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Revision 0

Compliance Monitoring Report for Petroleum Contaminated Soil Associated with the 300 Area Powerhouse Day Tanks

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Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Fluor Hanford
P.O. Box 1000
Richland, Washington

Contractor for the U.S. Department of Energy
Richland Operations Office under Contract DE-AC06-96RL13200

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C.J. Clement, Fluor Hanford, Inc.

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Compliance Monitoring Report for Petroleum Contaminated Soil Associated with the 300 Area Powerhouse Day Tanks

U. S. Department of Energy
Richland Operations Office
January 2004

Prepared by
Fluor Hanford, Inc.

Executive Summary

In June of 1999, two underground storage tanks (USTs), commonly referred to as the "Day Tanks," associated with the 384 Powerhouse in the 300 area of the Hanford site were removed. Subsequent to the removal of the USTs, petroleum contaminated soil (PCS) was discovered at the excavation site. The PCS was excavated and the site sampled to verify cleanup. Those actions are described in the *384 Powerhouse Day Tanks Remedial Action Report*, submitted to the State of Washington Department of Ecology in April of 2000.

The removed PCS was taken to Pit 9, located northwest of the 300 area, for bioremediation. On September 11, 2003, eleven samples were taken (based on a sampling grid) at the bioremediation area in Pit 9. All hazardous substances analyzed for were found to have concentrations below regulatory levels specified in Chapter 173-340 of the Washington State Administrative Code(WAC 173-340), *Model Toxics Control Act Cleanup Regulation* (MTCA). Accordingly, this site has completed the corrective action under WAC 173-360.

1.0 Purpose and Objective

This report has been prepared to show that the cleanup of the Pit 9 Bioremediation Area has been achieved per the corrective action requirements of the Chapter 173-360 of the Washington Administrative Code (WAC 173-360).

2.0 Background

The Pit 9 Bioremediation Area is located within the eastern portion of gravel Pit 9 on the Hanford site. Pit 9 is located approximately 1.2 kilometers (2 miles) north of the 300 area and east of Route 4S in Benton County, Washington. The bioremediation area was used to passively bioremediate petroleum contaminated soil that was discovered and excavated subsequent to the removal of two underground storage tanks (USTs) in the 300 area. The USTs, commonly referred to as the "Day Tanks," were associated with the 384 Powerhouse. The two tanks had contained No. 6 fuel oil and No. 2 diesel fuel at various times. The remedial action for the UST site in the 300 area is discussed in the *384 Powerhouse Day Tanks Remedial Action Report*, submitted to the State of Washington Department of Ecology in April of 2000.

The soils at the bioremediation area were initially sampled in September of 1999. The range of the results in the diesel range was from 11 to 240 mg/kg. The range of the results in the motor oil range was from 23 to 610 mg/kg.

The Waste Information Data system (WIDS) database identifies the UST site as "300-223, 384 Powerhouse Fuel Oil Day Tanks, #1 and #2" and the bioremediation area as "600-278, Bioremediation Pad Within Gravel Pit 9, Oil Contaminated Soil."

3.0 Sampling Results

The Pit 9 Bioremediation area was sampled on 9/11/03. Eleven samples (not including a field splits and duplicates) were extracted from locations based on a sampling grid in accordance with the *Sampling and Analysis Plan for Pit 9 Soil Petroleum Contamination Area*, September 2003 (Appendix 1). No samples had concentrations above the cleanup levels in Table 745-1 of WAC 173-340. A summary of the sample results is provided in Table 1, Table 2, Table 3, and Table 4 below.

The full analytical reports, including quality control data, are included in Appendix 2. Table 5 provides a crosswalk between the sample location numbers and the sample identifications used in the laboratory reports contained in Appendix 2.

Table 1 Summary of Results of Sampling from 9/11/03			
Sample Location #	**Test Performed**	**Result[1] (mg/kg)**	**Table 745-1 Cleanup Level (mg/kg)**
1	Benzene	<0.002	0.03
2	Benzene	<0.002	0.03
3	Benzene	<0.002	0.03
4	Benzene	<0.002	0.03
5	Benzene	<0.002	0.03
6	Benzene	<0.002	0.03
7	Benzene	<0.002	0.03
8	Benzene	<0.002	0.03
9	Benzene	<0.002	0.03
10	Benzene	<0.002	0.03
11	Benzene	<0.002	0.03
1	Toluene	<0.002	7
2	Toluene	<0.002	7
3	Toluene	<0.002	7
4	Toluene	<0.002	7
5	Toluene	<0.002	7
6	Toluene	<0.002	7
7	Toluene	<0.002	7
8	Toluene	<0.002	7
9	Toluene	<0.002	7
10	Toluene	<0.002	7
11	Toluene	<0.002	7
1	Ethylbenzene	<0.002	6
2	Ethylbenzene	<0.002	6
3	Ethylbenzene	<0.002	6
4	Ethylbenzene	<0.002	6
5	Ethylbenzene	<0.002	6
6	Ethylbenzene	<0.002	6
7	Ethylbenzene	<0.002	6
8	Ethylbenzene	<0.002	6
9	Ethylbenzene	<0.002	6
10	Ethylbenzene	<0.002	6
11	Ethylbenzene	<0.002	6
1	Total Xylenes	<0.002	9
2	Total Xylenes	<0.002	9
3	Total Xylenes	<0.002	9
4	Total Xylenes	<0.002	9
5	Total Xylenes	<0.002	9
6	Total Xylenes	<0.002	9

[1] Some of these values were converted from µg/kg.

Table 1 Summary of Results of Sampling from 9/11/03			
Sample Location #	**Test Performed**	**Result[1] (mg/kg)**	**Table 745-1 Cleanup Level (mg/kg)**
7	Total Xylenes	<0.002	9
8	Total Xylenes	<0.002	9
9	Total Xylenes	<0.002	9
10	Total Xylenes	<0.002	9
11	Total Xylenes	<0.002	9
1	Carcinogenic PAHs	1.36	2
2	Carcinogenic PAHs	1.16	2
3	Carcinogenic PAHs	0.47	2
4	Carcinogenic PAHs	1.82	2
5	Carcinogenic PAHs	1.28	2
6	Carcinogenic PAHs	1.19	2
7	Carcinogenic PAHs	1.74	2
8	Carcinogenic PAHs	1.48	2
9	Carcinogenic PAHs	1.35	2
10	Carcinogenic PAHs	1.35	2
11	Carcinogenic PAHs	1.87	2
1	Total Petroleum Hydrocarbons Diesel	<7.60	2000
2	Total Petroleum Hydrocarbons Diesel	<7.60	2000
3	Total Petroleum Hydrocarbons Diesel	<7.60	2000
4	Total Petroleum Hydrocarbons Diesel	<7.60	2000
5	Total Petroleum Hydrocarbons Diesel	<7.40	2000
6	Total Petroleum Hydrocarbons Diesel	<7.60	2000
7	Total Petroleum Hydrocarbons Diesel	<3.80	2000
8	Total Petroleum Hydrocarbons Diesel	<3.80	2000
9	Total Petroleum Hydrocarbons Diesel	<3.80	2000
10	Total Petroleum Hydrocarbons Diesel	<3.80	2000
11	Total Petroleum Hydrocarbons Diesel	<3.80	2000
1	Total Petroleum Hydrocarbons Motor Oil	130	2000
2	Total Petroleum Hydrocarbons Motor Oil	130	2000
3	Total Petroleum Hydrocarbons Motor Oil	130	2000

Table 1 Summary of Results of Sampling from 9/11/03			
Sample Location #	**Test Performed**	**Result[1] (mg/kg)**	**Table 745-1 Cleanup Level (mg/kg)**
4	Total Petroleum Hydrocarbons Motor Oil	120	2000
5	Total Petroleum Hydrocarbons Motor Oil	130	2000
6	Total Petroleum Hydrocarbons Motor Oil	160	2000
7	Total Petroleum Hydrocarbons Motor Oil	120	2000
8	Total Petroleum Hydrocarbons Motor Oil	110	2000
9	Total Petroleum Hydrocarbons Motor Oil	130	2000
10	Total Petroleum Hydrocarbons Motor Oil	100	2000
11	Total Petroleum Hydrocarbons Motor Oil	130	2000
1	1,1,1-Trichloroethane	<0.002	2
2	1,1,1-Trichloroethane	<0.002	2
3	1,1,1-Trichloroethane	<0.002	2
4	1,1,1-Trichloroethane	<0.002	2
5	1,1,1-Trichloroethane	<0.002	2
6	1,1,1-Trichloroethane	<0.002	2
7	1,1,1-Trichloroethane	<0.002	2
8	1,1,1-Trichloroethane	<0.002	2
9	1,1,1-Trichloroethane	<0.002	2
10	1,1,1-Trichloroethane	<0.002	2
11	1,1,1-Trichloroethane	<0.002	2
1	Methylene chloride	<0.002	0.02
2	Methylene chloride	<0.002	0.02
3	Methylene chloride	<0.002	0.02
4	Methylene chloride	<0.002	0.02
5	Methylene chloride	<0.002	0.02
6	Methylene chloride	<0.002	0.02
7	Methylene chloride	<0.002	0.02
8	Methylene chloride	<0.002	0.02
9	Methylene chloride	<0.002	0.02
10	Methylene chloride	<0.002	0.02
11	Methylene chloride	<0.002	0.02

Table 2 Summary of Results for Carcinogenic PAHs from Sampling on 9/11/03		
Sample Location #	**Test Performed**	**Result (µg/kg)**
1	Benzo(a)anthracene	340
1	Benzo(a)pyrene	270
1	Benzo(b)fluoranthene	0
1	Benzo(k)fluoranthene	310
1	Chrysene	440
1	Dibenz(a,h)anthracene	0
1	Indeno(1,2,3)pyrene	0
	Total	**1360**
2	Benzo(a)anthracene	250
2	Benzo(a)pyrene	290
2	Benzo(b)fluoranthene	0
2	Benzo(k)fluoranthene	210
2	Chrysene	410
2	Dibenz(a,h)anthracene	0
2	Indeno(1,2,3)pyrene	0
	Total	**1160**
3	Benzo(a)anthracene	110
3	Benzo(a)pyrene	88
3	Benzo(b)fluoranthene	0
3	Benzo(k)fluoranthene	74
3	Chrysene	200
3	Dibenz(a,h)anthracene	0
3	Indeno(1,2,3)pyrene	0
	Total	**472**
4	Benzo(a)anthracene	510
4	Benzo(a)pyrene	310
4	Benzo(b)fluoranthene	0
4	Benzo(k)fluoranthene	300
4	Chrysene	700
4	Dibenz(a,h)anthracene	0
4	Indeno(1,2,3)pyrene	0
	Total	**1820**
5	Benzo(a)anthracene	280
5	Benzo(a)pyrene	330
5	Benzo(b)fluoranthene	0
5	Benzo(k)fluoranthene	250
5	Chrysene	420
5	Dibenz(a,h)anthracene	0
5	Indeno(1,2,3)pyrene	0
	Total	**1280**

Table 2 Summary of Results for Carcinogenic PAHs from Sampling on 9/11/03		
Sample Location #	**Test Performed**	**Result (µg/kg)**
6	Benzo(a)anthracene	290
6	Benzo(a)pyrene	250
6	Benzo(b)fluoranthene	0
6	Benzo(k)fluoranthene	250
6	Chrysene	400
6	Dibenz(a,h)anthracene	0
6	Indeno(1,2,3)pyrene	0
	Total	**1190**
7	Benzo(a)anthracene	430
7	Benzo(a)pyrene	320
7	Benzo(b)fluoranthene	0
7	Benzo(k)fluoranthene	280
7	Chrysene	710
7	Dibenz(a,h)anthracene	0
7	Indeno(1,2,3)pyrene	0
	Total	**1740**
8	Benzo(a)anthracene	360
8	Benzo(a)pyrene	280
8	Benzo(b)fluoranthene	0
8	Benzo(k)fluoranthene	280
8	Chrysene	560
8	Dibenz(a,h)anthracene	0
8	Indeno(1,2,3)pyrene	0
	Total	**1480**
9	Benzo(a)anthracene	330
9	Benzo(a)pyrene	330
9	Benzo(b)fluoranthene	0
9	Benzo(k)fluoranthene	280
9	Chrysene	410
9	Dibenz(a,h)anthracene	0
9	Indeno(1,2,3)pyrene	0
	Total	**1350**

Sampling and Analysis Plan for Pit 9 Soil Petroleum Contamination Area

September 2003

Table 4 Summary of carcinogenic PAHs Results from Split of Sample #6		
Sample Location	**Test Performed**	**Result (ug/kg)**
6	Benzo(a)anthracene	130
6	Benzo(a)pyrene	30 (present below detection limits)
6	Benzo(b)fluoranthene	280
6	Benzo(k)fluoranthene	140
6	Chrysene	560
6	Dibenz(a,h)anthracene	68
6	Indeno(1,2,3)pyrene	180
6	**Total**	1388

Table 5 Crosswalk Between Sample Locations and Laboratory Identifications				
Sample Location #	**WSCF "Client ID"**	**Severn Trent "Client Sample ID"**	**Lionville Laboratory, Inc. "Cust ID"**	**Comments**
1	S03111-01	K0N6T3		
2	S03111-02	K0N6T4		
3	S03111-03	K0N6T5		
4	S03111-04	K0N6T6		
5	S03111-05	K0N6T7		
6	S03111-06	K0N6T8	K0N6V7	Field Splits
7	S03111-07	K0N6T9		
8	S03111-08	K0N6V0		
9	S03111-09	K0N6V1		
10	S03111-10	K0N6V2		
11	S03111-11 & S03111-12	K0N6V3 & K0N6V4		Field Duplicates: The higher values were used in the data analysis
NA	S03111-14		K0N6V6	Trip Blanks
NA	S03111-13	K0N6V5		Equipment Blank

4.0 Data Analysis

The *Model Toxics Control Act Cleanup Regulations* compliance monitoring standards (WAC 173-340-740(7)(e)) require that for all data analysis methods used, two necessary conditions must be satisfied to consider a site clean.

> (i) No single sample concentration shall be greater than two times the soil cleanup level. Higher exceedances to control false positive error rates at five percent may be approved by the department when the cleanup level is based on background concentrations; and
>
> (ii) Less than ten percent of the sample concentrations shall exceed the soil cleanup level. Higher exceedances to control false positive error rates at five percent may be approved by the department when the cleanup level is based on background concentrations. (WAC 173-340-740(7)(e)).

Since no single sample result exceeded the cleanup levels given in Table 745-1 of WAC 173-340-900, all sample concentrations met the requirements in WAC 173-340-740(7)(e)(i) and (ii) above.

Many of the sample results were below the practical quantitation limit. For some of data summarized above, the method described at WAC 173-340-740(7)(f)(iv) was applied.

> If more than fifty percent of the measurements are below the practical quantitation limit, the largest value in the data set shall be used in place of an upper confidence limit on the true mean soil concentration.

Since the concentrations for 1,1,1-Trichloroethane[3], Methylene Chloride[3], Benzene, Toluene, Ethylbenzene, Total Xylenes, and the total petroleum hydrocarbons (TPH) in the diesel range were all below the minimum detection limit, the data analysis method described above was used.

For TPH in the motor oil range and the carcinogenic polycyclic aromatic hydrocarbons[4] (cPAHs), the data analysis method in WAC 173-340-740(7)(d)(i) was used.

> (i) A confidence interval approach that meets the following requirements:
> (A) The upper one sided ninety-five percent confidence limit on the true mean soil concentration shall be less than the soil cleanup level. For lognormally distributed data, the upper one-sided ninety-five percent confidence limit shall be calculated using Land's method; and
> (B) Data shall be assumed to be lognormally distributed unless this assumption is rejected by a statistical test. If a lognormal distribution is inappropriate, data shall be assumed to be normally distributed unless this assumption is rejected by a statistical test. The W test, D'Agostino's test, or, censored probability plots, as appropriate for the data, shall be the statistical methods used to determine whether the data are lognormally or normally distributed;

The data were input into *MTCAstat* to perform the statistical calculations described above. Those printouts from *MTCAstat* are found in Appendix 3.

Regarding the cPAHs, the values that were input into *MTCAstat* were determined by summing the PAHs that had a result that was above the nondetect level. Those values are listed in Table 2. A value of zero was used when the results were "not detected."

Table 6 below lists the results of the data analysis.

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[3] Although not required to be tested for by Table 830-1 of WAC 173-340-900, because the lab reported values and they are listed in Table 745-1 of WAC 173-340-900, they are discussed here.
[4] The cPAHs include benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

Table 6 - Results of Data Analysis				
Hazardous Substance	**Data Analysis Method**	**Data Analysis Result**	**Table 745-1 Cleanup Level**	**Decision**
All	No single sample exceeds twice cleanup level (WAC 173-340-740(7)(e)(i))?	Yes	NA	Pass
All	Less than 10% of samples exceed cleanup level (WAC-340-740(7)(e)(ii))?	Yes	NA	Pass
Benzene	Largest value (WAC 173-340-740(7)(e)(iv))	<0.002 mg/kg	0.03 mg/kg	Pass
Toluene	Largest value (WAC 173-340-740(7)(e)(iv))	<0.002 mg/kg	7 mg/kg	Pass
Ethylbenzene	Largest value (WAC 173-340-740(7)(e)(iv))	<0.002 mg/kg	6 mg/kg	Pass
Xylenes	Largest value (WAC 173-340-740(7)(e)(iv))	<0.002 mg/kg	9 mg/kg	Pass
PAHs (carcinogenic)	Upper 95% confidence interval (WAC 173-340-740(7)(d)(i) using *MTCAStat*)	1.58 mg/kg	2 mg/kg	Pass
TPH - Diesel Range Organics	Largest value (WAC 173-340-740(7)(e)(iv))	<7.60 mg/kg	2,000 mg/kg	Pass
TPH - Heavy Oils	Upper 95% confidence interval (WAC 173-340-740(7)(d)(i) using *MTCAStat*)	135.2 mg/kg	2,000 mg/kg	Pass
Methylene Chloride	Largest value (WAC 173-340-740(7)(e)(iv))	<0.002 mg/kg	0.02 mg/kg	Pass
1,1,1-Trichloroethane	Largest value (WAC 173-340-740(7)(e)(iv))	<0.002 mg/kg	2 mg/kg	Pass

5.0 Conclusions and Future Actions

Using WAC 173-340 as the cleanup standard, the bioremediation area has met the corrective action requirements of WAC 173-360. The bioremediation area is also considered closed under WAC 173-304. The soil can now be used for cover of inert and demolition debris at Pit 9. After the soil has been used for cover, the site can be closed out in WIDS.

Appendix 1

Sampling and Analysis Plan for Pit 9 Soil Petroleum Contamination Area, September 2003

Sampling and Analysis Plan for Pit 9 Soil Petroleum Contamination Area

September 2003

Sampling Plan for Pit 9 Soil Petroleum Contamination Area

1.0 Purpose and Objective

This sampling plan is being prepared in accordance with the requirements of the Model Toxics Control Act (MTCA), WAC 173-340-820 (ref. 1). Results from this sampling will be used to determine if contamination levels in the soil being treated in the Pit 9 Soil Petroleum Contamination Area (Pit 9 Soil) have decreased to below the Method A soil cleanup levels for Industrial Properties, as listed in Table 745-1 in WAC 173-340 (ref. 2), or if further treatment is required. The Pit 9 soil pile is petroleum-contaminated soil discovered upon removal of the day tank at the 384 Powerhouse. The day tanks were used to store diesel and Bunker C heating oil. Based on analyses the potential source of contamination from the 384 Underground Fuel Bunker Site (ref 3), Table 1 provides the applicable Method A cleanup levels.

Table 1 – Applicable Method A Cleanup Levels

Hazardous Substance	Cleanup Level
Total petroleum Hydrocarbons (diesel and heavy oil ranges)	2,000 mg/kg
Volatile Organics	
Benzene	0.03 mg/kg
Tolulene	7 mg/kg
Ethyl Benzene	6 mg/kg
Xylene (total)	9 mg/kg
PAHs	
Benzo(a)anthracene	2 mg/kg total
Chrysene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Benzo(a)pyrene	
Indeno(1,2,3-cd)pyrene	
Dibenz(a,h)anthracene	

Pit 9 is located north of the 300 Area on Route 4 South. It is primarily used as an inert and demolition waste landfill for Hanford activities. In 1999, contaminated soil discovered upon removal of the day tanks at the 384 Powerhouse in the 300 was stockpiled at this location for treatment. However, the area where the soil was stockpiled was consequently posted as a radiological control area. The radiological posting was done as an administrative requirement because of where the soil originated (entire 300 Area is posed as an underground radioactive contamination area), not because any actual contamination was discovered. The issue of radiological posting was finally resolved in mid-2003, and a decision was made to remove the radiological postings.

The current sampling is being performed to determine if the soil meets the cleanup levels for petroleum contamination under MTCA Method A listed in Table 1, or if further treatment is required. If no further treatment is required, the plan is to use the soil as cover material for the Pit 9 landfill.

Upon removal of the radiological postings, the petroleum contaminated soil stock pile at Pit 9 was spread over an area of about 85 feet by 162 feet with a nominal depth of 28 inches to facilitate sampling and treatment.

2.0 Organization/Responsibilities

Sampling will be performed under the direction of Fluor Hanford (FH) Environmental Field Services (EFS) Staff. Sampling, including Chain-of-Custody, will be performed by the Sampling and Well Services organization. Samples that will be sent offsite for analyses will be surveyed at the point of sampling by a radiological control technician.

Samples will be analyzed at several laboratories. Analysis for Total Petroleum Hydrocarbons (TPH) and for volatile organics will be performed on the Hanford Site at the Waste Sampling and Characterization Facility (WSCF). The PAH analyses will be performed offsite by Severn Trent in St. Louis, Missouri. A quality control split sample will be sent offsite for independent analysis at the Lionsville Laboratory in Lionsville, Pennsylvania. The respective laboratories will be responsible for performing all analyses in accordance with requested method requirements, including quality assurance/quality control protocols, and for performing all data validation activities.

The FH EFS staff will interpret the analytical data and perform all statistical analysis required to show whether or not the soils meet cleanup standards.

3.0 Sampling Requirements

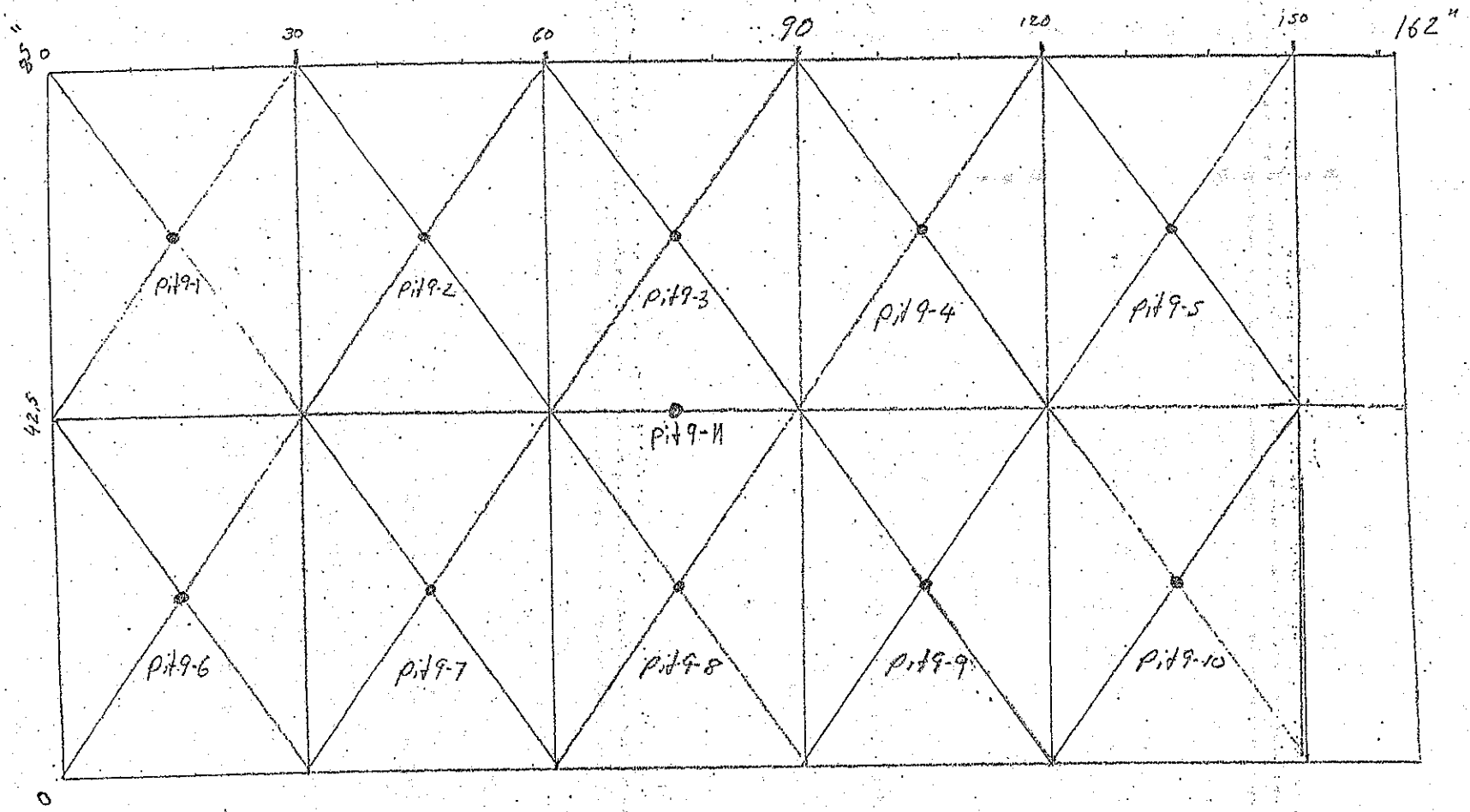
3.1 The following serves as a checklist of the minimum-required sampling and personal protective equipment to be used for this activity:

- Chain-of-custody form
- Field sampling log
- Sampling spoons and collection bowl
- Chemical resistant gloves
- Sample containers
- Sample labels
- Safety glasses
- Substantial footwear
- Cellular phone
- Sealable plastic bags
- Ice chest with ice for cooling samples
- Markers or flags to document location of samples
- Deionized water for equipment rinses

3.2 Identification/Justification for Sample Points

Total volume of contaminated soil is approximately 1173 cubic yards. Per guidance contained in Washington State Department of Ecology document 91-30, *Guidance for Remediation of Petroleum Contaminated Soils* (ref 4), a total of 10 samples are needed for this volume of soil. Eleven locations will be sampled for ease in applying the statistical tests outlined in WAC 173-340-740(7) for compliance monitoring (ref 5). Sampling points are shown in Table 2. Sample locations are based on a systematic sampling approach where an imaginary grid was placed over a map of the sample area and one sample location was selected from each grid area. This is consistent with the approach recommended in Ecology document 94-49, *Guidance on Sampling and Data Analysis Methods* (ref 6).

Table 2
Sample Locations



pit9-1 = 64, 15

pit9-2 = 64, 45

pit9-3 = 64, 75

pit9-4 = 64, 105

pit9-5 = 64, 135

pit9-6 = 22, 15

pit9-7 = 22, 45

pit9-8 = 22, 75

pit9-9 = 22, 105

pit9-10 = 22, 135

pit9-11 = 42.5, 75

3.3 Method of Sampling

Sample locations will be marked with a flag. One sample will be collected from each flagged location at a depth of approximately six to twelve inches.

3.4 Sample Collection and Handling Requirements

Samples will be extracted using a metal spoon and composited in a metal bowl prior to placing in individual sample containers. To the greatest extent possible, larger soil particles, rocks, etc. will be segregated out of the soil matrix prior to placing in sample bottles. Each constituent to be analyzed for will require segregation in a separate container (i.e., one container each for TPH, VOAs, and PAHs.). Samples will be segregated as follows in the type of container specified.

- TPH – 250 ml amber glass container
- VOA – 40 ml amber glass container with septum lid
- PAH – 120 amber glass container.

Each container will be filled to extent possible. The 40 ml containers used for the VOA analyses must be filled to avoid air pockets to preclude the escape of volatiles from the soil matrix (i.e., zero headspace). The lid of the sample container will be hand-tightened and secured with tape to avoid tampering en route to laboratory. Each container will be labeled, wrapped in a plastic bag, and placed in an ice chest packed with ice to facilitate preservation of sample while in route to laboratory.

A clean spoon/mixing bowl will be used for each sample location to avoid the chance of cross contamination.

3.5 Management of Waste Generated by Sampling Activities

Based on knowledge of soil pile, potential contamination, and expected extent of contamination, all waste generated during the course of sampling will be non-dangerous. This is expected to be limited to such things as used gloves, plastic bags, paper, etc. Waste will be collected in a garbage bag and disposed of in one of the site's standard trash dumpsters. The Hanford garbage is disposed of at the Roosevelt Regional landfill through the Basin Disposal transfer station in Pasco.

Unused soil samples at the WSCF laboratory will be retrieved from the laboratory within 30 days of receipt of satisfactory sampling results and be returned to the soil cell area. Unused soil samples sent to an offsite laboratory will be disposed of by the offsite laboratory.

3.6 Quality Assurance/Quality Control Requirements

A field log will be kept to document all pertinent information related to the sampling activity. All entries in the log will be completed, including date and signature of the person completing the log.

The following quality control samples will be collected for this sampling event:

- **Field Duplicate:** One field duplicate sample is required for every 20 samples collected; therefore, 11 samples will require one field duplicate. The field duplicate will be collected from the same source of composited soil as one of the primary samples. A duplicate will be submitted for each of the constituents being analyzed (i.e., TPH, VOA, and PAH). The field duplicates will be given a separate sample number and be analyzed independently to provide information regarding the homogeneity of the matrix, as well as an evaluation of the precision of the sampling process.
- **Field Split:** One field split sample is required for every 20 samples collected; therefore, 11 samples will require one field split. The field split will be collected from the same source of composited soil as one of the primary samples. It is different from the field duplicate in that it is sent to an independent laboratory for analyses, primarily for the purpose of auditing the performance of the primary laboratories. It is given a separate sample number and will be analyzed for the same constituents as the primary sample (i.e., TPH, VOA, and PAH).
- **Equipment Rinseate:** Equipment rinseate sample will be collected in the field for each type of sampling equipment used. Since a separate precleaned spoon and bowl will be used for each sampling location, a single rinseate sample can be collected. The rinseate sample consists of deinoized water washed through the decontaminated sampling equipment. Results are used to analyze the adequacy of the sampling equipment decontamination procedures. The rinseate sample will be analyzed for the same constituents as the soil (i.e., TPH, VOA, and PAH).
- **VOA Trip Blank:** One trip blank for VOA analysis will be submitted with each cooler containing samples collected for VOA analysis. The trip blank is used to detect contamination that may occur during sampling shipping and handling. The trip blank is an analyte sample container filled with deionized water that is transported to the sample site and then returned to the respective laboratory with the sample. The trip blank is filled prior to going to the field and is not opened in the field. Each trip blank is stored at the laboratory with the associated sample and is analyzed with those samples.

3.7 Sample Labeling and Chain-of-Custody Requirements

Each sample will be labeled with waterproof ink. The label will be affixed firmly to the appropriate sample container and include the following information:

- Name of collector
- Date and time of collection
- Place of collection
- Description of material being sampled (i.e., TPH-contaminated soil)
- Unique sample number corresponding to sample identification number on the chain-of-custody
- Specific analysis required
- Preservation requirements (i.e., cool to 4 degrees C $\pm$ 2 degrees)

All samples will be recorded on a chain of custody form. The primary purpose of the chain-of-custody form is to create a written record to trace the possession and handling of the sample from the moment of collection through analysis and eventual disposal. Hanford Site Form BC-6000-828 will be used to record the chain-of-custody.

The sample will remain in custody of the sampler through transfer to the analytical laboratory. A sample is in someone's custody under any of the following conditions:

- The sample is in one's actual possession.
- The sample is within view, after being in one's physical possession.
- The sample is in a locked area to prevent unauthorized personnel from tampering with it.
- The sample is in a secured area, restricted to authorized personnel only.

The following information will be recorded on the chain-of-custody:

- Name and address of analytical laboratory doing the analysis.
- Name, address, phone number, and fax number of client (i.e., FH EFS) contact person.
- Billing information.
- Required turnaround time.
- Project name for future reference to help identify the sampling act, including name of personnel involved in sampling.
- List of all unique sample identification numbers, description (i.e., size and type) of sampling container tied to each number, date and time sample was added to each container, and specific analysis requested for each.
- Preservation and holding time requirements, as appropriate.
- Under the comments section, list any project-specific information that might be useful to lab in running analysis, such as detection limit requirements, process knowledge, etc.

At the time of turnover to laboratory, the sampler will sign and date chain-of-custody, including time of sample turnover. Laboratory representative will do the same, and make a copy of chain-of-custody to be retained by the sampler. Original chain-of-custody will remain with sample throughout analytical process.

Samples requiring shipment to an offsite laboratory will be packaged in an ice chest to prevent shifting/movement of sample containers during transportation, including enough ice to maintain the samples at the desired temperature during transportation (4 C $\pm$ 2 degrees). Ice chests will be wrapped with strapping tape to ensure that the ice chest does not open during transportation. The chain-of-custody and appropriate shipping documentation will accompany the ice chest. Samples will be shipped offsite through the transportation organization at 1162 building.

Note: Based on previous sampling results, samples will not meet the definition of a DOT hazardous material in 49 CFR 171.8. In lieu of a shipping paper, an offsite property control from will be used (form number BC-6001-579).

4.0 Health and Safety Requirements

Minimum personal protective equipment requirements are found in section 3.1. Hazards associated with this site include uneven terrain, blowing dust, and insects. Personnel should exercise caution to avoid items that could result in slips, trips, or strains. Operations should be halted if winds in excess of 20 miles per hour are experienced or if dust creates an unreasonable hazard by reducing visibility or causing breathing problems. Goggles may be used in lieu of or in addition to safety glasses to protect eyes from blowing dust. Personnel should use caution in areas where insects or other animals may be present and avoid disturbing those whose bites or stings could be harmful.

Based on previous sampling results, the level of petroleum contamination present in the soil is not expected to pose any threat to personnel during completion of this sampling activity.

5.0 Sample Analysis and Reporting Requirements

5.1 Detection Limit

- Cleanup level requirements are given in Table 1. Detection limits will, at a minimum, be lower than the respective cleanup levels.

5.2 Analytical Techniques and Procedures

All analyses will be performed on a dry weight concentration basis. Samples will be analyzed per the following methods:

- TPH – NWTPHdx (extended to heavy oil range)
- VOA – EPA 8260
- PAH – EPA 8310

5.3 Quality Assurance/Quality Control Requirements

The respective laboratories will apply all required quality control procedures, as specified by the requested methods listed in 4.2 above. At a minimum, this will require laboratory duplicates, blanks, laboratory control samples.

5.4 Data Reporting/Validation Procedures

The laboratory will prepare a full report outlying all sample results. Non-detected analytes will be reported as less than the respective detection limit. A full quality control report will be generated, including reporting of surrogate recovery rates. Any samples outside of the prescribed surrogate recovery limits will be flagged and either rerun or explained in the comments section of the report. The laboratory will validate all sample results through an internal quality assurance process. Validated results will be sent to FH EFS.

The criteria established in WAC 173-340-740 (7) will be used determine if the data meets cleanup standards. This criteria is as follows:

- The upper confidence interval of the soil sampling data must be less than the respective cleanup level requirements, as listed in Table 1. Statistical tests shall be performed at a Type I error level of 0.05. Data will be assumed to be lognormal, unless this assumption is rejected by a statistical test. Upper confidence interval will be calculated using Land's method.
- No single concentration can be greater than two times the respective cleanup level.

- Less than 10% of the samples can exceed the respective cleanup level.

The upper confidence interval of soil sampling data will be established using guidance provided by Ecology in Statistical Guidance for Ecology Site Managers (ref. 7). As appropriate, the Ecology-issued statistical software package, MTCAStat (ref. 8) will be used to analyze the data.

6.0 References

1 Washington Administrative Code, WAC 173-340-820, Sampling and Analysis Plans.

2 Washington Administrative Code, WAC 173-340-900, Table 745-1, Method A Soil Cleanup Levels for Industrial Properties.

3 Sampling and Analysis Plan for the 384 Underground Fuel Bunker Site, BHI-01604.

4 Washington State Department of Ecology Toxics Cleanup Program, Guidance for Remediation of Petroleum Contaminated Soils, 91-30 (revised 11/95).

5 Washington Administrative Code, WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards.

6 Washington State Department of Ecology Toxics Cleanup Program and the Ecology Environmental Laboratory, Analytical Methods for Petroleum Hydrocarbons, ECY 97-602, June 1997.

7 Washington State Department of Ecology Toxics Cleanup Program, Statistical Guidance for Ecology Site Managers, 92-55, August 1992.

8 Washington State Department of Ecology Toxics Cleanup Program, MTCAStat 2.1.

Appendix 2

Analytical Reports from Sampling of Pit 9 Bioremediation Area on September 11, 2003

WSCF
ANALYTICAL RESULTS REPORT

for

Landlord Site Services
P.O. BOX 1400
R3-32
RICHLAND, WA 99352

Attention: Ron Del Mar R3-32 FX 2-1694

Analytical: _____

Client Services: _____

All results are reported on an "as received" basis unless otherwise noted in the comment section.

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Report#: 20031253
Report Date: 23-oct-2003
Report W004/ver. 5.2
Landlord Site Services

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00078	S03111-01	DEL MAR	TS	Percent Solids	SOLID	LA-519-412			98.6	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	<	41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	<	4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	<	4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report W004/ver. 5.2
Landlord Site Services

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00078	S03111-01	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		130	mg/kg	1.00	13	09/22/03	09/11/03	09/11/03
W03DC00078	S03111-01	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 7.60	mg/kg	1.00	7.6	09/22/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.4	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

MDL = Minimum Detection Limit U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00079	S03111-02	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		130	mg/kg	1.00	13	09/22/03	09/11/03	09/11/03
W03DC00079	S03111-02	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 7.60	mg/kg	1.00	7.6	09/22/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.2	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

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DF=Dilution Factor

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Report W004/ver. 5.2
Landlord Site Services

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00080	S03111-03	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		130	mg/kg	1.00	13	09/22/03	09/11/03	09/11/03
W03DC00080	S03111-03	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 7.60	mg/kg	1.00	7.6	09/22/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.1	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 40.0	ug/kg	1.00	40	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694 **Group #:** 20031253
Project: GEN.WASTE: GENERAL WASTE

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00081	S03111-04	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.00	ug/kg	1.00	4.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.00	ug/kg	1.00	4.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		120	mg/kg	1.00	13	09/22/03	09/11/03	09/11/03
W03DC00081	S03111-04	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 7.60	mg/kg	1.00	7.6	09/22/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.6	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00082	S03111-05	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	GCNO16	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		130	mg/kg	1.00	12	09/22/03	09/11/03	09/11/03
W03DC00082	S03111-05	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 7.40	mg/kg	1.00	7.4	09/22/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.6	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694 **Group #:** 20031253
Project: GEN.WASTE: GENERAL WASTE

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00083	S03111-06	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	<	41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	<	4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	<	4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH			160	mg/kg	1.00	13	09/22/03	09/11/03	09/11/03
W03DC00083	S03111-06	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	<	7.60	mg/kg	1.00	7.6	09/22/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	TS	Percent Solids	SOLID	LA-519-412			98.5	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00084	S03111-07	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00084	S03111-07	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		120	mg/kg	1.00	6.3	09/22/03	09/11/03	09/11/03

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* - indicates results that have NOT been validated; + - indicates more than six qualifier symbols

Report W004/ver. 5.2
Landlord Site Services

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694 **Group #:** 20031253
Project: GEN.WASTE: GENERAL WASTE

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00084	S03111-07	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 3.80	mg/kg	1.00	3.8	09/22/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.1	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00085	S03111-08	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		110	mg/kg	1.00	6.4	09/22/03	09/11/03	09/11/03
W03DC00085	S03111-08	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 3.80	mg/kg	1.00	3.8	09/22/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.8	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

DF=Dilution Factor

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694 **Group #:** 20031253
Project: GEN.WASTE: GENERAL WASTE

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00086	S03111-09	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		130	mg/kg	1.00	6.3	09/23/03	09/11/03	09/11/03
W03DC00086	S03111-09	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 3.80	mg/kg	1.00	3.8	09/23/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.5	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00087	S03111-10	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	<	4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	<	4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH			100	mg/kg	1.00	6.3	09/23/03	09/11/03	09/11/03
W03DC00087	S03111-10	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	<	3.80	mg/kg	1.00	3.8	09/23/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	TS	Percent Solids	SOLID	LA-519-412			98.2	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	<	41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	<	2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00088	S03111-11	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		130	mg/kg	1.00	6.4	09/23/03	09/11/03	09/11/03
W03DC00088	S03111-11	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 3.80	mg/kg	1.00	3.8	09/23/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	TS	Percent Solids	SOLID	LA-519-412		98.1	%	1.00	0.0	09/18/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 41.0	ug/kg	1.00	41	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00089	S03111-12	DEL MAR	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	107-12-0	Ethyl cyanide	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	109-99-9	Tetrahydrofuran	SOLID	LA-523-455	U	< 4.10	ug/kg	1.00	4.1	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	09/24/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	SOLID	NWTPH		98.0	mg/kg	1.00	6.4	09/23/03	09/11/03	09/11/03
W03DC00089	S03111-12	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	U	< 3.80	mg/kg	1.00	3.8	09/23/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	71-55-6	1,1,1-Trichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	79-00-5	1,1,2-Trichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	75-34-3	1,1-Dichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	75-35-4	1,1-Dichloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	107-06-2	1,2-Dichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03

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RQ=Result Qualifier

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report W004/ver. 5.2
Landlord Site Services

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00090	S03111-13	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	71-36-3	1-Butanol	WATER	LA-523-455	U	< 20.0	ug/L	1.00	20	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	78-93-3	2-Butanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	591-78-6	2-Hexanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	107-87-9	2-Pentanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	108-10-1	4-Methyl-2-pentanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	67-64-1	Acetone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	71-43-2	Benzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	75-27-4	Bromodichloromethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	75-15-0	Carbon Disulfide	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	56-23-5	Carbon Tetrachloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	108-90-7	Chlorobenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	67-66-3	Chloroform	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	107-12-0	Ethyl cyanide	WATER	LA-523-455	U	< 2.00	ug/L	1.00	2.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	100-41-4	Ethylbenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	75-09-2	Methylene Chloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	127-18-4	Tetrachloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	109-99-9	Tetrahydrofuran	WATER	LA-523-455	U	< 2.00	ug/L	1.00	2.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	108-88-3	Toluene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	1330-20-7	Total Xylenes	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	79-01-6	Trichloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	75-01-4	Vinyl Chloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	TPHKEROSENE	Kerosene	WATER	NWTPH	U	< 96.0	ug/L	1.00	96	10/02/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	68553-00-4	Tot Pet H-Carbons Bunker C	WATER	NWTPH	U	< 120	ug/L	1.00	1.2e+02	10/02/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	GCN016	Tot Pet H-Carbons Motor Oil	WATER	NWTPH	U	< 120	ug/L	1.00	1.2e+02	10/02/03	09/11/03	09/11/03
W03DC00090	S03111-13	DEL MAR	TPHDIESEL	Total Pet. Hydrocarbons Diesel	WATER	NWTPH	U	< 72.0	ug/L	1.00	72	10/02/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	71-55-6	1,1,1-Trichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03

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Report W004/ver. 5.2
Landlord Site Services

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project: GEN.WASTE: GENERAL WASTE

Group #: 20031253

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W03DC00091	S03111-14	DEL MAR	79-00-5	1,1,2-Trichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	75-34-3	1,1-Dichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	75-35-4	1,1-Dichloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	107-06-2	1,2-Dichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	540-59-0	1,2-Dichloroethene (cis & tran	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	106-46-7	1,4-Dichlorobenzene (VOA)	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	71-36-3	1-Butanol	WATER	LA-523-455	U	< 20.0	ug/L	1.00	20	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	78-93-3	2-Butanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	591-78-6	2-Hexanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	107-87-9	2-Pentanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	108-10-1	4-Methyl-2-pentanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	67-64-1	Acetone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	71-43-2	Benzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	75-27-4	Bromodichloromethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	75-15-0	Carbon Disulfide	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	56-23-5	Carbon Tetrachloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	108-90-7	Chlorobenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	67-66-3	Chloroform	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	107-12-0	Ethyl cyanide	WATER	LA-523-455	U	< 2.00	ug/L	1.00	2.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	100-41-4	Ethylbenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	75-09-2	Methylene Chloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	127-18-4	Tetrachloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	109-99-9	Tetrahydrofuran	WATER	LA-523-455	U	< 2.00	ug/L	1.00	2.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	108-88-3	Toluene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	1330-20-7	Total Xylenes	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	79-01-6	Trichloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03
W03DC00091	S03111-14	DEL MAR	75-01-4	Vinyl Chloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	09/18/03	09/11/03	09/11/03

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Report W004/ver. 5.2
Landlord Site Services

WSCF
ANALYTICAL RESULTS REPORT

Attention: Ron Del Mar R3-32 FX 2-1694 **Group #:** 20031253
Project: GEN.WASTE: GENERAL WASTE

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive

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WSCF
ANALYTICAL COMMENT REPORT

Attention: Ron Del Mar R3-32 FX 2-1694
Project Number GEN.WASTE

Group #: 20031253

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		TPHD/VOA: All results are moisture corrected and reported on a dry weight basis. cgc

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample
VALTEST - Test Validation
LOGTEST - Login for Tests
TESTDATA - Test Data Entry

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention:
Project Number :

Group #: 20031253

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units

RQ=Result Qualifier

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WSCF
METHOD REFERENCES REPORT

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-519-412	LA-519-412: TOTAL RESIDUE/% SOLIDS DRIED AT 103 - 105 C	
	EPA-600/4-79-020 160.3	RESIDUE, TOTAL
	Standard Methods 2540B	Total Solids Dried at 103-105 C
LA-523-455	LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8260B	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
NWTPH	NWTPH-Diesel and/or Gasoline	
	WDOE NWTPH-Dx/Gx	Total Petroleum Hydrocarbons - Diesel/Gasoline

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at http://apweb02/asponlinedocs/wscf/sample%20mgmt/ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

w13qlog v1 23-oct-2003 16:17:34

W13q Worklist/Batch/QC Report for Group# 20031253

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W03DC00090	Sample Screen - LAB USE ONLY
				SAMPLE	W03DC00078	Percent Solids
				SAMPLE	W03DC00079	Percent Solids
				SAMPLE	W03DC00080	Percent Solids
				SAMPLE	W03DC00081	Percent Solids
				SAMPLE	W03DC00082	Percent Solids
				SAMPLE	W03DC00083	Percent Solids
				SAMPLE	W03DC00084	Percent Solids
				SAMPLE	W03DC00085	Percent Solids
				SAMPLE	W03DC00086	Percent Solids
				SAMPLE	W03DC00087	Percent Solids
				SAMPLE	W03DC00088	Percent Solids
				SAMPLE	W03DC00089	Percent Solids
			23645	BLANK		WTPH-D TPH Diesel Range (Wa)
			23645	LCS		WTPH-D TPH Diesel Range (Wa)
			23645	MS	W030000818	WTPH-D TPH Diesel Range (Wa)
			23645	MSD	W030000818	WTPH-D TPH Diesel Range (Wa)
			23645	SPK-RPD	W030000818	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00078	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00078	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00079	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00079	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00080	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00080	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00081	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00081	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00082	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00082	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00083	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00083	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00084	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00084	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00085	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00085	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00086	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00086	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00087	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00087	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00088	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00088	WTPH-D TPH Diesel Range (Wa)
			23645	SAMPLE	W03DC00089	WTPH-D TPH Diesel Range (Wa)
			23645	SURR	W03DC00089	WTPH-D TPH Diesel Range (Wa)
			23648	BLANK		SW-846 8260A VOA
			23648	LCS		SW-846 8260A VOA
			23648	MS	W03C000276	SW-846 8260A VOA
			23648	MSD	W03C000276	SW-846 8260A VOA
			23648	SPK-RPD	W03C000276	SW-846 8260A VOA
			23648	SAMPLE	W03DC00090	SW-846 8260A VOA
			23648	SURR	W03DC00090	SW-846 8260A VOA
			23648	SAMPLE	W03DC00091	SW-846 8260A VOA
			23648	SURR	W03DC00091	SW-846 8260A VOA

23807	BLANK		WTPH-D TPH Diesel Range (Wa)
23807	LCS		WTPH-D TPH Diesel Range (Wa)
23807	MS	W03DC00090	WTPH-D TPH Diesel Range (Wa)
23807	MSD	W03DC00090	WTPH-D TPH Diesel Range (Wa)
23807	SAMPLE	W03DC00090	WTPH-D TPH Diesel Range (Wa)
23807	SPK-RPD	W03DC00090	WTPH-D TPH Diesel Range (Wa)
23807	SURR	W03DC00090	WTPH-D TPH Diesel Range (Wa)
23866	BLANK		SW-846 8260A VOA
23866	LCS		SW-846 8260A VOA
23866	MS	W03DC00078	SW-846 8260A VOA
23866	MSD	W03DC00078	SW-846 8260A VOA
23866	SAMPLE	W03DC00078	SW-846 8260A VOA
23866	SURR	W03DC00078	SW-846 8260A VOA
23866	SAMPLE	W03DC00079	SW-846 8260A VOA
23866	SURR	W03DC00079	SW-846 8260A VOA
23866	SAMPLE	W03DC00080	SW-846 8260A VOA
23866	SURR	W03DC00080	SW-846 8260A VOA
23866	SAMPLE	W03DC00081	SW-846 8260A VOA
23866	SURR	W03DC00081	SW-846 8260A VOA
23866	SAMPLE	W03DC00082	SW-846 8260A VOA
23866	SURR	W03DC00082	SW-846 8260A VOA
23866	SAMPLE	W03DC00083	SW-846 8260A VOA
23866	SURR	W03DC00083	SW-846 8260A VOA
23866	SAMPLE	W03DC00084	SW-846 8260A VOA
23866	SURR	W03DC00084	SW-846 8260A VOA
23866	SAMPLE	W03DC00085	SW-846 8260A VOA
23866	SURR	W03DC00085	SW-846 8260A VOA
23866	SAMPLE	W03DC00086	SW-846 8260A VOA
23866	SURR	W03DC00086	SW-846 8260A VOA
23866	SAMPLE	W03DC00087	SW-846 8260A VOA
23866	SURR	W03DC00087	SW-846 8260A VOA
23866	SAMPLE	W03DC00088	SW-846 8260A VOA
23866	SURR	W03DC00088	SW-846 8260A VOA
23866	SAMPLE	W03DC00089	SW-846 8260A VOA
23866	SURR	W03DC00089	SW-846 8260A VOA

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: S03-111
Sample Date: 09/10/03
Receive Date: 09/10/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
Lab ID: W030000818							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	ortho-Terphenyl Surr	84-15-1	91.400	% Recov	09/22/03	70.000	130.000
MSD	ortho-Terphenyl Surr	84-15-1	90.100	% Recov	09/22/03	70.000	130.000
SPK-RPD	ortho-Terphenyl Surr	84-15-1	1.433	RPD	09/22/03	0.000	20.000
Lab ID: W03DC00078							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	90.900	% Recov	09/22/03	70.000	130.000
Lab ID: W03DC00079							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	92.800	% Recov	09/22/03	70.000	130.000
Lab ID: W03DC00080							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	101.000	% Recov	09/22/03	70.000	130.000
Lab ID: W03DC00081							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	77.700	% Recov	09/22/03	70.000	130.000
Lab ID: W03DC00082							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	94.500	% Recov	09/22/03	70.000	130.000
Lab ID: W03DC00083							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	93.900	% Recov	09/22/03	70.000	130.000
Lab ID: W03DC00084							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	95.200	% Recov	09/22/03	70.000	130.000
Lab ID: W03DC00085							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	94.800	% Recov	09/22/03	70.000	130.000
Lab ID: W03DC00086							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	ortho-Terphenyl Surr	84-15-1	93.900	% Recov	09/23/03	70.000	130.000
Lab ID: W03DC00087							
BATCH QC ASSOCIATED WITH SAMPLE							

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: S03-111
Sample Date: 09/11/03
Receive Date: 09/11/03

QC Type	Analyte		CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
SURR	ortho-Terphenyl	Surr	84-15-1	87.100	% Recov	09/23/03	70.000	130.000

Lab ID: W03DC00088
BATCH QC ASSOCIATED WITH SAMPLE

SURR	ortho-Terphenyl	Surr	84-15-1	98.300	% Recov	09/23/03	70.000	130.000

Lab ID: W03DC00089
BATCH QC ASSOCIATED WITH SAMPLE

SURR	ortho-Terphenyl	Surr	84-15-1	85.500	% Recov	09/23/03	70.000	130.000

BATCH QC

BLANK	ortho-Terphenyl	Surr	84-15-1	108.000	% Recov	09/22/03	70.000	130.000
BLANK	Total Pet. Hydrocarbons Diesel		TPHDIESEL	< 3800	ug/Kg	09/22/03		
LCS	ortho-Terphenyl	Surr	84-15-1	99.900	% Recov	09/22/03	70.000	130.000
LCS	Total Pet. Hydrocarbons Diesel		TPHDIESEL	85.200	% Recov	09/22/03	80.000	120.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: WATER
Test: SW-846 8260A VOA

SAF Number: S03-111
Sample Date: 09/10/03
Receive Date: 09/10/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
Lab ID: W03C000276							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	1,1-Dichloroethene	75-35-4	96.000	% Recov	09/18/03	63.000	117.000
MS	Benzene	71-43-2	104.000	% Recov	09/18/03	75.000	129.000
MS	4-Bromofluorobenzene Surr	460-00-4	98.000	% Recov	09/18/03	84.000	116.000
MS	Chlorobenzene	108-90-7	104.000	% Recov	09/18/03	79.000	119.000
MS	1,2-Dichloroethane-d4 Surr	17060-07-0	104.000	% Recov	09/18/03	82.000	136.000
MS	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/18/03	89.000	119.000
MS	Toluene	108-88-3	104.000	% Recov	09/18/03	76.000	120.000
MS	Trichloroethene	79-01-6	100.000	% Recov	09/18/03	73.000	123.000
MSD	1,1-Dichloroethene	75-35-4	92.000	% Recov	09/18/03	63.000	117.000
MSD	Benzene	71-43-2	100.000	% Recov	09/18/03	75.000	129.000
MSD	4-Bromofluorobenzene Surr	460-00-4	96.000	% Recov	09/18/03	84.000	116.000
MSD	Chlorobenzene	108-90-7	100.000	% Recov	09/18/03	79.000	119.000
MSD	1,2-Dichloroethane-d4 Surr	17060-07-0	102.000	% Recov	09/18/03	82.000	136.000
MSD	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/18/03	89.000	119.000
MSD	Toluene	108-88-3	100.000	% Recov	09/18/03	76.000	120.000
MSD	Trichloroethene	79-01-6	96.000	% Recov	09/18/03	73.000	123.000
SPK-RPD	1,1-Dichloroethene	75-35-4	4.255	RPD	09/18/03	0.000	10.000
SPK-RPD	Benzene	71-43-2	3.922	RPD	09/18/03	0.000	10.000
SPK-RPD	Chlorobenzene	108-90-7	3.922	RPD	09/18/03	0.000	10.000
SPK-RPD	Toluene	108-88-3	3.922	RPD	09/18/03	0.000	10.000
SPK-RPD	Trichloroethene	79-01-6	4.082	RPD	09/18/03	0.000	10.000
Lab ID: W03DC00090							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	4-Bromofluorobenzene Surr	460-00-4	96.000	% Recov	09/18/03	84.000	116.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	102.000	% Recov	09/18/03	82.000	136.000
SURR	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/18/03	89.000	119.000
Lab ID: W03DC00091							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	4-Bromofluorobenzene Surr	460-00-4	96.000	% Recov	09/18/03	84.000	116.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	102.000	% Recov	09/18/03	82.000	136.000
SURR	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/18/03	89.000	119.000
BATCH QC							
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	ug/L	09/18/03		
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	ug/L	09/18/03		
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	ug/L	09/18/03		
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	ug/L	09/18/03		
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	ug/L	09/18/03		
BLANK	1,2-Dichloroethene (cis & tran	540-59-0	< 1.0	ug/L	09/18/03		
BLANK	1,4-Dichlorobenzene (VOA)	106-46-7	< 1.0	ug/L	09/18/03		

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: WATER
Test: SW-846 8260A VOA

SAF Number: S03-111
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
BLANK	1-Butanol	71-36-3	< 20	ug/L	09/18/03		
BLANK	2-Hexanone	591-78-6	< 1.0	ug/L	09/18/03		
BLANK	2-Pentanone	107-87-9	< 1.0	ug/L	09/18/03		
BLANK	4-Methyl-2-pentanone	108-10-1	< 1.0	ug/L	09/18/03		
BLANK	Acetone	67-64-1	< 1.0	ug/L	09/18/03		
BLANK	Bromodichloromethane	75-27-4	< 1.0	ug/L	09/18/03		
BLANK	Benzene	71-43-2	< 1.0	ug/L	09/18/03		
BLANK	4-Bromofluorobenzene Surr	460-00-4	96.000	% Recov	09/18/03	84.000	116.000
BLANK	Carbon Disulfide	75-15-0	< 1.0	ug/L	09/18/03		
BLANK	Carbon Tetrachloride	56-23-5	< 1.0	ug/L	09/18/03		
BLANK	Chloroform	67-66-3	< 1.0	ug/L	09/18/03		
BLANK	Chlorobenzene	108-90-7	< 1.0	ug/L	09/18/03		
BLANK	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/18/03	82.000	136.000
BLANK	Ethyl cyanide	107-12-0	< 2.0	ug/L	09/18/03		
BLANK	2-Butanone	78-93-3	< 1.0	ug/L	09/18/03		
BLANK	Methylene Chloride	75-09-2	< 1.0	ug/L	09/18/03		
BLANK	Tetrachloroethene	127-18-4	< 1.0	ug/L	09/18/03		
BLANK	Total Xylenes	1330-20-7	< 1.0	ug/L	09/18/03		
BLANK	Tetrahydrofuran	109-99-9	< 2.0	ug/L	09/18/03		
BLANK	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/18/03	89.000	119.000
BLANK	Toluene	108-88-3	< 1.0	ug/L	09/18/03		
BLANK	Trichloroethene	79-01-6	< 1.0	ug/L	09/18/03		
BLANK	Vinyl Chloride	75-01-4	< 1.0	ug/L	09/18/03		
LCS	1,1-Dichloroethene	75-35-4	92.000	% Recov	09/18/03	70.000	130.000
LCS	Benzene	71-43-2	108.000	% Recov	09/18/03	70.000	130.000
LCS	4-Bromofluorobenzene Surr	460-00-4	96.000	% Recov	09/18/03	84.000	116.000
LCS	Chlorobenzene	108-90-7	104.000	% Recov	09/18/03	70.000	130.000
LCS	1,2-Dichloroethane-d4 Surr	17060-07-0	102.000	% Recov	09/18/03	82.000	136.000
LCS	Toluene-d8 Surr	2037-26-5	102.000	% Recov	09/18/03	89.000	119.000
LCS	Toluene	108-88-3	108.000	% Recov	09/18/03	70.000	130.000
LCS	Trichloroethene	79-01-6	104.000	% Recov	09/18/03	70.000	130.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: WATER
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: S03-111
Sample Date: 09/11/03
Receive Date: 09/11/03

Lab ID: W03DC00090

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
MS	ortho-Terphenyl Surr	84-15-1	90.500	% Recov	10/02/03	70.000	130.000
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	93.300	% Recov	10/02/03	75.000	125.000
MSD	ortho-Terphenyl Surr	84-15-1	92.300	% Recov	10/02/03	70.000	130.000
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	87.300	% Recov	10/02/03	75.000	125.000
SPK-RPD	ortho-Terphenyl Surr	84-15-1	1.969	RPD	10/02/03	0.000	20.000
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	6.645	RPD	10/02/03	0.000	20.000
SURR	ortho-Terphenyl Surr	84-15-1	81.500	% Recov	10/02/03	70.000	130.000

BATCH QC

BLANK	Kerosene	TPHKEROSENE	< 100	ug/L	10/02/03		
BLANK	ortho-Terphenyl Surr	84-15-1	78.200	% Recov	10/02/03	70.000	130.000
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 75	ug/L	10/02/03		
BLANK	Tot Pet H-Carbons Bunker C	68553-00-4	< 120	ug/L	10/02/03		
BLANK	Tot Pet H-Carbons Motor Oil	GCN016	< 120	ug/L	10/02/03		
LCS	Kerosene	TPHKEROSENE	116.000	%Recove	10/02/03	70.000	130.000
LCS	ortho-Terphenyl Surr	84-15-1	86.800	% Recov	10/02/03	70.000	130.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: SOLID
Test: SW-846 8260A VOA

SAF Number: S03-111
Sample Date: 09/11/03
Receive Date: 09/11/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
Lab ID: W03DC00078							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	1,1-Dichloroethene	75-35-4	96.000	% Recov	09/24/03	70.000	130.000
MS	Benzene	71-43-2	106.000	% Recov	09/24/03	75.000	129.000
MS	4-Bromofluorobenzene Surr	460-00-4	88.000	% Recov	09/24/03	71.000	125.000
MS	Chlorobenzene	108-90-7	104.000	% Recov	09/24/03	83.000	117.000
MS	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
MS	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000
MS	Toluene	108-88-3	102.000	% Recov	09/24/03	78.000	126.000
MS	Trichloroethene	79-01-6	100.000	% Recov	09/24/03	73.000	121.000
MSD	1,1-Dichloroethene	75-35-4	98.000	% Recov	09/24/03	70.000	130.000
MSD	Benzene	71-43-2	104.000	% Recov	09/24/03	75.000	129.000
MSD	4-Bromofluorobenzene Surr	460-00-4	97.000	% Recov	09/24/03	71.000	125.000
MSD	Chlorobenzene	108-90-7	104.000	% Recov	09/24/03	83.000	117.000
MSD	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
MSD	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000
MSD	Toluene	108-88-3	106.000	% Recov	09/24/03	78.000	126.000
MSD	Trichloroethene	79-01-6	102.000	% Recov	09/24/03	73.000	121.000
SURR	4-Bromofluorobenzene Surr	460-00-4	88.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	99.000	% Recov	09/24/03	80.000	126.000
Lab ID: W03DC00079							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	4-Bromofluorobenzene Surr	460-00-4	88.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	99.000	% Recov	09/24/03	80.000	126.000
Lab ID: W03DC00080							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	4-Bromofluorobenzene Surr	460-00-4	92.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000
Lab ID: W03DC00081							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	4-Bromofluorobenzene Surr	460-00-4	95.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	102.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	102.000	% Recov	09/24/03	80.000	126.000
Lab ID: W03DC00082							
BATCH QC ASSOCIATED WITH SAMPLE							
SURR	4-Bromofluorobenzene Surr	460-00-4	92.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	110.000	% Recov	09/24/03	80.000	134.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: SOLID
Test: SW-846 8260A VOA

SAF Number: S03-111
Sample Date: 09/11/03
Receive Date: 09/11/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
SURR	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000

Lab ID: W03DC00083
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene Surr	460-00-4	93.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000

Lab ID: W03DC00084
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene Surr	460-00-4	93.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	98.000	% Recov	09/24/03	80.000	126.000

Lab ID: W03DC00085
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene Surr	460-00-4	95.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	110.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000

Lab ID: W03DC00086
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene Surr	460-00-4	88.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	110.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	98.000	% Recov	09/24/03	80.000	126.000

Lab ID: W03DC00087
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene Surr	460-00-4	92.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000

Lab ID: W03DC00088
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene Surr	460-00-4	91.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	110.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000

Lab ID: W03DC00089
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene Surr	460-00-4	88.000	% Recov	09/24/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	110.000	% Recov	09/24/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	99.000	% Recov	09/24/03	80.000	126.000

BATCH QC

BLANK	1,1-Dichloroethane	75-34-3	< 2.0	ug/Kg	09/24/03

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: SOLID
Test: SW-846 8260A VOA

SAF Number: S03-111
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
BLANK	1,1,1-Trichloroethane	71-55-6	< 2.0	ug/Kg	09/24/03		
BLANK	1,1,2-Trichloroethane	79-00-5	< 2.0	ug/Kg	09/24/03		
BLANK	1,1-Dichloroethene	75-35-4	< 2.0	ug/Kg	09/24/03		
BLANK	1,2-Dichloroethane	107-06-2	< 2.0	ug/Kg	09/24/03		
BLANK	1,2-Dichloroethene (cis & tran	540-59-0	< 2.0	ug/Kg	09/24/03		
BLANK	1,4-Dichlorobenzene (VOA)	106-46-7	< 2.0	mg/L	09/24/03	ug/Kg	
BLANK	1-Butanol	71-36-3	< 40	ug/Kg	09/24/03		
BLANK	2-Hexanone	591-78-6	< 2.0	ug/Kg	09/24/03		
BLANK	2-Pentanone	107-87-9	< 2.0	ug/Kg	09/24/03		
BLANK	4-Methyl-2-pentanone	108-10-1	< 2.0	ug/Kg	09/24/03		
BLANK	Acetone	67-64-1	< 2.0	ug/Kg	09/24/03		
BLANK	Bromodichloromethane	75-27-4	< 2.0	ug/Kg	09/24/03		
BLANK	Benzene	71-43-2	< 2.0	ug/Kg	09/24/03		
BLANK	4-Bromofluorobenzene Surr	460-00-4	97.000	% Recov	09/24/03	71.000	125.000
BLANK	Carbon Disulfide	75-15-0	< 2.0	ug/Kg	09/24/03		
BLANK	Carbon Tetrachloride	56-23-5	< 2.0	ug/Kg	09/24/03		
BLANK	Chloroform	67-66-3	< 2.0	ug/Kg	09/24/03		
BLANK	Chlorobenzene	108-90-7	< 2.0	ug/Kg	09/24/03		
BLANK	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
BLANK	Ethyl cyanide	107-12-0	< 4.0	mg/L	09/24/03		
BLANK	2-Butanone	78-93-3	< 2.0	ug/Kg	09/24/03		
BLANK	Methylene Chloride	75-09-2	< 2.0	ug/Kg	09/24/03		
BLANK	Tetrachloroethene	127-18-4	< 2.0	ug/Kg	09/24/03		
BLANK	Total Xylenes	1330-20-7	< 2.0	ug/Kg	09/24/03		
BLANK	Tetrahydrofuran	109-99-9	< 4.0	ug/Kg	09/24/03		
BLANK	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000
BLANK	Toluene	108-88-3	< 2.0	ug/Kg	09/24/03		
BLANK	Trichloroethene	79-01-6	< 2.0	ug/Kg	09/24/03		
BLANK	Vinyl Chloride	75-01-4	< 2.0	ug/Kg	09/24/03		
LCS	1,1-Dichloroethene	75-35-4	90.000	% Recov	09/24/03	70.000	130.000
LCS	Benzene	71-43-2	102.000	% Recov	09/24/03	70.000	130.000
LCS	4-Bromofluorobenzene Surr	460-00-4	97.000	% Recov	09/24/03	71.000	125.000
LCS	Chlorobenzene	108-90-7	102.000	% Recov	09/24/03	70.000	130.000
LCS	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
LCS	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000
LCS	Toluene	108-88-3	104.000	% Recov	09/24/03	70.000	130.000
LCS	Trichloroethene	79-01-6	100.000	% Recov	09/24/03	70.000	130.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20031253
Matrix: SOLID
Test: SW-846 8260A VOA

SAF Number: S03-111
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
BLANK	1,1,1-Trichloroethane	71-55-6	< 2.0	ug/Kg	09/24/03		
BLANK	1,1,2-Trichloroethane	79-00-5	< 2.0	ug/Kg	09/24/03		
BLANK	1,1-Dichloroethene	75-35-4	< 2.0	ug/Kg	09/24/03		
BLANK	1,2-Dichloroethane	107-06-2	< 2.0	ug/Kg	09/24/03		
BLANK	1,2-Dichloroethene (cis & tran	540-59-0	< 2.0	ug/Kg	09/24/03		
BLANK	1,4-Dichlorobenzene (VOA)	106-46-7	< 2.0	ug/Kg	09/24/03		
BLANK	1-Butanol	71-36-3	< 40	ug/Kg	09/24/03		
BLANK	2-Hexanone	591-78-6	< 2.0	ug/Kg	09/24/03		
BLANK	2-Pentanone	107-87-9	< 2.0	ug/Kg	09/24/03		
BLANK	4-Methyl-2-pentanone	108-10-1	< 2.0	ug/Kg	09/24/03		
BLANK	Acetone	67-64-1	< 2.0	ug/Kg	09/24/03		
BLANK	Bromodichloromethane	75-27-4	< 2.0	ug/Kg	09/24/03		
BLANK	Benzene	71-43-2	< 2.0	ug/Kg	09/24/03		
BLANK	4-Bromofluorobenzene Surr	460-00-4	97.000	% Recov	09/24/03	71.000	125.000
BLANK	Carbon Disulfide	75-15-0	< 2.0	ug/Kg	09/24/03		
BLANK	Carbon Tetrachloride	56-23-5	< 2.0	ug/Kg	09/24/03		
BLANK	Chloroform	67-66-3	< 2.0	ug/Kg	09/24/03		
BLANK	Chlorobenzene	108-90-7	< 2.0	ug/Kg	09/24/03		
BLANK	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
BLANK	Ethyl cyanide	107-12-0	< 4.0	ug/Kg	09/24/03		
BLANK	2-Butanone	78-93-3	< 2.0	ug/Kg	09/24/03		
BLANK	Methylene Chloride	75-09-2	< 2.0	ug/Kg	09/24/03		
BLANK	Tetrachloroethene	127-18-4	< 2.0	ug/Kg	09/24/03		
BLANK	Total Xylenes	1330-20-7	< 2.0	ug/Kg	09/24/03		
BLANK	Tetrahydrofuran	109-99-9	< 4.0	ug/Kg	09/24/03		
BLANK	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000
BLANK	Toluene	108-88-3	< 2.0	ug/Kg	09/24/03		
BLANK	Trichloroethene	79-01-6	< 2.0	ug/Kg	09/24/03		
BLANK	Vinyl Chloride	75-01-4	< 2.0	ug/Kg	09/24/03		
LCS	1,1-Dichloroethane	75-35-4	90.000	% Recov	09/24/03	70.000	130.000
LCS	Benzene	71-43-2	102.000	% Recov	09/24/03	70.000	130.000
LCS	4-Bromofluorobenzene Surr	460-00-4	97.000	% Recov	09/24/03	71.000	125.000
LCS	Chlorobenzene	108-90-7	102.000	% Recov	09/24/03	70.000	130.000
LCS	1,2-Dichloroethane-d4 Surr	17060-07-0	100.000	% Recov	09/24/03	80.000	134.000
LCS	Toluene-d8 Surr	2037-26-5	100.000	% Recov	09/24/03	80.000	126.000
LCS	Toluene	108-88-3	104.000	% Recov	09/24/03	70.000	130.000
LCS	Trichloroethene	79-01-6	100.000	% Recov	09/24/03	70.000	130.000

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. PIT 9 SOIL

R103-049

Lot #: F3I150137
SDG #: W04088

Deb Roles

Flour Hanford Inc
200 West MO291 MSIN T6-03
Richland, WA 99352

SEVERN TRENT LABORATORIES, INC.

MARTI WARD
Project Manager

September 30, 2003

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
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CASE NARRATIVE

Fluor Daniel Hanford
P.O. Box 700
Richland, Washington 99352
September 30, 2003

Attention: John Trechter

Quote Number	:	48973
SDG	:	W04088
Number of Samples	:	13
Sample Matrix	:	1 Water; 12 soil
SAF Number	:	R103-049
Data Deliverable	:	Summary
Date SDG Closed	:	September 12, 2003

II. Introduction

On September 12, 2003 one (1) water sample and twelve (12) soil samples were received at STL-St. Louis for chemical analysis. The samples were received in St. Louis at 2° C. See the COC and CUR for any receipt variations in conditions or temperature. See the attached Sample Summary for the Lab and Client sample Ids.

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. This report is incomplete without the Case Narrative. Samples are reported in an "as received" manner; i.e. wet weight, unless otherwise noted on the data sheets.

Analyses requested: 8310 - PAH

Deviation from Request: none

IV. Definitions

The following codes are used to denote laboratory quality control samples and can be found in the data summary section of this report:

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

V. Comments

General: The term "Detection Limit" used in the analytical data reports refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

PAH: A Laboratory Control Sample, Method Blank, Matrix Spike and Matrix Spike Duplicate were analyzed with the soil batch per the protocol for this analysis. The water sample was extracted with an LCS and LCS duplicate.

The sample's surrogate recoveries are outside established QC limits. This excursion is attributed to a matrix interference which is physically evident in the samples.

The samples were analyzed at a dilution due to high concentrations of target compounds. The reporting limit has been adjusted only for the dilution.

Several MS/MSD recoveries are outside the established QC limits. The RPD is not within method acceptance criteria. A matrix interference is physically evident in the samples. Method performance is demonstrated by acceptable LCS recovery.

The LCS/LCSD for the water sample has 2 compounds that do not meet RPD acceptance criteria. LCS/LCSD recoveries are within QC limits demonstrating good extraction performance in the sample matrix. No further action is required.

I certify that this Data Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Reviewed and approved:

Marti Ward

Marti Ward
St. Louis Project Manager

SAMPLE SUMMARY

F3I150137

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
F0CRH	001	K0N6T3	09/11/03	10:21
F0CRL	002	K0N6T4	09/11/03	10:34
F0CRM	003	K0N6T5	09/11/03	10:46
F0CRN	004	K0N6T6	09/11/03	11:00
F0CRP	005	K0N6T7	09/11/03	11:23
F0CRQ	006	K0N6T8	09/11/03	11:45
F0CRR	007	K0N6T9	09/11/03	11:52
F0CRV	008	K0N6V0	09/11/03	12:03
F0CRW	009	K0N6V1	09/11/03	12:20
F0CRX	010	K0N6V2	09/11/03	12:15
F0CR0	011	K0N6V3	09/11/03	12:30
F0CR1	012	K0N6V4	09/11/03	12:30
F0CR2	013	K0N6V5	09/11/03	09:44

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

METHODS SUMMARY

F3I150137

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
Polynuclear Aromatic Hydrocarbons by HPLC	SW846 8310	SW846 3520
Polynuclear Aromatic Hydrocarbons by HPLC	SW846 8310	SW846 3550

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

FLUOR HANFORD IC

Client Sample ID: K0N6T3

HPLC

Lot-Sample #...: F3I150137-001 Work Order #...: F0CRH1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 3.2 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	52	ug/kg	41
Acenaphthylene	ND	100	ug/kg	93
Anthracene	ND	31	ug/kg	4.5
Benzo(a)anthracene	**340**	**15**	**ug/kg**	**5.6**
Benzo(a)pyrene	**270**	**15**	**ug/kg**	**4.8**
Benzo(b)fluoranthene	ND	15	ug/kg	11
Benzo(ghi)perylene	**540**	**31**	**ug/kg**	**12**
Benzo(k)fluoranthene	**310**	**15**	**ug/kg**	**5.5**
Chrysene	**470 E**	**15**	**ug/kg**	**6.4**
Dibenz(a,h)anthracene	ND	31	ug/kg	12
Fluoranthene	**1000 E**	**31**	**ug/kg**	**13**
Fluorene	ND	31	ug/kg	9.0
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	5.6
Naphthalene	ND	52	ug/kg	42
Phenanthrene	**180**	**31**	**ug/kg**	**7.0**
Pyrene	**580 E**	**31**	**ug/kg**	**11**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	185 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6T3

HPLC

Lot-Sample #...:	F3I150137-001	Work Order #...:	F0CRH2AD	Matrix.....:	SOLID
Date Sampled...:	09/11/03	Date Received..:	09/12/03		
Prep Date.....:	09/23/03	Analysis Date..:	09/27/03		
Prep Batch #...:	3266192				
Dilution Factor:	4				
% Moisture.....:	3.2	Method.....:	SW846 8310		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chrysene	440 D	62	ug/kg	26
Fluoranthene	1000 D	120	ug/kg	52
Pyrene	600 D	120	ug/kg	43

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	176 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: F3I150137 Work Order #...: F0CRH1AE-MS Matrix.....: SOLID
MS Lot-Sample #: F3I150137-001 F0CRH1AF-MSD
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 1 % Moisture.....: 3.2

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Chrysene	470	68.8	809	ug/kg	495 a		SW846 8310
	470	68.8	475	ug/kg	8.1	52	SW846 8310
	Qualifiers:		a,p				
Benzo(a)anthracene	340	68.8	556	ug/kg	310 a		SW846 8310
	340	68.8	365	ug/kg	32 a,p	42	SW846 8310
Benzo(b)fluoranthene	ND	138	741	ug/kg	539 a		SW846 8310
	ND	138	579	ug/kg	421	24	SW846 8310
	Qualifiers:		a,p				
Benzo(k)fluoranthene	310	68.8	428	ug/kg	178 a		SW846 8310
	310	68.8	339	ug/kg	49 p	23	SW846 8310
Benzo(a)pyrene	270	68.8	457	ug/kg	274 a		SW846 8310
	270	68.8	345	ug/kg	112 p	28	SW846 8310
Indeno(1,2,3-cd)pyrene	ND	68.8	344	ug/kg	500 a		SW846 8310
	ND	68.8	311	ug/kg	452 a	10	SW846 8310
Naphthalene	ND	688	649	ug/kg	94		SW846 8310
	ND	688	457	ug/kg	66 p	35	SW846 8310
Acenaphthylene	ND	1380	2130	ug/kg	155 a		SW846 8310
	ND	1380	1860	ug/kg	135 a	13	SW846 8310
Acenaphthene	ND	688	1530	ug/kg	223 a		SW846 8310
	ND	688	1350	ug/kg	196 a	13	SW846 8310
Fluorene	ND	138	148	ug/kg	108		SW846 8310
	ND	138	118	ug/kg	86 p	23	SW846 8310
Phenanthrene	180	68.8	245	ug/kg	89		SW846 8310
	180	68.8	248	ug/kg	94	1.2	SW846 8310
Anthracene	ND	68.8	66.4	ug/kg	96		SW846 8310
	ND	68.8	57.4	ug/kg	83	14	SW846 8310
Fluoranthene	1000	138	1530	ug/kg	373 a		SW846 8310
	1000	138	1040	ug/kg	12 a,p	39	SW846 8310
Pyrene	580	68.8	1260	ug/kg	992 a		SW846 8310
	580	68.8	855	ug/kg	404	38	SW846 8310
	Qualifiers:		a,p				
Dibenz(a,h)anthracene	ND	138	835	ug/kg	607 a		SW846 8310
	ND	138	753	ug/kg	547 a	10	SW846 8310
Benzo(ghi)perylene	540	138	703	ug/kg	122		SW846 8310
	540	138	565	ug/kg	21 a,p	22	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	266 *	(39 - 117)
	215 *	(39 - 117)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: F3I150137 Work Order #...: F0CRH1AE-MS Matrix.....: SOLID
MS Lot-Sample #: F3I150137-001 F0CRH1AF-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

* Surrogate recovery is outside stated control limits.

FLUOR HANFORD IC

Client Sample ID: K0N6T4

HPLC

Lot-Sample #...: F3I150137-002 Work Order #...: F0CRL1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 1.5 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	51	ug/kg	40
Acenaphthylene	ND	100	ug/kg	91
Anthracene	ND	30	ug/kg	4.4
Benzo(a)anthracene	360 E	15	ug/kg	5.5
Benzo(a)pyrene	290	15	ug/kg	4.7
Benzo(b)fluoranthene	ND	15	ug/kg	11
Benzo(ghi)perylene	520	30	ug/kg	11
Benzo(k)fluoranthene	360 E	15	ug/kg	5.4
Chrysene	470 E	15	ug/kg	6.3
Dibenz(a,h)anthracene	ND	30	ug/kg	12
Fluoranthene	890 E	30	ug/kg	13
Fluorene	ND	30	ug/kg	8.8
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	5.5
Naphthalene	ND	51	ug/kg	41
Phenanthrene	170	30	ug/kg	6.9
Pyrene	820 E	30	ug/kg	11

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	257 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6T4

HPLC

Lot-Sample #...: F3I150137-002 Work Order #...: F0CRL2AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 4
% Moisture.....: 1.5 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)anthracene	250 D	61	ug/kg	22
Benzo(k)fluoranthene	210 D	61	ug/kg	21
Chrysene	410 D	61	ug/kg	25
Fluoranthene	890 D	120	ug/kg	52
Pyrene	800 D	120	ug/kg	42

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	229 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6T5

HPLC

Lot-Sample #...: F3I150137-003 Work Order #...: F0CRM1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 2.6 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	51	ug/kg	41
Acenaphthylene	ND	100	ug/kg	92
Anthracene	ND	31	ug/kg	4.4
Benzo(a)anthracene	110	15	ug/kg	5.6
Benzo(a)pyrene	88	15	ug/kg	4.8
Benzo(b)fluoranthene	ND	15	ug/kg	11
Benzo(ghi)perylene	150	31	ug/kg	12
Benzo(k)fluoranthene	74	15	ug/kg	5.4
Chrysene	200	15	ug/kg	6.4
Dibenz(a,h)anthracene	ND	31	ug/kg	12
Fluoranthene	ND	31	ug/kg	13
Fluorene	ND	31	ug/kg	8.9
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	5.6
Naphthalene	ND	51	ug/kg	41
Phenanthrene	100	31	ug/kg	7.0
Pyrene	360	31	ug/kg	11

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	92	(39 - 117)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

FLUOR HANFORD IC

Client Sample ID: K0N6T6

HPLC

Lot-Sample #...: F3I150137-004 Work Order #...: F0CRN1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 3.8 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	52	ug/kg	41
Acenaphthylene	ND	100	ug/kg	93
Anthracene	ND	31	ug/kg	4.5
Benzo(a)anthracene	**620 E**	**16**	**ug/kg**	**5.7**
Benzo(a)pyrene	**380 E**	**16**	**ug/kg**	**4.8**
Benzo(b)fluoranthene	ND	16	ug/kg	11
Benzo(ghi)perylene	**720 E**	**31**	**ug/kg**	**12**
Benzo(k)fluoranthene	**460 E**	**16**	**ug/kg**	**5.5**
Chrysene	**760 E**	**16**	**ug/kg**	**6.5**
Dibenz(a,h)anthracene	ND	31	ug/kg	12
Fluoranthene	**1600 E**	**31**	**ug/kg**	**13**
Fluorene	ND	31	ug/kg	9.0
Indeno(1,2,3-cd)pyrene	ND	16	ug/kg	5.7
Naphthalene	ND	52	ug/kg	42
Phenanthrene	**310**	**31**	**ug/kg**	**7.1**
Pyrene	ND	31	ug/kg	11

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	319 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6T6

HPLC

Lot-Sample #...: F3I150137-004 Work Order #...: F0CRN2AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 4
% Moisture.....: 3.8 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)anthracene	510 D	62	ug/kg	23
Benzo(a)pyrene	310 D	62	ug/kg	19
Benzo(ghi)perylene	1000 D	120	ug/kg	47
Benzo(k)fluoranthene	300 D	62	ug/kg	22
Chrysene	700 D	62	ug/kg	26
Fluoranthene	1600 D	120	ug/kg	53

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	294 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6T7

HPLC

Lot-Sample #...: F3I150137-005 Work Order #...: F0CRP1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 2.6 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	51	ug/kg	41
Acenaphthylene	ND	100	ug/kg	92
Anthracene	ND	31	ug/kg	4.4
Benzo(a)anthracene	**390 E**	**15**	**ug/kg**	**5.6**
Benzo(a)pyrene	**330**	**15**	**ug/kg**	**4.8**
Benzo(b)fluoranthene	ND	15	ug/kg	11
Benzo(ghi)perylene	**670**	**31**	**ug/kg**	**12**
Benzo(k)fluoranthene	**450 E**	**15**	**ug/kg**	**5.4**
Chrysene	**480 E**	**15**	**ug/kg**	**6.4**
Dibenz(a,h)anthracene	ND	31	ug/kg	12
Fluoranthene	**840 E**	**31**	**ug/kg**	**13**
Fluorene	ND	31	ug/kg	8.9
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	5.6
Naphthalene	ND	51	ug/kg	41
Phenanthrene	**170**	**31**	**ug/kg**	**7.0**
Pyrene	ND	31	ug/kg	11

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	208 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6T7

HPLC

Lot-Sample #...: F3I150137-005 Work Order #...: F0CRP2AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 4
% Moisture.....: 2.6 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)anthracene	280 D	62	ug/kg	22
Benzo(k)fluoranthene	250 D	62	ug/kg	22
Chrysene	420 D	62	ug/kg	26
Fluoranthene	860 D	120	ug/kg	52

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	192 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6T8

HPLC

Lot-Sample #...: F3I150137-006 Work Order #...: F0CRQ1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 1.5 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	5.5
Naphthalene	ND	51	ug/kg	41
Phenanthrene	**190**	**30**	**ug/kg**	**6.9**
Pyrene	**790 E**	**30**	**ug/kg**	**11**
Acenaphthene	ND	51	ug/kg	40
Acenaphthylene	ND	100	ug/kg	91
Anthracene	ND	30	ug/kg	4.4
Benzo(a)anthracene	**290**	**15**	**ug/kg**	**5.5**
Benzo(a)pyrene	**250**	**15**	**ug/kg**	**4.7**
Benzo(b)fluoranthene	ND	15	ug/kg	11
Benzo(ghi)perylene	**450**	**30**	**ug/kg**	**11**
Benzo(k)fluoranthene	**250**	**15**	**ug/kg**	**5.4**
Chrysene	**480 E**	**15**	**ug/kg**	**6.3**
Dibenz(a,h)anthracene	ND	30	ug/kg	12
Fluoranthene	**910 E**	**30**	**ug/kg**	**13**
Fluorene	ND	30	ug/kg	8.8

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	173 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6T8

HPLC

Lot-Sample #...: F3I150137-006 Work Order #...: F0CRQ2AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 4
% Moisture.....: 1.5 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pyrene	840 D	120	ug/kg	42
Chrysene	400 D	61	ug/kg	25
Fluoranthene	950 D	120	ug/kg	52

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	172 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6T9

HPLC

Lot-Sample #...:	F3I150137-007	Work Order #...:	F0CRR1AD	Matrix.....:	SOLID
Date Sampled...:	09/11/03	Date Received..:	09/12/03		
Prep Date.....:	09/23/03	Analysis Date..:	09/27/03		
Prep Batch #...:	3266192				
Dilution Factor:	1				
% Moisture.....:	1.7	Method.....:	SW846 8310		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	51	ug/kg	40
Acenaphthylene	ND	100	ug/kg	91
Anthracene	ND	31	ug/kg	4.4
Benzo(a)anthracene	**490 E**	**15**	**ug/kg**	**5.6**
Benzo(a)pyrene	**410 E**	**15**	**ug/kg**	**4.7**
Benzo(b)fluoranthene	ND	15	ug/kg	11
Benzo(ghi)perylene	**550**	**31**	**ug/kg**	**11**
Benzo(k)fluoranthene	**430 E**	**15**	**ug/kg**	**5.4**
Chrysene	**760 E**	**15**	**ug/kg**	**6.3**
Dibenz(a,h)anthracene	ND	31	ug/kg	12
Fluoranthene	**1100 E**	**31**	**ug/kg**	**13**
Fluorene	ND	31	ug/kg	8.8
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	5.6
Naphthalene	ND	51	ug/kg	41
Phenanthrene	**180**	**31**	**ug/kg**	**6.9**
Pyrene	**860 E**	**31**	**ug/kg**	**11**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	216 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6T9

HPLC

Lot-Sample #...: F3I150137-007 Work Order #...: F0CRR2AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 4
% Moisture.....: 1.7 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)anthracene	430 D	61	ug/kg	22
Benzo(a)pyrene	320 D	61	ug/kg	19
Benzo(k)fluoranthene	280 D	61	ug/kg	21
Chrysene	710 D	61	ug/kg	25
Fluoranthene	1200 D	120	ug/kg	52
Pyrene	900 D	120	ug/kg	42

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	267 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6V0

HPLC

Lot-Sample #...: F3I150137-008 Work Order #...: F0CRV1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 5.2 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	53	ug/kg	42
Acenaphthylene	ND	110	ug/kg	95
Anthracene	ND	32	ug/kg	4.6
Benzo(a)anthracene	**450 E**	**16**	**ug/kg**	**5.8**
Benzo(a)pyrene	**400 E**	**16**	**ug/kg**	**4.9**
Benzo(b)fluoranthene	ND	16	ug/kg	11
Benzo(ghi)perylene	**700**	**32**	**ug/kg**	**12**
Benzo(k)fluoranthene	**480 E**	**16**	**ug/kg**	**5.6**
Chrysene	**590 E**	**16**	**ug/kg**	**6.6**
Dibenz(a,h)anthracene	ND	32	ug/kg	13
Fluoranthene	**1000 E**	**32**	**ug/kg**	**13**
Fluorene	ND	32	ug/kg	9.1
Indeno(1,2,3-cd)pyrene	ND	16	ug/kg	5.8
Naphthalene	ND	53	ug/kg	43
Phenanthrene	**170**	**32**	**ug/kg**	**7.2**
Pyrene	**800 E**	**32**	**ug/kg**	**11**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	261 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6V0

HPLC

Lot-Sample #...: F3I150137-008 Work Order #...: F0CRV2AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/27/03
Prep Batch #...: 3266192
Dilution Factor: 4
% Moisture.....: 5.2 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)anthracene	360 D	63	ug/kg	23
Benzo(a)pyrene	280 D	63	ug/kg	20
Benzo(k)fluoranthene	280 D	63	ug/kg	22
Chrysene	560 D	63	ug/kg	26
Fluoranthene	1100 D	130	ug/kg	54
Pyrene	900 D	130	ug/kg	44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	204 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6V1

HPLC

Lot-Sample #...: F3I150137-009 Work Order #...: F0CRW1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/28/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 1.4 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	51	ug/kg	40
Acenaphthylene	ND	100	ug/kg	91
Anthracene	ND	30	ug/kg	4.4
Benzo(a)anthracene	**330**	**15**	**ug/kg**	**5.5**
Benzo(a)pyrene	**220**	**15**	**ug/kg**	**4.7**
Benzo(b)fluoranthene	ND	15	ug/kg	11
Benzo(ghi)perylene	**430**	**30**	**ug/kg**	**11**
Benzo(k)fluoranthene	**280**	**15**	**ug/kg**	**5.4**
Chrysene	**450 E**	**15**	**ug/kg**	**6.3**
Dibenz(a,h)anthracene	ND	30	ug/kg	12
Fluoranthene	**900 E**	**30**	**ug/kg**	**13**
Fluorene	ND	30	ug/kg	8.8
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	5.5
Naphthalene	ND	51	ug/kg	41
Phenanthrene	**190**	**30**	**ug/kg**	**6.9**
Pyrene	ND	30	ug/kg	11

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	197 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6V1

HPLC

Lot-Sample #...:	F3I150137-009	Work Order #...:	F0CRW2AD	Matrix.....:	SOLID
Date Sampled...:	09/11/03	Date Received..:	09/12/03		
Prep Date.....:	09/23/03	Analysis Date..:	09/28/03		
Prep Batch #...:	3266192				
Dilution Factor:	4				
% Moisture.....:	1.4	Method.....:	SW846 8310		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chrysene	410 D	61	ug/kg	25
Fluoranthene	970 D	120	ug/kg	52

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	191 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6V2

HPLC

Lot-Sample #...: F3I150137-010 Work Order #...: F0CRX1AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/28/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 13 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	57	ug/kg	45
Acenaphthylene	ND	110	ug/kg	100
Anthracene	ND	34	ug/kg	4.9
Benzo(a)anthracene	**440 E**	**17**	**ug/kg**	**6.3**
Benzo(a)pyrene	**330**	**17**	**ug/kg**	**5.3**
Benzo(b)fluoranthene	ND	17	ug/kg	12
Benzo(ghi)perylene	**630**	**34**	**ug/kg**	**13**
Benzo(k)fluoranthene	**430 E**	**17**	**ug/kg**	**6.0**
Chrysene	**560 E**	**17**	**ug/kg**	**7.1**
Dibenz(a,h)anthracene	ND	34	ug/kg	14
Fluoranthene	**1000 E**	**34**	**ug/kg**	**15**
Fluorene	ND	34	ug/kg	9.9
Indeno(1,2,3-cd)pyrene	ND	17	ug/kg	6.3
Naphthalene	ND	57	ug/kg	46
Phenanthrene	**170**	**34**	**ug/kg**	**7.8**
Pyrene	**990 E**	**34**	**ug/kg**	**12**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	213 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6V2

HPLC

Lot-Sample #...: F3I150137-010 Work Order #...: F0CRX2AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/28/03
Prep Batch #...: 3266192
Dilution Factor: 4
% Moisture.....: 13 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)anthracene	300 D	69	ug/kg	25
Benzo(k)fluoranthene	240 D	69	ug/kg	24
Chrysene	480 D	69	ug/kg	28
Fluoranthene	1100 D	140	ug/kg	58
Pyrene	980 D	140	ug/kg	48

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	196 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6V3

HPLC

Lot-Sample #...: F3I150137-011 Work Order #...: F0CR01AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/28/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 5.7 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	53	ug/kg	42
Acenaphthylene	ND	110	ug/kg	95
Anthracene	ND	32	ug/kg	4.6
Benzo(a)anthracene	**760 E**	**16**	**ug/kg**	**5.8**
Benzo(a)pyrene	590 E	16	ug/kg	4.9
Benzo(b)fluoranthene	ND	16	ug/kg	11
Benzo(ghi)perylene	**1300 E**	**32**	**ug/kg**	**12**
Benzo(k)fluoranthene	**770 E**	**16**	**ug/kg**	**5.6**
Chrysene	**1000 E**	**16**	**ug/kg**	**6.6**
Dibenz(a,h)anthracene	ND	32	ug/kg	13
Fluoranthene	**3300 E**	**32**	**ug/kg**	**13**
Fluorene	ND	32	ug/kg	9.2
Indeno(1,2,3-cd)pyrene	ND	16	ug/kg	5.8
Naphthalene	ND	53	ug/kg	43
Phenanthrene	**530 E**	**32**	**ug/kg**	**7.2**
Pyrene	**2000 E**	**32**	**ug/kg**	**11**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	486 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6V3

HPLC

Lot-Sample #...:	F3I150137-011	Work Order #...:	F0CR02AD	Matrix.....:	SOLID
Date Sampled...:	09/11/03	Date Received..:	09/12/03		
Prep Date.....:	09/23/03	Analysis Date..:	09/28/03		
Prep Batch #...:	3266192				
Dilution Factor:	4				
% Moisture.....:	5.7	Method.....:	SW846 8310		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)anthracene	400 D	64	ug/kg	23
Benzo(a)pyrene	370 D	64	ug/kg	20
Benzo(ghi)perylene	700 D	130	ug/kg	48
Benzo(k)fluoranthene	320 D	64	ug/kg	22
Chrysene	780 D	64	ug/kg	26
Fluoranthene	1700 D	130	ug/kg	54
Phenanthrene	420 D	130	ug/kg	29
Pyrene	1300 D	130	ug/kg	44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	239 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6V4

HPLC

Lot-Sample #...: F3I150137-012 Work Order #...: F0CR11AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/28/03
Prep Batch #...: 3266192
Dilution Factor: 1
% Moisture.....: 2.2 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	51	ug/kg	40
Acenaphthylene	ND	100	ug/kg	92
Anthracene	ND	31	ug/kg	4.4
Benzo(a)anthracene	**350**	**15**	**ug/kg**	**5.6**
Benzo(a)pyrene	**290**	**15**	**ug/kg**	**4.8**
Benzo(b)fluoranthene	ND	15	ug/kg	11
Benzo(ghi)perylene	**500**	**31**	**ug/kg**	**12**
Benzo(k)fluoranthene	**380 E**	**15**	**ug/kg**	**5.4**
Chrysene	**460 E**	**15**	**ug/kg**	**6.4**
Dibenz(a,h)anthracene	ND	31	ug/kg	12
Fluoranthene	**790 E**	**31**	**ug/kg**	**13**
Fluorene	ND	31	ug/kg	8.9
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	5.6
Naphthalene	ND	51	ug/kg	41
Phenanthrene	**170**	**31**	**ug/kg**	**6.9**
Pyrene	**690 E**	**31**	**ug/kg**	**11**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	196 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

FLUOR HANFORD IC

Client Sample ID: K0N6V4

HPLC

Lot-Sample #...: F3I150137-012 Work Order #...: F0CR12AD Matrix.....: SOLID
Date Sampled...: 09/11/03 Date Received..: 09/12/03
Prep Date.....: 09/23/03 Analysis Date..: 09/28/03
Prep Batch #...: 3266192
Dilution Factor: 4
% Moisture.....: 2.2 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(k)fluoranthene	210 D	61	ug/kg	22
Chrysene	420 D	61	ug/kg	25
Fluoranthene	840 D	120	ug/kg	52
Pyrene	720 D	120	ug/kg	43

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	186 *	(39 - 117)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

FLUOR HANFORD IC

Client Sample ID: K0N6V5

HPLC

Lot-Sample #...: F3I150137-013	**Work Order #...:** F0CR21AC	**Matrix.....:** WATER
Date Sampled...: 09/11/03	**Date Received..:** 09/12/03	
Prep Date.....: 09/18/03	**Analysis Date..:** 09/26/03	
Prep Batch #...: 3261611		
Dilution Factor: 1	**Method.....:** SW846 8310	

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Anthracene	ND	5.0	ug/L	0.020
Benzo(a)anthracene	ND	5.0	ug/L	0.060
Benzo(a)pyrene	ND	5.0	ug/L	0.060
Benzo(b)fluoranthene	ND	5.0	ug/L	0.090
Benzo(ghi)perylene	ND	5.0	ug/L	0.11
Benzo(k)fluoranthene	ND	5.0	ug/L	0.15
Chrysene	ND	5.0	ug/L	0.060
Dibenz(a,h)anthracene	ND	5.0	ug/L	0.10
Fluoranthene	ND	5.0	ug/L	0.14
Fluorene	ND	5.0	ug/L	0.040
Indeno(1,2,3-cd)pyrene	ND	5.0	ug/L	0.070
Naphthalene	ND	5.0	ug/L	0.46
Phenanthrene	ND	5.0	ug/L	0.030
Pyrene	ND	5.0	ug/L	0.090
Acenaphthene	ND	5.0	ug/L	0.55
Acenaphthylene	ND	5.0	ug/L	0.93

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	54	(29 - 121)

METHOD BLANK REPORT

HPLC

Client Lot #...: F3I150137 Work Order #...: F0N831AA Matrix.....: WATER
MB Lot-Sample #: F3I180000-611

Prep Date.....: 09/18/03
Analysis Date..: 09/26/03 Prep Batch #...: 3261611
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.0	ug/L	SW846 8310
Acenaphthylene	ND	5.0	ug/L	SW846 8310
Anthracene	ND	5.0	ug/L	SW846 8310
Benzo(a)anthracene	ND	5.0	ug/L	SW846 8310
Benzo(b)fluoranthene	ND	5.0	ug/L	SW846 8310
Benzo(k)fluoranthene	ND	5.0	ug/L	SW846 8310
Benzo(ghi)perylene	ND	5.0	ug/L	SW846 8310
Benzo(a)pyrene	ND	5.0	ug/L	SW846 8310
Chrysene	ND	5.0	ug/L	SW846 8310
Dibenz(a,h)anthracene	ND	5.0	ug/L	SW846 8310
Fluoranthene	ND	5.0	ug/L	SW846 8310
Fluorene	ND	5.0	ug/L	SW846 8310
Indeno(1,2,3-cd)pyrene	ND	5.0	ug/L	SW846 8310
Naphthalene	ND	5.0	ug/L	SW846 8310
Phenanthrene	ND	5.0	ug/L	SW846 8310
Pyrene	ND	5.0	ug/L	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	64	(29 - 121)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

HPLC

Client Lot #...: F3I150137 Work Order #...: F0XJK1AA Matrix.....: SOLID
MB Lot-Sample #: F3I230000-192

Prep Date.....: 09/23/03
Analysis Date..: 09/26/03 Prep Batch #...: 3266192
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	50	ug/kg	SW846 8310
Acenaphthylene	ND	100	ug/kg	SW846 8310
Anthracene	ND	30	ug/kg	SW846 8310
Benzo(a)anthracene	ND	15	ug/kg	SW846 8310
Benzo(b)fluoranthene	ND	15	ug/kg	SW846 8310
Benzo(k)fluoranthene	ND	15	ug/kg	SW846 8310
Benzo(ghi)perylene	ND	30	ug/kg	SW846 8310
Benzo(a)pyrene	ND	15	ug/kg	SW846 8310
Chrysene	ND	15	ug/kg	SW846 8310
Dibenz(a,h)anthracene	ND	30	ug/kg	SW846 8310
Fluoranthene	ND	30	ug/kg	SW846 8310
Fluorene	ND	30	ug/kg	SW846 8310
Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	SW846 8310
Naphthalene	ND	50	ug/kg	SW846 8310
Phenanthrene	ND	30	ug/kg	SW846 8310
Pyrene	ND	30	ug/kg	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	74	(39 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: F3I150137 Work Order #...: F0N831AC-LCS Matrix.....: WATER
LCS Lot-Sample#: F3I180000-611 F0N831AD-LCSD
Prep Date.....: 09/18/03 Analysis Date..: 09/26/03
Prep Batch #...: 3261611
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Chrysene	2.00	1.50	ug/L	75		SW846 8310
	2.00	1.62	ug/L	81	7.8	SW846 8310
Benzo(a)anthracene	2.00	1.49	ug/L	74		SW846 8310
	2.00	1.61	ug/L	80	7.9	SW846 8310
Benzo(b)fluoranthene	4.00	3.23	ug/L	81		SW846 8310
	4.00	3.29	ug/L	82	1.8	SW846 8310
Benzo(k)fluoranthene	2.00	1.64	ug/L	82		SW846 8310
	2.00	1.66	ug/L	83	0.66	SW846 8310
Benzo(a)pyrene	2.00	1.71	ug/L	85		SW846 8310
	2.00	1.69	ug/L	84	1.0	SW846 8310
Indeno(1,2,3-cd)pyrene	2.00	1.48	ug/L	74		SW846 8310
	2.00	1.36	ug/L	68	8.2	SW846 8310
Naphthalene	20.0	14.7	ug/L	74		SW846 8310
	20.0	15.2	ug/L	76	3.5	SW846 8310
Acenaphthylene	40.0	31.0	ug/L	78		SW846 8310
	40.0	32.0	ug/L	80	3.1	SW846 8310
Acenaphthene	20.0	15.1	ug/L	75		SW846 8310
	20.0	15.6	ug/L	78	3.1	SW846 8310
Fluorene	4.00	2.99	ug/L	75		SW846 8310
	4.00	3.13	ug/L	78	4.4	SW846 8310
Phenanthrene	2.00	1.52	ug/L	76		SW846 8310
	2.00	1.59	ug/L	79	4.0	SW846 8310
Anthracene	2.00	1.42	ug/L	71		SW846 8310
	2.00	1.49	ug/L	75	4.7	SW846 8310
Fluoranthene	4.00	3.24	ug/L	81		SW846 8310
	4.00	3.38	ug/L	85	4.3	SW846 8310
Pyrene	2.00	1.53	ug/L	76		SW846 8310
	2.00	1.61	ug/L	80	5.1	SW846 8310
Dibenz(a,h)anthracene	4.00	2.56	ug/L	64		SW846 8310
	4.00	1.70 p	ug/L	43	40	SW846 8310
Benzo(ghi)perylene	4.00	2.71	ug/L	68		SW846 8310
	4.00	2.04 p	ug/L	51	28	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	71	(29 - 121)
	68	(29 - 121)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: F3I150137 Work Order #...: F0XJK1AC Matrix.....: SOLID
LCS Lot-Sample#: F3I230000-192
Prep Date.....: 09/23/03 Analysis Date..: 09/26/03
Prep Batch #...: 3266192
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chrysene	66.7	59.3	ug/kg	89	SW846 8310
Benzo(a)anthracene	66.7	58.6	ug/kg	88	SW846 8310
Benzo(b)fluoranthene	133	127	ug/kg	95	SW846 8310
Benzo(k)fluoranthene	66.7	62.4	ug/kg	94	SW846 8310
Benzo(a)pyrene	66.7	62.8	ug/kg	94	SW846 8310
Indeno(1,2,3-cd)pyrene	66.7	63.4	ug/kg	95	SW846 8310
Naphthalene	667	570	ug/kg	86	SW846 8310
Acenaphthylene	1330	1200	ug/kg	90	SW846 8310
Acenaphthene	667	580	ug/kg	87	SW846 8310
Fluorene	133	118	ug/kg	88	SW846 8310
Phenanthrene	66.7	60.2	ug/kg	90	SW846 8310
Anthracene	66.7	56.4	ug/kg	85	SW846 8310
Fluoranthene	133	124	ug/kg	93	SW846 8310
Pyrene	66.7	59.0	ug/kg	88	SW846 8310
Dibenz(a,h)anthracene	133	146	ug/kg	109	SW846 8310
Benzo(ghi)perylene	133	137	ug/kg	103	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	90	(39 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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Duratek Federal Services

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C # R103-049-1

Page 1 of 2

Collector	J. G. HOGAN	Contact/Requestor	DEL MAR, RONALD A.	Tel. No. 376-2186 MSIN R3-32	FAX
SAF Number	S03-111 / R103-049	Sample Origin	Pit 9	Purchase Order/Charge Code	102024
Project Title	Soil Characterization at Pit 9	Logbook #	DFSNW-SAWS-H65	Ice Chest # SAWS-015	Temp.
Shipped To (Lab)	STLSL	Method of Shipment	FED EX	Bill of Lading/Air Bill No.	79089826 4060
Protocol	RCRA	Data Turnaround	15 Days	Offsite Property No.	N/A

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Perservative
K0N6T3		S	9/11/2003	1021	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6T3		S	9/11/2003	1021	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6T4		S	9/11/2003	1034	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6T4		S	9/11/2003	1034	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6T5		S	9/11/2003	1046	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6T5		S	9/11/2003	1046	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6T6		S	9/11/2003	1100	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6T6		S	9/11/2003	1100	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6T7		S	9/11/2003	1123	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6T7		S	9/11/2003	1123	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6T8		S	9/11/2003	1145	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6T8		S	9/11/2003	1145	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☐

List all known wastes.

WO 4088

SPECIAL INSTRUCTIONS Hold Time

E-Mail Summary Report to Debbie Roles within 15 days of receit of samples, followed up by the final hard copy within 30 days frpm receit. An equipment rinse blank water sample will accompany the soil samples, which will also be run for PAH. Contact John Trechter at (509) 373-7046 with any technical or production problems. Fax a copy of the COC to Debbie Roles within 24 hours of receit of samples. Final results for soils sahll be calculated on a dry weight basis.

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	J.G. HOGAN	J Hogan	1400 9-11-03	FED EX			
Relinquished By			Date/Time	Received By			Date/Time 9/12/03 9:30
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method e.g. Return to customer, per lab procedure, used in process. Disposed By Date/Time

DFNW-SS-010

Duratek Federal Services

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C # R103-049-1

Page 2 of 3

Collector J. G. Hogan	Contact/Requestor DEL MAR, RONALD A.	Tel. No. 376-2186 MSIN R3-32 FAX
SAF Number S03-111 / R103-049	Sample Origin Pit 9	Purchase Order/Charge Code 102024
Project Title Soil Characterization at Pit 9	Logbook # DFSNW-SAWS-H65	Ice Chest # SAWS-015 Temp.
Shipped To (Lab) STLSL	Method of Shipment FED EX	Bill of Lading/Air Bill No. 7908 9826 4060
Protocol RCRA	Data Turnaround 15 Days	Offsite Property No. N/A

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Perservative
K0N6T9		S	9/11/2003	1152	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6T9		S	9/11/2003	1152	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6V0		S	9/11/2003	1203	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V0		S	9/11/2003	1203	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6V1		S	9/11/2003	1220	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V1		S	9/11/2003	1220	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6V2		S	9/11/2003	1215	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V2		S	9/11/2003	1215	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6V3		S	9/11/2003	1230	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V3		S	9/11/2003	1230	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C
K0N6V4		S	9/11/2003	1230	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V4		S	9/11/2003	1230	(1) 120 aG	PAH in soil by EPA 8310	Cool to 4°C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☐

List all known wastes.

W04088

SPECIAL INSTRUCTIONS Hold Time

E-Mail Summary Report to Debbie Roles within 15 days of receit of samples, followed up by the final hard copy within 30 days frpm receit. An equipment rinse blank water sample will accompany the soil samples, which will also be run for PAH. Contact John Trechter at (509) 373-7046 with any technical or production problems. Fax a copy of the COC to Debbie Roles within 24 hours of receit of samples. Final results for soils sahll be calculated on a dry weight basis.

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J. G. Hogan / J Hogan	9-11-03 1400	FED EX	
FEDEX		M A Nutt	9/12/03 9:30

Matrix *

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method e.g. Return to customer, per lab procedure, used in process. Disposed By Date/Time

DFNW-SS-010

Duratek Federal Services

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C # R103-049-1

Page 3 of 3

Collector J. G. Hogan	Contact/Requestor DEL MAR, RONALD A.	Tel. No. 376-2186 MSIN R3-32 FAX
SAF Number S03-111 /R103-049	Sample Origin Pit 9	Purchase Order/Charge Code 102024
Project Title Soil Characterization at Pit 9	Logbook # DFSNW-SAWS-H65	Ice Chest # SAWS-015 Temp.
Shipped To (Lab) STLSL	Method of Shipment FED EX	Bill of Lading/Air Bill No. 7908 9826 4060
Protocol RCRA	Data Turnaround 15 Days	Offsite Property No. N/A

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Perservative
K0N6V5		W	9/11/2003	0944	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V5		W	9/11/2003	0944	(3) 1000 aG	PAH in water by EPA 8310	Cool to 4°C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☐

List all known wastes.

W04088

SPECIAL INSTRUCTIONS Hold Time

E-Mail Summary Report to Debbie Roles within 15 days of receit of samples, followed up by the final hard copy within 30 days frpm receit. An equipment rinse blank water sample will accompany the soil samples, which will also be run for PAH. Contact John Trechter at (509) 373-7046 with any technical or production problems. Fax a copy of the COC to Debbie Roles within 24 hours of receit of samples. Final results for soils sahll be calculated on a dry weight basis.

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.G. Hogan [signature]	9-11-03 1400	FED EX	
FED EX		[signature]	9/12/03 9:30

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method e.g. Return to customer, per lab procedure, used in process. Disposed By Date/Time

DFNW-SS-010

LIONVILLE LABORATORY INC.

RECORD COPY

DEC 2003 ENVIRONMENTAL COMPLIANCE

DEC 2003 RECEIVED SDLA

17 October 2003

Mr. Kevin Johnson
Thermo NUtech
2030 Wright Avenue
Richmond, California 94804

Subject: TNU-Hanford Contract N501118
Analytical Data Package

Dear Mr. Johnson:

Enclosed are the hard copy analytical reports for the referenced project listed above and the batch number/fraction indicated (marked X) in the ensuing table:

Batch #	0309L448
SDG #	H2341
SAF #	S03-111
Date Received	9/12/03
# Samples	2
Matrix	Soil/Water
Volatiles	X
Semivolatiles	
PAHs	X
Metals	
DRO	X

The electronic data deliverable (EDD) will be sent separately by way of e-mail to Debbie Roles at Fluor-Hanford. If you have any questions, please don't hesitate to contact me at (610) 280-3012.

Very truly yours,

Lionville Laboratory Incorporated

Orlette S. Johnson
Project Manager

Cc: Debbie Roles (original data reports)

208 Welsh Pool Road • Exton, PA 19341-1313 • (610) 280-3000 • Fax (610) 280-3041

RECORD COPY

DEC 2003
RECEIVED
SDLA

Lionville Laboratory, Inc.
VOA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD S03-111 H2341

RFW LOT # :03[illegible]

CLIENT ID	RFW #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
K0N6V6	001	W	03LVG198	09/11/03	09/12/03	N/A	09/17/03
K0N6V6	001 MS	W	03LVG198	09/11/03	09/12/03	N/A	09/17/03
K0N6V6	001 MSD	W	03LVG198	09/11/03	09/12/03	N/A	09/17/03
K0N6V7	002	S	03LVG201	09/11/03	09/12/03	N/A	09/18/03
K0N6V7	002 MS	S	03LVG201	09/11/03	09/12/03	N/A	09/18/03
K0N6V7	002 MSD	S	03LVG201	09/11/03	09/12/03	N/A	09/18/03
LAB QC:							
VBLKGJ	MB1	W	03LVG198	N/A	N/A	N/A	09/17/03
VBLKGJ	MB1 BS	W	03LVG198	N/A	N/A	N/A	09/17/03
VBLKGS	MB1	S	03LVG201	N/A	N/A	N/A	09/18/03
VBLKGS	MB1 BS	S	03LVG201	N/A	N/A	N/A	09/18/03

LIONVILLE LABORATORY INC.

Client: TNU-HANFORD S03-111
LVL #: 0309L448
SDG/SAF # H2341/S03-111

W.O. #: 11343-606-001-9999-00
Date Received: 09-12-2003

GC/MS VOLATILE

One (1) water and one (1) soil samples were collected on 09-11-2003.

The samples and their associated QC samples were analyzed according to criteria set forth in Lionville Laboratory OPs based on SW 846 Method 8260B for TCL volatile target compounds on 09-17,18-2003.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy.
2. Samples were analyzed within holding time.
3. All surrogate recoveries were within EPA QC limits.
4. All matrix spike recoveries were within EPA QC limits.
5. All blank spike recoveries were within EPA QC limits.
6. The method blanks contained the common laboratory contaminant Methylene Chloride at levels less than 2x the CRQL.
7. Internal standard area and retention time criteria were met.
8. "I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."

J. Michael Taylor
President
Lionville Laboratory Incorporated

09-30-03
Date

som\group\data\voa\tnu-hanford\0308-448.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 1 2 pages.

208 Welsh Pool Road • Exton, PA 19341-1313 • (610) 280-3000 • Fax (610) 280-3041

GLOSSARY

DATA QUALIFIERS

U = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.

J = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.

E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

D = Identifies all compounds identified in an analysis at a secondary dilution factor.

I = Interference.

NQ = Result qualitatively confirmed but not able to quantify.

A = Indicates that a TIC is a suspected aldol-condensation product.

N = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

X = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).

Y = Additional qualifiers used as required are explained in the case narrative.

mmz\10-94\gloss.bna

GLOSSARY

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.
BSD	=	Indicates blank spike duplicate.
MS	=	Indicates matrix spike.
MSD	=	Indicates matrix spike duplicate.
DL	=	Suffix added to sample number to indicate that results are from a diluted analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
SP, Z	=	Indicates Spiked Compound.

TECHNICAL FLAGS FOR MANUAL INTEGRATION

Manual quan modifications or integrations are performed routinely to improve the data quality for a variety of technical reasons. Documentation of these modifications should be clear and concise. The following "flags" are used to indicate the technical reasons for quan modifications:

MP - Missed Peak: manually added peak not found by automatic quan program.

PA - Peak Assignment: quan report was changed to reflect correct peak assignment.

RI - Routine Integration: routine integrations are performed for some analytes that are consistently integrated improperly by the automatic integration programs. Examples are the dichlorobenzene isomers on the VOA packed column and benzo(b)fluoranthene/benzo(k)fluoranthene which are poorly resolved on the BNA column.

SP - Split Peak: the automatic integration improperly split the peak; a manual integration was performed to get the correct area.

CB - Coelution/Background: peak was manually integrated to eliminate contribution from coeluting compounds, background signal, or other interference.

PI - Proper Integration: a peak with poor or inconsistent integration (e.g., excessive tail) was properly integrated manually.

Lionville Laboratory, Inc.
Volatiles by GC/MS, HSL List

Report Date: 09/30/03 12:46

RFW Batch Number: 0309L448 Client: TNUHANFORD S03-111 H2341 Work Order: 11343606001 Page: 1a

	Cust ID:	K0N6V6		K0N6V6		K0N6V6		K0N6V7		K0N6V7		K0N6V7	
Sample Information	RFW#:	001		001 MS		001 MSD		002		002 MS		002 MSD	
	Matrix:	WATER		WATER		WATER		SOIL		SOIL		SOIL	
	D.F.:	1.00		1.00		1.00		1.09		1.06		1.04	
	Units:	ug/L		ug/L		ug/L		ug/Kg		ug/Kg		ug/Kg	
Surrogate Recovery	Toluene-d8	95	%	94	%	94	%	99	%	97	%	96	%
	Bromofluorobenzene	102	%	103	%	105	%	111	%	108	%	112	%
	1,2-Dichloroethane-d4	105	%	110	%	110	%	107	%	108	%	109	%
			fl		fl		fl		fl		fl		fl
Chloromethane		10	U	10	U	10	U	11	U	11	U	11	U
Bromomethane		10	U	10	U	10	U	11	U	11	U	11	U
Vinyl Chloride		10	U	10	U	10	U	11	U	11	U	11	U
Chloroethane		10	U	10	U	10	U	11	U	11	U	11	U
Methylene Chloride		3	JB	4	JB	4	JB	20	B	15	B	14	B
Acetone		10	U	10	U	10	U	11	U	11	U	11	U
Carbon Disulfide		5	U	5	U	5	U	6	U	6	U	6	U
1,1-Dichloroethene		5	U	87	%	91	%	6	U	96	%	96	%
1,1-Dichloroethane		5	U	5	U	5	U	6	U	6	U	6	U
1,2-Dichloroethene (total)		5	U	5	U	5	U	6	U	6	U	6	U
Chloroform		5	U	5	U	5	U	6	U	6	U	6	U
1,2-Dichloroethane		5	U	5	U	5	U	6	U	6	U	6	U
2-Butanone		10	U	10	U	10	U	11	U	11	U	11	U
1,1,1-Trichloroethane		5	U	5	U	5	U	6	U	6	U	6	U
Carbon Tetrachloride		5	U	5	U	5	U	6	U	6	U	6	U
Bromodichloromethane		5	U	5	U	5	U	6	U	6	U	6	U
1,2-Dichloropropane		5	U	5	U	5	U	6	U	6	U	6	U
cis-1,3-Dichloropropene		5	U	5	U	5	U	6	U	6	U	6	U
Trichloroethene		5	U	100	%	107	%	6	U	106	%	106	%
Dibromochloromethane		5	U	5	U	5	U	6	U	6	U	6	U
1,1,2-Trichloroethane		5	U	5	U	5	U	6	U	6	U	6	U
Benzene		5	U	98	%	104	%	6	U	105	%	105	%
Trans-1,3-Dichloropropene		5	U	5	U	5	U	6	U	6	U	6	U
Bromoform		5	U	5	U	5	U	6	U	6	U	6	U
4-Methyl-2-pentanone		10	U	10	U	10	U	11	U	11	U	11	U
2-Hexanone		10	U	10	U	10	U	11	U	11	U	11	U
Tetrachloroethene		5	U	5	U	5	U	6	U	6	U	6	U
1,1,2,2-Tetrachloroethane		5	U	5	U	5	U	6	U	6	U	6	U
Toluene		5	U	94	%	101	%	6	U	104	%	104	%

*= Outside of EPA CLP QC limits.

RFW Batch Number: 0309L448 Client: TNUHANFORD S03-111 H2341 Work Order: 11343606001 Page: 1b

Cust ID:	K0N6V6	K0N6V6	K0N6V6	K0N6V7	K0N6V7	K0N6V7
RFW#:	001	001 MS	001 MSD	002	002 MS	002 MSD
Chlorobenzene	5 U	96 %	103 %	6 U	102 %	101 %
Ethylbenzene	5 U	5 U	5 U	6 U	6 U	6 U
Styrene	5 U	5 U	5 U	6 U	6 U	6 U
Xylene (total)	5 U	5 U	5 U	6 U	6 U	6 U

*= Outside of EPA CLP QC limits.

Lionville Laboratory, Inc.
Volatiles by GC/MS, HSL List

Report Date: 09/30/03 12:46

RFW Batch Number: 0309L448 Client: TNUHANFORD S03-111 H2341 Work Order: 11343606001 Page: 2a

	Cust ID:	VBLKGJ		VBLKGJ BS		VBLKGS		VBLKGS BS	
Sample Information	RFW#:	03LVG198-MB1		03LVG198-MB1		03LVG201-MB1		03LVG201-MB1	
	Matrix:	WATER		WATER		SOIL		SOIL	
	D.F.:	1.00		1.00		1.00		1.00	
	Units:	ug/L		ug/L		ug/Kg		ug/Kg	
Surrogate Recovery	Toluene-d8	97	%	94	%	95	%	88	%
	Bromofluorobenzene	105	%	99	%	97	%	96	%
	1,2-Dichloroethane-d4	105	%	104	%	101	%	94	%
Chloromethane		10	U	10	U	10	U	10	U
Bromomethane		10	U	10	U	10	U	10	U
Vinyl Chloride		10	U	10	U	10	U	10	U
Chloroethane		10	U	10	U	10	U	10	U
Methylene Chloride		4	J	4	JB	8		9	B
Acetone		10	U	10	U	10	U	10	U
Carbon Disulfide		5	U	5	U	5	U	5	U
1,1-Dichloroethene		5	U	94	%	5	U	82	%
1,1-Dichloroethane		5	U	5	U	5	U	5	U
1,2-Dichloroethene (total)		5	U	5	U	5	U	5	U
Chloroform		5	U	5	U	5	U	5	U
1,2-Dichloroethane		5	U	5	U	5	U	5	U
2-Butanone		10	U	10	U	10	U	10	U
1,1,1-Trichloroethane		5	U	5	U	5	U	5	U
Carbon Tetrachloride		5	U	5	U	5	U	5	U
Bromodichloromethane		5	U	5	U	5	U	5	U
1,2-Dichloropropane		5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene		5	U	5	U	5	U	5	U
Trichloroethene		5	U	107	%	5	U	97	%
Dibromochloromethane		5	U	5	U	5	U	5	U
1,1,2-Trichloroethane		5	U	5	U	5	U	5	U
Benzene		5	U	104	%	5	U	92	%
Trans-1,3-Dichloropropene		5	U	5	U	5	U	5	U
Bromoform		5	U	5	U	5	U	5	U
4-Methyl-2-pentanone		10	U	10	U	10	U	10	U
2-Hexanone		10	U	10	U	10	U	10	U
Tetrachloroethene		5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane		5	U	5	U	5	U	5	U
Toluene		5	U	102	%	5	U	93	%

*= Outside of EPA CLP QC limits.

Cust ID:	VBLKGJ	VBLKGJ BS	VBLKGS	VBLKGS BS
RFW#:	03LVG198-MB1	03LVG198-MB1	03LVG201-MB1	03LVG201-MB1
Chlorobenzene	5 U	103 %	5 U	95 %
Ethylbenzene	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U
Xylene (total)	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.

Lionville Laboratory Use Only

0309L448

Custody Transfer Record/Lab Work Request

Page 1 of 1

LVL LIONVILLE LABORATORY INC.

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: TNU Hanford S03-111

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: Orlette Johnson

QC: SPEC Del: STD TAT: 15 day

Date Rec'd: 9-12-03 Date Due: 9-27-03

		A-C				D					E					
Refrigerator #		1				4					4					
#/Type Container	Liquid	3g														
	Solid	1g				1g					1g					
Volume	Liquid	40														
	Solid	40				120					1250					
Preservatives		HCl				—					—					
ANALYSES REQUESTED		ORGANIC: VOA	BNA	Pest/PCB	Herb	PAH			INORG: Metal	CN	TPH					
Lionville Laboratory Use Only		06244				08310					ODRO					
Lab ID	Client ID/Description															
C01	KON6V6					W	9-11-03	0700	X								
C02	KON6V7					S	1	1145	X		X					X	

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Special Instructions: SAF # S03-111

Rem Matrix QC

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

Lionville Laboratory Use Only

Samples were:
1) Shipped ✓ or Hand Delivered ___ Airbill # ___
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Samples Properly Preserved Y or N
5) Received Within Holding Times Y or N

Tamper Resistant Seal was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Cooler Temp. 2.8 °C

Relinquished by	Received by	Date	Time
[signature]	[signature]	9-12-03	0915

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"		ORIGINAL REWRITTEN	

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES: # 7904 0674 6453

Duratek Federal Services

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector JG Hogan	Contact/Requestor DEL MAR, RONALD A.	Tel. No. 376-2186 MSIN R3-32 FAX
SAF Number S03-111	Sample Origin Pit 9	Purchase Order/Charge Code 102024
Project Title Soil Characterization at Pit 9	Logbook # DFSNW-SAWS-H65	Ice Chest # SAWS101 Temp.
Shipped To (Lab) Lionville Lab	Method of Shipment FED EX	Bill of Lading/Air Bill No. 7904 0674 6453
Protocol RCRA	Data Turnaround 15 Days	Offsite Property No. PTR # 12197

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Perservative
K0N6V6		W	9/11/2003	0700	(3) 40 aGs	VOA (EPA8260A), (TCL)	HCL
K0N6V7		S	9/11/2003	1145	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V7		S	9/11/2003		(1) 120 aG	PAH by 8310 (With TCL's)	Cool to 4°C
K0N6V7		S	9/11/2003		(1) 250 aG	TPH-Diesel Range, WTPH-D	Cool to 4°C
K0N6V7		S	9/11/2003	✓	(1) 40 aGs	VOA by 8260 (With TCL's)	Cool to 4°C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☐

List all known wastes.

SPECIAL INSTRUCTIONS Hold Time

E-Mail Summary Report to Debbie Roles within 15 days from receipt of the samples, followed up by the final hard copy within 30 days from receipt. Run WTPH-D extended into the heavey oil range. Run DI water trip blank for VOA only with no QC. Soil results shall be reported on a dry weight basis. Contact John Trechter (509)373-7046 in the event of any technical or production problems.

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
JG Hogan / JG Hogan	9-11-03 1400	FED EX	
[illegible]	9.12.03 1095	[illegible]	9.12.03 1095

Matrix *

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method e.g. Return to customer, per lab procedure, used in process. Disposed By Date/Time

DFNW-SS-010

LIONVILLE LABORATORY INCORPORATED
SAMPLE RECEIPT CHECKLIST

CLIENT: TNU Hanford

Purchase Order/Project:

DATE: 9-12-03

SAF# / SOW# / Release #: S03-111

Laboratory SDG #: 0309L448

NOTE: ALL ENTRIES MARKED "NO" MUST BE EXPLAINED IN THE COMMENT SECTION

1.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
2.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
3.	Airbill # recorded?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
4.	All expected paperwork received (coc and other client specific: historical data, alpha/beta or other screening data as applicable)? (paperwork sealed in plastic bag and taped to inside lid)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
5.	Sample containers are intact?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
7.	All samples on coc received?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
8.	All sample label information matches coc?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
9.	Laboratory QC samples designated on coc? (QC stickers placed on bottles?)	☐ Yes	☐ No	☑ N/A	☐ see Comment #
10.	Shipment meets LvLI Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
11.	Where applicable, bar code labels are affixed to coc?	☐ Yes	☐ No	☑ N/A	☐ see Comment #
12.	coc signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
13.	coc will be faxed or emailed to client?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
14.	Project Manager/Client contacted concerning discrepancies? (name/date)	☐ Yes	☐ No	☑ N/A	☐ see Comment #

Cooler # / temp (°C) and Comments:

SAWS-10 / 2.8°

Laboratory Sample Custodian: D Smith

Laboratory Project Manager:

RECORD COPY

DEC 2003
RECEIVED
SDLA

Lionville Laboratory, Inc.
8310 ANALYTICAL DATA PACKAGE FOR
TNUHANFORD S03-111 H2341

DATE RECEIVED: 09/12/03 LVL LOT # :0309L428

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
K0N6V7	002	S	03LE1144	09/11/03	09/15/03	10/01/03
K0N6V7	002 MS	S	03LE1144	09/11/03	09/15/03	10/01/03
K0N6V7	002 MSD	S	03LE1144	09/11/03	09/15/03	10/01/03

LAB QC:

BLK	MB1	S	03LE1144	N/A	09/15/03	10/01/03
BLK	MB1 BS	S	03LE1144	N/A	09/15/03	10/01/03

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD S03-111
LVL #: 0309L448
SDG/SAF #: H2341/S03-011

W.O. #: 11343-606-001-9999-00
Date Received: 09-12-03

PAH

One (1) soil sample was collected on 09-11-03.

The sample and its associated QC samples were extracted on 09-15-03 and analyzed according to criteria set for the in Lionville Laboratory OPs based on SW846, 3rd Edition for Polyaromatic Hydrocarbons on 10-01-03. The extraction procedure was based on method 3540 and the extracts were analyzed based on method 8310.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy.

2. All required holding times for extraction and analysis have been met.

3. The method blank was below the reporting limits for all target compounds.

4. All obtainable surrogate recoveries were within acceptance criteria. Surrogate recoveries were unobtainable for the sample due to dilution required for analysis.

5 All blank spike recoveries were within acceptance criteria.

6. Matrix spike recoveries were unobtainable due to the dilution required for analysis.

7. The sample and its matrix QC required instrument dilutions due to the high concentrations of target analytes. Reporting limits have been adjusted to reflect the necessary dilutions.

8. All initial calibrations associated with this data set were within acceptance criteria.

9. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 8 pages.

208 Welsh Pool Road • Exton, PA 19341-1313 • (610) 280-3000 • Fax (610) 280-3041

10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

10/14/3
Date

pefir:\group\data\pah\tnu hanford\09L-448.doc

LVLI
LIONVILLE LABORATORY, INC.

GLOSSARY OF PAH DATA

DATA QUALIFIERS

U = Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).

J = Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.

E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

I = Interference.

ABBREVIATIONS

BS = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.

BSD = Indicates blank spike duplicate.

MS = Indicates matrix spike.

MSD = Indicates matrix spike duplicate.

DL = Indicates that recoveries were not obtained because the extract had to be diluted for analysis.

NA = Not Applicable.

DF = Dilution Factor.

NR = Not Required.

SP = Indicates Spiked Compound.

Lionville Laboratory, Inc.
PAH'S by HPLC / Method 8310

Report Date: 10/09/03 12:54

RFW Batch Number: 0309L448 Client: TNUHANFORD S03-111 H2341 Work Order: 11343606001 Page: 1

	Cust ID:	K0N6V7	K0N6V7	K0N6V7	BLK	BLK BS
Sample Information	RFW#:	002	002 MS	002 MSD	03LE1144-MB1	03LE1144-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	10.0	100	100	1.00	1.00
	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Triphenylene	D	%	D	%	D	%	94	%	104	%
		fl		fl		fl		fl		fl
Naphthalene	3060	U	D	%	D	%	302	U	92	%
Acenaphthylene	3620	U	D	%	D	%	358	U	97	%
Acenaphthene	2500	J	D	%	D	%	302	U	96	%
Fluorene	354	U	D	%	D	%	35.0	U	102	%
Phenanthrene	1090	U	D	%	D	%	108	U	89	%
Anthracene	1110	U	D	%	D	%	110	U	101	%
Fluoranthene	950		D	%	D	%	35.0	U	95	%
Pyrene	780		D	%	D	%	45.0	U	93	%
Benzo(a)anthracene	130		D	%	D	%	2.25	U	86	%
Chrysene	560		D	%	D	%	25.0	U	96	%
Benzo(b)fluoranthrene	280		D	%	D	%	3.00	U	87	%
Benzo(k)fluoranthrene	140		D	%	D	%	2.75	U	98	%
Benzo(a)pyrene	30	J	D	%	D	%	3.75	U	99	%
Dibenzo(a,h)anthracene	68		D	%	D	%	5.00	U	89	%
Benzo(ghi)perylene	320		D	%	D	%	12.8	U	88	%
Indeno(1,2,3-cd)pyrene	180		D	%	D	%	7.25	U	87	%

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Lionville Laboratory Use Only

0309L448

Custody Transfer Record/Lab Work Request

Page ___ of ___

LVL LIONVILLE LABORATORY INC.

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: TNU Hanford S03-111

Est. Final Proj. Sampling Date:

Project #: 1343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: Colette Johnson

QC: SPEC Del: STD TAT: 15 day

Date Rec'd: 9-12-03 Date Due: 9-27-03

		A-C				D					E					
Refrigerator #		1				4					4					
#/Type Container	Liquid	3c														
	Solid	1g				1g					1g					
Volume	Liquid	40														
	Solid	40				120					1250					
Preservatives		HCL				—					—					
ANALYSES REQUESTED		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb	PAH			Metal	CN	TPH					
		Lionville Laboratory Use Only														
		06244				08310					0020					

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb	PAH			Metal	CN	TPH					
001	KON 6V6			W	9-11-03	0700	X														
002	KON 6V7			S	↓	1145	X				X					X					

Special Instructions: SAF # S03-111

Rem Matrix QC

DATE/REVISIONS:

1. ___
2. ___
3. ___
4. ___
5. ___
6. ___

Lionville Laboratory Use Only

Samples were:
1) Shipped ✓ or Hand Delivered ___
Airbill # ___
2) Ambient or Chilled
3) Received in Good Condition (Y) or N
4) Samples Properly Preserved (Y) or N
5) Received Within Holding Times (Y) or N

Tamper Resistant Seal was:
1) Present on Outer Package (Y) or N
2) Unbroken on Outer Package (Y) or N
3) Present on Sample (Y) or N
4) Unbroken on Sample (Y) or N

COC Record Present Upon Sample Rec't (Y) or N

Cooler Temp. 2.8 °C

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	9-12-03	0915

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"	ORIGINAL REWRITTEN		

Discrepancies Between Samples Labels and COC Record? Y or (N)

NOTES: # 79044 06744 62453

Duratek Federal Services

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page 1 of 1

Collector JG HOGAN	Contact/Requestor DEL MAR, RONALD A.	Tel. No. 376-2186 MSIN R3-32 FAX
SAF Number S03-111	Sample Origin PIT 9	Purchase Order/Charge Code 102024
Project Title Soil Characterization at Pit 9	Logbook # DFSNW-SAWS-H65	Ice Chest # SAWS101 Temp.
Shipped To (Lab) Lionville Lab	Method of Shipment FED EX	Bill of Lading/Air Bill No. 7904 0674 6453
Protocol RCRA	Data Turnaround 15 Days	Offsite Property No. PTR # 12497

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Perservative
K0N6V6		W	9/11/2003	0700	(3) 40 aGs	VOA (EPA8260A), (TCL)	HCL
K0N6V7		S	9/11/2003	1145	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V7		S	9/11/2003		(1) 120 aG	PAH by 8310 (With TCL's)	Cool to 4°C
K0N6V7		S	9/11/2003		(1) 250 aG	TPH-Diesel Range, WTPH-D	Cool to 4°C
K0N6V7		S	9/11/2003		(1) 40 aGs	VOA by 8260 (With TCL's)	Cool to 4°C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☐

List all known wastes.

SPECIAL INSTRUCTIONS Hold Time

E-Mail Summary Report to Debbie Roles within 15 days from receipt of the samples, followed up by the final hard copy within 30 days from receipt. Run WTPH-D extended into the heavey oil range. Run DI water trip blank for VOA only with no QC. Soil results shall be reported on a dry weight basis. Contact John Trechter (509)373-7046 in the event of any technical or production problems.

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JG HOGAN	JG Hogan		9-11-03 1400	FED EX			
[signature]			9.12.03 / 0915	[signature]			9.12-03 / 0915

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method e.g. Return to customer, per lab procedure, used in process. Disposed By Date/Time

DFNW-SS-010

LIONVILLE LABORATORY INCORPORATED
SAMPLE RECEIPT CHECKLIST

CLIENT: TNU Hanford

Purchase Order/Project:

DATE: 9-12-03

SAF# / SOW# / Release #: S03-111

Laboratory SDG #: 0309L448

NOTE: ALL ENTRIES MARKED "NO" MUST BE EXPLAINED IN THE COMMENT SECTION

1. Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
2. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
3. Airbill # recorded?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
4. All expected paperwork received (coc and other client specific: historical data, alpha/beta or other screening data as applicable)? (paperwork sealed in plastic bag and taped to inside lid)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
5. Sample containers are intact?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
7. All samples on coc received?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
8. All sample label information matches coc?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
9. Laboratory QC samples designated on coc? (QC stickers placed on bottles?)	☐ Yes	☐ No	☑ N/A	☐ see Comment #
10. Shipment meets LvL1 Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
11. Where applicable, bar code labels are affixed to coc?	☐ Yes	☐ No	☑ N/A	☐ see Comment #
12. coc signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
13. coc will be faxed or emailed to client?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
14. Project Manager/Client contacted concerning discrepancies? (name/date)	☐ Yes	☐ No	☑ N/A	☐ see Comment #

Cooler # / temp (°C) and Comments:

SAWS-10 / 2.8°

Laboratory Sample Custodian: [illegible]

Laboratory Project Manager:

RECORD COPY

DEC 2003
RECEIVED
SDLA

Lionville Laboratory, Inc.
DRO ANALYTICAL DATA PACKAGE FOR
TNUHANFORD S03-111 H2341

DATE RECEIVED: 09/12/03 LVL LOT # :0309L448

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
K0N6V7	002	S	03LE1142	09/11/03	09/15/03	10/01/03
K0N6V7	002 MS	S	03LE1142	09/11/03	09/15/03	10/01/03
K0N6V7	002 MSD	S	03LE1142	09/11/03	09/15/03	10/01/03
LAB QC:						
BLK	MB1	S	03LE1142	N/A	09/15/03	09/18/03
BLK	MB1 BS	S	03LE1142	N/A	09/15/03	09/18/03

10/1/3

LIONVILLE LABORATORY, INC.

Analytical Report

Client: TNU-HANFORD S03-111
LVL #: 0309L448
SDG/SAF #: H2341/S03-111

W.O. #: 11343-606-001-9999-00
Date Received: 09-12-03

DIESEL RANGE ORGANICS

One (1) soil sample was collected on 09-11-03.

The sample and its associated QC samples were extracted on 09-15-03 and analyzed according to Lionville Laboratory OPs based on SW846, 3rd Edition procedures on 09-18-03 and 10-01-03. The extraction procedure was based on method 3540 and the extracts were analyzed based on method 8015B. The analysis met the intent of method WTPH-D.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy.
2. All required holding times for extraction and analysis have been met.
3. The method blank was below the reporting limits for all target compounds.
4. All surrogate recoveries were within acceptance criteria.
5. The blank spike recovery was within acceptance criteria.
6. All matrix spike recoveries were within acceptance criteria.
7. The sample and its matrix QC required 5-fold instrument dilutions due to the high concentrations of non-target analytes. Reporting limits have been adjusted to reflect the necessary dilutions.
8. All initial calibrations associated with this data set were within acceptance criteria.
9. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

10/14/03
Date

pef\r:\group\data\dro\mu hanford\09L-448.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 8 pages.

GLOSSARY OF DIESEL RANGE ORGANICS DATA

DATA QUALIFIERS

U = Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).

J = Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.

E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

I = Interference.

ABBREVIATIONS

BS = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.

BSD = Indicates blank spike duplicate.

MS = Indicates matrix spike.

MSD = Indicates matrix spike duplicate.

DL = Indicates that recoveries were not obtained because the extract had to be diluted for analysis.

NA = Not Applicable.

DF = Dilution Factor.

NR = Not Required.

SP = Indicates Spiked Compound.

GLOSSARY OF DIESEL RANGE ORGANICS DATA

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

C = This flag applies to a compound that has been confirmed by GC/MS.

Lionville Laboratory, Inc.
DIESEL RANGE ORGANICS BY GC

Report Date: 10/09/03 12:20

RFW Batch Number: 0309L448 Client: TNUHANFORD S03-111 H2341 Work Order: 11343606001 Page: 1

	Cust ID:	K0N6V7	K0N6V7	K0N6V7	BLK	BLK BS
Sample Information	RFW#:	002	002 MS	002 MSD	03LE1142-MB1	03LE1142-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	5.00	5.00	5.00	1.00	1.00
	Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
p-Terphenyl		77 %	115 %	65 %	75 %	59 %
Diesel Range Organics		27 J	84 %	57 %	12.0 U	72 %
Motor Oil		180	190	140	12.0 U	12.0 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Lionville Laboratory Use Only

0309L448

Custody Transfer Record/Lab Work Request Page ___

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LIONVILLE LABORATORY INC.

Client: TNU Hanford S03-111

Est. Final Proj. Sampling Date: ___

Project #: 11343-606-001-9999-00

Project Contact/Phone #: ___

Lionville Laboratory Project Manager: Orlette Johnson

QC: SPEC Del: STD TAT: 15 days

Date Rec'd: 9-12-03 Date Due: 9-27-03

		A-C				D					E					
Refrigerator #		1				4					4					
#/Type Container	Liquid	3g														
	Solid	1g				1g					1g					
Volume	Liquid	40														
	Solid	40				120					1250					
Preservatives		HCl				—					—					
ANALYSES REQUESTED		ORGANIC: VOA	BNA	Pest/PCB	Herb	PAH			INORG: Metal	CN	TPH					
Lionville Laboratory Use Only		0624H				08310					ODRO					
Matrix	Date Collected	Time Collected														
W	9-11-03	0700	X													
S	1	1145	X			X					X					

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected
C01	KON6V6			W	9-11-03	0700
C02	KON6V7			S	1	1145

Special Instructions: SAF # S03-111

Rem Matrix QC

DATE/REVISIONS:
1. ___
2. ___
3. ___
4. ___
5. ___
6. ___

Lionville Laboratory Use Only

Samples were:
1) Shipped ✓ or Hand Delivered ___
Airbill # ___
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Samples Properly Preserved Y or N
5) Received Within Holding Times Y or N

Tamper Resistant Seal was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N
Cooler Temp. 2.8 °C

Relinquished by	Received by	Date	Time
[signature]	[signature]	9-12-03	0915

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"	ORIGINAL REWRITTEN		

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES: # 7904 0674 6453

Duratek Federal Services

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: JG Hogan	Contact/Requestor: DEL MAR, RONALD A.	Tel. No. 376-2186 MSIN R3-32 FAX
SAF Number: S03-111	Sample Origin: PIT 9	Purchase Order/Charge Code: 102024
Project Title: Soil Characterization at Pit 9	Logbook #: DFSNW-SAWS-465	Ice Chest #: SAWS101 Temp.
Shipped To (Lab): Lionville Lab	Method of Shipment: FED EX	Bill of Lading/Air Bill No. 7904 0674 6453
Protocol: RCRA	Data Turnaround: 15 Days	Offsite Property No. PTR # 12497

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Perservative
K0N6V6		W	9/11/2003	0700	(3) 40 aGs	VOA (EPA8260A), (TCL)	HCL
K0N6V7		S	9/11/2003	1145	(1) 20 P	Activity Scan (Lab Specific)	None
K0N6V7		S	9/11/2003		(1) 120 aG	PAH by 8310 (With TCL's)	Cool to 4°C
K0N6V7		S	9/11/2003		(1) 250 aG	TPH-Diesel Range, WTPH-D	Cool to 4°C
K0N6V7		S	9/11/2003	✓	(1) 40 aGs	VOA by 8260 (With TCL's)	Cool to 4°C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☐

List all known wastes.

SPECIAL INSTRUCTIONS Hold Time

E-Mail Summary Report to Debbie Roles within 15 days from receipt of the samples, followed up by the final hard copy within 30 days from receipt. Run WTPH-D extended into the heavey oil range. Run DI water trip blank for VOA only with no QC. Soil results shall be reported on a dry weight basis. Contact John Trechter (509)373-7046 in the event of any technical or production problems.

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
JG Hogan / JG Hogan	9-11-03 1400	FED EX	
[illegible]	9.12.03 1091.5	[illegible]	9.12.03 1091.5

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method e.g. Return to customer, per lab procedure, used in process. Disposed By Date/Time

DFNW-SS-010

LIONVILLE LABORATORY INCORPORATED
SAMPLE RECEIPT CHECKLIST

CLIENT: TNU Hanford

Purchase Order/Project:

DATE: 9-12-03

SAF# / SOW# / Release #: S03-111

Laboratory SDG #: 03091448

NOTE: ALL ENTRIES MARKED "NO" MUST BE EXPLAINED IN THE COMMENT SECTION

1. Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
2. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
3. Airbill # recorded?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
4. All expected paperwork received (coc and other client specific: historical data, alpha/beta or other screening data as applicable)? (paperwork sealed in plastic bag and taped to inside lid)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
5. Sample containers are intact?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
7. All samples on coc received?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
8. All sample label information matches coc?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
9. Laboratory QC samples designated on coc? (QC stickers placed on bottles?)	☐ Yes	☐ No	☑ N/A	☐ see Comment #
10. Shipment meets LvLI Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
11. Where applicable, bar code labels are affixed to coc?	☐ Yes	☐ No	☑ N/A	☐ see Comment #
12. coc signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
13. coc will be faxed or emailed to client?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
14. Project Manager/Client contacted concerning discrepancies? (name/date)	☐ Yes	☐ No	☑ N/A	☐ see Comment #

Cooler # / temp (°C) and Comments:

SAWS-10 / 2.8°

Laboratory Sample Custodian:

Laboratory Project Manager:

Appendix 3

MTCAStat Reports

DATA	ID
1360	1
1160	2
472	3
1820	4
1280	5
1190	6
1740	7
1480	8
1350	9
1350	10
1870	11

MTCAStat 97 Site Module

Number of samples		Uncensored values	
Uncensored	11	Mean	1370.182
Censored		Lognormal mean	1395.606
Detection limit or PQL		Std. devn.	386.446
Method detection limit		Median	1350
TOTAL	11	Min.	472
ENTER DATA		Max	1870

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: **0.729**

Normal distribution? r-squared is: **0.880**

Recommendations:

Reject lognormal distribution.

W value is 0.7544. This is less than the tabled value of 0.85

Assume normal distribution.

W value is 0.8939. This exceeds the tabled value of 0.85

Upper Confidence Limit (UCL)

UCL (based on t-statistic) is 1581.31206383026

Paste values

Sort data

Calculate UCL

Lognormal

Normal

Neither

Clear messages

Clear all

Histogram

5 10 20

Create report

Sample size

Finished

Exit MTCA*Stat*

WIDS Site 600-278 Total Petroleum Hydrocarbon (Motor Oil Range) Analyses from Sampling on 9/11/03

DATA	ID
130	1
130	2
130	3
120	4
130	5
160	6
120	7
110	8
130	9
100	10
130	11

MTCAStat 97 Site Module

Number of samples		Uncensored values	
Uncensored	11	Mean	126.364
Censored		Lognormal mean	126.443
Detection limit or PQL		Std. devn.	15.015
Method detection limit		Median	130
TOTAL	11	Min.	100
ENTER DATA		Max	160

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: **0.839**

Normal distribution? r-squared is: **0.824**

Recommendations:

Assume lognormal distribution.

W value is 0.8694. This exceeds the tabled value of 0.85

Upper Confidence Limit (UCL)

UCL (Land's method) is 135.233918155494

Paste values

Sort data

Calculate UCL

Lognormal

Normal

Neither

Finished

Exit MTCAStat

Clear messages

Clear all

Histogram

5 10 20

Create report

Sample size