PORT OF OAKLAND

October 26, 2007

Mr. Steven Plunkett
Hazardous Materials Specialist
Alameda County Health Care Services Agency,
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Well Destruction & Groundwater Sampling Report**
APL Terminal Yard and Gate Project, Oakland, CA
RO#0000470

Dear Mr. Plunkett:

The Port of Oakland ("Port") herein submits the *Well Destruction and Hydropunch Groundwater Sampling Report, American President Lines, Berths 60-63 Yard and Gate Project, Port of Oakland, California* prepared on the behalf of the Port by the team of MSE Group and Shaw Environmental, Inc. The field work reported on includes the destruction of three shallow monitoring wells in advance of imminent construction work and the collection of one shallow groundwater sample.

The collection of the groundwater sample requires some background explanation. Mr. Roger Papler, SFRWQCB, requested the collection of a single grab groundwater sample as a condition of the transfer of the Union Pacific Motor Freight (UPMF) project oversight back to the County. Mr. Papler noted there was a 150-foot wide gap between two shoreline sentry wells (MW-8 and APL-UPW2) that should be explored to ascertain if gasoline and benzene COPC's were possibly escaping to the Bay. Boring B-97 was placed within this perceived gap and a grab groundwater sample was collected and the concentrations were reported as comparable to the two adjacent monitoring well results.

If you have any questions or need additional information, please contact Mr. John Prall at (510) 627-1373 or by email at jprall@portoakland.com.

"I declare, under penalty of perjury, that the information and/or recommendations contained in the attached documentary report is true and correct to the best of my knowledge."

Sincerely,

Roberta Reinstein
Manager, Environmental Programs and Safety Department

Enclosure Noted

CC: Michele Heffes, Port of Oakland
John Prall, Port of Oakland
Jeff Jones, Port of Oakland
Debra Carey, Shaw Environmental
Carl Hackney, MSE Group
Deborah Ballati, Farell Braun + Martel
Chris Noma, Wendel Rosen Black & Dean

Shaw Environmental, Inc.

4005 Port Chicago Highway
Concord, CA 94520
Phone: 925.288.9898
Fax: 925.288.0888

Shaw Environmental, Inc.

October 10, 2007

Shaw Project No. 127546.04

Mr. Carl E. Hackney
MSE Group
302 Pendleton Way
Oakland, CA 94621

Subject: **Well Destruction and Hydropunch Groundwater Sampling Report**
American President Lines
Berths 60-63 Yard and Gate Redevelopment Project
1395 Middle Harbor Road, Port of Oakland
Oakland, California 94607

Dear Mr. Hackney:

Shaw Environmental, Inc. (Shaw) is pleased to present this *Well Destruction and Hydropunch Groundwater Sampling Report* for the above-referenced site. Included in Attachment A are the Site Vicinity Map (Figure 1) and Site Plan with Hydropunch Sampling Location (Figure 2) prepared by ETIC Engineering. The activities outlined in this report were requested by the Port of Oakland (Port) during a November 2005 meeting discussing the redevelopment plans for Berths 60-63. The areas where the wells are located are under temporary construction regulatory oversight of the Alameda County Health Care Services Agency (ACHCS), with the San Francisco Regional Water Quality Control Board (RWQCB) taking lead agency function at the conclusion of construction and upon completed well destruction. As shown in Figure 2, a total of 12 known wells exist at Berths 60-63 (Yard and Gate Redevelopment Area) of the American President Lines (APL) terminal, consisting of 11 groundwater monitoring wells (wells MW-1 through MW-3, MW-6 through MW-8, MSMW-1 through DSMW-3, APL/UP-W1, and APL/UP-W2) and one former groundwater extraction well (well EW-5).

Shaw was contracted to observe the sampling and destruction of three groundwater monitoring wells (MW-8, APL/UP-W1, and APL/UP-W2) and to log and obtain groundwater samples for laboratory analysis using hydropunch sampling technologies from a soil boring located between MW-8 and APL/UP-W2. Collection of the hydropunch samples is a condition of the temporary ACHCS regulatory oversight.

The well sampling and destruction, and hydropunch sampling activities were conducted at the APL site on June 14, 2007. The work was conducted in general accordance with the procedures outlined in the March 1, 2006 *Well Destruction Workplan*, prepared by ETIC Engineering for the Port (ETIC, 2006a), and the August 9, 2006 *Memorandum – Groundwater Sampling Workplan*, prepared by ETIC for the Port (ETIC, 2006b) and according to Port safety protocols.

BACKGROUND

Groundwater monitoring wells MW-8, APLUP-W1, and APLUP-W2 were historically used to define the downgradient extent of petroleum aromatic hydrocarbons in groundwater originating from the Union Pacific Motor Freight area upgradient of the southwestern corner of the APL terminal. Total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPH-G, TPH-D, and TPH-MO), and volatile organic compounds (VOCs) were not detected above their respective surface water quality criteria in groundwater samples collected from these wells over the last several years (ETIC, 2006b).

In addition, these compounds and TPH as Bunker C (TPH-bunkc) were also not detected above the surface water quality criteria in the groundwater sample collected from a temporary soil boring, B-60, located between MW-8 and APLUP-W2 (ETIC, 2006b). As requested by the ACHCS and the RWQCB, one groundwater sample was collected from the temporary soil boring B-97 to confirm the absence of these compounds above the surface water quality criteria in this area of the APL terminal, thereby confirming the inertness of the landfill backfill material and the absence of current and future threat to the adjacent shoreline.

PRE-FIELD ACTIVITIES

Permit: Well permits were acquired from the Alameda County Department of Public Works (ACDPW) prior to field activities (Attachment B).

Site Health and Safety: A site health and safety plan was prepared and subsequently utilized onsite during field activities.

Underground Utility Identification: Underground Service Alert (USA) was contacted two weeks prior to drilling activities in order to mark underground utilities in the delineated areas using standard color code identifiers. In addition, Cruz Brothers Utility Locators, a private underground utility locating company, was contracted to clear the area on June 12, 2007.

HYDROPUNCH SAMPLING ACTIVITIES

The fieldwork was performed by Environmental Control Associates (ECA), a California licensed drilling contractor. A Shaw field representative, working under the direction of a California Professional Geologist, was present onsite during the drilling of the soil boring and the collection of the groundwater sample on June 14, 2007.

Advancement of Soil Boring B-97: The soil boring for B-97 was advanced using a direct-push drill rig to a total depth of 20 feet below ground surface (bgs). Groundwater was encountered at 11 to 12 feet bgs and an attempt was made to sample groundwater when the boring reached 16 feet bgs. However, the boring did not produce enough water at 16 feet bgs for sampling purposes. As a result, the soil boring was advanced to a depth of 20 feet bgs. The soil boring was continuously logged as the push rods were advanced to the total depth. The soil boring/temporary well log is included in Attachment C.

Groundwater Sampling: Groundwater samples were collected from the soil boring through a temporary casing installed in the coring tool, using hydropunch sampling technologies (a hydropunch sampler) at approximately 20 feet bgs. A temporary well screen (1-inch diameter

PVC with 5 feet of 0.001-inch slotted screen) and casing were inserted into the boring. Protocols from the Work Plan were followed for groundwater sampling (Appendix B).

Groundwater samples were obtained from the temporary well using a peristaltic pump. Following collection, the sample containers provided by the laboratory were labeled, placed in an ice-packed cooler, and transported to the laboratory under chain-of-custody protocol. A copy of the chain-of-custody document is included in Attachment D.

Groundwater Analyses: Entech Analytical Labs, Inc., a California-certified hazardous materials testing laboratory, conducted the analysis of the groundwater samples. The groundwater samples were analyzed for the following:

- TPH-G using modified Environmental Protection Agency (EPA) Method 3050B;
- TPH-D, TPH-MO, and TPH-bunkc with silica gel cleanup by EPA Method 3510C and analyzed using modified EPA Method 8015B(M); and
- VOCs including methyl tertiary butyl ether (MTBE) and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260B.

Hydropunch Groundwater Analytical Results: Results of the analysis of the grab samples from B-97 detected benzene at a concentration of 1.9 micrograms per liter (µg/L). TPH-G, TPH-D, TPH-MO, TPH-bunkc, toluene, ethylbenzene, xylenes, MTBE, and other VOCs were not detected in the sample. A copy of the laboratory analytical report is included in Attachment D, along with a data quality assessment.

Grouting of Soil Boring and Handling of Excess Soil: Following completion of sampling, the boring was sealed to the surface with bentonite cement grout in accordance with ACDPW requirements. Excess soil generated during the drilling was stored in the waste management area located outside the entrance gate of the Berths 60-63 yard.

GROUNDWATER MONITORING WELL SAMPLING AND DESTRUCTION

Monitoring wells APLUP-W1, APLUP-W2, and MW-8 were sampled and then abandoned using the pressure grout method on June 14, 2007. Samples from the three monitoring wells were taken by Blaine Tech Services, Inc., from San Jose, California, and sent to Entech Analytical Labs, Inc. for analysis.

Water Level Measurements: All monitoring wells were opened and allowed to equilibrate prior to collecting depth-to-water measurements. Depth-to-water measurements were collected using an interface probe referenced to designated measuring points at the top of each well casing (See Attachment C for depth-to-water measurements).

Monitoring Well Sampling: A minimum of three well casing volumes were purged from each well, using a new disposable bailer. As the wells were purged, the pH, electrical conductivity, and temperature of the purge water were periodically measured in the field. Purge water was stored in one appropriately labeled 55-gallon drum and transported to the waste management area located outside the entrance gate of the Berths 60-63 yard. Field data sheets are included in Attachment C.

Following purging, groundwater samples were collected from each well on June 14, 2007 using the new polyethylene bailers. The water samples were transferred from the bailers into the appropriate laboratory-supplied containers and sent to a state-certified laboratory under chain of custody documentation.

Groundwater Analysis: The groundwater samples were submitted to Entech Analytical Labs, Inc., and analyzed for the following:

- TPH-G using modified EPA Method 5030B;
- TPH-D, TPH-MO, and TPH-bunkc with silica gel cleanup by EPA Method 3510C and analyzed using modified EPA Method 8015B(M); and
- VOCs including MTBE and BTEX by EPA Method 8260B.

Monitor Well Groundwater Analytical Results: The analysis of samples from the monitoring wells yielded the following results:

- In monitoring well APLUP-W1, TPH-G, benzene, ethylbenzene, xylene, and chlorobenzene were reported at concentrations of 150 µg/L, 14 µg/L, 0.56 µg/L, and 0.72 µg/L, respectively. TPH-D, TPH-MO, TPH-bunkc, toluene, and MTBE were not detected in APLUP-W1;
- No analytes were detected in monitoring well APLUP-W2;
- Results of the analysis for monitoring well MW-8 detected benzene and xylene at concentrations of 2.4 µg/L and 0.54 µg/L, respectively; and TPH-G, TPH-D, TPH-MO, TPH-bunkc, toluene, ethylbenzene, MTBE and other VOCs were not detected in MW-8.

Well Destruction: Once sampling was completed, monitoring wells APLUP-W1, APLUP-W2, and MW-8 were abandoned by the pressure grout method, in accordance with ACDPW requirements. The well casings were filled with neat cement grout followed by pressurizing the grout-filled casing to a pressure of 25 pounds per square inch for a minimum of 5 minutes. The existing flush-mounted monitoring well vault boxes were left in-place upon completion of the pressure-grouting activities and will be removed during the forthcoming site redevelopment activities.

Shaw appreciates the opportunity to work with MSE on this project. Please do not hesitate to call us at (925) 288-2328 if you have any questions.

Sincerely,

Shaw Environmental, Inc.

Debra Carey, CEG
Project Manager

Steven W. Pierce, PG
Senior Hydrogeologist

Attachments

Table 1 – Summary of Analytical Results
Attachment A – Figure 1 – Site Vicinity Map and Figure 2 – Site Plan with Hydropunch Sampling Location
Attachment B – Well Permits
Attachment C – Soil Boring/Temporary Well Log for B-97 and Field Data Sheets
Attachment D – Laboratory Report/ Chain-of-Custody Document/Data Quality Assessment

TABLE

ATTACHMENT A

FIGURE 1 – SITE VICINITY MAP
FIGURE 2 – SITE PLAN WITH HYDROPUNCH SAMPLING LOCATION

TABLE 1
Summary of Analytical Results
American President Lines
1395 Middle Harbor Road, Port of Oakland
Oakland, California

Sample ID	Date Collected	TPH-G	TPH-D	TPH-MO	TPH-bunkc	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	Other VOCs
		All results reported in micrograms per liter (µg/L).									
APLUP-W1	06/14/07	150	ND_{50}	ND_{100}	ND	14	$ND_{0.50}$	0.56	0.72	$ND_{1.0}$	Chlorobenzene: 1.7
APLUP-W2	06/14/07	ND_{25}	ND_{50}	ND_{100}	ND	$ND_{0.50}$	$ND_{0.50}$	$ND_{0.50}$	$ND_{0.50}$	$ND_{1.0}$	$ND_{0.5-50}$
MW-8	06/14/07	ND_{25}	ND_{50}	ND_{100}	ND	2.4	$ND_{0.50}$	$ND_{0.50}$	0.54	$ND_{1.0}$	$ND_{0.5-50}$
B97	06/14/07	ND_{25}	ND_{50}	ND_{100}	ND	1.9	$ND_{0.50}$	$ND_{0.50}$	$ND_{0.50}$	$ND_{1.0}$	$ND_{0.5-50}$

Notes:
TPH-G - total petroleum hydrocarbons as gasoline
TPH-D - total petroleum hydrocarbons as diesel
TPH-MO - total petroleum hydrocarbons as motor oil
TPH-bunc - total petroleum hydrocarbons as bunker C
MTBE - methyl tertiary butyl ether
VOC's -volatile organic compounds
NDx - not reported above "x" detection limit

.

SITE LOCATION

N

0 1,000 2,000

Approx. Scale (feet)

SITE VICINITY MAP

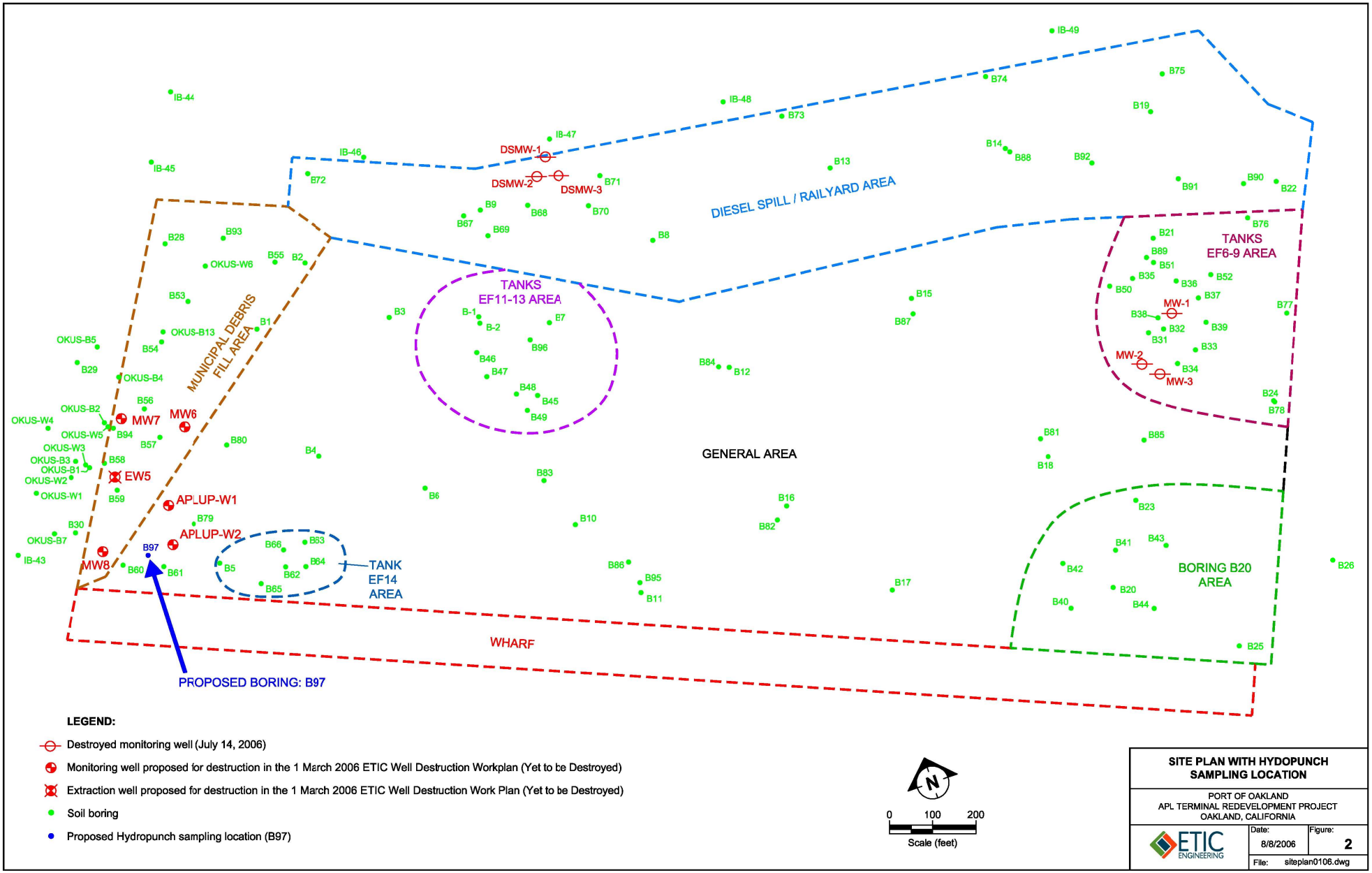
PORT OF OAKLAND
APL TERMINAL REDEVELOPMENT PROJECT
OAKLAND, CALIFORNIA

ETIC ENGINEERING

Date: 7/31/2006

Figure: 1

TOPO0106.DWG



LEGEND:

- Destroyed monitoring well (July 14, 2006)
- Monitoring well proposed for destruction in the 1 March 2006 ETIC Well Destruction Workplan (Yet to be Destroyed)
- Extraction well proposed for destruction in the 1 March 2006 ETIC Well Destruction Work Plan (Yet to be Destroyed)
- Soil boring
- Proposed Hydropunch sampling location (B97)

N

0 100 200

Scale (feet)

SITE PLAN WITH HYDOPUNCH SAMPLING LOCATION

PORT OF OAKLAND
APL TERMINAL REDEVELOPMENT PROJECT
OAKLAND, CALIFORNIA

ETIC ENGINEERING

Date: 8/8/2006

Figure: 2

File: siteplan0106.dwg

ATTACHMENT B

WELL PERMITS

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 06/13/2007 By jamesy

Permit Numbers: W2007-0689 to W2007-0692
Permits Valid from 06/14/2007 to 06/14/2007

Application Id: 1181546847253
City of Project Site: Oakland
Site Location: AMERICAN PRESIDENTIAL LINES
BERTHS 57-59 & BERTHS 60-63
1395 MIDDLE HARBOR ROAD
OAKLAND, CA
Project Start Date: 06/14/2007
Completion Date: 06/14/2007

Applicant: MSE Group Inc. - Joseph Cotton
302 Pendleton Way, Oakland, CA 94621
Phone: 510-703-5420

Property Owner: JOHN PRALL
PORT OF OAKLAND_530 WATER STREET, OAKLAND, CA 94604
Phone: 510-627-1373

Client: ** same as Property Owner **

Contact: Cotton Joseph
Phone: 510-703-5420
Cell: 510-703-5420

	Total Due:	$1100.00
Receipt Number: WR2007-0262	**Total Amount Paid:**	$1100.00
Payer Name : JOSEPH A. COTTON	Paid By: VISA	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 1 Boreholes
Driller: ENVIRONMENTAL CONTROL ASSOCIATES - Lic #: 695970 - Method: DP **Work Total: $200.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2007-0689	06/13/2007	09/12/2007	1	2.50 in.	20.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit

application on site shall result in a fine of $500.00.

6. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

Well Destruction-Monitoring - 3 Wells
Driller: EXPLORATION DRILLING SERVICES - Lic #: 431604 - Method: press **Work Total: $900.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2007-0690	06/13/2007	09/12/2007	APL/UP-W1	8.00 in.	2.00 in.	5.00 ft	22.50 ft			
W2007-0691	06/13/2007	09/12/2007	APL/UP-W2	8.00 in.	2.00 in.	5.00 ft	17.50 ft			
W2007-0692	06/13/2007	09/12/2007	MW-8	8.00 in.	2.00 in.	5.50 ft	17.00 ft			

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no

case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

6. Remove the Christy box or similar structure.

Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil.

After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

7. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

APPENDIX B

PROTOCOLS FOR GRAB GROUNDWATER SAMPLING

SUBSURFACE CLEARANCE PROCEDURES

Prior to drilling, proposed boring locations are marked with white paint. Underground Service Alert (USA) is contacted two weeks prior to drilling activities and a "ticket" is issued for the particular investigation. USA members mark underground utilities in the delineated areas using standard color code identifiers.

The proposed boring locations are also investigated by a geophysical surveying contractor using electromagnetic induction and magnetic surveys, among other methods. The choice of methods depends on shallow soil types and potential interference from surrounding cultural features.

The borings are cleared by hand auger, shovel, or posthole digger to the full diameter of downhole equipment to at least 4 feet below ground surface. An air knife may also be used in conjunction with the above hand clearing tools.

Downhole equipment, including drive casing, sample barrels, surge blocks and tools, are detergent-washed using Alconox or equivalent, or steam-cleaned prior to and following drilling activities at each boring.

SOIL LOGGING PROCEDURES

Although no soil sampling for laboratory analysis is planned during the proposed investigation, the soil boring, B-97, will be logged in accordance with the following standard protocol.

During direct-push sampling, soil samples are collected using a Geoprobe rig equipped with a macrocore sampler or a dual-wall sampler.

During soil sampling, a 4-foot long sampler, equipped with a plastic liner, is typically driven into the subsurface. Upon completion of the sample run, the sampler is extracted from the boring, the sample liner is removed, and a new liner is placed in the sampler.

During dual-wall sampling using a Geoprobe rig, a hydraulic hammer simultaneously drives smaller diameter inner rods, which are used to obtain and retrieve the 5-foot long soil core barrel, and larger diameter outer rods, which serve as temporary drive casing. As the rods are advanced, soil is driven into the core barrel, which is equipped with sample liners. The outer rods prevents sloughing of the formation and reduce cross-communication.

Soil samples are visually described by a trained geologist or engineer in accordance with the Unified Soil Classification System. The soil properties that are typically noted on boring logs include grain size category, color, density/firmness, plasticity and moisture content. The soil samples will be collected only for lithologic logging purposes. Field measurements for volatile organic compound

concentrations will be measured with a photoinoization detector and recorded by the trained geologist or engineer.

GRAB GROUNDWATER SAMPLING

During direct-push sampling, grab groundwater samples are typically collected using a Hydropunch or an open-hole piezometer. The Hydropunch sampler consists of an expendable drive point, a drive head, a protective sheath, a 3 or 4-foot long inner stainless steel screen (or polyvinyl chloride [PVC]) and an O-ring seal. Once the desired depth is achieved, the rods will be retracted to expose the Hydropunch screen to groundwater. Grab sampling with the open-hole piezometer consists of installing a small-diameter PVC well casing with 5 feet of 0.010-inch slotted well screen in the open boring. This method was typically used for shallow grab water samples. Groundwater samples may then be collected with a bailer, peristaltic pump, or bladder pump.

WATER SAMPLE HANDLING

The samples are decanted into laboratory-provided containers with appropriate preservatives. Samples that will be analyzed for VOCs are collected in 40-milliliter glass volatile organic analysis (VOA) vials with Teflon-lined septum caps. VOA vials are filled so that there are no air bubbles. The sample containers are labeled with the well number, date, location, sampler's initials, and preservative used. The sample containers are placed in a cooler with ice for delivery to the laboratory. Standard chain-of-custody procedures are followed.

BOREHOLE GROUTING

Following completion of sampling, borings are sealed with bentonite-cement grout. The grout is allowed to free-fall in the boring or pumped through a tremie pipe positioned at the bottom of the boring depending on the subsurface conditions and/or the requirements of the local oversight agency. Borings are resurfaced to match the surrounding surface conditions.

INTEGRATED WASTE MANAGEMENT HANDLING

Excess groundwater and soil generated during the soil drilling activities is stored in appropriately labeled 55 gallon Department of Transportation (DOT) drums. These drums are typically stored at a secured location, pending evaluation of disposal options.

ATTACHMENT C

SOIL BORING/TEMPORARY WELL LOGS FOR B-97 AND FIELD DATA SHEETS

BORING NO. B-97

COORDINATES: N. _____ E. _____

FIELD GEOLOGIST S. Pierce | DATE BEGAN 6/14/07
CHECKED BY _____ | DATE FINISHED 6/14/07
APPROVED BY _____ | SURFACE ELEV. _____
TOTAL DEPTH 20 feet | CORE SIZE 2.5 inches

DEPTH IN FEET	SAMPLE NUMBER	RECOVERY	PID (ppm)	DRILLING REMARKS	USCS	PROFILE	DESCRIPTION
0			0–2	(Background PID)	fill		Asphalt (4"). 0.33'
					sp		SAND; fine, poorly graded (fill). 0.83'
		80			gp		GRAVEL and SILTY SAND; (fill). 3.5'
			2				SAND; poorly graded, fine, light gray (dry) to medium gray–brown (damp).
5		100					
			0				
10		100/10		▽	sp		SAND; poolry graded, fine, medium gray–brown, damp to wet (soil stuck in core barrrel – only able to see top and bottom of sample).
			0				
		90					As above: Wet.
15				Not enough water production at 16' – push to 20'.			
							As above: Wet. 18.0'
		90			gp		GRAVEL with SAND; poorly graded, fine gravel, wet.
20							TOTAL DEPTH OF BORING IS 20.0 FEET
25							Temporary PVC screen (5 feet of 0.001 inch slots) and casing installed to 20' through inside of coring tool. Casing and screen removed and boring destroyed with cement grout.
30							
35							

DRILLER : Brett Cobb
DRILLING CO. : ECA
DRILLING METHOD : Direct Push/Hydropunch
SAMPLING METHOD :
PROJECT : MSE–Port of Oakland APL
LOCATION : Oakland, CA
PROJECT NO. : 127546–04000000

DRAWN BY	SCHAEFFER	CHECKED BY		DRAWING NO. : 127546–A1
DATE	8/28/07	APPROVED BY		

Shaw®

SPH or Purge Water Drum Log

Client: MSE

Site Address: 1395 Middle Harbor Rd, Oakland

STATUS OF DRUM(S) UPON ARRIVAL						
Date	6/14/07					
Number of drum(s) empty:						
Number of drum(s) 1/4 full:						
Number of drum(s) 1/2 full:						
Number of drum(s) 3/4 full:						
Number of drum(s) full:						
Total drum(s) on site:						
Are the drum(s) properly labeled?						
Drum ID & Contents:	0					
If any drum(s) are partially or totally filled, what is the first use date:						

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	6/14/07					
Number of drums empty:						
Number of drum(s) 1/4 full:	1					
Number of drum(s) 1/2 full:						
Number of drum(s) 3/4 full:						
Number of drum(s) full:						
Total drum(s) on site:	1					
Are the drum(s) properly labeled?	Y					
Drum ID & Contents:	Purgewater					

LOCATION OF DRUM(S)
Describe location of drum(s): Near Exit, in Equip Yard near soil stockpiles

FINAL STATUS						
Number of new drum(s) left on site this event	1					
Date of inspection:	6/14/07					
Drum(s) labelled properly:	Y					
Logged by BTS Field Tech:	PC					
Office reviewed by:						

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME MSE @ APL, Oakland				PROJECT NUMBER 070614.PC1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. C°	INITIALS
Myron L Ultrameter	L000489	6/14/07 815	4.0 PH	3.95pH	Y	24.8	
			7.0	7.02		25.3	PC
			10.0	10.01		24.8	
			3900µs	3901µs		27.6	
Hach Turbidimeter	060600C01703		100 NTU	100 NTU		—	
			800	810			
			<10	0.3		—	
		ORP	224.5mV @ 20C° → 224mV			27.0	

WELLHEAD INSPECTION CHECKLIST

Date 6/14/07 Client MSE

Site Address 1395 Middle Harbor Rd., Oakland

Job Number 070614-RC1 Technician P. Cornish

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
APLMP-W2		No Bolts - No tabs						
APLMP-W1		" "	" "	"				
MW-8		2/2 bolts missing						

NOTES:

WELL GAUGING DATA

Project # 070614-PC1 Date 6/14/07 Client MSE

Site 1395 Middle Harbor Rd. Oakland, CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
APLUP-W1		2					10.39	21.81	TOC	
APLUP-W2		2					9.74	16.98		
MW-8		2					10.90	16.81		

WELL MONITORING DATA SHEET

Project #: 0706	Client: MSE
Sampler: RC	Date: 6/14/07
Well I.D.: APLMP-W2	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 16.98	Depth to Water (DTW): 9.74
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.19	

Purge Method: Bailer / (✓) Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other ____

Sampling Method: Bailer / (✓) Disposable Bailer / Extraction Port / Dedicated Tubing / Other: ____

1 Case Volume		Specified Volumes		Calculated Volume
1.2	(Gals.) X	3	=	3.6 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	(mV) ORP Observations
0905	21.4	6.27	1977	11.6	Initial 1.2	88
0908	20.9	6.58	1729	17.0	2.4	82
0912	20.8	6.33	1725	15.0	3.6	59
0915	20.8	6.60	1717	14.2	↓	49

Did well dewater? Yes (No) Gallons actually evacuated: 3.6

Sampling Date: 6/14/07 Sampling Time: 0920 Depth to Water: 09.80

Sample I.D.: APLMP-W2 Laboratory: Kiff CalScience Other Entech

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 070614-R4	Client: MSE
Sampler: RC	Date: 6/14/07
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 16.61	Depth to Water (DTW): 10.90
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.86	

Purge Method: Bailer; (Disposable Bailer); Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: Bailer; (Disposable Bailer); Extraction Port; Dedicated Tubing; Other: _____

1 Case Volume	Specified Volumes	Calculated Volume
0.9 (Gals.) X	3	= 2.7 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations (MW) (RP)
947	21.3	7.20	2712	17.2	initial	cloudy -122
950	19.9	7.18	2830	174	1	-135
952	20.3	6.74	2815	313	2	-71
955	19.7	6.63	2819	450	3	-74

Did well dewater? Yes (No) Gallons actually evacuated: 3

Sampling Date: 6/14/07 Sampling Time: 1002 Depth to Water: 10.92

Sample I.D.: MW-8 Laboratory: Kiff CalScience Other Eutech

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 070614-PC1	Client: MSE
Sampler: PC	Date: 6/14/07
Well I.D.: APLUP-W1	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 21.81	Depth to Water (DTW): 10.39
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.67	

Purge Method: Bailer; ~~Disposable Bailer~~; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other____

Sampling Method: Bailer; (Disposable Bailer); Extraction Port; Dedicated Tubing; Other:____

1.8 (Gals.) X	3	= 5.4 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1008	21.3	6.64	1911	455	initial	-87
1012	20.3	6.64	2006	195	1.8	-126
1016	20.1	6.64	2005	29	3.6	-126
1020	20.3	6.75	1996	19	5.4	-122

Did well dewater? Yes (No) Gallons actually evacuated: 5.5

Sampling Date: 6/14/07 Sampling Time: ~~1020~~ 1026 Depth to Water: 10.39

Sample I.D.: APLUP-W1 Laboratory: Kiff CalScience Other

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: see COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-1@1036

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: see COC Lowhold

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

ATTACHMENT D

LABORATORY REPORT/
CHAIN-OF-CUSTODY DOCUMENT/
DATA QUALITY ASSESSMENT

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Della Murphy
MSE Group
302 Pendleton Way
Oakland, CA 94621

Lab Certificate Number: 55972
Issued: 06/22/2007

Project ID: MSE Group
Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Final Report

On June 15, 2007, samples were received under chain of custody for analysis.
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test / Comments
Liquid	Hold
	TPH-Extractable: EPA 3510C / EPA 8015B(M)
	TPH-Purgeable - GC/MS: EPA 5030B / GC/MS
	VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

C. L. Thom
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

MSE Group
302 Pendleton Way
Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-001 **Sample ID: B97** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:50 AM

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
1,1,1,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,1-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromo-3-Chloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromoethane (EDB)	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3,5-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dioxane	ND		1.0	50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Butanone (MEK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chloroethyl-vinyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Hexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Methyl-2-Pentanone(MIBK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrolein	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrylonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzene	**1.9**		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzyl Chloride	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromodichloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromoform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Disulfide	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Tetrachloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Detection Limit = Detection Limit for Reporting.
ND = Not Detected at or above the Detection Limit.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

MSE Group
302 Pendleton Way
Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-001 **Sample ID: B97** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:50 AM

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
cis-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
cis-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Cyclohexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dichlorodifluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Freon 113	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Hexachlorobutadiene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Iodomethane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropanol	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropylbenzene	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methylene Chloride	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Propylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Naphthalene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
p-Isopropyltoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Pentachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
sec-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Styrene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butanol (TBA)	ND		1.0	10	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrachloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrahydrofuran	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,4-Dichloro-2-butene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichlorofluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Acetate	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Chloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	109	60 - 130
Dibromofluoromethane	100	60 - 130
Toluene-d8	104	60 - 130

Analyzed by: XBian
Reviewed by: TFulton

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

MSE Group
302 Pendleton Way
Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-001 **Sample ID: B97** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:50 AM

TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	25	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.5	60 - 130
Dibromofluoromethane	105	60 - 130
Toluene-d8	97.1	60 - 130

Analyzed by: XBian
Reviewed by: TFulton

TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	6/19/2007	WD070619A	6/20/2007	WD070619A
59 µg/L Hydrocarbon (C10-C18).									
TPH as Motor Oil	ND		1.0	100	µg/L	6/19/2007	WD070619A	6/20/2007	WD070619A
No Bunker Oil pattern present.									

Surrogate	Surrogate Recovery	Control Limits (%)
n-Hexacosane	78.8	50 - 150

Analyzed by: JHsiang
Reviewed by: mtran

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 **Phone: (408) 588-0200** **Fax: (408) 588-0201**

MSE Group
302 Pendleton Way
Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-002 **Sample ID: APLUP-W1** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:26 AM

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
1,1,1,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,1-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromo-3-Chloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromoethane (EDB)	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3,5-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dioxane	ND		1.0	50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Butanone (MEK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chloroethyl-vinyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Hexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Methyl-2-Pentanone(MIBK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrolein	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrylonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzene	**14**		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzyl Chloride	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromodichloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromoform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Disulfide	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Tetrachloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chlorobenzene	**1.7**		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments. Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

MSE Group
302 Pendleton Way
Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-002 **Sample ID: APLUP-W1** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:26 AM

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
cis-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
cis-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Cyclohexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dichlorodifluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Ethyl Benzene	**0.56**		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Freon 113	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Hexachlorobutadiene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Iodomethane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropanol	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropylbenzene	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methylene Chloride	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Propylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Naphthalene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
p-Isopropyltoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Pentachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
sec-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Styrene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butanol (TBA)	ND		1.0	10	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrachloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrahydrofuran	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,4-Dichloro-2-butene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichlorofluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Acetate	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Chloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Xylenes, Total	**0.72**		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	109	60 - 130
Dibromofluoromethane	105	60 - 130
Toluene-d8	101	60 - 130

Analyzed by: XBian
Reviewed by: TFulton

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Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-002 **Sample ID: APLUP-W1** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:26 AM

TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	**150**		1.0	25	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.8	60 - 130
Dibromofluoromethane	110	60 - 130
Toluene-d8	94.1	60 - 130

Analyzed by: XBian
Reviewed by: TFulton

TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	6/19/2007	WD070619A	6/20/2007	WD070619A
170 µg/L Hydrocarbon (C9-C26).									
TPH as Motor Oil	ND		1.0	100	µg/L	6/19/2007	WD070619A	6/20/2007	WD070619A
No Bunker Oil pattern present.									

Surrogate	Surrogate Recovery	Control Limits (%)
n-Hexacosane	88.9	50 - 150

Analyzed by: JHsiang
Reviewed by: mtran

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
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Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-003 **Sample ID: APLUP-W2** **Matrix:** Liquid **Sample Date:** 6/14/2007 9:20 AM

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
1,1,1,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,1-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromo-3-Chloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromoethane (EDB)	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3,5-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dioxane	ND		1.0	50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Butanone (MEK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chloroethyl-vinyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Hexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Methyl-2-Pentanone(MIBK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrolein	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrylonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzyl Chloride	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromodichloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromoform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Disulfide	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Tetrachloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
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Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-003 **Sample ID: APLUP-W2** **Matrix:** Liquid **Sample Date:** 6/14/2007 9:20 AM

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
cis-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
cis-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Cyclohexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dichlorodifluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Freon 113	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Hexachlorobutadiene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Iodomethane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropanol	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropylbenzene	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methylene Chloride	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Propylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Naphthalene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
p-Isopropyltoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Pentachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
sec-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Styrene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butanol (TBA)	ND		1.0	10	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrachloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrahydrofuran	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,4-Dichloro-2-butene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichlorofluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Acetate	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Chloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	108	60 - 130
Dibromofluoromethane	102	60 - 130
Toluene-d8	106	60 - 130

Analyzed by: XBian
Reviewed by: TFulton

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

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MSE Group
302 Pendleton Way
Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-003 **Sample ID: APLUP-W2** **Matrix:** Liquid **Sample Date:** 6/14/2007 9:20 AM

TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	25	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	98.0	60 -	130
Dibromofluoromethane	107	60 -	130
Toluene-d8	99.3	60 -	130

Analyzed by: XBian
Reviewed by: TFulton

TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	6/19/2007	WD070619A	6/20/2007	WD070619A
90 µg/L Hydrocarbon (C9-C38).									
TPH as Motor Oil	ND		1.0	100	µg/L	6/19/2007	WD070619A	6/20/2007	WD070619A
No Bunker Oil pattern present.									

Surrogate	Surrogate Recovery	Control Limits (%)	
n-Hexacosane	88.5	50 -	150

Analyzed by: JHsiang
Reviewed by: mtran

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

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Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-004 **Sample ID: MW-8** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:02 AM

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
1,1,1,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,1-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromo-3-Chloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromoethane (EDB)	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3,5-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dioxane	ND		1.0	50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Butanone (MEK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chloroethyl-vinyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Hexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Methyl-2-Pentanone(MIBK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrolein	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrylonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzene	**2.4**		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzyl Chloride	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromodichloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromoform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Disulfide	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Tetrachloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

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MSE Group
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Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-004 **Sample ID: MW-8** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:02 AM

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
cis-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
cis-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Cyclohexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dichlorodifluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Freon 113	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Hexachlorobutadiene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Iodomethane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropanol	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropylbenzene	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methylene Chloride	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Propylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Naphthalene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
p-Isopropyltoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Pentachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
sec-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Styrene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butanol (TBA)	ND		1.0	10	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrachloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrahydrofuran	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,4-Dichloro-2-butene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichlorofluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Acetate	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Chloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Xylenes, Total	**0.54**		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	109	60 - 130
Dibromofluoromethane	101	60 - 130
Toluene-d8	104	60 - 130

Analyzed by: XBian
Reviewed by: TFulton

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments. Qual = Data Qualifier

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Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-004 **Sample ID: MW-8** **Matrix:** Liquid **Sample Date:** 6/14/2007 10:02 AM

TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	25	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	98.6	60 -	130
Dibromofluoromethane	106	60 -	130
Toluene-d8	96.7	60 -	130

Analyzed by: XBian
Reviewed by: TFulton

TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	6/19/2007	WD070619A	6/20/2007	WD070619A
130 µg/L Hydrocarbon (C9-C32).									
TPH as Motor Oil	ND		1.0	100	µg/L	6/19/2007	WD070619A	6/20/2007	WD070619A
No Bunker Oil pattern present.									

Surrogate	Surrogate Recovery	Control Limits (%)	
n-Hexacosane	82.0	50 -	150

Analyzed by: JHsiang
Reviewed by: mtran

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

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Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-006 **Sample ID: TB1** **Matrix:** Liquid **Sample Date:** 6/14/2007

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
1,1,1,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,1-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1,2-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,1-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,3-Trichloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trichlorobenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2,4-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromo-3-Chloropropane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dibromoethane (EDB)	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3,5-Trimethylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,3-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
1,4-Dioxane	ND		1.0	50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Butanone (MEK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chloroethyl-vinyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
2-Hexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Chlorotoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
4-Methyl-2-Pentanone(MIBK)	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acetonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrolein	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Acrylonitrile	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Benzyl Chloride	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromodichloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromoform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Bromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Disulfide	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Carbon Tetrachloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloroform	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Chloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments. Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

MSE Group
302 Pendleton Way
Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-006 **Sample ID: TB1** **Matrix:** Liquid **Sample Date:** 6/14/2007

VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
cis-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
cis-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Cyclohexanone	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dibromomethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Dichlorodifluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Freon 113	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Hexachlorobutadiene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Iodomethane	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropanol	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Isopropylbenzene	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Methylene Chloride	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
n-Propylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Naphthalene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
p-Isopropyltoluene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Pentachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
sec-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Styrene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butanol (TBA)	ND		1.0	10	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
tert-Butylbenzene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrachloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Tetrahydrofuran	ND		1.0	20	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
trans-1,4-Dichloro-2-butene	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Trichlorofluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Acetate	ND		1.0	5.0	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Vinyl Chloride	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	110	60 - 130
Dibromofluoromethane	102	60 - 130
Toluene-d8	104	60 - 130

Analyzed by: XBian
Reviewed by: TFulton

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 **Phone: (408) 588-0200** **Fax: (408) 588-0201**

MSE Group
302 Pendleton Way
Oakland, CA 94621
Attn: Della Murphy

Project ID: MSE Group

Project Name: APL
Project Location: 1359 Middle Harbor Rd.

Certificate of Analysis - Data Report

Samples Received: 06/15/2007
Sample Collected by: Blaine Tech

Lab # : 55972-006 **Sample ID: TB1** **Matrix:** Liquid **Sample Date:** 6/14/2007

TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	25	µg/L	N/A	N/A	6/21/2007	WM1A070621A

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	99.1	60 - 130
Dibromofluoromethane	106	60 - 130
Toluene-d8	97.2	60 - 130

Analyzed by: XBian
Reviewed by: TFulton

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

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Method Blank - Liquid - VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

QC Batch ID: WM1A070621A

Validated by: TFulton - 06/22/07

QC Batch Analysis Date: 6/21/2007

Parameter	Result	DF	PQLR	Units
1,1,1,2-Tetrachloroethane	ND	1	0.50	µg/L
1,1,1-Trichloroethane	ND	1	0.50	µg/L
1,1,2,2-Tetrachloroethane	ND	1	0.50	µg/L
1,1,2-Trichloroethane	ND	1	0.50	µg/L
1,1-Dichloroethane	ND	1	0.50	µg/L
1,1-Dichloroethene	ND	1	0.50	µg/L
1,1-Dichloropropene	ND	1	0.50	µg/L
1,2,3-Trichlorobenzene	ND	1	5.0	µg/L
1,2,3-Trichloropropane	ND	1	5.0	µg/L
1,2,4-Trichlorobenzene	ND	1	5.0	µg/L
1,2,4-Trimethylbenzene	ND	1	5.0	µg/L
1,2-Dibromo-3-Chloropropane	ND	1	5.0	µg/L
1,2-Dibromoethane (EDB)	ND	1	0.50	µg/L
1,2-Dichlorobenzene	ND	1	0.50	µg/L
1,2-Dichloroethane	ND	1	0.50	µg/L
1,2-Dichloropropane	ND	1	0.50	µg/L
1,3,5-Trimethylbenzene	ND	1	5.0	µg/L
1,3-Dichlorobenzene	ND	1	0.50	µg/L
1,3-Dichloropropane	ND	1	0.50	µg/L
1,4-Dichlorobenzene	ND	1	0.50	µg/L
1,4-Dioxane	ND	1	50	µg/L
2,2-Dichloropropane	ND	1	0.50	µg/L
2-Butanone (MEK)	ND	1	20	µg/L
2-Chloroethyl-vinyl Ether	ND	1	5.0	µg/L
2-Chlorotoluene	ND	1	5.0	µg/L
2-Hexanone	ND	1	20	µg/L
4-Chlorotoluene	ND	1	5.0	µg/L
4-Methyl-2-Pentanone(MIBK)	ND	1	20	µg/L
Acetone	ND	1	20	µg/L
Acetonitrile	ND	1	5.0	µg/L
Acrolein	ND	1	5.0	µg/L
Acrylonitrile	ND	1	5.0	µg/L
Benzene	ND	1	0.50	µg/L
Benzyl Chloride	ND	1	5.0	µg/L
Bromobenzene	ND	1	0.50	µg/L
Bromochloromethane	ND	1	0.50	µg/L
Bromodichloromethane	ND	1	0.50	µg/L
Bromoform	ND	1	0.50	µg/L
Bromomethane	ND	1	0.50	µg/L
Carbon Disulfide	ND	1	0.50	µg/L
Carbon Tetrachloride	ND	1	0.50	µg/L
Chlorobenzene	ND	1	0.50	µg/L
Chloroethane	ND	1	0.50	µg/L
Chloroform	ND	1	0.50	µg/L
Chloromethane	ND	1	0.50	µg/L
cis-1,2-Dichloroethene	ND	1	0.50	µg/L
cis-1,3-Dichloropropene	ND	1	0.50	µg/L
Cyclohexanone	ND	1	20	µg/L
Dibromochloromethane	ND	1	0.50	µg/L
Dibromomethane	ND	1	0.50	µg/L

Entech Analytical Labs, Inc.

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Method Blank - Liquid - VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

QC Batch ID: WM1A070621A Validated by: TFulton - 06/22/07

QC Batch Analysis Date: 6/21/2007

Parameter	Result	DF	PQLR	Units
Dichlorodifluoromethane	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Freon 113	ND	1	5.0	µg/L
Hexachlorobutadiene	ND	1	5.0	µg/L
Iodomethane	ND	1	5.0	µg/L
Isopropanol	ND	1	20	µg/L
Isopropylbenzene	ND	1	1.0	µg/L
Methylene Chloride	ND	1	20	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
Naphthalene	ND	1	5.0	µg/L
n-Butylbenzene	ND	1	5.0	µg/L
n-Propylbenzene	ND	1	5.0	µg/L
Pentachloroethane	ND	1	0.50	µg/L
p-Isopropyltoluene	ND	1	5.0	µg/L
sec-Butylbenzene	ND	1	5.0	µg/L
Styrene	ND	1	0.50	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
tert-Butylbenzene	ND	1	5.0	µg/L
Tetrachloroethene	ND	1	0.50	µg/L
Tetrahydrofuran	ND	1	20	µg/L
Toluene	ND	1	0.50	µg/L
trans-1,2-Dichloroethene	ND	1	0.50	µg/L
trans-1,3-Dichloropropene	ND	1	0.50	µg/L
trans-1,4-Dichloro-2-butene	ND	1	5.0	µg/L
Trichloroethene	ND	1	0.50	µg/L
Trichlorofluoromethane	ND	1	0.50	µg/L
Vinyl Acetate	ND	1	5.0	µg/L
Vinyl Chloride	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**108**	60 - 130
Dibromofluoromethane	**99.0**	60 - 130
Toluene-d8	**106**	60 - 130

Method Blank - Liquid - TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

QC Batch ID: WM1A070621A Validated by: TFulton - 06/22/07

QC Batch Analysis Date: 6/21/2007

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**97.9**	60 - 130
Dibromofluoromethane	**104**	60 - 130
Toluene-d8	**98.5**	60 - 130

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

QC Batch ID: WM1A070621A Reviewed by: TFulton - 06/22/07

QC Batch ID Analysis Date: 6/21/2007

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	21.7	µg/L	108	70 - 130
Benzene	<0.50	20	21.5	µg/L	108	70 - 130
Chlorobenzene	<0.50	20	20.2	µg/L	101	70 - 130
Methyl-t-butyl Ether	<1.0	20	22.7	µg/L	114	70 - 130
Toluene	<0.50	20	19.2	µg/L	96.0	70 - 130
Trichloroethene	<0.50	20	19.8	µg/L	99.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**117**	60 - 130
Dibromofluoromethane	**109**	60 - 130
Toluene-d8	**99.6**	60 - 130

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	21.5	µg/L	108	0.926	25.0	70 - 130
Benzene	<0.50	20	22.2	µg/L	111	3.20	25.0	70 - 130
Chlorobenzene	<0.50	20	21.4	µg/L	107	5.77	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	23.5	µg/L	118	3.46	25.0	70 - 130
Toluene	<0.50	20	20.5	µg/L	102	6.55	25.0	70 - 130
Trichloroethene	<0.50	20	21.0	µg/L	105	5.88	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**109**	60 - 130
Dibromofluoromethane	**106**	60 - 130
Toluene-d8	**99.9**	60 - 130

LCS / LCSD - Liquid - TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

QC Batch ID: WM1A070621A Reviewed by: TFulton - 06/22/07

QC Batch ID Analysis Date: 6/21/2007

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	125	136	µg/L	109	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**101**	60 - 130
Dibromofluoromethane	**104**	60 - 130
Toluene-d8	**95.2**	60 - 130

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	125	131	µg/L	105	3.74	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**95.6**	60 - 130
Dibromofluoromethane	**102**	60 - 130
Toluene-d8	**96.0**	60 - 130

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC/Prep Batch ID: WD070619A

Validated by: mtran - 06/22/07

QC/Prep Date: 6/19/2007

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L
TPH as Motor Oil	ND	1	100	µg/L

Surrogate for Blank	% Recovery	Control Limits
n-Hexacosane	**88.1**	50 - 150

LCS / LCSD - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC Batch ID: WD070619A

Reviewed by: mtran - 06/22/07

QC/Prep Date: 6/19/2007

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<50	1000	1150	µg/L	115	45 - 140
TPH as Motor Oil	<100	1000	1140	µg/L	114	45 - 140

Surrogate	% Recovery	Control Limits
n-Hexacosane	**81.8**	50 - 150

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<50	1000	1180	µg/L	118	3.12	25.0	45 - 140
TPH as Motor Oil	<100	1000	1220	µg/L	122	6.89	25.0	45 - 140

Surrogate	% Recovery	Control Limits
n-Hexacosane	**80.1**	50 - 150

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 070614-PC1

CLIENT: MSE Group

SITE: APL
1359 Middle Harbor Rd.
Oakland, CA

CONDUCT ANALYSIS TO DETECT

LAB: Entech 55972 | DHS #

MUST MEET SPECIFICATIONS
☑ EPA ☐ RWQCB REGION
☐ LIA
☐ OTHER

SPECIAL INSTRUCTIONS

Invoice and Report to: MSE Group

Attn: Joseph Cotton

Project # : Contact MSE Group for information.

SAMPLE I.D.	DATE	TIME	MATRIX (S = Soil, W = H2O)	CONTAINERS TOTAL	CONTAINERS 2x1L Amber 3x40ml Voa HCl	C = COMPOSITE ALL CONTAINERS	TPH-G / VOCs (8260)	TPH-D / Motor Oil / TPH-Bunker C							ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
B97	6/14/07	1050	W	5			X	X	-001									
APLUP-W1		1026		5			X	X	-002									
APLUP-W2		0920		5			X	X	-003									
MW8		1002		5			X	X	-004									
DUP		1036		5			X	X	-005						DS Sample ID Dup-1			
TB1		–		1	1x40ml Voa		X		006									

2 Lit Ambers each N/P
3 VOAs each (HCl)

SAMPLING COMPLETED	DATE 6/14/07	TIME 1100	SAMPLING PERFORMED BY P. Cornish, S. Kelsoe	RESULTS NEEDED NO LATER THAN Standard

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
P. Cornish	6/14/07	1650	P. Cornish	6/14/07	1650
[signature]	6/15/07	1450	[signature]	6/15/07	1450
[signature]	6/15/07	1512	[signature]	6/15/07	1519

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

From:	William Jones
To:	dtheesen@entechlabs.com;
CC:	
Subject:	COC Revision
Date:	Monday, June 18, 2007 9:17:15 AM
Attachments:	COCmseAPLrev2q07.pdf

Hi Diane,
Please note the revision to the attached COC. The sample labeled "DUP" is to be on HOLD. MSE will notify you if sample is to be analyzed. Contact me if you have any questions.
Thanks,

William Jones
Regional Manager
Blaine Tech Services, Inc.
1680 Rogers Avenue San Jose, CA 95112
Ph. 408-573-0555 x200 Fax 408-573-7771

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 070614-PCL

CLIENT MSE Group

SITE APL
1359 Middle Harbor Rd.
Oakland, CA

C = COMPOSITE ALL CONTAINERS

CONDUCT ANALYSIS TO DETECT

LAB Entech DHS #

MUST MEET SPECIFICATIONS
- [x] EPA
- [ ] LIA
- [ ] OTHER
- [ ] RWQCB REGION

SPECIAL INSTRUCTIONS

Invoice and Report to: MSE Group

Attn: Joseph Cotton

Project # : Contact MSE Group for Information.

SAMPLE I.D.	DATE	TIME	MATRIX S = Soil W = H2O	CONTAINERS TOTAL	2x1L Amber 3x40ml Vials	TPH-G / VOCs (8260)	TPH-D / Motor Oil / TPH-Bunker C	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
B97	6/14/07	1050	W	5		K	1				
APLUP-W1		1026		5		K	K				
APLUP-W2		0920		5		K	K				
MW8		1002		5		K	K				
DUP		1026		5		K	K	ON Hold	@ 6/18/07		
TB1		-		1	1x40ml Vial	K					

SAMPLING COMPLETED	DATE	TIME
	6/14/07	1100

SAMPLING PERFORMED BY P. Comish, E. Kelsoe

RESULTS NEEDED NO LATER THAN Standard

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
P Comish	6/14/07	1650	Pat Wil	6/14/07	1655
	6/15/07	1450		6/15/07	1450

RELEASED BY

RECEIVED BY

SHIPPED VIA | DATE SENT | TIME SENT | COOLER #

Data Quality Assessment

A total of five groundwater samples and one trip blank were collected on June 14, 2007. All samples were shipped to Entech Analytical Labs, Inc. located in Santa Clara, California for analyses. The groundwater samples were analyzed for VOCs/gasoline and diesel by EPA Method 8260B and EPA Method 8015; respectively. The trip blank was analyzed for VOCs and gasoline only. Sample DUP was collected during the same sampling event, and put on hold as a backup. The laboratory is currently certified for the National Environmental Accreditation Program by the State of California Department of Health Services to perform the required analyses.

A Level III data review was performed on all analytical results obtained from the June sampling event. The review was performed in accordance with the guidelines and control criteria specified in the following documents:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, (USEPA, 1999); and

- USEPA Test Methods for Evaluating Solid Waste, SW-846 Physical/Chemical Methods (1996).

The following quality control (QC) elements were included in the Level III data review:

- Laboratory method blanks;
- Sample holding times;
- Surrogate recovery;
- Laboratory control sample/laboratory control sample duplicate recoveries (LCS/LCSD);
- Matrix spike/matrix spike duplicate recoveries (MS/MSD);
- Relative percent differences (RPD); and
- Trip blanks

Laboratory Method Blanks: All field sample results were evaluated with respect to the laboratory method blank prepared and analyzed for each analytical batch. For the June sampling event, one laboratory method blank was prepared for VOC/gasoline analysis; and another blank was prepared for diesel analysis. Both blanks were free of any target analytes.

Sample Holding Times: Sample holding times were evaluated by comparing the sample collection dates to the sample extraction and analysis dates. Analysis holding times were reviewed for all samples to determine the validity of analytical results. Based on the review, all samples from the June sampling event met the extraction and analysis holding time requirements.

Surrogate Recovery: Surrogate standards are organic compounds added to field and laboratory QC samples for organic analysis to evaluate matrix effect and method performance on an individual sample basis. Based on the review, surrogate recoveries for all samples were acceptable for the June sampling event.

Laboratory Control Sample/Laboratory Control Sample Duplicate: The LCS is an aliquot of analyte-free matrix spiked with target analytes and is prepared with each batch. The recovery of target analytes from the LCS analysis is a measurement of method performance in an interference-free sample matrix. The review indicated that LCS and LCSD recoveries, and RPDs between LCS and LCSD recoveries met the established accuracy and precision requirements.

Matrix Spike/Matrix Spike Duplicates: The MS and MSD samples are a portion of a field sample spiked with target analytes, and are prepared with each analytical batch. The MS/MSD results are used to evaluate any bias introduced to the method due to matrix interference, and to measure accuracy and precision for each analytical batch. No MS/MSD samples were collected for the June sampling event.

Trip Blank: Trip blanks are prepared by the laboratory and stored along with all groundwater samples for VOC and gasoline analyses. Samples for VOC and gasoline analyses are maintained in as few coolers as possible to minimize the number of required trip blanks. For the June sampling event, one trip blank was shipped with the samples. No target analytes were detected in the trip blank. The trip blank results indicated good sample storage and shipping procedures.

Based on the above Level III data review, no significant, systematic problems were identified with the performance of the EPA Method 8260B and EPA Method 8015. No data qualification was applied to any analytical results obtained from the June sampling event. All data are usable and available for project decisions. Overall, the data are of good technical quality and usable to meet project objectives.

Chemical Analytical Data Review/Validation Form

Report Type: { } Preliminary {X} Final

Project Number: 127564 Project Name: MSE Group, APL, Oakland

Analysis/Method: VOC Laboratory: Entech SDG # not specified,

Evaluated By: Shuang Date Evaluated: 8/29/2007

Sample Number(s): B97, APLUP-W1, APLUP-W2, MW8, DUP, TB1

REVIEW QUESTIONS	YES	NO	COMMENTS
1. Were holding times met?	X		Sampled on 6/14 and analyzed on 6/21/07
2. Were sample preservation requirements met? (Sample condition, preservation, containers, temperature, etc.)			Temp not documented sample preserved with HCL
3. Were QAPP specified PQLs achieved?	X		
4. Were measurement results for all QAPP-specific target analytes reported?	X		
5. Was a method blank prepared and analyzed with each batch?	X		
6. Were target analytes reported in the method blank above the PQL?		X	All ND in the batch
7. Was an equipment blank collected and analyzed at the required frequency stated in the site-specific FSP?		X	
8. Were target analytes reported in field blank analyses (trip or equipment) above the PQL?		X	TB1 all ND
9. Was a field duplicate analyzed? Were RPDs within QAPP specifications?		X	
10. Surrogate Recoveries – Were all samples spiked prior to purging or preparation?	X		
11. Were surrogate recoveries within QAPP specifications?	X		Within 60-130 percent
12. Was an LCD/LCSD pair prepared and analyzed with each batch?	X		
13. Were LCS/LCSD RPDs within recoveries within QAPP specifications?	X		Within 70-130%, 25% RSD
14. Was a MS/MSD pair prepared with each batch?		X	

DUP collected, but put on hold

REVIEW QUESTIONS	YES	NO	COMMENTS
15. Is the MS/MSD parent sample a project sample?		X	
16. Were initial calibration standards analyzed at the QAPP-specific frequency for each instrument?			Not provided
17. Were these results within project specifications?			NA
18. Were continuing calibration standards analyzed at the QAPP-specific frequency for each instrument?			Not provided
19. Were these results within project specifications?			NA
20. Were laboratory-generated Quality Control Exception Reports (i.e., QCERs) issued? If yes, summarize contents.			
21. Were lab comments included in the report? If yes, summarize contents			

Chemical Analytical Data Review/Validation Form

Report Type: { } Preliminary {X} Final

Project Number: 127564 Project Name: MSE Group, APL, Oakland

Analysis/Method: Gasoline Laboratory: Entech SDG # not specified,

Evaluated By: Shuang Date Evaluated: 8/29/2007

Sample Number(s): B97, APLUP-W1, APLUP-W2, MW8, DUP, TB1

REVIEW QUESTIONS	YES	NO	COMMENTS
1. Were holding times met?	X		Sampled on 6/14 and analyzed on 6/21/07
2. Were sample preservation requirements met? (Sample condition, preservation, containers, temperature, etc.)			Temp not documented sample preserved with HCL
3. Were QAPP specified PQLs achieved?	X		
4. Were measurement results for all QAPP-specific target analytes reported?	X		
5. Was a method blank prepared and analyzed with each batch?	X		
6. Were target analytes reported in the method blank above the PQL?		X	All ND in the batch
7. Was an equipment blank collected and analyzed at the required frequency stated in the site-specific FSP?		X	
8. Were target analytes reported in field blank analyses (trip or equipment) above the PQL?		X	TB1 all ND
9. Was a field duplicate analyzed? Were RPDs within QAPP specifications?		X	
10. Surrogate Recoveries – Were all samples spiked prior to purging or preparation?	X		
11. Were surrogate recoveries within QAPP specifications?	X		Within 60-130 percent
12. Was an LCD/LCSD pair prepared and analyzed with each batch?	X		
13. Were LCS/LCSD RPDs within recoveries within QAPP specifications?	X		Within 65-1350%, 25% RSD
14. Was a MS/MSD pair prepared with each batch?		X	

DUP collected, but put on hold

REVIEW QUESTIONS	YES	NO	COMMENTS
15. Is the MS/MSD parent sample a project sample?		X	
16. Were initial calibration standards analyzed at the QAPP-specific frequency for each instrument?			Not provided
17. Were these results within project specifications?			NA
18. Were continuing calibration standards analyzed at the QAPP-specific frequency for each instrument?			Not provided
19. Were these results within project specifications?			NA
20. Were laboratory-generated Quality Control Exception Reports (i.e., QCERs) issued? If yes, summarize contents.			
21. Were lab comments included in the report? If yes, summarize contents			

Chemical Analytical Data Review/Validation Form

Report Type: { } Preliminary {X} Final

Project Number: 127564 Project Name: MSE Group, APL, Oakland

Analysis/Method: Diesel Laboratory: Entech SDG # not specified,

Evaluated By: Shuang Date Evaluated: 8/29/2007

Sample Number(s): B97, APLUP-W1, APLUP-W2, MW8, DUP

REVIEW QUESTIONS	YES	NO	COMMENTS
1. Were holding times met?	X		Sampled on 6/14, extracted on 6/19 and analyzed on 6/20/07
2. Were sample preservation requirements met? (Sample condition, preservation, containers, temperature, etc.)			Temp not documented sample preserved with HCL
3. Were QAPP specified PQLs achieved?	X		
4. Were measurement results for all QAPP-specific target analytes reported?	X		
5. Was a method blank prepared and analyzed with each batch?	X		
6. Were target analytes reported in the method blank above the PQL?		X	All ND in the batch
7. Was an equipment blank collected and analyzed at the required frequency stated in the site-specific FSP?		X	
8. Were target analytes reported in field blank analyses (trip or equipment) above the PQL?		NA	
9. Was a field duplicate analyzed? Were RPDs within QAPP specifications?		X	
10. Surrogate Recoveries – Were all samples spiked prior to purging or preparation?	X		
11. Were surrogate recoveries within QAPP specifications?	X		Within 50-150 percent
12. Was an LCD/LCSD pair prepared and analyzed with each batch?	X		
13. Were LCS/LCSD RPDs within recoveries within QAPP specifications?	X		Within 45-140%, 25% RSD
14. Was a MS/MSD pair prepared with each batch?		X	

DUP collected, but put on hold

REVIEW QUESTIONS	YES	NO	COMMENTS
15. Is the MS/MSD parent sample a project sample?		X	
16. Were initial calibration standards analyzed at the QAPP-specific frequency for each instrument?			Not provided
17. Were these results within project specifications?			NA
18. Were continuing calibration standards analyzed at the QAPP-specific frequency for each instrument?			Not provided
19. Were these results within project specifications?			NA
20. Were laboratory-generated Quality Control Exception Reports (i.e., QCERs) issued? If yes, summarize contents.			
21. Were lab comments included in the report? If yes, summarize contents			