

**DOERMOTC – 61008**

**BP AMOCO REFINERY:  
SOIL TREATABILITY TEST**

**Final Report for the Period of March 1, 2003 – April 30, 2003**

**Date Completed: November 16, 2004**

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**Prepared for the United States Department of Energy  
Office of Fossil Energy**

**Work performed under Rocky Mountain Oilfield Testing Center  
(RMOTC) CRADA 2003-034**

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## **Abstract**

BP Amoco owns and continues to be responsible for the former refinery properties in Casper, Wyoming. The company cannot afford to conduct a cleanup that is not fully protective of human health and the environment. BP Amoco is committed to applying the best available science and engineering to all of its property investigation and cleanup work. As part of that commitment, the company is installing world-class containment and treatment systems, and it has proposed conducting a more extensive investigation than has ever been done in the state of Wyoming. The former refinery site is an ideal Brownfields site because it offers the opportunity for a fully protective and timely cleanup of important land that can and should be returned to productive use in the near future. The open public process also creates numerous opportunities for citizens to get involved. The recently adopted community Reuse Plan reflects the efforts of many citizens who got involved and helped to create a shared vision for future use of the reclaimed refinery properties. BP will continue to work to make their Reuse Plan a reality.

The surfactants selected for this bench test desorb or strip the hydrocarbon from the soil particles during the emulsification process. During the desorption process it is possible that the Total Petroleum Hydrocarbons (TPH) levels will increase shortly after application. This is due to the contaminant emulsifying off the soil particle and increasing the total recoverable hydrocarbon. This allows the hydrocarbon, in the pump and treat process, to become mobile, and remain mobile in the water phase. The hydrocarbons are carried in the water phase to the recovery wells where it can be removed. This testing compares the pump and treat technology without enhancement with the addition of the selected surfactants to capture and if possible degrade more hydrocarbons from the soil matrix.

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## Introduction

The effectiveness of bioremediation in degrading contaminants is dependent on many variables, including the type and concentration of the contaminants present, oxygen supply, moisture content, nutrient supply, pH, temperature, and the availability of the target compounds to the microorganism. In bioremediation projects, shortly after the Total Petroleum Hydrocarbons (TPH) increase, there will be a dramatic decrease in the TPH levels. This is indicative of the encapsulation process common to most surfactant or surfactant based products.

The procedures detailed in this report are based on earlier testing conducted by the Rocky Mountain Oilfield Testing Center (RMOTC). RMOTC used soil samples obtained from the “smear zone” at the former BP Amoco Refinery Site. The bench test was conducted onsite at the Naval Petroleum Reserve No. 3. Pretreatment composite samples were collected from each test vessel to establish baseline conditions. The soil material was treated topically with specific applications rates determined by each vendor for individual product. The soils were completely saturated throughout the duration of the test.

The primary contaminants treated were petroleum hydrocarbon contaminated soils excavated from the Casper BP Amoco Refinery Site. The soils were characterized as sandy to sandy loam with an average bulk density of 1.3.

The analyses parameters for this test were important to demonstrate and document key functions of each vendor’s technology. (1) A general presence of petroleum hydrocarbons should be established using a test method widely accepted by most state regulatory agencies. (2) Test for specific hydrocarbons, in particular those longer chain hydrocarbon chains (C<sub>10</sub>-C<sub>28</sub>). (3) Test for those compounds that represent a risk to public health and the environment because they are relatively soluble in water and can diffuse rapidly once introduced into an aquifer (volatile organic compounds).

EPA Test Method 418.1, Total Petroleum Hydrocarbons (TPH) is widely used as a general measure of the presence of crude oil or petroleum product in water and soils. TPH is defined as the measurable amount of petroleum-based hydrocarbon in an environmental media. While TPH provides an overall concentration of petroleum

hydrocarbons in a medium, it is not a direct indicator of the risk. Other analysis or information should be used to relate TPH concentrations to risk.

EPA Method 8015 Modified reports the concentration of purgeable and extractable hydrocarbons, which are also sometimes referred to as gasoline and diesel range organics (i.e., GRO and DRO). Purgeable hydrocarbons are measured by purge-and-trap gas chromatography (GC) analysis using a flame ionization detector (FID), while the extractable hydrocarbons are analyzed by GC following extraction with a solvent and subsequent concentration of the extract by evaporation. While more detailed information is generated by this method (e.g., GC chromatograms); the results are most frequently reported as single numbers for purgeable and extractable hydrocarbons. For the purposes of this report, DRO measurements are given as a quantitative value.

EPA Method 8260 measures volatile organic compounds such as BTEX chemicals (Benzene, Toluene, Ethylbenzene, and Xylenes). These are volatile monoaromatic hydrocarbons. Together they are considered one of the major causes of environmental pollution because of widespread occurrences of leakage from underground petroleum storage tanks and spills at petroleum production wells, refineries, pipelines, and distribution terminals. The results of the BTEX analysis provide important documentation that the selected products effectively reduce the presence of these water soluble compounds.

The surfactants selected for this bench test are intended to desorb or strip the hydrocarbon from the soil particles during the emulsification process. During the desorption process it is possible that the TPH levels will increase shortly after application. This is due to the contaminant emulsifying off the soil particle and increasing the total recoverable hydrocarbon. This allows the hydrocarbon, in the pump and treat process, to become mobile and remain mobile in the water phase. The hydrocarbon is carried in the water phase to the recovery wells where it can be removed. This testing compares the pump and treat technology, without enhancement with the addition of the selected surfactants to capture and if possible degrade more hydrocarbons from the soil matrix.

## **Materials and Methods**

### **Materials**

Four 35-gallon plastic storage crates were modified to serve as test vessels. Each storage crate was fitted with a Plexiglas™ bridge to separate the soil layer from the leachate. The Plexiglas™ was drilled with twenty-four 3/8-inch holes. Mesh screen material was placed on top of the Plexiglas™ and a fine layer of gravel was placed on top of the bridging screen material in each tank. The storage crates were fitted with a three-quarter inch drain system.

Chemical injection pumps were used to pump fluid from the 55-gallon drum to the test vessels. Soaker hoses were oriented lengthwise across each test vessel to facilitate even distribution of solution atop the soil. 55-gallon drums were used to collect the leachate from the test vessels.

### **Methods**

A bulk density test was performed on the soil for each test vessel to determine percent sand, silt and clay values, and soil porosity (Table 1). Separate solutions were prepared with each vendor's product according to instructions provided by the vendor. The soil was completely saturated using a one-gallon container. This volume was recorded and used to help determine soil porosity. After saturating the soil column, composite samples of soil were pulled from the control tank and test tanks. The samples were homogenized and sent to a commercial laboratory for analysis. These baseline soil samples were analyzed for Diesel Range Organics, EPA Method 8015B Modified and Volatile Organic Compounds, EPA Method 8260.

Each day pump rates, the volume pumped from the solution drum and the volume collected in the leachate drum were recorded. Discharge flow rates were adjusted as necessary to maintain 1-2 day hydraulic retention time for each test vessel (Table 2).

Mid-test and post-test effluent samples were collected from the leachate drum using a water bailer. These samples were analyzed for Diesel Range Organics, EPA Method 8015B Modified and Volatile Organic Compounds, EPA Method 8260.

Using a soil sampler, composite soil samples were collected from each test vessel at the mid-test and post test points. Samples were analyzed for Diesel Range Organics, EPA Method 8015 Modified and Volatile Organic Compounds, EPA Method 8260.

Results for soil and water analyses are presented individually in corresponding tables for each test vessel.

## Discussion

According to the prescribed procedure, bulk density was determined by filling a quart jar approximately one-half full with soil and filling the remaining volume of the jar with distilled water. The contents of the jar were mixed by shaking for 60 seconds. The contents of the jar were allowed to settle for 24 hours. After settling, the percent sand, silt and clay were measured using a standard ruler. The measurements were entered into a program designed to calculate bulk density. Values are shown in Table 1. The program also determined soil type based on bulk density values.

<b>Table 1. Bulk Density Test</b>		
<b>Vessel</b>	<b>Bulk Density Value</b>	<b>Equivalent Soil Type</b>
<b>Control</b>	1.64	Sand/Sandy Loam
<b>Tub A</b>	1.47	Sand/Sandy Loam
<b>Tub B</b>	1.40	Sand/Sandy Loam
<b>Tub D</b>	<1.0	Sand

This test was designed to achieve flow rates and hydraulic conductivity similar to those experienced at the BP Amoco Refinery Site. Hydraulic retention times were targeted between one and two days. Average influent and effluent rates and calculated hydraulic retention times (HRT) are shown in Table 2.

<b>Table 2 Hydraulic Retention Times (HRT)</b>					
<b>Gallons Pumped In</b>	<b>Soil Volume</b>	<b>Flow (cm<sup>3</sup>/min)</b>	<b>HRT</b>	<b>HRT (hours)</b>	<b>HRT (days)</b>
Tub A	33,406.06	15.1	2212.32	36.87	1.54
Tub B	33,406.06	15.82	2111.63	35.19	1.47
Tub D	33,406.06	17.38	1922.09	32.03	1.33
Control	33,406.06	16.5	2024.60	33.74	1.41
<b>Gallons Discharged</b>	<b>Soil Volume</b>	<b>Flow (cm<sup>3</sup>/min)</b>	<b>HRT</b>	<b>HRT (hours)</b>	<b>HRT (days)</b>
Tub A	33,406.06	15.61	2140.04	35.66	1.49
Tub B	33,406.06	13.96	2392.98	39.88	1.66
Tub D	33,406.06	15.95	2094.42	34.90	1.45
Control	33,406.06	15.23	2193.43	36.55	1.52

Crude oil is typified by a broad molecular weight range usually reported between C4-C40. These are straight chain, branched-chain and cyclic aliphatics, mono- and polycyclic aromatic hydrocarbons (PAH) and various polar compounds such as sulfur, nitrogen and oxygen-containing hydrocarbons. Chromatographically, 20-70 percent of the individual compounds are resolved individual components, with the remaining hydrocarbons part of an unresolved complex mixture that typifies most crudes.

Light distillates are products in the C3 to C12 boiling point range. Typical of fresh light distillates is a predominance of light-end, resolved hydrocarbons. Automotive gasoline has considerable amounts of aromatic compounds, notably benzene and its various C1-, C2-, and C3-homologues: toluene, ethylbenzene, and o-, m-, and p-xylenes. In this test, concentrations of many of the volatile organic compounds (VOC's) were reduced to below detection limit. Others were not present in either soil or water samples.

For this report, only those compounds detected during analysis are reported for the control vessel and each individual vendor in corresponding tables. Full analysis reports can be found in Appendix A. It should be noted that this test did not quantify what percent of the volatile organic compounds volatilized and what percent were degraded by treatment.

## Control Test Vessel

The Control Vessel was set up to provide a standard by which performance of the other vessels could be compared. The contaminants of greatest interest include diesel fuel, 1, 2, 4 Trimethylbenzene, Benzene, Ethylbenzene and Xylene. Baseline analysis results show with the exception of Benzene, all of these contaminants were found in the soil collected from the smear zone at the BP Amoco refinery site (Table 3).

<b>Table 3. Control Test Vessel Analyses Results</b>						
		<b>Baseline Sampling Event 3/25/03</b>	<b>Mid-test Sampling Event 4/7/03</b>	<b>Final Sampling Event 4/17/03</b>		
<b>Matrix: Soil</b>						
Pore Volume			16	40.9		
<b>Parameter</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>% Change Mid-test</b>	<b>% Change Overall</b>
<b>GC Semi volatiles Total Extractable Hydrocarbons OA2</b>						
Diesel Fuel	mg/kg	1800	580	2500	68	(39)
<b>Organics Prep % Moisture Method: SM 2540G</b>						
% Moisture	%	7.70	15.50	12.30	(101)	(60)
<b>GS/MS Volatiles GC/MS VOCs in Soil by 8260 Method: EPA 8260</b>						
1,2,4-Trimethylbenzene	ug/kg	38000	8800	11000	77	71
1,3,5-Trimethylbenzene	ug/kg	4600	1300	1500	72	67
Ethylbenzene	ug/kg	890	679	679	24	24
m&p xylene	ug/kg	4700	900	1400	81	70
Napthalene	ug/kg	7100	1800	2600	75	63
n-Butylbenzene	ug/kg	4700	1200	1500	74	68
n-Propylbenzene	ug/kg	1000	679	679	32	32
p-Isopropyltoluene	ug/kg	1000	679	679	32	32
sec-Butylbenzene	ug/kg	1400	679	679	52	52
Xylene (Total)	ug/kg	4700	900	1400	81	70

Table 3 continued

		Baseline Sampling Event 3/25/03	Mid-test Sampling Event 4/3/03	Final Sampling Event 4/17/03		
Matrix: Water						
Parameter	Units	Results	Results	Results	% Change Mid-test	% Change Overall
<b>GC Semi volatiles</b>						
<b>Total Extractable Hydrocarbons OA2</b>						
Diesel Fuel	mg/l		4.90	4.90	NA	0.00
<b>GS/MS Volatiles</b>						
<b>GC/MS VOCs in Water by 8260</b>						
Method: EPA 8260	Units	Results	Results	Results	% Change Mid-test	% Change Overall
1,2,4-Trimethylbenzene	ug/l		4.90	4.90	NA	0.00
1,3,5-Trimethylbenzene	ug/l		4.90	5.60	NA	(14)
Ethylbenzene	ug/l		4.90	4.90	NA	0.00
m&p xylene	ug/l		4.90	4.90	NA	0.00
Napthalene	ug/l		19.90	21.00	NA	(6)
n-Butylbenzene	ug/l		4.90	4.90	NA	0.00
n-Propylbenzene	ug/l		4.90	4.90	NA	0.00
p-Isopropyltoluene	ug/l		4.90	4.90	NA	0.00
sec-Butylbenzene	ug/l		4.90	4.90	NA	0.00
Xylene (Total)	ug/l		31.90	32.00	NA	(0.31)

In Table 3, the results after 21 days of soil washing show Ethylbenzene levels were reduced by 24 percent, 1, 2, 4-Trimethylbenzene levels were reduced by 71 percent and Total Xylene levels were reduced in the soil matrix by 70 percent. Since these compounds are highly water soluble they should appear in the leachate collected from the discharge drain. The analysis reveals most of compounds are below detection limits (Table 3 and Appendix A).

#### Test Vessel "A" (ECOSAFE®)

ECOSAFE™ is a mixture of nutrients that blends natural sequestrants, surfactants, and emulsifying agents. It is 100% biodegradable, is not harmful to marine/aquatic life and safely treats and degrades organic based contaminants. ECOSAFE™ uses a reduction-

oxidation reaction to degrade the targeted organic compound. This reaction reduces the target compound to nitrates, oxygen, carbon dioxide and water. Another important aspect of this technology is the simultaneous treatment of the contaminated soil and ground water. The ECOSAFE™ solution penetrates into the soil. The solution emulsifies and degrades the organic compounds by breaking them up into suspended particles. These particles repel each other thereby changing the molecular structure of the organic compound. The compound in effect becomes water-soluble. The result is a mixture of dissolved oxygen, carbon dioxide, and nitrates using the hydrogen from water as a catalytic agent. Results for soil and water analysis are presented in Table 4.

The ECOSAFE® solution was applied topically to the soil at rates of 100:1, 500:1, 1000:1 and 2000:1.

**Table 4. Test Vessel “A” (ECOSAFE®)**

		Baseline Sampling Event 3/25/03	Mid-test Sampling Event 4/3/03	Final Sampling Event 4/17/03		
<b>Vessel A</b>						
<b>Matrix: Soil</b>						
Pore Volumes			14.6	37.4		
<b>Parameter</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>% Change Mid-test</b>	<b>% Change Overall</b>
<b>GC Semi volatiles</b>						
<b>Total Extractable Hydrocarbons OA2</b>						
(A) Diesel Fuel	mg/kg	2600	1100	1800	50	31
<b>Organics Prep</b>						
<b>% Moisture</b>						
<b>Method: SM 2540G</b>						
(A) % Moisture	%	9.70	15.70	18.90	62	(95)
<b>GS/MS Volatiles</b>						
<b>GC/MS VOCs in Soil by 8260</b>						
<b>Method: EPA 8260</b>						
(A) 1,2,4-Trimethylbenzene	ug/kg	58000	24000	12000	59	79
(A)-1,3,5-Trimethylbenzene	ug/kg	6500	3100	1600	52	75
(A) Ethylbenzene	ug/kg	5000	3300	1700	49	66
(A) Isopropylbenzene (Cumene)	ug/kg	2000	1200	820	40	59

(A) m&p xylene	ug/kg	9700	5300	2600	45	73
(A) Napthalene	ug/kg	13000	6400	2700	51	79
(A) n-Butylbenzene	ug/kg	7700	3700	2300	52	70
(A) n-Propylbenzene	ug/kg	6000	3800	2200	37	63
(A) p-Isopropyltoluene	ug/kg	1400	689	490	51	65
(A) sec-Butylbenzene	ug/kg	2300	1200	780	48	66
(A) Xylene (Total)	ug/kg	9700	5300	3500	45	64

Table 4 continued

		<b>Baseline Sampling Event 3/25/03</b>	<b>Mid-test Sampling Event 4/3/03</b>	<b>Final Sampling Event 4/17/03</b>		
<b>Matrix: Water</b>						
<b>Parameter</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>% Change Overall</b>
<b>GC Semi volatiles Total Extractable Hydrocarbons OA2</b>						
Diesel Fuel	mg/l	NM	0.39	7.90	NA	95
<b>GS/MS Volatiles GC/MS VOCs in Water by 8260 Method: EPA 8260</b>						
(A) 1,2,4-Trimethylbenzene	ug/l	NM	660.00	110.00	NA	83
(A) 1,3,5-Trimethylbenzene	ug/l	NM	100.00	13.00	NA	87
(A) Benzene	ug/l	NM	12.00	4.90	NA	59
(A) Ethylbenzene	ug/l	NM	150.00	30.00	NA	80
(A) m&p xylene	ug/l	NM	300.00	55.00	NA	82
(A) Isopropylbenzene (Cumene)	ug/l	NM	28.00	5.30	NA	81
(A) Napthalene	ug/l	NM	120.00	36.00	NA	70
(A) n-Butylbenzene	ug/l	NM	75.00	4.90	NA	94
(A) n-Propylbenzene	ug/l	NM	87.00	13.00	NA	85
(A) p-Isopropyltoluene	ug/l	NM	16.00	4.90	NA	69
(A) sec-Butylbenzene	ug/l	NM	24.00	4.90	NA	80
(A) Xylene (Total)	ug/l	NM	300.00	55.00	NA	82
(A) Acetone	ug/l	NM	96.00	70.00	NA	27
(A) 2-Butanone (MEK)	ug/l	NM	26.00	9.90	NA	62

As seen in Table 4 above, changes from baseline sampling to final sampling event in the soil matrix for diesel fuel was 31 percent, 1,2,4-Trimethylbenzene was 79 percent, Ethylbenzene was 66 percent and Total Xylene was 64 percent. The Benzene compound was not reported in the soil analysis.

Similar total increases in the concentrations of the target compounds in the water phase in Table 4 reveal diesel fuel was 95 percent, 1,2,4 Trimethylbenzene was 83 percent, Ethylbenzene was 80 percent and Total Xylene levels were 82 percent. Test Vessel “B” (Gold Crew).

### **Gold Crew**

Western States BioSolve™ manufactures products for in-situ and ex-situ bioremediation projects and has the ability to desorb and emulsify the hydrocarbon in the substrate. When applied through injection wells, Gold Crew allows the microbes to metabolize the contaminants by stripping the hydrocarbons off the soil particles and emulsifying them into the pore space creating a large interfacial surface area. Gold Crew is a blend of water-based, biodegradable surfactants which were engineered as a clean-up and mitigation agent for use on hydrocarbon products.

Gold Crew does not cause or catalyze specific chemical reactions, nor does it contain any bacteria cultures. The basic principle is to emulsify the hydrocarbon into small encapsulated particles in a water/oxygen bearing solution. This process desorbs the hydrocarbon molecules from the soil particles and allows the bacteria to rapidly metabolize the contaminant. Results for soil and water analysis are presented in Table 5.

Laboratory results for Gold Crew in soil and water matrices are shown in Table 5. Gold Crew was applied topically to the soil at 2% and 1% concentrations.

**Table 5. Test Vessel "B" (Gold Crew)**

<b>Vessel B</b>						
<b>Matrix: Soil</b>						
		<b>Baseline Sampling Event 3/25/03</b>	<b>Mid-test Sampling Event 4/3/03</b>	<b>Final Sampling Event 4/17/03</b>		
Pore Volumes			15.3	39.2		
<b>Parameter</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>% Change Mid-test</b>	<b>% Change Overall</b>
<b>GC Semi volatiles</b>						
<b>Total Extractable Hydrocarbons OA2</b>						
Diesel Fuel	mg/kg	2900	690	210	76	93
<b>Organics Prep</b>						
<b>% Moisture</b>						
<b>Method: SM 2540G</b>						
% Moisture	%	6.20	4.40	5.60	(27.27)	9.68
<b>GS/MS Volatiles</b>						
<b>GC/MS VOCs in Soil by 8260</b>						
<b>Method: EPA 8260</b>						
(B)1,2,4-Trimethylbenzene	ug/kg	180000	23000	5	99.98	100.00
(B) 1,3,5-Trimethylbenzene	ug/kg	21000	4000	19	99.53	99.91
(B) Ethylbenzene	ug/kg	40000	5100	5	99.90	99.99
(B) Isopropylbenzene (Cumene)	ug/kg	9200	1600	5	99.68	99.94
(B) m&p xylene	ug/kg	40000	6000	5	99.91	99.99
(B) Napthalene	ug/kg	32000	2700	11	99.60	99.97
(B) n-Butylbenzene	ug/kg	23000	3900	5	99.87	99.98
(B) n-Propylbenzene	ug/kg	39000	5200	5	99.90	99.99
(B) p-Isopropyltoluene	ug/kg	4000	770	5	99.32	99.87
(B) sec-Butylbenzene	ug/kg	7000	1400	5	99.63	99.93
(B) Xylene (Total)	ug/kg	41000	6000	5	99.91	99.99
(B) Dibromofluormethane (S)	%	95	96	97	(1.04)	(2.11)
<b>Matrix: Water</b>						
		<b>Baseline Sampling Event 3/25/03</b>	<b>Mid-test Sampling Event 4/3/03</b>	<b>Final Sampling Event 4/17/03</b>		
<b>Parameter</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>% Change Mid-t4est</b>	<b>% Change Overall</b>
<b>GC Semi volatiles</b>						
<b>Total Extractable Hydrocarbons OA2</b>						
Diesel Fuel			79.00	130.00	NA	(64.56)

Table 5 continued

**GS/MS Volatiles  
GC/MS VOCs in Water  
by 8260**

**Method: EPA 8260**

(B) 1,2,4-Trimethylbenzene	ug/l		13000.00	1500.00	NA	88.46
(B) 1,3,5-Trimethylbenzene	ug/l		1800.00	740.00	NA	58.89
(B) Benzene	ug/l		190.00	24.90	NA	86.89
(B) Ethylbenzene	ug/l		1700.00	24.90	NA	98.54
(B) m&p xylene	ug/l		4200.00	520.00	NA	87.62
(B) Isopropylbenzene (Cumene)	ug/l		610.00	65.00	NA	89.34
(B) Napthalene	ug/l		4100.00	1700.00	NA	58.54
(B) n-Butylbenzene	ug/l		1900.00	24.90	NA	98.69
(B) n-Propylbenzene	ug/l		1700.00	25.00	NA	98.53
(B) p-Isopropyltoluene	ug/l		340.00	160.00	NA	52.94
(B) sec-Butylbenzene	ug/l		490.00	210.00	NA	57.14
(B) Xylene (Total)	ug/l		4200.00	520.00	NA	87.62
(B) Acetone	ug/l		3900.00	24000.00	NA	(515.38)
(B) 2-Butanone (MEK)	ug/l		49.90	49.90	NA	0.00
(B) 1,2-Dichloroethane-d4 (S)	ug/l		24.90	24.90	NA	0.00
(B) Dibromofluormethane (S)	%		97.00	98.00	NA	(1.03)
(B) Toluene-d8 (S)	%		85.00	101.00	NA	(18.82)
(B) 4-Bromofluorobenzene (S)	%		82.00	85.00	NA	(3.66)

Laboratory analysis shown in Table 5 reveals dramatic decreases in the concentrations of diesel fuel, 1, 2, 4 Trimethylbenze, Ethylbenzene and Xylene levels in the soil. Similarly, levels of these contaminants were higher in the leachate recovered from Test Vessel B compared to Test Vessel A, Control Vessel.

**Test Vessel “D” (MicroSolv™)**

MicroSolv™ is a synergetic, biodegradable, nontoxic surfactant blended with nutrients. The agent remains active for up to fourteen (14) days. Upon application MicroSolv™ removes any volatile vapor fractions on contact. Because of this, air monitoring is not normally required during treatment. MicroSolv™ encapsulates the petroleum hydrocarbon mass as microscopic droplets, which increases the contaminant’s solubility and bioavailability to be metabolized by indigenous bacteria. Simultaneously, the growth of microbial colonies is stimulated and proceeds at accelerated rates. Results for soil and

water analysis are presented in Table 6. The MicroSolv solution was applied topically to the soil at concentrations of 5% and 1% respectively.

**Table 6. Test Vessel "D" (MicroSolv)**

		Baseline Sampling Event 3/25/03	Mid-test Sampling Event 4/3/03	Final Sampling Event 4/17/03		
<b>Matrix: Soil</b>						
Pore Volumes			16.8	43.1		
<b>Parameter</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>% Change Mid-test</b>	<b>% Change Overall</b>
<b>GC Semi volatiles</b>						
<b>Total Extractable Hydrocarbons</b>						
<b>OA2</b>						
Diesel Fuel	mg/kg	820	1200	1500	(25.00)	(82.93)
<b>Organics Prep</b>						
<b>% Moisture</b>						
<b>Method: SM 2540G</b>						
% Moisture	%	13.00	16.70	14.50	13.17	(11.54)
<b>GS/MS Volatiles</b>						
<b>GC/MS VOCs in Soil by 8260</b>						
<b>Method: EPA 8260</b>						
1,2,4-Trimethylbenzene	ug/kg	4800	280	220	21.43	95.42
1,3,5-Trimethylbenzene	ug/kg	720	110	29	73.73	95.99
Ethylbenzene	ug/kg	290	6	29	(389.83)	90.03
Isopropylbenzene (Cumene)	ug/kg	720	6	29	(389.83)	95.99
m&p xylene	ug/kg	560	15	29	(92.67)	94.84
Napthalene	ug/kg	1700	26	58	(122.69)	96.59
n-Butylbenzene	ug/kg	580	6	29	(389.83)	95.02
n-Propylbenzene	ug/kg	360	6	29	(389.83)	91.97
p-Isopropyltoluene	ug/kg	720	40	29	27.75	95.99
sec-Butylbenzene	ug/kg	720	6	29	(389.83)	95.99
2-Hexanone	ug/kg	1400	180	580	(222.17)	58.58
Xylene (Total)	ug/kg	15	15	29	(92.67)	(92.67)
Dibromofluoromethane (S)	%	100	97	98	(1.03)	2.00
		Baseline Sampling Event 3/25/03		Final Sampling Event 4/17/03		
<b>Matrix: Water</b>						
<b>Parameter</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>% Change Mid-test</b>	<b>% Change Overall</b>
<b>GC Semi volatiles</b>						

Total Extractable Hydrocarbons OA2						
Diesel Fuel	Mg/l		0.39	7.90	NA	(1925.64)

Table 6 continued						
GS/MS						
Volatiles						
GC/MS VOCs in Water						
by 8260						
Method: EPA 8260						
1,2,4-Trimethylbenzene	ug/l		4.90	4.90	NA	0.00
1,3,5-Trimethylbenzene	ug/l		4.90	4.90	NA	0.00
Benzene	ug/l		4.90	4.90	NA	0.00
Ethylbenzene	ug/l		4.90	4.90	NA	0.00
m&p xylene	ug/l		4.90	4.90	NA	0.00
Isopropylbenzene (Cumene)	ug/l		4.90	4.90	NA	0.00
Napthalene	ug/l		9.90	4.90	NA	50.51
n-Butylbenzene	ug/l		4.90	4.90	NA	0.00
n-Propylbenzene	ug/l		4.90	4.90	NA	0.00
p-Isopropyltoluene	ug/l		4.90	4.90	NA	0.00
sec-Butylbenzene	ug/l		4.90	4.90	NA	0.00
Xylene (Total)	ug/l		4.90	4.90	NA	0.00
Acetone	ug/l		570.00	28.00	NA	95.09
2-Butanone (MEK)	ug/l		10.00	9.90	NA	1.00
1,2-Dichloroethane-d4 (S)	ug/l		4.90	4.90	NA	0.00

The soil analysis in Table 6 shows reduction in all the volatile organic compounds in the soil column. In the same table, laboratory analysis of the leachate reveals all levels were below the limit of detection.

## Summary

The RMOTC work was used as a screening tool to determine if any of the products tested could be used on a larger scale at the BP Refinery Site in Casper, WY. The contractor for BP Amoco (RETEC) will complete an in-house bench test on one or more of the products for further evaluation.

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## **Appendix A Laboratory Results**

Lab Sample No: 605963073 Project Sample Number: 6069132-004 Date Collected: 04/03/03 14:00  
Client Sample ID: TANK CONTROL Matrix: Water Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: 0A2 / 0A2								
Mineral Spirits	ND	mg/l	0.40	1.0	04/11/03 14:42	MIM			
Jet Fuel	ND	mg/l	0.40	1.0	04/11/03 14:42	MIM			
Kerosene	ND	mg/l	0.40	1.0	04/11/03 14:42	MIM			
Diesel Fuel	ND	mg/l	0.40	1.0	04/11/03 14:42	MIM	68334-30-5		
Fuel Oil	ND	mg/l	0.40	1.0	04/11/03 14:42	MIM	68334-30-5		
Motor Oil	ND	mg/l	0.40	1.0	04/11/03 14:42	MIM			
p-Terphenyl (S)	106	%		1.0	04/11/03 14:42	MIM	92-94-4		
n-Tetracosane (S)	90	%		1.0	04/11/03 14:42	MIM	646-31-1		
Date Extracted	04/08/03				04/08/03				

**GC/MS Volatiles**

GC/MS VOCs by 8260	Method: EPA 8260								
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-71-8		
Chloromethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	74-87-3		
Vinyl chloride	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-01-4		
Bromomethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	74-83-9		
Chloroethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-00-3		
Trichlorofluoromethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-69-4		
Methylene chloride	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-09-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	156-60-5		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-34-3		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	594-20-7		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	156-59-2		
Chloroform	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	67-66-3		
Bromochloromethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	74-97-5		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	71-55-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	56-23-5		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	563-58-6		
Benzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	71-43-2		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	107-06-2		
Trichloroethene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	79-01-6		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	78-87-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-27-4		
Dibromomethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	74-95-3		
Toluene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	108-88-3		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	79-00-5		

Date: 04/17/03

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Lab Sample No: 605963073      Project Sample Number: 6069132-004      Date Collected: 04/03/03 14:00  
Client Sample ID: TANK CONTROL      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Tetrachloroethene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	142-28-9		
Dibromochloromethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	106-93-4		
Chlorobenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	630-20-6		
Ethylbenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	100-41-4		
m&p-Xylene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME			
o-Xylene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	95-47-6		
Styrene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	100-42-5		
Bromoform	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	79-34-5		
Bromobenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	96-18-4		
n-Propylbenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	95-63-6		
sec-Butylbenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	98-06-6		
p-Isopropyltoluene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	106-46-7		
n-Butylbenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	87-68-3		
Naphthalene	ND	ug/l	10.	1.0	04/14/03 20:04	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	87-61-6		
Xylene (Total)	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	1330-20-7		
Acetone	ND	ug/l	20.	1.0	04/14/03 20:04	BME	67-64-1		
2-Butanone (MEK)	ND	ug/l	10.	1.0	04/14/03 20:04	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	10.	1.0	04/14/03 20:04	BME	108-10-1		
2-Hexanone	ND	ug/l	10.	1.0	04/14/03 20:04	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	1634-04-4		
Carbon disulfide	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	75-15-0		

Date: 04/17/03

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Lab Project Number: 6069132  
Client Project ID: RNOTC

Lab Sample No: 605963073      Project Sample Number: 6069132-004      Date Collected: 04/03/03 14:00  
Client Sample ID: TANK CONTROL      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,2-Dichloroethene (Total)	ND	ug/l	5.0	1.0	04/14/03 20:04	BME	540-59-0		
Dibromofluoromethane (S)	97	%		1.0	04/14/03 20:04	BME	1868-53-7		
Toluene-d8 (S)	100	%		1.0	04/14/03 20:04	BME	2037-26-5		
4-Bromofluorobenzene (S)	100	%		1.0	04/14/03 20:04	BME	460-00-4		

Date: 04/17/03

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Lab Sample No: 606004901      Project Sample Number: 6069673-004      Date Collected: 04/17/03 11:29  
Client Sample ID: TANK CONTROL      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/l	0.40	1.0	04/23/03 20:31	MIM			
Jet Fuel	ND	mg/l	0.40	1.0	04/23/03 20:31	MIM			
Kerosene	ND	mg/l	0.40	1.0	04/23/03 20:31	MIM			
Diesel Fuel	ND	mg/l	0.40	1.0	04/23/03 20:31	MIM	68334-30-5		
Fuel Oil	ND	mg/l	0.40	1.0	04/23/03 20:31	MIM	68334-30-5		
Motor Oil	ND	mg/l	0.40	1.0	04/23/03 20:31	MIM			
p-Terphenyl (S)	97	%		1.0	04/23/03 20:31	MIM	92-94-4		
n-Tetracosane (S)	96	%		1.0	04/23/03 20:31	MIM	646-31-1		
Date Extracted	04/23/03				04/23/03				

**GC/MS Volatiles**

GC/MS VOCs by 8260

Method: EPA 8260

Dichlorodifluoromethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-71-8		
Chloromethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	74-87-3		
Vinyl chloride	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-01-4		
Bromomethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	74-83-9		
Chloroethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-00-3		
Trichlorofluoromethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-69-4		
Methylene chloride	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-09-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	156-60-5		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-34-3		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	594-20-7		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	156-59-2		
Chloroform	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	67-66-3		
Bromochloromethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	74-97-5		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	71-55-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	56-23-5		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	563-58-6		
Benzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	71-43-2		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	107-06-2		
Trichloroethene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	79-01-6		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	78-87-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-27-4		
Dibromomethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	74-95-3		
Toluene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	108-88-3		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	79-00-5		

Date: 05/06/03

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Lab Project Number: 6069673  
 Client Project ID: BP-CASPER, WY

Lab Sample No: 606004901 Project Sample Number: 6069673-004 Date Collected: 04/17/03 11:29  
 Client Sample ID: TANK CONTROL Matrix: Water Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Tetrachloroethene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	142-28-9		
Dibromochloromethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	106-93-4		
Chlorobenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	630-20-6		
Ethylbenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	100-41-4		
m&p-Xylene	32.	ug/l	5.0	1.0	05/01/03 08:00	BME			
o-Xylene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	95-47-6		
Styrene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	100-42-5		
Bromoform	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	79-34-5		
Bromobenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	96-18-4		
n-Propylbenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	95-49-8		
1,3,5-Trimethylbenzene	5.6	ug/l	5.0	1.0	05/01/03 08:00	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	106-43-4		
1,2,4-Trimethylbenzene	37.	ug/l	5.0	1.0	05/01/03 08:00	BME	95-63-6		
sec-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	98-06-6		
p-Isopropyltoluene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	106-46-7		
n-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	87-68-3		
Naphthalene	21.	ug/l	10.	1.0	05/01/03 08:00	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	87-61-6		
Xylene (Total)	32.	ug/l	5.0	1.0	05/01/03 08:00	BME	1330-20-7		
Acetone	ND	ug/l	20.	1.0	05/01/03 08:00	BME	67-64-1		
2-Butanone (MEK)	ND	ug/l	10.	1.0	05/01/03 08:00	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	10.	1.0	05/01/03 08:00	BME	108-10-1		
2-Hexanone	ND	ug/l	10.	1.0	05/01/03 08:00	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	1634-04-4		
Carbon disulfide	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	75-15-0		

Date: 05/06/03

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### REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 606004901      Project Sample Number: 6069673-004      Date Collected: 04/17/03 11:29  
Client Sample ID: TANK CONTROL      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
1,2-Dichloroethene (Total)	ND	ug/l	5.0	1.0	05/01/03 08:00	BME	540-59-0		
Dibromofluoromethane (S)	106	%		1.0	05/01/03 08:00	BME	1868-53-7		
Toluene-d8 (S)	104	%		1.0	05/01/03 08:00	BME	2037-26-5		
4-Bromofluorobenzene (S)	101	%		1.0	05/01/03 08:00	BME	460-00-4		

### REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605963164      Project Sample Number: 6069132-012      Date Collected: 03/25/03 13:49  
Client Sample ID: BASELINE CONTROL      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: 0A2 / 0A2								
Mineral Spirits	ND	mg/kg	11.		1.1 04/08/03 07:17	MIM			
Jet Fuel	ND	mg/kg	11.		1.1 04/08/03 07:17	MIM			
Kerosene	ND	mg/kg	11.		1.1 04/08/03 07:17	MIM			
Diesel Fuel	1800	mg/kg	11.		1.1 04/08/03 07:17	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	11.		1.1 04/08/03 07:17	MIM	68334-30-5		
Motor Oil	ND	mg/kg	11.		1.1 04/08/03 07:17	MIM			
n-Tetracosane (S)	106	%			1.0 04/08/03 07:17	MIM	646-31-1		
p-Terphenyl (S)	99	%			1.0 04/08/03 07:17	MIM	92-94-4		
Date Extracted	04/07/03				04/07/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	7.7	%			1.0 04/08/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
1,1,1,2-Tetrachloroethane	ND	ug/kg	680		135	04/07/03 19:57	BME	630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	680		135	04/07/03 19:57	BME	71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	680		135	04/07/03 19:57	BME	79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	680		135	04/07/03 19:57	BME	79-00-5		
1,1-Dichloroethane	ND	ug/kg	680		135	04/07/03 19:57	BME	75-34-3		
1,1-Dichloroethene	ND	ug/kg	680		135	04/07/03 19:57	BME	75-35-4		
1,1-Dichloropropene	ND	ug/kg	680		135	04/07/03 19:57	BME	563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	680		135	04/07/03 19:57	BME	87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	680		135	04/07/03 19:57	BME	96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	680		135	04/07/03 19:57	BME	120-82-1		
1,2,4-Trimethylbenzene	38000	ug/kg	1400		271	04/08/03 13:13	BME	95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	680		135	04/07/03 19:57	BME	96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	680		135	04/07/03 19:57	BME	106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	680		135	04/07/03 19:57	BME	95-50-1		
1,2-Dichloroethane	ND	ug/kg	680		135	04/07/03 19:57	BME	107-06-2		
1,2-Dichloropropane	ND	ug/kg	680		135	04/07/03 19:57	BME	78-87-5		
1,3,5-Trimethylbenzene	4600	ug/kg	680		135	04/07/03 19:57	BME	108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	680		135	04/07/03 19:57	BME	541-73-1		
1,3-Dichloropropane	ND	ug/kg	680		135	04/07/03 19:57	BME	142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	680		135	04/07/03 19:57	BME	106-46-7		
2,2-Dichloropropane	ND	ug/kg	680		135	04/07/03 19:57	BME	594-20-7		

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Lab Sample No: 605963164 Project Sample Number: 6069132-012 Date Collected: 03/25/03 13:49  
Client Sample ID: BASELINE CONTROL Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
2-Chloroethylvinyl ether	ND	ug/kg	680	135	04/07/03 19:57	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	680	135	04/07/03 19:57	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	680	135	04/07/03 19:57	BME	106-43-4		
Benzene	ND	ug/kg	680	135	04/07/03 19:57	BME	71-43-2		
Bromobenzene	ND	ug/kg	680	135	04/07/03 19:57	BME	108-86-1		
Bromochloromethane	ND	ug/kg	680	135	04/07/03 19:57	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	680	135	04/07/03 19:57	BME	75-27-4		
Bromoform	ND	ug/kg	680	135	04/07/03 19:57	BME	75-25-2		
Bromomethane	ND	ug/kg	680	135	04/07/03 19:57	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	680	135	04/07/03 19:57	BME	56-23-5		
Chlorobenzene	ND	ug/kg	680	135	04/07/03 19:57	BME	108-90-7		
Chloroethane	ND	ug/kg	680	135	04/07/03 19:57	BME	75-00-3		
Chloroform	ND	ug/kg	680	135	04/07/03 19:57	BME	67-66-3		
Chloromethane	ND	ug/kg	680	135	04/07/03 19:57	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	680	135	04/07/03 19:57	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	680	135	04/07/03 19:57	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	680	135	04/07/03 19:57	BME	124-48-1		
Dibromomethane	ND	ug/kg	680	135	04/07/03 19:57	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	680	135	04/07/03 19:57	BME	75-71-8		
Ethylbenzene	890	ug/kg	680	135	04/07/03 19:57	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	680	135	04/07/03 19:57	BME	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/kg	680	135	04/07/03 19:57	BME	98-82-8		
m&p-Xylene	4700	ug/kg	680	135	04/07/03 19:57	BME			
Methylene chloride	ND	ug/kg	680	135	04/07/03 19:57	BME	75-09-2		
Naphthalene	7100	ug/kg	1400	135	04/07/03 19:57	BME	91-20-3		
n-Butylbenzene	4700	ug/kg	680	135	04/07/03 19:57	BME	104-51-8		
n-Propylbenzene	1000	ug/kg	680	135	04/07/03 19:57	BME	103-65-1		
o-Xylene	ND	ug/kg	680	135	04/07/03 19:57	BME	95-47-6		
p-Isopropyltoluene	1000	ug/kg	680	135	04/07/03 19:57	BME	99-87-6		
sec-Butylbenzene	1400	ug/kg	680	135	04/07/03 19:57	BME	135-98-8		
Styrene	ND	ug/kg	680	135	04/07/03 19:57	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	680	135	04/07/03 19:57	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	680	135	04/07/03 19:57	BME	127-18-4		
Toluene	ND	ug/kg	680	135	04/07/03 19:57	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	680	135	04/07/03 19:57	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	680	135	04/07/03 19:57	BME	10061-02-6		
Trichloroethene	ND	ug/kg	680	135	04/07/03 19:57	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	680	135	04/07/03 19:57	BME	75-69-4		
Vinyl chloride	ND	ug/kg	680	135	04/07/03 19:57	BME	75-01-4		

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Lab Project Number: 6069132  
Client Project ID: RMOTC

Lab Sample No: 605963164      Project Sample Number: 6069132-012      Date Collected: 03/25/03 13:49  
Client Sample ID: BASELINE CONTROL      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Acetone	ND	ug/kg	2700	135	04/07/03 19:57	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	1400	135	04/07/03 19:57	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1400	135	04/07/03 19:57	BME	108-10-1		
Carbon disulfide	ND	ug/kg	1400	135	04/07/03 19:57	BME	75-15-0		
2-Hexanone	ND	ug/kg	14000	135	04/07/03 19:57	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	680	135	04/07/03 19:57	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	680	135	04/07/03 19:57	BME	540-59-0		
Xylene (Total)	4700	ug/kg	680	135	04/07/03 19:57	BME	1330-20-7		
Dibromofluoromethane (S)	100	%		1.0	04/07/03 19:57	BME	1868-53-7		
Toluene-d8 (S)	103	%		1.0	04/07/03 19:57	BME	2037-26-5		
4-Bromofluorobenzene (S)	92	%		1.0	04/07/03 19:57	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	113	%		1.0	04/07/03 19:57	BME	17060-07-0		

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Lab Project Number: 6069132  
Client Project ID: RMOTC

Lab Sample No: 605963115 Project Sample Number: 6069132-008 Date Collected: 04/03/03 15:05  
Client Sample ID: TANK CONTROL Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	12.	1.2	04/08/03 05:05	MIM			
Jet Fuel	ND	mg/kg	12.	1.2	04/08/03 05:05	MIM			
Kerosene	ND	mg/kg	12.	1.2	04/08/03 05:05	MIM			
Diesel Fuel	580	mg/kg	12.	1.2	04/08/03 05:05	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	12.	1.2	04/08/03 05:05	MIM	68334-30-5		
Motor Oil	ND	mg/kg	12.	1.2	04/08/03 05:05	MIM			
n-Tetracosane (S)	107	%		1.0	04/08/03 05:05	MIM	646-31-1		
p-Terphenyl (S)	104	%		1.0	04/08/03 05:05	MIM	92-94-4		
Date Extracted	04/07/03				04/07/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	15.5	%		1.0	04/08/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,1,2-Tetrachloroethane	ND	ug/kg	740	148	04/12/03 21:36	BME		630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	740	148	04/12/03 21:36	BME		71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	740	148	04/12/03 21:36	BME		79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	740	148	04/12/03 21:36	BME		79-00-5		
1,1-Dichloroethane	ND	ug/kg	740	148	04/12/03 21:36	BME		75-34-3		
1,1-Dichloroethene	ND	ug/kg	740	148	04/12/03 21:36	BME		75-35-4		
1,1-Dichloropropene	ND	ug/kg	740	148	04/12/03 21:36	BME		563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	740	148	04/12/03 21:36	BME		87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	740	148	04/12/03 21:36	BME		96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	740	148	04/12/03 21:36	BME		120-82-1		
1,2,4-Trimethylbenzene	8800	ug/kg	740	148	04/12/03 21:36	BME		95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	740	148	04/12/03 21:36	BME		96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	740	148	04/12/03 21:36	BME		106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	740	148	04/12/03 21:36	BME		95-50-1		
1,2-Dichloroethane	ND	ug/kg	740	148	04/12/03 21:36	BME		107-06-2		
1,2-Dichloropropane	ND	ug/kg	740	148	04/12/03 21:36	BME		78-87-5		
1,3,5-Trimethylbenzene	1300	ug/kg	740	148	04/12/03 21:36	BME		108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	740	148	04/12/03 21:36	BME		541-73-1		
1,3-Dichloropropane	ND	ug/kg	740	148	04/12/03 21:36	BME		142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	740	148	04/12/03 21:36	BME		106-46-7		
2,2-Dichloropropane	ND	ug/kg	740	148	04/12/03 21:36	BME		594-20-7		

Date: 04/17/03

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Lab Sample No: 605963115      Project Sample Number: 6069132-008      Date Collected: 04/03/03 15:05  
Client Sample ID: TANK CONTROL      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
2-Chloroethylvinyl ether	ND	ug/kg	740	148	04/12/03 21:36	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	740	148	04/12/03 21:36	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	740	148	04/12/03 21:36	BME	106-43-4		
Benzene	ND	ug/kg	740	148	04/12/03 21:36	BME	71-43-2		
Bromobenzene	ND	ug/kg	740	148	04/12/03 21:36	BME	108-86-1		
Bromochloromethane	ND	ug/kg	740	148	04/12/03 21:36	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	740	148	04/12/03 21:36	BME	75-27-4		
Bromoform	ND	ug/kg	740	148	04/12/03 21:36	BME	75-25-2		
Bromomethane	ND	ug/kg	740	148	04/12/03 21:36	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	740	148	04/12/03 21:36	BME	56-23-5		
Chlorobenzene	ND	ug/kg	740	148	04/12/03 21:36	BME	108-90-7		
Chloroethane	ND	ug/kg	740	148	04/12/03 21:36	BME	75-00-3		
Chloroform	ND	ug/kg	740	148	04/12/03 21:36	BME	67-66-3		
Chloromethane	ND	ug/kg	740	148	04/12/03 21:36	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	740	148	04/12/03 21:36	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	740	148	04/12/03 21:36	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	740	148	04/12/03 21:36	BME	124-48-1		
Dibromomethane	ND	ug/kg	740	148	04/12/03 21:36	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	740	148	04/12/03 21:36	BME	75-71-8		
Ethylbenzene	ND	ug/kg	740	148	04/12/03 21:36	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	740	148	04/12/03 21:36	BME	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/kg	740	148	04/12/03 21:36	BME	98-82-8		
m&p-Xylene	900	ug/kg	740	148	04/12/03 21:36	BME			
Methylene chloride	ND	ug/kg	740	148	04/12/03 21:36	BME	75-09-2		
Naphthalene	1800	ug/kg	1500	148	04/12/03 21:36	BME	91-20-3		
n-Butylbenzene	1200	ug/kg	740	148	04/12/03 21:36	BME	104-51-8		
n-Propylbenzene	ND	ug/kg	740	148	04/12/03 21:36	BME	103-65-1		
o-Xylene	ND	ug/kg	740	148	04/12/03 21:36	BME	95-47-6		
p-Isopropyltoluene	ND	ug/kg	740	148	04/12/03 21:36	BME	99-87-6		
sec-Butylbenzene	ND	ug/kg	740	148	04/12/03 21:36	BME	135-98-8		
Styrene	ND	ug/kg	740	148	04/12/03 21:36	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	740	148	04/12/03 21:36	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	740	148	04/12/03 21:36	BME	127-18-4		
Toluene	ND	ug/kg	740	148	04/12/03 21:36	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	740	148	04/12/03 21:36	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	740	148	04/12/03 21:36	BME	10061-02-6		
Trichloroethene	ND	ug/kg	740	148	04/12/03 21:36	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	740	148	04/12/03 21:36	BME	75-69-4		
Vinyl chloride	ND	ug/kg	740	148	04/12/03 21:36	BME	75-01-4		

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Lab Project Number: 6069132  
Client Project ID: RM0TC

Lab Sample No: 605963115      Project Sample Number: 6069132-008      Date Collected: 04/03/03 15:05  
Client Sample ID: TANK CONTROL      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Acetone	ND	ug/kg	3000	148	04/12/03 21:36	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	1500	148	04/12/03 21:36	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1500	148	04/12/03 21:36	BME	108-10-1		
Carbon disulfide	ND	ug/kg	1500	148	04/12/03 21:36	BME	75-15-0		
2-Hexanone	ND	ug/kg	15000	148	04/12/03 21:36	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	740	148	04/12/03 21:36	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	740	148	04/12/03 21:36	BME	540-59-0		
Xylene (Total)	900	ug/kg	740	148	04/12/03 21:36	BME	1330-20-7		
Dibromofluoromethane (S)	96	%		1.0	04/12/03 21:36	BME	1868-53-7		
Toluene-d8 (S)	98	%		1.0	04/12/03 21:36	BME	2037-26-5		
4-Bromofluorobenzene (S)	99	%		1.0	04/12/03 21:36	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	99	%		1.0	04/12/03 21:36	BME	17060-07-0		

## REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 606004943      Project Sample Number: 6069673-008      Date Collected: 04/17/03 11:52  
Client Sample ID: TANK CONTROL      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	11.		1.1 04/30/03 11:59	MIM			
Jet Fuel	ND	mg/kg	11.		1.1 04/30/03 11:59	MIM			
Kerosene	ND	mg/kg	11.		1.1 04/30/03 11:59	MIM			
Diesel Fuel	2500	mg/kg	11.		1.1 04/30/03 11:59	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	11.		1.1 04/30/03 11:59	MIM	68334-30-5		
Motor Oil	ND	mg/kg	11.		1.1 04/30/03 11:59	MIM			
n-Tetracosane (S)	115	%			1.0 04/30/03 11:59	MIM	646-31-1		
p-Terphenyl (S)	174	%			1.0 04/30/03 11:59	MIM	92-94-4	4	
Date Extracted	04/25/03				04/25/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	12.3	%			1.0 04/24/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,1,2-Tetrachloroethane	ND	ug/kg	710		142	04/28/03 12:08	BME	630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	710		142	04/28/03 12:08	BME	71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	710		142	04/28/03 12:08	BME	79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	710		142	04/28/03 12:08	BME	79-00-5		
1,1-Dichloroethane	ND	ug/kg	710		142	04/28/03 12:08	BME	75-34-3		
1,1-Dichloroethene	ND	ug/kg	710		142	04/28/03 12:08	BME	75-35-4		
1,1-Dichloropropene	ND	ug/kg	710		142	04/28/03 12:08	BME	563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	710		142	04/28/03 12:08	BME	87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	710		142	04/28/03 12:08	BME	96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	710		142	04/28/03 12:08	BME	120-82-1		
1,2,4-Trimethylbenzene	11000	ug/kg	710		142	04/28/03 12:08	BME	95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	710		142	04/28/03 12:08	BME	96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	710		142	04/28/03 12:08	BME	106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	710		142	04/28/03 12:08	BME	95-50-1		
1,2-Dichloroethane	ND	ug/kg	710		142	04/28/03 12:08	BME	107-06-2		
1,2-Dichloropropane	ND	ug/kg	710		142	04/28/03 12:08	BME	78-87-5		
1,3,5-Trimethylbenzene	1500	ug/kg	710		142	04/28/03 12:08	BME	108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	710		142	04/28/03 12:08	BME	541-73-1		
1,3-Dichloropropane	ND	ug/kg	710		142	04/28/03 12:08	BME	142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	710		142	04/28/03 12:08	BME	106-46-7		
2,2-Dichloropropane	ND	ug/kg	710		142	04/28/03 12:08	BME	594-20-7		

**REPORT OF LABORATORY ANALYSIS**

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Lab Sample No: 606004943      Project Sample Number: 6069673-008      Date Collected: 04/17/03 11:52  
Client Sample ID: TANK CONTROL      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
2-Chloroethylvinyl ether	ND	ug/kg	710	142	04/28/03 12:08	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	710	142	04/28/03 12:08	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	710	142	04/28/03 12:08	BME	106-43-4		
Benzene	ND	ug/kg	710	142	04/28/03 12:08	BME	71-43-2		
Bromobenzene	ND	ug/kg	710	142	04/28/03 12:08	BME	108-86-1		
Bromochloromethane	ND	ug/kg	710	142	04/28/03 12:08	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	710	142	04/28/03 12:08	BME	75-27-4		
Bromoform	ND	ug/kg	710	142	04/28/03 12:08	BME	75-25-2		
Bromomethane	ND	ug/kg	710	142	04/28/03 12:08	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	710	142	04/28/03 12:08	BME	56-23-5		
Chlorobenzene	ND	ug/kg	710	142	04/28/03 12:08	BME	108-90-7		
Chloroethane	ND	ug/kg	710	142	04/28/03 12:08	BME	75-00-3		
Chloroform	ND	ug/kg	710	142	04/28/03 12:08	BME	67-66-3		
Chloromethane	ND	ug/kg	710	142	04/28/03 12:08	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	710	142	04/28/03 12:08	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	710	142	04/28/03 12:08	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	710	142	04/28/03 12:08	BME	124-48-1		
Dibromomethane	ND	ug/kg	710	142	04/28/03 12:08	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	710	142	04/28/03 12:08	BME	75-71-8		
Ethylbenzene	ND	ug/kg	710	142	04/28/03 12:08	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	710	142	04/28/03 12:08	BME	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/kg	710	142	04/28/03 12:08	BME	98-82-8		
m&p-Xylene	1400	ug/kg	710	142	04/28/03 12:08	BME			
Methylene chloride	ND	ug/kg	710	142	04/28/03 12:08	BME	75-09-2		
Naphthalene	2600	ug/kg	1400	142	04/28/03 12:08	BME	91-20-3		
n-Butylbenzene	1500	ug/kg	710	142	04/28/03 12:08	BME	104-51-8		
n-Propylbenzene	ND	ug/kg	710	142	04/28/03 12:08	BME	103-65-1		
o-Xylene	ND	ug/kg	710	142	04/28/03 12:08	BME	95-47-6		
p-Isopropyltoluene	ND	ug/kg	710	142	04/28/03 12:08	BME	99-87-6		
sec-Butylbenzene	ND	ug/kg	710	142	04/28/03 12:08	BME	135-98-8		
Styrene	ND	ug/kg	710	142	04/28/03 12:08	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	710	142	04/28/03 12:08	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	710	142	04/28/03 12:08	BME	127-18-4		
Toluene	ND	ug/kg	710	142	04/28/03 12:08	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	710	142	04/28/03 12:08	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	710	142	04/28/03 12:08	BME	10061-02-6		
Trichloroethene	ND	ug/kg	710	142	04/28/03 12:08	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	710	142	04/28/03 12:08	BME	75-69-4		
Vinyl chloride	ND	ug/kg	710	142	04/28/03 12:08	BME	75-01-4		

Date: 05/06/03

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## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

Lab Sample No: 606004943      Project Sample Number: 6069673-008      Date Collected: 04/17/03 11:52  
Client Sample ID: TANK CONTROL      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Acetone	ND	ug/kg	2800	142	04/28/03 12:08	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	1400	142	04/28/03 12:08	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1400	142	04/28/03 12:08	BME	108-10-1		
Carbon disulfide	ND	ug/kg	1400	142	04/28/03 12:08	BME	75-15-0		
2-Hexanone	ND	ug/kg	14000	142	04/28/03 12:08	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	710	142	04/28/03 12:08	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	710	142	04/28/03 12:08	BME	540-59-0		
Xylene (Total)	1400	ug/kg	710	142	04/28/03 12:08	BME	1330-20-7		
Dibromofluoromethane (S)	98	%		1.0	04/28/03 12:08	BME	1868-53-7		
Toluene-d8 (S)	95	%		1.0	04/28/03 12:08	BME	2037-26-5		
4-Bromofluorobenzene (S)	94	%		1.0	04/28/03 12:08	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	100	%		1.0	04/28/03 12:08	BME	17060-07-0		

Date: 05/06/03

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### REPORT OF LABORATORY ANALYSIS

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Solid results are reported on a dry weight basis

Lab Sample No: 605963040 Project Sample Number: 6069132-001 Date Collected: 04/03/03 13:15  
Client Sample ID: TANK A Matrix: Water Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: 0A2 / 0A2								
Mineral Spirits	ND	mg/l	0.40	1.0	04/11/03 17:58	MIM			
Jet Fuel	ND	mg/l	0.40	1.0	04/11/03 17:58	MIM			
Kerosene	ND	mg/l	0.40	1.0	04/11/03 17:58	MIM			
Diesel Fuel	ND	mg/l	0.40	1.0	04/11/03 17:58	MIM	68334-30-5		
Fuel Oil	ND	mg/l	0.40	1.0	04/11/03 17:58	MIM	68334-30-5		
Motor Oil	ND	mg/l	0.40	1.0	04/11/03 17:58	MIM			
Total Petroleum Hydrocarbons	29.	mg/l	0.40	1.0	04/11/03 17:58	MIM			1
p-Terphenyl (S)	47	%		1.0	04/11/03 17:58	MIM	92-94-4		
n-Tetracosane (S)	48	%		1.0	04/11/03 17:58	MIM	646-31-1		2
Date Extracted	04/08/03			04/08/03					

**GC/MS Volatiles**

GC/MS VOCs by 8260	Method: EPA 8260								
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-71-8		
Chloromethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	74-87-3		
Vinyl chloride	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-01-4		
Bromomethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	74-83-9		
Chloroethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-00-3		
Trichlorofluoromethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-69-4		
Methylene chloride	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-09-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	156-60-5		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-34-3		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	594-20-7		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	156-59-2		
Chloroform	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	67-66-3		
Bromochloromethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	74-97-5		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	71-55-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	56-23-5		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	563-58-6		
Benzene	12.	ug/l	5.0	1.0	04/14/03 19:01	BME	71-43-2		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	107-06-2		
Trichloroethene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	79-01-6		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	78-87-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-27-4		
Dibromomethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	74-95-3		

Date: 04/17/03

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Lab Sample No: 605963040 Project Sample Number: 6069132-001 Date Collected: 04/03/03 13:15  
Client Sample ID: TANK A Matrix: Water Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Toluene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	108-88-3		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	79-00-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	142-28-9		
Dibromochloromethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	106-93-4		
Chlorobenzene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	630-20-6		
Ethylbenzene	150	ug/l	5.0	1.0	04/14/03 19:01	BME	100-41-4		
m&p-Xylene	300	ug/l	5.0	1.0	04/14/03 19:01	BME			
o-Xylene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	95-47-6		
Styrene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	100-42-5		
Bromoform	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-25-2		
Isopropylbenzene (Cumene)	28.	ug/l	5.0	1.0	04/14/03 19:01	BME	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	79-34-5		
Bromobenzene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	96-18-4		
n-Propylbenzene	87.	ug/l	5.0	1.0	04/14/03 19:01	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	95-49-8		
1,3,5-Trimethylbenzene	100	ug/l	5.0	1.0	04/14/03 19:01	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	106-43-4		
1,2,4-Trimethylbenzene	660	ug/l	50.	10.0	04/15/03 12:33	BME	95-63-6		
sec-Butylbenzene	24.	ug/l	5.0	1.0	04/14/03 19:01	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	98-06-6		
p-Isopropyltoluene	16.	ug/l	5.0	1.0	04/14/03 19:01	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	106-46-7		
n-Butylbenzene	75.	ug/l	5.0	1.0	04/14/03 19:01	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	87-68-3		
Naphthalene	120	ug/l	10.	1.0	04/14/03 19:01	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	87-61-6		
Xylene (Total)	300	ug/l	5.0	1.0	04/14/03 19:01	BME	1330-20-7		
Acetone	96.	ug/l	20.	1.0	04/14/03 19:01	BME	67-64-1		
2-Butanone (MEK)	26.	ug/l	10.	1.0	04/14/03 19:01	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	10.	1.0	04/14/03 19:01	BME	108-10-1		
2-Hexanone	ND	ug/l	10.	1.0	04/14/03 19:01	BME	591-78-6		

Date: 04/17/03

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**Pace Analytical Services, Inc.**  
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 Lenexa, KS 66219  
 Phone: 913.599.5665  
 Fax: 913.599.1759

Lab Project Number: 6069132  
 Client Project ID: RM0TC

Lab Sample No: 605963040      Project Sample Number: 6069132-001      Date Collected: 04/03/03 13:15  
 Client Sample ID: TANK A      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	1634-04-4		
Carbon disulfide	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	75-15-0		
1,2-Dichloroethene (Total)	ND	ug/l	5.0	1.0	04/14/03 19:01	BME	540-59-0		
Dibromofluoromethane (S)	100	%		1.0	04/14/03 19:01	BME	1868-53-7		
Toluene-d8 (S)	92	%		1.0	04/14/03 19:01	BME	2037-26-5		
4-Bromofluorobenzene (S)	84	%		1.0	04/14/03 19:01	BME	460-00-4	3	

Date: 04/17/03

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Solid results are reported on a dry weight basis

Lab Sample No: 606004877      Project Sample Number: 6069673-001      Date Collected: 04/17/03 11:11  
Client Sample ID: TANK A      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
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**GC Semivolatiles**

Total Extractable Hydrocarbons		Prep/Method: OA2 / OA2							
Mineral Spirits	ND	mg/l	8.0	20.0	04/30/03	12:46	MIM		
Jet Fuel	ND	mg/l	8.0	20.0	04/30/03	12:46	MIM		
Kerosene	ND	mg/l	8.0	20.0	04/30/03	12:46	MIM		
Diesel Fuel	ND	mg/l	8.0	20.0	04/30/03	12:46	MIM	68334-30-5	
Fuel Oil	ND	mg/l	8.0	20.0	04/30/03	12:46	MIM	68334-30-5	
Motor Oil	ND	mg/l	8.0	20.0	04/30/03	12:46	MIM		
Total Petroleum Hydrocarbons	30.	mg/l	8.0	20.0	04/30/03	12:46	MIM		1,2
p-Terphenyl (S)	78	µg		1.0	04/30/03	12:46	MIM	92-94-4	
n-Tetracosane (S)	66	µg		1.0	04/30/03	12:46	MIM	646-31-1	
Date Extracted	04/23/03				04/23/03				

**GC/MS Volatiles**

GC/MS VOCs by 8260		Method: EPA 8260							
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	75-71-8	
Chloromethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	74-87-3	
Vinyl chloride	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	75-01-4	
Bromomethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	74-83-9	
Chloroethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	75-00-3	
Trichlorofluoromethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	75-69-4	
Methylene chloride	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	75-09-2	
1,1-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	75-35-4	
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	156-60-5	
1,1-Dichloroethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	75-34-3	
2,2-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	594-20-7	
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	156-59-2	
Chloroform	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	67-66-3	
Bromochloromethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	71-55-6	
Carbon tetrachloride	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	56-23-5	
1,1-Dichloropropene	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	563-58-6	
Benzene	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	71-43-2	
1,2-Dichloroethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	107-06-2	
Trichloroethene	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	79-01-6	
1,2-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	78-87-5	
Bromodichloromethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	75-27-4	
Dibromomethane	ND	ug/l	5.0	1.0	05/01/03	14:30	BME	74-95-3	

**REPORT OF LABORATORY ANALYSIS**

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Lab Sample No: 606004877      Project Sample Number: 6069673-001      Date Collected: 04/17/03 11:11  
Client Sample ID: TANK A      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Toluene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	108-88-3		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	79-00-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	142-28-9		
Dibromochloromethane	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	106-93-4		
Chlorobenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	630-20-6		
Ethylbenzene	30.	ug/l	5.0	1.0	05/01/03 14:30	BME	100-41-4		
m&p-Xylene	55.	ug/l	5.0	1.0	05/01/03 14:30	BME			
o-Xylene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	95-47-6		
Styrene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	100-42-5		
Bromoform	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	75-25-2		
Isopropylbenzene (Cumene)	5.3	ug/l	5.0	1.0	05/01/03 14:30	BME	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	79-34-5		
Bromobenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	96-18-4		
n-Propylbenzene	13.	ug/l	5.0	1.0	05/01/03 14:30	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	95-49-8		
1,3,5-Trimethylbenzene	13.	ug/l	5.0	1.0	05/01/03 14:30	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	106-43-4		
1,2,4-Trimethylbenzene	110	ug/l	5.0	1.0	05/01/03 14:30	BME	95-63-6		
sec-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	98-06-6		
p-Isopropyltoluene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	106-46-7		
n-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	87-68-3		
Naphthalene	36.	ug/l	10.	1.0	05/01/03 14:30	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	87-61-6		
Xylene (Total)	55.	ug/l	5.0	1.0	05/01/03 14:30	BME	1330-20-7		
Acetone	70.	ug/l	20.	1.0	05/01/03 14:30	BME	67-64-1		
2-Butanone (MEK)	ND	ug/l	10.	1.0	05/01/03 14:30	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	10.	1.0	05/01/03 14:30	BME	108-10-1		
2-Hexanone	ND	ug/l	10.	1.0	05/01/03 14:30	BME	591-78-6		

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

Lab Sample No: 606004877      Project Sample Number: 6069673-001      Date Collected: 04/17/03 11:11  
Client Sample ID: TANK A      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	1634-04-4		
Carbon disulfide	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	75-15-0		
1,2-Dichloroethene (Total)	ND	ug/l	5.0	1.0	05/01/03 14:30	BME	540-59-0		
Dibromofluoromethane (S)	109	%		1.0	05/01/03 14:30	BME	1868-53-7		
Toluene-d8 (S)	108	%		1.0	05/01/03 14:30	BME	2037-26-5		
4-Bromofluorobenzene (S)	104	%		1.0	05/01/03 14:30	BME	460-00-4		

Comments : This sample had extensive foaming during the extraction process and the laboratory was required to reduce the extraction amount to 10ml instead of the normal 200ml. This caused elevated reporting limits.

Date: 05/06/03

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## REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605963123 Project Sample Number: 6069132-009 Date Collected: 03/25/03 16:01  
Client Sample ID: BASELINE A Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	11.		1.1 04/08/03 05:38	MIM			
Jet Fuel	ND	mg/kg	11.		1.1 04/08/03 05:38	MIM			
Kerosene	ND	mg/kg	11.		1.1 04/08/03 05:38	MIM			
Diesel Fuel	2600	mg/kg	11.		1.1 04/08/03 05:38	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	11.		1.1 04/08/03 05:38	MIM	68334-30-5		
Motor Oil	ND	mg/kg	11.		1.1 04/08/03 05:38	MIM			
n-Tetracosane (S)	104	%			1.0 04/08/03 05:38	MIM	646-31-1		
p-Terphenyl (S)	100	%			1.0 04/08/03 05:38	MIM	92-94-4		
Date Extracted	04/07/03				04/07/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	9.7	%			1.0 04/08/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
1,1,1,2-Tetrachloroethane		ND	ug/kg	690	138	04/07/03 18:24	BME	630-20-6		
1,1,1-Trichloroethane		ND	ug/kg	690	138	04/07/03 18:24	BME	71-55-6		
1,1,2,2-Tetrachloroethane		ND	ug/kg	690	138	04/07/03 18:24	BME	79-34-5		
1,1,2-Trichloroethane		ND	ug/kg	690	138	04/07/03 18:24	BME	79-00-5		
1,1-Dichloroethane		ND	ug/kg	690	138	04/07/03 18:24	BME	75-34-3		
1,1-Dichloroethene		ND	ug/kg	690	138	04/07/03 18:24	BME	75-35-4		
1,1-Dichloropropene		ND	ug/kg	690	138	04/07/03 18:24	BME	563-58-6		
1,2,3-Trichlorobenzene		ND	ug/kg	690	138	04/07/03 18:24	BME	87-61-6		
1,2,3-Trichloropropane		ND	ug/kg	690	138	04/07/03 18:24	BME	96-18-4		
1,2,4-Trichlorobenzene		ND	ug/kg	690	138	04/07/03 18:24	BME	120-82-1		
1,2,4-Trimethylbenzene	58000	ug/kg	2800	554	04/08/03 13:44	BME	95-63-6			
1,2-Dibromo-3-chloropropane		ND	ug/kg	690	138	04/07/03 18:24	BME	96-12-8		
1,2-Dibromoethane (EDB)		ND	ug/kg	690	138	04/07/03 18:24	BME	106-93-4		
1,2-Dichlorobenzene		ND	ug/kg	690	138	04/07/03 18:24	BME	95-50-1		
1,2-Dichloroethane		ND	ug/kg	690	138	04/07/03 18:24	BME	107-06-2		
1,2-Dichloropropane		ND	ug/kg	690	138	04/07/03 18:24	BME	78-87-5		
1,3,5-Trimethylbenzene	6500	ug/kg	690	138	04/07/03 18:24	BME	108-67-8			
1,3-Dichlorobenzene		ND	ug/kg	690	138	04/07/03 18:24	BME	541-73-1		
1,3-Dichloropropane		ND	ug/kg	690	138	04/07/03 18:24	BME	142-28-9		
1,4-Dichlorobenzene		ND	ug/kg	690	138	04/07/03 18:24	BME	106-46-7		
2,2-Dichloropropane		ND	ug/kg	690	138	04/07/03 18:24	BME	594-20-7		

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Lab Sample No: 605963123 Project Sample Number: 6069132-009 Date Collected: 03/25/03 16:01  
Client Sample ID: BASELINE A Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
2-Chloroethylvinyl ether	ND	ug/kg	690	138	04/07/03 18:24	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	690	138	04/07/03 18:24	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	690	138	04/07/03 18:24	BME	106-43-4		
Benzene	ND	ug/kg	690	138	04/07/03 18:24	BME	71-43-2		
Bromobenzene	ND	ug/kg	690	138	04/07/03 18:24	BME	108-86-1		
Bromochloromethane	ND	ug/kg	690	138	04/07/03 18:24	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	690	138	04/07/03 18:24	BME	75-27-4		
Bromoform	ND	ug/kg	690	138	04/07/03 18:24	BME	75-25-2		
Bromomethane	ND	ug/kg	690	138	04/07/03 18:24	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	690	138	04/07/03 18:24	BME	56-23-5		
Chlorobenzene	ND	ug/kg	690	138	04/07/03 18:24	BME	108-90-7		
Chloroethane	ND	ug/kg	690	138	04/07/03 18:24	BME	75-00-3		
Chloroform	ND	ug/kg	690	138	04/07/03 18:24	BME	67-66-3		
Chloromethane	ND	ug/kg	690	138	04/07/03 18:24	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	690	138	04/07/03 18:24	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	690	138	04/07/03 18:24	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	690	138	04/07/03 18:24	BME	124-48-1		
Dibromomethane	ND	ug/kg	690	138	04/07/03 18:24	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	690	138	04/07/03 18:24	BME	75-71-8		
Ethylbenzene	5100	ug/kg	690	138	04/07/03 18:24	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	690	138	04/07/03 18:24	BME	87-68-3		
Isopropylbenzene (Cumene)	2000	ug/kg	690	138	04/07/03 18:24	BME	98-82-8		
m&p-Xylene	9700	ug/kg	690	138	04/07/03 18:24	BME			
Methylene chloride	ND	ug/kg	690	138	04/07/03 18:24	BME	75-09-2		
Naphthalene	13000	ug/kg	1400	138	04/07/03 18:24	BME	91-20-3		
n-Butylbenzene	7700	ug/kg	690	138	04/07/03 18:24	BME	104-51-8		
n-Propylbenzene	6000	ug/kg	690	138	04/07/03 18:24	BME	103-65-1		
o-Xylene	ND	ug/kg	690	138	04/07/03 18:24	BME	95-47-6		
p-Isopropyltoluene	1400	ug/kg	690	138	04/07/03 18:24	BME	99-87-6		
sec-Butylbenzene	2300	ug/kg	690	138	04/07/03 18:24	BME	135-98-8		
Styrene	ND	ug/kg	690	138	04/07/03 18:24	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	690	138	04/07/03 18:24	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	690	138	04/07/03 18:24	BME	127-18-4		
Toluene	ND	ug/kg	690	138	04/07/03 18:24	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	690	138	04/07/03 18:24	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	690	138	04/07/03 18:24	BME	10061-02-6		
Trichloroethene	ND	ug/kg	690	138	04/07/03 18:24	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	690	138	04/07/03 18:24	BME	75-69-4		
Vinyl chloride	ND	ug/kg	690	138	04/07/03 18:24	BME	75-01-4		

Date: 04/17/03

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## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6069132  
Client Project ID: RM0TC

Lab Sample No: 605963123      Project Sample Number: 6069132-009      Date Collected: 03/25/03 16:01  
Client Sample ID: BASELINE A      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Acetone	ND	ug/kg	2800	138	04/07/03 18:24	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	1400	138	04/07/03 18:24	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1400	138	04/07/03 18:24	BME	108-10-1		
Carbon disulfide	ND	ug/kg	1400	138	04/07/03 18:24	BME	75-15-0		
2-Hexanone	ND	ug/kg	14000	138	04/07/03 18:24	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	690	138	04/07/03 18:24	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	690	138	04/07/03 18:24	BME	540-59-0		
Xylene (Total)	9700	ug/kg	690	138	04/07/03 18:24	BME	1330-20-7		
Dibromofluoromethane (S)	98	%		1.0	04/07/03 18:24	BME	1868-53-7		
Toluene-d8 (S)	101	%		1.0	04/07/03 18:24	BME	2037-26-5		
4-Bromofluorobenzene (S)	98	%		1.0	04/07/03 18:24	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	111	%		1.0	04/07/03 18:24	BME	17060-07-0		

Date: 04/17/03

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## REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605963081 Project Sample Number: 6069132-005 Date Collected: 04/03/03 14:42  
Client Sample ID: TANK A Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	12.	1.2	04/08/03 02:19	MIM			
Jet Fuel	ND	mg/kg	12.	1.2	04/08/03 02:19	MIM			
Kerosene	ND	mg/kg	12.	1.2	04/08/03 02:19	MIM			
Diesel Fuel	1100	mg/kg	12.	1.2	04/08/03 02:19	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	12.	1.2	04/08/03 02:19	MIM	68334-30-5		
Motor Oil	ND	mg/kg	12.	1.2	04/08/03 02:19	MIM			
n-Tetracosane (S)	106	%		1.0	04/08/03 02:19	MIM	646-31-1		
p-Terphenyl (S)	109	%		1.0	04/08/03 02:19	MIM	92-94-4		
Date Extracted	04/07/03				04/07/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	15.7	%		1.0	04/08/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,1,2-Tetrachloroethane	ND	ug/kg	740	148	04/12/03 20:33	BME		630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	740	148	04/12/03 20:33	BME		71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	740	148	04/12/03 20:33	BME		79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	740	148	04/12/03 20:33	BME		79-00-5		
1,1-Dichloroethane	ND	ug/kg	740	148	04/12/03 20:33	BME		75-34-3		
1,1-Dichloroethene	ND	ug/kg	740	148	04/12/03 20:33	BME		75-35-4		
1,1-Dichloropropene	ND	ug/kg	740	148	04/12/03 20:33	BME		563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	740	148	04/12/03 20:33	BME		87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	740	148	04/12/03 20:33	BME		96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	740	148	04/12/03 20:33	BME		120-82-1		
1,2,4-Trimethylbenzene	24000	ug/kg	740	148	04/12/03 20:33	BME		95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	740	148	04/12/03 20:33	BME		96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	740	148	04/12/03 20:33	BME		106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	740	148	04/12/03 20:33	BME		95-50-1		
1,2-Dichloroethane	ND	ug/kg	740	148	04/12/03 20:33	BME		107-06-2		
1,2-Dichloropropane	ND	ug/kg	740	148	04/12/03 20:33	BME		78-87-5		
1,3,5-Trimethylbenzene	3100	ug/kg	740	148	04/12/03 20:33	BME		108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	740	148	04/12/03 20:33	BME		541-73-1		
1,3-Dichloropropane	ND	ug/kg	740	148	04/12/03 20:33	BME		142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	740	148	04/12/03 20:33	BME		106-46-7		
2,2-Dichloropropane	ND	ug/kg	740	148	04/12/03 20:33	BME		594-20-7		

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Lab Sample No: 605963081 Project Sample Number: 6069132-005 Date Collected: 04/03/03 14:42  
Client Sample ID: TANK A Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
2-Chloroethylvinyl ether	ND	ug/kg	740	148	04/12/03 20:33	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	740	148	04/12/03 20:33	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	740	148	04/12/03 20:33	BME	106-43-4		
Benzene	ND	ug/kg	740	148	04/12/03 20:33	BME	71-43-2		
Bromobenzene	ND	ug/kg	740	148	04/12/03 20:33	BME	108-86-1		
Bromochloromethane	ND	ug/kg	740	148	04/12/03 20:33	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	740	148	04/12/03 20:33	BME	75-27-4		
Bromoform	ND	ug/kg	740	148	04/12/03 20:33	BME	75-25-2		
Bromomethane	ND	ug/kg	740	148	04/12/03 20:33	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	740	148	04/12/03 20:33	BME	56-23-5		
Chlorobenzene	ND	ug/kg	740	148	04/12/03 20:33	BME	108-90-7		
Chloroethane	ND	ug/kg	740	148	04/12/03 20:33	BME	75-00-3		
Chloroform	ND	ug/kg	740	148	04/12/03 20:33	BME	67-66-3		
Chloromethane	ND	ug/kg	740	148	04/12/03 20:33	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	740	148	04/12/03 20:33	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	740	148	04/12/03 20:33	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	740	148	04/12/03 20:33	BME	124-48-1		
Dibromomethane	ND	ug/kg	740	148	04/12/03 20:33	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	740	148	04/12/03 20:33	BME	75-71-8		
Ethylbenzene	3300	ug/kg	740	148	04/12/03 20:33	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	740	148	04/12/03 20:33	BME	87-68-3		
Isopropylbenzene (Cumene)	1200	ug/kg	740	148	04/12/03 20:33	BME	98-82-8		
m&p-Xylene	5300	ug/kg	740	148	04/12/03 20:33	BME			
Methylene chloride	ND	ug/kg	740	148	04/12/03 20:33	BME	75-09-2		
Naphthalene	6400	ug/kg	1500	148	04/12/03 20:33	BME	91-20-3		
n-Butylbenzene	3700	ug/kg	740	148	04/12/03 20:33	BME	104-51-8		
n-Propylbenzene	3800	ug/kg	740	148	04/12/03 20:33	BME	103-65-1		
o-Xylene	ND	ug/kg	740	148	04/12/03 20:33	BME	95-47-6		
p-Isopropyltoluene	ND	ug/kg	740	148	04/12/03 20:33	BME	99-87-6		
sec-Butylbenzene	1200	ug/kg	740	148	04/12/03 20:33	BME	135-98-8		
Styrene	ND	ug/kg	740	148	04/12/03 20:33	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	740	148	04/12/03 20:33	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	740	148	04/12/03 20:33	BME	127-18-4		
Toluene	ND	ug/kg	740	148	04/12/03 20:33	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	740	148	04/12/03 20:33	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	740	148	04/12/03 20:33	BME	10061-02-6		
Trichloroethene	ND	ug/kg	740	148	04/12/03 20:33	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	740	148	04/12/03 20:33	BME	75-69-4		
Vinyl chloride	ND	ug/kg	740	148	04/12/03 20:33	BME	75-01-4		

Date: 04/17/03

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Lab Project Number: 6069132  
Client Project ID: RM0TC

Lab Sample No: 605963081      Project Sample Number: 6069132-005      Date Collected: 04/03/03 14:42  
Client Sample ID: TANK A      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Acetone	ND	ug/kg	3000	148	04/12/03 20:33	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	1500	148	04/12/03 20:33	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1500	148	04/12/03 20:33	BME	108-10-1		
Carbon disulfide	ND	ug/kg	1500	148	04/12/03 20:33	BME	75-15-0		
2-Hexanone	ND	ug/kg	15000	148	04/12/03 20:33	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	740	148	04/12/03 20:33	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	740	148	04/12/03 20:33	BME	540-59-0		
Xylene (Total)	5300	ug/kg	740	148	04/12/03 20:33	BME	1330-20-7		
Dibromofluoromethane (S)	99	%		1.0	04/12/03 20:33	BME	1868-53-7		
Toluene-d8 (S)	99	%		1.0	04/12/03 20:33	BME	2037-26-5		
4-Bromofluorobenzene (S)	94	%		1.0	04/12/03 20:33	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	104	%		1.0	04/12/03 20:33	BME	17060-07-0		

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Lab Sample No: 606004919      Project Sample Number: 6069673-005      Date Collected: 04/17/03 11:11  
Client Sample ID: TANK A      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	12.	1.2	04/30/03 10:56	MIM			
Jet Fuel	ND	mg/kg	12.	1.2	04/30/03 10:56	MIM			
Kerosene	ND	mg/kg	12.	1.2	04/30/03 10:56	MIM			
Diesel Fuel	1800	mg/kg	12.	1.2	04/30/03 10:56	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	12.	1.2	04/30/03 10:56	MIM	68334-30-5		
Motor Oil	ND	mg/kg	12.	1.2	04/30/03 10:56	MIM			
n-Tetracosane (S)	96	%		1.0	04/30/03 10:56	MIM	646-31-1		
p-Terphenyl (S)	112	%		1.0	04/30/03 10:56	MIM	92-94-4		
Date Extracted	04/25/03				04/25/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	18.9	%		1.0	04/24/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,1,2-Tetrachloroethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		79-00-5		
1,1-Dichloroethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		75-34-3		
1,1-Dichloroethene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		75-35-4		
1,1-Dichloropropene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		120-82-1		
1,2,4-Trimethylbenzene	12000	ug/kg	770	154	04/25/03 16:15	BME		95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		95-50-1		
1,2-Dichloroethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		107-06-2		
1,2-Dichloropropane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		78-87-5		
1,3,5-Trimethylbenzene	1600	ug/kg	770	154	04/25/03 16:15	BME		108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		541-73-1		
1,3-Dichloropropane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		106-46-7		
2,2-Dichloropropane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME		594-20-7		

**REPORT OF LABORATORY ANALYSIS**

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Lab Sample No: 606004919      Project Sample Number: 6069673-005      Date Collected: 04/17/03 11:11  
Client Sample ID: TANK A      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
2-Chloroethylvinyl ether	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	106-43-4		
Benzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	71-43-2		
Bromobenzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	108-86-1		
Bromochloromethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	75-27-4		
Bromoform	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	75-25-2		
Bromomethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	56-23-5		
Chlorobenzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	108-90-7		
Chloroethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	75-00-3		
Chloroform	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	67-66-3		
Chloromethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	124-48-1		
Dibromomethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	75-71-8		
Ethylbenzene	1700	ug/kg	770	154	04/25/03 16:15	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	87-68-3		
Isopropylbenzene (Cumene)	820	ug/kg	31.	6.2	04/25/03 10:31	BME	98-82-8		
m&p-Xylene	2600	ug/kg	770	154	04/25/03 16:15	BME			
Methylene chloride	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	75-09-2		
Naphthalene	2700	ug/kg	1500	154	04/25/03 16:15	BME	91-20-3		
n-Butylbenzene	2300	ug/kg	770	154	04/25/03 16:15	BME	104-51-8		
n-Propylbenzene	2200	ug/kg	770	154	04/25/03 16:15	BME	103-65-1		
o-Xylene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	95-47-6		
p-Isopropyltoluene	490	ug/kg	31.	6.2	04/25/03 10:31	BME	99-87-6		
sec-Butylbenzene	780	ug/kg	31.	6.2	04/25/03 10:31	BME	135-98-8		
Styrene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	127-18-4		
Toluene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	10061-02-6		
Trichloroethene	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	75-69-4		
Vinyl chloride	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	75-01-4		

Date: 05/06/03

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## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

Lab Sample No: 606004919      Project Sample Number: 6069673-005      Date Collected: 04/17/03 11:11  
Client Sample ID: TANK A      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Acetone	ND	ug/kg	120	6.2	04/25/03 10:31	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	62.	6.2	04/25/03 10:31	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	62.	6.2	04/25/03 10:31	BME	108-10-1		
Carbon disulfide	ND	ug/kg	62.	6.2	04/25/03 10:31	BME	75-15-0		
2-Hexanone	ND	ug/kg	620	6.2	04/25/03 10:31	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	31.	6.2	04/25/03 10:31	BME	540-59-0		
Xylene (Total)	3500	ug/kg	31.	6.2	04/25/03 10:31	BME	1330-20-7		
Dibromofluoromethane (S)	101	%		1.0	04/25/03 10:31	BME	1868-53-7		
Toluene-d8 (S)	86	%		1.0	04/25/03 10:31	BME	2037-26-5		
4-Bromofluorobenzene (S)	80	%		1.0	04/25/03 10:31	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	103	%		1.0	04/25/03 10:31	BME	17060-07-0		

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Lab Sample No: 605963057      Project Sample Number: 6069132-002      Date Collected: 04/03/03 13:38  
Client Sample ID: TANK B      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/l	80.	200	04/14/03	11:22 MIM			
Jet Fuel	ND	mg/l	80.	200	04/14/03	11:22 MIM			
Kerosene	ND	mg/l	80.	200	04/14/03	11:22 MIM			
Diesel Fuel	ND	mg/l	80.	200	04/14/03	11:22 MIM	68334-30-5		
Fuel Oil	ND	mg/l	80.	200	04/14/03	11:22 MIM	68334-30-5		
Motor Oil	ND	mg/l	80.	200	04/14/03	11:22 MIM			
Total Petroleum Hydrocarbons	590	mg/l	80.	200	04/14/03	11:22 MIM		4	
p-Terphenyl (S)	128	%		1.0	04/14/03	11:22 MIM	92-94-4		
n-Tetracosane (S)	124	%		1.0	04/14/03	11:22 MIM	646-31-1		
Date Extracted	04/08/03				04/08/03				

**GC/MS Volatiles**

GC/MS VOCs by 8260	Method: EPA 8260								
Dichlorodifluoromethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	75-71-8		
Chloromethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	74-87-3		
Vinyl chloride	ND	ug/l	25.	5.0	04/14/03	20:35 BME	75-01-4		
Bromomethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	74-83-9		
Chloroethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	75-00-3		
Trichlorofluoromethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	75-69-4		
Methylene chloride	ND	ug/l	25.	5.0	04/14/03	20:35 BME	75-09-2		
1,1-Dichloroethene	ND	ug/l	25.	5.0	04/14/03	20:35 BME	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	25.	5.0	04/14/03	20:35 BME	156-60-5		
1,1-Dichloroethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	75-34-3		
2,2-Dichloropropane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	594-20-7		
cis-1,2-Dichloroethene	ND	ug/l	25.	5.0	04/14/03	20:35 BME	156-59-2		
Chloroform	ND	ug/l	25.	5.0	04/14/03	20:35 BME	67-66-3		
Bromochloromethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	74-97-5		
1,1,1-Trichloroethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	71-55-6		
Carbon tetrachloride	ND	ug/l	25.	5.0	04/14/03	20:35 BME	56-23-5		
1,1-Dichloropropene	ND	ug/l	25.	5.0	04/14/03	20:35 BME	563-58-6		
Benzene	190	ug/l	25.	5.0	04/14/03	20:35 BME	71-43-2		
1,2-Dichloroethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	107-06-2		
Trichloroethene	ND	ug/l	25.	5.0	04/14/03	20:35 BME	79-01-6		
1,2-Dichloropropane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	78-87-5		
Bromodichloromethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	75-27-4		
Dibromomethane	ND	ug/l	25.	5.0	04/14/03	20:35 BME	74-95-3		
Toluene	ND	ug/l	25.	5.0	04/14/03	20:35 BME	108-88-3		

Date: 04/17/03

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**REPORT OF LABORATORY ANALYSIS**

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Lab Sample No: 605963057      Project Sample Number: 6069132-002      Date Collected: 04/03/03 13:38  
Client Sample ID: TANK B      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,2-Trichloroethane	ND	ug/l	25.	5.0	04/14/03 20:35	BME	79-00-5		
Tetrachloroethene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	25.	5.0	04/14/03 20:35	BME	142-28-9		
Dibromochloromethane	ND	ug/l	25.	5.0	04/14/03 20:35	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	25.	5.0	04/14/03 20:35	BME	106-93-4		
Chlorobenzene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	25.	5.0	04/14/03 20:35	BME	630-20-6		
Ethylbenzene	1700	ug/l	500	100	04/15/03 13:05	BME	100-41-4		
m&p-Xylene	4200	ug/l	500	100	04/15/03 13:05	BME			
o-Xylene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	95-47-6		
Styrene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	100-42-5		
Bromoform	ND	ug/l	25.	5.0	04/14/03 20:35	BME	75-25-2		
Isopropylbenzene (Cumene)	610	ug/l	25.	5.0	04/14/03 20:35	BME	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/l	25.	5.0	04/14/03 20:35	BME	79-34-5		
Bromobenzene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	25.	5.0	04/14/03 20:35	BME	96-18-4		
n-Propylbenzene	1700	ug/l	500	100	04/15/03 13:05	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	95-49-8		
1,3,5-Trimethylbenzene	1800	ug/l	500	100	04/15/03 13:05	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	106-43-4		
1,2,4-Trimethylbenzene	13000	ug/l	500	100	04/15/03 13:05	BME	95-63-6		
sec-Butylbenzene	490	ug/l	25.	5.0	04/14/03 20:35	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	98-06-6		
p-Isopropyltoluene	340	ug/l	25.	5.0	04/14/03 20:35	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	106-46-7		
n-Butylbenzene	1900	ug/l	500	100	04/15/03 13:05	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	25.	5.0	04/14/03 20:35	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	87-68-3		
Naphthalene	4100	ug/l	1000	100	04/15/03 13:05	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	25.	5.0	04/14/03 20:35	BME	87-61-6		
Xylene (Total)	4200	ug/l	500	100	04/15/03 13:05	BME	1330-20-7		
Acetone	3900	ug/l	2000	100	04/15/03 13:05	BME	67-64-1		
2-Butanone (MEK)	ND	ug/l	50.	5.0	04/14/03 20:35	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	50.	5.0	04/14/03 20:35	BME	108-10-1		
2-Hexanone	ND	ug/l	50.	5.0	04/14/03 20:35	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/l	25.	5.0	04/14/03 20:35	BME	1634-04-4		

Date: 04/17/03

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## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6069132  
Client Project ID: RM0TC

Lab Sample No: 605963057      Project Sample Number: 6069132-002      Date Collected: 04/03/03 13:38  
Client Sample ID: TANK B      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Carbon disulfide	ND	ug/l	25.	5.0	04/14/03 20:35	BME	75-15-0		
1,2-Dichloroethene (Total)	ND	ug/l	25.	5.0	04/14/03 20:35	BME	540-59-0		
Dibromofluoromethane (S)	97	%		1.0	04/14/03 20:35	BME	1868-53-7		
Toluene-d8 (S)	85	%		1.0	04/14/03 20:35	BME	2037-26-5	3	
4-Bromofluorobenzene (S)	82	%		1.0	04/14/03 20:35	BME	460-00-4	3	

Date: 04/17/03

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### REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 606004885      Project Sample Number: 6069673-002      Date Collected: 04/17/03 11:40  
Client Sample ID: TANK B      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/l	8.0	20.0	04/30/03	13:02	MIM		
Jet Fuel	ND	mg/l	8.0	20.0	04/30/03	13:02	MIM		
Kerosene	ND	mg/l	8.0	20.0	04/30/03	13:02	MIM		
Diesel Fuel	130	mg/l	8.0	20.0	04/30/03	13:02	MIM	68334-30-5	1
Fuel Oil	ND	mg/l	8.0	20.0	04/30/03	13:02	MIM	68334-30-5	
Motor Oil	ND	mg/l	8.0	20.0	04/30/03	13:02	MIM		
p-Terphenyl (S)	74	%		1.0	04/30/03	13:02	MIM	92-94-4	
n-Tetracosane (S)	63	%		1.0	04/30/03	13:02	MIM	646-31-1	
Date Extracted	04/23/03				04/23/03				

**GC/MS Volatiles**

GC/MS VOCs by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Dichlorodifluoromethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	75-71-8		
Chloromethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	74-87-3		
Vinyl chloride	ND	ug/l	25.	5.0	04/29/03	21:19	BME	75-01-4		
Bromomethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	74-83-9		
Chloroethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	75-00-3		
Trichlorofluoromethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	75-69-4		
Methylene chloride	ND	ug/l	25.	5.0	04/29/03	21:19	BME	75-09-2		
1,1-Dichloroethene	ND	ug/l	25.	5.0	04/29/03	21:19	BME	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	25.	5.0	04/29/03	21:19	BME	156-60-5		
1,1-Dichloroethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	75-34-3		
2,2-Dichloropropane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	594-20-7		
cis-1,2-Dichloroethene	ND	ug/l	25.	5.0	04/29/03	21:19	BME	156-59-2		
Chloroform	ND	ug/l	25.	5.0	04/29/03	21:19	BME	67-66-3		
Bromochloromethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	74-97-5		
1,1,1-Trichloroethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	71-55-6		
Carbon tetrachloride	ND	ug/l	25.	5.0	04/29/03	21:19	BME	56-23-5		
1,1-Dichloropropene	ND	ug/l	25.	5.0	04/29/03	21:19	BME	563-58-6		
Benzene	ND	ug/l	25.	5.0	04/29/03	21:19	BME	71-43-2		
1,2-Dichloroethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	107-06-2		
Trichloroethene	ND	ug/l	25.	5.0	04/29/03	21:19	BME	79-01-6		
1,2-Dichloropropane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	78-87-5		
Bromodichloromethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	75-27-4		
Dibromomethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	74-95-3		
Toluene	ND	ug/l	25.	5.0	04/29/03	21:19	BME	108-88-3		
1,1,2-Trichloroethane	ND	ug/l	25.	5.0	04/29/03	21:19	BME	79-00-5		

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

Lab Sample No: 606004885      Project Sample Number: 6069673-002      Date Collected: 04/17/03 11:40  
Client Sample ID: TANK B      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Tetrachloroethene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	25.	5.0	04/29/03 21:19	BME	142-28-9		
Dibromochloromethane	ND	ug/l	25.	5.0	04/29/03 21:19	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	25.	5.0	04/29/03 21:19	BME	106-93-4		
Chlorobenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	25.	5.0	04/29/03 21:19	BME	630-20-6		
Ethylbenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	100-41-4		
m&p-Xylene	520	ug/l	25.	5.0	04/29/03 21:19	BME			
o-Xylene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	95-47-6		
Styrene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	100-42-5		
Bromoform	ND	ug/l	25.	5.0	04/29/03 21:19	BME	75-25-2		
Isopropylbenzene (Cumene)	65.	ug/l	25.	5.0	04/29/03 21:19	BME	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/l	25.	5.0	04/29/03 21:19	BME	79-34-5		
Bromobenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	25.	5.0	04/29/03 21:19	BME	96-18-4		
n-Propylbenzene	25.	ug/l	25.	5.0	04/29/03 21:19	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	95-49-8		
1,3,5-Trimethylbenzene	740	ug/l	25.	5.0	04/29/03 21:19	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	106-43-4		
1,2,4-Trimethylbenzene	1500	ug/l	100	20.0	04/30/03 22:05	BME	95-63-6		
sec-Butylbenzene	210	ug/l	25.	5.0	04/29/03 21:19	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	98-06-6		
p-Isopropyltoluene	160	ug/l	25.	5.0	04/29/03 21:19	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	106-46-7		
n-Butylbenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	25.	5.0	04/29/03 21:19	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	87-68-3		
Naphthalene	1700	ug/l	200	20.0	04/30/03 22:05	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	25.	5.0	04/29/03 21:19	BME	87-61-6		
Xylene (Total)	520	ug/l	25.	5.0	04/29/03 21:19	BME	1330-20-7		
Acetone	24000	ug/l	400	20.0	04/30/03 22:05	BME	67-64-1		
2-Butanone (MEK)	ND	ug/l	50.	5.0	04/29/03 21:19	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	50.	5.0	04/29/03 21:19	BME	108-10-1		
2-Hexanone	600	ug/l	50.	5.0	04/29/03 21:19	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/l	25.	5.0	04/29/03 21:19	BME	1634-04-4		
Carbon disulfide	ND	ug/l	25.	5.0	04/29/03 21:19	BME	75-15-0		

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**Pace Analytical Services, Inc.**  
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 Lenexa, KS 66219  
 Phone: 913.599.5665  
 Fax: 913.599.1759

Lab Project Number: 6069673  
 Client Project ID: BP-CASPER, WY

Lab Sample No: 606004885      Project Sample Number: 6069673-002      Date Collected: 04/17/03 11:40  
 Client Sample ID: TANK B      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,2-Dichloroethene (Total)	ND	ug/l	25.	5.0	04/29/03 21:19	BME	540-59-0		
Dibromofluoromethane (S)	98	%		1.0	04/29/03 21:19	BME	1868-53-7		
Toluene-d8 (S)	101	%		1.0	04/29/03 21:19	BME	2037-26-5		
4-Bromofluorobenzene (S)	85	%		1.0	04/29/03 21:19	BME	460-00-4	3	

Comments : This sample had extensive foaming during the extraction process and the laboratory was required to reduce the extraction amount to 10ml instead of the normal 200ml. This caused elevated reporting limits.

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### REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605963131 Project Sample Number: 6069132-010 Date Collected: 03/25/03 16:22  
Client Sample ID: BASELINE B Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	11.		1.1 04/08/03 06:11	MIM			
Jet Fuel	ND	mg/kg	11.		1.1 04/08/03 06:11	MIM			
Kerosene	ND	mg/kg	11.		1.1 04/08/03 06:11	MIM			
Diesel Fuel	2900	mg/kg	11.		1.1 04/08/03 06:11	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	11.		1.1 04/08/03 06:11	MIM	68334-30-5		
Motor Oil	ND	mg/kg	11.		1.1 04/08/03 06:11	MIM			
n-Tetracosane (S)	102	%			1.0 04/08/03 06:11	MIM	646-31-1		
p-Terphenyl (S)	97	%			1.0 04/08/03 06:11	MIM	92-94-4		
Date Extracted	04/07/03				04/07/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	6.2	%			1.0 04/08/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,1,2-Tetrachloroethane		ND	ug/kg	670	133	04/07/03 18:55	BME	630-20-6		
1,1,1-Trichloroethane		ND	ug/kg	670	133	04/07/03 18:55	BME	71-55-6		
1,1,2,2-Tetrachloroethane		ND	ug/kg	670	133	04/07/03 18:55	BME	79-34-5		
1,1,2-Trichloroethane		ND	ug/kg	670	133	04/07/03 18:55	BME	79-00-5		
1,1-Dichloroethane		ND	ug/kg	670	133	04/07/03 18:55	BME	75-34-3		
1,1-Dichloroethene		ND	ug/kg	670	133	04/07/03 18:55	BME	75-35-4		
1,1-Dichloropropene		ND	ug/kg	670	133	04/07/03 18:55	BME	563-58-6		
1,2,3-Trichlorobenzene		ND	ug/kg	670	133	04/07/03 18:55	BME	87-61-6		
1,2,3-Trichloropropane		ND	ug/kg	670	133	04/07/03 18:55	BME	96-18-4		
1,2,4-Trichlorobenzene		ND	ug/kg	670	133	04/07/03 18:55	BME	120-82-1		
1,2,4-Trimethylbenzene	180000	ug/kg	6700	1330	04/08/03 14:16	BME	95-63-6			
1,2-Dibromo-3-chloropropane	ND	ug/kg	670	133	04/07/03 18:55	BME	96-12-8			
1,2-Dibromoethane (EDB)	ND	ug/kg	670	133	04/07/03 18:55	BME	106-93-4			
1,2-Dichlorobenzene	ND	ug/kg	670	133	04/07/03 18:55	BME	95-50-1			
1,2-Dichloroethane	ND	ug/kg	670	133	04/07/03 18:55	BME	107-06-2			
1,2-Dichloropropane	ND	ug/kg	670	133	04/07/03 18:55	BME	78-87-5			
1,3,5-Trimethylbenzene	21000	ug/kg	670	133	04/07/03 18:55	BME	108-67-8			
1,3-Dichlorobenzene	ND	ug/kg	670	133	04/07/03 18:55	BME	541-73-1			
1,3-Dichloropropane	ND	ug/kg	670	133	04/07/03 18:55	BME	142-28-9			
1,4-Dichlorobenzene	ND	ug/kg	670	133	04/07/03 18:55	BME	106-46-7			
2,2-Dichloropropane	ND	ug/kg	670	133	04/07/03 18:55	BME	594-20-7			

Date: 04/17/03

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Lab Sample No: 605963131 Project Sample Number: 6069132-010 Date Collected: 03/25/03 16:22  
Client Sample ID: BASELINE B Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
2-Chloroethylvinyl ether	ND	ug/kg	670	133	04/07/03 18:55	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	670	133	04/07/03 18:55	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	670	133	04/07/03 18:55	BME	106-43-4		
Benzene	ND	ug/kg	670	133	04/07/03 18:55	BME	71-43-2		
Bromobenzene	ND	ug/kg	670	133	04/07/03 18:55	BME	108-86-1		
Bromochloromethane	ND	ug/kg	670	133	04/07/03 18:55	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	670	133	04/07/03 18:55	BME	75-27-4		
Bromoform	ND	ug/kg	670	133	04/07/03 18:55	BME	75-25-2		
Bromomethane	ND	ug/kg	670	133	04/07/03 18:55	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	670	133	04/07/03 18:55	BME	56-23-5		
Chlorobenzene	ND	ug/kg	670	133	04/07/03 18:55	BME	108-90-7		
Chloroethane	ND	ug/kg	670	133	04/07/03 18:55	BME	75-00-3		
Chloroform	ND	ug/kg	670	133	04/07/03 18:55	BME	67-66-3		
Chloromethane	ND	ug/kg	670	133	04/07/03 18:55	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	670	133	04/07/03 18:55	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	670	133	04/07/03 18:55	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	670	133	04/07/03 18:55	BME	124-48-1		
Dibromomethane	ND	ug/kg	670	133	04/07/03 18:55	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	670	133	04/07/03 18:55	BME	75-71-8		
Ethylbenzene	40000	ug/kg	6700	1330	04/08/03 14:16	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	670	133	04/07/03 18:55	BME	87-68-3		
Isopropylbenzene (Cumene)	9200	ug/kg	670	133	04/07/03 18:55	BME	98-82-8		
m&p-Xylene	40000	ug/kg	670	133	04/07/03 18:55	BME			
Methylene chloride	ND	ug/kg	670	133	04/07/03 18:55	BME	75-09-2		
Naphthalene	32000	ug/kg	13000	1330	04/08/03 14:16	BME	91-20-3		
n-Butylbenzene	23000	ug/kg	670	133	04/07/03 18:55	BME	104-51-8		
n-Propylbenzene	39000	ug/kg	6700	1330	04/08/03 14:16	BME	103-65-1		
o-Xylene	ND	ug/kg	670	133	04/07/03 18:55	BME	95-47-6		
p-Isopropyltoluene	4000	ug/kg	670	133	04/07/03 18:55	BME	99-87-6		
sec-Butylbenzene	7000	ug/kg	670	133	04/07/03 18:55	BME	135-98-8		
Styrene	ND	ug/kg	670	133	04/07/03 18:55	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	670	133	04/07/03 18:55	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	670	133	04/07/03 18:55	BME	127-18-4		
Toluene	ND	ug/kg	670	133	04/07/03 18:55	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	670	133	04/07/03 18:55	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	670	133	04/07/03 18:55	BME	10061-02-6		
Trichloroethene	ND	ug/kg	670	133	04/07/03 18:55	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	670	133	04/07/03 18:55	BME	75-69-4		
Vinyl chloride	ND	ug/kg	670	133	04/07/03 18:55	BME	75-01-4		

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Lab Project Number: 6069132  
Client Project ID: RM0TC

Lab Sample No: 605963131      Project Sample Number: 6069132-010      Date Collected: 03/25/03 16:22  
Client Sample ID: BASELINE B      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Acetone	ND	ug/kg	2700	133	04/07/03 18:55	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	1300	133	04/07/03 18:55	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1300	133	04/07/03 18:55	BME	108-10-1		
Carbon disulfide	ND	ug/kg	1300	133	04/07/03 18:55	BME	75-15-0		
2-Hexanone	ND	ug/kg	13000	133	04/07/03 18:55	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	670	133	04/07/03 18:55	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	670	133	04/07/03 18:55	BME	540-59-0		
Xylene (Total)	41000	ug/kg	670	133	04/07/03 18:55	BME	1330-20-7		
Dibromofluoromethane (S)	95	%		1.0	04/07/03 18:55	BME	1868-53-7		
Toluene-d8 (S)	96	%		1.0	04/07/03 18:55	BME	2037-26-5		
4-Bromofluorobenzene (S)	87	%		1.0	04/07/03 18:55	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	110	%		1.0	04/07/03 18:55	BME	17060-07-0		

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## REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605963099 Project Sample Number: 6069132-006 Date Collected: 04/03/03 14:56  
Client Sample ID: TANK B Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	10.		1.0 04/08/03 02:52	MIM			
Jet Fuel	ND	mg/kg	10.		1.0 04/08/03 02:52	MIM			
Kerosene	ND	mg/kg	10.		1.0 04/08/03 02:52	MIM			
Diesel Fuel	690	mg/kg	10.		1.0 04/08/03 02:52	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	10.		1.0 04/08/03 02:52	MIM	68334-30-5		
Motor Oil	ND	mg/kg	10.		1.0 04/08/03 02:52	MIM			
n-Tetracosane (S)	105	%			1.0 04/08/03 02:52	MIM	646-31-1		
p-Terphenyl (S)	103	%			1.0 04/08/03 02:52	MIM	92-94-4		
Date Extracted	04/07/03				04/07/03				

**Organics Prep**

Method: SM 2540G
Percent Moisture
Percent Moisture 4.4 %
1.0 04/08/03 MAM

**GC/MS Volatiles**

Method: EPA 8260
GC/MS VOCs in Soil by 8260
1,1,1,2-Tetrachloroethane ND ug/kg 650 131 04/12/03 21:04 BME 630-20-6
1,1,1-Trichloroethane ND ug/kg 650 131 04/12/03 21:04 BME 71-55-6
1,1,2,2-Tetrachloroethane ND ug/kg 650 131 04/12/03 21:04 BME 79-34-5
1,1,2-Trichloroethane ND ug/kg 650 131 04/12/03 21:04 BME 79-00-5
1,1-Dichloroethane ND ug/kg 650 131 04/12/03 21:04 BME 75-34-3
1,1-Dichloroethene ND ug/kg 650 131 04/12/03 21:04 BME 75-35-4
1,1-Dichloropropene ND ug/kg 650 131 04/12/03 21:04 BME 563-58-6
1,2,3-Trichlorobenzene ND ug/kg 650 131 04/12/03 21:04 BME 87-61-6
1,2,3-Trichloropropane ND ug/kg 650 131 04/12/03 21:04 BME 96-18-4
1,2,4-Trichlorobenzene ND ug/kg 650 131 04/12/03 21:04 BME 120-82-1
1,2,4-Trimethylbenzene 23000 ug/kg 650 131 04/12/03 21:04 BME 95-63-6
1,2-Dibromo-3-chloropropane ND ug/kg 650 131 04/12/03 21:04 BME 96-12-8
1,2-Dibromoethane (EDB) ND ug/kg 650 131 04/12/03 21:04 BME 106-93-4
1,2-Dichlorobenzene ND ug/kg 650 131 04/12/03 21:04 BME 95-50-1
1,2-Dichloroethane ND ug/kg 650 131 04/12/03 21:04 BME 107-06-2
1,2-Dichloropropane ND ug/kg 650 131 04/12/03 21:04 BME 78-87-5
1,3,5-Trimethylbenzene 4000 ug/kg 650 131 04/12/03 21:04 BME 108-67-8
1,3-Dichlorobenzene ND ug/kg 650 131 04/12/03 21:04 BME 541-73-1
1,3-Dichloropropane ND ug/kg 650 131 04/12/03 21:04 BME 142-28-9
1,4-Dichlorobenzene ND ug/kg 650 131 04/12/03 21:04 BME 106-46-7
2,2-Dichloropropane ND ug/kg 650 131 04/12/03 21:04 BME 594-20-7

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Lab Project Number: 6069132  
Client Project ID: RMOTC

Lab Sample No: 605963099 Project Sample Number: 6069132-006 Date Collected: 04/03/03 14:56  
Client Sample ID: TANK B Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
2-Chloroethylvinyl ether	ND	ug/kg	650	131	04/12/03 21:04	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	650	131	04/12/03 21:04	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	650	131	04/12/03 21:04	BME	106-43-4		
Benzene	ND	ug/kg	650	131	04/12/03 21:04	BME	71-43-2		
Bromobenzene	ND	ug/kg	650	131	04/12/03 21:04	BME	108-86-1		
Bromochloromethane	ND	ug/kg	650	131	04/12/03 21:04	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	650	131	04/12/03 21:04	BME	75-27-4		
Bromoform	ND	ug/kg	650	131	04/12/03 21:04	BME	75-25-2		
Bromomethane	ND	ug/kg	650	131	04/12/03 21:04	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	650	131	04/12/03 21:04	BME	56-23-5		
Chlorobenzene	ND	ug/kg	650	131	04/12/03 21:04	BME	108-90-7		
Chloroethane	ND	ug/kg	650	131	04/12/03 21:04	BME	75-00-3		
Chloroform	ND	ug/kg	650	131	04/12/03 21:04	BME	67-66-3		
Chloromethane	ND	ug/kg	650	131	04/12/03 21:04	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	650	131	04/12/03 21:04	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	650	131	04/12/03 21:04	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	650	131	04/12/03 21:04	BME	124-48-1		
Dibromomethane	ND	ug/kg	650	131	04/12/03 21:04	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	650	131	04/12/03 21:04	BME	75-71-8		
Ethylbenzene	5100	ug/kg	650	131	04/12/03 21:04	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	650	131	04/12/03 21:04	BME	87-68-3		
Isopropylbenzene (Cumene)	1600	ug/kg	650	131	04/12/03 21:04	BME	98-82-8		
m&p-Xylene	6000	ug/kg	650	131	04/12/03 21:04	BME			
Methylene chloride	ND	ug/kg	650	131	04/12/03 21:04	BME	75-09-2		
Naphthalene	2700	ug/kg	1300	131	04/12/03 21:04	BME	91-20-3		
n-Butylbenzene	3900	ug/kg	650	131	04/12/03 21:04	BME	104-51-8		
n-Propylbenzene	5200	ug/kg	650	131	04/12/03 21:04	BME	103-65-1		
o-Xylene	ND	ug/kg	650	131	04/12/03 21:04	BME	95-47-6		
p-Isopropyltoluene	770	ug/kg	650	131	04/12/03 21:04	BME	99-87-6		
sec-Butylbenzene	1400	ug/kg	650	131	04/12/03 21:04	BME	135-98-8		
Styrene	ND	ug/kg	650	131	04/12/03 21:04	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	650	131	04/12/03 21:04	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	650	131	04/12/03 21:04	BME	127-18-4		
Toluene	ND	ug/kg	650	131	04/12/03 21:04	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	650	131	04/12/03 21:04	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	650	131	04/12/03 21:04	BME	10061-02-6		
Trichloroethene	ND	ug/kg	650	131	04/12/03 21:04	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	650	131	04/12/03 21:04	BME	75-69-4		
Vinyl chloride	ND	ug/kg	650	131	04/12/03 21:04	BME	75-01-4		

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Lab Project Number: 6069132  
Client Project ID: RM0TC

Lab Sample No: 605963099      Project Sample Number: 6069132-006      Date Collected: 04/03/03 14:56  
Client Sample ID: TANK B      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Acetone	ND	ug/kg	2600	131	04/12/03 21:04	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	1300	131	04/12/03 21:04	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1300	131	04/12/03 21:04	BME	108-10-1		
Carbon disulfide	ND	ug/kg	1300	131	04/12/03 21:04	BME	75-15-0		
2-Hexanone	ND	ug/kg	13000	131	04/12/03 21:04	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	650	131	04/12/03 21:04	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	650	131	04/12/03 21:04	BME	540-59-0		
Xylene (Total)	6000	ug/kg	650	131	04/12/03 21:04	BME	1330-20-7		
Dibromofluoromethane (S)	96	%		1.0	04/12/03 21:04	BME	1868-53-7		
Toluene-d8 (S)	95	%		1.0	04/12/03 21:04	BME	2037-26-5		
4-Bromofluorobenzene (S)	93	%		1.0	04/12/03 21:04	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	97	%		1.0	04/12/03 21:04	BME	17060-07-0		

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Lab Sample No: 606004927      Project Sample Number: 6069673-006      Date Collected: 04/17/03 11:31  
Client Sample ID: TANK B      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	11.		1.1 04/30/03 10:40	MIM			
Jet Fuel	ND	mg/kg	11.		1.1 04/30/03 10:40	MIM			
Kerosene	ND	mg/kg	11.		1.1 04/30/03 10:40	MIM			
Diesel Fuel	210	mg/kg	11.		1.1 04/30/03 10:40	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	11.		1.1 04/30/03 10:40	MIM	68334-30-5		
Motor Oil	ND	mg/kg	11.		1.1 04/30/03 10:40	MIM			
n-Tetracosane (S)	128	%			1.0 04/30/03 10:40	MIM	646-31-1		
p-Terphenyl (S)	146	%			1.0 04/30/03 10:40	MIM	92-94-4		
Date Extracted	04/25/03				04/25/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	5.6	%			1.0 04/24/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	79-00-5		
1,1-Dichloroethane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	75-34-3		
1,1-Dichloroethene	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	75-35-4		
1,1-Dichloropropene	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	120-82-1		
1,2,4-Trimethylbenzene	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	95-50-1		
1,2-Dichloroethane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	107-06-2		
1,2-Dichloropropane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	78-87-5		
1,3,5-Trimethylbenzene	19.	ug/kg	5.3		1.1	04/25/03 15:44	BME	108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	541-73-1		
1,3-Dichloropropane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	106-46-7		
2,2-Dichloropropane	ND	ug/kg	5.3		1.1	04/25/03 15:44	BME	594-20-7		

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

Lab Sample No: 606004927      Project Sample Number: 6069673-006      Date Collected: 04/17/03 11:31  
Client Sample ID: TANK B      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
2-Chloroethylvinyl ether	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	106-43-4		
Benzene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	71-43-2		
Bromobenzene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	108-86-1		
Bromochloromethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	75-27-4		
Bromoform	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	75-25-2		
Bromomethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	56-23-5		
Chlorobenzene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	108-90-7		
Chloroethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	75-00-3		
Chloroform	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	67-66-3		
Chloromethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	124-48-1		
Dibromomethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	75-71-8		
Ethylbenzene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	98-82-8		
m&p-Xylene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME			
Methylene chloride	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	75-09-2		
Naphthalene	ND	ug/kg	11.	1.1	04/25/03 15:44	BME	91-20-3		
n-Butylbenzene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	104-51-8		
n-Propylbenzene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	103-65-1		
o-Xylene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	95-47-6		
p-Isopropyltoluene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	99-87-6		
sec-Butylbenzene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	135-98-8		
Styrene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	127-18-4		
Toluene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	10061-02-6		
Trichloroethene	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	75-69-4		
Vinyl chloride	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	75-01-4		

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Lab Sample No: 606004927      Project Sample Number: 6069673-006      Date Collected: 04/17/03 11:31  
Client Sample ID: TANK B      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Acetone	ND	ug/kg	21.	1.1	04/25/03 15:44	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	11.	1.1	04/25/03 15:44	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.	1.1	04/25/03 15:44	BME	108-10-1		
Carbon disulfide	ND	ug/kg	11.	1.1	04/25/03 15:44	BME	75-15-0		
2-Hexanone	ND	ug/kg	110	1.1	04/25/03 15:44	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	540-59-0		
Xylene (Total)	ND	ug/kg	5.3	1.1	04/25/03 15:44	BME	1330-20-7		
Dibromofluoromethane (S)	97	%		1.0	04/25/03 15:44	BME	1868-53-7		
Toluene-d8 (S)	92	%		1.0	04/25/03 15:44	BME	2037-26-5		
4-Bromofluorobenzene (S)	87	%		1.0	04/25/03 15:44	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	99	%		1.0	04/25/03 15:44	BME	17060-07-0		

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Lab Sample No: 605963065      Project Sample Number: 6069132-003      Date Collected: 04/03/03 13:51  
Client Sample ID: TANK D      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/l	0.40	1.0	04/11/03 15:38	MIM			
Jet Fuel	ND	mg/l	0.40	1.0	04/11/03 15:38	MIM			
Kerosene	ND	mg/l	0.40	1.0	04/11/03 15:38	MIM			
Diesel Fuel	ND	mg/l	0.40	1.0	04/11/03 15:38	MIM	68334-30-5		
Fuel Oil	ND	mg/l	0.40	1.0	04/11/03 15:38	MIM	68334-30-5		
Motor Oil	ND	mg/l	0.40	1.0	04/11/03 15:38	MIM			
Total Petroleum Hydrocarbons	3.2	mg/l	0.40	1.0	04/11/03 15:38	MIM		5	
p-Terphenyl (S)	99	%		1.0	04/11/03 15:38	MIM	92-94-4		
n-Tetracosane (S)	64	%		1.0	04/11/03 15:38	MIM	646-31-1		
Date Extracted	04/08/03				04/08/03				

**GC/MS Volatiles**

GC/MS VOCs by 8260	Method: EPA 8260								
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-71-8		
Chloromethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	74-87-3		
Vinyl chloride	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-01-4		
Bromomethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	74-83-9		
Chloroethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-00-3		
Trichlorofluoromethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-69-4		
Methylene chloride	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-09-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	156-60-5		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-34-3		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	594-20-7		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	156-59-2		
Chloroform	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	67-66-3		
Bromochloromethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	74-97-5		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	71-55-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	56-23-5		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	563-58-6		
Benzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	71-43-2		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	107-06-2		
Trichloroethene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	79-01-6		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	78-87-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-27-4		
Dibromomethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	74-95-3		
Toluene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	108-88-3		

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Lab Sample No: 605963065 Project Sample Number: 6069132-003 Date Collected: 04/03/03 13:51  
Client Sample ID: TANK D Matrix: Water Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	79-00-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	142-28-9		
Dibromochloromethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	106-93-4		
Chlorobenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	630-20-6		
Ethylbenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	100-41-4		
m&p-Xylene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME			
o-Xylene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	95-47-6		
Styrene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	100-42-5		
Bromoform	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	79-34-5		
Bromobenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	96-18-4		
n-Propylbenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	95-63-6		
sec-Butylbenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	98-06-6		
p-Isopropyltoluene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	106-46-7		
n-Butylbenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	87-68-3		
Naphthalene	ND	ug/l	10.	1.0	04/15/03 12:01	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	87-61-6		
Xylene (Total)	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	1330-20-7		
Acetone	570	ug/l	40.	2.0	04/15/03 20:55	BME	67-64-1		
2-Butanone (MEK)	10.	ug/l	10.	1.0	04/15/03 12:01	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	10.	1.0	04/15/03 12:01	BME	108-10-1		
2-Hexanone	ND	ug/l	10.	1.0	04/15/03 12:01	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	1634-04-4		

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Lab Project Number: 6069132  
Client Project ID: RMOTC

Lab Sample No: 605963065      Project Sample Number: 6069132-003      Date Collected: 04/03/03 13:51  
Client Sample ID: TANK D      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Carbon disulfide	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	75-15-0		
1,2-Dichloroethene (Total)	ND	ug/l	5.0	1.0	04/15/03 12:01	BME	540-59-0		
Dibromofluoromethane (S)	99	%		1.0	04/15/03 12:01	BME	1868-53-7		
Toluene-d8 (S)	98	%		1.0	04/15/03 12:01	BME	2037-26-5		
4-Bromofluorobenzene (S)	100	%		1.0	04/15/03 12:01	BME	460-00-4		

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Lab Sample No: 606004893      Project Sample Number: 6069673-003      Date Collected: 04/17/03 11:44  
Client Sample ID: TANK D      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/l	8.0	20.0	04/23/03 19:29	MIM			
Jet Fuel	ND	mg/l	8.0	20.0	04/23/03 19:29	MIM			
Kerosene	ND	mg/l	8.0	20.0	04/23/03 19:29	MIM			
Diesel Fuel	ND	mg/l	8.0	20.0	04/23/03 19:29	MIM	68334-30-5		
Fuel Oil	ND	mg/l	8.0	20.0	04/23/03 19:29	MIM	68334-30-5		
Motor Oil	ND	mg/l	8.0	20.0	04/23/03 19:29	MIM			
p-Terphenyl (S)	58	%		1.0	04/23/03 19:29	MIM	92-94-4		
n-Tetracosane (S)	62	%		1.0	04/23/03 19:29	MIM	646-31-1		
Date Extracted	04/23/03				04/23/03				

**GC/MS Volatiles**

GC/MS VOCs by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-71-8	
Chloromethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	74-87-3	
Vinyl chloride	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-01-4	
Bromomethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	74-83-9	
Chloroethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-00-3	
Trichlorofluoromethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-69-4	
Methylene chloride	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-09-2	
1,1-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-35-4	
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	156-60-5	
1,1-Dichloroethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-34-3	
2,2-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	594-20-7	
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	156-59-2	
Chloroform	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	67-66-3	
Bromochloromethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	71-55-6	
Carbon tetrachloride	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	56-23-5	
1,1-Dichloropropene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	563-58-6	
Benzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	71-43-2	
1,2-Dichloroethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	107-06-2	
Trichloroethene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	79-01-6	
1,2-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	78-87-5	
Bromodichloromethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-27-4	
Dibromomethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	74-95-3	
Toluene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	108-88-3	
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	79-00-5	

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Lab Sample No: 606004893      Project Sample Number: 6069673-003      Date Collected: 04/17/03 11:44  
Client Sample ID: TANK D      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Tetrachloroethene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	142-28-9		
Dibromochloromethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	106-93-4		
Chlorobenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	630-20-6		
Ethylbenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	100-41-4		
m&p-Xylene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME			
o-Xylene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	95-47-6		
Styrene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	100-42-5		
Bromoform	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	79-34-5		
Bromobenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	96-18-4		
n-Propylbenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	95-63-6		
sec-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	98-06-6		
p-Isopropyltoluene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	106-46-7		
n-Butylbenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	87-68-3		
Naphthalene	ND	ug/l	10.	1.0	05/01/03 07:28	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	87-61-6		
Xylene (Total)	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	1330-20-7		
Acetone	28.	ug/l	20.	1.0	05/01/03 07:28	BME	67-64-1		
2-Butanone (MEK)	ND	ug/l	10.	1.0	05/01/03 07:28	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	10.	1.0	05/01/03 07:28	BME	108-10-1		
2-Hexanone	ND	ug/l	10.	1.0	05/01/03 07:28	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	1634-04-4		
Carbon disulfide	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	75-15-0		

Date: 05/06/03

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## REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 606004893      Project Sample Number: 6069673-003      Date Collected: 04/17/03 11:44  
Client Sample ID: TANK D      Matrix: Water      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,2-Dichloroethene (Total)	ND	ug/l	5.0	1.0	05/01/03 07:28	BME	540-59-0		
Dibromofluoromethane (S)	106	%		1.0	05/01/03 07:28	BME	1868-53-7		
Toluene-d8 (S)	107	%		1.0	05/01/03 07:28	BME	2037-26-5		
4-Bromofluorobenzene (S)	102	%		1.0	05/01/03 07:28	BME	460-00-4		

## REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605963156      Project Sample Number: 6069132-011      Date Collected: 03/25/03 14:59  
Client Sample ID: BASELINE D      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: 0A2 / 0A2								
Mineral Spirits	ND	mg/kg	11.		1.1 04/08/03 06:44	MIM			
Jet Fuel	ND	mg/kg	11.		1.1 04/08/03 06:44	MIM			
Kerosene	ND	mg/kg	11.		1.1 04/08/03 06:44	MIM			
Diesel Fuel	820	mg/kg	11.		1.1 04/08/03 06:44	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	11.		1.1 04/08/03 06:44	MIM	68334-30-5		
Motor Oil	ND	mg/kg	11.		1.1 04/08/03 06:44	MIM			
n-Tetracosane (S)	103	%			1.0 04/08/03 06:44	MIM	646-31-1		
p-Terphenyl (S)	98	%			1.0 04/08/03 06:44	MIM	92-94-4		
Date Extracted	04/07/03				04/07/03				

<b>Organics Prep</b>									
Percent Moisture	Method: SM 2540G								
Percent Moisture	13.0	%			1.0 04/08/03		MAM		

<b>GC/MS Volatiles</b>									
GC/MS VOCs in Soil by 8260	Method: EPA 8260								
1,1,1,2-Tetrachloroethane	ND	ug/kg	720	144	04/07/03 19:26	BME	630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	720	144	04/07/03 19:26	BME	71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	720	144	04/07/03 19:26	BME	79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	720	144	04/07/03 19:26	BME	79-00-5		
1,1-Dichloroethane	ND	ug/kg	720	144	04/07/03 19:26	BME	75-34-3		
1,1-Dichloroethene	ND	ug/kg	720	144	04/07/03 19:26	BME	75-35-4		
1,1-Dichloropropene	ND	ug/kg	720	144	04/07/03 19:26	BME	563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	720	144	04/07/03 19:26	BME	96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	120-82-1		
1,2,4-Trimethylbenzene	4800	ug/kg	720	144	04/07/03 19:26	BME	95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	720	144	04/07/03 19:26	BME	96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	720	144	04/07/03 19:26	BME	106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	95-50-1		
1,2-Dichloroethane	ND	ug/kg	720	144	04/07/03 19:26	BME	107-06-2		
1,2-Dichloropropane	ND	ug/kg	720	144	04/07/03 19:26	BME	78-87-5		
1,3,5-Trimethylbenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	541-73-1		
1,3-Dichloropropane	ND	ug/kg	720	144	04/07/03 19:26	BME	142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	106-46-7		
2,2-Dichloropropane	ND	ug/kg	720	144	04/07/03 19:26	BME	594-20-7		

### REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605963156      Project Sample Number: 6069132-011      Date Collected: 03/25/03 14:59  
Client Sample ID: BASELINE D      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
2-Chloroethylvinyl ether	ND	ug/kg	720	144	04/07/03 19:26	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	720	144	04/07/03 19:26	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	720	144	04/07/03 19:26	BME	106-43-4		
Benzene	ND	ug/kg	720	144	04/07/03 19:26	BME	71-43-2		
Bromobenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	108-86-1		
Bromochloromethane	ND	ug/kg	720	144	04/07/03 19:26	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	720	144	04/07/03 19:26	BME	75-27-4		
Bromoform	ND	ug/kg	720	144	04/07/03 19:26	BME	75-25-2		
Bromomethane	ND	ug/kg	720	144	04/07/03 19:26	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	720	144	04/07/03 19:26	BME	56-23-5		
Chlorobenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	108-90-7		
Chloroethane	ND	ug/kg	720	144	04/07/03 19:26	BME	75-00-3		
Chloroform	ND	ug/kg	720	144	04/07/03 19:26	BME	67-66-3		
Chloromethane	ND	ug/kg	720	144	04/07/03 19:26	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	720	144	04/07/03 19:26	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	720	144	04/07/03 19:26	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	720	144	04/07/03 19:26	BME	124-48-1		
Dibromomethane	ND	ug/kg	720	144	04/07/03 19:26	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	720	144	04/07/03 19:26	BME	75-71-8		
Ethylbenzene	290	J ug/kg	720	144	04/07/03 19:26	BME	100-41-4	7	
Hexachloro-1,3-butadiene	ND	ug/kg	720	144	04/07/03 19:26	BME	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/kg	720	144	04/07/03 19:26	BME	98-82-8		
m&p-Xylene	560	J ug/kg	720	144	04/07/03 19:26	BME		7	
Methylene chloride	ND	ug/kg	720	144	04/07/03 19:26	BME	75-09-2		
Naphthalene	1700	ug/kg	1400	144	04/07/03 19:26	BME	91-20-3		
n-Butylbenzene	580	J ug/kg	720	144	04/07/03 19:26	BME	104-51-8	7	
n-Propylbenzene	360	J ug/kg	720	144	04/07/03 19:26	BME	103-65-1	7	
o-Xylene	ND	ug/kg	720	144	04/07/03 19:26	BME	95-47-6		
p-Isopropyltoluene	ND	ug/kg	720	144	04/07/03 19:26	BME	99-87-6		
sec-Butylbenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	135-98-8		
Styrene	ND	ug/kg	720	144	04/07/03 19:26	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	720	144	04/07/03 19:26	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	720	144	04/07/03 19:26	BME	127-18-4		
Toluene	ND	ug/kg	720	144	04/07/03 19:26	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	720	144	04/07/03 19:26	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	720	144	04/07/03 19:26	BME	10061-02-6		
Trichloroethene	ND	ug/kg	720	144	04/07/03 19:26	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	720	144	04/07/03 19:26	BME	75-69-4		
Vinyl chloride	ND	ug/kg	720	144	04/07/03 19:26	BME	75-01-4		

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## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6069132  
Client Project ID: RM0TC

Lab Sample No: 605963156      Project Sample Number: 6069132-011      Date Collected: 03/25/03 14:59  
Client Sample ID: BASELINE D      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
Acetone	ND	ug/kg	2900	144	04/07/03 19:26	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	1400	144	04/07/03 19:26	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1400	144	04/07/03 19:26	BME	108-10-1		
Carbon disulfide	ND	ug/kg	1400	144	04/07/03 19:26	BME	75-15-0		
2-Hexanone	ND	ug/kg	14000	144	04/07/03 19:26	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	720	144	04/07/03 19:26	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	720	144	04/07/03 19:26	BME	540-59-0		
Xylene (Total)	560	J ug/kg	720	144	04/07/03 19:26	BME	1330-20-7	7	
Dibromofluoromethane (S)	100	%		1.0	04/07/03 19:26	BME	1868-53-7		
Toluene-d8 (S)	103	%		1.0	04/07/03 19:26	BME	2037-26-5		
4-Bromofluorobenzene (S)	102	%		1.0	04/07/03 19:26	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	112	%		1.0	04/07/03 19:26	BME	17060-07-0		

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## REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605963107 Project Sample Number: 6069132-007 Date Collected: 04/03/03 15:12  
Client Sample ID: TANK D Matrix: Soil Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: 0A2 / 0A2								
Mineral Spirits	ND	mg/kg	12.		1.2 04/08/03 03:25	MIM			
Jet Fuel	ND	mg/kg	12.		1.2 04/08/03 03:25	MIM			
Kerosene	ND	mg/kg	12.		1.2 04/08/03 03:25	MIM			
Diesel Fuel	1200	mg/kg	12.		1.2 04/08/03 03:25	MIM	68334-30-5	6	
Fuel Oil	ND	mg/kg	12.		1.2 04/08/03 03:25	MIM	68334-30-5		
Motor Oil	ND	mg/kg	12.		1.2 04/08/03 03:25	MIM			
n-Tetracosane (S)	102	%			1.0 04/08/03 03:25	MIM	646-31-1		
p-Terphenyl (S)	104	%			1.0 04/08/03 03:25	MIM	92-94-4		
Date Extracted	04/07/03				04/07/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	16.7	%			1.0 04/08/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	79-00-5		
1,1-Dichloroethane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	75-34-3		
1,1-Dichloroethene	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	75-35-4		
1,1-Dichloropropene	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	120-82-1		
1,2,4-Trimethylbenzene	280	ug/kg	6.0		1.2	04/12/03 22:07	BME	95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	95-50-1		
1,2-Dichloroethane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	107-06-2		
1,2-Dichloropropane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	78-87-5		
1,3,5-Trimethylbenzene	110	ug/kg	6.0		1.2	04/12/03 22:07	BME	108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	541-73-1		
1,3-Dichloropropane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	106-46-7		
2,2-Dichloropropane	ND	ug/kg	6.0		1.2	04/12/03 22:07	BME	594-20-7		

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Lab Sample No: 605963107      Project Sample Number: 6069132-007      Date Collected: 04/03/03 15:12  
Client Sample ID: TANK D      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
2-Chloroethylvinyl ether	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	106-43-4		
Benzene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	71-43-2		
Bromobenzene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	108-86-1		
Bromochloromethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	75-27-4		
Bromoform	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	75-25-2		
Bromomethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	56-23-5		
Chlorobenzene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	108-90-7		
Chloroethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	75-00-3		
Chloroform	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	67-66-3		
Chloromethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	124-48-1		
Dibromomethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	75-71-8		
Ethylbenzene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	98-82-8		
m&p-Xylene	15.	ug/kg	6.0	1.2	04/12/03 22:07	BME			
Methylene chloride	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	75-09-2		
Naphthalene	26.	ug/kg	12.	1.2	04/12/03 22:07	BME	91-20-3		
n-Butylbenzene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	104-51-8		
n-Propylbenzene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	103-65-1		
o-Xylene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	95-47-6		
p-Isopropyltoluene	40.	ug/kg	6.0	1.2	04/12/03 22:07	BME	99-87-6		
sec-Butylbenzene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	135-98-8		
Styrene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	127-18-4		
Toluene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	10061-02-6		
Trichloroethene	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	75-69-4		
Vinyl chloride	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	75-01-4		

Date: 04/17/03

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Lab Sample No: 605963107      Project Sample Number: 6069132-007      Date Collected: 04/03/03 15:12  
Client Sample ID: TANK D      Matrix: Soil      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Acetone	ND	ug/kg	24.	1.2	04/12/03 22:07	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	12.	1.2	04/12/03 22:07	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.	1.2	04/12/03 22:07	BME	108-10-1		
Carbon disulfide	ND	ug/kg	12.	1.2	04/12/03 22:07	BME	75-15-0		
2-Hexanone	180	ug/kg	120	1.2	04/12/03 22:07	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	6.0	1.2	04/12/03 22:07	BME	540-59-0		
Xylene (Total)	15.	ug/kg	6.0	1.2	04/12/03 22:07	BME	1330-20-7		
Dibromofluoromethane (S)	97	%		1.0	04/12/03 22:07	BME	1868-53-7		
Toluene-d8 (S)	86	%		1.0	04/12/03 22:07	BME	2037-26-5		
4-Bromofluorobenzene (S)	76	%		1.0	04/12/03 22:07	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	99	%		1.0	04/12/03 22:07	BME	17060-07-0		

## REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 606004935      Project Sample Number: 6069673-007      Date Collected: 04/17/03 11:41  
Client Sample ID: TANK D      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	12.		1.2 04/30/03 11:43	MIM			
Jet Fuel	ND	mg/kg	12.		1.2 04/30/03 11:43	MIM			
Kerosene	ND	mg/kg	12.		1.2 04/30/03 11:43	MIM			
Diesel Fuel	1500	mg/kg	12.		1.2 04/30/03 11:43	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	12.		1.2 04/30/03 11:43	MIM	68334-30-5		
Motor Oil	ND	mg/kg	12.		1.2 04/30/03 11:43	MIM			
n-Tetracosane (S)	128	%			1.0 04/30/03 11:43	MIM	646-31-1		
p-Terphenyl (S)	144	%			1.0 04/30/03 11:43	MIM	92-94-4		
Date Extracted	04/25/03				04/25/03				

**Organics Prep**

Percent Moisture	Method: SM 2540G								
Percent Moisture	14.5	%			1.0 04/24/03	MAM			

**GC/MS Volatiles**

GC/MS VOCs in Soil by 8260	Method: EPA 8260	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
1,1,1,2-Tetrachloroethane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	630-20-6		
1,1,1-Trichloroethane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	71-55-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	79-34-5		
1,1,2-Trichloroethane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	79-00-5		
1,1-Dichloroethane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	75-34-3		
1,1-Dichloroethene	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	75-35-4		
1,1-Dichloropropene	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	563-58-6		
1,2,3-Trichlorobenzene	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	87-61-6		
1,2,3-Trichloropropane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	96-18-4		
1,2,4-Trichlorobenzene	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	120-82-1		
1,2,4-Trimethylbenzene	220	ug/kg	29.		5.8	04/25/03 11:33	BME	95-63-6		
1,2-Dibromo-3-chloropropane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	96-12-8		
1,2-Dibromoethane (EDB)	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	106-93-4		
1,2-Dichlorobenzene	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	95-50-1		
1,2-Dichloroethane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	107-06-2		
1,2-Dichloropropane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	78-87-5		
1,3,5-Trimethylbenzene	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	108-67-8		
1,3-Dichlorobenzene	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	541-73-1		
1,3-Dichloropropane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	142-28-9		
1,4-Dichlorobenzene	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	106-46-7		
2,2-Dichloropropane	ND	ug/kg	29.		5.8	04/25/03 11:33	BME	594-20-7		

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Lab Sample No: 606004935      Project Sample Number: 6069673-007      Date Collected: 04/17/03 11:41  
Client Sample ID: TANK D      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
2-Chloroethylvinyl ether	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	110-75-8		
2-Chlorotoluene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	95-49-8		
4-Chlorotoluene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	106-43-4		
Benzene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	71-43-2		
Bromobenzene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	108-86-1		
Bromochloromethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	74-97-5		
Bromodichloromethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	75-27-4		
Bromoform	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	75-25-2		
Bromomethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	74-83-9		
Carbon tetrachloride	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	56-23-5		
Chlorobenzene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	108-90-7		
Chloroethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	75-00-3		
Chloroform	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	67-66-3		
Chloromethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	74-87-3		
cis-1,2-Dichloroethene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	156-59-2		
cis-1,3-Dichloropropene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	10061-01-5		
Dibromochloromethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	124-48-1		
Dibromomethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	74-95-3		
Dichlorodifluoromethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	75-71-8		
Ethylbenzene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	98-82-8		
m&p-Xylene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME			
Methylene chloride	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	75-09-2		
Naphthalene	ND	ug/kg	58.	5.8	04/25/03 11:33	BME	91-20-3		
n-Butylbenzene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	104-51-8		
n-Propylbenzene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	103-65-1		
o-Xylene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	95-47-6		
p-Isopropyltoluene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	99-87-6		
sec-Butylbenzene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	135-98-8		
Styrene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	100-42-5		
tert-Butylbenzene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	98-06-6		
Tetrachloroethene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	127-18-4		
Toluene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	108-88-3		
trans-1,2-Dichloroethene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	156-60-5		
trans-1,3-Dichloropropene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	10061-02-6		
Trichloroethene	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	79-01-6		
Trichlorofluoromethane	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	75-69-4		
Vinyl chloride	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	75-01-4		

Date: 05/06/03

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Lab Sample No: 606004935      Project Sample Number: 6069673-007      Date Collected: 04/17/03 11:41  
Client Sample ID: TANK D      Matrix: Soil      Date Received: 04/18/03 09:45

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Acetone	ND	ug/kg	120	5.8	04/25/03 11:33	BME	67-64-1		
2-Butanone (MEK)	ND	ug/kg	58.	5.8	04/25/03 11:33	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	58.	5.8	04/25/03 11:33	BME	108-10-1		
Carbon disulfide	ND	ug/kg	58.	5.8	04/25/03 11:33	BME	75-15-0		
2-Hexanone	ND	ug/kg	580	5.8	04/25/03 11:33	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	1634-04-4		
1,2-Dichloroethene (Total)	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	540-59-0		
Xylene (Total)	ND	ug/kg	29.	5.8	04/25/03 11:33	BME	1330-20-7		
Dibromofluoromethane (S)	98	%		1.0	04/25/03 11:33	BME	1868-53-7		
Toluene-d8 (S)	93	%		1.0	04/25/03 11:33	BME	2037-26-5		
4-Bromofluorobenzene (S)	87	%		1.0	04/25/03 11:33	BME	460-00-4		
1,2-Dichloroethane-d4 (S)	100	%		1.0	04/25/03 11:33	BME	17060-07-0		

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**Pace Analytical Services, Inc.**  
9608 Loiret Blvd.  
Lenexa, KS 66219  
Phone: 913.599.5665  
Fax: 913.599.1759

April 17, 2003

Ms. Lorri Jackson  
BP-RETEC  
907 N. Poplar  
Suite 150  
Casper, WY 82601

RE: Lab Project Number: 6069132  
Client Project ID: RMOTC

Dear Ms. Jackson:

Enclosed are the analytical results for sample(s) received by the laboratory on April 4, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Adam Taylor  
adam.taylor@pacelabs.com  
Project Manager

Kansas/NELAP Certification Number E-10116

Enclosures

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**SAMPLE SUMMARY**

**Pace Analytical Services, Inc.**  
9608 Loiret Blvd.  
Lenexa, KS 66219  
Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069132  
Client Project ID: RMOTC

Project	Sample				
<u>Sample Number</u>	<u>Number</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
6069132-001	605963040	TANK A	Water	04/03/03 13:15	04/04/03 09:30
6069132-002	605963057	TANK B	Water	04/03/03 13:38	04/04/03 09:30
6069132-003	605963065	TANK D	Water	04/03/03 13:51	04/04/03 09:30
6069132-004	605963073	TANK CONTROL	Water	04/03/03 14:00	04/04/03 09:30
6069132-005	605963081	TANK A	Soil	04/03/03 14:42	04/04/03 09:30
6069132-006	605963099	TANK B	Soil	04/03/03 14:56	04/04/03 09:30
6069132-007	605963107	TANK D	Soil	04/03/03 15:12	04/04/03 09:30
6069132-008	605963115	TANK CONTROL	Soil	04/03/03 15:05	04/04/03 09:30
6069132-009	605963123	BASELINE A	Soil	03/25/03 16:01	04/04/03 09:30
6069132-010	605963131	BASELINE B	Soil	03/25/03 16:22	04/04/03 09:30
6069132-011	605963156	BASELINE D	Soil	03/25/03 14:59	04/04/03 09:30
6069132-012	605963164	BASELINE CONTROL	Soil	03/25/03 13:49	04/04/03 09:30
6069132-013	605966043	TRIP BLANK	Water	04/03/03	04/04/03 09:30

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**SAMPLE ANALYTE COUNT**

*Pace Analytical Services, Inc.*  
9608 Loiret Blvd.  
Lenexa, KS 66219  
Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069132  
Client Project ID: RM0TC

Project	Analysis	Analytes
Sample Number	Code	Reported
6069132-001	8260 WEPA GC/MS VOCs by 8260	68
	0A2 WL60 Total Extractable Hydrocarbons	10
6069132-002	8260 WEPA GC/MS VOCs by 8260	68
	0A2 WL60 Total Extractable Hydrocarbons	10
6069132-003	8260 WEPA GC/MS VOCs by 8260	68
	0A2 WL60 Total Extractable Hydrocarbons	10
6069132-004	8260 WEPA GC/MS VOCs by 8260	68
	0A2 WL60 Total Extractable Hydrocarbons	9
6069132-005	%MOISTURE Percent Moisture	1
	8260 SPAC GC/MS VOCs in Soil by 8260	72
	0A2 SL60 Total Extractable Hydrocarbons	9
6069132-006	%MOISTURE Percent Moisture	1
	8260 SPAC GC/MS VOCs in Soil by 8260	72
	0A2 SL60 Total Extractable Hydrocarbons	9
6069132-007	%MOISTURE Percent Moisture	1
	8260 SPAC GC/MS VOCs in Soil by 8260	72
	0A2 SL60 Total Extractable Hydrocarbons	9
6069132-008	%MOISTURE Percent Moisture	1
	8260 SPAC GC/MS VOCs in Soil by 8260	72
	0A2 SL60 Total Extractable Hydrocarbons	9
6069132-009	%MOISTURE Percent Moisture	1
	8260 SPAC GC/MS VOCs in Soil by 8260	72
	0A2 SL60 Total Extractable Hydrocarbons	9
6069132-010	%MOISTURE Percent Moisture	1
	8260 SPAC GC/MS VOCs in Soil by 8260	72
	0A2 SL60 Total Extractable Hydrocarbons	9
6069132-011	%MOISTURE Percent Moisture	1
	8260 SPAC GC/MS VOCs in Soil by 8260	72
	0A2 SL60 Total Extractable Hydrocarbons	9
6069132-012	%MOISTURE Percent Moisture	1
	8260 SPAC GC/MS VOCs in Soil by 8260	72
	0A2 SL60 Total Extractable Hydrocarbons	9
6069132-013	8260 WEPA GC/MS VOCs by 8260	68

**REPORT OF LABORATORY ANALYSIS**

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Lab Sample No: 605966043      Project Sample Number: 6069132-013      Date Collected: 04/03/03 00:00  
Client Sample ID: TRIP BLANK      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
<b>GC/MS Volatiles</b>									
GC/MS VOCs by 8260      Method: EPA 8260									
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-71-8		
Chloromethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	74-87-3		
Vinyl chloride	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-01-4		
Bromomethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	74-83-9		
Chloroethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-00-3		
Trichlorofluoromethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-69-4		
Methylene chloride	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-09-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	156-60-5		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-34-3		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	594-20-7		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	156-59-2		
Chloroform	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	67-66-3		
Bromochloromethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	74-97-5		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	71-55-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	56-23-5		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	563-58-6		
Benzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	71-43-2		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	107-06-2		
Trichloroethene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	79-01-6		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	78-87-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-27-4		
Dibromomethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	74-95-3		
Toluene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	108-88-3		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	79-00-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	127-18-4		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	142-28-9		
Dibromochloromethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	106-93-4		
Chlorobenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	630-20-6		
Ethylbenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	100-41-4		
m&p-Xylene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME			
o-Xylene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	95-47-6		
Styrene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	100-42-5		
Bromoform	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	98-82-8		

Date: 04/17/03

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Lab Sample No: 605966043      Project Sample Number: 6069132-013      Date Collected: 04/03/03 00:00  
Client Sample ID: TRIP BLANK      Matrix: Water      Date Received: 04/04/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	79-34-5		
Bromobenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	108-86-1		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	96-18-4		
n-Propylbenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	103-65-1		
2-Chlorotoluene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	108-67-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	95-63-6		
sec-Butylbenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	98-06-6		
p-Isopropyltoluene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	99-87-6		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	106-46-7		
n-Butylbenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	104-51-8		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	87-68-3		
Naphthalene	ND	ug/l	10.	1.0	04/14/03 16:24	BME	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	87-61-6		
Xylene (Total)	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	1330-20-7		
Acetone	ND	ug/l	20.	1.0	04/14/03 16:24	BME	67-64-1		
2-Butanone (MEK)	ND	ug/l	10.	1.0	04/14/03 16:24	BME	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/l	10.	1.0	04/14/03 16:24	BME	108-10-1		
2-Hexanone	ND	ug/l	10.	1.0	04/14/03 16:24	BME	591-78-6		
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	1634-04-4		
Carbon disulfide	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	75-15-0		
1,2-Dichloroethene (Total)	ND	ug/l	5.0	1.0	04/14/03 16:24	BME	540-59-0		
Dibromofluoromethane (S)	101	%		1.0	04/14/03 16:24	BME	1868-53-7		
Toluene-d8 (S)	99	%		1.0	04/14/03 16:24	BME	2037-26-5		
4-Bromofluorobenzene (S)	98	%		1.0	04/14/03 16:24	BME	460-00-4		

Date: 04/17/03

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## REPORT OF LABORATORY ANALYSIS

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#### PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

- ND Not detected at or above adjusted reporting limit  
NC Not Calculable  
J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit  
MDL Adjusted Method Detection Limit  
(S) Surrogate  
[1] Chromatogram is indicative of a mixture of gasoline, diesel and heavy range hydrocarbons. Quantitation was based on Diesel #2 reference standard covering C10-C28 hydrocarbons.  
[2] The surrogate was below laboratory control limits, however the alternate surrogate was within limits; therefore the data was accepted.  
[3] Low surrogate recovery was confirmed as a matrix effect by a second analysis.  
[4] Chromatogram is indicative of a mixture of gasoline and diesel range hydrocarbons. Quantitation was based upon Diesel #2 reference standard.  
[5] Chromatogram is indicative of a mixture of gasoline and diesel range hydrocarbons. Quantitation was based on Diesel #2 reference standard.  
[6] The sample contains some non-fuel compounds.  
[7] Detected but below the PRL; therefore, result is an estimated concentration (CLP J-Flag).

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Lab Project Number: 6069132  
Client Project ID: RM0TC

METHOD BLANK: 605966449

Associated Lab Samples: 605963123 605963131 605963156 605963164

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Chlorobenzene	ug/kg	ND	5.0	
Chloroethane	ug/kg	ND	5.0	
Chloroform	ug/kg	ND	5.0	
Chloromethane	ug/kg	ND	5.0	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
Dibromochloromethane	ug/kg	ND	5.0	
Dibromomethane	ug/kg	ND	5.0	
Dichlorodifluoromethane	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
m&p-Xylene	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	10.	
n-Butylbenzene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
o-Xylene	ug/kg	ND	5.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
sec-Butylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
tert-Butylbenzene	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
Vinyl chloride	ug/kg	ND	5.0	
Acetone	ug/kg	ND	20.	
2-Butanone (MEK)	ug/kg	ND	10.	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.	
Carbon disulfide	ug/kg	ND	10.	
2-Hexanone	ug/kg	ND	100	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	

Date: 04/17/03

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Lab Project Number: 6069132  
Client Project ID: RM0TC

METHOD BLANK: 605966449

Associated Lab Samples: 605963123 605963131 605963156 605963164

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
Xylene (Total)	ug/kg	ND	5.0	
Dibromofluoromethane (S)	%	101		
Toluene-d8 (S)	%	101		
4-Bromofluorobenzene (S)	%	102		
1,2-Dichloroethane-d4 (S)	%	109		

LABORATORY CONTROL SAMPLE: 605966456

Parameter	Units	Spike	LCS	LCS	% Rec	Footnotes
		Conc.	Result	% Rec	Limits	
1,1,1,2-Tetrachloroethane	ug/kg	50.00	51.89	104	75-129	
1,1,1-Trichloroethane	ug/kg	50.00	55.29	111	71-133	
1,1,2,2-Tetrachloroethane	ug/kg	50.00	48.71	97	68-127	
1,1,2-Trichloroethane	ug/kg	50.00	49.72	99	73-129	
1,1-Dichloroethane	ug/kg	50.00	51.31	103	72-131	
1,1-Dichloroethene	ug/kg	50.00	51.71	103	63-141	
1,1-Dichloropropene	ug/kg	50.00	53.15	106	70-134	
1,2,3-Trichlorobenzene	ug/kg	50.00	46.96	94	56-130	
1,2,3-Trichloropropane	ug/kg	50.00	58.68	117	72-127	
1,2,4-Trichlorobenzene	ug/kg	50.00	43.29	87	48-138	
1,2,4-Trimethylbenzene	ug/kg	50.00	47.52	95	68-129	
1,2-Dibromo-3-chloropropane	ug/kg	50.00	51.35	103	64-132	
1,2-Dibromoethane (EDB)	ug/kg	50.00	50.34	101	73-129	
1,2-Dichlorobenzene	ug/kg	50.00	47.34	95	71-128	
1,2-Dichloroethane	ug/kg	50.00	53.14	106	70-128	
1,2-Dichloropropane	ug/kg	50.00	52.01	104	74-125	
1,3,5-Trimethylbenzene	ug/kg	50.00	48.44	97	71-131	
1,3-Dichlorobenzene	ug/kg	50.00	45.79	92	66-128	
1,3-Dichloropropane	ug/kg	50.00	49.86	100	71-128	
1,4-Dichlorobenzene	ug/kg	50.00	44.58	89	64-126	
2,2-Dichloropropane	ug/kg	50.00	57.97	116	64-137	
2-Chlorotoluene	ug/kg	50.00	47.98	96	70-130	
4-Chlorotoluene	ug/kg	50.00	48.36	97	68-129	
Benzene	ug/kg	50.00	49.58	99	73-126	
Bromobenzene	ug/kg	50.00	47.26	94	74-128	

Date: 04/17/03

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Lab Project Number: 6069132  
Client Project ID: RM0TC

LABORATORY CONTROL SAMPLE: 605966456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Bromochloromethane	ug/kg	50.00	52.89	106	69-134	
Bromodichloromethane	ug/kg	50.00	56.69	113	77-139	
Bromoform	ug/kg	50.00	51.17	102	67-132	
Bromomethane	ug/kg	50.00	48.16	96	22-149	
Carbon tetrachloride	ug/kg	50.00	57.92	116	66-136	
Chlorobenzene	ug/kg	50.00	48.28	97	74-125	
Chloroethane	ug/kg	50.00	56.02	112	24-154	
Chloroform	ug/kg	50.00	51.66	103	72-130	
Chloromethane	ug/kg	50.00	47.97	96	15-135	
cis-1,2-Dichloroethene	ug/kg	50.00	50.92	102	74-130	
cis-1,3-Dichloropropene	ug/kg	50.00	55.51	111	75-133	
Dibromochloromethane	ug/kg	50.00	52.90	106	71-131	
Dibromomethane	ug/kg	50.00	52.72	105	75-128	
Dichlorodifluoromethane	ug/kg	50.00	40.74	82	10-123	
Ethylbenzene	ug/kg	50.00	48.21	96	75-126	
Hexachloro-1,3-butadiene	ug/kg	50.00	45.66	91	56-137	
Isopropylbenzene (Cumene)	ug/kg	50.00	45.53	91	73-124	
m&p-Xylene	ug/kg	100.00	94.39	94	73-124	
Methylene chloride	ug/kg	50.00	54.98	110	64-141	
Naphthalene	ug/kg	50.00	44.26	88	55-130	
n-Butylbenzene	ug/kg	50.00	47.87	96	61-137	
n-Propylbenzene	ug/kg	50.00	49.29	99	69-135	
o-Xylene	ug/kg	50.00	48.14	96	76-126	
p-Isopropyltoluene	ug/kg	50.00	47.03	94	66-128	
sec-Butylbenzene	ug/kg	50.00	48.23	96	72-133	
Styrene	ug/kg	50.00	47.25	94	75-128	
tert-Butylbenzene	ug/kg	50.00	47.63	95	71-133	
Tetrachloroethene	ug/kg	50.00	49.75	100	68-132	
Toluene	ug/kg	50.00	49.10	98	75-125	
trans-1,2-Dichloroethene	ug/kg	50.00	52.25	105	67-139	
trans-1,3-Dichloropropene	ug/kg	50.00	53.82	108	65-143	
Trichloroethene	ug/kg	50.00	57.44	115	74-139	
Trichlorofluoromethane	ug/kg	50.00	55.58	111	53-135	
Vinyl chloride	ug/kg	50.00	50.75	102	29-136	
Acetone	ug/kg	100.00	85.64	86	50-150	
2-Butanone (MEK)	ug/kg	100.00	93.11	93	50-150	
4-Methyl-2-pentanone (MIBK)	ug/kg	100.00	99.63	100	50-150	

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Lab Project Number: 6069132  
Client Project ID: RMOTC

LABORATORY CONTROL SAMPLE: 605966456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Carbon disulfide	ug/kg	100.00	124.5	125	50-150	
2-Hexanone	ug/kg	100.00	89.80	90	50-150	
Methyl-tert-butyl ether	ug/kg	50.00	48.15	96	56-130	
1,2-Dichloroethene (Total)	ug/kg	100.00	103.2	103	67-139	
Xylene (Total)	ug/kg	150.00	142.5	95	73-124	
Dibromofluoromethane (S)				103	80-120	
Toluene-d8 (S)				103	81-117	
4-Bromofluorobenzene (S)				101	74-121	
1,2-Dichloroethane-d4 (S)				109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605967389 605967397

Parameter	Units	605961507		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Footnotes
		Result	Conc.						RPD	RPD	
1,1,1,2-Tetrachloroethane	ug/kg	0	49.70	50.50	36.45	102	73	49-144	32	37	
1,1,1-Trichloroethane	ug/kg	0	49.70	55.92	41.03	112	82	52-146	31	16	3
1,1,2,2-Tetrachloroethane	ug/kg	0	49.70	51.75	37.69	104	76	10-173	31	27	3
1,1,2-Trichloroethane	ug/kg	0	49.70	51.01	40.05	103	80	37-141	24	32	
1,1-Dichloroethane	ug/kg	0	49.70	53.41	41.45	108	83	49-143	25	17	3
1,1-Dichloroethene	ug/kg	0	49.70	53.53	40.92	108	82	48-149	27	24	3
1,1-Dichloropropene	ug/kg	0	49.70	52.06	38.76	105	78	48-149	29	16	3
1,2,3-Trichlorobenzene	ug/kg	0	49.70	21.68	16.00	44	32	10-152	30	29	3
1,2,3-Trichloropropane	ug/kg	0	49.70	64.05	46.53	129	93	24-170	32	20	3
1,2,4-Trichlorobenzene	ug/kg	0	49.70	25.08	17.24	50	34	10-161	37	32	3
1,2,4-Trimethylbenzene	ug/kg	0	49.70	47.58	28.48	96	57	17-163	50	32	3
1,2-Dibromo-3-chloropropane	ug/kg	0	49.70	46.90	36.86	94	74	18-158	24	20	3
1,2-Dibromoethane (EDB)	ug/kg	0	49.70	47.06	38.82	95	78	27-150	19	20	
1,2-Dichlorobenzene	ug/kg	0	49.70	40.39	26.18	81	52	10-147	43	30	3
1,2-Dichloroethane	ug/kg	0	49.70	51.77	42.75	104	86	42-144	19	20	
1,2-Dichloropropane	ug/kg	0	49.70	51.21	41.47	103	83	44-136	21	22	
1,3,5-Trimethylbenzene	ug/kg	0	49.70	49.37	29.27	99	59	18-170	51	29	3
1,3-Dichlorobenzene	ug/kg	0	49.70	41.16	25.68	83	52	10-152	46	28	3
1,3-Dichloropropane	ug/kg	0	49.70	49.47	39.23	100	79	37-138	23	20	3
1,4-Dichlorobenzene	ug/kg	0	49.70	40.05	25.13	81	50	10-151	46	29	3
2,2-Dichloropropane	ug/kg	0	49.70	58.40	44.02	118	88	43-153	28	20	3
2-Chlorotoluene	ug/kg	0	49.70	49.00	29.51	99	59	20-161	50	22	3

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Lab Project Number: 6069132  
Client Project ID: RM0TC

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605967389 605967397

Parameter	Units	605961507	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes	
		Result	Conc.	Result	Result	% Rec	% Rec	Limits			
4-Chlorotoluene	ug/kg	0	49.70	49.05	29.50	99	59	12-160	50	23	3
Benzene	ug/kg	0	49.70	49.70	37.97	100	76	60-130	27	22	3
Bromobenzene	ug/kg	0	49.70	41.09	29.52	83	59	10-163	33	20	3
Bromochloromethane	ug/kg	0	49.70	50.16	40.87	101	82	37-154	20	20	
Bromodichloromethane	ug/kg	0	49.70	55.86	44.03	112	88	37-158	24	21	3
Bromoform	ug/kg	0	49.70	44.75	36.16	90	72	14-159	21	33	
Bromomethane	ug/kg	0	49.70	52.48	39.71	106	80	10-145	28	30	
Carbon tetrachloride	ug/kg	0	49.70	57.62	42.37	116	85	20-169	31	20	3
Chlorobenzene	ug/kg	0	49.70	46.90	32.93	94	66	53-132	35	26	3
Chloroethane	ug/kg	0	49.70	56.11	43.65	113	88	28-137	25	26	
Chloroform	ug/kg	0	49.70	52.58	40.39	106	81	47-139	26	20	3
Chloromethane	ug/kg	0	49.70	50.66	39.08	102	78	35-125	26	22	3
cis-1,2-Dichloroethene	ug/kg	0	49.70	51.35	40.03	103	80	42-142	25	20	3
cis-1,3-Dichloropropene	ug/kg	0	49.70	47.77	40.23	96	81	30-151	17	20	
Dibromochloromethane	ug/kg	0	49.70	51.21	38.48	103	77	29-150	28	35	
Dibromomethane	ug/kg	0	49.70	50.82	42.38	102	85	32-156	18	20	
Dichlorodifluoromethane	ug/kg	0	49.70	42.96	31.63	86	63	10-112	30	21	3
Ethylbenzene	ug/kg	0	49.70	47.19	32.79	95	66	49-142	36	24	3
Hexachloro-1,3-butadiene	ug/kg	0	49.70	22.30	15.64	45	31	18-145	35	20	3
Isopropylbenzene (Cumene)	ug/kg	0	49.70	42.02	28.75	84	58	39-146	37	21	3
m&p-Xylene	ug/kg	0	99.40	92.40	62.30	93	62	22-175	39	32	3
Methylene chloride	ug/kg	1.626	49.70	54.17	43.11	106	83	18-167	23	30	
Naphthalene	ug/kg	0	49.70	26.57	22.81	54	46	10-154	15	24	
n-Butylbenzene	ug/kg	0	49.70	39.78	24.30	80	49	20-159	48	32	3
n-Propylbenzene	ug/kg	0	49.70	50.47	29.79	102	60	18-171	52	25	3
o-Xylene	ug/kg	0	49.70	46.39	32.17	93	64	30-150	36	29	3
p-Isopropyltoluene	ug/kg	0	49.70	41.73	25.54	84	51	17-164	48	30	3
sec-Butylbenzene	ug/kg	0	49.70	44.04	26.87	89	54	19-150	48	28	3
Styrene	ug/kg	0	49.70	43.61	30.96	88	62	19-148	34	29	3
tert-Butylbenzene	ug/kg	0	49.70	46.58	28.03	94	56	17-150	50	28	3
Tetrachloroethene	ug/kg	0	49.70	49.43	32.67	100	66	26-158	41	28	3
Toluene	ug/kg	0	49.70	47.59	35.11	96	70	45-142	30	24	3
trans-1,2-Dichloroethene	ug/kg	0	49.70	53.66	41.45	108	83	39-150	26	20	3
trans-1,3-Dichloropropene	ug/kg	0	49.70	50.67	40.06	102	80	31-136	23	34	
Trichloroethene	ug/kg	0	49.70	58.34	43.35	117	87	48-149	29	22	3
Trichlorofluoromethane	ug/kg	0	49.70	57.23	43.10	115	86	39-159	28	20	3
Vinyl chloride	ug/kg	0	49.70	54.42	41.44	110	83	45-125	27	22	3

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Lab Project Number: 6069132  
Client Project ID: RMOTC

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605967389 605967397

Parameter	Units	605961507	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes
		Result	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Acetone	ug/kg	0	99.40	82.15	70.17	83	70	50-150	16	25
2-Butanone (MEK)	ug/kg	0	99.40	87.53	77.20	88	77	50-150	13	25
4-Methyl-2-pentanone (MIBK)	ug/kg	0	99.40	91.82	80.07	92	80	50-150	14	25
Carbon disulfide	ug/kg	0	99.40	120.9	93.18	122	93	50-150	26	25 3
2-Hexanone	ug/kg	0	99.40	79.24	71.10	80	71	50-150	11	25
Methyl-tert-butyl ether	ug/kg	0	49.70	47.75	39.79	96	80	48-125	18	19
1,2-Dichloroethene (Total)	ug/kg	0	99.40	105.0	81.48	106	82	50-150	25	20 3
Xylene (Total)	ug/kg	0	149.10	138.8	94.47	93	63	30-150	38	25 3
Dibromofluoromethane (S)						102	102	80-120		
Toluene-d8 (S)						100	101	81-117		
4-Bromofluorobenzene (S)						95	100	74-121		
1,2-Dichloroethane-d4 (S)						104	107	80-120		

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**QUALITY CONTROL DATA**

Lab Project Number: 6069132  
Client Project ID: RM0TC

METHOD BLANK: 605981554

Associated Lab Samples: 605963081 605963099 605963107 605963115

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Chlorobenzene	ug/kg	ND	5.0	
Chloroethane	ug/kg	ND	5.0	
Chloroform	ug/kg	ND	5.0	
Chloromethane	ug/kg	ND	5.0	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
Dibromochloromethane	ug/kg	ND	5.0	
Dibromomethane	ug/kg	ND	5.0	
Dichlorodifluoromethane	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
m&p-Xylene	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	10.	
n-Butylbenzene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
o-Xylene	ug/kg	ND	5.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
sec-Butylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
tert-Butylbenzene	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
Vinyl chloride	ug/kg	ND	5.0	
Acetone	ug/kg	ND	20.	
2-Butanone (MEK)	ug/kg	ND	10.	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.	
Carbon disulfide	ug/kg	ND	10.	
2-Hexanone	ug/kg	ND	100	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	

Date: 04/17/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

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Phone: 913.599.5665  
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Lab Project Number: 6069132  
Client Project ID: RMOTC

METHOD BLANK: 605981554

Associated Lab Samples: 605963081 605963099 605963107 605963115

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
Xylene (Total)	ug/kg	ND	5.0	
Dibromofluoromethane (S)	%	99		
Toluene-d8 (S)	%	99		
4-Bromofluorobenzene (S)	%	98		
1,2-Dichloroethane-d4 (S)	%	101		

LABORATORY CONTROL SAMPLE: 605981562

Parameter	Units	Spike	LCS	LCS	% Rec	Footnotes
		Conc.	Result	% Rec	Limits	
1,1,1,2-Tetrachloroethane	ug/kg	50.00	51.05	102	75-129	
1,1,1-Trichloroethane	ug/kg	50.00	48.01	96	71-133	
1,1,2,2-Tetrachloroethane	ug/kg	50.00	47.81	96	68-127	
1,1,2-Trichloroethane	ug/kg	50.00	50.71	101	73-129	
1,1-Dichloroethane	ug/kg	50.00	49.10	98	72-131	
1,1-Dichloroethene	ug/kg	50.00	51.77	104	63-141	
1,1-Dichloropropene	ug/kg	50.00	47.75	96	70-134	
1,2,3-Trichlorobenzene	ug/kg	50.00	31.00	62	56-130	
1,2,3-Trichloropropane	ug/kg	50.00	51.18	102	72-127	
1,2,4-Trichlorobenzene	ug/kg	50.00	27.29	55	48-138	
1,2,4-Trimethylbenzene	ug/kg	50.00	40.24	80	68-129	
1,2-Dibromo-3-chloropropane	ug/kg	50.00	48.13	96	64-132	
1,2-Dibromoethane (EDB)	ug/kg	50.00	50.31	101	73-129	
1,2-Dichlorobenzene	ug/kg	50.00	40.88	82	71-128	
1,2-Dichloroethane	ug/kg	50.00	45.34	91	70-128	
1,2-Dichloropropane	ug/kg	50.00	51.20	102	74-125	
1,3,5-Trimethylbenzene	ug/kg	50.00	41.25	82	71-131	
1,3-Dichlorobenzene	ug/kg	50.00	37.76	76	66-128	
1,3-Dichloropropane	ug/kg	50.00	49.75	100	71-128	
1,4-Dichlorobenzene	ug/kg	50.00	36.58	73	64-126	
2,2-Dichloropropane	ug/kg	50.00	46.00	92	64-137	
2-Chlorotoluene	ug/kg	50.00	42.74	86	70-130	
4-Chlorotoluene	ug/kg	50.00	39.52	79	68-129	
Benzene	ug/kg	50.00	46.56	93	73-126	
Bromobenzene	ug/kg	50.00	45.34	91	74-128	

Date: 04/17/03

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Lab Project Number: 6069132  
Client Project ID: RMOTC

LABORATORY CONTROL SAMPLE: 605981562

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Bromochloromethane	ug/kg	50.00	50.40	101	69-134	
Bromodichloromethane	ug/kg	50.00	51.72	103	77-139	
Bromoform	ug/kg	50.00	49.99	100	67-132	
Bromomethane	ug/kg	50.00	45.39	91	22-149	
Carbon tetrachloride	ug/kg	50.00	49.36	99	66-136	
Chlorobenzene	ug/kg	50.00	45.64	91	74-125	
Chloroethane	ug/kg	50.00	49.82	100	24-154	
Chloroform	ug/kg	50.00	49.15	98	72-130	
Chloromethane	ug/kg	50.00	46.96	94	15-135	
cis-1,2-Dichloroethene	ug/kg	50.00	49.88	100	74-130	
cis-1,3-Dichloropropene	ug/kg	50.00	47.45	95	75-133	
Dibromochloromethane	ug/kg	50.00	51.02	102	71-131	
Dibromomethane	ug/kg	50.00	49.86	100	75-128	
Dichlorodifluoromethane	ug/kg	50.00	39.19	78	10-123	
Ethylbenzene	ug/kg	50.00	46.17	92	75-126	
Hexachloro-1,3-butadiene	ug/kg	50.00	33.67	67	56-137	
Isopropylbenzene (Cumene)	ug/kg	50.00	43.07	86	73-124	
m&p-Xylene	ug/kg	100.00	89.24	89	73-124	
Methylene chloride	ug/kg	50.00	52.54	105	64-141	
Naphthalene	ug/kg	50.00	39.75	80	55-130	
n-Butylbenzene	ug/kg	50.00	35.87	72	61-137	
n-Propylbenzene	ug/kg	50.00	42.07	84	69-135	
o-Xylene	ug/kg	50.00	45.82	92	76-126	
p-Isopropyltoluene	ug/kg	50.00	38.47	77	66-128	
sec-Butylbenzene	ug/kg	50.00	43.14	86	72-133	
Styrene	ug/kg	50.00	46.23	92	75-128	
tert-Butylbenzene	ug/kg	50.00	44.70	89	71-133	
Tetrachloroethene	ug/kg	50.00	44.57	89	68-132	
Toluene	ug/kg	50.00	45.74	92	75-125	
trans-1,2-Dichloroethene	ug/kg	50.00	48.78	98	67-139	
trans-1,3-Dichloropropene	ug/kg	50.00	48.14	96	65-143	
Trichloroethene	ug/kg	50.00	50.22	100	74-139	
Trichlorofluoromethane	ug/kg	50.00	47.80	96	53-135	
Vinyl chloride	ug/kg	50.00	48.25	96	29-136	
Acetone	ug/kg	100.00	89.91	90	50-150	
2-Butanone (MEK)	ug/kg	100.00	88.69	89	50-150	
4-Methyl-2-pentanone (MIBK)	ug/kg	100.00	91.88	92	50-150	

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Lab Project Number: 6069132  
Client Project ID: RM0TC

LABORATORY CONTROL SAMPLE: 605981562

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Carbon disulfide	ug/kg	100.00	110.4	110	50-150	
2-Hexanone	ug/kg	100.00	91.34	91	50-150	
Methyl-tert-butyl ether	ug/kg	50.00	45.95	92	56-130	
1,2-Dichloroethene (Total)	ug/kg	100.00	98.66	99	67-139	
Xylene (Total)	ug/kg	150.00	135.1	90	73-124	
Dibromofluoromethane (S)				100	80-120	
Toluene-d8 (S)				96	81-117	
4-Bromofluorobenzene (S)				102	74-121	
1,2-Dichloroethane-d4 (S)				95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605981570 605981588

Parameter	Units	605966977	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnotes
		Result									
1,1,1,2-Tetrachloroethane	ug/kg	0	59.82	58.87	58.52	98	97	49-144	1	37	
1,1,1-Trichloroethane	ug/kg	0	59.82	58.15	60.72	97	101	52-146	4	16	
1,1,2,2-Tetrachloroethane	ug/kg	0	59.82	54.18	55.79	91	93	10-173	3	27	
1,1,2-Trichloroethane	ug/kg	0	59.82	56.47	57.11	94	95	37-141	1	32	
1,1-Dichloroethane	ug/kg	0	59.82	57.38	56.47	96	94	49-143	2	17	
1,1-Dichloroethene	ug/kg	0	59.82	62.25	65.44	104	109	48-149	5	24	
1,1-Dichloropropene	ug/kg	0	59.82	56.26	59.23	94	99	48-149	5	16	
1,2,3-Trichlorobenzene	ug/kg	1.463	59.82	35.05	36.08	56	58	10-152	3	29	
1,2,3-Trichloropropane	ug/kg	0	59.82	56.83	58.09	95	97	24-170	2	20	
1,2,4-Trichlorobenzene	ug/kg	0	59.82	33.35	34.11	56	57	10-161	2	32	
1,2,4-Trimethylbenzene	ug/kg	0	59.82	47.62	48.32	80	80	17-163	1	32	
1,2-Dibromo-3-chloropropane	ug/kg	0	59.82	50.77	55.54	85	92	18-158	9	20	
1,2-Dibromoethane (EDB)	ug/kg	0	59.82	54.84	54.65	92	91	27-150	0	20	
1,2-Dichlorobenzene	ug/kg	0	59.82	47.03	47.10	79	78	10-147	0	30	
1,2-Dichloroethane	ug/kg	0	59.82	52.14	50.50	87	84	42-144	3	20	
1,2-Dichloropropane	ug/kg	0	59.82	52.66	57.89	88	96	44-136	9	22	
1,3,5-Trimethylbenzene	ug/kg	0	59.82	50.20	50.98	84	85	18-170	2	29	
1,3-Dichlorobenzene	ug/kg	0	59.82	43.85	44.11	73	73	10-152	1	28	
1,3-Dichloropropane	ug/kg	0	59.82	55.58	54.05	93	90	37-138	3	20	
1,4-Dichlorobenzene	ug/kg	0	59.82	42.50	43.34	71	72	10-151	2	29	
2,2-Dichloropropane	ug/kg	0	59.82	53.07	54.32	89	90	43-153	2	20	
2-Chlorotoluene	ug/kg	0	59.82	50.78	51.15	85	85	20-161	1	22	

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**QUALITY CONTROL DATA**

Lab Project Number: 6069132  
Client Project ID: RMOTC

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605981570 605981588

Parameter	Units	605966977	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes
		Result	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
4-Chlorotoluene	ug/kg	0	59.82	46.04	46.79	77	78	12-160	2	23
Benzene	ug/kg	0	59.82	55.00	55.29	92	92	60-130	1	22
Bromobenzene	ug/kg	0	59.82	50.71	51.54	85	86	10-163	2	20
Bromochloromethane	ug/kg	0	59.82	57.50	55.72	96	93	37-154	3	20
Bromodichloromethane	ug/kg	0	59.82	58.93	57.42	98	96	37-158	3	21
Bromoform	ug/kg	0	59.82	53.48	53.52	89	89	14-159	0	33
Bromomethane	ug/kg	0	59.82	54.95	55.24	92	92	10-145	1	30
Carbon tetrachloride	ug/kg	0	59.82	59.95	62.27	100	104	20-169	4	20
Chlorobenzene	ug/kg	0	59.82	52.90	54.24	88	90	53-132	3	26
Chloroethane	ug/kg	0	59.82	66.77	69.67	112	116	28-137	4	26
Chloroform	ug/kg	0	59.82	57.35	56.24	96	94	47-139	2	20
Chloromethane	ug/kg	0	59.82	59.02	58.55	99	98	35-125	1	22
cis-1,2-Dichloroethene	ug/kg	0	59.82	58.38	57.12	98	95	42-142	2	20
cis-1,3-Dichloropropene	ug/kg	0	59.82	51.24	50.16	86	84	30-151	2	20
Dibromochloromethane	ug/kg	0	59.82	57.19	57.62	96	96	29-150	1	35
Dibromomethane	ug/kg	0	59.82	55.51	54.84	93	91	32-156	1	20
Dichlorodifluoromethane	ug/kg	0	59.82	50.76	56.11	85	93	10-112	10	21
Ethylbenzene	ug/kg	0	59.82	53.14	55.93	89	93	49-142	5	24
Hexachloro-1,3-butadiene	ug/kg	1.916	59.82	40.57	43.71	65	70	18-145	7	20
Isopropylbenzene (Cumene)	ug/kg	0	59.82	49.78	52.55	83	88	39-146	5	21
m&p-Xylene	ug/kg	0	119.60	105.3	108.6	88	90	22-175	3	32
Methylene chloride	ug/kg	0	59.82	63.37	63.39	106	106	18-167	0	30
Naphthalene	ug/kg	1.852	59.82	42.26	45.23	68	72	10-154	7	24
n-Butylbenzene	ug/kg	0	59.82	42.90	45.10	72	75	20-159	5	32
n-Propylbenzene	ug/kg	0	59.82	49.89	52.44	83	87	18-171	5	25
o-Xylene	ug/kg	0	59.82	53.69	54.75	90	91	30-150	2	29
p-Isopropyltoluene	ug/kg	0	59.82	45.50	47.09	76	78	17-164	3	30
sec-Butylbenzene	ug/kg	0	59.82	50.87	53.70	85	89	19-150	5	28
Styrene	ug/kg	0	59.82	51.27	52.18	86	87	19-148	2	29
tert-Butylbenzene	ug/kg	0	59.82	52.65	54.41	88	91	17-150	3	28
Tetrachloroethene	ug/kg	0	59.82	52.64	56.71	88	94	26-158	7	28
Toluene	ug/kg	0	59.82	53.85	54.17	90	90	45-142	1	24
trans-1,2-Dichloroethene	ug/kg	0	59.82	57.40	60.29	96	100	39-150	5	20
trans-1,3-Dichloropropene	ug/kg	0	59.82	51.12	50.88	86	85	31-136	0	34
Trichloroethene	ug/kg	0	59.82	57.71	66.87	96	111	48-149	15	22
Trichlorofluoromethane	ug/kg	0	59.82	57.45	64.80	96	108	39-159	12	20
Vinyl chloride	ug/kg	0	59.82	58.47	63.07	98	105	45-125	8	22

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Lab Project Number: 6069132  
Client Project ID: RMOTC

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605981570 605981588

Parameter	Units	605966977	Spike Conc.	MS	MSD	MS	MSD	% Rec	Limits	Max	Footnotes
		Result		Result	Result	% Rec	% Rec	RPD		RPD	
Acetone	ug/kg	3.132	119.60	88.01	101.2	71	82	50-150	14	25	
2-Butanone (MEK)	ug/kg	0	119.60	86.67	93.98	72	78	50-150	8	25	
4-Methyl-2-pentanone (MIBK)	ug/kg	0	119.60	94.50	103.9	79	86	50-150	9	25	
Carbon disulfide	ug/kg	0	119.60	123.8	133.5	104	111	50-150	8	25	
2-Hexanone	ug/kg	0	119.60	78.90	79.12	66	66	50-150	0	25	
Methyl-tert-butyl ether	ug/kg	0	59.82	50.13	49.11	84	82	48-125	2	19	
1,2-Dichloroethene (Total)	ug/kg	0	119.60	115.8	117.4	97	98	50-150	1	20	
Xylene (Total)	ug/kg	0	179.50	159.0	163.4	89	91	30-150	3	25	
Dibromofluoromethane (S)						98	97	80-120			
Toluene-d8 (S)						98	98	81-117			
4-Bromofluorobenzene (S)						100	100	74-121			
1,2-Dichloroethane-d4 (S)						92	92	80-120			

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Lab Project Number: 6069132  
Client Project ID: RMOTC

METHOD BLANK: 605985530

Associated Lab Samples: 605963040 605963057 605963065 605963073 605966043

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
Ethylbenzene	ug/l	ND	5.0	
m&p-Xylene	ug/l	ND	5.0	
o-Xylene	ug/l	ND	5.0	
Styrene	ug/l	ND	5.0	
Bromoform	ug/l	ND	5.0	
Isopropylbenzene (Cumene)	ug/l	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/l	ND	5.0	
Bromobenzene	ug/l	ND	5.0	
1,2,3-Trichloropropane	ug/l	ND	5.0	
n-Propylbenzene	ug/l	ND	5.0	
2-Chlorotoluene	ug/l	ND	5.0	
1,3,5-Trimethylbenzene	ug/l	ND	5.0	
4-Chlorotoluene	ug/l	ND	5.0	
1,2,4-Trimethylbenzene	ug/l	ND	5.0	
sec-Butylbenzene	ug/l	ND	5.0	
tert-Butylbenzene	ug/l	ND	5.0	
p-Isopropyltoluene	ug/l	ND	5.0	
1,3-Dichlorobenzene	ug/l	ND	5.0	
1,4-Dichlorobenzene	ug/l	ND	5.0	
n-Butylbenzene	ug/l	ND	5.0	
1,2-Dichlorobenzene	ug/l	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/l	ND	5.0	
1,2,4-Trichlorobenzene	ug/l	ND	5.0	
Hexachloro-1,3-butadiene	ug/l	ND	5.0	
Naphthalene	ug/l	ND	10.	
1,2,3-Trichlorobenzene	ug/l	ND	5.0	
Xylene (Total)	ug/l	ND	5.0	
Acetone	ug/l	ND	20.	
2-Butanone (MEK)	ug/l	ND	10.	
4-Methyl-2-pentanone (MIBK)	ug/l	ND	10.	
2-Hexanone	ug/l	ND	10.	
Methyl-tert-butyl ether	ug/l	ND	5.0	
Carbon disulfide	ug/l	ND	5.0	
1,2-Dichloroethene (Total)	ug/l	ND	5.0	
Dibromofluoromethane (S)	%	99		
Toluene-d8 (S)	%	99		

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Lab Project Number: 6069132

Client Project ID: RMOTC

METHOD BLANK: 605985530

Associated Lab Samples: 605963040 605963057 605963065 605963073 605966043

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
4-Bromofluorobenzene (S)	%	98		

LABORATORY CONTROL SAMPLE: 605985548

Parameter	Units	Spike	LCS	LCS	% Rec	Footnotes
		Conc.	Result	% Rec	Limits	
Dichlorodifluoromethane	ug/l	50.00	26.71	53	10-132	
Chloromethane	ug/l	50.00	37.36	75	10-146	
Vinyl chloride	ug/l	50.00	41.33	83	25-136	
Bromomethane	ug/l	50.00	42.69	85	10-175	
Chloroethane	ug/l	50.00	47.66	95	36-144	
Trichlorofluoromethane	ug/l	50.00	47.34	95	47-144	
Methylene chloride	ug/l	50.00	53.91	108	58-143	
1,1-Dichloroethene	ug/l	50.00	49.82	100	56-144	
trans-1,2-Dichloroethene	ug/l	50.00	49.12	98	61-139	
1,1-Dichloroethane	ug/l	50.00	47.40	95	68-132	
2,2-Dichloropropane	ug/l	50.00	48.71	97	59-137	
cis-1,2-Dichloroethene	ug/l	50.00	48.17	96	69-129	
Chloroform	ug/l	50.00	47.15	94	71-128	
Bromochloromethane	ug/l	50.00	49.84	100	69-131	
1,1,1-Trichloroethane	ug/l	50.00	49.47	99	69-134	
Carbon tetrachloride	ug/l	50.00	50.36	101	64-139	
1,1-Dichloropropene	ug/l	50.00	47.91	96	64-135	
Benzene	ug/l	50.00	46.05	92	70-126	
1,2-Dichloroethane	ug/l	50.00	45.22	90	68-130	
Trichloroethene	ug/l	50.00	51.77	104	70-139	
1,2-Dichloropropane	ug/l	50.00	49.58	99	71-125	
Bromodichloromethane	ug/l	50.00	49.47	99	75-136	
Dibromomethane	ug/l	50.00	48.23	96	72-128	
Toluene	ug/l	50.00	47.06	94	72-125	
1,1,2-Trichloroethane	ug/l	50.00	47.57	95	73-129	
Tetrachloroethene	ug/l	50.00	49.69	99	64-134	
1,3-Dichloropropane	ug/l	50.00	46.23	92	73-126	
Dibromochloromethane	ug/l	50.00	48.55	97	71-129	
1,2-Dibromoethane (EDB)	ug/l	50.00	47.16	94	73-128	

Date: 04/17/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

**Pace Analytical Services, Inc.**  
9608 Loiret Blvd.  
Lenexa, KS 66219  
Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069132

Client Project ID: RMOTC

LABORATORY CONTROL SAMPLE: 605985548

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Chlorobenzene	ug/l	50.00	46.36	93	72-125	
1,1,1,2-Tetrachloroethane	ug/l	50.00	49.40	99	73-128	
Ethylbenzene	ug/l	50.00	47.17	94	72-126	
m&p-Xylene	ug/l	100.00	94.72	95	71-126	
o-Xylene	ug/l	50.00	46.62	93	73-126	
Styrene	ug/l	50.00	47.58	95	74-129	
Bromoform	ug/l	50.00	46.66	93	63-132	
Isopropylbenzene (Cumene)	ug/l	50.00	43.60	87	69-124	
1,1,2,2-Tetrachloroethane	ug/l	50.00	45.67	91	64-128	
Bromobenzene	ug/l	50.00	45.91	92	71-126	
1,2,3-Trichloropropane	ug/l	50.00	48.46	97	70-130	
n-Propylbenzene	ug/l	50.00	47.33	95	69-128	
2-Chlorotoluene	ug/l	50.00	46.00	92	71-126	
1,3,5-Trimethylbenzene	ug/l	50.00	45.46	91	72-126	
4-Chlorotoluene	ug/l	50.00	44.85	90	70-125	
1,2,4-Trimethylbenzene	ug/l	50.00	44.35	89	69-125	
sec-Butylbenzene	ug/l	50.00	46.44	93	70-128	
tert-Butylbenzene	ug/l	50.00	45.39	91	70-128	
p-Isopropyltoluene	ug/l	50.00	44.60	89	66-123	
1,3-Dichlorobenzene	ug/l	50.00	44.05	88	70-122	
1,4-Dichlorobenzene	ug/l	50.00	43.70	87	68-120	
n-Butylbenzene	ug/l	50.00	45.15	90	64-129	
1,2-Dichlorobenzene	ug/l	50.00	44.68	89	69-125	
1,2-Dibromo-3-chloropropane	ug/l	50.00	44.90	90	57-132	
1,2,4-Trichlorobenzene	ug/l	50.00	39.59	79	57-124	
Hexachloro-1,3-butadiene	ug/l	50.00	41.11	82	52-134	
Naphthalene	ug/l	50.00	41.10	82	52-129	
1,2,3-Trichlorobenzene	ug/l	50.00	37.75	76	54-126	
Xylene (Total)	ug/l	150.00	141.3	94	71-126	
Acetone	ug/l	100.00	85.36	85	50-150	
2-Butanone (MEK)	ug/l	100.00	85.99	86	50-150	
4-Methyl-2-pentanone (MIBK)	ug/l	100.00	86.46	86	50-150	
2-Hexanone	ug/l	100.00	85.40	85	50-150	
Methyl-tert-butyl ether	ug/l	50.00	43.53	87	55-125	
Carbon disulfide	ug/l	100.00	107.2	107	50-150	
1,2-Dichloroethene (Total)	ug/l	100.00	97.29	97	61-139	
Dibromofluoromethane (S)				100	88-113	

Date: 04/17/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

**Pace Analytical Services, Inc.**  
9608 Loiret Blvd.  
Lenexa, KS 66219  
Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069132

Client Project ID: RMOTC

LABORATORY CONTROL SAMPLE: 605985548

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Chlorobenzene	ug/l	50.00	46.36	93	72-125	
1,1,1,2-Tetrachloroethane	ug/l	50.00	49.40	99	73-128	
Ethylbenzene	ug/l	50.00	47.17	94	72-126	
m&p-Xylene	ug/l	100.00	94.72	95	71-126	
o-Xylene	ug/l	50.00	46.62	93	73-126	
Styrene	ug/l	50.00	47.58	95	74-129	
Bromoform	ug/l	50.00	46.66	93	63-132	
Isopropylbenzene (Cumene)	ug/l	50.00	43.60	87	69-124	
1,1,2,2-Tetrachloroethane	ug/l	50.00	45.67	91	64-128	
Bromobenzene	ug/l	50.00	45.91	92	71-126	
1,2,3-Trichloropropane	ug/l	50.00	48.46	97	70-130	
n-Propylbenzene	ug/l	50.00	47.33	95	69-128	
2-Chlorotoluene	ug/l	50.00	46.00	92	71-126	
1,3,5-Trimethylbenzene	ug/l	50.00	45.46	91	72-126	
4-Chlorotoluene	ug/l	50.00	44.85	90	70-125	
1,2,4-Trimethylbenzene	ug/l	50.00	44.35	89	69-125	
sec-Butylbenzene	ug/l	50.00	46.44	93	70-128	
tert-Butylbenzene	ug/l	50.00	45.39	91	70-128	
p-Isopropyltoluene	ug/l	50.00	44.60	89	66-123	
1,3-Dichlorobenzene	ug/l	50.00	44.05	88	70-122	
1,4-Dichlorobenzene	ug/l	50.00	43.70	87	68-120	
n-Butylbenzene	ug/l	50.00	45.15	90	64-129	
1,2-Dichlorobenzene	ug/l	50.00	44.68	89	69-125	
1,2-Dibromo-3-chloropropane	ug/l	50.00	44.90	90	57-132	
1,2,4-Trichlorobenzene	ug/l	50.00	39.59	79	57-124	
Hexachloro-1,3-butadiene	ug/l	50.00	41.11	82	52-134	
Naphthalene	ug/l	50.00	41.10	82	52-129	
1,2,3-Trichlorobenzene	ug/l	50.00	37.75	76	54-126	
Xylene (Total)	ug/l	150.00	141.3	94	71-126	
Acetone	ug/l	100.00	85.36	85	50-150	
2-Butanone (MEK)	ug/l	100.00	85.99	86	50-150	
4-Methyl-2-pentanone (MIBK)	ug/l	100.00	86.46	86	50-150	
2-Hexanone	ug/l	100.00	85.40	85	50-150	
Methyl-tert-butyl ether	ug/l	50.00	43.53	87	55-125	
Carbon disulfide	ug/l	100.00	107.2	107	50-150	
1,2-Dichloroethene (Total)	ug/l	100.00	97.29	97	61-139	
Dibromofluoromethane (S)				100	88-113	

Date: 04/17/03

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**QUALITY CONTROL DATA**

**Pace Analytical Services, Inc.**  
9608 Loiret Blvd.  
Lenexa, KS 66219  
Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069132  
Client Project ID: RM0TC

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605986165 605986173

Parameter	Units	605977172	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes
		Result	Conc.	Result	Result	% Rec	% Rec	Limits		
4-Bromofluorobenzene (S)						101	100	86-115		

Date: 04/17/03

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**QUALITY CONTROL DATA**

Lab Project Number: 6069132  
 Client Project ID: RM0TC

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QC Batch: 142325	Analysis Method: SM 2540G				
QC Batch Method: SM 2540G	Analysis Description: Percent Moisture				
Associated Lab Samples:	605963081	605963099	605963107	605963115	605963123
	605963131	605963156	605963164		

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SAMPLE DUPLICATE: 605965755

<u>Parameter</u>	<u>Units</u>	605963123	DUP	<u>RPD</u>	<u>RPD</u>	<u>Footnotes</u>
		<u>Result</u>	<u>Result</u>			
Percent Moisture	%	9.700	8.400	15		

Date: 04/17/03

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### QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

- LCS(D) Laboratory Control Sample (Duplicate)
- MS(D) Matrix Spike (Duplicate)
- DUP Sample Duplicate
- ND Not detected at or above adjusted reporting limit
- NC Not Calculable
- J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
- MDL Adjusted Method Detection Limit
- RPD Relative Percent Difference
- (S) Surrogate
- [1] The sample matrix affected the Matrix Spike and Matrix Spike Duplicate (MS/MSD) compound recovery. The successful recovery of the Laboratory Control Sample (LCS) demonstrates the analytical system was in control for this QA/QC sample group.
- [2] Surrogate spike recovery was outside of QC limits low. No corrective action was taken since alternate surrogate was within QC limits. Therefore data was reported.
- [3] The calculated RPD was outside QC acceptance limits. Acceptable recovery of the LCS indicates the analytical system was in control.

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, Inc.**  
9608 Loiret Blvd.  
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Phone: 913.599.5665  
Fax: 913.599.1759

May 06, 2003

Ms. Lorri Jackson  
BP-RETEC  
907 N. Poplar  
Suite 150  
Casper, WY 82601

RE: Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

Dear Ms. Jackson:

Enclosed are the analytical results for sample(s) received by the laboratory on April 18, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Adam Taylor  
adam.taylor@pacelabs.com  
Project Manager

Kansas/NELAP Certification Number E-10116

Enclosures

## REPORT OF LABORATORY ANALYSIS

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**SAMPLE SUMMARY**

**Pace Analytical Services, Inc.**  
9608 Loiret Blvd.  
Lenexa, KS 66219  
Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

<u>Project</u>	<u>Sample</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
<u>Sample Number</u>	<u>Number</u>				
6069673-001	606004877	TANK A	Water	04/17/03 11:11	04/18/03 09:45
6069673-002	606004885	TANK B	Water	04/17/03 11:40	04/18/03 09:45
6069673-003	606004893	TANK D	Water	04/17/03 11:44	04/18/03 09:45
6069673-004	606004901	TANK CONTROL	Water	04/17/03 11:29	04/18/03 09:45
6069673-005	606004919	TANK A	Soil	04/17/03 11:11	04/18/03 09:45
6069673-006	606004927	TANK B	Soil	04/17/03 11:31	04/18/03 09:45
6069673-007	606004935	TANK D	Soil	04/17/03 11:41	04/18/03 09:45
6069673-008	606004943	TANK CONTROL	Soil	04/17/03 11:52	04/18/03 09:45
6069673-009	606004976	EQUIS EDD	Water	04/17/03	04/18/03 09:45

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**SAMPLE ANALYTE COUNT**

**Pace Analytical Services, Inc.**  
 9608 Loiret Blvd.  
 Lenexa, KS 66219  
 Phone: 913.599.5665  
 Fax: 913.599.1759

Lab Project Number: 6069673  
 Client Project ID: BP-CASPER, WY

Project	Sample No	Client Sample ID	Analysis Code	Analysis Description	Analytes Reported
6069673-001	606004877	TANK A	8260 WEPA	GC/MS VOCs by 8260	68
			0A2 WL60	Total Extractable Hydrocarbons	10
6069673-002	606004885	TANK B	8260 WEPA	GC/MS VOCs by 8260	68
			0A2 WL60	Total Extractable Hydrocarbons	9
6069673-003	606004893	TANK D	8260 WEPA	GC/MS VOCs by 8260	68
			0A2 WL60	Total Extractable Hydrocarbons	9
6069673-004	606004901	TANK CONTROL	8260 WEPA	GC/MS VOCs by 8260	68
			0A2 WL60	Total Extractable Hydrocarbons	9
6069673-005	606004919	TANK A	%MOISTURE	Percent Moisture	1
			8260 SPAC	GC/MS VOCs in Soil by 8260	72
6069673-006	606004927	TANK B	0A2 SL60	Total Extractable Hydrocarbons	9
			%MOISTURE	Percent Moisture	1
6069673-007	606004935	TANK D	8260 SPAC	GC/MS VOCs in Soil by 8260	72
			0A2 SL60	Total Extractable Hydrocarbons	9
6069673-008	606004943	TANK CONTROL	%MOISTURE	Percent Moisture	1
			8260 SPAC	GC/MS VOCs in Soil by 8260	72
			0A2 SL60	Total Extractable Hydrocarbons	9

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**PARAMETER FOOTNOTES**

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

- ND Not detected at or above adjusted reporting limit  
NC Not Calculable  
J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit  
MDL Adjusted Method Detection Limit  
(S) Surrogate  
[1] Due to low surrogate recovery on original extract, sample required a re-extraction, which was outside of 7-day hold time by 5-days. Re-extract was reported since surrogates were within QC limits.  
  
[2] This sample contained heavy organics in the late diesel and motor oil range and quantitation was achieved using diesel fuel as a reference standard.  
[3] Surrogate recovery outside of acceptance window confirmed as a matrix effect by the analysis of a duplicate or MS/MSD on this sample.  
[4] The surrogate exceeded laboratory control limits, however the alternate surrogate was within limits, therefore the data was accepted.

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**QUALITY CONTROL DATA**

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

METHOD BLANK: 606015170  
Associated Lab Samples: 606004919 606004927 606004935

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Chlorobenzene	ug/kg	ND	5.0	
Chloroethane	ug/kg	ND	5.0	
Chloroform	ug/kg	ND	5.0	
Chloromethane	ug/kg	ND	5.0	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
Dibromochloromethane	ug/kg	ND	5.0	
Dibromomethane	ug/kg	ND	5.0	
Dichlorodifluoromethane	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
m&p-Xylene	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	10.	
n-Butylbenzene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
o-Xylene	ug/kg	ND	5.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
sec-Butylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
tert-Butylbenzene	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
Vinyl chloride	ug/kg	ND	5.0	
Acetone	ug/kg	ND	20.	
2-Butanone (MEK)	ug/kg	ND	10.	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.	
Carbon disulfide	ug/kg	ND	10.	
2-Hexanone	ug/kg	ND	100	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	

Date: 05/06/03

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**QUALITY CONTROL DATA**

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Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

METHOD BLANK: 606015170

Associated Lab Samples: 606004919 606004927 606004935

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Xylene (Total)	ug/kg	ND	5.0	
Dibromofluoromethane (S)	%	102		
Toluene-d8 (S)	%	96		
4-Bromofluorobenzene (S)	%	101		
1,2-Dichloroethane-d4 (S)	%	108		

LABORATORY CONTROL SAMPLE: 606015188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
1,1,1,2-Tetrachloroethane	ug/kg	50.00	50.99	102	75-129	
1,1,1-Trichloroethane	ug/kg	50.00	48.55	97	71-133	
1,1,2,2-Tetrachloroethane	ug/kg	50.00	45.65	91	68-127	
1,1,2-Trichloroethane	ug/kg	50.00	48.90	98	73-129	
1,1-Dichloroethane	ug/kg	50.00	47.51	95	72-131	
1,1-Dichloroethene	ug/kg	50.00	48.01	96	63-141	
1,1-Dichloropropene	ug/kg	50.00	46.59	93	70-134	
1,2,3-Trichlorobenzene	ug/kg	50.00	35.77	72	56-130	
1,2,3-Trichloropropane	ug/kg	50.00	49.07	98	72-127	
1,2,4-Trichlorobenzene	ug/kg	50.00	34.57	69	48-138	
1,2,4-Trimethylbenzene	ug/kg	50.00	42.79	86	68-129	
1,2-Dibromo-3-chloropropane	ug/kg	50.00	45.56	91	64-132	
1,2-Dibromoethane (EDB)	ug/kg	50.00	48.31	97	73-129	
1,2-Dichlorobenzene	ug/kg	50.00	44.10	88	71-128	
1,2-Dichloroethane	ug/kg	50.00	48.40	97	70-128	
1,2-Dichloropropane	ug/kg	50.00	43.84	88	74-125	
1,3,5-Trimethylbenzene	ug/kg	50.00	43.71	87	71-131	
1,3-Dichlorobenzene	ug/kg	50.00	41.46	83	66-128	
1,3-Dichloropropane	ug/kg	50.00	47.56	95	71-128	
1,4-Dichlorobenzene	ug/kg	50.00	41.78	84	64-126	
2,2-Dichloropropane	ug/kg	50.00	46.64	93	64-137	
2-Chlorotoluene	ug/kg	50.00	45.03	90	70-130	
4-Chlorotoluene	ug/kg	50.00	42.96	86	68-129	
Benzene	ug/kg	50.00	45.61	91	73-126	
Bromobenzene	ug/kg	50.00	45.53	91	74-128	

Date: 05/06/03

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**QUALITY CONTROL DATA**

**Pace Analytical Services, Inc.**  
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Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606015188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Bromochloromethane	ug/kg	50.00	50.32	101	69-134	
Bromodichloromethane	ug/kg	50.00	50.26	101	77-139	
Bromoform	ug/kg	50.00	48.28	97	67-132	
Bromomethane	ug/kg	50.00	52.18	104	22-149	
Carbon tetrachloride	ug/kg	50.00	47.99	96	66-136	
Chlorobenzene	ug/kg	50.00	46.50	93	74-125	
Chloroethane	ug/kg	50.00	55.11	110	24-154	
Chloroform	ug/kg	50.00	48.93	98	72-130	
Chloromethane	ug/kg	50.00	47.64	95	15-135	
cis-1,2-Dichloroethene	ug/kg	50.00	49.82	100	74-130	
cis-1,3-Dichloropropene	ug/kg	50.00	46.81	94	75-133	
Dibromochloromethane	ug/kg	50.00	50.39	101	71-131	
Dibromomethane	ug/kg	50.00	45.47	91	75-128	
Dichlorodifluoromethane	ug/kg	50.00	49.45	99	10-123	
Ethylbenzene	ug/kg	50.00	46.26	92	75-126	
Hexachloro-1,3-butadiene	ug/kg	50.00	37.73	76	56-137	
Isopropylbenzene (Cumene)	ug/kg	50.00	42.60	85	73-124	
m&p-Xylene	ug/kg	100.00	91.37	91	73-124	
Methylene chloride	ug/kg	50.00	50.68	101	64-141	
Naphthalene	ug/kg	50.00	43.36	87	55-130	
n-Butylbenzene	ug/kg	50.00	40.02	80	61-137	
n-Propylbenzene	ug/kg	50.00	44.32	89	69-135	
o-Xylene	ug/kg	50.00	46.01	92	76-126	
p-Isopropyltoluene	ug/kg	50.00	41.14	82	66-128	
sec-Butylbenzene	ug/kg	50.00	43.40	87	72-133	
Styrene	ug/kg	50.00	47.33	95	75-128	
tert-Butylbenzene	ug/kg	50.00	43.79	88	71-133	
Tetrachloroethene	ug/kg	50.00	45.90	92	68-132	
Toluene	ug/kg	50.00	44.94	90	75-125	
trans-1,2-Dichloroethene	ug/kg	50.00	49.78	100	67-139	
trans-1,3-Dichloropropene	ug/kg	50.00	48.03	96	65-143	
Trichloroethene	ug/kg	50.00	50.14	100	74-139	
Trichlorofluoromethane	ug/kg	50.00	48.79	98	53-135	
Vinyl chloride	ug/kg	50.00	47.34	95	29-136	
Acetone	ug/kg	100.00	77.30	77	50-150	
2-Butanone (MEK)	ug/kg	100.00	77.74	78	50-150	
4-Methyl-2-pentanone (MIBK)	ug/kg	100.00	76.92	77	50-150	

Date: 05/06/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

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Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606015188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Carbon disulfide	ug/kg	100.00	98.29	98	50-150	
2-Hexanone	ug/kg	100.00	79.02	79	50-150	
Methyl-tert-butyl ether	ug/kg	50.00	40.08	80	56-130	
1,2-Dichloroethene (Total)	ug/kg	100.00	99.60	100	67-139	
Xylene (Total)	ug/kg	150.00	137.4	92	73-124	
Dibromofluoromethane (S)				103	80-120	
Toluene-d8 (S)				97	81-117	
4-Bromofluorobenzene (S)				102	74-121	
1,2-Dichloroethane-d4 (S)				101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606016095 606016103

Parameter	Units	606005627		Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnotes
		Result	Conc.									
1,1,1,2-Tetrachloroethane	ug/kg	0	62.82	62.82	34.82	30.07	55	49	49-144	15	37	
1,1,1-Trichloroethane	ug/kg	0	62.82	62.82	54.17	46.61	86	76	52-146	15	16	
1,1,2,2-Tetrachloroethane	ug/kg	0	62.82	62.82	29.74	26.88	47	44	10-173	10	27	
1,1,2-Trichloroethane	ug/kg	0	62.82	62.82	41.10	32.86	65	54	37-141	22	32	
1,1-Dichloroethane	ug/kg	0	62.82	62.82	48.85	42.74	78	70	49-143	13	17	
1,1-Dichloroethene	ug/kg	0	62.82	62.82	59.74	51.36	95	84	48-149	15	24	
1,1-Dichloropropene	ug/kg	0	62.82	62.82	48.37	41.78	77	68	48-149	15	16	
1,2,3-Trichlorobenzene	ug/kg	0	62.82	62.82	6.479	4.347	10	7	10-152	39	29	1,4
1,2,3-Trichloropropane	ug/kg	0	62.82	62.82	30.43	26.34	48	43	24-170	14	20	
1,2,4-Trichlorobenzene	ug/kg	0	62.82	62.82	7.092	4.710	11	8	10-161	40	32	1,4
1,2,4-Trimethylbenzene	ug/kg	320.3	62.82	62.82	213.8	219.3	0	0	17-163	3	32	1,1
1,2-Dibromo-3-chloropropane	ug/kg	0	62.82	62.82	23.02	17.78	37	29	18-158	26	20	4
1,2-Dibromoethane (EDB)	ug/kg	0	62.82	62.82	25.23	20.53	40	34	27-150	21	20	4
1,2-Dichlorobenzene	ug/kg	0	62.82	62.82	13.56	10.02	22	16	10-147	30	30	
1,2-Dichloroethane	ug/kg	0	62.82	62.82	35.45	29.08	56	48	42-144	20	20	
1,2-Dichloropropane	ug/kg	1.632	62.82	62.82	42.19	36.97	65	58	44-136	13	22	
1,3,5-Trimethylbenzene	ug/kg	118.2	62.82	62.82	102.3	108.6	0	0	18-170	6	29	1,1
1,3-Dichlorobenzene	ug/kg	0	62.82	62.82	14.32	11.07	23	18	10-152	26	28	
1,3-Dichloropropane	ug/kg	0	62.82	62.82	30.79	27.10	49	44	37-138	13	20	
1,4-Dichlorobenzene	ug/kg	0	62.82	62.82	13.15	9.914	21	16	10-151	28	29	
2,2-Dichloropropane	ug/kg	0	62.82	62.82	53.15	47.44	85	78	43-153	11	20	
2-Chlorotoluene	ug/kg	0	62.82	62.82	24.30	19.89	39	33	20-161	20	22	

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606016095 606016103

Parameter	Units	606005627	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes	
		Result	Conc.	Result	Result	% Rec	% Rec	Limits RPD	RPD		
4-Chlorotoluene	ug/kg	0	62.82	9.701	7.518	15	12	12-160	25	23	4
Benzene	ug/kg	2.074	62.82	44.72	38.18	68	59	60-130	16	22	1
Bromobenzene	ug/kg	0	62.82	18.31	14.78	29	24	10-163	21	20	4
Bromochloromethane	ug/kg	0	62.82	36.03	29.25	57	48	37-154	21	20	4
Bromodichloromethane	ug/kg	0	62.82	29.42	20.17	47	33	37-158	37	21	1,4
Bromoform	ug/kg	0	62.82	19.57	13.02	31	21	14-159	40	33	4
Bromomethane	ug/kg	0	62.82	44.95	36.80	72	60	10-145	20	30	
Carbon tetrachloride	ug/kg	0	62.82	53.47	42.04	85	69	20-169	24	20	4
Chlorobenzene	ug/kg	0	62.82	25.91	21.48	41	35	53-132	19	26	1,1
Chloroethane	ug/kg	0	62.82	61.32	60.94	98	100	28-137	1	26	
Chloroform	ug/kg	0	62.82	51.06	49.12	81	80	47-139	4	20	
Chloromethane	ug/kg	0	62.82	54.52	49.63	87	81	35-125	9	22	
cis-1,2-Dichloroethene	ug/kg	0	62.82	37.70	30.48	60	50	42-142	21	20	4
cis-1,3-Dichloropropene	ug/kg	0	62.82	21.19	13.24	34	22	30-151	46	20	1,4
Dibromochloromethane	ug/kg	0	62.82	25.73	17.98	41	29	29-150	35	35	
Dibromomethane	ug/kg	0	62.82	28.78	22.68	46	37	32-156	24	20	4
Dichlorodifluoromethane	ug/kg	0	62.82	67.36	59.05	107	97	10-112	13	21	
Ethylbenzene	ug/kg	104.6	62.82	123.4	133.1	30	46	49-142	8	24	1,1
Hexachloro-1,3-butadiene	ug/kg	0	62.82	20.38	18.82	32	31	18-145	8	20	
Isopropylbenzene (Cumene)	ug/kg	19.53	62.82	49.86	49.50	48	49	39-146	1	21	
m&p-Xylene	ug/kg	232.2	125.60	252.7	264.9	16	27	22-175	5	32	1
Methylene chloride	ug/kg	0	62.82	48.36	24.46	77	40	18-167	66	30	4
Naphthalene	ug/kg	13.73	62.82	15.46	11.25	3	0	10-154	32	24	1,1,4
n-Butylbenzene	ug/kg	40.44	62.82	44.41	45.55	6	8	20-159	3	32	1,1
n-Propylbenzene	ug/kg	75.61	62.82	81.01	84.76	9	15	18-171	5	25	1,1
o-Xylene	ug/kg	16.71	62.82	45.84	43.07	46	43	30-150	6	29	
p-Isopropyltoluene	ug/kg	5.029	62.82	30.88	27.55	41	37	17-164	11	30	
sec-Butylbenzene	ug/kg	10.66	62.82	40.15	37.80	47	44	19-150	6	28	
Styrene	ug/kg	0	62.82	19.35	15.37	31	25	19-148	23	29	
tert-Butylbenzene	ug/kg	0	62.82	34.01	30.10	54	49	17-150	12	28	
Tetrachloroethene	ug/kg	0	62.82	43.01	38.03	68	62	26-158	12	28	
Toluene	ug/kg	4.433	62.82	41.24	35.50	59	51	45-142	15	24	
trans-1,2-Dichloroethene	ug/kg	0	62.82	42.64	33.63	68	55	39-150	24	20	4
trans-1,3-Dichloropropene	ug/kg	0	62.82	17.83	11.77	28	19	31-136	41	34	1,1,4
Trichloroethene	ug/kg	0	62.82	44.52	37.72	71	62	48-149	17	22	
Trichlorofluoromethane	ug/kg	0	62.82	62.22	57.45	99	94	39-159	8	20	
Vinyl chloride	ug/kg	0	62.82	58.77	49.91	94	82	45-125	16	22	

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606016095 606016103

Parameter	Units	606005627	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes
		Result	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Acetone	ug/kg	92.28	125.60	170.2	152.7	62	50	50-150	11	25
2-Butanone (MEK)	ug/kg	19.00	125.60	90.74	75.44	57	46	50-150	18	25 1
4-Methyl-2-pentanone (MIBK)	ug/kg	0	125.60	59.84	48.52	48	40	50-150	21	25 1,1
Carbon disulfide	ug/kg	0	125.60	92.48	75.66	74	62	50-150	20	25
2-Hexanone	ug/kg	0	125.60	40.00	31.79	32	26	50-150	23	25 1,1
Methyl-tert-butyl ether	ug/kg	0	62.82	37.25	32.64	59	53	48-125	13	19
1,2-Dichloroethene (Total)	ug/kg	0	125.60	80.34	64.11	64	52	50-150	22	20 4
Xylene (Total)	ug/kg	248.9	188.50	298.5	308.0	26	32	30-150	3	25 1
Dibromofluoromethane (S)						104	98	80-120		
Toluene-d8 (S)						102	97	81-117		
4-Bromofluorobenzene (S)						96	97	74-121		
1,2-Dichloroethane-d4 (S)						103	98	80-120		

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

QC Batch: 143708  
QC Batch Method: EPA 8260  
Associated Lab Samples: 606004943

Analysis Method: EPA 8260  
Analysis Description: GC/MS VOCs in Soil by 8260

METHOD BLANK: 606022275  
Associated Lab Samples: 606004943

Parameter	Units	Blank Result	Reporting Limit	Footnotes
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,1-Trichloroethane	ug/kg	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,2-Trichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethene	ug/kg	ND	5.0	
1,1-Dichloropropene	ug/kg	ND	5.0	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	
1,2,3-Trichloropropane	ug/kg	ND	5.0	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.0	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	
1,2-Dichlorobenzene	ug/kg	ND	5.0	
1,2-Dichloroethane	ug/kg	ND	5.0	
1,2-Dichloropropane	ug/kg	ND	5.0	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	
1,3-Dichlorobenzene	ug/kg	ND	5.0	
1,3-Dichloropropane	ug/kg	ND	5.0	
1,4-Dichlorobenzene	ug/kg	ND	5.0	
2,2-Dichloropropane	ug/kg	ND	5.0	
2-Chloroethylvinyl ether	ug/kg	ND	5.0	
2-Chlorotoluene	ug/kg	ND	5.0	
4-Chlorotoluene	ug/kg	ND	5.0	
Benzene	ug/kg	ND	5.0	
Bromobenzene	ug/kg	ND	5.0	
Bromochloromethane	ug/kg	ND	5.0	
Bromodichloromethane	ug/kg	ND	5.0	
Bromoform	ug/kg	ND	5.0	
Bromomethane	ug/kg	ND	5.0	
Carbon tetrachloride	ug/kg	ND	5.0	

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

METHOD BLANK: 606022275  
Associated Lab Samples: 606004943

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Chlorobenzene	ug/kg	ND	5.0	
Chloroethane	ug/kg	ND	5.0	
Chloroform	ug/kg	ND	5.0	
Chloromethane	ug/kg	ND	5.0	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
Dibromochloromethane	ug/kg	ND	5.0	
Dibromomethane	ug/kg	ND	5.0	
Dichlorodifluoromethane	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
m&p-Xylene	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	10.	
n-Butylbenzene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
o-Xylene	ug/kg	ND	5.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
sec-Butylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
tert-Butylbenzene	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
Vinyl chloride	ug/kg	ND	5.0	
Acetone	ug/kg	ND	20.	
2-Butanone (MEK)	ug/kg	ND	10.	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.	
Carbon disulfide	ug/kg	ND	10.	
2-Hexanone	ug/kg	ND	100	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	

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**QUALITY CONTROL DATA**

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

METHOD BLANK: 606022275  
Associated Lab Samples: 606004943

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Xylene (Total)	ug/kg	ND	5.0	
Dibromofluoromethane (S)	%	101		
Toluene-d8 (S)	%	94		
4-Bromofluorobenzene (S)	%	99		
1,2-Dichloroethane-d4 (S)	%	104		

LABORATORY CONTROL SAMPLE: 606022283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
1,1,1,2-Tetrachloroethane	ug/kg	50.00	51.21	102	75-129	
1,1,1-Trichloroethane	ug/kg	50.00	47.01	94	71-133	
1,1,2,2-Tetrachloroethane	ug/kg	50.00	47.22	94	68-127	
1,1,2-Trichloroethane	ug/kg	50.00	48.59	97	73-129	
1,1-Dichloroethane	ug/kg	50.00	47.38	95	72-131	
1,1-Dichloroethene	ug/kg	50.00	48.32	97	63-141	
1,1-Dichloropropene	ug/kg	50.00	48.93	98	70-134	
1,2,3-Trichlorobenzene	ug/kg	50.00	40.74	82	56-130	
1,2,3-Trichloropropane	ug/kg	50.00	49.67	99	72-127	
1,2,4-Trichlorobenzene	ug/kg	50.00	42.76	86	48-138	
1,2,4-Trimethylbenzene	ug/kg	50.00	47.69	95	68-129	
1,2-Dibromo-3-chloropropane	ug/kg	50.00	46.96	94	64-132	
1,2-Dibromoethane (EDB)	ug/kg	50.00	47.68	95	73-129	
1,2-Dichlorobenzene	ug/kg	50.00	47.11	94	71-128	
1,2-Dichloroethane	ug/kg	50.00	45.18	90	70-128	
1,2-Dichloropropane	ug/kg	50.00	48.42	97	74-125	
1,3,5-Trimethylbenzene	ug/kg	50.00	48.13	96	71-131	
1,3-Dichlorobenzene	ug/kg	50.00	47.13	94	66-128	
1,3-Dichloropropane	ug/kg	50.00	47.33	95	71-128	
1,4-Dichlorobenzene	ug/kg	50.00	46.78	94	64-126	
2,2-Dichloropropane	ug/kg	50.00	47.85	96	64-137	
2-Chlorotoluene	ug/kg	50.00	48.78	98	70-130	
4-Chlorotoluene	ug/kg	50.00	47.63	95	68-129	
Benzene	ug/kg	50.00	46.34	93	73-126	
Bromobenzene	ug/kg	50.00	47.27	94	74-128	

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606022283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Bromochloromethane	ug/kg	50.00	48.94	98	69-134	
Bromodichloromethane	ug/kg	50.00	49.44	99	77-139	
Bromoform	ug/kg	50.00	48.10	96	67-132	
Bromomethane	ug/kg	50.00	40.99	82	22-149	
Carbon tetrachloride	ug/kg	50.00	50.30	101	66-136	
Chlorobenzene	ug/kg	50.00	48.63	97	74-125	
Chloroethane	ug/kg	50.00	45.82	92	24-154	
Chloroform	ug/kg	50.00	48.56	97	72-130	
Chloromethane	ug/kg	50.00	24.33	49	15-135	
cis-1,2-Dichloroethene	ug/kg	50.00	48.43	97	74-130	
cis-1,3-Dichloropropene	ug/kg	50.00	46.92	94	75-133	
Dibromochloromethane	ug/kg	50.00	50.90	102	71-131	
Dibromomethane	ug/kg	50.00	44.76	90	75-128	
Dichlorodifluoromethane	ug/kg	50.00	10.76	22	10-123	
Ethylbenzene	ug/kg	50.00	49.09	98	75-126	
Hexachloro-1,3-butadiene	ug/kg	50.00	44.66	89	56-137	
Isopropylbenzene (Cumene)	ug/kg	50.00	45.66	91	73-124	
m&p-Xylene	ug/kg	100.00	97.74	98	73-124	
Methylene chloride	ug/kg	50.00	47.82	96	64-141	
Naphthalene	ug/kg	50.00	46.20	92	55-130	
n-Butylbenzene	ug/kg	50.00	47.85	96	61-137	
n-Propylbenzene	ug/kg	50.00	49.78	100	69-135	
o-Xylene	ug/kg	50.00	48.12	96	76-126	
p-Isopropyltoluene	ug/kg	50.00	47.99	96	66-128	
sec-Butylbenzene	ug/kg	50.00	48.94	98	72-133	
Styrene	ug/kg	50.00	49.05	98	75-128	
tert-Butylbenzene	ug/kg	50.00	47.91	96	71-133	
Tetrachloroethene	ug/kg	50.00	49.99	100	68-132	
Toluene	ug/kg	50.00	45.41	91	75-125	
trans-1,2-Dichloroethene	ug/kg	50.00	49.54	99	67-139	
trans-1,3-Dichloropropene	ug/kg	50.00	49.74	100	65-143	
Trichloroethene	ug/kg	50.00	56.55	113	74-139	
Trichlorofluoromethane	ug/kg	50.00	43.92	88	53-135	
Vinyl chloride	ug/kg	50.00	32.00	64	29-136	
Acetone	ug/kg	100.00	68.42	68	50-150	
2-Butanone (MEK)	ug/kg	100.00	77.92	78	50-150	
4-Methyl-2-pentanone (MIBK)	ug/kg	100.00	80.70	81	50-150	

Date: 05/06/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606022283

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>% Rec Limits</u>	<u>Footnotes</u>
Carbon disulfide	ug/kg	100.00	88.86	89	50-150	
2-Hexanone	ug/kg	100.00	82.57	83	50-150	
Methyl-tert-butyl ether	ug/kg	50.00	38.49	77	56-130	
1,2-Dichloroethene (Total)	ug/kg	100.00	97.97	98	67-139	
Xylene (Total)	ug/kg	150.00	145.9	97	73-124	
Dibromofluoromethane (S)				100	80-120	
Toluene-d8 (S)				95	81-117	
4-Bromofluorobenzene (S)				98	74-121	
1,2-Dichloroethane-d4 (S)				96	80-120	5

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

QC Batch: 143822  
QC Batch Method: EPA 8260  
Associated Lab Samples: 606004885

Analysis Method: EPA 8260  
Analysis Description: GC/MS VOCs by 8260

METHOD BLANK: 606026649  
Associated Lab Samples: 606004885

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
Dichlorodifluoromethane	ug/l	ND	5.0	
Chloromethane	ug/l	ND	5.0	
Vinyl chloride	ug/l	ND	5.0	
Bromomethane	ug/l	ND	5.0	
Chloroethane	ug/l	ND	5.0	
Trichlorofluoromethane	ug/l	ND	5.0	
Methylene chloride	ug/l	ND	5.0	
1,1-Dichloroethene	ug/l	ND	5.0	
trans-1,2-Dichloroethene	ug/l	ND	5.0	
1,1-Dichloroethane	ug/l	ND	5.0	
2,2-Dichloropropane	ug/l	ND	5.0	
cis-1,2-Dichloroethene	ug/l	ND	5.0	
Chloroform	ug/l	ND	5.0	
Bromochloromethane	ug/l	ND	5.0	
1,1,1-Trichloroethane	ug/l	ND	5.0	
Carbon tetrachloride	ug/l	ND	5.0	
1,1-Dichloropropene	ug/l	ND	5.0	
Benzene	ug/l	ND	5.0	
1,2-Dichloroethane	ug/l	ND	5.0	
Trichloroethene	ug/l	ND	5.0	
1,2-Dichloropropane	ug/l	ND	5.0	
Bromodichloromethane	ug/l	ND	5.0	
Dibromomethane	ug/l	ND	5.0	
Toluene	ug/l	ND	5.0	
1,1,2-Trichloroethane	ug/l	ND	5.0	
Tetrachloroethene	ug/l	ND	5.0	
1,3-Dichloropropane	ug/l	ND	5.0	
Dibromochloromethane	ug/l	ND	5.0	
1,2-Dibromoethane (EDB)	ug/l	ND	5.0	
Chlorobenzene	ug/l	ND	5.0	
1,1,1,2-Tetrachloroethane	ug/l	ND	5.0	

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

METHOD BLANK: 606026649  
Associated Lab Samples: 606004885

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Ethylbenzene	ug/l	ND	5.0	
m&p-Xylene	ug/l	ND	5.0	
o-Xylene	ug/l	ND	5.0	
Styrene	ug/l	ND	5.0	
Bromoform	ug/l	ND	5.0	
Isopropylbenzene (Cumene)	ug/l	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/l	ND	5.0	
Bromobenzene	ug/l	ND	5.0	
1,2,3-Trichloropropane	ug/l	ND	5.0	
n-Propylbenzene	ug/l	ND	5.0	
2-Chlorotoluene	ug/l	ND	5.0	
1,3,5-Trimethylbenzene	ug/l	ND	5.0	
4-Chlorotoluene	ug/l	ND	5.0	
1,2,4-Trimethylbenzene	ug/l	ND	5.0	
sec-Butylbenzene	ug/l	ND	5.0	
tert-Butylbenzene	ug/l	ND	5.0	
p-Isopropyltoluene	ug/l	ND	5.0	
1,3-Dichlorobenzene	ug/l	ND	5.0	
1,4-Dichlorobenzene	ug/l	ND	5.0	
n-Butylbenzene	ug/l	ND	5.0	
1,2-Dichlorobenzene	ug/l	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/l	ND	5.0	
1,2,4-Trichlorobenzene	ug/l	ND	5.0	
Hexachloro-1,3-butadiene	ug/l	ND	5.0	
Naphthalene	ug/l	ND	10.	
1,2,3-Trichlorobenzene	ug/l	ND	5.0	
Xylene (Total)	ug/l	ND	5.0	
Acetone	ug/l	ND	20.	
2-Butanone (MEK)	ug/l	ND	10.	
4-Methyl-2-pentanone (MIBK)	ug/l	ND	10.	
2-Hexanone	ug/l	ND	10.	
Methyl-tert-butyl ether	ug/l	ND	5.0	
Carbon disulfide	ug/l	ND	5.0	
1,2-Dichloroethene (Total)	ug/l	ND	5.0	
Dibromofluoromethane (S)	%	102		
Toluene-d8 (S)	%	96		

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

METHOD BLANK: 606026649  
Associated Lab Samples: 606004885

Parameter	Units	Blank Result	Reporting Limit	Footnotes
4-Bromofluorobenzene (S)	%	99		

LABORATORY CONTROL SAMPLE: 606026656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Dichlorodifluoromethane	ug/l	50.00	53.84	108	10-132	
Chloromethane	ug/l	50.00	45.48	91	10-146	
Vinyl chloride	ug/l	50.00	49.03	98	25-136	
Bromomethane	ug/l	50.00	48.24	96	10-175	
Chloroethane	ug/l	50.00	53.40	107	36-144	
Trichlorofluoromethane	ug/l	50.00	52.31	105	47-144	
Methylene chloride	ug/l	50.00	45.89	92	58-143	
1,1-Dichloroethene	ug/l	50.00	50.53	101	56-144	
trans-1,2-Dichloroethene	ug/l	50.00	48.70	97	61-139	
1,1-Dichloroethane	ug/l	50.00	45.43	91	68-132	
2,2-Dichloropropane	ug/l	50.00	48.09	96	59-137	
cis-1,2-Dichloroethene	ug/l	50.00	46.48	93	69-129	
Chloroform	ug/l	50.00	46.01	92	71-128	
Bromochloromethane	ug/l	50.00	45.74	92	69-131	
1,1,1-Trichloroethane	ug/l	50.00	48.18	96	69-134	
Carbon tetrachloride	ug/l	50.00	51.41	103	64-139	
1,1-Dichloropropene	ug/l	50.00	49.24	98	64-135	
Benzene	ug/l	50.00	44.13	88	70-126	
1,2-Dichloroethane	ug/l	50.00	41.73	84	68-130	
Trichloroethene	ug/l	50.00	57.05	114	70-139	
1,2-Dichloropropane	ug/l	50.00	44.11	88	71-125	
Bromodichloromethane	ug/l	50.00	46.47	93	75-136	
Dibromomethane	ug/l	50.00	44.59	89	72-128	
Toluene	ug/l	50.00	44.21	88	72-125	
1,1,2-Trichloroethane	ug/l	50.00	47.55	95	73-129	
Tetrachloroethene	ug/l	50.00	55.32	111	64-134	
1,3-Dichloropropane	ug/l	50.00	45.89	92	73-126	
Dibromochloromethane	ug/l	50.00	49.05	98	71-129	
1,2-Dibromoethane (EDB)	ug/l	50.00	48.28	97	73-128	

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606026656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Chlorobenzene	ug/l	50.00	48.83	98	72-125	
1,1,1,2-Tetrachloroethane	ug/l	50.00	51.18	102	73-128	
Ethylbenzene	ug/l	50.00	50.90	102	72-126	
m&p-Xylene	ug/l	100.00	101.1	101	71-126	
o-Xylene	ug/l	50.00	49.10	98	73-126	
Styrene	ug/l	50.00	49.93	100	74-129	
Bromoform	ug/l	50.00	46.96	94	63-132	
Isopropylbenzene (Cumene)	ug/l	50.00	47.73	96	69-124	
1,1,2,2-Tetrachloroethane	ug/l	50.00	46.59	93	64-128	
Bromobenzene	ug/l	50.00	47.49	95	71-126	
1,2,3-Trichloropropane	ug/l	50.00	49.97	100	70-130	
n-Propylbenzene	ug/l	50.00	52.34	105	69-128	
2-Chlorotoluene	ug/l	50.00	50.04	100	71-126	
1,3,5-Trimethylbenzene	ug/l	50.00	50.39	101	72-126	
4-Chlorotoluene	ug/l	50.00	49.23	98	70-125	
1,2,4-Trimethylbenzene	ug/l	50.00	49.74	100	69-125	
sec-Butylbenzene	ug/l	50.00	51.09	102	70-128	
tert-Butylbenzene	ug/l	50.00	49.01	98	70-128	
p-Isopropyltoluene	ug/l	50.00	50.45	101	66-123	
1,3-Dichlorobenzene	ug/l	50.00	48.97	98	70-122	
1,4-Dichlorobenzene	ug/l	50.00	48.75	98	68-120	
n-Butylbenzene	ug/l	50.00	53.00	106	64-129	
1,2-Dichlorobenzene	ug/l	50.00	47.99	96	69-125	
1,2-Dibromo-3-chloropropane	ug/l	50.00	48.01	96	57-132	
1,2,4-Trichlorobenzene	ug/l	50.00	45.06	90	57-124	
Hexachloro-1,3-butadiene	ug/l	50.00	47.21	94	52-134	
Naphthalene	ug/l	50.00	45.77	92	52-129	
1,2,3-Trichlorobenzene	ug/l	50.00	41.58	83	54-126	
Xylene (Total)	ug/l	150.00	150.2	100	71-126	
Acetone	ug/l	100.00	79.48	80	50-150	
2-Butanone (MEK)	ug/l	100.00	78.82	79	50-150	
4-Methyl-2-pentanone (MIBK)	ug/l	100.00	77.07	77	50-150	
2-Hexanone	ug/l	100.00	84.75	85	50-150	
Methyl-tert-butyl ether	ug/l	50.00	39.33	79	55-125	
Carbon disulfide	ug/l	100.00	95.54	96	50-150	
1,2-Dichloroethene (Total)	ug/l	100.00	95.18	95	61-139	
Dibromofluoromethane (S)				91	88-113	

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**QUALITY CONTROL DATA**

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606026656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Toluene-d8 (S)				90	90-110	
4-Bromofluorobenzene (S)				101	86-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606027670 606027688

Parameter	Units	606003085 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnotes
Dichlorodifluoromethane	ug/l	0	50.00	5.420	5.202	11	10	10-132	4	21	
Chloromethane	ug/l	0	50.00	16.51	17.75	33	36	10-146	7	22	
Vinyl chloride	ug/l	0	50.00	24.11	24.55	48	49	15-158	2	22	
Bromomethane	ug/l	0	50.00	33.33	33.40	67	67	10-175	0	30	
Chloroethane	ug/l	0	50.00	37.40	41.40	75	83	36-144	10	26	
Trichlorofluoromethane	ug/l	0	50.00	41.29	42.61	83	85	47-144	3	20	
Methylene chloride	ug/l	0	50.00	46.02	47.96	92	96	58-143	4	20	
1,1-Dichloroethene	ug/l	0	50.00	45.97	47.51	92	95	47-160	3	24	
trans-1,2-Dichloroethene	ug/l	0	50.00	46.43	48.83	93	98	61-139	5	20	
1,1-Dichloroethane	ug/l	0	50.00	44.15	46.93	88	94	68-132	6	20	
2,2-Dichloropropane	ug/l	0	50.00	48.03	49.60	96	99	59-137	3	20	
cis-1,2-Dichloroethene	ug/l	0	50.00	47.58	49.13	95	98	69-129	3	20	
Chloroform	ug/l	0	50.00	49.34	49.08	99	98	62-140	1	20	
Bromochloromethane	ug/l	0	50.00	48.01	48.14	96	96	69-131	0	20	
1,1,1-Trichloroethane	ug/l	0	50.00	49.27	50.70	98	101	69-134	3	20	
Carbon tetrachloride	ug/l	0	50.00	50.99	52.82	102	106	56-142	4	20	
1,1-Dichloropropene	ug/l	0	50.00	47.75	47.10	96	94	64-135	1	20	
Benzene	ug/l	0	50.00	44.79	45.54	90	91	61-140	2	22	
1,2-Dichloroethane	ug/l	0	50.00	46.54	45.90	93	92	56-148	1	20	
Trichloroethene	ug/l	0	50.00	51.91	56.66	104	113	58-154	9	22	
1,2-Dichloropropane	ug/l	0	50.00	47.55	47.69	95	95	71-125	0	22	
Bromodichloromethane	ug/l	0	50.00	50.96	51.69	102	103	75-136	1	21	
Dibromomethane	ug/l	0	50.00	47.68	47.24	95	94	72-128	1	20	
Toluene	ug/l	0	50.00	45.44	47.54	91	95	59-140	5	24	
Tetrachloroethene	ug/l	0	50.00	48.64	51.62	97	103	55-135	6	28	
1,3-Dichloropropane	ug/l	0	50.00	45.79	47.64	92	95	73-126	4	20	
Dibromochloromethane	ug/l	0	50.00	50.09	51.81	100	104	71-129	3	35	
1,2-Dibromoethane (EDB)	ug/l	0	50.00	46.93	48.59	94	97	73-128	3	20	
Chlorobenzene	ug/l	0	50.00	47.13	50.14	94	100	66-136	6	26	

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**QUALITY CONTROL DATA**

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606027670 606027688

Parameter	Units	606003085	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes
		Result	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
1,1,1,2-Tetrachloroethane	ug/l	0	50.00	50.23	53.25	100	106	73-128	6	37
Ethylbenzene	ug/l	0	50.00	48.38	51.19	97	102	58-135	6	24
m&p-Xylene	ug/l	0	100.00	95.86	102.9	96	103	71-126	7	32
o-Xylene	ug/l	0	50.00	47.13	50.38	94	101	73-126	7	29
Styrene	ug/l	0	50.00	48.14	51.57	96	103	74-129	7	29
Bromoform	ug/l	0	50.00	47.19	48.67	94	97	63-132	3	33
Isopropylbenzene (Cumene)	ug/l	0	50.00	45.80	49.10	92	98	69-124	7	21
1,1,2,2-Tetrachloroethane	ug/l	0	50.00	47.12	47.36	94	95	64-128	1	27
Bromobenzene	ug/l	0	50.00	46.56	49.15	93	98	71-126	5	20
1,2,3-Trichloropropane	ug/l	0	50.00	49.93	50.78	100	102	70-130	2	20
n-Propylbenzene	ug/l	0	50.00	50.59	51.01	101	102	69-128	1	25
2-Chlorotoluene	ug/l	0	50.00	49.27	50.76	98	102	71-126	3	22
1,3,5-Trimethylbenzene	ug/l	0	50.00	49.37	50.66	99	101	63-139	3	29
4-Chlorotoluene	ug/l	0	50.00	47.83	48.87	96	98	70-125	2	23
1,2,4-Trimethylbenzene	ug/l	0	50.00	48.16	49.39	96	99	69-137	3	32
sec-Butylbenzene	ug/l	0	50.00	49.65	51.61	99	103	70-128	4	28
tert-Butylbenzene	ug/l	0	50.00	49.18	50.92	98	102	70-128	3	28
p-Isopropyltoluene	ug/l	0	50.00	47.64	49.32	95	99	66-123	3	30
1,3-Dichlorobenzene	ug/l	0	50.00	46.04	47.78	92	96	70-122	4	28
1,4-Dichlorobenzene	ug/l	0	50.00	45.85	47.14	92	94	68-120	3	29
n-Butylbenzene	ug/l	0	50.00	48.21	48.82	96	98	64-129	1	32
1,2-Dichlorobenzene	ug/l	0	50.00	46.99	48.77	94	98	69-125	4	30
1,2-Dibromo-3-chloropropane	ug/l	0	50.00	45.08	48.14	90	96	57-132	7	20
1,2,4-Trichlorobenzene	ug/l	0	50.00	40.08	42.63	80	85	57-124	6	32
Hexachloro-1,3-butadiene	ug/l	0	50.00	44.02	47.15	88	94	52-134	7	20
Naphthalene	ug/l	0	50.00	43.87	46.50	88	93	33-148	6	24
1,2,3-Trichlorobenzene	ug/l	0	50.00	38.47	40.71	77	81	54-126	6	29
Xylene (Total)	ug/l	0	150.00	143.0	153.3	95	102	57-134	7	21
Acetone	ug/l	0	100.00	71.99	73.28	72	73	50-150	2	25
2-Butanone (MEK)	ug/l	0	100.00	72.27	74.18	72	74	50-150	3	25
4-Methyl-2-pentanone (MIBK)	ug/l	0	100.00	78.23	80.59	78	81	50-150	3	25
2-Hexanone	ug/l	0	100.00	76.20	82.45	76	82	50-150	8	25
Methyl-tert-butyl ether	ug/l	0	50.00	37.64	37.67	75	75	46-133	0	25
Carbon disulfide	ug/l	0	100.00	77.25	80.06	77	80	50-150	4	25
1,2-Dichloroethene (Total)	ug/l	0	100.00	94.01	97.95	94	98	61-139	4	20
Dibromofluoromethane (S)						103	101	88-113		
Toluene-d8 (S)						97	97	90-110		

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 Phone: 913.599.5665  
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Lab Project Number: 6069673  
 Client Project ID: BP-CASPER, WY

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606027670 606027688

Parameter	Units	606003085 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Footnotes
4-Bromofluorobenzene (S)						100	101	86-115			

Date: 05/06/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

METHOD BLANK: 606030336  
Associated Lab Samples: 606004877 606004893 606004901

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
Ethylbenzene	ug/l	ND	5.0	
m&p-Xylene	ug/l	ND	5.0	
o-Xylene	ug/l	ND	5.0	
Styrene	ug/l	ND	5.0	
Bromoform	ug/l	ND	5.0	
Isopropylbenzene (Cumene)	ug/l	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/l	ND	5.0	
Bromobenzene	ug/l	ND	5.0	
1,2,3-Trichloropropane	ug/l	ND	5.0	
n-Propylbenzene	ug/l	ND	5.0	
2-Chlorotoluene	ug/l	ND	5.0	
1,3,5-Trimethylbenzene	ug/l	ND	5.0	
4-Chlorotoluene	ug/l	ND	5.0	
1,2,4-Trimethylbenzene	ug/l	ND	5.0	
sec-Butylbenzene	ug/l	ND	5.0	
tert-Butylbenzene	ug/l	ND	5.0	
p-Isopropyltoluene	ug/l	ND	5.0	
1,3-Dichlorobenzene	ug/l	ND	5.0	
1,4-Dichlorobenzene	ug/l	ND	5.0	
n-Butylbenzene	ug/l	ND	5.0	
1,2-Dichlorobenzene	ug/l	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/l	ND	5.0	
1,2,4-Trichlorobenzene	ug/l	ND	5.0	
Hexachloro-1,3-butadiene	ug/l	ND	5.0	
Naphthalene	ug/l	ND	10.	
1,2,3-Trichlorobenzene	ug/l	ND	5.0	
Xylene (Total)	ug/l	ND	5.0	
Acetone	ug/l	ND	20.	
2-Butanone (MEK)	ug/l	ND	10.	
4-Methyl-2-pentanone (MIBK)	ug/l	ND	10.	
2-Hexanone	ug/l	ND	10.	
Methyl-tert-butyl ether	ug/l	ND	5.0	
Carbon disulfide	ug/l	ND	5.0	
1,2-Dichloroethene (Total)	ug/l	ND	5.0	
Dibromofluoromethane (S)	%	106		
Toluene-d8 (S)	%	104		

Date: 05/06/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

**Pace Analytical Services, Inc.**  
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Phone: 913.599.5665  
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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

METHOD BLANK: 606030336

Associated Lab Samples: 606004877 606004893 606004901

Parameter	Units	Blank Result	Reporting Limit	Footnotes
4-Bromofluorobenzene (S)	%	101		

LABORATORY CONTROL SAMPLE: 606030344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Dichlorodifluoromethane	ug/l	50.00	49.69	99	10-132	
Chloromethane	ug/l	50.00	48.26	96	10-146	
Vinyl chloride	ug/l	50.00	51.28	103	25-136	
Bromomethane	ug/l	50.00	48.98	98	10-175	
Chloroethane	ug/l	50.00	53.35	107	36-144	
Trichlorofluoromethane	ug/l	50.00	49.60	99	47-144	
Methylene chloride	ug/l	50.00	52.08	104	58-143	
1,1-Dichloroethene	ug/l	50.00	51.92	104	56-144	
trans-1,2-Dichloroethene	ug/l	50.00	50.86	102	61-139	
1,1-Dichloroethane	ug/l	50.00	48.58	97	68-132	
2,2-Dichloropropane	ug/l	50.00	48.61	97	59-137	
cis-1,2-Dichloroethene	ug/l	50.00	48.19	96	69-129	
Chloroform	ug/l	50.00	47.79	96	71-128	
Bromochloromethane	ug/l	50.00	49.85	100	69-131	
1,1,1-Trichloroethane	ug/l	50.00	48.37	97	69-134	
Carbon tetrachloride	ug/l	50.00	49.59	99	64-139	
1,1-Dichloropropene	ug/l	50.00	49.09	98	64-135	
Benzene	ug/l	50.00	46.03	92	70-126	
1,2-Dichloroethane	ug/l	50.00	46.47	93	68-130	
Trichloroethene	ug/l	50.00	55.70	111	70-139	
1,2-Dichloropropane	ug/l	50.00	48.26	96	71-125	
Bromodichloromethane	ug/l	50.00	50.85	102	75-136	
Dibromomethane	ug/l	50.00	47.44	95	72-128	
Toluene	ug/l	50.00	46.38	93	72-125	
1,1,2-Trichloroethane	ug/l	50.00	47.67	95	73-129	
Tetrachloroethene	ug/l	50.00	46.34	93	64-134	
1,3-Dichloropropane	ug/l	50.00	46.96	94	73-126	
Dibromochloromethane	ug/l	50.00	51.30	103	71-129	
1,2-Dibromoethane (EDB)	ug/l	50.00	47.88	96	73-128	

Date: 05/06/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

**Pace Analytical Services, Inc.**  
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Phone: 913.599.5665  
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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606030344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Chlorobenzene	ug/l	50.00	46.34	93	72-125	
1,1,1,2-Tetrachloroethane	ug/l	50.00	48.95	98	73-128	
Ethylbenzene	ug/l	50.00	47.30	95	72-126	
m&p-Xylene	ug/l	100.00	90.60	91	71-126	
o-Xylene	ug/l	50.00	46.81	94	73-126	
Styrene	ug/l	50.00	47.59	95	74-129	
Bromoform	ug/l	50.00	51.14	102	63-132	
Isopropylbenzene (Cumene)	ug/l	50.00	43.91	88	69-124	
1,1,2,2-Tetrachloroethane	ug/l	50.00	44.43	89	64-128	
Bromobenzene	ug/l	50.00	45.42	91	71-126	
1,2,3-Trichloropropane	ug/l	50.00	48.84	98	70-130	
n-Propylbenzene	ug/l	50.00	44.73	90	69-128	
2-Chlorotoluene	ug/l	50.00	45.26	90	71-126	
1,3,5-Trimethylbenzene	ug/l	50.00	44.12	88	72-126	
4-Chlorotoluene	ug/l	50.00	42.47	85	70-125	
1,2,4-Trimethylbenzene	ug/l	50.00	42.94	86	69-125	
sec-Butylbenzene	ug/l	50.00	44.64	89	70-128	
tert-Butylbenzene	ug/l	50.00	44.90	90	70-128	
p-Isopropyltoluene	ug/l	50.00	40.95	82	66-123	
1,3-Dichlorobenzene	ug/l	50.00	41.59	83	70-122	
1,4-Dichlorobenzene	ug/l	50.00	40.19	80	68-120	
n-Butylbenzene	ug/l	50.00	39.73	80	64-129	
1,2-Dichlorobenzene	ug/l	50.00	42.95	86	69-125	
1,2-Dibromo-3-chloropropane	ug/l	50.00	47.41	95	57-132	
1,2,4-Trichlorobenzene	ug/l	50.00	35.64	71	57-124	
Hexachloro-1,3-butadiene	ug/l	50.00	37.87	76	52-134	
Naphthalene	ug/l	50.00	41.30	83	52-129	
1,2,3-Trichlorobenzene	ug/l	50.00	38.32	77	54-126	
Xylene (Total)	ug/l	150.00	137.4	92	71-126	
Acetone	ug/l	100.00	74.37	74	50-150	
2-Butanone (MEK)	ug/l	100.00	81.26	81	50-150	
4-Methyl-2-pentanone (MIBK)	ug/l	100.00	85.93	86	50-150	
2-Hexanone	ug/l	100.00	81.08	81	50-150	
Methyl-tert-butyl ether	ug/l	50.00	44.04	88	55-125	
Carbon disulfide	ug/l	100.00	119.7	120	50-150	
1,2-Dichloroethene (Total)	ug/l	100.00	99.06	99	61-139	
Dibromofluoromethane (S)				96	88-113	

Date: 05/06/03

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**QUALITY CONTROL DATA**

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606030344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Toluene-d8 (S)				96	90-110	
4-Bromofluorobenzene (S)				99	86-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606032621 606032639

Parameter	Units	606002103 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Footnotes
Dichlorodifluoromethane	ug/l	0	50.00	51.94	48.35	104	97	10-132	7	21	
Chloromethane	ug/l	0	50.00	48.64	46.60	97	93	10-146	4	22	
Vinyl chloride	ug/l	0	50.00	53.56	49.91	107	100	15-158	7	22	
Bromomethane	ug/l	0	50.00	51.87	50.83	104	102	10-175	2	30	
Chloroethane	ug/l	0	50.00	52.68	50.61	105	101	36-144	4	26	
Trichlorofluoromethane	ug/l	0	50.00	54.10	51.49	108	103	47-144	5	20	
Methylene chloride	ug/l	0	50.00	54.82	54.66	110	109	58-143	0	20	
1,1-Dichloroethene	ug/l	0	50.00	55.71	53.37	111	107	47-160	4	24	
trans-1,2-Dichloroethene	ug/l	0	50.00	53.95	51.50	108	103	61-139	5	20	
1,1-Dichloroethane	ug/l	0	50.00	52.49	51.07	105	102	68-132	3	20	
2,2-Dichloropropane	ug/l	0	50.00	51.14	50.66	102	101	59-137	1	20	
cis-1,2-Dichloroethene	ug/l	0	50.00	52.00	50.84	104	102	69-129	2	20	
Chloroform	ug/l	0	50.00	52.26	50.14	104	100	62-140	4	20	
Bromochloromethane	ug/l	0	50.00	54.76	53.51	110	107	69-131	2	20	
1,1,1-Trichloroethane	ug/l	0	50.00	52.76	50.96	106	102	69-134	3	20	
Carbon tetrachloride	ug/l	0	50.00	52.41	51.04	105	102	56-142	3	20	
1,1-Dichloropropene	ug/l	0	50.00	51.46	48.94	103	98	64-135	5	20	
Benzene	ug/l	0	50.00	50.51	47.69	101	95	61-140	6	22	
1,2-Dichloroethane	ug/l	0	50.00	53.51	50.36	107	101	56-148	6	20	
Trichloroethene	ug/l	0	50.00	53.33	55.59	107	111	58-154	4	22	
1,2-Dichloropropane	ug/l	0	50.00	47.36	51.03	95	102	71-125	7	22	
Bromodichloromethane	ug/l	0	50.00	52.68	55.22	105	110	75-136	5	21	
Dibromomethane	ug/l	0	50.00	48.70	52.47	97	105	72-128	7	20	
Toluene	ug/l	0	50.00	49.20	47.77	98	96	59-140	3	24	
Tetrachloroethene	ug/l	0	50.00	44.80	42.14	90	84	55-135	6	28	
1,3-Dichloropropane	ug/l	0	50.00	47.54	45.92	95	92	73-126	3	20	
Dibromochloromethane	ug/l	0	50.00	50.90	49.44	102	99	71-129	3	35	
1,2-Dibromoethane (EDB)	ug/l	0	50.00	49.09	46.72	98	93	73-128	5	20	
Chlorobenzene	ug/l	0	50.00	45.24	43.49	90	87	66-136	4	26	

Date: 05/06/03

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

LABORATORY CONTROL SAMPLE: 606030344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Toluene-d8 (S)				96	90-110	
4-Bromofluorobenzene (S)				99	86-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606032621 606032639

Parameter	Units	606002103 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Footnotes
Dichlorodifluoromethane	ug/l	0	50.00	51.94	48.35	104	97	10-132	7	21	
Chloromethane	ug/l	0	50.00	48.64	46.60	97	93	10-146	4	22	
Vinyl chloride	ug/l	0	50.00	53.56	49.91	107	100	15-158	7	22	
Bromomethane	ug/l	0	50.00	51.87	50.83	104	102	10-175	2	30	
Chloroethane	ug/l	0	50.00	52.68	50.61	105	101	36-144	4	26	
Trichlorofluoromethane	ug/l	0	50.00	54.10	51.49	108	103	47-144	5	20	
Methylene chloride	ug/l	0	50.00	54.82	54.66	110	109	58-143	0	20	
1,1-Dichloroethene	ug/l	0	50.00	55.71	53.37	111	107	47-160	4	24	
trans-1,2-Dichloroethene	ug/l	0	50.00	53.95	51.50	108	103	61-139	5	20	
1,1-Dichloroethane	ug/l	0	50.00	52.49	51.07	105	102	68-132	3	20	
2,2-Dichloropropane	ug/l	0	50.00	51.14	50.66	102	101	59-137	1	20	
cis-1,2-Dichloroethene	ug/l	0	50.00	52.00	50.84	104	102	69-129	2	20	
Chloroform	ug/l	0	50.00	52.26	50.14	104	100	62-140	4	20	
Bromochloromethane	ug/l	0	50.00	54.76	53.51	110	107	69-131	2	20	
1,1,1-Trichloroethane	ug/l	0	50.00	52.76	50.96	106	102	69-134	3	20	
Carbon tetrachloride	ug/l	0	50.00	52.41	51.04	105	102	56-142	3	20	
1,1-Dichloropropene	ug/l	0	50.00	51.46	48.94	103	98	64-135	5	20	
Benzene	ug/l	0	50.00	50.51	47.69	101	95	61-140	6	22	
1,2-Dichloroethane	ug/l	0	50.00	53.51	50.36	107	101	56-148	6	20	
Trichloroethene	ug/l	0	50.00	53.33	55.59	107	111	58-154	4	22	
1,2-Dichloropropane	ug/l	0	50.00	47.36	51.03	95	102	71-125	7	22	
Bromodichloromethane	ug/l	0	50.00	52.68	55.22	105	110	75-136	5	21	
Dibromomethane	ug/l	0	50.00	48.70	52.47	97	105	72-128	7	20	
Toluene	ug/l	0	50.00	49.20	47.77	98	96	59-140	3	24	
Tetrachloroethene	ug/l	0	50.00	44.80	42.14	90	84	55-135	6	28	
1,3-Dichloropropane	ug/l	0	50.00	47.54	45.92	95	92	73-126	3	20	
Dibromochloromethane	ug/l	0	50.00	50.90	49.44	102	99	71-129	3	35	
1,2-Dibromoethane (EDB)	ug/l	0	50.00	49.09	46.72	98	93	73-128	5	20	
Chlorobenzene	ug/l	0	50.00	45.24	43.49	90	87	66-136	4	26	

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Lab Project Number: 6069673  
Client Project ID: BP-CASPER, WY

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606032621 606032639

Parameter	Units	606002103	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes	
		Result	Conc.	Result	Result	% Rec	% Rec	Limits	RPD		
1,1,1,2-Tetrachloroethane	ug/l	0	50.00	48.10	46.86	96	94	73-128	3	37	
Ethylbenzene	ug/l	0	50.00	45.72	43.05	91	86	58-135	6	24	
m&p-Xylene	ug/l	0	100.00	88.76	82.90	89	83	71-126	7	32	
o-Xylene	ug/l	0	50.00	46.10	43.23	92	86	73-126	6	29	
Styrene	ug/l	0	50.00	33.18	32.95	66	66	74-129	1	29	1,1
Bromoform	ug/l	0	50.00	51.70	50.43	103	101	63-132	2	33	
Isopropylbenzene (Cumene)	ug/l	0	50.00	42.01	40.36	84	81	69-124	4	21	
1,1,2,2-Tetrachloroethane	ug/l	0	50.00	46.75	44.74	94	90	64-128	4	27	
Bromobenzene	ug/l	0	50.00	45.43	43.82	91	88	71-126	4	20	
1,2,3-Trichloropropane	ug/l	0	50.00	49.48	47.34	99	95	70-130	4	20	
n-Propylbenzene	ug/l	0	50.00	43.11	39.46	86	79	69-128	9	25	
2-Chlorotoluene	ug/l	0	50.00	42.52	40.54	85	81	71-126	5	22	
1,3,5-Trimethylbenzene	ug/l	0	50.00	42.39	39.05	85	78	63-139	8	29	
4-Chlorotoluene	ug/l	0	50.00	40.71	38.15	81	76	70-125	7	23	
1,2,4-Trimethylbenzene	ug/l	0	50.00	41.58	38.80	83	78	69-137	7	32	
sec-Butylbenzene	ug/l	0	50.00	42.65	40.12	85	80	70-128	6	28	
tert-Butylbenzene	ug/l	0	50.00	43.39	41.41	87	83	70-128	5	28	
p-Isopropyltoluene	ug/l	0	50.00	39.28	36.38	79	73	66-123	8	30	
1,3-Dichlorobenzene	ug/l	0	50.00	40.58	37.36	81	75	70-122	8	28	
1,4-Dichlorobenzene	ug/l	0	50.00	38.90	36.73	78	74	68-120	6	29	
n-Butylbenzene	ug/l	0	50.00	38.42	35.53	77	71	64-129	8	32	
1,2-Dichlorobenzene	ug/l	0	50.00	41.64	39.80	83	80	69-125	5	30	
1,2-Dibromo-3-chloropropane	ug/l	0	50.00	48.42	46.90	97	94	57-132	3	20	
1,2,4-Trichlorobenzene	ug/l	0	50.00	34.91	31.36	70	63	57-124	11	32	
Hexachloro-1,3-butadiene	ug/l	1.850	50.00	36.39	34.64	69	66	52-134	5	20	
Naphthalene	ug/l	1.740	50.00	41.34	39.77	79	76	33-148	4	24	
1,2,3-Trichlorobenzene	ug/l	1.585	50.00	38.67	35.80	74	68	54-126	8	29	
Xylene (Total)	ug/l	0	150.00	134.9	126.1	90	84	57-134	7	21	
Acetone	ug/l	8.660	100.00	96.07	85.95	87	77	50-150	11	25	
2-Butanone (MEK)	ug/l	0	100.00	86.60	83.60	87	84	50-150	4	25	
4-Methyl-2-pentanone (MIBK)	ug/l	0	100.00	94.95	93.24	95	93	50-150	2	25	
2-Hexanone	ug/l	0	100.00	80.36	77.48	80	78	50-150	4	25	
Methyl-tert-butyl ether	ug/l	0	50.00	50.78	48.29	102	97	46-133	5	25	
Carbon disulfide	ug/l	0	100.00	127.8	120.5	128	120	50-150	6	25	
1,2-Dichloroethene (Total)	ug/l	0	100.00	105.9	102.3	106	102	61-139	3	20	
Dibromofluoromethane (S)						106	107	88-113			
Toluene-d8 (S)						105	105	90-110			

Date: 05/06/03

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QUALITY CONTROL DATA

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Phone: 913.599.5665
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Lab Project Number: 6069673
Client Project ID: BP-CASPER, WY

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606032621 606032639

Table with 12 columns: Parameter, Units, 606002103 Result, Spike Conc., MS Result, MSD Result, MS % Rec, MSD % Rec, Limits, RPD, RPD, Footnotes. Row 1: 4-Bromofluorobenzene (S), 100, 102, 86-115

Date: 05/06/03

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### QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

- LCS(D) Laboratory Control Sample (Duplicate)
- MS(D) Matrix Spike (Duplicate)
- DUP Sample Duplicate
- ND Not detected at or above adjusted reporting limit
- NC Not Calculable
- J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
- MDL Adjusted Method Detection Limit
- RPD Relative Percent Difference
- (S) Surrogate
- [1] The sample matrix affected the Matrix Spike and Matrix Spike Duplicate (MS/MSD) compound recovery. The successful recovery of the Laboratory Control Sample (LCS) demonstrates the analytical system was in control for this QA/QC sample group.
- [2] The surrogate exceeded laboratory control limits, however the alternate surrogate was within limits; therefore the data was accepted.
- [3] The surrogate exceeded laboratory control limits, however the alternate surrogate was within limits; therefore the data was accepted.
- [4] The calculated RPD was outside QC acceptance limits. Acceptable recovery of the LCS indicates the analytical system was in control.
- [5] No MS/MSD was associated with the analytical batch due to samples requiring dilution and matrix interference.

## REPORT OF LABORATORY ANALYSIS

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