

**THIRD QUARTER 2005
GROUNDWATER MONITORING**

**ABE Petroleum LLC
17715 Mission Boulevard
Hayward, California 94539**

**Prepared for
Mr. Paul Garg
ABE Petroleum LLC**

Environmental Health

OCT 13 2005

Alameda County

**Prepared by
Sierra Environmental, Inc.**

**October 5, 2005
Project 03-103.07**



Sierra Environmental, Inc.
Environmental Consultants

Alameda County
OCT 18 2005
Environmental Health

October 5, 2005
Project 03-103.07

Mr. Paul Garg
ABE Petroleum LLC
33090 Mission Boulevard
Union City, California 94587

Subject: Report for Third Quarter 2005 Groundwater Monitoring, ABE Petroleum LLC, 17715 Mission Boulevard, Hayward, California

Dear Mr. Garg:

Sierra Environmental, Inc. (Sierra) is pleased to present this report summarizing the results for the third quarter 2005 groundwater monitoring at the subject location, hereafter, referred to as Site. Figure 1 shows the Site location. The groundwater monitoring was concurred by Alameda County Health Care Services (ACHCS) in a letter dated February 16, 2000, as result of gasoline impact to groundwater beneath the Site.

On September 22, 2005, Sierra obtained and recorded groundwater data, and collected groundwater samples from three groundwater monitoring wells (MW1 through MW3) at the Site for chemical analysis. Sierra submitted the samples to Entech Analytical Labs, Inc. (Entech) of Santa Clara, California for chemical analysis. Entech is an independent State-certified analytical laboratory (# 2346).

980 W. Taylor Street
San Jose, CA 95126
Phone (408) 971-6758
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BACKGROUND

On September 16, 1997, Balch Petroleum Contractors & Builders, Inc. (Balch) of Milpitas, California, removed one 2,000-gallon, two 6,000-gallon, one 10,000-gallon single-wall steel gasoline, and one 500-gallon single-wall steel waste oil USTs from the Site. Former UST locations are shown in Figure 2.

No hole or damage was observed in the tanks. No groundwater was encountered in the tank excavations. After UST removal, Sierra collected soil samples from the tank excavations for chemical analysis.

Up to 2,300 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHG) was detected in the soil samples collected from beneath the tanks at approximately 14 feet below ground surface (bgs). The soil sample locations are shown in Figure 2.

On August 14, 2000, Sierra drilled three exploratory soil borings and converted them to groundwater monitoring well MW1 through MW3. The wells are approximately 35 feet deep. Sierra collected soil and groundwater samples from the borings/wells for chemical analysis. The analytical results showed up to 720 ppm TPHG, 2.2 ppm benzene, and 3.4 ppm methyl tertiary butyl ether (MTBE) in the soil samples. Up to 290000 ppb TPHG, 10000 ppb benzene, and 4300 ppb MTBE were detected in the groundwater samples. Gasoline constituents were detected in groundwater samples collected from all three monitoring wells. Groundwater monitoring well locations are shown on Figure 3.

On March 30, 2001, Sierra performed first quarter 2001 groundwater monitoring at the Site. The field and analytical results are presented in Table I and II. Groundwater was measured at approximately 20 to 21 feet from top of the well casing (TOC) at the Site with a northwesterly flow direction.

On June 22, 2001, Sierra performed second quarter 2001 groundwater monitoring at the Site. Groundwater levels were measured at approximately 22 to 23 feet below TOC with a northwesterly flow direction during this monitoring event.

On September 20, 2001, Sierra performed third quarter 2001 groundwater monitoring at the Site. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 24 to 25 feet below TOC with a northwesterly flow direction during this monitoring event.

On December 27, 2001, Sierra performed fourth quarter 2001 groundwater monitoring at the Site. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 22.59 to 23.82 feet below TOC with a northwesterly flow direction during this monitoring event.

On September 24, 2002, Sierra performed third quarter 2002 groundwater monitoring at the Site. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 23.69 to 24.89 feet below TOC with a northwesterly flow direction during this monitoring event.

On December 17, 2002, Sierra performed fourth quarter 2002 groundwater monitoring at the Site. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 22.75 to 23.99 feet below TOC with a northwesterly flow direction during this monitoring event.

On April 2, 2003, Sierra performed first quarter 2003 groundwater monitoring at the Site. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 21.25 to 22.32 feet below TOC with a westerly flow direction during this monitoring event.

On June 12, 2003, Sierra performed second quarter 2003 groundwater monitoring at the site. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 20.64 to 20.94 feet below TOC with a westerly flow direction during this monitoring event.

Sierra prepared soil and Groundwater investigation plan and addendum to the plan dated May 27 and September 10, 2003 respectively for the site. The Addendum to the plan dated September 10, 2003 is being reviewed by ACHCS.

On September 29, 2003, Sierra performed third quarter 2003 groundwater monitoring at the site. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 22.95 to 24.15 feet below TOC with a westerly flow direction during this monitoring event.

On December 4, 2003, Sierra performed fourth quarter 2003 groundwater monitoring at the site. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 23.70 to 24.91 feet below TOC with a westerly flow direction during this monitoring event.

On March 9, 2004, Sierra performed first quarter 2004 groundwater monitoring at the Site. Sierra's field personnel measured the groundwater levels at MW1 through MW3 (Figure 3). Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 19.80 to 20.20 feet below TOC with a northwesterly flow direction during this monitoring event. Table I presents the groundwater measurement data.

On June 24, 2004, Sierra performed second quarter 2004 groundwater monitoring at the Site. Sierra's field personnel measured the groundwater levels at MW1 through MW3 (Figure 3). Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 21.44 to 22.95 feet below TOC with a northwesterly flow direction during this monitoring event. Table I presents the groundwater measurement data.

On September 9, 2004, Sierra performed third quarter 2004 groundwater monitoring at the Site. Sierra's field personnel measured the groundwater levels at MW1 through MW3 (Figure 3). Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 23.30' to 24.55' feet below TOC with a northwesterly flow direction during this monitoring event. Table I presents the groundwater measurement data.

On December 21, 2004, Sierra performed fourth quarter 2004 groundwater monitoring at the Site. Sierra's field personnel measured the groundwater levels at MW1 through MW3 (Figure 3). Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 22.92' to 24.21' feet below TOC with a northwesterly flow direction during this monitoring event. Table I presents the groundwater measurement data.

On March 16, 2005, Sierra performed first quarter 2005 groundwater monitoring at the Site. Sierra's field personnel measured the groundwater levels at MW1 through MW3 (Figure 3). Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 18.99' to 20.29' feet below TOC with a northwesterly flow direction during this monitoring event. Table I presents the groundwater measurement data.

On June 9, 2005, Sierra performed second quarter 2005 groundwater monitoring at the Site. Sierra's field personnel measured the groundwater levels at MW1 through MW3 (Figure 3). Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 20.02' to 21.68' feet below TOC with a northwesterly flow direction during this monitoring event. Table I presents the groundwater measurement data.

GROUNDWATER MONITORING

On September 22, 2005, Sierra performed the third quarter 2005 groundwater monitoring at the Site. Sierra's field personnel measured the groundwater levels at MW1 through MW3 (Figure 3) using an electronic sounder. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 20.69' to 21.98' feet below TOC with a northwesterly flow direction during this monitoring event. Table I presents the groundwater measurement data.

Sierra's field personnel purged the wells using bailers. pH, temperature, and electrical conductivity of groundwater were recorded during the purging activities to affirm that groundwater in the wells have stabilized. After completion of the purging, groundwater samples MW-1 through MW-3 were collected from the wells. After collection, the groundwater from each well was transferred into clean volatile organic analysis (VOA) vials. The VOAs were sealed with Teflon-septum screw caps, labeled, placed on ice in a cooler, and delivered to Entech with chain-of-custody documentation.

All sampling and measurement equipment were washed with Liqui-Nox[®] (a phosphate free laboratory detergent), and rinsed with tap water at each measurement and sampling interval. Purged and wash water was stored in 55-gallon drums at a designated location at the Site. Sierra's quality assurance/quality control (QA/QC) protocol is presented in Appendix A.

CHEMICAL ANALYSIS

The samples were analyzed for TPHG using the United States Environmental Protection Agency (EPA) method GC-MS. The samples were also analyzed for benzene, toluene, ethyl benzene, total xylenes (BTEX), and fuel oxygenates using EPA method 8260B. Copies of certified analytical results and chain-of-custody documentation are presented in Appendix B. Copies of the field notes are presented in Appendix C.

Sierra has submitted the analytical results to the State Water Board via Geotracker.

ANALYTICAL RESULTS

Table II presents Summary of the analytical results.

ENCROACHMENT PERMIT PROCEDURS

In August and September 2005, Sierra identified site's neighboring property representatives and mailed them access permission (Encroachment Permit) for drilling boring holes at their properties. This activity was presented in a work plan dated May 27, 2003. ACHCH approved the work plan on July 11, 2005. As of now no

their properties. Sierra has requested their permission twice. Sierra has obtained access permission from Jack-in-The-Box, southwest of Site and a residential property, northwest of the Site.

CONCLUSION AND RECOMMENDATIONS

The analytical results for the gasoline constituents in the groundwater samples obtained during this monitoring event show a generally decreasing trend in concentrations in comparison with the same hydrologic cycle in 2004.

Sierra recommends reevaluating locations of the proposed Borings/Monitoring Wells with the soil and groundwater investigation, and corrective action at the site as soon as possible, without a need to obtain access permission from Cal/Trans. Sierra recommends continuing with quarterly groundwater monitoring at the site during 2005.

LIMITATIONS

The content and conclusion provided by Sierra in this report are based on information collected during its assessment/monitoring, which include, but are not limited to field observations and analytical results for the groundwater samples collected at the Site.

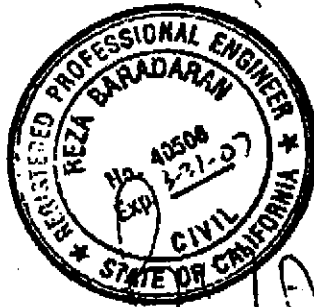
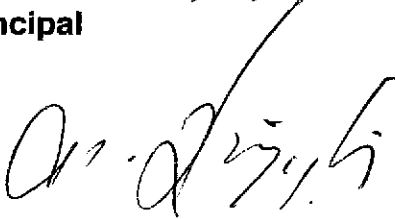
Sierra assumes that the samples collected and laboratory results are reasonably representative of the whole Site, which may not be the case at unsampled areas.

This assessment/monitoring was performed in accordance with generally accepted principles and practices of environmental engineering and assessment in Northern California at the time of the work. This report presents our professional opinion based on our findings, technical knowledge, and experience working on similar projects. No warranty, either expressed or implied, is made. The conclusions presented are based on the analytical results and current regulatory requirements. We are not responsible for the impact of any changes in environmental standards or regulations in the future.

Please feel welcome to call us if you have questions.

Very Truly Yours,
Sierra Environmental, Inc.

Reza Baradaran, PE, GE
Principal



10-6-2005

Mitch Hajiaghai, REA II, CAC
Principal

- Attachments:
- Table I - Groundwater Elevation Data
 - Table II - Analytical Results for Groundwater Samples
 - Figure 1 - Site Location Map
 - Figure 2 - Former UST and Soil Sample Locations
 - Figure 3 - Groundwater Monitoring Well Locations
 - Appendix A - QA/QC Protocol
 - Appendix B - Certified Analytical Results and Chain-of-Custody Documentation
 - Appendix C - Field Notes

cc: Mr. Amir Gholami, ACHCS (1 Copy)

R04-103.07\3rdQ2005GWMH10052005

**TABLE I
GROUNDWATER ELEVATION DATA**

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to ¹ Water (ft)	Water Table ² Elevation (ft)
MW1	8-18-00	2	99.46	20.32	79.14
	3-30-01			20.30	79.16
	6-22-01			21.91	77.55
	9-20-01			23.56	75.90
	12-27-01			22.59	76.87
	9-24-02			23.69	75.77
	12-17-02			22.75	76.71
	4-2-03			21.15	78.31
	6-12-03			20.64	78.82
	9-29-03			22.95	76.51
	12-04-03			23.70	75.76
	03-09-04			19.80	79.66
	6-24-04			21.44	78.02
	9-09-04			23.30	76.16
	12-21-04			22.92	76.54
	3-16-05			18.99	80.47
6-09-05	20.02	79.44			
9-22-05	20.69	78.77			
MW2	8-18-00	2	100.58	21.55	79.03
	3-30-01			21.55	79.03
	6-22-01			23.15	77.43
	9-20-01			24.78	75.80
	12-27-01			23.82	76.76
	9-24-02			24.89	75.69
	12-17-02			23.99	76.59
	4-2-03			22.32	78.26
	6-12-03			21.84	78.74
	9-29-03			24.15	76.43
	12-04-03			24.91	75.67
	03-09-04			21.05	79.53
	6-24-04			22.95	77.63
	9-09-04			24.55	76.03
	12-21-04			24.21	76.37
	3-16-05			20.29	80.29
6-09-05	21.68	78.90			
9-22-05	21.98	78.60			

**TABLE I
GROUNDWATER ELEVATION DATA
CONTINUED**

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to Water (ft)	Water Table Elevation (ft)
MW3	8-18-00	2	99.69	20.68	79.01
	3-30-01			20.68	79.01
	6-22-01			22.31	77.38
	9-20-01			23.92	75.77
	12-27-01			22.95	76.74
	9-24-02			24.03	75.66
	12-17-02			23.09	76.60
	4-2-03			21.46	78.23
	6-12-03			20.99	78.70
	9-29-03			23.30	76.39
	12-04-03			24.05	75.64
	03-09-04			20.20	79.49
	6-24-04			22.11	77.58
	9-09-04			20.20	79.49
	12-21-04			23.35	76.34
	3-16-05			19.43	80.26
6-09-05	20.47	79.22			
9-22-05	21.13	78.56			

1. Depths to groundwater were measured to the top of the well casings
2. Water table elevations were measured in relation to an assumed datum (100') relative elevation

**TABLE II
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**

Sample ID	Sample Date	Sample Location	TPHG µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-1	8-18-00	MW1	280,000	10,000	16,000	11,000	49,000	4,000
*	3-30-01		98,000	8,600	14,000	6,300	26,000	7,600
*	6-22-01		110,000	7,500	12,000	5,700	24,000	3,800
*	9-20-01		93,000	8,700	11,000	6,300	27,000	4,600
*	12-27-01		140,000	7,700	11,000	6,500	28,000	7,700
*	9-24-02		110,000	4,600	4,000	4,000	18,000	3,400
*	12-17-02		110,000	6,600	6,700	5,400	23,000	2,900
*	4-2-03		89,000	4,800	6,000	4,600	20,000	5,900
*	6-12-03		69,000	4,100	4,300	3,900	17,000	4,700
*	9-29-03		96,000	7,000	7,700	5,100	22,000	6,200
*	12-04-03		110,000	5,800	5,900	4,300	18,000	4,500
*	03-09-04		130,000	5,900	9,700	4,900	22,000	6,000
*	6-24-04		48,000	5,800	7,500	4,000	18,000	4,000
*	9-09-04		64,000	4,800	7,500	4,500	19,000	2,200
*	12-21-04		53,000	4,800	6,000	3,600	15,000	2,600
*	3-16-05		82,000	4,000	8,600	3,900	18,000	4,300
*	6-09-05		52,000	3,600	6,400	3,300	17,000	3,500
*	9-22-05		62,000	3,500	5,400	3,900	17,000	2,100
MW-2	8-18-00	MW2	290,000	3700	990	7,300	26,000	ND ⁹
*	3-30-01		47,000	3,200	470	4,500	13,000	3,100
*	6-22-01		57,000	2,500	350	4,200	12,000	1,800
*	9-20-01		42,000	2,300	230	4,300	12,000	2,200
*	12-27-01		70,000	2,900	390	4,800	14,000	2,400
*	9-24-02		110,000	1,600	200	3,400	9,100	2,500
*	12-17-02		66,000	2,400	340	4,600	13,000	1,900
*	4-2-03		29,000	1,000	130	2,300	5,100	2,000
*	6-12-03		8,700	380	52	790	2,000	2,200
*	9-29-03		52,000	1,700	200	4,500	9,800	2,300
*	12-04-03		66,000	1,500	210	4,500	9,200	1,900
*	03-09-04		61,000	1,500	2,000	4,200	8,500	2,200
*	6-24-04		29,000	1,200	72	3,100	6,000	2,100
*	9-09-04		37,000	1,600	110	4,000	8,500	3,100
*	12-21-04		27,000	1,400	84	3,100	5,400	3,200
*	3-16-05		54,000	1,700	140	4,500	8,900	4,000
*	6-09-05		2,800	420	ND	180	51	930
*	9-22-05		33,000	1,400	ND	3,400	5,700	2,200

**TABLE II
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
CONTINUED**

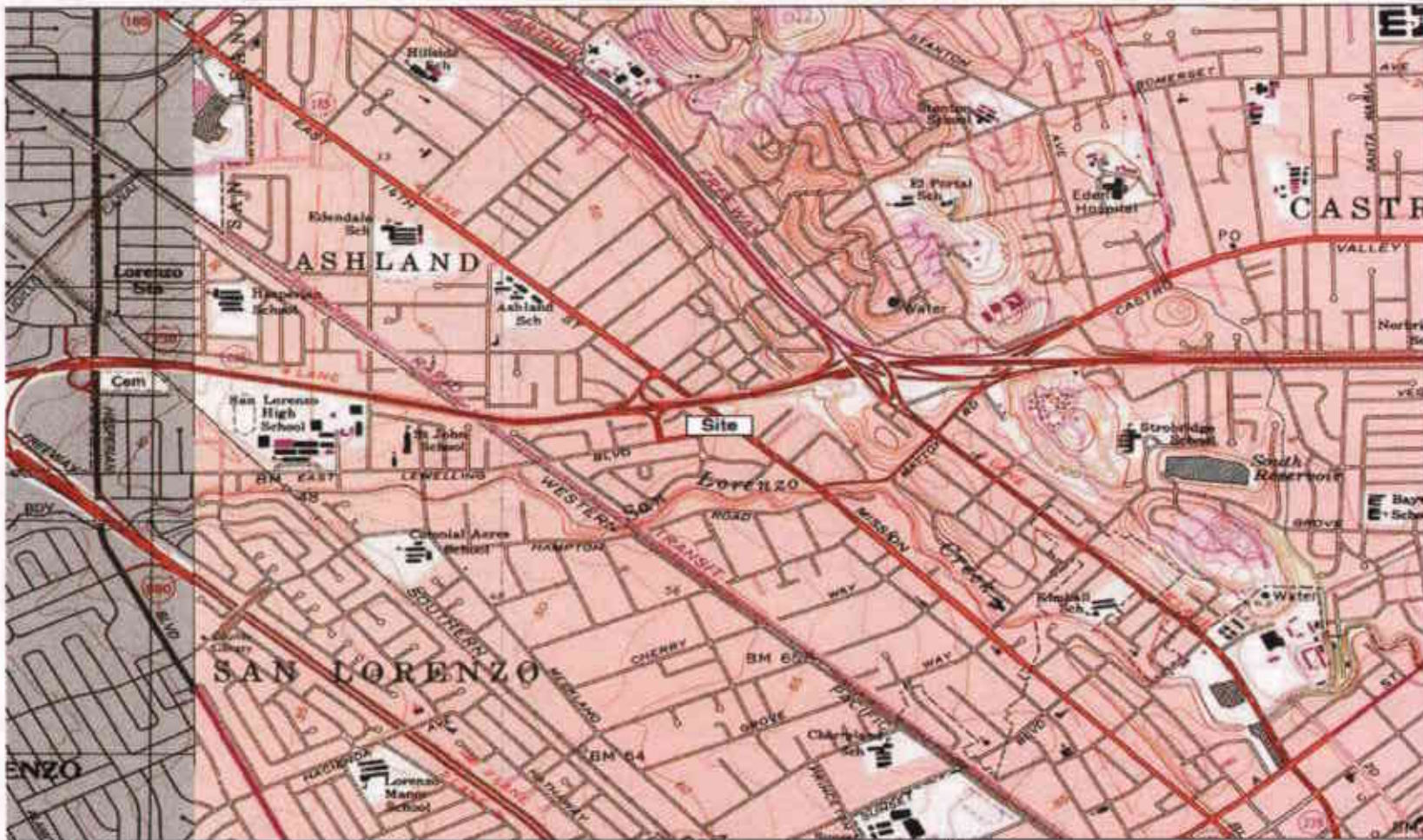
Sample ID	Sample Date	Sample Location	TPHG µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-3	8-18-00	MW3	46,000	3,200	550	3,700	14,000	2,200
*	3-30-01		30,000	3,300	340	2,800	9,100	4,700
*	6-22-01		35,000	4,000	340	2,900	7,600	4,100
*	9-20-01		30,000	3,800	260	2,500	6,600	5,300
*	12-27-01		39,000	4,400	340	3,000	6,700	5,500
*	9-24-02		53,000	4,100	270	3,100	6,600	6,400
*	12-17-02		40,000	3,600	240	2,200	5,700	5,200
*	4-2-03		24,000	2,000	130	1,800	3,300	3,000
*	6-12-03		26,000	2,700	180	2,000	4,200	5,500
*	9-29-03		39,000	4,000	220	3,200	5,300	4,800
*	12-04-03		40,000	3,200	180	2,200	4,300	4,400
*	03-09-04		39,000	3,100	160	2,100	4,400	4,000
*	6-24-04		21,000	3,000	110	2,300	3,800	3,400
*	9-09-04		26,000	4,100	140	2,200	4,300	6,000
*	12-21-04		20,000	3,400	99	1,700	2,900	6,400
*	3-16-05		35,000	1,800	78	1,900	2,600	4,000
*	6-09-05		2,000	55	ND	120	30	150
*	9-22-05		17,000	2,000	69	1,500	1,900	3,500

1. TPHG = Total Petroleum Hydrocarbons as Gasoline

2. MTBE = Methyl Tertiary Butyl Ether

3. ND = Not Detected

* The Sample was analyzed for Fuel Oxygenates using EPA Method 8260B. Analytical result is for MTBE



TN MN
15°

0 1000 FEET 0 500 1000 METERS
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)



SIERRA ENVIRONMENTAL, INC.
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SITE LOCATION MAP

**Third Quarter 2005 Groundwater Monitoring
ABE Petroleum LLC**

17715 Mission Boulevard • Hayward • California

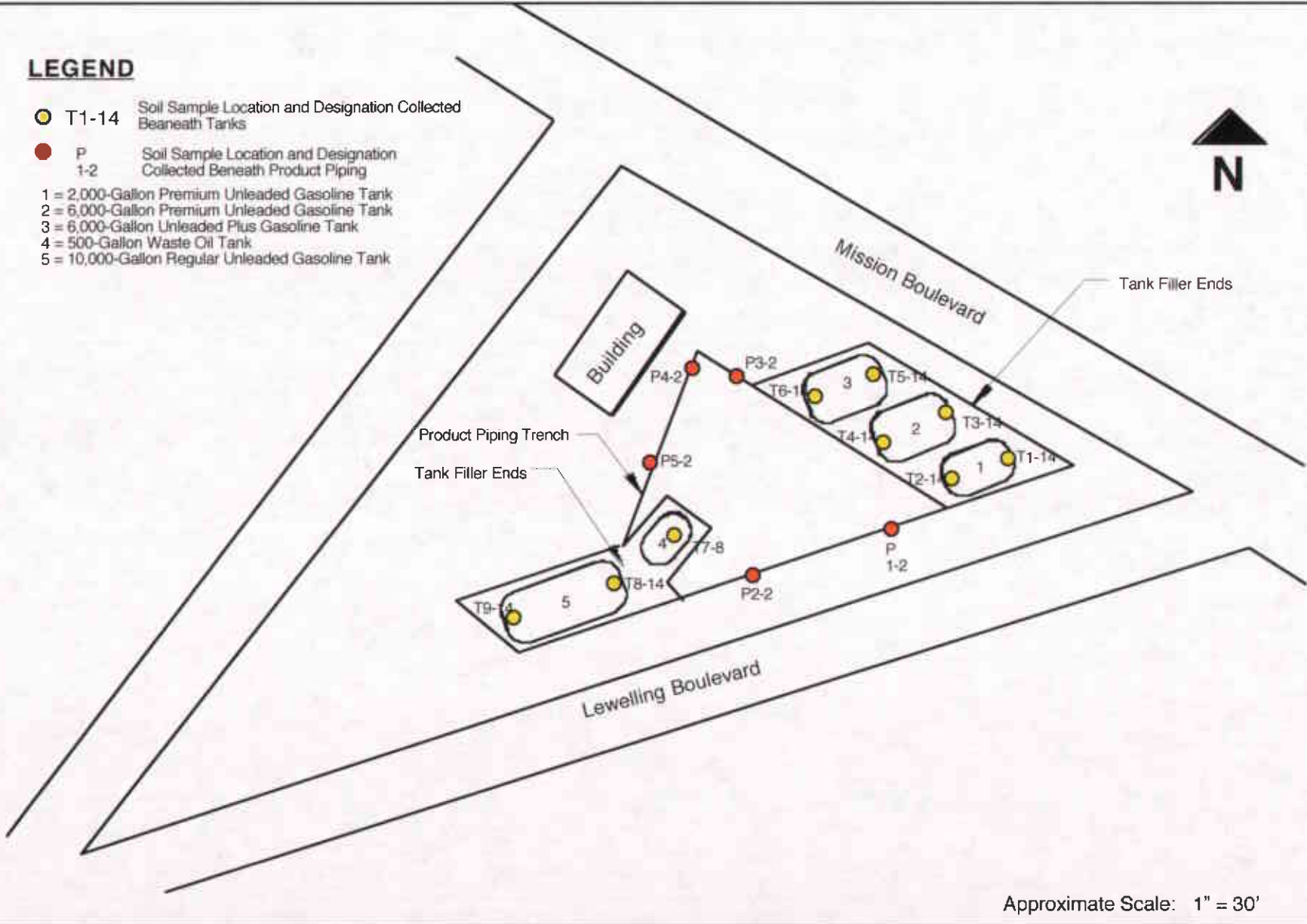
FIGURE

1

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LEGEND

- T1-14 Soil Sample Location and Designation Collected Beneath Tanks
 - P 1-2 Soil Sample Location and Designation Collected Beneath Product Piping
- 1 = 2,000-Gallon Premium Unleaded Gasoline Tank
 2 = 6,000-Gallon Premium Unleaded Gasoline Tank
 3 = 6,000-Gallon Unleaded Plus Gasoline Tank
 4 = 500-Gallon Waste Oil Tank
 5 = 10,000-Gallon Regular Unleaded Gasoline Tank



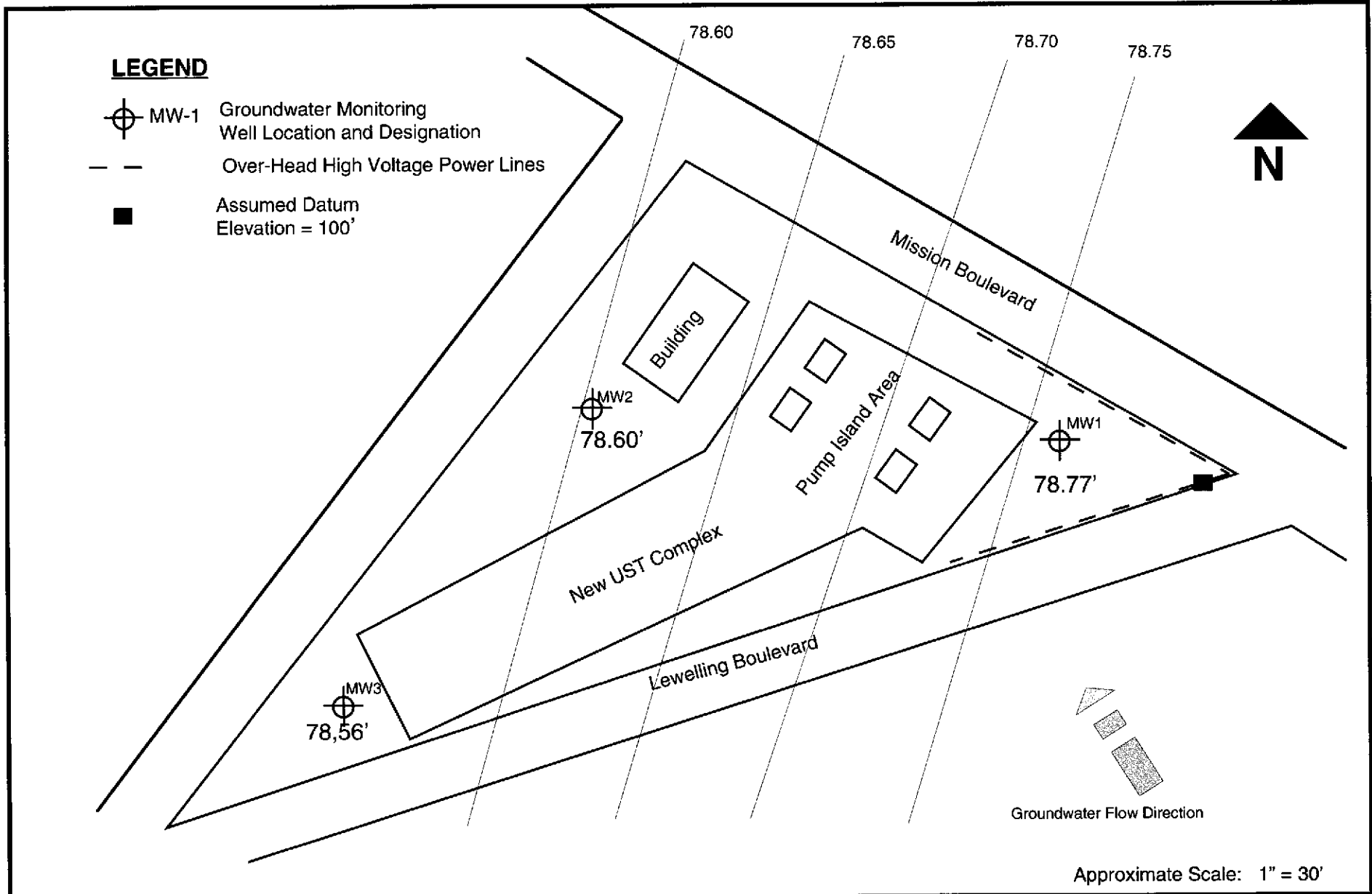
Approximate Scale: 1" = 30'



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Former UST and Soil Sample Locations
ABE Petroleum LLC
Third Quarter 2005 Groundwater Monitoring
17715 Mission Boulevard • Hayward • California

FIGURE
2
 October 5, 2005
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SIERRA ENVIRONMENTAL, INC.
Environmental Consultants

980 W. Taylor St., San Jose, CA 95128
Phone [408]971-6758 • Fax [408] 971-6759

Groundwater Monitoring Well Locations

**Third Quarter 2005 Groundwater Monitoring
ABE Petroleum LLC**

17715 Mission Boulevard • Hayward • California

FIGURE

3

October 5, 2005
Project 03-103.07

Appendix A
QA/QC PROTOCOL

QA/QC PROTOCOL

Groundwater Level and Well Depth Measurements

Groundwater level and well depths are measured using electrical sounder. An electrical sounder consists of a reel, two-conductor cable, a water sensor, and a control panel with a buzzer. To measure groundwater level, the sensor is lowered into a well. A low current circuit is completed when the sensor makes contact with water. The current in the circuit is then amplified and activates a buzzer which produce an audible signal. Cable markings are divided at 0.05-foot increments. Well depths are measured to the nearest 0.01 foot. Groundwater levels are measured before and after sample collection to ensure data accuracy.

Well Purging

Low flow submersible electrical pumps or bailers are used to purge groundwater monitoring wells. Approximately 3 to 5 well casing volume of water is removed from the well as a measure to stabilize natural, and representative groundwater in each well. pH, electrical conductivity, and temperature of the purged water is measured and recorded at approximately each casing volume interval. Purge water is stabilized when pH is recorded within 0.5 unit, electrical conductivity is within 5 percent, and temperature is within 1.0 degree Celsius.

Groundwater Sampling

Groundwater samples are transferred into appropriate containers provided by certified analytical laboratories. The containers include proper preservatives, and labels with appropriate project information. Groundwater is transferred into the containers with as little agitation as possible. After collection, containers are sealed and checked to ensure that no head space or air bubbles are present in the sample.

After collection, if required, samples are kept in a cooler to be delivered to analytical laboratory with chain-of-custody documentation.

Equipment Decontamination

All sampling equipment are washed with Liqui-Nox[®] (a phosphate free laboratory detergent), and rinsed with tap water before each sampling event, and at each sampling interval. To reduce the risk of cross contamination, wells which have shown lower levels of contamination historically are purged and sampled first.

Analytical Procedures

Samples are analyzed by an accredited State-certified analytical laboratory using procedures prescribed by United State Environmental Protection Agency (EPA) and other Federal, State, and Local agencies. At minimum a field blank is analyzed with each group of samples for quality assurance measures. At minimum two qualified personnel review analytical results and compare them with historical data for consistency and accuracy.

Field Reports

All field observations are documented in field reports. A field report contain project information, climatic condition, contractor/subcontractor information, field observation, discussions and communications during each particular field activity. Field reports are stored in appropriate project files. Project managers review field reports to obtain necessary information regarding the status of each project on daily basis.

Appendix B
CERTIFIED ANALYTICAL REPORTS AND
CHAIN-OF-CUSTODY DOCUMENTATION

Entech Analytical Labs, Inc.

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

Mitch Hajiaghai
Sierra Environmental, Inc.
980 West Taylor Street
San Jose, CA 95126

Certificate ID: 45433 - 10/5/2005 2:52:18 PM

Order Number: 45433
Project Name: ABE
Project Number: 03-103

Date Received: 09/22/2005
P.O. Number: 03-103
Global ID: T0600102154

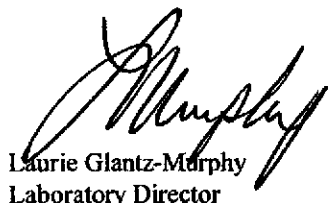
Certificate of Analysis - Final Report

On September 22, 2005, samples were received under chain of custody for analysis.
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Liquid	EDF EPA 8260B EPA 624 TPH as Gasoline - GC-MS	

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,



Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Sierra Environmental, Inc.
980 West Taylor Street
San Jose, CA 95126
Attn: Mitch Hajiaghai

Date Received: 9/22/2005
Project ID: 03-103
Project Name: ABE
GlobalID: T0600102154
P.O. Number: 03-103
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 45433-001 Sample ID: MW-1

Matrix: Liquid Sample Date: 9/22/2005

EPA 5030C	EPA 8260B	EPA 624	8260Petroleum						
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	3500		250	120	µg/L	N/A	N/A	10/3/2005	WM1051003
Toluene	5400		250	120	µg/L	N/A	N/A	10/3/2005	WM1051003
Ethyl Benzene	3900		250	120	µg/L	N/A	N/A	10/3/2005	WM1051003
Xylenes, Total	17000		250	120	µg/L	N/A	N/A	10/3/2005	WM1051003
Methyl-t-butyl Ether	2100		250	250	µg/L	N/A	N/A	10/3/2005	WM1051003
tert-Butyl Ethyl Ether	ND		250	1200	µg/L	N/A	N/A	10/3/2005	WM1051003
tert-Butanol (TBA)	ND		250	2500	µg/L	N/A	N/A	10/3/2005	WM1051003
Diisopropyl Ether	ND		250	1200	µg/L	N/A	N/A	10/3/2005	WM1051003
tert-Amyl Methyl Ether	ND		250	1200	µg/L	N/A	N/A	10/3/2005	WM1051003

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.9	70 - 130
Dibromofluoromethane	112	70 - 130
Toluene-d8	103	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

EPA 5030C	GC-MS	TPH as Gasoline - GC-MS							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	62000		250	6200	µg/L	N/A	N/A	10/3/2005	WM1051003

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.5	70 - 130
Dibromofluoromethane	102	70 - 130
Toluene-d8	100	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

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

10/5/2005 2:52:21 PM - dba

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Sierra Environmental, Inc.
980 West Taylor Street
San Jose, CA 95126
Attn: Mitch Hajiaghai

Date Received: 9/22/2005
Project ID: 03-103
Project Name: ABE
GlobalID: T0600102154
P.O. Number: 03-103
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 45433-002 Sample ID: MW-2

Matrix: Liquid Sample Date: 9/22/2005

EPA 5030C	EPA 8260B	EPA 624								8260Petroleum
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
Benzene	1400		200	100	µg/L	N/A	N/A	10/3/2005	WM1051003	
Toluene	ND		200	100	µg/L	N/A	N/A	10/3/2005	WM1051003	
Ethyl Benzene	3400		200	100	µg/L	N/A	N/A	10/3/2005	WM1051003	
Xylenes, Total	5700		200	100	µg/L	N/A	N/A	10/3/2005	WM1051003	
Methyl-t-butyl Ether	2200		200	200	µg/L	N/A	N/A	10/3/2005	WM1051003	
tert-Butyl Ethyl Ether	ND		200	1000	µg/L	N/A	N/A	10/3/2005	WM1051003	
tert-Butanol (TBA)	2300		200	2000	µg/L	N/A	N/A	10/3/2005	WM1051003	
Diisopropyl Ether	ND		200	1000	µg/L	N/A	N/A	10/3/2005	WM1051003	
tert-Amyl Methyl Ether	ND		200	1000	µg/L	N/A	N/A	10/3/2005	WM1051003	

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92.6	70 - 130
Dibromofluoromethane	110	70 - 130
Toluene-d8	103	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

EPA 5030C	GC-MS	TPH as Gasoline - GC-MS							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	33000		200	5000	µg/L	N/A	N/A	10/3/2005	WM1051003

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.3	70 - 130
Dibromofluoromethane	101	70 - 130
Toluene-d8	100	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

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

10/5/2005 2:52:22 PM - dba

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Sierra Environmental, Inc.
980 West Taylor Street
San Jose, CA 95126
Attn: Mitch Hajiaghai

Date Received: 9/22/2005
Project ID: 03-103
Project Name: ABE
GlobalID: T0600102154
P.O. Number: 03-103
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 45433-003 Sample ID: MW-3

Matrix: Liquid Sample Date: 9/22/2005

EPA 5030C	EPA 8260B	EPA 624								8260Petroleum
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
Benzene	2000		100	50	µg/L	N/A	N/A	10/4/2005	WM1051004	
Toluene	69		100	50	µg/L	N/A	N/A	10/4/2005	WM1051004	
Ethyl Benzene	1500		100	50	µg/L	N/A	N/A	10/4/2005	WM1051004	
Xylenes, Total	1900		100	50	µg/L	N/A	N/A	10/4/2005	WM1051004	
Methyl-t-butyl Ether	3500		100	100	µg/L	N/A	N/A	10/4/2005	WM1051004	
tert-Butyl Ethyl Ether	ND		100	500	µg/L	N/A	N/A	10/4/2005	WM1051004	
tert-Butanol (TBA)	1400		100	1000	µg/L	N/A	N/A	10/4/2005	WM1051004	
Diisopropyl Ether	ND		100	500	µg/L	N/A	N/A	10/4/2005	WM1051004	
tert-Amyl Methyl Ether	ND		100	500	µg/L	N/A	N/A	10/4/2005	WM1051004	

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92.1	70 - 130
Dibromofluoromethane	118	70 - 130
Toluene-d8	103	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

EPA 5030C	GC-MS	TPH as Gasoline - GC-MS							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	17000		100	2500	µg/L	N/A	N/A	10/4/2005	WM1051004

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97.8	70 - 130
Dibromofluoromethane	108	70 - 130
Toluene-d8	100	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

Entech Analytical Labs, Inc.

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

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1051003

Validated by: MaiChiTu - 10/03/05

QC Batch Analysis Date: 10/3/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	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
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	97.5	70 - 130
Dibromofluoromethane	118	70 - 130
Toluene-d8	110	70 - 130

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1051003

Validated by: MaiChiTu - 10/03/05

QC Batch Analysis Date: 10/3/2005

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

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	103	70 - 130
Dibromofluoromethane	108	70 - 130
Toluene-d8	108	70 - 130

Entech Analytical Labs, Inc.

1334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1051003

Reviewed by: MaiChiTu - 10/03/05

QC Batch ID Analysis Date: 10/3/2005

_CS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Benzene	<0.50	20	20.0	µg/L	100	70 - 130
Methyl-t-butyl Ether	<1.0	20	18.0	µg/L	90.0	70 - 130
Toluene	<0.50	20	19.9	µg/L	99.5	70 - 130

Surrogate	% Recovery	Control Limits
p-Bromofluorobenzene	86.7	70 - 130
Dibromofluoromethane	104	70 - 130
Toluene-d8	95	70 - 130

_CSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.50	20	19.7	µg/L	98.5	1.5	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	17.6	µg/L	88.0	2.2	25.0	70 - 130
Toluene	<0.50	20	20.2	µg/L	101	1.5	25.0	70 - 130

Surrogate	% Recovery	Control Limits
p-Bromofluorobenzene	89.7	70 - 130
Dibromofluoromethane	103	70 - 130
Toluene-d8	96.6	70 - 130

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1051003

Reviewed by: MaiChiTu - 10/03/05

QC Batch ID Analysis Date: 10/3/2005

_CS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	141	µg/L	113	65 - 135

Surrogate	% Recovery	Control Limits
p-Bromofluorobenzene	98.8	70 - 130
Dibromofluoromethane	95.5	70 - 130
Toluene-d8	103	70 - 130

_CSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	139	µg/L	111	1.5	25.0	65 - 135

Surrogate	% Recovery	Control Limits
p-Bromofluorobenzene	98.5	70 - 130
Dibromofluoromethane	94.5	70 - 130
Toluene-d8	102	70 - 130

Entech Analytical Labs, Inc.

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

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1051004

Validated by: MaiChiTu - 10/05/05

QC Batch Analysis Date: 10/4/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	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
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	96.5	70 - 130
Dibromofluoromethane	119	70 - 130
Toluene-d8	112	70 - 130

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1051004

Validated by: MaiChiTu - 10/05/05

QC Batch Analysis Date: 10/4/2005

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

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	102	70 - 130
Dibromofluoromethane	109	70 - 130
Toluene-d8	109	70 - 130

Entech Analytical Labs, Inc.

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Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1051004

Reviewed by: MaiChiTu - 10/05/05

QC Batch ID Analysis Date: 10/4/2005

CS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Benzene	<0.50	20	20.1	µg/L	100	70 - 130
Methyl-t-butyl Ether	<1.0	20	17.4	µg/L	87.0	70 - 130
Toluene	<0.50	20	20.1	µg/L	100	70 - 130
Surrogate	% Recovery	Control Limits				
-Bromofluorobenzene	88.7	70 - 130				
Dibromofluoromethane	105	70 - 130				
Toluene-d8	95.2	70 - 130				

CSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.50	20	20.9	µg/L	104	3.9	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	20.0	µg/L	100	14	25.0	70 - 130
Toluene	<0.50	20	20.7	µg/L	104	2.9	25.0	70 - 130
Surrogate	% Recovery	Control Limits						
-Bromofluorobenzene	89.2	70 - 130						
Dibromofluoromethane	107	70 - 130						
Toluene-d8	95.3	70 - 130						

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1051004

Reviewed by: MaiChiTu - 10/05/05

QC Batch ID Analysis Date: 10/4/2005

CS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	151	µg/L	121	65 - 135
Surrogate	% Recovery	Control Limits				
-Bromofluorobenzene	98.2	70 - 130				
Dibromofluoromethane	98.3	70 - 130				
Toluene-d8	103	70 - 130				

CSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	147	µg/L	117	2.6	25.0	65 - 135
Surrogate	% Recovery	Control Limits						
-Bromofluorobenzene	98.8	70 - 130						
Dibromofluoromethane	96	70 - 130						
Toluene-d8	104	70 - 130						

Entech Analytical Labs, Inc.

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

Matrix Spike / Matrix Spike Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1051004

Reviewed by: MaiChiTu - 10/05/05

QC Batch ID Analysis Date: 10/4/2005

MS Sample Spiked: 45595-004

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Benzene	ND	20	20.1	µg/L	10/4/2005	100	70 - 130
Methyl-t-butyl Ether	ND	20	17.7	µg/L	10/4/2005	88.5	70 - 130
Toluene	ND	20	20.8	µg/L	10/4/2005	104	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	88.5	70 - 130
Dibromofluoromethane	106	70 - 130
Toluene-d8	101	70 - 130

MSD Sample Spiked: 45595-004

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	19.7	µg/L	10/4/2005	98.5	2.0	25.0	70 - 130
Methyl-t-butyl Ether	ND	20	17.8	µg/L	10/4/2005	89.0	0.56	25.0	70 - 130
Toluene	ND	20	20.2	µg/L	10/4/2005	101	2.9	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	89.5	70 - 130
Dibromofluoromethane	106	70 - 130
Toluene-d8	98.4	70 - 130



SIERRA ENVIRONMENTAL, INC.
Environmental Consultants

CHAIN OF CUSTODY

Project Name: ABE Project No: 03-103 Date: 9-22-05

Project Location: 17715 Mission Blvd., Hayward Client: _____ Sampler: Mike Hays

Sample ID	Date Sampled	Sampling Time	Matrix	Nº of Containers	Analysis Requested							Turnaround Time		
					8015/8020 TPHG BTEX, NIIE <u>8260</u>	8015 TPHD	418.1 TRPH	8010 VOCs	8270 SVOCs	BTEX 8020	5 Metals LUFT	24-hour Other _____		
MW-1	9/22/05		Water	4	X								24-hour Other _____	Normal
MW-2	X		X	X	X								24-hour Other _____	Normal
MW-3	X		X	X	X								24-hour Other _____	Normal
													24-hour Other _____	Normal
													24-hour Other _____	Normal
													24-hour Other _____	Normal
													24-hour Other _____	Normal

Remarks: Please email the results in EDF format ID# T0600102154

Relinquished by <u>Mike Hays</u>	Date <u>9/22/05</u>	Time <u>2:00</u>	Received by <u>Tim Vetter</u>	Date <u>9-22-05</u>	Time <u>14:31</u>
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1670 Newhall St. • Suite 212 • Santa Clara • California • 95050
Phone (408) 248-3700 • Fax (408) 248-4700

Appendix C
FIELD NOTES



GROUNDWATER MONITORING DATA FORM

Project No: 03-103 Date: 9/22/05
 Project Name: ABE Well No: MW1
 Field Personnel: M. Hernandez Weather: Cloudy
 Project Location: 17715 Mission Blvd, Hayward

PURGE WATER VOLUME CALCULATION	Total Well Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier Casing Diameter			Casing Volume (gal)	Purged Volume (gal)
				2"	4"	6"		
	33.25	20.69	17.56	0.16	0.64	1.44	2.0	6

Purge Method: Bailor Measuring Reference: TPC

Time						
Volume Purged (gal)	0	2	4	6		
Temperature (° F)	68.3	67.9	67.66	66.09		
pH	7.01	6.74	6.80	6.60		
Specific Conductivity (umhos/cm)	2300	→	→	→		
Turbidity/Color	light gray	→	→	→		
Odor	Yes	→	→	→		

Comments: Shells were observed and odor was detected in water



GROUNDWATER MONITORING DATA FORM

Project No: 03-103 Date: 9-22-05
 Project Name: ABE Well N°: MW2
 Field Personnel: Mike / NAZ Weather: cloudy
 Project Location: 17715 Mission Blvd, Hayward

Purge Method	Total Well Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier			Casing Volume (gal)	Purged Volume (gal)
				Casing Diameter				
				2"	4"	6"		
	33.75	21.98 30.00	11.8	0.16	0.64	1.44	1.89	5.6 2.05

Purge Method: Bailor Measuring Reference: TOC

Parameter	1	2	3	4
Volume Purged (gal)	0	2	4	5.6
Temperature (° F)	70.5	69.81	68.0	68.1
Specific Conductivity (umhos/cm)	7.1	6.92	6.65	6.40
Specific Conductivity (umhos/cm)	2200	2200	2200	2300
Turbidity/Color	Light Gray	→	→	→
Other	Yes	→	→	→

Comments: + shivers and H2 odor



GROUNDWATER MONITORING DATA FORM

Project No: 03-103 Date: 9-22-05
 Project Name: ABE Well N°: MW3
 Field Personnel: Mike MAZ Weather: cloudy
 Project Location: 17715 Mission Blvd, Hayward

PURGE WATER VOLUME CALCULATION	Total Well Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier Casing Diameter			Casing Volume (gal)	Purged Volume (gal)
				2"	4"	6"		
				0.16	0.64	1.44		
	33.75	21.13	12.62				2.02	6.0

Purge Method: BAILER Measuring Reference: TOC

Time						
Volume Purged (gal)	0	2	4	6		
Temperature (° F)	70.85	68.91	68.0	66.3		
pH	6.72	6.68	6.51	6.08		
Specific Conductivity (umhos/cm)	2300	2200	2400	2300		
Turbidity/Color	Light Gray	→	→	→		
Odor	NCS	→	→	→		

Comments: _____