Stantec

GROUNDWATER MONITORING REPORT FOURTH QUARTER 2008

Former Impulse Motors
1210 Bockman Road
San Lorenzo, California

Geotracker Global ID:#T06019771179
ACHCS Case: #R00002737

Stantec Project: #04OT.29215.69

Submitted to:
Olson Urban Housing, LLC
3020 Old Ranch Parkway, Suite 400
Seal Beach, California

Submitted by:
Stantec Consulting Corporation
25864-F Business Center Drive
Redlands, California

Prepared by:

Kristin Daly for

Jason Adelaars
Staff Scientist

Reviewed by:

Kyle D. Emerson, CEG 1271
Managing Principal Geologist

REGISTERED GEOLOGIST
KYLE EMERSON
No. 1271
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

December 19, 2008

Date: December 19, 2008

QUARTERLY GROUNDWATER MONITORING REPORT

Address:	1210 Bockman Road (Figure 1)
Consulting Co./Contact Person:	Stantec/ Jason Adelaars and Kyle D. Emerson
Stantec Project No.:	04OT.29215.69
Primary Agency/Regulatory ID No.:	ACHCS / Case No. RO0002737

WORK PERFORMED THIS QUARTER [Fourth - 2008]:

1. Performed Fourth Quarter 2008 groundwater monitoring and sampling.

WORK PROPOSED FOR NEXT QUARTER [First - 2009]:

1. Request UST Site closure.

Current Phase of Project:	**Monitoring**	**(Unit)**
Frequency of Sampling:	Quarterly	(Quarterly, etc.)
Frequency of Monitoring:	Quarterly	(Monthly, etc.)
Are Liquid Phase Hydrocarbons Present On-site:	No	(Yes/No)
Bulk Soil Removed to Date:	500	(cubic yards)
Bulk Soil Removed This Quarter:	0	(cubic yards)
Approximate Depth to Groundwater	7.88 to 8.92	(Measured Feet)
Groundwater Gradient	Northwest	(Direction)
	0.003	(Magnitude)

DISCUSSION:

On December 8, 2008, Stantec personnel gauged groundwater monitoring wells at the site (Figure 2). The depth to water ranged between 7.88 feet in MW-02 to 8.92 feet in MW-03, as presented in Table 1. Groundwater elevations ranged between 11.66 feet to 11.81 feet above mean sea level (AMSL). Groundwater flows to the north by northwest at a hydraulic gradient of approximately 0.003 feet/foot (Figure 3). Groundwater samples were collected from the wells in accordance with the attached purging and sampling procedures. Groundwater samples were collected and analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), Total Petroleum Hydrocarbons as diesel (TPHd), BTEX, the fuel oxygenates methyl tert-butyl ether (MTBE), tert-Butyl Alcohol (TBA), Ethyl tert-Butyl Ether (ETBE), Di-isopropyl Ether (DIPE), and tert-amyl methyl ether (TAME), as well as ethylene dibromide and 1,2-Dichloroethane. Analytical results are reported in Tables 2 and 3 and historic analytical data on Table 4.

CONCLUSIONS & RECOMMENDATIONS:

Groundwater collected from the three groundwater monitoring wells located down-gradient of the former fuel dispensers contained concentrations of total petroleum hydrocarbons in the gasoline range (TPHg) from non-detect to a peak of 590 µg/L. TPH in the diesel range was measured from non detect to a peak of 66 µg/L. Benzene, toluene, ethylbenzene, xylenes, MTBE, and other fuel oxygenates were all below detection levels.

Based on this information, the detected groundwater impact remains localized to the area immediately down gradient of the former dispenser islands and currently beneath the parking and driveway areas of the Site development, as indicated on Figure 2. As a result, Stantec considers the limits of the impacted groundwater adequately assessed, stable, and naturally attenuating.

Therefore, based on the exceedingly small extent of impact and the completed source removal actions, which were performed along with the overlying land use (driveway and parking), Stantec recommends no further assessment or remedial action.

ATTACHMENTS:

Figure 1 - Site Location Map
Figure 2 - Site Plan
Figure 3 - Groundwater Gradient Map, December 8, 2008

Table 1 - Summary of Groundwater Elevation Data
Table 2 through 4 - Summary of Groundwater Analytical Results

Standard Procedures for Groundwater Sampling
Water Sample Field Data Sheets
Chain of Custody Records, Lab Data Sheets and QA/QC Results

STANDARD PROCEDURES FOR GROUNDWATER SAMPLING

Groundwater sampling activities involve several activities including groundwater depth measurements, well purging, sample collection, waste water disposal, etc. The procedures for conducting these activities are described below.

DEPTH TO GROUNDWATER

Prior to purging each of the wells, the depth to groundwater within each well casing is measured to the nearest 0.01 foot using either an electronic water level indicator. The wells were measured from the top of each casing. The tops of the well casings were later surveys to provide an accurate elevation.

GROUNDWATER MONITORING WELL PURGING

Purging is conducted prior to sampling wells, a dedicated 3.5 inch by 36 inch Polyethylene Bailor was used to purge the wells. Purge water was contained on-site in 55-gallon DOT-approved drums. To assure that the collected samples were representative of fresh formation water, the conductivity, temperature, and pH of the delivered effluent are monitored and recorded using a Hanna Hydac meter during purge operations. In addition, the turbidity of the removed water is visually monitored and recorded. Purge operations are determined to be sufficient once successive measurements of pH, conductivity, and temperature stabilize to within +/- 10 percent.

During purging a minimum of three (3) well volumes, measured as the annular space of the well casing below the groundwater surface, are removed from each well. Field data sheets are attached indicating the volume of water removed from each casing. Wells were allowed to recharge to within in 90 percent of pre-purge groundwater elevation prior to conducting sampling.

GROUNDWATER SAMPLE ACQUISITION AND HANDLING

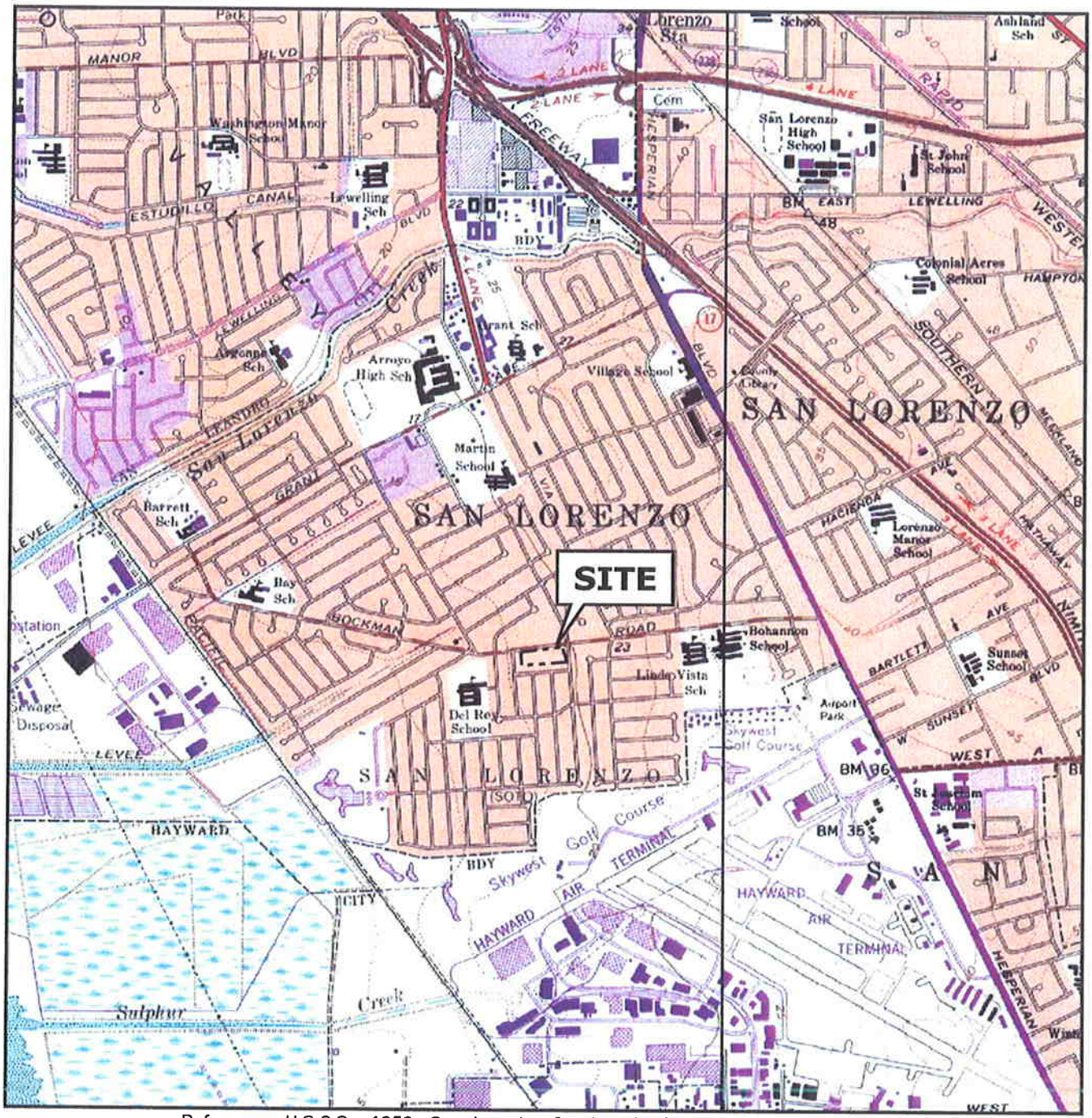
Following purging operations, groundwater samples were collected from each of the three wells at the air-water interface, using precleaned, single-sample polyethylene disposable bailers. The groundwater sample was discharged from the bailer to the sample container through a bottom emptying flow control valve to minimize volatilization.

Collected water samples were discharged directly into laboratory provided, precleaned, 40 milliliter (ml) glass vials or one liter amber bottles and sealed with Teflon-lined septum, screw-on lids. Labels documenting sample number, well identification, collection date and time, type of sample and type of preservative (if applicable) were affixed to each sample. The samples were then placed into an ice-filled cooler for delivery under chain-of-custody to a laboratory certified to perform the specified tests by the State of California Department of Health Services Environmental Laboratory Accreditation Program.

CONTAINMENT AND DISPOSAL OF GENERATED WATER

All wastewater and purge water generated during the field activities were retained on-site in appropriate containers (i.e. DOT approved drums) for future disposal. All wastewater will be delivered under appropriate manifest to a facility certified and licensed to receive such waste streams.

FIGURES



Reference: U.S.G.S., 1959, San Leandro Quadrangle California – Alameda County, 7.5' Series (Topographic). Photorevised 1980.

N

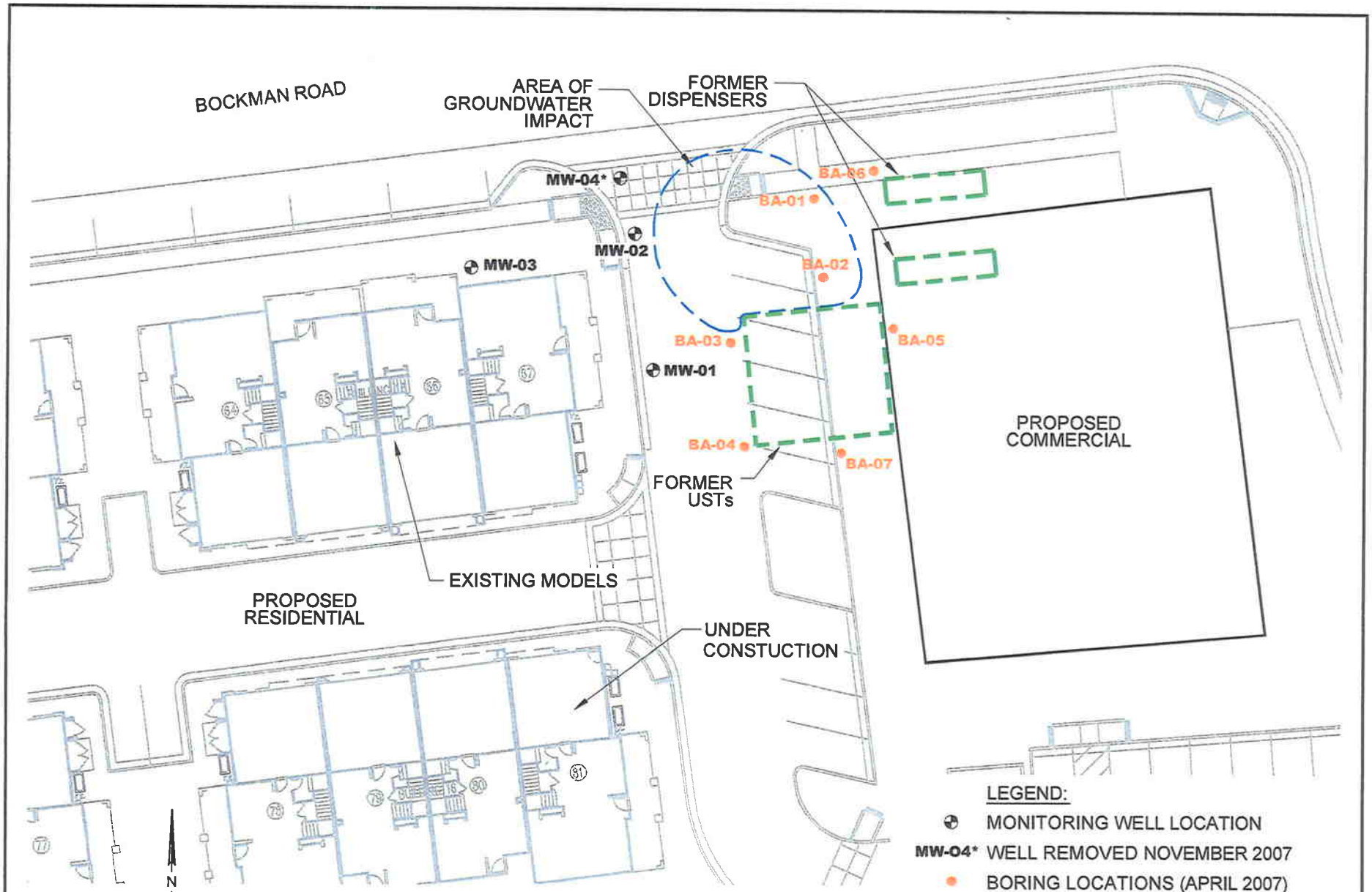
0 2000 4000

APPROXIMATE SCALE (FEET)

QUADRANGLE LOCATION

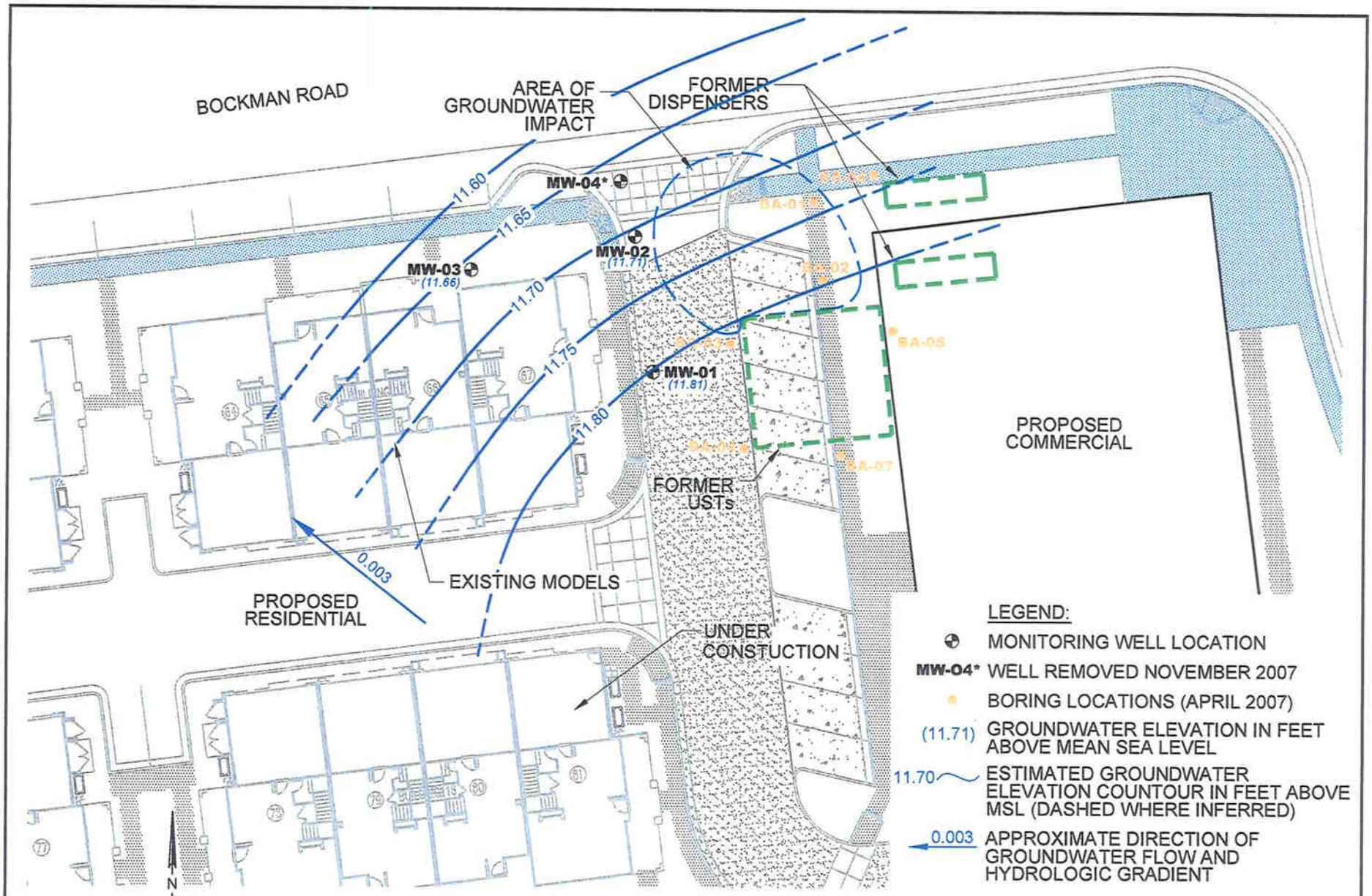
25864-F BUSINESS CENTER DRIVE REDLANDS, CALIFORNIA 92374 PH: (909) 335-6116 / FAX: (909) 335-6120	PREPARED FOR: THE OLSON COMPANY 1210-1366 BOCKMAN ROAD SAN LORENZO, CALIFORNIA	**SITE LOCATION MAP**		FIGURE: **1**
	JOB NUMBER: 04OT.29215.62	DRAWN BY: JMH	CHECKED BY: JH	APPROVED BY: JH	DATE: 12/2004

File Path – Q:\CADD-04\CAD Files\Olson-Co\San Lorenzo\OLS-2921561-PH1_south.dwg – Layout: Figure 1



25864-F BUSINESS CENTER DRIVE REDLANDS, CA 92374 PHONE: (909) 335-6116 FAX: (909) 335-6120	FOR: VILLAGE WALK 1210 BOCKMAN ROAD SAN LORENZO, CA	SITE PLAN WITH WELL LOCATIONS		FIGURE: 2
	JOB NUMBER: 04OT.29215.69	DRAWN BY: GH/JBL	CHECKED BY: JA	APPROVED BY:	DATE: 11/01/07

FILEPATH:Q:\CADD-94\00_OTHER OFFICES\Redlands\Village_Walk\dwg\29215 MW LOCATION MAP.dwg|jlieberman|Mar 18, 2008 at 9:52|Layout: SITEMAP



25864-F BUSINESS CENTER DRIVE
REDLANDS, CA 92374
PHONE: (909) 335-6116 FAX: (909) 335-6120

FOR:		GROUNDWATER GRADIENT MAP		FIGURE:
VILLAGE WALK 1210 BOCKMAN ROAD SAN LORENZO, CA				3
JOB NUMBER: 04OT.29215.69	DRAWN BY: GH/JBL	CHECKED BY: JA	APPROVED BY:	DATE: 12/15/08

FILEPATH:M:\00_OTHER OFFICES\Redlands\Village_Walk\4th-QTR-2008\29215 fig-3.dwg|jlieberman|Dec 15, 2008 at 8:52|Layout: SITEMAP

STANDARD PROCEDURES FOR GROUNDWATER SAMPLING

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TABLES

Table 1

Summary of Groundwater Elevation Data
Olson - San Lorenzo
1210 Bockman Road
San Lorenzo, California
Stantec Job No.: 04OT.29215.69

Well ID/Surveyed Elevation[1]	Date	Depth to Static Water (feet bgs)	Groundwater Elevation[2] (feet AMSL)
MW-01 20.3	3/17/2008	8.24	12.06
	6/10/2008	8.5	11.8
	9/8/2008	8.73	11.57
	12/8/2008	8.49	11.81
MW-02 19.59	3/17/2008	7.65	11.94
	6/10/2008	7.89	11.7
	9/8/2008	8.11	11.48
	12/8/2008	7.88	11.71
MW-03 20.58	3/17/2008	8.67	11.91
	6/10/2008	8.91	11.67
	9/8/2008	9.14	11.44
	12/8/2008	8.92	11.66

NOTES:
(1) Elevations are mesured in feet above mean sea level (AMSL), site surveyed on March 24, 2008
(2) Groundwater Elevation in feet AMSL = Surveyed Well Elevation subtracted by Depth to Water

Table 2

Summary of Groundwater Analytical Results
TPH by modified EPA 8015B (µg/L)
Olson - San Lorenzo
1210 Bockman Road
San Lorenzo, California
Stantec Job No.: 04OT.29215.69

Sample ID	Sampling Date	TPH [1] (8015)[2] C4-C12[3]	C12-C22[4]
RWQCB ESLs (µg/L)		100	100
MW-01-W	12/8/2008	<50	<50
MW-02-W	12/8/2008	**590**	**64**
MW-03-W	12/8/2008	<50	**66**
MW-04-W[5]	11/7/2007	<0.5	<0.4

NOTES:
(1) Concentrations reported in micrograms per liter (µg/L)
(2) EPA Test Method
(3) Characteristic carbon chain of Gasoline
(4) Characteristic carbon chain of Diesel
(5) MW-04 was removed due to conflict with contruction activities
< - Indicates the concentration was not detected above the laboratory method detection limit.

ABBREVIATIONS:

TPH - Total Petroleum Hydrocarbons
RWQCB ESLs - Environmental Screening Levels for Potential Source of Drinking Water established by the San Fransisco Bay Regional Water Quality Control Board (November 2007)

Table 3

Summary of Groundwater Analytical Results
VOCs by EPA 8260B (µg/L)
Olson - San Lorenzo
1210 Bockman Road
San Lorenzo, California
Stantec Job No.: 04OT.29215.69

Sample ID	Sampling Date	VOCs [1] (8260)[2]										
		Methyl-tert-butyl ether (MtBE)	tert-Amyl Methyl Ether (TAME)	Diisopropyl Ether (DIPE)	Ethyl tert-Butyl Ether (EtBE)	tert-Butanol (TBA)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Ethylene Dibromide	1,2 Dichloroethane (DCA)
CA MCLs (µg/L)		13	NR	NR	NR	NR	1	150	300	1750	NR	0.5
Fedral MCLs (µg/L)		NR	NR	NR	NR	NR	5	1000	700	10000	NR	5
RWQCB ESLs (µg/L)		5	NR	NR	NR	12	1	40	30	20	0.05	0.5
Samples												
MW-01-W	12/8/2008	<1.0	<1.0	<1.0	<1.0	<10	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5
MW-02-W	12/8/2008	<1.0	<1.0	<1.0	<1.0	<10	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5
MW-03-W	12/8/2008	<1.0	<1.0	<1.0	<1.0	<10	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5
MW-04-W[3]	11/7/2007	<1.0	<1.0	<1.0	<1.0	<10	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5

NOTES:
(1) Concentrations reported in micrograms per liter (µg/L)
(2) EPA Test Method
(3) MW-04 was removed due to conflict with construction activities
< - Indicates the concentration was not detected above the laboratory method detection limit.

ABBREVIATIONS:
VOCs - Volatile Organic Compounds
CA MCLs - Maximum Contaminant Levels established by the State of California
Federal MCLs - Maximum Contaminant Levels established by the Federal Environmental Protection Agency
RWQCB ESLs - Environmental Screening Levels for Potential Source of Drinking Water established by the San Fransisco Bay Regional Water Quality Control Board (November 2007)
NR - Not Reported

Table 4

Summary of Groundwater Analytical Results
TPH and VOCs Detected in Groundwater
Olson - San Lorenzo
1210 Bockman Road
San Lorenzo, California
Stantec Job No.: 04OT.29215.69

Sample ID	Sampling Date	TPH[1] 8015[2]		VOCs[1] 8260[2]			
		C4-C12[3]	C12-C22[4]	n-Butylbenzene	sec-Butylbenzene	n-Propylbenzene	Isopropylbenzene
CA MCLs (µg/L)		NR	NR	NR	NR	NR	NR
Fedral MCLs (µg/L)		NR	NR	NR	NR	NR	NR
RWQCB ESLs (µg/L)		100	100	NR	NR	NR	NR
Samples							
MW-01-W	3/17/2008	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5
	6/10/2008	<50	**64**	<1.0	<1.0	<1.0	<0.5
	9/8/2008	<50	<50	<1.0	<1.0	<1.0	<0.5
	12/8/2008	<50	<50	NA	NA	NA	NA
MW-02-W	3/17/2008	**0.41**	<1.0	**3.4**	<0.5	**2.2**	**1.0**
	6/10/2008	**400**	**230**	**1.4**	**1.7**	<1.0	**0.91**
	9/80/2008	**300**	**170**	**1.1**	**1.2**	<1.0	<0.5
	12/8/2008	**590**	**64**	NA	NA	NA	NA
MW-03-W	3/17/2008	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5
	6/10/2008	<50	<50	<1.0	<1.0	<1.0	<0.5
	9/8/2008	<50	<50	<1.0	<1.0	<1.0	<0.5
	12/8/2008	<50	**66**	NA	NA	NA	NA
MW-04-W[5]	11/7/2007	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5

NOTES:
(1) Concentrations reported in micrograms per liter (µg/L)
(2) EPA Test Method
(3) Characteristic carbon chain of Gasoline
(4) Characteristic carbon chain of Diesel
(5) MW-04 was removed due to conflict with construction activities
< - Indicates the concentration was not detected above the laboratory method detection limit.
Highlighted yellow boxes indicate most recent laboratory data.

ABBREVIATIONS:
VOCs - Volatile Organic Compounds
TPH - Total Petroleum Hydrocarbons
CA MCLs - Maximum Contaminant Levels established by the State of California
Federal MCLs - Maximum Contaminant Levels established by the Federal Environmental Protection Agency
RWQCB ESLs - Environmental Screening Levels for Potential Source of Drinking Water established by the San Fransisco Bay Regional Water Quality Control Board (February 2005)
NR - Not Reported
NA - Not Analyzed

WATER SAMPLE FIELD DATA SHEETS

Stantec
Well Sampling Data Sheet

Project No. 04OT.29215.69 | Well ID MW-01
Purged By J.Adelaars | Sample ID MW-01-W
Sampled By J.Adelaars | Client Olson - San Lorenzo
Location 1210 Bockman Road, San Lorenzo, CA

Type: Groundwater X Other

Casing Diameter (inches)	2	3	4	X	4.5	6	Other
Gallons per Linerar Foot	0.163	0.367	0.653		0.826	1.469	

Casing Elevation
Depth to Water 8.49
Elevation of Water
Depth of Well 12.76

Volume in Casing 2.8
Calculated Purge 8.3
Actual Purge 10
Depth of Mid Screen pump head is set at

Date Purged 12/8/2008 Start 1020 End 1035
Date Sampled 12/8/2008 Start 1045 End 1045

Field QC Sample(s) Collected at this Well (i.e. FB-1, X-DUP-1, MW-X etc.)

Time	Volume	pH	E.C. µS	Temp °C	D.O.	ORP	Color	NTU
1020	1 G	7.52	904	20.4			CLEAR	
1027	3	7.53	922	20.3			CLOUDY	
1030	6	7.31	921	20.5			CLOUDY	
1033	8	7.17	927	20.5			CLOUDY	
1035	10	7.17	925	20.5			SLI CLOUDY	

Purging Equipment
- ____ Dedicated Pump
- ____ Grundfos/Rediflow
- ____ Vac-Truck
- ____ Development Rig
- X Bailer/Type: Poly
- ____ Other:

Sampling Equipment
- ____ Dedicated Pump
- ____ Grundfos/Rediflow
- ____ Vac-Truck
- ____ Development Rig
- X Bailer/Type: Poly
- ____ Other:

Well Integrity: Good

Remarks:

Signature

Stantec
Well Sampling Data Sheet

Project No. 04OT.29215.69 | Well ID MW-02
Purged By J.Adelaars | Sample ID MW-02-W
Sampled By J.Adelaars | Client Olson - San Lorenzo
Location 1210 Bockman Road, San Lorenzo, CA

Type: Groundwater X Other

Casing Diameter (inches)	2	3	4	4.5	6	Other
Gallons per Linerar Foot	0.163	0.367	0.653	0.826	1.469	

Casing Elevation | Volume in Casing 2.86
Depth to Water 7.88 | Calculated Purge 8.5
Elevation of Water | Actual Purge 10.0
Depth of Well 12.26 | Depth of Mid Screen pump head is set at

Date Purged 12/8/2008 Start 1055 End 1110
Date Sampled 12/8/2008 Start 1110 End 1116

Field QC Sample(s) Collected at this Well (i.e. FB-1, X-DUP-1, MW-X etc.)

Time	Volume	pH	E.C.	Temp	D.O.	ORP	Color	NTU
1055	1	7.77	693	19.4			SLIGHT	
1100	3	7.28	888	20.0			CLOUDY	
1103	6	7.25	896	19.9			CLOUDY	
1105	8	7.27	867	19.9			CLOUDY	
1110	10	7.19	899	19.7			CLOUDY	

Purging Equipment
- ____ Dedicated Pump
- ____ Grundfos/Rediflow
- ____ Vac-Truck
- ____ Development Rig
- X Bailer/Type: Poly
- ____ Other:

Sampling Equipment
- ____ Dedicated Pump
- ____ Grundfos/Rediflow
- ____ Vac-Truck
- ____ Development Rig
- X Bailer/Type: Poly
- ____ Other:

Well Integrity:

Remarks:

Signature Page ____ of ____

Stantec
Well Sampling Data Sheet

Project No. 04OT.29215.69 | Well ID MW-03
Purged By J.Adelaars | Sample ID MW-03-W
Sampled By J.Adelaars | Client Olson - San Lorenzo
Location 1210 Bockman Road, San Lorenzo, CA

Type: Groundwater X Other

Casing Diameter (inches)	2	3	4	4.5	6	Other
			X			
Gallons per Linerar Foot	0.163	0.367	0.653	0.826	1.469	

Casing Elevation
Depth to Water 8.92
Elevation of Water
Depth of Well 12.75

Volume in Casing 2.5
Calculated Purge 7.5
Actual Purge 10
Depth of Mid Screen pump head is set at

Date Purged 12/8/2008 Start 1130 End 1143
Date Sampled 12/8/2008 Start 1150 End 1150

Field QC Sample(s) Collected at this Well (i.e. FB-1, X-DUP-1, MW-X etc.)

Time	Volume	pH	E.C.	Temp	D.O.	ORP	Color	NTU
1130	1	7.38	878	17.9			CLEAR	
1134	3	7.30	917	18.3				
1140	6.5	7.31	880	18.0				
1141	8	7.12	922	18.5				
1143	10	7.11	918	18.3				

Purging Equipment
- ____ Dedicated Pump
- ____ Grundfos/Rediflow
- ____ Vac-Truck
- ____ Development Rig
- X Bailer/Type: Poly
- ____ Other:

Sampling Equipment
- ____ Dedicated Pump
- ____ Grundfos/Rediflow
- ____ Vac-Truck
- ____ Development Rig
- X Bailer/Type: Poly
- ____ Other:

Well Integrity:

Remarks:

Signature Page ____ of ____

CHAIN OF CUSTODY RECORDS, LAB DATA SHEETS, AND QA/QC RESULTS

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-17225-1

Job Description: San Loranzo

For:
Stantec Consulting Corp.
25864. F Business Center Dr
Redlands, CA 92374

Attention: Mr. Jason Adelaars

Approved for release.
Afsaneh Salimpour
Project Manager I
12/15/2008 3:48 PM

Afsaneh Salimpour
Project Manager I
afsaneh.salimpour@testamericainc.com
12/15/2008

TestAmerica Laboratories, Inc.
TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 600-3002 www.testamericainc.com

Job Narrative
720-J17225-1

Comments
No additional comments.

Receipt
Trip Blanks (6) were submitted for analysis; however, it was not listed on the Chain-of-Custody (COC).

All other samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: Stantec Consulting Corp. Job Number: 720-17225-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-17225-2	**MW-02-W**				
Gasoline Range Organics (GRO)-C5-C12		590	50	ug/L	8260B/CA_LUFTMS
Diesel Range Organics [C10-C28]		64	50	ug/L	8015B
720-17225-3	**MW-03-W**				
Diesel Range Organics [C10-C28]		66	50	ug/L	8015B

METHOD SUMMARY

Client: Stantec Consulting Corp. Job Number: 720-17225-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL SF	SW846 8260B/CA_LUFTMS	
Purge and Trap	TAL SF		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL SF		SW846 3510C

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Stantec Consulting Corp. Job Number: 720-17225-1

Method	Analyst	Analyst ID
SW846 8260B/CA_LUFTMS	Zhao, June	JZ
SW846 8015B	Relja, Marlene	MR

SAMPLE SUMMARY

Client: Stantec Consulting Corp.

Job Number: 720-17225-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-17225-1	MW-01-W	Water	12/08/2008 1045	12/08/2008 1800
720-17225-2	MW-02-W	Water	12/08/2008 1110	12/08/2008 1800
720-17225-3	MW-03-W	Water	12/08/2008 1150	12/08/2008 1800

Client: Stantec Consulting Corp.

Job Number: 720-17225-1

Client Sample ID: **MW-01-W**

Lab Sample ID: 720-17225-1
Client Matrix: Water

Date Sampled: 12/08/2008 1045
Date Received: 12/08/2008 1800

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 12/09/2008 1337
Date Prepared: 12/09/2008 1337

Analysis Batch: 720-44780

Instrument ID: Saturn 2100
Lab File ID: d:\data\200812\120908\sa-
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	ND		50
Benzene	ND		0.50
1,2-Dichloroethane	ND		0.50
Toluene	ND		0.50
MTBE	ND		0.50
Ethylbenzene	ND		0.50
Tert-butyl ethyl ether	ND		0.50
Xylenes, Total	ND		1.0
TAME	ND		0.50
Ethylene Dibromide	ND		0.50
DIPE	ND		1.0
TBA	ND		5.0

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	83	78 - 112
1,2-Dichloroethane-d4 (Surr)	96	67 - 126

Client: Stantec Consulting Corp. Job Number: 720-17225-1

Client Sample ID: **MW-02-W**

Lab Sample ID: 720-17225-2
Client Matrix: Water

Date Sampled: 12/08/2008 1110
Date Received: 12/08/2008 1800

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 12/09/2008 1404
Date Prepared: 12/09/2008 1404

Analysis Batch: 720-44780

Instrument ID: Saturn 2100
Lab File ID: d:\data\200812\120908\sa-
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	590		50
Benzene	ND		0.50
1,2-Dichloroethane	ND		0.50
Toluene	ND		0.50
MTBE	ND		0.50
Ethylbenzene	ND		0.50
Tert-butyl ethyl ether	ND		0.50
Xylenes, Total	ND		1.0
TAME	ND		0.50
Ethylene Dibromide	ND		0.50
DIPE	ND		1.0
TBA	ND		5.0

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	82	78 - 112
1,2-Dichloroethane-d4 (Surr)	94	67 - 126

Client: Stantec Consulting Corp. Job Number: 720-17225-1

Client Sample ID: **MW-03-W**

Lab Sample ID: 720-17225-3
Client Matrix: Water

Date Sampled: 12/08/2008 1150
Date Received: 12/08/2008 1800

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 12/09/2008 1431
Date Prepared: 12/09/2008 1431

Analysis Batch: 720-44780

Instrument ID: Saturn 2100
Lab File ID: d:\data\200812\120908\sa-
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	ND		50
Benzene	ND		0.50
1,2-Dichloroethane	ND		0.50
Toluene	ND		0.50
MTBE	ND		0.50
Ethylbenzene	ND		0.50
Tert-butyl ethyl ether	ND		0.50
Xylenes, Total	ND		1.0
TAME	ND		0.50
Ethylene Dibromide	ND		0.50
DIPE	ND		1.0
TBA	ND		5.0

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	81	78 - 112
1,2-Dichloroethane-d4 (Surr)	97	67 - 126

Client: Stantec Consulting Corp. Job Number: 720-17225-1

Client Sample ID: MW-01-W

Lab Sample ID: 720-17225-1
Client Matrix: Water

Date Sampled: 12/08/2008 1045
Date Received: 12/08/2008 1800

8015B Diesel Range Organics (DRO) (GC)

Method: 8015B
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 12/10/2008 1636
Date Prepared: 12/09/2008 1841

Analysis Batch: 720-44855
Prep Batch: 720-44794

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		50

Surrogate	%Rec	Acceptance Limits
p-Terphenyl	91	50 - 150

Client: Stantec Consulting Corp.

Job Number: 720-17225-1

Client Sample ID: **MW-02-W**

Lab Sample ID: 720-17225-2
Client Matrix: Water

Date Sampled: 12/08/2008 1110
Date Received: 12/08/2008 1800

8015B Diesel Range Organics (DRO) (GC)

Method: 8015B
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 12/10/2008 1703
Date Prepared: 12/09/2008 1841

Analysis Batch: 720-44855
Prep Batch: 720-44794

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	64		50

Surrogate	%Rec	Acceptance Limits
p-Terphenyl	90	50 - 150

Client: Stantec Consulting Corp.

Job Number: 720-17225-1

Client Sample ID: **MW-03-W**

Lab Sample ID: 720-17225-3
Client Matrix: Water

Date Sampled: 12/08/2008 1150
Date Received: 12/08/2008 1800

8015B Diesel Range Organics (DRO) (GC)

Method: 8015B
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 12/10/2008 1730
Date Prepared: 12/09/2008 1841

Analysis Batch: 720-44855
Prep Batch: 720-44794

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	66		50

Surrogate	%Rec	Acceptance Limits
p-Terphenyl	91	50 - 150

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

Client: Stantec Consulting Corp. Job Number: 720-17225-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-44780					
LCS 720-44780/2	Lab Control Spike	T	Water	8260B/CA_LUFT	
LCSD 720-44780/1	Lab Control Spike Duplicate	T	Water	8260B/CA_LUFT	
MB 720-44780/3	Method Blank	T	Water	8260B/CA_LUFT	
720-17225-1	MW-01-W	T	Water	8260B/CA_LUFT	
720-17225-2	MW-02-W	T	Water	8260B/CA_LUFT	
720-17225-3	MW-03-W	T	Water	8260B/CA_LUFT	

Report Basis
T = Total

GC Semi VOA

Prep Batch: 720-44794					
LCS 720-44794/2-A	Lab Control Spike	T	Water	3510C	
LCSD 720-44794/3-A	Lab Control Spike Duplicate	T	Water	3510C	
MB 720-44794/1-A	Method Blank	T	Water	3510C	
720-17225-1	MW-01-W	T	Water	3510C	
720-17225-2	MW-02-W	T	Water	3510C	
720-17225-3	MW-03-W	T	Water	3510C	
Analysis Batch:720-44855					
LCS 720-44794/2-A	Lab Control Spike	T	Water	8015B	720-44794
LCSD 720-44794/3-A	Lab Control Spike Duplicate	T	Water	8015B	720-44794
MB 720-44794/1-A	Method Blank	T	Water	8015B	720-44794
720-17225-1	MW-01-W	T	Water	8015B	720-44794
720-17225-2	MW-02-W	T	Water	8015B	720-44794
720-17225-3	MW-03-W	T	Water	8015B	720-44794

Report Basis
T = Total

Client: Stantec Consulting Corp.

Job Number: 720-17225-1

Method Blank - Batch: 720-44780

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-44780/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/09/2008 1010
Date Prepared: 12/09/2008 1010

Analysis Batch: 720-44780
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: d:\data\200812\120908\mb
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Gasoline Range Organics (GRO)-C5-C12	ND		50
Benzene	ND		0.50
1,2-Dichloroethane	ND		0.50
Toluene	ND		0.50
MTBE	ND		0.50
Ethylbenzene	ND		0.50
Tert-butyl ethyl ether	ND		0.50
Xylenes, Total	ND		1.0
TAME	ND		0.50
Ethylene Dibromide	ND		0.50
DIPE	ND		1.0
TBA	ND		5.0

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	85	78 - 112
1,2-Dichloroethane-d4 (Surr)	93	67 - 126

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

Client: Stantec Consulting Corp.

Job Number: 720-17225-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-44780

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-44780/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/09/2008 1046
Date Prepared: 12/09/2008 1046

Analysis Batch: 720-44780
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: d:\data\200812\120908\ls-v
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-44780/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/09/2008 1112
Date Prepared: 12/09/2008 1112

Analysis Batch: 720-44780
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: d:\data\200812\120908\ld-wa
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	58	63	43 - 95	9	20		
Benzene	79	87	72 - 117	9	20		
Toluene	85	87	78 - 123	2	20		
MTBE	75	87	64 - 131	15	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	80	81	78 - 112
1,2-Dichloroethane-d4 (Surr)	80	88	67 - 126

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

Client: Stantec Consulting Corp.

Job Number: 720-17225-1

Method Blank - Batch: 720-44794

Method: 8015B
Preparation: 3510C

Lab Sample ID: MB 720-44794/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/10/2008 2132
Date Prepared: 12/09/2008 1841

Analysis Batch: 720-44855
Prep Batch: 720-44794
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		50

Surrogate	% Rec	Acceptance Limits
p-Terphenyl	100	50 - 150

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-44794

Method: 8015B
Preparation: 3510C

LCS Lab Sample ID: LCS 720-44794/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/10/2008 2039
Date Prepared: 12/09/2008 1841

Analysis Batch: 720-44855
Prep Batch: 720-44794
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-44794/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/10/2008 2105
Date Prepared: 12/09/2008 1841

Analysis Batch: 720-44855
Prep Batch: 720-44794
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diesel Range Organics [C10-C28]	80	88	48 - 99	9	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
p-Terphenyl	93	101	50 - 150

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

720-17225

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 113702

Date 12/8 Page 1 of 1

Report To

Attn: JASON ADELAARS
Company: STANTEC
Address: 25864-F Business Center Dr
Phone: 909-335-6116 Email: JASON.ADELAARS@...
Bill To: STANTEC
Attn: JA
Sampled By: JA STANTEC
Phone: 909-335-6116

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.	TPH EPA 8260B ☐ Gas w ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX EPA ☐ 8021 ☐ 8260B	TEPH EPA 8015M ☐ Diesel ☐ Motor Oil ☐ Other	Fuel Tests EPA 8260B: ☒ Gas ☒ BTEX ☒ Five Oxygenates ☐ DCA, EDB	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum ☐ Total EPA 1664	Pesticides ☐ EPA 8081 ☐ 608; PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other	Low Level Metals by EPA 200.8/6020 (ICP-MS)	W.E.T (STLC) TCLP ☐ ☐	Hexavalent Chromium pH (24h hold time for H₂O) ☐ ☐	Spec Cond. ☐ Alkalinity TSS ☐ TDS ☐	Anions ☐ Cl ☐ SO₄ ☐ NO₃ ☐ F ☐ Br ☐ NO₂ ☐ PO₄	DIESEL by 8015		
MW-01-W	12/8	1045	H_2O	HCL				X														X		
MW-02-W	12/8	1110	↓	↓				X														X		
MW-03-W	12/8	1150	↓	↓				X														X		

Project Info.

Project Name: OLSON-SAN LORENZO
Project#: 0410T 207.5.69
PO#:
Credit Card#:

Sample Receipt

of Containers: 21
Head Space: —
Temp: 0.1°C
Conforms to record:

T A T	5 Day	72h	48h	24h	Other:

Report ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF ☐ Global ID

Special Instructions / Comments:

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 1200	Signature: [signature] Time: 1800	Signature: Time:
Printed Name: JASON ADELAARS Date: 12/8	Printed Name: T. Lewis Date: 12/8/08	Printed Name: Date:
Company: STANTEC	Company: TA SF	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: [signature] Time: 1200	Signature: [signature] Time: 18:00	Signature: Time:
Printed Name: T. Lewis Date: 12/8/08	Printed Name: T. Bullock Date: 12/8/08	Printed Name: Date:
Company: TA SF	Company: TAL-SF	Company:

See Terms and Conditions on reverse
* TestAmerica SF reports 8015M from C9-C24 (industry norm). Default for 8015B is C10-C28.

Login Sample Receipt Check List

Client: Stantec Consulting Corp.

Job Number: 720-17225-1

Login Number: 17225
Creator: Bullock, Tracy
List Number: 1

List Source: TestAmerica San Francisco

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	SEE NCM
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	