

August 24, 2009

RECEIVED

2:45 pm, Aug 24, 2009

Alameda County
Environmental Health

Mr. Carl Graffenstatte
P.O. Box 1295
Eatonville, Washington 98328

RE: August 2009 Groundwater Monitoring Report
186 E. Lewelling Boulevard, San Lorenzo, California
ACEH Project No. RO0000013
ERS Project No. 1018-002.01

Dear Mr. Graffenstatte:

Environmental Risk Specialties Corporation (ERS) has enclosed one hard copy of the August 2009 Groundwater Monitoring Report for 186 E. Lewelling Boulevard, San Lorenzo, California. ERS will also upload the Report along with monitoring well sampling and analytical data to the Regional Water Quality Control Board's GeoTracker database.

If you have any questions regarding this report or the findings of the work, please contact ERS at (925) 938-1600, extension 109 or via email at ddement@erscorp.us.

Sincerely,



David DeMent, PG
Senior Geologist

cc: Steve Plunkett, ACEH

Enclosure

AUGUST 2009
GROUNDWATER
MONITORING REPORT

186 E. Lewelling Boulevard
San Lorenzo, California

Prepared for:
Mr. Carl Graffenstatte
P.O. Box 1295
Eatonville, Washington 98328

Prepared by:
Environmental Risk Specialties Corporation
Walnut Creek, California

August 24, 2009

Reviewed By:



David DeMent, PG
Senior Geologist

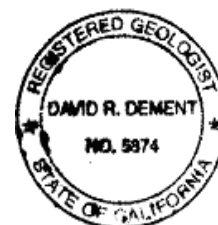


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INTRODUCTION

This August 2009 Groundwater Monitoring Report was prepared by Environmental Risk Specialties Corporation (ERS) at the request of Mr. Carl Graffenstatte (Client) to summarize groundwater monitoring and sampling work performed at 186 E. Lewelling Boulevard, San Lorenzo, California (Site). The project objectives were to purge and sample three groundwater monitoring wells, measure the depth to groundwater in the wells to calculate groundwater gradient and flow direction, and report the results.

BACKGROUND

The Site operated as a gasoline service station from 1965 to 1990. In September 1990, two 4,000-gallon gasoline USTs and one 350-gallon waste oil tank were removed. In June 1994, CET Environmental Services, Inc. (CET) installed three groundwater monitoring wells. CET subsequently conducted an exploratory soil boring investigation on and off the Site in the calculated downgradient direction and reported varying concentrations of total petroleum hydrocarbons as gasoline (TPHg) and relatively low to non-detect concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) in grab groundwater samples. CET did not issue a report due to payment problems with Ms. Wai Lee Young, but did provide analytical results on a faxed site plan (attached). We understand that Ms. Young purchased the property from Mr. Graffenstatte. According to the September 18, 2007 Sierra Environmental, Inc. (SEI) *Subsurface Investigation & Site Conceptual Model* report, the three wells were monitored and sampled once in 1994, three times in 1995, once in 1999, four times in 2001, and once in 2007.

1.1 Previous Investigation

Following the December 2001 groundwater sampling event, SEI requested closure as a "low risk groundwater case" case based on criteria in the SWRCB January 5, 1996 Memorandum. In its September 25, 2006 Comment Letter, Alameda County Environmental Health (ACEH) denied closure stating that five of the six closure criteria had not been satisfied and requested additional soil and groundwater investigation, plume definition, sample analyses, and submittal of case related documents to the SWRCB Geotracker database.

In May 2007, SEI sampled the three monitoring wells and conducted additional subsurface investigation onsite and offsite in the documented groundwater flow direction, and reported the results in its September 18, 2007 report. In April 2007, well MW-2 reported 3,200 micrograms per Liter ($\mu\text{g/L}$) TPHg, 21 $\mu\text{g/L}$ ethylbenzene, and 20 $\mu\text{g/L}$ xylenes, and

well MW-3 reported 12,000 µg/L TPHg, 18 µg/L ethylbenzene, and 27 µg/L xylenes. No total petroleum hydrocarbon as diesel (TPHd), benzene, toluene, or methyl tertiary butyl ether (MTBE) was reported in the three wells. The six grab groundwater samples reported varying concentrations of TPHg ranging from non-detect to 11,000 µg/L in SB-5-W and were non-detect for BTEX and all fuel oxygenates.

1.2 Regulatory Status

While SEI did not repeat its request for closure in its September 18, 2007 report, ACEH's subsequent December 29, 2008 comment letter indicates it would have denied closure again for similar reasons. In its December 29, 2008 comment letter, ACEH again requested additional source area characterization, plume characterization and definition, and extended site maps. Specifically, ACEH requested: 1) further source area characterization based on 110 to 120 mg/kg TPHg reported in a soil samples collected from 14.5 to 19.5 feet bgs in well MW-3 during its installation in June 1994 (15 years ago); 2) additional plume definition based on selected "worst case" TPHg concentrations in two grab groundwater samples while ignoring numerous other pertinent lines of evidence including an almost complete lack of reportable BTEX, other grab groundwater sample results, historical well monitoring data, age of the release, geological conditions and other fate & transport mechanisms, and significant natural attenuation; 3) residential ESLs be used for assessing potential human health risk in onsite soil citing groundwater migration offsite onto residential property; and 4) evaluation of San Lorenzo Creek as a potential sensitive receptor, even though San Lorenzo Creek is located over 350 feet south (cross-gradient of the Site) and is, in reality, a concrete lined flood control channel.

In a letter dated July 24, 2009, ACEH requested that groundwater monitoring be resumed on a semi-annual basis.

GROUNDWATER MONITORING AND SAMPLING

Groundwater monitoring and sampling of the Site was performed on August 12, 2009. Work at the Site included measuring depth to water, subjectively evaluating groundwater in the wells, purging and sampling the wells, and submitting the samples to a state-certified laboratory for analysis of constituents of concern. Constituents of concern are TPHg and BTEX, so samples were analyzed for TPHg, BTEX, and MTBE by EPA Method 8260. Diesel, lead, and other fuel oxygenates are not constituents of concern.

1.3 Groundwater Monitoring

Before groundwater purging and sampling, the depth to the water table was measured from the top of each well casing using a Solinst Water Level Meter. The water level measurements were recorded to the nearest 0.01 foot with respect to mean sea level (MSL). Worksheets of recorded groundwater monitoring data are included as Appendix 1. Information regarding well elevations and groundwater depths for the Site is summarized in Table 1.

TABLE 1 – GROUNDWATER ELEVATIONS

Well Number	Date Measured	Well Elevation* (feet above MSL)	Depth to Groundwater	Groundwater Elevation
MW-1	06/23/94	44.88	17.37	27.51
	03/15/95		13.47	31.41
	06/01/95		13.35	31.53
	09/11/95		15.37	29.51
	04/16/99		12.05	32.83
	03/21/01		13.59	31.29
	06/26/01		14.72	30.16
	09/18/01		15.98	28.90
	12/31/01		13.92	30.96
	04/02/07	44.91	13.77	31.14
	08/12/09		16.01	28.90
MW-2	06/23/94	45.26	16.75	28.51
	03/15/95		13.74	31.52
	06/01/95		13.52	31.74
	09/11/95		15.58	29.68
	03/21/01		13.81	29.71
	06/26/01		15.55	29.04
	09/18/01		16.22	31.04
	12/31/01		14.22	30.96
	04/02/07	45.31	14.00	31.31
	08/12/09		16.73	28.58

Well Number	Date Measured	Well Elevation* (feet above MSL)	Depth to Groundwater	Groundwater Elevation
MW-3	06/23/94	45.81	16.55	29.26
	03/15/95		14.43	31.38
	06/01/95		14.16	31.65
	09/11/95		16.20	29.61
	03/21/01		14.44	31.37
	06/26/01		14.97	30.84
	09/18/01		16.82	28.99
	12/31/01		14.91	30.90
	04/02/07	45.85	14.61	31.24
	08/12/09		16.75	29.10

Notes: All measurements are in feet.

* Well elevations measured to top of casing.

1.4 Groundwater Gradient

Figure 3 illustrates groundwater elevation contours as determined from monitoring well data obtained on August 12, 2009. Based on the measured groundwater elevations, calculated groundwater flow direction is to the east-northeast at an average gradient of 0.012 foot per foot. Historical groundwater gradients and flow directions are summarized in Table 2.

TABLE 2 - GROUNDWATER GRADIENT AND FLOW DIRECTION

Date Monitored	Gradient (foot/foot)	Direction
06/23/94	0.004	NW
03/15/95	0.004	W-SW
06/01/95	0.006	W-NW
09/11/95	0.005	W-NW
04/16/99	0.005*	W-SW*
03/21/01	0.005*	W-NW*
06/26/01	0.024	NE
09/18/01	0.004	NW
12/31/01	0.003*	SW*
04/02/07	0.005	W-NW
08/12/09	0.012	E-NE

Notes: * **Bolded** value may differ slightly from previously reported calculated values

1.5 Groundwater Sampling

Before groundwater sampling, each well was purged using a disposable polyethylene bailer. Groundwater samples were collected after four well casing volumes of water were removed and measured for temperature, conductivity, pH, and dissolved oxygen (DO). Following purging, each well was allowed to recharge before sampling. When recovery to 80 percent of the static water level was observed, a sample was collected for analysis.

Wells were sampled using disposable polyethylene bailers attached to new rope for each well. From each monitoring well, four laboratory-supplied 40-milliliter sample vials were filled to overflowing and sealed to eliminate trapped air. Once filled, sample vials were inverted and tapped to test for air bubbles. Sample containers were labeled with self adhesive, preprinted tags. The samples were stored in a pre-chilled, insulated container and returned to ERS's Walnut Creek Office pending courier pickup by AccuTest, a state-certified analytical laboratory, for the requested analyses.

Water purged during the sampling of the monitoring wells is being temporarily stored onsite in a 55-gallon drum pending laboratory analysis and proper disposal.

RESULTS OF GROUNDWATER SAMPLING

Groundwater samples collected from each well were submitted for analysis, following chain of custody protocol. Groundwater samples collected from wells MW-1 through MW-3 were analyzed for TPHg, benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8260B. Copies of the chain of custody record and laboratory analytical reports are included as Appendix 2. TPHg, BTEX, and MTBE analytical results are summarized in Table 3.

Although the laboratory provides method detection limits (MDLs) for reported analytical results, ERS will report laboratory reporting limits.

TABLE 3 – GROUNDWATER ANALYTICAL RESULTS

Well Number	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-1	06/23/94	3,600	<0.5	<0.5	7.2	2.6	NA
	03/15/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	06/01/95	100	<0.5	<0.5	<0.5	<0.5	NA
	09/11/95	50	<0.5	<0.5	<0.5	<0.5	NA
	04/16/99	160	ND	ND	ND	ND	ND
	03/21/01	ND	ND	ND	ND	ND	ND
	06/26/01	ND	ND	ND	ND	ND	ND
	09/18/01	82	ND	ND	2.1	ND	ND
	12/31/01	ND	ND	ND	ND	ND	ND
	04/02/07	ND	ND	ND	ND	ND	ND
08/12/09	<50	<1.0	<1.0	<1.0	<2.0	<1.0	
MW-2	06/23/94	71,000	310	710	2,600	4,600	NA
	03/15/95	35,000	150	1,000	2,100	10,000	NA
	06/01/95	49,000	210	1,300	2,900	11,000	NA
	09/11/95	39,000	150	1,000	2,900	13,000	NA
	04/16/99	50,000	25	110	1,900	8,000	ND
	03/21/01	22,000	ND	52	1,300	3,700	ND
	06/26/01	15,000	ND	ND	910	2,100	ND
	09/18/01	14,000	ND	ND	1,000	2,000	ND
	12/31/01	24,000	ND	ND	1,600	4,000	ND
	04/02/07	3,200	ND	ND	21	20	ND
08/12/09	151	<1.0	<1.0	1.3	<2.0	<1.0	
MW-3	06/23/94	93,000	550	130	3,300	7,500	NA
	03/15/95	46,000	330	94	3,800	10,000	NA
	06/01/95	42,000	270	230	3,400	10,000	NA
	09/11/95	49,000	190	330	4,000	12,000	NA
	04/16/99	16,000	10	ND	2,300	940	ND
	03/21/01	12,000	ND	28	2,000	ND	ND
	06/26/01	14,000	ND	ND	2,100	ND	ND
	09/18/01	13,000	ND	ND	1.5	ND	ND
	12/31/01	3,900	8.1	12	640	13	ND
	04/02/07	12,000	ND	ND	18	27	ND
08/12/09	1,790	<10	<10	12.1	<20	<10	

Notes: µg/L = micrograms per liter (approximately equivalent to ppb)
< = Concentration is below the laboratory reporting limit (RL)

DISCUSSION

The calculated groundwater flow direction and gradient for this sampling event did not correlate well with regional topography or with previously calculated values. Groundwater elevations were reported between 28.58 to 29.10 feet at the Site, and the calculated groundwater flow direction beneath the Site is to the east-northeast at an average gradient of 0.012 foot per foot.

With some fluctuations over the years, TPHg, BTEX, and MTBE concentrations continue to decrease in the wells. TPHg, BTEX, and MTBE concentrations have decreased significantly since April 2007 and BTEX concentrations reported in the three wells are at or below laboratory detection limits.

During this sampling event, well MW-1 was non-detect for all analyzed constituents and wells MW-2 and MW-3 reported significantly decreased concentrations of TPHg and BTEX. MTBE is not a constituent of concern. A decline in the concentration of constituents of concern typically indicates that no significant sources of impact to groundwater are present and/or natural attenuation is occurring. Based on decreases of TPHg of 85 to 95 percent, no ongoing sources of TPHg impact to groundwater is suspected, and natural attenuation is decreasing residual petroleum hydrocarbon concentrations in groundwater.

CONCLUSIONS

Based on the results of groundwater monitoring performed at 186 E. Lewelling, ERS has made the following conclusions:

- Groundwater flow direction beneath the Site is to the east-northeast at an average gradient of 0.012 foot per foot, and is not consistent with previously reported values;
- Concentrations of TPHg, BTEX, and MTBE continue to decrease in all three wells and indicate that sources of potential impact to groundwater are insignificant and natural attenuation processes continue to degrade residual petroleum hydrocarbon concentrations in groundwater; and
- The conclusions of this monitoring well sampling event support evaluating the Site for full regulatory closure in regards to the former USTs.

RECOMMENDATIONS

Based on current groundwater monitoring results and observations made during Site investigations, ERS recommends:

- Pending resolution of the SWRCB petition, perform semi-annual groundwater sampling as necessary in the three groundwater monitoring wells for one more event, as directed.

If necessary, the next groundwater monitoring event would be performed February 15, 2010.

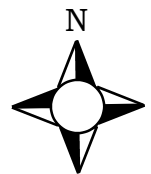
LIMITATIONS

The service performed by ERS has been conducted in a manner consistent with the levels of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area. No other warranty, expressed or implied, is made.

The conclusions presented in this report are professional opinions based on the indicated data described in this report and applicable regulations and guidelines currently in place. They are intended only for the purpose, site, and project indicated. Opinions and recommendations presented herein apply to site conditions existing at the time of our study.

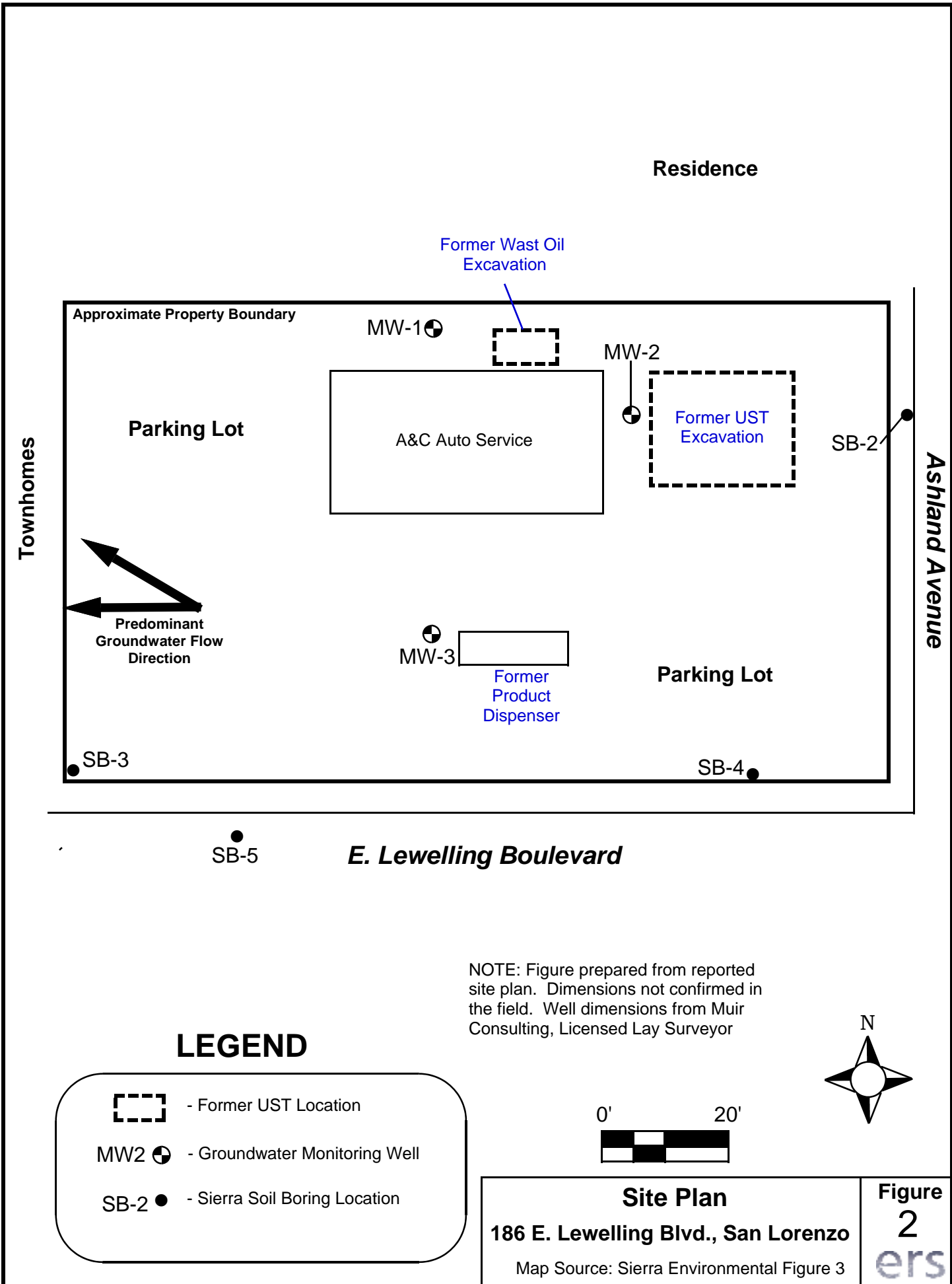
ERS has included analytical results from a state-certified laboratory, which performs analyses according to procedures suggested by the U.S. Environmental Protection Agency and the State of California. ERS is not responsible for laboratory errors in procedure or result reporting.

FIGURES



Location Map
186 E. Lewelling Boulevard
San Lorenzo, California
Source: National Geographic TOPO!

Figure 1
ers



Residence

(28.90')

Approximate Property Boundary

MW-1

(28.58')
MW-2

Parking Lot

Townhomes

Ashland Avenue

Calculated
Groundwater Flow
Direction
08/12/2009

28.90'

28.70'

MW-3
(29.10')

Parking Lot

E. Lewelling Boulevard

NOTE: Figure prepared from reported site plan. Dimensions not confirmed in the field. Well dimensions from Muir Consulting, Licensed Land Surveyor

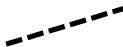
LEGEND



- Former UST Location



- Groundwater Monitoring Well

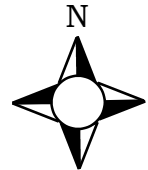


- Groundwater Elevation Contour

(29.10')

- Groundwater Elevation in feet

0' 20'



Groundwater Gradient Map
186 E. Lewelling Blvd., San Lorenzo

Map Source: Sierra Environmental Figure 3

Figure
3

ers

APPENDIX 1

WELL MONITORING DATA SHEET

SITE ADDRESS: 186 Lewelling **SAMPLED BY:** LTL
DATE: 8/12/09 **LABORATORY:**
PURGE METHOD: Bailers **ANALYSIS:** TPHg, BTEX, MTBE
ONSITE DRUM INVENTORY 1 drum w/ ~ 1/4 space left

CIRCLE ONE: Monitoring Sampling Developing

	Time	Gallons	Temp (°C or °F)	D.O.	pH	Cond	
WELL: MW-1							
Depth of Boring: 21.30	1347	1	67.55	2.70	6.62	1078	<input type="checkbox"/> Froth
Depth of Water: 16.01	1349	2	67.16	2.29	6.61	1076	<input type="checkbox"/> Sheen
Water Column: 5.29	1351	3	66.74	2.13	6.61	1070	<input type="checkbox"/> Odor Type: _____
Well Diameter: 2"	1353	4	66.65	2.01	6.64	1067	<input type="checkbox"/> Free Product
Well Volume: 1.0	1355	5	66.69	1.91	6.67	1064	Amount _____ Type: _____
Comments:	1359	6	66.63	1.91	6.69	1066	<input type="checkbox"/> Other
							Sample Time: 1410 ; DTW=16.04

	Time	Gallons	Temp (°C or °F)	D.O.	pH	Cond	
WELL: MW-2							
Depth of Boring: 22.80	1445	3.5	68.86	1.33	7.04	1129	<input type="checkbox"/> Froth
Depth of Water: 16.73	1451	7	68.84	1.64	7.07	1119	<input type="checkbox"/> Sheen
Water Column: 6.07	1455	9	68.56	1.56	7.06	1121	<input type="checkbox"/> Odor Type: _____
Well Diameter: 2"							<input type="checkbox"/> Free Product
Well Volume: 1.1							Amount _____ Type: _____
Comments:							<input type="checkbox"/> Other
							Sample Time: 1500 ; DTW=16.73

	Time	Gallons	Temp (°C or °F)	D.O.	pH	Cond	
WELL: MW-3							
Depth of Boring: 20.00	1420	2	69.02	1.58	7.02	656	<input type="checkbox"/> Froth
Depth of Water: 16.75	1425	4	69.21	1.28	7.12	660	<input type="checkbox"/> Sheen
Water Column: 3.25	1429	6	68.61	1.67	7.13	665	<input type="checkbox"/> Odor Type: _____
Well Diameter: 2"							<input type="checkbox"/> Free Product
Well Volume: 0.7							Amount _____ Type: _____
Comments:							<input type="checkbox"/> Other
							Sample Time: 1435 ; DTW=16.85

APPENDIX 2



Technical Report for

ERS Corporation

T0600100961-186 Lewelling, San Lorenzo, CA

Accutest Job Number: C7052

Sampling Date: 08/12/09

Report to:

ERS Corporation
1600 Riviera Ave Suite 310
Walnut Creek, CA 94596
ddement@erscorp.us; kblume@erscorp.us

ATTN: Kenneth Blume

Total number of pages in report: **14**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy
Laboratory Director

Client Service contact: Diane Theesen 408-588-0200

Certifications: CA (08258CA)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.



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Sample Summary

ERS Corporation

Job No: C7052

T0600100961-186 Lewelling, San Lorenzo, CA

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C7052-1	08/12/09	14:10 LL	08/13/09	AQ	Ground Water	MW-1
C7052-2	08/12/09	15:00 LL	08/13/09	AQ	Ground Water	MW-2
C7052-3	08/12/09	14:35 LL	08/13/09	AQ	Ground Water	MW-3



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-1		
Lab Sample ID: C7052-1		Date Sampled: 08/12/09
Matrix: AQ - Ground Water		Date Received: 08/13/09
Method: SW846 8260B		Percent Solids: n/a
Project: T0600100961-186 Lewelling, San Lorenzo, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W7781.D	1	08/21/09	TF	n/a	n/a	VW271
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	108%		60-130%
460-00-4	4-Bromofluorobenzene	111%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-2		
Lab Sample ID: C7052-2		Date Sampled: 08/12/09
Matrix: AQ - Ground Water		Date Received: 08/13/09
Method: SW846 8260B		Percent Solids: n/a
Project: T0600100961-186 Lewelling, San Lorenzo, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W7784.D	1	08/21/09	TF	n/a	n/a	VW271
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	1.3	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	151	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	108%		60-130%
460-00-4	4-Bromofluorobenzene	112%		60-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 08/12/09
Lab Sample ID: C7052-3	Date Received: 08/13/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: T0600100961-186 Lewelling, San Lorenzo, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W7785.D	10	08/21/09	TF	n/a	n/a	VW271
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	10	3.0	ug/l	
108-88-3	Toluene	ND	10	5.0	ug/l	
100-41-4	Ethylbenzene	12.1	10	3.0	ug/l	
1330-20-7	Xylene (total)	ND	20	7.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	5.0	ug/l	
	TPH-GRO (C6-C10)	1790	500	250	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	107%		60-130%
460-00-4	4-Bromofluorobenzene	112%		60-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

ERSCCAWCA189

Client / Reporting Information			Project Information			FED-EX Tracking #				Bottle Order Control #										
Company Name ERS			Project Name:			Accutest Quote #				Accutest Job #										
Address 1600 Riviera Ave #310			Street 186 Lewelling			8260 <input type="checkbox"/> 624 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> MTBE <input type="checkbox"/> TBA <input type="checkbox"/> NAP <input type="checkbox"/> +10 <input type="checkbox"/> +15 <input type="checkbox"/> 8270 <input type="checkbox"/> 624 <input type="checkbox"/> TCL <input type="checkbox"/> STARS <input type="checkbox"/> AERO <input type="checkbox"/> AEO <input type="checkbox"/> BND PAHD <input type="checkbox"/> TCSE <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> 8260 <input type="checkbox"/> BTEX <input type="checkbox"/> NAP <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> 8280 <input type="checkbox"/> 8280 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> MTBE <input type="checkbox"/> +10 <input type="checkbox"/> +15 <input type="checkbox"/> 8290 <input type="checkbox"/> 8290 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> TCSE <input type="checkbox"/> +10 <input type="checkbox"/> +15 <input type="checkbox"/> 8300 <input type="checkbox"/> 8300 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> TCSE <input type="checkbox"/> +10 <input type="checkbox"/> +15 <input type="checkbox"/>				C7052										
City Walnut Creek, CA 94596			City San Lorenzo, CA							8260 <input type="checkbox"/> 624 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> MTBE <input type="checkbox"/> TBA <input type="checkbox"/> NAP <input type="checkbox"/> +10 <input type="checkbox"/> +15 <input type="checkbox"/> 8270 <input type="checkbox"/> 624 <input type="checkbox"/> TCL <input type="checkbox"/> STARS <input type="checkbox"/> AERO <input type="checkbox"/> AEO <input type="checkbox"/> BND PAHD <input type="checkbox"/> TCSE <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> 8260 <input type="checkbox"/> BTEX <input type="checkbox"/> NAP <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> 8280 <input type="checkbox"/> 8280 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> MTBE <input type="checkbox"/> +10 <input type="checkbox"/> +15 <input type="checkbox"/> 8290 <input type="checkbox"/> 8290 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> TCSE <input type="checkbox"/> +10 <input type="checkbox"/> +15 <input type="checkbox"/> 8300 <input type="checkbox"/> 8300 <input type="checkbox"/> PPL <input type="checkbox"/> STARS <input type="checkbox"/> TCSE <input type="checkbox"/> +10 <input type="checkbox"/> +15 <input type="checkbox"/>				Requested Analysis						
Project Contact: ddement@erscorp.us			Project #			TPH g (8260)								Matrix Codes						
Phone # (925) 938-1600			Fax #											DW- Drinking Water GW- Ground Water WW- Water SW- Surface Water SO- Soil SL- Sludge OI- Oil LIQ- Other Liquid AIR- Air SOL- Other Solid WP- Wipe						
Sampler's Name Logan Lindeman			Client Purchase Order #											LAB USE ONLY						
Accutest		SUMMA #		Collection				Number of preserved Bottles												
Sample #	Field ID / Point of Collection	MEOH Vial #	Date	Time	Sampled by	Matrix	# of bottles	PCL	NH3	HV03	AS04	NONE	NH4SCN	MEOH	ENCORE	4 vials each (w/HA) 8/13/09 0937 T0600100901 On Ice <input checked="" type="checkbox"/> Cooler Temp. 5.6°C				
-1	MW-1		8/12/09	1410	LTLW		4	X												X
-2	MW-2			1500	↓		↓	X												X
-3	MW-3			1435	↓		↓	X												X
Turnaround Time (Business days)					Data Deliverable Information					Comments / Remarks										
<input checked="" type="checkbox"/> Std. 15 Business Days <input type="checkbox"/> 10 Day RUSH <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input type="checkbox"/> Other					Approved By/ Date: <input checked="" type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input type="checkbox"/> NJ Reduced <input type="checkbox"/> NJ Full <input type="checkbox"/> Other					<input type="checkbox"/> FULL CLP <input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input checked="" type="checkbox"/> EDD Format Geotracker T0600100901 Commercial "A" = Results Only										
Emergency T/A data available VIA Lablink										Sample Custody must be documented below each time samples change possession, including cooler delivery.										
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Date Time:		Received By:						
[Signature]		8/12/09 1630		[Signature]		[Signature]		1155		[Signature]		8/13/09		[Signature]						
1		3		4		5				Preserved where applicable		On Ice		Cooler Temp.						
										5				5.6°C						

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3

C7052: Chain of Custody

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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C7052
Account: ERSCCAWC ERS Corporation
Project: T0600100961-186 Lewelling, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW271-MB	W7772.D	1	08/21/09	TF	n/a	n/a	VW271

The QC reported here applies to the following samples:

Method: SW846 8260B

C7052-1, C7052-2, C7052-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	99% 60-130%
2037-26-5	Toluene-D8	107% 60-130%
460-00-4	4-Bromofluorobenzene	111% 60-130%

Blank Spike Summary

Job Number: C7052
Account: ERSCCAWC ERS Corporation
Project: T0600100961-186 Lewelling, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW271-BS	W7770.D	1	08/21/09	TF	n/a	n/a	VW271

The QC reported here applies to the following samples:

Method: SW846 8260B

C7052-1, C7052-2, C7052-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	60-130
100-41-4	Ethylbenzene	20	20.3	102	60-130
1634-04-4	Methyl Tert Butyl Ether	20	20.1	101	60-130
108-88-3	Toluene	20	18.7	94	60-130
1330-20-7	Xylene (total)	60	59.0	98	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	60-130%
2037-26-5	Toluene-D8	105%	60-130%
460-00-4	4-Bromofluorobenzene	113%	60-130%

4.2.1
4

Blank Spike Summary

Job Number: C7052
Account: ERSCCAWC ERS Corporation
Project: T0600100961-186 Lewelling, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW271-BS	W7771.D	1	08/21/09	TF	n/a	n/a	VW271

The QC reported here applies to the following samples:

Method: SW846 8260B

C7052-1, C7052-2, C7052-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	125	118	94	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	60-130%
2037-26-5	Toluene-D8	108%	60-130%
460-00-4	4-Bromofluorobenzene	111%	60-130%

4.2.2
4

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C7052
Account: ERSCCAWC ERS Corporation
Project: T0600100961-186 Lewelling, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7115-5MS	W7787.D	1	08/21/09	TF	n/a	n/a	VW271
C7115-5MSD	W7788.D	1	08/21/09	TF	n/a	n/a	VW271
C7115-5	W7773.D	1	08/21/09	TF	n/a	n/a	VW271

The QC reported here applies to the following samples:

Method: SW846 8260B

C7052-1, C7052-2, C7052-3

CAS No.	Compound	C7115-5 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	18.4	92	18.9	95	3	60-130/25
100-41-4	Ethylbenzene	ND	20	17.6	88	17.9	90	2	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	18.9	95	18.6	93	2	60-130/25
108-88-3	Toluene	ND	20	17.1	86	17.6	88	3	60-130/25
1330-20-7	Xylene (total)	ND	60	51.2	85	51.4	86	0	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C7115-5	Limits
1868-53-7	Dibromofluoromethane	101%	100%	98%	60-130%
2037-26-5	Toluene-D8	108%	107%	109%	60-130%
460-00-4	4-Bromofluorobenzene	114%	112%	109%	60-130%

4.3.1
4