

April 29, 2008

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**GROUNDWATER MONITORING
REPORT
2nd Quarter, 2008**

20957 Baker Road
Castro Valley, California 94565

AEI Project No. 273928

Prepared For

Nat and Darlene Piazza
7613 Peppertree Road
Dublin, California 94568

Prepared By

AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597
(800) 801-3224

AEI



AEI
CONSULTANTS

2500 Camino Diablo, Walnut Creek, CA 94597
tel 800-801-3224
fax 925-944-2895

ENVIRONMENTAL & ENGINEERING SERVICES

www.aeiconsultants.com

April 29, 2008

Nat and Darlene Piazza
7613 Peppertree Road
Dublin, California 94568

**Subject: Quarterly Groundwater Monitoring Report
2nd Quarter, 2008**
20957 Baker Road
Castro Valley, California 94565
AEI Project No. 273928

Dear Mr. and Mrs. Piazza:

AEI Consultants (AEI) has prepared this report on your behalf to document groundwater quality at the above referenced site (Figure 1: Site Location Map). The purpose of this activity was to monitor groundwater quality near the former underground storage tanks (USTs). This report presents the findings of the 2nd Quarter, 2008 groundwater monitoring event conducted on April 16, 2008.

I Site Description and Background

The subject property (hereafter referred to as the “site” or “property”) is located at 20957 Baker Road in Castro Valley, California (Figure 1: Site Location Map). The site is located in a mixed residential and commercial/light-industrial area of Castro Valley. The site is approximately 81 feet by 300 feet in area; and is currently undeveloped and not in use. The site is partially covered with asphalt surfacing and concrete slabs with the remainder of the site graveled. The site occupies the southern two thirds of the fenced in area.

Baker Road makes up the east boundary of the site with a residential property to the east, beyond the road. Rutledge Road bounds the property to the west with commercial and residential property beyond the road. The property is bounded to the north by a partially vacant lot. The parcel to the north is split by a fence, with the southern half of the adjacent lot appearing to be part of the subject site. Two residential buildings are located in the northeast quadrant of this adjacent lot. To the south, the eastern half of the property is by an apartment complex and the western half bounded to the south by a plumbing contractor. The locations of these buildings relative to the subject site and locations of the former UST are shown on Figure 2, “Site Map”.

Tank Removal

On April 16, 2004, AEI removed two 1,000-gallon USTs from the site (Figure 2). The removal was performed under permit from the ACEHS. Robert Weston, Inspector for the ACEHS, observed the tank removal. Two soil samples were collected from underneath each UST and analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, xylenes (BTEX) and Methyl tertiary butyl ether (MTBE) by EPA Method 8021B/8015Cm. Total Petroleum Hydrocarbons as diesel (TPH-d) was analyzed by EPA Method 8015C and total lead by EPA method 7010.

Hydrocarbons were reported in all the soil samples analyzed. TPH-g was reported at concentrations ranging from 160 milligrams per kilogram (mg/kg) (T1W-EB8') to 1,400 mg/kg (T2W-EB8'). TPH-d was reported at concentrations ranging from 1,400 mg/kg (T2E-EB8') to 10,000 mg/kg (T1E-EB8'). Total xylenes were reported in two samples at 8.4 mg/kg (T2W-E8') and 0.25 mg/kg (T2E-EB8'). Benzene and ethylbenzene were reported as not detected. Total lead was reported at concentrations ranging from 6.1 mg/kg (T1W-E8') to 24 mg/kg (stockpile sample STKP1-4).

Preliminary Site Investigation

AEI performed a Preliminary investigation at the property on May 18, 2005. Eight (8) soil borings (SB-1 through SB-8) were advanced to depths ranging from 14 ft. to 18 ft. below ground surface (bgs) using a Geoprobe[®] Model 5410 direct-push drilling rig. The locations of the soil borings are shown on Figure 2, Site Map.

No detectable concentrations of TPH-g, TPH-d, TPH-mo, MTBE or BTEX, were reported in any of the soil samples from depths of 7.5 to 11 feet bgs at or above detection limits of 1.0 mg/kg, 1.0 mg/kg, 5.0 mg/kg, 0.05 mg/kg, and 0.005 mg/kg, respectively.

TPH-g was reported in the groundwater sample from soil boring SB-2 (SB-2W) at concentration of 7,300 micrograms per liter ($\mu\text{g/L}$). No TPH-g was reported in groundwater samples from any other borings at or above the detection limit of 50 $\mu\text{g/L}$.

The maximum concentration of TPH-d was reported at a concentration of 23,000 $\mu\text{g/L}$ in the groundwater sample from boring SB-2 (SB-2W). TPH-d was reported in the other seven borings at concentrations ranging from ND<50 $\mu\text{g/L}$ (SB-7) to 670 $\mu\text{g/L}$ (SB-5).

TPH-mo was reported in groundwater samples from borings SB-1, SB-2, SB-5, SB-6 and SB-8 at concentrations ranging from 300 $\mu\text{g/L}$ (SB-6) to 1400 $\mu\text{g/L}$ (SB-1 and SB-5). No concentrations of TPH-mo were reported in groundwater samples from borings SB-3, SB-4 and SB-7 at or above a detection limit of 250 $\mu\text{g/L}$.

No MTBE was reported in the groundwater samples from any of the borings at or above a detection limit of 5.0 $\mu\text{g/L}$.

Monitoring Well Installation

On October 12, 2007 AEI installed five (5) 2-inch inside diameter (ID) groundwater monitoring wells, one on each side of the former tank hold (MW-1, MW-2), one through the center of the backfill (IN-1) and two down gradient of the former tank hold (MW-3, MW-4). The details of well construction are summarized in Table 1, *Well Construction Details*.

TPH-d was reported in well IN-1 at concentrations of 4.0 mg/kg, 5.1 mg/kg, and ND<1.0 in samples collected at depths of 8.5 feet bgs, 10 feet bgs, and 12 feet bgs, respectively. Two soil samples from borings MW-1 through MW-3 and three soil samples from wells MW-4 and IN-1 were analyzed for TPH-g and MBTEX by EPA Method 8015/8021B and TPH-d, TPH-mo, and TPH-bo by method 8015C.

No TPH-g, TPH-d, TPH-mo, TPH-bo, BTEX or MTBE was reported in any of the soil samples analyzed from wells MW-1 through MW-4 at or above standard reporting limits. No TPH-g, TPH-mo, BTEX or MTBE was reported in soil samples from well IN-1.

The wells were initially developed on October 15, 2007. Depth to water at the time the wells were developed ranged from 11.00 feet bgs (IN-1) to 14.57 feet bgs (MW-4). On October 18, 2007, at the time of the initial sampling event, the depth to groundwater ranged from 10.89 feet bgs (IN-1) to 14.92 feet bgs (MW-4). Depth to water in the wells was on November 6, 2007 ranged from 8.00 feet bgs (MW-4) to 11.37 feet bgs (MW-2). The depth to water in well MW-4 was anomalously low when the wells were installed and at the three times depth to water was measured in October 2007

Groundwater elevations on November 6, 2007 ranged from 148.59 feet bgs (MW-3) to 151.69 feet bgs (MW-4). The direction of groundwater flow at the time of measurement was to the south southeast with a groundwater gradient of 0.002 ft/ft.

Groundwater samples from the October 18, 2007 groundwater monitoring event were analyzed for TPH-g, MBTEX by method SW8021B/8015Cm and Total petroleum Hydrocarbons as Bunker oil (TPH-bo – C10+), TPH-d (C10-23) and TPH-mo (C18+) by method SW8015C.

No TPH-g, BTEX or MTBE were present at or above standard reporting limits in any of the groundwater samples.

No TPH-bo, TPH-d, or TPH-mo, were reported in samples from wells MW-2 through MW-4 and IN-1 at or above detection limits of 100 µg/L, 50 µg/L, and 250 µg/L, respectively. TPH-bo (C10+, middle - heavy residual fuel), TPH-d (C10 - 23, middle residual fuel), and TPH-mo (C28+ heavy residual fuel) were reported in the water sample from well MW-1 at concentrations of 56 µg/L, 140 µg/L, and ND<250 µg/L, respectively. The difference between concentrations reported for TPH-bo and TPH-d indicate that the heavy residual concentration was 86 µg/L.

The second quarterly groundwater monitoring event occurred on January 14, 2008. No hydrocarbons were reported in any well at standard reporting limits.

II Summary of Activities

On April 16, 2008, AEI conducted the regularly scheduled quarterly groundwater monitoring event at the site. The well caps were removed from each well (MW-1 to MW-4 and IN-1), allowing the wells to equilibrate with atmospheric pressure. The depth to groundwater was measured with an electric water level indicator.

Prior to sampling the wells, the well caps were all removed and the wells were allowed to equilibrate with the atmosphere for at least 15 minutes. The depth to water was then measured in each well to ± 0.01 foot using an electronic depth to water meter. Each well purged using a peristaltic pump with ¼-inch

polyethylene drop tube. The wells were low flow⁽¹²⁾ or micro-purged at a rate of approximately 0.5-liter per minute. During well purging temperature, pH, specific conductivity, dissolved oxygen, and oxidation-reduction potential (ORP) was measured at one-minute intervals. The wells were purged until the three successive readings are within ± 0.1 for pH, $\pm 3\%$ for conductivity, ± 10 mv for ORP, and $\pm 10\%$ for temperature between three consecutive measurements or until the well dewatered. Visual estimates of turbidity were noted during the purging of the wells.

Once the groundwater parameters stabilized water samples were collected from each well using the peristaltic pump. Water samples were collected into containers with appropriate preservatives to each analysis. Samples for volatile analytes were collected into 40 milliliter (mL) hydrochloric acid preserved volatile organic analysis (VOA) vials, with zero headspace (no air bubbles). Samples were labeled with, at minimum, project number, sample number, time, date, and sampler's name. The samples were then entered on an appropriate chain-of-custody form and placed on water ice in the pre-chilled cooler pending same day transportation to the laboratory. Samples were transported the same day on ice under proper chain-of-custody protocol to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification #1644).

Five groundwater samples were analyzed for TPH-g, BTEX, and MTBE by EPA Methods SW8021B and SW8015Cm. Analysis for TPH-d was performed by EPA Method SW8015C. The groundwater samples were for nine (9) fuel oxygenates by Method 8260B.

III Field Results

No hydrocarbon odor was noted while groundwater was being purged from of the wells. No sheen was detected at any of the wells. Groundwater levels for the current monitoring episode ranged from 150.64 (MW-1) to 149.64 (IN-1) feet above mean sea level (amsl). The average groundwater elevation was 1.37 feet lower than at the time of the previous monitoring event. The direction of groundwater flow was to the southwest with an apparent hydraulic gradient of 0.004 ft/ft. Apparent gradients at the site have exhibited a high degree of variability since the wells were installed. This variability appears to be the result of sensitivity to rainfall and possibly due to local recharge from fractures in the underlying bedrock.

Water table contours and groundwater flow direction are shown in Figure 3. Groundwater elevation data are summarized in Tables 2 and 2a. Refer to Appendix A for the Groundwater Monitoring Well Field Sampling Forms.

IV Groundwater Quality

No TPH-g, TPH-d, or TPH-bo were reported at detection limits of 50 $\mu\text{g/L}$, 50 $\mu\text{g/L}$, and ND<100 $\mu\text{g/L}$, respectively. MBTEX continued to be reported as not detectable at or above the laboratory reporting limits of 5.0 $\mu\text{g/L}$, 0.5 $\mu\text{g/L}$, 0.5 $\mu\text{g/L}$, 0.5 $\mu\text{g/L}$ and 5.0 $\mu\text{g/L}$ respectively. Analysis for fuel oxygenates by method 8260B reported all analytes to be non detectable in all wells.

A summary of groundwater sample analytical data is presented in Table 3. Laboratory results and chain of custody documentation are included in Appendix B.

V Conclusions and Recommendations

For the second quarter in a row, no TPH-g, BTEX, MTBE, or other fuel oxygenates were detected in any of the wells onsite during this groundwater monitoring event. The data from this and the previous monitoring event indicate that no hydrocarbon impact remains at the site. It appears that following the removal of the UST, natural attenuation mechanisms such as biodegradation and dispersion have reduced the contaminant concentrations to below detection limits. For this reason, AEI recommends immediate case closure for the site.

VI Report Limitations and Signatures

This report presents a summary of work completed by AEI Consultants, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, but it cannot be assumed that they are entirely representative of all areas not sampled. All conclusions and recommendations are based on these analyses, observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

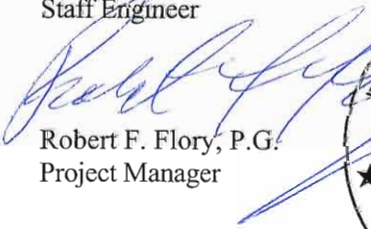
These services were performed in accordance with generally accepted practices in the environmental engineering and construction field, which existed at the time and location of the work.

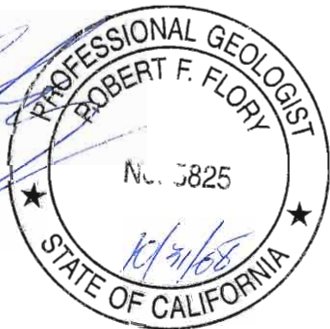
Please contact the undersigned for questions regarding the findings outlined in this report.

Sincerely,

AEI Consultants


Calvin Hee
Staff Engineer


Robert F. Flory, P.G.
Project Manager



Figures

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Gradients – 4/16/08
Figure 4	Groundwater Analytical data – 4/16/08

Tables

Table 1	Well Construction Details
Table 2/2a	Historical Groundwater Elevation Data
Table 3	Historical Groundwater Data

Appendix A

Groundwater Monitoring Well Field Sampling Forms

Appendix B

Laboratory Analyses with Chain of Custody Documentation

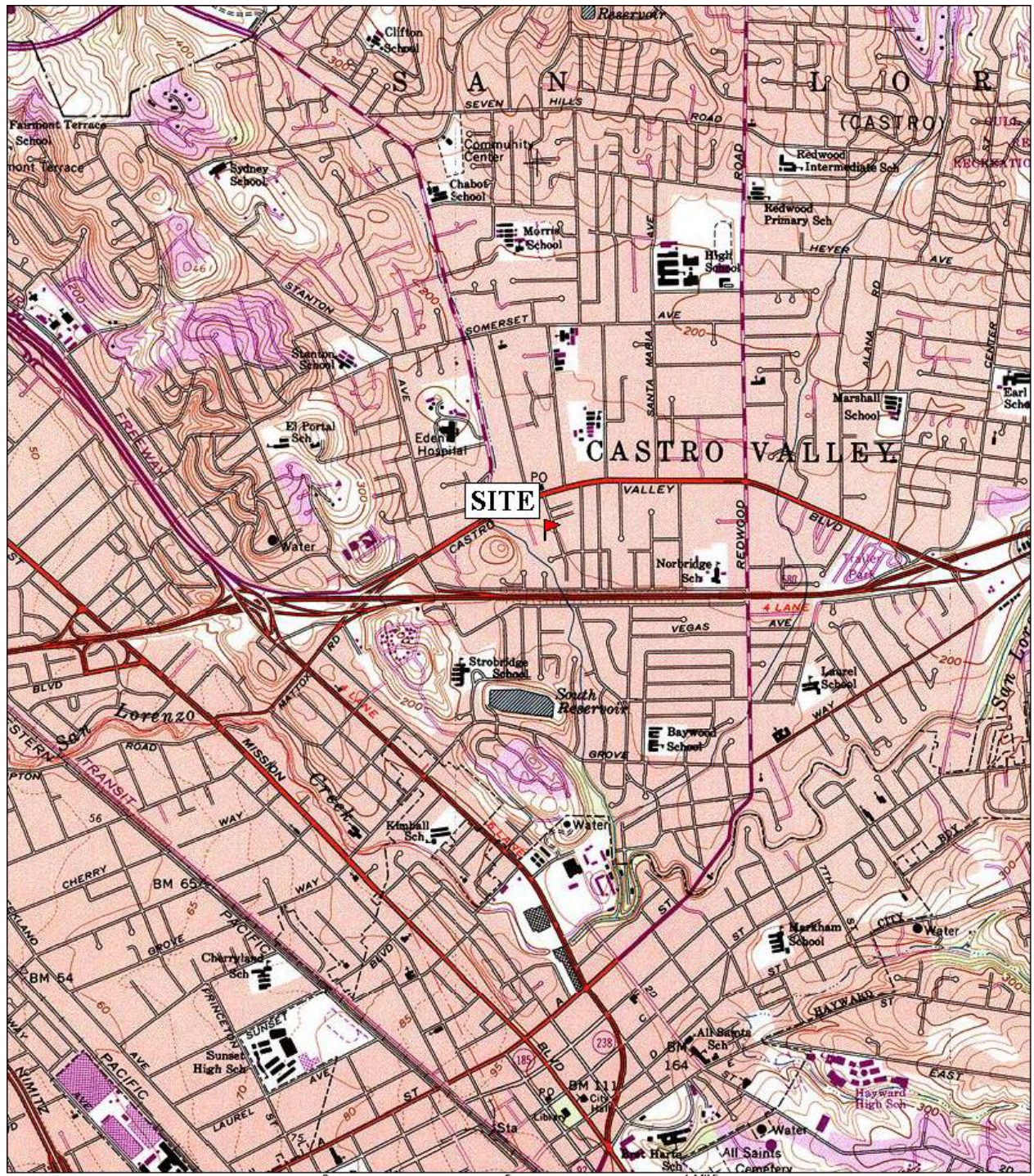
Previous Documentation

1. *Geotechnical Exploration and Engineering Study, Proposed Baker Road Apartments*, December 3, 1986, prepared by JMK Environmental Solutions, Inc.
2. *Underground Storage Tank removal Final Report*, May 19, 2004, prepared by AEI Consultants
3. *Workplan for Soil and Groundwater Investigation and Interim Source Removal*, September 20, 2007, prepared by AEI Consultants
4. *Well Installation Report*, November 29, 2007, prepared by AEI Consultants
5. *Groundwater Monitoring Report, 1st Quarter 2008*, February 29, 2008, prepared by AEI Consultants

Distribution:

Nat Piazza, 7613 Pepper Tree Road, Dublin, California, 94568-3343	2 copies
Steven Plunkett, Alameda County Environmental Health Services	Electronic
GeoTracker	Electronic
File	

FIGURES




TN MN
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0 1000 FEET 0 500 1000 METERS
0 1 MILE

Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

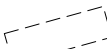
AEI CONSULTANTS	
SITE LOCATION MAP	
20957 BAKER ROAD CASTRO VALLEY, CALIFORNIA	FIGURE 1 PROJECT NO. 273928


LEGEND

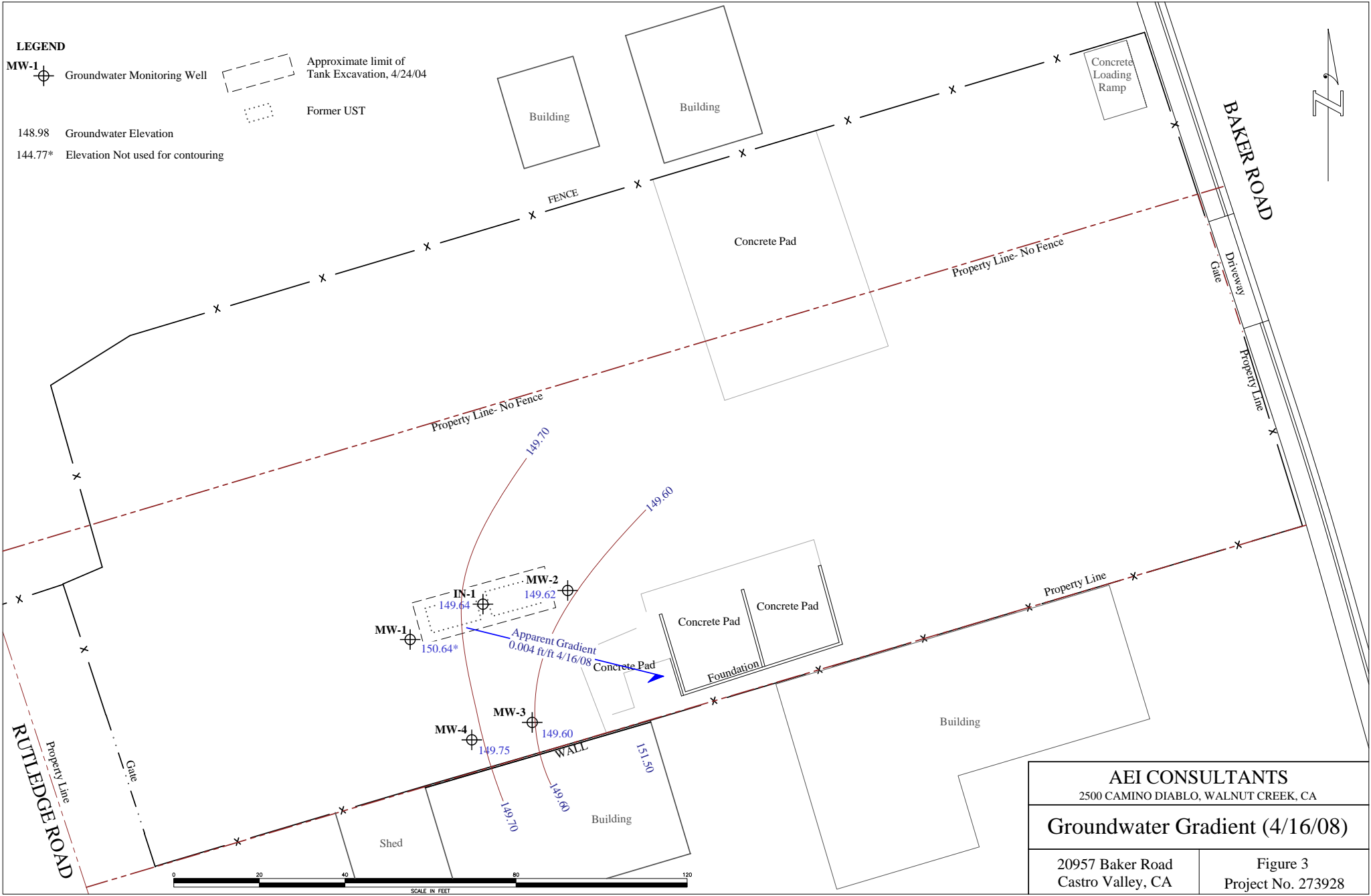
MW-1  Groundwater Monitoring Well

148.98 Groundwater Elevation

144.77* Elevation Not used for contouring


 Approximate limit of Tank Excavation, 4/24/04

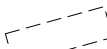
 Former UST




AEI CONSULTANTS 2500 CAMINO DIABLO, WALNUT CREEK, CA	
Groundwater Gradient (4/16/08)	
20957 Baker Road Castro Valley, CA	Figure 3 Project No. 273928

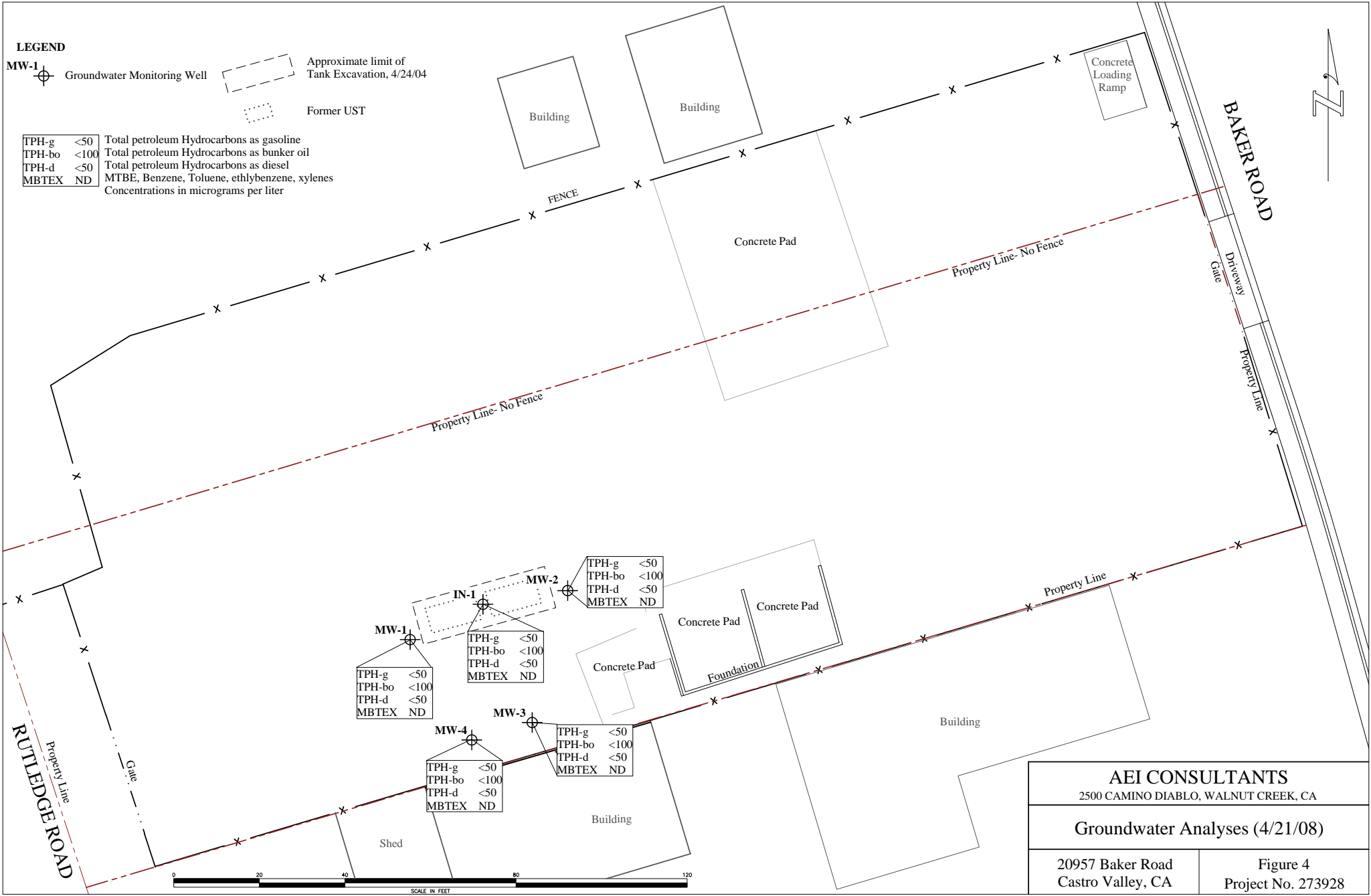
LEGEND

MW-1  Groundwater Monitoring Well

 Approximate limit of Tank Excavation, 4/24/04

 Former UST

TPH-g <50 Total petroleum Hydrocarbons as gasoline
 TPH-bo <100 Total petroleum Hydrocarbons as bunker oil
 TPH-d <50 Total petroleum Hydrocarbons as diesel
 MBTEX ND MTBE, Benzene, Toluene, ethylbenzene, xylenes
 Concentrations in micrograms per liter



TPH-g	<50
TPH-bo	<100
TPH-d	<50
MBTEX	ND

MW-1

TPH-g	<50
TPH-bo	<100
TPH-d	<50
MBTEX	ND

MW-2

TPH-g	<50
TPH-bo	<100
TPH-d	<50
MBTEX	ND

MW-3

TPH-g	<50
TPH-bo	<100
TPH-d	<50
MBTEX	ND

MW-4

TPH-g	<50
TPH-bo	<100
TPH-d	<50
MBTEX	ND

AEI CONSULTANTS	
2500 CAMINO DIABLO, WALNUT CREEK, CA	
Groundwater Analyses (4/21/08)	
20957 Baker Road Castro Valley, CA	Figure 4 Project No. 273928

TABLES

Table 1: Well Construction Details**Piazza, 20957 Baker Road, Castro Valley, CA**

Well ID	Date Installed (feet)	Top of casing (feet)	Top of Well Box (feet)	Depth To Water 04/16/08 (feet)	Casing Material	Total Depth Boring (feet)	Total Depth Well (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Sand (feet)	Bentonite Interval (feet)	Grout Interval (feet)
IN-1	10/12/07	160.12	159.85	10.21	PVC	16.5	16.5	8 1/4	2.0	6.5-16.5	0.020	6.0-16.5	2/12	5.0-5.5	.05-5.0
MW-1	10/12/07	159.84	159.62	8.98	PVC	16.5	16.5	8 1/4	2.0	6.5-16.5	0.020	6.0-16.5	2/12	5.0-6.5	.05-5.0
MW-2	10/12/07	160.30	160.00	10.38	PVC	16.5	16.5	8 1/4	2.0	6.5-16.5	0.020	6.0-16.5	2/12	5.0-6.5	.05-5.0
MW-3	10/12/07	160.04	159.79	10.19	PVC	16.5	16.5	8 1/4	2.0	6.5-16.5	0.020	6.0-16.5	2/12	5.0-6.5	.05-5.0
MW-4	10/12/07	159.95	159.69	9.94	PVC	16.5	16.5	8 1/4	2.0	6.5-16.5	0.020	6.0-16.5	2/12	5.0-6.5	.05-5.0

**Table 2 Groundwater Elevation Data
Piazza, 20957 Baker Road, Castro Valley, CA**

Well ID	Date	Well Elevation (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)	
IN-1	10/15/07	159.85	11.00	148.85	----	
	10/18/07	159.85	10.89	148.96	0.11	
	10/22/2007*	159.85	10.93	148.92	-0.04	
	11/06/07	159.85	11.20	148.65	-0.27	
	01/14/08	159.85	8.39	151.46	2.81	
	04/16/08	159.85	10.21	149.64	-1.82	
MW-1	10/15/07	159.62	14.30	145.32	----	
	10/18/07	159.62	11.64	147.98	2.66	
	10/22/07	159.62	10.86	148.76	0.78	
	11/06/07	159.62	10.95	148.67	-0.09	
	01/14/08	159.62	8.81	150.81	2.14	
	04/16/08	159.62	8.98	150.64	-0.17	
MW-2	10/15/07	160.00	13.28	146.72	----	
	10/18/07	160.00	11.74	148.26	1.54	
	10/22/07	160.00	11.32	148.68	0.42	
	11/06/07	160.00	11.35	148.65	-0.03	
	01/14/08	160.00	8.49	151.51	2.86	
	04/16/08	160.00	10.38	149.62	-1.89	
MW-3	10/15/07	159.79	11.01	148.78	----	
	10/18/07	159.79	11.10	148.69	-0.09	
	10/22/07	159.79	10.95	148.84	0.15	
	11/06/07	159.79	11.20	148.59	-0.25	
	01/14/08	159.79	8.41	151.38	2.79	
	04/16/08	159.79	10.19	149.60	-1.78	
MW-4	10/15/07	159.69	14.57	145.12	----	
	10/18/07	159.69	14.92	144.77	-0.35	
	10/22/07	159.69	14.65	145.04	0.27	
	10/22/07 Well loaded with fresh water- surged for 15 minutes- water level dropping slowly @ 4.0 feet bgs					
	11/06/07	159.69	8.00	151.69	6.65	
	01/14/08	159.69	8.77	150.92	-0.77	
	04/16/08	159.69	9.94	149.75	-1.17	

Depth to water measured from the top of well casing
ft amsl = feet above mean sea level

**Table 2a Groundwater Elevation and Gradient
Piazza, 20957 Baker Road, Castro Valley, CA**

Event	Date	Average Water Table Elevation (ft amsl)	Water Table Elevation Change (ft)	Hydraulic Gradient Flow Direction (ft/ft)
Develop wells	10/15/07	147.42	----	variable
1	10/18/07	148.47	1.06	variable
Develop well MW-	10/22/07	148.80	0.33	variable
4				
----	11/06/07	148.64	-0.16	0.002/SSE
2	01/14/08	151.22	2.58	0.010-0.029/SW
3	04/16/08	149.85	-1.37	0.004/SSE

Notes

**Table 3 Groundwater Analytical Data
Piazza, 20957 Baker Road, Castro Valley, CA**

Sample ID	Date	Depth to Water feet	TPH-g	TPH-d	TPH-mo	TPH-bo	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
			C6-C12 µg/L	C10-C23 µg/L	C18+ µg/L	C10+ µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EPA Method 8015						EPA Method 8021B					
IN-1	10/18/07	10.89	ND<50	ND<50	ND<250	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	1/14/2008	8.39	ND<50	ND<50	----	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	04/16/08	10.21	ND<50	ND<50	----	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-1	10/18/07	11.64	ND<50	56	ND<250 (86) ¹	140 ²	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	1/14/2008	8.81	ND<50	ND<50	----	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	04/16/08	8.98	ND<50	ND<50	----	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-2	10/18/07	11.74	ND<50	ND<50	ND<250	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	1/14/2008	8.49	ND<50	ND<50	----	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	04/16/08	10.38	ND<50	ND<50	----	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-3	10/18/07	11.10	ND<50	ND<50	ND<250	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	1/14/2008	8.41	ND<50	ND<50	----	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	04/16/08	10.19	ND<50	ND<50	----	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-4	10/18/07	14.82	ND<50	ND<50	ND<250	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	1/14/2008	8.77	ND<50	ND<50	----	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	04/16/08	9.94	ND<50	ND<50	----	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
RWQCB ESLs**			100	100	100	----	5.0	1.0	40	30	20

Notes

BOLD = Current groundwater data

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TPH-mo = total petroleum hydrocarbons as motor oil

µg/L = micrograms per liter (parts per billion)

ft amsl = feet above mean sea level

ND = Not reported at or above the indicated method detection limit

** = RWQCB ESLs November 2007, TABLE F-1a. Groundwater Screening levels, Groundwater is a current or potential drinking water resource

TPH-mo = total petroleum hydrocarbons as motor oil

TPH-bo = total petroleum hydrocarbons as bunker oil

MTBE = methyl tert-butyl ether

1 = value in parenthesis is approximate "residual fuel", C10+ value minus TPH-d value

2 = diesel range compounds are significant, no recognizable pattern

APPENDIX A

**Groundwater Monitoring Well
Field Sampling Forms**

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Nat Piazza	Date of Sampling:	4/16/2008
Job Number:	273928	Name of Sampler:	A Nieto
Project Address:	20957 Baker Road, Castro valley, California		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	159.62		
Depth of Well	16.50		
Depth to Water (from top of casing)	8.98		
Water Elevation (feet above msl)	150.64		
Well Volumes Purged	Micropurged		
Actual Volume Purged (liters)	2.5		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size				3 - 40 ml VOA, 1 1-liter Amber,			
Time	Vol Removed (liter)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
11:51	0.5	18.45	6.83	1322	3.88	55.1	Clear
11:52	1.0	18.35	6.85	1303	3.91	51.2	Clear
11:53	1.5	18.29	6.86	1287	3.96	48.8	Clear
11:54	2.0	18.26	6.86	1282	3.96	48.0	Clear
11:55	2.5	18.25	6.86	1285	3.95	47.5	Clear

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Clear with no hydrocarbon odor
Purge tube at 10 feet bgs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Nat Piazza	Date of Sampling:	4/16/2008
Job Number:	273928	Name of Sampler:	A Nieto
Project Address:	20957 Baker Road, Castro valley, California		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	160.00		
Depth of Well	16.50		
Depth to Water (from top of casing)	10.38		
Water Elevation (feet above msl)	149.62		
Well Volumes Purged	Micropurged		
Actual Volume Purged (liters)	4.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size				3 - 40 ml VOA, 1 1-liter Amber			
Time	Vol Removed (liter)	Temperature (deg C)	pH	Conductivity (μS/cm)	DO (mg/L)	ORP (meV)	Comments
11:03	1.0	18.73	7.04	802	5.09	35.1	Clear
11:05	2.0	18.34	6.88	765	3.89	38.8	Clear
11:07	3.0	18.27	6.83	766	3.50	39.1	Clear
11:09	4.0	18.25	6.82	769	3.07	38.2	Clear

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Clear, no hydrocarbon odor
Purge tube at 12 feet bgs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Nat Piazza	Date of Sampling:	4/16/2008
Job Number:	273928	Name of Sampler:	A Nieto
Project Address:	20957 Baker Road, Castro valley, California		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	159.79		
Depth of Well	16.50		
Depth to Water (from top of casing)	10.19		
Water Elevation (feet above msl)	149.60		
Well Volumes Purged	Micropurged		
Actual Volume Purged (liters)	3.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size				3 - 40 ml VOA, 1 1-liter Amber,			
Time	Vol Removed (liter)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
12:10	0.5	17.24	6.67	600	2.36	60.3	Clear
12:11	1.0	17.16	6.61	598	2.17	60.1	Clear
12:12	1.5	17.10	6.60	597	2.10	59.7	Clear
12:13	2.0	17.07	6.59	595	2.04	58.7	Clear
12:14	2.5	17.04	6.56	588	1.97	57.9	Clear
12:15	3.0	17.03	6.56	586	1.95	57.9	Clear

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Clear, no hydrocarbon odor
Purge tube at 12 feet bgs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Nat Piazza	Date of Sampling:	4/16/2008
Job Number:	273928	Name of Sampler:	A Nieto
Project Address:	20957 Baker Road, Castro valley, California		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	159.69		
Depth of Well	16.50		
Depth to Water (from top of casing)	9.94		
Water Elevation (feet above msl)	149.75		
Well Volumes Purged	Micropurged		
Actual Volume Purged (liters)	2.5		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size				3 - 40 ml VOA, 1 1-liter Amber,			
Time	Vol Removed (liter)	Temperature (deg C)	pH	Conductivity (μS/cm)	DO (mg/L)	ORP (meV)	Comments
12:01	0.5	17.32	6.91	1307	7.89	54.2	Clear
12:02	1.0	17.22	6.91	1302	4.91	48.6	Light brown
12:03	1.5	17.12	6.90	1292	4.33	48.3	Light brown
12:04	2.0	17.07	6.91	1281	3.83	46.9	Light brown
12:05	2.5	17.06	6.90	1274	3.47	46.8	Light brown

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Clear, no hydrocarbon odor. Turned light brown about 1 liter
Purge tube at 11 feet bgs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IN-1

Project Name:	Nat Piazza	Date of Sampling:	4/16/2008
Job Number:	273928	Name of Sampler:	A Nieto
Project Address:	20957 Baker Road, Castro valley, California		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	159.85		
Depth of Well	16.50		
Depth to Water (from top of casing)	10.21		
Water Elevation (feet above msl)	149.64		
Well Volumes Purged	Micropurged		
Actual Volume Purged (liters)	3.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size				3 - 40 ml VOA, 1 1-liter Amber,			
Time	Vol Removed (liter)	Temperature (deg C)	pH	Conductivity (μS/cm)	DO (mg/L)	ORP (meV)	Comments
11:40	0.5liters	19.10	6.57	578	3.4	51.5	Clear
11L41	1.0	18.97	6.55	577	3.2	53.3	Clear
11:42	1.5	18.78	6.51	572	3.0	55.1	Clear
11:43	2.0	18.70	6.48	570	3.0	57.6	Clear
11:44	2.5	18.60	6.46	567	2.9	59.9	Clear
11:45	3.0	18.56	6.45	566	2.8	61.5	Clear

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Purge water clear with no hydrocarbon odor.
Purge tube at 12 feet bgs

APPENDIX B

Laboratory Analytical Reports With Chain of Custody Documentation



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: # 273928; Piazza	Date Sampled: 04/16/08
		Date Received: 04/16/08
	Client Contact: Robert Flory	Date Reported: 04/21/08
	Client P.O.:	Date Completed: 04/21/08

WorkOrder: 0804410

April 21, 2008

Dear Robert:

Enclosed within are:

- 1) The results of the **5** analyzed samples from your project: **# 273928; Piazza,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0804410

ClientCode: AEL

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Robert Flory
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

Email: rflory@aeiconsultants.com
TEL: (925) 283-6000 FAX: (925) 283-6121
PO:
ProjectNo: # 273928; Piazza

Bill to:

Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days

Date Received: 04/16/2008

Date Printed: 04/16/2008

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0804410-001	MW-1	Water	4/16/2008 12:45	<input type="checkbox"/>	C	A	A	B								
0804410-002	MW-2	Water	4/16/2008 1:10	<input type="checkbox"/>	C	A		B								
0804410-003	MW-3	Water	4/16/2008 12:25	<input type="checkbox"/>	C	A		B								
0804410-004	MW-4	Water	4/16/2008 12:40	<input type="checkbox"/>	C	A		B								
0804410-005	IN-1	Water	4/16/2008 12:45	<input type="checkbox"/>	C	A		B								

Test Legend:

1	9-OXYS_W	2	G-MBTEX_W	3	PREFD REPORT	4	TPH_W	5	
6		7		8		9		10	
11		12							

Prepared by: Kimberly Burks

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **4/16/2008 6:44:13 PM**

Project Name: **# 273928; Piazza**

Checklist completed and reviewed by: **Kimberly Burks**

WorkOrder N°: **0804410** Matrix Water

Carrier: Client Drop-In

Chain of Custody (COC) Information

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Sample IDs noted by Client on COC? Yes No
- Date and Time of collection noted by Client on COC? Yes No
- Sampler's name noted on COC? Yes No

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes No NA
- Shipping container/cooler in good condition? Yes No
- Samples in proper containers/bottles? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
- Container/Temp Blank temperature Cooler Temp: 12.2°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA

Client contacted:

Date contacted:

Contacted by:

Comments:



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: # 273928; Piazza	Date Sampled: 04/16/08
		Date Received: 04/16/08
	Client Contact: Robert Flory	Date Extracted: 04/18/08
	Client P.O.:	Date Analyzed: 04/18/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0804410

Lab ID	0804410-001C	0804410-002C	0804410-003C	0804410-004C	Reporting Limit for DF =1	
Client ID	MW-1	MW-2	MW-3	MW-4		
Matrix	W	W	W	W		
DF	1	1	1	1		

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	ND	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethanol	ND	ND	ND	ND	NA	50
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methanol	ND	ND	ND	ND	NA	500
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	103	101	94	95	
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Comments

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; J) analyte detected below quantitation limits; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: # 273928; Piazza	Date Sampled: 04/16/08
		Date Received: 04/16/08
	Client Contact: Robert Flory	Date Extracted: 04/18/08
	Client P.O.:	Date Analyzed: 04/18/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0804410

Lab ID	0804410-005C				Reporting Limit for DF =1	
Client ID	IN-1					
Matrix	W					
DF	1					S

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND				NA	0.5
t-Butyl alcohol (TBA)	ND				NA	2.0
1,2-Dibromoethane (EDB)	ND				NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.5
Diisopropyl ether (DIPE)	ND				NA	0.5
Ethanol	ND				NA	50
Ethyl tert-butyl ether (ETBE)	ND				NA	0.5
Methanol	ND				NA	500
Methyl-t-butyl ether (MTBE)	ND				NA	0.5

Surrogate Recoveries (%)

%SS1:	94				
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Comments

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; J) analyte detected below quantitation limits; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: # 273928; Piazza	Date Sampled: 04/16/08
	Client Contact: Robert Flory	Date Received: 04/16/08
	Client P.O.:	Date Analyzed: 04/17/08
		Date Extracted: 04/16/08

Total Extractable Petroleum Hydrocarbons*

Extraction method SW3510C

Analytical methods SW8015C

Work Order: 0804410

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	TPH-Bunker Oil (C10-C36)	DF	% SS
001B	MW-1	W	ND	ND	ND	1	99
002B	MW-2	W	ND	ND	ND	1	104
003B	MW-3	W	ND	ND	ND	1	105
004B	MW-4	W	ND	ND	ND	1	98
005B	IN-1	W	ND	ND	ND	1	105

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	50	250	100	µg/L
	S	NA	NA	NA	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant (cooking oil?); h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) kerosene/kerosene range; l) bunker oil range (?); no recognizable pattern; m) fuel oil; n) stoddard solvent/mineral spirits; p) see attached narrative.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0804410

EPA Method SW8260B	Extraction SW5030B			BatchID: 35033			Spiked Sample ID: 0804408-001B					
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	121	118	2.29	118	115	2.35	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	79.4	79.6	0.285	79.4	85.8	7.82	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	109	109	0	108	109	0.288	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	120	117	2.40	120	117	2.07	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	118	114	3.49	113	111	1.78	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	123	119	3.51	118	116	2.00	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	121	119	1.67	120	117	2.10	70 - 130	30	70 - 130	30
%SS1:	98	10	100	100	0	98	99	0.769	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 35033 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0804410-001C	04/16/08 12:45 PM	04/18/08	04/18/08 4:32 AM	0804410-002C	04/16/08 1:10 AM	04/18/08	04/18/08 5:16 AM
0804410-003C	04/16/08 12:25 PM	04/18/08	04/18/08 4:12 AM	0804410-004C	04/16/08 12:40 PM	04/18/08	04/18/08 4:55 AM
0804410-005C	04/16/08 12:45 PM	04/18/08	04/18/08 5:37 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0804410

EPA Method SW8021B/8015Cm	Extraction SW5030B			BatchID: 35040			Spiked Sample ID: 0804408-001A					
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	60	102	84.2	19.0	109	102	6.98	70 - 130	20	70 - 130	20
MTBE	ND	10	110	105	4.69	108	106	2.23	70 - 130	20	70 - 130	20
Benzene	ND	10	95.2	96.2	1.11	98.5	92.8	5.97	70 - 130	20	70 - 130	20
Toluene	ND	10	95.4	97.5	2.14	110	104	6.11	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	93.7	94.7	1.04	109	102	7.24	70 - 130	20	70 - 130	20
Xylenes	ND	30	87.5	88.2	0.749	119	112	6.54	70 - 130	20	70 - 130	20
%SS:	95	10	108	108	0	92	93	1.14	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 35040 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0804410-001A	04/16/08 12:45 PM	04/18/08	04/18/08 4:25 AM	0804410-002A	04/16/08 1:10 AM	04/17/08	04/17/08 1:34 AM
0804410-003A	04/16/08 12:25 PM	04/17/08	04/17/08 2:09 AM	0804410-004A	04/16/08 12:40 PM	04/17/08	04/17/08 2:43 AM
0804410-005A	04/16/08 12:45 PM	04/17/08	04/17/08 3:17 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0804410

EPA Method SW8015C		Extraction SW3510C			BatchID: 35060			Spiked Sample ID: N/A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	116	117	0.549	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	101	101	0	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 35060 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0804410-001B	04/16/08 12:45 PM	04/16/08	04/17/08 2:59 PM	0804410-002B	04/16/08 1:10 AM	04/16/08	04/17/08 3:08 PM
0804410-003B	04/16/08 12:25 PM	04/16/08	04/17/08 4:18 PM	0804410-004B	04/16/08 12:40 PM	04/16/08	04/17/08 4:15 PM
0804410-005B	04/16/08 12:45 PM	04/16/08	04/17/08 6:35 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.