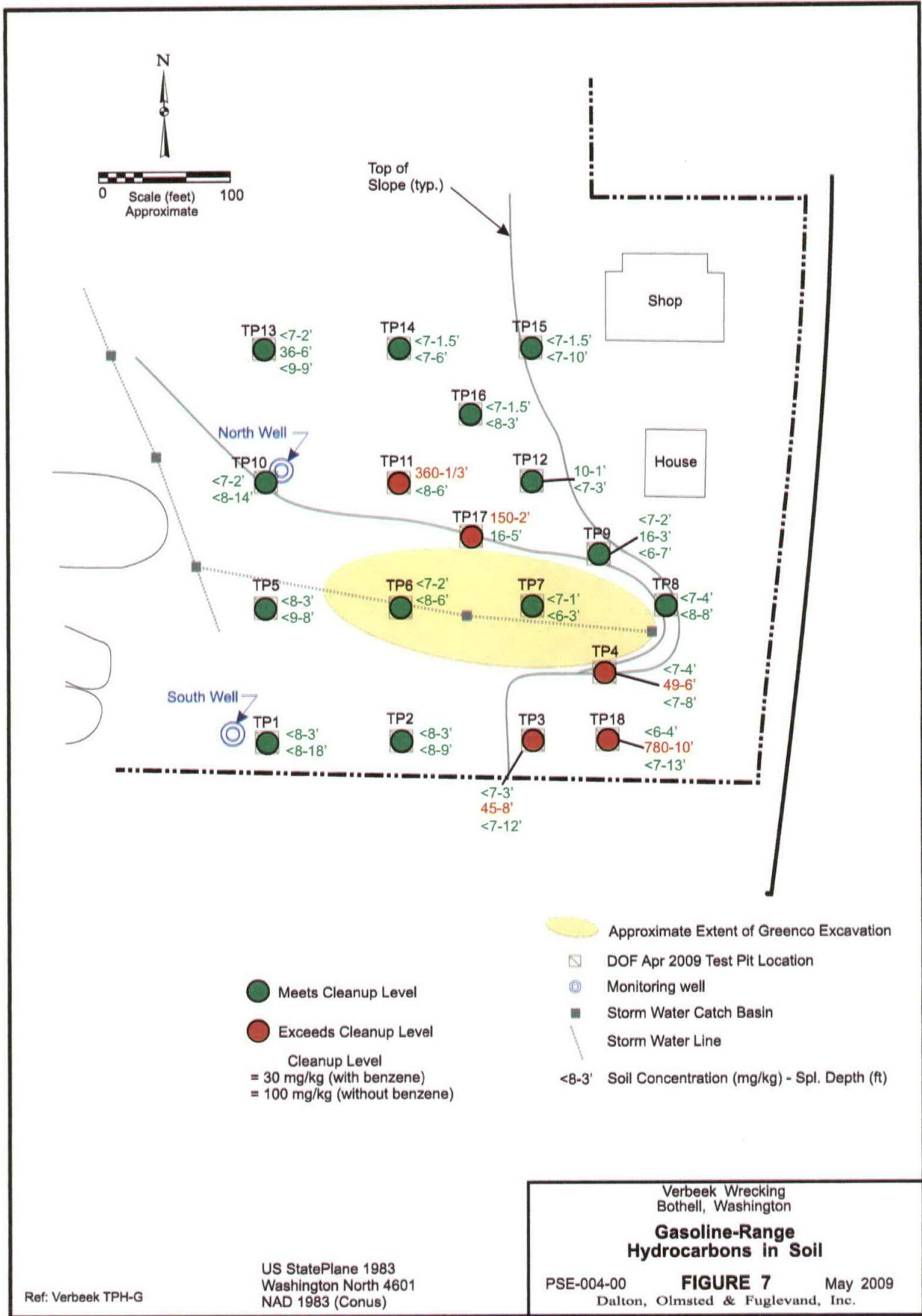
**SITE EXPLORATION PLAN**

Verbeek Wrecking  
18416 Bothell - Everett Highway  
Bothell, Washington

<b>Job No:</b> 08094E	<b>Date:</b> May 2008	<b>Plate:</b> 4
--------------------------	--------------------------	--------------------



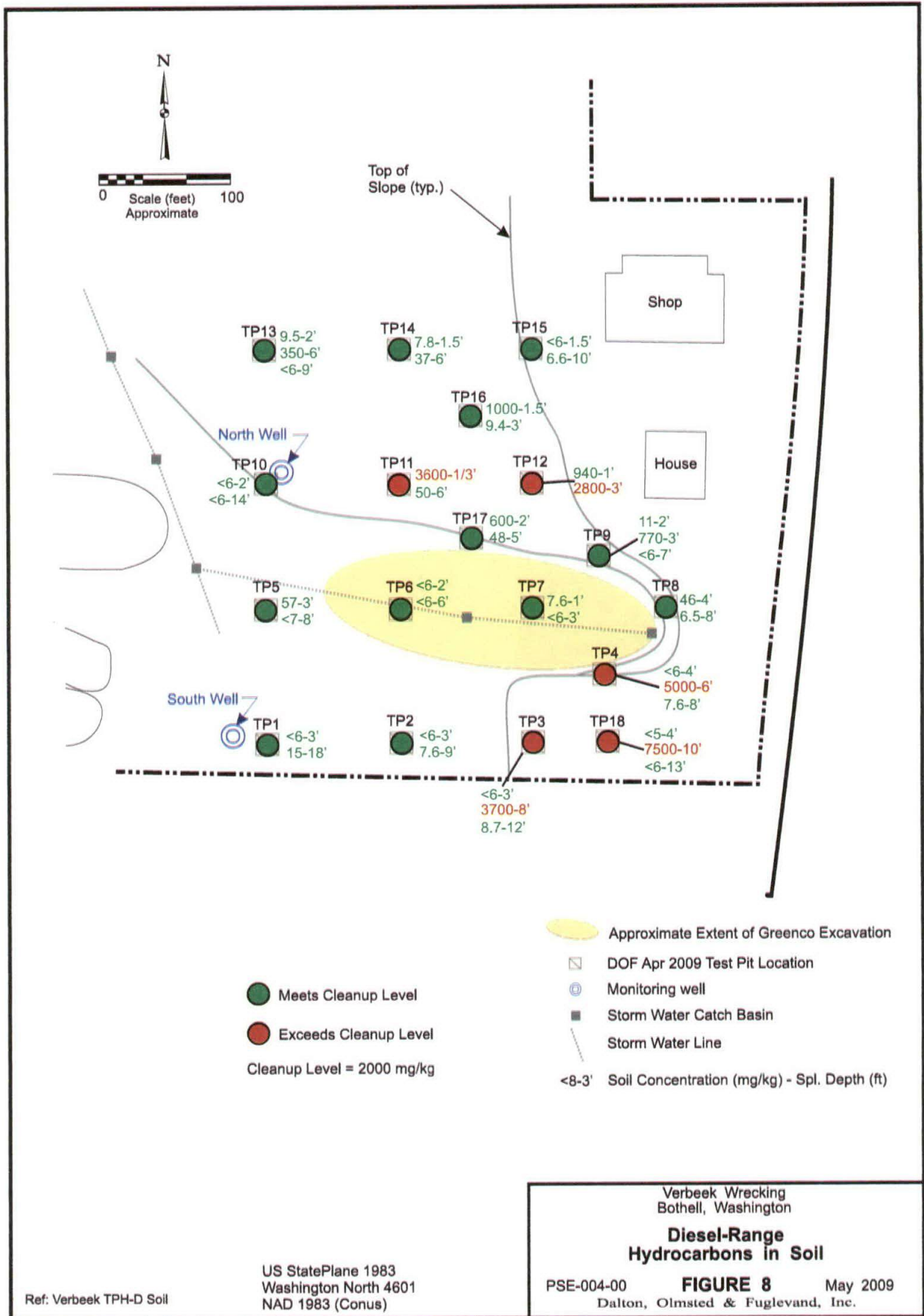


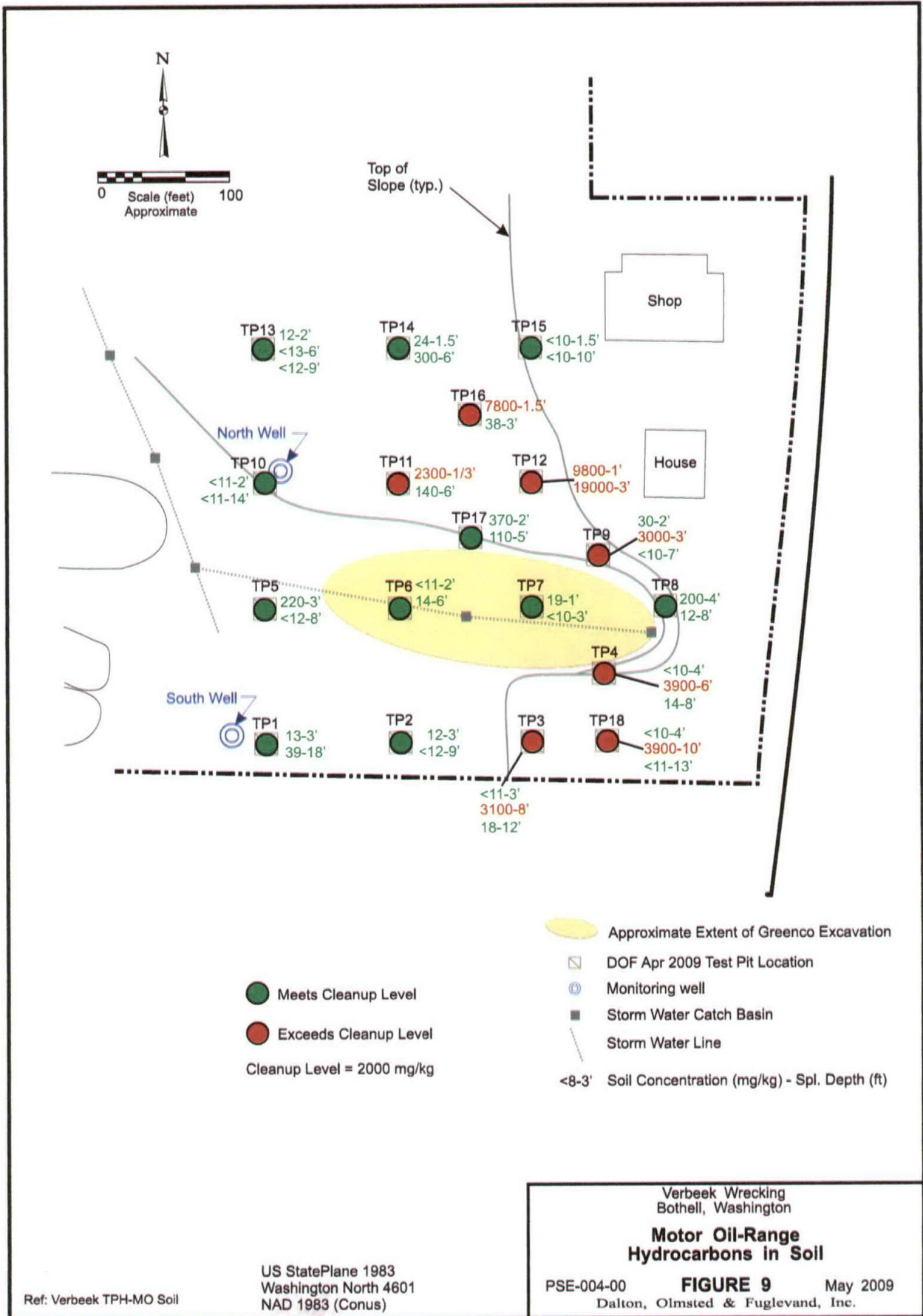


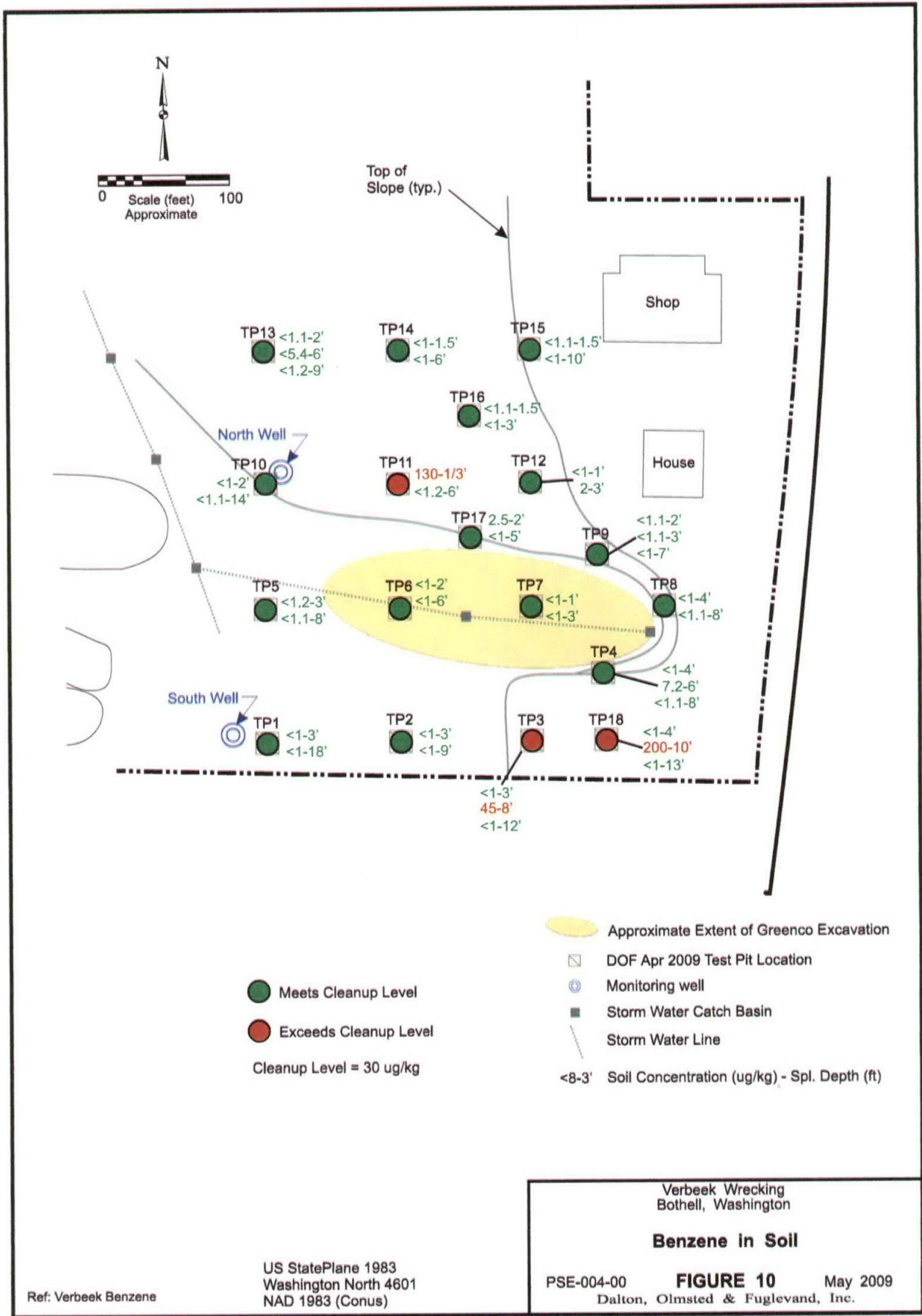
Ref: Verbeek TPH-G

US StatePlane 1983  
 Washington North 4601  
 NAD 1983 (Conus)

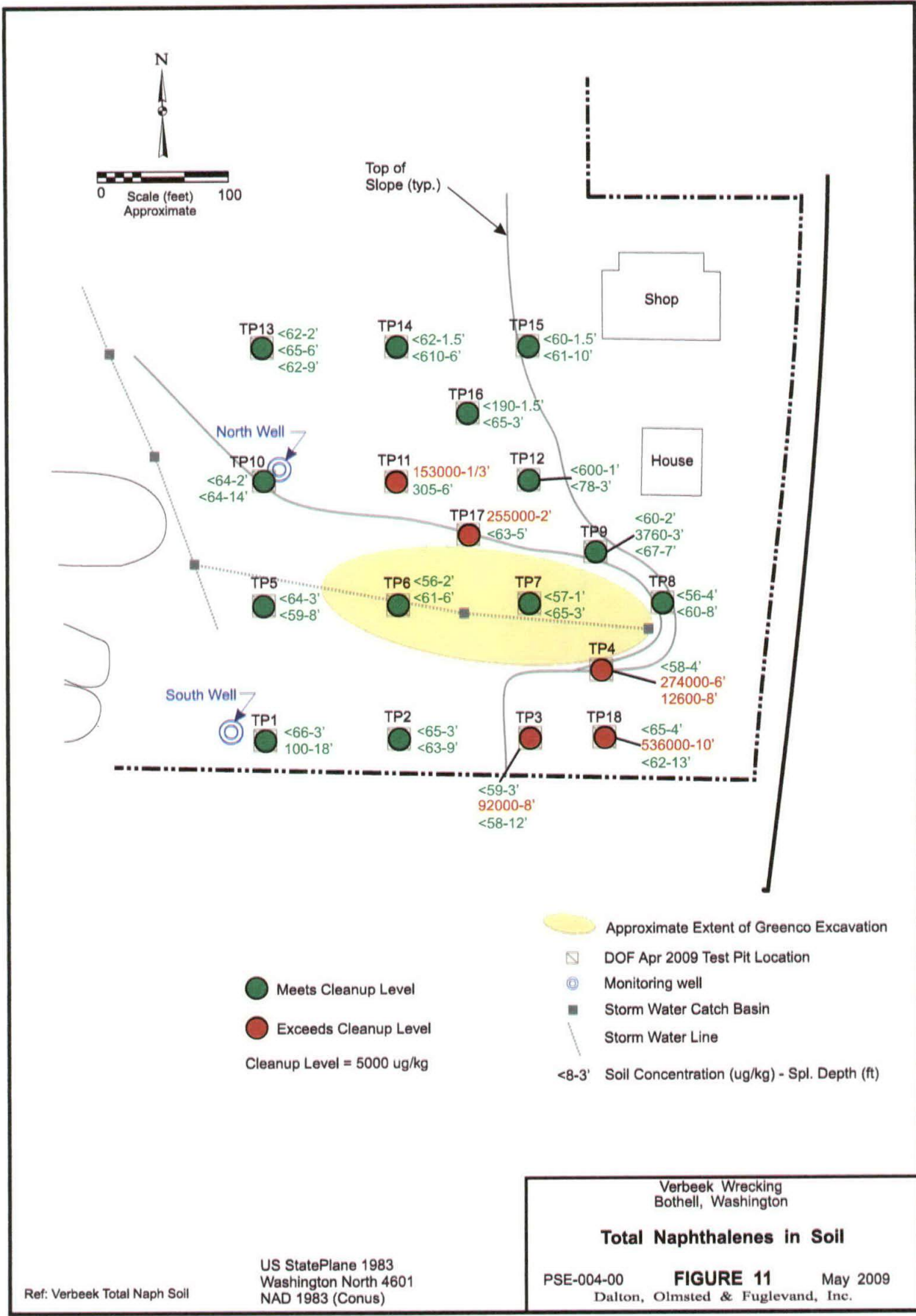
Verbeek Wrecking  
 Bothell, Washington  
**Gasoline-Range  
 Hydrocarbons in Soil**  
 PSE-004-00 **FIGURE 7** May 2009  
 Dalton, Olmsted & Fuglevand, Inc.

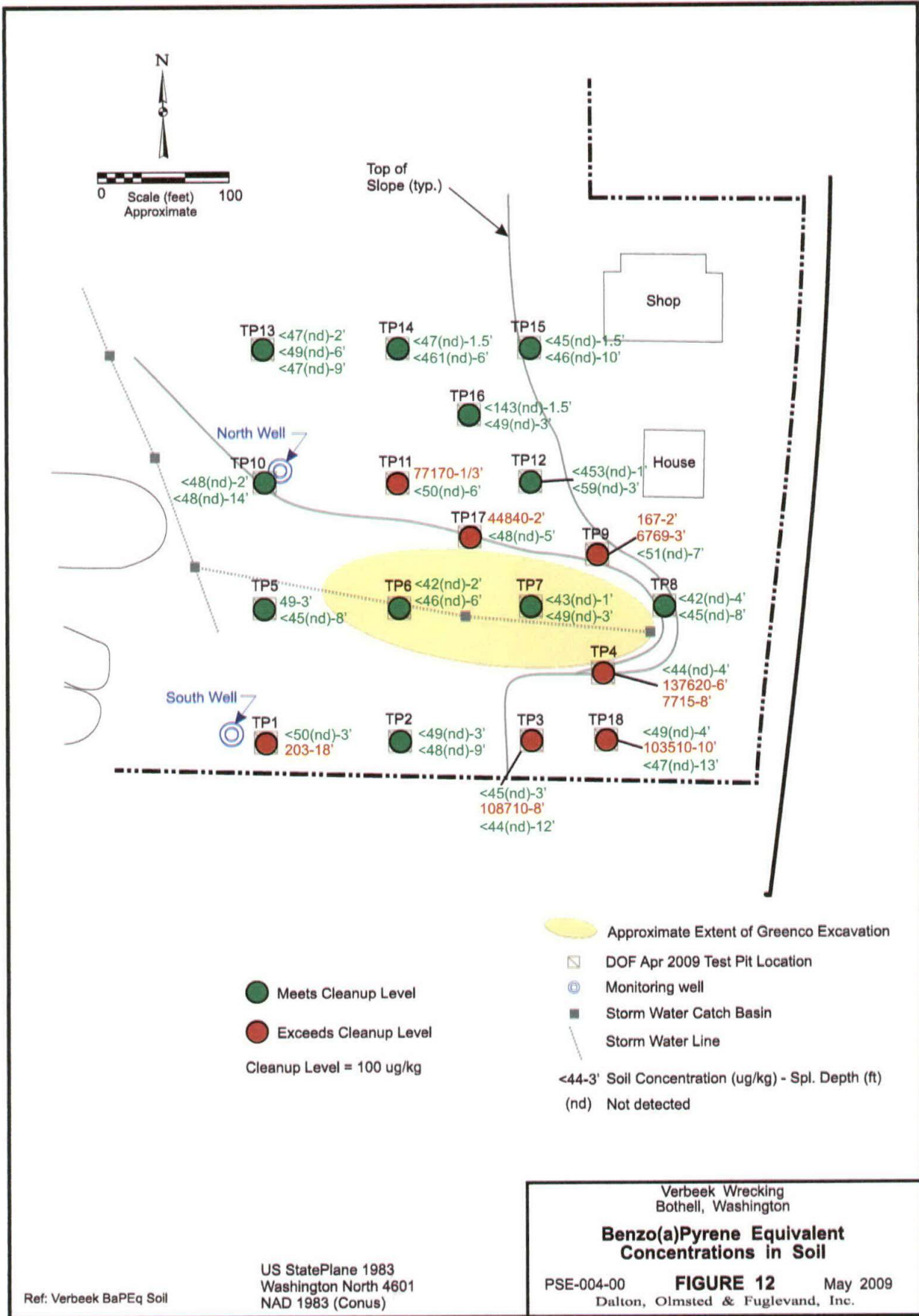


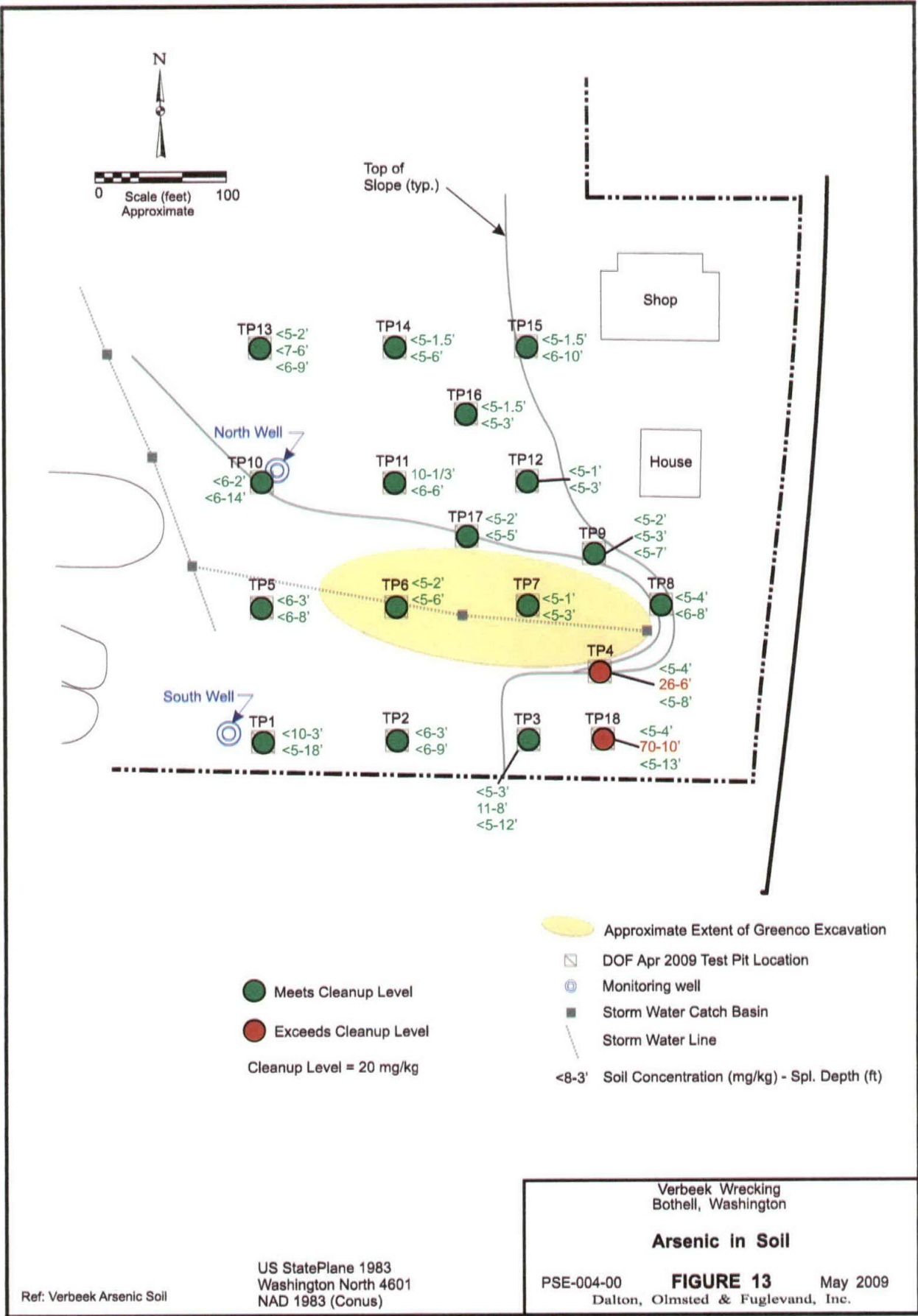












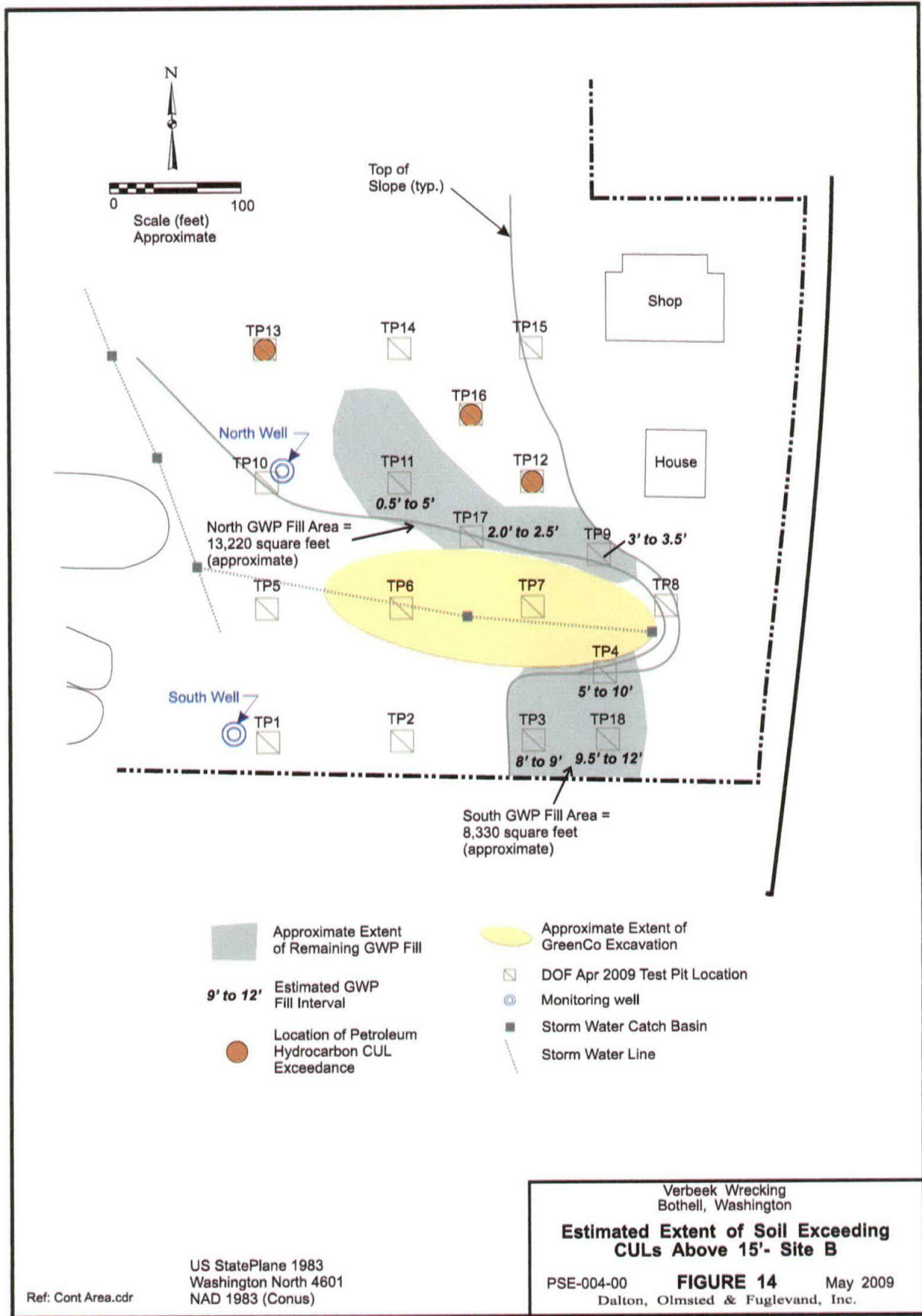
Ref: Verbeek Arsenic Soil

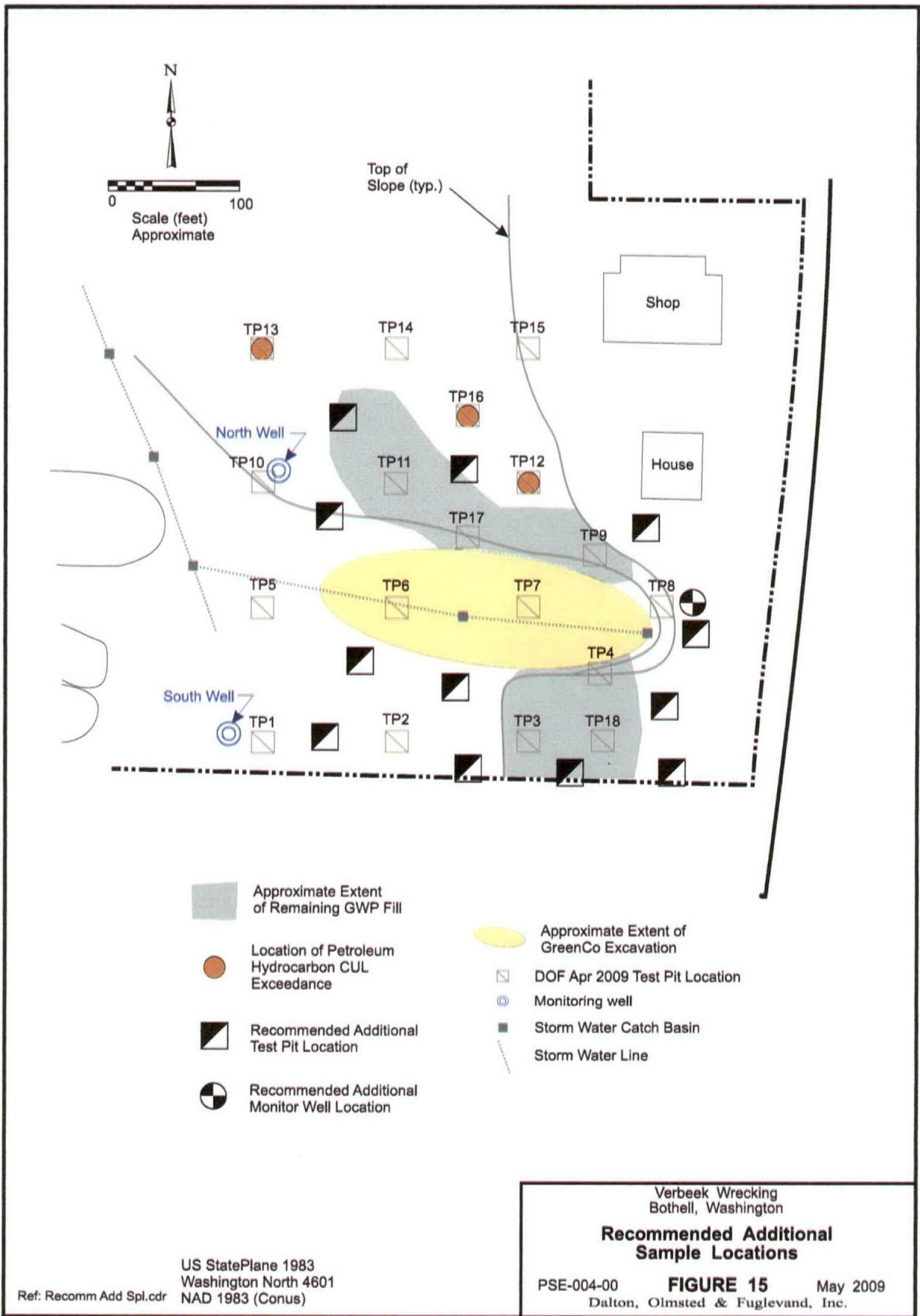
US StatePlane 1983  
Washington North 4601  
NAD 1983 (Conus)

Verbeek Wrecking  
Bothell, Washington

**Arsenic in Soil**

PSE-004-00 **FIGURE 13** May 2009  
Dalton, Olmsted & Fuglevand, Inc.





- Approximate Extent of Remaining GWP Fill
- Location of Petroleum Hydrocarbon CUL Exceedance
- Recommended Additional Test Pit Location
- Recommended Additional Monitor Well Location

- Approximate Extent of GreenCo Excavation
- DOF Apr 2009 Test Pit Location
- Monitoring well
- Storm Water Catch Basin
- Storm Water Line

Verbeek Wrecking  
Bothell, Washington  
**Recommended Additional  
Sample Locations**

PSE-004-00 **FIGURE 15** May 2009  
Dalton, Olmsted & Fuglevand, Inc.

US StatePlane 1983  
Washington North 4601  
Ref: Recomm Add Spl.cdr NAD 1983 (Conus)

**ATTACHMENT A**

**TEST PITS LOGS – APRIL 2009  
Verbeek Wrecking Yard  
Bothell, WA**

**TEST PIT DOF-TP1 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305770 E1302100	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/02/2009	
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed, undisturbed crushed rock to the west, near original site grade.		
0-1.5	Dense, wet, brown, gravelly, silty, SAND, no odor		
1.5-16	Dense, wet, gray, silty, Fine to Medium SAND, with minor gravel, no odor		
16-17	Loose, brown, silty, SAND, with some gravel, roots		
17-18	Medium dense, gray, gravelly, SAND, with some silt, no odor (native)		
	no groundwater seepage sidewall caving below 16'  Samples: DOF-TP1-3 grab @ 3' DOF-TP1-18 grab @ 18'		

**TEST PIT DOF-TP2 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305770 E1302200	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/02/2009	
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-1	Loose, wet, brown, gravelly, SAND, with some silt, no odor		
1-5	Medium dense, wet, gray, silty, SAND, with minor gravel, scattered roots, woody debris		
5-13	Dense, wet, mottled brown, gravelly, SAND, with some silt, trace organics, organic odor		
13-16	Very dense, moist to wet, gravelly, SAND, with trace silt, no odor (native)		
	seepage @ 9' caving below 13'  Samples: DOF-TP2-3 grab @ 3' DOF-TP2-9 grab @ 9' DOF-TP2-15 grab @ 15'		

**TEST PIT DOF-TP3 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305770 E1302300	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/02/2009	
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F	
Depth (Ft.)	DESCRIPTION		
From - To			
Surface	Crushed rock, street grade		
0-1	Medium dense, moist, brown, gravelly, SAND, with trace silt, no odor		
1-8	Medium dense, moist, gray, gravelly, SAND, with trace silt, concrete curb stop debris (up to 4'), no odor		
8-9	Loose, wet, black, silty, SAND, with some gravel, cinder, strong MGP-like fill odor, no NAPL		
9-16	Loose to medium dense, wet, brown, silty, SAND, with some gravel, scattered wood debris, no odor		
	no groundwater seepage sidewall caving below 8'  Samples: DOF-TP3-3 grab @ 3' DOF-TP3-8 grab @ 8' DOF-TP3-12 grab @ 12'		

**TEST PIT DOF-TP4 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305840 E1302350	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/02/2009	
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F	
Depth (Ft.)	DESCRIPTION		
From - To			
Surface	Crushed rock @ street grade, through embankment at south edge of Greenco excavation area		
0-5	Dense, moist, brown, gravelly, SAND, with trace silt, no odor		
1-5	M dense, wet, gray, silty, SAND, with minor gravel, scattered roots, woody debris		
5-7	Loose, moist, black, silty, SAND, with some gravel, cinder, strong MGP-like fill odor, no NAPL		
7-10	Medium Dense, wet, brown, gravelly, SAND, no odor		
	No seepage No caving Samples: DOF-TP4-4 grab @ 4' DOF-TP4-6 grab @ 6' DOF-TP4-8 grab @ 8'		



**TEST PIT DOF-TP5 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305870 E1302100
Excavating: Wyser Construction		Elevation :
Operator: Manual Ybarra		Date Completed: 04/02/2009
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F
Depth (Ft.)	<b>DESCRIPTION</b>	
From - To		
Surface	Disturbed, recently graded	
0-1	Loose, wet, brown, gravelly, SAND, no odor	
1-3	Medium dense, wet, mottled brown, silty, SAND, with minor gravel, wood debris, no odor	
3-11	Medium dense, wet, gray, silty, Fine SAND, with trace gravel, no odor	
11-16	Medium dense, wet, mottled brown, silty, SAND, with some gravel, woody debris, organic odor	
	no groundwater seepage sidewall caving full height  Samples: DOF-TP5-3 grab @ 3' DOF-TP5-8 grab @ 8'	

**TEST PIT DOF-TP6 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305870 E1302200
Excavating: Wyser Construction		Elevation :
Operator: Manual Ybarra		Date Completed: 04/02/2009
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F
Depth (Ft.)	<b>DESCRIPTION</b>	
From - To		
Surface	Disturbed, recently graded	
0-3	Loose, wet, brown, gravelly, SAND, with some silt, no odor	
3-10	Loose to medium dense, moist, mottled gray, gravelly, silty, SAND, with scattered wood debris, organic odor	
10-12	Very Dense, wet, gray, gravelly, SAND, with some silt (native)	
	No seepage No caving Samples: DOF-TP6-2 grab @ 2' DOF-TP6-6 grab @ 6' DOF-TP6-11 grab @ 11'	

**TEST PIT DOF-TP7 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305880 E1302300	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/02/2009	
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F	
Depth (Ft.) From - To	DESCRIPTION		
Surface	Disturbed, base of Greeco excavation		
0-1.5	Loose, wet, mottled brown, gravelly, silty, SAND, no odor		
1.5-9	Loose, wet, gray, Fine to Medium SAND, no odor		
	no groundwater seepage Rapid sidewall caving full height  Samples: DOF-TP7-1 grab @ 1' DOF-TP7-3 grab @ 3'		

**TEST PIT DOF-TP8 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305870 E1302400	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/02/2009	
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F	
Depth (Ft.) From - To	DESCRIPTION		
Surface	Disturbed, east sidewall of Greenco excavation, description elevation relative to adjacent catch basin		
0-4	Very loose, wet, brown, gravelly, SAND, no odor		
4-5	Medium dense, moist, mottled gray, gravelly, silty, SAND, no odor		
5-10	Medium Dense, wet, mottled brown, silty, SAND, with some gravel, scattered organics, wood		
	No seepage caving Samples: DOF-TP8-4 grab @ 4' DOF-TP8-8 grab @ 8'		

**TEST PIT DOF-TP9 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305910 E 1302350	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/02/2009	
Excavator Type: Komatsu PC200		Weather: Heavy Rain 45F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed, North sidewall of Greeco excavation		
0-3	Medium Dense, moist, mottled brown, silty, SAND, with some gravel, no odor		
3-3.5	Medium dense, moist, mottled gray-black, gravelly silty, SAND, with moderate MGP-like fill odor (elevation 3.5' lower than east catch basin)		
3.5-11	Loose, wet, gray, Fine to Medium SAND, with thin roots, no odor		
11-12	Dense, damp, brown, gravelly, SAND, with minor silt, no odor (native)		
	no groundwater seepage no caving  Samples: DOF-TP9-2 grab @ 2' DOF-TP9-3 grab @ 3' DOF-TP9-7 grab @ 7'		

**TEST PIT DOF-TP10 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305970 E1302100	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Cloudy 55F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Crushed rock, original yard grade		
0-0.5	Loose, wet, dark brown, silty, crushed rock, no odor		
0.5-3	Medium dense, moist, mottled brown-gray, gravelly, silty, SAND, no odor		
3-9	Loose, wet, brown, silty, SAND, with some gravel, wood, cable, concrete debris		
9-15	Medium dense, wet, mottled gray-brown, gravelly, silty, SAND (native)		
	Seepage @ 6.5' caving below 3'  Samples: DOF-TP10-2 grab @ 2' DOF-TP10-14 grab @ 14'		

**TEST PIT DOF-TP11 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305970 E 1302200	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Cloudy 55F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed, original yard grade approx. 4' higher than Greenco excavation at the south		
0-0.5	Loose, wet, brown, gravelly, SAND, with some silt, no odor		
0.5-5	Medium dense, moist, mottled, gray-black, silty, SAND, with some gravel, cinder, strong MGP-like/naphthalene odor, no NAPL		
5-11	Loose, wet, mottled gray, silty, SAND, with some gravel, wood, wire debris, no odor		
11-13	Dense, wet, mottled brown, gravelly, SAND, with some silt (native)		
seepage @ 12' caving below 5'  Samples: DOF-TP11-1/3 composite from 1-3' @ 2' DOF-TP11-6 grab @ 6' DOF-TP11-12 grab @ 12'			

**TEST PIT DOF-TP12 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305970 E1302300	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Coudy 55F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-0.5	Loose, saturated, brown, gravelly, SAND, with some silt, no odor		
0.5-1.5	Medium dense, moist, mottled gray, gravelly, SAND, with some silt, thin stringers of black MGP-like fill debris, granular no NAPL		
1.5-5	Medium dense, moist, mottled brown-gray, gravelly, SAND, with some silt, organics, woody debris, cans, garbage		
5-12	Loose, moist, gray, Fine to Medium SAND, with trace gravel, no odor		
No seepage Rapid caving below 5'  Samples: DOF-TP12-1 grab @ 1' DOF-TP12-3 grab @ 3' DOF-TP12-10 grab @ 10'			

**TEST PIT DOF-TP13 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N306070 E 1302100	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Cloudy 55F	
Depth (Ft.) From - To	DESCRIPTION		
Surface	Disturbed, near original yard grade based on nearby crushed rock		
0-3	Medium Dense, wet, mottled brown-gray, gravelly, silty, SAND, with concrete rubble		
3-4	Medium Stiff, wet, mottled gray-brown, clayey, SILT, with some organics		
4-8	Loose, wet, dark brown, silty, SAND, with some gravel, organics, asphalt concrete, pipe, wood, slight sheen on seepage water, diesel odor		
8-11	Dense, wet, gray, gravelly; SAND, with some silt, no odor		
	seepage @ 5' caving below 4'  Samples: DOF-TP13-2 grab @ 2' DOF-TP13-6 grab @ 5' DOF-TP13-9 grab @ 9'		

**TEST PIT DOF-TP14 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N306070 E1302200	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Cloudy 55F	
Depth (Ft.) From - To	DESCRIPTION		
Surface	Crushed rock, original yard grade		
0-0.5	Medium dense, wet, dark brown, silty, Crushed rock		
0.5-3.5	Loose to medium dense, moist, mottled brown, gravelly, silty, SAND, with wood debris, no odor		
3.5-8	Loose, wet, dark brown, silty, SAND, with some gravel, asphalt concrete, brick, concrete, metal, no odor		
8-13	Dense to very dense, wet, mottled brown, gravelly, SAND, with some silt, no odor (native)		
	Moderate seepage @ 9' Caving below 8'  Samples: DOF-TP14-1.5 grab @ 1.5' DOF-TP14-6 grab @ 6' DOF-TP14-12 grab @ 12'		

**TEST PIT DOF-TP15 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N306070 E 1302300	
Excavating: Wyser Construction		Elevation :	
Operator: Manuel Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Cloudy 55F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-1	Loose, wet, mottled brown, gravelly, SAND, with some silt, no odor		
1-11	Medium dense to dense, wet, mottled brown, gravelly, SAND, no odor (native)		
	No seepage No caving  Samples: DOF-TP15-1.5 grab @ 1.5' DOF-TP15-10 grab @ 10'		

**TEST PIT DOF-TP16 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N306020 E1302250	
Excavating: Wyser Construction		Elevation :	
Operator: Manuel Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Coudy 55F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed, near original yard grade		
0-0.5	Loose, wet, brown, gravelly, SAND, with trace silt, no odor		
0.5-2	Medium dense, wet, mottled gray-brown, silty, SAND, thin roots, thin black staining, very slight MGP-like fill odor, no NAPL		
2-9	Loose to medium dense, wet, dark brown, silty, SAND, with organincs, burned wood, concrete pipe		
9-12	Very dense, wet, brown to gray, gravelly, SAND, with minor silt (native)		
	Moderate seepage @ 9' Caving below 2'  Samples: DOF-TP16-1.5 grab @ 1.5' DOF-TP16-3 grab @ 3' DOF-TP16-11 grab @ 11'		

**TEST PIT DOF-TP17 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305920 E 1302250	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Cloudy 55F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	North embankment of Greenco excavation		
0-12	Loose, wet, mottled gray, sandy, GRAVEL, with some silt, asphalt concrete, concrete debris, no odor **		
12-18	Dense, wet, brown to gray, gravelly, SAND, with minor silt, no odor (native), extending approx 4' below Greenco subgrade.		
**	Advanced pit to north, encountering thin stringers of black granular MGP-like material mixed with fill - a 0.5' thick zone at elev 2' below upper ground surface		
	Seepage @ 10' No caving  Samples: DOF-TP17-2 grab @ 2' DOF-TP17-5 grab @ 5' DOF-TP17-16 grab @ 16'		

**TEST PIT DOF-TP10 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305770 E1302350	
Excavating: Wyser Construction		Elevation :	
Operator: Manual Ybarra		Date Completed: 04/03/2009	
Excavator Type: Komatsu PC200		Weather: Coudy 55F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Crushed rock, street grade		
0-0.5	Dense, wet, crushed rock		
0.5-2.5	Medium dense, wet, brown, Fine to Medium SAND, with some gravel, no odor		
2.5-9.5	Medium sense, wet, gray, gravelly, SAND, with trace silt, no odor		
9.5-12	Loose, moist, black gravelly, SAND, with cinders, strong MGP-like fill odor, no NAPL		
12-14	Medium dense, moist, gray, Fine to Medium SAND, with some gravel, no odor		
	No seepage Caving below 10'  Samples: DOF-TP18-4 grab @ 4' DOF-TP18-10 grab @ 10' DOF-TP18-13 grab @ 13'		

**ATTACHMENT B**  
Floyd Snider Sampling Report and  
Laboratory Data Sheets  
2008 In-Situ and Stockpile Soil Sample Results

Former Verbeek Wrecking Yard  
Bothell, Washington





## Confidential Memorandum

**To:** Laura Wishig, City of Seattle Law Department

**Copies:**

**From:** Megan King, Floyd|Snider

**Date:** March 31, 2009

**Project No:** COS-LAW-VERBEEK

**Re:** Summary of Field Sampling Activities

---

This memorandum summarizes field activities conducted at the Verbeek Auto Wrecking site by Floyd|Snider on behalf of the City of Seattle Law Department. Field sampling activities were conducted by Floyd|Snider on multiple occasions in September 2008, and are summarized by date below.

### **SEPTEMBER 10, 2008: BIOREMEDIATION PILE BASELINE SAMPLING**

On September 10, 2008, Floyd|Snider field staff arrived on site at the Verbeek site for collection of bioremediation pile (bio-pile) baseline sample collection. All material in the bio-pile had been previously excavated from the southeastern portion of the site by Greenco, and stockpiled and spread out along the western portion of the site. The bio-pile was not lined, and measured 450-feet in length from north to south, and 105-feet in width from west to east, with a 60-foot triangular end on the south side of the bio-pile. Figure 1 presents an approximate sketch of the bio-pile. The pile was approximately 2-feet thick at the north end, 3-feet thick in the central portion, and graded to as deep as 4-feet at the southern one-fifth (1/5) of the pile.

Baseline samples were collected in an effort to identify baseline conditions of the stockpiled soil prior to bioremediation treatment by Greenco. Individual samples were collected by compositing material from three discrete locations into one composite sample. Soil at each discrete sample location was collected from a 2-foot depth interval; material from the three locations were composited in a stainless steel bowl. Samples from the bowl were then split between Floyd|Snider and Greenco and jarred for laboratory analysis. Figure 1 presents the approximate location of each discrete sampling location, and identifies the sample ID for each set of composited aliquots. A total of 15 composite samples were collected for laboratory analysis from the bio-pile. Discrete sample locations were set on an approximate 30-foot by 30-foot spacing across the footprint of the bio-pile.

In addition to the baseline-conditions, bio-pile soil samples, three in-situ grab samples were collected from the southeastern portion of the property in the vicinity of the mass excavation. GRAB-1 was collected from approximately 2-feet below current ground surface, from a test pit

previously dug. The test pit was located north of the mass excavation, south and west of the storage shed. The material was tarry and had a strong naphthalene-like odor. Photos 1 and 2 show the material and approximate location of the test pit in relationship to site structures. GRAB-2 was collected from approximately 3-feet below current ground surface, from a test pit previously dug by Verbeek. The test pit was located between the mass excavation and the southern property line, approximately in line with the northwest corner of the neighboring Gold's Gym building. Photos 3 and 4 show the material and location of the test pit. The sampled material was collected from a horizon of black, NAPL saturated silty sand with a strong naphthalene-like odor. Sample GRAB-3 was collected from near the center of the south sidewall of the mass excavation, from a black stained horizon located 2–3 feet below ground surface. The horizon was approximately 2-feet thick, and approximately 3-feet in length. Photos 5 and 6 show the approximate sampling location in relation to site features and the sampled material. It was also noted that black staining was visible along the west sidewall of the mass excavation from approximately 0.5-feet to the base of the excavation, approximately 10-feet below ground surface (bgs).

#### **SEPTEMBER 17, 2008: BIO-PILE TREATMENT OBSERVATION**

Floyd|Snider was on-site on September 17, 2008 to observe Greenco's application of the biotreatment amendment material to a limited pilot test area of the bio-pile. No samples were collected during this site visit. Treatment was being pilot tested on the north end of the bio-pile, approximately 40-feet in from the north end of the pile.

#### **SEPTEMBER 22, 2008: MONITORING WELL INSTALLATION AND BIO-PILE SAMPLING**

On September 22, 2008, Floyd|Snider observed installation of two monitoring wells at the Verbeek site. The first well, labeled by Washington State Start Card as BAF-235 was located 32-feet north of the south property line, and 175-feet west of the break in the south fence line. No soil samples were collected. Water depth at the time of drilling measured at 14-feet bgs. The second well, identified by Start Card BAF-236, was located directly west and in line with the south end of the house, west of the mass excavation. Floyd|Snider left the site prior to completion of well installation.

In addition to well installation oversight, samples were collected from the north end of the bio-pile where Verbeek's representative had been pilot testing bioremediation. The treated area included the north-most 40-feet of the bio-pile. Two grab samples were collected from discrete locations in the pile. Samples were composited from 0–18" bgs, and were located 40-feet west of the east edge of the pile and 20-feet south of the north end of the pile (BIO-PILOT-1), and 30-feet east of the west edge of the pile and 15-feet south of the north end of the pile (BIO-PILOT-2). Verbeek's representative collected collocated samples from these locations, and identified them as "02" and "03" respectively.

#### **SEPTEMBER 24, 2008: GROUNDWATER SAMPLING OBSERVATION**

On September 24, 2008, Floyd|Snider observed monitoring well development and groundwater sample collection by ESN Northwest, on behalf of Verbeek. Groundwater samples were collected by peristaltic pump following completion of well development. Samples were labeled BAF-235 and BAF-236 corresponding with the Ecology Start Cards assigned to each well. No

split samples were collected. Depth to water in Well BAF-235 was measured at 11.68' below well casing; depth to water in Well BAF-236 was measured at 7.45' below well casing.

**SEPTEMBER 29, 2009: BIO-PILE TREATMENT AREA CONFIRMATION SAMPLING**

On September 29, 2008, Floyd|Snider was on-site to collect two composite soil samples from the bio-pile pilot treatment area for confirmation of treatment results. Sample BIO-PILOT-3 was collected from three discrete sample locations 20-feet, 40-feet, and 70-feet west of the east pile edge, and 30-feet south of the north end of the bio-pile. At each discrete location, material was collected from 0–2-foot bgs, and composited in a stainless steel bowl prior to jarring for laboratory analysis. Sample BIO-PILOT-4 was collected from three discrete sample locations at similar distances across the pile as the previous sample, 10-feet south of the north end of the bio-pile, along a distinct color change in the stockpiled material. Substantial disruption to the pile had occurred since the last site visit, and a trench separating the treated area from the remainder of the pile had been constructed 35-feet south of the north edge of the pile. Composite samples from the stainless steel bowl were collected by the Verbeek representative, and were identified as samples "04" and "05" respectively.

This summarizes all field activities conducted at the Verbeek site by Floyd|Snider staff in September 2008. Originals of all laboratory reports, site digital photographs, and field notes are on file at the Floyd|Snider's office.

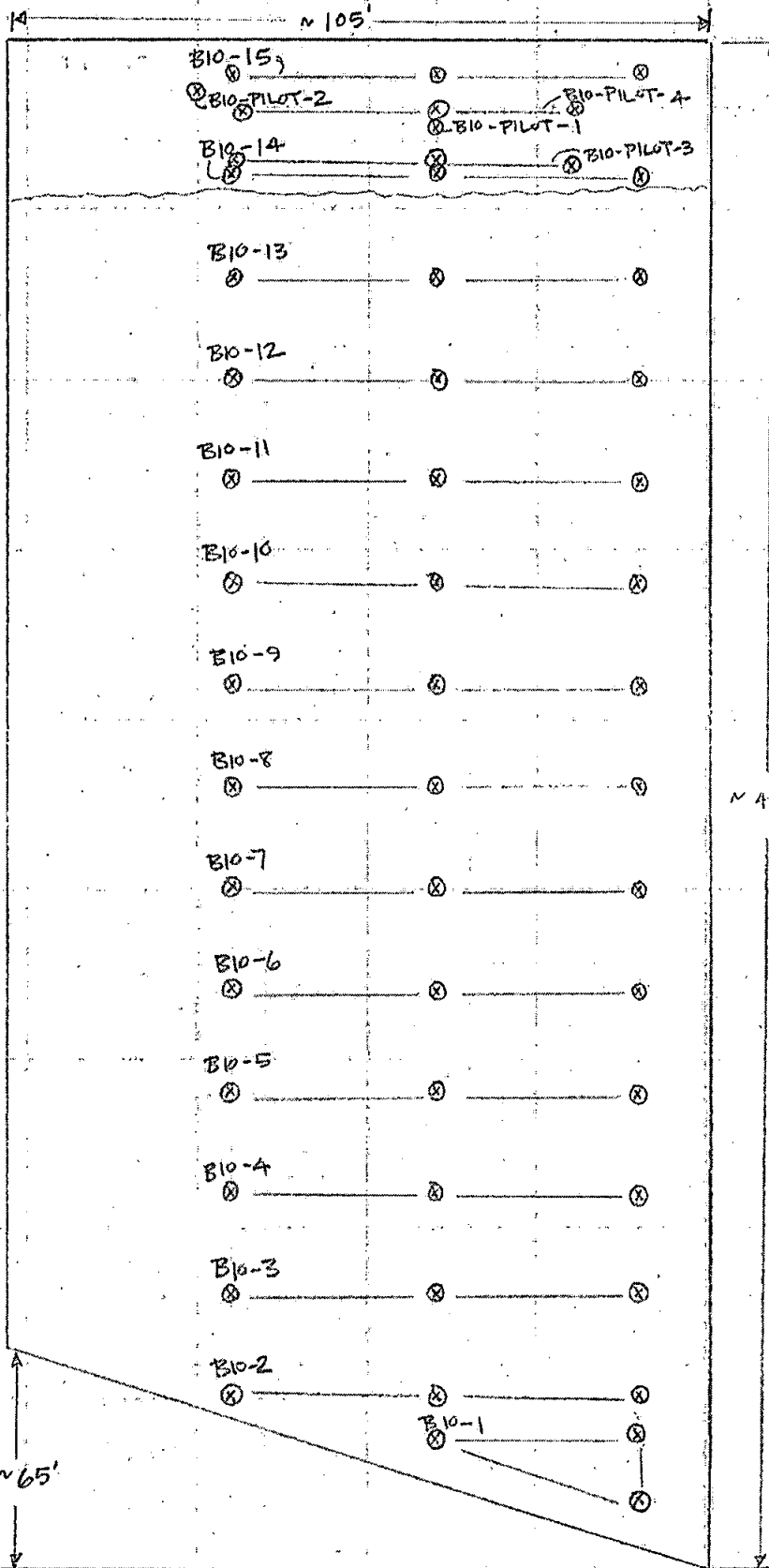
Encl.: Figure 1 – Bio-pile Sketch  
Attachment A – Field Photographs

---

**Figure**

\* NOT TO SCALE - LOCATIONS APPROXIMATE

APPROX. EXTENTS OF PLOT TEST



KEY

- ⊗ = DISCRETE SAMPLE LOCATION
- ⊙—⊙ = SAMPLES COMPOSITED INTO SINGLE SAMPLE

~65'

~450'

~105'

---

**Attachment A**  
**Field Photographs**

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Photograph 1: View East at sample location for sample GRAB-1.  
Test pit shown in center of photo, in line with north edge of house.



Photograph 2: Tarry material from test pit, collected sample GRAB-1.





Photograph 3: Test pit location south of mass excavation.  
Sample GRAB-2 collected from test pit sidewall.



Photograph 4: Material collected as sample GRAB-2 from test pit sidewall.



Photograph 5: Sample location GRAB-3 collected from mass excavation south sidewall, in line with orange measuring wheel in photo.



Photograph 6: Material collected as sample GRAB-3.



**Fremont**  
ANALYTICAL

2930 Westlake Ave N Suite 100  
Seattle, WA 98109  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

Floyd | Snider  
Attn: Teri Floyd  
601 Union St. Suite 600  
Seattle, WA 98101

RE: COS - Verbeek  
Fremont Project No: CHM080910-3 / CHM080912-3  
Floyd | Snider Project No: COS - Verbeek

September 16<sup>th</sup>, 2008

Teri:

Enclosed are the additional analytical results for the COS - Verbeek soil samples delivered to Fremont Analytical on September 10<sup>th</sup>, 2008.

Examination of these samples was conducted for the presence of the following:

- *Semi-Volatile Organic Compounds in Soil by EPA Method 8270*
- *Polyaromatic Hydrocarbons (PAH) in Soil by EPA Method 8270C*

These applications were performed under Washington State Department of Ecology accreditation parameters. All appropriate Quality Assurance / Quality Control method parameters have been applied.

**Notations – EPA Method 8270C:**

- *sVOC Sample ID – B10-3:* The p-Terphenyl surrogate recovery slightly exceeded QC limits. The other 4 surrogates were within range. This is acceptable under by this method. No further action is required.
- *sVOC Sample ID - Matrix Spike Duplicate (MSD) – Grab 3:* The p-Terphenyl surrogate recovery slightly exceeded QC limits. The other 4 surrogates were within range. This is acceptable under by this method. No further action is required.
- *PAH Sample ID - Matrix Spike Duplicate (MSD) – Grab 3:* The p-Terphenyl surrogate recovery slightly exceeded QC limits. The other surrogate, (2-Fluorobiphenyl), MS, MSD and LCS were within QC range. No further action is required (please refer to *sVOC Sample ID - Matrix Spike Duplicate (MSD) – Grab 3*)
- *PAH Sample ID - Grab 1:* The p-Terphenyl surrogate recovery slightly exceeded QC limits. The other surrogate, (2-Fluorobiphenyl) was within QC range. No further action is required.

Please contact the laboratory if you should have any questions about the report. Thank you for using Fremont Analytical.

Sincerely,

Michael Dee  
Sr. Chemist / Principal  
mikedee@fremontanalytical.com

[www.fremontanalytical.com](http://www.fremontanalytical.com)



2930 Westlake Ave N Suite 100 Tel: 206-352-3700  
Seattle WA 98109 Fax: 206-352-7178

# Chain of Custody Record

Date: 9/10/08

Page 2 of 2

Client: Floyd Snider  
Address: 601 Union St. Ste 600  
City, State, Zip: Seattle, WA 98101 Tel: 206-292-2774

Project Name: COS-VERBEEK  
Location: Bathell, WA  
Collected by: M. King, E. Murray

Reports To (PM): Teri Floyd Fax: 206-642-7807 Email: teri.floyd@floydsnider.com Project No: COS-VERBEEK

Sample Name	Time	Sample Type	Container Type	Date of Collection	VOA 8260	VOA 801/8 BTEX	NWTPH-GX	NWTPH-PCID	NWTPH-DX (F)	SEMI VOA 8270C	PAH 8270	PCB-8082	CL PESTICIDES 8081	CL PESTICIDES 815A	METALS	Metals METALS	Metals REFA 8	Comments/Details
B10-8	12:35	S	403	9/10/08					✓	✓								Strong Contam.
B10-9	12:40	S							✓	✓								Mud Contam.
B10-10	13:05	S							✓	✓								Mud Contam.
B10-11	13:10	S							✓	✓								Mud Contam.
B10-12	13:20	S							✓	✓								" "
B10-13	13:25	S							✓	✓								" "
B10-14	13:35	S							✓	✓								Strong Contam.
B10-15	13:45	S							✓	✓								Strong Contam.

Please CC Megan King w/ Results  
megan.king@floydsnider.com

Prepared by: <u>[Signature]</u>	Date/Time: <u>9/10/08 4:40</u>	Received by: <u>[Signature]</u>	Date/Time: <u>9/10/08 4:40</u>	Sample Receipt:	Special Remarks:
				Good? <u>Y</u>	24 HR on DX Standard on 8270
				Temperature <u>30</u>	
				Seals Intact? <u>Y</u>	
				Total Number of Containers	TAT: <u>24HR</u> <u>48HR</u> <u>Standard</u>

\* Please NWTPH-DX chromatographs



# Chain of Custody Record

140 Westlake Ave. S. Suite 100  
Seattle, WA 98101

Date 9/10/08

Page 1 of 2

Client Floyd / Snider  
Address 601 Union St Ste 100  
City/State/Zip Seattle, WA 98101 Tel 206 722 2178

Project Name COS - VERBEEK  
Location Bathell WA  
Collected by M. King / E. Murray

Reports to (PM) Tom Floyd Fax 206-682-7807 Email tom.floyd@floydsnider.com Project No COS VERBEEK

Please CC Megan King  
megan.king@floydsnider.com

Hold

Sample ID	Time	Temp	Flow	Date	Analysis	Notes
Grab-1	10:30 AM	S	403	9/10/08	(X)	✓
Grab-2	14:15	S	1603		(X)	✓
Grab-3	17:25	S	1605		(X)	✓
B10-1	11:20	S	403		✓	Med contamination
B10-2	11:40	S			✓	Signif contamination
B10-3	11:50	S			✓	" "
B10-4	12:05				✓	Med contamination
B10-5	12:20				✓	Strong Contamination
B10-6	12:25				✓	" "
B10-7	12:30				✓	" "

(X) Add Analysis  
9/12/08  
(INCLUDE NAPHTHALENE)

Supervisors out  
Med contamination  
Signif contamination  
" "  
Med contamination  
Strong Contamination  
" "

Signature: [Signature] Date/Time: 9/10/08 4:40pm  
Signature: [Signature] Date/Time: 9/10/08 4:40

Sample Receipt  
Date: 9/10/08  
Time: 4:40  
Signature: [Signature]  
Signature: [Signature]

\* Provide NWTPH-DX Chromatographs



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	LCSD	B10-1	B10-2	B10-3	B10-4
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Date Analyzed		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Matrix		Soil			Soil	Soil	Soil	Soil
Aniline	0.4	nd			nd	nd	nd	nd
Phenol	0.4	nd	128%	128%	nd	nd	nd	nd
Bis(2-chloroethyl)ether	0.4	nd			nd	nd	nd	nd
2-Chlorophenol	0.2	nd	105%	106%	nd	nd	nd	nd
1,3-Dichlorobenzene	0.2	nd			nd	nd	nd	nd
1,4-Dichlorobenzene	0.2	nd	119%	115%	nd	nd	nd	nd
1,2-Dichlorobenzene	0.2	nd			nd	nd	nd	nd
Benzyl alcohol	0.2	nd			nd	nd	nd	nd
Bis(2-chloroisopropyl)ether	0.2	nd			0.34	nd	nd	nd
2-Methylphenol (o-cresol)	0.2	nd			nd	nd	nd	nd
Hexachloroethane	0.2	nd			nd	nd	nd	nd
N-Nitroso-di-n-propylamine	0.2	nd	80%	90%	nd	nd	nd	nd
4-Methylphenol (p-cresol)	0.2	nd			nd	nd	nd	nd
3-Methylphenol (p-cresol)	0.2	nd			nd	nd	nd	nd
Nitrobenzene	0.4	nd			nd	nd	nd	nd
Isophorone	0.2	nd			nd	nd	nd	nd
2-Nitrophenol	0.2	nd			nd	nd	nd	nd
2,4-Dimethylphenol	0.2	nd			nd	nd	nd	nd
Bis(2-chloroethoxy)methane	0.2	nd			nd	nd	nd	nd
2,4-Dichlorophenol	0.4	nd			nd	nd	nd	nd
1,2,3-Trichlorobenzene	0.2	nd			nd	nd	nd	nd

"nd" Indicates not detected at listed reporting limits  
 "Int" Indicates that interference prevents determination  
 "J" Indicates estimated value  
 "MRL" Indicates Method Reporting Limit  
 "LCS" Indicates Laboratory Control Sample  
 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L





## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	LCSD	B10-1	B10-2	B10-3	B10-4
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Date Analyzed		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Matrix		Soil			Soil	Soil	Soil	Soil
Naphthalene	0.2	nd			35	5.7	6.6	7.7
4-Chloroaniline	0.5	nd			nd	nd	nd	nd
Hexachlorobutadiene	0.2	nd			nd	nd	nd	nd
4-Chloro-3-methylphenol	0.5	nd	109%	108%	nd	nd	nd	nd
2-Methylnaphthalene	0.2	nd			15	1.7	2.0	2.3
1-Methylnaphthalene	0.2	nd			13	1.7	2.1	1.9
Hexachlorocyclopentadiene	0.2	nd			nd	nd	nd	nd
2,4,6-Trichlorophenol	0.2	nd			nd	nd	nd	nd
2,4,5-Trichlorophenol	0.2	nd			nd	nd	nd	nd
2-Chloronaphthalene	0.2	nd			nd	nd	nd	nd
2-Nitroaniline	0.5	nd			nd	nd	nd	nd
1,4-Dinitrobenzene	0.5	nd			nd	nd	nd	nd
Acenaphthylene	0.2	nd			11	2.2	2.0	2.5
1,3-Dinitrobenzene	0.5	nd			nd	nd	nd	nd
Dimethylphthalate	0.2	nd			nd	nd	nd	nd
2,6-Dinitrotoluene	0.2	nd			nd	nd	nd	nd
1,2-Dinitrobenzene	0.2	nd			nd	nd	nd	nd
Acenaphthene	0.2	nd	113%	114%	11	1.6	1.8	1.2
3-Nitroaniline	0.5	nd			nd	nd	nd	nd
2,4-Dinitrophenol	0.2	nd			nd	nd	nd	nd
Dibenzofuran	0.2	nd			1.9	nd	0.24	0.27

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"LCS" Indicates Laboratory Control Sample

"MS" Indicates Matrix Spike

"MSD" Indicates Matrix Spike Duplicate

"RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode

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Acceptable Recovery Limits:

Surrogate = 50% to 150%

LCS, LCSD = 50% to 150%

Surrogates and Spike Concentration = 25 ug/L



2930 Westlake Ave. N., Suite 100  
Seattle, WA 98103

T: 206.352.3790  
F: 206.352.7178

email: info@fremontanalytical.com

## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	LCSD	B10-1	B10-2	B10-3	B10-4
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Date Analyzed		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Matrix		Soil			Soil	Soil	Soil	Soil
2,4-Dinitrotoluene	0.2	nd			nd	nd	nd	nd
4-Nitrophenol	0.5	nd	78%	104%	nd	nd	nd	nd
2,3,4,6-Tetrachlorophenol	0.2	nd			nd	nd	nd	nd
2,3,5,6-Tetrachlorophenol	0.2	nd			nd	nd	nd	nd
Fluorene	0.2	nd			8.7	1.7	1.4	1.1
4-Chlorophenyl phenyl ether	0.2	nd			nd	nd	nd	nd
Diethylphthalate	0.2	nd			nd	nd	nd	nd
4,6-Dinitro-2-methylphenol	0.5	nd			nd	nd	nd	nd
Diphenylamine	0.5	nd			nd	nd	nd	nd
Azobenzene	0.2	nd			nd	nd	nd	nd
4-Bromo phenyl phenyl ether	0.2	nd			nd	nd	nd	nd
Hexachlorobenzene	0.2	nd			nd	nd	nd	nd
Pentachlorophenol	0.2	nd	67%	83%	nd	nd	nd	nd
Phenanthrene	0.2	nd			38	10	9.4	8.3
Anthracene	0.2	nd			11	2.3	0.8	2.2
Carbazole	0.5	nd			nd	nd	nd	nd
Di-n-butylphthalate	0.2	nd			nd	nd	nd	nd
Fluoranthene	0.2	nd			56	18	20	17
Pyrene	0.2	nd	105%	105%	150	27	30	26
Benzyl Butyl phthalate	0.2	nd			nd	nd	nd	nd
bis (2-Ethylhexyl) adipate	0.2	nd			nd	nd	nd	nd

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email: info@fremontanalytical.com

## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	LCSD	B10-1	B10-2	B10-3	B10-4
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Date Analyzed		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Matrix		Soil			Soil	Soil	Soil	Soil
Benzo [a] anthracene	0.1	nd			29	7.5	9.0	8.6
Chrysene	0.1	nd			29	6.1	6.9	7.3
bis (2-Ethylhexyl) phthalate	0.2	nd			nd	nd	nd	nd
Di-n-octyl phthalate	0.2	nd			nd	nd	nd	nd
benzo [b] fluoranthene	0.1	nd			25	5.0	7.6	8.2
benzo [k] fluoranthene	0.1	nd			13	3.3	7.8	8.9
benzo [a] pyrene	0.1	nd			30	7.1	6.8	8.1
Indeno [ 1,2,3-cd] pyrene	0.1	nd			25	4.9	4.8	5.1
Dibenz [a,h] anthracene	0.1	nd			2.8	0.5	0.9	0.7
Benzo [g,h,i] perylene	0.1	nd			43	7.9	7.8	8.6
Benzoic Acid	0.4	nd			nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.2	nd	97%	103%	nd	nd	nd	nd
<b>Surrogate Recovery</b>								
(Surr 1) 2-Fluorophenol		79%	122%	111%	117%	137%	133%	144%
(Surr) Phenol -d6		54%	83%	88%	85%	102%	82%	105%
(Surr) Nitrobenzene-d5		68%	62%	79%	79%	48%	59%	73%
(Surr) 2-Fluorobiphenyl		98%	74%	101%	134%	100%	91%	109%
(Surr 2) p-Terphenyl		125%	70%	71%	137%	145%	158%	143%

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 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



2930 Westlake Ave. N., Suite 100  
Seattle, WA 98103

T: 206.352.3790

F: 206.352.7178

email: info@fremontanalytical.com

## Analysis of Polyaromatic Hydrocarbons in Soil by EPA Method 8270C

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080912-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	Grab-1	Grab-2	Grab-3	Duplicate	
							Grab-3	RPD %
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	
Date Analyzed		9/14/08	9/14/08	9/15/08	9/15/08	9/15/08	9/15/08	
Matrix		Soil		Soil	Soil	Soil	Soil	
Naphthalene	0.1	nd		38,000	2800	370	390	5%
1-Methylnaphthalene	0.1	nd		21,800	390	100	95	5%
2-Methylnaphthalene	0.1	nd		15,800	490	120	120	0%
Acenaphthene	0.1	nd	113%	3000	400	240	230	4%
Acenaphthylene	0.1	nd		1140	190	40	42	5%
Fluorene	0.1	nd		5000	250	85	90	6%
Phenanthrene	0.1	nd		15,800	2200	550	600	9%
Anthracene	0.1	nd		3600	520	230	160	36%
Fluoranthene	0.1	nd		12,200	3200	1400	1300	7%
Pyrene	0.1	nd	105%	23,800	4400	1900	1800	5%
Benzo(a)anthracene	0.08	nd		4600	890	440	380	15%
Chrysene	0.08	nd		4000	870	400	390	3%
Benzo(b)fluoranthene	0.08	nd		2200	440	250	230	8%
Benzo(k)fluoranthene	0.08	nd		1420	470	190	220	15%
Benzo(a)pyrene	0.08	nd		3600	870	390	320	20%
Indeno(1,2,3-cd)pyrene	0.08	nd		2800	670	290	280	4%
Dibenzo(a,h)anthracene	0.08	nd		660	120	40	36	11%
Benzo(g,h,i)perylene	0.1	nd		4200	1200	490	470	4%
<i>Total PAH Carcinogens</i>				19,280	4330	2000	1856	

**Total PAH Carcinogens Defined as:**

Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene,  
Benzo(k)fluoranthene, Benzo(a)pyrene,  
Indeno(1,2,3-cd)pyrene & Dibenzo(a,h)anthracene

**Surrogate Recovery**

(Surr 1) 2-Fluorobiphenyl	98%	74%	125%	96%	113%	118%
(Surr 2) p-Terphenyl	125%	70%	153%	145%	148%	134%

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"MS" Indicates Matrix Spike

"MSD" Indicates Matrix Spike Duplicate

"RPD" Indicates Relative Percent Difference

Samples may be run under SIM

Acceptable RPD is determined to be less than 30%

**Acceptable Recovery Limits:**

Surrogates = 65% to 135%

LCS, LCSD, MS, MSD = 50% to 150%

Surrogates and Spike Concentration = 25 ug/L



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F: 206.352.7178  
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## Analysis of Polyaromatic Hydrocarbons in Soil by EPA Method 8270C

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080912-3

EPA 8270C (mg/kg)	MRL	MS	MSD	RPD %
		Grab-3	Grab-3	
Date Extracted		9/14/08	9/14/08	
Date Analyzed		9/15/08	9/15/08	
Matrix		Soil	Soil	
Naphthalene	0.1			
1-Methylnaphthalene	0.1			
2-Methylnaphthalene	0.1			
Acenaphthene	0.1	135%	145%	7%
Acenaphthylene	0.1			
Fluorene	0.1			
Phenanthrene	0.1			
Anthracene	0.1			
Fluoranthene	0.1			
Pyrene	0.1	110%	130%	17%
Benzo(a)anthracene	0.08			
Chrysene	0.08			
Benzo(b)fluoranthene	0.08			
Benzo(k)fluoranthene	0.08			
Benzo(a)pyrene	0.08			
Indeno(1,2,3-cd)pyrene	0.08			
Dibenzo(a,h)anthracene	0.08			
Benzo(g,h,i)perylene	0.1			

### Total PAH Carcinogens

**Total PAH Carcinogens Defined as:**  
Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene,  
Benzo(k)fluoranthene, Benzo(a)pyrene,  
Indeno(1,2,3-cd)pyrene & Dibenzo(a,h)anthracene

### Surrogate Recovery

(Surr 1) 2-Fluorobiphenyl	95%	101%
(Surr 2) p-Terphenyl	151%	147%

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Samples may be run under SIM  
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2930 Westlake Ave. N. Suite 100  
Seattle, WA 98109

Tel: 206-352-3790  
Fax: 206-352-7178

# Chain of Custody Record

Date: 9/10/08

Page: 1 of 2

Client: Floyd / Snider  
Address: 601 Union St. Ste 1000  
City, State, Zip: Seattle, WA 98101

Project Name: COS-VERBEEK  
Location: Bathell, WA  
Collected by: M. King / E. Murray

Reports To (PM): Teri Floyd Fax: 206-682-7847 Email: teri.floyd@floyd-snider.com Project No: COS-VERBEEK

Sample Name	Time	Sample Type	Container Type	Date of Collection	VDA B7B	VDA B003R BTEX	NWTPH-CY	NWTPH-HCID	NWTPH-DX	SEMP VOA B270X	PAH B27U	PCB: B052	ELIPELUCIDES B081	CHLOROPICLIDES B151A	METALS	Metals MTLA-5	Metals BCR-A-B	Hold	Comments/Depth		
1 Grab-1	10:30 AM	S	403	9/10/08																Please CC Megan King megan.king@floyd-snider.com	
2 Grab-2	14:15	S	1603																		
3 Grab-3	17:25	S	1603																		
4 BIO-1	11:20	S	403						✓	✓										Suspected hut	
5 BIO-2	11:40	S							✓	✓											Mod. contamination
6 BIO-3	11:50	S							✓	✓											Slight contamination
7 BIO-4	12:05								✓	✓											" "
8 BIO-5	12:20								✓	✓											Mod. Contamination
9 BIO-4	12:25								✓	✓											Strong Contamination
10 BIO-7	12:30								✓	✓											" "

Relinquished	Date/Time	Received	Date/Time	Sample Receipt:	Special Remarks
<i>[Signature]</i>	9/10/08 4:40pm	<i>[Signature]</i>	9/10/08 4:40	Good?	24HR on DX
Relinquished	Date/Time	Received	Date/Time	Temperature	Standard on B270
				Seals Intact?	
				Total Number of Containers	1AT ... 24HR 48HR Standard

\* Provide NWTPH-DX chromatographs



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	B10-5	B10-9	B10-10	B10-11	B10-12	B10-13	B10-14
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Date Analyzed		9/14/08	9/14/08	9/14/08	9/15/08	9/15/08	9/15/08	9/15/08
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Aniline	0.4	nd	nd	nd	nd	nd	nd	nd
Phenol	0.4	nd	nd	nd	nd	nd	nd	nd
Bis(2-chloroethyl)ether	0.4	nd	nd	nd	nd	nd	nd	nd
2-Chlorophenol	0.2	nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.2	nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.2	nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.2	nd	nd	nd	nd	nd	nd	nd
Benzyl alcohol	0.2	nd	nd	nd	nd	nd	nd	nd
Bis(2-chloroisopropyl)ether	0.2	nd	nd	nd	nd	nd	nd	nd
2-Methylphenol (o-cresol)	0.2	nd	nd	nd	nd	nd	nd	nd
Hexachloroethane	0.2	nd	nd	nd	nd	nd	nd	nd
N-Nitroso-di-n-propylamine	0.2	nd	nd	nd	nd	nd	nd	nd
4-Methylphenol (p-cresol)	0.2	nd	nd	nd	nd	nd	nd	nd
3-Methylphenol (p-cresol)	0.2	nd	nd	nd	nd	nd	nd	nd
Nitrobenzene	0.4	nd	nd	nd	nd	nd	nd	nd
Isophorone	0.2	nd	nd	nd	nd	nd	nd	nd
2-Nitrophenol	0.2	nd	nd	nd	nd	nd	nd	nd
2,4-Dimethylphenol	0.2	nd	nd	nd	nd	nd	nd	nd
Bis(2-chloroethoxy)methane	0.2	nd	nd	nd	nd	nd	nd	nd
2,4-Dichlorophenol	0.4	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	0.2	nd	nd	nd	nd	nd	nd	nd

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## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	B10-5	B10-9	B10-10	B10-11	B10-12	B10-13	B10-14
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Date Analyzed		9/14/08	9/14/08	9/14/08	9/15/08	9/15/08	9/15/08	9/15/08
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Naphthalene	0.2	7.1	8.3	14	9.3	17	12	55
4-Chloroaniline	0.5	nd	nd	nd	nd	nd	nd	nd
Hexachlorobutadiene	0.2	nd	nd	nd	nd	nd	nd	nd
4-Chloro-3-methylphenol	0.5	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene	0.2	2.8	2.7	5.4	2.8	5.9	4.0	20
1-Methylnaphthalene	0.2	2.8	2.3	4.5	2.8	5.8	3.8	16
Hexachlorocyclopentadiene	0.2	nd	nd	nd	nd	nd	nd	nd
2,4,6-Trichlorophenol	0.2	nd	nd	nd	nd	nd	nd	nd
2,4,5-Trichlorophenol	0.2	nd	nd	nd	nd	nd	nd	nd
2-Chloronaphthalene	0.2	nd	nd	nd	nd	nd	nd	nd
2-Nitroaniline	0.5	nd	nd	nd	nd	nd	nd	nd
1,4-Dinitrobenzene	0.5	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene	0.2	1.8	2.6	3.5	2.4	4.0	2.6	8.9
1,3-Dinitrobenzene	0.5	nd	nd	nd	nd	nd	nd	nd
Dimethylphthalate	0.2	nd	nd	nd	nd	nd	nd	nd
2,6-Dinitrotoluene	0.2	nd	nd	nd	nd	nd	nd	nd
1,2-Dinitrobenzene	0.2	nd	nd	nd	nd	nd	nd	nd
Acenaphthene	0.2	2.3	2.4	3.6	2.3	4.0	2.7	11
3-Nitroaniline	0.5	nd	nd	nd	nd	nd	nd	nd
2,4-Dinitrophenol	0.2	nd	nd	nd	nd	nd	nd	nd
Dibenzofuran	0.2	0.36	0.37	0.5	0.36	0.75	0.42	2.4

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 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L





## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	B10-5	B10-9	B10-10	B10-11	B10-12	B10-13	B10-14
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Date Analyzed		9/14/08	9/14/08	9/14/08	9/15/08	9/15/08	9/15/08	9/15/08
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
2,4-Dinitrotoluene	0.2	nd	nd	nd	nd	nd	nd	nd
4-Nitrophenol	0.5	nd	nd	nd	nd	nd	nd	nd
2,3,4,6-Tetrachlorophenol	0.2	nd	nd	nd	nd	nd	nd	nd
2,3,5,6-Tetrachlorophenol	0.2	nd	nd	nd	nd	nd	nd	nd
Fluorene	0.2	1.6	1.8	2.8	1.6	2.5	2.1	8.4
4-Chlorophenyl phenyl ether	0.2	nd	nd	nd	nd	nd	nd	nd
Diethylphthalate	0.2	nd	nd	nd	nd	nd	nd	nd
4,6-Dinitro-2-methylphenol	0.5	nd	nd	nd	nd	nd	nd	nd
Diphenylamine	0.5	nd	nd	nd	nd	nd	nd	nd
Azobenzene	0.2	nd	nd	nd	nd	nd	nd	nd
4-Bromo phenyl phenyl ether	0.2	nd	nd	nd	nd	nd	nd	nd
Hexachlorobenzene	0.2	nd	nd	nd	nd	nd	nd	nd
Pentachlorophenol	0.2	nd	nd	nd	nd	nd	nd	nd
Phenanthrene	0.2	10	10	16	9.2	17	12	42
Anthracene	0.2	2.8	3.1	1.4	0.6	3.9	3.7	10
Carbazole	0.5	nd	nd	nd	nd	nd	nd	nd
Di-n-butylphthalate	0.2	nd	nd	nd	nd	nd	nd	nd
Fluoranthene	0.2	19	23	26	19	38	22	68
Pyrene	0.2	27	35	37	30	48	32	85
Benzyl Butyl phthalate	0.2	nd	nd	nd	nd	nd	nd	nd
bis (2-Ethylhexyl) adipate	0.2	nd	nd	nd	nd	nd	nd	nd

"nd" Indicates not detected at listed reporting limits  
 "int" Indicates that interference prevents determination  
 "J" Indicates estimated value  
 "MRL" Indicates Method Reporting Limit  
 "LCS" Indicates Laboratory Control Sample  
 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	B10-5	B10-9	B10-10	B10-11	B10-12	B10-13	B10-14
Date Extracted		9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08	9/14/08
Date Analyzed		9/14/08	9/14/08	9/14/08	9/15/08	9/15/08	9/15/08	9/15/08
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Benzo [a] anthracene	0.1	6.3	10	9.6	7.8	17	8.1	27
Chrysene	0.1	5.6	8.7	8.7	7.8	15	8.1	28
bis (2-Ethylhexyl) phthalate	0.2	nd	nd	nd	nd	nd	nd	nd
Di-n-octyl phthalate	0.2	nd	nd	nd	nd	nd	nd	nd
benzo [b] fluoranthene	0.1	3.9	6.2	8.9	8.2	16	4.7	19
benzo [k] fluoranthene	0.1	2.7	4.1	9.4	8.5	17	3.7	12
benzo [a] pyrene	0.1	5.3	8.8	8.6	7.3	12	7.5	28
Indeno [ 1,2,3-cd] pyrene	0.1	4.5	6.7	6.3	6.0	11	6.0	20
Dibenz [a,h] anthracene	0.1	0.6	0.8	1.3	0.7	2.1	0.79	3.7
Benzo [g,h,i] perylene	0.1	7.3	12	11	10	18	11	35
Benzoic Acid	0.4	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.2	nd	nd	nd	nd	nd	nd	nd
<b>Surrogate Recovery</b>								
(Surr 1) 2-Fluorophenol		122%	131%	117%	113%	97%	123%	112%
(Surr) Phenol -d6		84%	85%	84%	72%	66%	85%	64%
(Surr) Nitrobenzene-d5		70%	66%	75%	60%	82%	74%	88%
(Surr) 2-Fluorobiphenyl		91%	103%	104%	102%	103%	111%	117%
(Surr 2) p-Terphenyl		143%	150%	143%	133%	153%	138%	139%

"nd" Indicates not detected at listed reporting limits  
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 "J" Indicates estimated value  
 "MRL" Indicates Method Reporting Limit  
 "LCS" Indicates Laboratory Control Sample  
 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Duplicate		RPD %	MS	MSD	RPD %
		B10-15	B10-15		Grab 3	Grab 3	
Date Extracted		9/14/08	9/14/08		9/14/08	9/14/08	
Date Analyzed		9/15/08	9/15/08		9/15/08	9/15/08	
Matrix		Soil	Soil		Soil	Soil	
Aniline	0.4	nd	nd				
Phenol	0.4	nd	nd		88%	65%	30%
Bis(2-chloroethyl)ether	0.4	nd	nd				
2-Chlorophenol	0.2	nd	nd		78%	60%	27%
1,3-Dichlorobenzene	0.2	nd	nd				
1,4-Dichlorobenzene	0.2	nd	nd		74%	56%	28%
1,2-Dichlorobenzene	0.2	nd	nd				
Benzyl alcohol	0.2	nd	nd				
Bis(2-chloroisopropyl)ether	0.2	nd	nd				
2-Methylphenol (o-cresol)	0.2	nd	nd				
Hexachloroethane	0.2	nd	nd				
N-Nitroso-di-n-propylamine	0.2	nd	nd		61%	62%	1%
4-Methylphenol (p-cresol)	0.2	nd	nd				
3-Methylphenol (p-cresol)	0.2	nd	nd				
Nitrobenzene	0.4	nd	nd				
Isophorone	0.2	nd	nd				
2-Nitrophenol	0.2	nd	nd				
2,4-Dimehtylphenol	0.2	nd	nd				
Bis(2-chloroethoxy)methane	0.2	nd	nd				
2,4-Dichlorophenol	0.4	nd	nd				
1,2,3-Trichlorobenzene	0.2	nd	nd				

"nd" Indicates not detected at listed reporting limits  
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 "J" Indicates estimated value  
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2930 Westlake Ave. N., Suite 100  
Seattle, WA 98103

T: 206.352.3790  
F: 206.352.7178

email: info@fremontanalytical.com

## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Duplicate		RPD %	MS	MSD	RPD %
		B10-15	B10-15		Grab 3	Grab 3	
Date Extracted		9/14/08	9/14/08		9/14/08	9/14/08	
Date Analyzed		9/15/08	9/15/08		9/15/08	9/15/08	
Matrix		Soil	Soil		Soil	Soil	
Naphthalene	0.2	8.7	10	14%			
4-Chloroaniline	0.5	nd	nd				
Hexachlorobutadiene	0.2	nd	nd				
4-Chloro-3-methylphenol	0.5	nd	nd		82%	70%	16%
2-Methylnaphthalene	0.2	3.0	2.8	7%			
1-Methylnaphthalene	0.2	3.2	2.8	13%			
Hexachlorocyclopentadiene	0.2	nd	nd				
2,4,6-Trichlorophenol	0.2	nd	nd				
2,4,5-Trichlorophenol	0.2	nd	nd				
2-Chloronaphthalene	0.2	nd	nd				
2-Nitroaniline	0.5	nd	nd				
1,4-Dinitrobenzene	0.5	nd	nd				
Acenaphthylene	0.2	3.2	3.5	9%			
1,3-Dinitrobenzene	0.5	nd	nd				
Dimethylphthalate	0.2	nd	nd				
2,6-Dinitrotoluene	0.2	nd	nd				
1,2-Dinitrobenzene	0.2	nd	nd				
Acenaphthene	0.2	1.9	2.0	5%	135%	145%	7%
3-Nitroaniline	0.5	nd	nd				
2,4-Dinitrophenol	0.2	nd	nd				
Dibenzofuran	0.2	0.41	0.27	41%			

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 "LCS" Indicates Laboratory Control Sample  
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Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Duplicate		RPD %	MS	MSD	RPD %
		B10-15	B10-15		Grab 3	Grab 3	
Date Extracted		9/14/08	9/14/08		9/14/08	9/14/08	
Date Analyzed		9/15/08	9/15/08		9/15/08	9/15/08	
Matrix		Soil	Soil		Soil	Soil	
2,4-Dinitrotoluene	0.2	nd	nd				
4-Nitrophenol	0.5	nd	nd		67%	113%	51%
2,3,4,6-Tetrachlorophenol	0.2	nd	nd				
2,3,5,6-Tetrachlorophenol	0.2	nd	nd				
Fluorene	0.2	1.6	1.3	21%			
4-Chlorophenyl phenyl ether	0.2	nd	nd				
Diethylphthalate	0.2	nd	nd				
4,6-Dinitro-2-methylphenol	0.5	nd	nd				
Diphenylamine	0.5	nd	nd				
Azobenzene	0.2	nd	nd				
4-Bromo phenyl phenyl ether	0.2	nd	nd				
Hexachlorobenzene	0.2	nd	nd				
Pentachlorophenol	0.2	nd	nd		148%	123%	19%
Phenanthrene	0.2	11	11	0%			
Anthracene	0.2	3.2	3.4	6%			
Carbazole	0.5	nd	nd				
Di-n-butylphthalate	0.2	nd	nd				
Fluoranthene	0.2	22	28	24%			
Pyrene	0.2	32	42	27%	110%	190%	53%
Benzyl Butyl phthalate	0.2	nd	nd				
bis (2-Ethylhexyl) adipate	0.2	nd	nd				

"nd" Indicates not detected at listed reporting limits  
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 "J" Indicates estimated value  
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 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Duplicate		RPD %	MS	MSD	RPD %
		B10-15	B10-15		Grab 3	Grab 3	
Date Extracted		9/14/08	9/14/08		9/14/08	9/14/08	
Date Analyzed		9/15/08	9/15/08		9/15/08	9/15/08	
Matrix		Soil	Soil		Soil	Soil	

Benzo [a] anthracene	0.1	9.1	10	9%			
Chrysene	0.1	8.7	11	23%			
bis (2-Ethylhexyl) phthalate	0.2	nd	nd				
Di-n-octyl phthalate	0.2	nd	nd				
benzo [b] fluoranthene	0.1	4	4.7	16%			
benzo [k] fluoranthene	0.1	3.1	4.4	35%			
benzo [a] pyrene	0.1	7.5	8.7	15%			
Indeno [ 1,2,3-cd] pyrene	0.1	6.2	7.3	16%			
Dibenz [a,h] anthracene	0.1	0.8	1.0	22%			
Benzo [g,h,i] perylene	0.1	10	12	18%			
Benzoic Acid	0.4	nd	nd				
1,2,4-Trichlorobenzene	0.2	nd	nd		64%	69%	8%

### Surrogate Recovery

(Surr 1) 2-Fluorophenol	98%	95%	100%	82%
(Surr) Phenol -d6	78%	56%	81%	56%
(Surr) Nitrobenzene-d5	77%	60%	91%	67%
(Surr) 2-Fluorobiphenyl	103%	95%	95%	101%
(Surr 2) p-Terphenyl	150%	141%	151%	147%

"nd" Indicates not detected at listed reporting limits  
 "int" Indicates that interference prevents determination  
 "J" Indicates estimated value  
 "MRL" Indicates Method Reporting Limit  
 "LCS" Indicates Laboratory Control Sample  
 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



## Analysis of Polyaromatic Hydrocarbons in Soil by EPA Method 8270C

**Project:** COS - Verbeek  
**Client:** Floyd | Snider  
**Client Project #:** COS-Law-Verbeek  
**Lab Project #:** CHM080923-2

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	Duplicate		RPD %	Bio-Pilot-2	MS	MSD	RPD %
				Bio-Pilot-1	Bio-Pilot-1			Batch	Batch	
Date Extracted		9/25/08	9/25/08	9/25/08	9/25/08		9/25/08	9/25/08	9/25/08	
Date Analyzed		9/25/08	9/25/08	9/25/08	9/25/08		9/25/08	9/25/08	9/25/08	
Matrix		Soil		Soil	Soil		Soil	Soil	Soil	
Naphthalene	0.1	nd		2.5	2.9	15%	6.0			
1-Methylnaphthalene	0.1	nd		0.9	0.7	18%	1.1			
2-Methylnaphthalene	0.1	nd		0.7	0.3	89%	0.3			
Acenaphthene	0.1	nd	88%	0.6	0.6	0%	1.4	102%	85%	18%
Acenaphthylene	0.1	nd		1.1	1.0	10%	17			
Fluorene	0.1	nd		0.5	0.5	14%	11			
Phenanthrene	0.1	nd		2.9	2.9	0%	140			
Anthracene	0.1	nd		1.4	1.3	7%	25			
Fluoranthene	0.1	nd		7.2	6.3	13%	130			
Pyrene	0.1	nd	105%	13	11	17%	200	106%	106%	0%
Benzo(a)anthracene	0.08	nd		1.9	1.6	17%	34			
Chrysene	0.08	nd		3.8	3.0	24%	44			
Benzo(b)fluoranthene	0.08	nd		1.9	1.6	17%	19			
Benzo(k)fluoranthene	0.08	nd		2.5	1.9	27%	29			
Benzo(a)pyrene	0.08	nd		4.2	3.6	15%	44			
Indeno(1,2,3-cd)pyrene	0.08	nd		3.1	2.5	21%	28			
Dibenzo(a,h)anthracene	0.08	nd		0.8	0.6	29%	5.6			
Benzo(g,h,i)perylene	0.1	nd		4.9	4.6	6%	46			
<b>Total PAH Carcinogens</b>				<b>18.2</b>	<b>14.8</b>		<b>203.6</b>			

**Total PAH Carcinogens Defined as:**

Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene & Dibenzo(a,h)anthracene

**Surrogate Recovery**

(Surr 1) 2-Fluorobiphenyl	85%	104%	85%	93%	100%	119%	103%
(Surr 2) p-Terphenyl	116%	81%	117%	107%	104%	87%	78%

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 "J" Indicates estimated value  
 "MRL" Indicates Method Reporting Limit  
 "LCS" Indicates Laboratory Control Sample  
 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM  
 Acceptable RPD is determined to be less than 30%  
 Acceptable Recovery Limits:  
 Surrogates = 65% to 135%  
 LCS, LCSD, MS, MSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



2930 Westlake Ave N Suite 100  
Seattle, WA 98109  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**Floyd | Snider**  
**Attn: Teri Floyd**  
601 Union St. Suite 600  
Seattle, WA 98101

**RE: COS - Verbeek**  
**Fremont Project No: CHM080910-3**  
**Floyd | Snider Project No: COS - Verbeek**

September 11<sup>th</sup>, 2008

**Teri:**

Enclosed are the analytical results for the **COS - Verbeek** soil sample delivered to Fremont Analytical on September 10<sup>th</sup>, 2008.

The samples were received in good condition - in the proper containers (4 oz. soil jars), properly sealed, labeled and within holding times. The samples were received in a cooler with gel ice at a temperature of 3°C, which is within the recommended laboratory cooler temperature range (2°C - 10°C). The samples were extracted and then stored in refrigeration units at the USEPA-recommended temperature of 4°C ± 2°C. There were no sample receipt issues to report.

Examination of these samples was conducted for the presence of the following:

- ***Diesel and Heavy Oil in Soil by NWTPH-Dx/Dx Ext.***
- ***Semi-Volatile Organic Compounds in Soil by EPA Method 8270***

These applications were performed under Washington State Department of Ecology accreditation parameters. All appropriate Quality Assurance / Quality Control method parameters have been applied.

**Notations – EPA Method 8270C:**

- The Matrix Spike (MS) Duplicate for 4-Nitrophenol exceeded the QC range. The MS, Laboratory Control Sample (LCS) & LCS Duplicate were within QC range, proving the analysis in control.
- There was no MS or MSD recovery for Pyrene due to elevated detections in the sample. The LCS and LCS Duplicate were within QC limits.
- B10-8: The Phenol -d6 surrogate recovery was slightly under QC limits. The other 4 surrogates were within range. This is acceptable under by this method. No further action is required.

Please contact the laboratory if you should have any questions about the report.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Dee".

Michael Dee  
Sr. Chemist / Principal  
mikedee@fremontanalytical.com

**www.fremontanalytical.com**





## Analysis of Diesel and Heavy Oil in Soil by NWTPH-Dx / Dx Ext.

**Project:** COS - Verbeek  
**Client:** Floyd | Snider  
**Client Project #:** COS - Verbeek  
**Lab Project #:** CHM080910-3

NWTPH-Dx/Dx Ext. (mg/kg)	MRL	Method Blank	B10-1	B10-2	B10-3	B10-4	B10-5	B10-6
Date Extracted		9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08
Date Analyzed		9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Diesel (Fuel Oil)	20	nd	nd	nd	nd	nd	nd	nd
Mineral Oil	40	nd	nd	nd	nd	nd	nd	nd
Heavy Oil	50	nd	nd	nd	nd	nd	nd	nd
DRO*	20	nd	370	130	60	36	54	58
ORO**	50	nd	450	130	120	66	120	82

### Surrogate Recovery

(Surr 1 ) 2-Fluorobiphenol	78%	C	C	128%	129%	129%	128%
(Surr 2) o-Terphenol	76%	C	C	126%	125%	126%	126%

"nd" Indicates not detected at listed reporting limits  
 "int" Indicates that interference prevents determination  
 "J" Indicates estimated value  
 "C" Indicates coelution prevents determination  
 "MRL" Indicates Method Reporting Limit

\*DRO Indicates Diesel Range Organics  
 \*\*ORO Indicates Heavy Oil Range Organics  
 Acceptable RPD is determined to be less than 30%  
Acceptable Recovery Limits:  
 Surrogate = 65% to 135%  
 Surrogate Concentration = 5 mg/L  
 Diesel (Fuel Oil) = C12-C24  
 Mineral Oil = C15-C40  
 Heavy Oil = C24-C40



2930 Westlake Ave. N., Suite 100  
Seattle, WA 98109

T: 206.352.3790

F: 206.352.7178

email: info@fremontanalytical.com

## Analysis of Diesel and Heavy Oil in Soil by NWTPH-Dx / Dx Ext.

**Project:** COS - Verbeek  
**Client:** Floyd | Snider  
**Client Project #:** COS - Verbeek  
**Lab Project #:** CHM080910-3

NWTPH-Dx/Dx Ext. (mg/kg)	MRL	B10-7	B10-8	B10-9	B10-10	B10-11	B10-12	B10-13
Date Extracted		9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08
Date Analyzed		9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Diesel (Fuel Oil)	20	nd	nd	nd	nd	nd	nd	nd
Mineral Oil	40	nd	nd	nd	nd	nd	nd	nd
Heavy Oil	50	nd	nd	nd	nd	nd	nd	nd
DRO*	20	59	87	52	63	57	140	240
ORO**	50	98	110	100	110	95	170	230
<b>Surrogate Recovery</b>								
(Surr 1) 2-Fluorobiphenol		134%	77%	72%	71%	77%	91%	97%
(Surr 2) o-Terphenol		132%	76%	71%	68%	75%	93%	103%
"nd" Indicates not detected at listed reporting limits "int" Indicates that interference prevents determination "J" Indicates estimated value "C" Indicates coelution prevents determination "MRL" Indicates Method Reporting Limit								

\*DRO Indicates Diesel Range Organics  
\*\*ORO Indicates Heavy Oil Range Organics  
Acceptable RPD is determined to be less than 30%  
Acceptable Recovery Limits:  
Surrogate = 65% to 135%  
Surrogate Concentration = 5 mg/L  
Diesel (Fuel Oil) = C12-C24  
Mineral Oil = C15-C40  
Heavy Oil = C24-C40



## Analysis of Diesel and Heavy Oil in Soil by NWTPH-Dx / Dx Ext.

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

NWTPH-Dx/Dx Ext. (mg/kg)	MRL	B10-14	B10-15	Duplicate	
				B10-15	RPD %
Date Extracted		9/10/08	9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	9/11/08	
Matrix		Soil	Soil	Soil	
Diesel (Fuel Oil)	20	nd	nd	nd	
Mineral Oil	40	nd	nd	nd	
Heavy Oil	50	nd	nd	nd	
DRO*	20	280	120	110	9%
ORO**	50	390	130	130	0%
<b>Surrogate Recovery</b>					
(Surr 1 ) 2-Fluorobiphenol		99%	92%	95%	
(Surr 2) o-Terphenol		106%	92%	92%	

"nd" Indicates not detected at listed reporting limits  
 "int" Indicates that interference prevents determination  
 "J" Indicates estimated value  
 "C" Indicates coelution prevents determination  
 "MRL" Indicates Method Reporting Limit

\*DRO Indicates Diesel Range Organics  
\*\*ORO Indicates Heavy Oil Range Organics  
Acceptable RPD is determined to be less than 30%  
Acceptable Recovery Limits:  
Surrogate = 65% to 135%  
Surrogate Concentration = 5 mg/L  
Diesel (Fuel Oil) = C12-C24  
Mineral Oil = C15-C40  
Heavy Oil = C24-C40



2930 Westlake Ave. N., Suite 100  
Seattle, WA 98103

T: 206.352.3790  
F: 206.352.7178

email: info@fremontanalytical.com

## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	LCSD	B10-6	B10-7	Duplicate		RPD %
							B10-8	B10-8	
Date Extracted		9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	
Matrix		Soil			Soil	Soil	Soil	Soil	
Aniline	0.4	nd			nd	nd	nd	nd	
Phenol	0.4	nd	93%	90%	nd	nd	nd	nd	
Bis(2-chloroethyl)ether	0.4	nd			nd	nd	nd	nd	
2-Chlorophenol	0.2	nd	82%	77%	nd	nd	nd	nd	
1,3-Dichlorobenzene	0.2	nd			nd	nd	nd	nd	
1,4-Dichlorobenzene	0.2	nd	78%	78%	nd	nd	nd	nd	
1,2-Dichlorobenzene	0.2	nd			nd	nd	nd	nd	
Benzyl alcohol	0.2	nd			nd	nd	nd	nd	
Bis(2-chloroisopropyl)ether	0.2	0.32			0.31	0.32	0.31	0.33	6%
2-Methylphenol (o-cresol)	0.2	nd			nd	nd	nd	nd	
Hexachloroethane	0.2	nd			nd	nd	nd	nd	
N-Nitroso-di-n-propylamine	0.2	nd	67%	90%	nd	nd	nd	nd	
4-Methylphenol (p-cresol)	0.2	nd			nd	nd	nd	nd	
3-Methylphenol (p-cresol)	0.2	nd			nd	nd	nd	nd	
Nitrobenzene	0.4	nd			nd	nd	nd	nd	
Isophorone	0.2	nd			nd	nd	nd	nd	
2-Nitrophenol	0.2	nd			nd	nd	nd	nd	
2,4-Dimethylphenol	0.2	nd			nd	nd	nd	nd	
Bis(2-chloroethoxy)methane	0.2	nd			nd	nd	nd	nd	
2,4-Dichlorophenol	0.4	nd			nd	nd	nd	nd	
1,2,3-Trichlorobenzene	0.2	nd			nd	nd	nd	nd	

"nd" Indicates not detected at listed reporting limits  
 "int" Indicates that interference prevents determination  
 "J" Indicates estimated value  
 "MRL" Indicates Method Reporting Limit  
 "LCS" Indicates Laboratory Control Sample  
 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



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Seattle, WA 98103

T: 206.352.3790

F: 206.352.7178

email: info@fremontanalytical.com

## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	LCSD	B10-6	B10-7	Duplicate		RPD %
							B10-8	B10-8	
Date Extracted		9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	
Matrix		Soil			Soil	Soil	Soil	Soil	
Naphthalene	0.2	nd			1.1	2.5	1.0	1.3	26%
4-Chloroaniline	0.5	nd			nd	nd	nd	nd	
Hexachlorobutadiene	0.2	nd			nd	nd	nd	nd	
4-Chloro-3-methylphenol	0.5	nd	93%	55%	nd	nd	nd	nd	
2-Methylnaphthalene	0.2	nd			0.24	0.63	0.29	0.37	24%
1-Methylnaphthalene	0.2	nd			0.28	0.78	0.34	0.30	13%
Hexachlorocyclopentadiene	0.2	nd			nd	nd	nd	nd	
2,4,6-Trichlorophenol	0.2	nd			nd	nd	nd	nd	
2,4,5-Trichlorophenol	0.2	nd			nd	nd	nd	nd	
2-Chloronaphthalene	0.2	nd			nd	nd	nd	nd	
2-Nitroaniline	0.5	nd			nd	nd	nd	nd	
1,4-Dinitrobenzene	0.5	nd			nd	nd	nd	nd	
Acenaphthylene	0.2	nd			0.75	0.44	0.30	0.41	31%
1,3-Dinitrobenzene	0.5	nd			nd	nd	nd	nd	
Dimethylphthalate	0.2	nd			nd	nd	nd	nd	
2,6-Dinitrotoluene	0.2	nd			nd	nd	nd	nd	
1,2-Dinitrobenzene	0.2	nd			nd	nd	nd	nd	
Acenaphthene	0.2	nd	74%	85%	0.46	0.54	0.32	0.39	20%
3-Nitroaniline	0.5	nd			nd	nd	nd	nd	
2,4-Dinitrophenol	0.2	nd			nd	nd	nd	nd	
Dibenzofuran	0.2	nd			nd	nd	nd	nd	

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 "int" Indicates that interference prevents determination  
 "J" Indicates estimated value  
 "MRL" Indicates Method Reporting Limit  
 "LCS" Indicates Laboratory Control Sample  
 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	LCSD	B10-6	B10-7	B10-8	Duplicate	
								B10-8	RPD %
Date Extracted		9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	
Matrix		Soil			Soil	Soil	Soil	Soil	
2,4-Dinitrotoluene	0.2	nd			nd	nd	nd	nd	
4-Nitrophenol	0.5	nd	95%	96%	nd	nd	nd	nd	
2,3,4,6-Tetrachlorophenol	0.2	nd			nd	nd	nd	nd	
2,3,5,6-Tetrachlorophenol	0.2	nd			nd	nd	nd	nd	
Fluorene	0.2	nd			0.6	0.78	0.70	0.42	50%
4-Chlorophenyl phenyl ether	0.2	nd			nd	nd	nd	nd	
Diethylphthalate	0.2	nd			nd	nd	nd	nd	
4,6-Dinitro-2-methylphenol	0.5	nd			nd	nd	nd	nd	
Diphenylamine	0.5	nd			nd	nd	nd	nd	
Azobenzene	0.2	nd			nd	nd	nd	nd	
4-Bromo phenyl phenyl ether	0.2	nd			nd	nd	nd	nd	
Hexachlorobenzene	0.2	nd			nd	nd	nd	nd	
Pentachlorophenol	0.2	nd	112%	118%	nd	nd	nd	nd	
Phenanthrene	0.2	nd			4.6	2.4	2.2	2.3	4%
Anthracene	0.2	nd			2.6	2.3	2.3	2.2	4%
Carbazole	0.5	nd			nd	nd	nd	nd	
Di-n-butylphthalate	0.2	nd			0.91	0.37	1.1	1.1	0%
Fluoranthene	0.2	nd			11	5.3	6.8	7.2	6%
Pyrene	0.2	nd	78%	87%	16	7.6	9.3	9.9	6%
Benzyl Butyl phthalate	0.2	nd			nd	nd	nd	nd	
bis (2-Ethylhexyl) adipate	0.2	nd			nd	nd	nd	nd	

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Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
 Acceptable Recovery Limits:  
 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	LCSD	B10-6	B10-7	Duplicate		RPD %
							B10-8	B10-8	
Date Extracted		9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08	
Matrix		Soil			Soil	Soil	Soil	Soil	
Benzo [a] anthracene	0.1	nd			6.4	3.9	4.6	4.4	12%
Chrysene	0.1	nd			3.4	2.3	2.6	2.6	12%
bis (2-Ethylhexyl) phthalate	0.2	nd			nd	nd	nd	nd	
Di-n-octyl phthalate	0.2	nd			nd	nd	nd	nd	
benzo [b] fluoranthene	0.1	nd			4.9	3.2	3.6	3.3	3%
benzo [k] fluoranthene	0.1	nd			3.9	2.5	2.4	2.1	17%
benzo [a] pyrene	0.1	nd			5.8	4.0	4.1	4.5	12%
Indeno [ 1,2,3-cd] pyrene	0.1	nd			3.7	2.3	2.4	2.4	4%
Dibenz [a,h] anthracene	0.1	nd			1.6	1.2	1.2	1.2	0%
Benzo [g,h,i] perylene	0.1	nd			4.8	2.7	2.9	2.8	4%
Benzoic Acid	0.4	nd			nd	nd	nd	nd	
1,2,4-Trichlorobenzene	0.2	nd	77%	77%	nd	nd	nd	nd	
<b>Surrogate Recovery</b>									
(Surr 1) 2-Fluorophenol		102%	133%	124%	105%	104%	112%	114%	
(Surr) Phenol -d6		95%	123%	122%	72%	55%	44%	84%	
(Surr) Nitrobenzene-d5		76%	89%	99%	85%	68%	73%	84%	
(Surr) 2-Fluorobiphenyl		107%	131%	120%	158%	136%	110%	82%	
(Surr 2) p-Terphenyl		113%	73%	70%	142%	125%	136%	134%	

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 Surrogate = 50% to 150%  
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 Surrogates and Spike Concentration = 25 ug/L



2930 Westlake Ave. N., Suite 100  
Seattle, WA 98103

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F: 206.352.7178  
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## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	MS	MSD	RPD %
		B10-8	B10-8	
Date Extracted		9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	
Matrix		Soil	Soil	
Aniline	0.4			
Phenol	0.4	102%	105%	3%
Bis(2-chloroethyl)ether	0.4			
2-Chlorophenol	0.2	87%	87%	1%
1,3-Dichlorobenzene	0.2			
1,4-Dichlorobenzene	0.2	82%	81%	1%
1,2-Dichlorobenzene	0.2			
Benzyl alcohol	0.2			
Bis(2-chloroisopropyl)ether	0.2			
2-Methylphenol (o-cresol)	0.2			
Hexachloroethane	0.2			
N-Nitroso-di-n-propylamine	0.2	69%	72%	5%
4-Methylphenol (p-cresol)	0.2			
3-Methylphenol (p-cresol)	0.2			
Nitrobenzene	0.4			
Isophorone	0.2			
2-Nitrophenol	0.2			
2,4-Dimethylphenol	0.2			
Bis(2-chloroethoxy)methane	0.2			
2,4-Dichlorophenol	0.4			
1,2,3-Trichlorobenzene	0.2			

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 Surrogate = 50% to 150%  
 LCS, LCSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L





## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

**Project:** COS - Verbeek  
**Client:** Floyd | Snider  
**Client Project #:** COS - Verbeek  
**Lab Project #:** CHM080910-3

EPA 8270C (mg/kg)	MRL	MS	MSD	RPD %
		B10-8	B10-8	
Date Extracted		9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	
Matrix		Soil	Soil	

Naphthalene	0.2			
4-Chloroaniline	0.5			
Hexachlorobutadiene	0.2			
4-Chloro-3-methylphenol	0.5	93%	144%	43%
2-Methylnaphthalene	0.2			
1-Methylnaphthalene	0.2			
Hexachlorocyclopentadiene	0.2			
2,4,6-Trichlorophenol	0.2			
2,4,5-Trichlorophenol	0.2			
2-Chloronaphthalene	0.2			
2-Nitroaniline	0.5			
1,4-Dinitrobenzene	0.5			
Acenaphthylene	0.2			
1,3-Dinitrobenzene	0.5			
Dimethylphthalate	0.2			
2,6-Dinitrotoluene	0.2			
1,2-Dinitrobenzene	0.2			
Acenaphthene	0.2	97%	124%	24%
3-Nitroaniline	0.5			
2,4-Dinitrophenol	0.2			
Dibenzofuran	0.2			

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Samples may be run under SIM mode  
 Acceptable RPD is determined to be less than 50%  
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 Surrogate = 50% to 150%  
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 Surrogates and Spike Concentration = 25 ug/L



## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	MS	MSD	RPD %
		B10-8	B10-8	
Date Extracted		9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	
Matrix		Soil	Soil	
2,4-Dinitrotoluene	0.2			
4-Nitrophenol	0.5	117%	196%	50%
2,3,4,6-Tetrachlorophenol	0.2			
2,3,5,6-Tetrachlorophenol	0.2			
Fluorene	0.2			
4-Chlorophenyl phenyl ether	0.2			
Diethylphthalate	0.2			
4,6-Dinitro-2-methylphenol	0.5			
Diphenylamine	0.5			
Azobenzene	0.2			
4-Bromo phenyl phenyl ether	0.2			
Hexachlorobenzene	0.2			
Pentachlorophenol	0.2	111%	119%	6%
Phenanthrene	0.2			
Anthracene	0.2			
Carbazole	0.5			
Di-n-butylphthalate	0.2			
Fluoranthene	0.2			
Pyrene	0.2	0%	0%	
Benzyl Butyl phthalate	0.2			
bis (2-Ethylhexyl) adipate	0.2			

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## Semi-Volatile Organic Compounds in Soil by EPA Method 8270c

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS - Verbeek  
Lab Project #: CHM080910-3

EPA 8270C (mg/kg)	MRL	MS	MSD	RPD %
		B10-8	B10-8	
Date Extracted		9/10/08	9/10/08	
Date Analyzed		9/11/08	9/11/08	
Matrix		Soil	Soil	

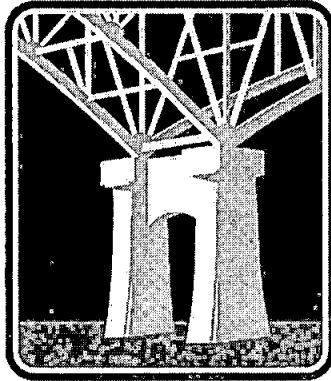
Benzo [a] anthracene	0.1			
Chrysene	0.1			
bis (2-Ethylhexyl) phthalate	0.2			
Di-n-octyl phthalate	0.2			
benzo [b] fluoranthene	0.1			
benzo [k] fluoranthene	0.1			
benzo [a] pyrene	0.1			
Indeno [ 1,2,3-cd] pyrene	0.1			
Dibenz [a,h] anthracene	0.1			
Benzo [g,h,i] perylene	0.1			
Benzoic Acid	0.4			
1,2,4-Trichlorobenzene	0.2	79%	72%	9%

### Surrogate Recovery

(Surr 1) 2-Fluorophenol	146%	126%
(Surr) Phenol -d6	147%	139%
(Surr) Nitrobenzene-d5	123%	101%
(Surr) 2-Fluorobiphenyl	80%	121%
(Surr 2) p-Terphenyl	114%	135%

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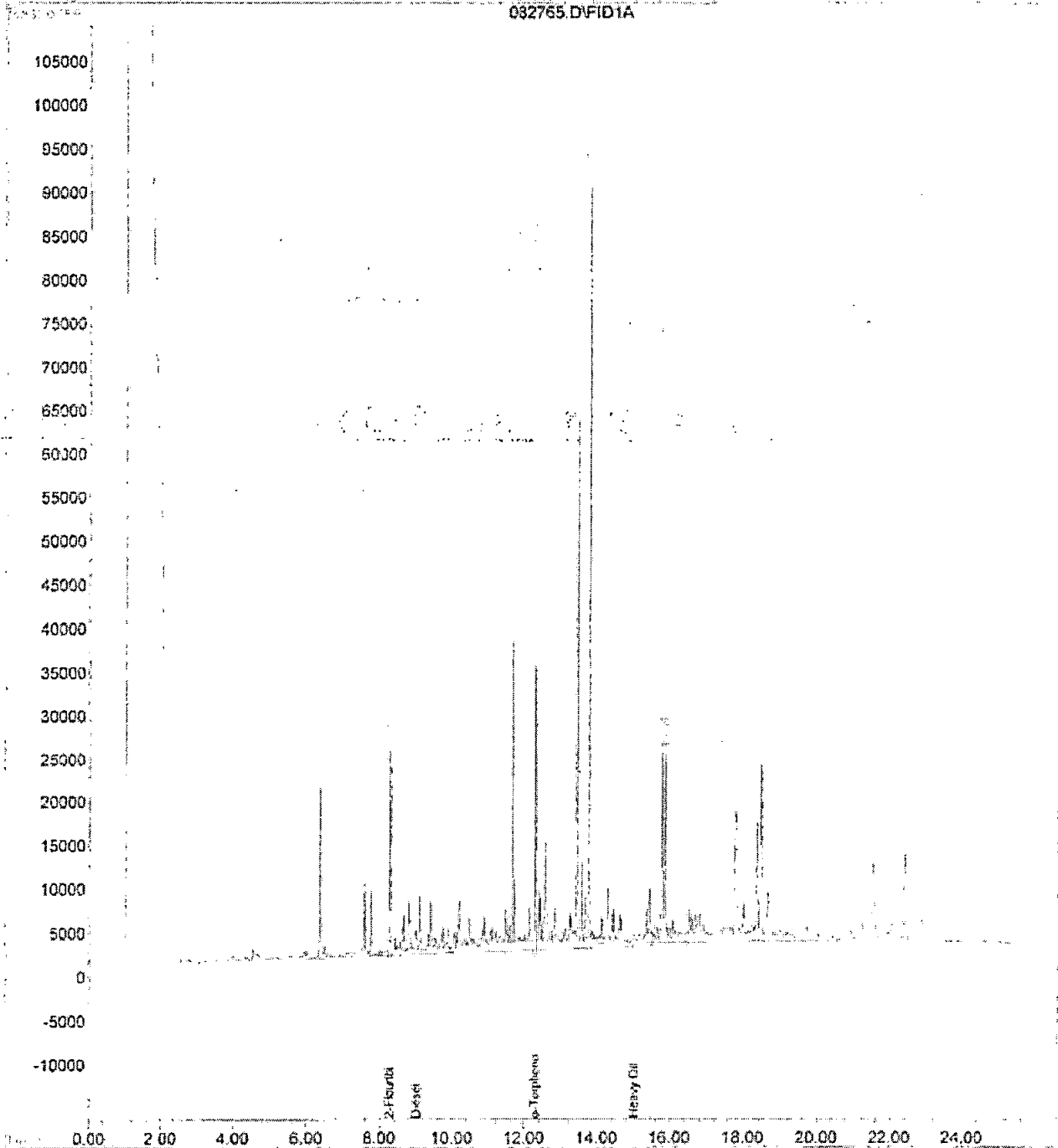
**NWTPH-Dx / Dx Ext. Chromatography**

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082765.D Vial: 65  
Acq On : 10 Sep 2008 7:05 pm Operator: JB  
Sample : FS B-10-1 Inst : GC FID  
Misc : Multiplr: 1.00  
IntFile : events.e  
Quant Time: Sep 11 15:14 2008 Quant Results File: DIESEL.RES

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :



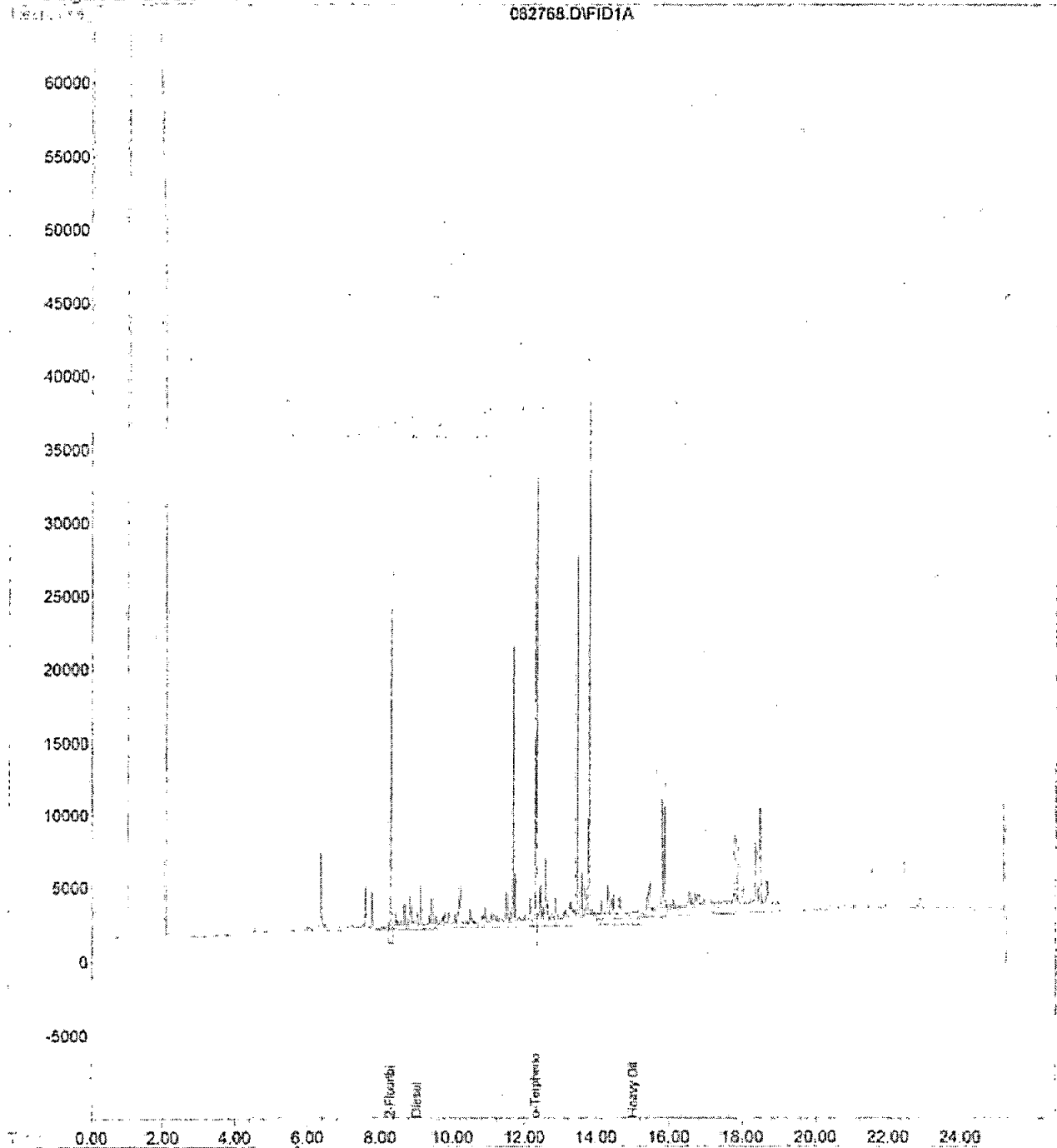
Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082768.D  
Acq On : 10 Sep 2008 8:40 pm  
Sample : FS B-10-2  
Misc :  
IntFile : events.e  
Quant Time: Sep 11 15:15 2008

Vial: 68  
Operator: JB  
Inst : GC FID  
Multiplier: 1.00

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :

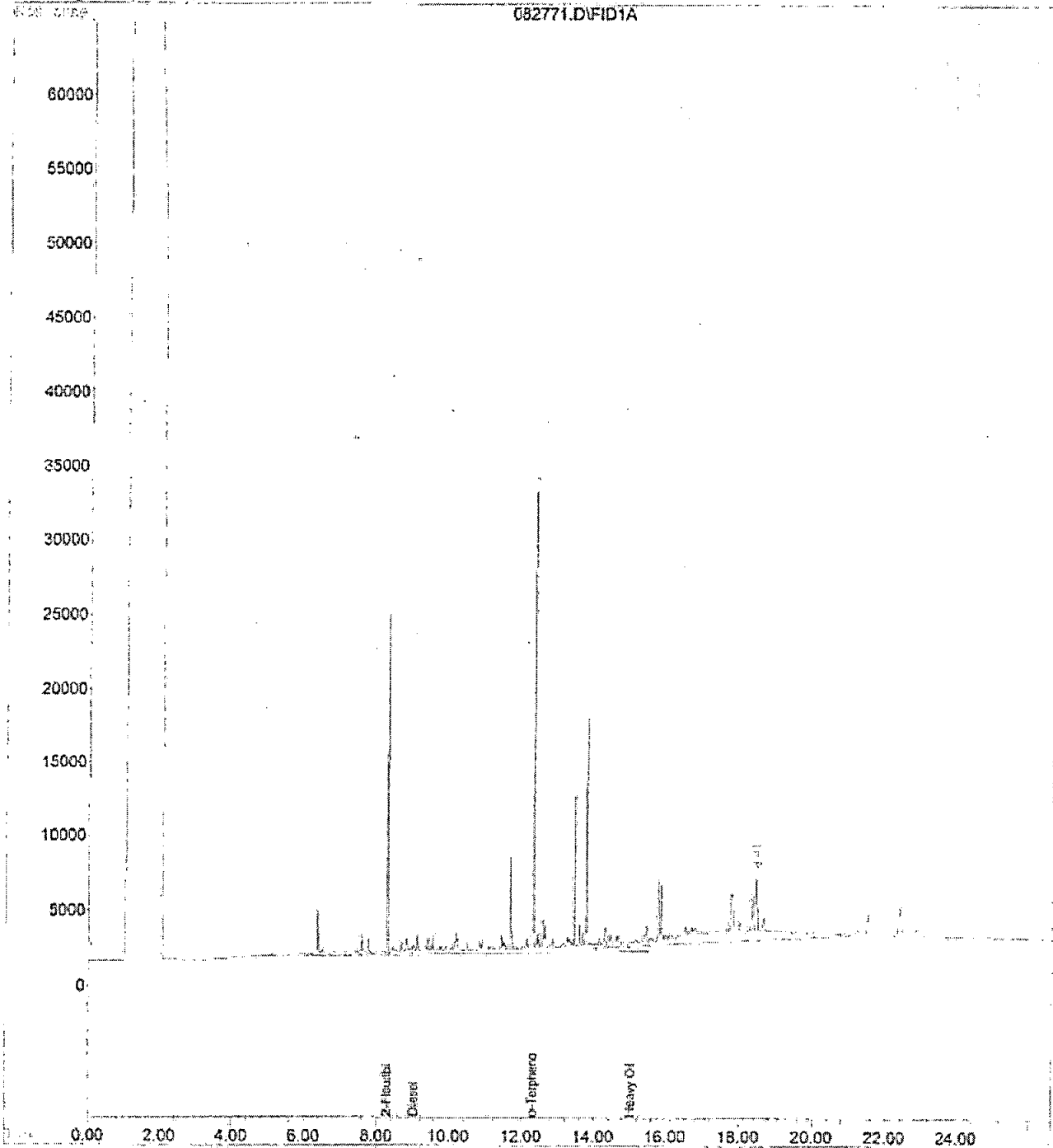


Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082771.D Vial: 71  
Acq On : 10 Sep 2008 10:15 pm Operator: JB  
Sample : FS B-10-3 Inst : GC FID  
Misc : Multipir: 1.00  
IntFile : events.e  
Quant Time: Sep 11 15:15 2008 Quant Results File: DIESEL.RES

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :

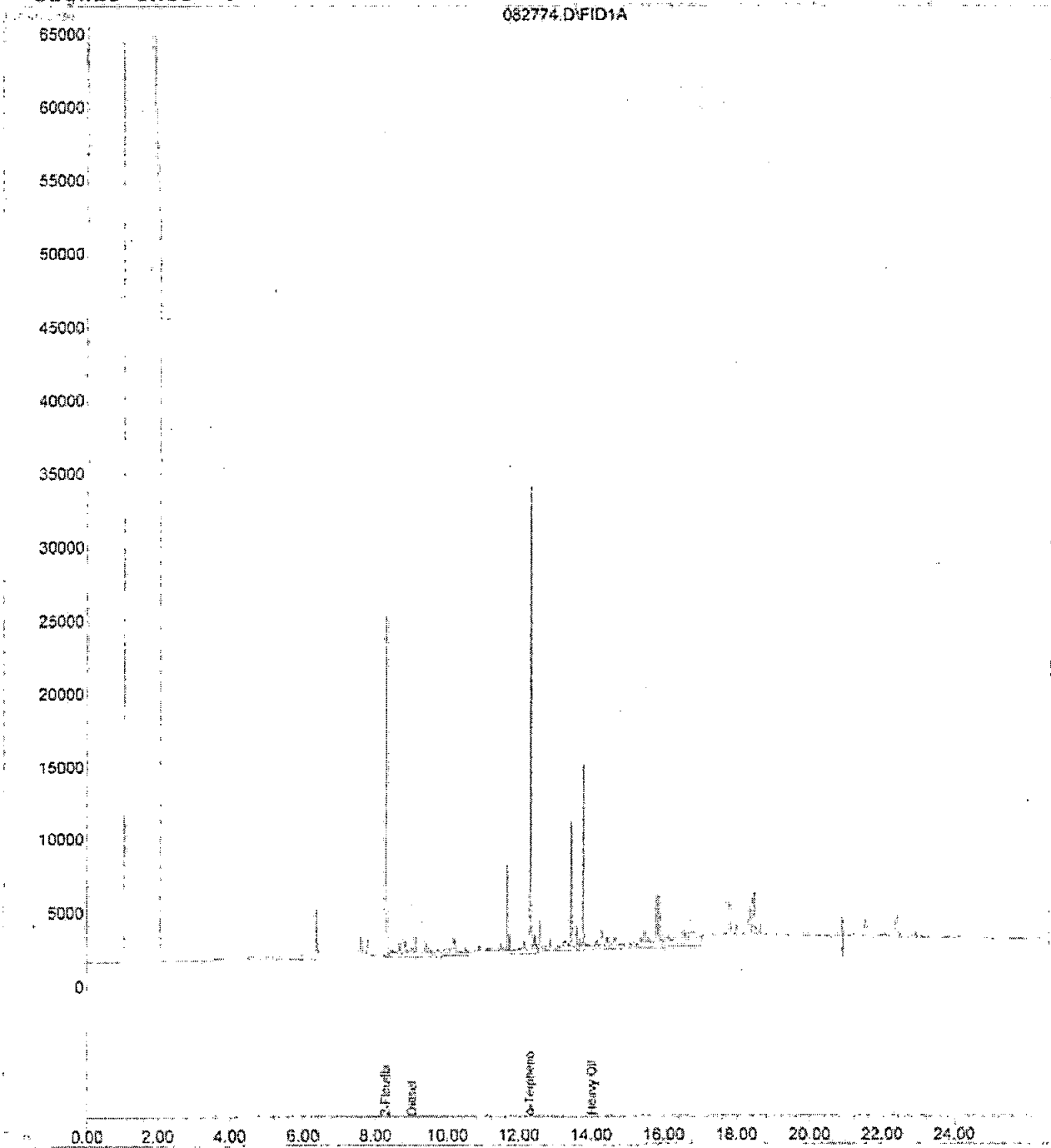


Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082774.D Vial: 74  
Acq On : 10 Sep 2008 11:49 pm Operator: JB  
Sample : FS B-10-4 Inst : GC FID  
Misc : MultipIr: 1.00  
IntFile : events.e  
Quant Time: Sep 11 14:37 2008 Quant Results File: DIESEL.RES

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 14:29:58 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :



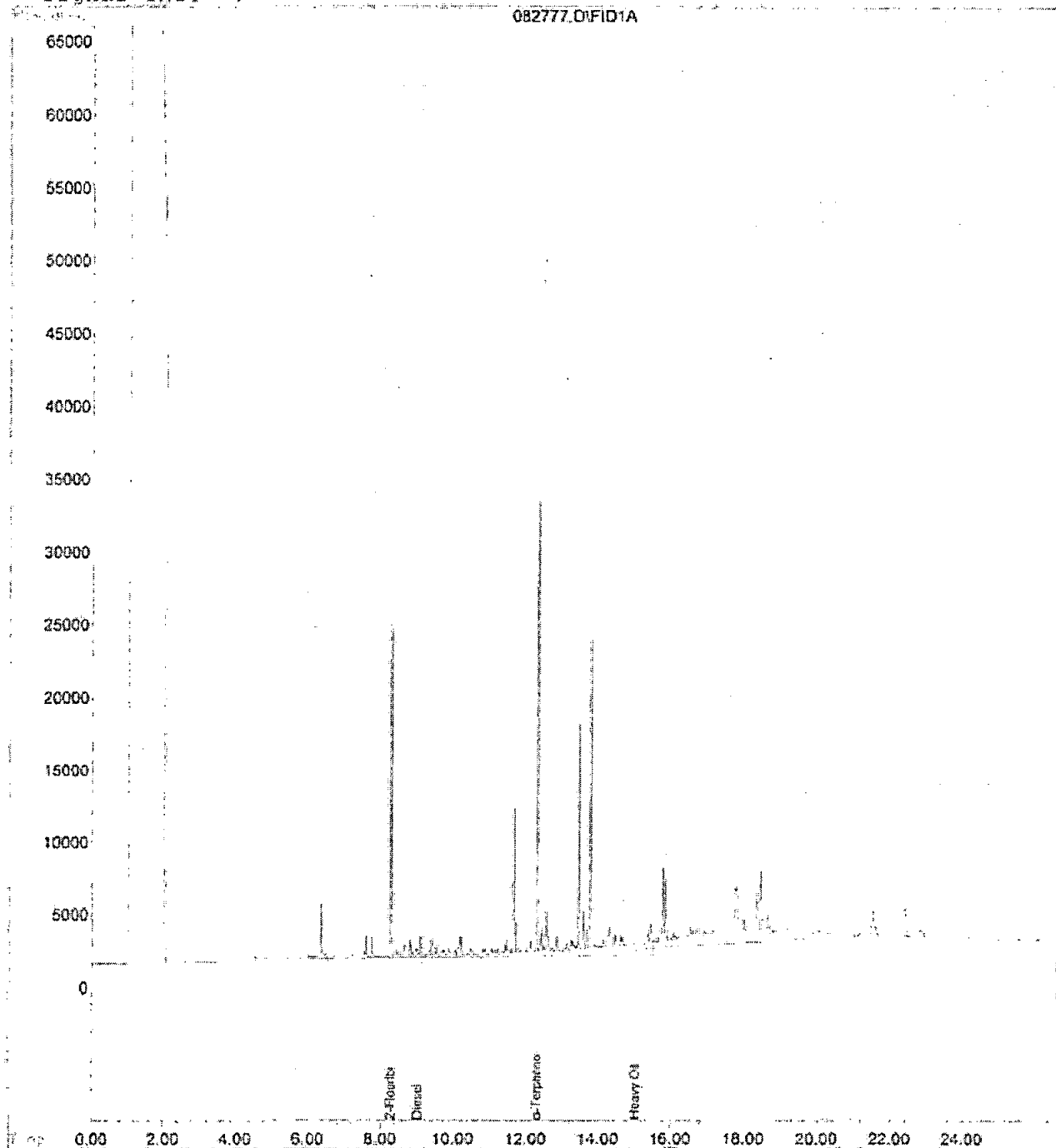


Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082777.D Vial: 77  
Acq On : 11 Sep 2008 1:24 am Operator: JB  
Sample : FS B-10-5 Inst : GC FID  
Misc : Multiplr: 1.00  
IntFile : events.e  
Quant Time: Sep 11 15:16 2008 Quant Results File: DIESEL.RES

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :



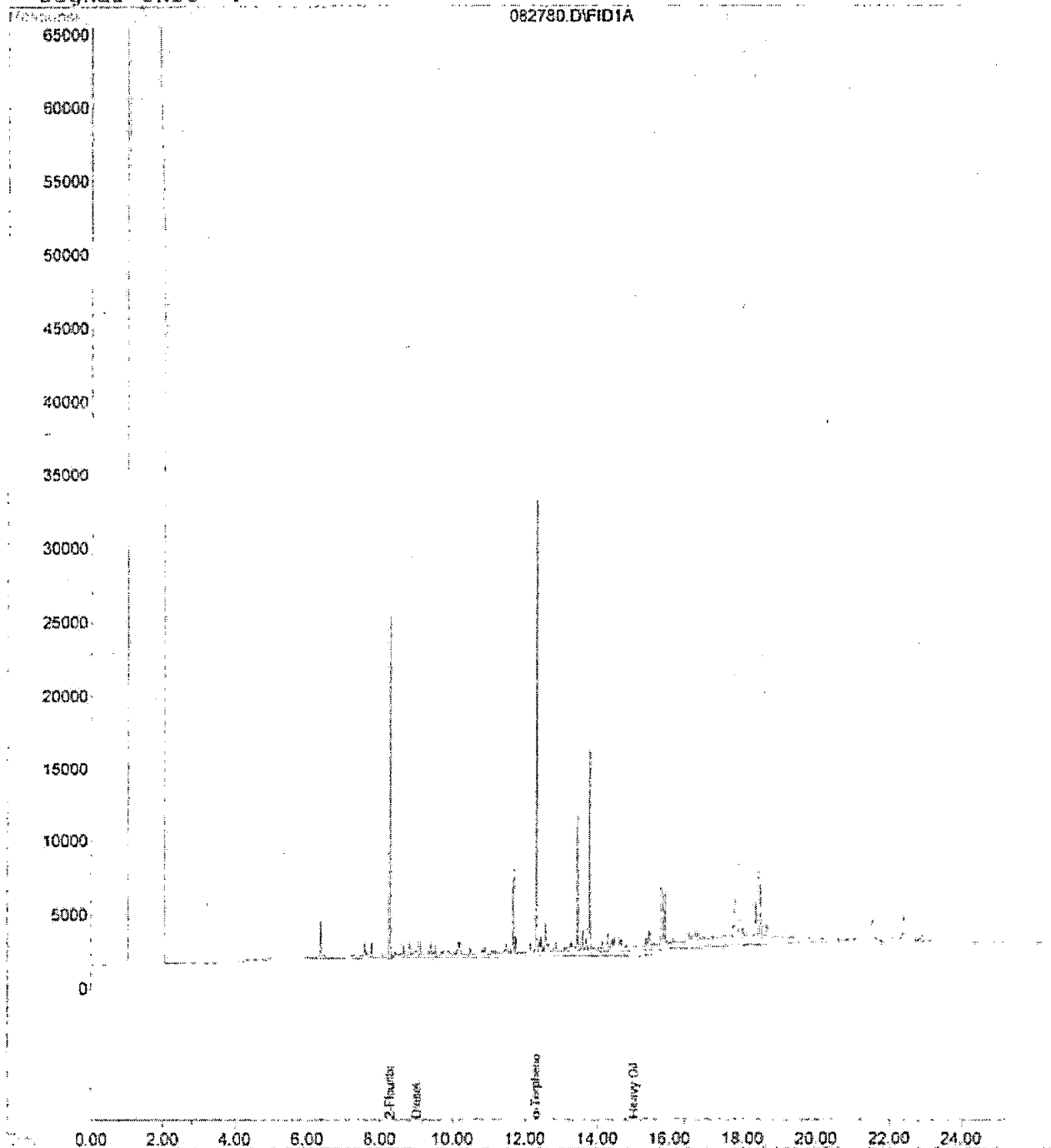
Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082780.D  
Acq On : 11 Sep 2008 2:58 am  
Sample : FS B-10-6  
Misc :  
IntFile : events.e  
Quant Time: Sep 11 15:16 2008 Quant Results File: DIESEL.RES

Vial: 80  
Operator: JB  
Inst : GC FID  
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :



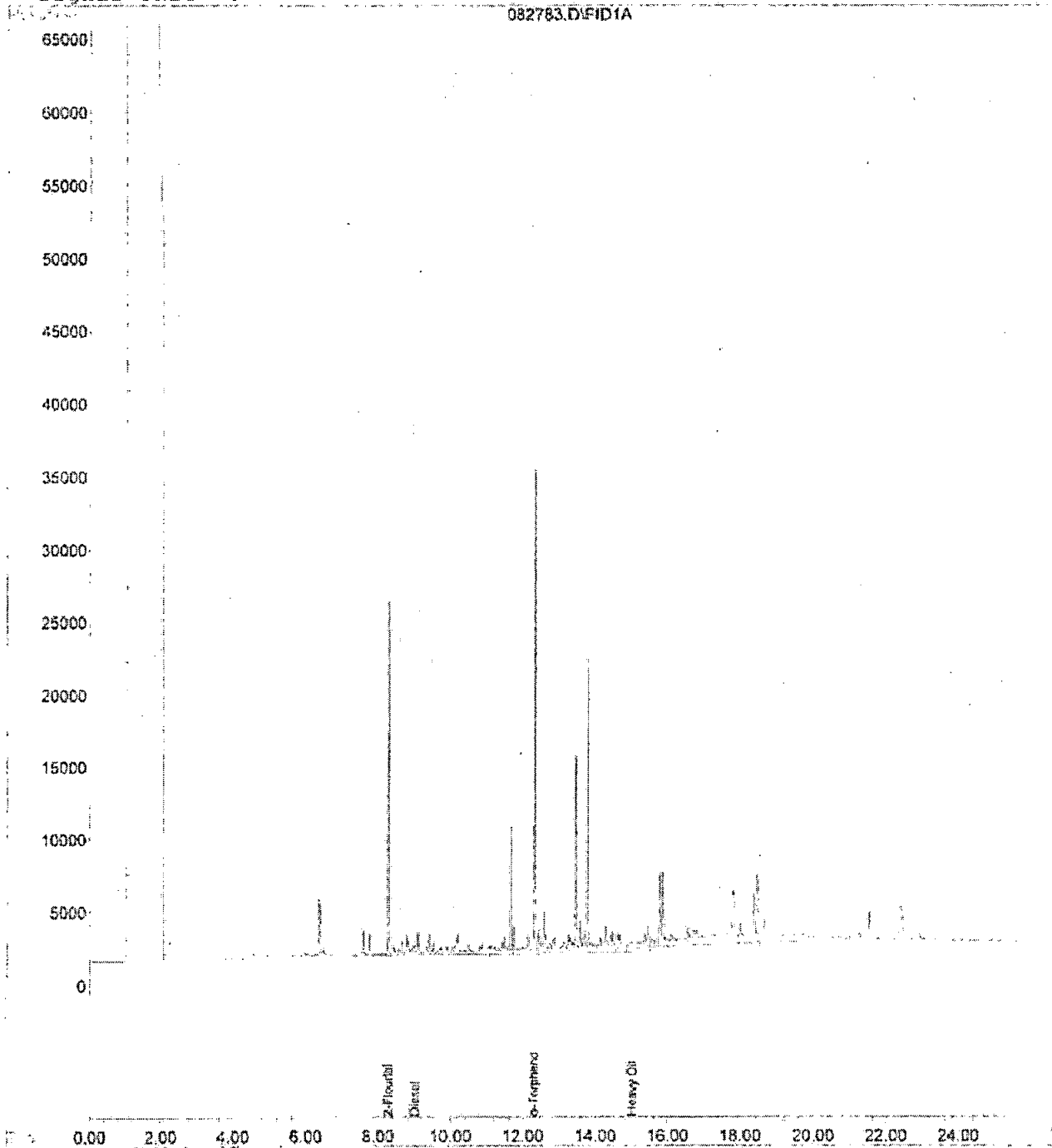
Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082783.D  
Acq On : 11 Sep 2008 4:32 am  
Sample : FS B-10-7  
Misc :  
IntFile : events.e  
Quant Time: Sep 11 15:16 2008 Quant Results File: DIESEL.RES

Vial: 83  
Operator: JB  
Inst : GC FID  
Multiplier: 1.00

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :

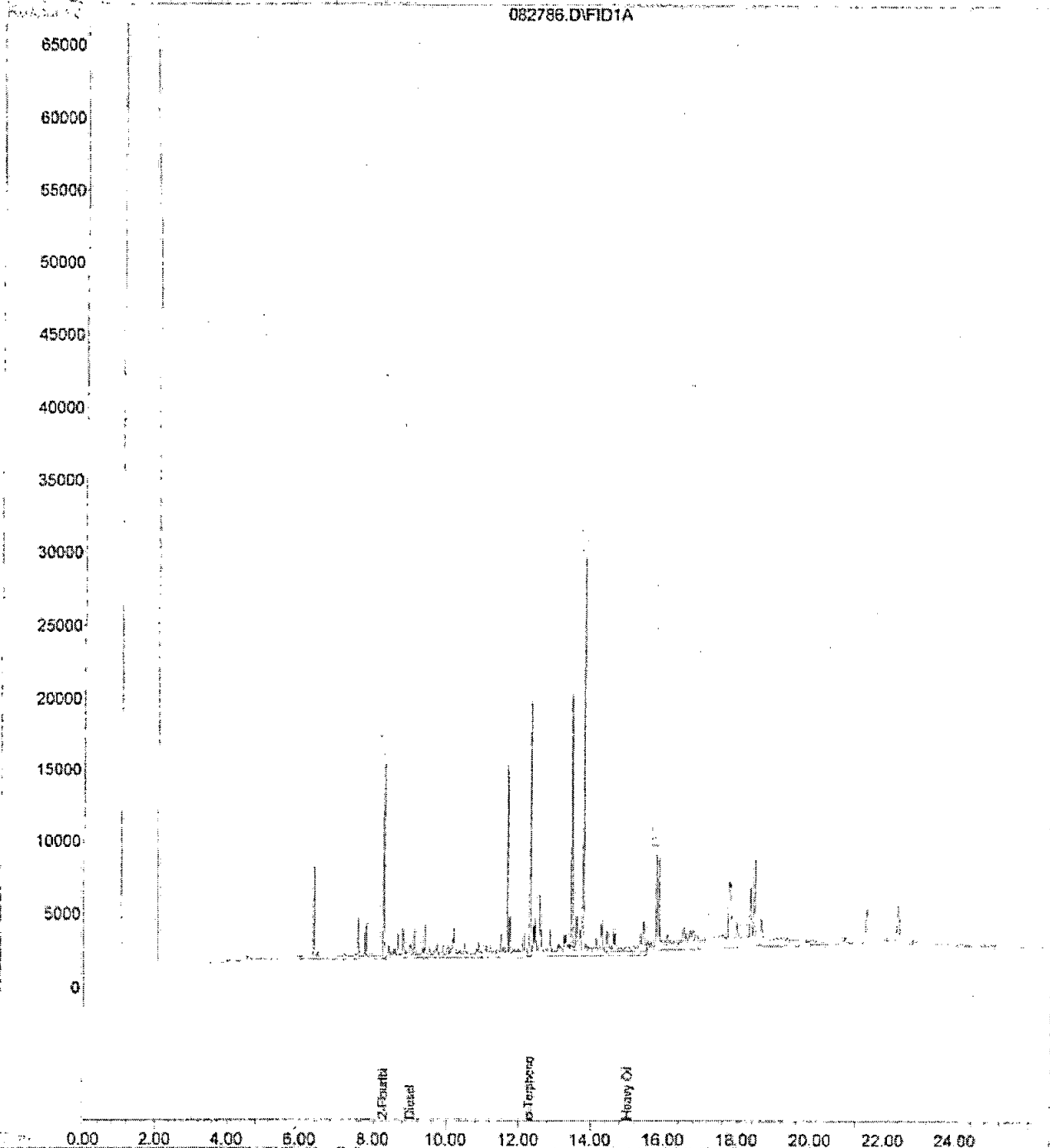


Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082786.D Vial: 86  
Acq On : 11 Sep 2008 6:07 am Operator: JB  
Sample : FS 9-10-8 Inst : GC FID  
Misc : Multiplr: 1.00  
IntFile : events.e  
Quant Time: Sep 11 15:17 2008 Quant Results File: DIESEL.RES

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :

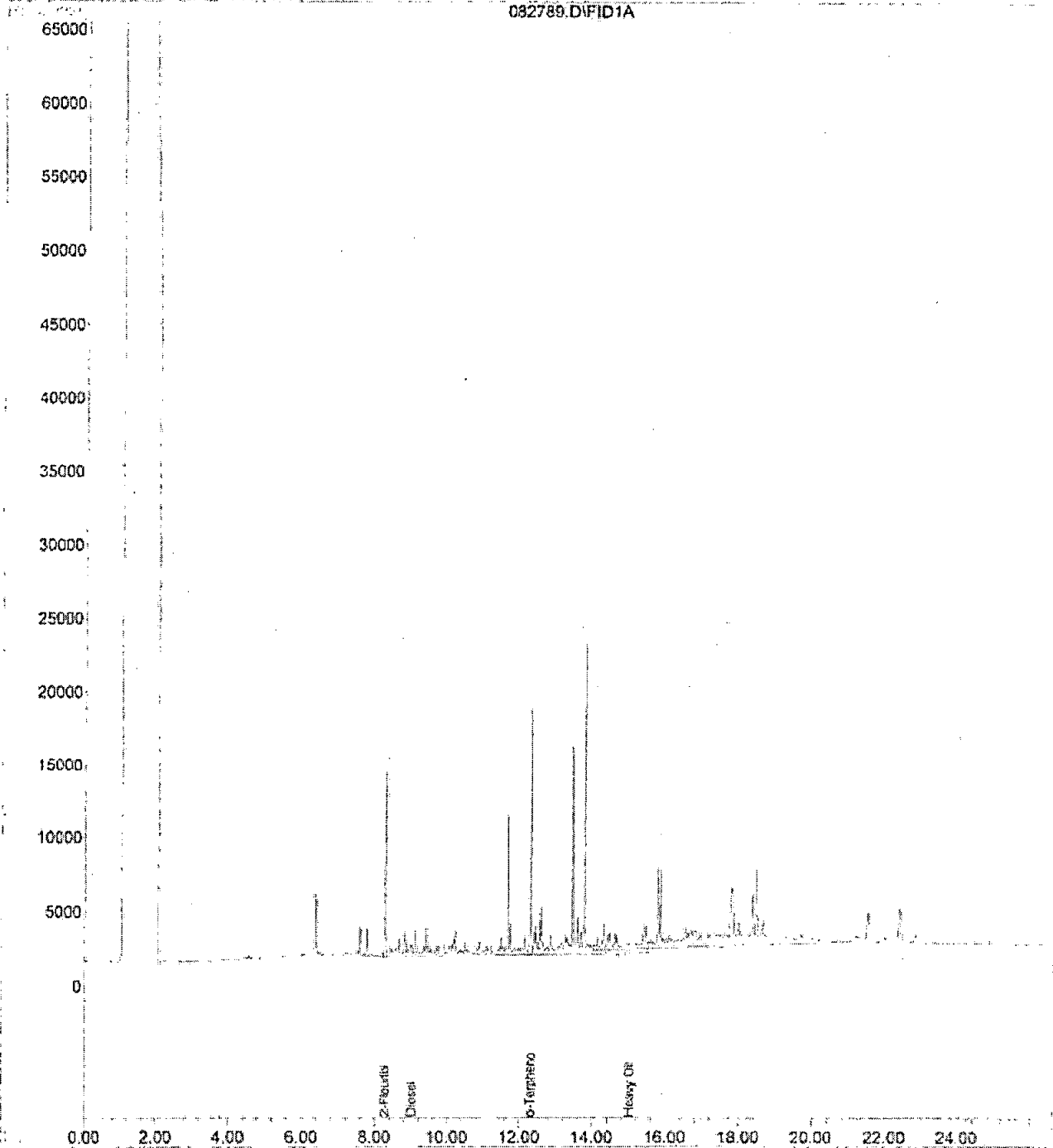


Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082789.D Vial: 89  
Acq On : 11 Sep 2008 7:41 am Operator: JB  
Sample : FS B-10-9 Inst : GC FID  
Misc : Multiplr: 1.00  
IntFile : events.e  
Quant Time: Sep 11 15:17 2008 Quant Results File: DIESEL.RES

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :



Quantitation Report (Not Reviewed)

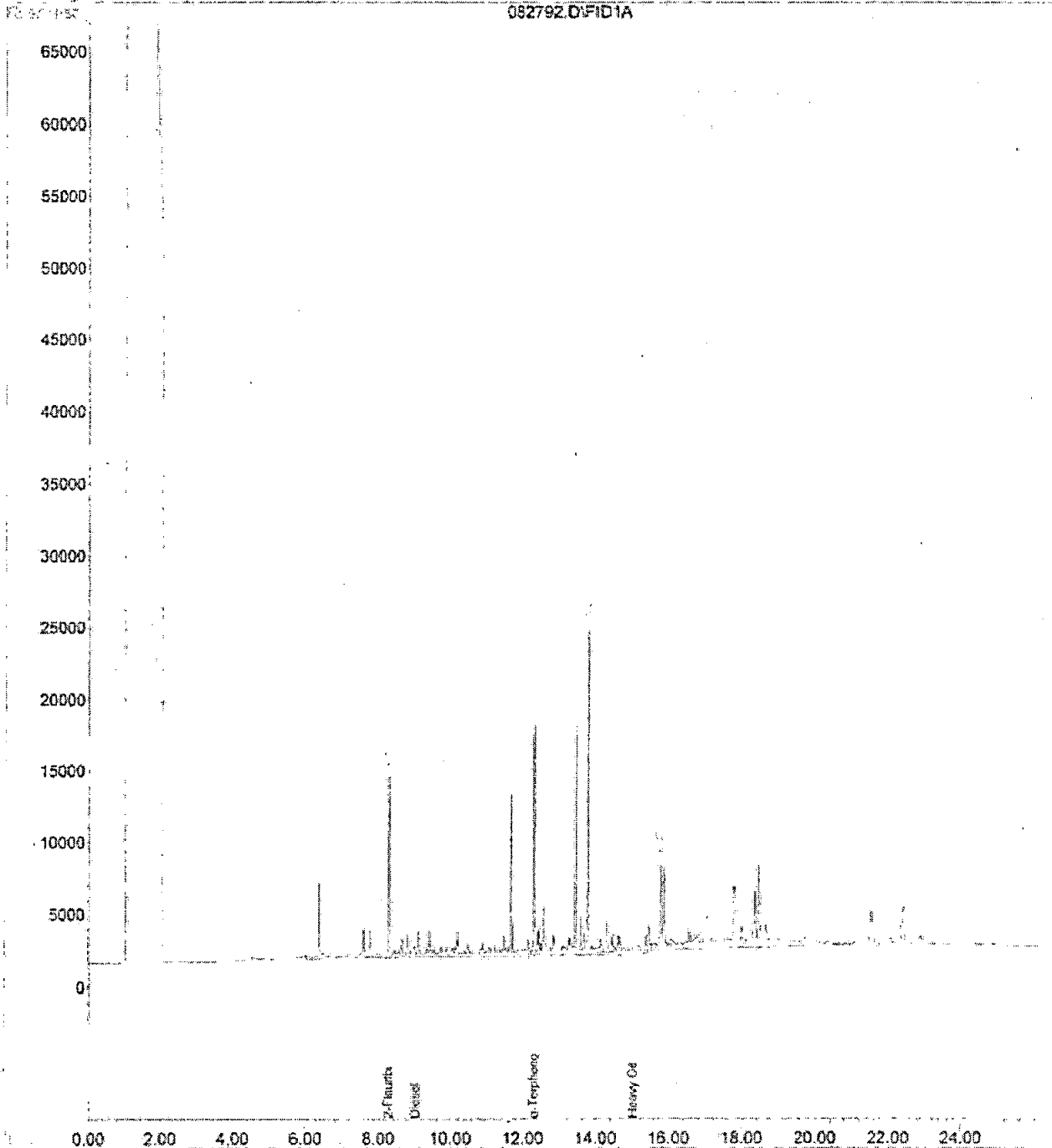
Data File : C:\HPCHEM\2\DATA\090508\082792.D  
Acq On : 11 Sep 2008 9:16 am  
Sample : FS B-10-10  
Misc :  
IntFile : events.e  
Quant Time: Sep 11 15:17 2008

Vial: 92  
Operator: JB  
Inst : GC FID  
Multiplr: 1.00

Quant Results File: DIESEL.RES

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :



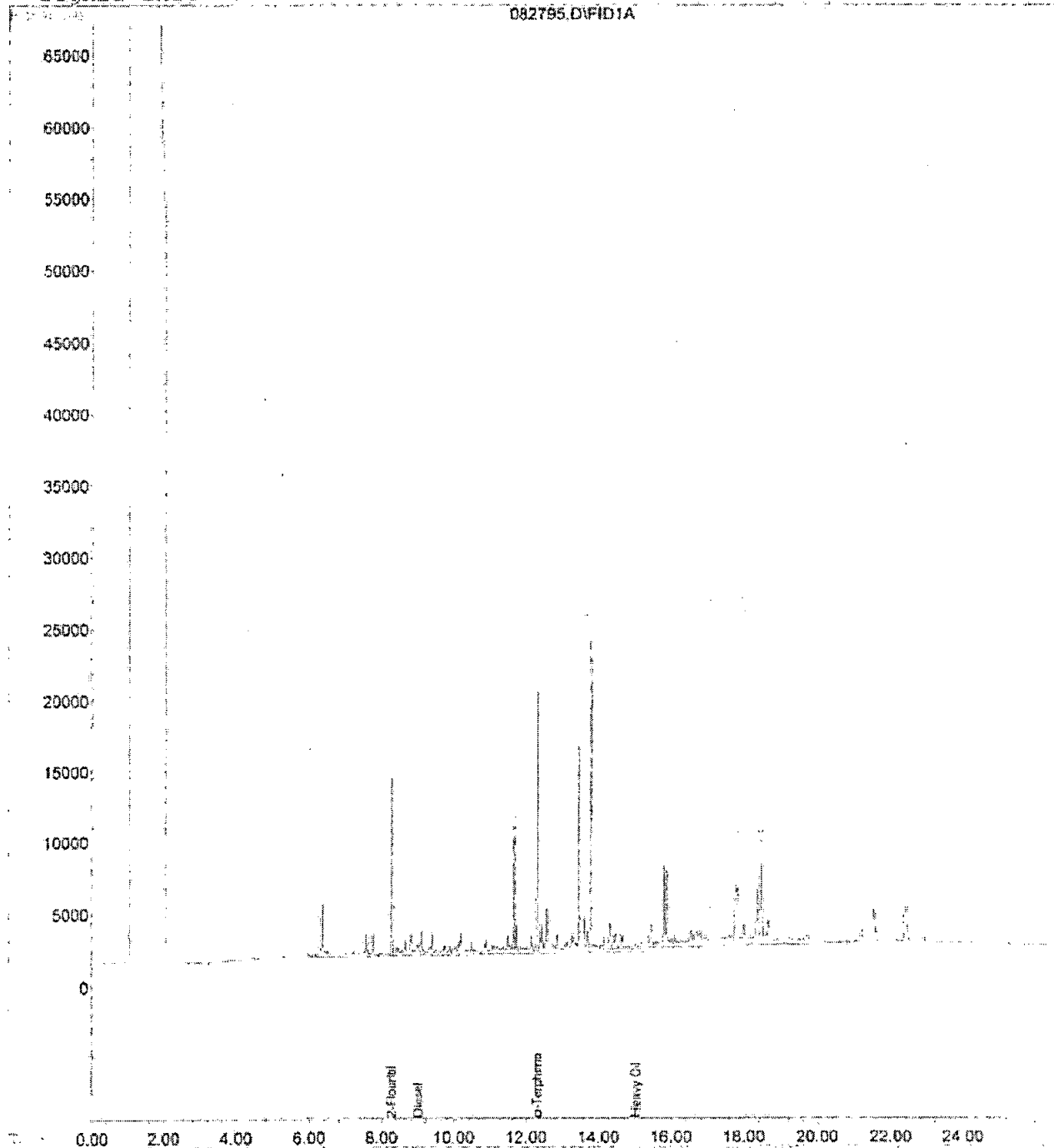
Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082795.D  
Acq On : 11 Sep 2008 10:50 am  
Sample : FS B-10-11  
Misc :  
IntFile : events.e  
Quant Time: Sep 11 15:18 2008 Quant Results File: DIESEL.RES

Vial: 95  
Operator: JB  
Inst : GC FID  
Multiplier: 1.00

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :



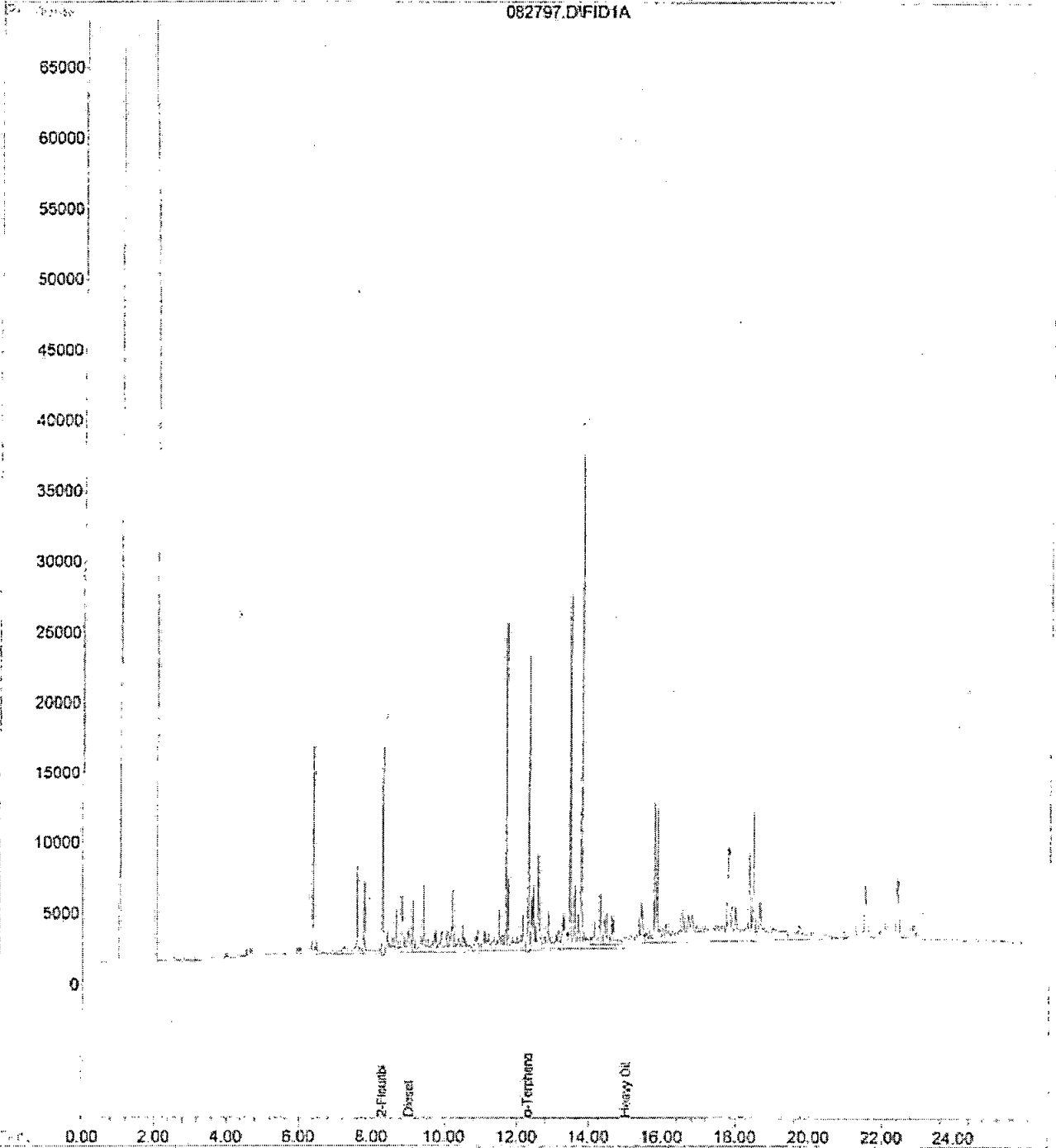
Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082797.D  
Acq On : 11 Sep 2008 12:26 pm  
Sample : FS B-10-12  
Misc :  
IntFile : events.e  
Quant Time: Sep 11 15:18 2008 Quant Results File: DIESEL.RES

Vial: 97  
Operator: JB  
Inst : GC FID  
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :





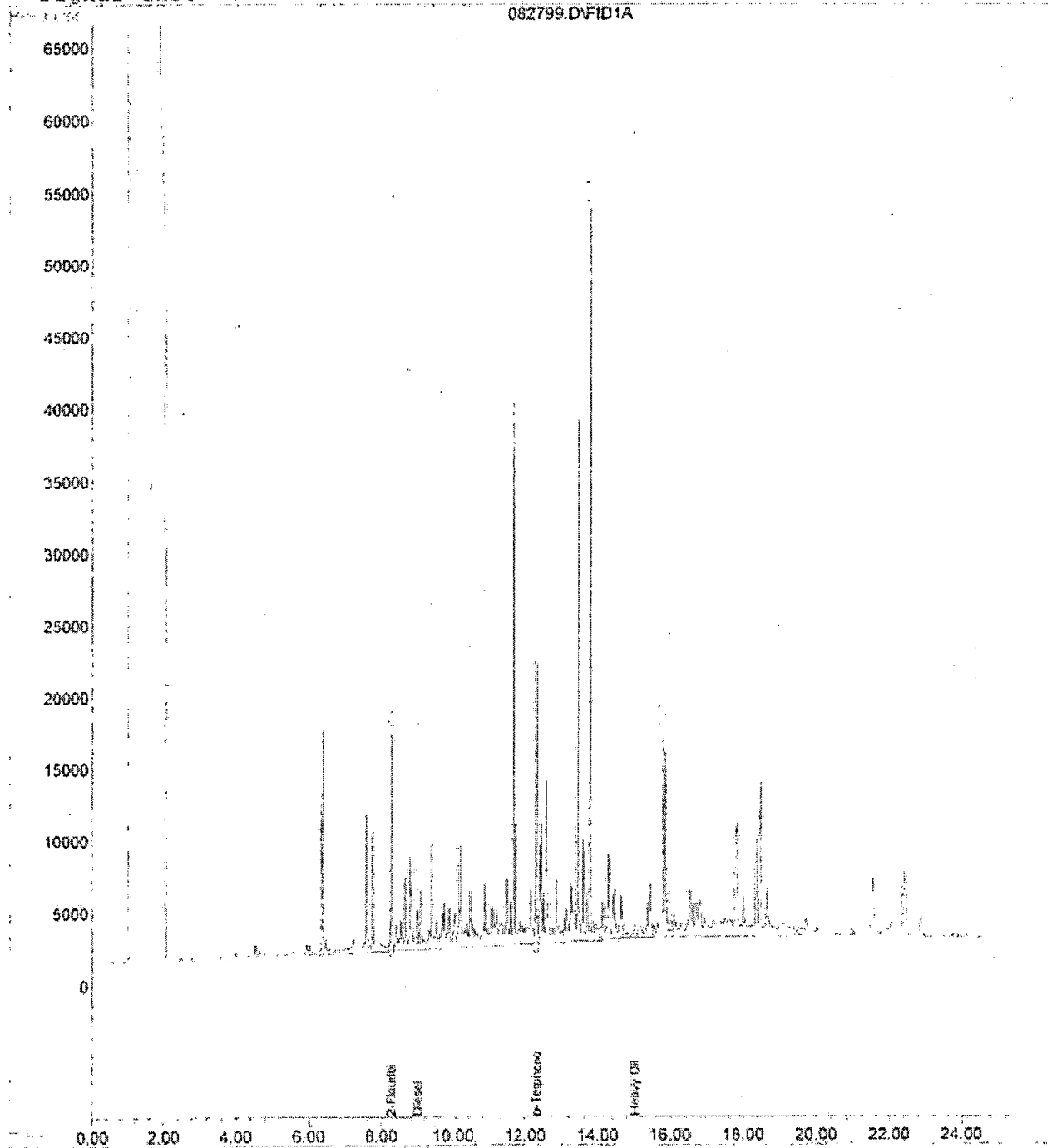
Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082799.D  
Acq On : 11 Sep 2008 1:29 pm  
Sample : FS B-10-13  
Misc :  
IntFile : events.e  
Quant Time: Sep 11 15:18 2008 Quant Results File: DIESEL.RES

Vial: 99  
Operator: JB  
Inst : GC FID  
Multiplier: 1.00

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :



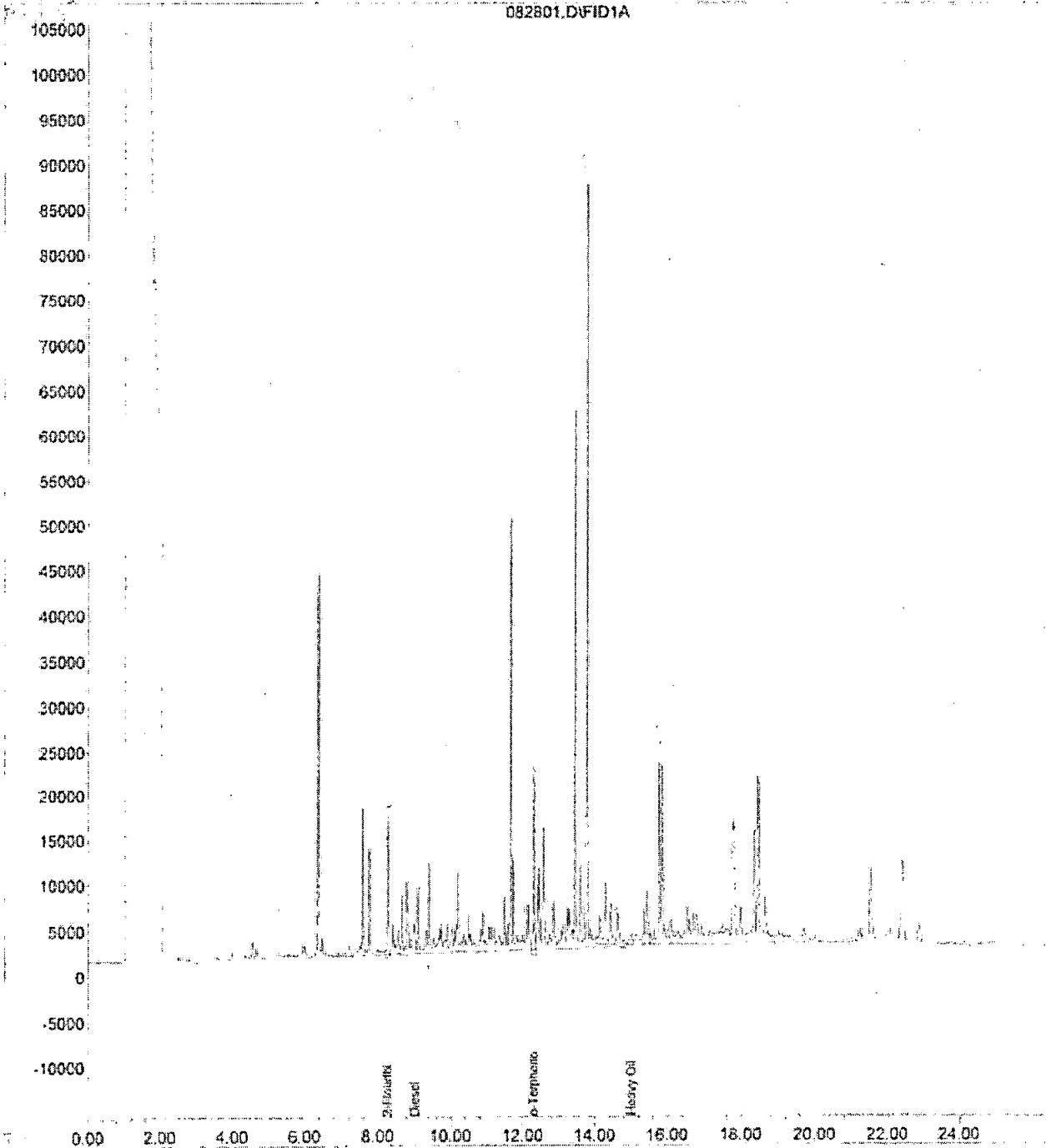
Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082801.D  
Acq On : 11 Sep 2008 2:32 pm  
Sample : FS B-10-14  
Misc :  
IntFile : events.e  
Quant Time: Sep 11 15:18 2008 Quant Results File: DIESEL.RES

Vial: 1  
Operator: JB  
Inst : GC FID  
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :

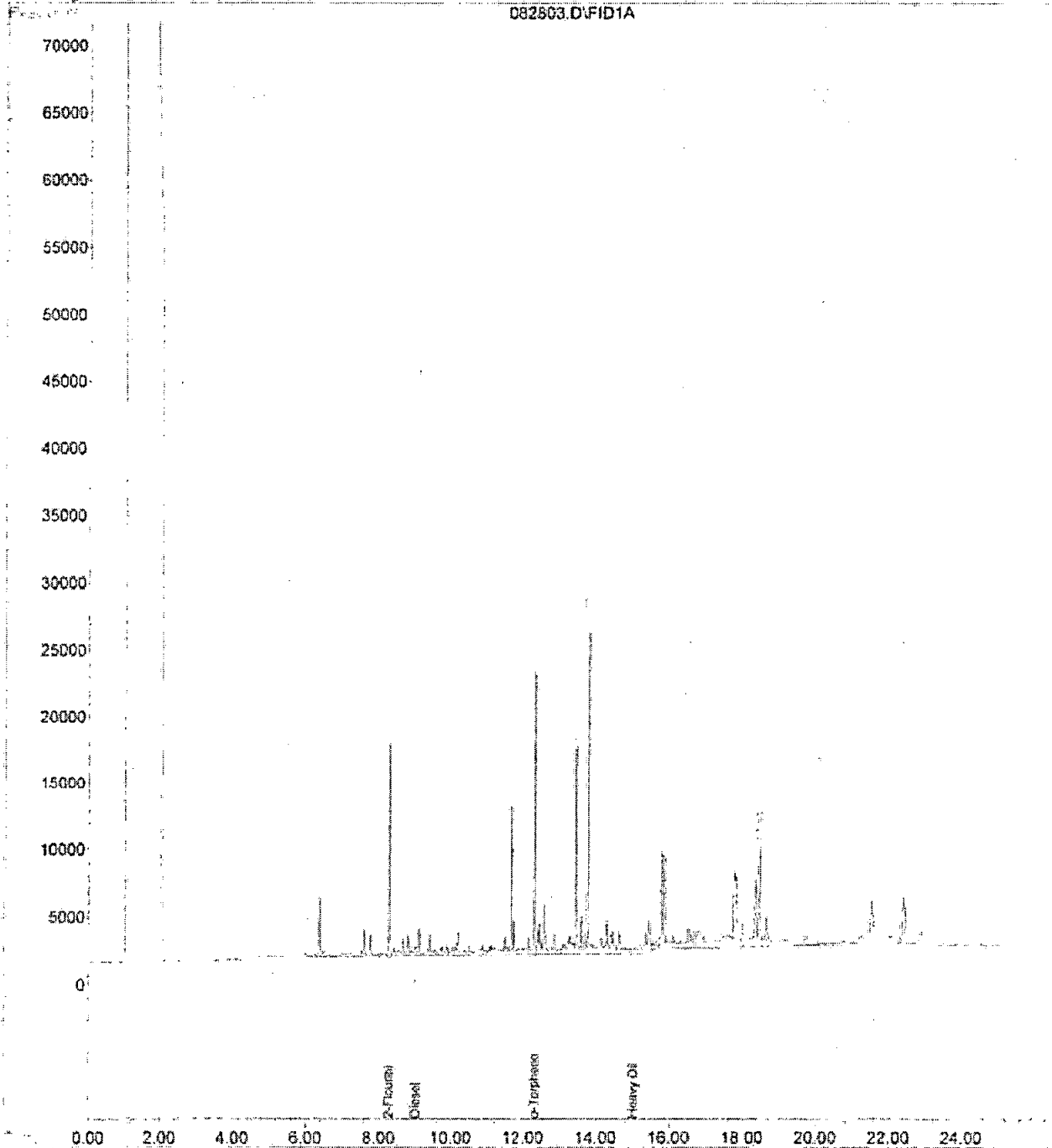


Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\090508\082803.D Vial: 3  
Acq On : 11 Sep 2008 3:36 pm Operator: JB  
Sample : FS B-10-15 Inst : GC FID  
Misc : Multiplr: 1.00  
IntFile : events.e  
Quant Time: Sep 11 16:23 2008 Quant Results File: DIESEL.RES

Quant Method : C:\HPCHEM\2\METHODS\DIESEL.M (Chemstation Integrator)  
Title :  
Last Update : Thu Sep 11 15:14:04 2008  
Response via : Multiple Level Calibration  
DataAcq Meth : DIESEL.M

Volume Inj. :  
Signal Phase :  
Signal Info :





# Fremont

2030 Westlake Ave. N, Suite 100  
 Seattle, WA 98109

Tel: 206-352-3790  
 Fax: 206-352-7178

## Chain of Custody Record

Date: 9/10/08Page: 1 of 2

Client: Floyd Snider  
 Address: 601 Union St. Ste 600  
 City, State, Zip: Seattle, WA 98101 Tel: 206-292-2078

Project Name: COS-VERBEEK  
 Location: Bethell, WA  
 Collected by: M. King / E. Murray

Reports To (PM): Teri Floyd Fax: 206-682-7867 Email: teri.floyd@floyd-snider.com Project No: COS-VERBEEK

Sample Name	Time	Sample Type	Container Type	Date of Collection	VDA 8260	VDA 80218 BTEX	NWTPH-GX	NWTPH-HCID	NWTPH-DX Ext.	SEMI VOL S270C	PAH S270	PCB S 8032	CI PESTICIDES 8081	CI HERBICIDES 8151A	METALS:	Metals: MTCA5	Metals: RCRA8	Hold	Comments/Depth
1 Grab-1	10:30 AM	S	403	9/10/08														✓	Please CC Megan King megan.king@floyd-snider.com
2 Grab-2	14:15	S	1603															✓	
3 Grab-3	14:25	S	1603															✓	
4 BIO-1	11:20	S	403						✓	✓									Suspected hot
5 BIO-2	11:40	S							✓	✓									Mod. contamination
6 BIO-3	11:50	S							✓	✓									Slight contamination
7 BIO-4	12:05								✓	✓									" "
8 BIO-5	12:20								✓	✓									Mod. Contamination
9 BIO-6	12:25								✓	✓									Strong Contamination
10 BIO-7	12:30								✓	✓									" "

Relinquished	Date/Time	Received	Date/Time	Sample Receipt	Special Remarks
x <u>E. Murray</u>	<u>9/10/08 4:40pm</u>	x <u>[Signature]</u>	<u>9/10/08 4:40</u>	Good?	24 HR on DX
Relinquished	Date/Time	Received	Date/Time	Temperature:	Standard on 8270
x		x		Seals Intact?:	
				Total Number of Containers:	TAT → 4HR 4HR Standard

\* Provide NWTPH-DX chromatographs



# Fremont

2930 Westlake Ave. N. Suite 100  
 Seattle, WA 98109

Tel: 206-352-3790  
 Fax: 206-352-7178

## Chain of Custody Record

Date: 9/10/08Page: 2 of: 2

Client: Floyd Snider  
 Address: 601 Union St. Ste. 600  
 City, State, Zip: Seattle, WA 98101

Project Name: COX-VERBEEK  
 Location: Bothell, WA  
 Collected by: M. King, E. Murray

Reports To (PM): Teri Floyd Fax: 206-642-7867 Email: teri.floyd@floyd-snider.com Project No: COX-VERBEEK

Sample Name	Time	Sample Type	Container Type	Date of Collection	VOA 8260	VOA 8021B ATEX	NWTPH-GX	NWTPH-PCID	NWTPH-DX EXT.	SEMI VOL 8270C	PAH 8270	PCBs 8082	CI PESTICIDES 8081	CI HERBICIDES 8151A	METALS	Metals: MTEA-5	Metals: PCBs-8	Comments/Dent
1 B10-8	12:35	S	403	9/10/08					✓	✓								PHASE CC Megan King w/ Results megan.king@floyd-snider.com
2 B10-9	12:40	S	↓	↓					✓	✓								Strong Contam.
3 B10-10	13:05	S	↓	↓					✓	✓								Mod Contam.
4 B10-11	13:10	S	↓	↓					✓	✓								Mod Contam.
5 B10-12	13:20	S	↓	↓					✓	✓								" "
6 B10-13	13:25	S	↓	↓					✓	✓								" "
7 B10-14	13:35	S	↓	↓					✓	✓								Strong Contam.
8 B10-15	13:45	S	↓	↓					✓	✓								Strong Contam.
9																		
10																		

Relinquished	Date/Time	Received	Date/Time	Sample Receipts	Special Remarks
<i>[Signature]</i>	9/10/08 4:40	<i>[Signature]</i>	9/10/08 4:40	Good?	24 HR on DX
Relinquished	Date/Time	Received	Date/Time	Temperature:	Standard on 8270
				Seals Intact?	
				Total Number of Containers:	TAT → 24HR 48HR Standard

\* Please NWTPH-DX chromatographs



7920 Westlake Ave. N Suite 1001  
 Seattle, WA 98109  
 Tel: 206-852-1790  
 Fax: 206-852-7178

# Chain of Custody Record

Date: 9/10/08 Page 1 of 2

Client: Floyd / Snider  
 Address: 601 Union St Ste 1000  
 City, State, Zip: Seattle, WA 98101 Tel: 206 322 2078

Project Name: COS-VERBEEK  
 Location: Bathell, WA  
 Collected by: M. King / E. Hunsicker

Reports To (PM): Tom Floyd Fax: 206-682-7807 Email: tom.floyd@fremontanalytical.com Project No: COS-VERBEEK

Sample Name	Time	Sample Type	Container Type	Date of Collection	VOCs 8260	VOCs 8210 BTEX	HWTPH GY	HWTPH GIC	HWTPH DE ET	SEMI VOL 8270C	PAH 8270	PCRB 8082	CHLORIDES 8081	CHLORIDES 8134	METALS	MERC 1000	BIODE REPA	FIELD	Comments/Depth	
1. Grab - 1	10:30 AM	S	4-3	9/10/08														✓	Please CC Megan King megan.king@fremontanalytical.com	
2. Grab - 2	14:15	S	16-3															✓		
3. Grab - 3	17:25	S	16-3															✓		
4. BIO-1	11:20	S	4-3						✓	✓										Substrate not
5. BIO-2	11:40	S							✓	✓										Mild contamination
6. BIO-3	11:50	S							✓	✓										Slight contamination
7. BIO-4	12:05								✓	✓										" "
8. BIO-5	12:20								✓	✓										Mild Contamination
9. BIO-4	2:25								✓	⊗										Strong Contamination
10. BIO-7	12:30								✓	⊗										" "

Relinquished	Date/Time	Received	Date/Time	Sample (Receipt)	Special Remarks
<u>S. M. King</u>	<u>9/10/08 4:40 PM</u>	<u>[Signature]</u>	<u>9/10/08 4:40</u>	Good?	24HR on DX Spreader on 8270 ⊗ RUSH ON 8270 9/10
Relinquished	Date/Time	Received	Date/Time	Temperature	
				Seals Intact?	
				Total Number of Containers	

\* Provide NWTPH-DX chromatographs



# Chain of Custody Record

2230 Westlake Ave N Suite 100  
 Seattle, WA 98109  
 Tel: 206-452-1750  
 Fax: 206-452-7178

Date: 9/10/08 Page: 2 of 2

Client: Floyd/Sawker  
 Address: 621 Union St Ste 600  
 City, State, Zip: Seattle WA 98101  
 Tel: 206-292-2778

Project Name: COS - VERBEE  
 Location: Boothill Hill  
 Collected by: M. King, E. Murray

Reports To (PM): Tom Floyd Fax: 206-616-7807 Email: tom.floyd@floyd-sawker.com Project No: COS-VERBEE

Sample Name	Time	Sample Type	Container Type	Date of Transfer	VOL 8260	VOL 80116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	VOL 8116/8117	Comments
B10-8	12:35	S	403	9/10/08														String Portion
B10-9	12:40	S																Mud Contam.
B10-10	13:05	S																Mud Contam.
B10-11	13:10	S																Mud Contam.
B10-12	13:20	S																"
B10-13	13:25	S																"
B10-14	13:35	S																String Portion
B10-15	13:45	S																String Contam.

Please see Megan King's report for Megan King's signature

Relinquished	Date/Time	Received	Date/Time	Sample Receipt	Special Remarks
<u>[Signature]</u>	<u>9/10/08 4:40</u>	<u>[Signature]</u>	<u>9/10/08 4:42</u>	Good?	27 HR on DX
Relinquished	Date/Time	Received	Date/Time	Temperature	Specimens on 8/270
				Seals Intact?	<b>Ⓞ PUSH ON 8270</b> 9/10
				Total Number of Containers	161 - 8260 8260

\* Primar NWTPH-DX Chromatography

(Station, White - Lab, Yellow - File, Pink - Originator)



**Fremont**  
**Analytical**

2930 Westlake Ave N Suite 100  
Seattle, WA 98109  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**Floyd | Snider**  
**Attn: Teri Floyd**  
601 Union St. Suite 600  
Seattle, WA 98101

**RE: COS – Law - Verbeek**  
**Fremont Project No: CHM080930-3**  
**Floyd | Snider Project No: COS – Law - Verbeek**

October 2nd, 2008

**Teri:**

Enclosed are the analytical results for the **COS – Law - Verbeek** soil samples delivered to Fremont Analytical on September 30th, 2008.

The samples were received in good condition - in the proper containers (4oz. soil jars), properly sealed, labeled and within holding times. The samples were received in a cooler with gel & wet ice, with a cooler temperature of 5.9°C, which is within the recommended laboratory cooler temperature range (<4°C - 10°C). The samples were extracted and then stored in refrigeration units at the USEPA-recommended temperature of 4°C ± 2°C. There were no sample receipt issues to report.

Examination of these samples was conducted for the presence of the following:

- ***Polyaromatic Hydrocarbons (PAH) in Soil by EPA Method 8270C***

This application was performed under Washington State Department of Ecology accreditation parameters. All appropriate Quality Assurance / Quality Control method parameters have been applied.

**Notations – EPA Method 8270C:**

**Phenanthrene, Benzo(b)fluoranthene:** The Relative Percent Difference (RPD) between the sample and sample duplicate exceeded the laboratory QC limits. However, the Laboratory Control Sample (LCS), Matrix Spike (MS), MS Duplicate (MSD) and all surrogate recoveries were within range, proving the analysis in control. The variance is most likely do the sample matrix. No further action is required.

Please contact the laboratory if you should have any questions about the report.

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee  
Sr. Chemist / Principal  
mikedee@fremontanalytical.com





## Analysis of Polyaromatic Hydrocarbons in Soil by EPA Method 8270C

Project: COS - Verbeek  
Client: Floyd | Snider  
Client Project #: COS-Law-Verbeek  
Lab Project #: CHM080930-3

EPA 8270C (mg/kg)	MRL	Method Blank	LCS	Duplicate		RPD %	Bio-Pilot-4	MS	MSD	RPD %
				Batch	Batch					
Date Extracted		9/30/08	9/30/08	9/30/08	9/30/08		9/30/08	9/30/08	9/30/08	
Date Analyzed		10/2/08	10/2/08	10/2/08	10/2/08		10/2/08	10/2/08	10/2/08	
Matrix		Soil		Soil	Soil		Soil			
Naphthalene	0.1	nd		4.6	4.7	2%	1.3			
1-Methylnaphthalene	0.1	nd		1.7	1.7	0%	0.4			
2-Methylnaphthalene	0.1	nd		1.9	2.0	5%	0.4			
Acenaphthene	0.1	nd	83%	1.3	1.3	0%	0.3	77%	79%	3%
Acenaphthylene	0.1	nd		0.8	0.7	5%	0.4			
Fluorene	0.1	nd		1.1	1.1	0%	0.4			
Phenanthrene	0.1	nd		8.6	5.8	39%	2.6			
Anthracene	0.1	nd		1.3	1.2	8%	0.7			
Fluoranthene	0.1	nd		13	12	8%	5.8			
Pyrene	0.1	nd	82%	20	19	5%	9.8	75%	76%	2%
Benzo(a)anthracene	0.08	nd		5.6	5.1	9%	2.0			
Chrysene	0.08	nd		4.6	4.9	6%	2.5			
Benzo(b)fluoranthene	0.08	nd		5.0	3.4	36%	2.7			
Benzo(k)fluoranthene	0.08	nd		2.9	2.2	27%	1.8			
Benzo(a)pyrene	0.08	nd		4.8	4.1	16%	2.9			
Indeno(1,2,3-cd)pyrene	0.08	nd		3.1	2.9	7%	1.8			
Dibenzo(a,h)anthracene	0.08	nd		0.6	0.6	7%	0.4			
Benzo(g,h,i)perylene	0.1	nd		4.3	4.0	7%	2.7			
<b>Total PAH Carcinogens</b>				26.6	23.2		14.1			

**Total PAH Carcinogens Defined as:**

Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Ideno(1,2,3-cd)pyrene & Dibenzo(a,h)anthracene

**Surrogate Recovery**

(Surr 1) 2-Fluorobiphenyl	105%	103%	100%	106%		104%	120%	79%
(Surr 2) p-Terphenyl	98%	102%	110%	111%		108%	92%	98%

"nd" Indicates not detected at listed reporting limits  
 "int" Indicates that interference prevents determination  
 "J" Indicates estimated value  
 "MRL" Indicates Method Reporting Limit  
 "LCS" Indicates Laboratory Control Sample  
 "MS" Indicates Matrix Spike  
 "MSD" Indicates Matrix Spike Duplicate  
 "RPD" Indicates Relative Percent Difference

Samples may be run under SIM  
 Acceptable RPD is determined to be less than 30%  
 Acceptable Recovery Limits:  
 Surrogates = 65% to 135%  
 LCS, LCSD, MS, MSD = 50% to 150%  
 Surrogates and Spike Concentration = 25 ug/L

**From:** Megan King  
**To:** Michael C. Ridgeway;  
**Subject:** Verbeek soil samples  
**Date:** Tuesday, September 30, 2008 3:44:24 PM

---

Hello!

Can you please analyze the two soil samples dropped off at the lab yesterday (Bio-Pilot-3 and Bio-Pilot-4) for PAHs + naphthalene by 8270 on a standard turn?

Thank you, and please give me a buzz if you have any questions.

Megan King  
Floyd|Snider

601 Union Street, Suite 600

Seattle, WA 98101

tel: 206.292.2078

fax: 206.682.7867

[megan.king@floydsnider.com](mailto:megan.king@floydsnider.com)



# Chain of Custody Record

Client

Address

City, State, Zip

Reports To (PM)

Project Name

Location

Collected by

Fax

Email

Project No.

(X)  
(X)

(X) Analysis Added  
9/30/08  
*[Signature]*

*[Signature]*

9/29/08 11:30

*[Signature]*

9/29/08 11:30

Project No.

*[Signature]*  
(X)



**ATTACHMENT C**

DMD Data Quality Evaluation  
APRIL 2009  
Verbeek Wrecking Yard  
Bothell, WA



**D.M.D., Inc.**

**Environmental & Toxicological Services**

13706 SW Caster Road, Vashon, WA 98070-7428 (206) 463-6223 fax: (206) 463-4013

**MEMORANDUM**

**TO:** Matt Dalton (DOF)

**FROM:** Raleigh Farlow

**DATE:** May 14, 2009

**SUBJECT:** Data Evaluation/Assessment for 44 Soils and Two Groundwater Samples  
Collected during April 2009 from the Verbeek Wrecking site in Bothell, WA

Forty-four soils and two groundwater samples were collected by Dalton, Olmsted & Fuglevand (DOF) staff during April of 2009 for the evaluation of environmental quality. Three of the soils were collected as [single-blind] field duplicates and a VOC's trip blank was submitted for evaluation of potential bias. The two groundwater samples were field-filtered (0.45 µm) for measurement of dissolved metals and centrifuged in glass (@ 2000 rpm and 4 deg. C for 1 hour) prior to measurement of SVOCs. All samples were delivered to Analytical Resources Inc. (ARI) of Tukwila, Washington within four days of collection. Samples were received on ice at temperatures of 9.2 and 11 degrees C, and maintained at the project laboratory at 4 degrees C prior to analyses. Field filtration of groundwater samples was performed using in-line 0.45 µm pore filters for measurement of dissolved metal species, and appropriate preservatives were added to selected sample aliquots as required. Groundwater metals were preserved with HNO<sub>3</sub> and VOCs with HCl. No chemical preservatives were added to soil samples. Samples were relinquished by DOF under chain-of-custody (C-O-C) procedure.

All analyses were performed by U.S. EPA-recommended methods as summarized here.

<u>Parameter group</u>	<u>Analytical method</u>
Petroleum hydrocarbons, gasoline-range	NWTPH-G
Petroleum hydrocarbons, diesel extended	NWTPH-Dx
Volatile organic compounds (VOCs)	SW846 M.8260B
Semivolatile organic compounds (SVOCs)	SW846 M.8270D
Metals, with exception of Hg, in soils	SW846 M.6010B
Mercury in soils	EPA 7471A
Metals, with exception of Hg, in waters	EPA 200.8
Mercury in waters	EPA 7470A

All analyses were completed within the maximum holding times recommended by the U.S. EPA. Sample holding times/conditions are determined to be acceptable.

Generally, [lower] reporting limits were sufficient for comparison of results to appropriate environmental screening levels.

**Method blanks** were analyzed and reported for all analytical parameters and groups (analytical groups are  $\leq 20$  samples). All method blanks reported nondetects, with the exception of zinc at 6 mg/kg in group OU25 and *bis*(2-ethylhexyl)phthalate at 0.1  $\mu\text{g/L}$  in analytical group OV74. These levels were sufficiently low to not affect sample results. No data required qualification due to method blanks performance.

One trip/transport blank was analyzed for assessment of potential contamination for volatile organic compounds (VOCs). No contamination for target analytes was found.

All laboratory control sample (LCS/LCSD) and matrix spike (MS/MSD) recoveries were within acceptable ranges for all analytes. Some recoveries were nonevaluable due to high native levels of analyte interfering with spike levels. Recoveries of spike analytes were determined to be acceptable, and no results required qualification due to analytical recovery performance.

All **surrogate compound recoveries** (for organic analytes) are within the laboratory's acceptance and method-specified acceptance ranges. *o*-Terphenyl (TPH-Dx surrogate compound) recovery was immeasurable in two samples for group OU21 and three in group OU25 due to elevated levels of lubricant hydrocarbons overwhelming the surrogate response. *d*<sub>4</sub>-1,2-Dichloroethane recovery (VOCs surrogate) in OU25G was slightly elevated relative to the acceptance range. Other surrogate compound recoveries in OU25G were within acceptable limits. This does not adversely affect data quality. 2-Fluorophenol (SVOC surrogate compound) recovery in OV74A was slightly less than the lower end of the acceptance range; the other phenolic surrogates showed acceptable performance. Measures of recovery performance are determined to be acceptable, and no data required qualification due to surrogate compounds performance.

Sample results reported here are determined to be in general compliance with method and laboratory requirements. Some SVOC (HPAH) data are qualified as estimated with the "J" qualifier code due to deviation in quantitation response factors. No other qualification of data is required. All reported data (attached) are considered usable for the intended purposes of the project.

## Verbeek Wrecking Site Investigation

Field I.D.	Matrix	Collection Date	inorganic analytes: mg/kg		Lab I.D.	% solids	Benzene 71-43-2
			organic analytes: ug/kg				
			Comments				
DOF-TP1-3	soil	4/2/2009			098641-OU21A	83.2	< 1.0
DOF-TP1-18	soil	4/2/2009			098642-OU21B	84.8	< 1.0
DOF-TP2-3	soil	4/2/2009			098643-OU21C	84.0	< 1.0
DOF-TP2-9	soil	4/2/2009			098644-OU21D	82.6	< 1.0
DOF-TP3-3	soil	4/2/2009			098645-OU21E	91.8	< 0.9
DOF-TP3-8	soil	4/2/2009			098646-OU21F	87.8	45
DOF-TP3-12	soil	4/2/2009			098647-OU21G	89.1	< 1.0
DOF-TP4-4	soil	4/2/2009			098648-OU21H	91.6	< 1.0
DOF-TP4-6	soil	4/2/2009			098649-OU21I	85.1	7.2
DOF-TP4-8	soil	4/2/2009			098650-OU21J	88.2	< 1.1
DOF-TP5-3	soil	4/2/2009			098651-OU21K	82.8	< 1.2
DOF-TP5-8	soil	4/2/2009			098652-OU21L	79.5	< 1.1
DOF-TP6-2	soil	4/2/2009			098653-OU21M	90.2	< 1.0
DOF-TP6-6	soil	4/2/2009			098654-OU21N	86.5	< 1.0
DOF-TP7-1	soil	4/2/2009			098655-OU21O	89.2	< 1.0
DOF-TP7-3	soil	4/2/2009			098656-OU21P	95.2	< 1.0
DOF-TP8-4	soil	4/2/2009			098657-OU21Q	91.1	< 1.0
DOF-TP8-8	soil	4/2/2009			098658-OU21R	85.2	< 1.1
DOF-TP9-2	soil	4/2/2009			098659-OU21S	90.0	< 1.1
DOF-TP9-3	soil	4/2/2009			098660-OU21T	91.9	< 1.1
DOF-TP9-7	soil	4/2/2009			098684-OU25A	92.7	< 1.0
DOF-TP10-2	soil	4/3/2009			098685-OU25B	86.4	< 0.9
DOF-TP10-14	soil	4/3/2009			098686-OU25C	84.6	< 1.1
DOF-TP11-1/3	soil	4/3/2009			098687-OU25D	85.8	130
DOF-TP11-6	soil	4/3/2009			098688-OU25E	83.2	< 1.2
DOF-TP12-1	soil	4/3/2009			098689-OU25F	92.6	< 1.0
DOF-TP12-3	soil	4/3/2009			098690-OU25G	91.9	2.0
DOF-TP13-2	soil	4/3/2009			098691-OU25H	89.0	< 1.1
DOF-TP13-6	soil	4/3/2009			098692-OU25I	69.2	< 5.4
DOF-TP13-9	soil	4/3/2009			098693-OU25J	84.6	< 1.2
DOF-TP14-1.5	soil	4/3/2009			098694-OU25K	89.2	< 1.0
DOF-TP14-6	soil	4/3/2009			098695-OU25L	89.8	< 1.0
DOF-TP15-1.5	soil	4/3/2009			098696-OU25M	91.8	< 1.1
DOF-TP15-10	soil	4/3/2009			098697-OU25N	86.0	< 1.0
DOF-TP16-1.5	soil	4/3/2009			098698-OU25O	88.4	< 1.1
DOF-TP16-3	soil	4/3/2009			098699-OU25P	85.3	< 1.0
DOF-TP17-2	soil	4/3/2009			098700-OU25Q	88.7	2.5
DOF-TP17-5	soil	4/3/2009			098701-OU25R	87.6	< 1.0
DOF-TP18-4	soil	4/3/2009			098702-OU25S	95.0	< 1.0
DOF-TP18-10	soil	4/3/2009			098703-OU25T	80.3	200
DOF-TP18-13	soil	4/3/2009			098721-OU27A	89.8	< 1.0
DOF-DUPL1	soil	4/2/2009	field replicate of TP6-2		098722-OU27B	90.8	< 0.9
DOF-DUPL2	soil	4/2/2009	field replicate of TP7-3		098723-OU27C	94.8	< 1.0
DOF-DUPL3	soil	4/2/2009	field replicate of TP9-7		098724-OU27D	93.4	< 1.0
MW-South	GW	4/13/2009	total metals = ug/L		099252-OV25A	-	< 0.2
MW-North	GW	4/13/2009	total metals = ug/L		099253-OV25B	-	< 0.2
Trip Blank	water				099254-OV25C	-	< 0.2
MW-South	GW	4/13/2009	dissolved metals = ug/L		099255-OV25D	-	
MW-North	GW	4/13/2009	dissolved metals = ug/L		099256-OV25E	-	



## Verbeek Wrecking Site Investigation

Field ID.	Toluene 108-88-3	Ethyl benzene 100-41-4	m,p-Xylenes 1330-20-7	o-Xylene 95-47-6	Arsenic 7440-38-2	Barium 7440-39-3	Cadmium 7440-43-9	Chromium 7440-47-3
DOF-TP1-3	< 1.0	< 1.0	< 1.0	< 1.0	< 10	107	< 0.6	55
DOF-TP1-18	< 1.0	< 1.0	< 1.0	< 1.0	< 5	71.6	< 0.2	31.9
DOF-TP2-3	< 1.0	< 1.0	< 1.0	< 1.0	< 6	101	< 0.2	56.0
DOF-TP2-9	< 1.0	< 1.0	< 1.0	< 1.0	< 6	85.3	< 0.2	31.6
DOF-TP3-3	< 0.9	< 0.9	< 0.9	< 0.9	< 5	47.0	< 0.2	27.2
DOF-TP3-8	41	370	330	530	11	94.0	< 0.2	22.8
DOF-TP3-12	1.3	< 1.0	1.4	1.7	< 5	61.1	< 0.2	37.3
DOF-TP4-4	< 1.0	< 1.0	< 1.0	< 1.0	< 5	45.2	< 0.2	33.8
DOF-TP4-6	6.7	15	90	140	26	172	< 0.2	22.8
DOF-TP4-8	< 1.1	< 1.1	< 1.1	< 1.1	< 5	60.5	< 0.2	27.2
DOF-TP5-3	1.2	< 1.2	< 1.2	< 1.2	< 6	132	< 0.2	34.1
DOF-TP5-8	< 1.1	< 1.1	< 1.1	< 1.1	< 6	101	< 0.2	55.3
DOF-TP6-2	< 1.0	< 1.0	< 1.0	< 1.0	< 5	52.1	< 0.2	29.0
DOF-TP6-6	< 1.0	< 1.0	< 1.0	< 1.0	< 5	77.3	< 0.2	40.6
DOF-TP7-1	< 1.0	< 1.0	< 1.0	< 1.0	< 5	83.0	< 0.2	36.1
DOF-TP7-3	< 1.0	< 1.0	< 1.0	< 1.0	< 5	52.2	< 0.2	26.5
DOF-TP8-4	< 1.0	< 1.0	< 1.0	< 1.0	< 5	42.0	< 0.2	18.1
DOF-TP8-8	< 1.1	< 1.1	< 1.1	< 1.1	< 6	40.2	< 0.2	19.6
DOF-TP9-2	< 1.1	< 1.1	< 1.1	< 1.1	< 5	46.2	< 0.2	23.7
DOF-TP9-3	1.3	2.0	3.2	2.2	< 5	66.0	< 0.2	27.3
DOF-TP9-7	< 1.0	< 1.0	< 1.0	< 1.0	< 5	52.2	< 0.2	30.2
DOF-TP10-2	< 0.9	< 0.9	< 0.9	< 0.9	< 6	87.8	< 0.2	44.9
DOF-TP10-14	< 1.1	< 1.1	< 1.1	< 1.1	< 6	42.3	< 0.2	24.1
DOF-TP11-1/3	44	570	590	640	10	283	< 0.2	27.0
DOF-TP11-6	< 1.2	< 1.2	< 1.2	< 1.2	< 6	73.8	< 0.2	30.8
DOF-TP12-1	< 1.0	< 1.0	1.7	< 1.0	< 5	1550	< 0.2	14.9
DOF-TP12-3	1.1	2.6	4.7	2.6	< 5	81.5	< 0.2	25.0
DOF-TP13-2	< 1.1	< 1.1	< 1.1	< 1.1	< 5	67.0	< 0.2	31.9
DOF-TP13-6	< 5.4	< 5.4	< 5.4	< 5.4	< 7	86.8	< 0.3	29.2
DOF-TP13-9	< 1.2	< 1.2	< 1.2	< 1.2	< 6	30.2	< 0.2	21.1
DOF-TP14-1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 5	64.2	< 0.2	28.6
DOF-TP14-6	< 1.0	< 1.0	< 1.0	< 1.0	< 5	51.2	< 0.2	26.6
DOF-TP15-1.5	< 1.1	< 1.1	< 1.1	< 1.1	< 5	38.6	< 0.2	20.0
DOF-TP15-10	< 1.0	< 1.0	< 1.0	< 1.0	< 6	48.0	< 0.2	22.8
DOF-TP16-1.5	< 1.1	2.0	6.9	1.7	< 5	66.0	< 0.2	27.1
DOF-TP16-3	< 1.0	< 1.0	< 1.0	< 1.0	< 5	74.6	< 0.2	32.4
DOF-TP17-2	12	170	220	150	< 5	61.0	< 0.2	30.7
DOF-TP17-5	< 1.0	< 1.0	< 1.0	< 1.0	< 5	79.9	0.3	30.1
DOF-TP18-4	< 1.0	< 1.0	< 1.0	< 1.0	< 5	43.0	< 0.2	38.8
DOF-TP18-10	120	910	1200	2300	70	435	< 0.6	37
DOF-TP18-13	< 1.0	< 1.0	< 1.0	< 1.0	< 5	421	< 0.2	6.6
DOF-DUPL1	< 0.9	< 0.9	< 0.9	< 0.9	< 5	29.7	< 0.2	13.6
DOF-DUPL2	< 1.0	< 1.0	< 1.0	< 1.0	< 5	1390	< 0.2	6.1
DOF-DUPL3	< 1.0	< 1.0	< 1.0	< 1.0	< 5	51.2	< 0.2	25.6
MW-South	< 0.2	< 0.2	< 0.4	< 0.2	0.9	10.2	< 0.2	< 1
MW-North	< 0.2	< 0.2	< 0.4	< 0.2	0.5	12.0	< 0.2	< 1
Trip Blank	< 0.2	< 0.2	< 0.4	< 0.2				
MW-South					0.9	10.4	< 0.2	< 1
MW-North					0.5	11.7	< 0.2	< 1

## Verbeek Wrecking Site Investigation

Field I.D.	Lead	Mercury	Nickel	Zinc	TPH-G	TPH-Dx (mg/kg)		Phenol
	7439-92-1	7439-97-6	7440-02-0	7440-66-6	(mg/kg)	DRO	RRO	108-95-2
DOF-TP1-3	7	0.06	65	66	< 7.8	< 5.9	13	< 66
DOF-TP1-18	9	< 0.05	42	53	< 7.5	15	39	< 59
DOF-TP2-3	5	0.07	57	58	< 7.7	< 5.9	12	< 65
DOF-TP2-9	3	< 0.05	39	42	< 7.6	7.6	< 12	< 63
DOF-TP3-3	3	< 0.04	39	38	< 6.3	< 5.4	< 11	< 59
DOF-TP3-8	62	0.09	130	63	45	3700	3100	< 1900
DOF-TP3-12	4	0.06	37	38	< 6.5	8.7	18	< 58
DOF-TP4-4	< 2	< 0.05	44	43	< 6.2	< 5.3	< 10	< 58
DOF-TP4-6	53	0.20	98	55	49	5000	3900	< 870
DOF-TP4-8	3	< 0.05	35	40	< 6.9	7.6	14	< 63
DOF-TP5-3	238	0.22	38	91	< 8.0	57	220	< 64
DOF-TP5-8	5	0.08	60	69	< 8.8	< 6.2	< 12	< 59
DOF-TP6-2	3	< 0.04	39	50	< 6.4	< 5.3	< 11	< 56
DOF-TP6-6	5	< 0.05	46	58	< 7.3	< 5.4	14	< 61
DOF-TP7-1	6	< 0.05	43	65	< 6.4	7.6	19	< 57
DOF-TP7-3	< 2	< 0.04	34	41	< 5.7	< 5.1	< 10	< 65
DOF-TP8-4	3	< 0.05	27	31	< 6.1	46	200	< 56
DOF-TP8-8	< 2	< 0.05	27	31	< 7.2	6.5	12	< 60
DOF-TP9-2	< 2	< 0.04	31	32	< 6.4	11	30	< 60
DOF-TP9-3	17	< 0.04	33	73	16	770	3000	< 190
DOF-TP9-7	3	< 0.02	36	37	< 5.9	< 5.2	< 10	< 67
DOF-TP10-2	4	0.04	51	40	< 6.9	< 5.6	< 11	< 64
DOF-TP10-14	< 2	< 0.02	32	28	< 7.4	< 5.7	< 11	< 64
DOF-TP11-1/3	29	0.13	49	46	360	3600	2300	< 1900
DOF-TP11-6	21	0.04	36	48	< 7.5	50	140	< 66
DOF-TP12-1	12	0.02	17	34	10	940	9800	< 600
DOF-TP12-3	2	0.02	35	30	< 6.2	2800	19,000	< 78
DOF-TP13-2	4	0.03	44	37	< 6.6	9.5	12	< 62
DOF-TP13-6	12	0.33	34	78	36	350	< 13	< 65
DOF-TP13-9	< 2	< 0.02	31	24	< 8.4	< 6.0	< 12	< 62
DOF-TP14-1.5	4	0.03	35	27	< 6.6	7.8	24	< 62
DOF-TP14-6	9	0.04	30	50	< 6.3	37	300	< 610
DOF-TP15-1.5	< 2	< 0.02	27	21	< 6.3	< 5.2	< 10	< 60
DOF-TP15-10	< 2	< 0.02	28	24	< 6.4	6.6	< 10	< 61
DOF-TP16-1.5	13	0.04	36	45	< 6.6	1000	7800	< 190
DOF-TP16-3	19	0.04	40	42	< 7.4	9.4	38	< 65
DOF-TP17-2	17	0.04	37	45	150	600	370	< 620
DOF-TP17-5	61	0.04	36	88	16	48	110	< 63
DOF-TP18-4	3	< 0.02	43	41	< 5.5	< 5.0	< 10	< 65
DOF-TP18-10	139	1.63	302	88	780	7500	3900	< 1800
DOF-TP18-13	< 2	< 0.04	10	9	< 6.6	< 5.5	< 11	< 62
DOF-DUPL1	< 2	< 0.05	18	25	< 6.4	< 5.3	16	< 56
DOF-DUPL2	< 2	< 0.04	11	26	< 5.7	< 5.0	< 10	< 62
DOF-DUPL3	3	< 0.04	34	40	< 5.8	< 5.0	< 10	< 59
MW-South	< 1	< 0.1	0.7	< 4	< 0.25	< 0.25	< 0.5	< 0.1
MW-North	< 1	< 0.1	1.1	< 4	< 0.25	< 0.25	< 0.5	< 0.1
Trip Blank					< 0.25			
MW-South	< 1	< 0.1	0.7	< 4	<i>Bold-highlighted TPH-Dx data most resembles</i>			
MW-North	< 1	< 0.1	1.1	< 4	<i>patterns of [weathered] diesel fuel and/or motor oil.</i>			

## Verbeek Wrecking Site Investigation

Field I.D.	2-Methylphenol 95-48-7	4-Methylphenol 106-44-5	2,4-Dimethyl- phenol 105-67-9	Naphthalene 91-20-3	2-Methyl- naphthalene 91-57-6	1-Methyl- naphthalene 90-12-0	Dimethyl- phthalate 131-11-3
DOF-TP1-3	< 66	< 66	< 66	< 66	< 66	< 66	< 66
DOF-TP1-18	< 59	< 59	< 59	100	< 59	< 59	< 59
DOF-TP2-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP2-9	< 63	< 63	< 63	< 63	< 63	< 63	< 63
DOF-TP3-3	< 59	< 59	< 59	< 59	< 59	< 59	< 59
DOF-TP3-8	< 1900	< 1900	< 1900	61,000	16,000	15,000	< 1900
DOF-TP3-12	< 58	< 58	< 58	< 58	< 58	< 58	< 58
DOF-TP4-4	< 58	< 58	< 58	< 58	< 58	< 58	< 58
DOF-TP4-6	< 870	< 870	< 870	190,000	50,000	34,000	< 870
DOF-TP4-8	< 63	< 63	< 63	7100	3200	2300	< 63
DOF-TP5-3	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP5-8	< 59	< 59	< 59	< 59	< 59	< 59	< 59
DOF-TP6-2	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-TP6-6	< 61	< 61	< 61	< 61	< 61	< 61	< 61
DOF-TP7-1	< 57	< 57	< 57	< 57	< 57	< 57	< 57
DOF-TP7-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP8-4	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-TP8-8	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP9-2	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP9-3	< 190	< 190	< 190	1800	960	1000	< 190
DOF-TP9-7	< 67	< 67	< 67	< 67	< 67	< 67	< 67
DOF-TP10-2	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP10-14	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP11-1/3	< 1900	< 1900	< 1900	92,000	32,000	29,000	< 1900
DOF-TP11-6	< 66	< 66	< 66	220	85	< 66	< 66
DOF-TP12-1	< 600	< 600	< 600	< 600	< 600	< 600	< 600
DOF-TP12-3	< 78	< 78	< 78	< 78	< 78	< 78	< 78
DOF-TP13-2	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP13-6	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP13-9	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP14-1.5	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP14-6	< 610	< 610	< 610	< 610	< 610	< 610	< 610
DOF-TP15-1.5	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP15-10	< 61	< 61	< 61	< 61	< 61	< 61	< 61
DOF-TP16-1.5	< 190	< 190	< 190	< 190	< 190	< 190	< 190
DOF-TP16-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP17-2	< 620	< 620	< 620	170,000	53,000	32,000	< 620
DOF-TP17-5	< 63	< 63	< 63	< 63	< 63	< 63	< 63
DOF-TP18-4	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP18-10	< 1800	< 1800	< 1800	370,000	99,000	67,000	< 1800
DOF-TP18-13	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-DUPL1	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-DUPL2	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-DUPL3	< 59	< 59	< 59	< 59	< 59	< 59	< 59
MW-South	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MW-North	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Trip Blank							
MW-South							
MW-North							

## Verbeek Wrecking Site Investigation

Field I.D.	Acenaph- thylene 208-96-8	Acenaph- thene 83-32-9	Dibenzo- furan 132-64-9	Diethyl- phthalate 84-66-2	Fluorene 86-73-7	Phenanthrene 85-01-8	Carbazole 86-74-8	Anthracene 120-12-7
DOF-TP1-3	< 66	< 66	< 66	< 66	< 66	< 66	< 66	< 66
DOF-TP1-18	< 59	< 59	< 59	< 59	< 59	110	< 59	< 59
DOF-TP2-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP2-9	< 63	< 63	< 63	< 63	< 63	< 63	< 63	< 63
DOF-TP3-3	< 59	< 59	< 59	< 59	< 59	< 59	< 59	< 59
DOF-TP3-8	46,000	4500	2700	< 1900	23,000	260,000	5300	29,000
DOF-TP3-12	< 58	< 58	< 58	< 58	< 58	< 58	< 58	< 58
DOF-TP4-4	< 58	< 58	< 58	< 58	< 58	< 58	< 58	< 58
DOF-TP4-6	44,000	5100	3500	< 870	25,000	170,000	5400	34,000
DOF-TP4-8	2800	1400	280	< 63	2600	20,000	240	3300
DOF-TP5-3	< 64	< 64	< 64	< 64	< 64	98	< 64	< 64
DOF-TP5-8	< 59	< 59	< 59	< 59	< 59	< 59	< 59	< 59
DOF-TP6-2	< 56	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-TP6-6	< 61	< 61	< 61	< 61	< 61	< 61	< 61	< 61
DOF-TP7-1	< 57	< 57	< 57	< 57	< 57	< 57	< 57	< 57
DOF-TP7-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP8-4	< 56	< 56	< 56	< 56	< 56	68	< 56	< 56
DOF-TP8-8	< 60	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP9-2	< 60	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP9-3	1300	540	< 190	< 190	1100	8000	< 190	1600
DOF-TP9-7	< 67	< 67	< 67	< 67	< 67	< 67	< 67	< 67
DOF-TP10-2	< 64	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP10-14	< 64	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP11-1/3	11,000	23,000	2400	< 1900	17,000	110,000	2400	21,000
DOF-TP11-6	< 66	< 66	< 66	< 66	< 66	150	< 66	< 66
DOF-TP12-1	< 600	< 600	< 600	< 600	< 600	< 600	< 600	< 600
DOF-TP12-3	< 78	< 78	< 78	< 78	< 78	< 78	< 78	< 78
DOF-TP13-2	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP13-6	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP13-9	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP14-1.5	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP14-6	< 610	< 610	< 610	< 610	< 610	< 610	< 610	< 610
DOF-TP15-1.5	< 60	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP15-10	< 61	< 61	< 61	< 61	< 61	< 61	< 61	< 61
DOF-TP16-1.5	< 190	< 190	< 190	< 190	< 190	< 190	< 190	< 190
DOF-TP16-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP17-2	21,000	6300	2200	< 620	20,000	140,000	3200	16,000
DOF-TP17-5	< 63	< 63	< 63	< 63	< 63	< 63	< 63	< 63
DOF-TP18-4	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP18-10	97,000	8100	6300	< 1800	66,000	260,000	8500	41,000
DOF-TP18-13	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-DUPL1	< 56	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-DUPL2	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-DUPL3	< 59	< 59	< 59	< 59	< 59	< 59	< 59	< 59
MW-South	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MW-North	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Trip Blank								
MW-South								
MW-North								

## Verbeek Wrecking Site Investigation

Field I.D.	Di-n-butyl- phthalate 84-74-2	Fluor- anthene 206-44-0	Pyrene 129-00-0	Butylbenzyl- phthalate 85-68-7	Benzo(a)- anthracene 56-55-3	bis (2-Ethylhexyl)- phthalate 117-81-7	Chrysene 218-01-9
DOF-TP1-3	< 66	< 66	< 66	< 66	< 66	< 66	< 66
DOF-TP1-18	< 59	<b>390</b>	<b>410</b>	< 59	<b>82</b>	< 59	<b>110</b>
DOF-TP2-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP2-9	< 63	< 63	< 63	< 63	< 63	< 63	< 63
DOF-TP3-3	< 59	< 59	< 59	< 59	< 59	< 59	< 59
DOF-TP3-8	< 1900	<b>370,000</b>	<b>380,000 J</b>	< 1900	<b>60,000</b>	< 1900	<b>77,000</b>
DOF-TP3-12	< 58	< 58	< 58	< 58	< 58	< 58	< 58
DOF-TP4-4	< 58	< 58	< 58	< 58	< 58	< 58	< 58
DOF-TP4-6	< 870	<b>400,000</b>	<b>410,000 J</b>	< 870	<b>76,000</b>	< 870	<b>94,000 J</b>
DOF-TP4-8	< 63	<b>20,000</b>	<b>21,000 J</b>	< 63	<b>4900</b>	< 63	<b>5800 J</b>
DOF-TP5-3	< 64	<b>280</b>	<b>280 J</b>	< 64	< 64	< 64	<b>75</b>
DOF-TP5-8	< 59	< 59	< 59	< 59	< 59	< 59	< 59
DOF-TP6-2	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-TP6-6	< 61	< 61	< 61	< 61	< 61	< 61	< 61
DOF-TP7-1	< 57	<b>130</b>	<b>140</b>	< 57	< 57	< 57	< 57
DOF-TP7-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP8-4	< 56	<b>120</b>	<b>110</b>	< 56	< 56	< 56	< 56
DOF-TP8-8	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP9-2	< 60	<b>210</b>	<b>250</b>	< 60	<b>67</b>	< 60	<b>94</b>
DOF-TP9-3	< 190	<b>11,000</b>	<b>11,000</b>	< 190	<b>3400</b>	< 190	<b>4600</b>
DOF-TP9-7	< 67	< 67	< 67	< 67	< 67	< 67	< 67
DOF-TP10-2	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP10-14	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP11-1/3	< 1900	<b>140,000</b>	<b>140,000</b>	< 1900	<b>40,000</b>	< 1900	<b>53,000</b>
DOF-TP11-6	< 66	<b>150</b>	<b>140</b>	< 66	< 66	< 66	< 66
DOF-TP12-1	< 600	< 600	<b>630 J</b>	< 600	< 600	<b>1100</b>	< 600
DOF-TP12-3	< 78	< 78	< 78	< 78	< 78	< 78	< 78
DOF-TP13-2	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP13-6	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP13-9	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP14-1.5	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP14-6	< 610	< 610	< 610	< 610	< 610	< 610	< 610
DOF-TP15-1.5	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP15-10	< 61	< 61	< 61	< 61	< 61	< 61	< 61
DOF-TP16-1.5	< 190	< 190	< 190	< 190	< 190	<b>990</b>	< 190
DOF-TP16-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP17-2	< 620	<b>93,000</b>	<b>110,000</b>	< 620	<b>26,000</b>	< 620	<b>30,000</b>
DOF-TP17-5	< 63	< 63	< 63	< 63	< 63	< 63	< 63
DOF-TP18-4	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP18-10	< 1800	<b>320,000</b>	<b>330,000</b>	< 1800	<b>60,000</b>	< 1800	<b>71,000</b>
DOF-TP18-13	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-DUPL1	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-DUPL2	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-DUPL3	< 59	< 59	< 59	< 59	< 59	< 59	< 59
MW-South	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	<b>0.7</b>	< 0.1
MW-North	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Trip Blank							
MW-South							
MW-North							

## Verbeek Wrecking Site Investigation

Field I.D.	Di-n-octyl- phthalate <u>117-84-0</u>	Benzo(b)- fluoranthene <u>205-99-2</u>	Benzo(k)- fluoranthene <u>207-08-9</u>	Benzo(a)- pyrene <u>50-32-8</u>	Indeno(1,2,3- cd)pyrene <u>193-39-5</u>	Dibenz(a,h)- anthracene <u>53-70-3</u>	Benzo(g,h,i)- perylene <u>191-24-2</u>	Retene <u>483-65-8</u>
DOF-TP1-3	< 66	< 66	< 66	< 66	< 66	< 66	< 66	< 66
DOF-TP1-18	< 59	96	100	160	110	< 59	170	< 59
DOF-TP2-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP2-9	< 63	< 63	< 63	< 63	< 63	< 63	< 63	< 63
DOF-TP3-3	< 59	< 59	< 59	< 59	< 59	< 59	< 59	< 59
DOF-TP3-8	< 1900	59,000	41,000	86,000	50,000	9400	72,000	< 1900
DOF-TP3-12	< 58	< 58	< 58	< 58	< 58	< 58	< 58	< 58
DOF-TP4-4	< 58	< 58	< 58	< 58	< 58	< 58	< 58	< 58
DOF-TP4-6	< 870	83,000	48,000	110,000	50,000	9800	72,000 J	< 870
DOF-TP4-8	< 63	3500	3300	6200	2400	470	3300 J	< 63
DOF-TP5-3	< 64	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP5-8	< 59	< 59	< 59	< 59	< 59	< 59	< 59	< 59
DOF-TP6-2	< 56	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-TP6-6	< 61	< 61	< 61	< 61	< 61	< 61	< 61	< 61
DOF-TP7-1	< 57	< 57	< 57	< 57	< 57	< 57	< 57	< 57
DOF-TP7-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP8-4	< 56	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-TP8-8	< 60	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP9-2	< 60	93	77	130	96	< 60	150	< 60
DOF-TP9-3	< 190	3200	3500	5400	2700	430	3700	< 190
DOF-TP9-7	< 67	< 67	< 67	< 67	< 67	< 67	< 67	< 67
DOF-TP10-2	< 64	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP10-14	< 64	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DOF-TP11-1/3	< 1900	47,000	28,000	61,000	35,000	6400	53,000	< 1900
DOF-TP11-6	< 66	< 66	< 66	< 66	< 66	< 66	< 66	< 66
DOF-TP12-1	< 600	< 600	< 600	< 600	< 600	< 600	< 600	< 600
DOF-TP12-3	< 78	< 78	< 78	< 78	< 78	< 78	< 78	< 78
DOF-TP13-2	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP13-6	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP13-9	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP14-1.5	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-TP14-6	< 610	< 610	< 610	< 610	< 610	< 610	< 610	< 610
DOF-TP15-1.5	< 60	< 60	< 60	< 60	< 60	< 60	< 60	< 60
DOF-TP15-10	< 61	< 61	< 61	< 61	< 61	< 61	< 61	< 61
DOF-TP16-1.5	< 190	< 190	< 190	< 190	< 190	< 190	< 190	< 190
DOF-TP16-3	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP17-2	< 620	20,000	18,000	36,000	17,000	4400	22,000 J	< 620
DOF-TP17-5	< 63	< 63	< 63	< 63	< 63	< 63	< 63	160
DOF-TP18-4	< 65	< 65	< 65	< 65	< 65	< 65	< 65	< 65
DOF-TP18-10	< 1800	54,000	49,000	80,000	53,000	12,000	62,000 J	< 2000
DOF-TP18-13	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-DUPL1	< 56	< 56	< 56	< 56	< 56	< 56	< 56	< 56
DOF-DUPL2	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
DOF-DUPL3	< 59	< 59	< 59	< 59	< 59	< 59	< 59	< 59
MW-South	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MW-North	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Trip Blank								
MW-South								
MW-North								

**ATTACHMENT E**  
Field Procedures, Geologic Logs of  
Push-Probe and Test Pit Sampling, and  
Laboratory Data Sheets (on CD)  
Site B Verbeek Wrecking Yard  
August/September 2009

**Field Procedures, Geologic Logs, Analytical Procedures  
and Laboratory Data Sheets (on CD)  
Push-Probe and Test Pit Sampling  
August/September 2009**

Supplemental sampling within Site B of the former Verbeek wrecking yard was conducted on August 31 and September 2, 2009. The sampling included advancing and collecting samples from seven push-probes (P1 to P7) and excavating nine additional test pits (TP-19 to TP-27). Dave Cooper Engineering Geologist for Dalton, Olmsted & Fuglevand, Inc. (DOF) observed and documented the drilling/excavation, prepared logs of the soils encountered and collected samples for laboratory analysis. Soils encountered during the field work were logged using ASTM D-2488 as a general guide. Probe/test pits logs are included with this attachment.

**Push-Probes**

Seven push probes were advanced and sampled by Cascade Drilling, Woodinville, WA on August 31, 2009. Subsurface soils were sampled continuously using a Geoprobe 6600, equipped with a 2-inch diameter macro sampler, lined with a disposable acrylic sleeve. The probes penetrated 10 to 15 feet below ground surface. Representative grab samples were collected at 5 foot intervals for laboratory analyses.

**Test Pits**

Nine supplemental test pits were excavated on September 2, 2009. Excavated soils were temporarily stockpiled adjacent to the excavation and segregated as clean or suspected contaminated, then backfilled in the same order as they were removed.

Soil samples were collected using a stainless steel spoon directly from the test pit sidewall within four feet of the surface or from the track-hoe bucket at depths greater than four feet. The sample depth interval indicated on the log and sample ID, represents a discrete location within plus and minus 0.5 feet of that depth (samples were obtained over a depth interval of approximately one foot).

**Sample Handling**

Samples were placed in laboratory prepared containers. Sample containers were labeled and placed in an iced cooler for transportation to ARI in Seattle, WA for analysis following standard chain of custody procedures. Samples were delivered to ARI within approximately 24 hours of collection.

**Analytical Procedures**

Analytical Resources Inc., (ARI) conducted the laboratory analyses. The samples were analyzed for the following constituents using the indicated methods:

- Gasoline Range Hydrocarbons - NWTPH-G



**Attachment E**

**Field Procedures and Logs - August/September 09 Sampling**

**Page 2    Draft: October 10, 2009**

- Diesel and Motor Oil Range Hydrocarbons - NWTPH-Dx
- Volatile Organic Compounds (VOCs) - SW846 M.8260C
- Semivolatile Organic Compounds (SVOCs) - SW846 M.8270D
- Metals (arsenic) - SW846 M. 6010B

Laboratory data sheets for the August/September 09 sampling are included on CD with this attachment.

**Attachments**

- Test Pit Logs TP-19 to TP-27
- Probe Logs P1 to P7
- Laboratory Data Sheets (August/September 2009 analyses) - On CD

**TEST PIT AND PROBE LOGS  
AUGUST/SEPTEMBER 2009  
SITE B VERBEEK WRECKING YARD**

**LABORATORY DATA SHEETS  
AUGUST/SEPTEMBER 2009 SAMPLES  
SITE B, VERBEEK WRECKING YARD  
(ON CD)**

**ATTACHMENT E**  
**Field Procedures, Geologic Logs of**  
**Push-Probe and Test Pit Sampling, and**  
**Laboratory Data Sheets (on CD)**  
**Site B Verbeek Wrecking Yard**  
**August/September 2009**

**Field Procedures, Geologic Logs, Analytical Procedures  
and Laboratory Data Sheets (on CD)  
Push-Probe and Test Pit Sampling  
August/September 2009**

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Nine supplemental test pits were excavated on September 2, 2009. Excavated soils were temporarily stockpiled adjacent to the excavation and segregated as clean or suspected contaminated, then backfilled in the same order as they were removed.

Soil samples were collected using a stainless steel spoon directly from the test pit sidewall within four feet of the surface or from the track-hoe bucket at depths greater than four feet. The sample depth interval indicated on the log and sample ID, represents a discrete location within plus and minus 0.5 feet of that depth (samples were obtained over a depth interval of approximately one foot).

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Samples were placed in laboratory prepared containers. Sample containers were labeled and placed in an iced cooler for transportation to ARI in Seattle, WA for analysis following standard chain of custody procedures. Samples were delivered to ARI within approximately 24 hours of collection.

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**Attachment E**

**Field Procedures and Logs - August/September 09 Sampling**

**Page 2    Draft: October 10, 2009**

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- Semivolatile Organic Compounds (SVOCs) - SW846 M.8270D
- Metals (arsenic) - SW846 M. 6010B

Laboratory data sheets for the August/September 09 sampling are included on CD with this attachment.

**Attachments**

- Test Pit Logs TP-19 to TP-27
- Probe Logs P1 to P7
- Laboratory Data Sheets (August/September 2009 analyses) - On CD

**TEST PIT AND PROBE LOGS  
AUGUST/SEPTEMBER 2009  
SITE B VERBEEK WRECKING YARD**



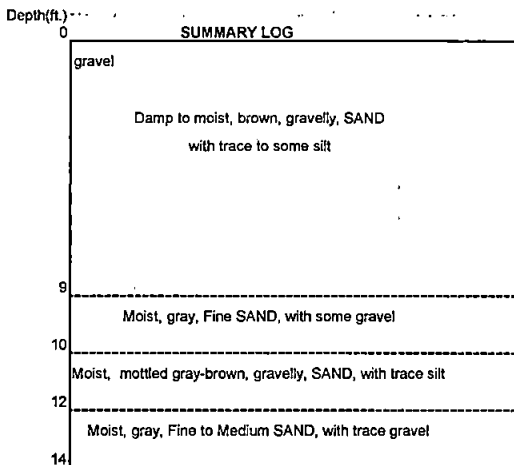


DOF-P2

BORING - DESCRIPTION OF SAMPLES & DATA

Field Rep: DG Cooper			Location: N305805 E1302415				
Drilling Co.: Cascade			Elevation (Ft.):				
Driller: Casey Goble			Ground Surface: Gravel				
Drill Type: Geoprobe 6600			Date Completed: 08/31/09				
Size/Type Casing: 2"			Weather: Clear 65F				
			Hammer Type: Percussion				
			Sampler Type: 5' long x 2" dia. Macro Core w/ acrylic sleeve				
Spl.No.	sample saved	Drill Action	Testing	Spl Depth (Ft.) From - To	Spl length inches	Time	Sample Description
		gravely		0-5	60		0-5 Dense, damp, bwn, gravelly, SAND, w/trace silt, no odor or staining
P2-A	grab @ 3-5'					1145	
				5-10	60		5-6 As above
P2-B	grab @ 8-10'					1155	6-9 Moist, bwn, gravelly, SAND, w/some silt, no odor
							9-10 Moist, gry, F SAND, w/some gravel, no odor
				10-14	48		10-12 Dense, moist, gry-bwn, gravelly, SAND, w/trace silt, no odor
P2-C	grab @ 12-14'					1200	12-14 Dense, moist, gry, F-M SAND, w/trace gravel, no odor
		Refusal					Refusal @ 14' on cobble

Testing Notes: Analytical A1 - NWTPH-DX  
A2 - NWTPH-G/BTEX  
A3 - PAHs  
A4 - Metals



(Bottom of Boring)  
NOTE: The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.  
Completed boring backfilled with granular bentonite

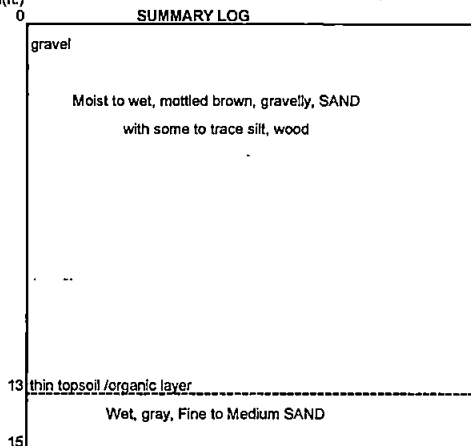
DOF-P3

BORING - DESCRIPTION OF SAMPLES & DATA

Field Rep: DG Cooper			Location: N305755 E1302415				
Drilling Co.: Cascade			Elevation (FL):		Ground Surface: Gravel		
Driller: Casey Goble			Date Completed: 08/31/09				
Drill Type: Geoprobe 6600			Weather: Clear 65F				
Size/Type Casing: 2"			Hammer Type: Percussion		Sampler Type: 5' long x 2" dia. Macro Core w/ acrylic sleeve		
Spl.No.	sample saved	Drill Action	Testing	Spl Depth (Ft.) From - To	Spl length inches	Time	Sample Description
		Hard		0-5	48		0-5 Moist, mot bwn, gravelly, SAND, w/some silt, no odor
P3-A	grab @ 4-5'					1210	oxidized gravel
				5-10	36		5-10 Dense wet, gry, gravelly, SAND, w/trace silt, no odor
P3-B	grab @ 9-10'					1220	
				10-14	42		10-11.5 As above, with wood
P3-C	grab @ 14-15'					1230	11.5-13 Wet, gry, gravelly, SAND, w/some silt, topsoil @ base
							13-15 Wet, gry, F-M SAND, no odor

Testing Notes: Analytical A1 - NWTPH-DX  
A2 - NWTPH-G/BTEX  
A3 - PAHs  
A4 - Metals

Depth(ft.)



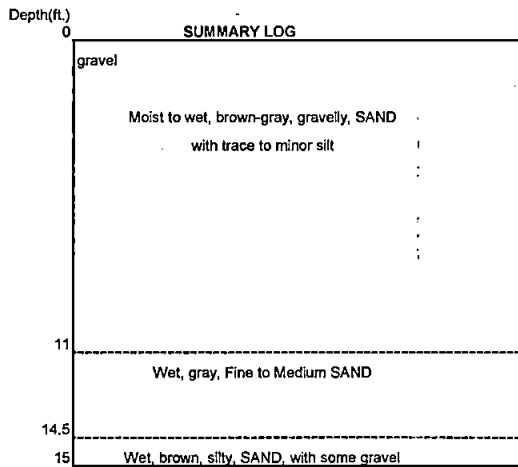
(Bottom of Boring)  
NOTE: The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.  
Completed boring backfilled with granular bentonite

DOF-P4

BORING - DESCRIPTION OF SAMPLES & DATA

Field Rep: DG Cooper			Location: N305755 E1302415				
Drilling Co.: Cascade			Elevation (Ft.):		Ground Surface: Gravel		
Driller: Casey Goble			Date Completed: 08/31/09				
Drill Type: Geoprobe 6600			Weather: Clear 65F				
Size/Type Casing: 2"			Hammer Type: Percussion		Sampler Type: 5' long x 2" dia. Macro Core w/ acrylic sleeve		
Spl.No.	sample saved	Drill Action	Testing	Spl Depth (Ft.) From - To	Spl length inches	Time	Sample Description
		Hard		0-5	48		0-5 Moist, bwn, gravelly, SAND, w/trace silt, no odor
P4-A	grab @ 4-5'		A1,A2,A3,A4			1240	
				5-10	48		5-10 As above
P4-B	grab @ 9-10'		A1,A2,A3,A4			1250	
				10-14	60		10-11 As above
P4-C	grab @ 14-15'		A1,A2,A3,A4			1255	11-14.5 Wet, gry, F-M SAND, no odor
							14.5-15 Wet, bwn, silty, SAND, w/some gravel, no odor

Testing Notes: Analytical A1 - NWTPH-DX  
A2 - NWTPH-G/BTEX  
A3 - PAHs  
A4 - Metals



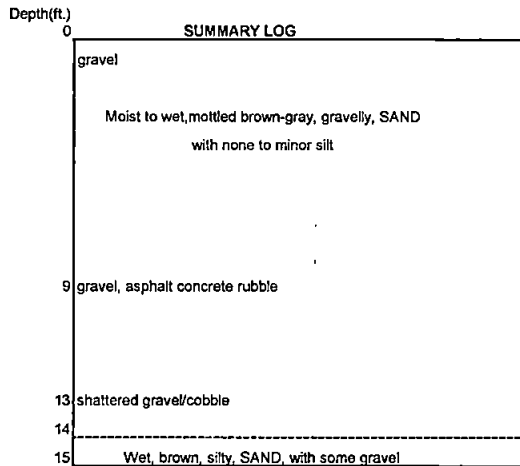
NOTE: The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.  
Completed boring backfilled with granular bentonite

DOF-P5

BORING - DESCRIPTION OF SAMPLES & DATA

Field Rep: DG Cooper			Location: N305748 E1302370				
Drilling Co.: Cascade			Elevation (Ft.):		Ground Surface: Gravel		
Driller: Casey Goble			Date Completed: 08/31/09				
Drill Type: Geoprobe 6600			Weather: Clear 65F				
Size/Type Casing: 2"			Hammer Type: Percussion		Sampler Type: 5' long x 2" dia. Macro Core w/ acrylic sleeve		
Spl.No.	sample saved	Drill Action	Testing	Spl Depth (Ft.) From - To	Spl length inches	Time	Sample Description
		Hard		0-5	48		0-5 Moist-wet, mot gry-bwn, gravelly SAND, no odor or staining
P5-A	grab @ 4-5'		A1,A2,A3,A4			1300	
				5-10	40		5-9 As above
P5-B	grab @ 9-10'		A1,A2,A3,A4			1315	9-10 Damp, mot gry-blk, GRAVEL, with asphalt concrete, no odor
				10-14	36		10-13 Wet, bwn, gravevly, SAND, w/trace silt, no odor
P5-C	grab @ 14-15'		A1,A2,A3,A4			1320	13-14 shattered cobble/gravel (drill action)
							14-15 Wet, mot bwn, silty, SAND, w/some gravel, organics

Testing Notes: Analytical  
 A1 - NWTPH-DX  
 A2 - NWTPH-G/BTEX  
 A3 - PAHs  
 A4 - Metals



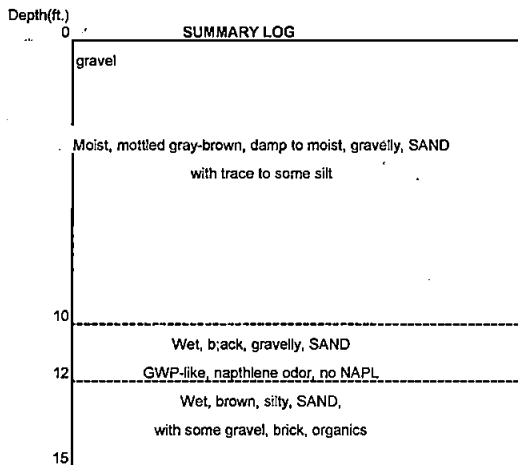
(Bottom of Boring)  
 NOTE: The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.  
 Completed boring backfilled with granular bentonite

BORING - DESCRIPTION OF SAMPLES & DATA

DOF-P6

Field Rep: DG Cooper			Location: N305753 E1302321				
Drilling Co.: Cascade			Elevation (Ft.):		Ground Surface: Gravel		
Driller: Casey Goble			Date Completed: 08/31/09				
Drill Type: Geoprobe 6600			Weather: Clear 65F				
Size/Type Casing: 2"			Hammer Type: Percussion		Sampler Type: 5' long x 2" dia. Macro Core w/ acrylic sleeve		
Spl.No.	sample saved	Drill Action	Testing	Spl Depth (Ft.) From - To	Spl length inches	Time	Sample Description
		Hard		0-5	40		0-4 Moist, bwn, gravelly SAND, w/trace silt, no odor
P6-A	grab @ 4-5'					1330	4-4.5 Moist, gry, silty SAND, w/trace gravel
							4.5-5 Damp, gry, gravelly, SAND
				5-10	40		5-10 Moist, mot gry, gravelly, SAND, w/some silt
P6-B	grab @ 9-10'					1340	9-10 Damp, mot gry-blk, GRAVEL, with asphalt concrete, no odor
				10-14	36		10-12 Wet, blk, gravelly, SAND, GWP-like, naphthalene odor, no NAPL
P6-C	grab @ 10-11'					1350	12-15 Wet, bwn, silty, SAND, w/some gravel, brick, organics
P6-D	grab @ 12-13'					1355	

Testing Notes: Analytical A1 - NWTPH-DX  
A2 - NWTPH-G/BTEX  
A3 - PAHs  
A4 - Metals



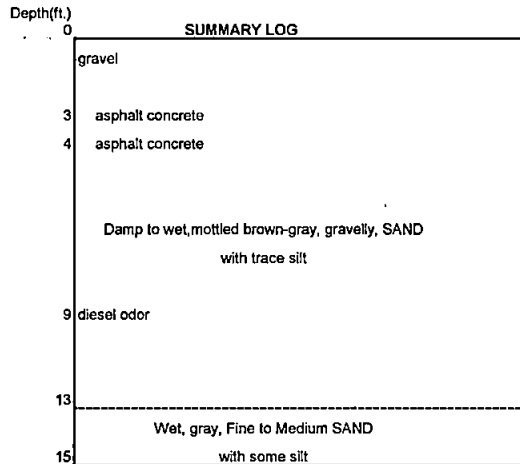
(Bottom of Boring)  
NOTE: The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.  
Completed boring backfilled with granular bentonite

DOF-P7

BORING - DESCRIPTION OF SAMPLES & DATA

Field Rep: DG Cooper			Location: N305775 E1302355				
Drilling Co.: Cascade			Elevation (Ft.):		Ground Surface: Gravel		
Driller: Casey Goble			Date Completed: 08/31/09				
Drill Type: Geoprobe 6600			Weather: Clear 65F				
Size/Type Casing: 2"			Hammer Type: Percussion		Sampler Type: 5' long x 2" dia. Macro Core w/ acrylic sleeve		
Spl.No.	sample saved	Drill Action	Testing	Spl Depth (Ft.) From - To	Spl length inches	Time	Sample Description
		Hard		0-5	48		0-5 Damp-moist, gry-bwn, gravelly, SAND, w/trace silt, no odor
P7-A	grab @ 4-5'		A1,A2,A3,A4			1405	
				5-10	40		5-10 As above
P7-B	grab @ 9-10'		A1,A2,A3,A4			1410	asphalt concrete cored @ 3' and 4' diesel odor @ 9-9.5'
				10-14	36		10-13 Wet, mot gry-bwn, gravelly, SAND, w/trace silt, no odor
P7-C	grab @ 14-15'		A1,A2,A3,A4			1415	13-15 Wet, gry, F-M SAND, w/some silt, no odor

Testing Notes: Analytical: A1 - NWT PH-DX  
A2 - NWT PH-G/BTEX  
A3 - PAHs  
A4 - Metals



(Bottom of Boring)  
NOTE: The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.  
Completed boring backfilled with granular bentonite

**TEST PIT DOF-TP19 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305755 E1302150
Excavating: Wyser Construction		Elevation:
Operator Bruce		Date Completed: 09/02/09
Excavator Type: Kobelco 135		Weather: clear 70F
Depth (Ft.) From - To	<b>DESCRIPTION</b>	
Surface	Disturbed crushed rock, near original site grade.	
0-8	Loose, wet, gray, silty, Fine SAND, with scattered organics. Increasing organic content @ 8', organic/topsoil odor	
8-10	Medium Dense, wet, mottled gray-black, silty, fine SAND, with some gravel, naphthalene odor, no NAPL, intermixed fill	
11-14	Medium Dense, wet, dark gray, silty, SAND, with some gravel, wood debris, tires	
14-17	Dense, wet, mottled brown, gravelly, SAND, with some silt, organic debris intermixed at top	
17-18	Dense, wet, mottled brown, gravelly, SAND; with minor silt (native)	
	groundwater seepage @ 14' sidewall caving below 16' Samples: DOF-TP19-7 grab @ 6-7' DOF-TP19-9 grab @ 8-9' DOF-TP19-11 grab @ 10-11' DOF-TP19-15 grab @ 14-15' DOF-TP19-18 grab @ 17-18'	

**TEST PIT DOF-TP20 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305750 E1302245
Excavating: Wyser Construction		Elevation:
Operator: Bruce		Date Completed: 09/02/09
Excavator Type: Kobelco 135		Weather: Clear 70F
Depth (Ft.) From - To	<b>DESCRIPTION</b>	
Surface	Disturbed	
0-4	Medium dense, moist, brown, gravelly, SAND, with some silt	
4-6	Loose, wet, mottled gray, silty, SAND, with some gravel	
6-8	Loose, wet, black, gravelly, SAND, with some silt, GWP-like, naphthalene odor, no NAPL. Sloping down to south, layer 7-9' bgs @ property line.	
8-11	Loose, wet, gray, gravelly SAND, with minor silt. Asphalt concrete, concrete curbing, wire @ 10-11'	
11-14	Loose, wet, mottled brown, organic, silty, SAND, with some gravel, many roots	
14-16	Loose, wet, brown, gravelly, silty, SAND (native)	
	slight seepage @ 16' caving from 6-9' Samples: DOF-TP20-6 grab @ 5-6' DOF-TP20-11 grab @ 10-11' DOF-TP20-15 grab @ 14-15'	

**TEST PIT DOF-TP21 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305840 E1302160	
Excavating: Wyser Construction		Elevation :	
Operator Bruce		Date Completed: 09/02/09	
Excavator Type: Kobelco 135		Weather: clear 70F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-4	Medium dense, wet, gray, silty, Fine SAND, with trace gravel		
4-5	Medium dense, moist, black, gravelly, SAND, with some silt, GWP-like, naphthalene odor, no NAPL. Sloping up to the north		
5-10	Medium Dense, wet, gray, gravelly, SAND, with trace silt, cedar log with creosote odor		
10-15	Medium dense, wet, gray, gravelly, SAND, with trace silt (native)		
	groundwater seepage @ 15'  Samples: DOF-TP21-4 grab @ 3-4' DOF-TP21-7 grab @ 6-7' DOF-TP21-11 grab @ 10-11' DOF-TP21-15 grab @ 14-15'		

**TEST PIT DOF-TP22 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305825 E1302250	
Excavating: Wyser Construction		Elevation :	
Operator: Bruce		Date Completed: 09/02/09	
Excavator Type: Kobelco 135		Weather: Clear 70F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-3	Loose, moist, gray, gravelly, silty, SAND		
3-6	Loose, moist, black, gravelly, SAND, with broken concrete pipe, wood, metal. GWP-like, naphthalene odor, no NAPL, sloping up to north		
6-12	Medium dense, moist, gray, gravelly, SAND, with trace silt, concrete rubble. Becoming very dense @ 8'. Organics/wood debris @ 12'		
12-14	Loose, wet, organic, silty, SAND, with dense roots		
14-15	Loose, wet, brown, gravelly, SAND, with minor silt (Native)		
	no seepage caving below 8' Samples: DOF-TP22-7 grab @ 6-7' DOF-TP22-11 grab @ 10-11' DOF-TP22-15 grab @ 14-15'		



**TEST PIT DOF-TP23 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305845 E1302110	
Excavating: Wyser Construction		Elevation :	
Operator Bruce		Date Completed: 09/02/09	
Excavator Type: Kobelco 135		Weather: clear 70F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-11	Loose, wet, gray, silty, Fine SAND, scattered metal, concrete debris		
11-12	Loose, wet, mottled brown-black, silty, SAND, with organics. GWP-like mixed with fill, slight naphthalene odor		
12-15	Loose, wet-saturated, mottled brown, silty, SAND, with some gravel, organics, woody debris, burned wood.		
	groundwater seepage @ 14'		
	Samples: DOF-TP23-8 grab @ 7-8' DOF-TP23-12 grab @ 11-12' DOF-TP23-15 grab @ 14-15'		

**TEST PIT DOF-TP24 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305840 E1302060	
Excavating: Wyser Construction		Elevation :	
Operator: Bruce		Date Completed: 09/02/09	
Excavator Type: Kobelco 135		Weather: Clear 70F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-9	Loose, wet, mottled gray-brown, silty, SAND, with large concrete <3', wood, brick, topsoil mixed		
9-14	Loose, wet, gray, silty, SAND, with some gravel. Grading siltier		
14-15	Loose, wet, mottled brown, silty, SAND, with some gravel, organics with wood debris.		
	no seepage rapid caving 3-4' into sidewall. Depth of penetration limited due to caving. Samples: DOF-TP24-10 grab @ 9-10' DOF-TP24-15 grab @ 14-15'		

**TEST PIT DOF-TP25 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N305950 E1302150	
Excavating: Wyser Construction		Elevation:	
Operator: Bruce		Date Completed: 09/02/09	
Excavator Type: Kobelco 135		Weather: clear 70F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-4	Medium dense, moist, mottled brown, gravelly, SAND, with some silt, asphalt concrete		
4-8	Medium dense, moist, black, gravelly, SAND, with some silt, GWP-like, naphthalene odor, no NAPL		
8-12	Medium dense, wet, mottled dark brown, silty, SAND, with some silt, scattered organics		
12-13	Dense, wet-saturated, gray-brown, gravelly, SAND (Native)		
	slight seepage @ 11' no caving Samples: DOF-TP25-4 grab @ 3-4' DOF-TP25-11 grab @ 10-11' DOF-TP21-13 grab @ 12-13'		

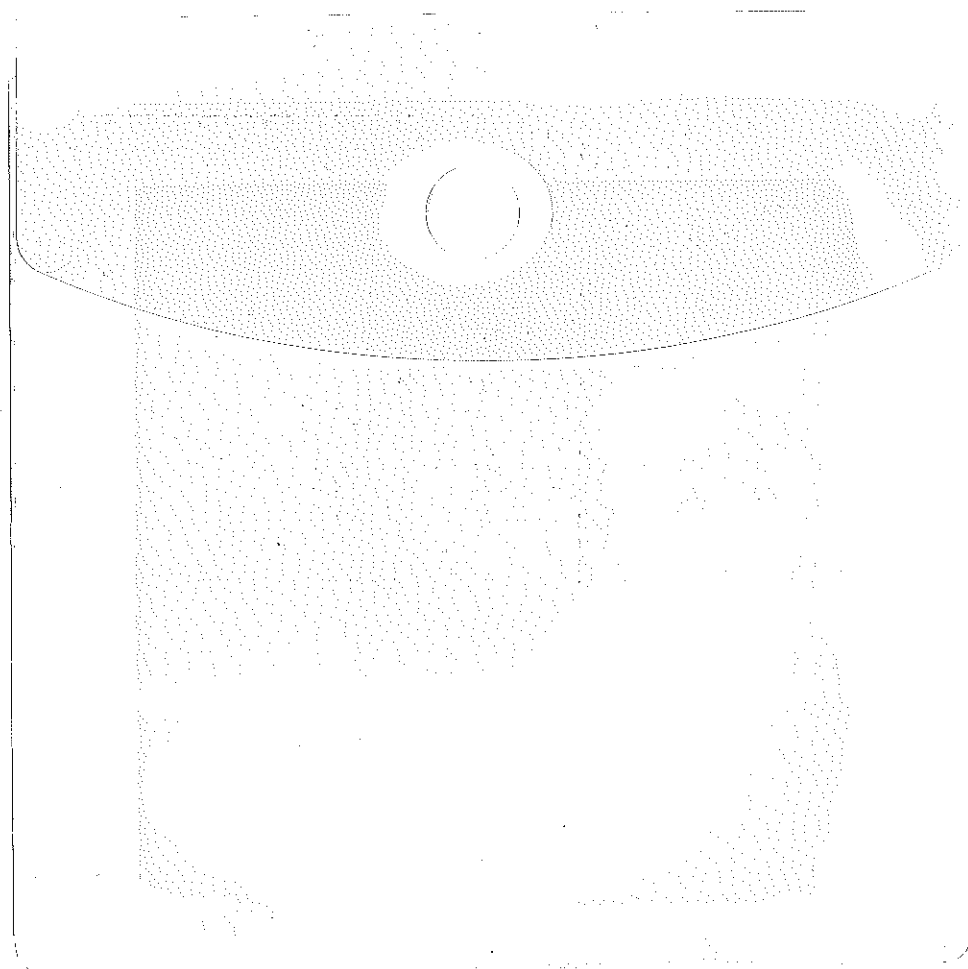
**TEST PIT DOF-TP26 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper		Location: N306020 E1302150	
Excavating: Wyser Construction		Elevation:	
Operator: Bruce		Date Completed: 09/02/09	
Excavator Type: Kobelco 135		Weather: Clear 70F	
Depth (Ft.) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-5	Medium dense, moist, gray, gravelly, silty, SAND, with scattered organics		
5-9	Medium dense, wet, mottled brown, silty, SAND, with some gravel, concrete slab debris		
9-11	Loose, wet, mottled brown, organic, silty, SAND, with roots		
11-13	Medium dense, wet-saturated, brown, gravelly, SAND (Native)		
	Seepage @ 12' no caving Samples: DOF-TP26-4 grab @ 3-4' DOF-TP26-9 grab @ 8-9' DOF-TP26-13 grab @ 12-13'		

**TEST PIT DOF-TP27 - DESCRIPTION OF SAMPLES AND TESTS**

Field Rep: DG Cooper Excavating: Wyser Construction Operator Bruce Excavator Type: Kobelco 135		Location: N305860 E1302350 Elevation: Date Completed: 09/02/09 Weather: clear 70F	
Depth (Ft) From - To	<b>DESCRIPTION</b>		
Surface	Disturbed		
0-6	Loose, moist, brown, gravelly, SAND, with trace silt		
	no seepage no caving Samples: DOF-TP27-1 grab @ 0-1' DOF-TP27-4 grab @ 3-4' DOF-TP27-6 grab @ 5-6'		

**LABORATORY DATA SHEETS  
AUGUST/SEPTEMBER 2009 SAMPLES  
SITE B, VERBEEK WRECKING YARD  
(ON CD)**





## Analytical Resources, Incorporated

Analytical Chemists and Consultants

September 16, 2009

Matt Dalton  
Dalton, Olmsted, & Fuglevand  
10827 NE 68th, Suite B  
Kirkland, WA 98033

**RE: Client Project: Verbeek – PSE-004-00**  
**ARI Job No.: PM90**

Dear Matt:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final analytical results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted ten soil samples on September 3, 2009. Select samples were archived upon receipt. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for VOCs, SVOCs, NWTPH-Gx, NWTPH-Dx, and Arsenic, as requested on the COC.

The continuing calibration of Retene fell outside the control limits low for the 9/9/09 analysis. All detected results for this compound on the date of analysis have been flagged with a "Q" qualifier. No further corrective action was required.

The surrogate percent recovery of Trifluorotoluene was outside the control limits high for sample **DOF-TP25-4**. All other surrogate percent recoveries were within control limits. No corrective action was required.

There were no matrix spike/matrix spike duplicate percent recoveries for Diesel for sample **DOF-TP26-9**. No corrective action is required for matrix QC.

An electronic copy of this report will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.



Cheronne Oreiro  
Project Manager

-For-

Susan Dunninghoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile PM90

Page 1 of 61

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **PM90**  
 Turn-around Requested: **Normal**  
 ARI Client Company: **DAVID DUNSTON & FUGLIUANO**  
 Phone: **9/3/09**  
 Client Contact: **MATT DUNSTON / DAVID COOPER**  
 Client Project Name: **VOORBEU**  
 Client Project #: **PSE-004-00**  
 Samplers: **AG COOPER**

Page: **3** of **3**  
 Date: **9/3/09**  
 No. of Coolers: **2**  
 Cooler Temps: **5.9, 5.8**

Ice Present? **Yes**  
 Analysis Requested: **MSBUIL**

Received by: (Signature) *[Signature]*  
 Printed Name: **A. Voigardsen**  
 Company: **ARI**  
 Date & Time: **9/3/09 11:20**

Relinquished by: (Signature) *[Signature]*  
 Printed Name: **A. Voigardsen**  
 Company: **ARI**  
 Date & Time: **9/3/09 11:20**

Received by: (Signature) *[Signature]*  
 Printed Name: **A. Voigardsen**  
 Company: **ARI**  
 Date & Time: **9/3/09 11:20**

Relinquished by: (Signature) *[Signature]*  
 Printed Name: **A. Voigardsen**  
 Company: **ARI**  
 Date & Time: **9/3/09 11:20**

Received by: (Signature) *[Signature]*  
 Printed Name: **A. Voigardsen**  
 Company: **ARI**  
 Date & Time: **9/3/09 11:20**

Relinquished by: (Signature) *[Signature]*  
 Printed Name: **A. Voigardsen**  
 Company: **ARI**  
 Date & Time: **9/3/09 11:20**

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					MSBUIL	MSBUIL	MSBUIL	MSBUIL	
DDF-TP25-4	9/2/09	1435	SOIL	3	X	X	X	X	
DDF-TP25-11		1445			X	X	X	X	
DDF-TP25-13		1500			X	X	X	X	
DDF-TP26-4		1545			X	X	X	X	
DDF-TP26-9		1530			X	X	X	X	
DDF-TP26-13		1540			X	X	X	X	
DDF-TP27-1		1600							ARCHIVE
DDF-TP27-4		1605			X				
DDF-TP27-6		1610			X				
DDF-TP2A-8		1620		3					ARCHIVE

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

PM90:00002



Analytical Resources,  
Incorporated  
Analytical Chemists and  
Consultants

# Cooler Receipt Form

ARI Client: DOF

Project Name: Verbeek

COC No(s): \_\_\_\_\_ (NA)

Delivered by: Fed-Ex UPS Courier (Hand) Delivered Other: \_\_\_\_\_

Assigned ARI Job No: PM90

Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 5.8 5.8

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 48740S

Cooler Accepted by: AV Date: 9/3/09 Time: 11:30

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Samples Logged by: JW Date: 9/3/09 Time: 12:00

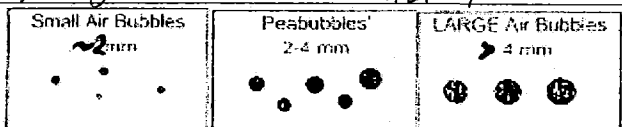
**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
<u>DOF-TP2A</u>	<u>DOF-TP2A-8</u>		

**Additional Notes, Discrepancies, & Resolutions:**

One jar did not have the -8 on it, it was in same bag as other DOF-TP2A-8 jars though

By: JW Date: 9/3/09



Small → "sm"  
Peabubbles → "pb"  
Large → "lg"  
Headspace → "hs"

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP25-4  
SAMPLE

Page 1 of 1

Lab Sample ID: PM90A

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20591

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized:

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.39 g-dry-wt

Date Analyzed: 09/04/09 11:37

Purge Volume: 5.0 mL

Moisture: 14.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	3.3	
179601-23-1	m,p-Xylene	1.1	7.6	
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	103%
d8-Toluene	97.9%
Bromofluorobenzene	91.8%
d4-1,2-Dichlorobenzene	96.8%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP25-11

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM90B


QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20592

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.35 g-dry-wt

Date Analyzed: 09/04/09 12:03

Purge Volume: 5.0 mL

Moisture: 19.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	99.0%
d8-Toluene	99.3%
Bromofluorobenzene	97.4%
d4-1,2-Dichlorobenzene	98.4%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP25-13

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM90C

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20593

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.61 g-dry-wt

Date Analyzed: 09/04/09 12:30

Purge Volume: 5.0 mL

Moisture: 14.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	99.9%
Bromofluorobenzene	99.4%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP26-4

Page 1 of 1

SAMPLE

Lab Sample ID: PM90D


QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20594

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.76 g-dry-wt

Date Analyzed: 09/04/09 12:57

Purge Volume: 5.0 mL

Moisture: 8.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	100%
d8-Toluene	99.7%
Bromofluorobenzene	96.4%
d4-1,2-Dichlorobenzene	98.6%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP26-9

Page 1 of 1

SAMPLE

Lab Sample ID: PM90E

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20595

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.72 g-dry-wt

Date Analyzed: 09/04/09 13:23

Purge Volume: 5.0 mL

Moisture: 11.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	99.1%
Bromofluorobenzene	95.4%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP26-13

Page 1 of 1

SAMPLE

Lab Sample ID: PM90F


QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20596

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.55 g-dry-wt

Date Analyzed: 09/04/09 13:50

Purge Volume: 5.0 mL

Moisture: 15.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	99.7%
Bromofluorobenzene	98.9%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DOF-TP27-4**

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM90G

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20597

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 5.41 g-dry-wt

Date Analyzed: 09/04/09 14:16

Purge Volume: 5.0 mL

Moisture: 6.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
179601-23-1	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	103%
d8-Toluene	99.6%
Bromofluorobenzene	98.0%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP27-6

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM90H

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20598

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.81 g-dry-wt

Date Analyzed: 09/04/09 14:43

Purge Volume: 5.0 mL

Moisture: 7.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	101%
d8-Toluene	99.9%
Bromofluorobenzene	97.2%
d4-1,2-Dichlorobenzene	99.0%

**VOA SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-090409	Method Blank	Low	101%	99.9%	98.8%	99.6%	0
LCS-090409	Lab Control	Low	108%	100%	102%	99.9%	0
LCSD-090409	Lab Control Dup	Low	109%	100%	103%	101%	0
PM90A	DOF-TP25-4	Low	103%	97.9%	91.8%	96.8%	0
PM90AMS	DOF-TP25-4	Low	110%	98.0%	94.8%	94.8%	0
PM90AMSD	DOF-TP25-4	Low	109%	98.5%	94.2%	96.7%	0
PM90B	DOF-TP25-11	Low	99.0%	99.3%	97.4%	98.4%	0
PM90C	DOF-TP25-13	Low	104%	99.9%	99.4%	102%	0
PM90D	DOF-TP26-4	Low	100%	99.7%	96.4%	98.6%	0
PM90E	DOF-TP26-9	Low	104%	99.1%	95.4%	100%	0
PM90F	DOF-TP26-13	Low	104%	99.7%	98.9%	101%	0
PM90G	DOF-TP27-4	Low	103%	99.6%	98.0%	101%	0
PM90H	DOF-TP27-6	Low	101%	99.9%	97.2%	99.0%	0

**LCS/MB LIMITS**

**QC LIMITS**

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	75-120	76-120	72-134	69-120
(TOL) = d8-Toluene	80-122	80-120	78-124	80-120
(BFB) = Bromofluorobenzene	79-120	80-120	66-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	79-120	80-120

Log Number Range: 09-20591 to 09-20598



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP25-4

Page 1 of 1

**MATRIX SPIKE**

Lab Sample ID: PM90A


QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20591

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst MS: NT9/AAR

Sample Amount MS: 4.55 g-dry-wt

MSD: NT9/AAR

MSD: 4.48 g-dry-wt

Date Analyzed MS: 09/04/09 20:00

Purge Volume MS: 5.0 mL

MSD: 09/04/09 20:27

MSD: 5.0 mL

Moisture: 14.5%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 1.1 U	49.2	54.9	89.6%	50.7	55.8	90.9%	3.0%
Toluene	< 1.1 U	44.6	54.9	81.2%	45.8	55.8	82.1%	2.7%
Ethylbenzene	3.3	48.6	54.9	82.5%	50.0	55.8	83.7%	2.8%
m,p-Xylene	7.6	95.6	110	80.0%	97.5	112	80.3%	2.0%
o-Xylene	< 1.1 U	43.8	54.9	79.8%	45.1	55.8	80.8%	2.9%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP25-4

Page 1 of 1

**MATRIX SPIKE**

Lab Sample ID: PM90A

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20591

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.55 g-dry-wt

Date Analyzed: 09/04/09 20:00

Purge Volume: 5.0 mL

Moisture: 14.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	---	
108-88-3	Toluene	1.1	---	
100-41-4	Ethylbenzene	1.1	---	
179601-23-1	m,p-Xylene	1.1	---	
95-47-6	o-Xylene	1.1	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	98.0%
Bromofluorobenzene	94.8%
d4-1,2-Dichlorobenzene	94.8%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP25-4

Page 1 of 1

MATRIX SPIKE DUP

Lab Sample ID: PM90A

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20591

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.48 g-dry-wt

Date Analyzed: 09/04/09 20:27

Purge Volume: 5.0 mL

Moisture: 14.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	---	
108-88-3	Toluene	1.1	---	
100-41-4	Ethylbenzene	1.1	---	
179601-23-1	m,p-Xylene	1.1	---	
95-47-6	o-Xylene	1.1	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	109%
d8-Toluene	98.5%
Bromofluorobenzene	94.2%
d4-1,2-Dichlorobenzene	96.7%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-090409

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-090409

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20591

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 09/14/09

Date Received: NA

Instrument/Analyst LCS: NT9/AAR

Sample Amount LCS: 5.00 g-dry-wt

LCSD: NT9/AAR

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 09/04/09 10:12

Purge Volume LCS: 5.0 mL

LCSD: 09/04/09 10:38

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	45.7	50.0	91.4%	47.8	50.0	95.6%	4.5%
Toluene	46.1	50.0	92.2%	47.9	50.0	95.8%	3.8%
Ethylbenzene	48.0	50.0	96.0%	50.2	50.0	100%	4.5%
m,p-Xylene	97.4	100	97.4%	99.6	100	99.6%	2.2%
o-Xylene	48.8	50.0	97.6%	50.4	50.0	101%	3.2%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	108%	109%
d8-Toluene	100%	100%
Bromofluorobenzene	102%	103%
d4-1,2-Dichlorobenzene	99.9%	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-090409

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-090409


QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20591

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 09/14/09

Date Received: NA

Instrument/Analyst: NT9/AAR

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 09/04/09 11:05

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	101%
d8-Toluene	99.9%
Bromofluorobenzene	98.8%
d4-1,2-Dichlorobenzene	99.6%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP25-4  
SAMPLE

Lab Sample ID: PM90A  
LIMS ID: 09-20591  
Matrix: Soil  
Data Release Authorized: *YWW*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 09:19  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.75 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 14.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	< 64 U
95-48-7	2-Methylphenol	64	< 64 U
106-44-5	4-Methylphenol	64	< 64 U
105-67-9	2,4-Dimethylphenol	64	< 64 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>64</b>	<b>810</b>
91-57-6	2-Methylnaphthalene	64	< 64 U
131-11-3	Dimethylphthalate	64	< 64 U
208-96-8	Acenaphthylene	64	< 64 U
83-32-9	Acenaphthene	64	< 64 U
132-64-9	Dibenzofuran	64	< 64 U
84-66-2	Diethylphthalate	64	< 64 U
86-73-7	Fluorene	64	< 64 U
85-01-8	Phenanthrene	64	< 64 U
86-74-8	Carbazole	64	< 64 U
120-12-7	Anthracene	64	< 64 U
84-74-2	Di-n-Butylphthalate	64	< 64 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>64</b>	<b>71</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>64</b>	<b>76</b>
85-68-7	Butylbenzylphthalate	64	< 64 U
56-55-3	Benzo (a) anthracene	64	< 64 U
117-81-7	bis (2-Ethylhexyl)phthalate	64	< 64 U
218-01-9	Chrysene	64	< 64 U
117-84-0	Di-n-Octyl phthalate	64	< 64 U
205-99-2	Benzo (b) fluoranthene	64	< 64 U
207-08-9	Benzo (k) fluoranthene	64	< 64 U
50-32-8	Benzo (a) pyrene	64	< 64 U
193-39-5	Indeno (1,2,3-cd) pyrene	64	< 64 U
53-70-3	Dibenz (a,h) anthracene	64	< 64 U
191-24-2	Benzo (g,h,i) perylene	64	< 64 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	64	< 64 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	54.4%	2-Fluorobiphenyl	65.2%
d14-p-Terphenyl	50.8%	d4-1,2-Dichlorobenzene	52.8%
d5-Phenol	49.6%	2-Fluorophenol	46.1%
2,4,6-Tribromophenol	61.1%	d4-2-Chlorophenol	46.1%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP25-11  
SAMPLE

Lab Sample ID: PM90B  
LIMS ID: 09-20592  
Matrix: Soil  
Data Release Authorized: *MMW*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 19:51  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.40 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
91-57-6	2-Methylnaphthalene	60	< 60 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
83-32-9	Acenaphthene	60	< 60 U
132-64-9	Dibenzofuran	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
86-73-7	Fluorene	60	< 60 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
205-99-2	Benzo(b)fluoranthene	60	< 60 U
207-08-9	Benzo(k)fluoranthene	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	60	< 60 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	60.8%	2-Fluorobiphenyl	71.2%
d14-p-Terphenyl	77.6%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	59.5%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	62.7%	d4-2-Chlorophenol	54.4%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP25-13  
SAMPLE

Lab Sample ID: PM90C  
LIMS ID: 09-20593  
Matrix: Soil  
Data Release Authorized: *WVW*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 20:26  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.46 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 14.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	82.8%	d4-1,2-Dichlorobenzene	67.2%
d5-Phenol	63.5%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	67.7%	d4-2-Chlorophenol	57.9%



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP26-4  
SAMPLE

Lab Sample ID: PM90D  
LIMS ID: 09-20594  
Matrix: Soil  
Data Release Authorized: YWW  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 21:01  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.47 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 8.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	61.6%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	78.4%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	60.3%	2-Fluorophenol	53.9%
2,4,6-Tribromophenol	60.8%	d4-2-Chlorophenol	54.9%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP26-9  
SAMPLE

Lab Sample ID: PM90E  
LIMS ID: 09-20595  
Matrix: Soil  
Data Release Authorized: *WVW*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 10:16  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.03 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>62</b>	<b>64</b>
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>62</b>	<b>160</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>62</b>	<b>220</b>
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
<b>483-65-8</b>	<b>Retene</b>	<b>120</b>	<b>140 Q</b>
90-12-0	1-Methylnaphthalene	62	< 62 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	59.2%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	56.5%	2-Fluorophenol	53.3%
2,4,6-Tribromophenol	71.5%	d4-2-Chlorophenol	52.5%

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP26-13  
SAMPLE

Lab Sample ID: PM90F  
LIMS ID: 09-20596  
Matrix: Soil  
Data Release Authorized: *mm*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 21:37  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.69 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 15.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
91-57-6	2-Methylnaphthalene	65	< 65 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
83-32-9	Acenaphthene	65	< 65 U
132-64-9	Dibenzofuran	65	< 65 U
84-66-2	Diethylphthalate	65	< 65 U
86-73-7	Fluorene	65	< 65 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
205-99-2	Benzo(b)fluoranthene	65	< 65 U
207-08-9	Benzo(k)fluoranthene	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	65	< 65 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	65.6%	2-Fluorobiphenyl	75.6%
d14-p-Terphenyl	84.4%	d4-1,2-Dichlorobenzene	70.0%
d5-Phenol	65.3%	2-Fluorophenol	58.1%
2,4,6-Tribromophenol	68.3%	d4-2-Chlorophenol	59.7%

**SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
DOF-TP25-4	54.4%	65.2%	50.8%	52.8%	49.6%	46.1%	61.1%	46.1%		0
DOF-TP25-11	60.8%	71.2%	77.6%	62.8%	59.5%	53.1%	62.7%	54.4%		0
DOF-TP25-13	62.8%	72.4%	82.8%	67.2%	63.5%	55.7%	67.7%	57.9%		0
DOF-TP26-4	61.6%	73.2%	78.4%	63.6%	60.3%	53.9%	60.8%	54.9%		0
DOF-TP26-9	62.4%	73.2%	59.2%	60.8%	56.5%	53.3%	71.5%	52.5%		0
MB-090709	67.6%	79.6%	89.6%	71.6%	66.9%	59.7%	74.1%	61.1%		0
LCS-090709	69.2%	77.2%	77.2%	70.8%	67.7%	58.4%	67.7%	58.7%		0
DOF-TP26-13	65.6%	75.6%	84.4%	70.0%	65.3%	58.1%	68.3%	59.7%		0
DOF-TP26-13 MS	71.2%	79.6%	76.4%	74.4%	70.4%	60.0%	66.9%	60.3%		0
DOF-TP26-13 MSD	69.6%	78.0%	72.4%	72.0%	67.7%	58.4%	64.3%	59.5%		0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-102)	(32-106)
(FBP) = 2-Fluorobiphenyl	(51-105)	(39-107)
(TPH) = d14-p-Terphenyl	(55-124)	(31-130)
(DCB) = d4-1,2-Dichlorobenzene	(48-104)	(38-102)
(PHL) = d5-Phenol	(44-110)	(27-112)
(2FP) = 2-Fluorophenol	(38-112)	(22-108)
(TBP) = 2,4,6-Tribromophenol	(54-120)	(31-131)
(2CP) = d4-2-Chlorophenol	(50-103)	(36-104)

Prep Method: SW3546  
Log Number Range: 09-20591 to 09-20596

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP26-13  
MS/MSD

Lab Sample ID: PM90F  
LIMS ID: 09-20596  
Matrix: Soil  
Data Release Authorized: *mw*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted MS/MSD: 09/07/09  
Date Analyzed MS: 09/08/09 22:12  
MSD: 09/08/09 22:47  
Instrument/Analyst MS: NT6/JZ  
MSD: NT6/JZ  
GPC Cleanup: NO

Sample Amount MS: 8.31 g-dry-wt  
MSD: 7.81 g-dry-wt  
Final Extract Volume MS: 0.5 mL  
MSD: 0.5 mL  
Dilution Factor MS: 1.00  
MSD: 1.00  
Percent Moisture: 15.1 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 65.0 U	921	1500	61.4%	960	1600	60.0%	4.1%
2-Methylphenol	< 65.0 U	910	1500	60.7%	958	1600	59.9%	5.1%
4-Methylphenol	< 65.0 U	1930	3010	64.1%	2030	3200	63.4%	5.1%
2,4-Dimethylphenol	< 65.0 U	836	1500	55.7%	887	1600	55.4%	5.9%
Naphthalene	< 65.0 U	1030	1500	68.7%	1090	1600	68.1%	5.7%
2-Methylnaphthalene	< 65.0 U	1080	1500	72.0%	1130	1600	70.6%	4.5%
Dimethylphthalate	< 65.0 U	1030	1500	68.7%	1090	1600	68.1%	5.7%
Acenaphthylene	< 65.0 U	1090	1500	72.7%	1180	1600	73.8%	7.9%
Acenaphthene	< 65.0 U	1120	1500	74.7%	1190	1600	74.4%	6.1%
Dibenzofuran	< 65.0 U	1050	1500	70.0%	1130	1600	70.6%	7.3%
Diethylphthalate	< 65.0 U	1040	1500	69.3%	1100	1600	68.8%	5.6%
Fluorene	< 65.0 U	1030	1500	68.7%	1090	1600	68.1%	5.7%
Phenanthrene	< 65.0 U	1090	1500	72.7%	1150	1600	71.9%	5.4%
Carbazole	< 65.0 U	1060	1500	70.7%	1150	1600	71.9%	8.1%
Anthracene	< 65.0 U	1060	1500	70.7%	1120	1600	70.0%	5.5%
Di-n-Butylphthalate	< 65.0 U	1040	1500	69.3%	1140	1600	71.2%	9.2%
Fluoranthene	< 65.0 U	1040	1500	69.3%	1150	1600	71.9%	10.0%
Pyrene	< 65.0 U	1060	1500	70.7%	1180	1600	73.8%	10.7%
Butylbenzylphthalate	< 65.0 U	961	1500	64.1%	1030	1600	64.4%	6.9%
Benzo(a)anthracene	< 65.0 U	1010	1500	67.3%	1090	1600	68.1%	7.6%
bis(2-Ethylhexyl)phthalate	< 65.0 U	1000	1500	66.7%	1050	1600	65.6%	4.9%
Chrysene	< 65.0 U	1100	1500	73.3%	1170	1600	73.1%	6.2%
Di-n-Octyl phthalate	< 65.0 U	1030	1500	68.7%	1080	1600	67.5%	4.7%
Benzo(b)fluoranthene	< 65.0 U	1040	1500	69.3%	1010	1600	63.1%	2.9%
Benzo(k)fluoranthene	< 65.0 U	972	1500	64.8%	1140	1600	71.2%	15.9%
Benzo(a)pyrene	< 65.0 U	1010	1500	67.3%	1070	1600	66.9%	5.8%
Indeno(1,2,3-cd)pyrene	< 65.0 U	995	1500	66.3%	1040	1600	65.0%	4.4%
Dibenz(a,h)anthracene	< 65.0 U	1150	1500	76.7%	1220	1600	76.2%	5.9%
Benzo(g,h,i)perylene	< 65.0 U	1190	1500	79.3%	1270	1600	79.4%	6.5%
Retene	< 130 U	1010	1500	67.3%	1060	1600	66.2%	4.8%
1-Methylnaphthalene	< 65.0 U	1030	1500	68.7%	1090	1600	68.1%	5.7%

Results reported in µg/kg  
RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP26-13  
MATRIX SPIKE

Lab Sample ID: PM90F  
LIMS ID: 09-20596  
Matrix: Soil  
Data Release Authorized: *MMW*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 22:12  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.31 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 15.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	---
95-48-7	2-Methylphenol	60	---
106-44-5	4-Methylphenol	60	---
105-67-9	2,4-Dimethylphenol	60	---
91-20-3	Naphthalene	60	---
91-57-6	2-Methylnaphthalene	60	---
131-11-3	Dimethylphthalate	60	---
208-96-8	Acenaphthylene	60	---
83-32-9	Acenaphthene	60	---
132-64-9	Dibenzofuran	60	---
84-66-2	Diethylphthalate	60	---
86-73-7	Fluorene	60	---
85-01-8	Phenanthrene	60	---
86-74-8	Carbazole	60	---
120-12-7	Anthracene	60	---
84-74-2	Di-n-Butylphthalate	60	---
206-44-0	Fluoranthene	60	---
129-00-0	Pyrene	60	---
85-68-7	Butylbenzylphthalate	60	---
56-55-3	Benzo(a)anthracene	60	---
117-81-7	bis(2-Ethylhexyl)phthalate	60	---
218-01-9	Chrysene	60	---
117-84-0	Di-n-Octyl phthalate	60	---
205-99-2	Benzo(b)fluoranthene	60	---
207-08-9	Benzo(k)fluoranthene	60	---
50-32-8	Benzo(a)pyrene	60	---
193-39-5	Indeno(1,2,3-cd)pyrene	60	---
53-70-3	Dibenz(a,h)anthracene	60	---
191-24-2	Benzo(g,h,i)perylene	60	---
483-65-8	Retene	120	---
90-12-0	1-Methylnaphthalene	60	---

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	71.2%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	76.4%	d4-1,2-Dichlorobenzene	74.4%
d5-Phenol	70.4%	2-Fluorophenol	60.0%
2,4,6-Tribromophenol	66.9%	d4-2-Chlorophenol	60.3%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP26-13  
MATRIX SPIKE DUPLICATE

Lab Sample ID: PM90F  
LIMS ID: 09-20596  
Matrix: Soil  
Data Release Authorized: *MMW*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 22:47  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.81 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 15.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	---
95-48-7	2-Methylphenol	64	---
106-44-5	4-Methylphenol	64	---
105-67-9	2,4-Dimethylphenol	64	---
91-20-3	Naphthalene	64	---
91-57-6	2-Methylnaphthalene	64	---
131-11-3	Dimethylphthalate	64	---
208-96-8	Acenaphthylene	64	---
83-32-9	Acenaphthene	64	---
132-64-9	Dibenzofuran	64	---
84-66-2	Diethylphthalate	64	---
86-73-7	Fluorene	64	---
85-01-8	Phenanthrene	64	---
86-74-8	Carbazole	64	---
120-12-7	Anthracene	64	---
84-74-2	Di-n-Butylphthalate	64	---
206-44-0	Fluoranthene	64	---
129-00-0	Pyrene	64	---
85-68-7	Butylbenzylphthalate	64	---
56-55-3	Benzo(a)anthracene	64	---
117-81-7	bis(2-Ethylhexyl)phthalate	64	---
218-01-9	Chrysene	64	---
117-84-0	Di-n-Octyl phthalate	64	---
205-99-2	Benzo(b)fluoranthene	64	---
207-08-9	Benzo(k)fluoranthene	64	---
50-32-8	Benzo(a)pyrene	64	---
193-39-5	Indeno(1,2,3-cd)pyrene	64	---
53-70-3	Dibenz(a,h)anthracene	64	---
191-24-2	Benzo(g,h,i)perylene	64	---
483-65-8	Retene	130	---
90-12-0	1-Methylnaphthalene	64	---

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	78.0%
d14-p-Terphenyl	72.4%	d4-1,2-Dichlorobenzene	72.0%
d5-Phenol	67.7%	2-Fluorophenol	58.4%
2,4,6-Tribromophenol	64.3%	d4-2-Chlorophenol	59.5%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: LCS-090709  
LAB CONTROL

Lab Sample ID: LCS-090709  
LIMS ID: 09-20596  
Matrix: Soil  
Data Release Authorized: *mm*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 19:16  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: NO

Sample Amount: 7.50 g  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	975	1670	58.4%
2-Methylphenol	994	1670	59.5%
4-Methylphenol	2100	3330	63.1%
2,4-Dimethylphenol	981	1670	58.7%
Naphthalene	1110	1670	66.5%
2-Methylnaphthalene	1140	1670	68.3%
Dimethylphthalate	1110	1670	66.5%
Acenaphthylene	1160	1670	69.5%
Acenaphthene	1200	1670	71.9%
Dibenzofuran	1130	1670	67.7%
Diethylphthalate	1130	1670	67.7%
Fluorene	1100	1670	65.9%
Phenanthrene	1190	1670	71.3%
Carbazole	1180	1670	70.7%
Anthracene	1160	1670	69.5%
Di-n-Butylphthalate	1160	1670	69.5%
Fluoranthene	1140	1670	68.3%
Pyrene	1160	1670	69.5%
Butylbenzylphthalate	1060	1670	63.5%
Benzo(a)anthracene	1120	1670	67.1%
bis(2-Ethylhexyl)phthalate	1110	1670	66.5%
Chrysene	1230	1670	73.7%
Di-n-Octyl phthalate	1120	1670	67.1%
Benzo(b)fluoranthene	1120	1670	67.1%
Benzo(k)fluoranthene	1140	1670	68.3%
Benzo(a)pyrene	1120	1670	67.1%
Indeno(1,2,3-cd)pyrene	1060	1670	63.5%
Dibenz(a,h)anthracene	1290	1670	77.2%
Benzo(g,h,i)perylene	1340	1670	80.2%
Retene	1050	1670	62.9%
1-Methylnaphthalene	1090	1670	65.3%

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	69.2%
2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	77.2%
d4-1,2-Dichlorobenzene	70.8%
d5-Phenol	67.7%
2-Fluorophenol	58.4%
2,4,6-Tribromophenol	67.7%
d4-2-Chlorophenol	58.7%

Results reported in µg/kg



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: MB-090709  
METHOD BLANK

Lab Sample ID: MB-090709  
LIMS ID: 09-20596  
Matrix: Soil  
Data Release Authorized: *MMW*  
Reported: 09/11/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: NA  
Date Received: NA

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 18:41  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.50 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	67	< 67 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	67.6%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	89.6%	d4-1,2-Dichlorobenzene	71.6%
d5-Phenol	66.9%	2-Fluorophenol	59.7%
2,4,6-Tribromophenol	74.1%	d4-2-Chlorophenol	61.1%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Matrix: Soil


QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

Event: PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Data Release Authorized:   
Reported: 09/14/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-091109 09-20591	Method Blank	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.0 U --- 90.1% 91.2%
PM90A 09-20591	DOF-TP25-4	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.5 U --- 125% 130%
PM90B 09-20592	DOF-TP25-11	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 8.5 U --- 116% 116%
PM90C 09-20593	DOF-TP25-13	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.4 U --- 118% 118%
PM90D 09-20594	DOF-TP26-4	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.2 U --- 105% 106%
PM90E 09-20595	DOF-TP26-9	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.8 U --- 102% 104%
PM90F 09-20596	DOF-TP26-13	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.4 U --- 103% 105%
PM90G 09-20597	DOF-TP27-4	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.8 U --- 103% 108%
PM90H 09-20598	DOF-TP27-6	09/11/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.8 U --- 97.4% 103%

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**TPHG SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: PM90  
Matrix: Soil

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
Event: PSE-004-00

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT</u>	<u>OUT</u>
MB-091109	NA	90.1%	91.2%	0	
LCS-091109	NA	98.5%	97.4%	0	
LCSD-091109	NA	91.6%	91.8%	0	
DOF-TP25-4	NA	125%*	130%	1	
DOF-TP25-11	NA	116%	116%	0	
DOF-TP25-13	NA	118%	118%	0	
DOF-TP26-4	NA	105%	106%	0	
DOF-TP26-9	NA	102%	104%	0	
DOF-TP26-13	NA	103%	105%	0	
DOF-TP27-4	NA	103%	108%	0	
DOF-TP27-6	NA	97.4%	103%	0	
DOF-TP27-6 MS	NA	106%	110%	0	
DOF-TP27-6 MSD	NA	101%	105%	0	


	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(66-123)
(BBZ) = Bromobenzene	(80-120)	(62-130)

Log Number Range: 09-20591 to 09-20598

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG  
Page 1 of 1

Sample ID: DOF-TP27-6  
MATRIX SPIKE

Lab Sample ID: PM90H  
LIMS ID: 09-20598  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
Event: PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Analyzed MS: 09/11/09 20:17  
MSD: 09/11/09 20:41  
Instrument/Analyst MS: PID3/MH  
MSD: PID3/MH

Purge Volume: 5.0 mL  
Sample Amount MS: 84.2 mg-dry-wt  
MSD: 84.8 mg-dry-wt

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Gasoline Range Hydrocarbons < 5.80 U		58.4	51.4	114%	53.5	51.1	105%	8.8%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	MS	MSD
Trifluorotoluene	106%	101%
Bromobenzene	110%	105%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: LCS-091109

LAB CONTROL SAMPLE

Lab Sample ID: LCS-091109

LIMS ID: 09-20591

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

Event: PSE-004-00

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 09/11/09 08:46

LCSD: 09/11/09 09:10

Instrument/Analyst LCS: PID3/MH

LCSD: PID3/MH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	55.3	50.0	111%	50.6	50.0	101%	8.9%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	98.5%	91.6%
Bromobenzene	97.4%	91.8%

**ORGANICS ANALYSIS DATA SHEET  
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID  
Page 1 of 1  
Matrix: Soil

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Received: 09/03/09

Data Release Authorized: *AB*  
Reported: 09/10/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
PM90A 09-20591	DOF-TP25-4 HC ID: DRO/MOTOR OIL	09/04/09	09/05/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.8 12	40 330 66.1%
PM90B 09-20592	DOF-TP25-11 HC ID: ---	09/04/09	09/05/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.0 12	< 6.0 U < 12 U 90.4%
PM90C 09-20593	DOF-TP25-13 HC ID: ---	09/04/09	09/05/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.6 11	< 5.6 U < 11 U 91.9%
PM90D 09-20594	DOF-TP26-4 HC ID: ---	09/04/09	09/05/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.3 10	< 5.3 U < 10 U 79.3%
MB-090409 09-20595	Method Blank HC ID: ---	09/04/09	09/05/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 97.2%
PM90E 09-20595	DOF-TP26-9 HC ID: DRO/MOTOR OIL	09/04/09	09/07/09 FID3A	1.00 10	Diesel Motor Oil o-Terphenyl	56 110	200 1,200 88.2%
PM90F 09-20596	DOF-TP26-13 HC ID: ---	09/04/09	09/05/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.5 11	< 5.5 U < 11 U 79.3%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.  
DL-Dilution of extract prior to analysis.  
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.  
Motor Oil quantitation on total peaks in the range from C24 to C38.  
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

MA 9/9/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090905.b/0905a007.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/09/2009  
Macro: FID:3A090109

ARI ID: PM90MBW1  
Client ID:  
Injection: 05-SEP-2009 13:25  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1345010	14
C8	1.067	-0.007	16768	19600	DIESEL (C12-C24)	503264	23
C10	3.001	-0.002	5425	756	M.OIL (C24-C38)	167215	14
C12	3.769	0.000	8352	1168	AK-102 (C10-C25)	865236	32
C14	4.332	0.001	6546	1176	AK-103 (C25-C36)	120379	13
C16	4.814	-0.002	4029	643	OR.DIES (C10-C28)	871779	41
C18	5.249	0.001	1914	266	OR.MOIL (C28-C40)	219531	19
C20	5.643	0.001	1522	479	JET-A (C10-C18)	819645	52
C22	5.996	0.001	539	52			
C24	6.301	0.000	178	31			
C25	6.443	0.001	99	9			
C26	6.574	0.000	42	7			
C28	6.823	0.000	427	105			
C32	7.270	0.002	5701	14107			
C34	7.472	0.002	3253	909			
Filter Peak	9.078	0.000	6307	881			
C36	7.671	0.006	4560	7961	CREOSOT (C8-C22)	1379245	216
C38	7.851	0.000	4386	437			
C40	8.048	-0.001	5758	1034	BUNKERC (C10-C38)	1032249	107

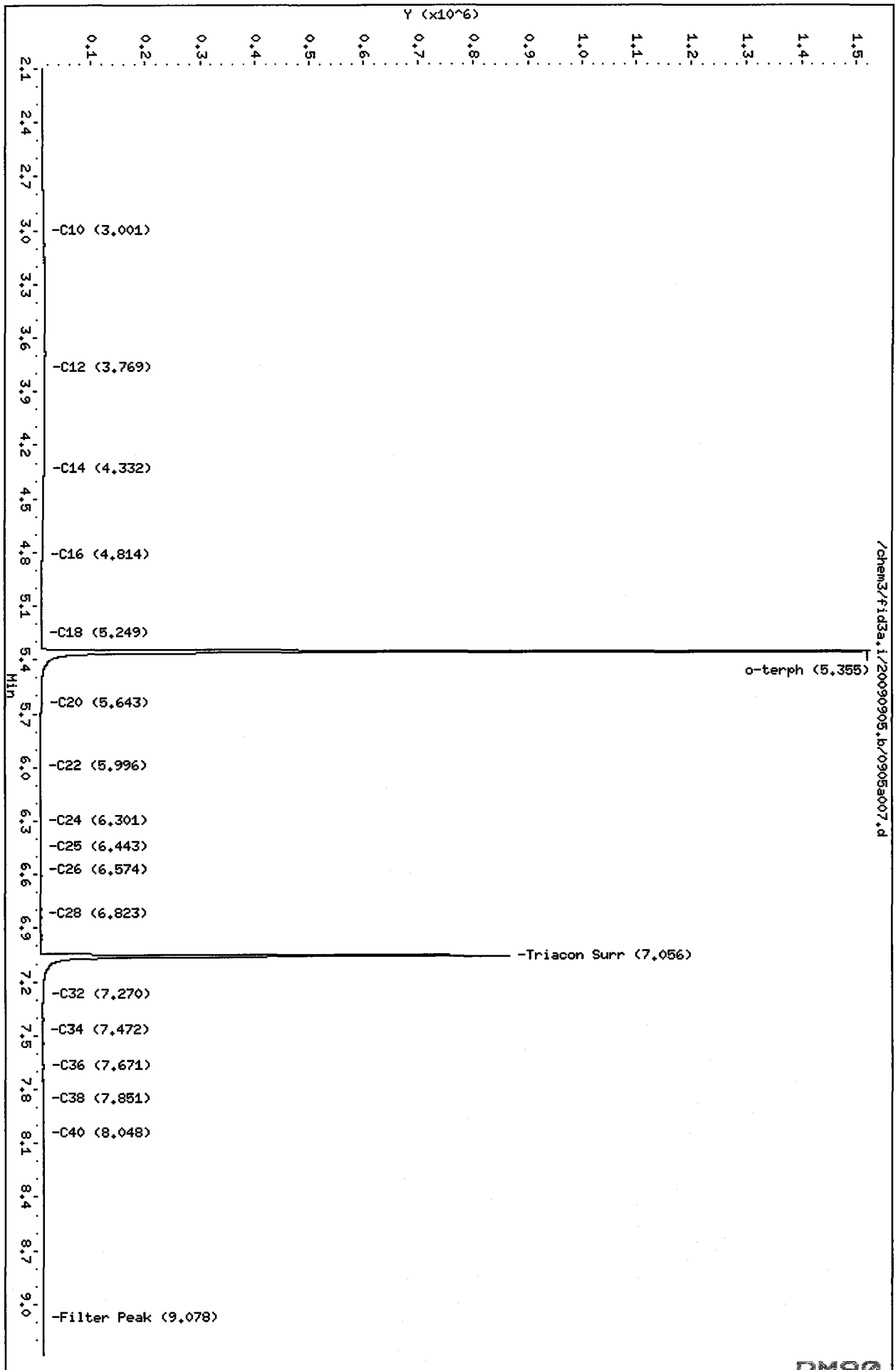
Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1149948	43.7	97.2
Triacontane	762466	44.3	98.5

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a007.d  
Date: 05-SEP-2009 13:25  
Client ID:  
Sample Info: PH90HBM4  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25





ms 9/9/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090905.b/0905a011.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/09/2009  
Macro: FID:3A090109

ARI ID: PM90A  
Client ID:  
Injection: 05-SEP-2009 14:38  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1198629	13
C8	1.056	-0.018	13110	20755	DIESEL (C12-C24)	7403468	345
C10	3.006	0.003	6504	9137	M.OIL (C24-C38)	34120675	2861
C12	3.768	0.000	14856	2962	AK-102 (C10-C25)	8400746	315
C14	4.332	0.000	25818	33175	AK-103 (C25-C36)	30665490	3433
C16	4.812	-0.003	31189	32347	OR.DIES (C10-C28)	17846400	846
C18	5.246	-0.002	34697	61338	OR.MOIL (C28-C40)	26368628	2339
C20	5.642	0.000	52689	44620	JET-A (C10-C18)	2705160	171
C22	5.993	-0.002	92070	71673			
C24	6.298	-0.004	258614	305029			
C25	6.442	0.000	238019	56931			
C26	6.577	0.003	282684	117288			
C28	6.828	0.004	417824	372604			
C32	7.265	-0.003	416705	149225			
C34	7.468	-0.002	388585	100363			
Filter Peak	9.081	0.003	32405	7758			
C36	7.665	0.001	317394	50694	CREOSOT (C8-C22)	5455050	853
C38	7.851	0.000	265490	206311			
C40	8.045	-0.003	167720	82994	BUNKERC (C10-C38)	42052141	4356

Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

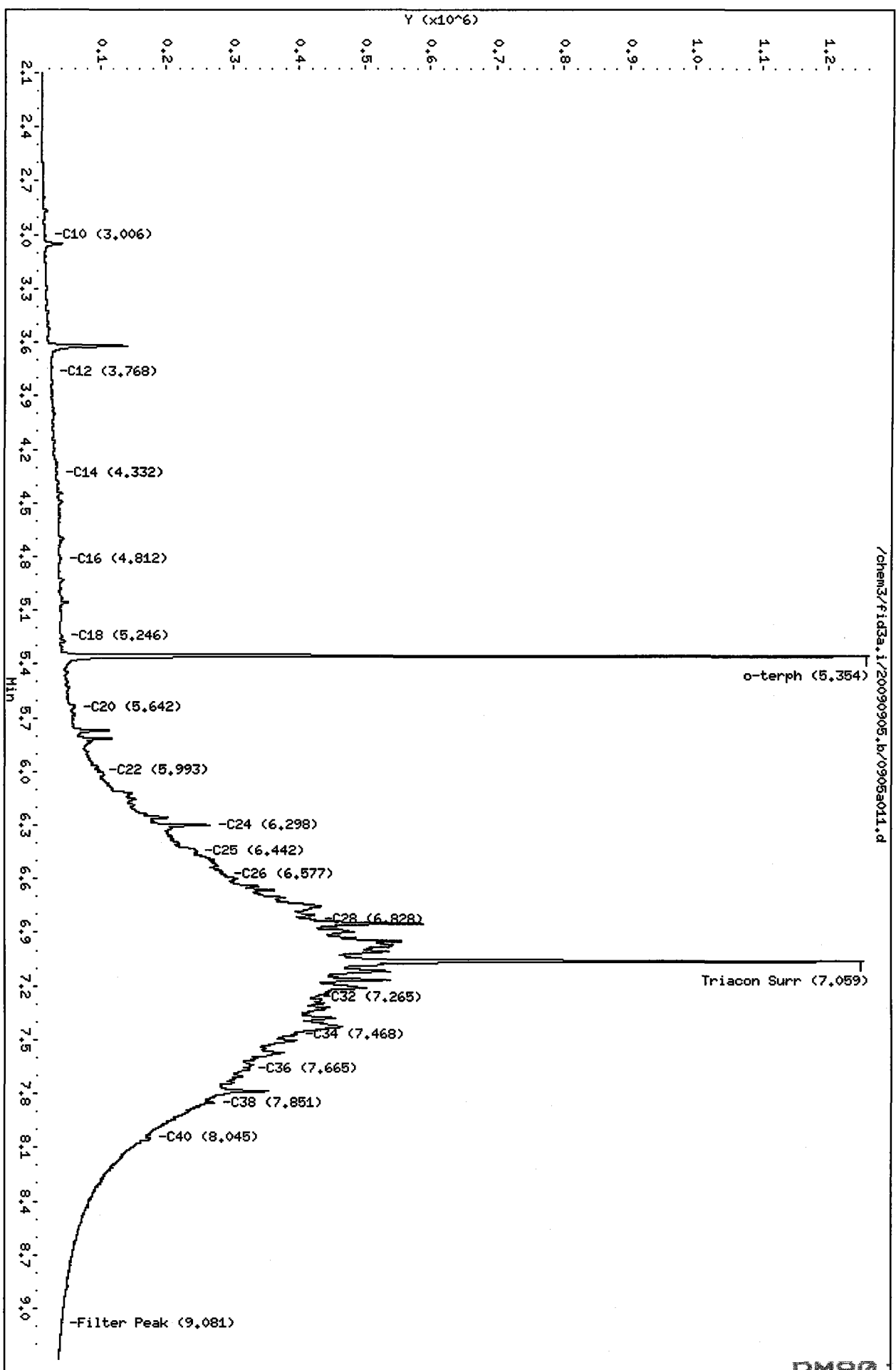
Surrogate	Area	Amount	%Rec
o-Terphenyl	782447	29.8	66.1
Triacontane	495096	28.8	64.0

753 ✓

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a011.d  
Date: 05-SEP-2009 14:38  
Client ID:  
Sample Info: PM90A  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090905.b/0905a011.d

MW 9/9/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090907.b/0907a007.d  
Method: /chem3/fid3a.i/20090903.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/09/2009  
Macro: FID:3A090109

ARI ID: PM90E  
Client ID:  
Injection: 07-SEP-2009 08:52  
Dilution Factor: 10

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	900150	9
C8	1.064	-0.003	12384	6105	DIESEL (C12-C24)	3865522	180
C10	3.002	0.001	2847	339	M.OIL (C24-C38)	13106255	1099
C12	3.770	0.002	6412	768	AK-102 (C10-C25)	4363782	164
C14	4.330	-0.001	6593	526	AK-103 (C25-C36)	11936699	1336
C16	4.815	0.000	5356	3150	OR.DIES (C10-C28)	8615515	409
C18	5.247	-0.001	8190	6021	OR.MOIL (C28-C40)	9371838	831
C20	5.631	-0.010	33492	62285	JET-A (C10-C18)	774609	49
C22	5.989	-0.005	78606	74036			
C24	6.302	0.002	113219	33870			
C25	6.437	-0.004	132662	83662			
C26	6.577	0.003	139225	120427			
C28	6.824	0.002	175758	41919			
C32	7.268	0.000	154073	33843			
C34	7.470	-0.001	127721	30134			
Filter Peak	9.079	0.002	28289	6221			
C36	7.667	0.001	101584	42282	CREOSOT (C8-C22)	2572759	402
C38	7.858	0.003	80474	20848			
C40	8.043	-0.010	63624	96941	BUNKERC (C10-C38)	17222830	1784

Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.693 - 3.818) NW M.Oil(6.351 - 7.905)  
AK102(2.951 - 6.391) AK103(6.391 - 7.716) Jet A(2.951 - 5.298)

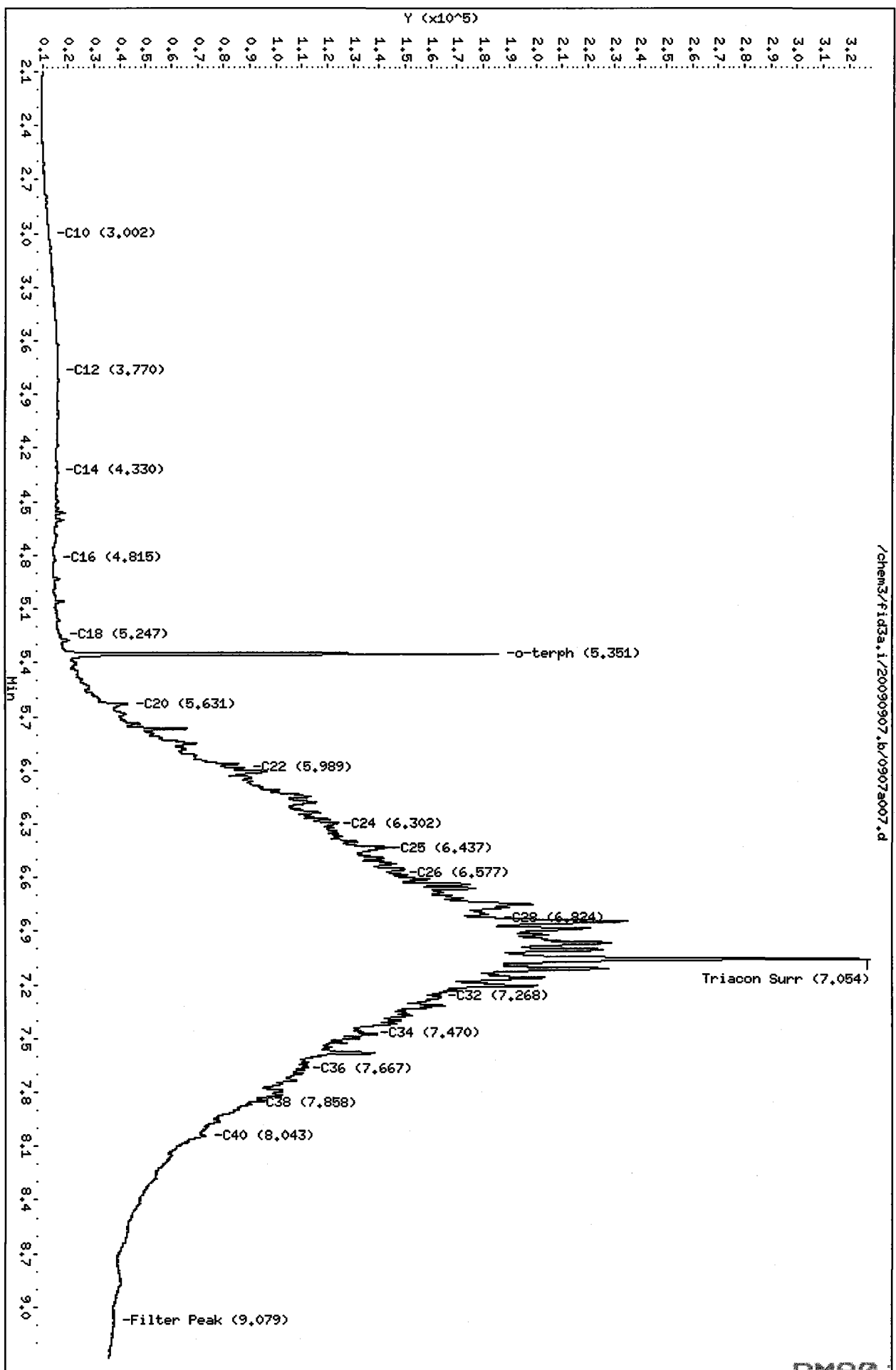
Surrogate	Area	Amount	%Rec
o-Terphenyl	104426	4.0	88.2
Triacontane	89977	5.2	116.3

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090907.b/0907a007.d  
Date: 07-SEP-2009 08:52  
Client ID:  
Sample Info: PM90E.10  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25

/chem3/fid3a.i/20090907.b/0907a007.d



**TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
DOF-TP25-4	66.1%	0
DOF-TP25-11	90.4%	0
DOF-TP25-13	91.9%	0
DOF-TP26-4	79.3%	0
090409MBS	97.2%	0
090409LCS	97.7%	0
DOF-TP26-9	88.2%	0
DOF-TP26-9 MS	89.0%	0
DOF-TP26-9 MSD	91.6%	0
DOF-TP26-13	79.3%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(58-121)

(53-118)

Prep Method: SW3546  
Log Number Range: 09-20591 to 09-20596

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1

Sample ID: DOF-TP26-9  
MS/MSD

Lab Sample ID: PM90E

LIMS ID: 09-20595

Matrix: Soil

Data Release Authorized: *RB*

Reported: 09/10/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Date Extracted MS/MSD: 09/04/09

Sample Amount MS: 9.53 g-dry-wt

MSD: 9.47 g-dry-wt

Date Analyzed MS: 09/05/09 15:52

Final Extract Volume MS: 1.0 mL

MSD: 09/05/09 16:29

MSD: 1.0 mL

Instrument/Analyst MS: FID3A/MS

Dilution Factor MS: 1.00

MSD: FID3A/MS

MSD: 1.00

Percent Moisture: 11.1%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	201	181	157	NA	184	158	NA	1.6%

**TPHD Surrogate Recovery**

	MS	MSD
o-Terphenyl	89.0%	91.6%

Results reported in mg/kg

NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.

RPD calculated using sample concentrations per SW846.

ms 9/9/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090905.b/0905a015.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/09/2009  
Macro: FID:3A090109

ARI ID: PM90EMS  
Client ID:  
Injection: 05-SEP-2009 15:52  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.751	0.000	73401	155926	GAS (Tol-C12)	6179895	65
C8	1.078	0.003	19207	34028	DIESEL (C12-C24)	37086538	1726
C10	3.007	0.004	227722	267965	M.OIL (C24-C38)	27077074	2270
C12	3.772	0.004	542050	470316	AK-102 (C10-C25)	42131715	1579
C14	4.332	0.001	771384	1129842	AK-103 (C25-C36)	24459956	2738
C16	4.816	0.000	823651	1537492	OR.DIES (C10-C28)	51003617	2418
C18	5.251	0.003	705060	874566	OR.MOIL (C28-C40)	19366824	1718
C20	5.644	0.002	544838	919588	JET-A (C10-C18)	26735313	1687
C22	5.996	0.001	312050	356248			
C24	6.302	0.001	291710	395344			
C25	6.446	0.004	318266	279855			
C26	6.578	0.004	291784	246572			
C28	6.818	-0.005	327867	32775			
C32	7.267	-0.001	309239	61554			
C34	7.474	0.004	277484	175238			
Filter Peak	9.077	-0.001	41605	21508			
C36	7.667	0.002	231376	132169	CREOSOT (C8-C22)	38379786	6001
C38	7.856	0.005	185973	245793			
C40	8.047	-0.002	123249	29415	BUNKERC (C10-C38)	68724218	7118

Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1053803	40.1	89.0
Triacontane	678774	39.5	87.7

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a015.d  
Date: 05-SEP-2009 15:52

Client ID:

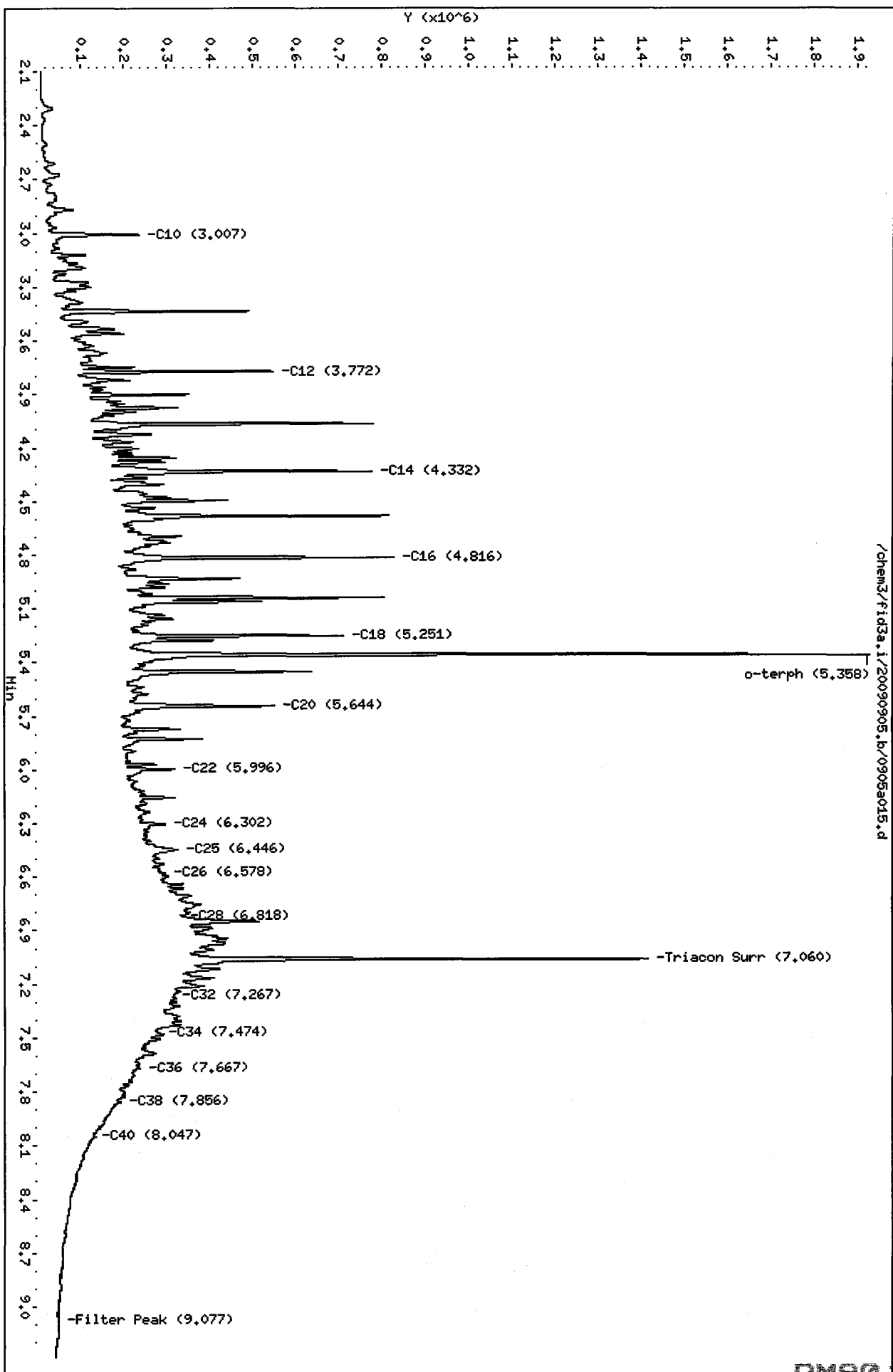
Sample Info: PH90EHS

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25





ms 9/9/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090905.b/0905a017.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/09/2009  
Macro: FID:3A090109

ARI ID: PM90EMSD  
Client ID:  
Injection: 05-SEP-2009 16:29  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.751	0.000	73517	126956	GAS (Tol-C12)	6241430	65
C8	1.077	0.003	19238	77865	DIESEL (C12-C24)	37453691	1744
C10	3.006	0.003	230066	276088	M.OIL (C24-C38)	27084588	2271
C12	3.772	0.004	538831	471943	AK-102 (C10-C25)	42540241	1594
C14	4.333	0.002	803399	1162933	AK-103 (C25-C36)	24404091	2732
C16	4.817	0.002	859971	1366813	OR.DIES (C10-C28)	51217674	2429
C18	5.251	0.004	723646	780241	OR.MOIL (C28-C40)	19471869	1727
C20	5.644	0.003	570255	896310	JET-A (C10-C18)	27501538	1735
C22	5.997	0.002	314640	367945			
C24	6.300	-0.001	298313	445913			
C25	6.445	0.003	317913	520640			
C26	6.575	0.001	271281	152924			
C28	6.832	0.008	341837	332896			
C32	7.267	-0.001	307764	85636			
C34	7.469	-0.001	282281	175726			
Filter Peak	9.081	0.003	37941	15129			
C36	7.667	0.002	228638	118084	CREOSOT (C8-C22)	39207059	6130
C38	7.851	0.001	184880	116467			
C40	8.046	-0.002	124021	22255	BUNKERC (C10-C38)	69109344	7158

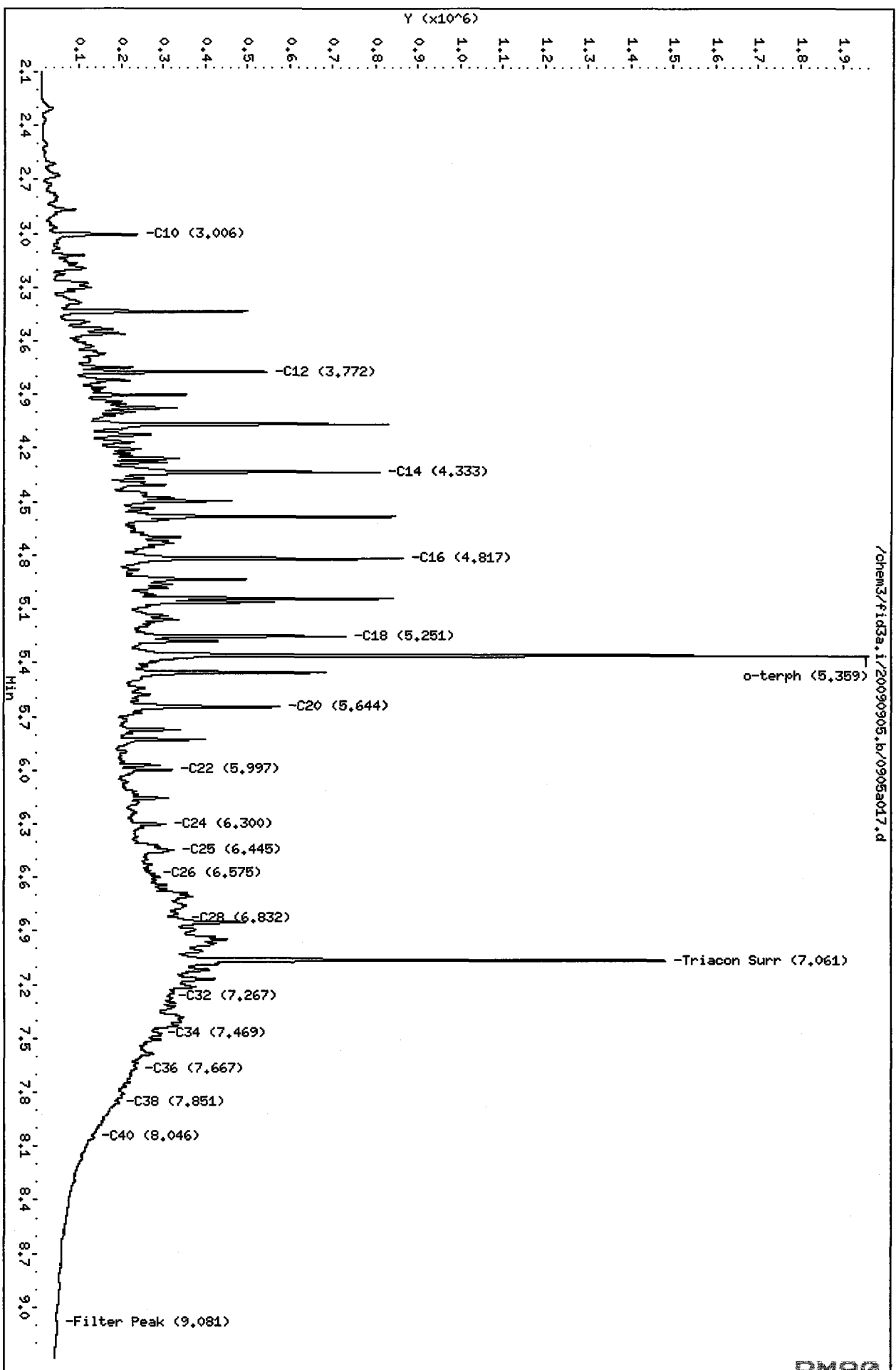
Range Times: NW Diesel (3.818 - 6.351) NW Gas (0.701 - 3.818) NW M.Oil (6.351 - 7.901)  
AK102 (2.953 - 6.392) AK103 (6.392 - 7.715) Jet A (2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1084024	41.2	91.6
Triacontane	704875	41.0	91.1

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a017.d  
Date : 05-SEP-2009 16:29  
Client ID:  
Sample Info: PM90EMSD  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1


Sample ID: LCS-090409

LAB CONTROL

Lab Sample ID: LCS-090409

LIMS ID: 09-20595

Matrix: Soil

Data Release Authorized: 

Reported: 09/10/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: NA

Date Received: NA

Date Extracted: 09/04/09

Date Analyzed: 09/05/09 13:43

Instrument/Analyst: FID3A/MS

Sample Amount: 10.0 g

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	138	150	92.0%

**TPHD Surrogate Recovery**

o-Terphenyl	97.7%
-------------	-------

Results reported in mg/kg

ms 9/9/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090905.b/0905a008.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/09/2009  
Macro: FID:3A090109

ARI ID: PM90LCSW1  
Client ID:  
Injection: 05-SEP-2009 13:43  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	6292156	66
C8	1.073	-0.002	20106	36178	DIESEL (C12-C24)	29596996	1378
C10	3.006	0.003	236257	290161	M.OIL (C24-C38)	511763	43
C12	3.772	0.004	555026	497563	AK-102 (C10-C25)	34488292	1292
C14	4.332	0.001	763869	1139642	AK-103 (C25-C36)	430040	48
C16	4.816	0.001	804148	1492046	OR.DIES (C10-C28)	34836474	1652
C18	5.250	0.003	680802	841602	OR.MOIL (C28-C40)	104342	9
C20	5.643	0.001	461247	725607	JET-A (C10-C18)	26477422	1671
C22	5.995	0.000	166066	216179			
C24	6.301	0.000	66303	140100			
C25	6.442	0.000	39252	63799			
C26	6.575	0.000	21169	32967			
C28	6.822	-0.001	5254	5271			
C32	7.271	0.004	4307	8600			
C34	7.470	-0.001	558	130			
Filter Peak	9.079	0.000	1863	259			
C36	7.659	-0.006	244	28	CREOSOT (C8-C22)	34560448	5403
C38	7.852	0.001	743	103			
C40	8.050	0.001	1734	273	BUNKERC (C10-C38)	34925828	3618

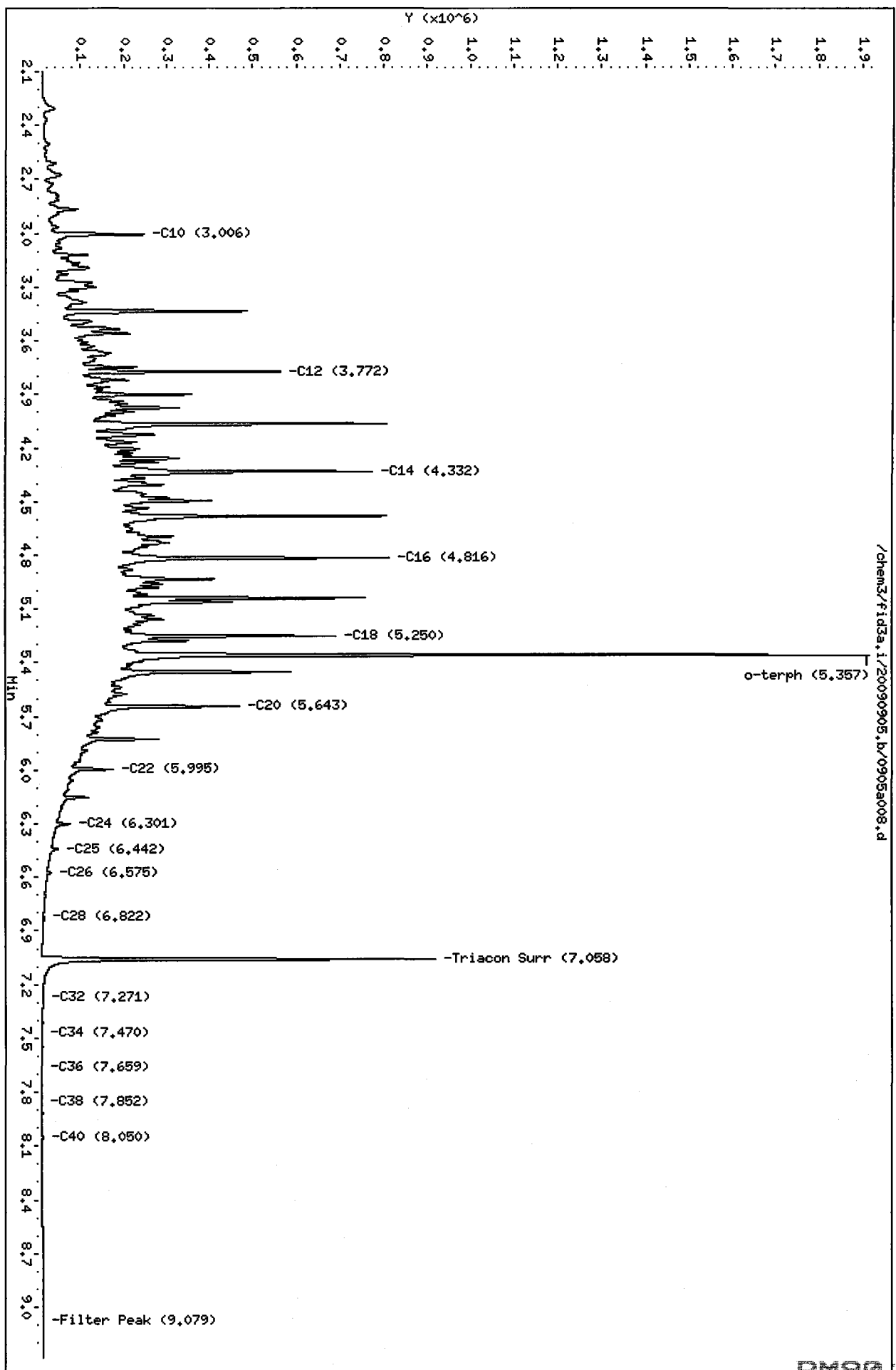
Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1156315	44.0	97.7
Triacontane	738200	42.9	95.4

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a008.d  
Date : 05-SEP-2009 13:43  
Client ID:  
Sample Info: PH90LCSM4  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Soil  
Date Received: 09/03/09

ARI Job: PM90  
Project: VERBEEK  
PSE-004-00

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
09-20591-PM90A	DOF-TP25-4	8.67 g	1.00 mL	D	09/04/09
09-20592-PM90B	DOF-TP25-11	8.31 g	1.00 mL	D	09/04/09
09-20593-PM90C	DOF-TP25-13	8.87 g	1.00 mL	D	09/04/09
09-20594-PM90D	DOF-TP26-4	9.51 g	1.00 mL	D	09/04/09
09-20595-090409MB1	Method Blank	10.0 g	1.00 mL	-	09/04/09
09-20595-090409LCS1	Lab Control	10.0 g	1.00 mL	-	09/04/09
09-20595-PM90E	DOF-TP26-9	8.96 g	1.00 mL	D	09/04/09
09-20595-PM90EMS	DOF-TP26-9	9.53 g	1.00 mL	D	09/04/09
09-20595-PM90EMSD	DOF-TP26-9	9.47 g	1.00 mL	D	09/04/09
09-20596-PM90F	DOF-TP26-13	9.04 g	1.00 mL	D	09/04/09

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: DOF-TP25-4

SAMPLE

Lab Sample ID: PM90A

LIMS ID: 09-20591

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 86.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	7	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP25-11  
SAMPLE

Lab Sample ID: PM90B

LIMS ID: 09-20592

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 69.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	7	7	U

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP25-13  
SAMPLE

Lab Sample ID: PM90C

LIMS ID: 09-20593

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 86.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP26-4  
SAMPLE

Lab Sample ID: PM90D

LIMS ID: 09-20594

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 91.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP26-9  
SAMPLE

Lab Sample ID: PM90E


QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20595

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/14/09

Date Received: 09/03/09

Percent Total Solids: 85.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP26-13  
SAMPLE

Lab Sample ID: PM90F

LIMS ID: 09-20596

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 85.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: DOF-TP25-4

**MATRIX SPIKE**

Lab Sample ID: PM90A

LIMS ID: 09-20591

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	7	199	213	90.1%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DOF-TP25-4  
DUPLICATE**

Lab Sample ID: PM90A

LIMS ID: 09-20591

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	7	7	0.0%	+/- 5	L

Reported in mg/kg-dry

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: PM90LCS

LIMS ID: 09-20592

Matrix: Soil

Data Release Authorized 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	198	200	99.0%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: METHOD BLANK**

Lab Sample ID: PM90MB

LIMS ID: 09-20592

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: STD REFERENCE  
ERA D053540

Lab Sample ID: PM90SRM

LIMS ID: 09-20592

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM90-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: NA

Date Received: NA

Analyte	Analysis Method	Analysis Date	mg/kg-dry	Certified Value	Advisory Range
Arsenic	6010B	09/11/09	128	132	106-157



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

September 21, 2009

Matt Dalton  
Dalton, Olmsted, & Fuglevand  
10827 NE 68th, Suite B  
Kirkland, WA 98033

**RE: Client Project: Verbeek – PSE-004-00**  
**ARI Job No.: PM91**

Dear Matt:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final analytical results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted twenty soil samples on September 3, 2009. Select samples were archived upon receipt. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for VOCs, SVOCs, NWTPH-Gx, NWTPH-Dx, and Arsenic, as requested on the COC.

The LCS percent recovery of Toluene fell outside the control limits low for **LCS-090309**. The LCSD percent recovery was within control limits. No corrective action was required.

The matrix spike percent recoveries of Benzene, Toluene, Ethylbenzene, m,p-Xylene, and o-Xylene fell outside the advisory control limits for sample **DOF-TP20-11**. No corrective action is required for matrix QC.

The internal standard areas of 1,4-Dichlorobenzene-d4, Naphthalene-d8, and Acenaphthene-d10 fell outside the control limits low for sample **DOF-TP22-7**. The sample was re-analyzed at a dilution and all internal standard areas were within control limits. Both sets of data have been included in this report for your review. No further corrective action was required.

The surrogate percent recoveries of d4-1,2-Dichlorobenzene and d4-2-Chlorophenol fell outside the control limits low for sample **DOF-TP19-9** due to matrix effects. The sample was re-analyzed at a dilution. Both sets of data have been included in this report for your review. No further corrective action was required.

Several surrogate percent recoveries were outside the control limits for samples **DOF-TP22-7** and **DOF-TP23-12** due to matrix effects. The samples were re-analyzed at dilutions. Both sets of data have been included in this report for your review. No further corrective action was required.

The matrix spike duplicate percent recovery of Gasoline Range Hydrocarbons was outside the advisory control limits high for sample **DOF-TP22-7**. No corrective action is required for matrix QC.



**Analytical Resources, Incorporated**

Analytical Chemists and Consultants

An electronic copy of this report will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro

Project Manager

-For-

Susan Dunning

Director, Client Services

sue@arilabs.com

206-695-6207

Enclosures

cc: eFile PM91

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **PM01**  
 Turn-around Requested: **Normal**  
 ARI Client Company: **DAVID CHEMISTS & FUGLEMAN**  
 Phone: **206 695 6200**  
 Client Contact: **MATT WALTON / DAVE COOPER**  
 Client Project Name: **VERBEEK**  
 Client Project #: **PSE-004-00**  
 Samplers: **266004**

Page: **1** of **3**  
 Date: **9/3/09**  
 Ice Present? **yes**  
 No. of Coolers: **2**  
 Cooler Temps: **5, 6, 6, 8**

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					MMPH-G/350	MMPH-DX	PAHS B270 Full Scan	ANALYTIC	
DDF-TP19-7	9/2/09	0920	SOIL	3	X	X	X	X	
DDF-TP19-9		0835			X	X	X	X	
DDF-TP19-15		0910			X	X	X	X	
DDF-TP19-18		0915			X	X	X	X	ANALYTIC
DDF-TP19-11		0845			X	X	X	X	
DDF-TP20-6		1020			X	X	X	X	
DDF-TP20-11		1000			X	X	X	X	
DDF-TP20-15		1010			X	X	X	X	
DDF-TP21-4		1105			X	X	X	X	
DDF-TP21-7		1045			X	X	X	X	

Comments/Special Instructions	Relinquished by:		Received by:	
	(Signature)	Printed Name:	(Signature)	Printed Name:
	<i>[Signature]</i>	<b>DAVID COOPER</b>	<i>[Signature]</i>	<b>A. Volgarden</b>
		Company: <b>ARI</b>		Company: <b>ARI</b>
		Date & Time: <b>9/3/09 1120</b>		Date & Time: <b>9/3/09 1120</b>

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: DM241 Turn-around Requested: ASAP Phone: \_\_\_\_\_  
 ARI Client Company: DAVID CURTIS & FUGLSTAD  
 Client Contact: MATT DALTON / DAVE COOPER  
 Client Project Name: VERBEEK  
 Client Project #: PSE-004-00

Page: 2 of 3  
 Date: 9/3/09 Ice Present? Yes  
 No. of Coolers: 2 Cooler Temps: 5.8, 5.8



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

Sample ID	Samplers:			No. Containers
	Date	Time	Matrix	
DDF-TP21-11	9/2/09	1055	SOIL	3
DDF-TP21-15		1100		
DDF-TP22-7		1220		
DDF-TP22-11		1230		
DDF-TP22-15		1235		
DDF-TP23-B		1315		
DDF-TP23-12		1325		
DDF-TP23-15		1330		
DDF-TP24-10		1400		
DDF-TP24-15		1415		

Analysis Requested	Analysis Requested				Notes/Comments
	ADPH-5 / AEX	ADPH-DX	PATHS BZTS FULL CAN	MSEIVE	
	X	X	X	X	
	X	X	X	X	ARCHIVE
	X	X	X	X	ARCHIVE
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	

Comments/Special Instructions: \_\_\_\_\_

Relinquished by: (Signature) DG Cooper Date & Time: 9/3/09 1120  
 Printed Name: DG Cooper Company: ARI

Received by: (Signature) \_\_\_\_\_ Date & Time: \_\_\_\_\_  
 Printed Name: A. Volgardsen Company: ARI

Relinquished by: (Signature) \_\_\_\_\_ Date & Time: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_ Company: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date & Time: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_ Company: \_\_\_\_\_

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Analytical Resources,  
Incorporated  
Analytical Chemists and  
Consultants

# Cooler Receipt Form

ARI Client: DOF

Project Name: Verbeek

COC No(s): \_\_\_\_\_ (NA)

Delivered by: Fed-Ex UPS Courier (Hand) Delivered Other: \_\_\_\_\_

Assigned ARI Job No: PM91

Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 5.8 5.8

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 48740S

Cooler Accepted by: AV Date: 9/3/09 Time: 1130

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? (YES) NO

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES (NO)

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

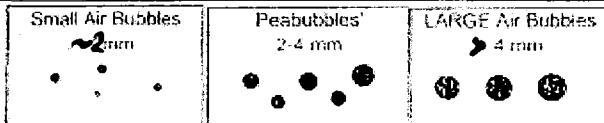
Samples Logged by: JP Date: 9-3-09 Time: 1210

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

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



Small → "sm"  
Peabubbles → "pb"  
Large → "lg"  
Headspace → "hs"

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DOF-TP19-7**

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM91A


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20622

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.59 g-dry-wt

Date Analyzed: 09/03/09 18:51

Purge Volume: 5.0 mL

Moisture: 16.7%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	100%
d8-Toluene	99.5%
Bromofluorobenzene	96.2%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP19-9

Page 1 of 1

SAMPLE

Lab Sample ID: PM91B


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20623

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.58 g-dry-wt

Date Analyzed: 09/03/09 19:18

Purge Volume: 5.0 mL

Moisture: 12.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	4.4	
108-88-3	Toluene	1.1	2.5	
100-41-4	Ethylbenzene	1.1	27	
179601-23-1	m,p-Xylene	1.1	22	
95-47-6	o-Xylene	1.1	27	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	98.0%
Bromofluorobenzene	95.8%
d4-1,2-Dichlorobenzene	99.6%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP19-15

Page 1 of 1

SAMPLE

Lab Sample ID: PM91C


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20624

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.04 g-dry-wt

Date Analyzed: 09/03/09 19:45

Purge Volume: 5.0 mL

Moisture: 22.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	100%
d8-Toluene	99.5%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DOF-TP19-11  
SAMPLE

Lab Sample ID: PM91E

LIMS ID: 09-20626

Matrix: Soil

Data Release Authorized: *AB*

Reported: 09/15/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Date Analyzed: 09/03/09 20:11

Sample Amount: 4.35 g-dry-wt

Purge Volume: 5.0 mL

Moisture: 16.7%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	103%
d8-Toluene	95.5%
Bromofluorobenzene	87.5%
d4-1,2-Dichlorobenzene	93.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP20-6

Page 1 of 1

SAMPLE

Lab Sample ID: PM91F


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20627

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.28 g-dry-wt

Date Analyzed: 09/03/09 20:38

Purge Volume: 5.0 mL

Moisture: 17.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	98.6%
d8-Toluene	98.9%
Bromofluorobenzene	96.8%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP20-11

Page 1 of 1

SAMPLE

Lab Sample ID: PM91G

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20628

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.29 g-dry-wt

Date Analyzed: 09/03/09 21:05

Purge Volume: 5.0 mL

Moisture: 15.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	101%
d8-Toluene	99.6%
Bromofluorobenzene	96.6%
d4-1,2-Dichlorobenzene	99.2%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP20-15

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM91H


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20629

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 3.61 g-dry-wt

Date Analyzed: 09/03/09 21:31

Purge Volume: 5.0 mL

Moisture: 30.3%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.4	< 1.4	U
108-88-3	Toluene	1.4	< 1.4	U
100-41-4	Ethylbenzene	1.4	< 1.4	U
179601-23-1	m,p-Xylene	1.4	< 1.4	U
95-47-6	o-Xylene	1.4	< 1.4	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)


**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	100%
d8-Toluene	99.8%
Bromofluorobenzene	98.9%
d4-1,2-Dichlorobenzene	98.3%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DOF-TP21-4  
SAMPLE

Lab Sample ID: PM91I  
LIMS ID: 09-20630  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/15/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Instrument/Analyst: NT9/AAR  
Date Analyzed: 09/03/09 21:58

Sample Amount: 4.47 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 16.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	1.3	
179601-23-1	m,p-Xylene	1.1	2.0	
95-47-6	o-Xylene	1.1	3.1	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)


**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	99.6%
d8-Toluene	98.9%
Bromofluorobenzene	98.6%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DOF-TP21-7  
SAMPLE

Lab Sample ID: PM91J  
LIMS ID: 09-20631  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/15/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Instrument/Analyst: NT9/AAR  
Date Analyzed: 09/03/09 22:24

Sample Amount: 4.49 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 11.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	101%
d8-Toluene	99.3%
Bromofluorobenzene	95.8%
d4-1,2-Dichlorobenzene	106%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP21-11

Page 1 of 1

SAMPLE

Lab Sample ID: PM91K


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20632

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.46 g-dry-wt

Date Analyzed: 09/03/09 22:51

Purge Volume: 5.0 mL

Moisture: 14.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**


d4-1,2-Dichloroethane	102%
d8-Toluene	99.6%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	101%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DOF-TP22-7  
SAMPLE

Lab Sample ID: PM91M  
LIMS ID: 09-20634  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/15/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Instrument/Analyst: NT9/AAR  
Date Analyzed: 09/03/09 23:17

Sample Amount: 4.07 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 19.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	9.6	
179601-23-1	m,p-Xylene	1.2	9.8	
95-47-6	o-Xylene	1.2	10	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	105%
d8-Toluene	98.9%
Bromofluorobenzene	98.9%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP22-15

Page 1 of 1

SAMPLE

Lab Sample ID: PM910


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20636

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.73 g-dry-wt

Date Analyzed: 09/03/09 23:44

Purge Volume: 5.0 mL

Moisture: 14.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	99.3%
Bromofluorobenzene	99.7%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP23-8

Page 1 of 1

SAMPLE

Lab Sample ID: PM91P


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20637

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.12 g-dry-wt

Date Analyzed: 09/04/09 00:10

Purge Volume: 5.0 mL

Moisture: 18.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	100%
d8-Toluene	99.0%
Bromofluorobenzene	96.1%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DOF-TP23-12  
SAMPLE

Lab Sample ID: PM91Q  
LIMS ID: 09-20638  
Matrix: Soil  
Data Release Authorized: *B*  
Reported: 09/15/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Instrument/Analyst: NT9/AAR  
Date Analyzed: 09/04/09 00:37

Sample Amount: 4.05 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 19.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	29	
108-88-3	Toluene	1.2	3.8	
100-41-4	Ethylbenzene	1.2	100	
179601-23-1	m,p-Xylene	1.2	39	
95-47-6	o-Xylene	1.2	56	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)


**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	96.7%
Bromofluorobenzene	92.3%
d4-1,2-Dichlorobenzene	99.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DOF-TP23-15  
SAMPLE

Lab Sample ID: PM91R  
LIMS ID: 09-20639  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/15/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Instrument/Analyst: NT9/AAR  
Date Analyzed: 09/04/09 01:03

Sample Amount: 3.01 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 40.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.7	< 1.7	U
108-88-3	Toluene	1.7	< 1.7	U
100-41-4	Ethylbenzene	1.7	< 1.7	U
179601-23-1	m,p-Xylene	1.7	< 1.7	U
95-47-6	o-Xylene	1.7	< 1.7	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	101%
d8-Toluene	97.8%
Bromofluorobenzene	85.5%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DOF-TP24-10**

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM91S


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20640

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.42 g-dry-wt

Date Analyzed: 09/04/09 01:30

Purge Volume: 5.0 mL

Moisture: 17.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	99.8%
d8-Toluene	99.3%
Bromofluorobenzene	96.3%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP24-15

Page 1 of 1

SAMPLE

Lab Sample ID: PM91T


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20641

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.01 g-dry-wt

Date Analyzed: 09/04/09 01:57

Purge Volume: 5.0 mL

Moisture: 22.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
179601-23-1	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	98.4%
d8-Toluene	98.5%
Bromofluorobenzene	85.5%
d4-1,2-Dichlorobenzene	99.8%

**VOA SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
PM91A	DOF-TP19-7	Low	100%	99.5%	96.2%	100%	0
PM91B	DOF-TP19-9	Low	108%	98.0%	95.8%	99.6%	0
PM91C	DOF-TP19-15	Low	100%	99.5%	101%	100%	0
PM91E	DOF-TP19-11	Low	103%	95.5%	87.5%	93.5%	0
PM91F	DOF-TP20-6	Low	98.6%	98.9%	96.8%	101%	0
MB-090309	Method Blank	Low	103%	99.9%	101%	101%	0
LCS-090309	Lab Control	Low	108%	99.8%	103%	99.8%	0
LCSD-090309	Lab Control Dup	Low	106%	99.0%	102%	99.0%	0
PM91G	DOF-TP20-11	Low	101%	99.6%	96.6%	99.2%	0
PM91GMS	DOF-TP20-11	Low	109%	99.9%	102%	99.8%	0
PM91GMSD	DOF-TP20-11	Low	108%	99.3%	99.0%	98.5%	0
PM91H	DOF-TP20-15	Low	100%	99.8%	98.9%	98.3%	0
PM91I	DOF-TP21-4	Low	99.6%	98.9%	98.6%	101%	0
PM91J	DOF-TP21-7	Low	101%	99.3%	95.8%	106%	0
PM91K	DOF-TP21-11	Low	102%	99.6%	101%	101%	0
PM91M	DOF-TP22-7	Low	105%	98.9%	98.9%	102%	0
PM91O	DOF-TP22-15	Low	104%	99.3%	99.7%	101%	0
PM91P	DOF-TP23-8	Low	100%	99.0%	96.1%	101%	0
PM91Q	DOF-TP23-12	Low	108%	96.7%	92.3%	99.5%	0
PM91R	DOF-TP23-15	Low	101%	97.8%	85.5%	101%	0
PM91S	DOF-TP24-10	Low	99.8%	99.3%	96.3%	101%	0
PM91T	DOF-TP24-15	Low	98.4%	98.5%	85.5%	99.8%	0

**LCS/MB LIMITS**

**QC LIMITS**

**SW8260C**

	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	75-120	76-120	72-134	69-120
(TOL) = d8-Toluene	80-122	80-120	78-124	80-120
(BFB) = Bromofluorobenzene	79-120	80-120	66-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	79-120	80-120

Log Number Range: 09-20622 to 09-20641



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP20-11

Page 1 of 1

**MATRIX SPIKE**

Lab Sample ID: PM91G

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20628

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst MS: NT9/AAR

Sample Amount MS: 4.20 g-dry-wt

MSD: NT9/AAR

MSD: 4.19 g-dry-wt

Date Analyzed MS: 09/04/09 02:24

Purge Volume MS: 5.0 mL

MSD: 09/04/09 02:51

MSD: 5.0 mL

Moisture: 15.2%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 1.2 U	43.7	59.5	73.4%	54.0	59.7	90.5%	21.1%
Toluene	< 1.2 U	40.7	59.5	68.4%	51.2	59.7	85.8%	22.9%
Ethylbenzene	< 1.2 U	38.9	59.5	65.4%	50.5	59.7	84.6%	26.0%
m,p-Xylene	< 1.2 U	75.9	119	63.8%	102	119	85.7%	29.3%
o-Xylene	< 1.2 U	37.9	59.5	63.7%	51.1	59.7	85.6%	29.7%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-TP20-11

Page 1 of 1

MATRIX SPIKE

Lab Sample ID: PM91G

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20628

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.20 g-dry-wt

Date Analyzed: 09/04/09 02:24

Purge Volume: 5.0 mL

Moisture: 15.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	---	
108-88-3	Toluene	1.2	---	
100-41-4	Ethylbenzene	1.2	---	
179601-23-1	m,p-Xylene	1.2	---	
95-47-6	o-Xylene	1.2	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	109%
d8-Toluene	99.9%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	99.8%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DOF-TP20-11**

Page 1 of 1

**MATRIX SPIKE DUP**

Lab Sample ID: PM91G


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20628

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/15/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.19 g-dry-wt

Date Analyzed: 09/04/09 02:51

Purge Volume: 5.0 mL

Moisture: 15.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.2	---	
108-88-3	Toluene	1.2	---	
100-41-4	Ethylbenzene	1.2	---	
179601-23-1	m,p-Xylene	1.2	---	
95-47-6	o-Xylene	1.2	---	

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	108%
d8-Toluene	99.3%
Bromofluorobenzene	99.0%
d4-1,2-Dichlorobenzene	98.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-090309

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-090309

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20628

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: NA

Reported: 09/15/09

Date Received: NA

Instrument/Analyst LCS: NT9/AAR

Sample Amount LCS: 5.00 g-dry-wt

LCS D: NT9/AAR

LCS D: 5.00 g-dry-wt

Date Analyzed LCS: 09/03/09 16:39

Purge Volume LCS: 5.0 mL

LCS D: 09/03/09 17:06

LCS D: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Benzene	40.6	50.0	81.2%	46.4	50.0	92.8%	13.3%
Toluene	39.8	50.0	79.6%	46.0	50.0	92.0%	14.5%
Ethylbenzene	40.2	50.0	80.4%	46.7	50.0	93.4%	15.0%
m,p-Xylene	84.1	100	84.1%	97.3	100	97.3%	14.6%
o-Xylene	42.5	50.0	85.0%	49.3	50.0	98.6%	14.8%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCS D
d4-1,2-Dichloroethane	108%	106%
d8-Toluene	99.8%	99.0%
Bromofluorobenzene	103%	102%
d4-1,2-Dichlorobenzene	99.8%	99.0%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: MB-090309**

Page 1 of 1

**METHOD BLANK**

Lab Sample ID: MB-090309

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20628

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: *B*

Date Sampled: NA

Reported: 09/15/09

Date Received: NA

Instrument/Analyst: NT9/AAR

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 09/03/09 18:25

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U


Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	103%
d8-Toluene	99.9%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP19-7  
SAMPLE

Lab Sample ID: PM91A  
LIMS ID: 09-20622  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 14:56  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.51 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 16.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
<b>129-00-0</b>	<b>Pyrene</b>	<b>67</b>	<b>83</b>
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	67	< 67 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	49.2%	2-Fluorobiphenyl	56.8%
d14-p-Terphenyl	66.4%	d4-1,2-Dichlorobenzene	52.0%
d5-Phenol	49.6%	2-Fluorophenol	43.2%
2,4,6-Tribromophenol	63.7%	d4-2-Chlorophenol	45.3%

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Sample ID: DOF-TP19-9  
SAMPLE

Lab Sample ID: PM91B  
LIMS ID: 09-20623  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/09/09  
Date Analyzed: 09/11/09 11:25  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: Yes

Sample Amount: 3.99 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 12.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	120	< 120 U
95-48-7	2-Methylphenol	120	< 120 U
106-44-5	4-Methylphenol	120	< 120 U
105-67-9	2,4-Dimethylphenol	120	< 120 U
91-20-3	Naphthalene	120	12,000 E
91-57-6	2-Methylnaphthalene	120	6,100
131-11-3	Dimethylphthalate	120	< 120 U
208-96-8	Acenaphthylene	120	2,400
83-32-9	Acenaphthene	120	6,100
132-64-9	Dibenzofuran	120	660
84-66-2	Diethylphthalate	120	< 120 U
86-73-7	Fluorene	120	5,100
85-01-8	Phenanthrene	120	24,000 ES
86-74-8	Carbazole	120	540
120-12-7	Anthracene	120	5,300
84-74-2	Di-n-Butylphthalate	120	< 120 U
206-44-0	Fluoranthene	120	36,000 ES
129-00-0	Pyrene	120	47,000 ES
85-68-7	Butylbenzylphthalate	120	< 120 U
56-55-3	Benzo (a) anthracene	120	13,000 E
117-81-7	bis(2-Ethylhexyl)phthalate	120	< 120 U
218-01-9	Chrysene	120	15,000 E
117-84-0	Di-n-Octyl phthalate	120	< 120 U
205-99-2	Benzo (b) fluoranthene	120	12,000 E
207-08-9	Benzo (k) fluoranthene	120	12,000 E
50-32-8	Benzo (a) pyrene	120	20,000 E
193-39-5	Indeno (1,2,3-cd) pyrene	120	14,000 E
53-70-3	Dibenz (a,h) anthracene	120	3,500
191-24-2	Benzo (g,h,i) perylene	120	20,000 E
483-65-8	Retene	250	< 250 U
90-12-0	1-Methylnaphthalene	120	5,400

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	33.6%	2-Fluorobiphenyl	43.6%
d14-p-Terphenyl	34.0%	d4-1,2-Dichlorobenzene	34.7%
d5-Phenol	33.3%	2-Fluorophenol	23.7%
2,4,6-Tribromophenol	39.2%	d4-2-Chlorophenol	28.0%

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Sample ID: DOF-TP19-9  
DILUTION

Lab Sample ID: PM91B  
LIMS ID: 09-20623  
Matrix: Soil  
Data Release Authorized: *AS*  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/09/09  
Date Analyzed: 09/11/09 16:02  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: Yes

Sample Amount: 3.99 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 10.0  
Percent Moisture: 12.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1,200	< 1,200 U
95-48-7	2-Methylphenol	1,200	< 1,200 U
106-44-5	4-Methylphenol	1,200	< 1,200 U
105-67-9	2,4-Dimethylphenol	1,200	< 1,200 U
91-20-3	Naphthalene	1,200	12,000
91-57-6	2-Methylnaphthalene	1,200	5,900
131-11-3	Dimethylphthalate	1,200	< 1,200 U
208-96-8	Acenaphthylene	1,200	2,100
83-32-9	Acenaphthene	1,200	5,500
132-64-9	Dibenzofuran	1,200	< 1,200 U
84-66-2	Diethylphthalate	1,200	< 1,200 U
86-73-7	Fluorene	1,200	5,000
85-01-8	Phenanthrene	1,200	28,000
86-74-8	Carbazole	1,200	< 1,200 U
120-12-7	Anthracene	1,200	4,800
84-74-2	Di-n-Butylphthalate	1,200	< 1,200 U
206-44-0	Fluoranthene	1,200	44,000
129-00-0	Pyrene	1,200	63,000
85-68-7	Butylbenzylphthalate	1,200	< 1,200 U
56-55-3	Benzo (a) anthracene	1,200	15,000
117-81-7	bis(2-Ethylhexyl)phthalate	1,200	< 1,200 U
218-01-9	Chrysene	1,200	19,000
117-84-0	Di-n-Octyl phthalate	1,200	< 1,200 U
205-99-2	Benzo (b) fluoranthene	1,200	13,000
207-08-9	Benzo (k) fluoranthene	1,200	13,000
50-32-8	Benzo (a) pyrene	1,200	24,000
193-39-5	Indeno (1,2,3-cd) pyrene	1,200	16,000
53-70-3	Dibenz (a,h) anthracene	1,200	2,900
191-24-2	Benzo (g,h,i) perylene	1,200	26,000
483-65-8	Retene	2,500	< 2,500 U
90-12-0	1-Methylnaphthalene	1,200	5,300

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	34.0%	2-Fluorobiphenyl	43.6%
d14-p-Terphenyl	56.0%	d4-1,2-Dichlorobenzene	D
d5-Phenol	31.2%	2-Fluorophenol	23.7%
2,4,6-Tribromophenol	32.0%	d4-2-Chlorophenol	D



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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP19-15  
SAMPLE

Lab Sample ID: PM91C  
LIMS ID: 09-20624  
Matrix: Soil  
Data Release Authorized: *AB*  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 15:31  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.05 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 22.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	62	< 62 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	44.0%	2-Fluorobiphenyl	50.4%
d14-p-Terphenyl	60.8%	d4-1,2-Dichlorobenzene	48.0%
d5-Phenol	45.1%	2-Fluorophenol	40.3%
2,4,6-Tribromophenol	52.5%	d4-2-Chlorophenol	41.1%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP19-11  
SAMPLE

Lab Sample ID: PM91E  
LIMS ID: 09-20626  
Matrix: Soil  
Data Release Authorized: *[Signature]*  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 16:06  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.03 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 16.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>62</b>	<b>68</b>
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>62</b>	<b>72</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>62</b>	<b>87</b>
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	62	< 62 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	50.8%	2-Fluorobiphenyl	61.2%
d14-p-Terphenyl	62.4%	d4-1,2-Dichlorobenzene	51.6%
d5-Phenol	49.1%	2-Fluorophenol	42.1%
2,4,6-Tribromophenol	64.8%	d4-2-Chlorophenol	45.1%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP20-6  
SAMPLE

Lab Sample ID: PM91F  
LIMS ID: 09-20627  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 16:41  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 9.01 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 17.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	56	< 56 U
95-48-7	2-Methylphenol	56	< 56 U
106-44-5	4-Methylphenol	56	< 56 U
105-67-9	2,4-Dimethylphenol	56	< 56 U
91-20-3	Naphthalene	56	< 56 U
91-57-6	2-Methylnaphthalene	56	< 56 U
131-11-3	Dimethylphthalate	56	< 56 U
208-96-8	Acenaphthylene	56	< 56 U
83-32-9	Acenaphthene	56	< 56 U
132-64-9	Dibenzofuran	56	< 56 U
84-66-2	Diethylphthalate	56	< 56 U
86-73-7	Fluorene	56	< 56 U
85-01-8	Phenanthrene	56	< 56 U
86-74-8	Carbazole	56	< 56 U
120-12-7	Anthracene	56	< 56 U
84-74-2	Di-n-Butylphthalate	56	< 56 U
206-44-0	Fluoranthene	56	< 56 U
129-00-0	Pyrene	56	< 56 U
85-68-7	Butylbenzylphthalate	56	< 56 U
56-55-3	Benzo(a)anthracene	56	< 56 U
117-81-7	bis(2-Ethylhexyl)phthalate	56	< 56 U
218-01-9	Chrysene	56	< 56 U
117-84-0	Di-n-Octyl phthalate	56	< 56 U
205-99-2	Benzo(b)fluoranthene	56	< 56 U
207-08-9	Benzo(k)fluoranthene	56	< 56 U
50-32-8	Benzo(a)pyrene	56	< 56 U
193-39-5	Indeno(1,2,3-cd)pyrene	56	< 56 U
53-70-3	Dibenz(a,h)anthracene	56	< 56 U
191-24-2	Benzo(g,h,i)perylene	56	< 56 U
483-65-8	Retene	110	< 110 U
90-12-0	1-Methylnaphthalene	56	< 56 U


Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	55.6%	2-Fluorobiphenyl	62.0%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	53.6%	2-Fluorophenol	49.3%
2,4,6-Tribromophenol	57.9%	d4-2-Chlorophenol	50.1%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP20-11  
SAMPLE

Lab Sample ID: PM91G  
LIMS ID: 09-20628  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 17:16  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.26 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 15.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
91-57-6	2-Methylnaphthalene	60	< 60 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
83-32-9	Acenaphthene	60	< 60 U
132-64-9	Dibenzofuran	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
86-73-7	Fluorene	60	< 60 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
205-99-2	Benzo(b)fluoranthene	60	< 60 U
207-08-9	Benzo(k)fluoranthene	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	60	< 60 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	52.0%	2-Fluorobiphenyl	63.6%
d14-p-Terphenyl	69.6%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	52.3%	2-Fluorophenol	45.9%
2,4,6-Tribromophenol	64.3%	d4-2-Chlorophenol	47.5%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP20-15  
SAMPLE

Lab Sample ID: PM91H  
LIMS ID: 09-20629  
Matrix: Soil  
Data Release Authorized. *AS*  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 17:51  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.01 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 30.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	62	< 62 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	48.4%	2-Fluorobiphenyl	54.4%
d14-p-Terphenyl	60.8%	d4-1,2-Dichlorobenzene	53.2%
d5-Phenol	48.3%	2-Fluorophenol	44.0%
2,4,6-Tribromophenol	56.3%	d4-2-Chlorophenol	44.8%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP21-4  
SAMPLE

Lab Sample ID: PM91I  
LIMS ID: 09-20630  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 18:26  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.60 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 16.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	66	< 66 U
95-48-7	2-Methylphenol	66	< 66 U
106-44-5	4-Methylphenol	66	< 66 U
105-67-9	2,4-Dimethylphenol	66	< 66 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>66</b>	<b>360</b>
91-57-6	2-Methylnaphthalene	66	< 66 U
131-11-3	Dimethylphthalate	66	< 66 U
208-96-8	Acenaphthylene	66	< 66 U
83-32-9	Acenaphthene	66	< 66 U
132-64-9	Dibenzofuran	66	< 66 U
84-66-2	Diethylphthalate	66	< 66 U
86-73-7	Fluorene	66	< 66 U
85-01-8	Phenanthrene	66	< 66 U
86-74-8	Carbazole	66	< 66 U
120-12-7	Anthracene	66	< 66 U
84-74-2	Di-n-Butylphthalate	66	< 66 U
206-44-0	Fluoranthene	66	< 66 U
129-00-0	Pyrene	66	< 66 U
85-68-7	Butylbenzylphthalate	66	< 66 U
56-55-3	Benzo(a)anthracene	66	< 66 U
117-81-7	bis(2-Ethylhexyl)phthalate	66	< 66 U
218-01-9	Chrysene	66	< 66 U
117-84-0	Di-n-Octyl phthalate	66	< 66 U
205-99-2	Benzo(b)fluoranthene	66	< 66 U
207-08-9	Benzo(k)fluoranthene	66	< 66 U
50-32-8	Benzo(a)pyrene	66	< 66 U
193-39-5	Indeno(1,2,3-cd)pyrene	66	< 66 U
53-70-3	Dibenz(a,h)anthracene	66	< 66 U
191-24-2	Benzo(g,h,i)perylene	66	< 66 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	66	< 66 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	50.0%	2-Fluorobiphenyl	55.6%
d14-p-Terphenyl	61.6%	d4-1,2-Dichlorobenzene	53.6%
d5-Phenol	49.3%	2-Fluorophenol	44.5%
2,4,6-Tribromophenol	56.8%	d4-2-Chlorophenol	45.6%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP21-7  
SAMPLE

Lab Sample ID: PM91J  
LIMS ID: 09-20631  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 19:01  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.04 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
91-57-6	2-Methylnaphthalene	62	< 62 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
83-32-9	Acenaphthene	62	< 62 U
132-64-9	Dibenzofuran	62	< 62 U
84-66-2	Diethylphthalate	62	< 62 U
86-73-7	Fluorene	62	< 62 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
<b>129-00-0</b>	<b>Pyrene</b>	<b>62</b>	<b>68</b>
85-68-7	Butylbenzylphthalate	62	< 62 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
205-99-2	Benzo(b)fluoranthene	62	< 62 U
207-08-9	Benzo(k)fluoranthene	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	62	< 62 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	46.8%	2-Fluorobiphenyl	52.0%
d14-p-Terphenyl	64.0%	d4-1,2-Dichlorobenzene	50.4%
d5-Phenol	47.2%	2-Fluorophenol	41.9%
2,4,6-Tribromophenol	60.3%	d4-2-Chlorophenol	42.9%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP21-11  
SAMPLE

Lab Sample ID: PM91K  
LIMS ID: 09-20632  
Matrix: Soil  
Data Release Authorized: *AS*  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 20:46  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.97 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 14.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
91-57-6	2-Methylnaphthalene	63	< 63 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
83-32-9	Acenaphthene	63	< 63 U
132-64-9	Dibenzofuran	63	< 63 U
84-66-2	Diethylphthalate	63	< 63 U
86-73-7	Fluorene	63	< 63 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
205-99-2	Benzo(b)fluoranthene	63	< 63 U
207-08-9	Benzo(k)fluoranthene	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	63	< 63 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	74.8%	2-Fluorobiphenyl	83.2%
d14-p-Terphenyl	96.8%	d4-1,2-Dichlorobenzene	82.0%
d5-Phenol	75.5%	2-Fluorophenol	65.9%
2,4,6-Tribromophenol	92.5%	d4-2-Chlorophenol	68.3%



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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP22-7  
SAMPLE

Lab Sample ID: PM91M  
LIMS ID: 09-20634  
Matrix: Soil  
Data Release Authorized:  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/10/09 00:16  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.22 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 19.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>61</b>	<b>2,100</b>
91-57-6	2-Methylnaphthalene	61	< 61 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>61</b>	<b>710</b>
132-64-9	Dibenzofuran	61	< 61 U
84-66-2	Diethylphthalate	61	< 61 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>61</b>	<b>120</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>61</b>	<b>120</b>
<b>86-74-8</b>	<b>Carbazole</b>	<b>61</b>	<b>96</b>
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>61</b>	<b>96</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>61</b>	<b>120</b>
85-68-7	Butylbenzylphthalate	61	< 61 U
56-55-3	Benzo(a)anthracene	61	< 61 U
<b>117-81-7</b>	<b>bis(2-Ethylhexyl)phthalate</b>	<b>61</b>	<b>160</b>
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
205-99-2	Benzo(b)fluoranthene	61	< 61 U
207-08-9	Benzo(k)fluoranthene	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
483-65-8	Retene	120	< 120 U
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>61</b>	<b>910</b>


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	110%	2-Fluorobiphenyl	126%
d14-p-Terphenyl	143%	d4-1,2-Dichlorobenzene	116%
d5-Phenol	111%	2-Fluorophenol	95.7%
2,4,6-Tribromophenol	145%	d4-2-Chlorophenol	100%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP22-7  
DILUTION

Lab Sample ID: PM91M  
LIMS ID: 09-20634  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/11/09 18:21  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.22 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 5.00  
Percent Moisture: 19.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	300	< 300 U
95-48-7	2-Methylphenol	300	< 300 U
106-44-5	4-Methylphenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	300	< 300 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>300</b>	<b>2,800</b>
91-57-6	2-Methylnaphthalene	300	< 300 U
131-11-3	Dimethylphthalate	300	< 300 U
208-96-8	Acenaphthylene	300	< 300 U
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>300</b>	<b>940</b>
132-64-9	Dibenzofuran	300	< 300 U
84-66-2	Diethylphthalate	300	< 300 U
86-73-7	Fluorene	300	< 300 U
85-01-8	Phenanthrene	300	< 300 U
86-74-8	Carbazole	300	< 300 U
120-12-7	Anthracene	300	< 300 U
84-74-2	Di-n-Butylphthalate	300	< 300 U
206-44-0	Fluoranthene	300	< 300 U
129-00-0	Pyrene	300	< 300 U
85-68-7	Butylbenzylphthalate	300	< 300 U
56-55-3	Benzo(a)anthracene	300	< 300 U
117-81-7	bis(2-Ethylhexyl)phthalate	300	< 300 U
218-01-9	Chrysene	300	< 300 U
117-84-0	Di-n-Octyl phthalate	300	< 300 U
205-99-2	Benzo(b)fluoranthene	300	< 300 U
207-08-9	Benzo(k)fluoranthene	300	< 300 U
50-32-8	Benzo(a)pyrene	300	< 300 U
193-39-5	Indeno(1,2,3-cd)pyrene	300	< 300 U
53-70-3	Dibenz(a,h)anthracene	300	< 300 U
191-24-2	Benzo(g,h,i)perylene	300	< 300 U
483-65-8	Retene	610	< 610 U
90-12-0	1-Methylnaphthalene	300	1,200


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	86.6%
d14-p-Terphenyl	84.4%	d4-1,2-Dichlorobenzene	68.4%
d5-Phenol	68.8%	2-Fluorophenol	57.7%
2,4,6-Tribromophenol	79.2%	d4-2-Chlorophenol	61.2%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP22-15  
SAMPLE

Lab Sample ID: PM910  
LIMS ID: 09-20636  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 21:22  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.89 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 14.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>63</b>	<b>120</b>
91-57-6	2-Methylnaphthalene	63	< 63 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
83-32-9	Acenaphthene	63	< 63 U
132-64-9	Dibenzofuran	63	< 63 U
84-66-2	Diethylphthalate	63	< 63 U
86-73-7	Fluorene	63	< 63 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>63</b>	<b>68</b>
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>63</b>	<b>88</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>63</b>	<b>120</b>
85-68-7	Butylbenzylphthalate	63	< 63 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
205-99-2	Benzo(b)fluoranthene	63	< 63 U
207-08-9	Benzo(k)fluoranthene	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	63	< 63 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	54.4%	2-Fluorobiphenyl	60.8%
d14-p-Terphenyl	69.2%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	54.9%	2-Fluorophenol	48.0%
2,4,6-Tribromophenol	67.2%	d4-2-Chlorophenol	50.1%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP23-8  
SAMPLE

Lab Sample ID: PM91P  
LIMS ID: 09-20637  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 21:56  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.45 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 18.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	59	< 59 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	48.4%	2-Fluorobiphenyl	52.0%
d14-p-Terphenyl	58.0%	d4-1,2-Dichlorobenzene	52.8%
d5-Phenol	48.5%	2-Fluorophenol	43.7%
2,4,6-Tribromophenol	54.1%	d4-2-Chlorophenol	44.8%

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Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP23-12  
DILUTION

Lab Sample ID: PM91Q  
LIMS ID: 09-20638  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/09/09  
Date Analyzed: 09/11/09 15:27  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: Yes

Sample Amount: 4.09 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 10.0  
Percent Moisture: 19.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1,200	< 1,200 U
95-48-7	2-Methylphenol	1,200	< 1,200 U
106-44-5	4-Methylphenol	1,200	< 1,200 U
105-67-9	2,4-Dimethylphenol	1,200	< 1,200 U
91-20-3	Naphthalene	1,200	4,400
91-57-6	2-Methylnaphthalene	1,200	1,500
131-11-3	Dimethylphthalate	1,200	< 1,200 U
208-96-8	Acenaphthylene	1,200	1,500
83-32-9	Acenaphthene	1,200	1,300
132-64-9	Dibenzofuran	1,200	< 1,200 U
84-66-2	Diethylphthalate	1,200	< 1,200 U
86-73-7	Fluorene	1,200	1,200
85-01-8	Phenanthrene	1,200	9,000
86-74-8	Carbazole	1,200	< 1,200 U
120-12-7	Anthracene	1,200	1,800
84-74-2	Di-n-Butylphthalate	1,200	< 1,200 U
206-44-0	Fluoranthene	1,200	21,000
129-00-0	Pyrene	1,200	32,000
85-68-7	Butylbenzylphthalate	1,200	< 1,200 U
56-55-3	Benzo (a) anthracene	1,200	7,900
117-81-7	bis(2-Ethylhexyl)phthalate	1,200	< 1,200 U
218-01-9	Chrysene	1,200	10,000
117-84-0	Di-n-Octyl phthalate	1,200	< 1,200 U
205-99-2	Benzo (b) fluoranthene	1,200	7,200
207-08-9	Benzo (k) fluoranthene	1,200	7,200
50-32-8	Benzo (a) pyrene	1,200	14,000
193-39-5	Indeno (1,2,3-cd) pyrene	1,200	8,800
53-70-3	Dibenz (a,h) anthracene	1,200	1,700
191-24-2	Benzo (g,h,i) perylene	1,200	14,000
483-65-8	Retene	2,400	< 2,400 U
90-12-0	1-Methylnaphthalene	1,200	1,500


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	46.0%	d4-1,2-Dichlorobenzene	D
d5-Phenol	27.5%	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP23-12  
SAMPLE

Lab Sample ID: PM91Q  
LIMS ID: 09-20638  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/09/09  
Date Analyzed: 09/11/09 12:00  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: Yes

Sample Amount: 4.09 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 19.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	120	< 120 U
95-48-7	2-Methylphenol	120	< 120 U
106-44-5	4-Methylphenol	120	< 120 U
105-67-9	2,4-Dimethylphenol	120	< 120 U
91-20-3	Naphthalene	120	4,400
91-57-6	2-Methylnaphthalene	120	1,500
131-11-3	Dimethylphthalate	120	< 120 U
208-96-8	Acenaphthylene	120	1,700
83-32-9	Acenaphthene	120	1,400
132-64-9	Dibenzofuran	120	190
84-66-2	Diethylphthalate	120	< 120 U
86-73-7	Fluorene	120	1,400
85-01-8	Phenanthrene	120	9,500
86-74-8	Carbazole	120	240
120-12-7	Anthracene	120	2,000
84-74-2	Di-n-Butylphthalate	120	< 120 U
206-44-0	Fluoranthene	120	20,000 E
129-00-0	Pyrene	120	28,000 ES
85-68-7	Butylbenzylphthalate	120	< 120 U
56-55-3	Benzo (a) anthracene	120	7,100
117-81-7	bis(2-Ethylhexyl)phthalate	120	< 120 U
218-01-9	Chrysene	120	9,800
117-84-0	Di-n-Octyl phthalate	120	< 120 U
205-99-2	Benzo (b) fluoranthene	120	7,700
207-08-9	Benzo (k) fluoranthene	120	7,700
50-32-8	Benzo (a) pyrene	120	14,000 E
193-39-5	Indeno (1,2,3-cd) pyrene	120	8,500
53-70-3	Dibenz (a, h) anthracene	120	2,100
191-24-2	Benzo (g, h, i) perylene	120	13,000 E
483-65-8	Retene	240	< 240 U
90-12-0	1-Methylnaphthalene	120	1,500

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	31.1%	2-Fluorobiphenyl	38.9%
d14-p-Terphenyl	32.1%	d4-1,2-Dichlorobenzene	31.0%
d5-Phenol	28.8%	2-Fluorophenol	23.4%
2,4,6-Tribromophenol	34.1%	d4-2-Chlorophenol	26.3%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP23-15  
SAMPLE

Lab Sample ID: PM91R  
LIMS ID: 09-20639  
Matrix: Soil  
Data Release Authorized: *AB*  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 22:31  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.89 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 40.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
91-57-6	2-Methylnaphthalene	63	< 63 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
83-32-9	Acenaphthene	63	< 63 U
132-64-9	Dibenzofuran	63	< 63 U
84-66-2	Diethylphthalate	63	< 63 U
86-73-7	Fluorene	63	< 63 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
205-99-2	Benzo(b)fluoranthene	63	< 63 U
207-08-9	Benzo(k)fluoranthene	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	63	< 63 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	48.0%	2-Fluorobiphenyl	55.6%
d14-p-Terphenyl	57.6%	d4-1,2-Dichlorobenzene	52.8%
d5-Phenol	46.9%	2-Fluorophenol	42.4%
2,4,6-Tribromophenol	57.1%	d4-2-Chlorophenol	44.3%

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP24-10  
SAMPLE

Lab Sample ID: PM91S  
LIMS ID: 09-20640  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 23:06  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.81 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 17.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	57	< 57 U
95-48-7	2-Methylphenol	57	< 57 U
106-44-5	4-Methylphenol	57	< 57 U
105-67-9	2,4-Dimethylphenol	57	< 57 U
91-20-3	Naphthalene	57	< 57 U
91-57-6	2-Methylnaphthalene	57	< 57 U
131-11-3	Dimethylphthalate	57	< 57 U
208-96-8	Acenaphthylene	57	< 57 U
83-32-9	Acenaphthene	57	< 57 U
132-64-9	Dibenzofuran	57	< 57 U
84-66-2	Diethylphthalate	57	< 57 U
86-73-7	Fluorene	57	< 57 U
85-01-8	Phenanthrene	57	< 57 U
86-74-8	Carbazole	57	< 57 U
120-12-7	Anthracene	57	< 57 U
84-74-2	Di-n-Butylphthalate	57	< 57 U
206-44-0	Fluoranthene	57	< 57 U
129-00-0	Pyrene	57	< 57 U
85-68-7	Butylbenzylphthalate	57	< 57 U
56-55-3	Benzo(a)anthracene	57	< 57 U
117-81-7	bis(2-Ethylhexyl)phthalate	57	< 57 U
218-01-9	Chrysene	57	< 57 U
117-84-0	Di-n-Octyl phthalate	57	< 57 U
205-99-2	Benzo(b)fluoranthene	57	< 57 U
207-08-9	Benzo(k)fluoranthene	57	< 57 U
50-32-8	Benzo(a)pyrene	57	< 57 U
193-39-5	Indeno(1,2,3-cd)pyrene	57	< 57 U
53-70-3	Dibenz(a,h)anthracene	57	< 57 U
191-24-2	Benzo(g,h,i)perylene	57	< 57 U
483-65-8	Retene	110	< 110 U
90-12-0	1-Methylnaphthalene	57	< 57 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	48.0%	2-Fluorobiphenyl	53.6%
d14-p-Terphenyl	61.2%	d4-1,2-Dichlorobenzene	51.6%
d5-Phenol	46.7%	2-Fluorophenol	42.4%
2,4,6-Tribromophenol	53.6%	d4-2-Chlorophenol	43.7%



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP24-15  
SAMPLE

Lab Sample ID: PM91T  
LIMS ID: 09-20641  
Matrix: Soil  
Data Release Authorized:  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 23:41  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.36 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 22.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
91-57-6	2-Methylnaphthalene	60	< 60 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
83-32-9	Acenaphthene	60	< 60 U
132-64-9	Dibenzofuran	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
86-73-7	Fluorene	60	< 60 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
205-99-2	Benzo(b)fluoranthene	60	< 60 U
207-08-9	Benzo(k)fluoranthene	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	60	< 60 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	43.6%	2-Fluorobiphenyl	48.8%
d14-p-Terphenyl	51.2%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	44.3%	2-Fluorophenol	41.6%
2,4,6-Tribromophenol	46.1%	d4-2-Chlorophenol	41.6%

**SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
DOF-TP19-7	49.2%	56.8%	66.4%	52.0%	49.6%	43.2%	63.7%	45.3%	0	
MB-090909	64.8%	74.4%	91.2%	67.2%	63.7%	55.7%	79.2%	57.9%	0	
LCS-090909	70.8%	80.0%	93.2%	73.6%	70.7%	58.9%	83.5%	60.8%	0	
LCSD-090909	70.0%	76.8%	86.4%	70.0%	67.7%	55.5%	79.7%	58.9%	0	
DOF-TP19-9	33.6%	43.6%	34.0%	34.7%*	33.3%	23.7%	39.2%	28.0%*	2	
DOF-TP19-9 DL	34.0%	43.6%	56.0%	D	31.2%	23.7%	32.0%	D	0	
DOF-TP19-15	44.0%	50.4%	60.8%	48.0%	45.1%	40.3%	52.5%	41.1%	0	
DOF-TP19-11	50.8%	61.2%	62.4%	51.6%	49.1%	42.1%	64.8%	45.1%	0	
DOF-TP20-6	55.6%	62.0%	70.4%	59.6%	53.6%	49.3%	57.9%	50.1%	0	
DOF-TP20-11	52.0%	63.6%	69.6%	54.8%	52.3%	45.9%	64.3%	47.5%	0	
DOF-TP20-15	48.4%	54.4%	60.8%	53.2%	48.3%	44.0%	56.3%	44.8%	0	
DOF-TP21-4	50.0%	55.6%	61.6%	53.6%	49.3%	44.5%	56.8%	45.6%	0	
MB-090709	61.2%	68.8%	82.4%	64.4%	61.3%	54.1%	66.1%	55.2%	0	
LCS-090709	64.0%	70.4%	78.8%	68.8%	65.1%	56.8%	72.3%	57.1%	0	
DOF-TP21-7	46.8%	52.0%	64.0%	50.4%	47.2%	41.9%	60.3%	42.9%	0	
DOF-TP21-7 MS	64.0%	68.4%	70.4%	68.4%	64.5%	55.2%	72.0%	56.3%	0	
DOF-TP21-7 MSD	60.4%	64.4%	71.2%	64.0%	62.7%	52.5%	71.5%	54.1%	0	
DOF-TP21-11	74.8%	83.2%	96.8%	82.0%	75.5%	65.9%	92.5%	68.3%	0	
DOF-TP22-7	110%*	126%*	143%*	116%*	111%	95.7%	145%*	100%	5	
DOF-TP22-7 DL	69.6%	86.6%	84.4%	68.4%	68.8%	57.7%	79.2%	61.2%	0	
DOF-TP22-15	54.4%	60.8%	69.2%	58.8%	54.9%	48.0%	67.2%	50.1%	0	
DOF-TP23-8	48.4%	52.0%	58.0%	52.8%	48.5%	43.7%	54.1%	44.8%	0	
DOF-TP23-12	31.1%*	38.9%*	32.1%	31.0%*	28.8%	23.4%	34.1%	26.3%*	4	
DOF-TP23-12 DL	D	D	46.0%	D	27.5%	D	D	D	0	
DOF-TP23-15	48.0%	55.6%	57.6%	52.8%	46.9%	42.4%	57.1%	44.3%	0	
DOF-TP24-10	48.0%	53.6%	61.2%	51.6%	46.7%	42.4%	53.6%	43.7%	0	
DOF-TP24-15	43.6%	48.8%	51.2%	50.0%	44.3%	41.6%	46.1%	41.6%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-102)	(32-106)
(FBP) = 2-Fluorobiphenyl	(51-105)	(39-107)
(TPH) = d14-p-Terphenyl	(55-124)	(31-130)
(DCB) = d4-1,2-Dichlorobenzene	(48-104)	(38-102)
(PHL) = d5-Phenol	(44-110)	(27-112)
(2FP) = 2-Fluorophenol	(38-112)	(22-108)
(TBP) = 2,4,6-Tribromophenol	(54-120)	(31-131)
(2CP) = d4-2-Chlorophenol	(50-103)	(36-104)

Prep Method: SW3546  
Log Number Range: 09-20622 to 09-20641

FORM-II SW8270

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP21-7  
MS/MSD

Lab Sample ID: PM91J  
LIMS ID: 09-20631  
Matrix: Soil  
Data Release Authorized:  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted MS/MSD: 09/07/09  
Date Analyzed MS: 09/09/09 19:36  
MSD: 09/09/09 20:11  
Instrument/Analyst MS: NT6/JZ  
MSD: NT6/JZ  
GPC Cleanup: NO


Sample Amount MS: 8.25 g-dry-wt  
MSD: 8.49 g-dry-wt  
Final Extract Volume MS: 0.5 mL  
MSD: 0.5 mL  
Dilution Factor MS: 1.00  
MSD: 1.00  
Percent Moisture: 11.0 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 62.2 U	887	1520	58.4%	832	1470	56.6%	6.4%
2-Methylphenol	< 62.2 U	927	1520	61.0%	875	1470	59.5%	5.8%
4-Methylphenol	< 62.2 U	1960	3030	64.7%	1860	2940	63.3%	5.2%
2,4-Dimethylphenol	< 62.2 U	868	1520	57.1%	828	1470	56.3%	4.7%
Naphthalene	< 62.2 U	1050	1520	69.1%	1000	1470	68.0%	4.9%
2-Methylnaphthalene	< 62.2 U	1060	1520	69.7%	1010	1470	68.7%	4.8%
Dimethylphthalate	< 62.2 U	1020	1520	67.1%	955	1470	65.0%	6.6%
Acenaphthylene	< 62.2 U	1030	1520	67.8%	951	1470	64.7%	8.0%
Acenaphthene	< 62.2 U	1040	1520	68.4%	976	1470	66.4%	6.3%
Dibenzofuran	< 62.2 U	1010	1520	66.4%	946	1470	64.4%	6.5%
Diethylphthalate	< 62.2 U	1100	1520	72.4%	1030	1470	70.1%	6.6%
Fluorene	< 62.2 U	1030	1520	67.8%	980	1470	66.7%	5.0%
Phenanthrene	< 62.2 U	1040	1520	68.4%	980	1470	66.7%	5.9%
Carbazole	< 62.2 U	1070	1520	70.4%	1030	1470	70.1%	3.8%
Anthracene	< 62.2 U	1010	1520	66.4%	953	1470	64.8%	5.8%
Di-n-Butylphthalate	< 62.2 U	1110	1520	73.0%	1060	1470	72.1%	4.6%
Fluoranthene	< 62.2 U	1100	1520	72.4%	1140	1470	77.6%	3.6%
Pyrene	67.8	1160	1520	71.9%	1230	1470	79.1%	5.9%
Butylbenzylphthalate	< 62.2 U	943	1520	62.0%	916	1470	62.3%	2.9%
Benzo(a)anthracene	< 62.2 U	986	1520	64.9%	918	1470	62.4%	7.1%
bis(2-Ethylhexyl)phthalate	< 62.2 U	1020	1520	67.1%	1010	1470	68.7%	1.0%
Chrysene	< 62.2 U	1060	1520	69.7%	1020	1470	69.4%	3.8%
Di-n-Octyl phthalate	< 62.2 U	979	1520	64.4%	931	1470	63.3%	5.0%
Benzo(b)fluoranthene	< 62.2 U	1030	1520	67.8%	1020	1470	69.4%	1.0%
Benzo(k)fluoranthene	< 62.2 U	1030	1520	67.8%	858	1470	58.4%	18.2%
Benzo(a)pyrene	< 62.2 U	952	1520	62.6%	907	1470	61.7%	4.8%
Indeno(1,2,3-cd)pyrene	< 62.2 U	807	1520	53.1%	723	1470	49.2%	11.0%
Dibenz(a,h)anthracene	< 62.2 U	931	1520	61.2%	856	1470	58.2%	8.4%
Benzo(g,h,i)perylene	< 62.2 U	932	1520	61.3%	886	1470	60.3%	5.1%
Retene	< 124 U	993	1520	65.3%	965	1470	65.6%	2.9%
1-Methylnaphthalene	< 62.2 U	1040	1520	68.4%	979	1470	66.6%	6.0%

Results reported in µg/kg  
RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-TP21-7  
MATRIX SPIKE

Lab Sample ID: PM91J  
LIMS ID: 09-20631  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 19:36  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.25 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	---
95-48-7	2-Methylphenol	61	---
106-44-5	4-Methylphenol	61	---
105-67-9	2,4-Dimethylphenol	61	---
91-20-3	Naphthalene	61	---
91-57-6	2-Methylnaphthalene	61	---
131-11-3	Dimethylphthalate	61	---
208-96-8	Acenaphthylene	61	---
83-32-9	Acenaphthene	61	---
132-64-9	Dibenzofuran	61	---
84-66-2	Diethylphthalate	61	---
86-73-7	Fluorene	61	---
85-01-8	Phenanthrene	61	---
86-74-8	Carbazole	61	---
120-12-7	Anthracene	61	---
84-74-2	Di-n-Butylphthalate	61	---
206-44-0	Fluoranthene	61	---
129-00-0	Pyrene	61	---
85-68-7	Butylbenzylphthalate	61	---
56-55-3	Benzo(a)anthracene	61	---
117-81-7	bis(2-Ethylhexyl)phthalate	61	---
218-01-9	Chrysene	61	---
117-84-0	Di-n-Octyl phthalate	61	---
205-99-2	Benzo(b)fluoranthene	61	---
207-08-9	Benzo(k)fluoranthene	61	---
50-32-8	Benzo(a)pyrene	61	---
193-39-5	Indeno(1,2,3-cd)pyrene	61	---
53-70-3	Dibenz(a,h)anthracene	61	---
191-24-2	Benzo(g,h,i)perylene	61	---
483-65-8	Retene	120	---
90-12-0	1-Methylnaphthalene	61	---

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	68.4%
d5-Phenol	64.5%	2-Fluorophenol	55.2%
2,4,6-Tribromophenol	72.0%	d4-2-Chlorophenol	56.3%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-TP21-7  
MATRIX SPIKE DUPLICATE

Lab Sample ID: PM91J  
LIMS ID: 09-20631  
Matrix: Soil  
Data Release Authorized: *B*  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 20:11  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.49 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	---
95-48-7	2-Methylphenol	59	---
106-44-5	4-Methylphenol	59	---
105-67-9	2,4-Dimethylphenol	59	---
91-20-3	Naphthalene	59	---
91-57-6	2-Methylnaphthalene	59	---
131-11-3	Dimethylphthalate	59	---
208-96-8	Acenaphthylene	59	---
83-32-9	Acenaphthene	59	---
132-64-9	Dibenzofuran	59	---
84-66-2	Diethylphthalate	59	---
86-73-7	Fluorene	59	---
85-01-8	Phenanthrene	59	---
86-74-8	Carbazole	59	---
120-12-7	Anthracene	59	---
84-74-2	Di-n-Butylphthalate	59	---
206-44-0	Fluoranthene	59	---
129-00-0	Pyrene	59	---
85-68-7	Butylbenzylphthalate	59	---
56-55-3	Benzo(a)anthracene	59	---
117-81-7	bis(2-Ethylhexyl)phthalate	59	---
218-01-9	Chrysene	59	---
117-84-0	Di-n-Octyl phthalate	59	---
205-99-2	Benzo(b)fluoranthene	59	---
207-08-9	Benzo(k)fluoranthene	59	---
50-32-8	Benzo(a)pyrene	59	---
193-39-5	Indeno(1,2,3-cd)pyrene	59	---
53-70-3	Dibenz(a,h)anthracene	59	---
191-24-2	Benzo(g,h,i)perylene	59	---
483-65-8	Retene	120	---
90-12-0	1-Methylnaphthalene	59	---


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	60.4%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	71.2%	d4-1,2-Dichlorobenzene	64.0%
d5-Phenol	62.7%	2-Fluorophenol	52.5%
2,4,6-Tribromophenol	71.5%	d4-2-Chlorophenol	54.1%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: LCS-090709  
LAB CONTROL

Lab Sample ID: LCS-090709  
LIMS ID: 09-20631  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 14:21  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: NO

Sample Amount: 7.50 g  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	978	1670	58.6%
2-Methylphenol	1000	1670	59.9%
4-Methylphenol	2100	3330	63.1%
2,4-Dimethylphenol	871	1670	52.2%
Naphthalene	1070	1670	64.1%
2-Methylnaphthalene	1130	1670	67.7%
Dimethylphthalate	1110	1670	66.5%
Acenaphthylene	1120	1670	67.1%
Acenaphthene	1130	1670	67.7%
Dibenzofuran	1090	1670	65.3%
Diethylphthalate	1160	1670	69.5%
Fluorene	1110	1670	66.5%
Phenanthrene	1120	1670	67.1%
Carbazole	1140	1670	68.3%
Anthracene	1090	1670	65.3%
Di-n-Butylphthalate	1200	1670	71.9%
Fluoranthene	1140	1670	68.3%
Pyrene	1150	1670	68.9%
Butylbenzylphthalate	1100	1670	65.9%
Benzo(a)anthracene	1070	1670	64.1%
bis(2-Ethylhexyl)phthalate	1190	1670	71.3%
Chrysene	1100	1670	65.9%
Di-n-Octyl phthalate	1060	1670	63.5%
Benzo(b)fluoranthene	1150	1670	68.9%
Benzo(k)fluoranthene	1060	1670	63.5%
Benzo(a)pyrene	1050	1670	62.9%
Indeno(1,2,3-cd)pyrene	957	1670	57.3%
Dibenz(a,h)anthracene	1090	1670	65.3%
Benzo(g,h,i)perylene	1140	1670	68.3%
Retene	1170	1670	70.1%
1-Methylnaphthalene	1100	1670	65.9%

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	64.0%
2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	78.8%
d4-1,2-Dichlorobenzene	68.8%
d5-Phenol	65.1%
2-Fluorophenol	56.8%
2,4,6-Tribromophenol	72.3%
d4-2-Chlorophenol	57.1%

Results reported in µg/kg

FORM III

PM91 : 00053

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by SW8270D GC/MS  
Page 1 of 2

Sample ID: LCS-090909  
LCS/LCSD

Lab Sample ID: LCS-090909  
LIMS ID: 09-20623  
Matrix: Soil  
Data Release Authorized: *[Signature]*  
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Date Extracted LCS/LCSD: 09/09/09

Sample Amount LCS: 7.50 g  
LCSD: 7.50 g

Date Analyzed LCS: 09/11/09 10:15  
LCSD: 09/11/09 10:50

Final Extract Volume LCS: 0.5 mL  
LCSD: 0.5 mL

Instrument/Analyst LCS: NT6/JZ  
LCSD: NT6/JZ

Dilution Factor LCS: 1.00  
LCSD: 1.00

GPC Cleanup: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	1050	1670	62.9%	1010	1670	60.5%	3.9%
2-Methylphenol	1060	1670	63.5%	1020	1670	61.1%	3.8%
4-Methylphenol	2230	3330	67.0%	2220	3330	66.7%	0.4%
2,4-Dimethylphenol	891	1670	53.4%	883	1670	52.9%	0.9%
Naphthalene	1160	1670	69.5%	1180	1670	70.7%	1.7%
2-Methylnaphthalene	1230	1670	73.7%	1250	1670	74.9%	1.6%
Dimethylphthalate	1310	1670	78.4%	1290	1670	77.2%	1.5%
Acenaphthylene	1250	1670	74.9%	1250	1670	74.9%	0.0%
Acenaphthene	1300	1670	77.8%	1310	1670	78.4%	0.8%
Dibenzofuran	1260	1670	75.4%	1240	1670	74.3%	1.6%
Diethylphthalate	1380	1670	82.6%	1370	1670	82.0%	0.7%
Fluorene	1270	1670	76.0%	1270	1670	76.0%	0.0%
Phenanthrene	1290	1670	77.2%	1300	1670	77.8%	0.8%
Carbazole	1320	1670	79.0%	1340	1670	80.2%	1.5%
Anthracene	1260	1670	75.4%	1270	1670	76.0%	0.8%
Di-n-Butylphthalate	1420	1670	85.0%	1410	1670	84.4%	0.7%
Fluoranthene	1390	1670	83.2%	1410	1670	84.4%	1.4%
Pyrene	1340	1670	80.2%	1370	1670	82.0%	2.2%
Butylbenzylphthalate	1280	1670	76.6%	1250	1670	74.9%	2.4%
Benzo(a)anthracene	1270	1670	76.0%	1270	1670	76.0%	0.0%
bis(2-Ethylhexyl)phthalate	1470	1670	88.0%	1450	1670	86.8%	1.4%
Chrysene	1390	1670	83.2%	1350	1670	80.8%	2.9%
Di-n-Octyl phthalate	1340	1670	80.2%	1330	1670	79.6%	0.7%
Benzo(b)fluoranthene	1420	1670	85.0%	1310	1670	78.4%	8.1%
Benzo(k)fluoranthene	1420	1670	85.0%	1320	1670	79.0%	7.3%
Benzo(a)pyrene	1290	1670	77.2%	1290	1670	77.2%	0.0%
Indeno(1,2,3-cd)pyrene	1170	1670	70.1%	1180	1670	70.7%	0.9%
Dibenz(a,h)anthracene	1340	1670	80.2%	1330	1670	79.6%	0.7%
Benzo(g,h,i)perylene	1430	1670	85.6%	1400	1670	83.8%	2.1%
Retene	1370	1670	82.0%	1310	1670	78.4%	4.5%
1-Methylnaphthalene	1180	1670	70.7%	1190	1670	71.3%	0.8%

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by SW8270D GC/MS  
Page 2 of 2

Sample ID: LCSD-090909  
LCS/LCSD

Lab Sample ID: LCS-090909  
LIMS ID: 09-20623  
Matrix: Soil  
Date Analyzed LCS: 09/11/09 10:15  
LCSD: 09/11/09 10:50

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00

Analyte	Spike		LCS	LCS	Spike		LCS	RPD
	LCS	Added-LCS	Recovery		Added-LCSD	Recovery		

**Semivolatile Surrogate Recovery**


	LCS	LCSD
d5-Nitrobenzene	70.8%	70.0%
2-Fluorobiphenyl	80.0%	76.8%
d14-p-Terphenyl	93.2%	86.4%
d4-1,2-Dichlorobenzene	73.6%	70.0%
d5-Phenol	70.7%	67.7%
2-Fluorophenol	58.9%	55.5%
2,4,6-Tribromophenol	83.5%	79.7%
d4-2-Chlorophenol	60.8%	58.9%

Results reported in µg/kg  
RPD calculated using sample concentrations per SW846.



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: MB-090709  
METHOD BLANK

Lab Sample ID: MB-090709  
LIMS ID: 09-20631  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: NA  
Date Received: NA

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 13:46  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.50 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	67	< 67 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	82.4%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	61.3%	2-Fluorophenol	54.1%
2,4,6-Tribromophenol	66.1%	d4-2-Chlorophenol	55.2%

ORGANICS ANALYSIS DATA SHEET  
 Semivolatiles by SW8270D GC/MS  
 Page 1 of 1



Sample ID: MB-090909  
 METHOD BLANK

Lab Sample ID: MB-090909  
 LIMS ID: 09-20623  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek  
 PSE-004-00  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 09/09/09  
 Date Analyzed: 09/11/09 09:41  
 Instrument/Analyst: NT6/JZ  
 GPC Cleanup: Yes

Sample Amount: 7.50 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	67	< 67 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	64.8%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	91.2%	d4-1,2-Dichlorobenzene	67.2%
d5-Phenol	63.7%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	79.2%	d4-2-Chlorophenol	57.9%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Matrix: Soil

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

Event: PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Data Release Authorized: *B*

Reported: 09/14/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-091009 09-20622	Method Blank	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.0 U --- 92.4% 94.0%
PM91A 09-20622	DOF-TP19-7	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.8 U --- 107% 108%
PM91B 09-20623	DOF-TP19-9	09/10/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>48</b> GRO 105% 107%
PM91C 09-20624	DOF-TP19-15	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 9.1 U --- 112% 110%
PM91E 09-20626	DOF-TP19-11	09/10/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>18</b> GRO 105% 104%
PM91F 09-20627	DOF-TP20-6	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.9 U --- 122% 123%
PM91G 09-20628	DOF-TP20-11	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.5 U --- 108% 109%
PM91H 09-20629	DOF-TP20-15	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 11 U --- 117% 117%
PM91I 09-20630	DOF-TP21-4	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.6 U --- 110% 110%
PM91J 09-20631	DOF-TP21-7	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.7 U --- 97.3% 97.5%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Matrix: Soil

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

Event: PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Data Release Authorized: *MS*  
Reported: 09/14/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
PM91K 09-20632	DOF-TP21-11	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.1 U --- 102% 102%
PM91M 09-20634	DOF-TP22-7	09/10/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>11</b> GRO 116% 116%
PM91O 09-20636	DOF-TP22-15	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.5 U --- 98.9% 98.8%
PM91P 09-20637	DOF-TP23-8	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 8.2 U --- 109% 112%
PM91Q 09-20638	DOF-TP23-12	09/10/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>43</b> GRO 102% 104%
PM91R 09-20639	DOF-TP23-15	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 15 U --- 116% 121%
PM91S 09-20640	DOF-TP24-10	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.9 U --- 112% 114%
PM91T 09-20641	DOF-TP24-15	09/10/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 9.2 U --- 99.9% 101%

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MH  
9/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a006.d      ARI ID: MB0910  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a006.d      Client ID:  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m            Injection Date: 10-SEP-2009 09:31  
Instrument: pid3.i                                        Matrix: WATER  
Gas Ical Date: 22-JUN-2009                            Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.425	0.028	6890	80742	92.4	TFT (Surr)
14.914	0.021	4073	33429	94.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	2303	0.003
8015B 2MP-TMB ( 4.89 to 15.58)	2123	0.002
AKGas nC6-nC10 ( 5.38 to 14.54)	1080	0.001
NWGas Tol-Nap (10.17 to 18.19)	2303	0.003

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.423	0.029	22660	95.5	TFT (Surr)
14.912	0.022	46267	95.5	BB (Surr)

AROMATICS (PID)

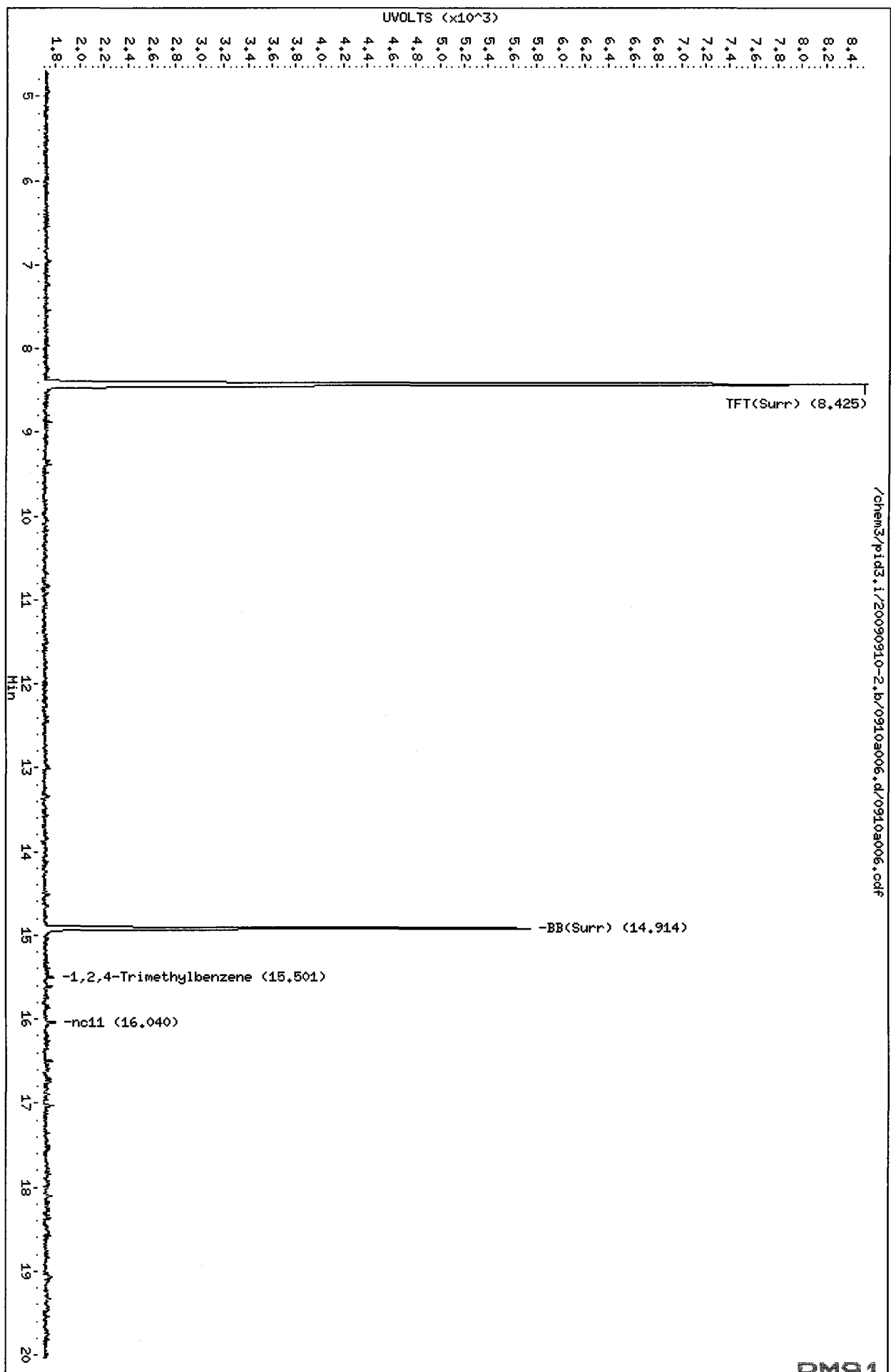
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090910-2.b/0910a006.d  
Date: 10-SEP-2009 09:31  
Client ID:  
Sample Info: HB0910  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20090910-2.b/0910a006.d/0910a006.cdf



MH  
9/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a012.d      ARI ID: PM91B  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a012.d      Client ID: DOF-TP19-9  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m              Injection Date: 10-SEP-2009 13:48  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.425	0.028	6255	73956	83.8	TFT(Surr)
14.914	0.020	3678	30547	84.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	187386	0.271
8015B 2MP-TMB ( 4.89 to 15.58)	43653	0.032
AKGas nC6-nC10 ( 5.38 to 14.54)	12648	0.011
NWGas Tol-Nap (10.17 to 18.19)	497892	0.682

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.423	0.028	20341	85.7	TFT(Surr)
14.912	0.022	41211	85.0	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
12.839	0.032	476	0.37	Ethylbenzene
ND	---	---	---	M/P-Xylene
13.763	-0.004	442	0.32	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090910-2.b/0910a012.d

Date: 10-SEP-2009 13:48

Client ID: DDF-TP19-9

Sample Info: PM91B

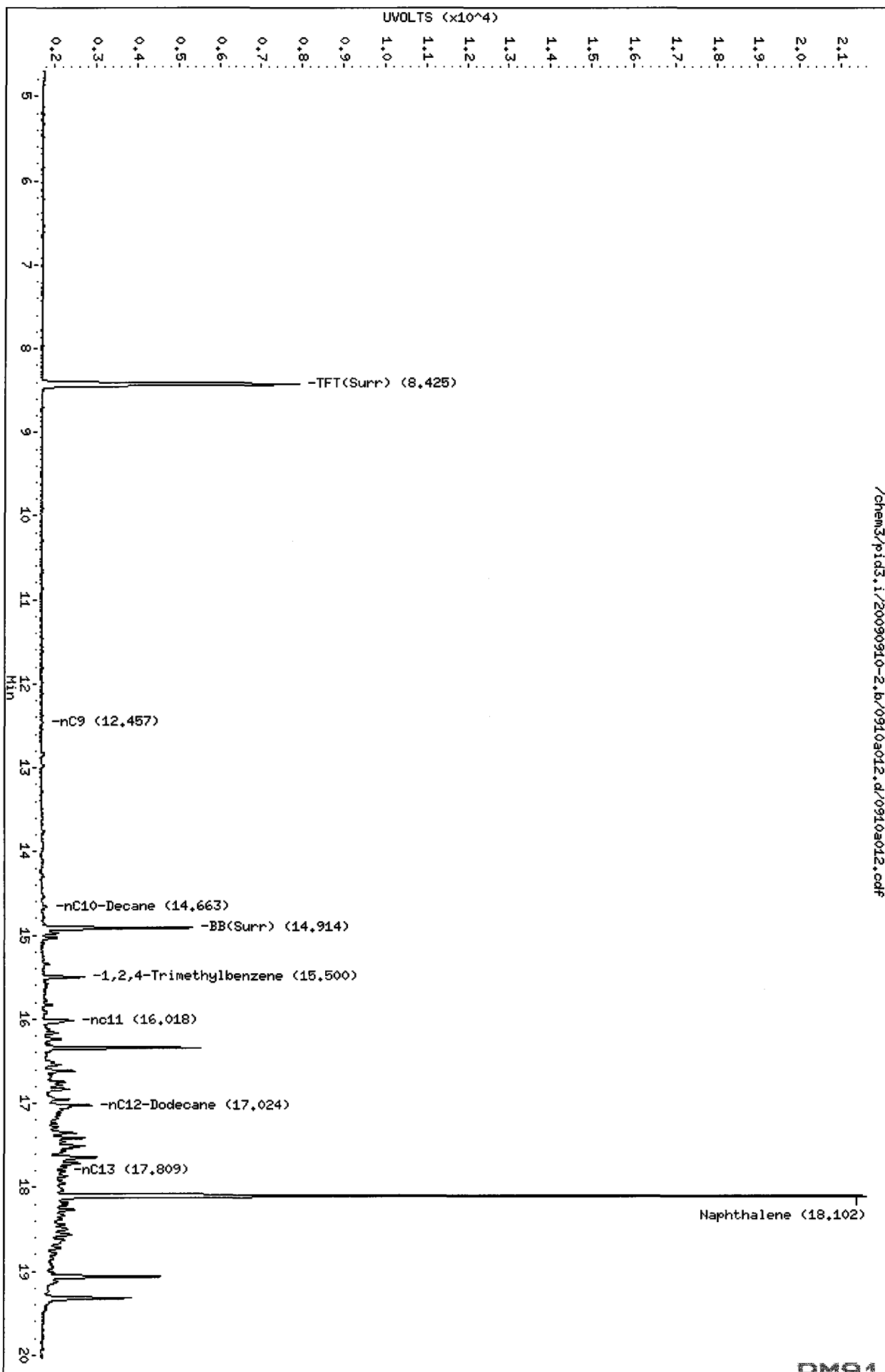
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

/chem3/pid3.i/20090910-2.b/0910a012.d/0910a012.cdf





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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a009.d      ARI ID: PM91E  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a009.d      Client ID: DOF-TP19-11  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m              Injection Date: 10-SEP-2009 12:35  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.413	0.016	5866	69791	78.6	TFT(Surr)
14.905	0.012	3357	27870	77.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	77640	0.112
8015B 2MP-TMB ( 4.89 to 15.58)	16652	0.012
AKGas nC6-nC10 ( 5.38 to 14.54)	3079	0.003
NWGas Tol-Nap (10.17 to 18.19)	162753	0.223

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.412	0.017	19110	80.5	TFT(Surr)
14.904	0.013	38432	79.3	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090910-2.b/0910a009.d

Date : 10-SEP-2009 12:35

Client ID: DDF-TP19-11

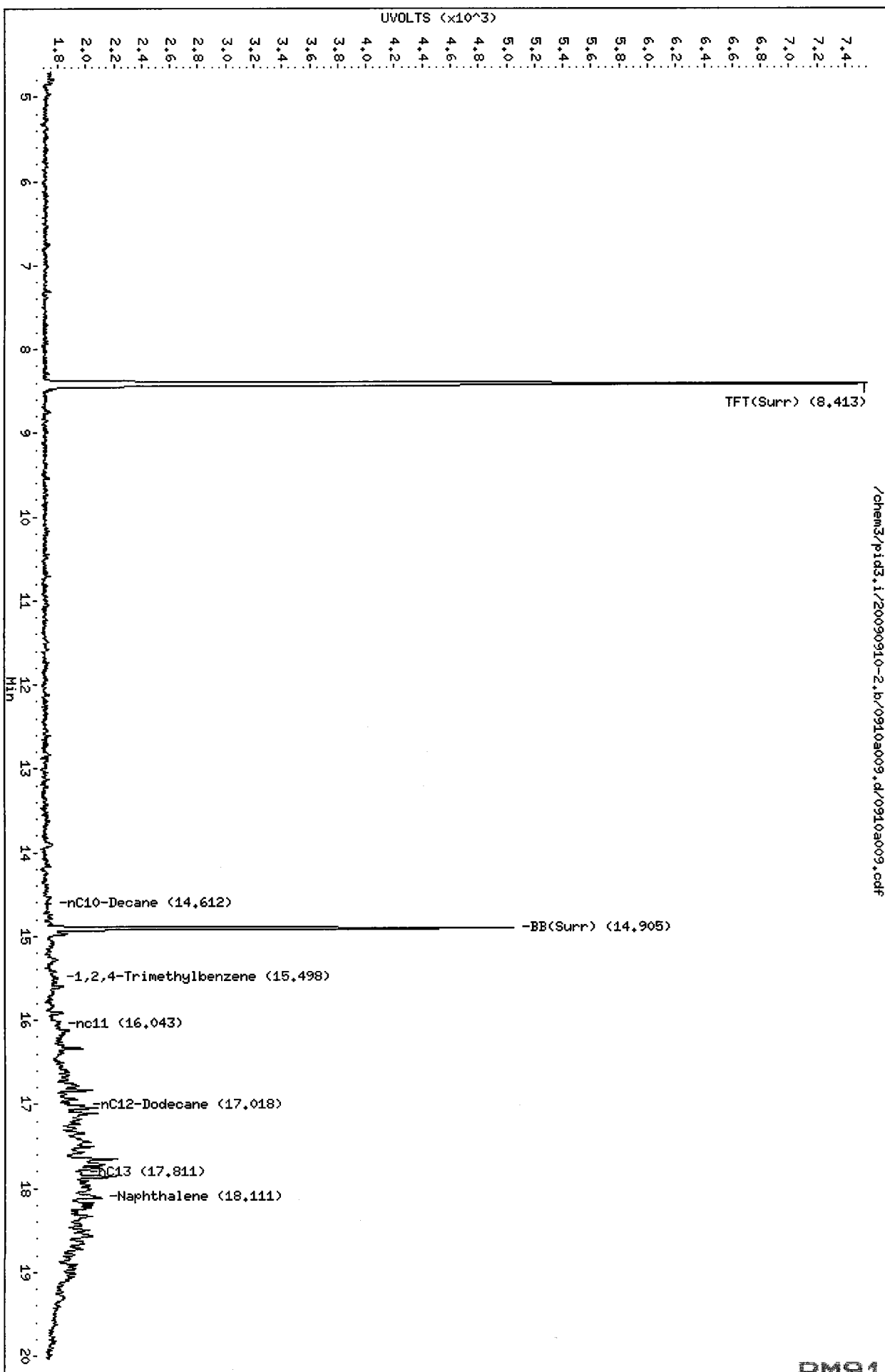
Sample Info: PM91E

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



MT  
9/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a019.d      ARI ID: PM91M  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a019.d      Client ID: DOF-TP22-7  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m              Injection Date: 10-SEP-2009 16:40  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.427	0.030	6208	72671	83.2	TFT (Surr)
14.915	0.022	3615	29223	83.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	60994	0.088
8015B 2MP-TMB ( 4.89 to 15.58)	11601	0.008
AKGas nC6-nC10 ( 5.38 to 14.54)	2461	0.002
NWGas Tol-Nap (10.17 to 18.19)	95788	0.131

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.425	0.030	20180	85.0	TFT (Surr)
14.913	0.023	40897	84.4	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090910-2.b/0910a019.d

Date : 10-SEP-2009 16:40

Client ID: DOF-TP22-7

Sample Info: PM91M

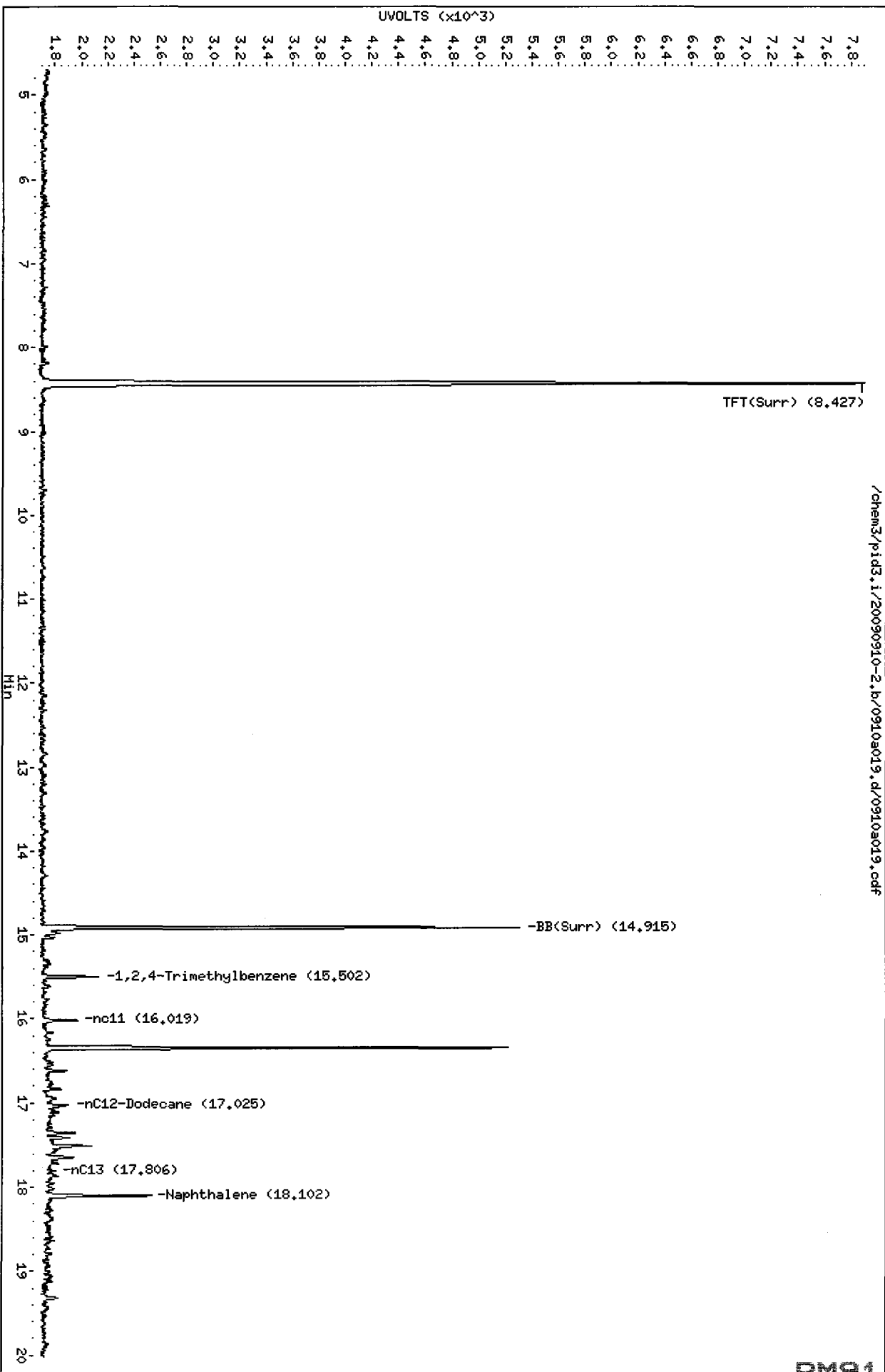
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

/chem3/pid3.i/20090910-2.b/0910a019.d/0910a019.pdf



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9/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a029.d      ARI ID: PM91Q  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a029.d      Client ID: DOF-TP23-12  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m              Injection Date: 10-SEP-2009 20:47  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.429	0.032	5358	62837	71.8	TFT(Surr)
14.914	0.021	3178	26163	73.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	164894	0.238
8015B 2MP-TMB ( 4.89 to 15.58)	42177	0.030
AKGas nC6-nC10 ( 5.38 to 14.54)	14195	0.013
NWGas Tol-Nap (10.17 to 18.19)	385720	0.528

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.428	0.033	16739	70.5	TFT(Surr)
14.913	0.022	34571	71.3	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
12.841	0.034	1720	1.34	Ethylbenzene
12.979	0.034	726	0.51	M/P-Xylene
13.760	-0.007	868	0.64	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090910-2.b/0910a029.d

Date: 10-SEP-2009 20:47

Client ID: DDF-TP23-12

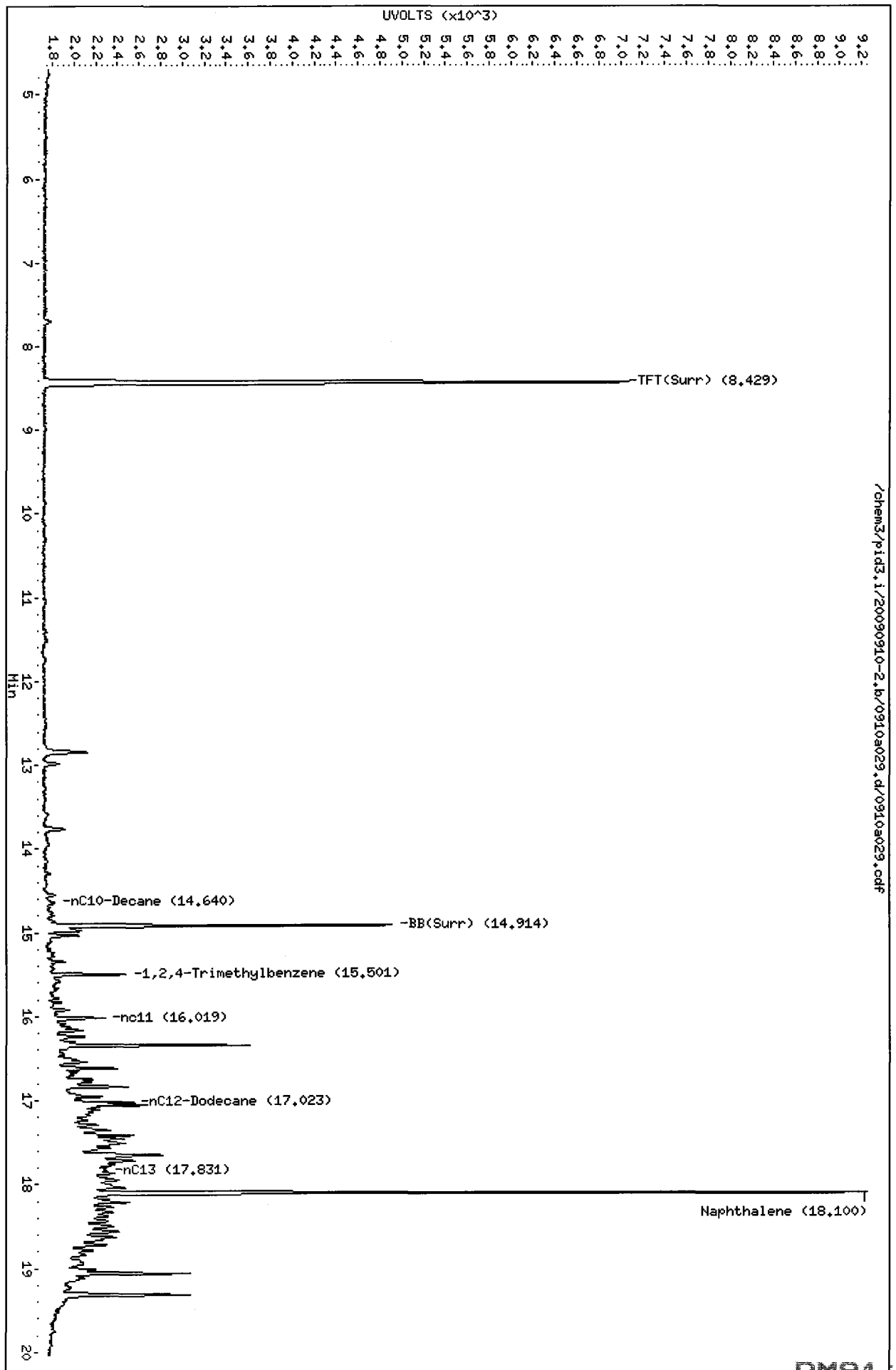
Sample Info: PH910

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



/chem3/pid3.i/20090910-2.b/0910a029.d/0910a029.cdf

**TPHG SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: PM91  
Matrix: Soil

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
Event: PSE-004-00

Client ID	BFB	TFT	BBZ	TOT OUT
MB-091009	NA	92.4%	94.0%	0
LCS-091009	NA	96.8%	96.9%	0
LCSD-091009	NA	96.5%	96.3%	0
DOF-TP19-7	NA	107%	108%	0
DOF-TP19-9	NA	105%	107%	0
DOF-TP19-15	NA	112%	110%	0
DOF-TP19-11	NA	105%	104%	0
DOF-TP20-6	NA	122%	123%	0
DOF-TP20-11	NA	108%	109%	0
DOF-TP20-15	NA	117%	117%	0
DOF-TP21-4	NA	110%	110%	0
DOF-TP21-7	NA	97.3%	97.5%	0
DOF-TP21-11	NA	102%	102%	0
DOF-TP22-7	NA	116%	116%	0
DOF-TP22-7 MS	NA	116%	115%	0
DOF-TP22-7 MSD	NA	124%*	120%	1
DOF-TP22-15	NA	98.9%	98.8%	0
DOF-TP23-8	NA	109%	112%	0
DOF-TP23-12	NA	102%	104%	0
DOF-TP23-15	NA	116%	121%	0
DOF-TP24-10	NA	112%	114%	0
DOF-TP24-15	NA	99.9%	101%	0

	LCS/MB LIMITS	QC LIMITS
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(66-123)
(BBZ) = Bromobenzene	(80-120)	(62-130)

Log Number Range: 09-20622 to 09-20641

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DOF-TP22-7

MATRIX SPIKE

Lab Sample ID: PM91M

LIMS ID: 09-20634

Matrix: Soil

Data Release Authorized: *AB*

Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

Event: PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Date Analyzed MS: 09/10/09 17:05

MSD: 09/10/09 17:30

Instrument/Analyst MS: PID3/MH

MSD: PID3/MH

Purge Volume: 5.0 mL

Sample Amount MS: 58.8 mg-dry-wt

MSD: 62.1 mg-dry-wt

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Gasoline Range Hydrocarbons	11.0	82.2	61.3	116%	87.8	58.1	132%	6.6%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	MS	MSD
Trifluorotoluene	116%	124%
Bromobenzene	115%	120%



MH  
9/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a020.d      ARI ID: PM91MMS  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a020.d      Client ID:  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m              Injection Date: 10-SEP-2009 17:05  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.426	0.029	6256	74431	83.9	TFT (Surr)
14.914	0.021	3603	29909	83.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	647979	0.935
8015B 2MP-TMB ( 4.89 to 15.58)	1227296	0.886
AKGas nC6-nC10 ( 5.38 to 14.54)	985326	0.891
NWGas Tol-Nap (10.17 to 18.19)	706158	0.967

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.424	0.029	20311	85.6	TFT (Surr)
14.913	0.022	40993	84.6	BB (Surr)

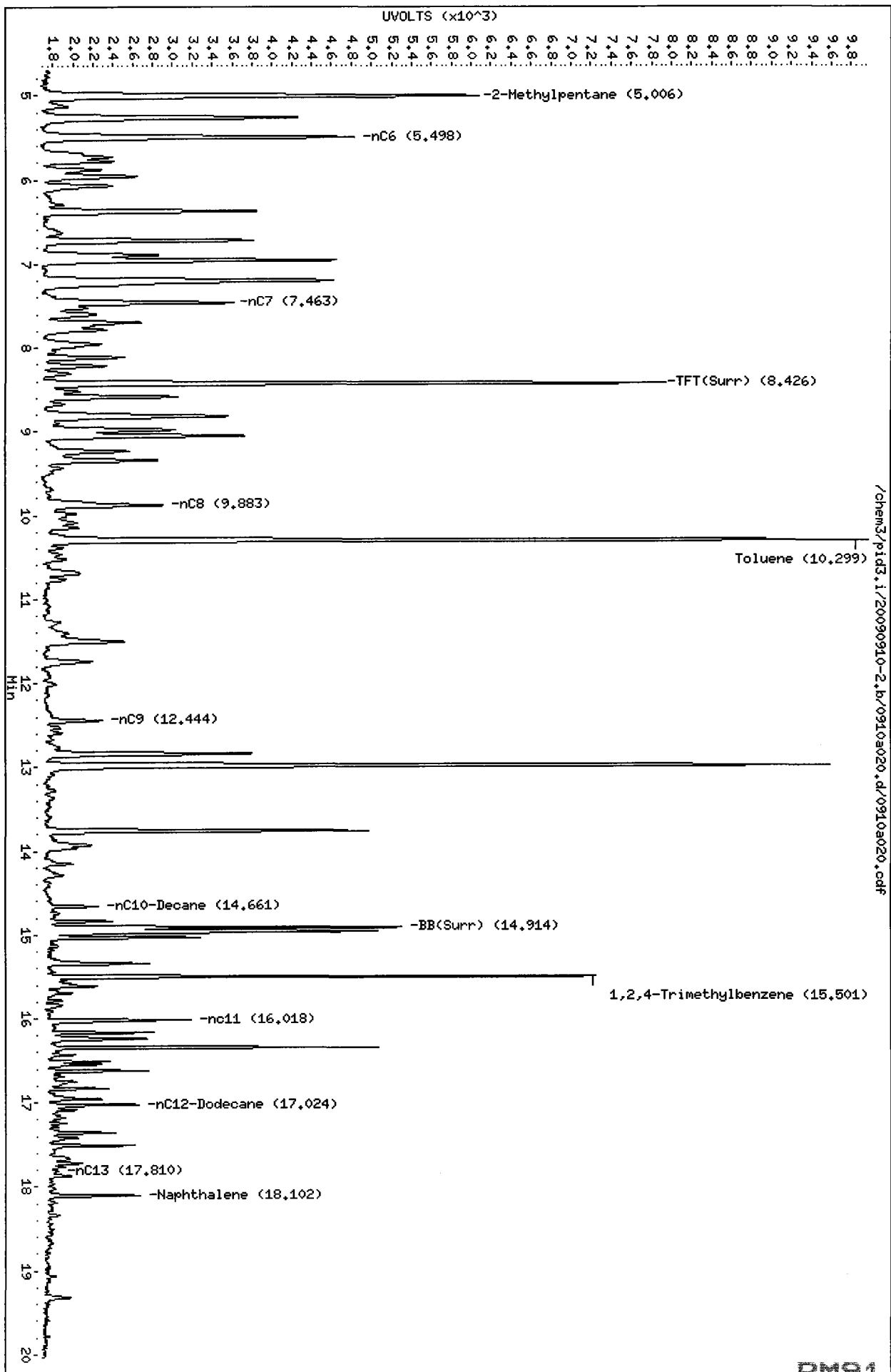
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.696	0.027	5745	3.95	Benzene
10.298	0.032	44191	31.28	Toluene
12.840	0.033	9799	7.64	Ethylbenzene
12.980	0.035	45023	31.92	M/P-Xylene
13.758	-0.009	15454	11.33	O-Xylene
5.265	0.005	1268	3.18	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090910-2.b/0910a020.d  
Date: 10-SEP-2009 17:05  
Client ID:  
Sample Info: PH91MHS  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



MH  
9/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a021.d      ARI ID: PM91MMSD  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a021.d      Client ID:  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m              Injection Date: 10-SEP-2009 17:30  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.427	0.030	6496	76860	87.1	TFT(Surr)
14.915	0.022	3676	30514	84.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	723462	1.044
8015B 2MP-TMB ( 4.89 to 15.58)	1432402	1.035
AKGas nC6-nC10 ( 5.38 to 14.54)	1145222	1.036
NWGas Tol-Nap (10.17 to 18.19)	795531	1.090

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.424	0.030	20837	87.8	TFT(Surr)
14.913	0.023	42153	87.0	BB(Surr)

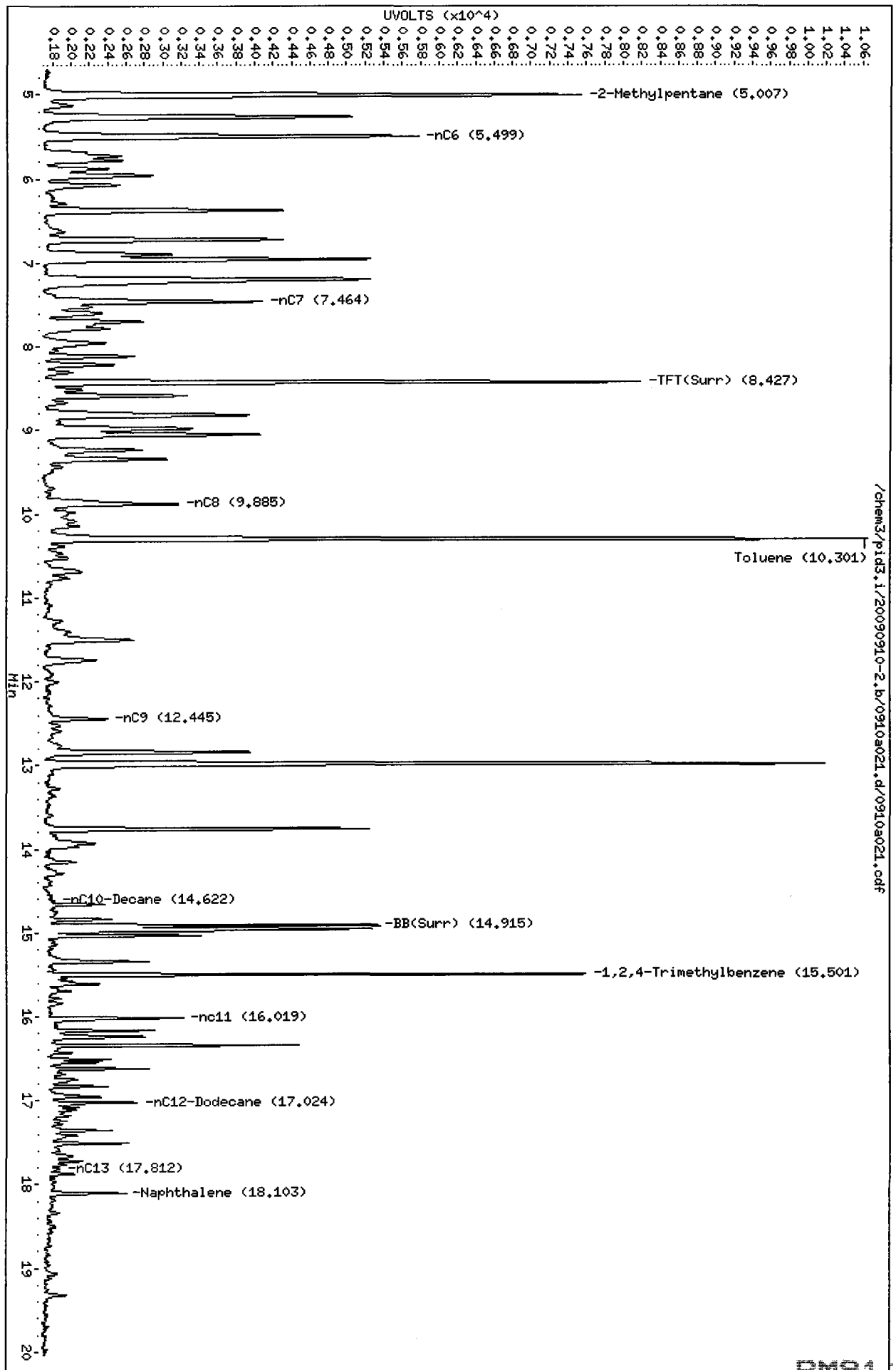
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.696	0.027	6278	4.32	Benzene
10.298	0.033	47590	33.68	Toluene
12.840	0.033	10681	8.33	Ethylbenzene
12.980	0.036	48783	34.59	M/P-Xylene
13.758	-0.009	16958	12.43	O-Xylene
5.265	0.004	1681	4.22	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.1/20090910-2.b/0910a021.d  
Date: 10-SEP-2009 17:30  
Client ID:  
Sample Info: PH91MHSD  
Column phase: RTX 502-2 FID

Instrument: pid3.1  
Operator: MH  
Column diameter: 0.18



**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: LCS-091009

LAB CONTROL SAMPLE

Lab Sample ID: LCS-091009

LIMS ID: 09-20622

Matrix: Soil

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

Event: PSE-004-00

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 09/10/09 08:41

LCSD: 09/10/09 09:06

Instrument/Analyst LCS: PID3/MH

LCSD: PID3/MH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	49.7	50.0	99.4%	47.6	50.0	95.2%	4.3%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	96.8%	96.5%
Bromobenzene	96.9%	96.3%

Mt.  
9/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a004.d      ARI ID: LCS0910  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a004.d      Client ID:  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m              Injection Date: 10-SEP-2009 08:41  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.420	0.023	7220	85020	96.8	TFT(Surr)
14.910	0.017	4198	34523	96.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	680356	0.982
8015B 2MP-TMB ( 4.89 to 15.58)	1378630	0.996
AKGas nC6-nC10 ( 5.38 to 14.54)	1117206	1.010
NWGas Tol-Nap (10.17 to 18.19)	725891	0.994

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.419	0.024	23730	100.0	TFT(Surr)
14.909	0.018	48332	99.7	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.691	0.022	6538	4.50	Benzene
10.292	0.026	51201	36.24	Toluene
12.834	0.027	11237	8.76	Ethylbenzene
12.974	0.029	52646	37.33	M/P-Xylene
13.752	-0.014	18172	13.32	O-Xylene
5.262	0.002	1564	3.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090910-2.b/0910a004.d

Date: 10-SEP-2009 08:41

Client ID:

Sample Info: LCS0910

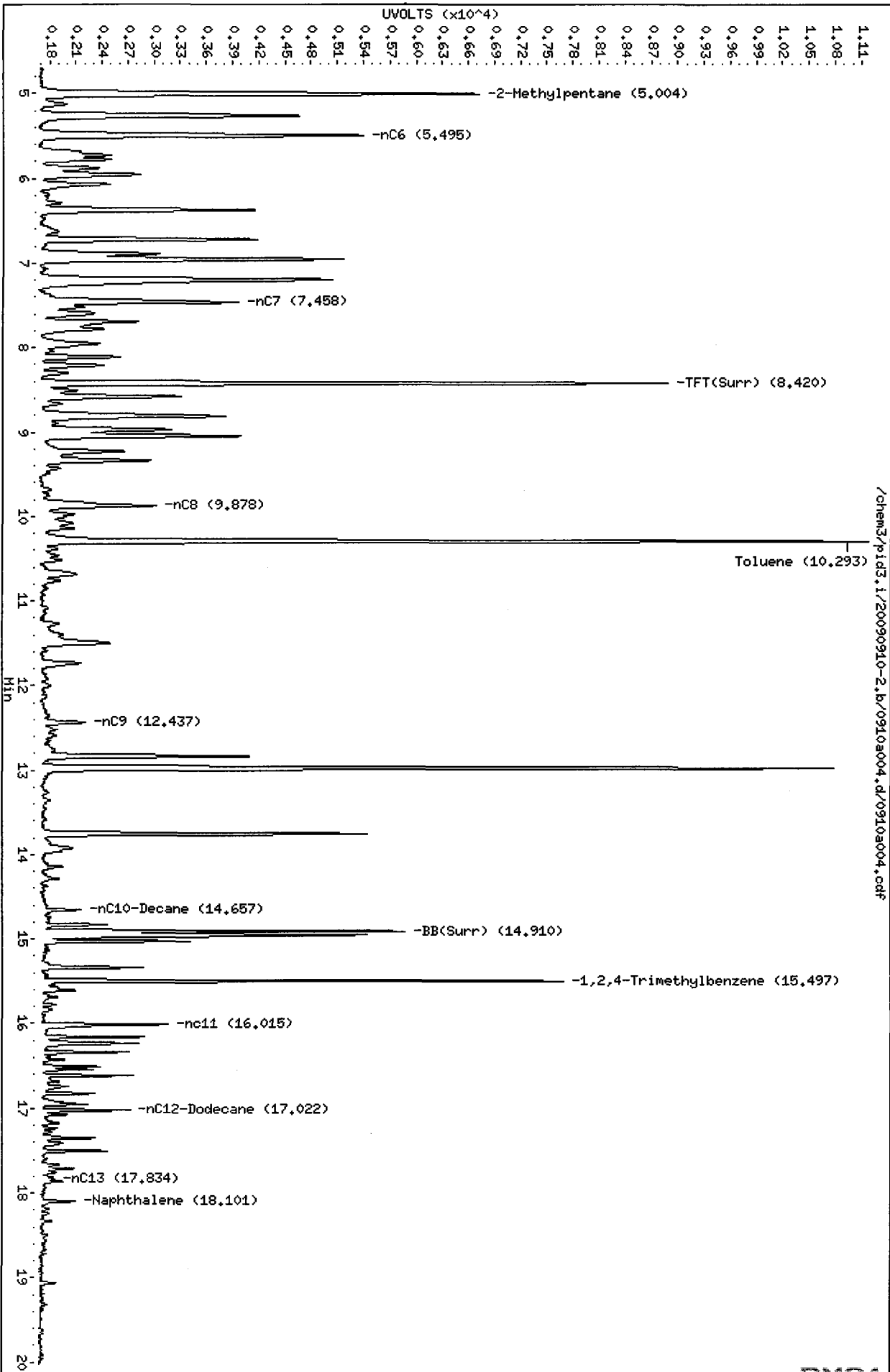
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Page 1



MH  
9/14/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090910-2.b/0910a005.d  
Data file 2: /chem3/pid3.i/20090910-1.b/0910a005.d  
Method: /chem3/pid3.i/20090910-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 22-JUN-2009  
BETX Ical Date: 07-SEP-2009

ARI ID: LCSD0910  
Client ID:  
Injection Date: 10-SEP-2009 09:06  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.423	0.026	7202	84724	96.5	TFT(Surr)
14.912	0.019	4171	34040	96.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.12)	653732	0.944
8015B 2MP-TMB ( 4.89 to 15.58)	1309578	0.946
AKGas nC6-nC10 ( 5.38 to 14.54)	1061848	0.960
NWGas Tol-Nap (10.17 to 18.19)	695150	0.952

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.422	0.027	23355	98.4	TFT(Surr)
14.910	0.020	47634	98.3	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.693	0.024	6237	4.29	Benzene
10.295	0.029	48649	34.43	Toluene
12.837	0.030	10692	8.34	Ethylbenzene
12.977	0.032	49581	35.15	M/P-Xylene
13.755	-0.012	17026	12.48	O-Xylene
5.263	0.003	1489	3.74	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20090910-2.b/0910a005.d

Date: 10-SEP-2009 09:06

Client ID:

Sample Info: LCSD0910

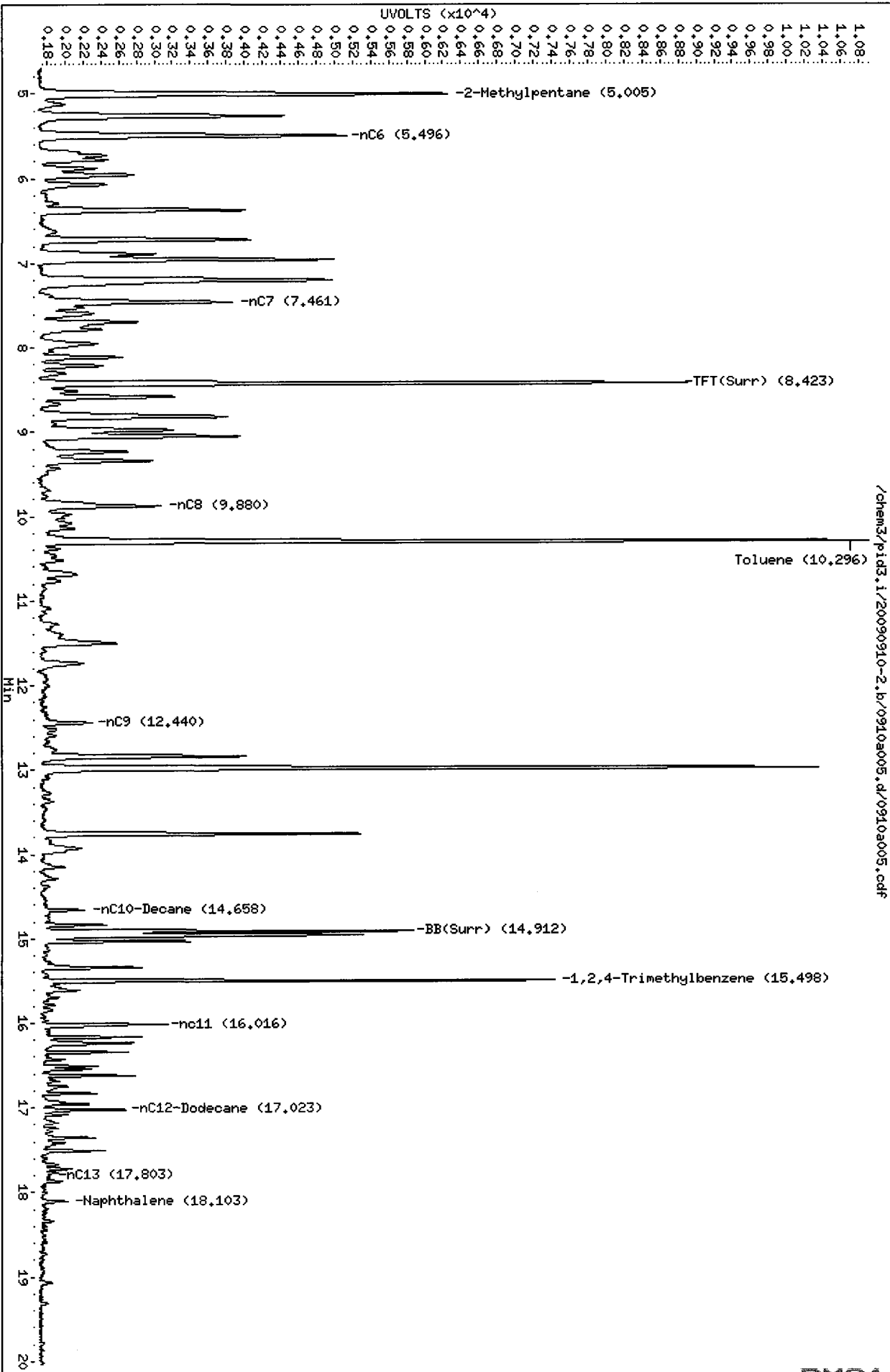
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

Page 1




PM91: 00080

**ORGANICS ANALYSIS DATA SHEET  
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID  
Page 1 of 2  
Matrix: Soil

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Received: 09/03/09


Data Release Authorized:   
Reported: 09/11/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
PM91A 09-20622	DOF-TP19-7 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.9 12	< 5.9 U < 12 U 91.8%
PM91B 09-20623	DOF-TP19-9 HC ID: DIESEL/RRO	09/04/09	09/10/09 FID3A	5.00 5.0	Diesel Motor Oil o-Terphenyl	140 270	1,700 1,400 78.3%
PM91C 09-20624	DOF-TP19-15 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.3 12	< 6.3 U < 12 U 95.4%
PM91E 09-20626	DOF-TP19-11 HC ID: DRO/MOTOR OIL	09/04/09	09/10/09 FID3A	1.00 5.0	Diesel Motor Oil o-Terphenyl	30 60	96 330 99.8%
PM91F 09-20627	DOF-TP20-6 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.0 12	< 6.0 U < 12 U 93.4%
PM91G 09-20628	DOF-TP20-11 HC ID: DRO/MOTOR OIL	09/04/09	09/10/09 FID3A	1.00 2.0	Diesel Motor Oil o-Terphenyl	12 23	46 280 102%
PM91H 09-20629	DOF-TP20-15 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	7.0 14	< 7.0 U < 14 U 96.2%
PM91I 09-20630	DOF-TP21-4 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.9 12	< 5.9 U < 12 U 94.7%
PM91J 09-20631	DOF-TP21-7 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.5 11	< 5.5 U < 11 U 97.1%
MB-090409 09-20632	Method Blank HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 100%
PM91K 09-20632	DOF-TP21-11 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.8 12	< 5.8 U < 12 U 96.2%
PM91M 09-20634	DOF-TP22-7 HC ID: DRO/MOTOR OIL	09/04/09	09/10/09 FID3A	1.00 5.0	Diesel Motor Oil o-Terphenyl	30 59	120 420 96.7%
PM91O 09-20636	DOF-TP22-15 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.6 11	< 5.6 U < 11 U 96.1%

PM91 : 00081

**ORGANICS ANALYSIS DATA SHEET**  
**TOTAL DIESEL RANGE HYDROCARBONS**  
 NWTPHD by GC/FID  
 Page 2 of 2  
 Matrix: Soil

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
 Project: Verbeek  
 PSE-004-00  
 Date Received: 09/03/09

Data Release Authorized:   
 Reported: 09/11/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
PM91P 09-20637	DOF-TP23-8 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.1 12	< 6.1 U < 12 U 94.8%
PM91Q 09-20638	DOF-TP23-12 HC ID: DIESEL/RRO	09/04/09	09/10/09 FID3A	4.00 10	Diesel Motor Oil o-Terphenyl	240 490	2,000 2,000 77.3%
PM91R 09-20639	DOF-TP23-15 HC ID: DRO/MOTOR OIL	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	8.0 16	95 90 86.0%
PM91S 09-20640	DOF-TP24-10 HC ID: ---	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.0 12	< 6.0 U < 12 U 95.2%
PM91T 09-20641	DOF-TP24-15 HC ID: DRO/RRO	09/04/09	09/10/09 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.2 12	9.0 30 88.7%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.  
 DL-Dilution of extract prior to analysis.  
 RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.  
 Motor Oil quantitation on total peaks in the range from C24 to C38.  
 HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

MS 9/11/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090909.b/0909a041.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91MBS1  
Client ID: PM91MBS1  
Injection: 10-SEP-2009 01:50  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.769	0.008	59046	50371	GAS (Tol-C12)	1348040	14
C8	1.096	0.016	14061	11916	DIESEL (C12-C24)	509315	24
C10	3.002	0.000	5608	559	M.OIL (C24-C38)	157406	13
C12	3.768	0.001	8298	1656	AK-102 (C10-C25)	877778	33
C14	4.331	0.000	6499	777	AK-103 (C25-C36)	108534	12
C16	4.815	0.001	4096	900	OR.DIES (C10-C28)	882231	42
C18	5.247	0.000	2054	245	OR.MOIL (C28-C40)	207148	18
C20	5.641	0.001	1404	196	JET-A (C10-C18)	828821	52
C22	5.994	0.000	500	39			
C24	6.301	0.001	217	28			
C25	6.439	-0.001	105	9			
C26	6.574	0.001	58	12			
C28	6.821	-0.001	515	247			
C32	7.269	0.001	4334	5885			
C34	7.472	0.000	2922	291			
Filter Peak	9.083	0.001	6469	1162			
C36	7.666	-0.001	4042	3178	CREOSOT (C8-C22)	1359560	213
C38	7.855	0.000	4412	352			
C40	8.054	0.001	4896	684	BUNKERC (C10-C38)	1034991	107

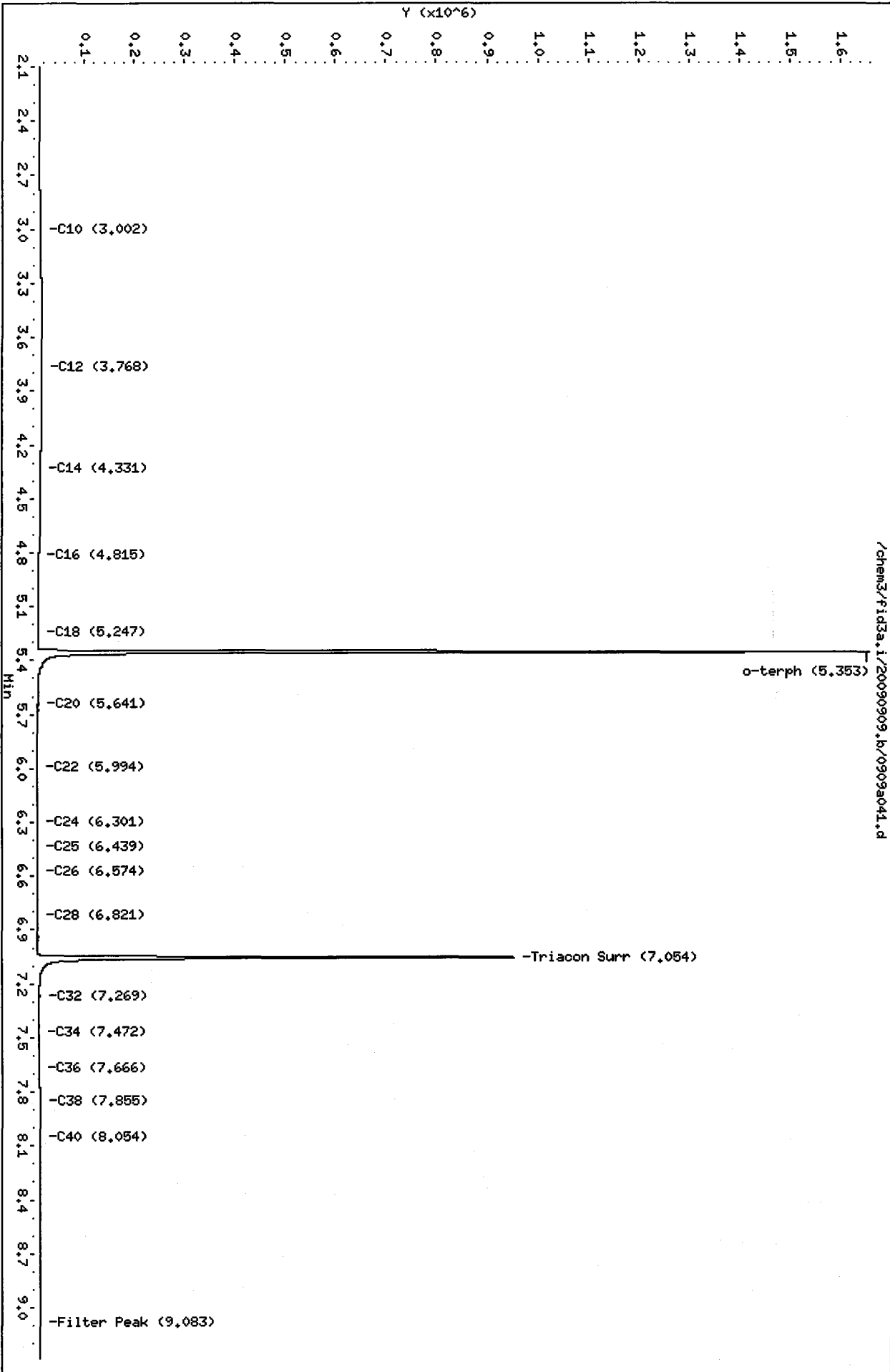
Range Times: NW Diesel(3.818 - 6.350) NW Gas(0.710 - 3.818) NW M.Oil(6.350 - 7.905)  
AK102(2.952 - 6.390) AK103(6.390 - 7.717) Jet A(2.952 - 5.297)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1186370	45.1	100.2
Triacontane	807953	47.0	104.4

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090909.b/0909a041.d  
Date: 10-SEP-2009 01:50  
Client ID: PH91HBS1  
Sample Info: PH91HBS1  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



ms 9/11/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090909.b/0909a044.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91B  
Client ID: DOF-TP19-9  
Injection: 10-SEP-2009 02:45  
Dilution Factor: 5

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1361564	14
C8	1.079	-0.002	11395	4286	DIESEL (C12-C24)	13661877	636
C10	3.004	0.002	5696	7835	M.OIL (C24-C38)	6022714	505
C12	3.769	0.001	16966	22214	AK-102 (C10-C25)	14472602	542
C14	4.315	-0.016	165457	272826	AK-103 (C25-C36)	5776763	647
C16	4.811	-0.003	107326	170904	OR.DIES (C10-C28)	17410495	826
C18	5.244	-0.002	112194	137446	OR.MOIL (C28-C40)	3190745	283
C20	5.638	-0.002	166235	283102	JET-A (C10-C18)	6538642	413
C22	5.979	-0.015	138216	169211			
C24	6.301	0.001	323650	303291			
C25	6.449	0.009	58338	8161			
C26	6.566	-0.008	69491	85842			
C28	6.823	0.001	386292	358369			
C32	7.281	0.014	83559	173338			
C34	7.464	-0.007	34256	43900			
Filter Peak	9.083	0.001	6931	1382			
C36	7.644	-0.022	61143	242345	CREOSOT (C8-C22)	12697623	1985
C38	7.859	0.004	19577	5449			
C40	8.052	-0.001	17408	3132	BUNKERC (C10-C38)	20413722	2114

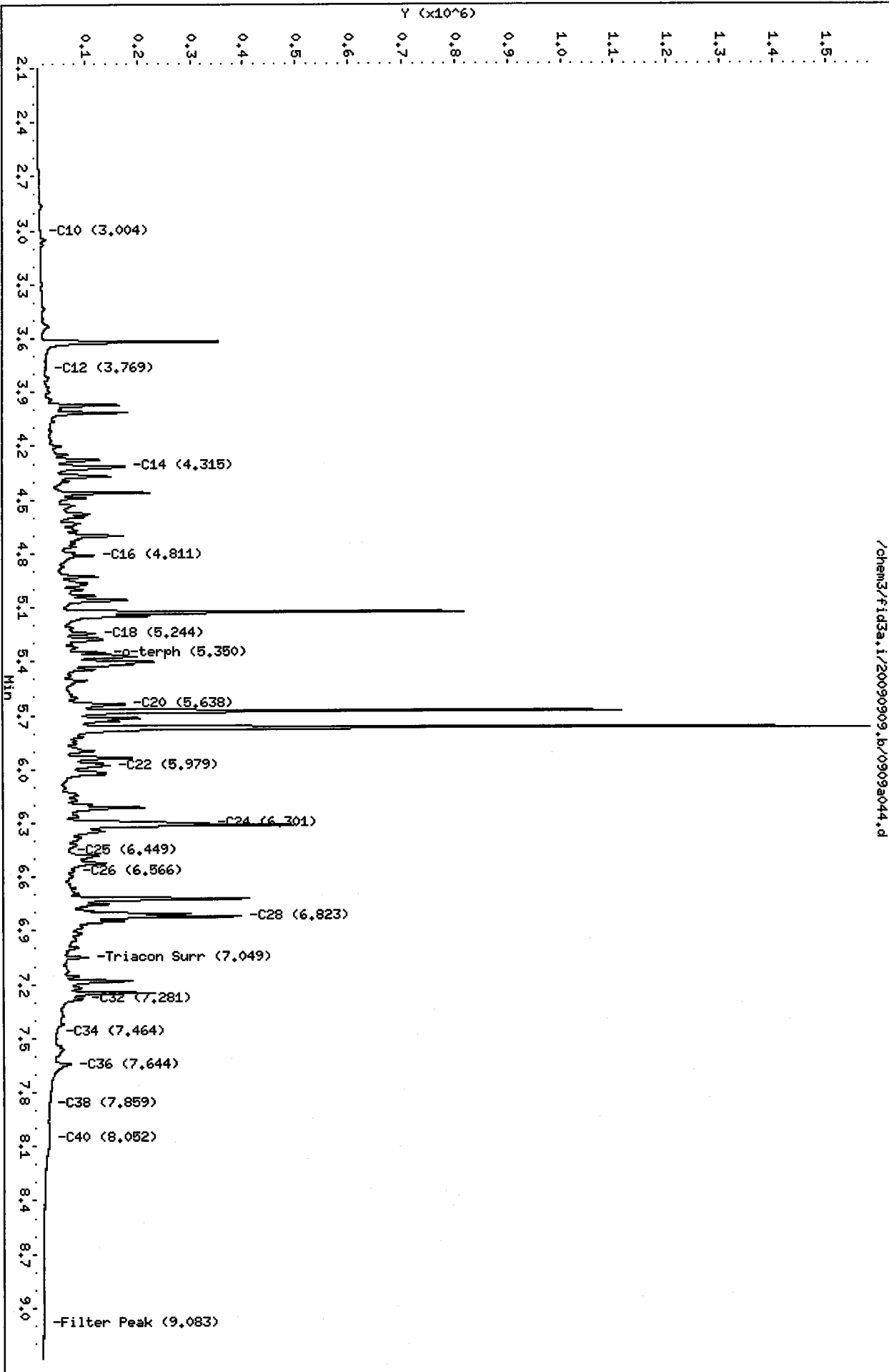
Range Times: NW Diesel(3.818 - 6.350) NW Gas(0.710 - 3.818) NW M.Oil(6.350 - 7.905)  
AK102(2.952 - 6.390) AK103(6.390 - 7.717) Jet A(2.952 - 5.297)

Surrogate	Area	Amount	%Rec
o-Terphenyl	37030	1.4	15.6
Triacontane	26501	1.5	17.1

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090909.b/0909a044.d  
Date: 10-SEP-2009 02:45  
Client ID: DDF-TP19-9  
Sample Info: PM91B.5  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090909.b/0909a044.d

Analytical Resources Inc.  
TPH Quantitation Report

ms 9/21/09  
11

Data file: /chem3/fid3a.i/20090909.b/0909a046.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91E  
Client ID: DOF-TP19-11  
Injection: 10-SEP-2009 03:21  
Dilution Factor: 5

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	957317	10
C8	1.084	0.004	11690	12004	DIESEL (C12-C24)	3451522	161
C10	3.004	0.002	3922	3815	M.OIL (C24-C38)	6569312	551
C12	3.772	0.004	11293	14504	AK-102 (C10-C25)	3897306	146
C14	4.330	0.000	18959	14430	AK-103 (C25-C36)	6162567	690
C16	4.813	-0.002	19401	13262	OR.DIES (C10-C28)	6116075	290
C18	5.244	-0.003	21526	29598	OR.MOIL (C28-C40)	4469735	396
C20	5.639	-0.001	29956	50772	JET-A (C10-C18)	1815152	115
C22	5.991	-0.003	37381	27856			
C24	6.299	-0.001	51448	5140			
C25	6.439	-0.001	86616	173874			
C26	6.576	0.003	67766	64695			
C28	6.820	-0.002	81205	85435			
C32	7.267	0.000	69107	57409			
C34	7.470	-0.001	66793	49573			
Filter Peak	9.082	0.000	7472	1044			
C36	7.668	0.001	39632	26273	CREOSOT (C8-C22)	3199477	500
C38	7.852	-0.003	27773	15402			
C40	8.052	-0.001	17547	7300	BUNKERC (C10-C38)	10368683	1074

Range Times: NW Diesel(3.818 - 6.350) NW Gas(0.710 - 3.818) NW M.Oil(6.350 - 7.905)  
AK102(2.952 - 6.390) AK103(6.390 - 7.717) Jet A(2.952 - 5.297)

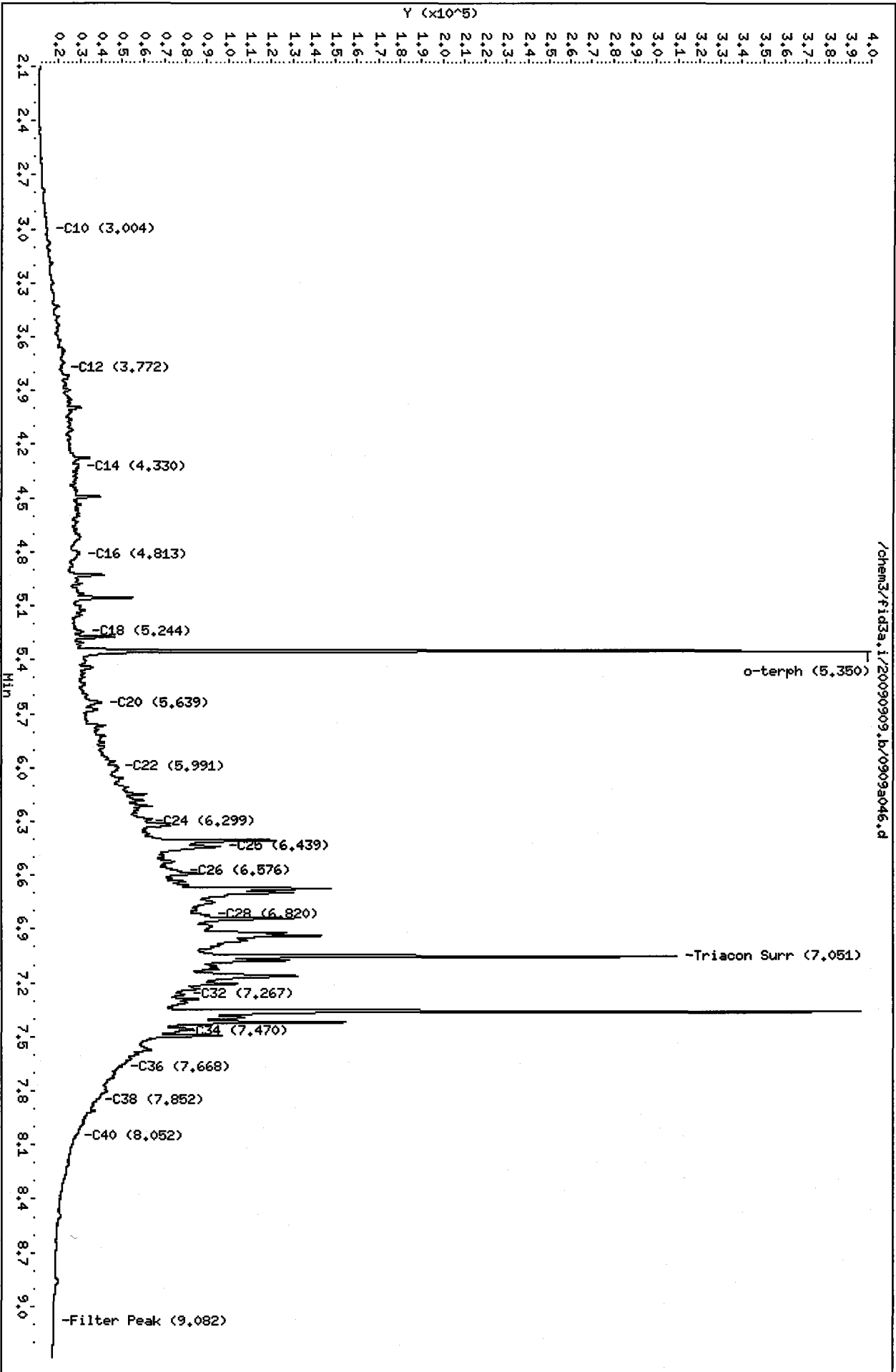
Surrogate	Area	Amount	%Rec
o-Terphenyl	236175	9.0	99.8
Triacontane	137217	8.0	88.6

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090909.b/0909a046.d  
Date: 10-SEP-2009 03:24  
Client ID: DQF-TP19-11  
Sample Info: PM91E,5  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

*ms 9/11/09*

Data file: /chem3/fid3a.i/20090909.b/0909a048.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91G  
Client ID: DOF-TP20-11  
Injection: 10-SEP-2009 03:57  
Dilution Factor: 2

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	946110	10
C8	1.070	-0.010	11824	4214	DIESEL (C12-C24)	4273915	199
C10	3.002	0.000	3697	871	M.OIL (C24-C38)	14694382	1232
C12	3.767	-0.001	10910	2178	AK-102 (C10-C25)	4711899	177
C14	4.332	0.001	32824	31430	AK-103 (C25-C36)	12328233	1380
C16	4.818	0.003	21633	4315	OR.DIES (C10-C28)	7429534	352
C18	5.241	-0.005	16860	8254	OR.MOIL (C28-C40)	13519700	1199
C20	5.636	-0.004	33988	8124	JET-A (C10-C18)	2262531	143
C22	6.006	0.012	40474	39562			
C24	6.304	0.004	57014	28317			
C25	6.437	-0.003	73298	21885			
C26	6.565	-0.008	78659	7862			
C28	6.811	-0.011	118759	21316			
C32	7.270	0.002	186488	107052			
C34	7.470	-0.001	220910	132674			
Filter Peak	9.083	0.001	24178	12882			
C36	7.669	0.002	206863	37165	CREOSOT (C8-C22)	3877731	606
C38	7.858	0.003	196125	126501			
C40	8.050	-0.003	123508	60868	BUNKERC (C10-C38)	19284916	1998

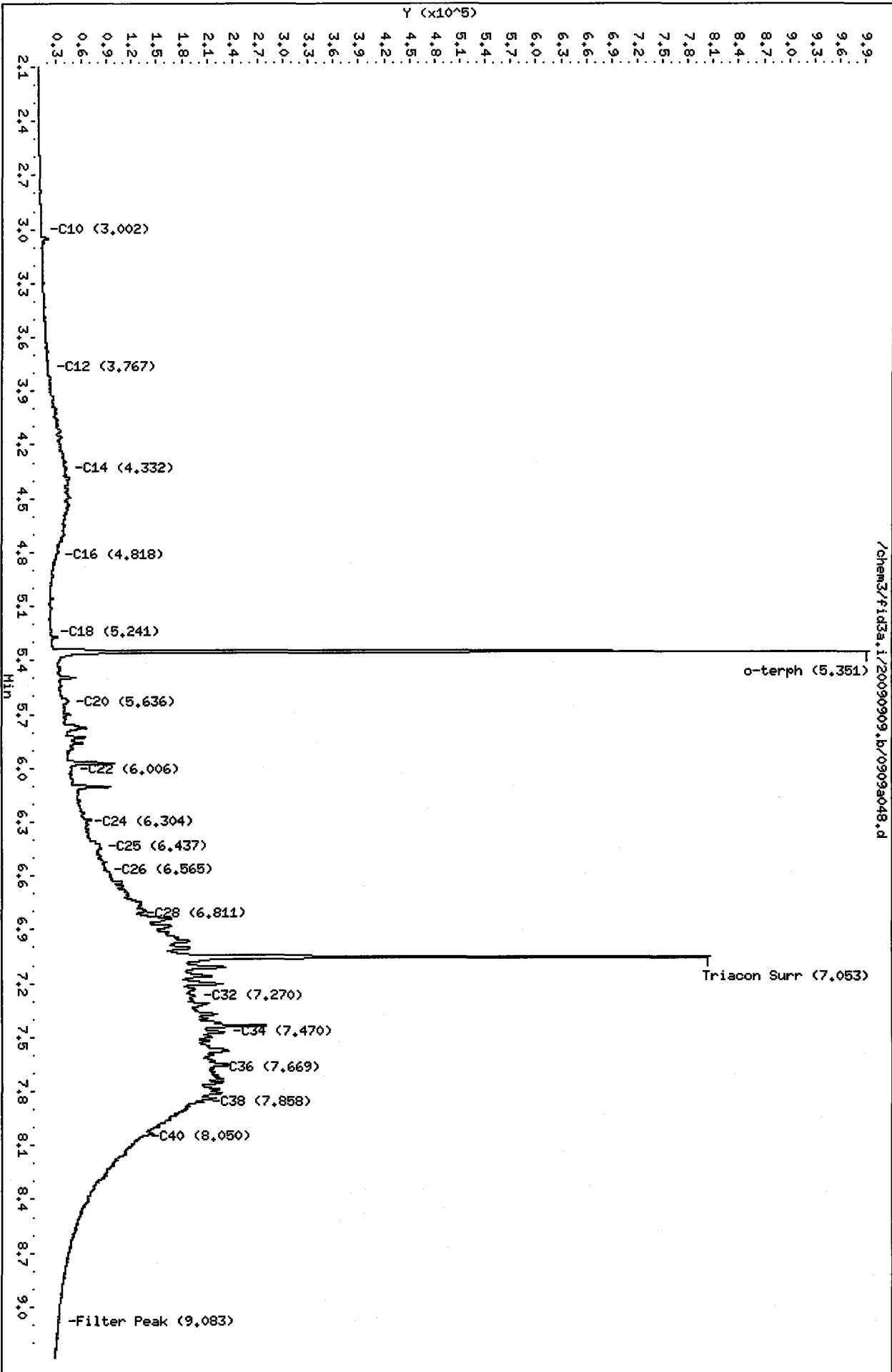
Range Times: NW Diesel (3.818 - 6.350) NW Gas (0.710 - 3.818) NW M.Oil (6.350 - 7.905)  
AK102 (2.952 - 6.390) AK103 (6.390 - 7.717) Jet A (2.952 - 5.297)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602597	22.9	101.8
Triacontane	414970	24.1	107.2

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090909.b/0909a048.d  
Date: 10-SEP-2009 03:57  
Client ID: DQF-TP20-11  
Sample Info: PM91G,2  
Column phases: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090909.b/0909a048.d

ms 9/11/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090909.b/0909a057.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91M  
Client ID: DOF-TP22-7  
Injection: 10-SEP-2009 06:41  
Dilution Factor: 5

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	725300	8
C8	1.083	0.003	11193	10888	DIESEL (C12-C24)	4237058	197
C10	3.003	0.001	7129	9995	M.OIL (C24-C38)	8457853	709
C12	3.768	0.000	10521	4398	AK-102 (C10-C25)	4874773	183
C14	4.325	-0.005	13996	22930	AK-103 (C25-C36)	7677581	860
C16	4.814	-0.001	16096	8155	OR.DIES (C10-C28)	7780395	369
C18	5.245	-0.002	29788	34715	OR.MOIL (C28-C40)	5840204	518
C20	5.638	-0.002	43165	82448	JET-A (C10-C18)	1756459	111
C22	5.994	0.000	52443	11464			
C24	6.301	0.001	74621	23607			
C25	6.446	0.006	103098	179211			
C26	6.575	0.001	92780	22201			
C28	6.807	-0.014	108771	34564			
C32	7.265	-0.002	93307	40804			
C34	7.470	-0.002	81593	71328			
Filter Peak	9.081	-0.001	9707	2326			
C36	7.667	0.000	63873	15262	CREOSOT (C8-C22)	3728143	583
C38	7.854	-0.001	52216	19632			
C40	8.055	0.002	33464	20490	BUNKERC (C10-C38)	13166084	1364

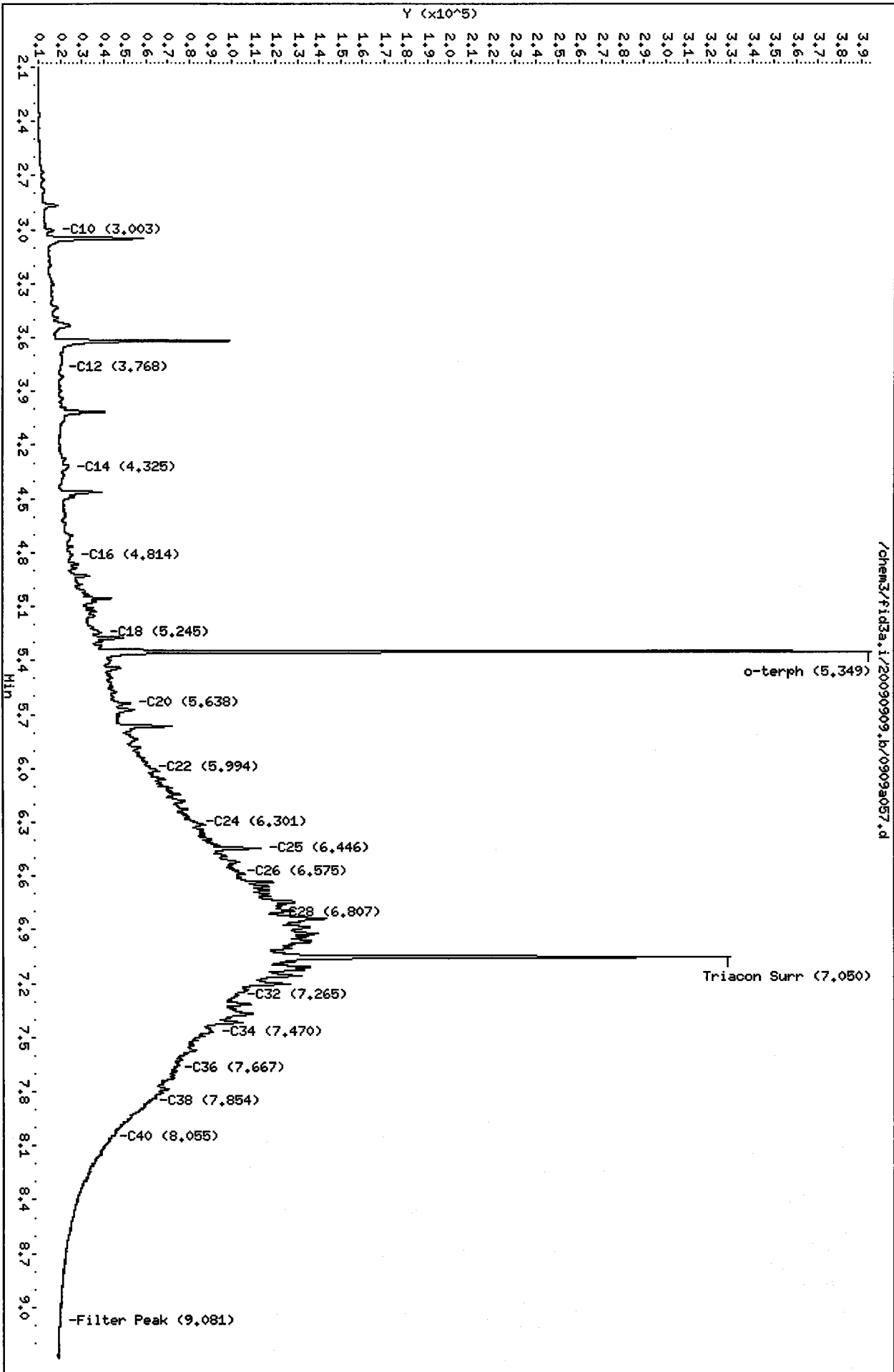
Range Times: NW Diesel(3.818 - 6.350) NW Gas(0.710 - 3.818) NW M.Oil(6.350 - 7.905)  
AK102(2.952 - 6.390) AK103(6.390 - 7.717) Jet A(2.952 - 5.297)

Surrogate	Area	Amount	%Rec
o-Terphenyl	228839	8.7	96.7
Triacontane	148138	8.6	95.7

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090909.b/0909a057.d  
Date: 10-SEP-2009 06:44  
Client ID: DOF-TP22-7  
Sample Info: PM91H\_5  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



Ms 9/11/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090909.b/0909a060.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91Q  
Client ID: DOF-TP23-12  
Injection: 10-SEP-2009 07:35  
Dilution Factor: 10

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (To1-C12)	1007074	11
C8	1.074	-0.007	11675	13307	DIESEL (C12-C24)	8626399	402
C10	3.004	0.002	4308	4991	M.OIL (C24-C38)	4787340	401
C12	3.768	0.000	12787	9280	AK-102 (C10-C25)	9132450	342
C14	4.314	-0.016	60723	122679	AK-103 (C25-C36)	4545080	509
C16	4.811	-0.003	41651	35971	OR.DIES (C10-C28)	11507581	546
C18	5.243	-0.003	51984	94080	OR.MOIL (C28-C40)	2536800	225
C20	5.637	-0.003	90073	166163	JET-A (C10-C18)	3613020	228
C22	5.979	-0.014	95046	115591			
C24	6.301	0.001	234939	151545			
C25	6.454	0.014	46207	18377			
C26	6.567	-0.007	55492	67416			
C28	6.823	0.001	312739	302762			
C32	7.283	0.015	65759	150485			
C34	7.469	-0.003	28629	10851			
Filter Peak	9.082	0.000	6884	688			
C36	7.649	-0.018	43798	163332	CREOSOT (C8-C22)	7854817	1228
C38	7.853	-0.002	18169	8641			
C40	8.050	-0.004	16461	10697	BUNKERC (C10-C38)	13865933	1436

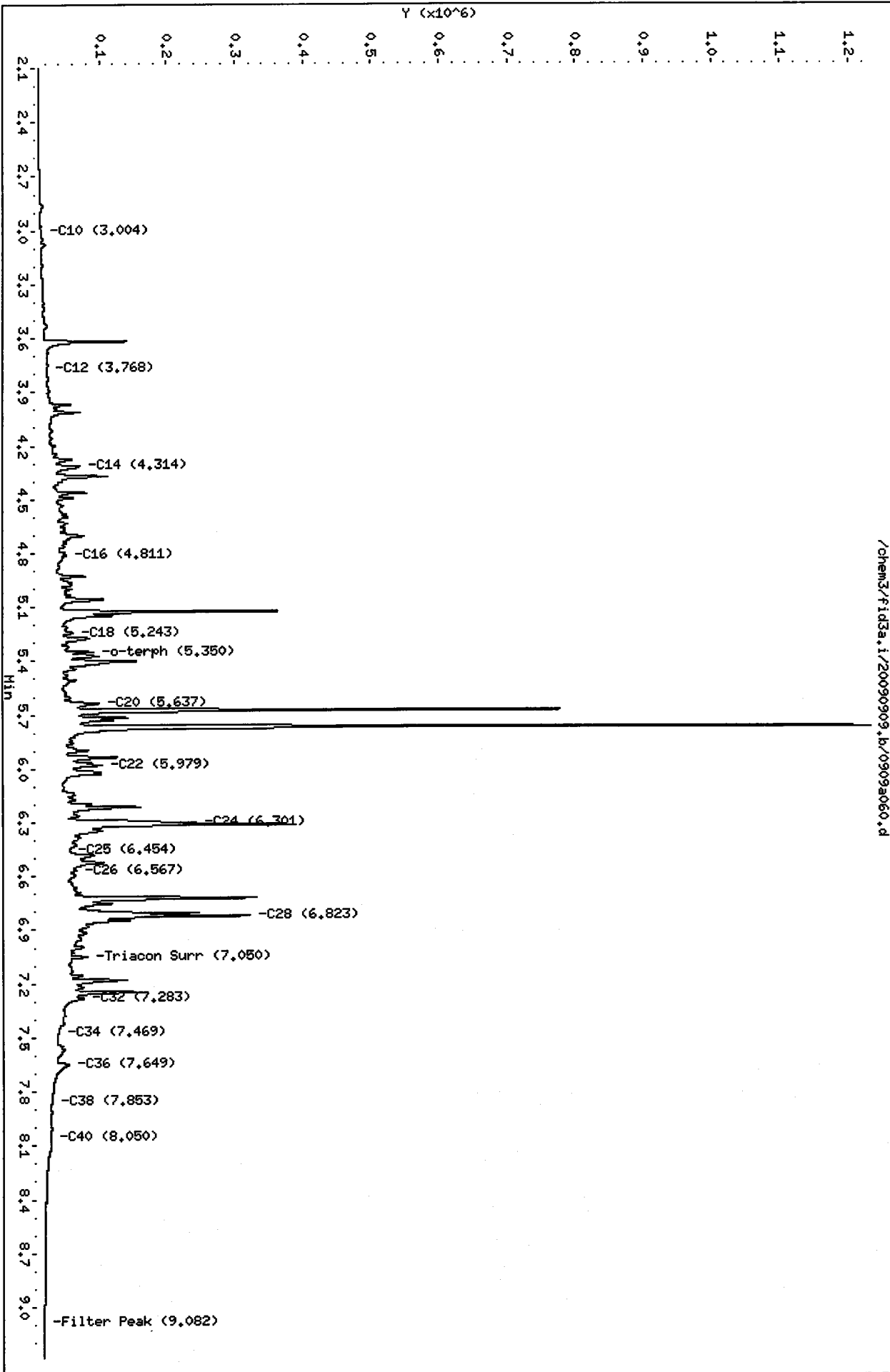
Range Times: NW Diesel(3.818 - 6.350) NW Gas(0.710 - 3.818) NW M.Oil(6.350 - 7.905)  
AK102(2.952 - 6.390) AK103(6.390 - 7.717) Jet A(2.952 - 5.297)

Surrogate	Area	Amount	%Rec
o-Terphenyl	22867	0.9	19.3
Triacontane	16154	0.9	20.9

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090909.b/0909a060.d  
Date: 10-SEP-2009 07:35  
Client ID: DDF-TP23-12  
Sample Info: PM91Q.10  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090909.b/0909a060.d

Ms 9/11/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090909.b/0909a061.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91R  
Client ID: DOF-TP23-15  
Injection: 10-SEP-2009 07:53  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1032583	11
C8	1.072	-0.008	13703	15542	DIESEL (C12-C24)	12824608	597
C10	3.002	0.000	6226	5190	M.OIL (C24-C38)	6774367	568
C12	3.767	-0.001	11150	14285	AK-102 (C10-C25)	13428348	503
C14	4.335	0.005	49032	46648	AK-103 (C25-C36)	6127607	686
C16	4.810	-0.004	11039	12588	OR.DIES (C10-C28)	15943677	756
C18	5.240	-0.006	14561	13847	OR.MOIL (C28-C40)	4420126	392
C20	5.643	0.003	199433	185040	JET-A (C10-C18)	1336204	84
C22	6.003	0.009	48102	18150			
C24	6.279	-0.021	1720903	2774985			
C25	6.439	-0.001	132452	217327			
C26	6.563	-0.010	98089	140421			
C28	6.822	0.001	71745	38025			
C32	7.265	-0.002	78917	74114			
C34	7.456	-0.015	92002	156217			
Filter Peak	9.079	-0.002	14026	3920			
C36	7.668	0.002	50977	56182	CREOSOT (C8-C22)	4554516	712
C38	7.859	0.005	36463	6553			
C40	8.053	0.000	31597	40745	BUNKERC (C10-C38)	19976362	2069

Range Times: NW Diesel(3.818 - 6.350) NW Gas(0.710 - 3.818) NW M.Oil(6.350 - 7.905)  
AK102(2.952 - 6.390) AK103(6.390 - 7.717) Jet A(2.952 - 5.297)

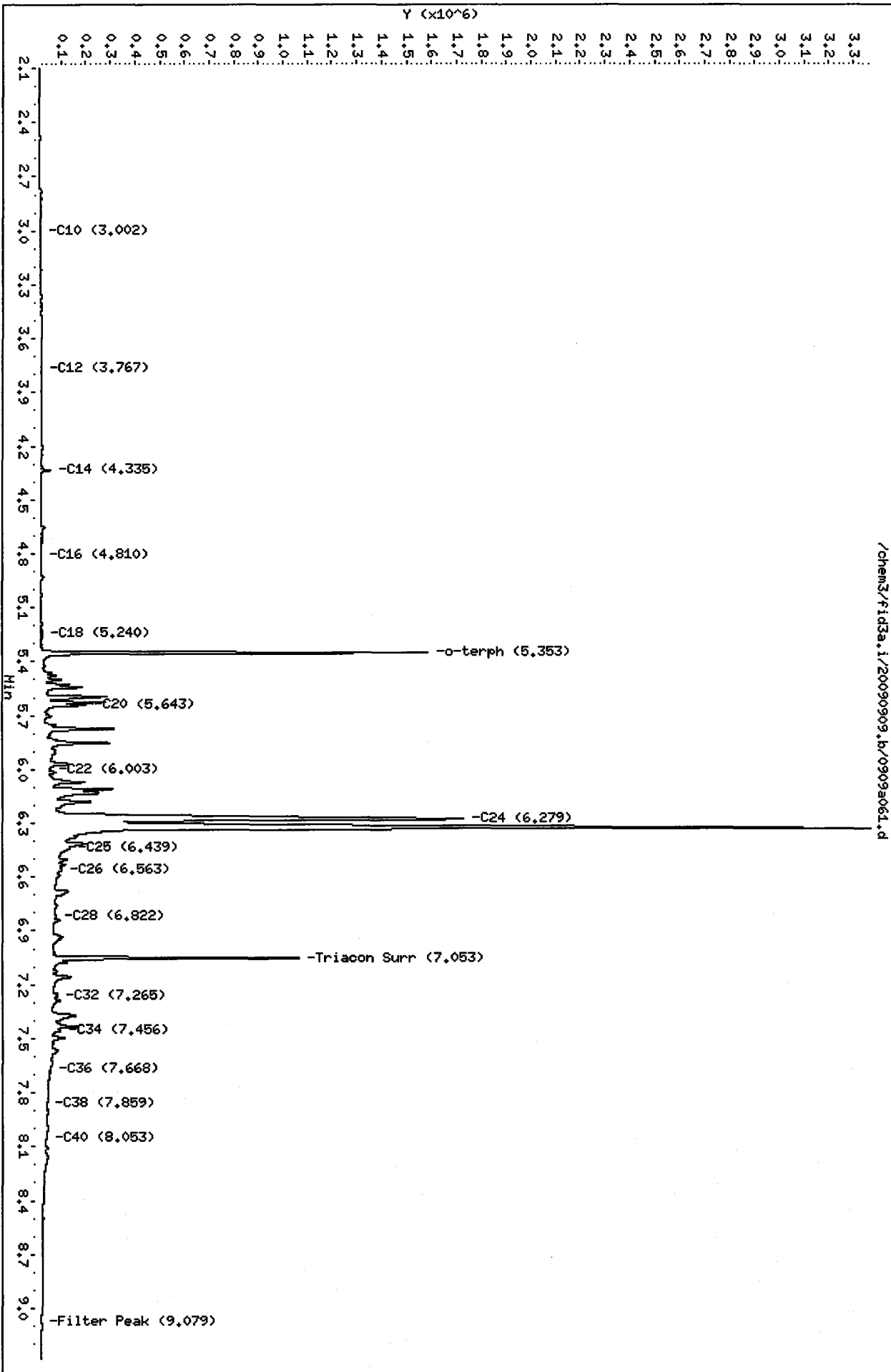
Surrogate	Area	Amount	%Rec
o-Terphenyl	1018324	38.7	86.0
Triacontane	685180	39.8	88.5

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090909.b/0909a061.d  
Date: 10-SEP-2009 07:53  
Client ID: DQF-TP23-15  
Sample Info: PM91R  
Column phases: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090909.b/0909a061.d

Analytical Resources Inc.  
TPH Quantitation Report

ms 9/11/09

Data file: /chem3/fid3a.i/20090909.b/0909a063.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91T  
Client ID: DOF-TP24-15  
Injection: 10-SEP-2009 08:30  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	853706	9
C8	1.072	-0.008	12053	7809	DIESEL (C12-C24)	1549963	72
C10	3.003	0.002	4037	2711	M.OIL (C24-C38)	2853174	239
C12	3.767	0.000	7896	1734	AK-102 (C10-C25)	1878994	70
C14	4.326	-0.004	7649	916	AK-103 (C25-C36)	2658642	298
C16	4.814	-0.001	5932	3032	OR.DIES (C10-C28)	2702694	128
C18	5.242	-0.005	5389	3979	OR.MOIL (C28-C40)	2155476	191
C20	5.641	0.001	21238	23567	JET-A (C10-C18)	842319	53
C22	5.990	-0.003	13703	5450			
C24	6.286	-0.013	35551	30512			
C25	6.436	-0.004	39227	16634			
C26	6.566	-0.007	21453	16381			
C28	6.818	-0.003	28833	36091			
C32	7.280	0.012	42587	68730			
C34	7.474	0.003	30282	17677			
Filter Peak	9.081	0.000	10011	1600			
C36	7.666	0.000	23820	26021	CREOSOT (C8-C22)	1606452	251
C38	7.863	0.009	16995	2711			
C40	8.054	0.001	16966	20695	BUNKERC (C10-C38)	4707964	488

Range Times: NW Diesel (3.818 - 6.350) NW Gas (0.710 - 3.818) NW M.Oil (6.350 - 7.905)  
AK102 (2.952 - 6.390) AK103 (6.390 - 7.717) Jet A (2.952 - 5.297)

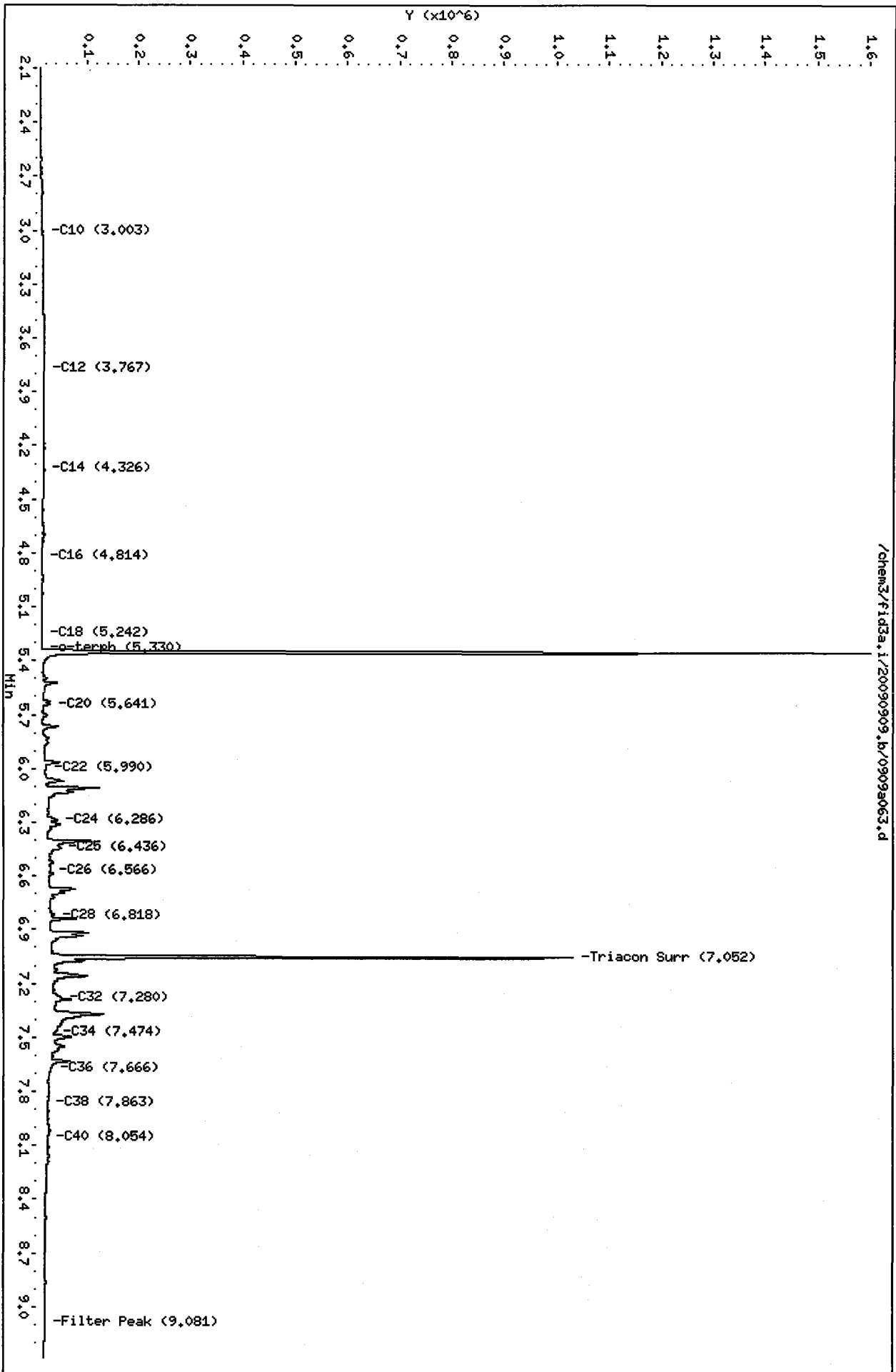
Surrogate	Area	Amount	%Rec
o-Terphenyl	1050070	39.9	88.7
Triacontane	692393	40.3	89.5

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090909.b/0909a063.d  
Date: 10-SEP-2009 08:30  
Client ID: DOF-TP24-15  
Sample Info: PM91T

Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090909.b/0909a063.d

**TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
DOF-TP19-7	91.8%	0
DOF-TP19-9	78.3%	0
DOF-TP19-15	95.4%	0
DOF-TP19-11	99.8%	0
DOF-TP20-6	93.4%	0
DOF-TP20-11	102%	0
DOF-TP20-15	96.2%	0
DOF-TP21-4	94.7%	0
DOF-TP21-7	97.1%	0
090409MBS	100%	0
090409LCS	92.6%	0
DOF-TP21-11	96.2%	0
DOF-TP21-11 MS	90.4%	0
DOF-TP21-11 MSD	95.6%	0
DOF-TP22-7	96.7%	0
DOF-TP22-15	96.1%	0
DOF-TP23-8	94.8%	0
DOF-TP23-12	77.3%	0
DOF-TP23-15	86.0%	0
DOF-TP24-10	95.2%	0
DOF-TP24-15	88.7%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(58-121)

(53-118)

Prep Method: SW3546  
Log Number Range: 09-20622 to 09-20641

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1

Sample ID: DOF-TP21-11

MS/MSD

Lab Sample ID: PM91K

LIMS ID: 09-20632

Matrix: Soil

Data Release Authorized: *B*

Reported: 09/11/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Date Extracted MS/MSD: 09/04/09

Sample Amount MS: 8.74 g-dry-wt

MSD: 8.80 g-dry-wt

Date Analyzed MS: 09/10/09 06:04

Final Extract Volume MS: 1.0 mL

MSD: 09/10/09 06:22

MSD: 1.0 mL

Instrument/Analyst MS: FID3A/MS

Dilution Factor MS: 1.00

MSD: FID3A/MS

MSD: 1.00

Percent Moisture: 14.6%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 5.8 U	148	172	86.0%	155	170	91.2%	4.6%

**TPHD Surrogate Recovery**

	MS	MSD
o-Terphenyl	90.4%	95.6%

Results reported in mg/kg

RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.  
TPH Quantitation Report

*ms 9/11/09*

Data file: /chem3/fid3a.i/20090909.b/0909a055.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91KMS  
Client ID: DOF-TP21-11 MS  
Injection: 10-SEP-2009 06:04  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.739	-0.021	76258	174193	GAS (Tol-C12)	6473061	68
C8	1.070	-0.011	19863	73636	DIESEL (C12-C24)	27768530	1293
C10	3.004	0.002	232747	241740	M.OIL (C24-C38)	411454	34
C12	3.770	0.002	569610	478254	AK-102 (C10-C25)	32686907	1225
C14	4.330	0.000	772164	1095620	AK-103 (C25-C36)	330163	37
C16	4.814	-0.001	802826	1231830	OR.DIES (C10-C28)	32969953	1563
C18	5.248	0.001	658844	821079	OR.MOIL (C28-C40)	81080	7
C20	5.641	0.001	456161	670599	JET-A (C10-C18)	25015765	1578
C22	5.993	-0.001	172315	234542			
C24	6.298	-0.001	68223	92947			
C25	6.439	-0.001	39918	59526			
C26	6.572	-0.002	21424	31385			
C28	6.819	-0.003	5063	4632			
C32	7.265	-0.003	3077	2234			
C34	7.471	-0.001	44	8			
Filter Peak	9.082	0.000	2781	277			
C36	7.665	-0.002	1420	1537	CREOSOT (C8-C22)	32887271	5142
C38	7.855	0.000	1308	182			
C40	8.054	0.001	2019	400	BUNKERC (C10-C38)	33028174	3421

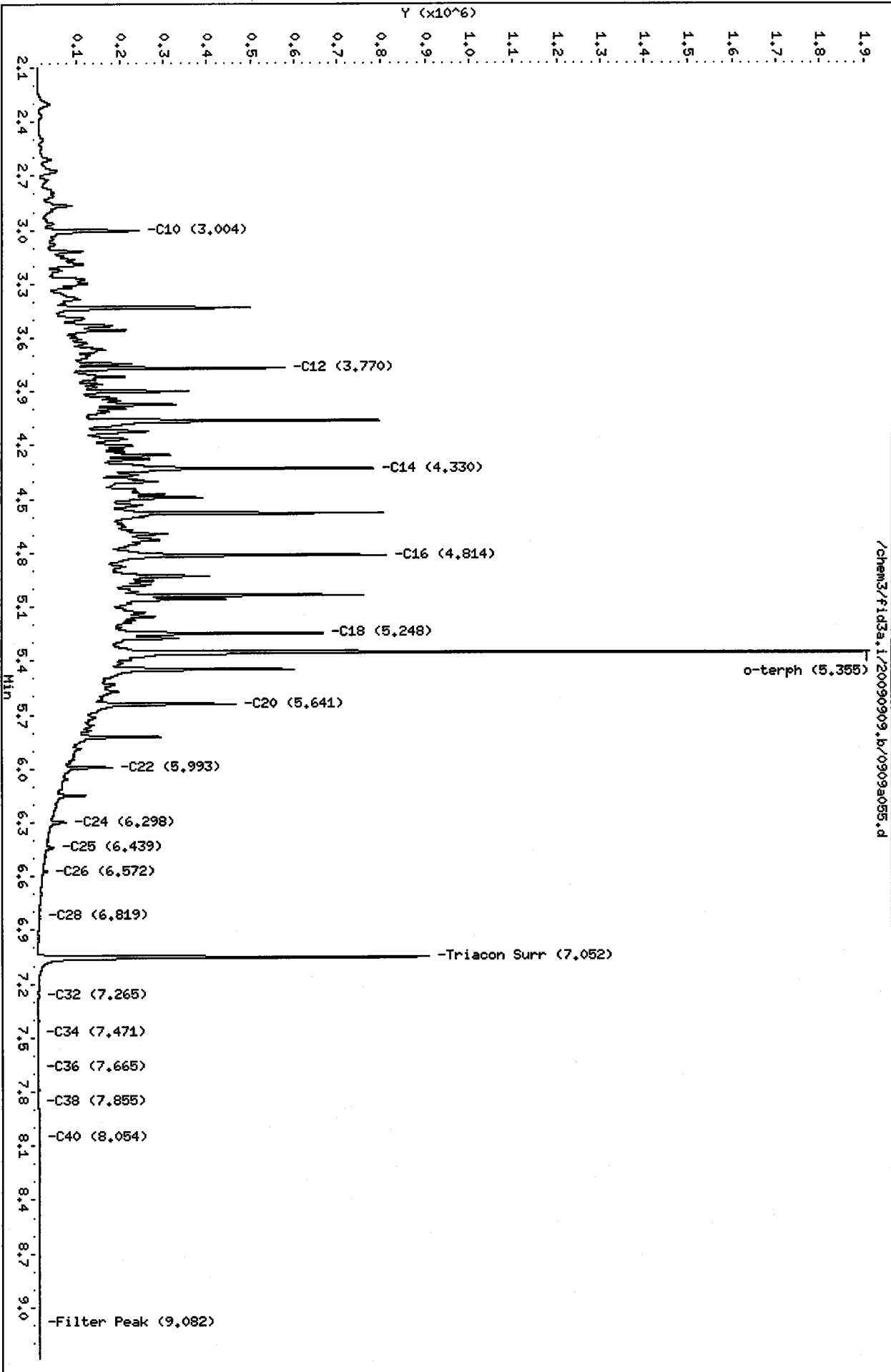
Range Times: NW Diesel(3.818 - 6.350) NW Gas(0.710 - 3.818) NW M.Oil(6.350 - 7.905)  
AK102(2.952 - 6.390) AK103(6.390 - 7.717) Jet A(2.952 - 5.297)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1069919	40.7	90.4
Triacontane	726244	42.2	93.8

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090909.b/0909a055.d  
Date: 10-SEP-2009 06:04  
Client ID: DQF-TP21-11 MS  
Sample Info: PM91KHS  
Column phase: ZR1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

*ms 9/11/09*

Data file: /chem3/fid3a.i/20090909.b/0909a056.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91KMSD  
Client ID: DOF-TP21-11 MSD  
Injection: 10-SEP-2009 06:22  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.754	-0.007	72159	120172	GAS (Tol-C12)	6888160	72
C8	1.081	0.000	20216	34401	DIESEL (C12-C24)	29292769	1364
C10	3.004	0.002	264419	294671	M.OIL (C24-C38)	450941	38
C12	3.769	0.002	600877	506924	AK-102 (C10-C25)	34572903	1296
C14	4.330	0.000	825149	1156547	AK-103 (C25-C36)	363606	41
C16	4.814	-0.001	848951	1469256	OR.DIES (C10-C28)	34897906	1655
C18	5.248	0.002	722236	750536	OR.MOIL (C28-C40)	68364	6
C20	5.641	0.001	498705	633498	JET-A (C10-C18)	26698579	1685
C22	5.992	-0.001	180590	219920			
C24	6.298	-0.001	71921	120487			
C25	6.439	-0.001	43031	84014			
C26	6.572	-0.001	22667	32799			
C28	6.820	-0.001	5660	6465			
C32	7.266	-0.001	2707	4304			
C34	7.474	0.002	111	25			
Filter Peak	9.082	0.000	2449	292			
C36	7.665	-0.001	854	857	CREOSOT (C8-C22)	34738840	5431
C38	7.855	0.000	1084	150			
C40	8.053	0.000	1795	250	BUNKERC (C10-C38)	34945641	3620

Range Times: NW Diesel (3.818 - 6.350) NW Gas (0.710 - 3.818) NW M.Oil (6.350 - 7.905)  
AK102 (2.952 - 6.390) AK103 (6.390 - 7.717) Jet A (2.952 - 5.297)

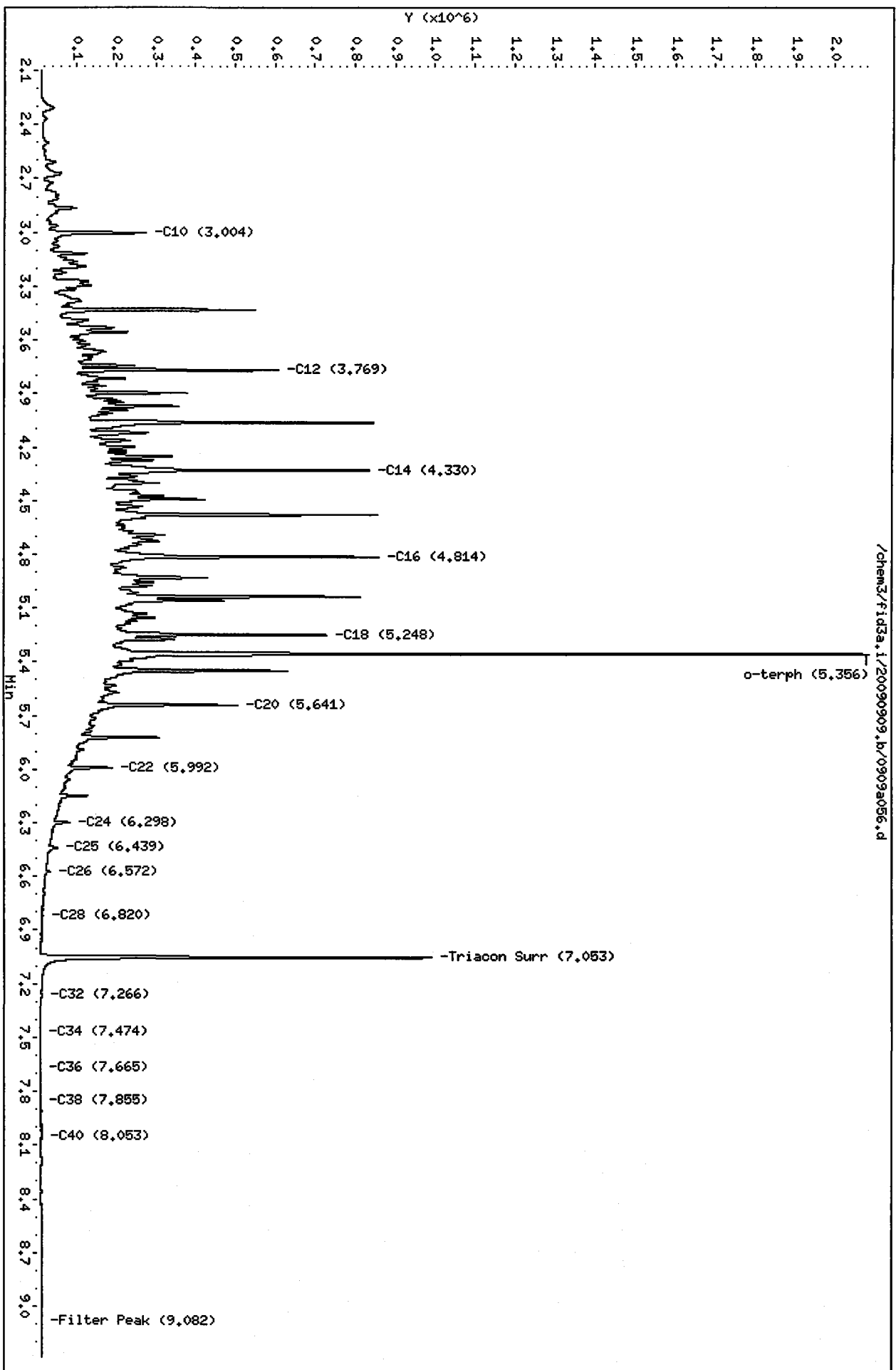
Surrogate	Area	Amount	%Rec
o-Terphenyl	1131015	43.0	95.6
Triacontane	789846	45.9	102.1

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3a.i/20090909.b/0909a056.d  
Date: 10-SEP-2009 06:22  
Client ID: DDF-TP21-11 HSD  
Sample Info: PM91KNSD  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1

Sample ID: LCS-090409

LAB CONTROL

Lab Sample ID: LCS-090409

LIMS ID: 09-20632

Matrix: Soil

Data Release Authorized: *AB*

Reported: 09/11/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: NA

Date Received: NA

Date Extracted: 09/04/09

Date Analyzed: 09/10/09 02:09

Instrument/Analyst: FID3A/MS

Sample Amount: 10.0 g

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	141	150	94.0%

**TPHD Surrogate Recovery**

o-Terphenyl	92.6%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.  
TPH Quantitation Report

Ms 9/11/09

Data file: /chem3/fid3a.i/20090909.b/0909a042.d  
Method: /chem3/fid3a.i/20090909.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/11/2009  
Macro: FID:3A090109

ARI ID: PM91LCSS1  
Client ID: PM91LCSS1  
Injection: 10-SEP-2009 02:09  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.763	0.003	72505	85550	GAS (Tol-C12)	7063813	74
C8	1.081	0.001	20680	2891	DIESEL (C12-C24)	30192103	1406
C10	3.005	0.003	268330	263513	M.OIL (C24-C38)	470991	39
C12	3.770	0.002	622654	514520	AK-102 (C10-C25)	35549417	1332
C14	4.330	0.000	839417	1198666	AK-103 (C25-C36)	383123	43
C16	4.814	0.000	874021	1290653	OR.DIES (C10-C28)	35890573	1702
C18	5.248	0.002	717351	754613	OR.MOIL (C28-C40)	64131	6
C20	5.641	0.001	499318	620233	JET-A (C10-C18)	27259527	1720
C22	5.993	-0.001	182243	362188			
C24	6.300	0.000	70943	110748			
C25	6.441	0.001	41805	80770			
C26	6.572	-0.001	22923	33065			
C28	6.820	-0.002	5051	4716			
C32	7.267	0.000	2442	1889			
C34	7.473	0.002	74	18			
Filter Peak	9.081	-0.001	2291	592			
C36	7.665	-0.002	886	928	CREOSOT (C8-C22)	35765750	5592
C38	7.855	0.000	904	142			
C40	8.054	0.001	1163	184	BUNKERC (C10-C38)	35941488	3723

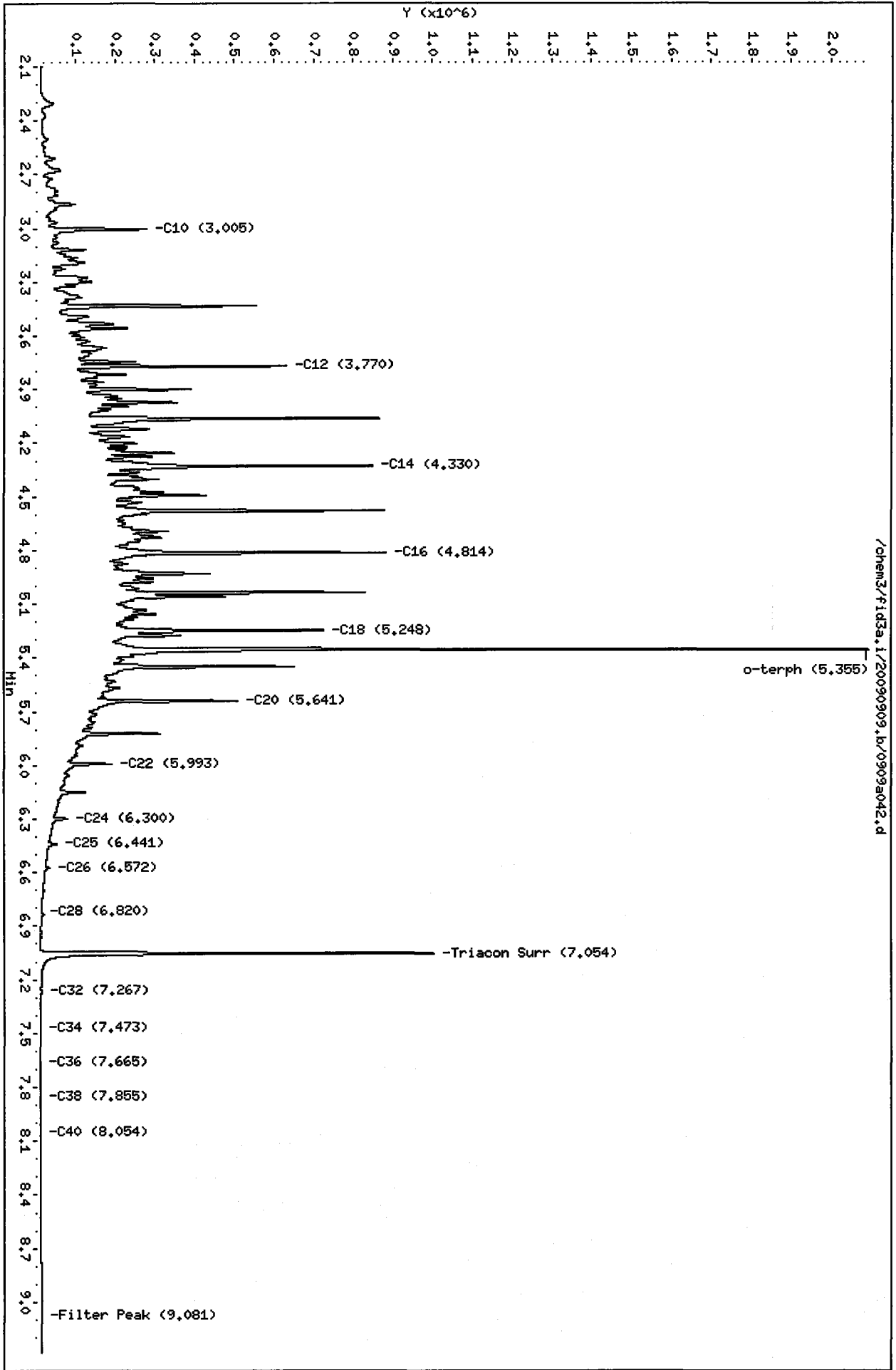
Range Times: NW Diesel(3.818 - 6.350) NW Gas(0.710 - 3.818) NW M.Oil(6.350 - 7.905)  
AK102(2.952 - 6.390) AK103(6.390 - 7.717) Jet A(2.952 - 5.297)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1095855	41.7	92.6
Triacontane	787722	45.8	101.8

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.1/20090909.b/0909a042.d  
Date: 10-SEP-2009 02:09  
Client ID: PM91LCSS1  
Sample Info: PM91LCSS1  
Column phase: ZB1-HT

Instrument: fid3a.1  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.1/20090909.b/0909a042.d

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil  
Date Received: 09/03/09

ARI Job: PM91  
Project: Verbeek  
PSE-004-00

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
09-20622-PM91A	DOF-TP19-7	8.47 g	1.00 mL	D	09/04/09
09-20623-PM91B	DOF-TP19-9	9.17 g	5.00 mL	D	09/04/09
09-20624-PM91C	DOF-TP19-15	7.97 g	1.00 mL	D	09/04/09
09-20626-PM91E	DOF-TP19-11	8.34 g	1.00 mL	D	09/04/09
09-20627-PM91F	DOF-TP20-6	8.27 g	1.00 mL	D	09/04/09
09-20628-PM91G	DOF-TP20-11	8.69 g	1.00 mL	D	09/04/09
09-20629-PM91H	DOF-TP20-15	7.11 g	1.00 mL	D	09/04/09
09-20630-PM91I	DOF-TP21-4	8.50 g	1.00 mL	D	09/04/09
09-20631-PM91J	DOF-TP21-7	9.02 g	1.00 mL	D	09/04/09
09-20632-090409MB1	Method Blank	10.0 g	1.00 mL	-	09/04/09
09-20632-090409LCS1	Lab Control	10.0 g	1.00 mL	-	09/04/09
09-20632-PM91K	DOF-TP21-11	8.63 g	1.00 mL	D	09/04/09
09-20632-PM91KMS	DOF-TP21-11	8.74 g	1.00 mL	D	09/04/09
09-20632-PM91KMSD	DOF-TP21-11	8.80 g	1.00 mL	D	09/04/09
09-20634-PM91M	DOF-TP22-7	8.46 g	1.00 mL	D	09/04/09
09-20636-PM91O	DOF-TP22-15	8.87 g	1.00 mL	D	09/04/09
09-20637-PM91P	DOF-TP23-8	8.16 g	1.00 mL	D	09/04/09
09-20638-PM91Q	DOF-TP23-12	8.21 g	4.00 mL	D	09/04/09
09-20639-PM91R	DOF-TP23-15	6.28 g	1.00 mL	D	09/04/09
09-20640-PM91S	DOF-TP24-10	8.36 g	1.00 mL	D	09/04/09
09-20641-PM91T	DOF-TP24-15	8.00 g	1.00 mL	D	09/04/09

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP19-7  
SAMPLE

Lab Sample ID: PM91A

LIMS ID: 09-20622

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 82.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP19-9  
SAMPLE

Lab Sample ID: PM91B

LIMS ID: 09-20623

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 87.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	6	

U-Analyte undetected at given RL


RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP19-15  
SAMPLE

Lab Sample ID: PM91C  
LIMS ID: 09-20624  
Matrix: Soil  
Data Release Authorized   
Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Percent Total Solids: 75.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP19-11  
SAMPLE

Lab Sample ID: PM91E

LIMS ID: 09-20626

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 83.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP20-6  
SAMPLE

Lab Sample ID: PM91F

LIMS ID: 09-20627

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 82.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	10	10	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP20-11  
SAMPLE

Lab Sample ID: PM91G

LIMS ID: 09-20628

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 85.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP20-15  
SAMPLE

Lab Sample ID: PM91H

LIMS ID: 09-20629

Matrix: Soil

Data Release Authorized 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 71.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	7	7	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

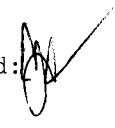
Page 1 of 1

Sample ID: DOF-TP21-4  
SAMPLE

Lab Sample ID: PM91I

LIMS ID: 09-20630

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 82.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	10	10	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

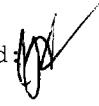
Page 1 of 1

Sample ID: DOF-TP21-7  
SAMPLE

Lab Sample ID: PM91J

LIMS ID: 09-20631

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 75.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	7	7	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP21-11  
SAMPLE

Lab Sample ID: PM91K

LIMS ID: 09-20632

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 83.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL


RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP22-7  
SAMPLE

Lab Sample ID: PM91M  
LIMS ID: 09-20634  
Matrix: Soil  
Data Release Authorized   
Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Percent Total Solids: 92.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	8	

U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP22-15  
SAMPLE

Lab Sample ID: PM910

LIMS ID: 09-20636

Matrix: Soil

Data Release Authorized 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 72.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	7	7	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP23-8  
SAMPLE

Lab Sample ID: PM91P

LIMS ID: 09-20637

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 80.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP23-12  
SAMPLE

Lab Sample ID: PM91Q

LIMS ID: 09-20638

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 81.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	8	


U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP23-15  
SAMPLE

Lab Sample ID: PM91R  
LIMS ID: 09-20639  
Matrix: Soil  
Data Release Authorized   
Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Percent Total Solids: 67.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	7	7	U

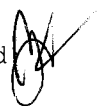
U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP24-10  
SAMPLE

Lab Sample ID: PM91S  
LIMS ID: 09-20640  
Matrix: Soil  
Data Release Authorized   
Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc  
Project: Verbeek  
PSE-004-00  
Date Sampled: 09/02/09  
Date Received: 09/03/09

Percent Total Solids: 81.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	10	10	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP24-15  
SAMPLE

Lab Sample ID: PM91T

LIMS ID: 09-20641

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

Percent Total Solids: 76.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	6	6	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DOF-TP19-7

**MATRIX SPIKE**

Lab Sample ID: PM91A


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20622

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/16/09

Date Received: 09/03/09

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	6 U	211	229	92.1%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-TP19-7  
DUPLICATE

Lab Sample ID: PM91A

LIMS ID: 09-20622

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: 09/02/09

Date Received: 09/03/09

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	6 U	6 U	0.0%	+/- 6	L

Reported in mg/kg-dry

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: PM91LCS

LIMS ID: 09-20623

Matrix: Soil

Data Release Authorized 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	194	200	97.0%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: PM91MB


QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20623

Project: Verbeek

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 09/16/09

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: STD REFERENCE  
ERA D053540

Lab Sample ID: PM91SRM

LIMS ID: 09-20623

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM91-Dalton, Olmsted & Fuglevand, Inc

Project: Verbeek

PSE-004-00

Date Sampled: NA

Date Received: NA

Analyte	Analysis Method	Analysis Date	mg/kg-dry	Certified Value	Advisory Range
Arsenic	6010B	09/11/09	126	132	106-157



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

September 21, 2009

Matt Dalton  
Dalton, Olmsted, & Fuglevand  
10827 NE 68th, Suite B  
Kirkland, WA 98033

**RE: Client Project: Verbeek – PSE-004-00**  
**ARI Job No.: PM92**

Dear Matt:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final analytical results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted twenty-one soil samples on September 3, 2009. Select samples were archived upon receipt. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for VOCs, SVOCs, NWTPH-Gx, NWTPH-Dx, and Arsenic, as requested on the COC.

The continuing calibration of Retene fell outside the control limits low for the 9/9/09 analysis. All detected results for this compound on the date of analysis have been flagged with a "Q" qualifier. No further corrective action was required.

The matrix spike and matrix spike duplicate percent recoveries of Gasoline Range Hydrocarbons fell outside the advisory control limits for sample **DOF-P7-C**. No corrective action is required for matrix QC.

An electronic copy of this report will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.



Cheronne Oreiro  
Project Manager

-For-

Susan Dunnihoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile PM92

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# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **PM92**  
 Turn-around Requested: **NMHTL**  
 ARI Client Company: **ORLTON OUNITED & FUGLEMAN**  
 Phone: **06 60074**  
 Client Contact: **MATT DALTON / DAVE COOPER**  
 Client Project Name: **VERBEEK**  
 Client Project #: **RSE-004-00**  
 Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



Page: **1** of **3**  
 Date: **9/3/09**  
 No. of Coolers: **0**  
 Cooler Temps: **0**  
 Ice Present? **No**

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					NMHTL-6/ ATEX	NMHTL-0X	PATHS & 270 FULL SCAN	ARISWIC	
DDF-P1-A	9/3/09	1120	SOIL	3	X	X	X		
DDF-P1-B		1130			X	X	X		
DDF-P2-A		1145			X	X	X		
DDF-P2-B		1155							HOLD
DDF-P2-C		1200							
DDF-P3-A		1210							
DDF-P3-B		1220							
DDF-P3-C		1230							
DDF-P4-A		1240			X	X	X		
DDF-P4-B		1250			X	X	X		
Comments/Special Instructions	Relinquished by: <i>[Signature]</i> (Signature) <b>David Cooper</b> Printed Name: <b>David Cooper</b> Company: <b>ARI</b> Date & Time: <b>9/3/09 1120</b>				Relinquished by: <i>[Signature]</i> (Signature) <b>Jonathan Walter</b> Printed Name: <b>Jonathan Walter</b> Company: <b>ARI</b> Date & Time: <b>9/3/09 1120</b>				Received by: <i>[Signature]</i> (Signature) <b>David Cooper</b> Printed Name: <b>David Cooper</b> Company: <b>ARI</b> Date & Time: <b>9/3/09 1120</b>

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

# Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: 157772  
 Turn-around Requested: \_\_\_\_\_  
 ARI Client Company: DDF  
 Phone: \_\_\_\_\_  
 Client Contact: MST OTTEW / DAVE COOPER  
 Client Project Name: VERDEEN  
 Client Project #: PCE-004-00

Page: 2 of 3  
 Date: 8/3/09  
 No. of Coolers: \_\_\_\_\_  
 Ice Present? \_\_\_\_\_  
 Cooler Temps: \_\_\_\_\_

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					MUTPH-G/RTX	MUTPH-DX	PATHS BZTO FULL KAN	ANALYTIC	
DDF-P4-C	8/3/09	1255	SOIL	3	X	X	X	X	
DDF-P5-A		1300			X	X	X	X	
DDF-P5-B		1315			X	X	X	X	
DDF-P5-C		1320			X	X	X	X	
DDF-P6-A		1330							HOLD
DDF-P6-B		1340							
DDF-P6-C		1350							
DDF-P6-D		1355							
DDF-P7-A		1405			X	X	X	X	
DDF-P7-B		1410			X	X	X	X	
Comments/Special Instructions	Relinquished by: <u>[Signature]</u> (Signature) _____ Printed Name: <u>Jonathan Walker</u> Company: <u>ARI</u> Date & Time: <u>8/3/09 1120</u>				Relinquished by: <u>[Signature]</u> (Signature) _____ Printed Name: _____ Company: _____ Date & Time: _____				Received by: _____ (Signature) _____ Printed Name: _____ Company: _____ Date & Time: _____

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.





Analytical Resources,  
Incorporated  
Analytical Chemists and  
Consultants

# Cooler Receipt Form

ARI Client: DOF

Project Name: Verbeek

COC No(s): \_\_\_\_\_ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_

Assigned ARI Job No: PM92

Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? ..... YES NO

Were custody papers properly filled out (ink, signed, etc.) ..... YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 8.2

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 487405

Cooler Accepted by: AV Date: 9/3/09 Time: 1130

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? ..... YES (NO)

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? ..... NA YES (NO)

Were all bottles sealed in individual plastic bags? ..... YES NO

Did all bottles arrive in good condition (unbroken)? ..... YES NO

Were all bottle labels complete and legible? ..... YES NO

Did the number of containers listed on COC match with the number of containers received? ..... YES NO

Did all bottle labels and tags agree with custody papers? ..... YES NO

Were all bottles used correct for the requested analyses? ..... YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? ..... (NA) YES NO

Was sufficient amount of sample sent in each bottle? ..... YES NO

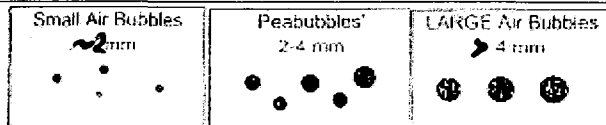
Samples Logged by: AV Date: 9/3/09 Time: 1233

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

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



Small → "sm"  
Peabubbles → "pb"  
Large → "lg"  
Headspace → "hs"





# Cooler Temperature Compliance Form

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type
All samples on PMA2 are out of temp. Compliance		

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Completed by: AV Date: 9/3/09 Time: 1231

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-P1-A

Page 1 of 1

SAMPLE

Lab Sample ID: PM92A

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20601

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *AB*

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 5.03 g-dry-wt

Date Analyzed: 09/04/09 15:09

Purge Volume: 5.0 mL

Moisture: 4.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	99.9%
Bromofluorobenzene	97.7%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-P1-B

Page 1 of 1

SAMPLE

Lab Sample ID: PM92B

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20602

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *B*

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 5.41 g-dry-wt

Date Analyzed: 09/04/09 15:36

Purge Volume: 5.0 mL

Moisture: 3.3%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
179601-23-1	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	99.3%
Bromofluorobenzene	98.5%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-P4-A

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM92I

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20609

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 5.40 g-dry-wt

Date Analyzed: 09/04/09 16:02

Purge Volume: 5.0 mL

Moisture: 7.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
179601-23-1	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	99.9%
Bromofluorobenzene	98.8%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-P4-B

Page 1 of 1

SAMPLE

Lab Sample ID: PM92J


QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20610

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 09/04/09 16:28

Purge Volume: 5.0 mL

Moisture: 7.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	101%
d8-Toluene	99.8%
Bromofluorobenzene	96.9%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DOF-P4-C  
SAMPLE

Lab Sample ID: PM92K  
LIMS ID: 09-20611  
Matrix: Soil  
Data Release Authorized: *AB*  
Reported: 09/14/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Instrument/Analyst: NT9/AAR  
Date Analyzed: 09/04/09 16:55

Sample Amount: 5.36 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 11.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
179601-23-1	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	102%
d8-Toluene	99.8%
Bromofluorobenzene	99.0%
d4-1,2-Dichlorobenzene	99.3%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-P5-A

Page 1 of 1

SAMPLE

Lab Sample ID: PM92L

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20612

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *B*

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.85 g-dry-wt

Date Analyzed: 09/04/09 17:21

Purge Volume: 5.0 mL

Moisture: 6.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	103%
d8-Toluene	99.1%
Bromofluorobenzene	96.8%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DOF-P5-B  
SAMPLE

Lab Sample ID: PM92M  
LIMS ID: 09-20613  
Matrix: Soil  
Data Release Authorized: *AB*  
Reported: 09/14/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Instrument/Analyst: NT9/AAR  
Date Analyzed: 09/04/09 17:48

Sample Amount: 5.14 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 12.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	102%
d8-Toluene	99.1%
Bromofluorobenzene	95.3%
d4-1,2-Dichlorobenzene	100%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-P5-C

Page 1 of 1

SAMPLE

Lab Sample ID: PM92N


QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20614

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.57 g-dry-wt

Date Analyzed: 09/04/09 18:14

Purge Volume: 5.0 mL

Moisture: 14.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	99.8%
d8-Toluene	99.5%
Bromofluorobenzene	91.5%
d4-1,2-Dichlorobenzene	104%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DOF-P7-A**

Page 1 of 1

**SAMPLE**

Lab Sample ID: PM92S


QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20619

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.72 g-dry-wt

Date Analyzed: 09/04/09 18:41

Purge Volume: 5.0 mL

Moisture: 6.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	103%
d8-Toluene	100%
Bromofluorobenzene	99.1%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-P7-B

Page 1 of 1

SAMPLE

Lab Sample ID: PM92T

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20620

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 5.13 g-dry-wt

Date Analyzed: 09/04/09 19:07

Purge Volume: 5.0 mL

Moisture: 11.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
<b>108-88-3</b>	<b>Toluene</b>	<b>1.0</b>	<b>1.3</b>	
100-41-4	Ethylbenzene	1.0	< 1.0	U
<b>179601-23-1</b>	<b>m,p-Xylene</b>	<b>1.0</b>	<b>1.1</b>	
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	104%
d8-Toluene	98.7%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DOF-P7-C  
SAMPLE

Page 1 of 1

Lab Sample ID: PM92U

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20621

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *B*

Date Sampled: 08/31/09

Reported: 09/14/09

Date Received: 09/03/09

Instrument/Analyst: NT9/AAR

Sample Amount: 4.64 g-dry-wt

Date Analyzed: 09/04/09 19:34

Purge Volume: 5.0 mL

Moisture: 11.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U
108-88-3	Toluene	1.1	1.4	
100-41-4	Ethylbenzene	1.1	< 1.1	U
179601-23-1	m,p-Xylene	1.1	1.2	
95-47-6	o-Xylene	1.1	< 1.1	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	103%
d8-Toluene	100%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	97.2%

**VOA SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-090409	Method Blank	Low	101%	99.9%	98.8%	99.6%	0
LCS-090409	Lab Control	Low	108%	100%	102%	99.9%	0
LCSD-090409	Lab Control Dup	Low	109%	100%	103%	101%	0
PM92A	DOF-P1-A	Low	104%	99.9%	97.7%	101%	0
PM92B	DOF-P1-B	Low	104%	99.3%	98.5%	101%	0
PM92I	DOF-P4-A	Low	104%	99.9%	98.8%	102%	0
PM92J	DOF-P4-B	Low	101%	99.8%	96.9%	100%	0
PM92K	DOF-P4-C	Low	102%	99.8%	99.0%	99.3%	0
PM92L	DOF-P5-A	Low	103%	99.1%	96.8%	100%	0
PM92M	DOF-P5-B	Low	102%	99.1%	95.3%	100%	0
PM92N	DOF-P5-C	Low	99.8%	99.5%	91.5%	104%	0
PM92S	DOF-P7-A	Low	103%	100%	99.1%	101%	0
PM92T	DOF-P7-B	Low	104%	98.7%	102%	100%	0
PM92U	DOF-P7-C	Low	103%	100%	100%	97.2%	0

**LCS/MB LIMITS**

**QC LIMITS**

	Low	Med	Low	Med
<b>SW8260C</b>				
(DCE) = d4-1,2-Dichloroethane	75-120	76-120	72-134	69-120
(TOL) = d8-Toluene	80-122	80-120	78-124	80-120
(BFB) = Bromofluorobenzene	79-120	80-120	66-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	79-120	80-120

Log Number Range: 09-20601 to 09-20621

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-090409

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-090409

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20601

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 09/14/09

Date Received: NA

Instrument/Analyst LCS: NT9/AAR

Sample Amount LCS: 5.00 g-dry-wt

LCS D: NT9/AAR

LCS D: 5.00 g-dry-wt

Date Analyzed LCS: 09/04/09 10:12

Purge Volume LCS: 5.0 mL

LCS D: 09/04/09 10:38

LCS D: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Benzene	45.7	50.0	91.4%	47.8	50.0	95.6%	4.5%
Toluene	46.1	50.0	92.2%	47.9	50.0	95.8%	3.8%
Ethylbenzene	48.0	50.0	96.0%	50.2	50.0	100%	4.5%
m,p-Xylene	97.4	100	97.4%	99.6	100	99.6%	2.2%
o-Xylene	48.8	50.0	97.6%	50.4	50.0	101%	3.2%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCS D
d4-1,2-Dichloroethane	108%	109%
d8-Toluene	100%	100%
Bromofluorobenzene	102%	103%
d4-1,2-Dichlorobenzene	99.9%	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-090409

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METHOD BLANK

Lab Sample ID: MB-090409


QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20601

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 09/14/09

Date Received: NA

Instrument/Analyst: NT9/AAR

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 09/04/09 11:05

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	101%
d8-Toluene	99.9%
Bromofluorobenzene	98.8%
d4-1,2-Dichlorobenzene	99.6%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-P1-A  
SAMPLE

Lab Sample ID: PM92A  
LIMS ID: 09-20601  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 23:22  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.64 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 4.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
91-57-6	2-Methylnaphthalene	65	< 65 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
83-32-9	Acenaphthene	65	< 65 U
132-64-9	Dibenzofuran	65	< 65 U
84-66-2	Diethylphthalate	65	< 65 U
86-73-7	Fluorene	65	< 65 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
205-99-2	Benzo(b)fluoranthene	65	< 65 U
207-08-9	Benzo(k)fluoranthene	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	65	< 65 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	77.2%	d4-1,2-Dichlorobenzene	68.0%
d5-Phenol	63.7%	2-Fluorophenol	58.1%
2,4,6-Tribromophenol	64.8%	d4-2-Chlorophenol	58.7%



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-P1-B  
SAMPLE

Lab Sample ID: PM92B  
LIMS ID: 09-20602  
Matrix: Soil  
Data Release Authorized: *W*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 23:57  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.92 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 3.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
91-57-6	2-Methylnaphthalene	63	< 63 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
83-32-9	Acenaphthene	63	< 63 U
132-64-9	Dibenzofuran	63	< 63 U
84-66-2	Diethylphthalate	63	< 63 U
86-73-7	Fluorene	63	< 63 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
205-99-2	Benzo(b)fluoranthene	63	< 63 U
207-08-9	Benzo(k)fluoranthene	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	63	< 63 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	73.2%	d4-1,2-Dichlorobenzene	63.2%
d5-Phenol	60.0%	2-Fluorophenol	54.7%
2,4,6-Tribromophenol	65.1%	d4-2-Chlorophenol	54.7%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-P4-A  
SAMPLE

Lab Sample ID: PM92I  
LIMS ID: 09-20609  
Matrix: Soil  
Data Release Authorized: *W*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 01:43  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 9.02 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 7.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	55	< 55 U
95-48-7	2-Methylphenol	55	< 55 U
106-44-5	4-Methylphenol	55	< 55 U
105-67-9	2,4-Dimethylphenol	55	< 55 U
91-20-3	Naphthalene	55	< 55 U
91-57-6	2-Methylnaphthalene	55	< 55 U
131-11-3	Dimethylphthalate	55	< 55 U
208-96-8	Acenaphthylene	55	< 55 U
83-32-9	Acenaphthene	55	< 55 U
132-64-9	Dibenzofuran	55	< 55 U
84-66-2	Diethylphthalate	55	< 55 U
86-73-7	Fluorene	55	< 55 U
85-01-8	Phenanthrene	55	< 55 U
86-74-8	Carbazole	55	< 55 U
120-12-7	Anthracene	55	< 55 U
84-74-2	Di-n-Butylphthalate	55	< 55 U
206-44-0	Fluoranthene	55	< 55 U
129-00-0	Pyrene	55	< 55 U
85-68-7	Butylbenzylphthalate	55	< 55 U
56-55-3	Benzo(a)anthracene	55	< 55 U
117-81-7	bis(2-Ethylhexyl)phthalate	55	< 55 U
218-01-9	Chrysene	55	< 55 U
117-84-0	Di-n-Octyl phthalate	55	< 55 U
205-99-2	Benzo(b)fluoranthene	55	< 55 U
207-08-9	Benzo(k)fluoranthene	55	< 55 U
50-32-8	Benzo(a)pyrene	55	< 55 U
193-39-5	Indeno(1,2,3-cd)pyrene	55	< 55 U
53-70-3	Dibenz(a,h)anthracene	55	< 55 U
191-24-2	Benzo(g,h,i)perylene	55	< 55 U
483-65-8	Retene	110	< 110 U
90-12-0	1-Methylnaphthalene	55	< 55 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	59.2%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	58.1%	2-Fluorophenol	52.0%
2,4,6-Tribromophenol	57.6%	d4-2-Chlorophenol	53.6%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-P4-B  
SAMPLE

Lab Sample ID: PM92J  
LIMS ID: 09-20610  
Matrix: Soil  
Data Release Authorized: *mw*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 02:18  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.61 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 7.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
91-20-3	Naphthalene	58	< 58 U
91-57-6	2-Methylnaphthalene	58	< 58 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	Acenaphthylene	58	< 58 U
83-32-9	Acenaphthene	58	< 58 U
132-64-9	Dibenzofuran	58	< 58 U
84-66-2	Diethylphthalate	58	< 58 U
86-73-7	Fluorene	58	< 58 U
85-01-8	Phenanthrene	58	< 58 U
86-74-8	Carbazole	58	< 58 U
120-12-7	Anthracene	58	< 58 U
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	Fluoranthene	58	< 58 U
129-00-0	Pyrene	58	< 58 U
85-68-7	Butylbenzylphthalate	58	< 58 U
56-55-3	Benzo(a)anthracene	58	< 58 U
117-81-7	bis(2-Ethylhexyl)phthalate	58	< 58 U
218-01-9	Chrysene	58	< 58 U
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	Benzo(b)fluoranthene	58	< 58 U
207-08-9	Benzo(k)fluoranthene	58	< 58 U
50-32-8	Benzo(a)pyrene	58	< 58 U
193-39-5	Indeno(1,2,3-cd)pyrene	58	< 58 U
53-70-3	Dibenz(a,h)anthracene	58	< 58 U
191-24-2	Benzo(g,h,i)perylene	58	< 58 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	58	< 58 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	55.6%	2-Fluorobiphenyl	65.2%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	54.9%	2-Fluorophenol	49.1%
2,4,6-Tribromophenol	56.3%	d4-2-Chlorophenol	49.9%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-P4-C  
SAMPLE

Lab Sample ID: PM92K  
LIMS ID: 09-20611  
Matrix: Soil  
Data Release Authorized: *WW*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 02:53  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.48 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	59	< 59 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	54.4%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	68.0%	d4-1,2-Dichlorobenzene	56.4%
d5-Phenol	52.5%	2-Fluorophenol	47.7%
2,4,6-Tribromophenol	54.9%	d4-2-Chlorophenol	47.7%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-P5-A  
SAMPLE

Lab Sample ID: PM92L  
LIMS ID: 09-20612  
Matrix: Soil  
Data Release Authorized:   
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 10:50  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 9.19 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 6.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	54	< 54 U
95-48-7	2-Methylphenol	54	< 54 U
106-44-5	4-Methylphenol	54	< 54 U
105-67-9	2,4-Dimethylphenol	54	< 54 U
91-20-3	Naphthalene	54	< 54 U
91-57-6	2-Methylnaphthalene	54	< 54 U
131-11-3	Dimethylphthalate	54	< 54 U
208-96-8	Acenaphthylene	54	< 54 U
83-32-9	Acenaphthene	54	< 54 U
132-64-9	Dibenzofuran	54	< 54 U
84-66-2	Diethylphthalate	54	< 54 U
86-73-7	Fluorene	54	< 54 U
85-01-8	Phenanthrene	54	< 54 U
86-74-8	Carbazole	54	< 54 U
120-12-7	Anthracene	54	< 54 U
84-74-2	Di-n-Butylphthalate	54	< 54 U
206-44-0	Fluoranthene	54	< 54 U
129-00-0	Pyrene	54	< 54 U
85-68-7	Butylbenzylphthalate	54	< 54 U
56-55-3	Benzo(a)anthracene	54	< 54 U
117-81-7	bis(2-Ethylhexyl)phthalate	54	< 54 U
218-01-9	Chrysene	54	< 54 U
117-84-0	Di-n-Octyl phthalate	54	< 54 U
205-99-2	Benzo(b)fluoranthene	54	< 54 U
207-08-9	Benzo(k)fluoranthene	54	< 54 U
50-32-8	Benzo(a)pyrene	54	< 54 U
193-39-5	Indeno(1,2,3-cd)pyrene	54	< 54 U
53-70-3	Dibenz(a,h)anthracene	54	< 54 U
191-24-2	Benzo(g,h,i)perylene	54	< 54 U
483-65-8	Retene	110	< 110 U
90-12-0	1-Methylnaphthalene	54	< 54 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	58.8%	2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	60.8%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	55.7%	2-Fluorophenol	51.7%
2,4,6-Tribromophenol	71.7%	d4-2-Chlorophenol	52.0%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-P5-B  
SAMPLE

Lab Sample ID: PM92M  
LIMS ID: 09-20613  
Matrix: Soil  
Data Release Authorized: *WWW*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 03:28  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.49 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 12.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo (a) anthracene	59	< 59 U
117-81-7	bis (2-Ethylhexyl) phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo (b) fluoranthene	59	< 59 U
207-08-9	Benzo (k) fluoranthene	59	< 59 U
50-32-8	Benzo (a) pyrene	59	< 59 U
193-39-5	Indeno (1,2,3-cd) pyrene	59	< 59 U
53-70-3	Dibenz (a,h) anthracene	59	< 59 U
191-24-2	Benzo (g,h,i) perylene	59	< 59 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	56.4%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	68.8%	d4-1,2-Dichlorobenzene	56.8%
d5-Phenol	53.9%	2-Fluorophenol	48.3%
2,4,6-Tribromophenol	57.3%	d4-2-Chlorophenol	49.1%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-P5-C  
SAMPLE

Lab Sample ID: PM92N  
LIMS ID: 09-20614  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 05:48  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.74 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 14.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
91-20-3	<b>Naphthalene</b>	<b>65</b>	<b>150</b>
91-57-6	<b>2-Methylnaphthalene</b>	<b>65</b>	<b>170</b>
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
83-32-9	Acenaphthene	65	< 65 U
132-64-9	<b>Dibenzofuran</b>	<b>65</b>	<b>100</b>
84-66-2	Diethylphthalate	65	< 65 U
86-73-7	Fluorene	65	< 65 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	<b>Fluoranthene</b>	<b>65</b>	<b>160</b>
129-00-0	<b>Pyrene</b>	<b>65</b>	<b>180</b>
85-68-7	Butylbenzylphthalate	65	< 65 U
56-55-3	<b>Benzo (a) anthracene</b>	<b>65</b>	<b>83</b>
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	<b>Chrysene</b>	<b>65</b>	<b>120</b>
117-84-0	Di-n-Octyl phthalate	65	< 65 U
205-99-2	<b>Benzo (b) fluoranthene</b>	<b>65</b>	<b>81</b>
207-08-9	Benzo(k) fluoranthene	65	< 65 U
50-32-8	<b>Benzo (a) pyrene</b>	<b>65</b>	<b>84</b>
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	<b>Benzo (g,h,i) perylene</b>	<b>65</b>	<b>68</b>
483-65-8	Retene	130	720 Q
90-12-0	<b>1-Methylnaphthalene</b>	<b>65</b>	<b>170</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	57.6%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	54.0%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	54.1%	2-Fluorophenol	48.3%
2,4,6-Tribromophenol	58.7%	d4-2-Chlorophenol	49.9%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: DOF-P7-A  
SAMPLE

Lab Sample ID: PM92S  
LIMS ID: 09-20619  
Matrix: Soil  
Data Release Authorized: *WV*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 04:03  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.14 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 6.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
91-57-6	2-Methylnaphthalene	61	< 61 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
83-32-9	Acenaphthene	61	< 61 U
132-64-9	Dibenzofuran	61	< 61 U
84-66-2	Diethylphthalate	61	< 61 U
86-73-7	Fluorene	61	< 61 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
205-99-2	Benzo(b)fluoranthene	61	< 61 U
207-08-9	Benzo(k)fluoranthene	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	61	< 61 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	72.4%	d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	60.5%	2-Fluorophenol	55.2%
2,4,6-Tribromophenol	61.9%	d4-2-Chlorophenol	55.7%



**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-P7-B  
SAMPLE

Lab Sample ID: PM92T  
LIMS ID: 09-20620  
Matrix: Soil  
Data Release Authorized: *MMW*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 04:38  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.45 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
91-57-6	2-Methylnaphthalene	59	< 59 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
83-32-9	Acenaphthene	59	< 59 U
132-64-9	Dibenzofuran	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
86-73-7	Fluorene	59	< 59 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>59</b>	<b>110</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>59</b>	<b>190</b>
85-68-7	Butylbenzylphthalate	59	< 59 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	58.8%	2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	62.4%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	54.9%	2-Fluorophenol	50.4%
2,4,6-Tribromophenol	62.1%	d4-2-Chlorophenol	49.6%

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: DOF-P7-C  
SAMPLE

Lab Sample ID: PM92U  
LIMS ID: 09-20621  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/09/09 05:13  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 8.23 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
91-57-6	2-Methylnaphthalene	61	< 61 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
83-32-9	Acenaphthene	61	< 61 U
132-64-9	Dibenzofuran	61	< 61 U
84-66-2	Diethylphthalate	61	< 61 U
86-73-7	Fluorene	61	< 61 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
205-99-2	Benzo(b)fluoranthene	61	< 61 U
207-08-9	Benzo(k)fluoranthene	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
483-65-8	Retene	120	< 120 U
90-12-0	1-Methylnaphthalene	61	< 61 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	70.0%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	54.7%	2-Fluorophenol	50.4%
2,4,6-Tribromophenol	58.4%	d4-2-Chlorophenol	50.1%

**SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
MB-090709	67.6%	79.6%	89.6%	71.6%	66.9%	59.7%	74.1%	61.1%	0	
LCS-090709	69.2%	77.2%	77.2%	70.8%	67.7%	58.4%	67.7%	58.7%	0	
DOF-P1-A	66.4%	77.2%	77.2%	68.0%	63.7%	58.1%	64.8%	58.7%	0	
DOF-P1-B	61.2%	72.4%	73.2%	63.2%	60.0%	54.7%	65.1%	54.7%	0	
DOF-P4-A	59.2%	67.6%	73.6%	61.6%	58.1%	52.0%	57.6%	53.6%	0	
DOF-P4-B	55.6%	65.2%	70.8%	58.0%	54.9%	49.1%	56.3%	49.9%	0	
DOF-P4-C	54.4%	62.8%	68.0%	56.4%	52.5%	47.7%	54.9%	47.7%	0	
DOF-P5-A	58.8%	68.8%	60.8%	59.6%	55.7%	51.7%	71.7%	52.0%	0	
DOF-P5-B	56.4%	66.4%	68.8%	56.8%	53.9%	48.3%	57.3%	49.1%	0	
DOF-P5-C	57.6%	71.6%	54.0%	58.0%	54.1%	48.3%	58.7%	49.9%	0	
DOF-P7-A	62.4%	72.0%	72.4%	65.2%	60.5%	55.2%	61.9%	55.7%	0	
DOF-P7-B	58.8%	68.8%	62.4%	58.0%	54.9%	50.4%	62.1%	49.6%	0	
DOF-P7-C	56.8%	65.6%	70.0%	58.8%	54.7%	50.4%	58.4%	50.1%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-102)	(32-106)
(FBP) = 2-Fluorobiphenyl	(51-105)	(39-107)
(TPH) = d14-p-Terphenyl	(55-124)	(31-130)
(DCB) = d4-1,2-Dichlorobenzene	(48-104)	(38-102)
(PHL) = d5-Phenol	(44-110)	(27-112)
(2FP) = 2-Fluorophenol	(38-112)	(22-108)
(TBP) = 2,4,6-Tribromophenol	(54-120)	(31-131)
(2CP) = d4-2-Chlorophenol	(50-103)	(36-104)

Prep Method: SW3546  
Log Number Range: 09-20601 to 09-20621

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
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Sample ID: LCS-090709  
LAB CONTROL

Lab Sample ID: LCS-090709  
LIMS ID: 09-20601  
Matrix: Soil  
Data Release Authorized: *MMW*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: 08/31/09  
Date Received: 09/03/09

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 19:16  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: NO

Sample Amount: 7.50 g  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	975	1670	58.4%
2-Methylphenol	994	1670	59.5%
4-Methylphenol	2100	3330	63.1%
2,4-Dimethylphenol	981	1670	58.7%
Naphthalene	1110	1670	66.5%
2-Methylnaphthalene	1140	1670	68.3%
Dimethylphthalate	1110	1670	66.5%
Acenaphthylene	1160	1670	69.5%
Acenaphthene	1200	1670	71.9%
Dibenzofuran	1130	1670	67.7%
Diethylphthalate	1130	1670	67.7%
Fluorene	1100	1670	65.9%
Phenanthrene	1190	1670	71.3%
Carbazole	1180	1670	70.7%
Anthracene	1160	1670	69.5%
Di-n-Butylphthalate	1160	1670	69.5%
Fluoranthene	1140	1670	68.3%
Pyrene	1160	1670	69.5%
Butylbenzylphthalate	1060	1670	63.5%
Benzo(a)anthracene	1120	1670	67.1%
bis(2-Ethylhexyl)phthalate	1110	1670	66.5%
Chrysene	1230	1670	73.7%
Di-n-Octyl phthalate	1120	1670	67.1%
Benzo(b)fluoranthene	1120	1670	67.1%
Benzo(k)fluoranthene	1140	1670	68.3%
Benzo(a)pyrene	1120	1670	67.1%
Indeno(1,2,3-cd)pyrene	1060	1670	63.5%
Dibenz(a,h)anthracene	1290	1670	77.2%
Benzo(g,h,i)perylene	1340	1670	80.2%
Retene	1050	1670	62.9%
1-Methylnaphthalene	1090	1670	65.3%

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	69.2%
2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	77.2%
d4-1,2-Dichlorobenzene	70.8%
d5-Phenol	67.7%
2-Fluorophenol	58.4%
2,4,6-Tribromophenol	67.7%
d4-2-Chlorophenol	58.7%

Results reported in µg/kg

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by SW8270D GC/MS  
Page 1 of 1

Sample ID: MB-090709  
METHOD BLANK

Lab Sample ID: MB-090709  
LIMS ID: 09-20601  
Matrix: Soil  
Data Release Authorized: *WJW*  
Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00  
Date Sampled: NA  
Date Received: NA

Date Extracted: 09/07/09  
Date Analyzed: 09/08/09 18:41  
Instrument/Analyst: NT6/JZ  
GPC Cleanup: No

Sample Amount: 7.50 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
91-57-6	2-Methylnaphthalene	67	< 67 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
83-32-9	Acenaphthene	67	< 67 U
132-64-9	Dibenzofuran	67	< 67 U
84-66-2	Diethylphthalate	67	< 67 U
86-73-7	Fluorene	67	< 67 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
205-99-2	Benzo(b)fluoranthene	67	< 67 U
207-08-9	Benzo(k)fluoranthene	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
483-65-8	Retene	130	< 130 U
90-12-0	1-Methylnaphthalene	67	< 67 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	67.6%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	89.6%	d4-1,2-Dichlorobenzene	71.6%
d5-Phenol	66.9%	2-Fluorophenol	59.7%
2,4,6-Tribromophenol	74.1%	d4-2-Chlorophenol	61.1%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Matrix: Soil


QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

Event: PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Data Release Authorized: 

Reported: 09/11/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-090809 09-20601	Method Blank	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.0 U --- 98.6% 99.5%
PM92A 09-20601	DOF-P1-A	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.3 U --- 102% 101%
PM92B 09-20602	DOF-P1-B	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.2 U --- 97.0% 96.5%
PM92I 09-20609	DOF-P4-A	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.0 U --- 99.3% 100%
PM92J 09-20610	DOF-P4-B	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.1 U --- 100% 102%
PM92K 09-20611	DOF-P4-C	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.5 U --- 79.5% 82.9%
PM92L 09-20612	DOF-P5-A	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.9 U --- 94.3% 95.1%
PM92M 09-20613	DOF-P5-B	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 6.8 U --- 106% 107%
PM92N 09-20614	DOF-P5-C	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 7.5 U --- 106% 95.4%
PM92S 09-20619	DOF-P7-A	09/08/09 PID3	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.7 U --- 97.4% 96.0%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Matrix: Soil

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

Event: PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Data Release Authorized: *[Signature]*

Reported: 09/11/09

ARI ID	Client ID	Analysis Date	Basis	Range	Result
PM92T 09-20620	DOF-P7-B	09/08/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>52</b> GRO 101% 105%
PM92U 09-20621	DOF-P7-C	09/08/09 PID3	Dry	<b>Gasoline</b> HC ID Trifluorotoluene Bromobenzene	<b>53</b> GRO 98.6% 98.4%

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MH  
9/11/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090908-2.b/0908a006.d      ARI ID: MB0908  
Data file 2: /chem3/pid3.i/20090908-1.b/0908a006.d      Client ID:  
Method: /chem3/pid3.i/20090908-1.b/PIDB.m              Injection Date: 08-SEP-2009 09:45  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.426	-0.001	7358	86078	98.6	TFT (Surr)
14.915	-0.001	4312	34952	99.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.20 to 17.11)	8422	0.012
8015B 2MP-TMB ( 4.90 to 15.58)	1178	0.001
AKGas nC6-nC10 ( 5.39 to 14.54)	1177	0.001
NWGas Tol-Nap (10.20 to 18.19)	16143	0.022

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.425	0.027	23280	98.1	TFT (Surr)
14.914	0.020	47980	99.0	BB (Surr)

AROMATICS (PID)

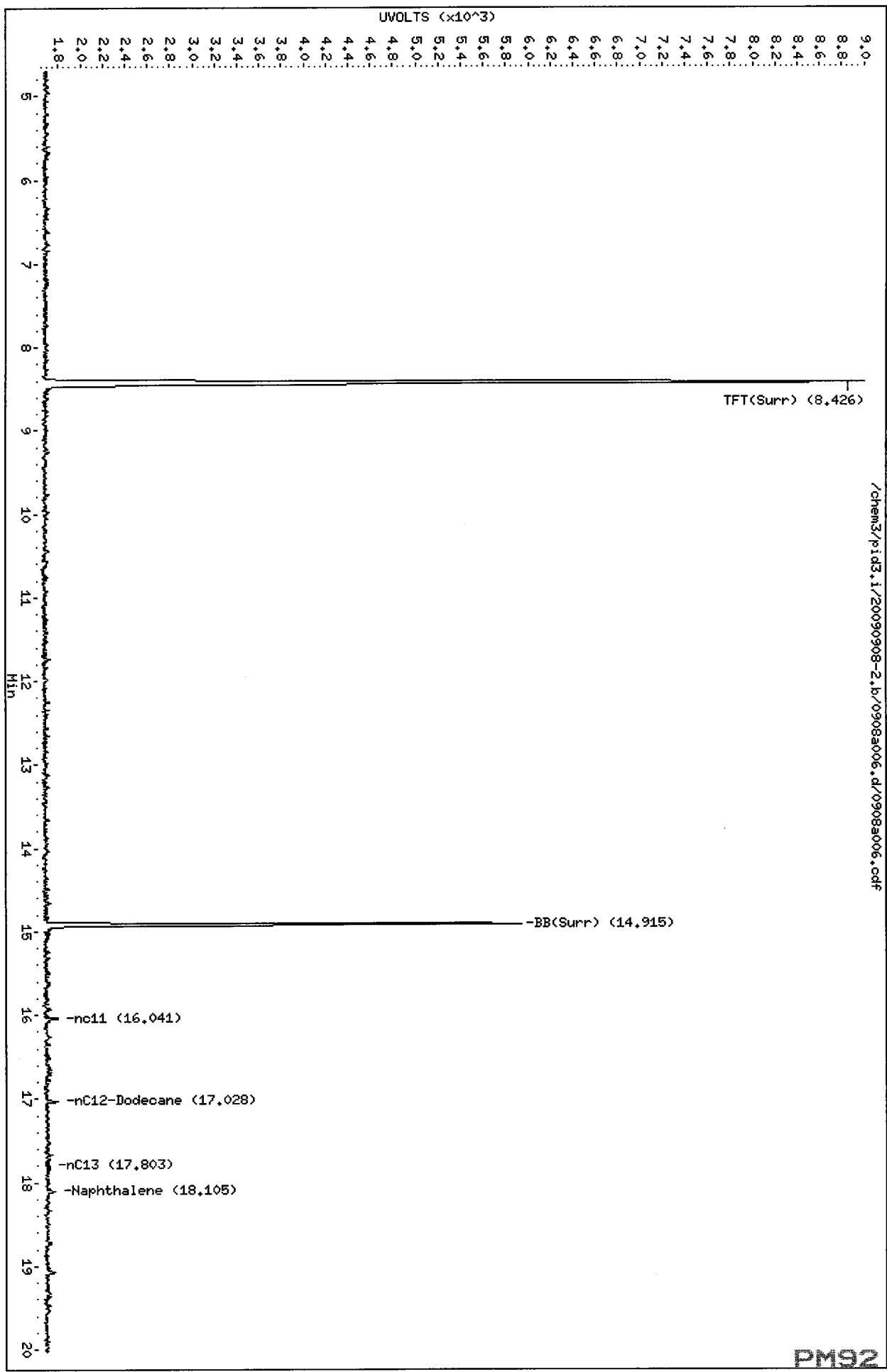
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.1/20090908-2.b/0908a006.d  
Date: 08-SEP-2009 09:45  
Client ID:  
Sample Info: HB0908  
Column phase: RTX 502-2 FID

Instrument: pid3.1  
Operator: HH  
Column diameter: 0.18



MH  
9/11/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090908-2.b/0908a021.d      ARI ID: PM92T  
Data file 2: /chem3/pid3.i/20090908-1.b/0908a021.d      Client ID: DOF-P7-B  
Method: /chem3/pid3.i/20090908-1.b/PIDB.m              Injection Date: 08-SEP-2009 16:24  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.427	0.000	6101	71743	81.8	TFT (Surr)
14.916	0.000	3671	30564	84.7	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.20 to 17.11)	276720	0.399
8015B 2MP-TMB ( 4.90 to 15.58)	65356	0.047
AKGas nC6-nC10 ( 5.39 to 14.54)	18568	0.017
NWGas Tol-Nap (10.20 to 18.19)	568334	0.779

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.426	0.028	20000	84.2	TFT (Surr)
14.915	0.021	41721	86.1	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090908-2.b/0908a021.d

Date: 08-SEP-2009 16:24

Client ID: DOF-P7-B

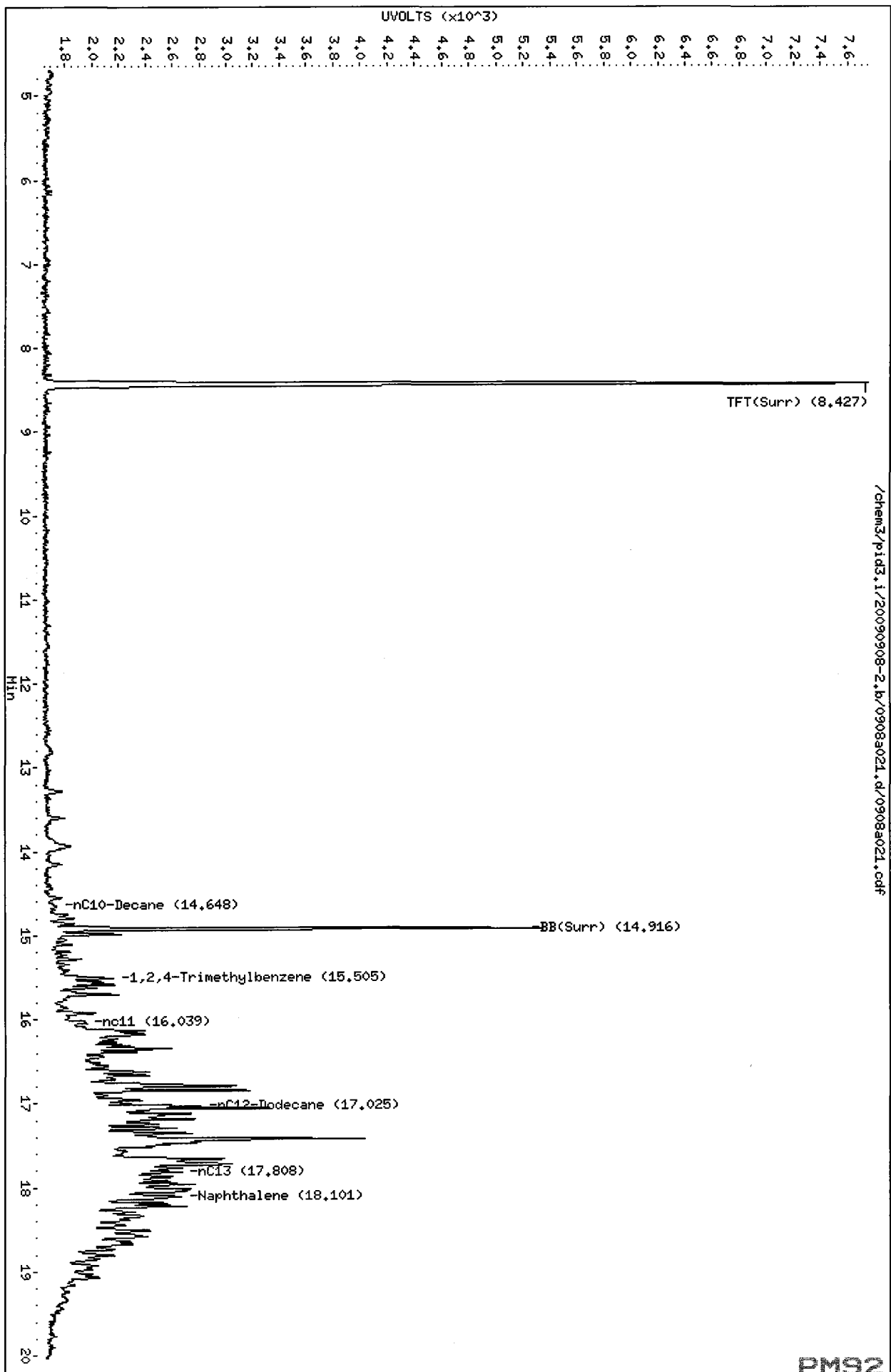
Sample Info: PM92T

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



/chem3/pid3.i/20090908-2.b/0908a021.d/0908a021.cdf

MH  
8/11/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090908-2.b/0908a022.d      ARI ID: PM92U  
Data file 2: /chem3/pid3.i/20090908-1.b/0908a022.d      Client ID: DOF-P7-C  
Method: /chem3/pid3.i/20090908-1.b/PIDB.m              Injection Date: 08-SEP-2009 16:48  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.427	-0.001	5923	69873	79.4	TFT(Surr)
14.916	-0.001	3432	27817	79.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.20 to 17.11)	565240	0.816
8015B 2MP-TMB ( 4.90 to 15.58)	148557	0.107
AKGas nC6-nC10 ( 5.39 to 14.54)	29335	0.027
NWGas Tol-Nap (10.20 to 18.19)	595864	0.816

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.426	0.028	19395	81.7	TFT(Surr)
14.915	0.021	39830	82.2	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
12.851	0.041	896	0.70	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090908-2.b/0908a022.d

Date : 08-SEP-2009 16:48

Client ID: DGF-P7-C

Sample Info: PM92U

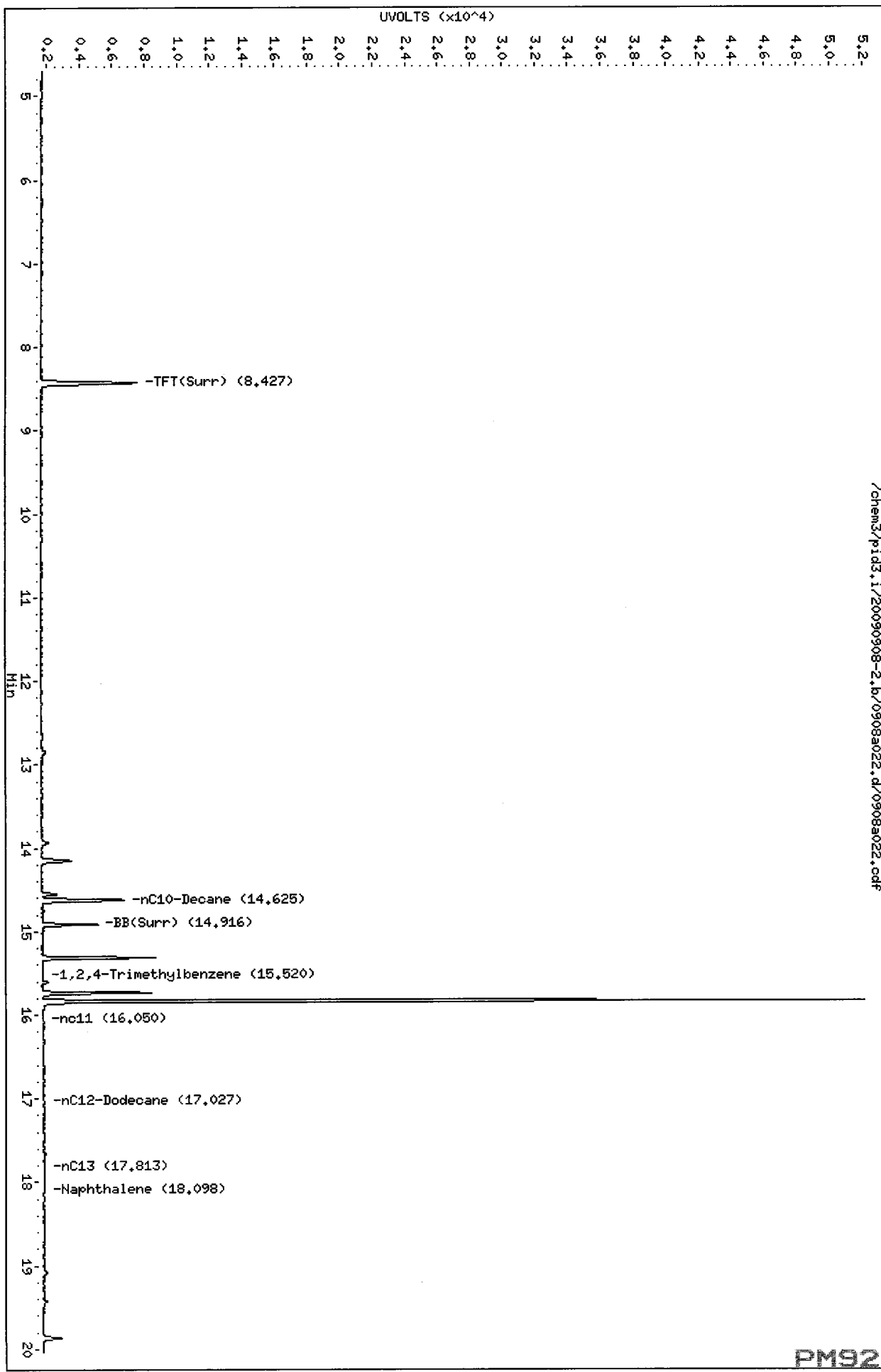
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20090908-2.b/0908a022.d/0908a022.cdf



**TPHG SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: PM92  
Matrix: Soil

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
Event: PSE-004-00

Client ID	BFB	TFT	BBZ	TOT OUT
MB-090809	NA	98.6%	99.5%	0
LCS-090809	NA	98.0%	97.0%	0
LCSD-090809	NA	99.2%	97.4%	0
DOF-P1-A	NA	102%	101%	0
DOF-P1-B	NA	97.0%	96.5%	0
DOF-P4-A	NA	99.3%	100%	0
DOF-P4-B	NA	100%	102%	0
DOF-P4-C	NA	79.5%	82.9%	0
DOF-P5-A	NA	94.3%	95.1%	0
DOF-P5-B	NA	106%	107%	0
DOF-P5-C	NA	106%	95.4%	0
DOF-P7-A	NA	97.4%	96.0%	0
DOF-P7-B	NA	101%	105%	0
DOF-P7-C	NA	98.6%	98.4%	0
DOF-P7-C MS	NA	102%	102%	0
DOF-P7-C MSD	NA	104%	105%	0

	LCS/MB LIMITS	QC LIMITS
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(66-123)
(BBZ) = Bromobenzene	(80-120)	(62-130)

Log Number Range: 09-20601 to 09-20621

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DOF-P7-C

MATRIX SPIKE

Lab Sample ID: PM92U

LIMS ID: 09-20621

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

Event: PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Date Analyzed MS: 09/08/09 17:13

MSD: 09/08/09 17:37

Instrument/Analyst MS: PID3/MH

MSD: PID3/MH

Purge Volume: 5.0 mL

Sample Amount MS: 76.1 mg-dry-wt

MSD: 75.5 mg-dry-wt

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Gasoline Range Hydrocarbons	52.8	85.3	53.1	61.2%	74.4	53.5	40.4%	13.7%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	MS	MSD
Trifluorotoluene	102%	104%
Bromobenzene	102%	105%

MH  
9/11/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090908-2.b/0908a023.d      ARI ID: PM92UMS  
Data file 2: /chem3/pid3.i/20090908-1.b/0908a023.d      Client ID:  
Method: /chem3/pid3.i/20090908-1.b/PIDB.m              Injection Date: 08-SEP-2009 17:13  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.428	0.000	6178	72802	82.8	TFT(Surr)
14.916	-0.001	3556	28970	82.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.20 to 17.11)	910651	1.315
8015B 2MP-TMB ( 4.90 to 15.58)	1211898	0.875
AKGas nC6-nC10 ( 5.39 to 14.54)	922800	0.834
NWGas Tol-Nap (10.20 to 18.19)	947638	1.298

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.426	0.028	20281	85.4	TFT(Surr)
14.914	0.021	41444	85.5	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.697	0.025	5572	3.83	Benzene
10.300	0.031	43760	30.97	Toluene
12.843	0.033	10007	7.80	Ethylbenzene
12.983	0.034	45263	32.09	M/P-Xylene
13.760	-0.006	15553	11.40	O-Xylene
5.266	0.004	1245	3.13	MTBE

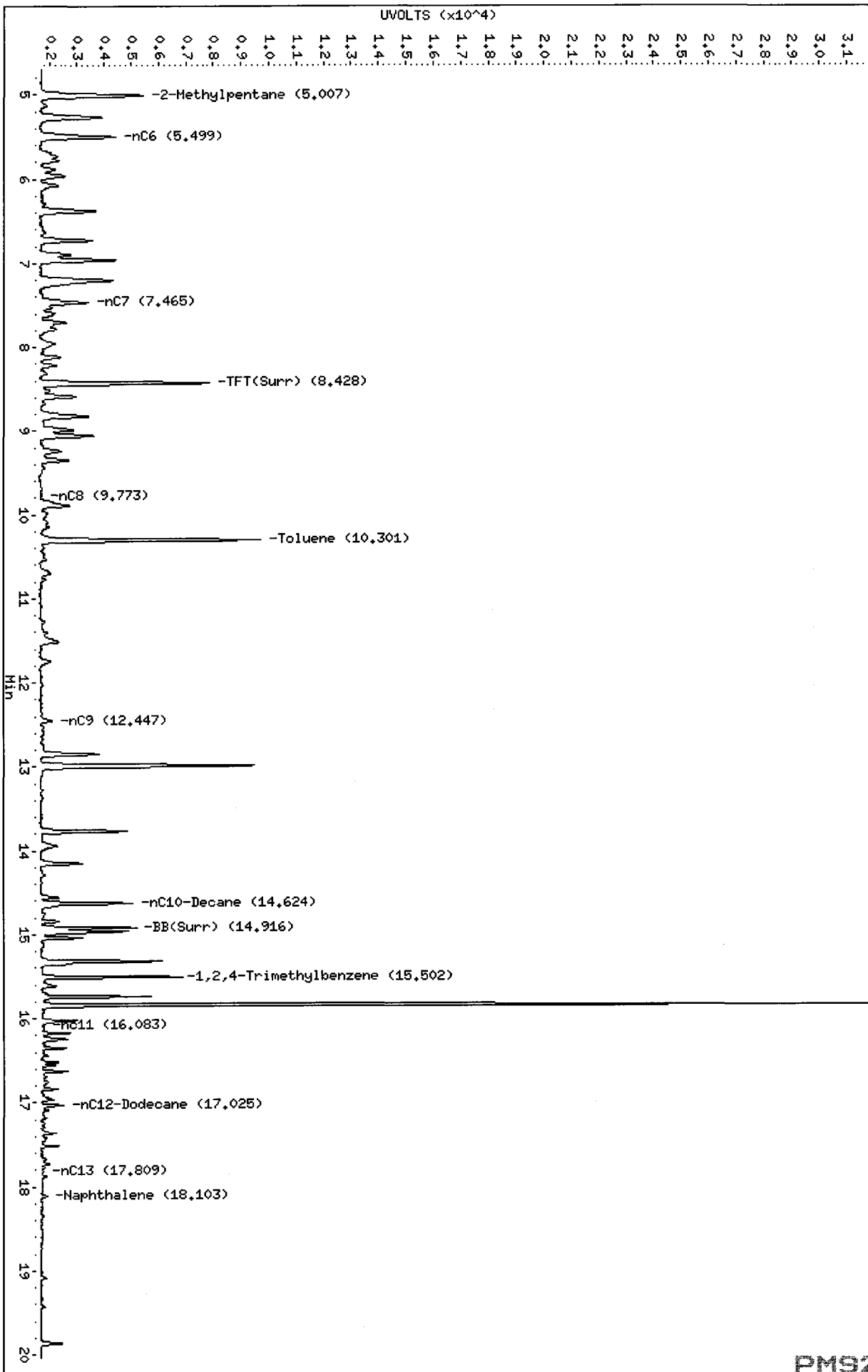
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20090908-2.b/0908a023.d  
Date: 08-SEP-2009 17:13  
Client ID:  
Sample Info: PH92UMS  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20090908-2.b/0908a023.d/0908a023.cdf



MH  
9/11/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090908-2.b/0908a024.d      ARI ID: PM92UMSD  
Data file 2: /chem3/pid3.i/20090908-1.b/0908a024.d      Client ID:  
Method: /chem3/pid3.i/20090908-1.b/PIDB.m              Injection Date: 08-SEP-2009 17:37  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 22-JUN-2009                                   Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.431	0.003	6276	74138	84.1	TFT(Surr)
14.917	0.000	3677	30713	84.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.20 to 17.11)	771514	1.114
8015B 2MP-TMB ( 4.90 to 15.58)	1107782	0.800
AKGas nC6-nC10 ( 5.39 to 14.54)	871176	0.788
NWGas Tol-Nap (10.20 to 18.19)	819768	1.123

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.429	0.031	20601	86.8	TFT(Surr)
14.916	0.022	42393	87.5	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.701	0.028	5621	3.87	Benzene
10.303	0.034	44878	31.76	Toluene
12.845	0.035	10066	7.85	Ethylbenzene
12.985	0.037	46477	32.95	M/P-Xylene
13.762	-0.004	15970	11.70	O-Xylene
5.270	0.008	1030	2.59	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090908-2.b/0908a024.d

Date: 08-SEP-2009 17:37

Client ID:

Sample Info: PH92UMSD

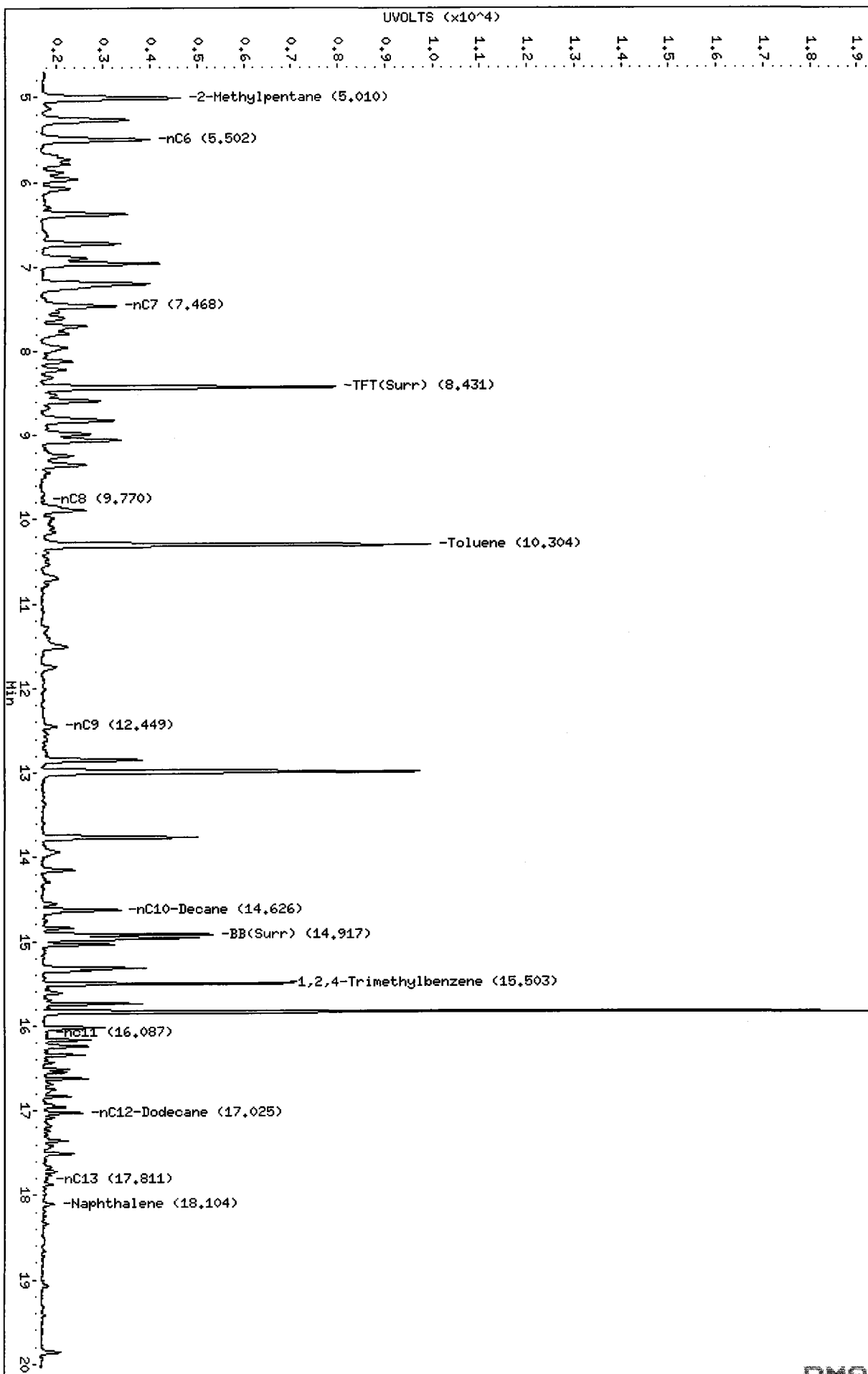
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: NH

Column diameter: 0.18

/chem3/pid3.i/20090908-2.b/0908a024.d/0908a024.cdf



**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: LCS-090809

LAB CONTROL SAMPLE

Lab Sample ID: LCS-090809

LIMS ID: 09-20601

Matrix: Soil

Data Release Authorized: 

Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

Event: PSE-004-00

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 09/08/09 08:56

LCSD: 09/08/09 09:20

Instrument/Analyst LCS: PID3/MH

LCSD: PID3/MH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	47.7	50.0	95.4%	49.5	50.0	99.0%	3.7%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	98.0%	99.2%
Bromobenzene	97.0%	97.4%

MEH  
9/11/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090908-2.b/0908a004.d      ARI ID: LCS0908  
Data file 2: /chem3/pid3.i/20090908-1.b/0908a004.d      Client ID:  
Method: /chem3/pid3.i/20090908-1.b/PIDB.m              Injection Date: 08-SEP-2009 08:56  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.423	-0.005	7311	86961	98.0	TFT(Surr)
14.912	-0.004	4204	34383	97.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.20 to 17.11)	656490	0.948
8015B 2MP-TMB ( 4.90 to 15.58)	1391295	1.005
AKGas nC6-nC10 ( 5.39 to 14.54)	1120554	1.013
NWGas Tol-Nap (10.20 to 18.19)	696255	0.954

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.421	0.024	23160	97.6	TFT(Surr)
14.911	0.017	46724	96.4	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.694	0.021	6344	4.36	Benzene
10.295	0.025	47976	33.95	Toluene
12.837	0.026	10656	8.31	Ethylbenzene
12.977	0.029	49311	34.96	M/P-Xylene
13.755	-0.011	16937	12.41	O-Xylene
5.262	0.000	1671	4.19	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20090908-2.b/0908a004.d

Date: 08-SEP-2009 08:56

Client ID:

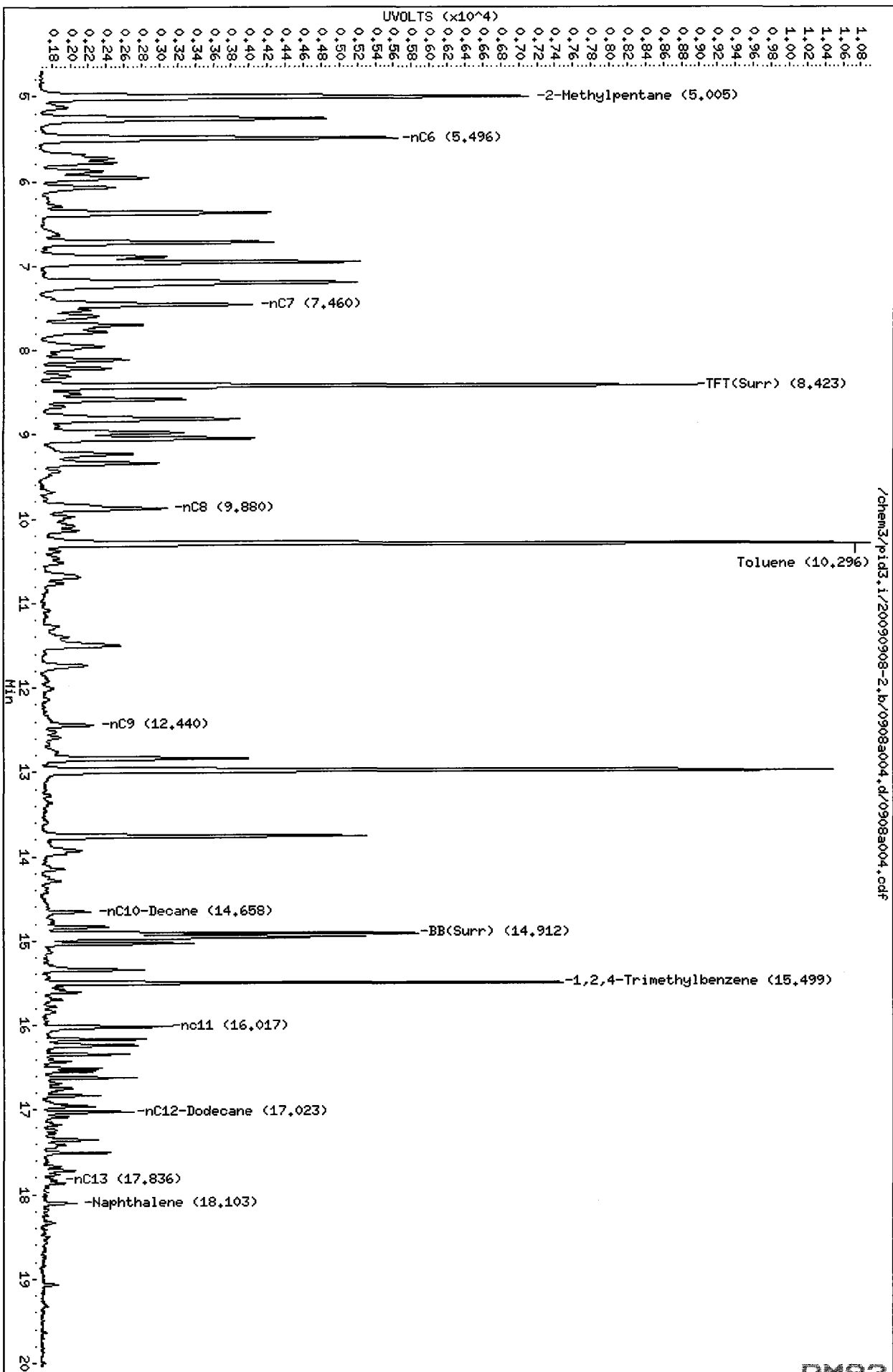
Sample Info: LCS0908

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



MH  
9/11/09

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20090908-2.b/0908a005.d      ARI ID: LCSD0908  
Data file 2: /chem3/pid3.i/20090908-1.b/0908a005.d      Client ID:  
Method: /chem3/pid3.i/20090908-1.b/PIDB.m              Injection Date: 08-SEP-2009 09:20  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 22-JUN-2009                                  Dilution Factor: 1.000  
BETX Ical Date: 07-SEP-2009

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.426	-0.002	7403	87499	99.2	TFT(Surr)
14.915	-0.002	4222	34915	97.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.20 to 17.11)	680332	0.982
8015B 2MP-TMB ( 4.90 to 15.58)	1398260	1.010
AKGas nC6-nC10 ( 5.39 to 14.54)	1124938	1.017
NWGas Tol-Nap (10.20 to 18.19)	722766	0.990

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

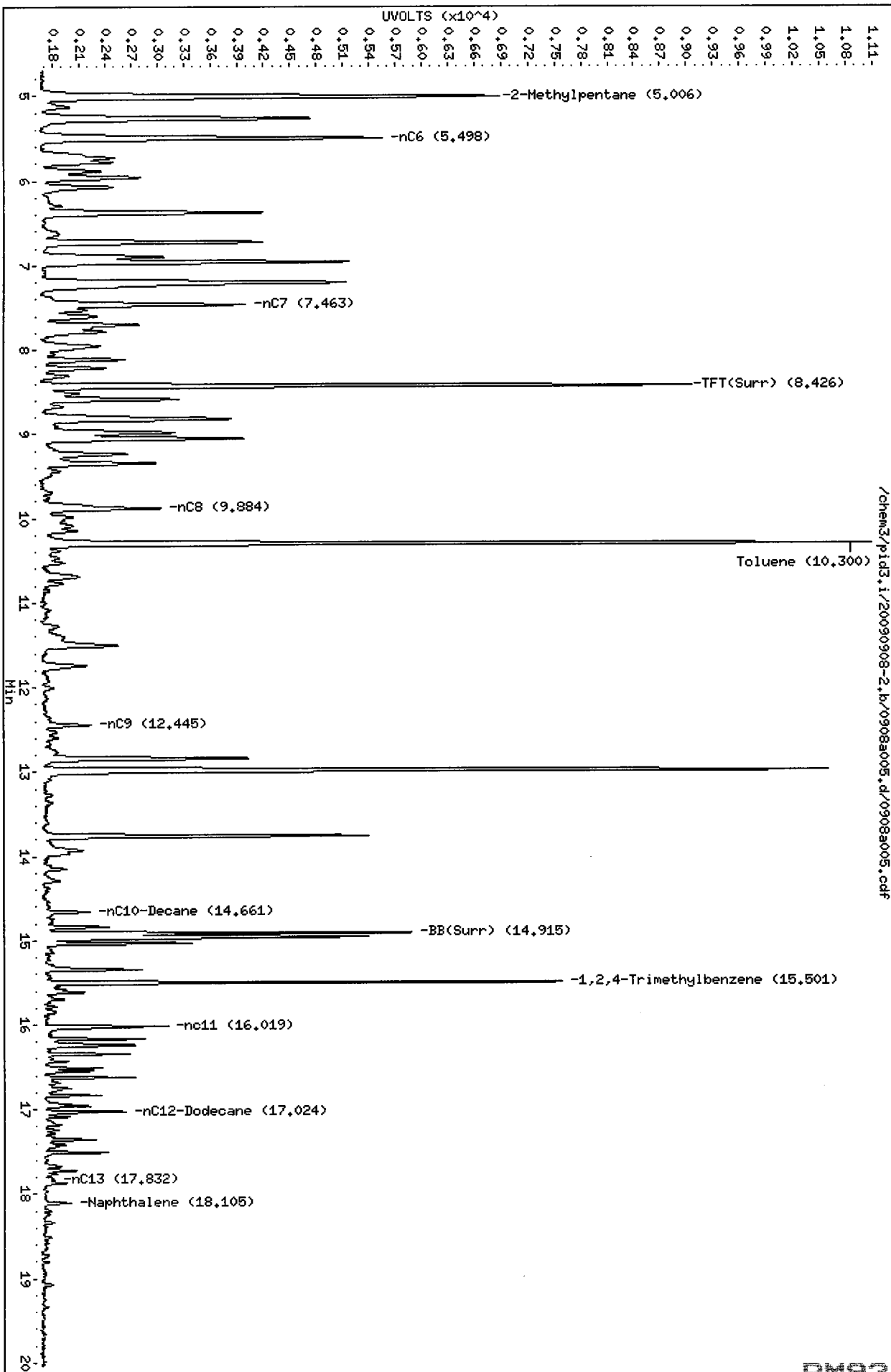
PID Surrogates

RT	Shift	Response	%Rec	Compound
8.424	0.027	23392	98.5	TFT(Surr)
14.913	0.020	47502	98.0	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.696	0.023	6234	4.29	Benzene
10.298	0.029	49012	34.69	Toluene
12.841	0.031	10716	8.36	Ethylbenzene
12.981	0.033	50001	35.45	M/P-Xylene
13.759	-0.008	17247	12.64	O-Xylene
5.264	0.002	1589	3.99	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



/chem3/pid3.i/20090908-2.b/0908a005.d/0908a005.cdf



**ORGANICS ANALYSIS DATA SHEET**  
**TOTAL DIESEL RANGE HYDROCARBONS**  
 NWTPHD by GC/FID  
 Page 1 of 2  
 Matrix: Soil

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK  
 PSE-004-00  
 Date Received: 09/03/09

Data Release Authorized: *MW*  
 Reported: 09/11/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-090409	Method Blank	09/04/09	09/05/09	1.00	Diesel	5.0	< 5.0 U
09-20601	HC ID: ---		FID3A	1.0	Motor Oil o-Terphenyl	10	< 10 U 97.2%
PM92A	DOF-P1-A	09/04/09	09/05/09	1.00	Diesel	5.2	< 5.2 U
09-20601	HC ID: RRO		FID3A	1.0	Motor Oil o-Terphenyl	10	16 91.2%
PM92B	DOF-P1-B	09/04/09	09/05/09	1.00	Diesel	5.1	8.8
09-20602	HC ID: DRO		FID3A	1.0	Motor Oil o-Terphenyl	10	< 10 U 86.8%
PM92I	DOF-P4-A	09/04/09	09/05/09	1.00	Diesel	5.3	< 5.3 U
09-20609	HC ID: ---		FID3A	1.0	Motor Oil o-Terphenyl	11	< 11 U 92.1%
PM92J	DOF-P4-B	09/04/09	09/05/09	1.00	Diesel	5.4	< 5.4 U
09-20610	HC ID: ---		FID3A	1.0	Motor Oil o-Terphenyl	11	< 11 U 83.1%
PM92K	DOF-P4-C	09/04/09	09/05/09	1.00	Diesel	5.5	< 5.5 U
09-20611	HC ID: ---		FID3A	1.0	Motor Oil o-Terphenyl	11	< 11 U 76.0%
PM92L	DOF-P5-A	09/04/09	09/05/09	1.00	Diesel	5.1	16
09-20612	HC ID: DRO/MOTOR OIL		FID3A	1.0	Motor Oil o-Terphenyl	10	110 95.5%
PM92M	DOF-P5-B	09/04/09	09/05/09	1.00	Diesel	5.7	9.9
09-20613	HC ID: DRO/MOTOR OIL		FID3A	1.0	Motor Oil o-Terphenyl	11	47 77.9%
PM92N	DOF-P5-C	09/04/09	09/05/09	1.00	Diesel	5.8	49
09-20614	HC ID: DIESEL/MOTOR OIL		FID3A	1.0	Motor Oil o-Terphenyl	12	110 85.9%
PM92S	DOF-P7-A	09/04/09	09/05/09	1.00	Diesel	5.2	< 5.2 U
09-20619	HC ID: ---		FID3A	1.0	Motor Oil o-Terphenyl	10	< 10 U 89.6%
PM92T	DOF-P7-B	09/04/09	09/05/09	1.00	Diesel	5.4	66
09-20620	HC ID: DIESEL/MOTOR OIL		FID3A	1.0	Motor Oil o-Terphenyl	11	44 74.2%
PM92U	DOF-P7-C	09/04/09	09/05/09	1.00	Diesel	5.3	< 5.3 U
09-20621	HC ID: ---		FID3A	1.0	Motor Oil o-Terphenyl	11	< 11 U 86.2%

**ORGANICS ANALYSIS DATA SHEET**  
**TOTAL DIESEL RANGE HYDROCARBONS**  
 NWTPHD by GC/FID  
 Page 2 of 2  
 Matrix: Soil

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
 Project: VERBEEK  
 PSE-004-00  
 Date Received: 09/03/09

Data Release Authorized:  
 Reported: 09/11/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
--------	-----------	-----------------	---------------	--------	-------	----	--------

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.

Motor Oil quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

ms 9/10/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090905.b/0905a007.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/10/2009  
Macro: FID:3A090109

ARI ID: PM90MBW1  
Client ID:  
Injection: 05-SEP-2009 13:25  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1345010	14
C8	1.067	-0.007	16768	19600	DIESEL (C12-C24)	503264	23
C10	3.001	-0.002	5425	756	M.OIL (C24-C38)	167215	14
C12	3.769	0.000	8352	1168	AK-102 (C10-C25)	865236	32
C14	4.332	0.001	6546	1176	AK-103 (C25-C36)	120379	13
C16	4.814	-0.002	4029	643	OR.DIES (C10-C28)	871779	41
C18	5.249	0.001	1914	266	OR.MOIL (C28-C40)	219531	19
C20	5.643	0.001	1522	479	JET-A (C10-C18)	819645	52
C22	5.996	0.001	539	52			
C24	6.301	0.000	178	31			
C25	6.443	0.001	99	9			
C26	6.574	0.000	42	7			
C28	6.823	0.000	427	105			
C32	7.270	0.002	5701	14107			
C34	7.472	0.002	3253	909			
Filter Peak	9.078	0.000	6307	881			
C36	7.671	0.006	4560	7961	CREOSOT (C8-C22)	1379245	216
C38	7.851	0.000	4386	437			
C40	8.048	-0.001	5758	1034	BUNKERC (C10-C38)	1032249	107

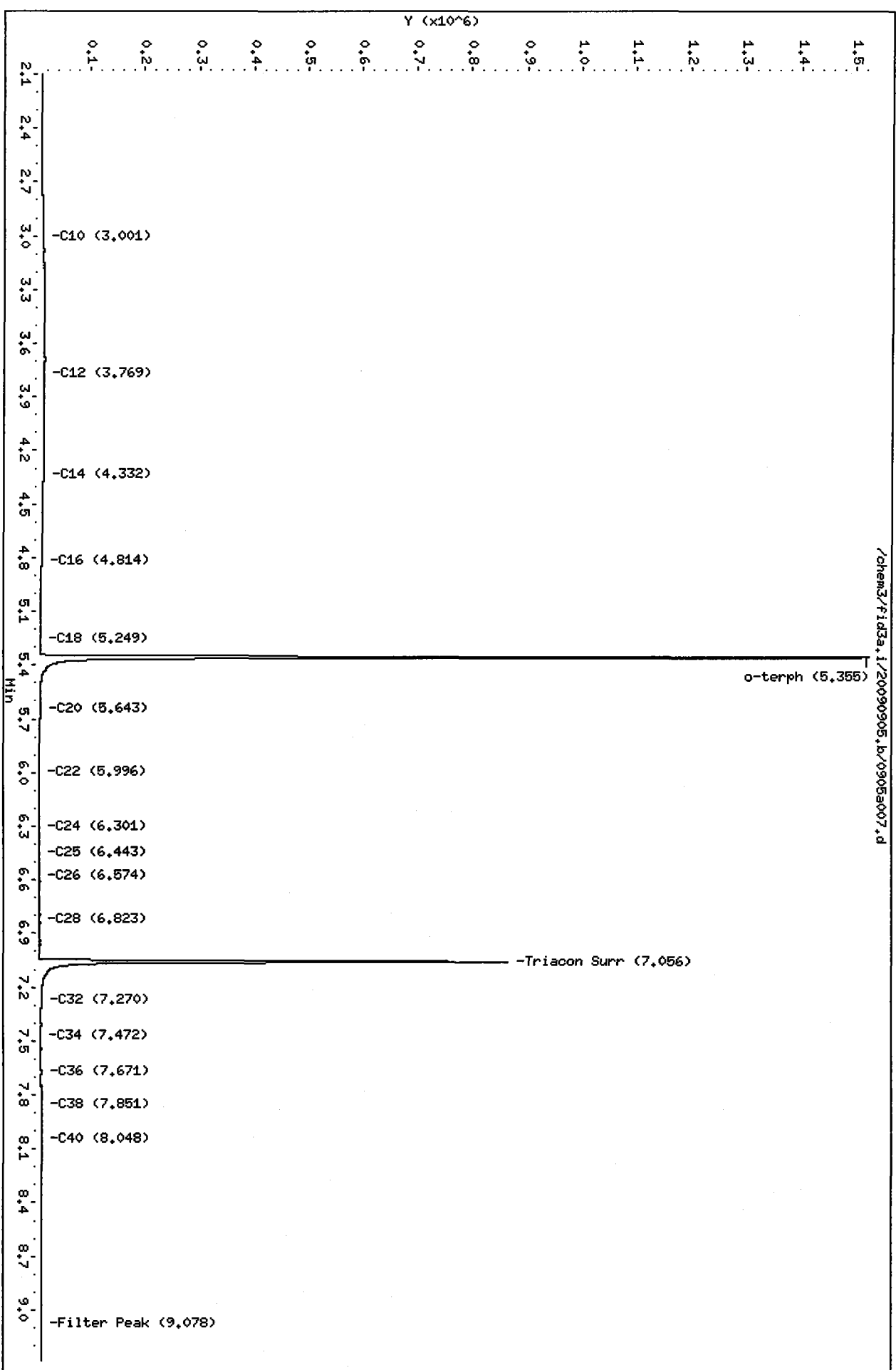
Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1149948	43.7	97.2
Triacontane	762466	44.3	98.5

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a007.d  
Date: 05-SEP-2009 13:25  
Client ID:  
Sample Info: P190HBM1  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



ms 9/10/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090905.b/0905a021.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/10/2009  
Macro: FID:3A090109

ARI ID: PM92A  
Client ID:  
Injection: 05-SEP-2009 17:42  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	830222	9
C8	1.084	0.009	11914	23980	DIESEL (C12-C24)	420256	20
C10	3.003	0.001	3015	416	M.OIL (C24-C38)	1836026	154
C12	3.768	0.000	6062	1331	AK-102 (C10-C25)	672108	25
C14	4.331	0.000	4737	758	AK-103 (C25-C36)	1671294	187
C16	4.814	-0.001	2489	394	OR.DIES (C10-C28)	1011317	48
C18	5.248	0.000	1151	1177	OR.MOIL (C28-C40)	1685287	149
C20	5.645	0.003	3321	3719	JET-A (C10-C18)	557149	35
C22	5.996	0.001	2489	1453			
C24	6.302	0.001	5638	4552			
C25	6.439	-0.003	23061	29648			
C26	6.572	-0.002	11049	7925			
C28	6.822	-0.002	21799	28269			
C32	7.272	0.004	24255	34250			
C34	7.466	-0.004	33173	65925			
Filter Peak	9.078	0.000	14838	2076			
C36	7.670	0.005	18472	5164	CREOSOT (C8-C22)	841949	132
C38	7.851	0.000	19841	45828			
C40	8.048	-0.001	18872	28691	BUNKERC (C10-C38)	2503221	259

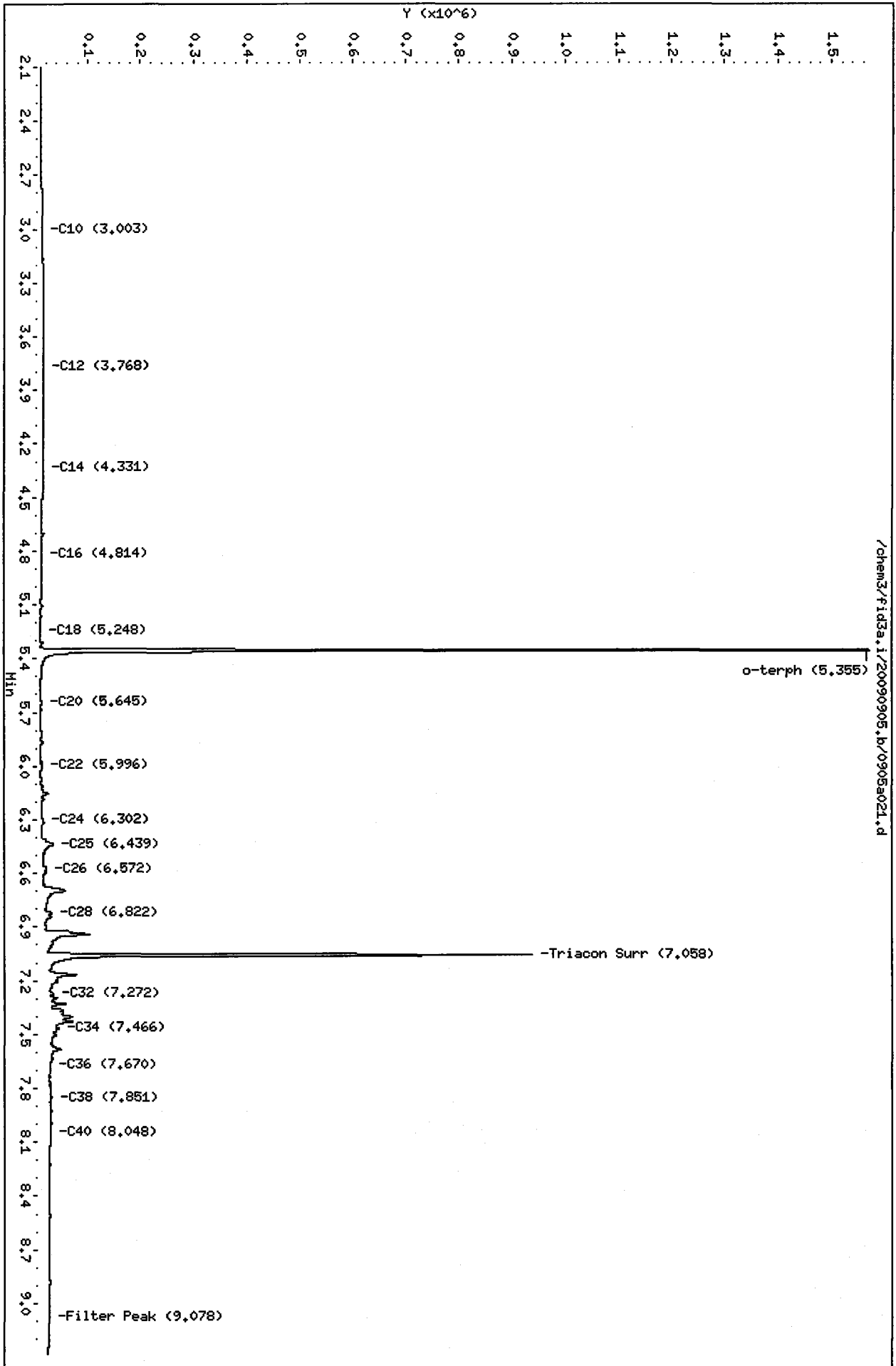
Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1079962	41.1	91.3
Triacontane	689485	40.1	89.1

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a021.d  
Date: 05-SEP-2009 17:42  
Client ID:  
Sample Info: PM92A  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090905.b/0905a021.d

ms9/10/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090904.b/0904a028.d  
Method: /chem3/fid3a.i/20090904.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/10/2009  
Macro: FID:3A090109

ARI ID: PM92B  
Client ID:  
Injection: 05-SEP-2009 05:01  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.787	0.023	53899	306825	GAS (Tol-C12)	862723	9
C8	1.111	0.023	11342	5155	DIESEL (C12-C24)	1869613	87
C10	3.006	0.000	3115	496	M.OIL (C24-C38)	1165480	98
C12	3.771	0.001	5944	830	AK-102 (C10-C25)	2171220	81
C14	4.332	-0.001	4354	868	AK-103 (C25-C36)	1029496	115
C16	4.816	0.000	12252	14583	OR.DIES (C10-C28)	2665649	126
C18	5.248	0.000	5069	5356	OR.MOIL (C28-C40)	705669	63
C20	5.642	0.000	26523	46152	JET-A (C10-C18)	804870	51
C22	5.996	0.000	36097	52584			
C24	6.302	0.000	27891	40910			
C25	6.451	0.008	25904	44031			
C26	6.576	-0.001	19243	16380			
C28	6.823	-0.002	15135	10307			
C32	7.269	-0.001	13076	17255			
C34	7.468	-0.003	9609	960			
Filter Peak	9.077	-0.001	6314	1512			
C36	7.668	0.006	9171	6269	CREOSOT (C8-C22)	1896273	296
C38	7.846	-0.001	8202	5024			
C40	8.043	-0.001	8205	6100	BUNKERC (C10-C38)	3280653	340

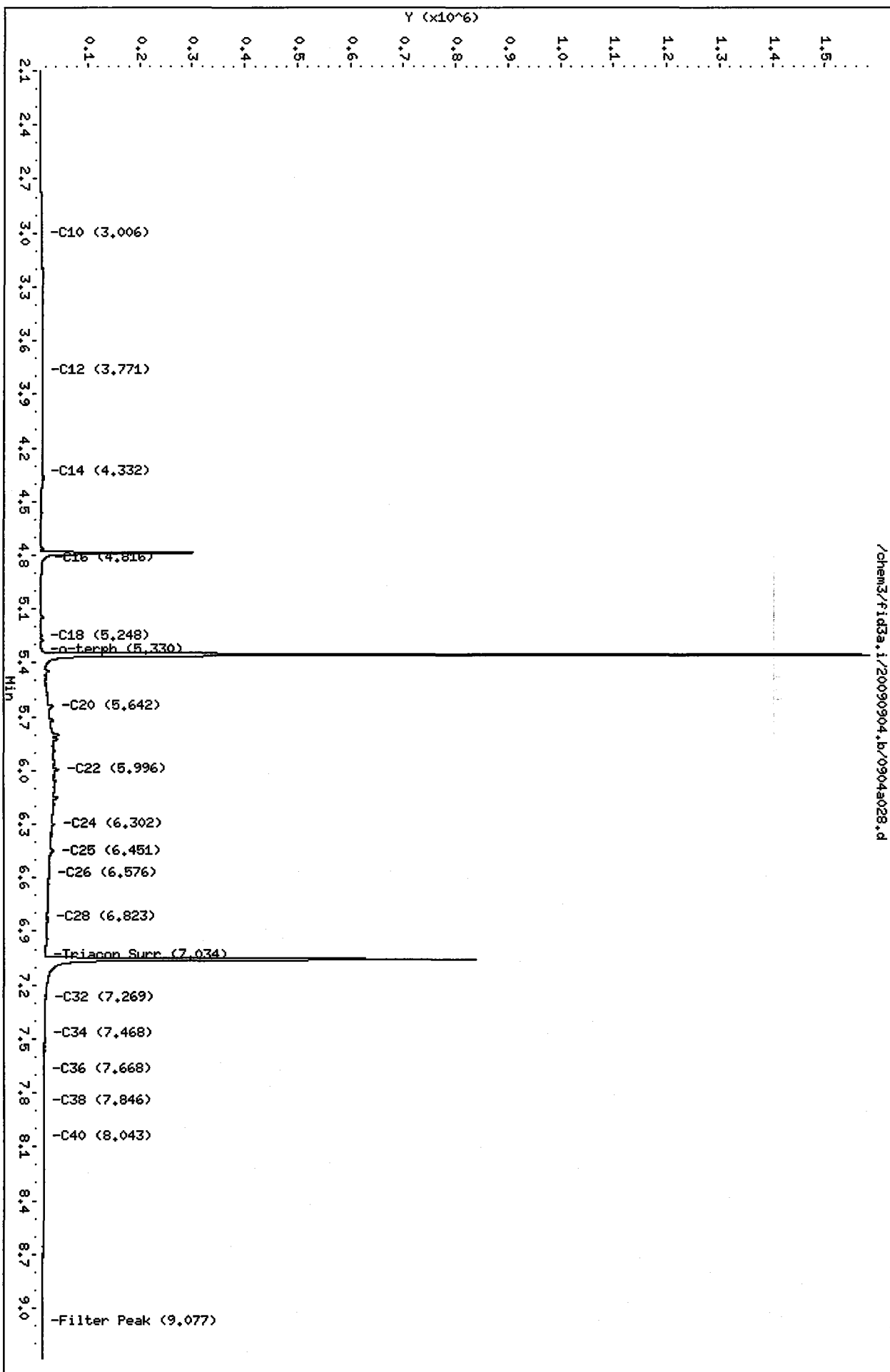
Range Times: NW Diesel(3.820 - 6.352) NW Gas(0.713 - 3.820) NW M.Oil(6.352 - 7.897)  
AK102(2.955 - 6.392) AK103(6.392 - 7.712) Jet A(2.955 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1027421	39.1	86.8
Triacontane	639101	37.2	82.6

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090904.b/0904a028.d  
Date: 05-SEP-2009 05:01  
Client ID:  
Sample Info: PM92B  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090904.b/0904a028.d



Analytical Resources Inc.  
TPH Quantitation Report

ms 9/10/09

Data file: /chem3/fid3a.i/20090905.b/0905a023.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/10/2009  
Macro: FID:3A090109

ARI ID: PM92L  
Client ID:  
Injection: 05-SEP-2009 18:19  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	908913	9
C8	1.071	-0.003	12579	11770	DIESEL (C12-C24)	3282228	153
C10	3.004	0.002	3251	1645	M.OIL (C24-C38)	12992672	1089
C12	3.768	0.000	6484	1029	AK-102 (C10-C25)	3688539	138
C14	4.332	0.000	6156	2656	AK-103 (C25-C36)	10413315	1166
C16	4.816	0.001	8372	11969	OR.DIES (C10-C28)	6059273	287
C18	5.247	0.000	16056	25945	OR.MOIL (C28-C40)	12430082	1103
C20	5.641	-0.001	39586	66367	JET-A (C10-C18)	877564	55
C22	5.996	0.001	56749	17987			
C24	6.300	-0.001	63231	18904			
C25	6.441	-0.001	70280	37399			
C26	6.571	-0.004	73487	17537			
C28	6.823	-0.001	105625	51322			
C32	7.271	0.003	149849	71064			
C34	7.469	-0.001	174832	48619			
Filter Peak	9.079	0.001	37761	16497			
C36	7.665	0.000	216115	64160	CREOSOT (C8-C22)	2683247	420
C38	7.850	0.000	230237	163504			
C40	8.045	-0.003	156954	70727	BUNKERC (C10-C38)	16529161	1712

Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1130226	43.0	95.5
Triacontane	716317	41.6	92.6

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a023.d  
Date: 05-SEP-2009 18:19

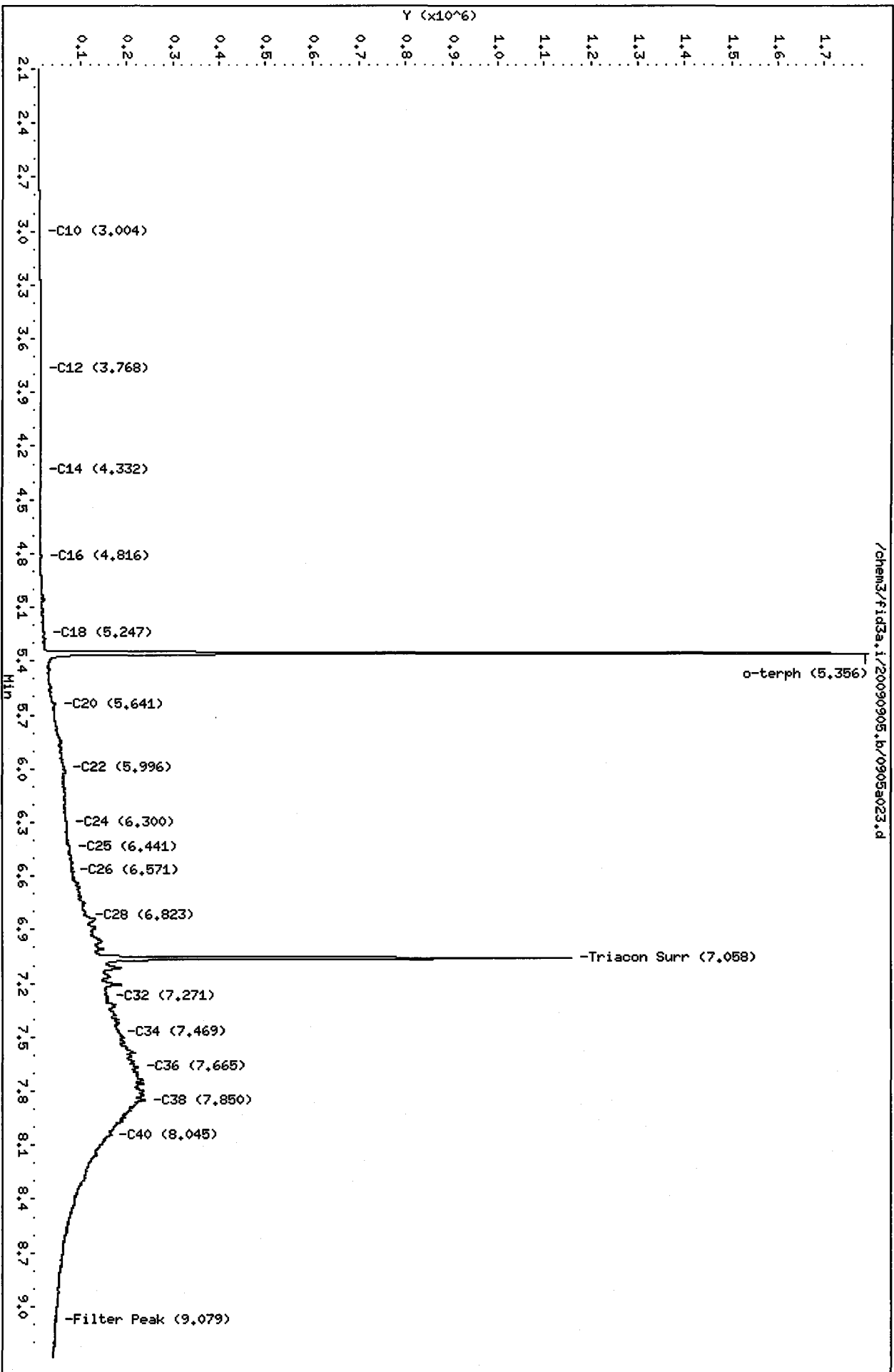
Client ID:  
Sample Info: PM92L

Column phase: ZB4-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.  
TPH Quantitation Report

ms 9/10/09

Data file: /chem3/fid3a.i/20090904.b/0904a036.d  
Method: /chem3/fid3a.i/20090904.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/10/2009  
Macro: FID:3A090109

ARI ID: PM92M  
Client ID:  
Injection: 05-SEP-2009 07:26  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.788	0.024	52178	353309	GAS (Tol-C12)	862012	9
C8	1.084	-0.004	12083	7597	DIESEL (C12-C24)	1873082	87
C10	3.005	0.000	3160	502	M.OIL (C24-C38)	4933741	414
C12	3.769	-0.001	6208	2589	AK-102 (C10-C25)	2210330	83
C14	4.330	-0.003	5460	435	AK-103 (C25-C36)	4527545	507
C16	4.817	0.001	8742	15494	OR.DIES (C10-C28)	3808013	181
C18	5.249	0.000	13173	17166	OR.MOIL (C28-C40)	3455266	306
C20	5.643	0.000	16524	32310	JET-A (C10-C18)	742698	47
C22	5.996	0.000	28694	17056			
C24	6.302	0.000	41382	9046			
C25	6.447	0.004	50239	55361			
C26	6.577	0.000	50059	17936			
C28	6.828	0.003	66416	50205			
C32	7.271	0.002	58526	22045			
C34	7.469	-0.002	52317	18709			
Filter Peak	9.077	-0.001	7370	1618			
C36	7.662	0.000	37616	11258	CREOSOT (C8-C22)	1679368	263
C38	7.849	0.002	29754	28316			
C40	8.045	0.000	20127	13818	BUNKERC (C10-C38)	7050429	730

Range Times: NW Diesel(3.820 - 6.352) NW Gas(0.713 - 3.820) NW M.Oil(6.352 - 7.897)  
AK102(2.955 - 6.392) AK103(6.392 - 7.712) Jet A(2.955 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	922241	35.1	77.9
Triacontane	547748	31.8	70.8

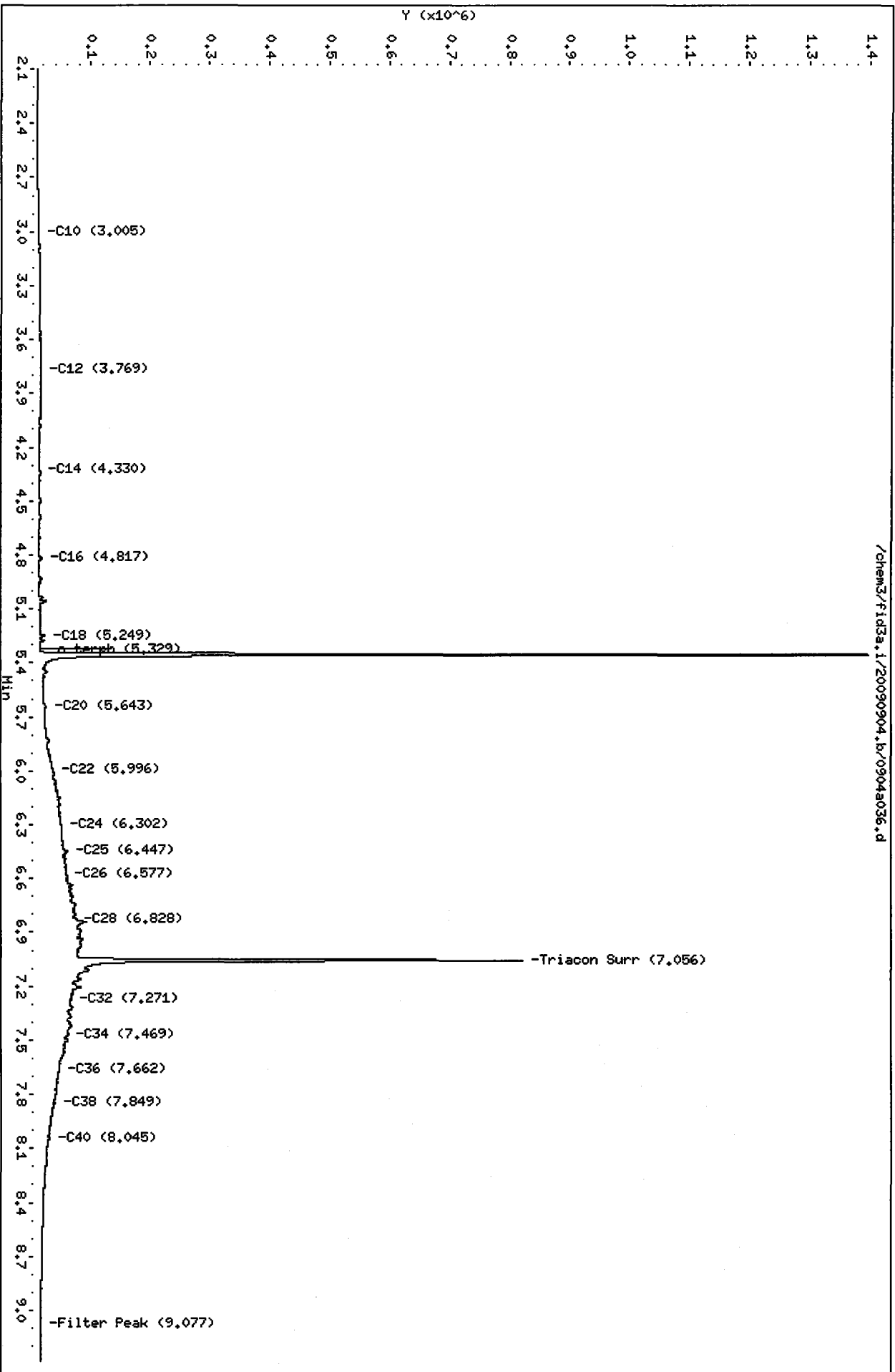
Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090904.b/0904a036.d  
Date : 05-SEP-2009 07:26

Client ID:  
Sample Info: PM92H

Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



ms 9/10/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090905.b/0905a025.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/10/2009  
Macro: FID:3A090109

ARI ID: PM92N  
Client ID:  
Injection: 05-SEP-2009 18:55  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1522179	16
C8	1.073	-0.001	13156	6781	DIESEL (C12-C24)	9049837	421
C10	3.007	0.004	14963	25635	M.OIL (C24-C38)	11666177	978
C12	3.770	0.002	29411	41045	AK-102 (C10-C25)	9992924	374
C14	4.328	-0.003	52037	109588	AK-103 (C25-C36)	10831468	1213
C16	4.814	-0.001	44395	45817	OR.DIES (C10-C28)	13953623	662
C18	5.248	0.000	54112	80932	OR.MOIL (C28-C40)	8094569	718
C20	5.634	-0.007	524038	422913	JET-A (C10-C18)	3840033	242
C22	5.994	0.000	128631	117707			
C24	6.301	0.000	160754	182318			
C25	6.440	-0.002	172732	385603			
C26	6.574	0.000	157863	206496			
C28	6.824	0.000	193997	211644			
C32	7.269	0.001	155856	153377			
C34	7.462	-0.008	213504	344368			
Filter Peak	9.080	0.001	22625	7213			
C36	7.677	0.013	75354	44413	CREOSOT (C8-C22)	8303741	1298
C38	7.852	0.001	61562	30614			
C40	8.050	0.001	44986	28149	BUNKERC (C10-C38)	21514612	2228

Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1016341	38.6	85.9
Triacontane	693720	40.3	89.6

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a025.d  
Date: 05-SEP-2009 18:55

Client ID:

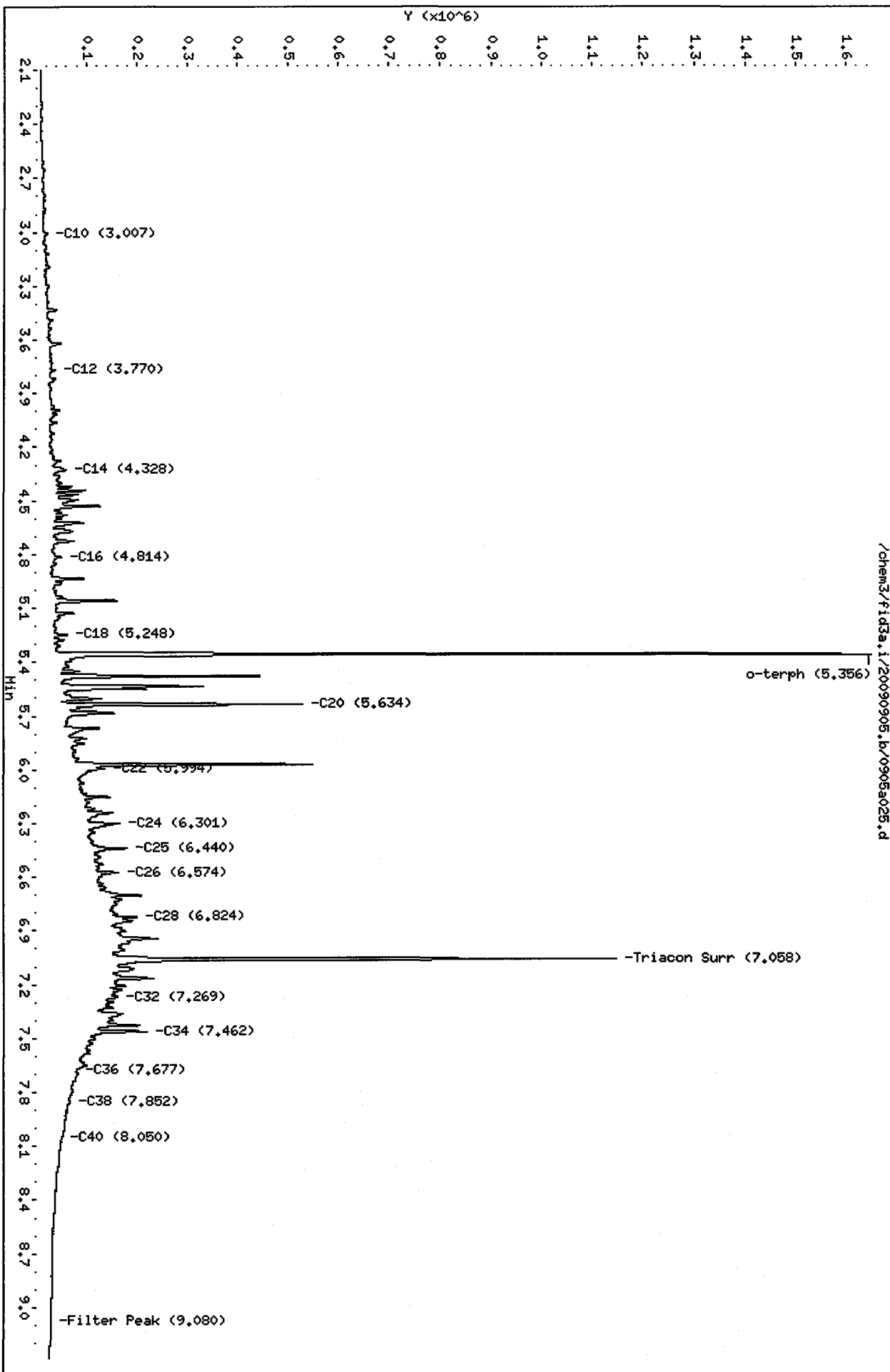
Sample Info: PH92N

Column phase: ZB1-HT

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



/chem3/fid3a.i/20090905.b/0905a025.d

ms 9/10/09

Analytical Resources Inc.  
TPH Quantitation Report

Data file: /chem3/fid3a.i/20090904.b/0904a039.d  
Method: /chem3/fid3a.i/20090904.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/10/2009  
Macro: FID:3A090109

ARI ID: PM92T  
Client ID:  
Injection: 05-SEP-2009 08:21  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.787	0.023	53175	438072	GAS (Tol-C12)	2118027	22
C8	1.092	0.004	11740	1872	DIESEL (C12-C24)	13017003	606
C10	3.005	0.000	6417	12194	M.OIL (C24-C38)	4800977	403
C12	3.770	0.001	49965	70652	AK-102 (C10-C25)	14516195	544
C14	4.322	-0.011	220778	375679	AK-103 (C25-C36)	4342528	486
C16	4.813	-0.003	133572	140120	OR.DIES (C10-C28)	15718500	745
C18	5.247	-0.001	115628	199442	OR.MOIL (C28-C40)	3874504	344
C20	5.641	-0.001	99519	184654	JET-A (C10-C18)	10769565	680
C22	5.993	-0.003	57115	72359			
C24	6.301	0.000	39936	31490			
C25	6.441	-0.001	38872	42826			
C26	6.574	-0.002	36622	23258			
C28	6.823	-0.001	55651	54461			
C32	7.270	0.001	62999	52639			
C34	7.460	-0.011	72335	122484			
Filter Peak	9.079	0.001	10385	830			
C36	7.666	0.004	48494	13543	CREOSOT (C8-C22)	13990434	2187
C38	7.847	0.000	40311	71054			
C40	8.040	-0.004	31116	33114	BUNKERC (C10-C38)	19236534	1993

Range Times: NW Diesel (3.820 - 6.352) NW Gas (0.713 - 3.820) NW M.Oil (6.352 - 7.897)  
AK102 (2.955 - 6.392) AK103 (6.392 - 7.712) Jet A (2.955 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	878107	33.4	74.2
Triacontane	550499	32.0	71.1

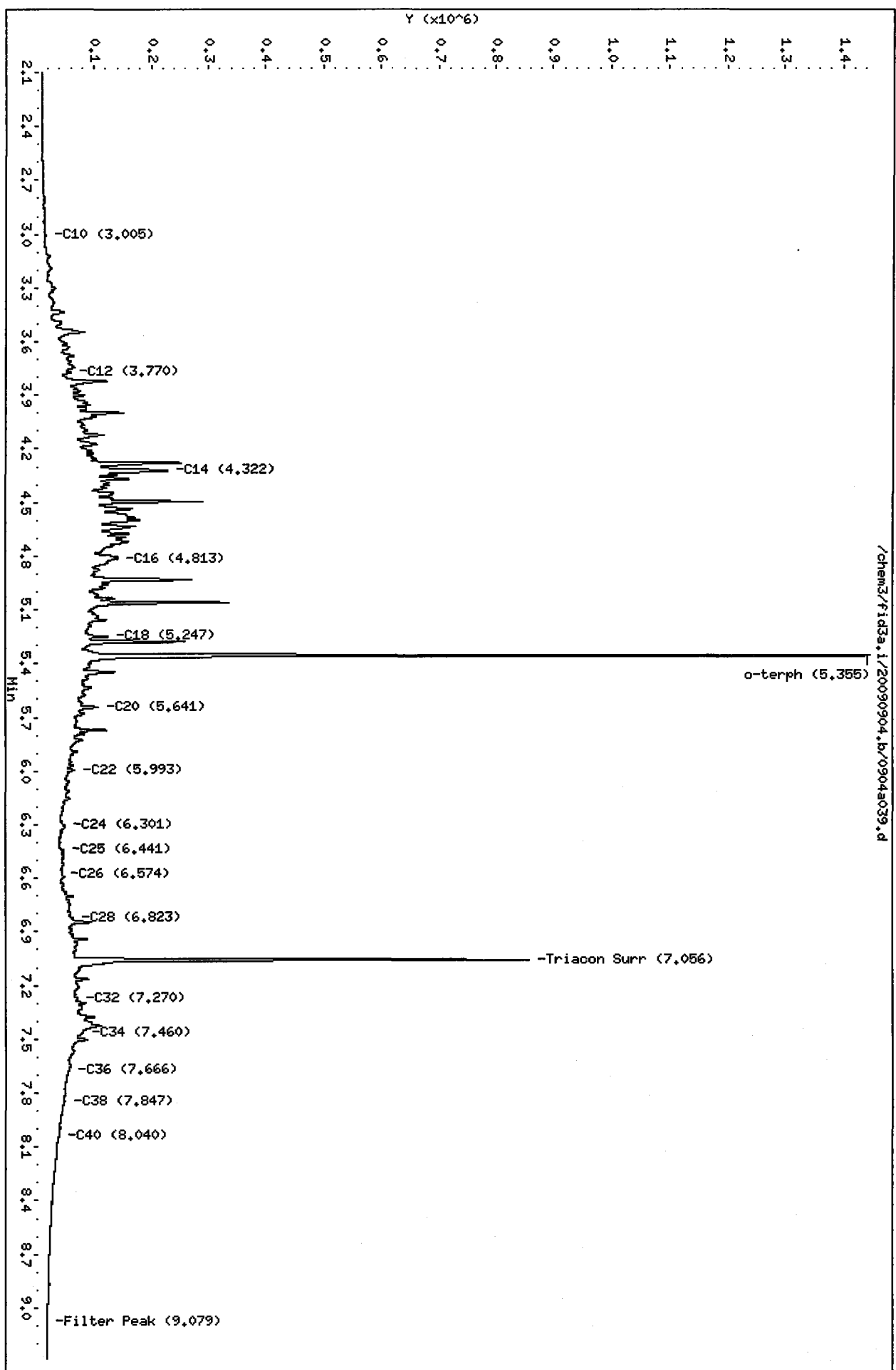
Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090904.b/0904a039.d  
Date: 05-SEP-2009 08:21

Client ID:  
Sample Info: PM92T

Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



/chem3/fid3a.i/20090904.b/0904a039.d



**TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc  
Project: VERBEEK  
PSE-004-00

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
090409MBS	97.2%	0
090409LCS	97.7%	0
DOF-P1-A	91.2%	0
DOF-P1-B	86.8%	0
DOF-P4-A	92.1%	0
DOF-P4-B	83.1%	0
DOF-P4-C	76.0%	0
DOF-P5-A	95.5%	0
DOF-P5-B	77.9%	0
DOF-P5-C	85.9%	0
DOF-P7-A	89.6%	0
DOF-P7-B	74.2%	0
DOF-P7-C	86.2%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(58-121)

(53-118)

Prep Method: SW3546

Log Number Range: 09-20601 to 09-20621

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID

Page 1 of 1

Sample ID: LCS-090409

LAB CONTROL

Lab Sample ID: LCS-090409

LIMS ID: 09-20601

Matrix: Soil

Data Release Authorized: *MW*

Reported: 09/11/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: NA

Date Received: NA

Date Extracted: 09/04/09

Date Analyzed: 09/05/09 13:43

Instrument/Analyst: FID3A/MS

Sample Amount: 10.0 g

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	138	150	92.0%

**TPHD Surrogate Recovery**

o-Terphenyl	97.7%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.  
TPH Quantitation Report

ms 9/10/09

Data file: /chem3/fid3a.i/20090905.b/0905a008.d  
Method: /chem3/fid3a.i/20090905.b/ftphfid3a.m  
Instrument: fid3a.i  
Operator: ms  
Report Date: 09/10/2009  
Macro: FID:3A090109

ARI ID: PM90LCSW1  
Client ID:  
Injection: 05-SEP-2009 13:43  
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	6292156	66
C8	1.073	-0.002	20106	36178	DIESEL (C12-C24)	29596996	1378
C10	3.006	0.003	236257	290161	M.OIL (C24-C38)	511763	43
C12	3.772	0.004	555026	497563	AK-102 (C10-C25)	34488292	1292
C14	4.332	0.001	763869	1139642	AK-103 (C25-C36)	430040	48
C16	4.816	0.001	804148	1492046	OR.DIES (C10-C28)	34836474	1652
C18	5.250	0.003	680802	841602	OR.MOIL (C28-C40)	104342	9
C20	5.643	0.001	461247	725607	JET-A (C10-C18)	26477422	1671
C22	5.995	0.000	166066	216179			
C24	6.301	0.000	66303	140100			
C25	6.442	0.000	39252	63799			
C26	6.575	0.000	21169	32967			
C28	6.822	-0.001	5254	5271			
C32	7.271	0.004	4307	8600			
C34	7.470	-0.001	558	130			
Filter Peak	9.079	0.000	1863	259			
C36	7.659	-0.006	244	28	CREOSOT (C8-C22)	34560448	5403
C38	7.852	0.001	743	103			
C40	8.050	0.001	1734	273	BUNKERC (C10-C38)	34925828	3618

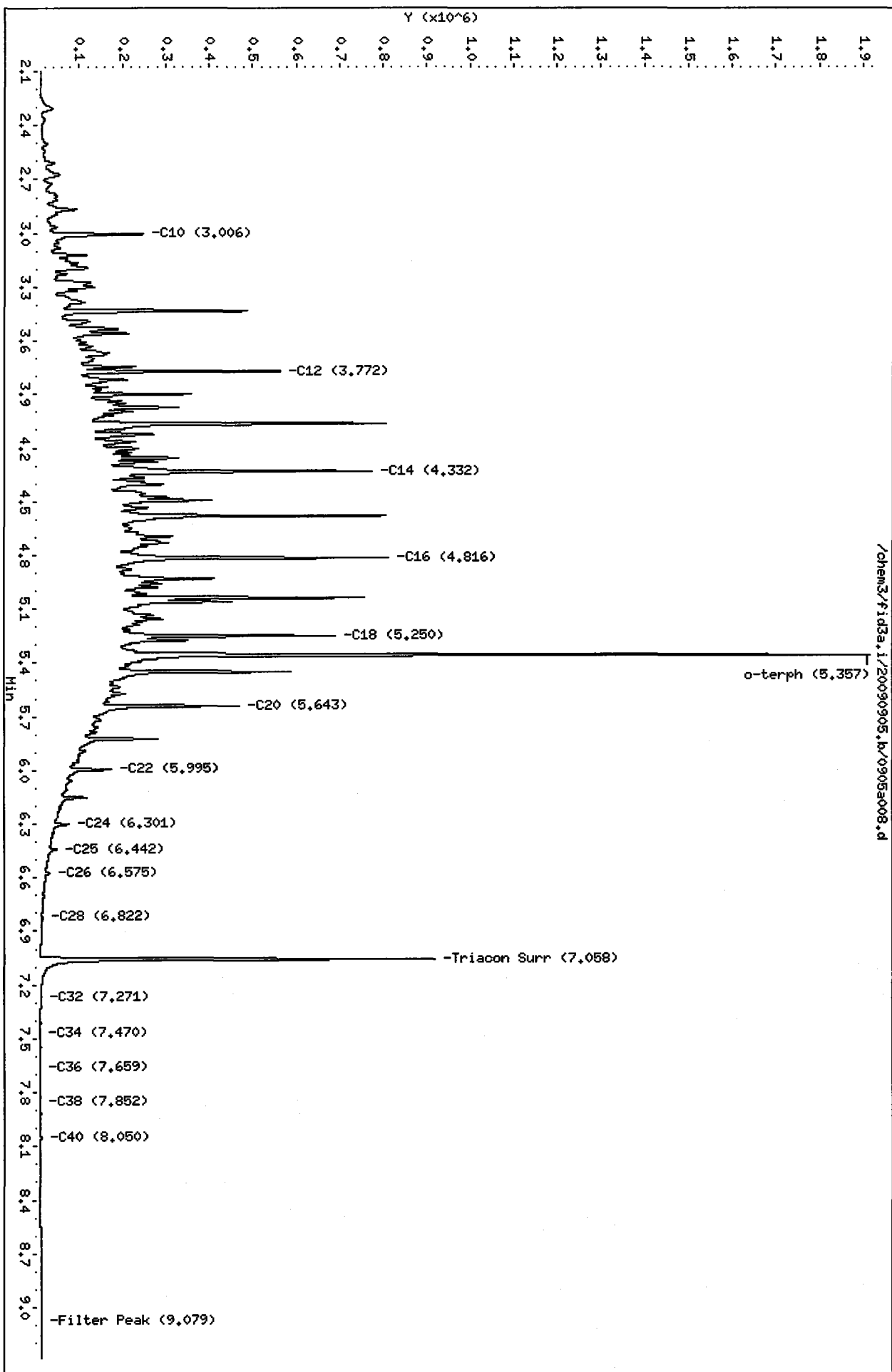
Range Times: NW Diesel(3.818 - 6.351) NW Gas(0.701 - 3.818) NW M.Oil(6.351 - 7.901)  
AK102(2.953 - 6.392) AK103(6.392 - 7.715) Jet A(2.953 - 5.298)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1156315	44.0	97.7
Triacontane	738200	42.9	95.4

Analyte	RF	Curve Date
o-Terph Surr	26299.8	01-SEP-2009
Triacon Surr	17199.0	01-SEP-2009
Gas	95793.1	07-AUG-2009
Diesel	21481.1	01-SEPT-2009
Motor Oil	11926.9	01-SEPT-2009
AK102	26685.8	01-SEPT-2009
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
Bunker C	9654.3	19-JAN-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3a.i/20090905.b/0905a008.d  
Date: 05-SEP-2009 13:43  
Client ID:  
Sample Info: PM90LCSM1  
Column phase: ZB1-HT

Instrument: fid3a.i  
Operator: ms  
Column diameter: 0.25



**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Soil  
Date Received: 09/03/09

ARI Job: PM92  
Project: VERBEEK  
PSE-004-00

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
09-20601-090409MB1	Method Blank	10.0 g	1.00 mL	-	09/04/09
09-20601-090409LCS1	Lab Control	10.0 g	1.00 mL	-	09/04/09
09-20601-PM92A	DOF-P1-A	9.58 g	1.00 mL	D	09/04/09
09-20602-PM92B	DOF-P1-B	9.87 g	1.00 mL	D	09/04/09
09-20609-PM92I	DOF-P4-A	9.38 g	1.00 mL	D	09/04/09
09-20610-PM92J	DOF-P4-B	9.35 g	1.00 mL	D	09/04/09
09-20611-PM92K	DOF-P4-C	9.08 g	1.00 mL	D	09/04/09
09-20612-PM92L	DOF-P5-A	9.80 g	1.00 mL	D	09/04/09
09-20613-PM92M	DOF-P5-B	8.81 g	1.00 mL	D	09/04/09
09-20614-PM92N	DOF-P5-C	8.65 g	1.00 mL	D	09/04/09
09-20619-PM92S	DOF-P7-A	9.64 g	1.00 mL	D	09/04/09
09-20620-PM92T	DOF-P7-B	9.20 g	1.00 mL	D	09/04/09
09-20621-PM92U	DOF-P7-C	9.46 g	1.00 mL	D	09/04/09

Basis: D=Dry Weight W=As Received  
Diesel Extraction Report

PM92: 00074

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

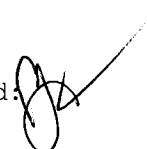
Sample ID: DOF-P1-A

SAMPLE

Lab Sample ID: PM92A

LIMS ID: 09-20601

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 94.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P1-B  
SAMPLE

Lab Sample ID: PM92B

LIMS ID: 09-20602

Matrix: Soil

Data Release Authorized 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 94.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P4-A  
SAMPLE

Lab Sample ID: PM92I

LIMS ID: 09-20609

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 92.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P4-B  
SAMPLE

Lab Sample ID: PM92J

LIMS ID: 09-20610

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 91.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P4-C  
SAMPLE

Lab Sample ID: PM92K

LIMS ID: 09-20611

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 90.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P5-A  
SAMPLE

Lab Sample ID: PM92L

LIMS ID: 09-20612

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 91.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

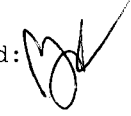
Page 1 of 1

Sample ID: DOF-P5-B  
SAMPLE

Lab Sample ID: PM92M

LIMS ID: 09-20613

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 90.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P5-C  
SAMPLE

Lab Sample ID: PM92N

LIMS ID: 09-20614

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 78.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	6	6	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P7-A  
SAMPLE

Lab Sample ID: PM92S

LIMS ID: 09-20619

Matrix: Soil

Data Release Authorized 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 93.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P7-B  
SAMPLE

Lab Sample ID: PM92T

LIMS ID: 09-20620

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 92.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P7-C  
SAMPLE

Lab Sample ID: PM92U

LIMS ID: 09-20621

Matrix: Soil

Data Release Authorized 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

Percent Total Solids: 89.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/15/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: DOF-P1-A

**MATRIX SPIKE**

Lab Sample ID: PM92A

LIMS ID: 09-20601

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	5 U	189	194	97.4%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DOF-P1-A  
DUPLICATE

Lab Sample ID: PM92A

LIMS ID: 09-20601

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: 08/31/09

Date Received: 09/03/09

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	5 U	5 U	0.0%	+/- 5	L

Reported in mg/kg-dry

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: PM92LCS

LIMS ID: 09-20602

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	191	200	95.5%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: PM92MB


QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

LIMS ID: 09-20602

Project: VERBEEK

Matrix: Soil

PSE-004-00

Data Release Authorized: 

Date Sampled: NA

Reported: 09/16/09

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/07/09	6010B	09/11/09	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: STD REFERENCE  
ERA D053540

Lab Sample ID: PM92SRM

LIMS ID: 09-20602

Matrix: Soil

Data Release Authorized: 

Reported: 09/16/09

QC Report No: PM92-Dalton, Olmsted & Fuglevand, Inc

Project: VERBEEK

PSE-004-00

Date Sampled: NA

Date Received: NA

Analyte	Analysis Method	Analysis Date	mg/kg-dry	Certified Value	Advisory Range
Arsenic	6010B	09/11/09	128	132	106-157

**ATTACHMENT F**  
Compliance Monitoring Plan

**Compliance Monitoring Plan  
Interim Remedial Action  
Site B Portion of Verbeek Wrecking Yard  
Bothell, Washington**

**Prepared for:  
Puget Sound Energy and  
City of Seattle**

**Dalton, Olmsted & Fuglevand, Inc. *Environmental Consultants***

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Ecology Review Draft: 1-15-10

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**INTRODUCTION**

This Compliance Monitoring Plan (CMP) was prepared to support remediation of GWP-Fill located within Site B of the Verbeek Wrecking Yard. The general Site B remediation area is shown on Figure 1. The plan was prepared consistent with the requirements of WAC 173-340-740(7) and WAC 173-340-410.

Compliance monitoring consists of:

- Protection Monitoring (described in a Health and Safety Plan)
- Performance Monitoring (this plan)
- Confirmation Monitoring (to assess long-term effectiveness)

The interim action covered by this plan consists of the removal of fill primarily containing high concentration of polycyclic aromatic hydrocarbons (PAHs) that appears to have originated from Gas Works Park (herein termed GWP-Fill). The goal of the Site B interim action is to reduce concentrations of GWP-Fill constituents to below unrestricted site use cleanup levels (CULs). Performance monitoring will be completed to confirm that this goal is attained.

**CONTAMINANTS OF POTENTIAL CONCERN**

Contaminants of Potential Concern (COPCs) are identified in the IRAP. COPCs are listed below.

Constituent	Human Health CUL (mg/kg)	Terrestrial CUL (3) (mg/kg)
Gasoline-Range Hydrocarbons	30/100 (A)(1)	200
Diesel-Range Hydrocarbons	2000 (A)	460
Motor Oil-Range Hydrocarbons	2000 (A)	Not available
Benzene	0.03 (A)	Not available
Total Naphthalenes	5.0 (A)	Not available
Carcinogenic PAHs (2)	0.14 (B)	30 [as benzo(a)pyrene]
Arsenic	20 (A)	20
Nickel	1600 (B)	100

Notes: (A) – Method A (WAC 173-340-900-Table 740-1)

(B) Method B (CLARC)

(1) – 30 mg/kg w/benzene present; 100 mg/kg w/o benzene present.

(2) – Based on benzo(a)pyrene equivalent concentration (Ecology 2007).

(3) - Table 749-2



The primary COPCs contained in GWP-Fill are PAHs. The primary PAHs of concern are carcinogenic PAHs (cPAHs). While a number of other contaminants are or might be associated with GWP-Fill, the primary remedial driver is the human health based cPAH (Method B) cleanup level of 0.14 mg/kg. If the cPAH cleanup level is achieved, concentrations of other COPCs will also be achieved within the general Site B area as described below.

- **Arsenic.** Only two of sixty-four samples exceeded the arsenic cleanup level (TP4-6 at 26 mg/kg and TP18-10 at 70 mg/kg). Both these locations are associated with high concentrations of cPAHs associated with GWP-Fill and will be remediated with the GWP-Fill material. Arsenic concentrations in the remaining sixty-two samples ranged between not detected (less than 5 mg/kg) and 11 mg/kg; in fact arsenic was not detected in most of the sixty-two samples (N=56). Once the cPAH cleanup is achieved, site B arsenic concentrations will be well below the unrestricted site use cleanup level.
- **Nickel.** Only two of forty-one samples exceeded the terrestrial CUL of 100 mg/kg (TP3-8 at 130 mg/kg and TP-18-10 at 302 mg/kg). Both these locations are associated with high concentrations of cPAHs associated with GWP-Fill and will be remediated with the GWP-Fill material. Nickel concentrations in the remaining thirty-nine samples ranged between 10 mg/kg and 98 mg/kg. Once the cPAH cleanup is achieved, site B nickel concentrations will be well below the unrestricted site use cleanup level.
- **Gasoline-Range Hydrocarbons.** Gasoline-range hydrocarbon concentrations exceeded the CUL of 30 mg/kg in eight of sixty-six soil samples. Gasoline range hydrocarbons are associated with high concentrations of cPAHs (GWP-Fill) at seven of the eight locations. At location TP13-6, a gasoline range hydrocarbon of 36 mg/kg was detected. However, at this location benzene was not detected and the detected value is below the 100 mg/kg CUL when benzene is not present. Once the cPAH CUL is achieved, concentrations of gasoline-range hydrocarbons will meet CULs.
- **Benzene.** Three of sixty-six samples exceeded the benzene CUL of 30 ug/kg. (TP3-8 at 45 ug/kg; TP-11-1/3 at 130 ug/kg; TP18-10 at 200 ug/kg). Each of the three locations is associated with GWP-Fill. Once the cPAH cleanup is achieved, Site B benzene concentrations will be well below the Method A unrestricted site use cleanup level.
- **Diesel-Range Hydrocarbons.** Diesel range hydrocarbon concentrations exceeded the terrestrial CUL of 460 mg/kg in eleven of sixty-four soil samples. At eight of the eleven locations, the diesel range hydrocarbons are associated with high concentrations of cPAHs in GWP-Fill. Diesel range hydrocarbons in the remaining three samples (locations TP-12 and TP-16), are not associated with

GWP-Fill and will be remediated by the site owner as part of their TPH cleanup activities. cPAHs were not detected at these three locations. By meeting the cPAH CUL, the diesel range terrestrial CUL will be achieved.

- **Motor-Oil Range Hydrocarbons.** Motor-oil range hydrocarbon concentrations exceeded the CUL of 2,000 mg/kg in eight of sixty-four soil samples. Five of the samples are associated with high concentrations of cPAHs in GWP-Fill. Motor oil range hydrocarbons in the remaining three samples (locations TP-12 and TP-16), are not associated with GWP-Fill and will be remediated by the site owner as part of their TPH cleanup activities. cPAHs were not detected at these three locations. By meeting the cPAH CUL, the motor-oil range hydrocarbon CUL will be achieved.
- **Total Naphthalenes.** Total Naphthalene concentrations exceeded the CUL of 5,000 ug/kg in eight of sixty-four soil samples. All of the samples are associated with high concentrations of cPAHs in GWP-Fill. By meeting the cPAH CUL, total naphthalene concentrations will be below the CUL.

#### POINT OF COMPLIANCE

The soil contact Point of Compliance (POC) is from the ground surface to fifteen feet below ground surface consistent with WAC 173-340-740(6)(d). Available data indicate that GWP-Fill lies above this depth and meeting the soil contact cleanup level will also be protective of groundwater quality. If cPAH residues above the soil contact cleanup level extend to depths deeper than 15 feet, excavation will be conducted to remove such residues to a practical extent.

#### COMPLIANCE SAMPLING

##### *GWP-Fill Excavation*

Excavation will proceed based on obvious evidence of GWP-Fill material. Once obvious GWP-Fill has been removed, compliance samples will be obtained from the excavation bottom and side walls.

- **Bottom Sampling.** Bottom samples will be obtained on approximately 30 foot centers using a 30-foot square grid pattern. Within each grid square (or partial grid square), a sample will be taken at the approximate center of the grid from the top half foot of soil (sample depth 0 to 0.5 feet).
- **Sidewall Sampling.** Sidewall samples will be obtained approximately every 30 lineal feet of sidewall. A channel sample will be collected from the approximate

GWP-Fill depth interval observed near the edge of the excavation. The thickness of the channel sample will vary depending on the GWP-Fill interval thickness.

### ***GWP-Fill Stockpile Post-Removal Sampling***

- **Bottom Sampling.** Once the GWP-Fill stockpile has been removed, compliance samples will be obtained of the soil surface formerly covered by the stockpile. Soil samples will be obtained on approximately 30 foot centers along the longitudinal trend of the pile.

### ***Sampling Procedure***

Samples will be obtained using clean stainless steel spoons. Initially the soil surface will be scraped to expose the soil surface.

- Bottom sampling will consist of excavating a 0 to 0.5 feet hole and scraping the six-inch long sidewall to obtain the sample. Care will be taken to obtain a uniform sample of the 0.5 foot sample interval. Particle sizes greater than 1/4-inch will be removed from the sample. The samples will be placed in clean glass 4 to 8 oz. containers provided by the contract laboratory.
- Sidewall samples will be scraped along the GWP-Fill interval. Equal portions of the interval will be placed in a clean stainless steel bowl and mixed thoroughly. The mixed sample will be placed in clean glass 4 to 8 oz. containers provided by the contract laboratory.

## **SOIL SAMPLE HANDLING, ANALYSIS AND QA/QC PROCEDURES**

Sample handling will be documented using standard chain-of-custody procedures.

- Sample labels will include the sample location, depth interval, date and time of sampling, and sampler.
- Filled sample containers will be placed in chilled coolers for transport to the laboratory.
- Samples will be delivered to the laboratory within 48 hours of collection.
- Chain-of-Custody sheets will be included with the laboratory data sheets.

Analytical Resources Inc. (ARI) will conduct the chemical analyses. Compliance samples will be analyzed for the following cPAHs.

- Benzo(a)anthracene
- Benzo(b)fluoranthene

- Benzo(k)fluoranthene
- Benzo(a)pyrene
- Chrysene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)pyrene

The samples will be analyzed using Method 8270 (GC/MS) or Method 8270-SIM to achieve a reporting limit of 0.1 mg/kg.

As a practical manner, the samples will likely be analyzed on a relatively rapid turn-around basis so that backfilling can be accomplished in a timely manner. In any case, the samples will be extracted and analyzed within the following time periods:

- Sample extraction - within 14 days of collection
- Sample analysis - within 40 days of extraction

Quality Assurance/Quality Control will be assessed using the following:

- Laboratory control samples (one per 20 samples or per sample batch)
- Laboratory duplicates - per method requirements
- Surrogate recoveries - per method requirements.

The results of the sample analyses and QA/QC data will be reported on data sheets provided by the laboratory. These will be included, along with the Chain-of-Custody, in the remedial construction report.

## DECONTAMINATION PROCEDURES

Equipment that comes in contact with potentially contaminated material will be decontaminated as follows:

- **Track-Hoe** – If the excavation equipment is used to collect soil samples, loose soil clinging the bucket and arm will be removed by brushing or other means (“dry-decon”) before collecting the sample. A sample would be obtained from the center of the bucket from soil that has not contacted the bucket sides. Once the excavation work is completed, the track-hoe will be steamed cleaned before moving off-site.
- **Soil Sampling Equipment (split spoons)** – Pre-cleaned stainless steel spoons will be used to sample site soils. Should some spoon decontamination be necessary in the field, the sampling equipment will be washed between sampling runs as follows:

- Non-phosphate detergent wash, using a brush, if necessary.
- Tap water rinse.

## MISCELLANEOUS WASTE MATERIALS

Miscellaneous waste materials will likely include decontamination water and personal protective equipment. These wastes will be placed in labeled containers and temporarily stored on site. After test results are received, they will be disposed of in an appropriate manner.

## DATA ANALYSIS AND EVALUATION

As the laboratory data sheets are received from the laboratory, the data will be reviewed for QA/QC purposes and be summarized in a Excel spread sheet. The individual cPAH concentrations will be converted to an equivalent benzo(a)pyrene concentration (BaPEq) using the procedure described in Ecology (2007). The BaPEq concentration will be compared to the benzo(a)pyrene CUL.

The compliance sample results will be compared to the criteria listed in WAC 173-340-740(7). Cleanup will be achieved based on the following:

- No single sample is greater than two times the CUL
- Less than 10% of the samples are above the CUL
- Using a confidence limit approach (Ecology 1992;1993), the upper 95% confidence limit on the mean (UCL95%) will be less than the CUL. Ecology's statistical program MTCA-Stat will be used to assess the data distribution and calculate the UCL95% concentration.

## REFERENCES

Ecology (Washington State Department of Ecology), 1992, Statistical Guidance for Ecology Site Managers, August 1992.

Ecology, 1993, Supplement to Statistical Guidance for Ecology Site Managers, August 11, 1993.

Ecology, 2007, Evaluating the Toxicity and Assessing Carcinogenic Risk of Environmental Mixtures Using Toxicity Equivalency Factors.

## Attachments

Figure 1 - Estimated GWP-Fill Extent

