AP - 051

STAGE 1 REPORT

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AP051

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June 27, 2006

Glenn von Gonten
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Stage 1 Report, Former Maverik (Caribou) Refinery, Kirtland, New Mexico

Dear Mr. von Gonten:

Introduction

This report provides results of the New Mexico Oil and Gas Division (NMOCD) approved Stage 1 Abatement Plan for the Maverik Country Stores site (former Caribou Refinery) in Kirtland, New Mexico. The site location is shown on Figure 1. Field work was conducted during the week March 27, 2006. The abatement plan scope included:

- Groundwater sampling of existing site wells
- Slurry wall integrity testing and analysis
- A private well survey downgradient of the former refinery
- Inspection of the local irrigation ditches

The primary objective of the abatement plan was to determine the current limits of the dissolved-phase hydrocarbons in the vicinity of the slurry wall through groundwater sampling of the existing monitoring well network and private wells positioned downgradient of the site. The private well sampling was prompted by a citizen's concern and included an updated well search to confirm the location, construction detail, and use of nearby private wells. Another objective of the abatement plan was to evaluate the integrity of the soil-bentonite slurry wall by collecting samples for geotechnical testing. Finally, a reconnaissance of irrigation ditches adjacent to the site was conducted to identify if any offsite impacts were present.

As discussed in the following report, the groundwater plume is stable and confined to within the soil-bentonite wall impoundment. Offsite impacts from the former Caribou Refinery were not found in downgradient private well groundwater and in the local irrigation ditch network sediment.

Groundwater Sampling

The groundwater sampling activities were completed March 28 through March 30. Prior to sampling site-wide fluid levels were measured using an oil/water interface probe. During the collection of the fluid level measurements, well condition was noted and the wells were secured with new locks. Fluid levels were not measured from four of the site wells including:

- MW-02 (unable to find, possibly destroyed)
- MW-06 (unable to locate, possibly abandoned or destroyed)
- MW-05 (not located)

- MW-04 (converted to an irrigation well within a pumphouse by Mr. Jackson)

Two other wells were damaged including:

- MW-18 (loose monument, damaged PVC casing)
- MW-07 (loose monument, damaged PVC casing)

The March fluid levels are provided with well construction detail in Table 1. Figure 2 is a potentiometric surface map of the March fluid levels. One monitoring well, MW-17 located within the slurry wall, had a measurable layer of product on the water table of 0.03 feet. Based on the March 2006 fluid levels, the groundwater flow direction is to the south-southwest across the site under a horizontal gradient ranging from .005 near the site to .008 east of the site in the residential area (Figure 2).

Eight monitoring wells were low-flow sampled using a peristaltic pump and flow-through cell. Field parameters measured during the sampling event included pH, specific conductance, dissolved oxygen, oxygen reduction potential (ORP) and temperature. Field measurements are provided on the groundwater sampling forms in Attachment A. Groundwater samples were shipped to Severn Trent Laboratories in Arvada, Colorado under chain of custody protocol and analyzed for volatile organic compounds (VOCs) EPA Method 8260.

Results of the groundwater sampling are summarized in Table 2. Laboratory deliverables and data validation reports are provided in Attachment B. Figure 3 is a cross section constructed parallel to groundwater flow across the slurry wall area showing the BTEX and 1,2-DCA groundwater concentrations. The cross section shows that the BTEX concentrations are confined to the slurry wall impoundment as VOCs in downgradient well MW-19 were below analytical detection limits for all VOCs. The VOC concentrations in the other downgradient wells (MW-10 and MW-20) and cross gradient wells (MW-9, MW-16, and MW-21) were also all below analytical detection limits (Table 2). Other detected compounds from within the slurry wall wells (MW-17 and MW-22) included 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene and naphthalene (Table 2). The precision, accuracy, method compliance, and completeness of the data set have been determined to be acceptable, based on the data submitted (Attachment B). Purge water generated from the sampling event was containerized in 55-gallon drum and will be disposed of by a local recycler.

Private Well Survey

The private well survey was conducted on March 30 and 31, 2006 to locate and voluntarily sample wells downgradient of the former Caribou Refinery. The survey was completed by going door to door in the area south of South of County Road 6100 and south of County Road 6263 (Figure 2). The wells and locations confirmed from the survey are shown on Figure 2. Table 3 provides construction details and current use of the located private wells. Table 4 includes the analytical results of private wells that were sampled during the survey. The analytical data package and data validation reports for the private well samples are provided in Attachment B.

Samples were collected from five irrigation wells. The irrigation well at the Colin Bloomfield residence is jointly used for domestic use so samples were collected at both the irrigation source

(wellhead) and at the kitchen faucet. In general, samples were collected near wellheads after allowing water to run for few minutes to obtain representative samples and to allow dissipation of iron staining from pumps that required priming after the inactive winter months. Samples were preserved on ice and shipped under chain of custody protocol to STL in Arvada, CO for VOC analysis per EPA method 8260.

The private well results were all below analytical reporting limits for VOCs in all samples (Table 4). The samples from the Bloomfield well samples contained trace levels of MTBE, a compound not associated with the former Caribou Refinery, nor detected in site monitoring well network (Tables 2 and 5). The sample results from the private wells were sent to the individual well owners on May 10th, 2006.

Mr. Jackson denied access for sampling of the well that was associated with his initial complaint, however, he did allow sampling of the other two wells on his property including former site well MW-4 which he utilizes as an irrigation well. The test results of the all downgradient wells do not indicate they have been impacted by former site operations. No further sampling of these wells in warranted.

Irrigation Ditch Observations

The ditches west, south, and east of the former refinery including the Westside Irrigation Ditch, fed by the Farmer's Irrigation Ditch on the western site boundary were inspected on March 28. The Westside Irrigation Ditch was dry at the time of inspection and has been filled in on the south side of Road 6100 (Figure 2). Due this blockage, the ditch has not been in use to the residential area in the past few years. The ditch network west of the site on Murray's property contained stagnant water with cattails and algae. Probing in the ditch with a shovel uncovered anoxic fine-grained sediment with decayed leaf and plant detritus and biogenic sheens. There were no observed visual impacts from petroleum hydrocarbons in ditches adjacent to or downgradient of the former Caribou Refinery in the residential area to the south of the site. Sampling of the irrigation ditches is not warranted based on these observations.

Slurry Wall

A field investigation and laboratory testing program was conducted to evaluate the integrity of the soil-bentonite slurry wall installed in 1990. The slurry wall was installed to contain impacted groundwater in the former tank farm area. Following site utility locates, the slurry wall was located by excavating shallow trenches normal to the perimeter of the bermed impoundment area. The slurry wall was identifiable by the presence of an HDPE liner buried under a structural fill layer positioned over the slurry wall and by visual evidence of bentonite mixed with soil. The slurry wall was exposed and sampled in the four locations shown on Figure 4.

Samples for permeability testing were collected using a hollow-stem auger (HSA) drill rig. Each sample was collected by driving 3-inch diameter Shelby Tubes in two-foot intervals. Five samples were collected including one in from the vadose zone and four from the saturated zone. The soil in the tip of each tube was inspected to verify the presence of bentonite to ensure the drives were fully within the slurry wall. The tips of the soil drives were also inspected for evidence of rooting effects. Visual observation of all sample drives showed evidence of

bentonite. Notable rooting effects were absent from the soil drives except for the sample collected from 5-7' below grade along the south wall. After sample collection, each boring was backfilled with bentonite chips and hydrated. The trenches were backfilled and returned to grade. There was no soil waste generated from the slurry wall testing. Samples were shipped to Advanced Terra Testing in Lakewood, Colorado for permeability testing.

Permeability Test Results

The laboratory testing program for the slurry wall consisted of permeability tests on the soil-bentonite backfill material which develops the low permeability vertical barrier for containment. This testing was followed by a compatibility test to assure that site contaminants do not compromise the effectiveness of the backfill material by increasing its permeability.

Permeability was determined with a flex-wall permeameter in accordance with test method ASTM D5084 using lab water as a permeant. All geotechnical laboratory testing for the Maverik slurry wall samples have been performed by Advanced Terra Testing, located in Lakewood, Colorado. Permeability results for the five samples are summarized in Table 5 with the complete lab results provided as Attachment C.

Four of the Maverik slurry wall samples were found to have permeability less than or near $1x10^{-7}$ cm/sec, a typical performance standard for soil-bentonite slurry walls. One sample was slightly higher at $7.7x10^{-7}$ cm/sec from the South Wall Saturated Zone and one sample was at $3.2x10^{-6}$ cm/sec from the East Wall Vadose Zone. Trees were observed in close proximity to the south end of the slurry wall which could have caused the slightly higher permeability results from the South Wall Saturated Zone sample.

A compatibility test is currently being conducted on the "South Wall Saturated Zone" sample and is estimated to be complete in July 2006. This test for permeability uses impacted site water as the permeant in place of the lab water. Three pore volumes of site water will pass through the sample. At completion of testing, the final permeability will be compared to the beginning of the test as well as the test with lab water to see if there has been a significant increase in permeability, indicating an incompatibility. Results will be submitted under a separate letter.

Conclusions

The March 2006 field work met objectives set forth in the Stage 1 Abatement Plan. Groundwater sampling was completed across the existing site well network and from private wells situated downgradient of the slurry wall area. Hydraulic conditions continue to show south-southwesterly groundwater flow across the site toward the San Juan River. Groundwater samples collected from the site well network were below analytical reporting limits for all 8260 VOCs with the exception of wells located within the confines of the slurry wall impoundment area. Wells within the slurry wall contain a suite of VOCs, primarily BTEX. The maximum benzene concentration in March 2006 was 3,800 µg/L in MW-17. The groundwater VOC concentrations have declined appreciably likely through biodegradation processes. Compounds such as 1,2-DCA are no longer detected in site groundwater and VOCs such as benzene have decreased by two orders of magnitude since the early 1990s. Reconnaissance of ditches near the site did not indicate any evidence of hydrocarbon impacts. Groundwater samples collected from private wells south and southwest of the site were all below detection limits for the 8260 VOC

suite. In general, residents were eager to provide access to wells. Mr. Roland Jackson did not permit access to one of three wells on his property (the well behind his house near his orchard), but did allow sampling of the other two irrigation wells.

In the March 1990 Dames & Moore report titled *On-Site Ground, Surface Water and Sludge Laboratory Analytical Data and Modified Ground Water Remediation Plan for Maverik Tank Farm* a soil-bentonite slurry wall with a permeability $\leq 1x10^{-7}$ cm/sec is recommended to prevent off-site migration of contaminants from the remediation zone defined as the "upper shallow (12-foot deep) contaminated zone." Assuming that the slurry wall was intended to achieve an effective permeability of $1x10^{-7}$ cm/sec, the results of this investigation indicate that the slurry wall is still functioning as an effective containment system for impacted groundwater at the site. While two samples exhibited permeability higher than $1x10^{-7}$ cm/sec, the slurry wall still provides a good containment to prevent horizontal migration of impacted groundwater. The sample with the highest permeability was a vadose zone sample, therefore not a significant concern for horizontal migration of groundwater through this area. As indicated above, the other sample with permeability higher than $1x10^{-7}$ cm/sec may have been the compromised by tree rooting effects.

Recommendations

Current site conditions include a groundwater VOC plume contained within the slurry wall. The combined groundwater data and permeability test results show that the wall is functioning as designed and meets typical performance standards. Due to some rooting effects on the south side of the wall near trees and shrubs tree removal in this area is recommended to maintain wall performance. In addition, two site wells (MW-18 and MW-7) have been damaged. Well MW-18 positioned on the upgradient boundary of the impoundment should be replaced to provide hydraulic and upgradient groundwater quality information. Given that MW-7 is located downgradient of several wells without detectable VOCs, it is recommended that this well be abandoned. Currently, Maverik is monitoring groundwater on an annual basis. RETEC recommends that this frequency is continued utilizing low-flow sampling techniques and collection of dissolved oxygen data to support assessment of natural attenuation processes at the site. Given the current plume extent and lack of VOC detections in downgradient private wells, the monitoring network should be reduced to site wells located north of County Road 6100.

Sincerely,

The RETEC Group, Inc.

Bjorn Selvig
Project Geologist

Attachments

cc: Dennis Riding, Maverik Country Stores, Inc.
Jenny Phillips, The RETEC Group, Inc.

Tables

Table 1 Monitoring Well Construction Summary and March 2006 Fluid Levels
Maverik Country Stores, Inc. (Former Caribou Refinery)

Well ID	Completion Date	Total Depth (ft. BGS)	Well Diameter (in.)	Top of Steel Casing Elevation (ft. AMSL)	Top of PVC Casing Elevation (ft. AMSL)	Ground Surface Elevation (ft. AMSL)	Screen Length (ft.)	Top of Screen Elevation (ft. AMSL)	Bottom of Screen Elevation (ft. AMSL)	Depth to Groundwater (feet) March 2006	Product Thickness (feet)	Groundwater Elevation (ft. AMSL)	Comments
MW-1	1987	21.5	2	5207.79	5207.24	5205.75	10	5194.3	5184.3	17.61		5189.6	
MW-2	1987	15	2	5197.10	5196.93	5195.25	10	5190.3	5180.3	NM		NM	
MW-3	1987	14.5	2	5183.00	5181.46	5181.06	10	5176.6	5166.6	2.80		5178.7	
MW-4	1987	15	2	5178.41	5177.1	5176.14	10	5171.1	5161.1	NM		NM	Converted to irrigation well
MW-5	1987	15	2	5175.62	5175.09	5173.67	10	5168.7	5158.7	NM		NM	
MW-6	1987	15.5	2	5176.40	5176.01	5174.23	10	5168.7	5158.7	NM		NM	
MW-7	1987	15	2	5183.71	5182.84	5181.73	10	5176.7	5166.7	5.15		5177.7	
MW-8	1987	15	2	5186.00	5185.87	5184.02	10	5179.0	5169.0	4.50		5181.4	
MW-9	1987	15	2	5191.39	5191.22	5189.33	10	5184.3	5174.3	5.70		5185.5	
MW-10	1987	12.5	2	5189.80	5189.30	5187.47	10	5185.0	5175.0	5.13		5184.2	
MW-11	1987	33	2	5197.26	5197.15	5194.97	10	5172.0	5162.0	NM		NM	abandoned 1990
MW-12	1987	12	2	5196.66	5196.19	5194.80	10	5192.8	5182.8	NM		NM	abandoned 1990
MW-13	1987	5	2	5187.76	na	5187.56	5	5187.6	5182.6	NM		NM	destroyed
MW-14	1989	6	2	na	5194.47	5190.70	5	5189.7	5184.7	8.40		5186.1	
MW-15	1989	6	2	na	5188.80	5185.40	5	5184.4	5179.4	5.44		5183.4	
MW-16	1990	13	2	na	5194.98	5193.74	10	5190.7	5180.7	8.13		5186.9	
MW-17	1993	15	2	5196.49	5195.91	5193.43	10	5188.4	5178.4	9.42	0.03	5186.5	
MW-18	1993	15	2	5202.27	5201.75	5199.14	10	5194.1	5184.1	14.65		5187.1	
MW-19	1990	12.5	2	na	5189.54	5188.28	10	5185.8	5175.8	4.40		5185.1	
MW-20	1990	12	2	na	5191.05	5190.10	10	5188.1	5178.1	5.80		5185.3	
MW-21	1990	13	2	na	5194.81	5193.62	10	5190.6	5180.6	7.35		5187.5	
MW-22	1990	13	2	na	5195.86	5194.58	10	5191.6	5181.6	8.99		5186.9	
P-1	1993	8	2	na	5197.66	5195.74	5	5192.7	5187.7	9.94		5187.7	
P-2	1993	8	2	na	5192.32	5190.50	5	5187.5	5182.5	6.36		5186.0	
P-3	1993	8	2	na	5193.21	5191.44	5	5188.4	5183.4	6.65		5186.6	
P-4	1993	8	2	na	5198.82	5197.06	5	5194.1	5189.1	9.95		5188.9	

Notes:

AMSL = Above mean sea level
BGS = Below ground surface
NM = Not Measured
na = not applicable

Table 2 Monitoring Well Results
Maverik Country Stores, Inc. (Former Caribou Refinery)

Wells / Units	MW-9 (ug/L)	MW-16 (ug/L)	MW-20 (ug/L)	MW-20D (ug/L)	MW-21 (ug/L)	MW-19 (ug/L)	MW-10 (ug/L)	MW-18 (ug/L)	MW-22 (ug/L)	MW-17 (ug/L)
Chemical										
Trichlorofluoromethane	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 40	< 200
1,2,3-Trichloropropane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Vinyl chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Xylenes (total)	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	**1.4 J**	**1.6 J**	**0.34 J**	<40	**2,800**
n-Butylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
sec-Butylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**0.55 J**	**5.5 J**	< 100
Isopropylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**0.36 J**	**12 J**	**20 J**
1,2,4-Trimethylbenzene	**0.16 J,B**	< 1.0	< 1.0	< 1.0	< 1.0	**0.76 J,B**	**0.89 J,B**	**0.49 J**	**280**	**880**
1,3,5-Trimethylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**0.36 J**	**0.40 J**	< 1.0	**9.8 J**	**110**
n-Propylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**0.26 J**	**34**	**34 J**
tert-Butylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**0.36 J**	< 20	< 100
Dibromofluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
2-Chlorotoluene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
4-Chlorotoluene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,2-Dibromo-3-chloropropane (DBCP)	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 500
1,3-Dichloropropane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
2,2-Dichloropropane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 500
1,1-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Hexachlorobutadiene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
4-Isopropyltoluene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**0.27 J**	< 20	< 100
Methyl tert-butyl ether	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 500
1,2,3-Trichlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
m-Xylene & p-Xylene	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	**1.4 J**	**1.6 J**	**0.34 J**	< 40	**2,500**
o-Xylene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	**240**
Bromobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Bromochloromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Naphthalene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**16 J**	**110**

Notes:
B - Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J - Estimated result. Result is less than RL
COL - More than 40% RPD bewtwwn primary and confirmation column results. The lower of the two results is reported.

Table 2 Monitoring Well Results
Maverik Country Stores, Inc. (Former Caribou Refinery)

Wells / Units	MW-9 (ug/L)	MW-16 (ug/L)	MW-20 (ug/L)	MW-20D (ug/L)	MW-21 (ug/L)	MW-19 (ug/L)	MW-10 (ug/L)	MW-18 (ug/L)	MW-22 (ug/L)	MW-17 (ug/L)
Chemical										
Acetone	< 10	< 10	< 10	< 10	**3.2 J**	**2.5 J**	<10	<10	< 200	< 1000
Benzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**0.25 J**	**440**	**3,800**
Bromodichloromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Bromomethane	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 40	< 200
2-Butanone (MEK)	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 120	< 600
Carbon tetrachloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Chloroethane	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 40	< 200
Chloroform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Chloromethane	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 40	< 200
Dibromochloromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,2-Dibromoethane (EDB)	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,2-Dichlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,3-Dichlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,4-Dichlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Dichlorodifluoromethane	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 40	< 200
1,1-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,2-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,1-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,2-Dichloroethene (total)	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
cis-1,2-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
trans-1,2-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,2-Dichloropropane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
cis-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
trans-1,3-Dichloropropene	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 60	< 300
Ethylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**250**	**310**
2-Hexanone	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 500
Methylene chloride	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 500
4-Methyl-2-pentanone	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 500
Styrene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,1,1,2-Tetrachloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Tetrachloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Toluene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**7.9 J**	**57 J**
1,2,4-Trichlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,1,1-Trichloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
1,1,2-Trichloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100
Trichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 100

Table 3 Private Water Well Survey
Maverik Country Stores, Inc. (Former Caribou Refinery)

Owners Name	Address	Well Present? y/n	Use	Construction Information (If available)	Sample Date and Time
Roland Jackson	20 Road 6271, Kirtland, NM 87417	Yes	Irrigation	Formerly MW-4	"Jackson MW-4" 3/31/06 1015
Roland Jackson	20 Road 6271, Kirtland, NM 87417	Yes	Irrigation	Approximately 38 feet	"R. Jackson" 3/31/06 1020
Roland Jackson	20 Road 6271, Kirtland, NM 87417	Yes	None	Open casing, no pump	Not sampled-access denied
Ellen Walker	15 Road 6271, Kirtland, NM 87417	Yes	Irrigation	Well is 26 feet deep, pump at 23 feet	"Walker" 3/30/06 1700
Colin Bloomfield	337 Road 6100, Kirtland, NM 87417	Yes	Irrigation	Approximately 20 feet	"Bloomfield Well" 3/31/06 1115
Colin Bloomfield	337 Road 6100, Kirtland, NM 87417	Yes	Domestic	Same as above (same well)	"Bloomfield Tap" 3/31/06 1110
G. Bloomfield	333 Road 6100, Kirtland, NM 87417	Yes	Out of Service	Unknown	Not Sampled
Virginia Murray	300 Road 6100, Kirtland, NM 87417	Yes	Out of Service	Unknown	Not Sampled-could not prime
Mike Ryan	14 Road 6271, Kirtland, NM 87417	Yes	Irrigation	Approximately 20 feet, pump not yet installed (new well)	"Ryan" 3/31/06 1345
M. Stone	3 Road 6271, Kirtland, NM 87417	Yes	Plugged	Unknown	Not sampled
Unknown	Residence NW of Well MW-7	Yes	Out of Service	Unknown	Not sampled-access denied

Table 4 Private Well Results
Maverik Country Stores, Inc. (Former Caribou Refinery)

Name Units		R. Jackson (ug/L)	Jackson MW-4 (ug/L)	Bloomfield Tap (ug/L)	Bloomfield Well (ug/L)	Ryan (ug/L)	Walker (ug/L)
Chemical							
Acetone		< 10	< 10	< 10	< 10	< 10	< 10
Benzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
2-Butanone (MEK)		< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0
Carbon tetrachloride		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane (EDB)		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorodifluoromethane		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethene (total)		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methylene chloride		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Methyl-2-pentanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Table 4 Private Well Results
Maverik Country Stores, Inc. (Former Caribou Refinery)

Name Units		R. Jackson (ug/L)	Jackson MW-4 (ug/L)	Bloomfield Tap (ug/L)	Bloomfield Well (ug/L)	Ryan (ug/L)	Walker (ug/L)
Chemical							
Trichloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,2,3-Trichloropropane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes (total)		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
n-Butylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromofluoromethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane (DBCP)		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,3-Dichloropropane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl tert-butyl ether		< 5.0	< 5.0	***0.28 J***	***0.26 J***	< 5.0	< 5.0
1,2,3-Trichlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m-Xylene & p-Xylene		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Notes:
B - Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J - Estimated result. Result is less than RL
COL - More than 40% RPD bewtwwn primary and confirmation column results. The lower of the two results is reported.

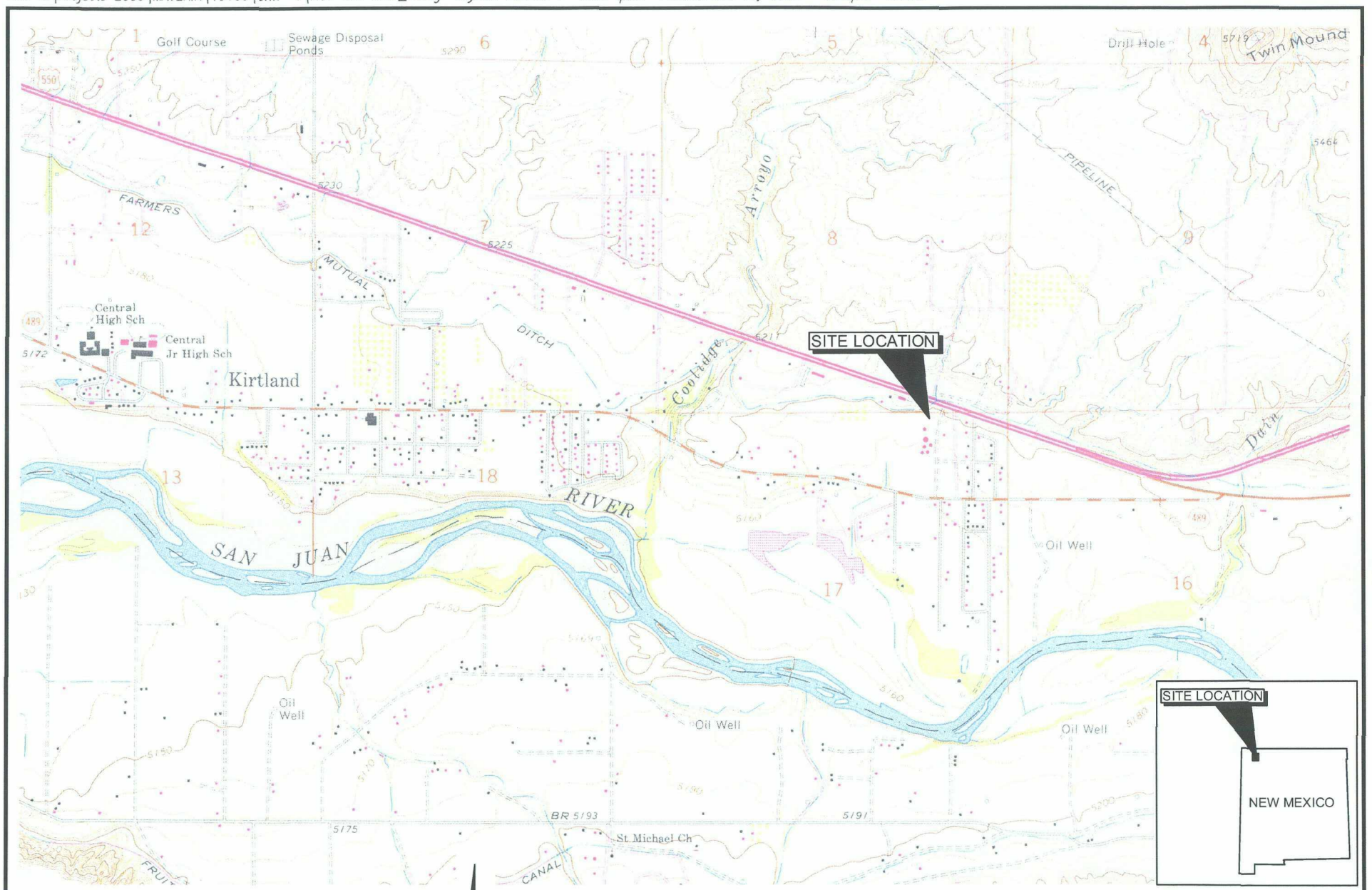
Table 5 Permeability Test Results
Maverik Country Stores, Inc. (Former Caribou Refinery)

Sample	Zone	Depth (feet)	Permeabilty (cm/sec)	Comments
East Wall	Vadose	3'-5'	3.2×10^{-6}	
East Wall	Saturated	5'-7'	6.8×10^{-8}	
South Wall [1)]	Saturated	3.5'-5'	7.7×10^{-7}	Hydrocarbon odor noted at laboratory, rooting and iron-staining observed in sample
SW Wall	Saturated	5'-6.5'	2.9×10^{-8}	
NW Wall	Saturated	4'-6'	1.1×10^{-7}	

[1)] Compatibility test in progress

Figures

File: H:\Projects 2006\MAVERIK\19100\SIWP-1\Mav-Kirt-SIWP_1.dwg Layout: FIGURE 1 User: lpaul Plotted: Jun 13, 2006 - 3:23pm Xref's:



Stage 1 Abatement Plan Report Maverik (Caribou) Former Refinery, Kirtland, New Mexico		SITE LOCATION MAP
DATE: 6/1/06	DRWN: E.S.S./DEN	FIGURE 1

Co. Road 6261

Co. RoadD 6259

Co. RoadD 6263

Co. RoadD 6271

U.S. Highway 64

CO. Road 6100

5189

5187

5185

5183

5181

5179

MW-01
5189.63

MW-02

MW-21
5187.46

MW-20
5185.25

P4
DRY

MW-18
5187.10*

MW-22
5186.87

P3
5186.56

P2
5185.96

MW-10
5184.17

P1
DRY

MW-17
5186.49
(0.03)

MW-19
5185.14

MW-15
5183.36

(Out of Service)

MW-3
5178.66*

G. Nelson

DITCH IS FILLED IN
AT THIS LOCATION

WESTSIDE
IRRIGATION DITCH

MW-16
5186.85

MW-14
5186.07

MW-09
5185.52

MW-7
5177.69*

R. Jackson

Ryan

A. Jackson

MW-4

FARMER'S MUTUAL
IRRIGATION DITCH

MURRAY
PROPERTY
DITCH

MW-8
5181.37

M. Stone
(Abandoned)

WM. H. Walker

MW-5

V. Murray
(Out of Service)

J. Bloomfield
(Out of Service)

C. Bloomfield

LEGEND

MW-4 5189.63 (0.03)	MONITORING WELL WITH MARCH 2006 GROUNDWATER ELEVATION (PRODUCT THICKNESS IN PARENTHESES)
P1	PIEZOMETER
E. Gray	PRIVATE WELL
	APPROX. DIRECTION OF GROUNDWATER FLOW
	SLURRY WALL
	MAVERIK (CARIBOU) FORMER REFINERY BOUNDARY
*	ELEVATION ESTIMATED (WELL DAMAGED)

100 0 200

1"=200'

RETEC

Stage 1 Abatement Plan

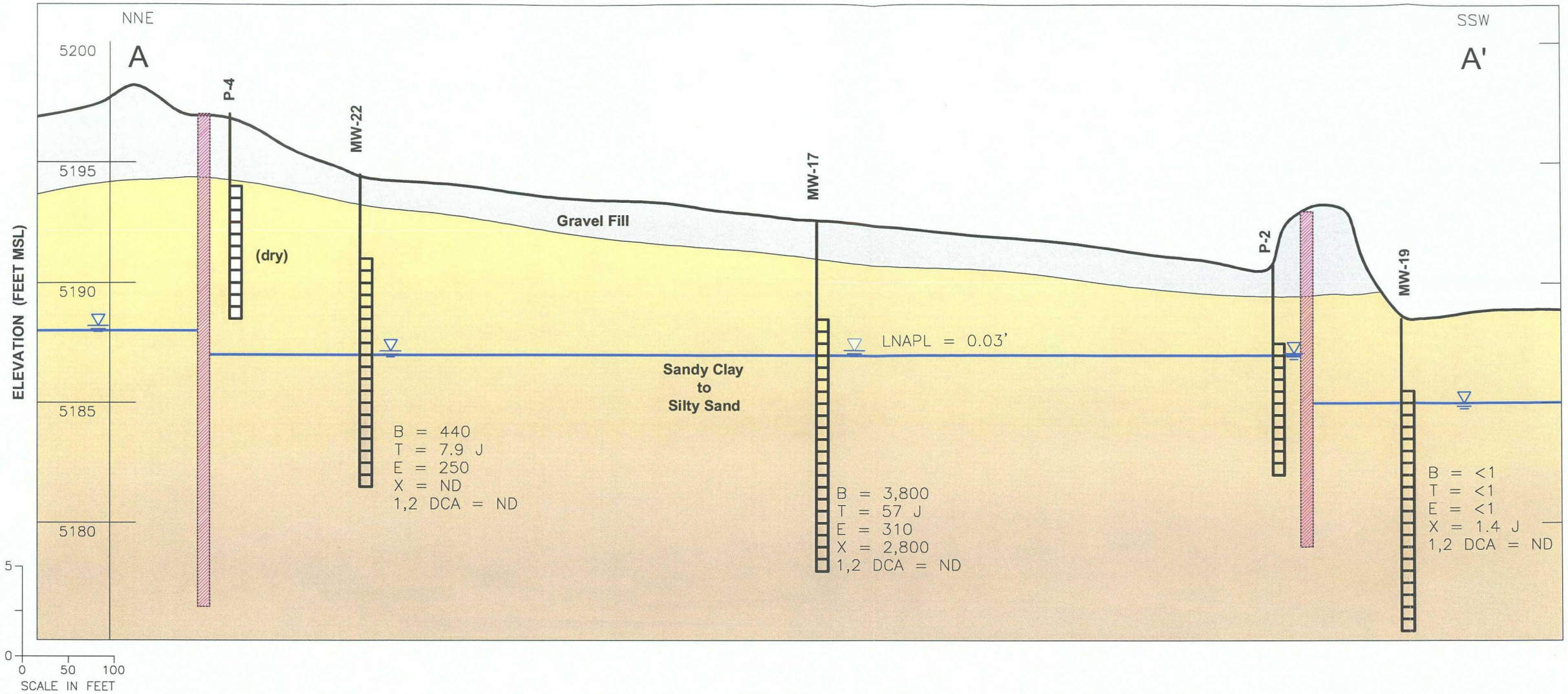
Maverik (Caribou) Former Refinery, Kirtland, New Mexico

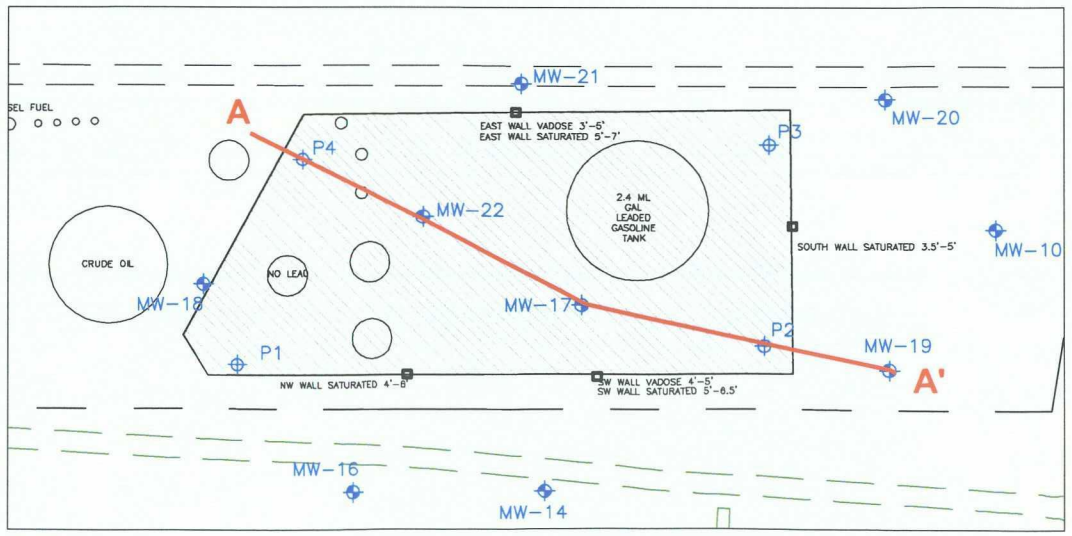
DATE: 06/13/06 | DRWN: LP/FTC

POTENTIOMETRIC SURFACE MAP MARCH 2006

FIGURE 2

File: H:\Projects 2006\MAVERIK\19100\SIWP-2\Potentiometric Surface Map_March 2006.dwg Layout: FIGURE 2 User: lpaul Plotted: Jun 13, 2006 - 1:22pm Xref's:





LEGEND

B = BENZENE CONCENTRATION (µg/L)

T = TOULENE CONCENTRATION (µg/L)

E = ETHYLBENZENE CONCENTRATION (µg/L)

X= TOTAL XYLENES CONCENTRATION (µg/L)

1,2 DCA = 1, 2 DICHLOROETHANE CONCENTRATION (µg/L)

SOIL- BENTONITE SLURRY WALL

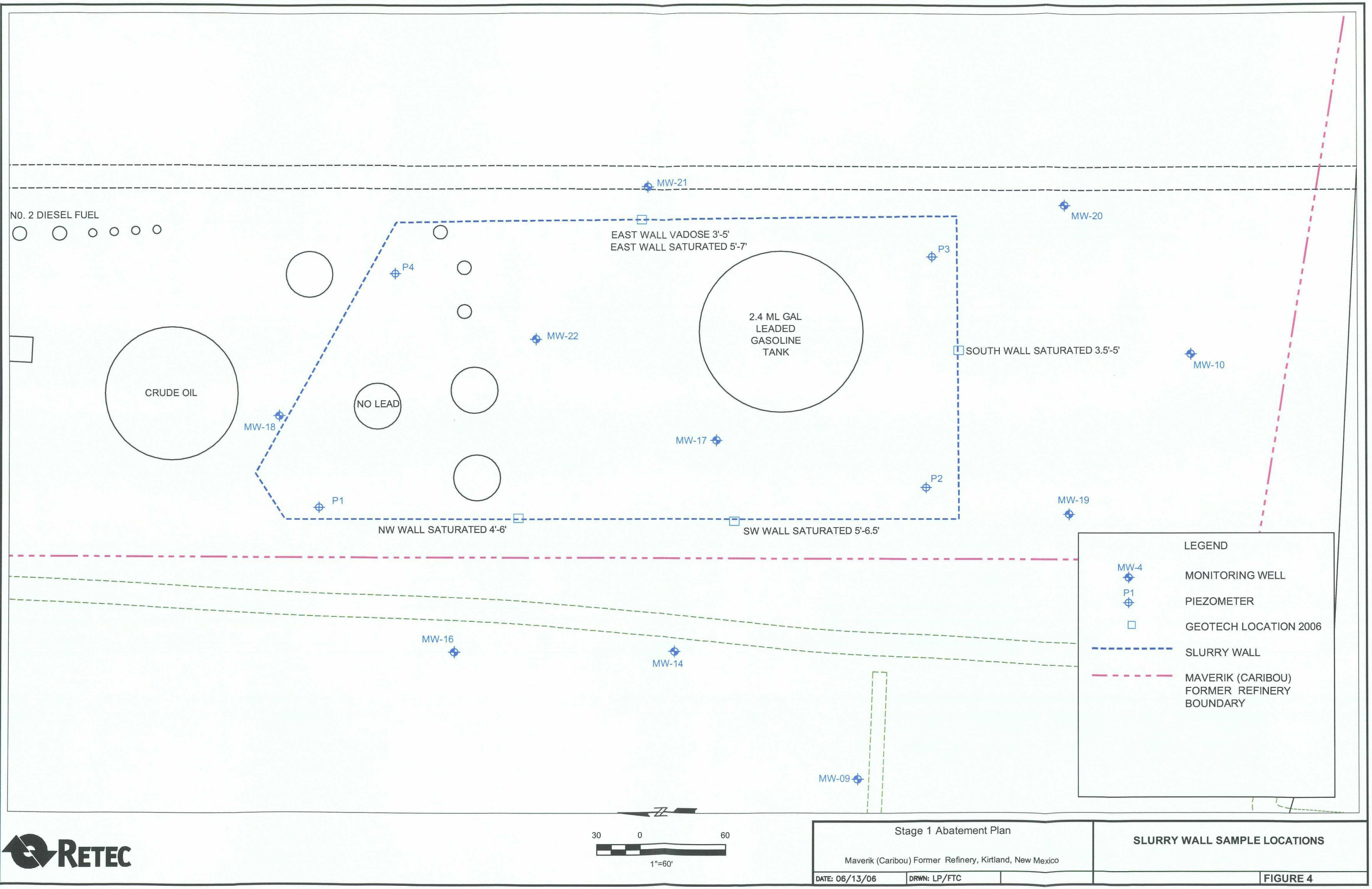
MONITORING WELL / PIEZOMETER WITH SCREEN POSITION

GROUNDWATER ELEVATION MARCH 2006

RETEC

Stage 1 Abatement Plan Maverik (Caribou) Former Refinery, Kirtland, New Mexico			**CROSS SECTION A-A'**
DATE: 06/05/06	DRWN: LP/FTC		**FIGURE 3**

File: H:\Projects 2006\MAVERIK\19100\SWP-2\Cross Section A-A'.dwg Layout: ANSI_B User: lpaul Plotted: Jun 13, 2006 - 3:25pm Xref's:



RETEC

Stage 1 Abatement Plan

Maverik (Caribou) Former Refinery, Kirtland, New Mexico

SLURRY WALL SAMPLE LOCATIONS

DATE: 06/13/06 | DRWN: LP/FTC | **FIGURE 4**

File: H:\Projects 2006\MAVERIK\19100\SWP-2\Slurry Wall Sample Locations.dwg Layout: FIGURE 4 User: lpaul Plotted: Jun 13, 2006 - 1:19pm Xref's:

Attachments

Attachment A

Field Forms

Groundwater Sampling Form

Well ID: MW- 9
Sampler(s): BWS

Well Condition

Bump Posts:
Visibility: Good
Secured: yes (new lock) 3/28/06
Well Label: yes
Surface Pad: yes

Fluid Level/Purge Volume Information

Date: 3/28/06 Time: 1220

Purge Method: Waterra/Peristaltic
Depth to water (ft): 5.70
Depth to product (ft): —
Total depth (ft): 16.66

Water column thickness (ft): 10.96'
One Purge Volume (gal): 1.78g

Groundwater Field Parameters

Date: 3/28/06 Start Time:

Time	Evacuated (gal)	pH (SU)	SpCond. (mS)	Temp. (°C)	Dis. Ox. (ppm)	ORP (mV)	Turb. (NTU)	Sample Appearance/Description
1243	0.25	6.79	1.88	–	1.46	55	–	Clear, greyish tint
1247	1.0	6.97	1.86	12.97	0.95	70	–	" "
1249	1.5	7.00	1.87	13.13	.76	74	–	" "
1253	2.0	7.05	1.86	13.34	.52	83	–	" "
1257	2.5	7.08	1.86	13.53	.43	81		" "
1300	3.0	7.10	1.85	13.52	0.40	81		" "

Meter Calibration Information

Probes	Date	Time	Comments
DO Calibration	3/24/06	1700	YSI 556
pH and SpC Calibration	"	"	YSI 556
ORP Calibration	"	"	YSI 556
Turbidity			Hanna

Sample Collection and Analytical Information

Date: 3/29/06 Time: 1300

Laboratory: STL
COC Seal: Yes
Shipped by: FedEx
Shipping Container: Ice Cooler
Field Instrument(s): YSI Flow Through Cell, ~~Hanna Turbidity Meter~~

Check Box**	Parameters	Method	Container(s)	Preservative	Comments
☐	VOCs	8260	2 x 40ml	HCl	
☐					
☐					
☐					
☐					
☐					
☐					
☐					

Comments:

Groundwater Sampling Form

Well ID: MW- 10
Sampler(s): BWS

Well Condition

Bump Posts: No
Well Label: Yes
Visibility: OK
Surface Pad: Yes.
Secured: New lock on 3/30/06

Fluid Level/Purge Volume Information

Date: 3/30/06 Time: 1230

Purge Method: Peri Pump
Depth to water (ft): 5.13
Depth to product (ft): -
Total depth (ft): 15.20
Water column thickness (ft): 10.07
One Purge Volume (gal): 1.65

Groundwater Field Parameters

Date: Start Time:

Time	Evacuated (gal)	pH (SU)	SpCond. (mS)	Temp. (°C)	Dis. Ox. (ppm)	ORP (mV)	Turb. (NTU)	Sample Appearance/Description
1232	0.25	7.49	1.07	10.5	1.6	95	-	Clear
1236	1.0	7.40	1.05	9.9	1.01	84	-	"
1238	1.25	7.37	1.05	9.75	0.87	76	-	"
1240	1.5	7.35	1.06	9.74	0.81	65	-	"
1242	1.75g	7.35	1.06	9.77	0.81	61		"

Meter Calibration Information

Probes	Date	Time	Comments
DO Calibration			
pH and SpC Calibration			
ORP Calibration			
Turbidity			

Sample Collection and Analytical Information

Date: 3/30 Time: 1245

Laboratory: STL
COC Seal: Yes
Shipped by: FedEx
Shipping Container: Ice Cooler
Field Instrument(s):

Check Box**	Parameters	Method	Container(s)	Preservative	Comments
☒	VOCs	8260	2 x 40ml	HCl	
☐					
☐					
☐					
☐					
☐					
☐					
☐					

Comments:

Groundwater Sampling Form

Well ID: MW- 16
Sampler(s): BWS

Well Condition

Bump Posts: No
Visibility: Good
Secured: Yes
Well Label: Yes
Surface Pad: Yes
new lock 3/28/06

Fluid Level/Purge Volume Information

Date: 3/28/06 Time: ~~1345~~ 1315

Purge Method: Waterra/(Peristaltic)
Depth to water (ft): 8.13
Depth to product (ft): —
Total depth (ft): 14.61

Water column thickness (ft): 6.48'
One Purge Volume (gal): 1.05g

Groundwater Field Parameters

Date: Start Time:

Time	Evacuated (gal)	pH (SU)	SpCond. (mS)	Temp. (°C)	Dis. Ox. (ppm)	ORP (mV)	Turb. (NTU)	Sample Appearance/Description
1317	0.25	6.97	2.67	11.21	3.72	112	—	Clear, Greyish tint
1320	1.0	6.85	2.66	11.07	2.32	116	—	" " "
1325	1.5	6.82	2.56	11.08	1.36	115	—	" " "
1331	2.5	6.82	2.59	11.24	1.[illegible]	116	—	Clear, slight Greyish tint
1340	4.0	6.82	2.59	11.2	1.30	116	—	" " " "

Meter Calibration Information

Probes	Date	Time	Comments
DO Calibration	3/24	1700	YSI 556
pH and SpC Calibration	"	"	YSI 556
ORP Calibration	"	"	YSI 556
Turbidity	—	—	Hanna

Sample Collection and Analytical Information

Date: 3/28/06 Time: 1340

Laboratory: STL
COC Seal: Yes
Shipped by: FedEx
Shipping Container: Ice Cooler
Field Instrument(s): YSI Flow Through Cell, Hanna Turbidity Meter

Check Box**	Parameters	Method	Container(s)	Preservative	Comments
☒	VOCs	8260	2x40ml	HCl	
☐					
☐					
☐					
☐					
☐					
☐					
☐					

Comments:

Groundwater Sampling Form

Well ID: MW- 17
Sampler(s):

Well Condition

Bump Posts: No
Visibility: Good
Secured: No
Well Label: No
Surface Pad: Yes
Need lock on 3/30/06

Fluid Level/Purge Volume Information

Date: 3/30/06 Time: 1400

Purge Method: Peri pump
Depth to water (ft): 9.42
Depth to product (ft): 9.39
Total depth (ft): 16.65
Water column thickness (ft): 7.13'
One Purge Volume (gal):

Groundwater Field Parameters

Date: Start Time:

Time	Evacuated (gal)	pH (SU)	SpCond. (mS)	Temp. (°C)	Dis. Ox. (ppm)	ORP (mV)	Turb. (NTU)	Sample Appearance/Description

N/A

Meter Calibration Information

Probes	Date	Time	Comments
DO Calibration			
pH and SpC Calibration			
ORP Calibration			
Turbidity			

Sample Collection and Analytical Information

Date: 3/30/06 Time: 1410

Laboratory: STL
COC Seal: Yes
Shipped by: FedEx
Shipping Container: Ice Cooler
Field Instrument(s):

Check Box**	Parameters	Method	Container(s)	Preservative	Comments
☑	VOCs	8260	2 x 40ml	HCl	
☐					
☐					
☐					
☐					
☐					
☐					
☐					

Comments: No field parameters due to presence of product in well

Groundwater Sampling Form

Well ID: MW- 19
Sampler(s): BWS

Well Condition

Bump Posts: No
Visibility: OK
Secured: yes, new lock 3/30/06
Well Label: Yes
Surface Pad: yes

Fluid Level/Purge Volume Information

Date: 3/30/06 Time: 1158

Purge Method: Peristaltic
Depth to water (ft): 4.4
Depth to product (ft): –
Total depth (ft): 14.15

Water column thickness (ft): 9.85
One Purge Volume (gal): 1.6

Groundwater Field Parameters

Date: Start Time:

Time	Evacuated (gal)	pH (SU)	SpCond. (mS)	Temp. (°C)	Dis. Ox. (ppm)	ORP (mV)	Turb. (NTU)	Sample Appearance/Description
1201	0.5	7.24	1.10	10.9	1.1	96		Clear, greyish
1204	1.0g	7.24	1.09	10.4	.71	91		" "
1209	2.0g	7.20	1.09	10.2	.44	82		" "
1213	2.5g	7.18	1.10	10.3	.37	77		" "

Meter Calibration Information

Probes	Date	Time	Comments
DO Calibration			
pH and SpC Calibration			
ORP Calibration			
Turbidity			

Sample Collection and Analytical Information

Date: 3/30/06 Time: 1215

Laboratory: STL
COC Seal: Yes
Shipped by: FedEx
Shipping Container: Ice Cooler
Field Instrument(s): YSI 556

Check Box**	Parameters	Method	Container(s)	Preservative	Comments
☒	VOCs	8260	2 x 40ml	HCl	
☐					
☐					
☐					
☐					
☐					
☐					
☐					

Comments:

Groundwater Sampling Form

Well ID: MW- 20
Sampler(s): BWS

Well Condition

Bump Posts: No
Visibility: OK
Secured: yes
Well Label: Yes
Surface Pad: yes
New Lock 3/28/06

Fluid Level/Purge Volume Information

Date: 3/28/06 Time: 1623

Purge Method: Waterra/Peristaltic
Depth to water (ft): 5.80
Depth to product (ft): –
Total depth (ft): 15.52

Water column thickness (ft): 9.72'
One Purge Volume (gal): 1.58g

Groundwater Field Parameters

Date: Start Time:

Time	Evacuated (gal)	pH (SU)	SpCond. (mS)	Temp. (°C)	Dis. Ox. (ppm)	ORP (mV)	Turb. (NTU)	Sample Appearance/Description
1641	0.5	7.39	1.72	11.33	0.96	-62	–	Clear w/ fine brown sand
1645	1.0	7.38	1.59	11.48	0.53	-51	–	" " " " "
1650	1.5	7.37	1.44	11.65	0.37	-42	–	" " " " "
1700	2.5	7.35	1.38	11.69	0.29	-32	–	" " " " "

Meter Calibration Information

Probes	Date	Time	Comments
DO Calibration	3/24	1700	YSI 556
pH and SpC Calibration	"	"	YSI 556
ORP Calibration	"	"	YSI 556
Turbidity	–	–	Hanna

Sample Collection and Analytical Information

Date: Time:

Laboratory: STL
COC Seal: Yes
Shipped by: FedEx
Shipping Container: Ice Cooler
Field Instrument(s): YSI Flow Through Cell, Hanna Turbidity Meter

Check Box**	Parameters	Method	Container(s)	Preservative	Comments
☒	VOCs	8260	6 x 40ml	HCl	Also MS/MSD & Dup @ 1730
☐					
☐					
☐					
☐					
☐					
☐					
☐					

Comments: Collected MS/MSD
Collected Duplicate = MW-20D @ 1730

Groundwater Sampling Form

Well ID: MW- 21
Sampler(s): BWS

Well Condition

Bump Posts: No
Visibility: OK
Secured: yes, new lock
Well Label: yes
Surface Pad: OK
3/28/06

Fluid Level/Purge Volume Information

Date: 3/28/06 Time: ~~1540~~ PB 1540

Purge Method: Waterra/Peristaltic
Depth to water (ft): 7.35
Depth to product (ft): —
Total depth (ft): 15.52

Water column thickness (ft): 8.17'
One Purge Volume (gal): 1.33

Groundwater Field Parameters

Date: Start Time:

Time	Evacuated (gal)	pH (SU)	SpCond. (mS)	Temp. (°C)	Dis. Ox. (ppm)	ORP (mV)	Turb. (NTU)	Sample Appearance/Description
1650	1.0	6.33	16.4	11.56	1.2	-30	-	Clear, pale orange color
1655	1.5	6.23	20.9	12.3	—	-32	-	" " " "
1600	1.75	6.11	25.9	12.37	1.97	-40	-	" " " "
1610	2.0	6.19	27.07	12.82	< 2	-42	-	" " " "

Meter Calibration Information

Probes	Date	Time	Comments
DO Calibration	3/24	1700	YSI 556
pH and SpC Calibration	"	"	YSI 556
ORP Calibration	"	"	YSI 556
Turbidity			Hanna

Sample Collection and Analytical Information

Date: 3/28/06 Time: 1610

Laboratory: STL
COC Seal: Yes
Shipped by: FedEx
Shipping Container: Ice Cooler
Field Instrument(s): YSI Flow Through Cell, Hanna Turbidity Meter

Check Box**	Parameters	Method	Container(s)	Preservative	Comments
☒	VOCs	8260	2 x 40ml	HCl	
☐					
☐					
☐					
☐					
☐					
☐					
☐					

Comments: Difficult to get parameters to stabilize - possibly due to MgCl or CaCl from upgradient trucking operation.

Groundwater Sampling Form

Well ID: MW- 22
Sampler(s): BWS

Well Condition

Bump Posts: No
Well Label: NO
Visibility: Good
Surface Pad: yes
Secured: New lock 3/30/06

Fluid Level/Purge Volume Information

Date: 3/30/06 Time: ~~1340~~ 1340

Purge Method:
Depth to water (ft): 8.99
Depth to product (ft): -
Total depth (ft): 13.95
Water column thickness (ft): 4.69
One Purge Volume (gal): 0.8g

Groundwater Field Parameters

Date: 3/30/06 Start Time: ~~1343~~ 1340

Time	Evacuated (gal)	pH (SU)	SpCond. (mS)	Temp. (°C)	Dis. Ox. (ppm)	ORP (mV)	Turb. (NTU)	Sample Appearance/Description
~~1343~~	0.5	6.75	1.34	13.6	.33	-64	-	Clear, grey tint, fetid odor
1345	1.0	6.78	1.36	13.8	.2	-71		" " " "
1350	1.1	6.8	1.36	13.8	0.2	-68		

2 Blank Pantos in Purge Hz & Samp.

Meter Calibration Information

Probes	Date	Time	Comments
DO Calibration			
pH and SpC Calibration			
ORP Calibration			
Turbidity			

Sample Collection and Analytical Information

Date: ~~3/30/06~~ 3/30/06 Time: 1350

Laboratory: STL
COC Seal: Yes
Shipped by: FedEx
Shipping Container: Ice Cooler
Field Instrument(s): YSI 556

Check Box**	Parameters	Method	Container(s)	Preservative	Comments
☒	VOCs	8260	2x40ml	HCl	
☐					
☐					
☐					
☐					
☐					
☐					
☐					

Comments: Slow recharge well

Chain of Custody Record

No 4943

The RETEC Group, Inc.
2409 Research Blvd., Suite 106 • Fort Collins, CO 80526
(970) 493-3700 Phone • (970) 493-2328 Fax
www.retec.com

RETEC

Project Name:	Project Number:
Send Report To:	Sampler (Print Name):
Address:	Sampler (Print Name):
	Shipment Method:
	Airbill Number:
Phone:	Laboratory Receiving:
Fax:	

Page ____ of ____

Purchase Order #: _____

Analysis Requested

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
					Duplicate of MW-28	

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Sample Custodian Remarks (Completed By Laboratory):

QA/QC Level		Turnaround		Sample Receipt	
Level I	☐	Routine	☐	Total # Containers Received?	
Level II	☐	24 Hour	☐	COC Seals Present?	
Level III	☐	1 Week	☐	COC Seals Intact?	
Other	☐	Other _____		Received Containers Intact?	
				Temperature?	

White: Lab Copy Yellow: PM Copy Pink: Field Copy Gold: PM/QA/QC Copy

Chain of Custody Record

The RETEC Group, Inc.
2409 Research Blvd., Suite 106 • Fort Collins, CO 80526
(970) 493-3700 Phone • (970) 493-2328 Fax
www.retec.com

RETEC

Project Name:	Project Number:
Send Report To:	Sampler (Print Name):
Address:	Sampler (Print Name):
	Shipment Method:
	Airbill Number:
Phone:	Laboratory Receiving:
Fax:	

Analysis Requested

Page ____ of ____

Purchase Order #: _____

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Sample Custodian Remarks (Completed By Laboratory):

QA/QC Level	Turnaround	Sample Receipt	
		Total # Containers Received?	
Level I ☐	Routine ☐	COC Seals Present?	
Level II ☐	24 Hour ☐	COC Seals Intact?	
Level III ☐	1 Week ☐	Received Containers Intact?	
Other ☐	Other _____	Temperature?	

White: Lab Copy Yellow: PM Copy Pink: Field Copy Gold: PM/QA/QC Copy

Attachment B

Analytical Data and Data Validation Report

May 17, 2006

Organic
Data Verification Report

Maverik Country Stores

Groundwater with Water QC Samples
March 2006 Sampling

Prepared for:

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Project Manager
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Prepared by:

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RETEC Project No.: MCS01-19100-2100

Overview

The samples analyzed for the Maverik Country Stores groundwater sampling event from March 2006 are listed in the Table of Samples Analyzed (page 2). Data verification was performed on sixteen groundwater samples and two trip blank samples.

Samples were analyzed by Severn Trent Laboratories, Inc. of Arvada, CO. The verified analysis was Volatile Organic Compounds (VOCs) by GC/MS method 8260B.

The RETEC Analytical Data Verification Checklist is presented as pages 4-8. Data were evaluated based on validation criteria set forth in the *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Superfund Organic Methods Data Review*, document number EPA540/R-99/008, October 1999 with additional reference to document 540-R-04-009, January 2005 as they applied to the reported methodology. Field duplicate RPD control limits were taken from the USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, February 1988, upheld in DRAFT 1993.

The following data components were reviewed during the data verification procedure:

Submitted Deliverables
Case Narratives
Chain-of-Custody form(s) and sample integrity
Sample results, reporting detection limits, method detection limits, dilution factors
Holding times
Method blank results
Trip blank results
LCS/LCSD (blank spike) results
MS/MSD (matrix spike) results
Laboratory duplicate results
Organic surrogate recoveries
Blind field duplicate results
Electronic data deliverables (EDDs)

Data Validation Qualifiers Assigned During this Review

J estimated concentration

U evaluated to be undetected at the reporting limit or at the reported concentration due to evidence of contamination

Assigned qualifiers are detailed in the RETEC Analytical Data Verification Checklist and are summarized in the Table of Qualified Analytical Results (page 3).

Overall Data Assessment

Precision, accuracy, method compliance, and completeness of the data set have been determined to be acceptable, based on the data submitted. The data are suitable for their intended use with the qualifications noted.

Table of Samples Analyzed
Maverik Country Stores
Groundwater with Water QC Samples
Severn Trent Laboratories, Inc. (STL Denver) Laboratory Reports (as listed)
March 2006 Sampling

Lab SDG	Matrix	Sample Name	Parent Sample ID	Sample Date and Time		Lab SDG	COC Reference
D6C310372	Groundwater	MW-10		3/30/2006	12:45	D6C310372	4043
D6C310372	Groundwater	MW-16		3/28/2006	13:40	D6C310372	4043
D6C310372	Groundwater	MW-17		3/30/2006	14:10	D6C310372	4043
D6C310372	Groundwater	MW-18		3/30/2006	13:20	D6C310372	4043
D6C310372	Groundwater	MW-19		3/30/2006	12:15	D6C310372	4043
D6C310372	Groundwater	MW-20		3/28/2006	17:00	D6C310372	4043
D6C310372	Groundwater	MW-20D	MW-20	3/28/2006	17:30	D6C310372	4043
D6C310372	Groundwater	MW-21		3/28/2006	16:10	D6C310372	4043
D6C310372	Groundwater	MW-22		3/30/2006	13:50	D6C310372	4043
D6C310372	Groundwater	MW-9		3/28/2006	13:00	D6C310372	4043
D6C310372	Water QC	TRIP BLANK-032806		3/28/2006	00:00	D6C310372	4043
D6D010147	Groundwater	BLOOMFIELD TOP		3/31/2006	11:10	D6D010147	6007
D6D010147	Groundwater	BLOOMFIELD WELL		3/31/2006	11:15	D6D010147	6007
D6D010147	Groundwater	JACKSON MW-4		3/31/2006	10:15	D6D010147	6007
D6D010147	Groundwater	R.JACKSON		3/31/2006	10:20	D6D010147	6007
D6D010147	Groundwater	RYAN		3/31/2006	13:45	D6D010147	6007
D6D010147	Water QC	TRIP BLANK-033106		3/31/2006	00:00	D6D010147	6007
D6D010147	Groundwater	WALKER		3/31/2006	17:00	D6D010147	6007

Table of Qualified Analytical Results
Maverik Country Stores
Groundwater with Water QC Samples
Severn Trent Laboratories, Inc. (STL Denver) Laboratory Reports (as listed)
March 2006 Sampling

Lab SDG	Sample ID	Method	DF	Analyte	Concentration		Qualifier	Reason Code
D6C310372	MW-10	SW8260B	1	1,2,4-Trimethylbenzene	0.89	ug/l	J	<PQL
D6C310372	MW-10	SW8260B	1	1,3,5-Trimethylbenzene	0.40	ug/l	J	<PQL
D6C310372	MW-10	SW8260B	1	m-Xylene & p-Xylene	1.6	ug/l	J	<PQL
D6C310372	MW-10	SW8260B	1	Xylenes (total)	1.6	ug/l	J	<PQL
D6C310372	MW-17	SW8260B	100	Isopropylbenzene	20	ug/l	J	<PQL
D6C310372	MW-17	SW8260B	100	n-Propylbenzene	34	ug/l	J	<PQL
D6C310372	MW-17	SW8260B	100	Toluene	57	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	1,2,4-Trimethylbenzene	0.49	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	4-Isopropyltoluene	0.27	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	Benzene	0.25	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	Isopropylbenzene	0.36	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	m-Xylene & p-Xylene	0.34	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	n-Propylbenzene	0.26	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	sec-Butylbenzene	0.55	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	tert-Butylbenzene	0.36	ug/l	J	<PQL
D6C310372	MW-18	SW8260B	1	Xylenes (total)	0.34	ug/l	J	<PQL
D6C310372	MW-19	SW8260B	1	1,2,4-Trimethylbenzene	1.0	ug/l	U	MB, <PQL, original result was 0.76
D6C310372	MW-19	SW8260B	1	1,3,5-Trimethylbenzene	0.36	ug/l	J	<PQL
D6C310372	MW-19	SW8260B	1	Acetone	2.5	ug/l	J	<PQL
D6C310372	MW-19	SW8260B	1	m-Xylene & p-Xylene	1.4	ug/l	J	<PQL
D6C310372	MW-19	SW8260B	1	Xylenes (total)	1.4	ug/l	J	<PQL
D6C310372	MW-21	SW8260B	1	Acetone	3.2	ug/l	J	<PQL
D6C310372	MW-22	SW8260B	20	1,3,5-Trimethylbenzene	9.8	ug/l	J	<PQL
D6C310372	MW-22	SW8260B	20	Isopropylbenzene	12	ug/l	J	<PQL
D6C310372	MW-22	SW8260B	20	Naphthalene	16	ug/l	J	<PQL
D6C310372	MW-22	SW8260B	20	sec-Butylbenzene	5.5	ug/l	J	<PQL
D6C310372	MW-22	SW8260B	20	Toluene	7.9	ug/l	J	<PQL
D6C310372	MW-9	SW8260B	1	1,2,4-Trimethylbenzene	1.0	ug/l	U	MB, <PQL, original result was 0.16
D6D010147	BLOOMFIELD TOP	SW8260B	1	Methyl tert-butyl ether	0.28	ug/l	J	<PQL
D6D010147	BLOOMFIELD WELL	SW8260B	1	Methyl tert-butyl ether	0.26	ug/l	J	<PQL

Qualifier Definitions
J – Estimated concentration.
U – Evaluated to be undetected at the reported concentration; result is considered to be a false positive.

Reason Code Definitions
< PQL – Reported concentration is greater than the MDL but less than the PQL.
MB – Method blank contamination.

RETEC ANALYTICAL DATA VERIFICATION CHECKLIST

Project Name: Maverik Country Stores	Laboratory: Severn Trent Laboratories, Inc. Arvada, CO (STL – Denver)
Project Reference:	Sample Matrix: Groundwater with Water QC Samples
RETEC Project: MCS01-19100-210	Sample Start Date: 03/28/2006
Verified By/Date Verified: Ann Biegelsen / 05/17/2006	Sample End Date: 03/31/2006
Samples Analyzed: Refer to the Table of Samples Analyzed (page 2).	
Parameters Verified: Volatile Organic Compounds (VOCs) by GC/MS method 8260B.	
Laboratory Project IDs: D6C310372 and D6D010147	

PRECISION, ACCURACY, METHOD COMPLIANCE, AND COMPLETENESS ASSESSMENT

Precision:	X	Acceptable		Unacceptable	AB	Initials

Comments: Precision is the measure of variability of individual sample measurements. Field precision was determined by comparison of field duplicate sample results. Laboratory precision was determined by examination of laboratory duplicate results. Evaluation of both field and laboratory duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. Field duplicate RPD QC limits were set at 0-30% for water samples. Laboratory RPD limits referenced EPA published QC limits. No data require qualification based on field or laboratory duplicate precision measurements, and overall field and laboratory precision is acceptable. Precision measurements are reviewed in items 17, 20, and 21.

Accuracy:	X	Acceptable		Unacceptable	AB	Initials

Comments: Field accuracy, a measure of the sampling bias, was determined by reviewing trip blank results for evidence of sample contamination stemming from sample transport. Laboratory accuracy is a measure of the system bias, and was measured by evaluating laboratory control sample/laboratory control sample duplicate (LCS/LCSD), matrix spike/matrix spike duplicate (MS/MSD), and organic system monitoring compounds (surrogate) percent recoveries (%Rs). LCS/LCSD %Rs, which demonstrated the overall performance of the analysis, were compared to EPA published QC limits. MS/MSD %Rs, which provided information on sample matrix interferences, were compared to EPA published QC limits or laboratory control charted limits. System monitoring compound or surrogate recoveries, which measured system performance and efficiency during organic analysis, were compared to EPA published QC limits or laboratory control charted limits. No data require qualification based on field or laboratory accuracy measurements, and overall field and laboratory accuracy is acceptable. Accuracy measurements are reviewed in items 12, 14, 15 and 16.

Method Compliance:	X	Acceptable		Unacceptable	AB	Initials

Comments: Method compliance was determined by evaluating sample integrity, holding time, and laboratory blanks against method specified requirements, while applying EPA data validation guidelines. Although some data require qualification based on analytes detected below the practical quantitation limits and above the method detection limits (see item 6) or based on laboratory blank contamination (see item 11), overall method compliance is acceptable based on the supplied data. Method compliance measurements are reviewed in items 4, 6, 8, 11, 13, 18, 19, 20 and 22.

Completeness:	X	Acceptable		Unacceptable	AB	Initials

Comments: Completeness is the overall ratio of the number of samples planned versus the number of samples with verified analyses. Completeness goals are set at 90-100%. Determination of completeness included a review of chain of custody records, laboratory analytical methods and detection limits, laboratory case narratives, and project requirements. Completeness also included 100% review of the laboratory sample data results, QC summary reports, and electronic data deliverables (EDDs). All of the data received from the laboratory are useable with qualification. Completeness of the data is 100% and is acceptable.

RETEC ANALYTICAL DATA VERIFICATION CHECKLIST

VERIFICATION CRITERIA CHECK						
Data verification flags used in this review: J – estimated concentration U – evaluated to be undetected at the reported concentration; result is considered to be a false positive The following comments requiring qualification are in bold type. The other comments are of interest, but qualification of the samples was not necessary. Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (page 3).						
1. Did the laboratory identify any non-conformances related to the analytical results?	X	Yes		No	AB	Initials
Explanation by laboratory: SDG D6D010147: No anomalies were encountered in the analyses of the reported samples. Sample Receipt: SDG D6C310372: One of two 40 mL vials submitted for sample MW-21, requesting VOC 8260B analysis, contained 1mm of headspace. Sufficient volume remained to proceed with the requested analysis. Method 8260B: SDG D6C310372: Due to analytes present above the linear calibration curve, samples MW-22 and MW-17 had to be analyzed at dilution. Low levels of 1,2,4-trimethylbenzene are present in the method blank associated with QC batch 6097140. Because the concentration is below the reporting limit, no corrective action is deemed necessary. MS/MSD analyses were performed on sample MW-20, as requested. All spike parameters were within QC control limits. Data qualification, if any, related to the laboratory observations are discussed in the following sections.						
2. Were sample Chain-of-Custody forms complete?	X	Yes		No	AB	Initials
Comments: COC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt.						
3. Were all the analyses requested for the samples on the COCs completed by the laboratory?	X	Yes		No	AB	Initials
Comments: All requested analyses were completed.						
4. Were samples received in good condition and at the appropriate temperature?	X	Yes		No	AB	Initials
Comments: Samples were received on ice, intact, and in good condition with cooler temperatures within the 4°C ± 2°C acceptance range at 4.8°C and 3.3°C as noted on COCs and Sample Receiving Checklist forms.						
5. Were the requested analytical methods in compliance with WP/QAPP, permit, or COC?	X	Yes		No	AB	Initials
Comments: Reported methods and target analyte lists were in compliance with COC records.						

RETEC ANALYTICAL DATA VERIFICATION CHECKLIST

6. Were detection limits in accordance with WP/QAPP, permit, or method?	X	Yes		No	AB	Initials
Comments: Reported detection limits are achievable by the quoted methods. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately. **Analytes detected below the laboratory practical quantitation limit (PQL) and above the method detection limit (MDL) have been qualified as J to indicate the concentrations are estimated, as the quantitation of results detected outside the calibration range of the instrument can not be guaranteed.** Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (page 3).						
7. Do the laboratory reports include only those constituents requested to be reported for a specific analytical method?	X	Yes		No	AB	Initials
Comments: Only the requested target analytes were reported.						
8. Were sample holding times met?	X	Yes		No	AB	Initials
Comments: Extraction and analytical holding times were met for all samples and analyses.						
9. Were correct concentration units reported?	X	Yes		No	AB	Initials
Comments: Correct concentration units were reported. All results are reported in units of µg/L (ppb).						
10. Were the reporting requirements for flagged data met?	X	Yes		No	AB	Initials
Comments: Data verification qualifiers override any assigned laboratory flags.						
11. Were laboratory blank samples free of target analyte contamination?		Yes	X	No	AB	Initials
Comments: All laboratory blanks were free of target analyte contamination with the following exception. **<u>Method 8260B</u>: D6C310372: The laboratory blank sample associated with laboratory batch 6097140 reported 1,2,4-trimethylbenzene at 0.17 µg/L. This analyte was also detected below the reporting limits and at less than five times the amount found in the blank in associated samples MW-9 and MW-19. This analyte has been qualified as U at the reporting limit to indicate the result was undetected at the reporting limit and is considered to be a false positive below the reporting limit.** Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (page 3).						
12. Were trip blank, field blank, and/or equipment rinse blank samples free of target analyte contamination?	X	Yes		No	AB	Initials
Comments: Target analytes were not detected in the trip blank samples.						
13. Were instrument calibrations within method or data validation control limits?	NA	Yes	NA	No	AB	Initials
Comments: Not applicable for this level of data verification – Instrument calibration data were not supplied in analytical laboratory reports and were therefore not included in this data review.						

RETEC ANALYTICAL DATA VERIFICATION CHECKLIST

14. Were surrogate recoveries within control limits?	X	Yes		No	AB	Initials
Comments: Surrogate percent recoveries (%Rs) for organic analyses were within data verification QC criteria for all samples.						
15. Were laboratory control sample recoveries within control limits?	X	Yes		No	AB	Initials
Comments: LCS and LCSD (blank spike) recoveries were within data verification or laboratory control-charted QC limits for all target analytes.						
16. Were matrix spike recoveries within control limits?	X	Yes		No	AB	Initials
Comments: Project specific MS and MSD recoveries for target analytes were within data verification QC. MS and MSD spike recoveries for non-project samples were not considered since matrix similarity to project samples could not be guaranteed.						
17. Were duplicate RPDs and/or serial dilution %Ds within control limits?	X	Yes		No	AB	Initials
Comments: Laboratory RPDs for target analytes in LCS/LCSD and project-specific MS/MSD samples were within data verification control limits.						
18. Were organic system performance criteria met?	NA	Yes	NA	No	AB	Initials
Comments: Not applicable for this level of data verification – Organic system performance data was not supplied in analytical laboratory reports and was therefore not included in this data review.						
19. Were internal standards within method criteria for GC/MS sample analyses?	NA	Yes	NA	No	AB	Initials
Comments: Not applicable for this level of data verification – GC/MS internal standard data was not supplied in analytical laboratory reports and was therefore not included in this data review.						
20. Were inorganic system performance criteria met?	NA	Yes	NA	No	AB	Initials
Comments: Not applicable for this level of data verification – Inorganic system performance data was not supplied in analytical laboratory reports and was therefore not included in this data review.						
21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.	X	Yes		No	AB	Initials
Duplicate Sample No.	MW-20D		Primary Sample No.	MW-20		
Comments: The RPDs for the duplicates were not applicable due to results that were undetected in both samples.						
22. Were qualitative criteria for organic target analyte identification met?	NA	Yes	NA	No	AB	Initials
Comments: Not applicable for this level of data verification – GC and GC/MS quantitation reports and chromatograms were not supplied in analytical laboratory reports and were therefore not included in this data review. However, retention times and chromatography were reviewed by trained laboratory personnel in accordance with the laboratory's internal QA/QC program.						

RETEC ANALYTICAL DATA VERIFICATION CHECKLIST

23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?	X	Yes		No	AB	Initials
Comments: There were no discrepancies between the EDD concentrations and reporting limits and the hardcopy data reports.						
24. General Comments: Data were evaluated based on validation criteria set forth in the *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Superfund Organic Methods Data Review*, document number EPA540/R-99/008, October 1999 with additional reference to document 540-R-04-009, January 2005 as they applied to the reported methodology. Field duplicate RPD control limits were taken from the USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, February 1988, upheld in DRAFT 1993. Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (page 3).						

SEVERN TRENT STL

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ANALYTICAL REPORT

PROJECT NO.: MCS01-19100-210

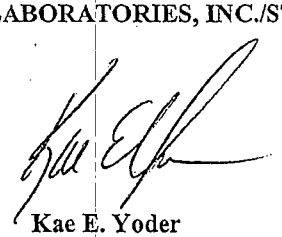
MAVERIK

Lot #: D6C310372

Leslie Hill

The RETEC Group, Inc.
2409 Research Blvd.
Suite 106
Fort Collins, CO 80526

SEVERN TRENT LABORATORIES, INC./STL DENVER



Kae E. Yoder
Project Manager

April 14, 2006

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Standard Deliverables

Report Contents	Total Number of Pages

Standard Deliverables

The Cover Letter and the Report Cover page are considered integral parts of this Standard Deliverable package. This report is incomplete unless all pages indicated in this Table of Contents are included.

CASE NARRATIVE
D6C310372

The following report contains the analytical results for ten water samples and one trip blank, submitted to STL Denver by The RETEC Group, Inc. from the Maverik site, project number MCS01-19100-210. The samples were received March 31, 2006, according to documented sample acceptance procedures.

STL Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter listed on the methods summary page in accordance with the methods indicated. Dilution factors and footnotes have been provided on each datasheet to assist in the interpretation of the results.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted below.

SUPPLEMENTAL QC INFORMATION

Sample Receipt

Samples were received intact at a temperature of 4.8°C.

One of two 40mL vials submitted for sample MW-21, requesting VOC 8260B analysis, contained 1mm of headspace. Sufficient volume remains to proceed with the requested analysis. The client was notified on April 3, 2006. No other anomalies were encountered during sample receipt.

GC/MS Volatile Organics – 8260B

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to analytes present above the linear calibration curve, samples MW-22 and MW-17 had to be analyzed at dilutions. The reporting limits have been adjusted relative to the dilutions required.

Low levels of 1,2,4-Trimethylbenzene are present in the method blank associated with QC batch 6097140. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

No other anomalies were encountered.

MS/MSD were performed on sample MW-20, as requested. All spike parameters were within QC control limits.

EXECUTIVE SUMMARY - Detection Highlights

D6C310372

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-9 03/28/06 13:00 001				
1,2,4-Trimethylbenzene	0.16 J,B	1.0	ug/L	SW846 8260B
MW-21 03/28/06 16:10 005				
Acetone	3.2 J	10	ug/L	SW846 8260B
MW-19 03/30/06 12:15 007				
Acetone	2.5 J	10	ug/L	SW846 8260B
Xylenes (total)	1.4 J	2.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	0.76 J,B	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	0.36 J	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	1.4 J	2.0	ug/L	SW846 8260B
MW-10 03/30/06 12:45 008				
Xylenes (total)	1.6 J	2.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	0.89 J,B	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	0.40 J	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	1.6 J	2.0	ug/L	SW846 8260B
MW-18 03/30/06 13:20 009				
Benzene	0.25 J	1.0	ug/L	SW846 8260B
Xylenes (total)	0.34 J	2.0	ug/L	SW846 8260B
sec-Butylbenzene	0.55 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.36 J	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	0.49 J	1.0	ug/L	SW846 8260B
n-Propylbenzene	0.26 J	1.0	ug/L	SW846 8260B
tert-Butylbenzene	0.36 J	1.0	ug/L	SW846 8260B
4-Isopropyltoluene	0.27 J	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	0.34 J	2.0	ug/L	SW846 8260B
MW-22 03/30/06 13:50 010				
Benzene	440	20	ug/L	SW846 8260B
Ethylbenzene	250	20	ug/L	SW846 8260B
Toluene	7.9 J	20	ug/L	SW846 8260B
sec-Butylbenzene	5.5 J	20	ug/L	SW846 8260B
Isopropylbenzene	12 J	20	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	280	20	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	9.8 J	20	ug/L	SW846 8260B
n-Propylbenzene	34	20	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D6C310372

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-22 03/30/06 13:50 010				
Naphthalene	16 J	20	ug/L	SW846 8260B
MW-17 03/30/06 14:10 011				
Benzene	3800	100	ug/L	SW846 8260B
Ethylbenzene	310	100	ug/L	SW846 8260B
Toluene	57 J	100	ug/L	SW846 8260B
Xylenes (total)	2800	200	ug/L	SW846 8260B
Isopropylbenzene	20 J	100	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	880	100	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	110	100	ug/L	SW846 8260B
n-Propylbenzene	34 J	100	ug/L	SW846 8260B
m-Xylene & p-Xylene	2500	200	ug/L	SW846 8260B
o-Xylene	240	100	ug/L	SW846 8260B
Naphthalene	110	100	ug/L	SW846 8260B

METHODS SUMMARY

D6C310372

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826

References:

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

METHOD / ANALYST SUMMARY

D6C310372

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8260B	Daniel Kiekel	011370

References:

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

SAMPLE SUMMARY

D6C310372

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
H2EWK	001	MW-9	03/28/06	13:00
H2EWN	002	MW-16	03/28/06	13:40
H2EWP	003	MW-20	03/28/06	17:00
H2EWR	004	MW-20D	03/28/06	17:30
H2EWT	005	MW-21	03/28/06	16:10
H2EWV	006	TRIP BLANK	03/28/06	
H2EW0	007	MW-19	03/30/06	12:15
H2EW3	008	MW-10	03/30/06	12:45
H2EW5	009	MW-18	03/30/06	13:20
H2EW6	010	MW-22	03/30/06	13:50
H2EW8	011	MW-17	03/30/06	14:10

NOTE(S):

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

The RETEC Group, Inc.

Client Sample ID: MW-9

GC/MS Volatiles

Lot-Sample #...: D6C310372-001 **Work Order #...:** H2EWK1AA **Matrix.....:** WG
Date Sampled...: 03/28/06 13:00 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 11:08
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

(Continued on next page)

The RETEC Group, Inc.

Client Sample ID: MW-9

GC/MS Volatiles

Lot-Sample #...: D6C310372-001 **Work Order #...:** H2EWK1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	**0.16 J,B**	**1.0**	**ug/L**	**0.14**
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 119)
1,2-Dichloroethane-d4	83	(65 - 126)
4-Bromofluorobenzene	91	(75 - 115)
Toluene-d8	109	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

The RETEC Group, Inc.

Client Sample ID: MW-16

GC/MS Volatiles

Lot-Sample #...: D6C310372-002 **Work Order #...:** H2EWN1AA **Matrix.....:** WG
Date Sampled...: 03/28/06 13:40 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 11:29
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

(Continued on next page)

The RETEC Group, Inc.

Client Sample ID: MW-16

GC/MS Volatiles

Lot-Sample #...: D6C310372-002 **Work Order #...:** H2EWN1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 119)
1,2-Dichloroethane-d4	84	(65 - 126)
4-Bromofluorobenzene	92	(75 - 115)
Toluene-d8	107	(78 - 118)

The RETEC Group, Inc.

Client Sample ID: MW-20

GC/MS Volatiles

Lot-Sample #...: D6C310372-003 **Work Order #...:** H2EWP1AA **Matrix.....:** WG
Date Sampled...: 03/28/06 17:00 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 11:50
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: MW-20

GC/MS Volatiles

Lot-Sample #...: D6C310372-003 Work Order #...: H2EWP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 119)
1,2-Dichloroethane-d4	89	(65 - 126)
4-Bromofluorobenzene	95	(75 - 115)
Toluene-d8	108	(78 - 118)

The RETEC Group, Inc.

Client Sample ID: MW-20D

GC/MS Volatiles

Lot-Sample #...: D6C310372-004 **Work Order #...:** H2EWR1AA **Matrix.....:** WG
Date Sampled...: 03/28/06 17:30 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 12:52
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: MW-20D

GC/MS Volatiles

Lot-Sample #...: D6C310372-004 Work Order #...: H2EWR1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(79 - 119)
1,2-Dichloroethane-d4	83	(65 - 126)
4-Bromofluorobenzene	89	(75 - 115)
Toluene-d8	102	(78 - 118)

The RETEC Group, Inc.

Client Sample ID: MW-21

GC/MS Volatiles

Lot-Sample #...: D6C310372-005 **Work Order #...:** H2EWT1AA **Matrix.....:** WG
Date Sampled...: 03/28/06 16:10 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 13:13
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.2 J**	**10**	**ug/L**	**1.9**
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: MW-21

GC/MS Volatiles

Lot-Sample #...: D6C310372-005 Work Order #...: H2EWT1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(79 - 119)
1,2-Dichloroethane-d4	93	(65 - 126)
4-Bromofluorobenzene	91	(75 - 115)
Toluene-d8	101	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

The RETEC Group, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D6C310372-006 **Work Order #...:** H2EWV1AA **Matrix.....:** WQ
Date Sampled...: 03/28/06 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 13:34
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D6C310372-006 Work Order #...: H2EWV1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 119)
1,2-Dichloroethane-d4	86	(65 - 126)
4-Bromofluorobenzene	90	(75 - 115)
Toluene-d8	102	(78 - 118)

The RETEC Group, Inc.

Client Sample ID: MW-19

GC/MS Volatiles

Lot-Sample #...: D6C310372-007 **Work Order #...:** H2EW01AA **Matrix.....:** WG
Date Sampled...: 03/30/06 12:15 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 13:54
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J**	**10**	**ug/L**	**1.9**
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: MW-19

GC/MS Volatiles

Lot-Sample #...: D6C310372-007 Work Order #...: H2EW01AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	**1.4 J**	**2.0**	**ug/L**	**0.19**
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	**0.76 J,B**	**1.0**	**ug/L**	**0.14**
1,3,5-Trimethylbenzene	**0.36 J**	**1.0**	**ug/L**	**0.14**
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	**1.4 J**	**2.0**	**ug/L**	**0.34**
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(79 - 119)
1,2-Dichloroethane-d4	81	(65 - 126)
4-Bromofluorobenzene	89	(75 - 115)
Toluene-d8	102	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

The RETEC Group, Inc.

Client Sample ID: MW-10

GC/MS Volatiles

Lot-Sample #...: D6C310372-008 **Work Order #...:** H2EW31AA **Matrix.....:** WG
Date Sampled...: 03/30/06 12:45 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 14:15
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: MW-10

GC/MS Volatiles

Lot-Sample #...: D6C310372-008 Work Order #...: H2EW31AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	**1.6 J**	**2.0**	**ug/L**	**0.19**
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	**0.89 J,B**	**1.0**	**ug/L**	**0.14**
1,3,5-Trimethylbenzene	**0.40 J**	**1.0**	**ug/L**	**0.14**
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	**1.6 J**	**2.0**	**ug/L**	**0.34**
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 119)
1,2-Dichloroethane-d4	85	(65 - 126)
4-Bromofluorobenzene	91	(75 - 115)
Toluene-d8	105	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level..

The RETEC Group, Inc.

Client Sample ID: MW-18

GC/MS Volatiles

Lot-Sample #...: D6C310372-009 **Work Order #...:** H2EW51AA **Matrix.....:** WG
Date Sampled...: 03/30/06 13:20 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097139 **Analysis Time..:** 20:07
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	**0.25 J**	**1.0**	**ug/L**	**0.16**
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: MW-18

GC/MS Volatiles

Lot-Sample #...: D6C310372-009 **Work Order #...:** H2EW51AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	**0.34 J**	**2.0**	**ug/L**	**0.19**
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	**0.55 J**	**1.0**	**ug/L**	**0.17**
Isopropylbenzene	**0.36 J**	**1.0**	**ug/L**	**0.19**
1,2,4-Trimethylbenzene	**0.49 J**	**1.0**	**ug/L**	**0.14**
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	**0.26 J**	**1.0**	**ug/L**	**0.16**
tert-Butylbenzene	**0.36 J**	**1.0**	**ug/L**	**0.16**
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	**0.27 J**	**1.0**	**ug/L**	**0.17**
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	**0.34 J**	**2.0**	**ug/L**	**0.34**
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(79 - 119)
1,2-Dichloroethane-d4	80	(65 - 126)
4-Bromofluorobenzene	90	(75 - 115)
Toluene-d8	101	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

The RETEC Group, Inc.

Client Sample ID: MW-22

GC/MS Volatiles

Lot-Sample #...: D6C310372-010 **Work Order #...:** H2EW61AA **Matrix.....:** WG
Date Sampled...: 03/30/06 13:50 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097139 **Analysis Time..:** 20:28
Dilution Factor: 20

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	200	ug/L	38
Benzene	**440**	**20**	**ug/L**	**3.2**
Bromodichloromethane	ND	20	ug/L	3.4
Bromoform	ND	20	ug/L	3.8
Bromomethane	ND	40	ug/L	4.2
2-Butanone (MEK)	ND	120	ug/L	37
Carbon tetrachloride	ND	20	ug/L	3.8
Chlorobenzene	ND	20	ug/L	3.4
Chloroethane	ND	40	ug/L	8.2
Chloroform	ND	20	ug/L	3.2
Chloromethane	ND	40	ug/L	6.0
Dibromomethane	ND	20	ug/L	3.4
1,2-Dibromoethane (EDB)	ND	20	ug/L	3.6
1,2-Dichlorobenzene	ND	20	ug/L	2.6
1,3-Dichlorobenzene	ND	20	ug/L	3.2
1,4-Dichlorobenzene	ND	20	ug/L	3.2
Dichlorodifluoromethane	ND	40	ug/L	6.2
1,1-Dichloroethane	ND	20	ug/L	3.2
1,2-Dichloroethane	ND	20	ug/L	2.6
1,1-Dichloroethene	ND	20	ug/L	2.8
1,2-Dichloroethene (total)	ND	20	ug/L	3.0
cis-1,2-Dichloroethene	ND	20	ug/L	3.0
trans-1,2-Dichloroethene	ND	20	ug/L	3.0
1,2-Dichloropropane	ND	20	ug/L	2.6
cis-1,3-Dichloropropene	ND	20	ug/L	3.2
trans-1,3-Dichloropropene	ND	60	ug/L	16
Ethylbenzene	**250**	**20**	**ug/L**	**3.2**
2-Hexanone	ND	100	ug/L	28
Methylene chloride	ND	100	ug/L	6.4
4-Methyl-2-pentanone	ND	100	ug/L	9.8
Styrene	ND	20	ug/L	3.4
1,1,1,2-Tetrachloroethane	ND	20	ug/L	3.4
1,1,2,2-Tetrachloroethane	ND	20	ug/L	4.0
Tetrachloroethene	ND	20	ug/L	4.0
Toluene	**7.9 J**	**20**	**ug/L**	**3.4**
1,2,4-Trichloro-benzene	ND	20	ug/L	6.4

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The RETEC Group, Inc.

Client Sample ID: MW-22

GC/MS Volatiles

Lot-Sample #...: D6C310372-010 Work Order #...: H2EW61AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	20	ug/L	3.2
1,1,2-Trichloroethane	ND	20	ug/L	6.4
Trichloroethene	ND	20	ug/L	3.2
Trichlorofluoromethane	ND	40	ug/L	5.8
1,2,3-Trichloropropane	ND	20	ug/L	5.4
Vinyl chloride	ND	20	ug/L	3.4
Xylenes (total)	ND	40	ug/L	3.8
n-Butylbenzene	ND	20	ug/L	2.8
sec-Butylbenzene	**5.5 J**	**20**	**ug/L**	**3.4**
Isopropylbenzene	**12 J**	**20**	**ug/L**	**3.8**
1,2,4-Trimethylbenzene	**280**	**20**	**ug/L**	**2.8**
1,3,5-Trimethylbenzene	**9.8 J**	**20**	**ug/L**	**2.8**
n-Propylbenzene	**34**	**20**	**ug/L**	**3.2**
tert-Butylbenzene	ND	20	ug/L	3.2
Dibromochloromethane	ND	20	ug/L	3.4
2-Chlorotoluene	ND	20	ug/L	3.4
4-Chlorotoluene	ND	20	ug/L	3.4
1,2-Dibromo-3-chloropropane (DBCP)	ND	100	ug/L	30
1,3-Dichloropropane	ND	20	ug/L	3.0
2,2-Dichloropropane	ND	100	ug/L	4.0
1,1-Dichloropropene	ND	20	ug/L	3.0
Hexachlorobutadiene	ND	20	ug/L	2.4
4-Isopropyltoluene	ND	20	ug/L	3.4
Methyl tert-butyl ether	ND	100	ug/L	5.0
1,2,3-Trichlorobenzene	ND	20	ug/L	3.6
m-Xylene & p-Xylene	ND	40	ug/L	6.8
o-Xylene	ND	20	ug/L	3.8
Bromobenzene	ND	20	ug/L	3.4
Bromochloromethane	ND	20	ug/L	2.0
Naphthalene	**16 J**	**20**	**ug/L**	**4.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(79 - 119)
1,2-Dichloroethane-d4	78	(65 - 126)
4-Bromofluorobenzene	86	(75 - 115)
Toluene-d8	101	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

The RETEC Group, Inc.

Client Sample ID: MW-17

GC/MS Volatiles

Lot-Sample #...: D6C310372-011 **Work Order #...:** H2EW81AA **Matrix.....:** WG
Date Sampled...: 03/30/06 14:10 **Date Received..:** 03/31/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100135 **Analysis Time..:** 09:52
Dilution Factor: 100

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	1000	ug/L	190
Benzene	**3800**	**100**	**ug/L**	**16**
Bromodichloromethane	ND	100	ug/L	17
Bromoform	ND	100	ug/L	19
Bromomethane	ND	200	ug/L	21
2-Butanone (MEK)	ND	600	ug/L	180
Carbon tetrachloride	ND	100	ug/L	19
Chlorobenzene	ND	100	ug/L	17
Chloroethane	ND	200	ug/L	41
Chloroform	ND	100	ug/L	16
Chloromethane	ND	200	ug/L	30
Dibromomethane	ND	100	ug/L	17
1,2-Dibromoethane (EDB)	ND	100	ug/L	18
1,2-Dichlorobenzene	ND	100	ug/L	13
1,3-Dichlorobenzene	ND	100	ug/L	16
1,4-Dichlorobenzene	ND	100	ug/L	16
Dichlorodifluoromethane	ND	200	ug/L	31
1,1-Dichloroethane	ND	100	ug/L	16
1,2-Dichloroethane	ND	100	ug/L	13
1,1-Dichloroethene	ND	100	ug/L	14
1,2-Dichloroethene (total)	ND	100	ug/L	15
cis-1,2-Dichloroethene	ND	100	ug/L	15
trans-1,2-Dichloroethene	ND	100	ug/L	15
1,2-Dichloropropane	ND	100	ug/L	13
cis-1,3-Dichloropropene	ND	100	ug/L	16
trans-1,3-Dichloropropene	ND	300	ug/L	80
Ethylbenzene	**310**	**100**	**ug/L**	**16**
2-Hexanone	ND	500	ug/L	140
Methylene chloride	ND	500	ug/L	32
4-Methyl-2-pentanone	ND	500	ug/L	49
Styrene	ND	100	ug/L	17
1,1,1,2-Tetrachloroethane	ND	100	ug/L	17
1,1,2,2-Tetrachloroethane	ND	100	ug/L	20
Tetrachloroethene	ND	100	ug/L	20
Toluene	**57 J**	**100**	**ug/L**	**17**
1,2,4-Trichloro-benzene	ND	100	ug/L	32

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The RETEC Group, Inc.

Client Sample ID: MW-17

GC/MS Volatiles

Lot-Sample #...: D6C310372-011 Work Order #...: H2EW81AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	100	ug/L	16
1,1,2-Trichloroethane	ND	100	ug/L	32
Trichloroethene	ND	100	ug/L	16
Trichlorofluoromethane	ND	200	ug/L	29
1,2,3-Trichloropropane	ND	100	ug/L	27
Vinyl chloride	ND	100	ug/L	17
Xylenes (total)	**2800**	**200**	**ug/L**	**19**
n-Butylbenzene	ND	100	ug/L	14
sec-Butylbenzene	ND	100	ug/L	17
Isopropylbenzene	**20 J**	**100**	**ug/L**	**19**
1,2,4-Trimethylbenzene	**880**	**100**	**ug/L**	**14**
1,3,5-Trimethylbenzene	**110**	**100**	**ug/L**	**14**
n-Propylbenzene	**34 J**	**100**	**ug/L**	**16**
tert-Butylbenzene	ND	100	ug/L	16
Dibromochloromethane	ND	100	ug/L	17
2-Chlorotoluene	ND	100	ug/L	17
4-Chlorotoluene	ND	100	ug/L	17
1,2-Dibromo-3-chloropropane (DBCP)	ND	500	ug/L	150
1,3-Dichloropropane	ND	100	ug/L	15
2,2-Dichloropropane	ND	500	ug/L	20
1,1-Dichloropropene	ND	100	ug/L	15
Hexachlorobutadiene	ND	100	ug/L	12
4-Isopropyltoluene	ND	100	ug/L	17
Methyl tert-butyl ether	ND	500	ug/L	25
1,2,3-Trichlorobenzene	ND	100	ug/L	18
m-Xylene & p-Xylene	**2500**	**200**	**ug/L**	**34**
o-Xylene	**240**	**100**	**ug/L**	**19**
Bromobenzene	ND	100	ug/L	17
Bromochloromethane	ND	100	ug/L	10
Naphthalene	**110**	**100**	**ug/L**	**22**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(79 - 119)
1,2-Dichloroethane-d4	89	(65 - 126)
4-Bromofluorobenzene	90	(75 - 115)
Toluene-d8	106	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D6C310372

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8260B		6097140	6097215
002	WG	SW846 8260B		6097140	6097215
003	WG	SW846 8260B		6097140	6097215
004	WG	SW846 8260B		6097140	6097215
005	WG	SW846 8260B		6097140	6097215
006	WQ	SW846 8260B		6097140	6097215
007	WG	SW846 8260B		6097140	6097215
008	WG	SW846 8260B		6097140	6097215
009	WG	SW846 8260B		6097139	6097198
010	WG	SW846 8260B		6097139	6097198
011	WG	SW846 8260B		6100135	6100085

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2T361AA **Matrix.....:** WATER
MB Lot-Sample #: D6D070000-139

Prep Date.....: 04/06/06 **Analysis Time..:** 17:00
Analysis Date..: 04/06/06 **Prep Batch #...:** 6097139
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone (MEK)	ND	6.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	3.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2T361AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
4-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(79 - 119)
1,2-Dichloroethane-d4	84	(65 - 126)
4-Bromofluorobenzene	88	(75 - 115)
Toluene-d8	102	(78 - 118)

NOTE(S):

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

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2T831AA **Matrix.....:** WATER
MB Lot-Sample #: D6D070000-140

Prep Date.....: 04/06/06 **Analysis Time..:** 09:45
Analysis Date..: 04/06/06 **Prep Batch #...:** 6097140
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone (MEK)	ND	6.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	3.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2T831AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	**0.17 J**	**1.0**	**ug/L**	**SW846 8260B**
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
4-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(79 - 119)
1,2-Dichloroethane-d4	83	(65 - 126)
4-Bromofluorobenzene	83	(75 - 115)
Toluene-d8	99	(78 - 118)

NOTE(S):

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

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2XDR1AA **Matrix.....:** WATER
MB Lot-Sample #: D6D100000-135

Prep Date.....: 04/07/06 **Analysis Time..:** 09:27
Analysis Date..: 04/07/06 **Prep Batch #...:** 6100135
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone (MEK)	ND	6.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	3.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2XDR1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
4-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(79 - 119)
1,2-Dichloroethane-d4	88	(65 - 126)
4-Bromofluorobenzene	90	(75 - 115)
Toluene-d8	104	(78 - 118)

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2T361AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D6D070000-139 H2T361AD-LCSD
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097139 **Analysis Time..:** 16:19
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**109**	**(77 - 118)**			**SW846 8260B**
	109	**(77 - 118)**	**0.80**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**103**	**(78 - 118)**			**SW846 8260B**
	107	**(78 - 118)**	**4.1**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**114**	**(68 - 133)**			**SW846 8260B**
	117	**(68 - 133)**	**2.8**	**(0-20)**	**SW846 8260B**
Toluene	**104**	**(73 - 120)**			**SW846 8260B**
	109	**(73 - 120)**	**4.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**104**	**(78 - 122)**			**SW846 8260B**
	110	**(78 - 122)**	**5.8**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 119)
	95	(79 - 119)
1,2-Dichloroethane-d4	84	(65 - 126)
	86	(65 - 126)
4-Bromofluorobenzene	85	(75 - 115)
	91	(75 - 115)
Toluene-d8	101	(78 - 118)
	103	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2T361AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D6D070000-139 H2T361AD-LCSD
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097139 **Analysis Time..:** 16:19
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10.0**	**10.9**	**ug/L**	**109**		**SW846 8260B**
	10.0	**10.9**	**ug/L**	**109**	**0.80**	**SW846 8260B**
Chlorobenzene	**10.0**	**10.3**	**ug/L**	**103**		**SW846 8260B**
	10.0	**10.7**	**ug/L**	**107**	**4.1**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**11.4**	**ug/L**	**114**		**SW846 8260B**
	10.0	**11.7**	**ug/L**	**117**	**2.8**	**SW846 8260B**
Toluene	**10.0**	**10.4**	**ug/L**	**104**		**SW846 8260B**
	10.0	**10.9**	**ug/L**	**109**	**4.2**	**SW846 8260B**
Trichloroethene	**10.0**	**10.4**	**ug/L**	**104**		**SW846 8260B**
	10.0	**11.0**	**ug/L**	**110**	**5.8**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 119)
	95	(79 - 119)
1,2-Dichloroethane-d4	84	(65 - 126)
	86	(65 - 126)
4-Bromofluorobenzene	85	(75 - 115)
	91	(75 - 115)
Toluene-d8	101	(78 - 118)
	103	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2T831AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D6D070000-140 H2T831AD-LCSD
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 09:03
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**103**	**(77 - 118)**			**SW846 8260B**
	108	**(77 - 118)**	**4.3**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**103**	**(78 - 118)**			**SW846 8260B**
	106	**(78 - 118)**	**3.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**109**	**(68 - 133)**			**SW846 8260B**
	112	**(68 - 133)**	**3.3**	**(0-20)**	**SW846 8260B**
Toluene	**101**	**(73 - 120)**			**SW846 8260B**
	106	**(73 - 120)**	**4.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**104**	**(78 - 122)**			**SW846 8260B**
	107	**(78 - 122)**	**2.9**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(79 - 119)
	92	(79 - 119)
1,2-Dichloroethane-d4	80	(65 - 126)
	84	(65 - 126)
4-Bromofluorobenzene	85	(75 - 115)
	90	(75 - 115)
Toluene-d8	97	(78 - 118)
	104	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2T831AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D6D070000-140 H2T831AD-LCSD
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 09:03
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10.0**	**10.3**	**ug/L**	**103**		**SW846 8260B**
	10.0	**10.8**	**ug/L**	**108**	**4.3**	**SW846 8260B**
Chlorobenzene	**10.0**	**10.3**	**ug/L**	**103**		**SW846 8260B**
	10.0	**10.6**	**ug/L**	**106**	**3.2**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**10.9**	**ug/L**	**109**		**SW846 8260B**
	10.0	**11.2**	**ug/L**	**112**	**3.3**	**SW846 8260B**
Toluene	**10.0**	**10.1**	**ug/L**	**101**		**SW846 8260B**
	10.0	**10.6**	**ug/L**	**106**	**4.1**	**SW846 8260B**
Trichloroethene	**10.0**	**10.4**	**ug/L**	**104**		**SW846 8260B**
	10.0	**10.7**	**ug/L**	**107**	**2.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(79 - 119)
	92	(79 - 119)
1,2-Dichloroethane-d4	80	(65 - 126)
	84	(65 - 126)
4-Bromofluorobenzene	85	(75 - 115)
	90	(75 - 115)
Toluene-d8	97	(78 - 118)
	104	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2XDR1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D6D100000-135 H2XDR1AD-LCSD
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100135 **Analysis Time..:** 08:46
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**106**	**(77 - 118)**			**SW846 8260B**
	111	**(77 - 118)**	**4.1**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**109**	**(78 - 118)**			**SW846 8260B**
	107	**(78 - 118)**	**1.7**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**111**	**(68 - 133)**			**SW846 8260B**
	121	**(68 - 133)**	**7.8**	**(0-20)**	**SW846 8260B**
Toluene	**112**	**(73 - 120)**			**SW846 8260B**
	107	**(73 - 120)**	**4.5**	**(0-20)**	**SW846 8260B**
Trichloroethene	**105**	**(78 - 122)**			**SW846 8260B**
	112	**(78 - 122)**	**6.2**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(79 - 119)
	97	(79 - 119)
1,2-Dichloroethane-d4	81	(65 - 126)
	93	(65 - 126)
4-Bromofluorobenzene	86	(75 - 115)
	89	(75 - 115)
Toluene-d8	104	(78 - 118)
	101	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2XDR1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D6D100000-135 H2XDR1AD-LCSD
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100135 **Analysis Time..:** 08:46
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10.0**	**10.6**	**ug/L**	**106**		**SW846 8260B**
	10.0	**11.1**	**ug/L**	**111**	**4.1**	**SW846 8260B**
Chlorobenzene	**10.0**	**10.9**	**ug/L**	**109**		**SW846 8260B**
	10.0	**10.7**	**ug/L**	**107**	**1.7**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**11.1**	**ug/L**	**111**		**SW846 8260B**
	10.0	**12.1**	**ug/L**	**121**	**7.8**	**SW846 8260B**
Toluene	**10.0**	**11.2**	**ug/L**	**112**		**SW846 8260B**
	10.0	**10.7**	**ug/L**	**107**	**4.5**	**SW846 8260B**
Trichloroethene	**10.0**	**10.5**	**ug/L**	**105**		**SW846 8260B**
	10.0	**11.2**	**ug/L**	**112**	**6.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(79 - 119)
	97	(79 - 119)
1,2-Dichloroethane-d4	81	(65 - 126)
	93	(65 - 126)
4-Bromofluorobenzene	86	(75 - 115)
	89	(75 - 115)
Toluene-d8	104	(78 - 118)
	101	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2KX51AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D6D040296-001 H2KX51AD-MSD
Date Sampled...: 04/03/06 08:54 **Date Received..:** 04/04/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097139 **Analysis Time..:** 21:09
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**103**	**(77 - 118)**			**SW846 8260B**
	114	**(77 - 118)**	**11**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**103**	**(78 - 118)**			**SW846 8260B**
	111	**(78 - 118)**	**7.0**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**104**	**(68 - 133)**			**SW846 8260B**
	109	**(68 - 133)**	**4.8**	**(0-20)**	**SW846 8260B**
Toluene	**102**	**(73 - 120)**			**SW846 8260B**
	114	**(73 - 120)**	**12**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(78 - 122)**			**SW846 8260B**
	109	**(78 - 122)**	**7.5**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(79 - 119)
	93	(79 - 119)
1,2-Dichloroethane-d4	81	(65 - 126)
	83	(65 - 126)
4-Bromofluorobenzene	89	(75 - 115)
	90	(75 - 115)
Toluene-d8	104	(78 - 118)
	104	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2KX51AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D6D040296-001 H2KX51AD-MSD
Date Sampled...: 04/03/06 08:54 **Date Received..:** 04/04/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097139 **Analysis Time..:** 21:09
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10.0**	**10.3**	**ug/L**	**103**		**SW846 8260B**
	ND	**10.0**	**11.4**	**ug/L**	**114**	**11**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**10.3**	**ug/L**	**103**		**SW846 8260B**
	ND	**10.0**	**11.1**	**ug/L**	**111**	**7.0**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10.0**	**10.4**	**ug/L**	**104**		**SW846 8260B**
	ND	**10.0**	**10.9**	**ug/L**	**109**	**4.8**	**SW846 8260B**
Toluene	**ND**	**10.0**	**10.2**	**ug/L**	**102**		**SW846 8260B**
	ND	**10.0**	**11.4**	**ug/L**	**114**	**12**	**SW846 8260B**
Trichloroethene	**ND**	**10.0**	**10.1**	**ug/L**	**101**		**SW846 8260B**
	ND	**10.0**	**10.9**	**ug/L**	**109**	**7.5**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(79 - 119)
	93	(79 - 119)
1,2-Dichloroethane-d4	81	(65 - 126)
	83	(65 - 126)
4-Bromofluorobenzene	89	(75 - 115)
	90	(75 - 115)
Toluene-d8	104	(78 - 118)
	104	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2EWP1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D6C310372-003 H2EWP1AD-MSD
Date Sampled...: 03/28/06 17:00 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 12:11
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**103**	**(77 - 118)**			**SW846 8260B**
	93	**(77 - 118)**	**10**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**101**	**(78 - 118)**			**SW846 8260B**
	101	**(78 - 118)**	**0.0**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**100**	**(68 - 133)**			**SW846 8260B**
	94	**(68 - 133)**	**6.2**	**(0-20)**	**SW846 8260B**
Toluene	**101**	**(73 - 120)**			**SW846 8260B**
	103	**(73 - 120)**	**2.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**102**	**(78 - 122)**			**SW846 8260B**
	96	**(78 - 122)**	**5.2**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(79 - 119)
	89	(79 - 119)
1,2-Dichloroethane-d4	84	(65 - 126)
	82	(65 - 126)
4-Bromofluorobenzene	89	(75 - 115)
	92	(75 - 115)
Toluene-d8	100	(78 - 118)
	103	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2EWP1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D6C310372-003 H2EWP1AD-MSD
Date Sampled...: 03/28/06 17:00 **Date Received..:** 03/31/06
Prep Date.....: 04/06/06 **Analysis Date..:** 04/06/06
Prep Batch #...: 6097140 **Analysis Time..:** 12:11
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10.0**	**10.3**	**ug/L**	**103**		**SW846 8260B**
	ND	**10.0**	**9.26**	**ug/L**	**93**	**10**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**10.1**	**ug/L**	**101**		**SW846 8260B**
	ND	**10.0**	**10.1**	**ug/L**	**101**	**0.0**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10.0**	**10.0**	**ug/L**	**100**		**SW846 8260B**
	ND	**10.0**	**9.41**	**ug/L**	**94**	**6.2**	**SW846 8260B**
Toluene	**ND**	**10.0**	**10.1**	**ug/L**	**101**		**SW846 8260B**
	ND	**10.0**	**10.3**	**ug/L**	**103**	**2.1**	**SW846 8260B**
Trichloroethene	**ND**	**10.0**	**10.2**	**ug/L**	**102**		**SW846 8260B**
	ND	**10.0**	**9.65**	**ug/L**	**96**	**5.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(79 - 119)
	89	(79 - 119)
1,2-Dichloroethane-d4	84	(65 - 126)
	82	(65 - 126)
4-Bromofluorobenzene	89	(75 - 115)
	92	(75 - 115)
Toluene-d8	100	(78 - 118)
	103	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2MLF1AL-MS **Matrix.....:** WATER
MS Lot-Sample #: D6D050195-001 H2MLF1AM-MSD
Date Sampled...: 04/04/06 10:25 **Date Received..:** 04/05/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100135 **Analysis Time..:** 12:18
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**112**	**(77 - 118)**			**SW846 8260B**
	113	**(77 - 118)**	**0.16**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**109**	**(78 - 118)**			**SW846 8260B**
	112	**(78 - 118)**	**3.4**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**116**	**(68 - 133)**			**SW846 8260B**
	113	**(68 - 133)**	**3.0**	**(0-20)**	**SW846 8260B**
Toluene	**111**	**(73 - 120)**			**SW846 8260B**
	112	**(73 - 120)**	**0.73**	**(0-20)**	**SW846 8260B**
Trichloroethene	**110**	**(78 - 122)**			**SW846 8260B**
	105	**(78 - 122)**	**4.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 119)
	97	(79 - 119)
1,2-Dichloroethane-d4	83	(65 - 126)
	85	(65 - 126)
4-Bromofluorobenzene	87	(75 - 115)
	89	(75 - 115)
Toluene-d8	104	(78 - 118)
	107	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D6C310372 **Work Order #...:** H2MLF1AL-MS **Matrix.....:** WATER
MS Lot-Sample #: D6D050195-001 H2MLF1AM-MSD
Date Sampled...: 04/04/06 10:25 **Date Received..:** 04/05/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100135 **Analysis Time..:** 12:18
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10.0**	**11.2**	**ug/L**	**112**		**SW846 8260B**
	ND	**10.0**	**11.3**	**ug/L**	**113**	**0.16**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**10.9**	**ug/L**	**109**		**SW846 8260B**
	ND	**10.0**	**11.2**	**ug/L**	**112**	**3.4**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10.0**	**11.6**	**ug/L**	**116**		**SW846 8260B**
	ND	**10.0**	**11.3**	**ug/L**	**113**	**3.0**	**SW846 8260B**
Toluene	**ND**	**10.0**	**11.1**	**ug/L**	**111**		**SW846 8260B**
	ND	**10.0**	**11.2**	**ug/L**	**112**	**0.73**	**SW846 8260B**
Trichloroethene	**ND**	**10.0**	**11.0**	**ug/L**	**110**		**SW846 8260B**
	ND	**10.0**	**10.5**	**ug/L**	**105**	**4.0**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 119)
	97	(79 - 119)
1,2-Dichloroethane-d4	83	(65 - 126)
	85	(65 - 126)
4-Bromofluorobenzene	87	(75 - 115)
	89	(75 - 115)
Toluene-d8	104	(78 - 118)
	107	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

Chain of Custody Record

№ 4043

The RETEC Group, Inc.
2409 Research Blvd., Suite 106 • Fort Collins, CO 80526
(970) 493-3700 Phone • (970) 493-2328 Fax
www.retec.com

RETEC

Project Name: Maverik Kirtland	Project Number: MSC01 - 19100
Send Report To: Bjorn Selvig	Sampler (Print Name): Bjorn Selvig
Address: Aztec	Sampler (Print Name):
	Shipment Method: Fed X
	Airbill Number:
Phone:	Laboratory Receiving: STL Denver
Fax:	

Page ____ of ____

Purchase Order #: _____

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Analysis Requested: VOCs 8260	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
MW-9	3/28/06	1300	H_2O	2	X		
MW-16	3/28/06	1340	H_2O	2	X		
MW-20	3/28/06	1700	H_2O	2	X		
MW-20 MS/MSD	3/28/06	1700	H_2O	2	X		
MW-20D	3/28/06	1730	H_2O	2	X		
MW-21	3/28/06	1610	H_2O	2	X		
Trip Blank	—	—	H_2O	2	X		
MW-19	3/30/06	1215	H_2O	2	X		
MW-10	3/30/06	1245	H_2O	2	X		
MW-18	3/30/06	1320	H_2O	2	X		
MW-22	3/30/06	1350	H_2O	2	X		
MW-17	3/30/06	1410	H_2O	2	X		

Relinquished by: (Signature)	Received by: (Signature)	Date: 3/30/06	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 3/31/06	Time: 0900
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Sample Custodian Remarks (Completed By Laboratory):

QA/QC Level		Turnaround		Sample Receipt	
Level I	☐	Routine	☐	Total # Containers Received?	
Level II	☐	24 Hour	☐	COC Seals Present?	
Level III	☐	1 Week	☐	COC Seals Intact?	
Other	☐	Other ____		Received Containers Intact?	
				Temperature?	

White: Lab Copy Yellow: PM Copy Pink: Field Copy Gold: PM/QA/QC Copy

STL Denver

Sample Receiving Checklist

Lot #: D6C310372 Date/Time Received:

Company Name & Sampling Site: The RETEC Group Maverick

PM to Complete This Section: *Yes* *No*
Residual chlorine check required: ☐ ☒

Quarantined : *Yes* ☐ *No* ☒

Quote #: 68961 – B

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 4.8

N/A	*Yes*	*No*		*Initials*
☐	☒	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☒	☐	2. Chain of custody present? If no, document on CUR.	
	☐	☒	3. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☒	4. Multiphasic samples obvious? If yes, document on CUR.	
	☒	☐	5. Proper container & preservatives used? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR.	
☐	☐	☐	6. pH of all samples checked and meet requirements? If no, document on CUR.	
	☒	☐	7. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☒	☐	8. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☐	☐	☒	9. Were VOA samples without headspace? If no, document on CUR.	
☐	☒	☐	10. Were VOA vials preserved? Preservative ☒HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☒	11. Did samples require preservation with sodium thiosulfate?	
☐	☐	☐	12. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☐	☐	☐	13. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☐	☒	☐	14. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☐	15. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☐	16. Are analyses with short holding times requested?	
	☐	☐	17. Was a quick Turn Around (TAT) requested?	

STL Denver

Sample Receiving Checklist

Lot # DCC310372

Login Checks:

Initials MH

N/A	Yes	No		
	☑	☐	18.	Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR, and contact PM before proceeding.
☑	☑ 3-21-06	☐	19.	Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
	☑	☐	20.	Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?
☐	☐	☐	21.	Were special log in instructions read and followed?
☑	☐	☐	22.	Were AFCEE metals logged for refrigerated storage? C
	☑	☐	23.	Were tests logged checked against the COC? Which samples were confirmed? _____
☐	☐	☐	24.	Was a Rush form completed for quick TAT?
☐	☐	☐	25.	Was a Short Hold form completed for any short holds?
	☐	☐	26.	Is "Strict ICOC" required?
	☐	☐	27.	Were special archiving instructions indicated in the General Comments? If so, what were they?

_____

Labeling and Storage Checks:

Initials MB

☑	☐	☐	28.	Was the subcontract COC signed and sent with samples to bottle prep?
	☑	☐	29.	Were sample labels double-checked by a second person?
☑	☐	☐	30.	Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
	☑	☐	31.	Did the sample ID, Date, and Time from label match what was logged?
☑	☐	☐	32.	Were stickers for special archiving instructions affixed to each box and to the ICOC? See #27
☑	☐	☐	33.	Were AFCEE metals stored refrigerated?
☑	☐	☐	34.	Were "Strict ICOC" copies given to satellite storage areas?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

SEVERN TRENT STL

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ANALYTICAL REPORT

PROJECT NO.: MCS01-19100-210

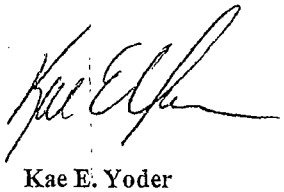
MAVERIK

Lot #: D6D010147

Leslie Hill

The RETEC Group, Inc.
2409 Research Blvd.
Suite 106
Fort Collins, CO 80526

SEVERN TRENT LABORATORIES, INC./STL DENVER



Kae E. Yoder
Project Manager

April 17, 2006

Table Of Contents

Standard Deliverables

Report Contents	Total Number of Pages
Standard Deliverables *The Cover Letter and the Report Cover page are considered integral parts of this Standard Deliverable package. This report is incomplete unless all pages indicated in this Table of Contents are included.*	

CASE NARRATIVE
D6D010147

The following report contains the analytical results for six water samples and one trip blank, submitted to STL Denver by The RETEC Group, Inc. from the Maverik site, project number MCS01-19100-210. The samples were received April 1, 2006, according to documented sample acceptance procedures.

STL Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter listed on the methods summary page in accordance with the methods indicated. Dilution factors and footnotes have been provided on each datasheet to assist in the interpretation of the results.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted below.

SUPPLEMENTAL QC INFORMATION

Sample Receipt
Samples were received intact at a temperature of 3.3°C. No anomalies were encountered during sample receipt.

GC/MS Volatile Organics – 8260B
No anomalies were encountered.

EXECUTIVE SUMMARY - Detection Highlights

D6D010147

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
BLOOMFIELD TOP 03/31/06 11:10 003				
Methyl tert-butyl ether	0.28 J	5.0	ug/L	SW846 8260B
BLOOMFIELD WELL 03/31/06 11:15 004				
Methyl tert-butyl ether	0.26 J	5.0	ug/L	SW846 8260B

METHODS SUMMARY

D6D010147

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826

References:

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

METHOD / ANALYST SUMMARY

D6D010147

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8260B	Jason Reinhardt	013454

References:

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

SAMPLE SUMMARY

D6D010147

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
H2FWX	001	R.JACKSON	03/31/06	10:20
H2FW9	002	JACKSON MW-4	03/31/06	10:15
H2FXC	003	BLOOMFIELD TOP	03/31/06	11:10
H2FXH	004	BLOOMFIELD WELL	03/31/06	11:15
H2FXJ	005	RYAN	03/31/06	13:45
H2FXK	006	WALKER	03/31/06	17:00
H2FXL	007	TRIP BLANK	03/31/06	

NOTE(S):

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

The RETEC Group, Inc.

Client Sample ID: R.JACKSON

GC/MS Volatiles

Lot-Sample #...: D6D010147-001 **Work Order #...:** H2FWX1AA **Matrix.....:** WG
Date Sampled...: 03/31/06 10:20 **Date Received..:** 04/01/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 11:58
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: R.JACKSON

GC/MS Volatiles

Lot-Sample #...: D6D010147-001 Work Order #...: H2FWX1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(79 - 119)
1,2-Dichloroethane-d4	99	(65 - 126)
4-Bromofluorobenzene	96	(75 - 115)
Toluene-d8	93	(78 - 118)

The RETEC Group, Inc.

Client Sample ID: JACKSON MW-4

GC/MS Volatiles

Lot-Sample #...: D6D010147-002 Work Order #...: H2FW91AA Matrix.....: WG
Date Sampled...: 03/31/06 10:15 Date Received..: 04/01/06
Prep Date.....: 04/07/06 Analysis Date..: 04/07/06
Prep Batch #...: 6100049 Analysis Time..: 12:19
Dilution Factor: 1
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: JACKSON MW-4

GC/MS Volatiles

Lot-Sample #...: D6D010147-002 Work Order #...: H2FW91AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(79 - 119)
1,2-Dichloroethane-d4	101	(65 - 126)
4-Bromofluorobenzene	94	(75 - 115)
Toluene-d8	92	(78 - 118)

The RETEC Group, Inc.

Client Sample ID: BLOOMFIELD TOP

GC/MS Volatiles

Lot-Sample #...: D6D010147-003 **Work Order #...:** H2FXC1AA **Matrix.....:** WG
Date Sampled...: 03/31/06 11:10 **Date Received..:** 04/01/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 12:41
Dilution Factor: 1
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: BLOOMFIELD TOP

GC/MS Volatiles

Lot-Sample #...: D6D010147-003 Work Order #...: H2FXC1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	**0.28 J**	**5.0**	**ug/L**	**0.25**
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(79 - 119)
1,2-Dichloroethane-d4	106	(65 - 126)
4-Bromofluorobenzene	93	(75 - 115)
Toluene-d8	87	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

The RETEC Group, Inc.

Client Sample ID: BLOOMFIELD WELL

GC/MS Volatiles

Lot-Sample #...: D6D010147-004 Work Order #...: H2FXH1AA Matrix.....: WG
Date Sampled...: 03/31/06 11:15 Date Received..: 04/01/06
Prep Date.....: 04/07/06 Analysis Date..: 04/07/06
Prep Batch #...: 6100049 Analysis Time..: 13:02
Dilution Factor: 1
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: BLOOMFIELD WELL

GC/MS Volatiles

Lot-Sample #...: D6D010147-004 Work Order #...: H2FXH1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	**0.26 J**	**5.0**	**ug/L**	**0.25**
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(79 - 119)
1,2-Dichloroethane-d4	101	(65 - 126)
4-Bromofluorobenzene	97	(75 - 115)
Toluene-d8	93	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

The RETEC Group, Inc.

Client Sample ID: RYAN

GC/MS Volatiles

Lot-Sample #...: D6D010147-005 **Work Order #...:** H2FXJ1AA **Matrix.....:** WG
Date Sampled...: 03/31/06 13:45 **Date Received..:** 04/01/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 13:23
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: RYAN

GC/MS Volatiles

Lot-Sample #...: D6D010147-005 **Work Order #...:** H2FXJ1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(79 - 119)
1,2-Dichloroethane-d4	101	(65 - 126)
4-Bromofluorobenzene	94	(75 - 115)
Toluene-d8	91	(78 - 118)

The RETEC Group, Inc.

Client Sample ID: WALKER

GC/MS Volatiles

Lot-Sample #...: D6D010147-006 **Work Order #...:** H2FXK1AA **Matrix.....:** WG
Date Sampled...: 03/31/06 17:00 **Date Received..:** 04/01/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 13:44
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: WALKER

GC/MS Volatiles

Lot-Sample #...: D6D010147-006 **Work Order #...:** H2FXK1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(79 - 119)
1,2-Dichloroethane-d4	101	(65 - 126)
4-Bromofluorobenzene	99	(75 - 115)
Toluene-d8	92	(78 - 118)

The RETEC Group, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D6D010147-007 **Work Order #...:** H2FXL1AA **Matrix.....:** WQ
Date Sampled...: 03/31/06 **Date Received..:** 04/01/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 14:04
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.9
Benzene	ND	1.0	ug/L	0.16
Bromodichloromethane	ND	1.0	ug/L	0.17
Bromoform	ND	1.0	ug/L	0.19
Bromomethane	ND	2.0	ug/L	0.21
2-Butanone (MEK)	ND	6.0	ug/L	1.8
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.17
Chloroethane	ND	2.0	ug/L	0.41
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	2.0	ug/L	0.30
Dibromomethane	ND	1.0	ug/L	0.17
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.18
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.16
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	2.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.16
1,2-Dichloroethane	ND	1.0	ug/L	0.13
1,1-Dichloroethene	ND	1.0	ug/L	0.14
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.15
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.15
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.16
trans-1,3-Dichloropropene	ND	3.0	ug/L	0.80
Ethylbenzene	ND	1.0	ug/L	0.16
2-Hexanone	ND	5.0	ug/L	1.4
Methylene chloride	ND	5.0	ug/L	0.32
4-Methyl-2-pentanone	ND	5.0	ug/L	0.49
Styrene	ND	1.0	ug/L	0.17
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.17
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.20
Tetrachloroethene	ND	1.0	ug/L	0.20
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.32

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The RETEC Group, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D6D010147-007 **Work Order #...:** H2FXL1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,1-Trichloroethane	ND	1.0	ug/L	0.16
1,1,2-Trichloroethane	ND	1.0	ug/L	0.32
Trichloroethene	ND	1.0	ug/L	0.16
Trichlorofluoromethane	ND	2.0	ug/L	0.29
1,2,3-Trichloropropane	ND	1.0	ug/L	0.27
Vinyl chloride	ND	1.0	ug/L	0.17
Xylenes (total)	ND	2.0	ug/L	0.19
n-Butylbenzene	ND	1.0	ug/L	0.14
sec-Butylbenzene	ND	1.0	ug/L	0.17
Isopropylbenzene	ND	1.0	ug/L	0.19
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.14
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.14
n-Propylbenzene	ND	1.0	ug/L	0.16
tert-Butylbenzene	ND	1.0	ug/L	0.16
Dibromochloromethane	ND	1.0	ug/L	0.17
2-Chlorotoluene	ND	1.0	ug/L	0.17
4-Chlorotoluene	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	1.5
1,3-Dichloropropane	ND	1.0	ug/L	0.15
2,2-Dichloropropane	ND	5.0	ug/L	0.20
1,1-Dichloropropene	ND	1.0	ug/L	0.15
Hexachlorobutadiene	ND	1.0	ug/L	0.12
4-Isopropyltoluene	ND	1.0	ug/L	0.17
Methyl tert-butyl ether	ND	5.0	ug/L	0.25
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.18
m-Xylene & p-Xylene	ND	2.0	ug/L	0.34
o-Xylene	ND	1.0	ug/L	0.19
Bromobenzene	ND	1.0	ug/L	0.17
Bromochloromethane	ND	1.0	ug/L	0.10
Naphthalene	ND	1.0	ug/L	0.22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(79 - 119)
1,2-Dichloroethane-d4	96	(65 - 126)
4-Bromofluorobenzene	97	(75 - 115)
Toluene-d8	92	(78 - 118)

QC DATA ASSOCIATION SUMMARY

D6D010147

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8260B		6100049	6100034
002	WG	SW846 8260B		6100049	6100034
003	WG	SW846 8260B		6100049	6100034
004	WG	SW846 8260B		6100049	6100034
005	WG	SW846 8260B		6100049	6100034
006	WG	SW846 8260B		6100049	6100034
007	WQ	SW846 8260B		6100049	6100034

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D6D010147 **Work Order #...:** H2W501AA **Matrix.....:** WATER
MB Lot-Sample #: D6D100000-049

Prep Date.....: 04/07/06 **Analysis Time..:** 06:31
Analysis Date..: 04/07/06 **Prep Batch #...:** 6100049
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone (MEK)	ND	6.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	3.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D6D010147 **Work Order #...:** H2W501AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
4-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(79 - 119)
1,2-Dichloroethane-d4	99	(65 - 126)
4-Bromofluorobenzene	98	(75 - 115)
Toluene-d8	95	(78 - 118)

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D6D010147 **Work Order #...:** H2W501AC **Matrix.....:** WATER
LCS Lot-Sample#: D6D100000-049
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 06:10
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**92**	**(77 - 118)**	**SW846 8260B**
Chlorobenzene	**91**	**(78 - 118)**	**SW846 8260B**
1,1-Dichloroethene	**101**	**(68 - 133)**	**SW846 8260B**
Toluene	**96**	**(73 - 120)**	**SW846 8260B**
Trichloroethene	**97**	**(78 - 122)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(79 - 119)
1,2-Dichloroethane-d4	93	(65 - 126)
4-Bromofluorobenzene	95	(75 - 115)
Toluene-d8	93	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D6D010147 **Work Order #...:** H2W501AC **Matrix.....:** WATER
LCS Lot-Sample#: D6D100000-049
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 06:10
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**10.0**	**9.24**	**ug/L**	**92**	**SW846 8260B**
Chlorobenzene	**10.0**	**9.13**	**ug/L**	**91**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**10.1**	**ug/L**	**101**	**SW846 8260B**
Toluene	**10.0**	**9.57**	**ug/L**	**96**	**SW846 8260B**
Trichloroethene	**10.0**	**9.69**	**ug/L**	**97**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(79 - 119)
1,2-Dichloroethane-d4	93	(65 - 126)
4-Bromofluorobenzene	95	(75 - 115)
Toluene-d8	93	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D6D010147 **Work Order #...:** H2D4G1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D6C310242-007 H2D4G1AD-MSD
Date Sampled...: 03/30/06 13:05 **Date Received..:** 03/31/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 07:47
Dilution Factor: 20

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**89**	**(77 - 118)**			**SW846 8260B**
	93	**(77 - 118)**	**4.3**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**88**	**(78 - 118)**			**SW846 8260B**
	89	**(78 - 118)**	**1.0**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**99**	**(68 - 133)**			**SW846 8260B**
	104	**(68 - 133)**	**4.9**	**(0-20)**	**SW846 8260B**
Toluene	**91**	**(73 - 120)**			**SW846 8260B**
	96	**(73 - 120)**	**4.8**	**(0-20)**	**SW846 8260B**
Trichloroethene	**91**	**(78 - 122)**			**SW846 8260B**
	102	**(78 - 122)**	**4.4**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(79 - 119)
	97	(79 - 119)
1,2-Dichloroethane-d4	94	(65 - 126)
	98	(65 - 126)
4-Bromofluorobenzene	91	(75 - 115)
	95	(75 - 115)
Toluene-d8	91	(78 - 118)
	93	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D6D010147 **Work Order #...:** H2D4G1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D6C310242-007 H2D4G1AD-MSD
Date Sampled...: 03/30/06 13:05 **Date Received..:** 03/31/06
Prep Date.....: 04/07/06 **Analysis Date..:** 04/07/06
Prep Batch #...: 6100049 **Analysis Time..:** 07:47
Dilution Factor: 20

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**200**	**179**	**ug/L**	**89**		**SW846 8260B**
	ND	**200**	**187**	**ug/L**	**93**	**4.3**	**SW846 8260B**
Chlorobenzene	**ND**	**200**	**176**	**ug/L**	**88**		**SW846 8260B**
	ND	**200**	**178**	**ug/L**	**89**	**1.0**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**200**	**197**	**ug/L**	**99**		**SW846 8260B**
	ND	**200**	**207**	**ug/L**	**104**	**4.9**	**SW846 8260B**
Toluene	**ND**	**200**	**182**	**ug/L**	**91**		**SW846 8260B**
	ND	**200**	**191**	**ug/L**	**96**	**4.8**	**SW846 8260B**
Trichloroethene	**300**	**200**	**479**	**ug/L**	**91**		**SW846 8260B**
	300	**200**	**501**	**ug/L**	**102**	**4.4**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(79 - 119)
	97	(79 - 119)
1,2-Dichloroethane-d4	94	(65 - 126)
	98	(65 - 126)
4-Bromofluorobenzene	91	(75 - 115)
	95	(75 - 115)
Toluene-d8	91	(78 - 118)
	93	(78 - 118)

NOTE(S):

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

Bold print denotes control parameters

Chain of Custody Record

3.3 4/11/06 BB JLC

No 6007

The RETEC Group, Inc.
2409 Research Blvd., Suite 106 • Fort Collins, CO 80526
(970) 493-3700 Phone • (970) 493-2328 Fax
www.retec.com

RETEC

Project Name: Maverik Kirtland	Project Number: MSC01 - 19100
Send Report To: Bjorn Selvig	Sampler (Print Name): Bjorn Selvig
Address: Rowe	Sampler (Print Name):
	Shipment Method: Fed X
	Airbill Number: 8548 9895 9823
Phone:	Laboratory Receiving: STL - ARVADA
Fax:	

Page ____ of ____

Purchase Order #: _____

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Analysis Requested: VOCs 8260	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
R. Jackson	3/31/06	1020	H2O	2	X		
Jackson MW-4	3/31/06	1015	H2O	2	X		
Bloomfield Tap	3/31/06	1110	H2O	2	X		
Bloomfield Well	3/31/06	1115	H2O	2	X		
Ryan	3/31/06	1345	H2O	2	X		
Walker	3/30/06	1700	H2O	2	X		
Trip Blank	—	—	H2O	2	X		

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	Fed X	3/31/06	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		4/4/06	0900
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Sample Custodian Remarks (Completed By Laboratory):

QA/QC Level		Turnaround		Sample Receipt	
Level I	☐	Routine	☐	Total # Containers Received?	
Level II	☐	24 Hour	☐	COC Seals Present?	
Level III	☐	1 Week	☐	COC Seals Intact?	
Other	☐	Other _____		Received Containers Intact?	
				Temperature?	

White: Lab Copy Yellow: PM Copy Pink: Field Copy Gold: PM/QA/QC Copy

STL Denver

Sample Receiving Checklist

Lot #: D6D016147 Date/Time Received: 4.1.06 0900

Company Name & Sampling Site: Rotec Masonville

PM to Complete This Section: *Yes* ☐ *No* ☒ Quarantined: *Yes* ☐ *No* ☒

Residual chlorine check required: ☐

Quote #: 68968-B

Special Instructions:

Time Zone:
• *EDT/EST* • *CDT/CST* • *MDT/MST* • *PDT/PST* • *OTHER*

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 3.3

N/A	*Yes*	*No*		*Initials*
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☑	☐	2. Chain of custody present? If no, document on CUR.	
	☐	☑	3. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☑	4. Multiphasic samples obvious? If yes, document on CUR.	
	☑	☐	5. Proper container & preservatives used? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR.	
☑	☐	☐	6. pH of all samples checked and meet requirements? If no, document on CUR.	
	☑	☐	7. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☐	☐	8. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☐	☐	☐	9. Were VOA samples without headspace? If no, document on CUR.	
☐	☐	☐	10. Were VOA vials preserved? Preservative ☑HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☑	11. Did samples require preservation with sodium thiosulfate?	
☐	☐	☐	12. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☐	☐	☐	13. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☐	☐	☐	14. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☐	15. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☐	16. Are analyses with short holding times requested?	
	☐	☐	17. Was a quick Turn Around (TAT) requested?	

STL Denver

Sample Receiving Checklist

Lot # P6D010147

Login Checks:

Initials MH

N/A	Yes	No		
	☑	☐	18. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DEN-QA-0003)	If no, document on CUR, and contact PM before proceeding.
☑	☐	☐	19. Is sufficient volume provided for client requested MS, MSD or matrix duplicates?	If no, document on CUR, and contact PM before proceeding.
	☑	☐	20. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	21. Were special log in instructions read and followed?	
☑	☐	☐	22. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	23. Were tests logged checked against the COC? Which samples were confirmed? 1	
☑	☐	☐	24. Was a Rush form completed for quick TAT?	
☑	☐	☐	25. Was a Short Hold form completed for any short holds?	
	☐	☑	26. Is "Strict ICOC" required?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

Initials PB

☑	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?
	☑	☐	29. Were sample labels double-checked by a second person?
☑	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
	☑	☐	31. Did the sample ID, Date, and Time from label match what was logged?
☑	☐	☐	32. Were stickers for special archiving instructions affixed to each box and to the ICOC? See #27
☑	☐	☐	33. Were AFCEE metals stored refrigerated?
☑	☐	☐	34. Were "Strict ICOC" copies given to satellite storage areas?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

Attachment C

Geotechnical Report

PERMEABILITY TRIAXIAL
FLOW PUMP
ASTM D 5084

PERMEABILITY TEST - BACK PRESSURE CONSTANT HEAD
ASTM D 5084

CLIENT	The Retec Group	JOB NO.	2570-15
BORING NO.	East Wall Vadose	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-10-06 CAL
SAMPLE NO.		TEST FINISHED	4-26-06 CAL
SOIL DESCR.	Project#MSC01-19100-300	CELL NUMBER	12P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

MOISTURE/DENSITY DATA	BEFORE TEST	AFTER TEST
Wt. Soil + Moisture (g)	460.1	461.2
Wt. Wet Soil & Pan (g)	468.2	469.3
Wt. Dry Soil & Pan (g)	374.9	374.9
Wt. Lost Moisture (g)	93.3	94.4
Wt. of Pan Only (g)	8.1	8.1
Wt. of Dry Soil (g)	366.8	366.8
Moisture Content %	25.4	25.7
Wet Density PCF	127.7	132.2
Dry Density PCF	101.8	105.1

Init. Diameter (in)	2.410	(cm)	6.121
Init. Area (sq in)	4.562	(sq cm)	29.432
Init. Height (in)	3.009	(cm)	7.643
Vol. Bef. Consol. (cu ft)	0.00794		
Vol. After Consol. (cu ft)	0.00769		
Porosity %	43.34		
Constant Head (PSI)	1.00	(cm)	70.39

Time Min	Time Sec	Init. Burette CC	Final Burette CC	Head Corr. CM	Permeability k cm/sec
60.0	3600	49.5	46.2	13.2	4.2E-06
120.0	7200	46.2	39.3	18.8	4.8E-06
120.0	7200	39.3	35.0	24.9	3.4E-06
120.0	7200	35.6	32.4	28.3	2.8E-06
120.0	7200	32.4	29.3	31.8	2.9E-06
120.0	7200	49.8	44.5	14.0	3.4E-06
120.0	7200	44.5	39.7	19.5	3.4E-06
120.0	7200	49.0	44.5	14.4	2.9E-06
120.0	7200	44.5	40.4	19.1	2.9E-06
				Average last 4 values	**3.2E-06**

Data entry by: CAL/SR Date: 04/27/2006
Checked by: RS Date: 4/27/06
FileName: RGP0VAEW

ADVANCED TERRA TESTING, INC.

TRIAXAL COMPRESSION TEST DATA

CLIENT	The Retec Group	JOB NO.	2570-15
BORING NO.	East Wall Vadose	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-10-06 CAL
SAMPLE NO.		TEST FINISHED	4-26-06 CAL
SOIL DESCR.	Project#MSC01-19100-300	CELL NUMBER	12P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

SATURATION DATA

Cell Pres. (PSI)	Back Pres. (PSI)	Burette Reading (CC)		Pore Pressure (PSI)		Change	B
		Close	Open	Close	Open		
40.0	38.0	2.1	11.4				
50.0	48.0	15.9	17.3	38.3	46.4	8.1	0.81
60.0	58.0	17.7	18.7	42.4	51.1	8.7	0.87
70.0		18.3	19.2	58.2	67.3	9.1	0.91
80.0		19.2	19.2	68.2	77.7	9.5	0.95

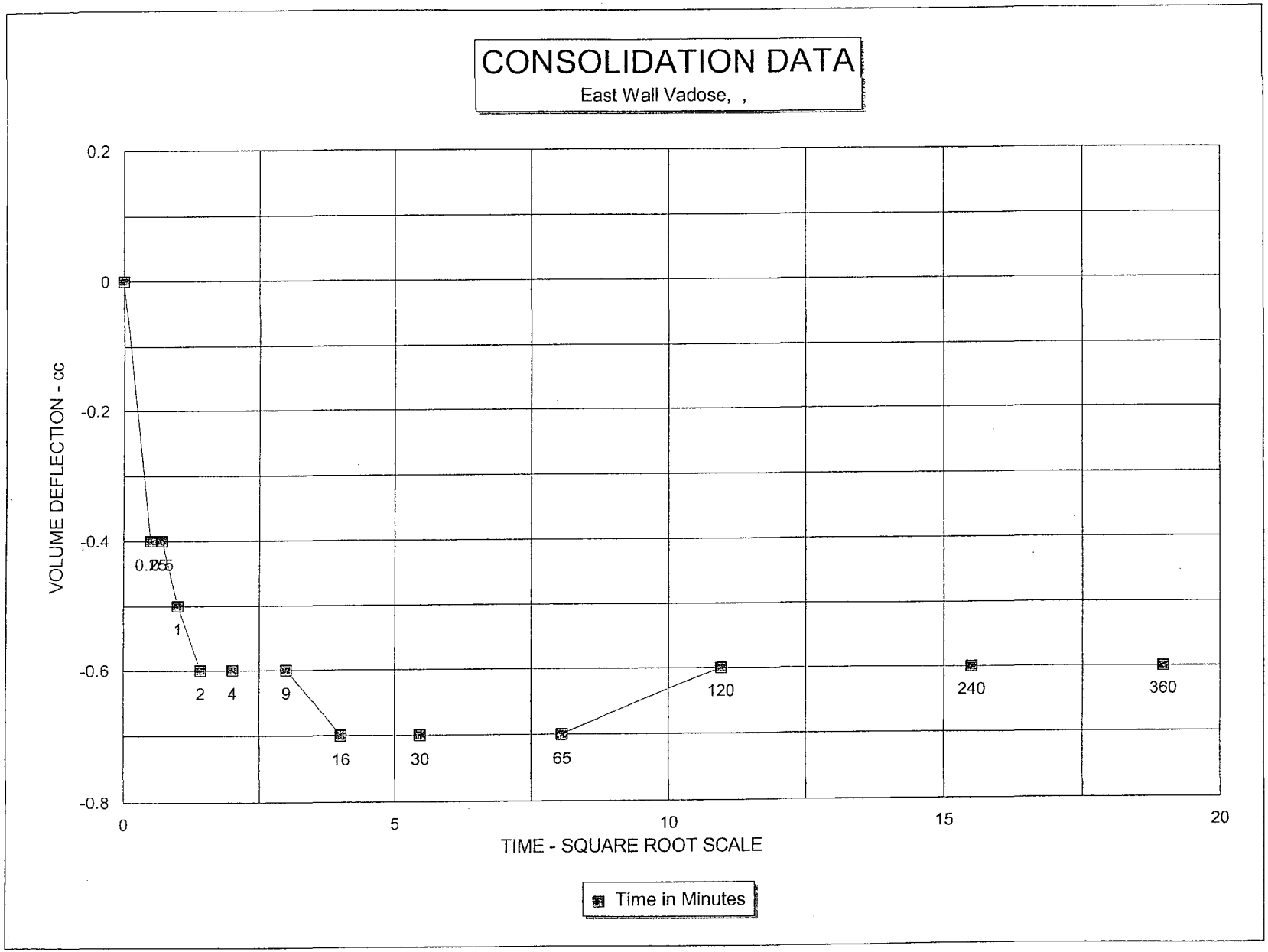
CONSOLIDATION DATA

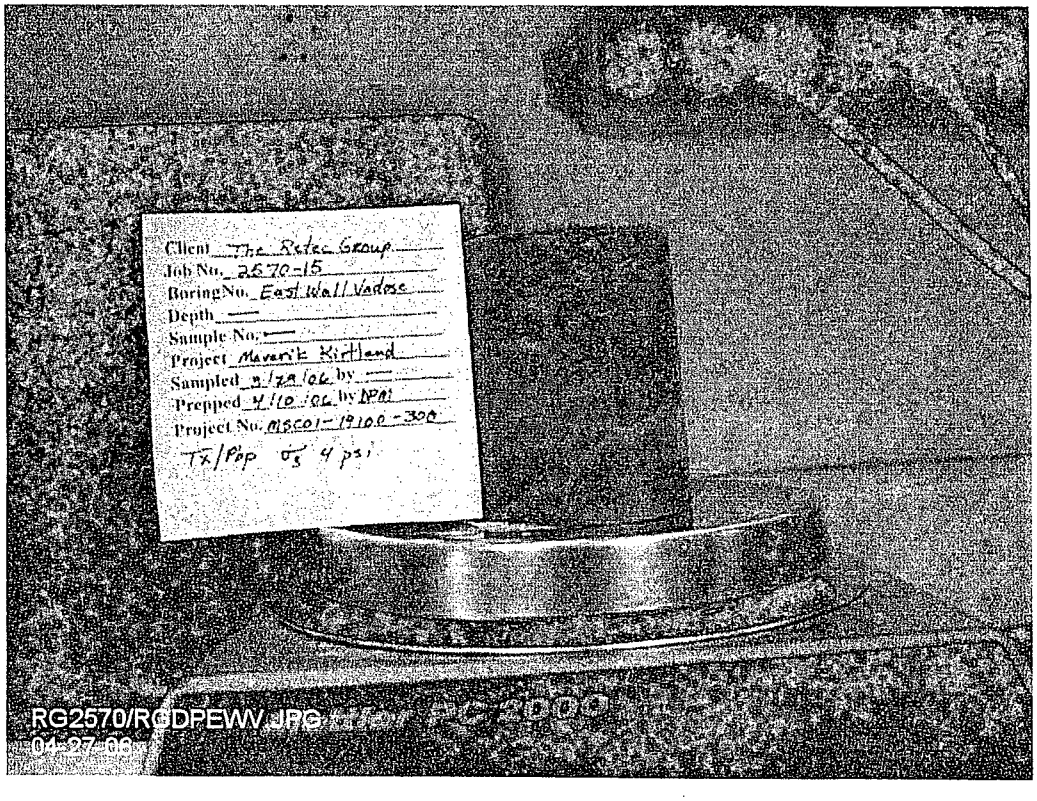
Elapsed Time (Min)	SQRT Time (Min)	Burette Reading (CC)	Volume Defl. (CC)
0.00	0.00	1.20	0.00
0.25	0.50	1.60	-0.40
0.5	0.71	1.60	-0.40
1	1.00	1.70	-0.50
2	1.41	1.80	-0.60
4	2.00	1.80	-0.60
9	3.00	1.80	-0.60
16	4.00	1.90	-0.70
30	5.48	1.90	-0.70
65	8.06	1.90	-0.70
120	10.95	1.80	-0.60
240	15.49	1.80	-0.60
360	18.97	1.80	-0.60

Initial Height (in)	3.009	Init. Vol. (CC)	224.97
Height Change (in)	0.044	Vol. Change (CC)	19.50
Ht. After Cons. (in)	2.965	Cell Exp. (CC)	12.41
Initial Area (sq in)	4.562	Net Change (CC)	7.09
Area After Cons. (sq in)	4.483	Cons. Vol. (CC)	217.88

Data entry by: CAL/SR Date: 04/27/2006
Checked by: RB Date: 4/27/06
FileName: RGP0VAEW

ADVANCED TERRA TESTING, INC.


CONSOLIDATION DATA
East Wall Vadose, ,
VOLUME DEFLECTION - cc
0.2
0
-0.2
-0.4
-0.6
-0.8
0.25
1
2
4
9
16
30
65
120
240
360
0
5
10
15
20
TIME - SQUARE ROOT SCALE
Time in Minutes


Client The Retec Group
Job No. 2670-15
Boring No. East Wall Vadose
Depth
Sample No.
Project Maverik Kirtland
Sampled 3/28/06 by
Prepped 4/10/06 by DPM
Project No. 85001-1910.0-300
Tx/Pop σ3 4 psi
RG2570/RGDPEWV.JPG
04-27-06

PERMEABILITY TEST - BACK PRESSURE SATURATED - FLOW PUMP METHOD
ASTM D 5084

CLIENT	The Retec Group	JOB NO.	2570-15
BORING NO.	East Wall Saturated	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-11-06 DPM
SAMPLE NO.		TEST FINISHED	4-19-06 CAL/BKL
SOIL DESCR.	#MSC01-19100-300	CELL NUMBER	10P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

MOISTURE/DENSITY DATA	BEFORE TEST	AFTER TEST
Wt. Soil + Moisture (g)	452.6	447.0
Wt. Wet Soil & Pan (g)	461.0	455.4
Wt. Dry Soil & Pan (g)	378.5	378.5
Wt. Lost Moisture (g)	82.5	76.9
Wt. of Pan Only (g)	8.3	8.3
Wt. of Dry Soil (g)	370.2	370.2
Moisture Content %	22.3	20.8
Wet Density PCF	127.4	128.8
Dry Density PCF	104.2	106.7

Init. Diameter (in)	2.405	(cm)	6.109
Init. Area (sq in)	4.543	(sq cm)	29.310
Init. Height (in)	2.979	(cm)	7.567
Vol. Bef. Consol. (cu ft)	0.00783		
Vol. After Consol. (cu ft)	0.00765		
Porosity %	35.48		

FLOW PUMP CALCULATIONS

Pump Setting	79
Velocity CM/Sec	5.18E-04
Q (cc/s)	1.66E-05
Height	2.815
Diameter	2.445
Pressure (psi)	0.820
Area after consol. (cm*cm)	30.294
Gradient	8.063
Permeability k (cm/s)	6.8E-08
Back Pressure (psi)	68.0
Cell Pressure (psi)	72.0
Ave. Effective Stress (psi)	3.590

Data entry by: CAL/SR Date: 04/24/2006
Checked by: RD Date: 4/24/06
FileName: RGP0EWSA

ADVANCED TERRA TESTING, INC.

TRIAXAL COMPRESSION TEST DATA

CLIENT	The Retec Group	JOB NO.	2570-15
BORING NO.	East Wall Saturated	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-11-06 DPM
SAMPLE NO.		TEST FINISHED	4-19-06 CAL/BKL
SOIL DESCR.	#MSC01-19100-300	SETUP NO.	10P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

SATURATION DATA

Cell Pres. (PSI)	Back Pres. (PSI)	Burette Reading (CC)		Pore Pressure (PSI)		Change	B
		Close	Open	Close	Open		
40.0	38.0	4.5	16.5				
50.0	48.0	18.2	19.1	34.7	43.9	9.2	0.92
60.0	58.0	19.3	20.3	48.4	57.6	9.2	0.92
70.0		20.3	20.3	58.4	67.9	9.5	0.95

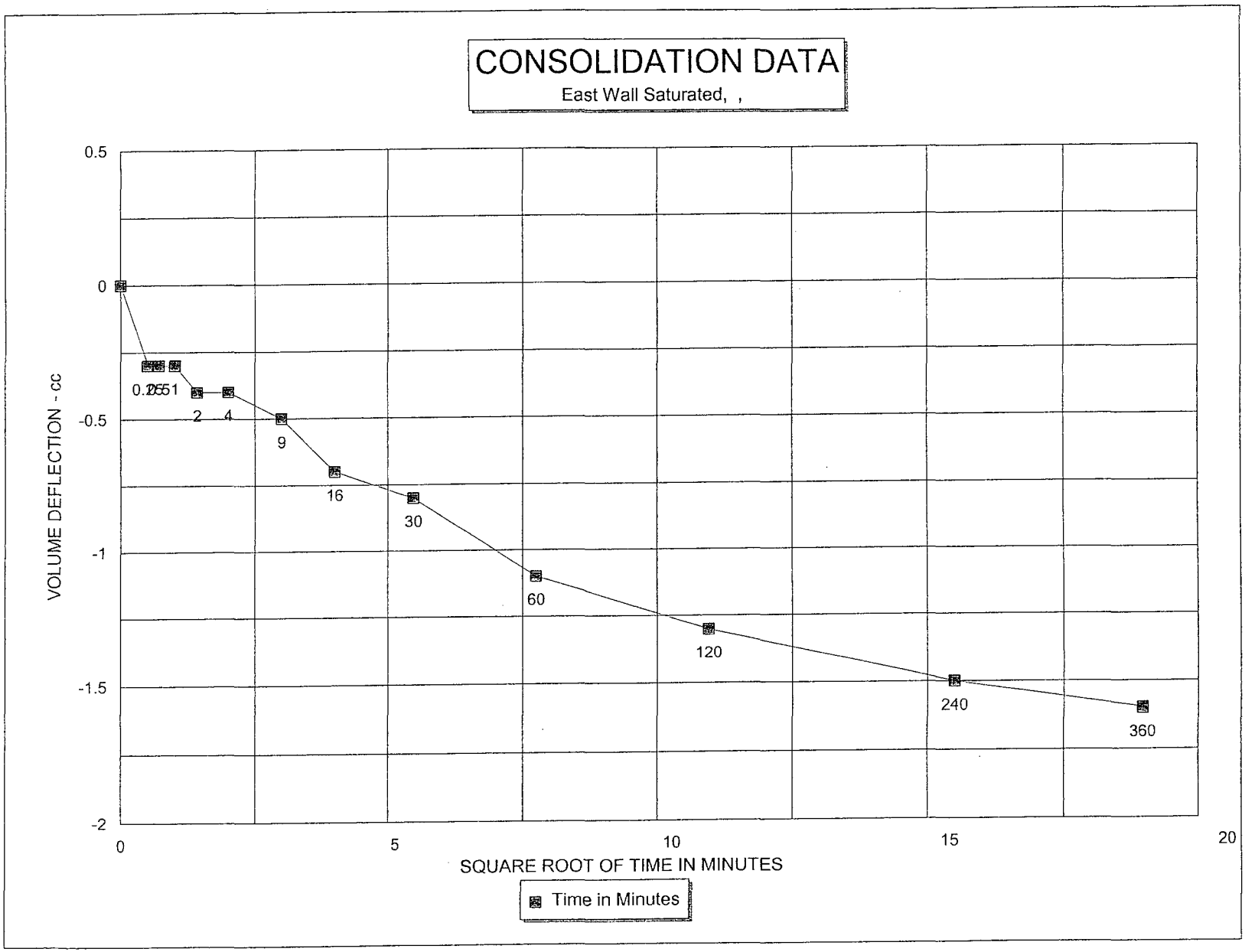
CONSOLIDATION DATA

Elapsed Time (Min)	SQRT Time (Min)	Burette Reading (CC)	Volume Defl. (cc)
0.00	0.00	1.10	0.00
0.25	0.50	1.40	-0.30
0.5	0.71	1.40	-0.30
1	1.00	1.40	-0.30
2	1.41	1.50	-0.40
4	2.00	1.50	-0.40
9	3.00	1.60	-0.50
16	4.00	1.80	-0.70
30	5.48	1.90	-0.80
60	7.75	2.20	-1.10
120	10.95	2.40	-1.30
240	15.49	2.60	-1.50
360	18.97	2.70	-1.60

Initial Height (in)	2.979	Init. Vol. (CC)	221.80
Height Change (in)	0.164	Vol. Change (CC)	18.90
Ht. After Cons. (in)	2.815	Cell Exp. (CC)	13.74
Initial Area (sq in)	4.543	Net Change (CC)	5.16
Area After Cons. (sq in)	4.696	Cons. Vol. (CC)	216.64

Data entry by: CAL/SR Date: 04/24/2006
Checked by: RB Date: 4/24/06
FileName: RGP0EWSA

ADVANCED TERRA TESTING, INC.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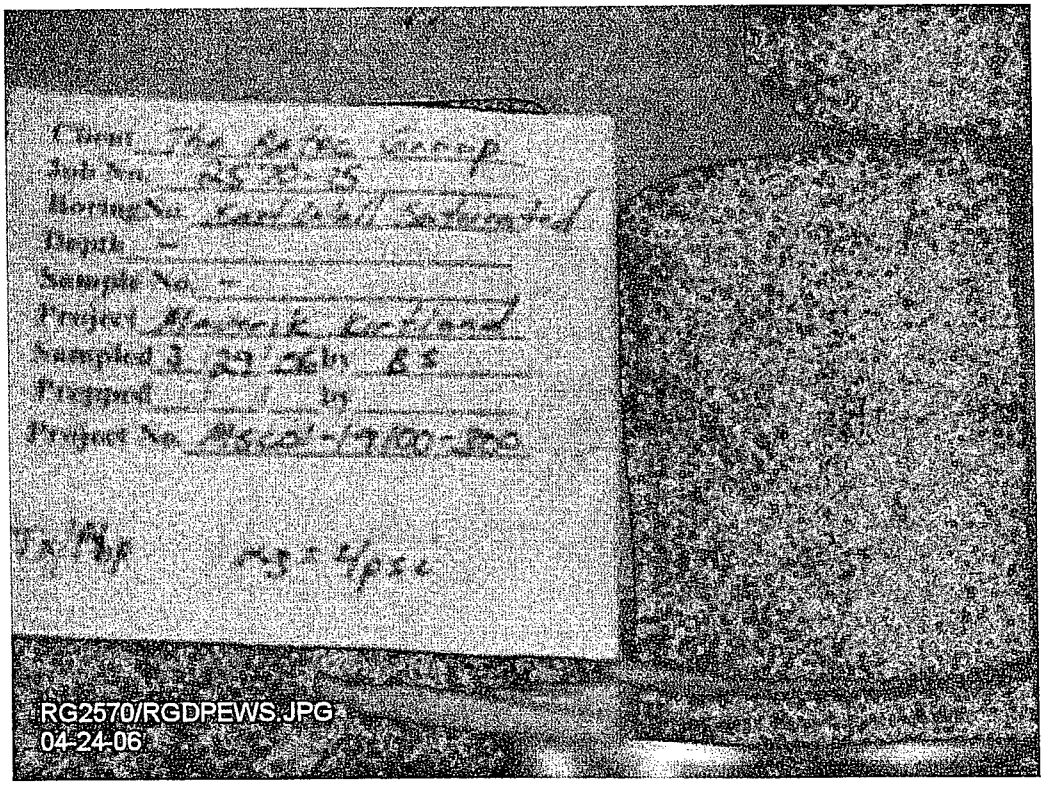
East Wall Saturated, ,
VOLUME DEFLECTION - cc
0.5
0
-0.5
-1
-1.5
-2
0
5
10
15
20
0.25
0.5
1
2
4
9
16
30
60
120
240
360
SQUARE ROOT OF TIME IN MINUTES
Time in Minutes


RG2570/RGDPEWS.JPG
04-24-06

PERMEABILITY TEST - BACK PRESSURE SATURATED - FLOW PUMP METHOD
ASTM D 5084

CLIENT	The Retec Group	JOB NO.	2570-15
BORING NO.	NW Wall Saturated	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-10-06 DPM
SAMPLE NO.		TEST FINISHED	4-19-06 CAL
SOIL DESCR.	#MSC01-19100-300	CELL NUMBER	6P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

MOISTURE/DENSITY DATA	BEFORE TEST	AFTER TEST
Wt. Soil + Moisture (g)	444.0	464.1
Wt. Wet Soil & Pan (g)	452.4	472.5
Wt. Dry Soil & Pan (g)	391.8	391.8
Wt. Lost Moisture (g)	60.6	80.7
Wt. of Pan Only (g)	8.4	8.4
Wt. of Dry Soil (g)	383.4	383.4
Moisture Content %	15.8	21.0
Wet Density PCF	120.0	127.5
Dry Density PCF	103.6	105.3

Init. Diameter (in)	2.415	(cm)	6.134
Init. Area (sq in)	4.581	(sq cm)	29.554
Init. Height (in)	3.078	(cm)	7.818
Vol. Bef. Consol. (cu ft)	0.00816		
Vol. After Consol. (cu ft)	0.00803		
Porosity %	35.49		

FLOW PUMP CALCULATIONS

Pump Setting	79
Velocity CM/Sec	5.18E-04
Q (cc/s)	1.66E-05
Height	3.053
Diameter	2.405
Pressure (psi)	0.543
Area after consol. (cm*cm)	29.312
Gradient	4.923
Permeability k (cm/s)	1.1E-07
Back Pressure (psi)	68.0
Cell Pressure (psi)	72.0
Ave. Effective Stress (psi)	3.729

Data entry by: CAL Date: 04/21/2006
Checked by: RB Date: 4/24/06
FileName: RGP0NWWS

ADVANCED TERRA TESTING, INC.

TRIAXAL COMPRESSION TEST DATA

CLIENT The Retec Group

JOB NO. 2570-15

BORING NO.	NW Wall Saturated	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-10-06 DPM
SAMPLE NO.		TEST FINISHED	4-19-06 CAL
SOIL DESCR.	#MSC01-19100-300	SETUP NO.	6P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

SATURATION DATA

Cell Pres. (PSI)	Back Pres. (PSI)	Burette Reading (CC)		Pore Pressure (PSI)		Change	B
		Close	Open	Close	Open		
40.0	38.0	4.0	15.8				
50.0	48.0	11.8	13.0	38.4	47.0	8.6	0.86
60.0	58.0	13.5	15.1	48.3	57.5	9.2	
70.0	68.0	15.3	16.4	58.2	67.6	9.4	
80.0		16.5	16.6	68.2	77.9	9.7	

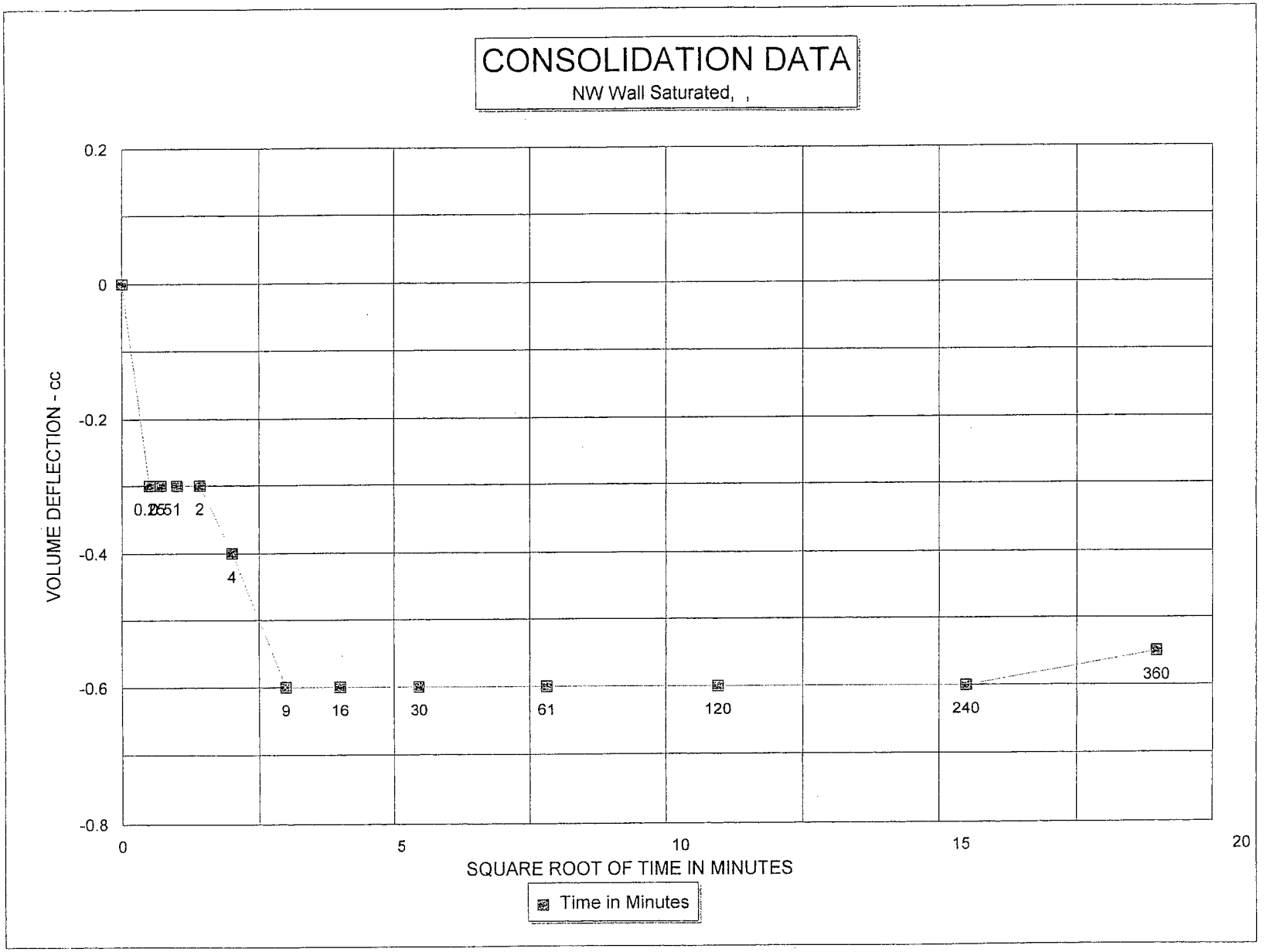
CONSOLIDATION DATA

Elapsed Time (Min)	SQRT Time (Min)	Burette Reading (CC)	Volume Defl. (cc)
0.00	0.00	1.20	0.00
0.25	0.50	1.50	-0.30
0.5	0.71	1.50	-0.30
1	1.00	1.50	-0.30
2	1.41	1.50	-0.30
4	2.00	1.60	-0.40
9	3.00	1.80	-0.60
16	4.00	1.80	-0.60
30	5.48	1.80	-0.60
61	7.81	1.80	-0.60
120	10.95	1.80	-0.60
240	15.49	1.80	-0.60
360	18.97	1.75	-0.55

Initial Height (in)	3.078	Init. Vol. (CC)	231.08
Height Change (in)	0.025	Vol. Change (CC)	13.90
Ht. After Cons. (in)	3.053	Cell Exp. (CC)	10.16
Initial Area (sq in)	4.581	Net Change (CC)	3.74
Area After Cons. (sq in)	4.543	Cons. Vol. (CC)	227.34

Data entry by: CAL Date: 04/21/2006
Checked by: RB Date: 4/24/06
FileName: RGP0NWWS

ADVANCED TERRA TESTING, INC.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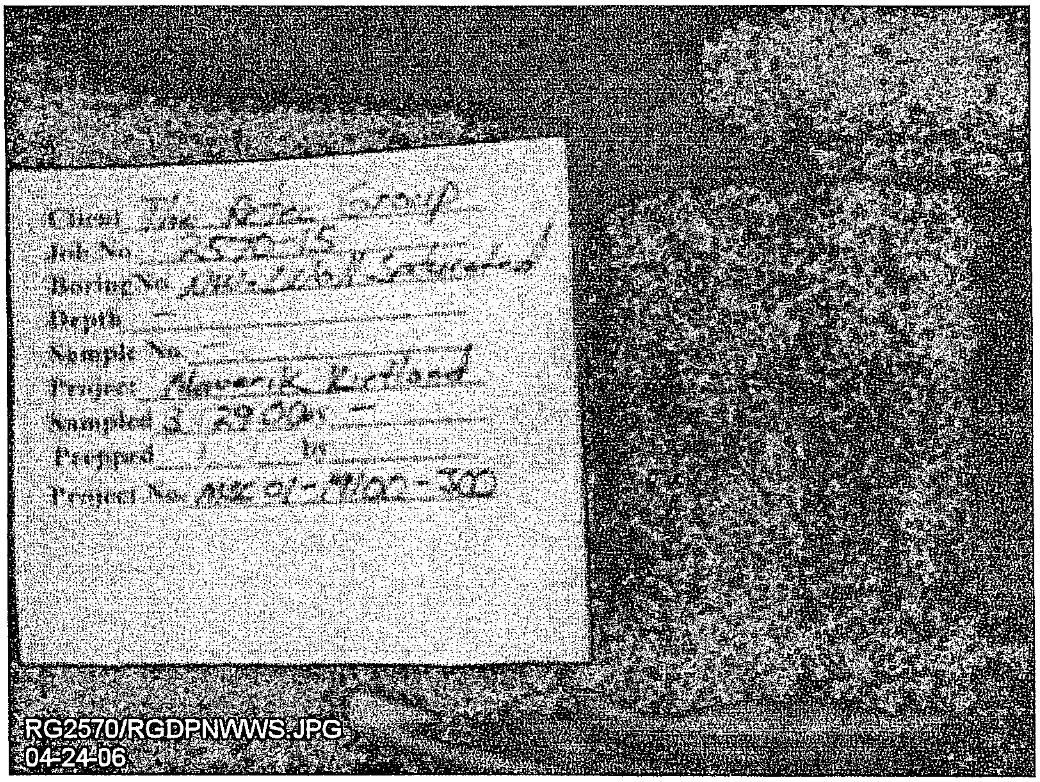
NW Wall Saturated, ,
VOLUME DEFLECTION - cc
0.2
0
-0.2
-0.4
-0.6
-0.8
0
5
10
15
20
SQUARE ROOT OF TIME IN MINUTES
0.25
0.5
1
2
4
9
16
30
61
120
240
360
Time in Minutes


Client
Job No. 2570-15
Boring No.
Depth
Sample No.
Project
Sampled
Prepped
Project No.
RG2570/RGDPNWWS.JPG
04-24-06

PERMEABILITY TEST - BACK PRESSURE SATURATED - FLOW PUMP METHOD
ASTM D 5084

CLIENT	The Retec Group	JOB NO.	2570-15
BORING NO.	SW Wall Saturated	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-06-06 CAL
SAMPLE NO.		TEST FINISHED	4-10-06 CAL
SOIL DESCR.	#MSC01-19100-300	CELL NUMBER	8P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

MOISTURE/DENSITY DATA	BEFORE TEST	AFTER TEST
Wt. Soil + Moisture (g)	426.1	413.6
Wt. Wet Soil & Pan (g)	434.6	422.1
Wt. Dry Soil & Pan (g)	342.0	342.0
Wt. Lost Moisture (g)	92.6	80.1
Wt. of Pan Only (g)	8.5	8.5
Wt. of Dry Soil (g)	333.5	333.5
Moisture Content %	27.8	24.0
Wet Density PCF	118.4	125.5
Dry Density PCF	92.7	101.2

Init. Diameter (in)	2.409	(cm)	6.119
Init. Area (sq in)	4.558	(sq cm)	29.407
Init. Height (in)	3.008	(cm)	7.640
Vol. Bef. Consol. (cu ft)	0.00793		
Vol. After Consol. (cu ft)	0.00726		
Porosity %	38.94		

FLOW PUMP CALCULATIONS

Pump Setting	69
Velocity CM/Sec	4.53E-04
Q (cc/s)	1.45E-05
Height	2.931
Diameter	2.335
Pressure (psi)	1.939
Area after consol. (cm*cm)	27.632
Gradient	18.312
Permeability k (cm/s)	2.9E-08
Back Pressure (psi)	38.0
Cell Pressure (psi)	42.0
Ave. Effective Stress (psi)	3.031

Data entry by: CAL Date: 04/21/2006
Checked by: RD Date: 4/24/06
FileName: RGP0SWWS

ADVANCED TERRA TESTING, INC.

TRIAXAL COMPRESSION TEST DATA

CLIENT	The Retec Group	JOB NO.	2570-15
BORING NO.	SW Wall Saturated	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-06-06 CAL
SAMPLE NO.		TEST FINISHED	4-10-06 CAL
SOIL DESCR.	#MSC01-19100-300	SETUP NO.	8P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

SATURATION DATA

Cell Pres. (PSI)	Back Pres. (PSI)	Burette Reading (CC)		Pore Pressure (PSI)		Change	B
		Close	Open	Close	Open		
40.0	38.0	3.1	17.5				
50.0		24.4	24.6	37.3	47.3	10.0	1.00

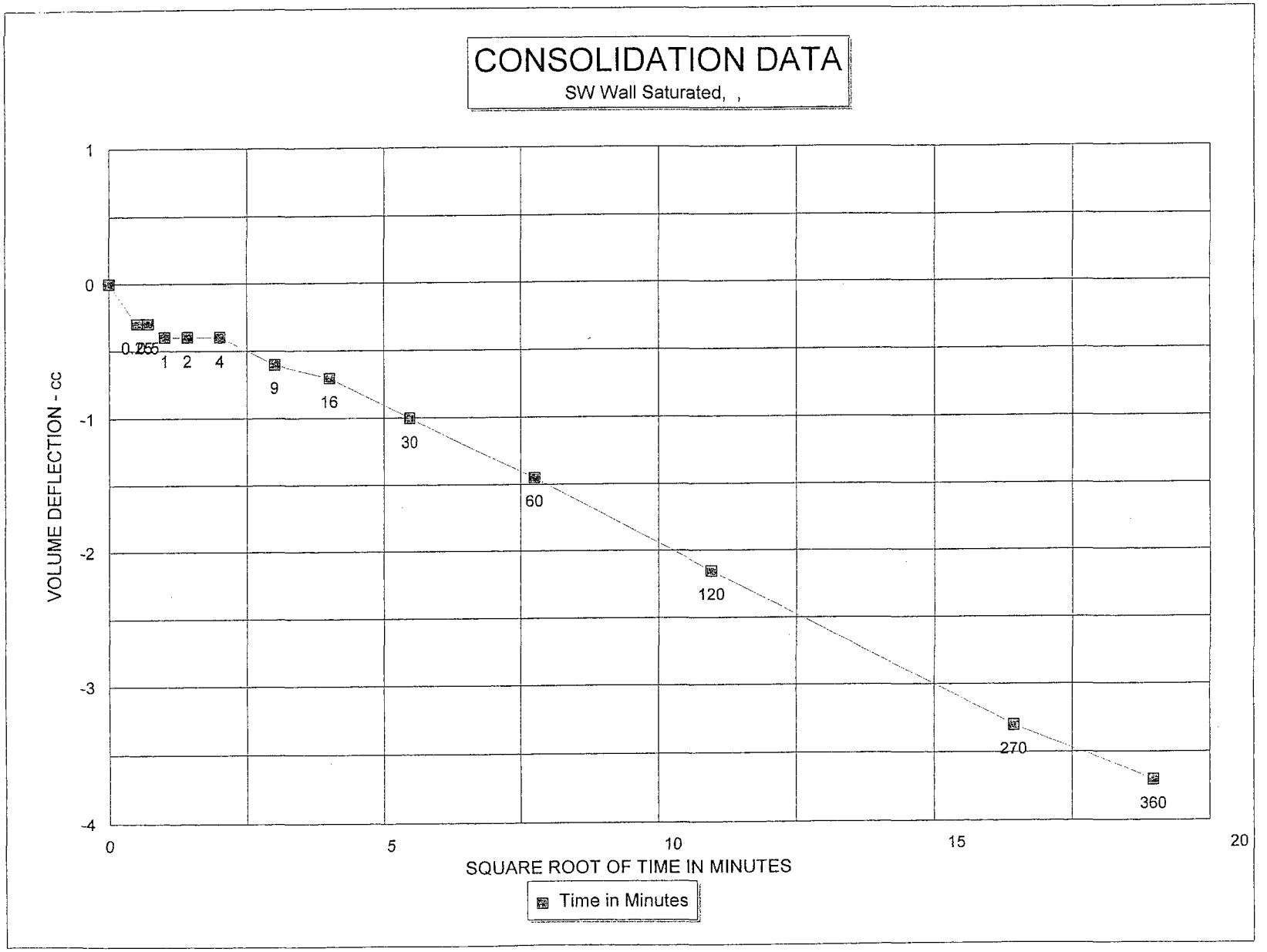
CONSOLIDATION DATA

Elapsed Time (Min)	SQRT Time (Min)	Burette Reading (CC)	Volume Defl. (cc)
0.00	0.00	0.30	0.00
0.25	0.50	0.60	-0.30
0.5	0.71	0.60	-0.30
1	1.00	0.70	-0.40
2	1.41	0.70	-0.40
4	2.00	0.70	-0.40
9	3.00	0.90	-0.60
16	4.00	1.00	-0.70
30	5.48	1.30	-1.00
60	7.75	1.75	-1.45
120	10.95	2.45	-2.15
270	16.43	3.60	-3.30
360	18.97	4.00	-3.70

Initial Height (in)	3.008	Init. Vol. (CC)	224.71
Height Change (in)	0.077	Vol. Change (CC)	27.40
Ht. After Cons. (in)	2.931	Cell Exp. (CC)	8.44
Initial Area (sq in)	4.558	Net Change (CC)	18.96
Area After Cons. (sq in)	4.283	Cons. Vol. (CC)	205.75

Data entry by: CAL Date: 04/21/2006
Checked by: RB Date: 4/24/06
FileName: RGP0SWWS

ADVANCED TERRA TESTING, INC.


CONSOLIDATION DATA
SW Wall Saturated, ,
VOLUME DEFLECTION - cc
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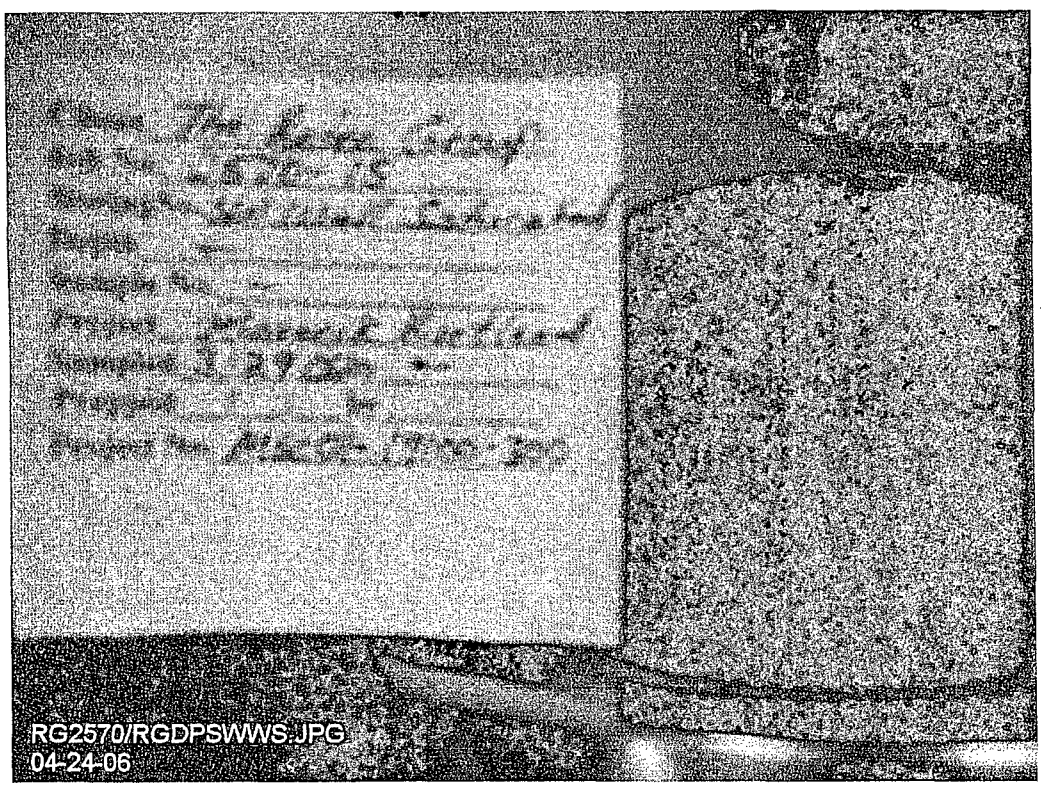
0
-1
-2
-3
-4
0.25
1
2
4
9
16
30
60
120
270
360
0
5
10
15
20
SQUARE ROOT OF TIME IN MINUTES
Time in Minutes



RG2570/RGDPSWWS.JPG
04-24-06

PERMEABILITY TEST - BACK PRESSURE SATURATED - FLOW PUMP METHOD
ASTM D 5084

CLIENT	The Retec Group	JOB NO.	2570-15
BORING NO.	South Wall Saturated	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-06-06 CAL
SAMPLE NO.		TEST FINISHED	4-11-06 DPM
SOIL DESCR.	#MSC01-19100-300	CELL NUMBER	3P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

MOISTURE/DENSITY DATA	BEFORE TEST	AFTER TEST
Wt. Soil + Moisture (g)	458.5	453.5
Wt. Wet Soil & Pan (g)	466.8	461.8
Wt. Dry Soil & Pan (g)	383.7	383.7
Wt. Lost Moisture (g)	83.2	78.2
Wt. of Pan Only (g)	8.3	8.3
Wt. of Dry Soil (g)	375.4	375.4
Moisture Content %	22.2	20.8
Wet Density PCF	128.8	131.5
Dry Density PCF	105.4	108.9

Init. Diameter (in)	2.396	(cm)	6.086
Init. Area (sq in)	4.509	(sq cm)	29.091
Init. Height (in)	3.008	(cm)	7.640
Vol. Bef. Consol. (cu ft)	0.00785		
Vol. After Consol. (cu ft)	0.00760		
Porosity %	36.31		

FLOW PUMP CALCULATIONS

Pump Setting	99
Velocity CM/Sec	6.50E-04
Q (cc/s)	2.08E-05
Height	2.972
Diameter	2.372
Pressure (psi)	0.102
Area after consol. (cm*cm)	28.516
Gradient	0.950
Permeability k (cm/s)	7.7E-07
Back Pressure (psi)	38.0
Cell Pressure (psi)	42.0
Ave. Effective Stress (psi)	3.949

Data entry by: CAL Date: 04/21/2006
Checked by: RB Date: 4/24/06
FileName: RGP0SWST

ADVANCED TERRA TESTING, INC.

TRIAXAL COMPRESSION TEST DATA

CLIENT The Retec Group

JOB NO. 2570-15

BORING NO.	South Wall Saturated	SAMPLED	3-29-06
DEPTH		TEST STARTED	4-06-06 CAL
SAMPLE NO.		TEST FINISHED	4-11-06 DPM
SOIL DESCR.	#MSC01-19100-300	SETUP NO.	3P
LOCATION	Maverik Kirtland	SATURATED TEST	Yes
CONF. PRES. PSF	576	TEST TYPE	TX/Pbp

SATURATION DATA

Cell Pres. (PSI)	Back Pres. (PSI)	Burette Reading (CC)		Pore Pressure (PSI)		Change	B
		Close	Open	Close	Open		
40.0	38.0	1.9	13.7				
50.0		17.8	17.9	35.4	45.7	10.3	1.03

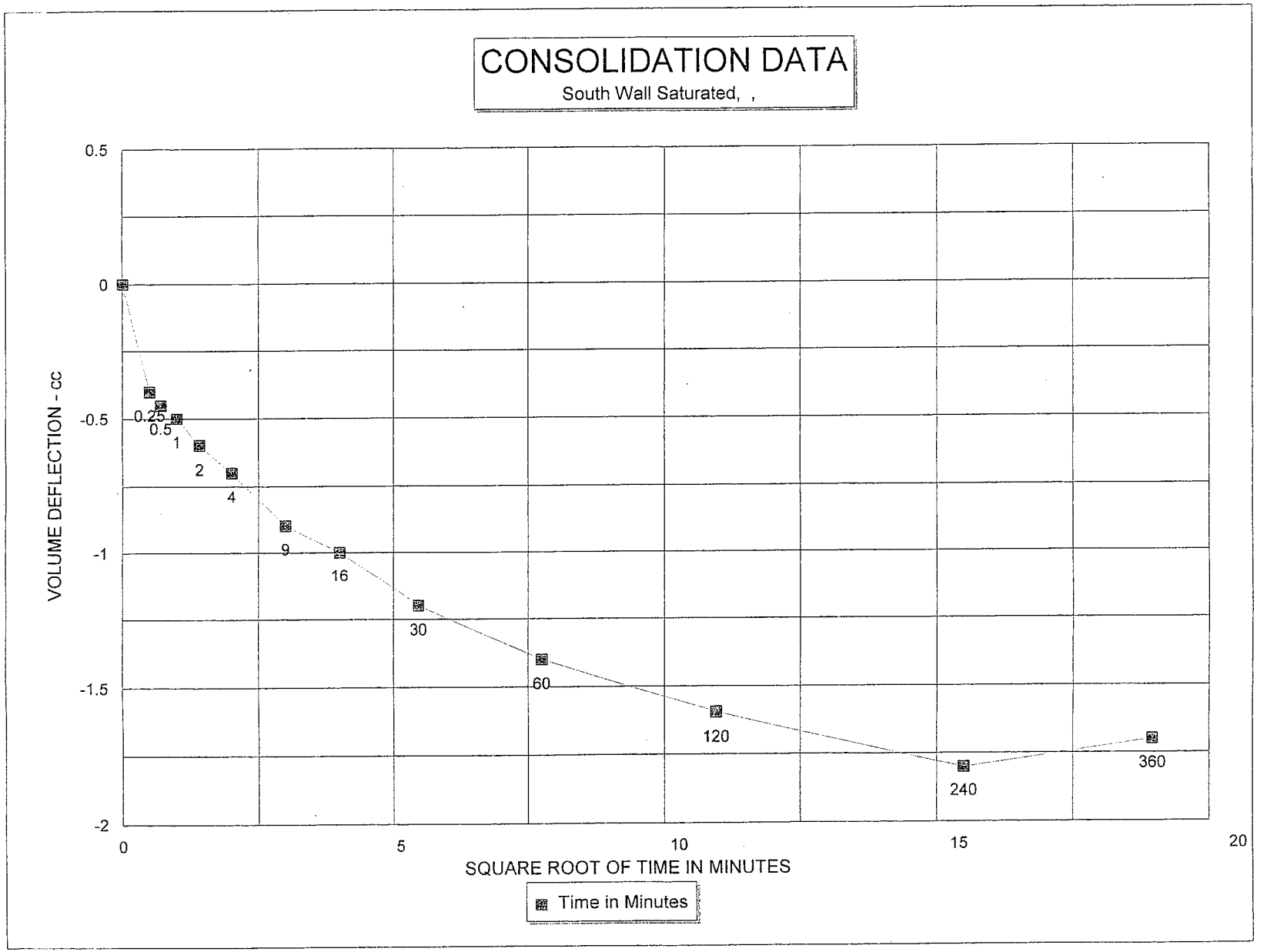
CONSOLIDATION DATA

Elapsed Time (Min)	SQRT Time (Min)	Burette Reading (CC)	Volume Defl. (cc)
0.00	0.00	17.90	0.00
0.25	0.50	18.30	-0.40
0.5	0.71	18.35	-0.45
1	1.00	18.40	-0.50
2	1.41	18.50	-0.60
4	2.00	18.60	-0.70
9	3.00	18.80	-0.90
16	4.00	18.90	-1.00
30	5.48	19.10	-1.20
60	7.75	19.30	-1.40
120	10.95	19.50	-1.60
240	15.49	19.70	-1.80
360	18.97	19.60	-1.70

Initial Height (in)	3.008	Init. Vol. (CC)	222.29
Height Change (in)	0.036	Vol. Change (CC)	18.00
Ht. After Cons. (in)	2.972	Cell Exp. (CC)	11.01
Initial Area (sq in)	4.509	Net Change (CC)	6.99
Area After Cons. (sq in)	4.420	Cons. Vol. (CC)	215.30

Data entry by: CAL Date: 04/21/2006
Checked by: RB Date: 4/24/06
FileName: RGP0SWST

ADVANCED TERRA TESTING, INC.


CONSOLIDATION DATA
South Wall Saturated, ,
VOLUME DEFLECTION - cc
0.5
0
-0.5
-1
-1.5
-2
0
5
10
15
20
SQUARE ROOT OF TIME IN MINUTES
0.25
0.5
1
2
4
9
16
30
60
120
240
360
Time in Minutes


RG2570/RGDPSSSS.JPG
04-24-06